

PERSONS RECEIVING THIS ITB FROM THE INTERNET OR BY FAX MUST CALL (505-384-2369) or E-MAIL jeng@emwgas.org AND REGISTER THEMSELVES AS A BIDDER.

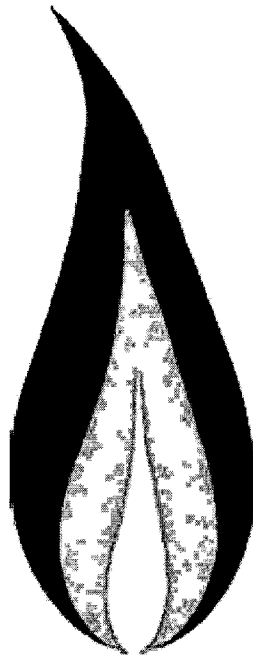
**INVITATION TO BID
ITB # 2021-1
CNG CANOPY
(Commodity Code #15585)**

Bid Posting Date

July 23, 2021

Bid Submittal Due Date

August 3, 2021
10:00 A.M. MST



TO:

**Jennifer Gauna, Chief Procurement Officer
416 5th Street
Estancia, NM 87016
505-384-2369
jeng@emwgas.org**

CNG Canopy
ITB 2021-1
Commodity Code: 15585

EMW Gas Association desires to solicit qualified bids for the materials and installation of a CNG Public Access Fueling Station Canopy. The fueling station is in Moriarty, NM, Torrance County. Delivery of Bids is the sole responsibility of the Bidder. No electronic bids will be accepted. Sealed bids will be received at EMW Gas Association, by no later than **10:00 a.m. MDT on Thursday, August 3, 2021.**

All bids shall be marked **"Invitation to Bid 2021-1, CNG Canopy"** and should be submitted to Jennifer Gauna, CPO, at jeng@emwgas.org.

Background and General Information

Founded in 1964 by Joint Powers Agreement between the Town of Estancia, City of Moriarty, and the Village of Willard, EMW Gas Association ("EMW") is a local governmental public body and an inter-community supplier of natural gas to approximately 5000 metered consumers in the Estancia Valley in Torrance, Santa Fe and Bernalillo Counties.

Scope of Work

The successful Bidder will have the capability to provide products as specified in this Invitation to Bid.

(See Attachment C & D Section 13100 Engineered Canopy Systems – Small Arrow Engineering, LLC

Section 13120 Pre-Engineered and Fabricated Structures – Small Arrow Engineering, LLC; Site & Map Plans)

If not previously registered as a qualified bidder, a W-9 form must be submitted upon award along with a New Mexico Taxation and Revenue Registration Number, if available.

(See Attachment B. IRS Form W-9: Request for Taxpayer Identification Number and Certification)

GENERAL PROVISIONS

Proposals

Cash discount must be shown on bid; otherwise, prices will be considered net. Unless prices and all information requested are complete, bid may be disregarded and given no consideration. EMW Gas Association's preferred payment term is 2% Net 10th. This Invitation for Bid shall result in a firm, fixed price contract. **All bids must be signed with the firm's name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.**

Submission of Bids

Each bid must be submitted via hand delivered, or delivered via USPS to PO Box 118, Estancia, NM 87016-0118, or UPS or FEDEX to 416 5th St., Estancia, NM 87016. Each bid must be signed as indicated above. Information must be furnished complete in compliance with the terms, conditions, provisions, and specifications of the Invitation to Bid. The information requested and the manner of submission is essential to permit prompt evaluation of all bids on a fair and uniform basis. Accordingly, EMW reserves the right to declare as non-responsive, and reject any bid in which material information requested is not furnished or where indirect or incomplete answers or information is provided. Any bid modifications or corrections thereof received after the closing time specified will not be considered. No telephone bids will be accepted.

Term of Agreement

The term of this Agreement shall begin August 4, 2021, and end September 30, 2021.

Modification

The Agreement shall not be modified, except by written amendment, executed by all parties. Oral change orders are not permitted. No change in the Agreement shall be made unless EMW gives prior written approval. Any specification changes not properly ordered by written modification to the Agreement executed by EMW shall be void at the sole option of EMW and VENDOR shall be liable for all costs or expenses arising there from and/or for satisfactorily correcting or replacing same.

Single Bid Response

If only one bid is received in response to the Invitation to Bid, a detailed bid review may be requested of the single bidder. A cost/price analysis and evaluation and/or audit may be performed of the bid price to determine if the price is fair and reasonable.

Bid Withdrawal

After the bids are opened, bids may not be withdrawn for thirty (30) calendar days. Prior to the date/time set for the bid opening, however, bids may be modified or withdrawn by the bidder's authorized representative in person, or by written notice. If bids are modified or withdrawn in person, the authorized representative shall make his identity known and shall sign a receipt for the ITB. Written notices shall be received in the office indicated in this Invitation to Bid no later than the exact date/time for the bid opening. A written modification or withdrawal received in the designated office by mail or facsimile from the receiving office no later than the date/time set for the bid opening shall be considered if such message is confirmed by receipt of the CPO.

Award

EMW reserves the right to accept bids, award bids and/or not award bids, to reject any or all bids, to waive any informality in the bid, and to accept the bid that appears from all consideration to be for the best interest of EMW. In determining and evaluating the best bid, The Chief Procurement Officer shall be the sole judge in the determination of these matters. Notice of bid

award, if bid is awarded, will be made within two (2) days after the scheduled closing time for receipt of bids.

Receipt of the official Purchase Order of EMW covering the services described in the ITB will indicate the award of the bid and a contract to purchase.

State and Local Tax

Prices quoted shall include State and/or Local Gross Receipts tax for labor only. Upon receipt of the awarded bidder's New Mexico State ID number (if applicable) or Federal Employee ID (as identified on Federal Form W-9) EMW will submit a Non-Taxable Transaction Certificate to the awarded bidder to authorize the omission of state and/or Local Gross Receipts tax from any invoices generated by this award for required materials. Invoice billing will be paid in accordance with the contract payment schedule.

Payment Process

The VENDOR shall submit invoice to EMW, Accounts Payable, P. O. Box 118, Estancia, NM 87016.203. **W-9 to be submitted upon award.**

Legality

If any provisions of this Bid shall be held to be invalid, illegal, or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Bid Contents

Responsible bidders shall submit the signed Bid Form. Additional information is optional but may also be provided.

PLEASE NOTE THAT NO ELECTRONIC BIDS WILL BE ACCEPTED.

Bid Pricing

Contract price will remain firm thru September 30, 2021.

Bid Evaluation

EMW's General Manager and Chief Procurement Officer (CPO) will review all bids submitted and recommend award based on best price from a responsive, responsible bidder. The results of the bid opening will be submitted to the Board of Directors for final approval. The EMW Gas Association Board of Directors reserves the right to reject any or all bids and to accept the bid deemed to serve the best interest of EMW Gas Association. The Board of Directors meets the third Tuesday of every month. Evaluation of bids is expected to be complete within two (2) days after their receipt.

Estimated Schedule

July 23, 2021	Bid Post Date
August 3, 2021	All Bids Due: Bid Opening 10:00 a.m., 416 5th St., Estancia, NM
August 3, 2021	Board of Directors' Approval of Award
August 4, 2021	Award, Purchase Order Issued
August 5, 2021	Start of Foundation Discussions
August 23, 2021	Expected Delivery of Materials and Start of Erection

Bidder Inquiries

For information concerning ITB process and additional information, contact:

John H. Bolte. P.E.
Principle
Small Arrow
Engineering
417-624-2333
417-291-5530
[johnbolte@small-
arrow.com](mailto:johnbolte@small-arrow.com)

Jennifer Gauna
Chief Procurement Officer
416 5th Street
Estancia, NM 87016
(505) 384-2369 Voice
(505) 384-2234 Fax
jeng@emwgas.org

ATTACHMENT A: SPECIFICATIONS AND PRICING DOCUMENT

Project Name: CNG CANOPY
 Project No. 2021-1

To the EMW Gas Association (hereinafter called "**Owner**"):

1. The undersigned (hereinafter called "**Bidder**") in compliance with your invitation for bids to supply the materials as listed below, having carefully examined the Contract Documents below. These unit prices are to cover all expenses incurred in supplying materials required.

All TOTAL amounts of the Bid shall be shown in both words and figures. In case of discrepancies, the amount shown in words will govern.

2. Bid - Unit Prices

Bid Item #	Commodity Code		Item Description	Qty	Unit	Unit Price	Amount
1	15585		24' X 40' CNG Fueling Canopy w/4 Columns w/Roof Drains w/LED Lights and Facia w/Signage/Artwork	1	LS		
2	n/a	n/a	Installation Cost/Labor	1	LS		
3	n/a	n/a	Gross Receipts Tax (on labor only)	7.6875%	LS		

Base Bid – Subtotal of Bid Items No. 1 through 3 \$ _____

_____ Dollars (Base Bid Total amount written in words)

- 3. The **Bidder** agrees that this Bid Proposal may not be withdrawn for a period of thirty (30) calendar days after the scheduled closing time for receipt of bids.
- 4. The **Bidder** accepts all the terms and conditions contained in the Contract Documents.
- 6. If the Contract is to be awarded, the **Owner** will give the apparent successful **Bidder** a Notice of Award within two (2) days after the scheduled closing time for receipt of bids.
- 7. Within (2) days of **Bidder's** receipt of Notice of Award and accompanying Purchase Order, **Bidder** will execute and deliver order confirmation indicating delivery date on or before **August 23, 2021**.
- 8. If requested, by the **Owner**, the **Bidder** agrees to furnish to the **Owner** all information and data necessary for the **Owner** to determine the ability of the **Bidder** to supply materials according to listed specifications.

We, the undersigned, have read all the requirements set forth in this bid proposal regarding the articles being bid on, and we agree to furnish these articles at the prices stated.

This Bid Proposal is hereby respectfully submitted by:

_____ Company Name of Bidder

Address: _____

_____ Signature

_____ Date

_____ Printed Name

_____ Email Address

NM Tax ID: _____

_____ Title

_____ Phone Number

FEIN: _____

Attachment B

Form W-9 (Rev. December 2014) Department of the Treasury Internal Revenue Service	Request for Taxpayer Identification Number and Certification	Give Form to the requester. Do not send to the IRS.
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Print or type See Specific Instructions on page 2	1 Name (as shown on your income tax return). Name is required on this line, do not leave this line blank.		
	2 Business name/disregarded entity name, if different from above		
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ <small>Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.</small> <input type="checkbox"/> Other (see instructions) ▶ _____		4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <small>(Applies to accounts maintained outside the U.S.)</small>
	5 Address (number, street, and apt. or suite no.)		Requester's name and address (optional)
	6 City, state, and ZIP code		
	7 List account number(s) here (optional)		

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter

Social security number	
[] [] [] - [] [] - [] [] [] []	
OR	
Employer identification number	
[] [] [] [] - [] [] - [] [] [] [] [] [] [] []	
OR	
Employer identification number	
[] [] [] [] - [] [] - [] [] [] [] [] [] [] []	

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	Signature of U.S. person ▶	Date ▶
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2

By signing the filled-out form, you:

SECTION 13100**ENGINEERED CANOPY SYSTEMS****PART 1 GENERAL****1.1 QUALITY ASSURANCE**

- A. Engineered Canopy System manufacturer shall have a minimum of 15 years of experience.
- B. Canopy Manufacturer shall have a current American Institute of Steel Construction (AISC) SBR Certification.
- C. All materials shall be delivered to the job site on trucks that are directly owned and operated by the Canopy System manufacturer

1.2 SYSTEM DESCRIPTION

Engineered Canopy System shall be pre-engineered and pre-fabricated using only the highest quality materials available. Recycled or salvaged steel, decking and fascia are not acceptable. Engineered Canopy System shall be completely flat decked. The Engineered Canopy System shall have a complete perimeter guttering system designed to drain back to a centralized gutter that carries roof water to the columns for collection and dispersal via an external downspout or internal PVC drain system.

1.3 PERFORMANCE REQUIREMENTS

Design, fabricate, and erect the canopy system to withstand loads from winds, gravity, and structural movement, and resist in-service use without failure. Design members to withstand stresses resulting from combinations of loads that produce maximum allowable stresses prescribed Metal Building Manufacturers Association (MBMA) Design Practices Manual and International Building Code (IBC) 2018, American Society of Civil Engineers (ASCE) 7-16 or as specified.

- A. Design Loads: Basic design loads to be withstood are indicated below:
(These are minimum requirements)

Governing Building Code:	Per IBC 2018 or as specified
Roof Dead:	Self weight unless additional specified
Roof Live:	Per ASCE 7-16 or as specified
Snow Drift:	Per IBC 2018 or as specified
Seismic:	As required by local code
Wind Loads:	Per ASCE 7-16 or as specified
Uplift:	Per ASCE 7-16 or as specified

1.4 STRUCTURAL FRAMING AND ROOF PANELS

Design structural members and exterior coverings for applicable loads and combinations of loads in accordance with latest edition of Metal Building Manufacturers Association (MBMA) Design Practices Manual and IBC 2018 or Local Code.

- A. Structural Steel: Comply with the latest edition of AISC Specification for Design, Fabrication and Erection of Structural Steel for Buildings for design requirements and allowable stresses.
- B. Light Gauge Steel: For design requirements and allowable stresses, comply with latest edition of AISC Specification for the Design of Cold-Formed Steel Structural Members and Design of Light Gauge Steel Diaphragms.

1.5 SUBMITTALS

Submit the following in accordance with the Conditions of the Contract:

- A. Product Data: Include manufacturer's product information for building components and accessories.
- B. Shop Drawings: Provide shop drawings for structural framing system, roofing, and fascia panels, and accessories not fully detailed or dimensioned in manufacturers product data.
 - 1. Structural Framing: Furnish erection drawings for submittal to secure permits. Include fabrication and assembly details. Show anchor bolt details and roof framing.
 - 2. Roofing and Fascia Panels: Provide panel layouts and details of edge conditions, joints, corners, custom profiles, support bracing, anchorages, trim, flashing, closures, and special conditions.

1.6 PRODUCT CERTIFICATION

Certification must be prepared and signed by a Professional Engineer with 5 years of continuous experience in canopy design and registered in the state for which the project is being built verifying that structural framing and covering panels meet local loading requirements and codes.

1.7 SYSTEM SPECIFICATIONS

The Engineered Canopy System submittal from the canopy system manufacturer will be reviewed for approval by the Engineer.

PART 2 PRODUCTS

2.1 METALS

Metal products shall be as specified by the ASTM International standards listed or as otherwise specified. Provide the following as required:

- A. Structural Steel Tubing: ASTM A500, Grade B, with a minimum yield stress of 46,000 psi.
- B. Steel Members Fabricated from Plate or Bar Stock: ASTM A529, A570, or ASTM A572. Provide 36,000-psi minimum yield strength.

- C. Steel Members Fabricated by Cold Forming: ASTM A607, Grade 50.
- D. Structural Quality Zinc-Coated (Galvanized) Steel Sheet: Roof deck shall be a minimum thickness of 20 gauge and a minimum yield of 40,000 PSI to meet ASTM A653, with a G60 coating complying with ASTM A924.
- E. Fascia Materials: Aluminum Composite Material Panel to be constructed with a 3mm thick pre-finished ACM substrate. Finish color shall be factory applied. Color shall be any stock color.
- F. Structural Bolts: ASTM A325 minimum.
- G. Beams: ASTM A572, 50,000 PSI

2.2 PAINT MATERIALS

Comply with performance requirements of federal specifications indicated.

- A. Shop primer for ferrous metals: Fast-curing, lead free universal primer per Federal Specification TT-P-645B or TT-P-645C. The primer thickness shall be a minimum of 2 mils.
- B. Deck Materials have a coil coated polyester finish.

2.3 STRUCTURAL FRAMING

- A. Rigid Frames: Crossbeams and purlins shall be factory welded, shop primed, wide flange shapes with structural attaching plates and or splice members to suit project conditions. All attachments shall be factory drilled for field bolted connections. Field welding and fabrication is unacceptable.
- B. Columns: Structural Steel Tubing ASTM A500, Grade B, minimum yield stress of 46,000 psi.
 - 1. Provide means for tank vent piping and electrical conduit as required or as specified on drawings.
 - 2. Provide 14 gauge external collector boxes or 7 gauge internal drain boxes at each column to collect drain water from the guttering system. Collector boxes used as required.

PART 3 EXECUTION

3.1 ERECTION

Erect framing true to line, plumb, level, rigid and secure. Level baseplates are to be true even plane with bearing to supporting structures, set with double-nutted anchor bolts. Anchor bolts shall be a minimum of 1 1/4" in diameter, 30" long with a 5" hook. Contractor shall use non-shrinking grout under the baseplate to obtain uniform bearing and maintain level baseline elevation. Moisture cure the grout for 7 days after its placement.

3.2 ROOF PANELS

Fasten panels to purlins with galvanized steel clip fasteners. Avoid panel creep or application not true to line. Protect factory finishes from damage. Field cutting of panels by torch is not permitted.

3.3 SHEET METAL ACCESSORIES

Install gutters, downspouts, and other accessories for positive anchorage to structure and weather tight mounting. Use only high quality sealant designed for outdoor use on sheet metal.

3.4 FACIA SECTIONS

Install fascia sections, trim and related accessories per manufactures specifications for the style of fascia used on this project.

Install screw fasteners with power tools having controlled torque as to not strip screw threads and or damage fascia material.

3.5 CLEANING AND TOUCH-UP

Clean component surfaces. Touch up abrasions, marks or minor defects to shop primed surfaces. Stack all waste materials and packaging in appropriate facility. If appropriate facility is not provided, stack material neatly out of the way.

END OF SECTION

SECTION 13120**PRE-ENGINEERED AND FABRICATED STRUCTURES
(CANOPY / CARPORT SYSTEMS)****PART 1 GENERAL****1.01 SYSTEM DESCRIPTION**

Engineered Canopy/Carport Systems shall be pre-engineered and pre-fabricated using only the highest quality materials available. Recycled or salvaged steel, decking and fascia are not acceptable. Engineered Canopy Systems over refueling dispensers shall be completely flat decked. The Engineered Canopy System over refueling dispensers shall have a complete perimeter guttering system designed to drain back to a centralized gutter that carries roof water to the columns for collection and dispersal via an external downspout or internal PVC drain system.

1.02 PERFORMANCE REQUIREMENTS

Design, fabricate, and erect the canopy system(s) to withstand loads from winds, gravity, and structural movement, and resist in-service use without failure. Design members to withstand stresses resulting from combinations of loads that produce maximum allowable stresses prescribed Metal Building Manufacturers Association (MBMA) Design Practices Manual, International Building Code (IBC) 2018, and the American Society of Civil Engineers (ASCE) Chapter 7-16.

- A. Design Loads: Basic design loads to be withstood are indicated below:
(These are minimum requirements)

Governing Building Code:	IBC 2018
Roof Dead:	Self weight
Roof Live:	IBC 2018 Section 1607: 20 PSF Uniform; 300 LB Concentrated
Snow Loads:	IBC 2018 Section 1608: 20 PSF Uniform
Seismic:	Per ASCE 7-16, Chapter 11: Design Category: B $I_e = 1.00$
Wind Loads:	IBC 2018 Section 1609 and per ASCE 7-16, Chapter 26: Basic Wind Speed 105 mph Exposure Category: B Surface Roughness Category: B

1.03 STRUCTURAL FRAMING AND ROOF PANELS

Design structural members and exterior coverings for applicable loads and combinations of loads in accordance with latest edition of Metal Building Manufacturers Association (MBMA) Design Practices Manual and IBC 2018 or Local Code.

- A. Structural Steel: Comply with the latest edition of AISC Specification for Design, Fabrication and Erection of Structural Steel for Buildings for design requirements and allowable stresses.

- B. Light Gauge Steel: For design requirements and allowable stresses, comply with latest edition of AISC Specification for the Design of Cold-Formed Steel Structural Members and Design of Light Gauge Steel Diaphragms.

1.04 SUBMITTALS

Submit the following in accordance with the Conditions of the Contract:

- A. Product Data: Include manufacturer's product information for building components and accessories.
- B. Shop Drawings: Provide shop drawings for structural framing system, roofing, and fascia panels, and accessories not fully detailed or dimensioned in manufacturers product data.
 - 1. Structural Framing: Furnish erection drawings for submittal to secure permits. Include fabrication and assembly details. Show anchor bolt details and roof framing.
 - 2. Roofing and Fascia Panels: Provide panel layouts and details of edge conditions, joints, corners, custom profiles, support bracing, anchorages, trim, flashing, closures, and special conditions.

1.05 PRODUCT CERTIFICATION

Certification must be prepared and signed by a Professional Engineer with 5 years of continuous experience in canopy design and registered in the state for which the project is being built verifying that structural framing and covering panels meet local loading requirements and codes.

1.06 SYSTEM SPECIFICATIONS

The Engineered Canopy System submittal from the canopy system manufacturer will be reviewed for approval by the Engineer.

1.07 QUALITY ASSURANCE

- A. Engineered Canopy System manufacturer shall have a minimum of 15 years of experience.
- B. Canopy Manufacturer shall have a current American Institute of Steel Construction (AISC) SBR Certification.
- C. All materials shall be delivered to the job site on trucks that are directly owned and operated by the Canopy System manufacturer

PART 2 PRODUCTS

2.01 METALS

Metal products shall be as specified by the ASTM International standards listed or as otherwise specified. Provide the following as required:

- A. Hot Rolled Structural wide flange steel: ASTM A992 or ASTM A572, with a minimum yield stress of 50,000psi.
- B. Other Hot Rolled Structural Steel: ASTM A36, with a minimum yield stress of 36,000psi.
- C. Structural Steel Tubing: ASTM A500, Grade B, with a minimum yield stress of 46,000 psi.
- D. Steel Members Fabricated by Cold Forming: ASTM A607, Grade 50.
- E. Structural Quality Zinc-Coated (Galvanized) Steel Sheet: Roof decking shall be a minimum thickness of 20 gauge (unless otherwise noted on the drawings) and a minimum yield of 40,000 PSI to meet ASTM A653, with a G60 coating complying with ASTM A924.
- F. Fascia Materials: Aluminum Composite Material Panel to be constructed with a 3mm thick pre-finished ACM substrate. Finish color shall be factory applied. Color shall be any stock color.
- G. Structural Bolts: ASTM A325 minimum. Light Gage steel connection bolts: ASTM A307.

2.02 PAINT MATERIALS

Comply with performance requirements of federal specifications indicated.

- A. Shop primer for ferrous metals: Fast-curing, lead free universal primer per Federal Specification TT-P-645B or TT-P-645C. The primer thickness shall be a minimum of 2 mils.
- B. Deck Materials have a coil coated polyester finish.

2.03 STRUCTURAL FRAMING

- A. Rigid Frames: Crossbeams and purlins shall be factory welded, shop primed, wide flange shapes with structural attaching plates and or splice members to suit project conditions. All attachments shall be factory drilled for field bolted connections. Field welding and fabrication is unacceptable.
- B. Columns: (for canopy over refueling dispensers, compressors or ASME vessels)
 - 1. Provide means for tank vent piping and electrical conduit as specified on drawings.
 - 2. Provide 14 gauge external collector boxes or 7 gauge internal drain boxes at each column to collect drain water from the guttering system. Collector boxes used as required.

PART 3 EXECUTION

3.01 ERECTION

A. Dispenser / Compressor / ASME Vessel Canopy: Erect framing true to line, plumb, level, rigid and secure. Level baseplates are to be true even plane with bearing to supporting structures, set with double-nutted anchor bolts. Anchor bolts shall be a minimum of 1 1/4" in diameter, 30" long with a 5" hook. Contractor shall use non-shrinking grout under the baseplate to obtain uniform bearing and maintain level baseline elevation. Moisture cure the grout for 7 days after its placement.

3.02 ROOF PANELS

Fasten panels to purlins with galvanized steel clip fasteners. Avoid panel creep or application not true to line. Protect factory finishes from damage. Field cutting of panels by torch is not permitted.

3.03 SHEET METAL ACCESSORIES

Install gutters, downspouts, and other accessories for positive anchorage to structure and weather tight mounting. Use only high quality sealant designed for outdoor use on sheet metal.

3.04 FACIA SECTIONS

Install fascia sections, trim and related accessories per manufactures specifications for the style of fascia used on this project.

Install screw fasteners with power tools having controlled torque as to not strip screw threads and or damage fascia material.

3.05 CLEANING AND TOUCH-UP

Clean component surfaces. Touch up abrasions, marks or minor defects to shop primed surfaces. Stack all waste materials and packaging in appropriate facility. If appropriate facility is not provided, stack material neatly out of the way.

PART 4 MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

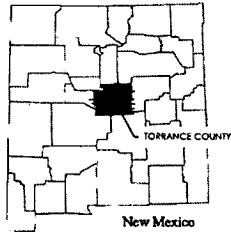
Measurement for the Pre-Engineered and Fabricated Structures installation will be made at the Contract unit price per each, complete in place, at each location installed and accepted by the Engineer.

4.02 PAYMENT

All costs incurred by the Contractor by reason of compliance to satisfy the requirements under this section shall be considered incidental to and completely covered by the Contract unit price for the following bid items:

<u>Description</u>	<u>Unit(s)</u>
Pre-Engineered and Fabricated Structure (Canopy)	Each

END OF SECTION



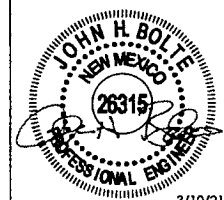
EMW GAS ASSOCIATION PUBLIC CNG STATION SITE AND MEP PLANS

LOCATED AT
614 U.S. ROUTE 66 (W)
MORIARTY, TORRANCE COUNTY, NEW MEXICO 87035



216 S. MAIN STREET
P.O. BOX 1538
JOPLIN, MISSOURI 64802
TEL 417.624.2333
FAX 417.624.2441
EMAIL jsa@small-arrow.com

SMALL ARROW ENGINEERING, LLC
CERTIFICATES OF AUTHORIZATION:
MISSOURI E-2010013647
KANSAS E-1920
ARKANSAS 2097
OKLAHOMA 5937



JOHN H. BOLTE, PROFESSIONAL ENGINEER
MO LIC E22511 OR LIC 18355
KS LIC 14094 AR LIC 14310

PUBLIC ACCESS CNG STATION
E.M.W. GAS ASSOCIATION
614 U.S. Route 66 (W)
MORIARTY, NM 87035
COVER SHEET, INDEX, LOC. MAP

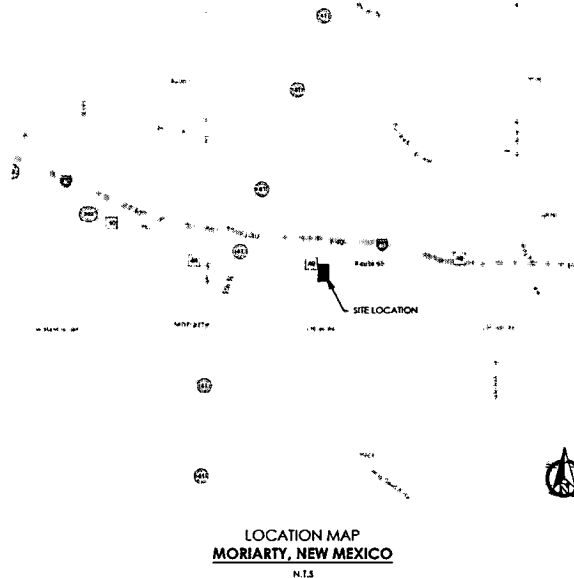
GENERAL NOTES

1. ALL CONSTRUCTION ACTIVITIES AND MATERIALS SHALL FOLLOW/MEET LOCAL CODES AND SPECIFICATIONS.
2. CONTRACTORS SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER BEFORE CONSTRUCTION BEGINS.
3. EXISTING UTILITIES HAVE BEEN SHOWN WITH INFORMATION AVAILABLE. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING INSTALLATION OF NEW FACILITIES. CONTACT THE ENGINEER FOR INSTRUCTIONS WHEREVER ANY CONFLICTS ARE DISCOVERED.
4. IT IS THE CONTRACTORS RESPONSIBILITY TO CORRECT ANY DAMAGE TO UTILITIES OR OTHER IMPROVEMENTS WHICH IS DUE TO HIS OPERATION.
5. THE CONTRACTOR SHALL STRICTLY COMPLY WITH ALL OSHA SAFETY RULES AND REGULATIONS AND USE ONLY APPROVED EQUIPMENT REQUIRED FOR THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL STRICTLY COMPLY WITH ALL OSHA SAFETY RULES AND REGULATIONS AND USE ONLY APPROVED METHODS OF EXCAVATION, TRENCHING AND SHORING METHODS DESCRIBED IN OSHA 29 CFR 1926.650. THE CONTRACTOR SHALL MAINTAIN AND CLOSELY SUPERVISE ALL SAFETY PRACTICES AND CODES. EXTREME CARE SHALL BE TAKEN TO SAFEGUARD THE PUBLIC AND THE EMPLOYEES OF THE CONTRACTOR.

GENERAL INSTALLATION SPECIFICATIONS

- ENTIRE FACILITY SHALL BE CONSTRUCTED PER 2013 NFPA 52, THE 2015 IFC AND ALL APPLICABLE AMENDMENTS.
(CONTRACTOR TO PROVIDE EQUIPMENT SUBMITTALS TO ENGINEER FOR APPROVAL.)
1. EACH EMERGENCY SHUT DOWN DEVICE SHALL BE EQUIPPED WITH A 20 LB BC RATED (CO2) FIRE EXTINGUISHER MOUNTED IN SURFACE CABINET.
 2. EXPOSED BARE STEEL SHALL BE PAINTED WITH METAL PRIMER AND TWO COATS LATEX GALVANIZED METAL MAY REMAIN EXPOSED. ALL EXPOSED STEEL GAS INLET PIPING SHALL BE PAINTED WHITE.
 3. INSTALL ALL HARDWARE PER MANUFACTURER'S INSTRUCTIONS.
 4. EMERGENCY SHUTDOWN SYSTEM (ESD) IS DESIGNED TO SHUT OFF THE FLOW OF GAS FROM THE COMPRESSOR TO THE PRIORITY PANEL, FROM THE STORAGE CYLINDERS TO THE PRIORITY PANEL, AND FROM THE PRIORITY PANEL TO THE DISPENSERS AND DESIGNED TO SHUT DOWN THE COMPRESSOR MOTOR. THE RELAYS REQUIRED FOR THE ESD WILL BE INSTALLED ON THE COMPRESSOR CONTROL PANEL. THIS WILL ALLOW THE ESD SYSTEM TO SHUT OFF THE COMPRESSOR INLET SOLENOID VALVE INCORPORATED INTO THE COMPRESSOR PACKAGE AND PRIORITY PANEL. ONE ESD BUTTON WILL BE MOUNTED ON/ADJACENT TO EACH COMPRESSION SKID. REMOTE ESD BUTTONS WILL BE MOUNTED IN THE DISPENSER AREA PER EQUIPMENT PLAN VIEW. SEE PLAN VIEW FOR LOCATIONS. SHUT DOWNS WILL BE RED PUSH BUTTON TYPE SUITABLE FOR INSTALLATION IN CLASSIFIED LOCATIONS AS DEFINED ON ELECTRICAL PLANS AND BY NFPA 52.

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PHONE:	(505) 384-2369



INDEX OF SHEETS

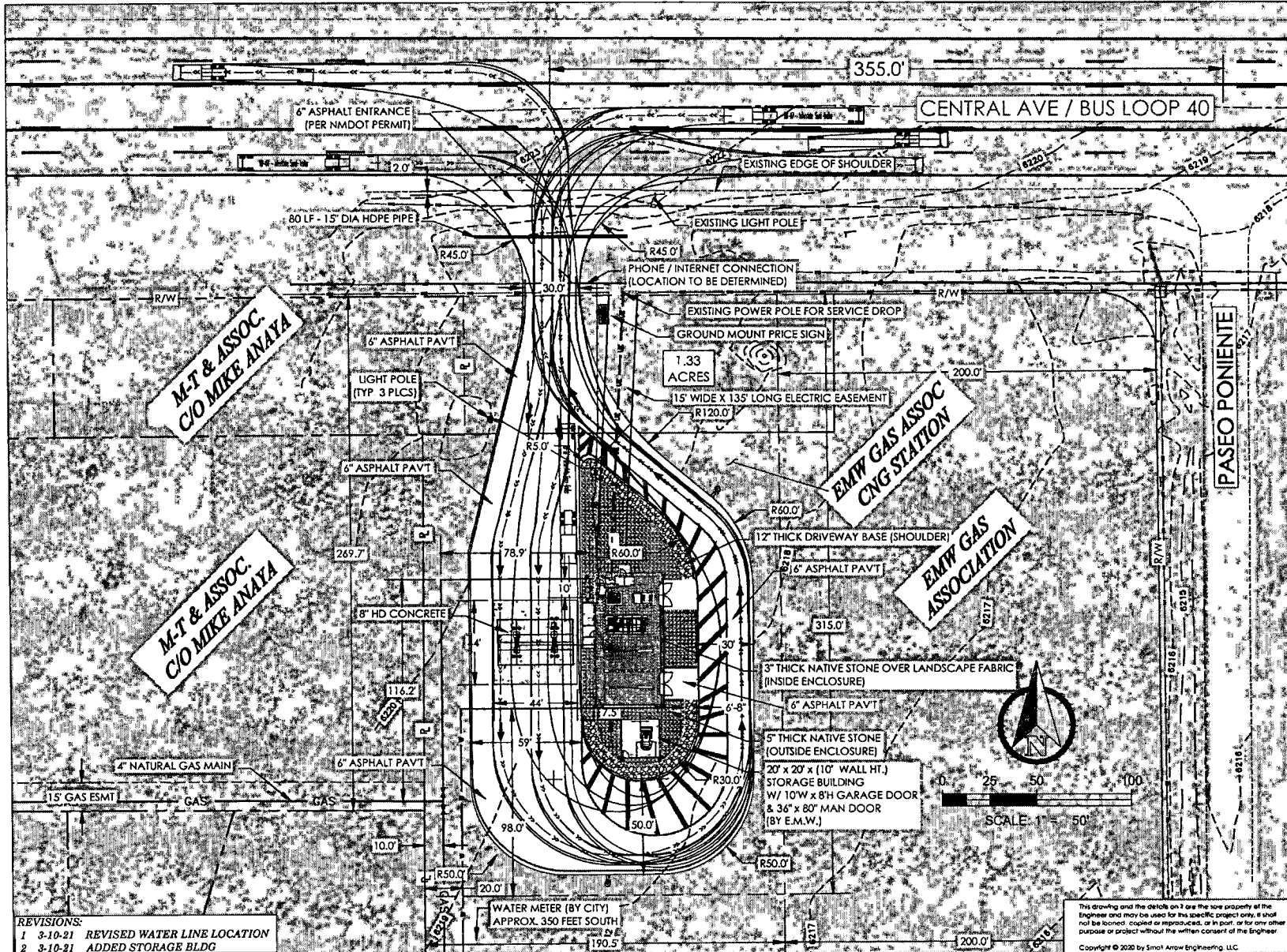
- 1 COVER SHEET
- 2 CNG STATION - SITE LAYOUT
- 3 CNG EQUIPMENT LAYOUT
- 4 CNG STATION - GRADING LAYOUT
- 5 EQUIPMENT ENCLOSURE WALL ELEVATIONS
- 6 WALL CONSTRUCTION DETAILS
- 7-8 CANOPY LAYOUT, ELEVATIONS AND DETAILS
- 9 EQUIPMENT PAD CONSTRUCTION DETAILS
- 10 MISC. CONSTRUCTION DETAILS
- 11 INLET GAS PIPING DETAILS
- 12 CNG & SAFETY SIGN DETAILS
- 13 SIGN PLACEMENT & LAYOUT
- 14 ELECTRICAL BILL OF MATERIALS
- 15 ELECTRICAL - ONE-LINE DIAGRAM
- 16 ELECTRICAL - ESD CTRL. PANEL BOM & DETAILS
- 17 ELECTRICAL - SITE CAMERA FOV & PHOTOMETRY
- 18-20 ELECTRICAL - EQUIP. WALL ELEVATIONS
- 21-22 ELECTRIC - CONDUIT LAYOUT - EQUIPMENT
- 23-24 ELECTRIC - EQUIPMENT TERMINATIONS
- 25-26 ELECTRIC - CONDUIT & CABLING SCHEDULE
- 27 EROSION CONTROL DETAILS

REVISIONS:
1 4-20-21 REVISED IFC EDITION FROM 2009 TO 2015

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SURVEY BY:	N/A	PROJECT #:	20104
DRAWN BY:	TEG	DATE:	02/18/2020
CHECKED BY:	JHB	SCALE:	N.T.S.
PROJECT:	PUBLIC CNG STATION		
SHEET DESC.:	COVER SHEET		
SHEET:	1	OF:	27



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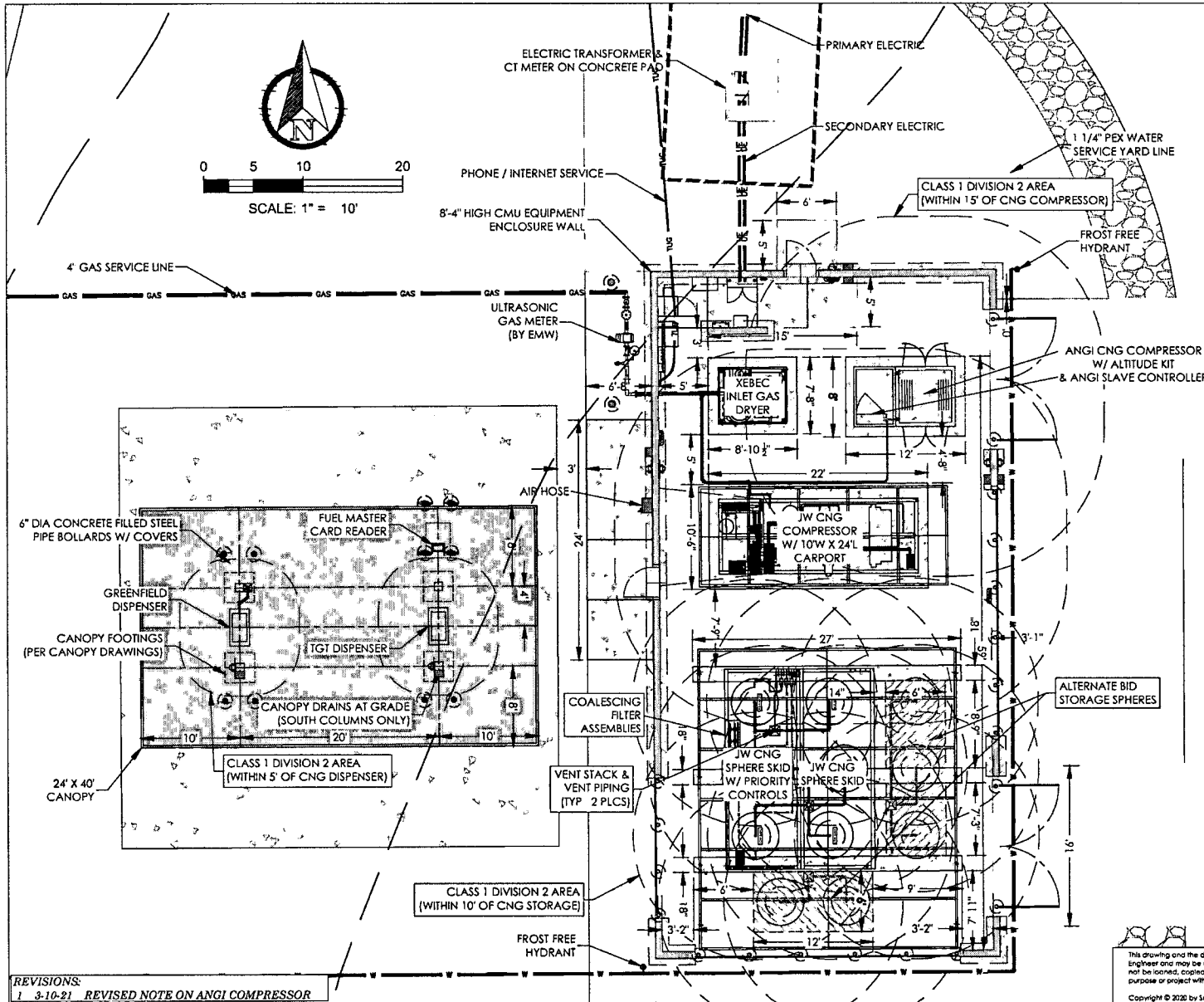
3/10/21
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 KS LIC 14094 AR LIC 14310

PUBLIC ACCESS CNG STATION
E.M.W. GAS ASSOCIATION
 614 U.S. Route 66 (W)
 MORIARTY, NM 87035
CNG STATION - SITE LAYOUT

SURVEY BY:	N/A	PROJECT #:	20104
DRAWN BY:	TED	DATE:	09/18/2020
CHECKED BY:	JHB	SCALE:	1"=50'
PROJECT:	PUBLIC CNG STATION		
SHEET DESCRIPTION:	CNG STATION - SITE LAYOUT		
SHEET:	2	OF:	27

REVISIONS:
 1 3-10-21 REVISED WATER LINE LOCATION
 2 3-10-21 ADDED STORAGE BLDG

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REVISIONS:
 1 8-10-21 REVISED NOTE ON ANGI COMPRESSOR

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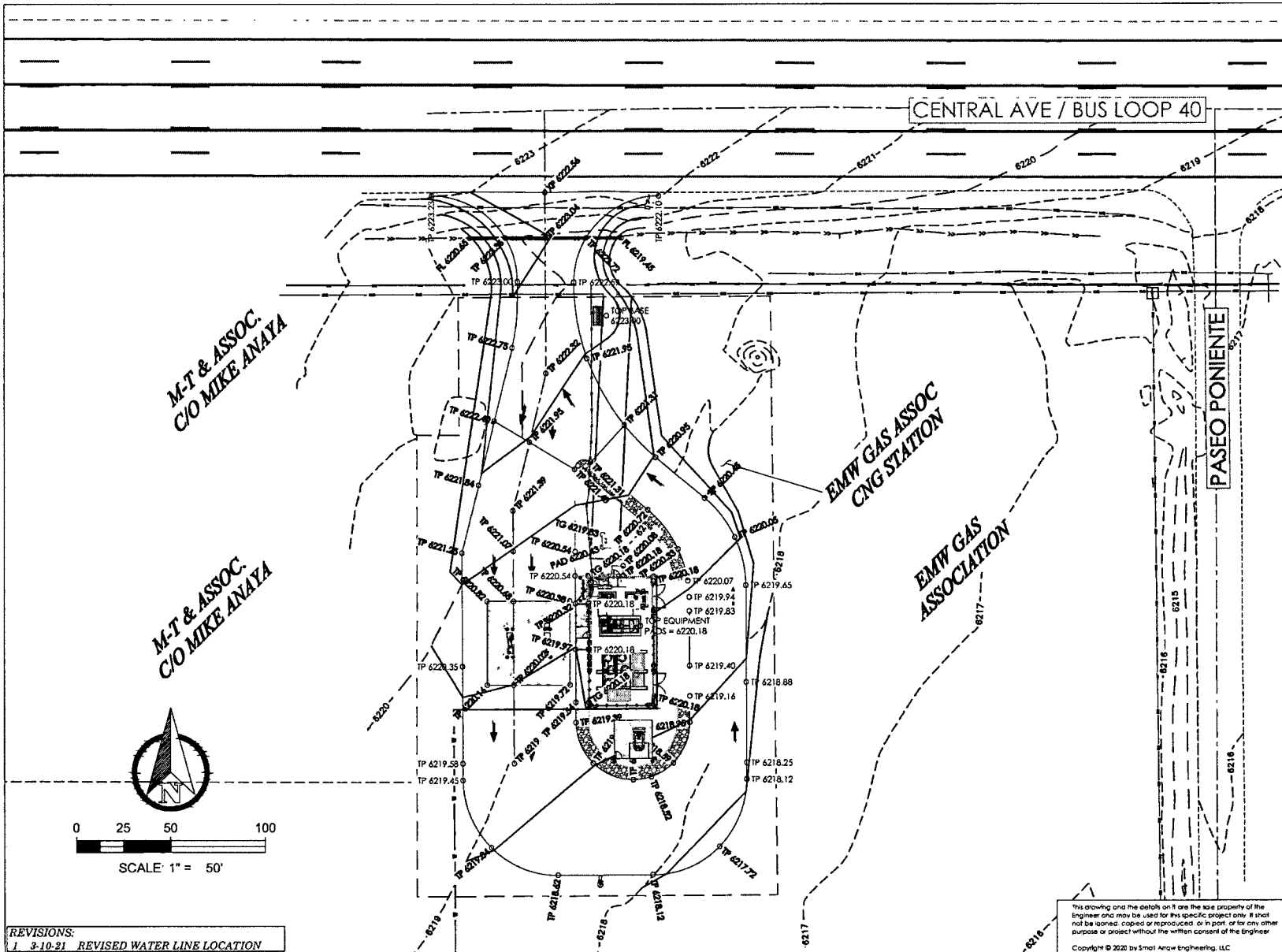
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PUBLIC ACCESS CNG STATION
 E.M.W. GAS ASSOCIATION
 614 U.S. Route 66 (W)
 MORIARTY, NM 87035
 CNG EQUIPMENT LAYOUT

SURVEY BY N/A PROJECT # 20104
 DRAWN BY TED DATE 10/08/2020
 CHECKED BY JHB SCALE 1"=10'
 PROJECT PUBLIC CNG STATION
 SHEET DESC CNG EQUIPMENT LAYOUT
 SHEET 3 OF 27






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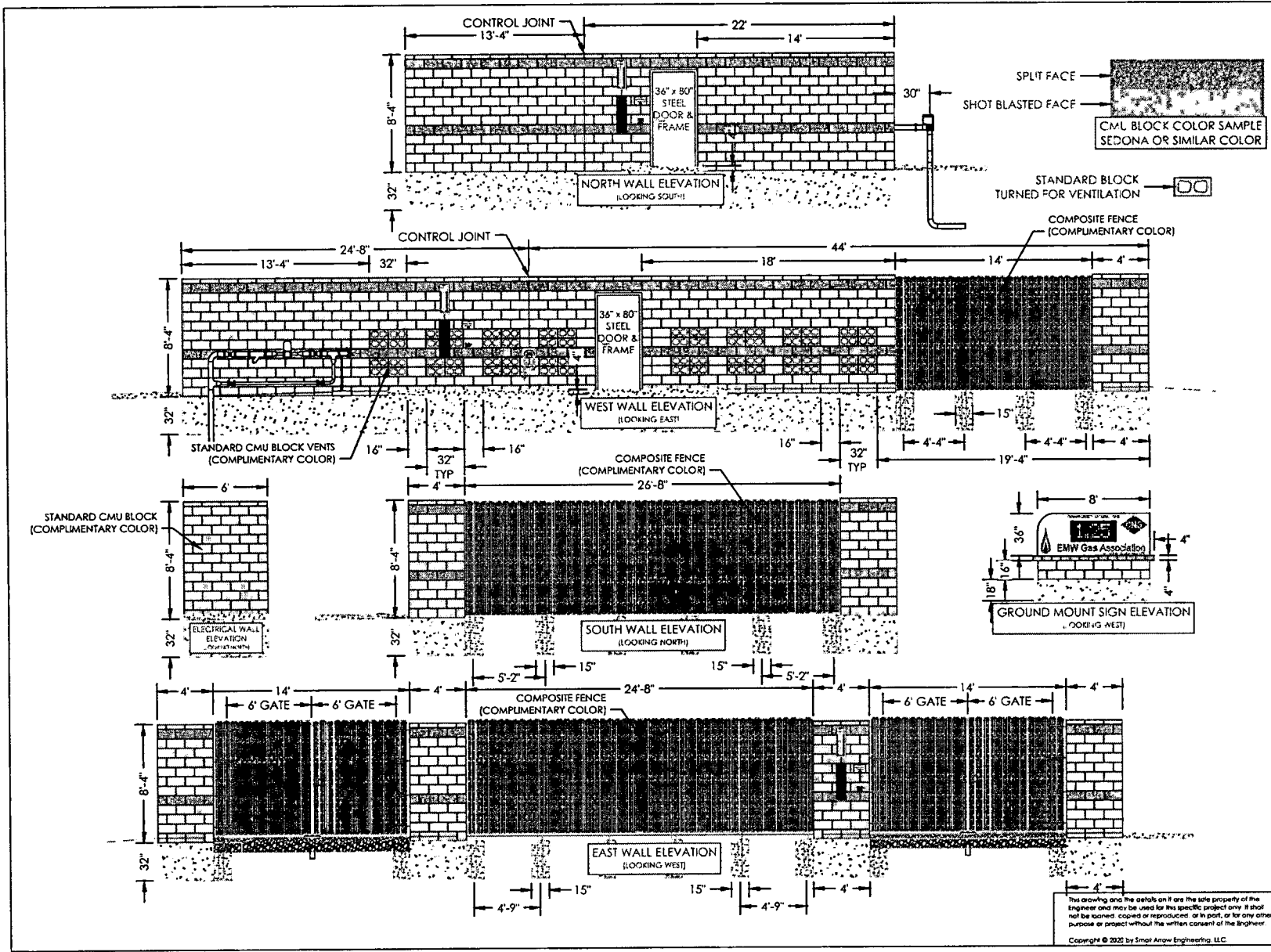
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**PUBLIC ACCESS CNG STATION
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614 U.S. Route 66 (W)
MORIARTY, NM 87035
CNG STATION - GRADING LAYOUT**

SURVEY BY: N/A PROJECT #: 20104
DRAWN BY: JED DATE: 09/18/2020
CHECKED BY: JHB SCALE: 1"=50'

PROJECT: PUBLIC CNG STATION
SHEET DESC: CNG STATION - GRADING
SHEET: 4 OF 27

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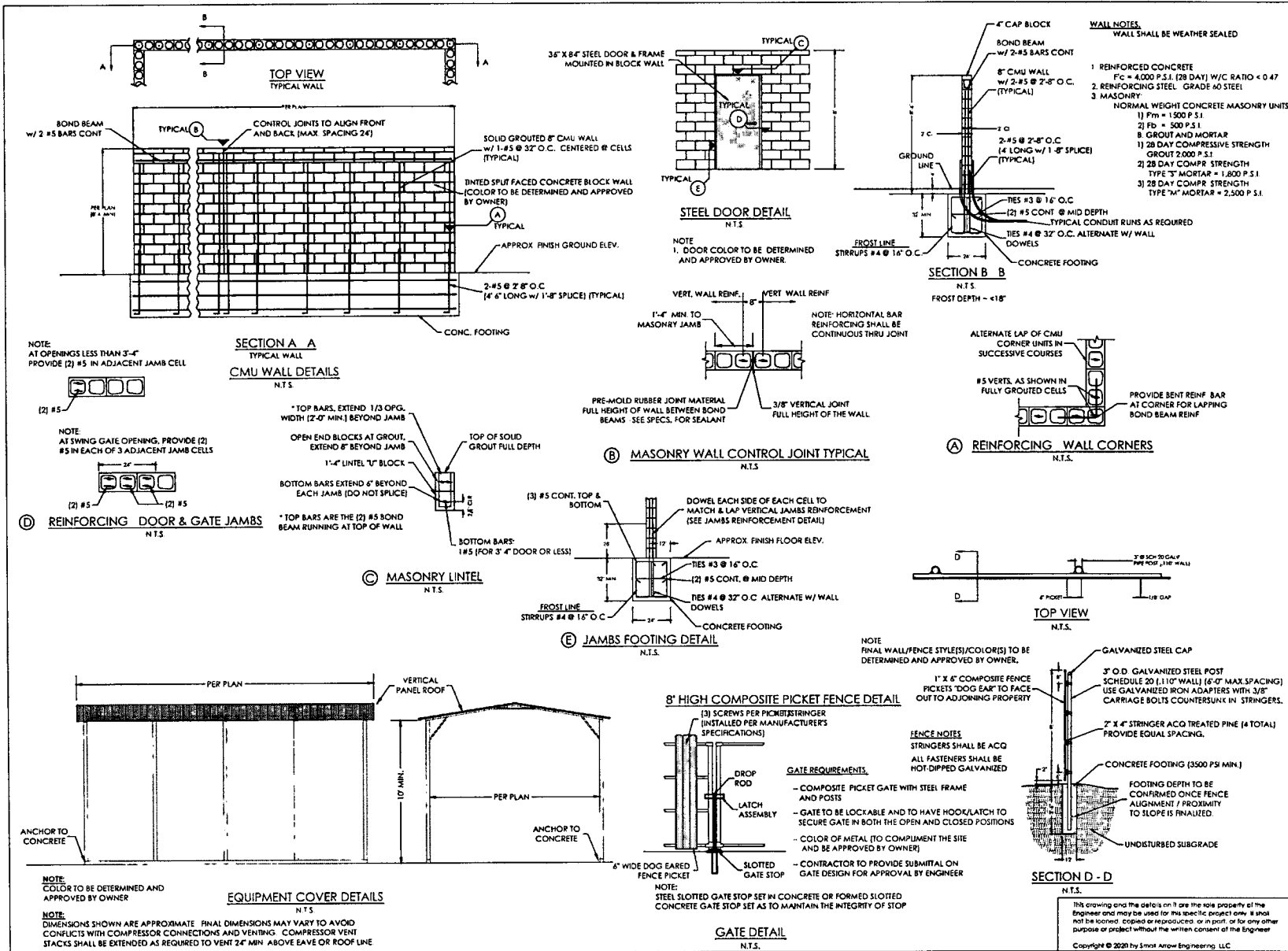
3/10/21
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 KS LIC 14094 AR LIC 14310


**PUBLIC ACCESS CNG STATION
 E.M.W. GAS ASSOCIATION
 614 U.S. Route 66 (W)
 MORIARTY, NM 87035
 WALL & SIGN ELEVATIONS**

SURVEY BY: N/A	PROJECT #: 20104
DRAWN BY: JEB	DATE: 02/13/2020
CHECKED BY: JEB	SCALE: 1"=10'

PROJECT: PUBLIC CNG STATION
 SHEET DESC: WALL & SIGN ELEVATIONS
 SHEET: 5 OF 27

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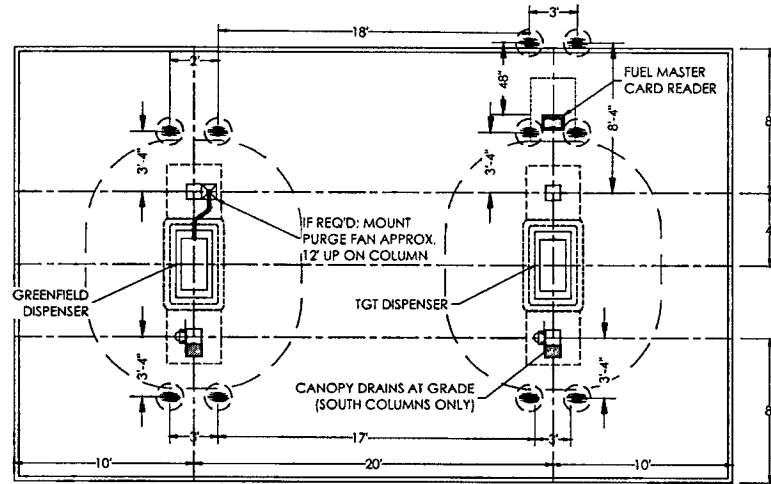
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PUBLIC ACCESS CNG STATION
 E.M.W. GAS ASSOCIATION
 614 U.S. Route 66 (W)
 MORIARTY, NM 87035
 WALL CONSTRUCTION DETAILS

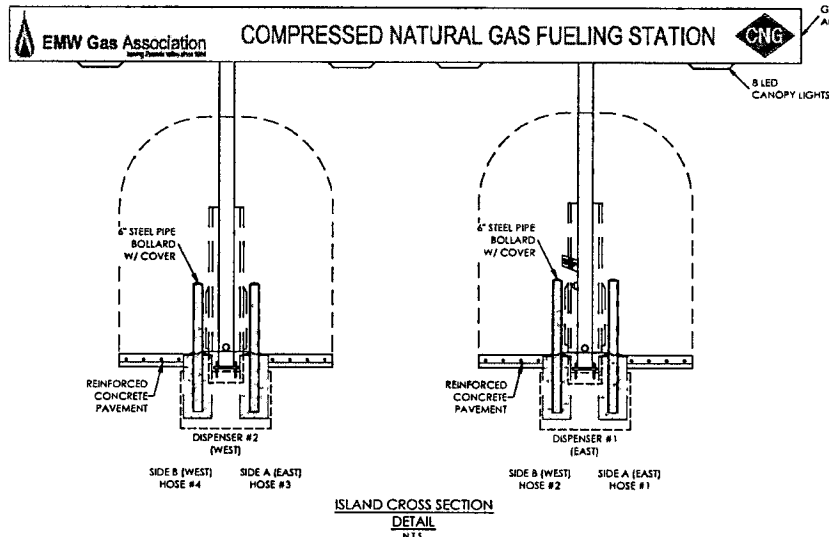
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 SHEET 6 OF 27

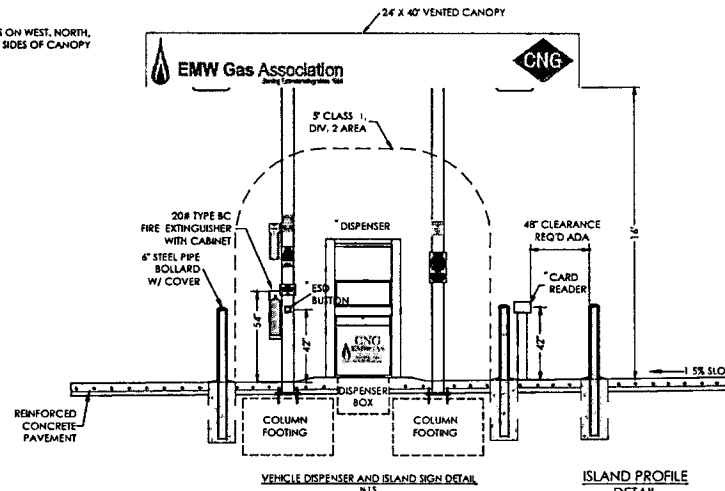
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ISLAND PLAN VIEW
DETAIL
N13



ISLAND CROSS SECTION
DETAIL
N13



VEHICLE DISPENSER AND ISLAND SIGN DETAIL
DETAIL
N13

* NOTE:
ALL USER ACCESSIBLE ITEMS SHALL NOT EXCEED 48" ABOVE FINISHED GRADE.
(IE. HOSE, START/STOP BUTTONS, CARD READER INTERFACE.)

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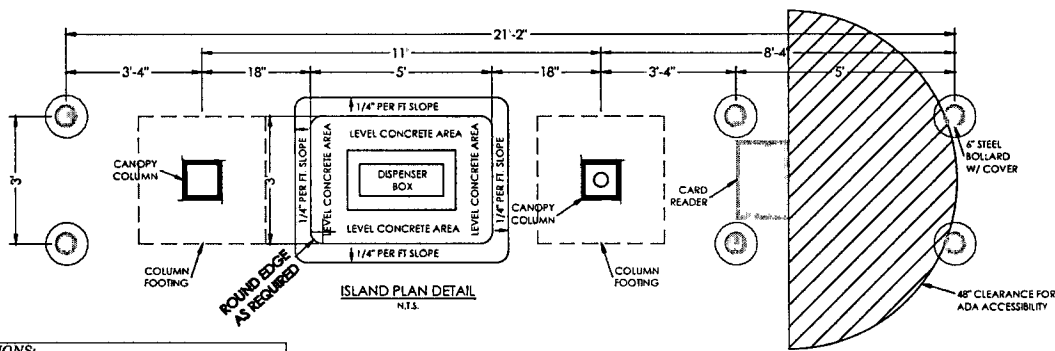
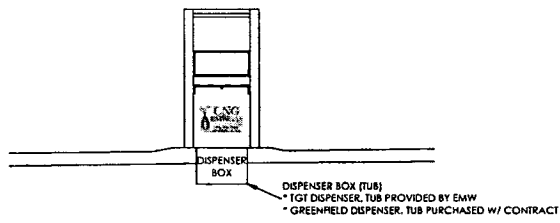
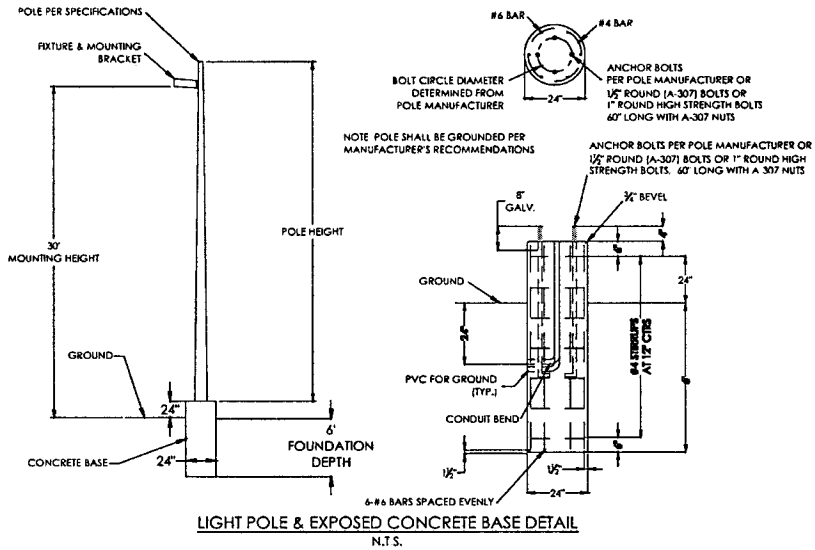
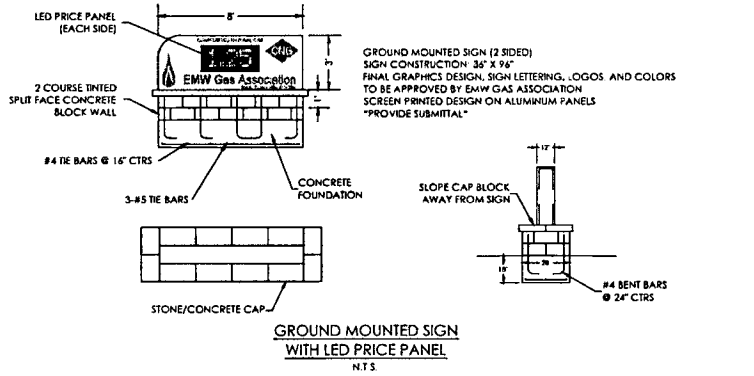


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PUBLIC ACCESS CNG STATION
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MORIARTY, NM 87035
CANOPY LAYOUT & ELEVATIONS

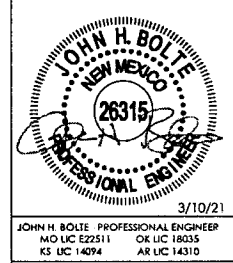
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DRAWN BY: TED DATE: 09/18/2020
CHECKED BY: JHB SCALE: 1"=10'
PROJECT: PUBLIC CNG STATION
SHEET DESC: CANOPY LAYOUT & ELEVATIONS
SHEET 7 OF 27



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3/10/21

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KS LIC: 14274 AR LIC: 14310

PUBLIC ACCESS CNG STATION
E.M.W. GAS ASSOCIATION
614 U.S. Route 66 (W)
MORIARTY, NM 87035
CANOPY LAYOUT & ELEVATIONS

REVISIONS:
1 9-1-20 ADDED LIGHT POLE & BASE DETAIL

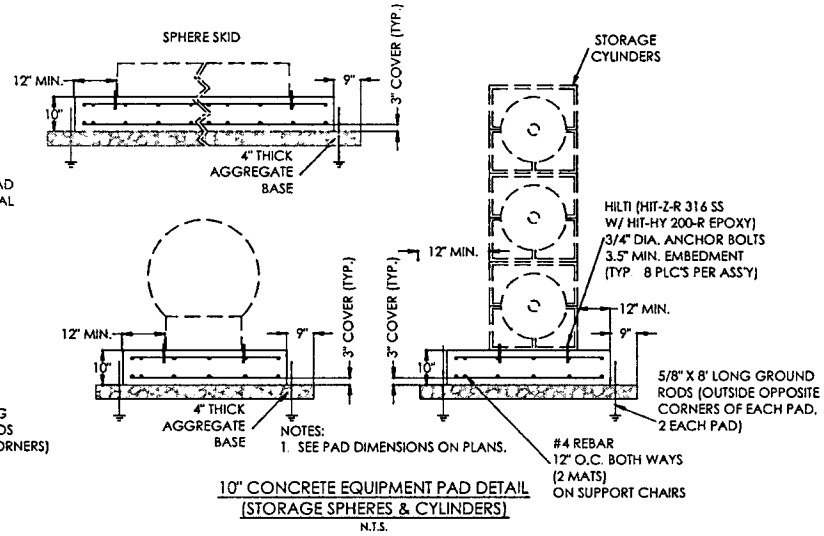
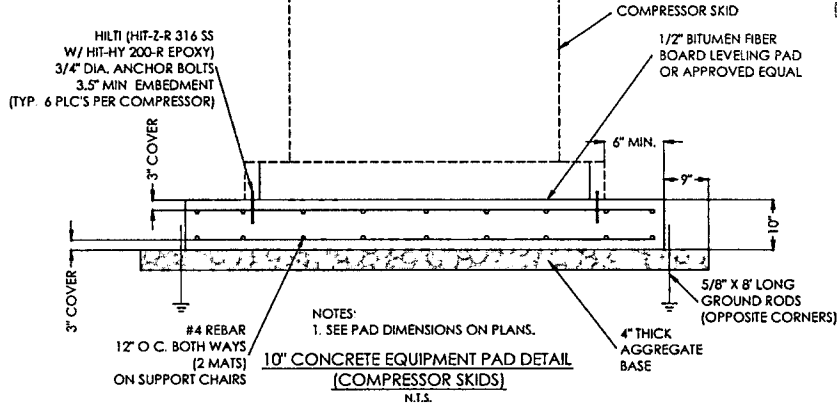
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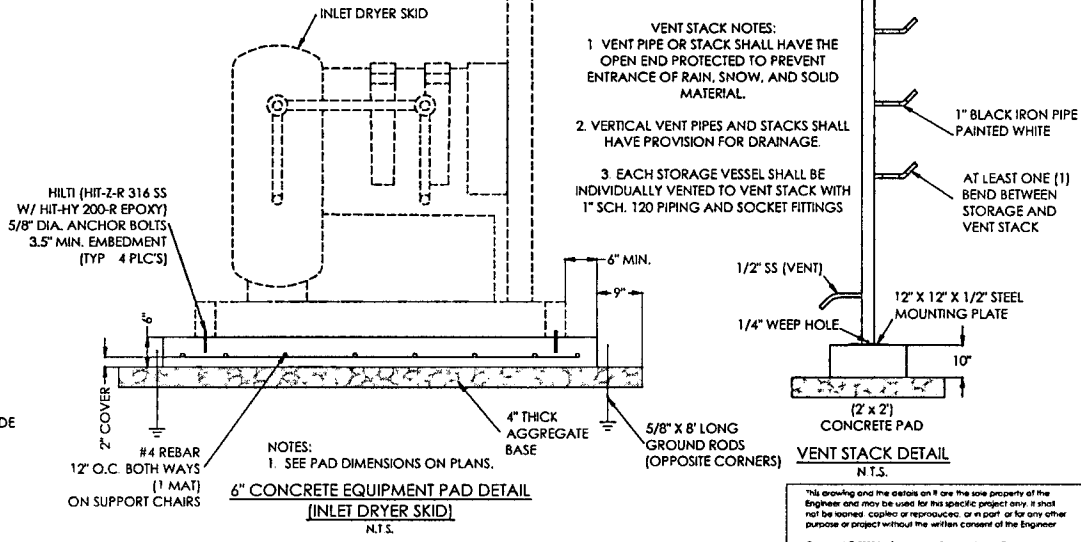
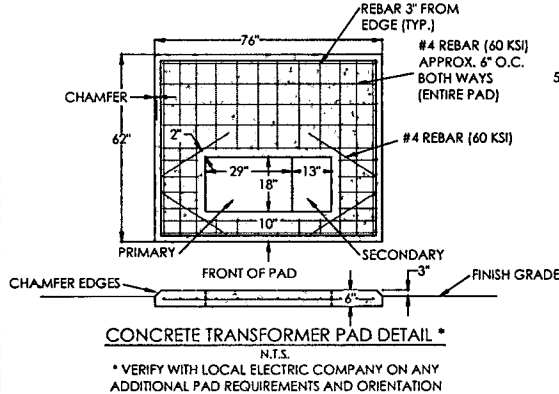
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CHECKED BY: JBH SCALE: 1/4"=1'-0"

PROJECT: PUBLIC CNG STATION
SHEET DESC: CANOPY LAYOUT & ELEVATIONS
SHEET 8 OF 27

NOTE:
ALL EQUIPMENT IS TO BE MOUNTED/ANCHORED TO CONCRETE PADS ACCORDING TO MANUFACTURER'S SPECIFICATIONS & RECOMMENDATIONS.



TRANSFORMER CONCRETE PAD NOTES:
1. CONCRETE TESTING: 4,000 PSI 4% TO 6% ENTRAINED AIR, 3/4" MAXIMUM SIZE AGGREGATE
2. REINFORCING STEEL ASTM-A615 GRADE 60, PLACE APPROX. 6" O.C. EACH WAY AND SECURELY TIED TOGETHER
3. MINIMUM CONCRETE COVER REINFORCING STEEL 2 INCHES UNLESS NOTED
4. WOOD FLOAT FINISH, LEAVING NO DEPRESSIONS.



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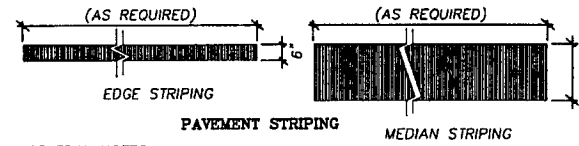
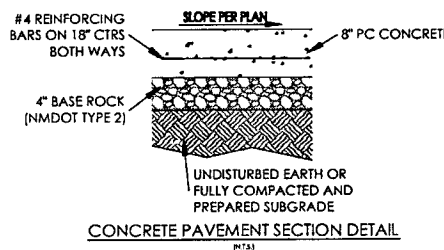
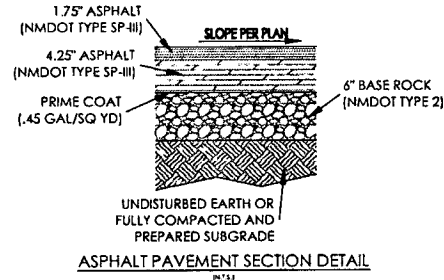
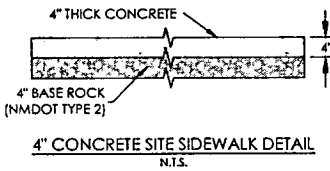
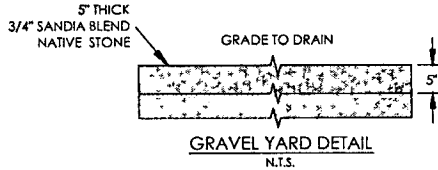
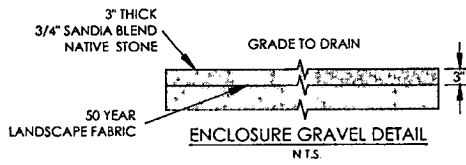


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JOHN H. BOLTE PROFESSIONAL ENGINEER
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KS LIC 14094 AR LIC 14310

PUBLIC ACCESS CNG STATION
E.M.W. GAS ASSOCIATION
614 U.S. Route 66 (W)
MORIARTY, NM 87035
EQUIPMENT PAD DETAILS

SURVEY BY: N/A PROJECT #: 20104
DRAWN BY: JED DATE: 09/18/2020
CHECKED BY: JHB SCALE: N.T.S.
PROJECT: PUBLIC CNG STATION
SHEET DESC: EQUIPMENT PAD DETAILS
SHEET 9 OF 27

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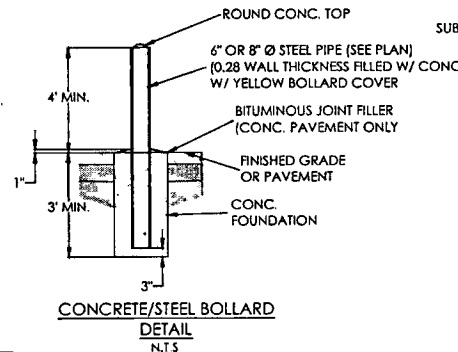
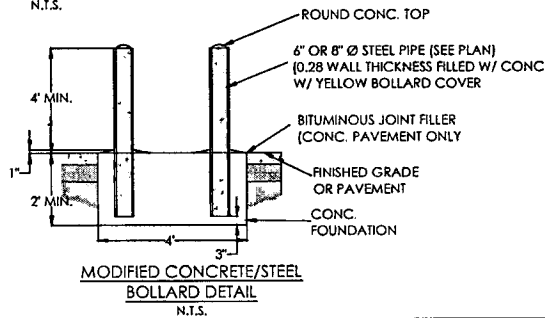
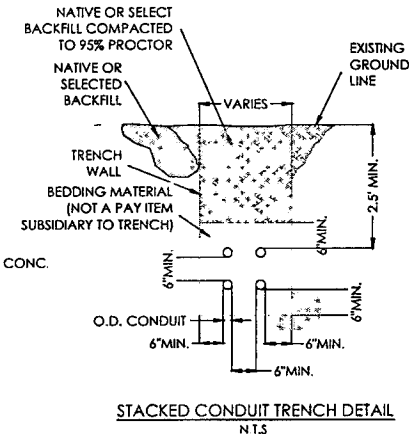
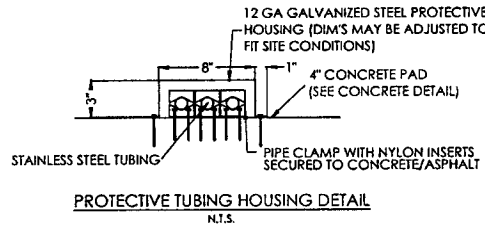
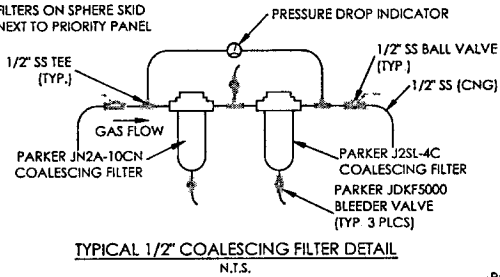


GENERAL NOTES:

- ALL PAVEMENT MARKINGS FOR THE PARKING LOT SPACES AND DRIVES SHALL BE STRIPED AS SHOWN ON THE SITE CONSTRUCTION PLAN. PAVEMENT MARKINGS FOR PARKING SPACES SHALL BE YELLOW STRIPING (HIGH GRADE TRAFFIC PAINT), EXCEPT FOR THE ADA STALL SYMBOL, WHICH SHALL BE BLUE PAVEMENT MARKINGS FOR CROSSWALK, ARROWS AND STOP LINES SHALL BE WHITE PAINT STRIPING. PAVEMENT MARKINGS FOR CROSSING ZONES SHALL BE YELLOW PAINT STRIPING.
- STENCILS AND TEMPLATES USED SHALL BE PROFESSIONALLY MADE TO INDUSTRY STANDARDS. "FREE HAND" PAINTING OF ARROWS, SYMBOLS OR WORDING SHALL NOT BE ALLOWED.
- PAVEMENT SURFACE SHALL BE FREE OF DIRT, SAND, GRAVEL, OIL AND OTHER FOREIGN MATTER.
- CONTRACTOR SHALL PROTECT ADJACENT CURBS, WALKS, FENCES AND OTHER ITEMS FROM RECEIVING PAINT.
- PAVEMENT MARKINGS SHALL BE STRAIGHT AND EVEN IN ACCORDANCE WITH PLAN.
- PAVEMENT MARKINGS SHALL BE APPLIED TO THE WIDTHS AND COLORS AS DETAILED IN PLANS.

PAVEMENT MARKING DETAILS

NOTE:
MOUNT COALESCING FILTERS ON SPHERE SKID NEXT TO PRIORITY PANEL



REVISIONS:
1 9-1-20 REVISED GRAVEL DETAILS, ADDED PAVEMENT TYPICAL SECTIONS FOR CONCRETE AND ASPHALT

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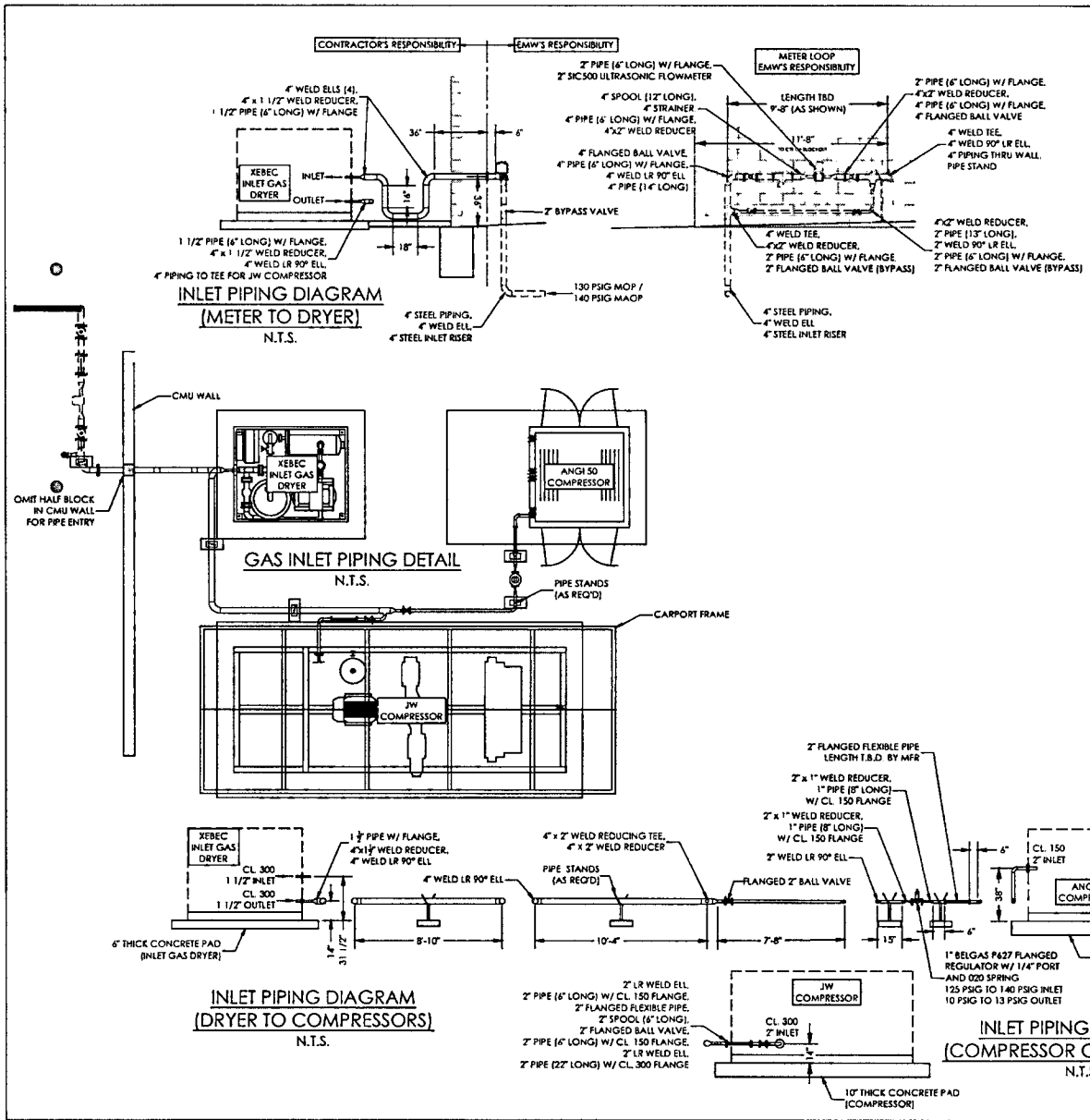
SMALL ARROW ENGINEERING, LLC
CERTIFICATES OF AUTHORIZATION
MISSOURI: E-2010013147
KANSAS: E-1930
ARKANSAS: 2097
OKLAHOMA: 5937

3/10/21
JOHN H. BOLTE - PROFESSIONAL ENGINEER
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KS LIC 14094 AR LIC 14310

PUBLIC ACCESS CNG STATION
E.M.W. GAS ASSOCIATION
614 U.S. Route 66 (W)
MORIARTY, NM 87035
MISC CONSTRUCTION DETAILS

SURVEY BY: N/A PROJECT #: 20104
DRAWN BY: JED DATE: 09/18/2020
CHECKED BY: JHB SCALE: N.T.S.


PROJECT: PUBLIC CNG STATION
SHEET DISC. CONSTRUCTION DETAILS
SHEET 10 OF 27



NOTE:
QUANTITIES SHOWN ARE FOR CONVENIENCE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE ALL MATERIALS NECESSARY FOR A COMPLETE PIPING SYSTEM.

BILL OF MATERIAL (INLET PIPING)	
QTY.	DESCRIPTION
30	4" STEEL PIPE
15	2" STEEL PIPE
2	1 1/2" STEEL PIPE
2	1" STEEL PIPE
2	2" CONICAL STRAINER - 80 MESH
2	2" FLANGED BALL VALVE WITH LOCK ON/OFF (NUT STYLE)
2	2" FLEX COUPLING W/ CL 150 FLANGES
1	4"x2" WELD REDUCING TEE
6	4" L.R. WELD 90° ELL
5	2" L.R. WELD 90° ELL
2	2" CHECK VALVE
1	4" CLASS 300 FLANGE KITS
1	4" INSULATING KIT
1	4" x 2" WELD REDUCER
2	4" x 1 1/2" WELD REDUCER
2	2" x 1" WELD REDUCER
1	2" CL 300 FLANGE KITS
7	2" CL 150 FLANGE KITS
2	1 1/2" CL 300 FLANGE KITS
2	1" CL 150 FLANGE KITS
2	PRESSURE GAUGE (2" DIAL, LIQUID FILLED, 0-300PSI)
1	1" BELGAS P427 FLANGED REGULATOR W/ 1/4" PORT AND O20 SPRING 125 PSIG TO 140 PSIG INLET 10 PSIG TO 13 PSIG OUTLET
4	PIPE STANDS


- * SUP-ON FLANGES ARE PREFERRED OVER WELD NECK FLANGES
- NOTES:
1. ABOVE GRADE 2" 4" GAS PIPING SHALL BE API 5LX-35 GRADE, 0.154" MIN. WALL STEEL, PAINTED WHITE (ALL PIPING PRIOR TO COMPRESSOR ONLY).
2. PIPE SHALL BE WELDED, EXCEPT AS NOTED OR REQUIRED AND PRESSURE TESTED AS FOLLOWS:
METER TO REGULATOR (UPSTREAM OF DRYER): 262.5 PSIG FOR 2 HOURS.
REGULATOR TO ANGI COMPRESSOR: 100 PSIG FOR 2 HOURS.



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INLET PIPING DETAILS

SURVEY BY: N/A PROJECT # 20104
DRAWN BY: TED DATE: 02/18/2020
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PROJECT: PUBLIC CNG STATION
SHEET DESC: INLET PIPING DETAILS
SHEET 11 OF 27

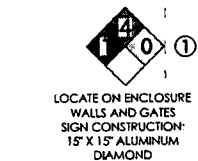
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BILL OF MATERIAL (SIGNAGE)		
ITEM	QTY	DESCRIPTION
1	9	HAZMAT SIGN (15' X 15' ALUMINUM)
2	5	DANGER NO SMOKING (10" X 14" ALUMINUM)
3	7	WARNING VIDEO SURVEILLANCE (14" X 10" ALUMINUM)
4	4	SHUT OFF ENGINE (14" X 10" ALUMINUM)
5	4	STOP MOTOR (18" X 10" ALUMINUM)
6	8	CNG EMERGENCY SHUT OFF (7" X 10" ALUMINUM)
7	4	NOTICE AUTHORIZED PERSONAL (10" X 14" ALUMINUM)
8	4	WARNING NO SMOKING (10" X 14" ALUMINUM)
9	8	SIDE MOUNT 2- SIDED FIRE EXTINGUISHER (18" X 5" ALUMINUM)
8	8	20# TYPE B-C FIRE EXTINGUISHERS AND CABINETS
10	2	LED PRICE SIGN
11	7	IN CASE OF FIRE CALL 911 (10" X 14" ALUMINUM)

STANDARD SIGN CONSTRUCTION:
 SUBSTRATE:
 0.040" ALUMINUM, WHITE ENAMEL COATED (BOTH SIDES)

PRINTING LAYER:
 4.0 MIL VINYL WITH PERMANENT ACRYLIC ADHESIVE
 UV STABLE INK

LAMINATE:
 2.5 MIL PVC FILM (OPTICALLY CLEAR)
 *SCRATCH RESISTANT
 *CHEMICAL RESISTANT
 *UV RESISTANT



LOCATE ON ENCLOSURE WALLS AND GATES
 SIGN CONSTRUCTION:
 15' X 15' ALUMINUM DIAMOND



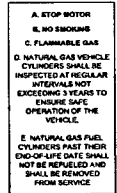
LOCATE IN EQUIP ENCLOSURE WALLS AND FENCE
 SIGN CONSTRUCTION:
 10" X 14" ALUMINUM



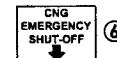
LOCATE ON CANOPY COLUMNS/EQUIPMENT ENCLOSURE
 SIGN CONSTRUCTION:
 14" X 10" ALUMINUM



LOCATE ON THE DISPENSER OR CANOPY POST
 SIGN CONSTRUCTION:
 14" X 10" ALUMINUM



LOCATE ON DISPENSER OR CANOPY SUPPORTS (ALT. LOCATION)
 SIGN CONSTRUCTION:
 18" X 10" ALUMINUM
 1/2" BLACK LETTERS ON WHITE BACKGROUND ITEMS A, B & C BOLD.



LOCATE AT EACH ESD DEVICE
 SIGN CONSTRUCTION: 7" X 10" ALUMINUM RED LETTERS WITH BLACK ARROW ON WHITE BACKGROUND



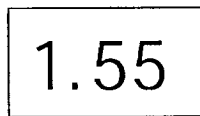
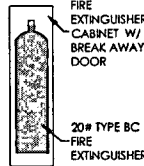
LOCATE ON ENCLOSURE GATE
 SIGN CONSTRUCTION:
 10" X 14" ALUMINUM



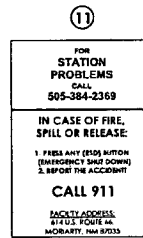
LOCATE ON OUTSIDE OF ENCLOSURE
 SIGN CONSTRUCTION:
 10" X 14" ALUMINUM
 1" MIN. RED LETTERS ON WHITE BACKGROUND RED BORDER



LOCATE ON CANOPY COLUMN ABOVE EXTINGUISHER
 SIGN CONSTRUCTION:
 18" X 5" ALUMINUM SIDE MOUNT - 2 SIDED SIGN



LOCATE ON GROUND MOUNT SIGN
 SIGN CONSTRUCTION:
 BY SUBMITTAL



LOCATE ON CANOPY SUPPORTS (4).
 ENCLOSURE FENCE ESD POST

SIGN CONSTRUCTION:
 14" X 10" ALUMINUM, WHITE BACKGROUND

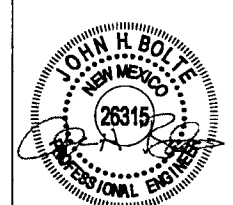
- 3/4" BOLD RED FONT:
 1. STATION PROBLEMS
 2. 505-384-2369
 3. IN CASE OF FIRE, SPILL OR RELEASE:
 1. FOR
 2. CALL
 3. PRESS ANY (ESD) BUTTON
 4. (EMERGENCY SHUT DOWN)
 5. REPORT THE ACCIDENT
 1" BOLD RED FONT: "CALL 911"
 1/2" STANDARD BLACK UNDERLINED FONT: FACILITY ADDRESS:
 1/2" STANDARD BLACK FONT:
 614 U.S. ROUTE 66, MORIARTY, NM 87035

NATURAL GAS - COMPRESSED
 LOCATE ON OUTSIDE OF STORAGE VESSEL SIGN
 CONSTRUCTION: PAINT
 3" MIN. DARK BLUE OR BLACK LETTERS



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 ARKANSAS: 2097
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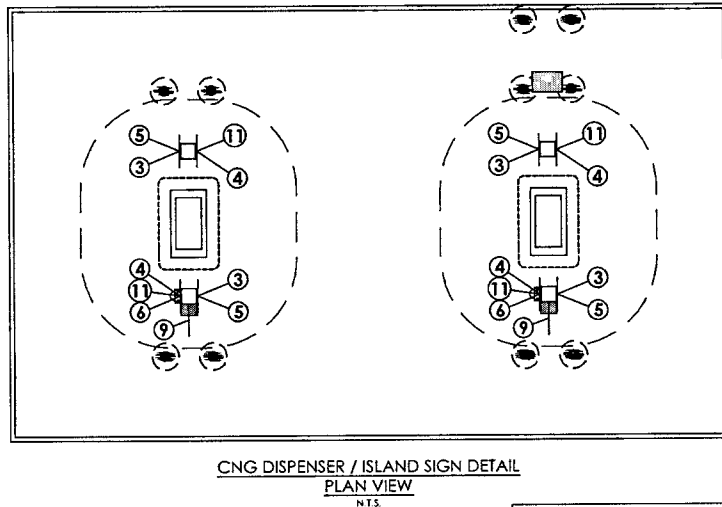
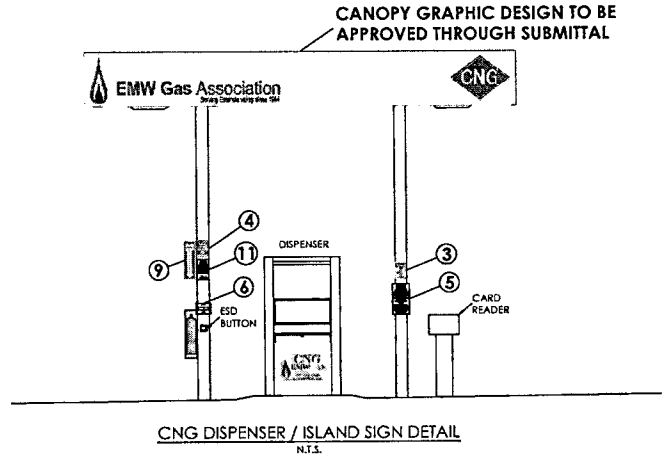
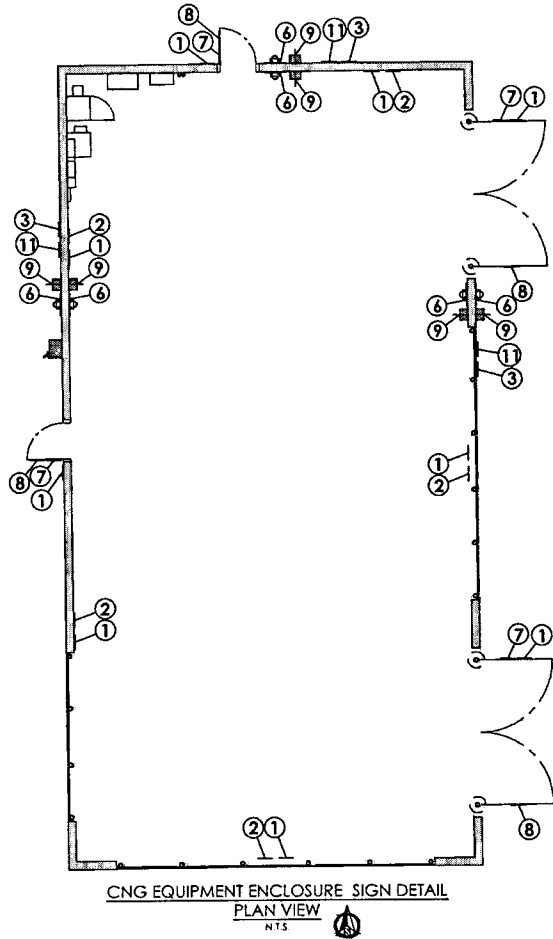
3/10/21
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 KS LIC 14094 AR LIC 14310


PUBLIC ACCESS CNG STATION
 E.M.W. GAS ASSOCIATION
 614 U.S. Route 66 (W)
 MORIARTY, NM 87035
 CNG & SAFETY SIGN DETAILS

SURVEY BY: N/A PROJECT #: 20104
 DRAWN BY: TED DATE: 07/18/2020
 CHECKED BY: JHB SCALE: N.T.S.

PROJECT: PUBLIC CNG STATION
 SHEET DESC: CNG & SAFETY SIGN DETAILS
 SHEET: 12 OF 27

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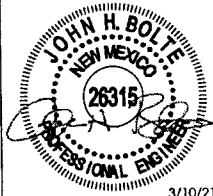




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PUBLIC ACCESS CNG STATION
E.M.W. GAS ASSOCIATION
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MORIARTY, NM 87035
SIGN PLACEMENT AND LAYOUT

SURVEY BY: N/A PROJECT #: 20104
DRAWN BY: TED DATE: 09/18/2020
CHECKED BY: jhb SCALE: N.T.S.

PROJECT: PUBLIC CNG STATION
SHEET DESC: SIGN LAYOUT
SHEET: 13 OF 27

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* CNMCC

ELECTRICAL EQUIPMENT - BILL OF MATERIALS

ITEM	QTY	DESCRIPTION OF ITEMS
①	1	PAD MOUNTED TRANSFORMER (INSTALLED BY UTILITY COMPANY) *
②	1	SAFETY SWITCH. (AS REQUIRED BY UTILITY COMPANY) *
③	1	METER BASE WITH BYPASS LEVER (FURNISHED BY UTILITY COMPANY) *
④	1	METER (FURNISHED BY UTILITY COMPANY) *
⑤	15	3/4" X 6" COPPER CLAD GROUND RODS @ CNG EQUIPMENT. ALL OTHER ELECTRICAL GROUNDS SHALL BE GROUND BOND
⑥	1	PANELBOARD, 3φ, 4W, 35KA, 400A, 480V, 38X BOX (36" X 73"). EATON NO PRL48 W/ STANDARD LOCK & KEY MOD 3 NEMA 3R, MOD 16 PADLOCKABLE 400A KD MAIN, MOD 35 SURGE (LIGHTNING) ARRESTER INCLUDES THE FOLLOWING BREAKERS WITH PADLOCKABLE HANDLES: (1) KD 3-300A 35KA, (1) KD 3-200A 35KA, (1) FD 3-30A 35KA (1) FD 2-40A 35KA
⑦	1	EATON TYPE EPT, ENERGY EFFICIENT TRANSFORMER 75 KVA 480 VOLTS TO 208/120 VOLTS (245 FRAME)
⑧	1	EATON TYPE EP, ENERGY EFFICIENT TRANSFORMER 25 KVA 480 VOLTS TO 240/120 VOLTS (FR182 FRAME)
⑨	1	PANELBOARD, 1φ, 3W, 18KA, 200A, 240/120V, 18X BOX (20" X 34"). EATON NO PRL16 W/ STANDARD LOCK & KEY MOD 3 NEMA 3R, MOD 16 PADLOCKABLE 150A FDB MAIN. INCLUDES THE FOLLOWING BREAKERS: (1) QBHW 2P-20A (5) QBHW 1P-20A, (5) QBHW 1P-15A
⑩	1	RACEWAY NEMA 3R (8" X 8" X 40')
⑪	ALT-1	BLACKBOX CLIMATECAB NEMA 12 WALL MOUNT CABINET (24" CUBE) W/ 800-87U AC 12U, SINGLE HINGED
⑫	ALT-1	OUTLET 20A QUADPLEX 115V (INSTALLED INSIDE COMM CABINET)
⑬	1	OUTLET, 20A DUPLEX GR OUTDOOR RATED WITH WEATHERPROOF ENCLOSURE
⑭	1	INTERMATIC (MODEL # E18000) (120V) LIGHTING CONTROL PANEL W/ ASTRONOMIC TIMER (SITE & CANOPY LIGHTS)
⑮	2	SWITCH, 20A SINGLE POLE OUTDOOR RATED WITH METAL BOX & FACEPLATE (4 OUTDOOR COVER)
⑯	3	CHAMP CP4MV SERIES LED (WALL PACK) (MODEL# CP4MV 5L W H UNV) 5903 OR EQUAL (HAZARDOUS AREA)
⑰	4	LUMARK NAVION SERIES LED (SITE/AREA LIGHTS) (MODEL# NAV-AE-04-E-UNV-SL4-10K-AH-S) OR EQUAL FULL CUT-OFF
⑱	ALT-1	SECURITY CAMERA SYSTEM W/ NVR & 8 CAMERAS, UPS, (INCL INTERNET ROUTER, MODEM, AND SWITCHES AS REQ'D)
⑲	1	ESD CONTROL PANEL (SEE SEPARATE BILL OF MATERIALS)
⑳	8	ESD PUSH BUTTONS AND ENCLOSURES (SEE SEPARATE BILL OF MATERIALS)
㉑	--	CONDUITS, FITTINGS, CONNECTIONS, TRENCHING (SEE CONDUIT & CABLING SCHEDULE)
㉒	--	ELECTRICAL CABLING (SEE CONDUIT & CABLING SCHEDULE)
㉓	--	COMMUNICATION & CONTROL CABLING (SEE CONDUIT & CABLING SCHEDULE)
㉔	--	8 LED CANOPY LIGHTS - LEGACY (OR) (MODEL# C04-LED-HO-48-W-10) OR EQUAL FULL CUT-OFF (SUPPLIED W/ CANOPY BY AIRING)

NOTE: ELECTRICAL CONDUITS & WIRING SHOWN MAY BE USED FOR BIDDING PURPOSES. FINAL LOCATIONS, QUANTITIES WIRE TYPE, WIRE SIZE, AND TERMINATION DETAILS TO BE DETERMINED DURING CONSTRUCTION BY WIRING DIAGRAM SUPPLIED BY EQUIPMENT MANUFACTURER TO MEET THE REQUIREMENTS FOR THE INSTALLATION OF SAID EQUIPMENT. ALL WIRING AND CONDUIT SHALL BE APPROVED BY SUBMITTAL TO ENGINEER BEFORE ORDERED AND INSTALLED. ESD SYSTEMS SHALL BE WIRED SO THAT IF ANY ESD BUTTON IS ENGAGED THE ESD SYSTEM WILL BE ACTIVATED. TERMINATION AND CONNECTION OF ESD SYSTEM CABLING TO INDIVIDUAL PIECES OF EQUIPMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE COORDINATED WITH THE EQUIPMENT MANUFACTURER. IF ANY ELECTRICAL DISCREPANCIES SHOULD ARISE OR IF PLANS CONFLICT WITH CODE ENFORCEMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

REVISIONS:
1 3-10-21 REVISED BOM

GENERAL NOTES

- BELOW GROUND ELECTRICAL CONDUITS TO BE RIGID, UNLESS PRE-APPROVED BY THE ENGINEER.
- ABOVE GROUND ELECTRICAL CONDUITS TO BE GALV. RIGID OR INT. METALLIC
- ALL CONDUIT RUNS SHALL BE PLACED PRIOR TO CONSTRUCTION.
- ALL VACANT CONDUIT RUNS SHALL BE INSTALLED AND CAPPED FOR FUTURE CONNECTIONS
- CONDUCTORS TO BE COPPER W/ THHN OR THHW INSULATION.
- AREA WITHIN 15 FEET OF COMPRESSOR AND ANCILLARY EQUIPMENT IS CLASSIFIED AS CLASS 1, DIVISION 2 GROUP D AND REQUIRES APPROPRIATE CONDUIT AND SEALS.
- EQUIPMENT & CONDUIT LOCATIONS ON ELECTRICAL WALL ARE APPROXIMATE. FIELD ADJUST AS REQUIRED.
- LAYOUT SHOWN IS APPROXIMATE. LENGTHS OF CONDUIT RUNS AND FITTINGS USED MAY BE ADJUSTED TO MEET SITE CONDITIONS.
- CONDUITS FOR STAINLESS STEEL TUBING TO BE MDPE.
- ALL BRANCH CIRCUITS & FEEDERS SHALL CARRY A GROUND WIRE.
- ALL COMMON NEUTRAL CIRCUITS REQUIRE HANDLE TIE/COMMON TRIP BREAKER. IF COMMON TRIP BREAKER IS NOT USED, INDIVIDUAL NEUTRALS SHALL BE RUN.

NATIONAL ELECTRICAL CODE ARTICLE 501.15 (A)(4) & (B)(2)

(A)(4) CLASS 1, DIVISION 1 BOUNDARY. IN EACH CONDUIT RUN LEAVING A CLASS 1, DIVISION 1 LOCATION, THE SEALING FITTING SHALL BE PERMITTED ON EITHER SIDE OF THE BOUNDARY OF SUCH LOCATION WITHIN 10 FEET OF THE BOUNDARY AND SHALL BE DESIGNED AND INSTALLED SO AS TO MINIMIZE THE AMOUNT OF GAS OR VAPOR WITHIN THE DIVISION 1 PORTION OF THE CONDUIT FROM BEING COMMUNICATED TO THE CONDUIT BEYOND THE SEAL. EXCEPT FOR LISTED EXPLOSION PROOF REDUCERS AT THE CONDUIT SEAL, THERE SHALL BE NO UNION, COUPLING, BOX, OR FITTING BETWEEN THE CONDUIT SEAL AND THE POINT AT WHICH THE CONDUIT LEAVES THE DIVISION 1 LOCATION (SEE EXCEPTION NO. 1 AND EXCEPTION NO. 2 IN CODE)

(B)(2) CLASS 1, DIVISION 2 BOUNDARY. IN EACH CONDUIT RUN PASSING FROM A CLASS 1, DIVISION 2 LOCATION INTO AN UNCLASSIFIED LOCATION, THE SEALING FITTING SHALL BE PERMITTED ON EITHER SIDE OF THE BOUNDARY OF SUCH LOCATION WITHIN 10 FEET OF THE BOUNDARY. RIGID METAL CONDUIT OR THREADED STEEL INTERMEDIATE METAL CONDUIT SHALL BE USED BETWEEN THE SEALING FITTING AND THE POINT AT WHICH THE CONDUIT LEAVES THE DIVISION 2 LOCATION, AND A THREADED CONNECTION SHALL BE USED AT THE SEALING FITTING AND THE POINT AT WHICH THE CONDUIT LEAVES THE DIVISION 2 LOCATION. CONDUITS SHALL BE SEALED TO MINIMIZE THE AMOUNT OF GAS OR VAPOR WITHIN THE DIVISION 2 PORTION OF THE CONDUIT FROM BEING COMMUNICATED TO THE CONDUIT BEYOND THE SEAL. SUCH SEALS SHALL NOT BE REQUIRED TO BE EXPLOSION PROOF BUT SHALL BE IDENTIFIED FOR THE PURPOSE OF MINIMIZING PASSAGE OF GASES UNDER THE NORMAL OPERATING CONDITIONS AND SHALL BE ACCESSIBLE FOR THE PURPOSE OF MINIMIZING (SEE EXCEPTION NO. 1, EXCEPTION NO. 2, EXCEPTION NO. 3, AND EXCEPTION NO. 4 IN CODE)

THE FOLLOWING TAGS SHOULD BE PLACED ON EQUIPMENT

TAG	DESCRIPTION
P#1	MAIN PANEL BOARD #1
P#2	PANELBOARD #2
MCP-ANGI	MOTOR CONTROL PANEL ANGI
ESD J-BOX	ESD CONTROL PANEL #1
LC #1	LIGHT CONTROL/TIMER

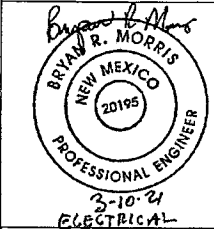


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KS LIC 14094 AR LIC 14310

(CNG INTEGRATION CONTRACTOR)

BASE BID INSTALLATION OF EQUIPMENT
(PROVIDED BY EMW GAS ASSOC.)

- 1 INLET GAS DRYER (KREBEC MODEL# STR1BNX-1-55-400A490)
- 1 3-STAGE 100 HP (LW POWER) CNG COMPRESSOR SKID
- 1 4-STAGE 50 HP (ANGI ENERGY) CNG COMPRESSOR SKID (INCLUDES ALTITUDE KIT, SLAVE PLC, SPARE PARTS KIT, SOFT START MOTOR CONTROL PANEL)
- 1 SPHERE SKID W/ 3 48" STORAGE SPHERES (INCLUDES PRIORITY ESD VALVES/PLUMBING ON SPHERE SKID (LW POWER))
- 1 SPHERE SKID W/ 3 48" STORAGE SPHERES (LW POWER)
- 3 ASME 20" X 24" STORAGE CYLINDERS (CP INDUSTRIES)
- 1 GREENFIELD CNG DISPENSER (NON X-PURGE TO BE CONVERTED)
- 1 TGT 7203-B NGC50 CNG DISPENSER AND TUB
- 1 FUELMASTER FMU 2550 CARD READER
- 1 INLET GAS DRYER (KREBEC MODEL# STR1BNX)

ALTERNATE BID INSTALLATION OF EQUIPMENT
(PROVIDED BY EMW GAS ASSOC.)

- 3 48" CNG STORAGE SPHERES

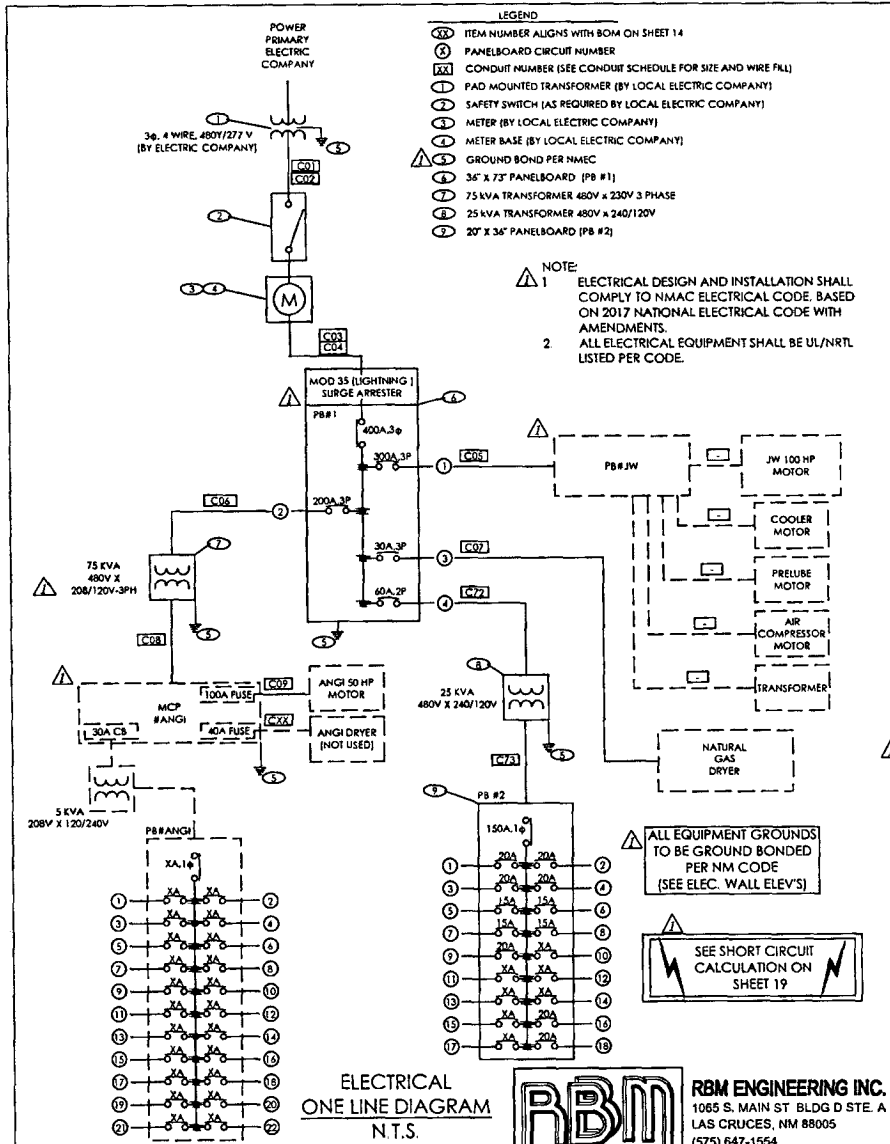
BASE BID EQUIPMENT
(PROVIDED BY CONTRACTOR)

- 2 COALESCING FILTER ASSEMBLIES
- 1 DISPENSER TUB FOR GREENFIELD DISPENSER

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PUBLIC ACCESS CNG STATION
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614 U.S. Route 66 (W)
MORIARTY, NM 87035
ELECTRICAL - BILL OF MATERIALS

SURVEY BY: N/A PROJECT # - 20104
DRAWN BY: JBS DATE: 02/18/2020
CHECKED BY: JBS SCALE: N.T.S.
PROJECT: PUBLIC CNG STATION
SHEET DESC: ELECTRICAL - BOM
SHEET 14 OF 27



ELECTRICAL ONE LINE DIAGRAM N.T.S.



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REVISIONS:
 1 3-10-21 REVISED/ADDED VARIOUS ITEMS

PB #1

400 AMP MAIN		65E A/C	SURFACE MOUNT BOTTOM FEED NEMA 3P			
CKT	BKR	DESCRIPTION	MB	DESCRIPTION	BKR	CKT
1	300	PB#JW	0	TRANSFORMER - MCP RANGI	200	2
		PB#JW	0	TRANSFORMER MCP RANGI		
		PB#JW	0	TRANSFORMER MCP RANGI		
3	30	INLET DRYER	0	TRANSFORMER PB #2	60	4
		INLET DRYER	0	TRANSFORMER PB #2		
		INLET DRYER	0			

PB #2

150 AMP MAIN		18K A/C	SURFACE MOUNT BOTTOM FEED			
CKT	BKR	DESCRIPTION	MB	DESCRIPTION	BKR	CKT
1	20	QUAD-PLEX OUTLET IN COMM.	0	ESD PANEL	20	2
3	20	DUPLEX OUTLET #1	0	LIGHT CONTROLLER	20	4
5	15	GROUND MOUNT SIGN	0	EQUIPMENT LIGHTS (M) WALL	15	4
7	15	SPARE	0	EQUIPMENT LIGHTS (N&E) WALLS	15	8
9	20	SPARE	0	SPARE	15	10
11			0			12
13			0			14
15			0	A/C CLIMATE BOX		16
17			0	A/C CLIMATE BOX	20	18

PB #ANG1
 AS INSTALLED IN MCP #ANG1 (FEED FROM 5 KVA TRANSFORMER ON MCP #ANG1)

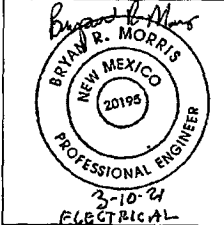
CKT	BKR	DESCRIPTION	XA	DESCRIPTION	BKR	CKT
15		ANG1 COMP. CONTROL POWER	0			
15		MASTER CONTROL PANEL	0			
15		SLAVE CONTROL PANEL	0			
15		UPS PANEL 120V POWER	0			
15		ANG1 COMP. ENCLOSURE LIGHTING	0			
15		PRIORITY PANEL	0			
15		DISPENSER #1	0			
15		DISPENSER #2	0			
15		FUEL MGMT #1	0			
15		FUEL MGMT #2	0			
15		ANG1 COMP. OIL HEATER	0			
15		SPARE	0			
15		SPARE	0			

* CIRCUITS ALREADY SETUP IN ANG1 MSP (ORDER UNKNOWN)



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PUBLIC ACCESS CNG STATION
 E.M.W. GAS ASSOCIATION
 614 U.S. Route 66 (W)
 MORIARTY, NM 87035
 ELECTRICAL - ONE-LINE DIAGRAM

SURVEY BY: N/A PROJECT #: 20104
 DRAWN BY: JEB DATE: 09/18/2020
 CHECKED BY: JEB SCALE: N/A

PROJECT: PUBLIC CNG STATION
 SHEET DESC: ELEC. ONE-LINE DIAGRAM
 SHEET: 15 OF 27

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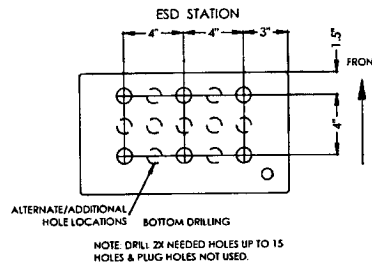
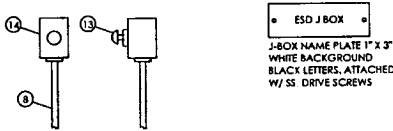
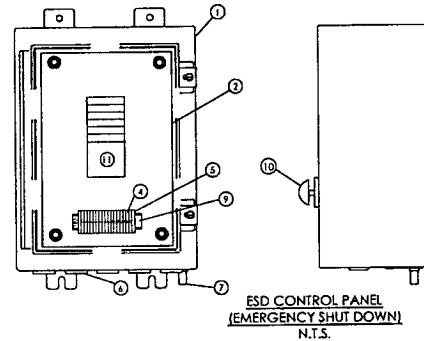
NOTE
ELECTRICAL CONDUITS & WIRING SHOWN MAY BE USED FOR
BIDDING PURPOSES. FINAL LOCATIONS, QUANTITIES, AND WIRE
SIZES TO BE DETERMINED DURING CONSTRUCTION BY WIRING
DIAGRAM SUPPLIED BY COMPRESSOR ESD MANUFACTURER TO
MEET THE REQUIREMENTS FOR THE COMPRESSOR CONTROL
PANEL. ALL WIRING AND CONDUIT SHALL BE APPROVED BY
SUBMITTAL TO ENGINEER BEFORE ORDERED AND INSTALLED.

NOTE FINAL WIRING DIAGRAM FOR COMPRESSOR
CONTROL PANEL AND ESD EQUIPMENT TO BE
PROVIDED BY COMPRESSOR MANUFACTURER

ESD
WIRING DIAGRAM
N.T.S.

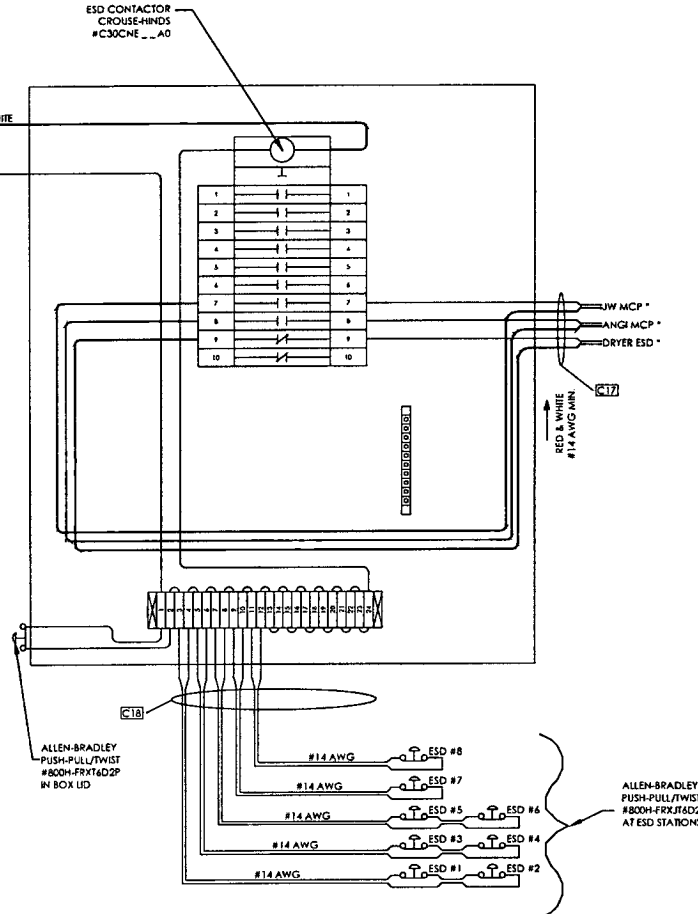
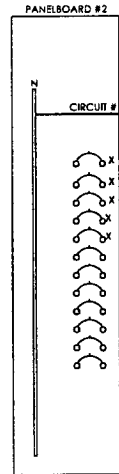
*EQUIPMENT ESD NOTES:

1. BY NFPA 52 CODE THERE IS NO REQUIREMENT TO MAKE EQUIPMENT ESD
BUTTON CONTROL SITE ESD, BUT IF ANY SITE ESD BUTTON IS ACTIVATED ALL
THE COMPRESSOR(S), DISPENSER(S), AND DEPUING PANEL(S) SHALL
HAVE POWER SUPPLY SHUT OFF AND HAVE GAS SUPPLY SHUT OFF.
2. CONNECT TO EQUIPMENT ESD CIRCUIT ACCORDING TO EQUIPMENT
MANUFACTURER'S RECOMMENDATIONS.
3. ADDITIONAL RELAYS AND WIRING MAY BE REQUIRED
4. DEPENDING ON EQUIPMENT ESD REQUIREMENTS, REVERSAL FROM N-O
TO N-C CONTACT CAN BE ACHIEVED BY ROTATING THE CONTACT 180°



BILL OF MATERIAL (ESD CONTROL PANEL)

ELEC	ESD	BOM	ITEM	QTY	DESCRIPTION
1	1	1	1	1	ENCLOSURE - HOFFMAN NO. A-16148CH
2	1	1	1	1	PANEL - HOFFMAN NO. A-16P14
3	1	1	1	1	CORROSION INHIBITOR - HOFFMAN NO. AHCI10E
4	24	1	24	1	TERMINALS PHOENIX NO. 3204342
5	2	1	2	1	END STOP PHOENIX NO. 0800884
6	3	1	3	1	HUB 3/4" - CROUSE-HINDS NO. HUB1
7	1	1	1	1	BREATHER DRAIN - ECD18
8	A/R	1	1	1	3/4" CONDUIT
9	A/R	1	1	1	DIN RAIL 35 MM
10	1	1	1	1	PUSH BUTTON - ALLEN-BRADLEY NO. #800H-FRXT6D2P
11	1	1	1	1	LIGHTING CONTACTOR - CUTLER-HAMMER NO. C30CNE _ _ A0
12	1	1	1	1	LOT - TERMINALS & MISC. HARDWARE AS REQUIRED
13	8	1	8	1	PUSH BUTTON - ALLEN-BRADLEY NO. #800H-FRXT6D2P
14	8	1	8	1	BUTTON ENCLOSURES - NEMA 4



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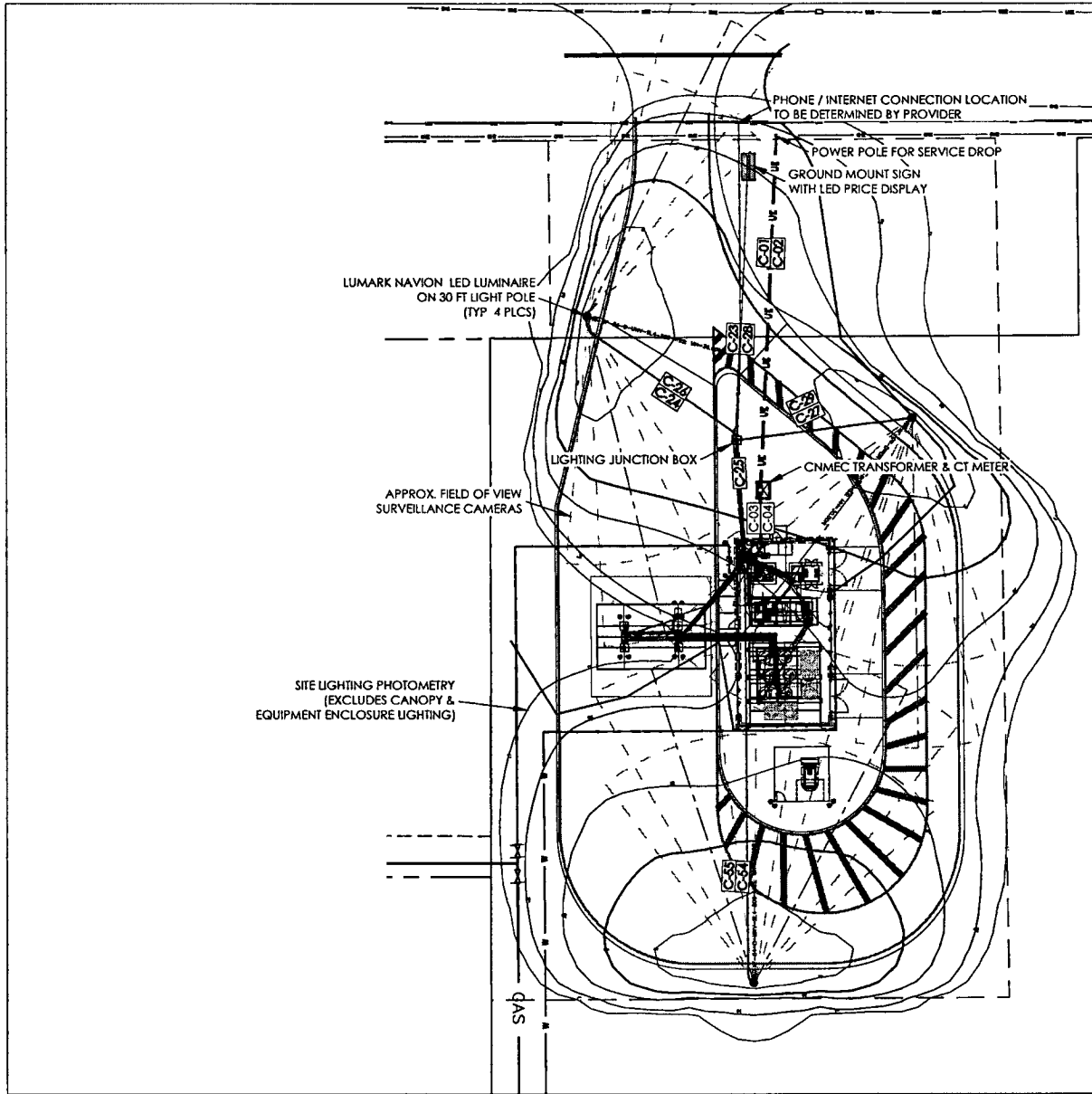
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ELECTRICAL - ESD CTRL PANEL BOM

SURVEY BY	N/A	PROJECT #	20104
DRAWN BY	TEO	DATE	09/18/2020
CHECKED BY	JHB	SCALE	N.T.S.
PROJECT	PUBLIC CNG STATION		
SHEET DESC	ELEC. ESD PANEL BOM		
SHEET	16	OF	27

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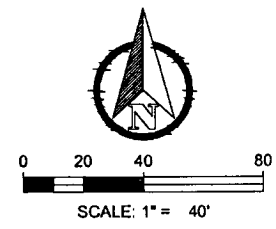


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3-10-21
ELECTRICAL
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 MORIARTY, NM 87035
 CAMERA FOV & PHOTOMETRY

SURVEY BY: N/A	PROJECT #: 20104
DRAWN BY: TED	DATE: 09/18/2020
CHECKED BY: JHB	SCALE: 1"=40'
PROJECT: PUBLIC CNG STATION	
SHEET DESC: FOV & PHOTOMETRY	
SHEET: 17	OF: 27

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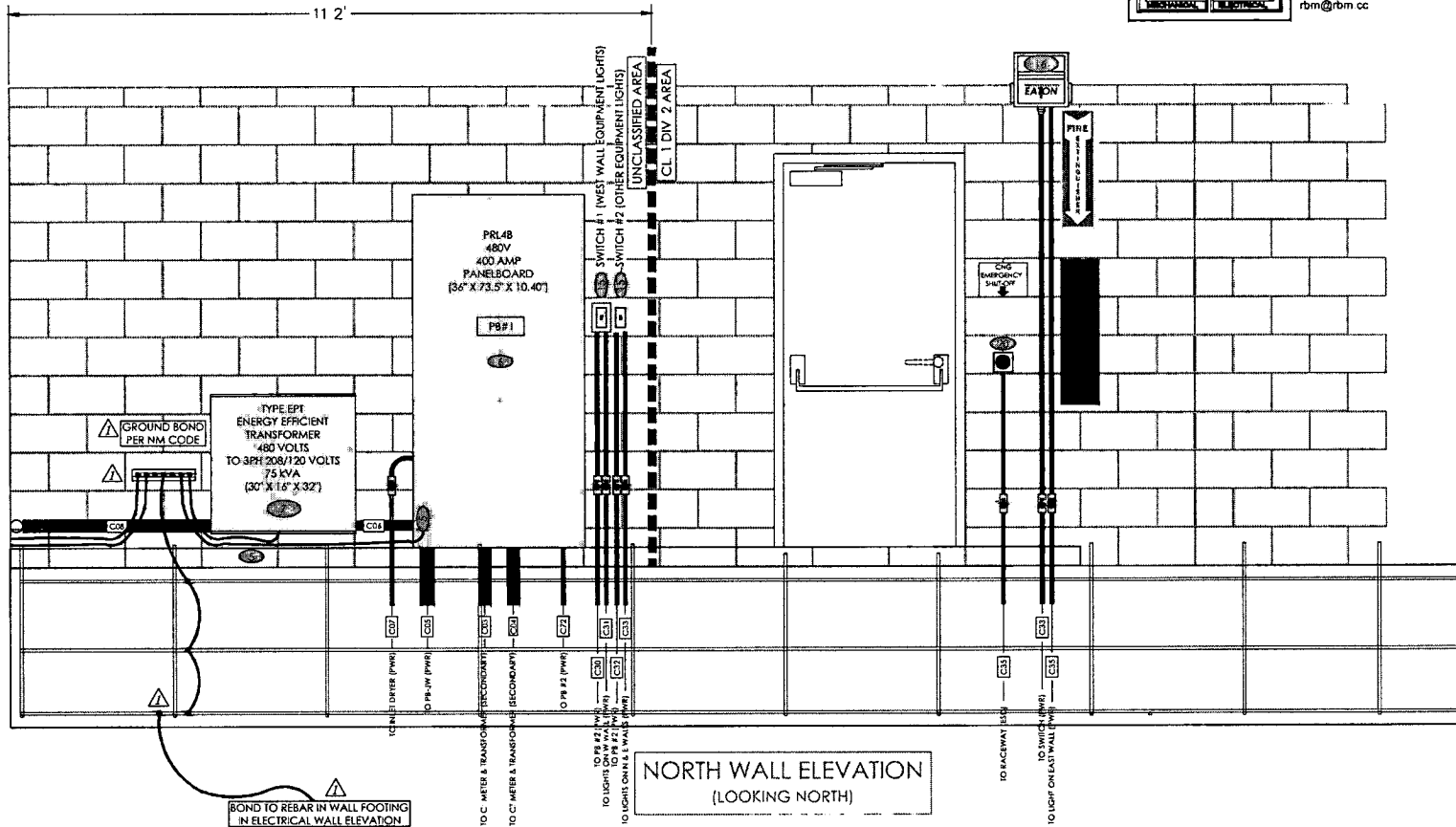


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 KS LIC 14094 AR LIC 14310

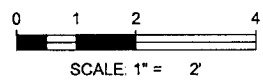
PUBLIC ACCESS CNG STATION
 E.M.W. GAS ASSOCIATION
 614 U.S. Route 66 (W)
 MORIARTY, NM 87035
 NORTH ELECTRICAL WALL ELEV.

SURVEY BY: N/A PROJECT #: 20104
 DRAWN BY: JED DATE: 07/18/2020
 CHECKED BY: JHB SCALE: 1" = 2'

PROJECT: PUBLIC CNG STATION
 SHEET DESC: NORTH ELEC. WALL ELEV.
 SHEET: 18 OF 27



NORTH WALL ELEVATION
 (LOOKING NORTH)



REVISIONS:
 1 3-10-21 REVISED GROUNDING TO GROUND BOND

- (XX) ITEM NUMBERS ALIGN WITH BOM ON SHEET 13
- (XX) CONDUIT NUMBERS ALIGN WITH SCHEDULES ON SHEETS 23 & 24

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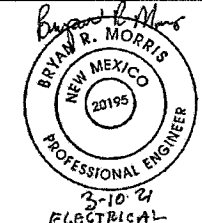


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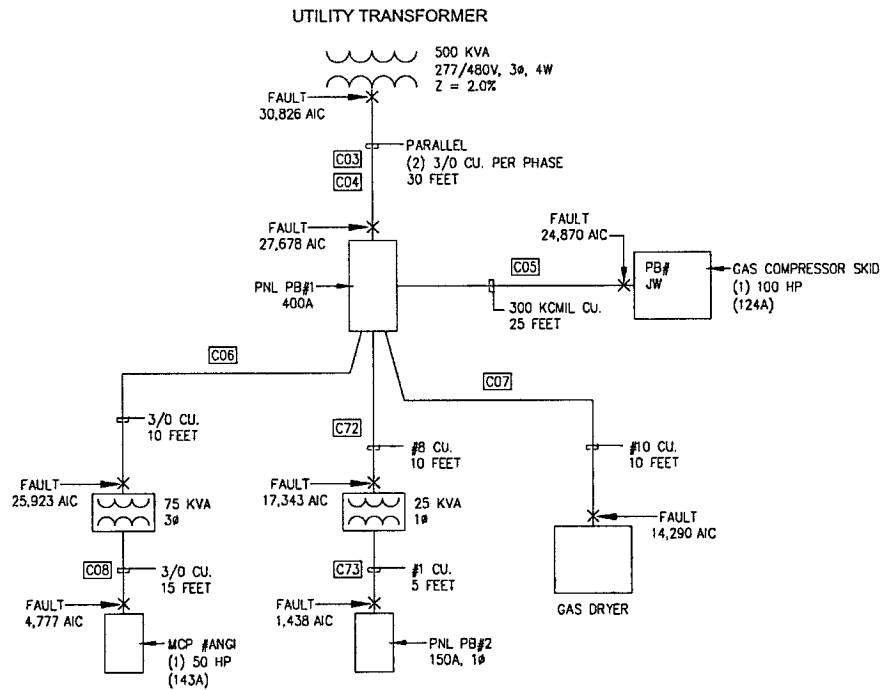
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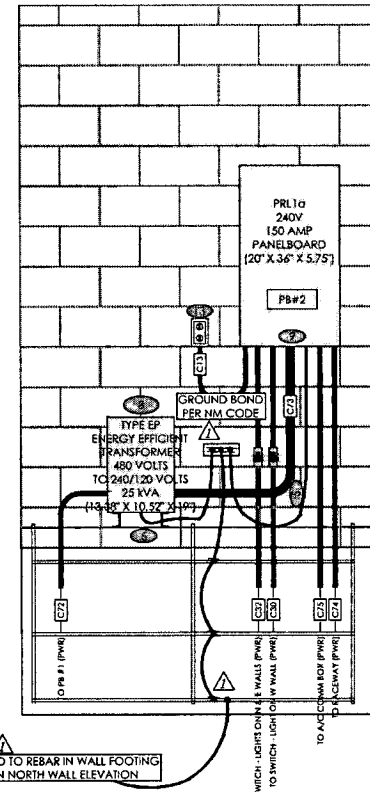
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 KS LIC 14094 AR LIC 14310

PUBLIC ACCESS CNG STATION
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 MORIARTY, NM 87035
 INTERIOR ELECTRICAL WALL ELEV.

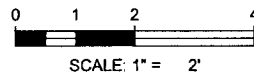


SHORT CIRCUIT CALCULATION

PANEL PB#1 SHALL HAVE A MINIMUM 27,678 AIC.
 GAS COMPRESSOR SKID SHALL HAVE A 24,870 SCCR MIN.
 GAS DRYER SHALL HAVE A 14,290 SCCR MIN.
 PANEL PB#2 SHALL HAVE A MINIMUM 1,438 AIC.
 MCP #ANGI SHALL HAVE A 4,777 SCCR MIN.



ELECTRICAL WALL ELEVATION
 (LOOKING SOUTH)



REVISIONS:

1	3-10-21	REVISED GROUNDING TO GROUND BOND
2	3-10-21	ADDED SHORT CIRCUIT CALCULATION

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DRAWN BY: TED	DATE: 09/18/2020
CHECKED BY: JHB	SCALE: 1"=2'
PROJECT: PUBLIC CNG STATION	
SHEET DESC: INTERIOR ELEC. WALL ELEV.	
SHEET: 19	OF: 27

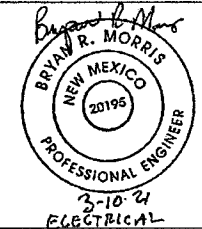


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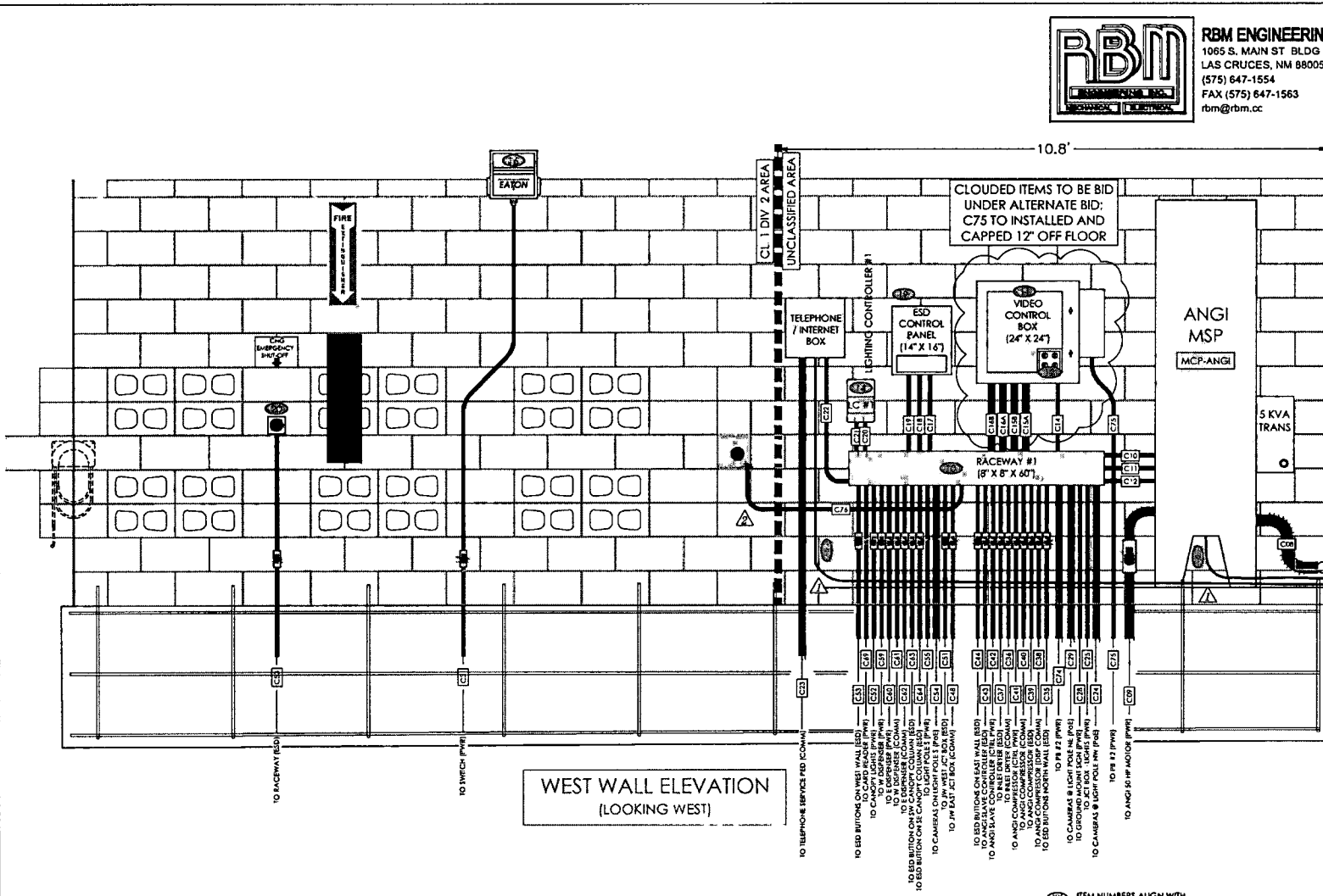


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KS LIC 14094 AR LIC 14310

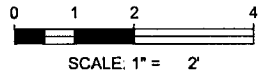
PUBLIC ACCESS CNG STATION
E.M.W. GAS ASSOCIATION
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MORIARTY, NM 87035
WEST ELECTRICAL WALL ELEVATION

SURVEY BY: N/A PROJECT #: 20104
DRAWN BY: JED DATE: 09/18/2020
CHECKED BY: JHB SCALE: 1"=2'

PROJECT: PUBLIC CNG STATION
SHEET DESC: WEST ELEC. WALL ELEV.
SHEET: 20 OF 27



WEST WALL ELEVATION (LOOKING WEST)

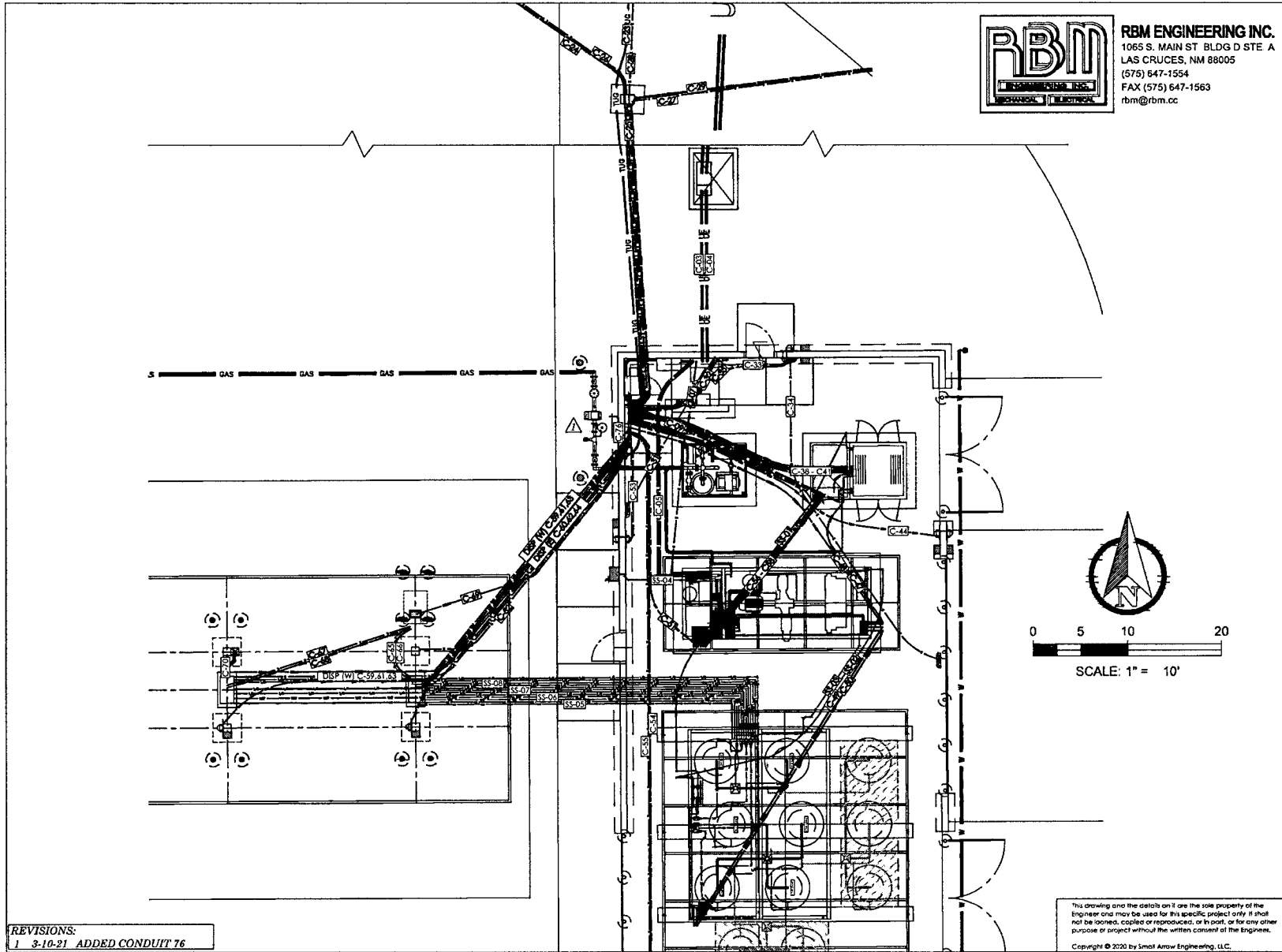


SCALE: 1" = 2'

Table with 3 columns: Revision Number, Date, and Description. Includes revisions for 'REVISED GROUNDING TO GROUND BOND' and 'ADDED CONDUIT 76'.

- Legend for item numbers and conduit numbers, including references to sheets 23 & 24.

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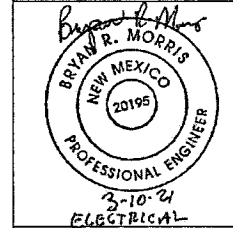


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PUBLIC ACCESS CNG STATION
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 EQUIPMENT CONDUIT LAYOUT

REVISIONS:
 1 3-10-21 ADDED CONDUIT 76

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SURVEY BY: N/A PROJECT #: 20104.
 DRAWN BY: JED DATE: 09/18/2020
 CHECKED BY: JHB SCALE: 1"=10'
 PROJECT: PUBLIC CNG STATION
 SHEET DESC: EQUIP. CONDUIT LAYOUT
 SHEET: 21 OF 27

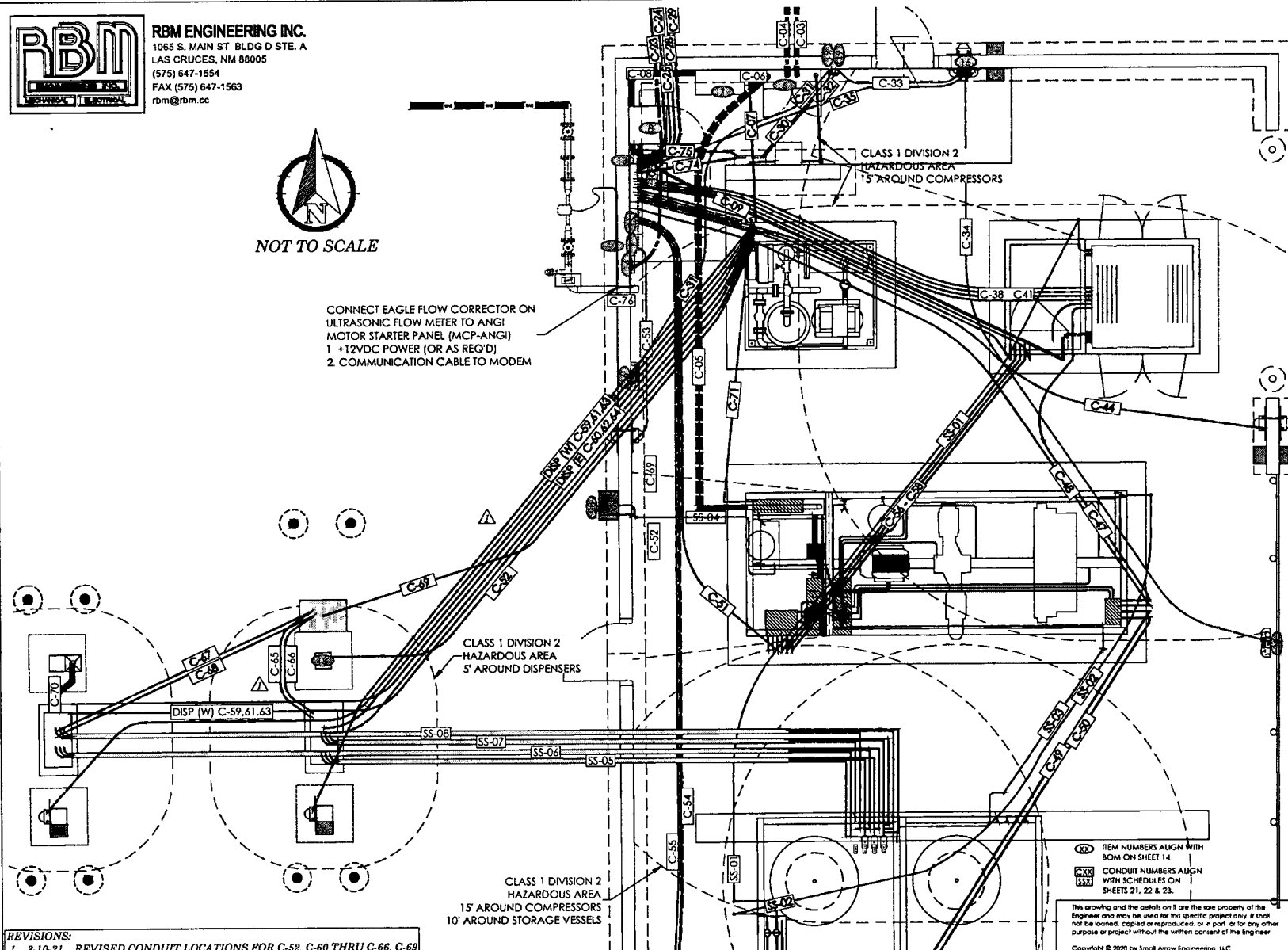


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NOT TO SCALE

CONNECT EAGLE FLOW CORRECTOR ON
 ULTRASONIC FLOW METER TO ANGI
 MOTOR STARTER PANEL (MCP-ANGI)
 1. +12VDC POWER (OR AS REQ'D)
 2. COMMUNICATION CABLE TO MODEM



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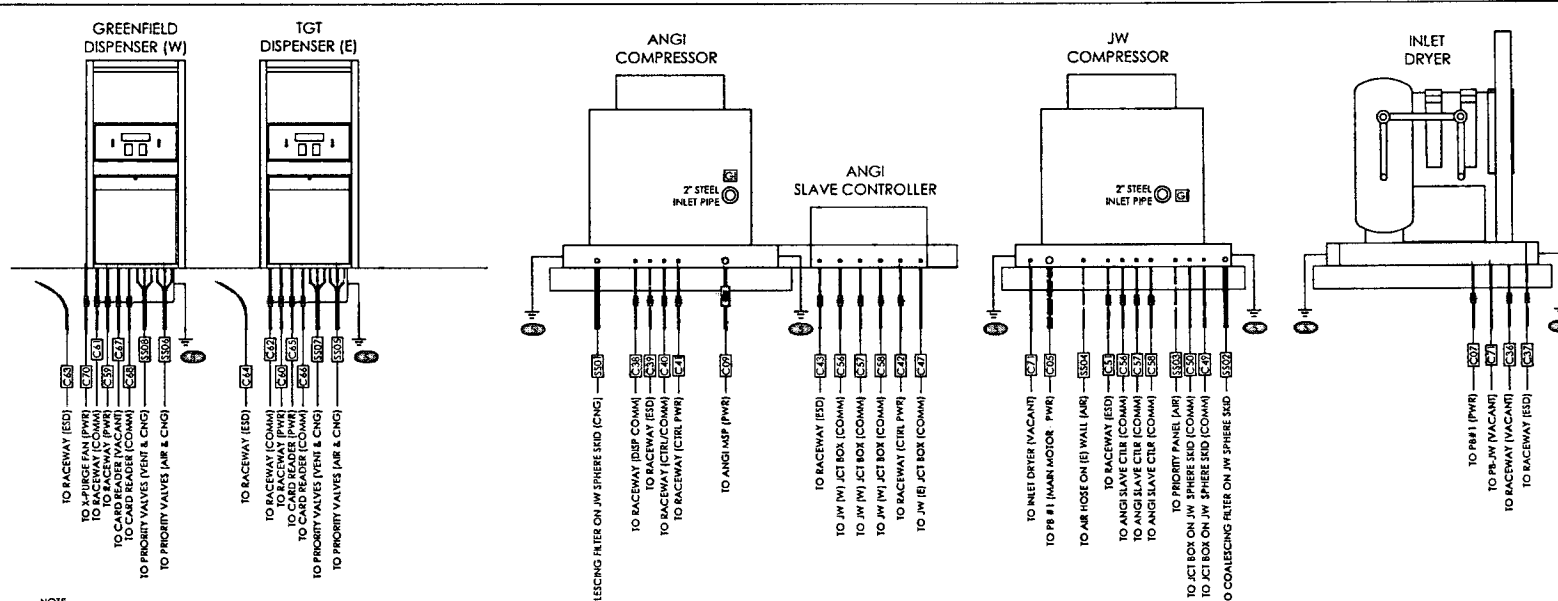
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 3-10-21
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**PUBLIC ACCESS CNG STATION
 E.M.W. GAS ASSOCIATION
 614 U.S. Route 66 (W)
 MORIARTY, NM 87035
 EQUIPMENT CONDUIT LAYOUT**

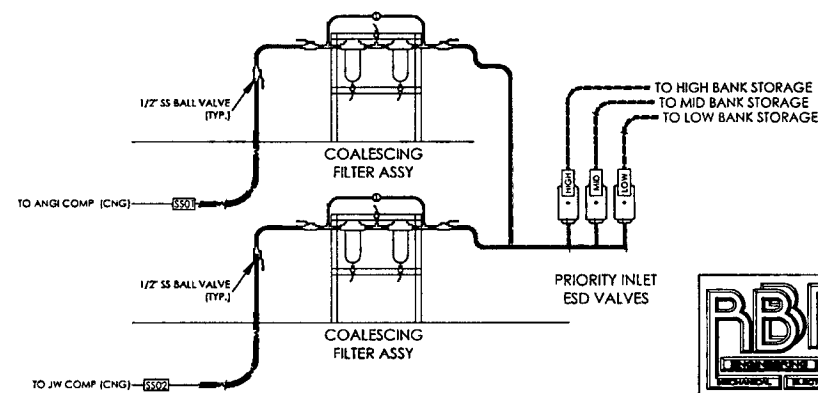
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 DRAWN BY: JED DATE: 09/18/2020
 CHECKED BY: JHB SCALE: N.T.S.
 PROJECT: PUBLIC CNG STATION
 SHEET DESC: EQUIP. CONDUIT LAYOUT
 SHEET: 22 OF 27

REVISIONS:
 1 3-10-21 REVISED CONDUIT LOCATIONS FOR C-52, C-60 THRU C-66, C-69

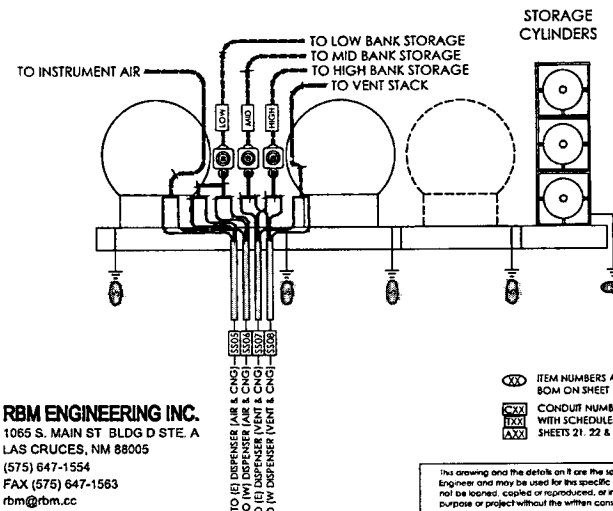
ITEM NUMBERS ALIGN WITH
 BOM ON SHEET 14
 CONDUIT NUMBERS ALIGN
 WITH SCHEDULES ON
 SHEETS 21, 22 & 23.
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(X) ITEM NUMBERS ALIGN WITH BOM ON SHEET 14
 (C-2) CONDUIT NUMBERS ALIGN WITH SCHEDULES ON SHEETS 21, 22 & 23.

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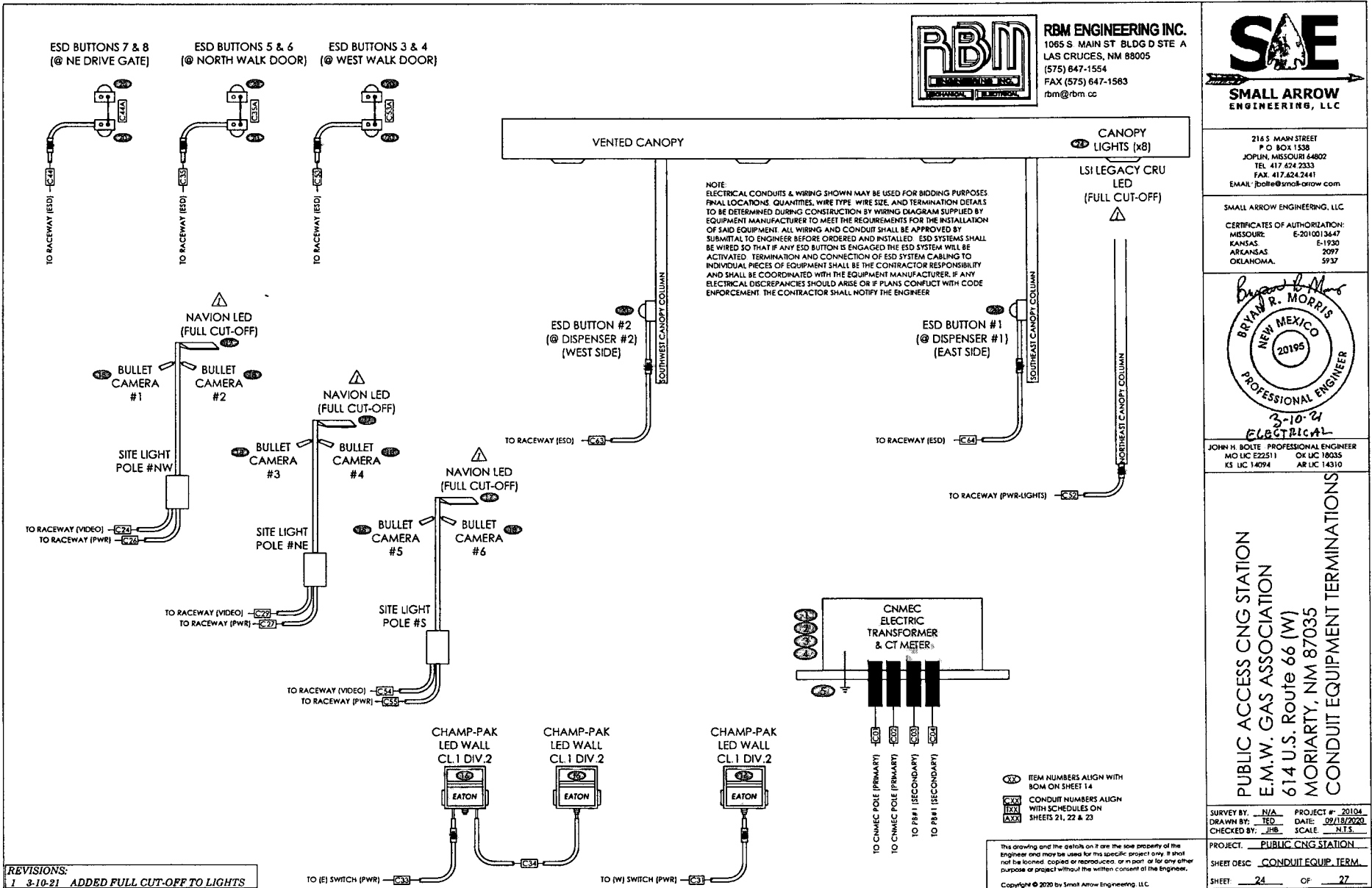
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 MORIARTY, NM 87035
 CONDUIT EQUIPMENT TERMINATIONS

SURVEY BY: N/A PROJECT #: 20104
 DRAWN BY: JED DATE: 02/18/2020
 CHECKED BY: JED SCALE: N.T.S.

PROJECT: PUBLIC CNG STATION
 SHEET DESC: CONDUIT EQUIP. TERM.
 SHEET 23 OF 27



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CONDUIT EQUIPMENT TERMINATIONS

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SHEET: 24 OF 27



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CONDUIT & WIRING SCHEDULE

CONDUIT NO.	MIN. SIZE	LENGTH FT TO PT	PHASE	NO. & SIZE WIRE/CABLE	GROUND WIRE	CIRCUIT NO.	BAR/ET/P/POLE	FROM	TO	FUNCTION/COMMENTS	SEAL	SHEET REFERENCE
1	6" SCH 80	130'	3	CNMEC TO PROVIDE AND INSTALL PRIMARY CABLE		(PRIMARY)		EXIST POWER POLE @ DWY	TRANSFORMER/CT METER			
2	6" SCH 80	130'	3	CNMEC TO PROVIDE AND INSTALL PRIMARY CABLE		(PRIMARY)		EXIST POWER POLE @ DWY	TRANSFORMER/CT METER			
3	2 1/2"	30'	3	(3) 3/0 MCM	(1) 3/0 MCM	(SECONDARY)	400A MAIN BREAK	TRANSFORMER/CT METER	PB #1			
4	2 1/2"	30'	3	(3) 3/0 MCM	(1) 3/0 MCM	(SECONDARY)	400A MAIN BREAK	TRANSFORMER/CT METER	PB #1			
5	1"	25'	3	(3) 3/0 MCM	(1) 2/0 MCM	PB1-1	200A-3P	PB #1	PB #V	100A MAIN BREAK (FEEDS 400A EXISTING)		
6	2 1/2"	1'	3	(1) 3/0 MCM	(1) 3/0 MCM	PB1-2	200A-3P	PB #1	75 KVA TRANSFORMER 230V-3PH			
7	1"	10'	3	(3) 4 AWG P10	(1) 4 AWG P10	PB1-2	30A-3P	PB #1	INLET DRIVER			
8	2 1/2"	5'	3	(3) 3/0 MCM	(1) 3/0 MCM	(PB-ANG)		TRANSFORMER 230V 3PH	ANGI MSP			
9	2"	25'	3	(3) 2/0 MCM	(1) 2/0 MCM	(PB-ANG)		ANGI MSP	ANGI 150HP MOTOR		Y	
10	1 1/4"	2'	1	(2) 12 AWG, (2) 14 AWG	(3) 12 AWG, (3) 14 AWG	VARIABLES	VARIABLES	ANGI MSP	RACEWAY			
11	1 1/4"	2'	ESD	(2) #14 AWG				ANGI MSP	RACEWAY			
12	1 1/4"	1'	COMM	(1) CAT 5				ANGI MSP	RACEWAY			
13	3/4"	1'	1	(2) 12 AWG	(1) 12 AWG	PB2-3	20A	PB #2	W/PROOF DUPLEX OUTLET			
14	1"	1'	1	(2) 12 AWG	(1) 12 AWG	PB2-1	20A	RACEWAY	QUADPLEX OUTLET-VIDEO CTRL PNL	ALTERNATE BID ITEM		
15A	1 1/2"	1'	VIDEO	(1) CAT 6				RACEWAY	VIDEO CONTROL PANEL	ALTERNATE BID ITEM		
15B	1 1/2"	1'	VIDEO	(2) CAT 6 PUT (2) CAT 5				RACEWAY	VIDEO CONTROL PANEL	ALTERNATE BID ITEM		
16A	1 1/2"	1'	VIDEO	MISC. VARIOUS CABLE FOR PHONE / INTERNET / COMM				RACEWAY	VIDEO CONTROL PANEL	ALTERNATE BID ITEM		
16B	1 1/2"	1'	VIDEO	MISC. VARIOUS CABLE FOR PHONE / INTERNET / COMM				RACEWAY	VIDEO CONTROL PANEL	ALTERNATE BID ITEM		
17	1"	1'	ESD	(1) #14 AWG				RACEWAY	ESD CONTROL PANEL			
18	1"	1'	ESD	(1) #14 AWG				RACEWAY	ESD CONTROL PANEL			
19	1"	1'	1	(2) 12 AWG	(1) 12 AWG	PB2-2	20A	RACEWAY	ESD CONTROL PANEL			
20	3/4"	1'	1	(2) 12 AWG	(1) 12 AWG	PB2-4	20A	RACEWAY	LIGHTING CONTROL PANEL			
21	3/4"	1'	1	(4) 12 AWG	(2) 12 AWG	PB2-4	20A	RACEWAY	LIGHTING CONTROL PANEL			
22	3/4"	1'	COMM	T.B.D.				RACEWAY	TELEPHONE/INTERNET BOX			
23	1 1/2"	165'	T.B.D.	T.B.D.				RACEWAY	TELEPHONE/INTERNET BOX			
24	1 1/2"	125'	VIDEO	(2) CAT 6				RACEWAY	17" PTY CONNECTION POINT CAMERAS ON LIGHT POLE (NW)			
25	3/4"	45'	1	(1) #14 AWG	(1) #14 AWG	PB2-4	20A	RACEWAY	JUNCTION BOX			
26	3/4"	80'	1	(1) #14 AWG	(1) #14 AWG	PB2-4	20A	RACEWAY	JUNCTION BOX			
27	3/4"	60'	1	(1) #14 AWG	(1) #14 AWG	PB2-4	20A	RACEWAY	JUNCTION BOX			
28	1"	145'	1	(2) #12 AWG	(1) #14 AWG	PB2-5	15A	RACEWAY	GROUND MOUNT SIGN			
29	1 1/2"	105'	VIDEO	(2) CAT 6				RACEWAY	CAMERAS ON LIGHT POLE (WE)			
30	3/4"	10'	1	(2) #14 AWG	(1) #14 AWG	PB2-6	15A	PB #2	WEST SWITCH			
31	3/4"	20'	1	(2) #14 AWG	(1) #14 AWG	PB2-6	15A	PB #2	WEST SWITCH		Y	
32	3/4"	10'	1	(2) #14 AWG	(1) #14 AWG	PB2-8	15A	PB #2	EAST SWITCH			
33	3/4"	10'	1	(1) #14 AWG	(1) #14 AWG	PB2-8	15A	PB #2	EAST SWITCH			
34	3/4"	40'	1	(2) #14 AWG	(1) #14 AWG	PB2-8	15A	PB #2	NORTH WALL LIGHT			
35	3/4"	20'	ESD	(1) #14 AWG	(1) #14 AWG	PB2-8	15A	RACEWAY	NORTH WALL LIGHT			
35A	3/4"	1'	ESD	(2) #14 AWG				RACEWAY	ESD NORTH WALL (IN)		Y	
36	3/4"	5'	COMM	T.B.D.				RACEWAY	ESD NORTH WALL (OUTER)		Y	
37	3/4"	5'	ESD	(2) #14 AWG				RACEWAY	INLET DRIVER		Y	
38	3/4"	25'	COMM	(1) CAT 5				RACEWAY	ANGI COMPRESSOR A	DISPENSER COMMUNICATION	Y	
39	3/4"	25'	ESD	(2) #14 AWG				RACEWAY	ANGI COMPRESSOR A	ESD	Y	
40	3/4"	25'	COMM	T.B.D.				RACEWAY	ANGI COMPRESSOR A	COMMUNICATION / CONTROL	Y	
41	3/4"	25'	1	(2) #14 AWG	(1) #14 AWG	(PB-ANG)	(15A)	RACEWAY	ANGI COMPRESSOR A	CONTROL POWER	Y	
42	3/4"	20'	1	(2) #14 AWG	(1) #14 AWG	(PB-ANG)	(15A)	RACEWAY	ANGI SLAVE CONTROLER	CONTROL POWER	Y	
43	3/4"	20'	ESD	(2) #14 AWG				RACEWAY	ANGI SLAVE CONTROLER	ESD	Y	
44	3/4"	35'	ESD	(2) #14 AWG				RACEWAY	ESD (EAST WALL (IN))		Y	
44A	3/4"	35'	ESD	(2) #14 AWG				RACEWAY	ESD (EAST WALL (OUTER))		Y	

REVISIONS:
 1 3-10-21 REVISED CONDUITS 1 & 2 TO 6"

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PROJECT: PUBLIC CNG STATION
 SHEET DESC: COND. & WIRING SCHED.
 SHEET: 25 OF 27



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CONDUIT & WIRING SCHEDULE

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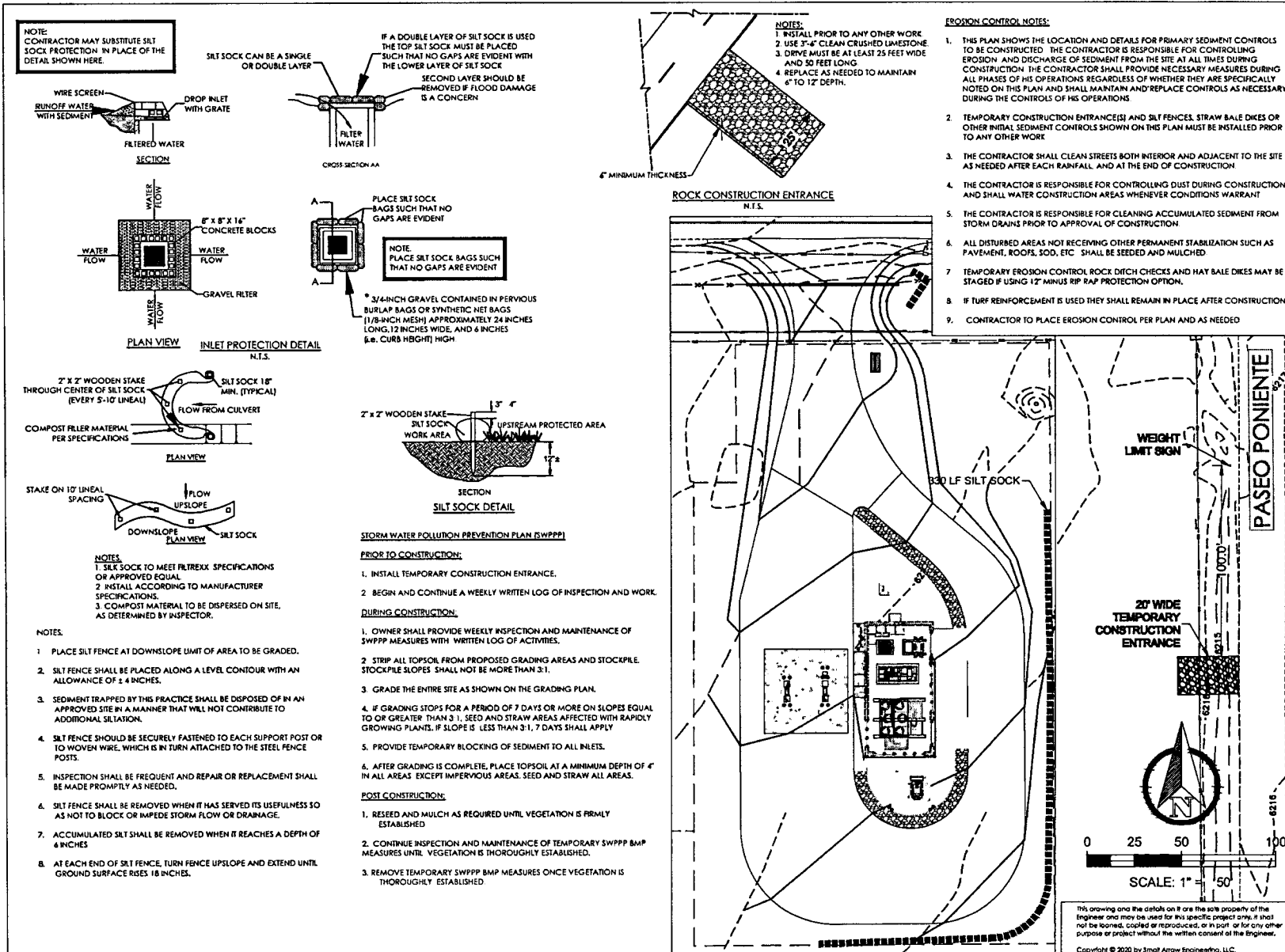
PROJECT PUBLIC CNG STATION
SHEET DESC COND. & WIRING SCHED.
SHEET 26 OF 27


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CONDUIT & WIRING SCHEDULE

CONDUIT NO.	MIN SIZE	LENGTH FT TO PT	PHASE	NO. & SIZE WIRE/CABLE	GROUND WIRE	CIRCUIT NO.	BREAKER/POLE	FROM	TO	FUNCTION/COMMENTS	SEAL	SHEET REFERENCE
47	3/4"	15'	COMM	(1) CAT 5								
48	3/4"	35'	COMM	(1) CAT 5				ANGI COMPRESSOR RACEWAY	NW EAST JCT BOX	STORAGE CONNECTIONS	Y	
49	3/4"	35'	COMM	(1) CAT 5				NW EAST JCT BOX	STORAGE JCT BOX	STORAGE CONNECTIONS	Y	
50	3/4"	35'	COMM	T.B.D.				NW EAST JCT BOX	STORAGE JCT BOX			
51	3/4"	20'	ESD	(2) #14 AWG				RACEWAY	NW WEST JCT BOX		Y	
52	3/4"	50'	1	(2) #12 AWG	(1) #12 AWG	PB2-4	20A	RACEWAY	N/E CANOPY COLUMN - CANOPY LIGHTS		Y	
53	3/4"	15'	ESD	(2) #14 AWG				RACEWAY	ESD WEST WALL (N/E)		Y	
53A	3/4"	1'	ESD	(2) #14 AWG				ESD WEST WALL (INNER)	ESD WEST WALL (OUTER)		Y	
54	1 1/2"	35'	VIDEO	(2) CAT 6				RACEWAY	CAMERAS ON LIGHT POLE (S)			
55	3/4"	55'	1	(2) #10 AWG	(1) #14 AWG	PB2-4	20A	RACEWAY	LIGHT POLE (S)			
56	3/4"	20'	COMM	(1) CAT 5				ANGI SLAVE CONTROLLER	NW WEST JCT BOX		Y	
57	3/4"	20'	COMM	T.B.D.				ANGI SLAVE CONTROLLER	NW WEST JCT BOX		Y	
58	3/4"	20'	COMM	T.B.D.				ANGI SLAVE CONTROLLER	NW WEST JCT BOX		Y	
59	3/4"	20'	1	(2) #14 AWG	(1) #14 AWG	(PB-ANGI)	(15A)	RACEWAY	GREEN FIELD DISPENSER (W)		Y	
60	3/4"	50'	1	(2) #14 AWG	(1) #14 AWG	(PB-ANGI)	(15A)	RACEWAY	TGT DISPENSER (E)		Y	
61	3/4"	20'	COMM	(1) CAT 5				RACEWAY	GREEN FIELD DISPENSER (W)		Y	
62	3/4"	50'	COMM	(1) CAT 5				RACEWAY	TGT DISPENSER (E)		Y	
63	3/4"	80'	ESD	(2) #14 AWG				RACEWAY	NW CANOPY COLUMN		Y	
64	3/4"	80'	ESD	(2) #14 AWG				RACEWAY	SE CANOPY COLUMN		Y	
65	3/4"	10'	1	(2) #16 AWG	(1) #14 AWG	(PB-ANGI)	(15A)	TGT DISPENSER (E)	CARD READER		Y	
66	3/4"	10'	COMM	(1) CAT 5				TGT DISPENSER (E)	CARD READER		Y	
67	3/4"	20'	1	VACANT				GREEN FIELD DISPENSER (W)	CARD READER		Y	
68	3/4"	20'	COMM	(1) CAT 5				GREEN FIELD DISPENSER (W)	CARD READER		Y	
69	3/4"	45'	COMM	(1) CAT 5				RACEWAY	CARD READER			
70	3/4"	5'	1	(2) #14 AWG	(1) #14 AWG	(PB-ANGI)	(15A)	GREEN FIELD DISPENSER (W)	X-PURGE FAN (F REOD)		Y	
71	3/4"	15'	VACANT	VACANT (FUTURE)				PB #1	INLET DRIVER		Y	
72	3/4"	10'	1	(2) #16 AWG	(1) #16 AWG	PB1-4	20A-2P	PB #1	25 IWA TRANSFORMER			
73	2"	5'	2	(2) #1 AWG	(1) #1 AWG	PB1-4	150A MAIN BREAKER	25 IWA TRANSFORMER	PB #2			
74	1"	10'	1	(4) #12 AWG, (2) #16 AWG	(2) #12 AWG, (1) #16 AWG	PB2-1	20A, 20A, 15A	PB #2	RACEWAY			
75	1"	10'	2	(2) #12 AWG	(1) #12 AWG	PB2-16/18	20A-2P	PB #2	A/C - VIDEO CONTROL PANEL	BASE BID - RUN CONDUIT & CAP ALT BIDE - CABLING & CONNECTION		
55-01	1 1/2"	20'		(1) 1/2" SS 0.065" WALL (CNG)				ANGI COMPRESSOR	COLLECTING FILTER ON SPHERE SKID	CAP / SEAL / CABLE / FILLER D OF CONDUIT AROUND SS	-	
55-02	1 1/2"	25'		(1) 1/2" SS 0.065" WALL (CNG)				JW COMPRESSOR	COLLECTING FILTER ON SPHERE SKID	CAP / SEAL / CABLE / FILLER D OF CONDUIT AROUND SS	-	
55-03	1 1/2"	10'		(1) 1/2" SS 0.030" WALL (AIR)				JW COMPRESSOR	PRIORITY PANEL ON SPHERE SKID	CAP / SEAL / CABLE / FILLER D OF CONDUIT AROUND SS	-	
55-04	1 1/2"	10'		(1) 1/2" SS 0.030" WALL (AIR)				JW COMPRESSOR	AIR HOSE ON WEST WALL	CAP / SEAL / CABLE / FILLER D OF CONDUIT AROUND SS	-	
55-05	2"	40'		(1) 1/2" SS 0.020" W (AIR), (2) 1/2" SS 0.065" W (CNG)				PRIORITY PANEL ON SPHERE SKID	TGT DISPENSER (E)	CAP / SEAL / CABLE / FILLER D OF CONDUIT AROUND SS	-	
55-06	2"	60'		(1) 1/2" SS 0.020" W (AIR), (2) 1/2" SS 0.065" W (CNG)				PRIORITY PANEL ON SPHERE SKID	GREEN FIELD DISPENSER (W)	CAP / SEAL / CABLE / FILLER D OF CONDUIT AROUND SS	-	
55-07	2"	40'		(1) 1/2" SS 0.065" W (VENT), (2) 1/2" SS 0.065" W (CNG)				PRIORITY PANEL ON SPHERE SKID	TGT DISPENSER (E)	CAP / SEAL / CABLE / FILLER D OF CONDUIT AROUND SS	-	
55-08	2"	60'		(1) 1/2" SS 0.065" W (VENT), (2) 1/2" SS 0.065" W (CNG)				PRIORITY PANEL ON SPHERE SKID	GREEN FIELD DISPENSER (W)	CAP / SEAL / CABLE / FILLER D OF CONDUIT AROUND SS	-	
76	1/2"	15'	12vdc	(2) #18 AWG	(1) #18 AWG			ANGI MSP / RACEWAY	EAGLE CONTROLLER	EMW GAS METER		

REVISIONS:
1 3-10-21 ADDED CONDUIT 76






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EROSION CONTROL PLAN

SURVEY BY: N/A PROJECT # 20104
DRAWN BY: JED DATE 09/18/2020
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PROJECT: PUBLIC CNG STATION
SHEET DESC: EROSION CONTROL PLAN
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