



INCORPORATED COUNTY OF LOS ALAMOS

101 Camino Entrada, Building 3
Los Alamos, New Mexico 87544 (505) 663-3507
Procurement Division

November 22, 2023

TO ALL HOLDERS OF SOLICITATION DOCUMENTS FOR:

Invitation for Bids No. IFB24-16
IFB Name: White Rock Visitor Center Restrooms and Pavilion

Addendum No. 1

This Addendum No. 1 forms a part of the Solicitation Documents and modifies, as noted below, the original Solicitation Documents identified above.

This Addendum provides an updated submission deadline and updated Project Dates and Milestones, as well as revised date for Site Visits to all potential Bidders:

1. See below the Attendance Sheet from the Non-Mandatory Pre-Bid Conference held on November 13, 2023 at 11:00 a.m.



IFB24-16 White Rock Visitor Center Outdoor Restroom and Pavilion Project

Non-Mandatory Pre-Bid Conference: November 13, 2023, 11:00 a.m.
White Rock Visitor Center 115 NM 4 White Rock NM 87547

SIGN IN SHEET

Name	Company	Contact Information	
		Phone No.	E-Mail Address
Carmela Salazar	LAC - Procurement	505-662-8056	carmela_salazar@lacnm.us
Manuel Martinez	LAC – PW	505-662-3430	manuel_martinez@lacnm.us
Sara Rhoton	LAC – Pw	505-662-8088	sara_rhoton@lacnm.us
Juan Contreras	Contreras Construction	505-400-7325	jcontreras@contrerasconstructioncopr.com
Justin Newcomb	Pluma Construction	505-526-0589	justin@plucys.com
Jerry Gallegos	Southwest Building & Development	505-920-8088	swfabrication@aol.com
Charles Griggs	Southwest Building & Development	505-920-8088	crgriggs@aol.com
Nicholas Mata	Cultura Construction	505-414-4014	n.mata@cultura.com

2. Delete Section 1.5.5 Campaign Contribution Form in its entirety and replace with the attached updated Section 1.5.5.

3. Los Alamos County has not submitted request to Construction Industries for permit?
Answer: Contractor is responsible for permits.
4. Please provide specifications for the privacy screen and the ad alternate metal screen.
Answer: Specifications regarding privacy screen in front of bathroom doors can be found on sheet C-111. The color for the pressure treated plywood shall be White. The bid alternate 2 should be a 1/16" thick plate.
5. Who is responsible for loading disassembled structure and removing it from site?
Answer: The contractor is responsible for removal of the existing sitting cover structure, see keyed note 4 on sheet C-007.
6. Does the Staging Area need to be fenced? When will dumpster be set-up?
Answer: Yes, Staging Area must be fenced. Dumpsters will be set-up once construction begins
7. Will the RV Park remain open during construction?
Answer: Yes.
8. Reinforcement on the Slab?
Answer: See sheet KLY-674 provided by Cedar Forrest Products that has a 4" concrete slab with 6 x 6 W 4.5 x W 4.5 reinforcement.
9. Flowable Fill?
Answer: Flowable fill is to be used in locations where the new utilities do not maintain a 12-inch minimum separation from the existing utilities see keyed note 3 on sheet C-104 and C-105. Flowable fill will also be used to protect the installation of the new electrical and communication conduit at the shallow depth of 18-inches.
10. Utilities?
Answer: Existing utility data shown in plans is based on County data and needs to be verified by the contractor. Pot holes were not performed to located vertical position of utilities.
11. IRR SYS – who is responsible to replace?
Answer: Contractor will be responsible to replace
12. Is there flexibility in County's Noise Ordinance?
Answer: Noise Ordinance waivers are required for work occurring between the hours of 9:00 p.m. and 7:00 a.m., see Section 1.3.5 Conditions of Work.
13. Please provide contact information for Cedar Forest Products.
Answer: Contact that assisted in the design as shown in plans is Duke DeFillippo, duke@creativerecdesigns.com, 505-414-9866.
14. Does the job site have security cameras or fire alarm system?
Answer: There are no security cameras or a fire alarm system on Premises. Fire suppression is not a part of the Scope of Work.
15. Where is the location of FH for water?
Answer: South end of RV park.

16. Rip Rap??? – any particular species of rock?

Answer: Sheet C-101 calls out Class C rip rap. Section 602: Slope and Erosion Protection Structures of the NMDOT 2019 specifications provides additional info. / guidance. This specification section has been attached for reference.

17. Removal of some concrete railing and sidewalk?

Answer: Sheet C-007 shows removal of some existing railing and sidewalk for the installation of the new concrete pad and restroom facilities.

18. Who is responsible for removal of trees?

Answer: Contractor is responsible to remove and deliver to a planting location within Los Alamos County. Planting location will be provided during Pre-Construction Conference.

All other provisions of the Solicitation Documents shall remain unchanged. This Addendum No. 1 is hereby made a part of the Solicitation Documents to the same extent as those provisions contained in the original documents and all itemized listings thereof.

Each Respondent is requested to acknowledge receipt of this Addendum No. 1 with the Bid Forms.

I hereby acknowledge receipt of this Addendum No.1.

Signed _____ Print Name _____ Date _____

Title _____ Company _____

1.5.5 Campaign Contribution Form

Incorporated County of Los Alamos
Bid Number: IFB24-16
White Rock Visitor Center Outdoor Restrooms and Pavilion

This document must be returned with IFB submittal.

Any prospective contractor seeking to enter into a contract with the Incorporated County of Los Alamos must file this form disclosing whether they, a family member or a representative of the prospective contractor has made a campaign contribution to an applicable public official during the two (2) years prior to the date on which prospective contractor submits a proposal or, in the case of a sole source or small purchase contract, the two (2) years prior to the date prospective contractor signs the contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contractor to the public official exceeds TWO HUNDRED FIFTY DOLLARS (\$250.00) over the two (2) year period.

THIS FORM MUST BE FILED BY ANY PROSPECTIVE CONTRACTOR WHETHER OR NOT THEY, THEIR FAMILY MEMBER, OR THEIR REPRESENTATIVE HAS MADE ANY CONTRIBUTIONS SUBJECT TO DISCLOSURE.

The following definitions apply:

“Applicable public official” means a person elected to an office or a person appointed to complete a term of an elected office, who has the authority to award or influence the award of the contract for which the prospective contractor is submitting a competitive sealed proposal or who has the authority to negotiate a sole source or small purchase contract that may be awarded without submission of a sealed competitive proposal.

“Campaign Contribution” means a gift, subscription, loan, advance or deposit of money or other things of value, including the estimated value of an in-kind contribution, that is made to or received by an applicable public official or any person authorized to raise, collect or expend contributions on that official’s behalf for the purpose of electing the official to either statewide or local office. “Campaign Contribution” includes the payment of a debt incurred in an election campaign, but does not include the value of services provided without compensation or unreimbursed travel or other personal expenses of individuals who volunteer a portion or all of their time on behalf of a candidate or political committee, nor does it include the administrative or solicitation expenses of a political committee that are paid by an organization that sponsors the committee.

“Contract” means any agreement for the procurement of items of tangible personal property, services, professional services, or construction.

“Family member” means a spouse, father, mother, child, father-in-law, mother-in-law, daughter-in-law or son-in-law of:

- (a) a prospective contractor, if the prospective contractor is a natural person; or
- (b) an owner of a prospective contractor.

“Pendency of the procurement process” means the time period commencing with the public notice of the request for proposals and ending with the award of the contract or the cancellation of the request for proposals.

“Person” means any corporation, partnership, individual, joint venture, association or any other private legal entity.

“Prospective contractor” means a person who is subject to the competitive sealed proposal process set forth in the Procurement Code or is not required to submit a competitive sealed proposal because that person qualifies for a sole source or a small purchase contract.

“Representative of a prospective contractor” means an officer or director of a corporation, a member or manager of a limited liability corporation, a partner of a partnership or a trustee of a trust of the prospective contractor.

DISCLOSURE OF CONTRIBUTIONS: (Report any applicable contributions made to the following - COUNTY COUNCILORS: Theresa Cull; Denise Derkacs; Melanee Hand; Susie Havemann; Keith Lepsch; David Reagor; and Randal Ryti.)

Contribution Made By:			
Relation to Prospective Contractor:			
Name of Applicable Public Official:			
Contribution(s) Date(s)	Contribution Amount(s):	Nature of Contribution(s):	Purpose of Contribution(s):
	\$		
	\$		
	\$		
	\$		
	\$		

(Attach extra pages if necessary)

Please check the box next to the applicable statement.

	CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250.00) WERE MADE to an applicable public official by me, a family member or representative, and I have disclosed those contributions.
	NO CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250.00) WERE MADE to an applicable public official by me, a family member or representative.

Signature Date

Title (position)

SECTION 602: SLOPE AND EROSION PROTECTION STRUCTURES

602.1 DESCRIPTION

This Work consists of providing and placing riprap, gabions, revetment mattresses, sacked concrete revetment, concrete block revetment, wrapped rock faces, and other systems on the Embankment slopes and the sides and bottoms of channels, drain outlets, ditches, and other such locations.

602.2 MATERIALS

Unless otherwise specified in the Contract, the Contractor shall provide slope protection Structures as follows:

1. Hexagonal double-twisted wire mesh riprap, gabions, and revetment mattresses; or
2. Welded wire mesh gabions, revetment mattresses, and wrapped rock faces.

The Contractor shall provide galvanized slope protection items in accordance with ASTM A 641. If specified in the Contract, the Contractor shall coat galvanized items with PVC in accordance with Section 602.2.2.9, "PVC Coating."

The Contractor shall provide double-twisted riprap, gabions, and revetment mattresses in accordance with ASTM A 975. The Contractor shall provide welded wire mesh gabions, revetment mattresses, and wrapped rock faces in accordance with ASTM A 974.

602.2.1 Classifications

The Department will classify riprap and gabions in accordance with Table 602.2.1:1, "Riprap Classifications and Gabion Requirements."

The Contractor shall provide riprap with at least 80% of the stones meeting the specified size requirements. The Contractor shall use stones less than the minimum dimensions to fill voids. For riprap Class A, wrapped rock faces, and gabions, the Contractor shall not use stones smaller than the mesh openings.

The Department will classify riprap and gabions in accordance with Table 602.2.1:1 "Riprap Classifications and Gabion Requirements" with the exception of Class D, Derrick Stone. Class D, Derrick Stone will follow the gradation requirements in Table 602.2.1:2 "Gradation Requirements for Class D, Derrick Stone" shown below.

**Table 602.2.1:1
Riprap Classifications and Gabion Requirements**

Class	Description	Stone volume (ft ³)		Minimum dimension (in) ^a
		Minimum	Maximum	
A	Wire enclosed riprap	1/6	2/3	4
B ^b	Non-enclosed riprap	1	2	6
C ^b	Non-enclosed riprap	2	4	9
E	Grouted riprap	1/3	1	3
F	Grouted riprap	1	2	6
G	Rock plating	—	—	4–8 ^c

**Table 602.2.1:1
Riprap Classifications and Gabion Requirements**

Class	Description	Stone volume (ft ³)		Minimum dimension (in) ^a
		Minimum	Maximum	
N/A	Wrapped rockfacing	—	—	1
N/A	Gabions	—	—	4–8 ^c

^aMinimum size in the least dimension.

^bClass B and C stone — at least two (2) Fractured Faces.

^c70% to 80% of the stone — at least four (4) inches but not more than eight (8) inches in the smallest dimension. 30 to 20% of the stone — no larger than four (4) inches in any dimension.

**Table 602.2.1:2
Gradation Requirements for Class D, Derrick Stone**

Class, Description	Percent of Rock Equal or Smaller By Count, D _x	Range of Intermediate Dimension ¹ , (inches)	Range of Rock Weight ² , (pounds)
D, Derrick Stone ³	100	30	5000
	70	24 – 18	1780 – 2500
	40	11 – 14	360 – 500
	20	6 – 8	70 - 100

¹ Intermediate dimension measured as the shortest straight-line distance from one side of the rock or rock particle to the other on the maximum projection plane (plane of rock or rock particle with the largest projected surface area).
² Weights based on a specific gravity of 2.65.
³ Include spalls and rock fragments to provide a stable dense mass.

602.2.2 Riprap, Gabions, and Revetment Mattresses

602.2.2.1 Stone for Riprap, Gabions, Revetment Mattresses, and Rock Faces

Except for Class G riprap, the Contractor shall provide rocks or rough quarry stone with no more than 60% wear, in accordance with AASHTO T 96. The Contractor shall provide stone with a soundness loss of no more than 21, in accordance with AASHTO T 104 using a magnesium sulfate solution with a five (5)-cycle test duration.

The Contractor shall provide stone for riprap, gabions, revetment mattresses, and rockfaces in accordance with Section 602.2.1, "Classifications."

602.2.2.2 Wire Mesh

The Contractor shall provide non-raveling, double-twisted wire mesh forming hexagons for riprap, gabions, and revetment mattresses in accordance with Section 602.2.2.3, "Pull-Apart Test." The Contractor shall provide non-raveling welded wire mesh for gabions, wrapped rock faces, and revetment mattresses forming squares or rectangles in accordance with ASTM A 974, Section 7, *Material Properties*, except that the strength requirement for mattress joints is 900 lb per foot instead of 600 lb per foot.

602.2.2.2.1 Wire

The Contractor shall provide soft temper wire with a Class 3 zinc coating for constructing wire mesh in accordance with ASTM A 641. The Contractor shall provide 0.120-inch diameter wire for gabions and riprap and 0.087-inch diameter wire for revetment mattresses and wrapped rock faces.

602.2.2.2.2 Mesh Openings

The Contractor shall ensure that mesh openings are uniform and hexagonal. The Contractor shall make mesh openings for riprap and double-twisted gabions approximately 3 1/4 inch × 4 3/4 inch, and for double-twisted revetment mattresses approximately 2 1/2 inch × 3 1/4 inch. The Contractor shall make mesh openings for welded wire mesh gabions approximately three (3) inch × three (3) inch, and for welded wire mesh revetment mattresses and wrapped rock faces approximately 1 1/2 inch × three (3) inch.

602.2.2.2.3 Selvedges

The Contractor shall mechanically selvedge the edges of double-twisted gabions, revetment mattresses, and wrapped rock face, including, end panels and diaphragms. The Contractor shall use a selvedge wire with a diameter of at least 0.150 inch.

602.2.2.2.4 Lacing and Tie Wire

The Contractor shall provide lacing wire for double-twisted gabions, revetment mattresses, and wrapped rock faces with a diameter of at least 0.087 inch. The Contractor shall provide tie wire for double-twisted gabions and revetment mattresses with a diameter of at least 0.087 inch. The Contractor shall provide tie wire for riprap with a diameter of at least 0.120 inch. The Contractor shall provide lacing and tie wire with the same tensile strength and coating as the mesh wire.

602.2.2.2.5 Spiral Binders

The Contractor shall provide spiral binders for welded wire mesh gabions, revetment mattresses, and wrapped rock faces, of the same wire quality as the mesh wire with a diameter of at least 0.106 inch. Unless otherwise approved, the Contractor shall provide spiral binders with a maximum inside diameter of 2 1/2 inches and with a maximum pitch of three (3) inches.

602.2.2.2.6 Alternate Fasteners

The Contractor may use alternative fasteners, such as ring fasteners, with double-twisted wire mesh, and welded wire mesh riprap, gabions, revetment mattresses, and wrapped rock faces, if approved by the Project Manager. The Contractor shall provide wire for alternative fasteners in accordance with Section 602.2.2.2.5, "Spiral Binders."

602.2.2.2.7 Minimum Strength of Fasteners

The Contractor shall use fasteners that provide a minimum strength of 1,400 lb per foot for gabion baskets, and 900 lb per foot for revetment mattresses and wrapped rock faces.

602.2.2.2.8 Approval of Alternative Fasteners

The Contractor shall use a certified Laboratory to test alternative fasteners in accordance with Section 602.2.2.3, "Pull-Apart Test." At least 60 Days before using alternative fasteners, the Contractor shall submit CTRs to the Project Manager verifying that the fasteners meet the pull-apart test requirements.

The Contractor shall provide a description of the fastener, with drawings and photographs showing the number of fasteners required, details of the fasteners, and load capacities. In addition the Contractor shall:

1. Lock and close each interlocking fastener. For gabions, use fasteners in every other opening. For revetment mattresses and wrapped rock faces, use fasteners in every opening; and
2. Close each overlapping ring fastener and overlap ends a minimum of one (1) inch. Provide one (1) ring for each opening.

The Department will allow this fastener for forming individual baskets, but not for interconnecting baskets.

602.2.2.2.9 PVC Coating

The Contractor shall provide PVC coating with an average thickness of 0.0216 inch and a minimum thickness of 0.0150 inch per side. The Contractor shall apply PVC coating over the galvanizing.

The Contractor shall coat the galvanized wire with extruded or fusion bonded PVC Material. Unless otherwise specified, the Contractor shall use a gray or green colored coating. The Contractor shall use a PVC coating that meets the following requirements:

1. Specific gravity of from 1.20 to 1.40, if tested in accordance with ASTM D 792;
2. Abrasion resistance of less than 12% weight loss, if tested in accordance with ASTM D 1242-95A, Method B at 200 cycles, CSI-A Abrader Recording, 80 grit;
3. Brittleness temperature no higher than 15° F, if tested in accordance with ASTM D 746;
4. Tensile strength no less than 2,980 psi for extruded coating, if tested in accordance with ASTM D 412; and no less than 2,275 psi for fusion bonded coating, if tested in accordance with ASTM D 638;
5. Modulus of elasticity no less than 2,700 psi at 100% strain for extruded coating, if tested in accordance with ASTM D 412; and no less than 1,980 psi at 100% strain for fusion bonded coating, if tested in accordance with ASTM D 638;
6. Ultraviolet light exposure for a test period of no less than 3,000 h, using apparatus Type E at 145 °F, if tested in accordance with ASTM G 152; and
7. Salt spray test for a test period of no less than 3,000 h, if tested in accordance with ASTM B 117.

602.2.2.3 Pull-Apart Test

602.2.2.3.1 Sample Preparation

The Contractor shall prepare two (2) identical rectangular panels along a selvedge wire, each about 10 1/2 mesh-openings wide. The Contractor shall attach the two (2) panels along the two (2) selvedge wires using the proposed fastener system. If the Contractor uses alternative fasteners to join two (2) individual gabion baskets, the Contractor shall include two (2) additional selvedge wires (each mechanically wrapped with mesh wires) so that each fastener contains two (2) selvedges and two (2) mesh wires.

602.2.2.3.2 Test Procedures

The Contractor shall mount the joined test panels in a loading machine with grips or

clamps that secure the panels uniformly along the full width. The Contractor shall use grips or clamps designed to transmit only tension forces. The Contractor shall apply the load at a uniform rate of 50.7 lb per second until failure occurs. The Department will define failure as a drop in strength under continuous loading or, when an opening between two (2) joined selvedge wires exceeds two (2) inch. The minimum allowable strength at failure is 1,400 lb per foot for joined gabions; and 900 lb per foot for joined revetment mattresses and wrapped rock face panels.

602.2.2.4 Certification

The Contractor shall submit a certificate, to the Project Manager, stating that the following proposed items meet the requirements of this Specification before their use:

1. Wire mesh;
2. Gabion baskets;
3. Lacing wire;
4. Tie wire; and
5. Approved alternative fastener systems.

602.2.2.5 Stakes

The Contractor shall use steel railroad rails, standard weight galvanized steel pipe, or steel angles for riprap stakes. The Contractor shall use railroad rails with a unit weight of at least 30 lb per yard. The Contractor shall use standard weight galvanized steel pipe with a minimum outside diameter of four (4) inches. The Contractor shall use steel angles that are at least four (4) × four (4) × 3/8 inch.

602.2.2.6 Grout

The Contractor shall provide portland cement, aggregate, and water for grout in accordance with Section 509, "Portland Cement Concrete Mix Designs."

602.2.2.7 Material

The Contractor shall provide geotextile (filter fabric) Class one (1) as per Section 604, "Soil and Drainage Geotextiles."

602.2.3 Sacked Concrete Revetment

The Contractor shall provide sacked concrete revetment from a vendor on the Department's *Approved Products List*. The Contractor shall provide bags of concrete that weigh from 60 lb to 80 lb each, dry weight, and contain from 0.018 yd³ to 0.025 yd³ of concrete. The Contractor shall ensure each bag contains one (1) of the following mixes:

1. One (1) part cement to three (3) parts sand;
2. A mix design in accordance with the Contract; or
3. A mix design approved by the State Materials Bureau.

The Contractor shall provide a concrete mix capable of attaining a minimum compressive strength of 3,500 psi after 28 Days, unless otherwise specified in the Contract. The Contractor shall keep the sacked concrete in dry storage until application.

602.2.3.1 Packaging

The Contractor shall use permeable, biodegradable sacks made of jute, cotton, or scrim-reinforced paper that are capable of holding the sand-cement mix without significant leakage and allowing sufficient water to hydrate the concrete mix.

The Contractor shall provide non-asphaltic, three (3)-layer laminated, polyester-fiber-scrim-reinforced paper sacks. The Contractor shall perforate each of the three (3) layers and offset the perforations to prevent cement leakage.

The Contractor shall use only one (1) type and size of sack throughout the Project, unless otherwise specified in the Contract.

602.2.3.2 Portland Cement

The Contractor shall provide portland cement in accordance with Section 509, "Portland Cement Concrete Mix Designs."

602.2.3.3 Aggregate

The Contractor shall provide fine aggregate in accordance with Section 509, "Portland Cement Concrete Mix Designs."

602.2.3.4 Steel Anchorage

The Contractor shall provide steel staples in accordance with Section 540, "Steel Reinforcement." The Contractor shall use steel staples either epoxy coated in accordance with AASHTO M 284, or galvanized in accordance with ASTM A 153.

602.2.4 Concrete Block Revetment

The Contractor shall provide concrete block revetment products from the Department's *Approved Products List*. The Contractor shall provide concrete block units compatible with the geotextiles being used and with a minimum compressive strength of 3,000 psi, unless otherwise specified in the Contract.

602.3 CONSTRUCTION REQUIREMENTS

602.3.1 General Placement Requirements

The Contractor shall place riprap stones forming a continuous blanket in accordance with the Contract. Unless otherwise specified, the Contractor shall construct rock plating using riprap Class G to minimum thickness of 12 inches. The Contractor shall place stones with the long axis parallel to the toe of the slope, with a stable bearing upon the underlying soil or stones.

The Contractor shall place large stones as close together as possible. The Contractor shall use smaller stones to fill the areas between the larger stones, except when the Contract requires Class E or F (grouted) riprap.

The Contractor shall ensure that the finished riprap surface varies no more than three (3) inches from the specified slope; and derrick stone riprap varies no more than eight (8) inches from the specified slope.

Unless otherwise specified, the Contractor shall place the riprap foundation course in a trench excavated to 24 inches below the toe of the slope of the Embankment or side of channel.

The Contractor shall place a layer of Class 1 geotextile filter fabric between the slope and erosion protection Structures, and the backfill Material.

602.3.1.1 Grouted Riprap Placement

The Contractor shall fill riprap voids with grout to the full riprap thickness. After placing grout, the Contractor shall sweep the riprap surface with a stiff broom.

The Contractor shall protect grout from freezing for at least four (4) Days after placement.

The Contractor shall cure grouted riprap placed in hot, dry weather in accordance with Section 511.3.9, "Curing."

602.3.1.2 Proportioning and Mixing Grout

The Contractor shall use grout that consists of one (1) part portland cement and three (3) parts fine aggregate (by volume). The Contractor shall mix with water to a workable consistency.

602.3.1.3 Class A Riprap Placement

The Contractor shall enclose Class A riprap with wire mesh drawn tightly on all sides. The Contractor may connect wire mesh using approved fasteners or lacing wire. The Contractor shall weave adjacent edges at least once with double loops of lacing wire that is as strong and flexible as the mesh.

The Contractor shall provide continuous lacing as far as possible that passes through each mesh opening. Where splicing is necessary, the Contractor shall overlap the lacing at least 12 inches.

The Contractor shall space galvanized wire ties connecting top and bottom mesh layers approximately 24 inches on centers. The Contractor shall anchor the ties to the bottom wire-fabric layer. The Contractor shall extend the ties through the rock layer and secure to the top wire-fabric layer. The Contractor shall anchor wire-enclosed riprap to slopes with steel stakes driven into the Embankment. The Contractor shall space stakes in accordance with the Contract.

602.3.1.4 Placement of Geotextile

The Contractor shall place Class 1 non-woven geotextile (filter fabric) between the riprap or revetment mattresses and the supporting soil. The Contractor shall ensure that the fabric is in accordance with Section 604, "Soil and Drainage Geotextiles."

602.3.2 Sacked Concrete Revetment Placement

The Contractor shall place sacked concrete revetment within ± 0.2 ft of the specified grade and slope, or as directed by the Project Manager.

The Contractor shall place the foundation course in a trench excavated to 24 inches below the toe of the slope of the Embankment or side of channel. The Contractor shall stagger the sack ends and steel staple anchors of succeeding courses.

The Contractor shall tamp each row of sacks, round out the bags, eliminate wrinkles, minimize voids, and prepare an even surface for the next row.

The Contractor shall obtain the Project Manager's approval of the compaction method prior to backfill and compact soil behind each row of sacks before placing the next row. The Contractor shall not place large stones and jagged objects adjacent to the bags.

The Contractor shall anchor the sacks with steel staples without damaging the sacks.

After placing the sacks, the Contractor shall wet thoroughly and keep moist for at least three (3) Days.

602.3.3 Concrete Block Revetment Placement

The Contractor shall construct concrete block revetment systems in accordance with the manufacturer's recommendations and the Contract.

The Contractor shall remove slope obstructions, and fill voids with approved Material or grade slopes before placing concrete blocks.

602.3.4 Gabions

The Contractor shall supply gabions within \pm five percent (5%) of the manufacturer's stated sizes.

602.3.4.1 Assembly of Gabion Baskets

The Contractor shall fabricate gabions for individual assembly at the construction site.

If a gabion is greater than 1 1/2 times as long as it is wide, the Contractor shall divide the gabion into cells using diaphragms of the same wire mesh as the body of the gabion. The Contractor shall create cells that are no longer than the gabion is wide and anchor diaphragms to the base section of the gabion. The Contractor shall selvages or bind perimeter edges so the joints are as strong as the gabion body. The Contractor shall assemble perimeter edges using approved fasteners or lacing wire. The Contractor shall place fasteners in each mesh opening. The Contractor shall secure lacing wire by double looping through every other mesh opening. The Contractor shall assemble gabions using one (1) of the following:

1. Double looped lacing twice; or
2. Connect with approved fasteners and double looped lacing once.

602.3.4.2 Foundation Preparation

The Contractor shall level and compact the top six (6) in of the gabion foundation to at least 95% of maximum density in accordance with AASHTO T 180 (Modified Proctor), Method D (TTCP Modified), and to field densities in accordance with AASHTO T 310.

602.3.4.3 Placement of Gabion Baskets

The Contractor shall set assembled, empty baskets into the specified positions and wire each unit to adjacent units along the top and vertical edges before placing stone.

602.3.4.4 Placement of Gabion Stone

The Contractor shall place stone in equal layers of from nine (9) inch to 12 inch. The Contractor shall minimize local deformations by not filling a gabion more than 12 inches higher than an adjacent gabion. The Contractor shall hand place stone at exposed surfaces.

The Contractor shall provide cross-connecting wires on gabions with cells 18 inches or higher. The Contractor shall place cross connecting wires directly above each layer of stone. The Contractor shall equally space and tightly tie two (2) connecting wires in each direction for each layer through two (2) mesh openings at opposite faces of each gabion cell.

The Contractor shall maintain alignment while filling gabions (minimizing voids and bulges, and finishing to a neat square appearance).

After filling, the Contractor shall bend the lid over and tightly bind to the perimeters and diaphragms in accordance with Section 602.3.4.1, "Assembly of Gabion Baskets."

602.3.4.5 Gabion Marking

The Contractor shall mark each gabion in an identifiable manner that clearly indicates its size.

602.3.4.6 Placement of Geotextile

The Contractor shall install Class 1 non-woven geotextile (filter fabric) between gabion baskets and supporting soil, and between gabion baskets and backfill.

602.3.5 Placement of Wrapped Rock Faces

The Contractor shall place wrapped rock faces within ± 0.2 ft of the specified grade and slope.

The Contractor shall place the foundation course 18 inches below the toe of the slope of the Embankment or side of channel.

The Contractor shall place each level of welded wire forms with biaxial geogrid embedded in the rock face in accordance with the Contract, and tensioned with anchor pins to remove slack. The Contractor shall lap the geogrid a minimum of 12 inches at the edges of adjacent panels. The Contractor shall tamp the welded wire form face to eliminate wrinkles, minimize voids, and finish to an even surface.

The Contractor shall backfill and compact behind each welded wire form level before placing the next row. The Contractor shall obtain the Project Manager's approval of the compaction method.

602.4 METHOD OF MEASUREMENT

The Department will measure *Riprap Class*___ and *Sacked Concrete Revetment* based on the specified thickness and Accepted surface area.

The Department will measure *Concrete Block Revetment* and *Wrapped Rockfacing* based on the Accepted surface area.

The Department will measure *Gabions* and *Revetment Mattresses* based on the specified basket dimensions.

602.5 BASIS OF PAYMENT

Pay Item	Pay Unit
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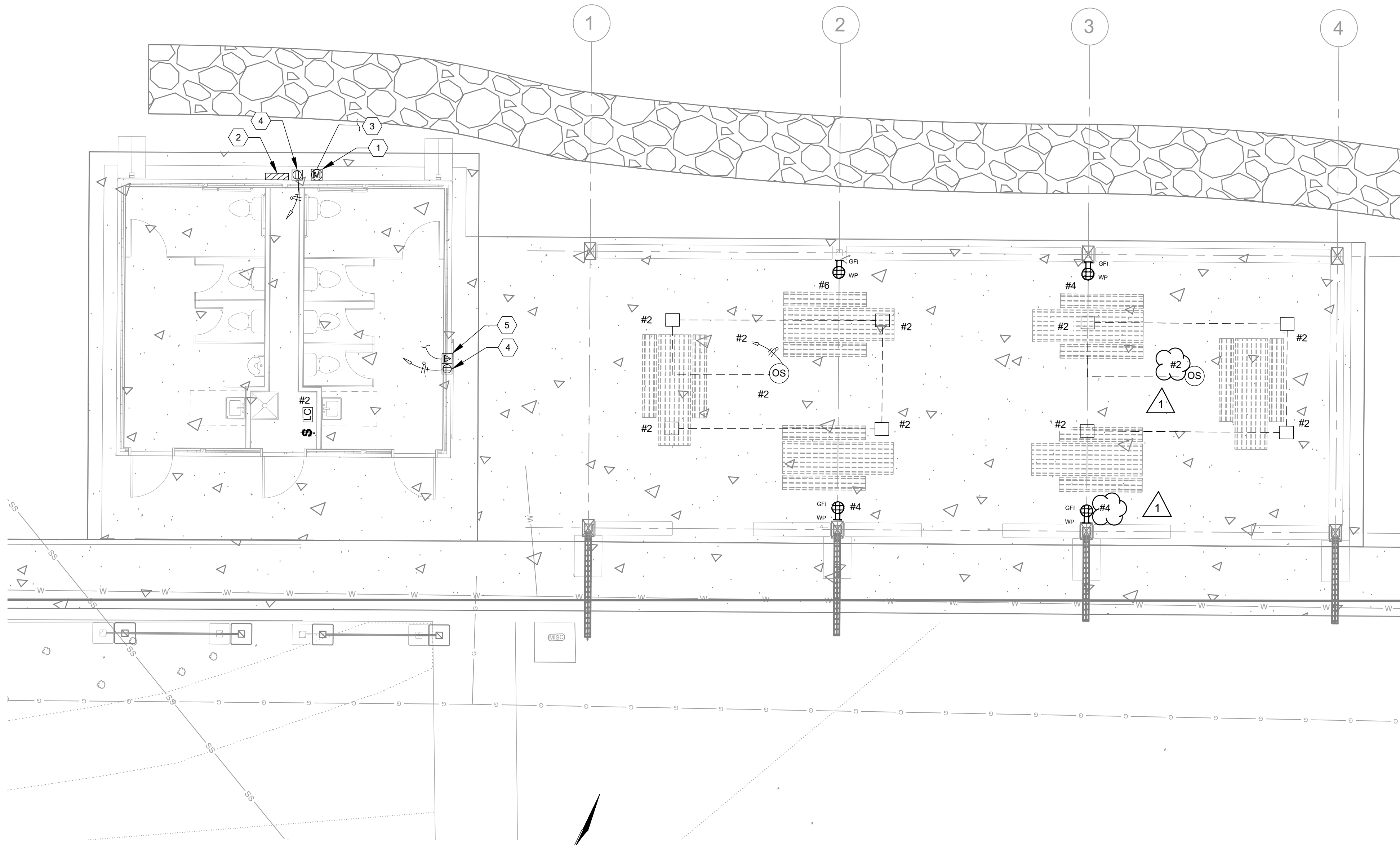
<i>Riprap Class ___</i>	Cubic Yard
<i>Riprap Class G</i>	Square Yard
<i>Sacked Concrete Revetment</i>	Cubic Yard
<i>Concrete Block Revetment</i>	Square Yard
<i>Gabions</i>	Cubic Yard
<i>Revetment Mattresses</i>	Cubic Yard
<i>Wrapped Rockfacing</i>	Square Yard

602.5.1 Work Included in Payment

The following Work and items will be considered as included in the payment for the main item(s) and will not be measured or paid for separately:

1. Excavation, backfilling and disposal of Material required for the placement of slope and erosion protection Structures;
2. Dewatering; and
3. Stakes and steel staples, drainage geotextile(s).

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1 ELECTRICAL - POWER AND LIGHTING PLAN
1" = 5'

GENERAL NOTES:

1. CIRCUIT NUMBERS SHOWN FOR REFERENCE ONLY. FEED LIGHTING FIXTURES FROM 20A, 120V, CIRCUIT BREAKER IN SERVICE PANEL. FEED RECEPTACLES FROM 20A, 120V, CIRCUIT BREAKERS IN SERVICE PANEL.
2. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
3. IF THIS SHEET IS NOT 22"x34", THEN IT IS REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
4. COORDINATE WITH MANUFACTURER DRAWINGS AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON BUILDING AND CANOPY AREA.
5. COORDINATE WITH MANUFACTURER DRAWINGS FOR LOCATIONS OF ALL ELECTRICAL EQUIPMENT.
6. OBTAIN THE SERVICES OF THE CONTROL MANUFACTURER FIELD REPRESENTATIVE TO CALIBRATE AND COMMISSION THE LIGHTING CONTROL SYSTEM AND DEVICES AND TO PROGRAM SETTINGS AND TIMECLOCK.
7. INSTALL LIGHTING SYSTEM CONTROLLER IN PLUMBING CHASE INCLUDING WIRELESS SWITCH AND ANTENNA. IF SIGNAL STRENGTH TO THE LIGHTING FIXTURES IS TOO LOW, ANTENNA SHALL BE MOVED OUTDOORS AND MOUNTED TO THE SOUTHEAST CORNER OF BUILDING.
8. MOUNT RECEPTACLES AT 18" TO CANOPY SUPPORTS.
9. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL ELECTRICAL SAFETY CODE (NESC), STATE AND LOCAL CODES, REGULATIONS AND GENERAL ORDINANCES.
10. ALL NEW WIRING AND CABLING SHALL BE PROPERLY IDENTIFIED AND TAGGED AT ALL PULL BOXES, JUNCTION BOXES, EQUIPMENT BOXES AND CABINETS.
11. ALL PULL BOXES SHALL BE UNDERGROUND, RATED FOR THE LOCATION AND PROPERLY MARKED TO INDICATE THE SERVICE THAT IS UTILIZING THE PULL BOX ("ELECTRICAL", ETC). CONTRACTOR SHALL INSTALL ADDITIONAL PULL BOXES AND JUNCTION BOXES AS NEEDED OR WHEREVER IT IS REQUIRED BY N.E.C. AND/OR REQUIRED BY THE LOCAL UTILITY PROVIDERS.
12. SHOULD CONTRACTOR AT ANY TIME NOTICE THAT THE ACTUAL FIELD CONDITIONS DO NOT CORRESPOND TO THE INFORMATION INDICATED ON THE DRAWINGS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNER, LOCAL UTILITIES AND ENGINEERING FIRM FOR CLARIFICATION AND DIRECTION PRIOR TO COMMENCING WORK.
13. WHEREVER REQUIRED, THE CONTRACTOR SHALL FURNISH AND INSTALL UNISTRUT CHANNELS, ANGLE IRON OR ANY ADDITIONAL SUPPORTS REQUIRED TO ACCOMMODATE THE INSTALLATION OF ALL ELECTRICAL EQUIPMENT AND MATERIALS.
14. ALL CONDUIT ROUTINGS SHOWN ON THE PLAN DRAWINGS ARE APPROXIMATE. EXACT ROUTINGS AND LOCATION OF CONDUITS SHALL BE COORDINATED IN THE FIELD AND INSTALLED AS FIELD CONDITIONS ALLOW.
15. LOCATIONS OF THE ELECTRICAL EQUIPMENT, PULL BOXES AND ALL OTHER DEVICES SHOWN ON THE PLAN DRAWING ARE APPROXIMATE AND SHALL BE FIELD COORDINATED. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE U.L. LISTED. SEE ELECTRICAL SPECIFICATIONS SHEET FOR ADDITIONAL REQUIREMENTS.
16. MAXIMUM VOLTAGE DROP SHALL NOT EXCEED THE FOLLOWING:
 - a. FROM SERVICE TO END LOAD - 5%
 - b. FOR FEEDER OR BRANCH CIRCUITS - 3%.

(IF FINAL INSTALLATION OF WIRING EXCEEDS ALLOWABLE VOLTAGE DROP REQUIREMENTS, THE CONTRACTOR SHALL INCREASE THE CONDUCTOR SIZE AND CONDUIT, AS NEEDED, TO MEET NEC REQUIREMENTS.)

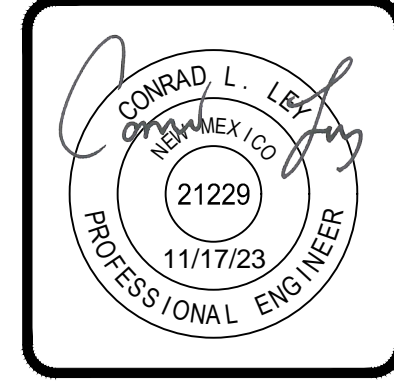
KEYED NOTES

1. NEW METER SHALL BE INSTALLED IN APPROXIMATE LOCATION SHOWN. FINAL LOCATION SHALL BE DETERMINED BY LOCATION OF INCOMING SERVICE FROM UTILITY TRANSFORMER:
 - A. METERING: 100 AMPERE, 120/240V, SINGLE PHASE, 3 WIRE SERVICE AS PER LOCAL ELECTRIC COMPANY REQUIREMENTS.
2. SERVICE PANEL COORDINATE WITH MANUFACTURER FOR LOCATION OF ALL ELECTRICAL EQUIPMENT.
3. NEW UNDERGROUND SERVICE TO NEW BUILDING: 3-#2/0 THWN CU. IN 2" SCHD 40 CONDUIT FROM METER TO EXISTING UTILITY TRANSFORMER. COORDINATE WITH LOCAL ELECTRIC COMPANY FOR REQUIREMENTS, FINAL CONNECTIONS AND EXACT LOCATION OF UTILITY TRANSFORMER.
4. INSTALL A 20A GFCI DUPLEX RECEPTACLE ALONG THE FRAME OF THE NEW TV SCREEN ENCLOSURE. RECEPTACLE WILL BE LOCATED INSIDE THE ENCLOSURE AND UTILIZED FOR A FLAT SCREEN TV TO BE INSTALLED. COORDINATE WITH ARCHITECTURAL PLANS FOR THE EXACT LOCATION OF THE TV PRIOR TO ANY INSTALLATION. POWER TO NEW RECEPTACLE WILL BE FED FROM NEW PANEL INSTALLED WITH BUILDING.
5. A NEW DATA RECEPTACLE WILL BE INSTALLED ALONG THE FRAME OF THE NEW TV SCREEN ENCLOSURE, NEXT TO THE RECEPTACLE. DATA RECEPTACLE WILL BE LOCATED INSIDE THE ENCLOSURE AND UTILIZED FOR A FLAT SCREEN TV TO BE INSTALLED. FINAL INSTALLATION OF DATA CABLE TO BE COMPLETED BY OTHERS. PROVIDE AND INSTALL CONDUIT WITH PULLSTRING FROM RECEPTACLE TO CHASE.
6. PENDANT MOUNT LIGHT FIXTURE 8'-4" ABOVE FLOOR. PROVIDE PENDANT AND SWIVEL MOUNTING KIT TO INSTALL FIXTURE PARALLEL TO FLOOR.

LEGEND

DESCRIPTION	CATALOG NO.
HOLOPHANE PARKPAK SQUARE LED, LED PERFORMANCE PACKAGE, CCT, ZERO UPLIGHT, TYPE V, PENDANT MOUNT WITH SWIVEL KIT. PROVIDE 120V CIRCUIT.	PPSQL2 P10 30K XX FC T5W PSM
WIRELESS, BATTERY-POWERED, DIMMER SWITCH. 3-BUTTON - ON/OFF, DIM UP, DIM DOWN.	NLIGHT AIR RPOD MICRO RPODU DX WH G2, NGRAVE FA3
WIRELESS LIGHT SYSTEM CONTROLLER, WITH ANTENNA. PROVIDE 120V CIRCUIT	NLIGHT ECLYPSE NEC MVOLT REMR ENC AIR
GFI TYPE QUAD RECEPTACLE IN WEATHERPROOF ENCLOSURE. PROVIDE 120V CIRCUIT.	
COMBINATION DAYLIGHT/MOTION SENSOR, MOUNT OUTDOOR, LARGE MOTION/EXTENDED RANGE 360 DEGREE LENS, CURRENT MONITORING, GENERATION TWO. PROVIDE 120V CIRCUIT.	NLIGHT AIR BOX RSBO 10 IM XX G2
- - - - - DASH LINE INDICATES 0-10V CONTROL WIRE IN 3/4" RMC.	

NO.	REVISION DESCRIPTION	DATE	BY
5			
4			
3			
2			
1	ADDENDUM NO. 1	11/17	CL



DESIGNED BY: CL	DATE: OCTOBER 2023
DRAWN BY: YEM	
CHECKED BY: ESC	
APPROVED BY: NM	
SCALE:	

WHITE ROCK VISITOR CENTER ADDITIONS
 PROJECT BID NO. IFB 24-16
ELECTRICAL- POWER AND LIGHTING PLAN

COUNTY OF LOS ALAMOS
 PUBLIC WORKS DEPARTMENT
 1000 CENTRAL AVE
 LOS ALAMOS, NEW MEXICO 87544

SHEET
E-101