

PROJECT NUMBER: PR-2024-011242

Application Number: SI-2025-00079

Is an Infrastructure List required? (X) Yes () No If yes, then a set of approved DRC plans with a work order is required for any construction within Public Right-of-Way or for construction of public improvements.

DFT SITE DEVELOPMENT PLAN APPROVAL:

<u>Traffic Engineering, Transportation Division</u>	<u>Date</u>
---	-------------

<u>ABCWUA</u>	<u>Date</u>
---------------	-------------

<u>Parks and Recreation Department</u>	<u>Date</u>
--	-------------

<u>Hydrology</u>	<u>Date</u>
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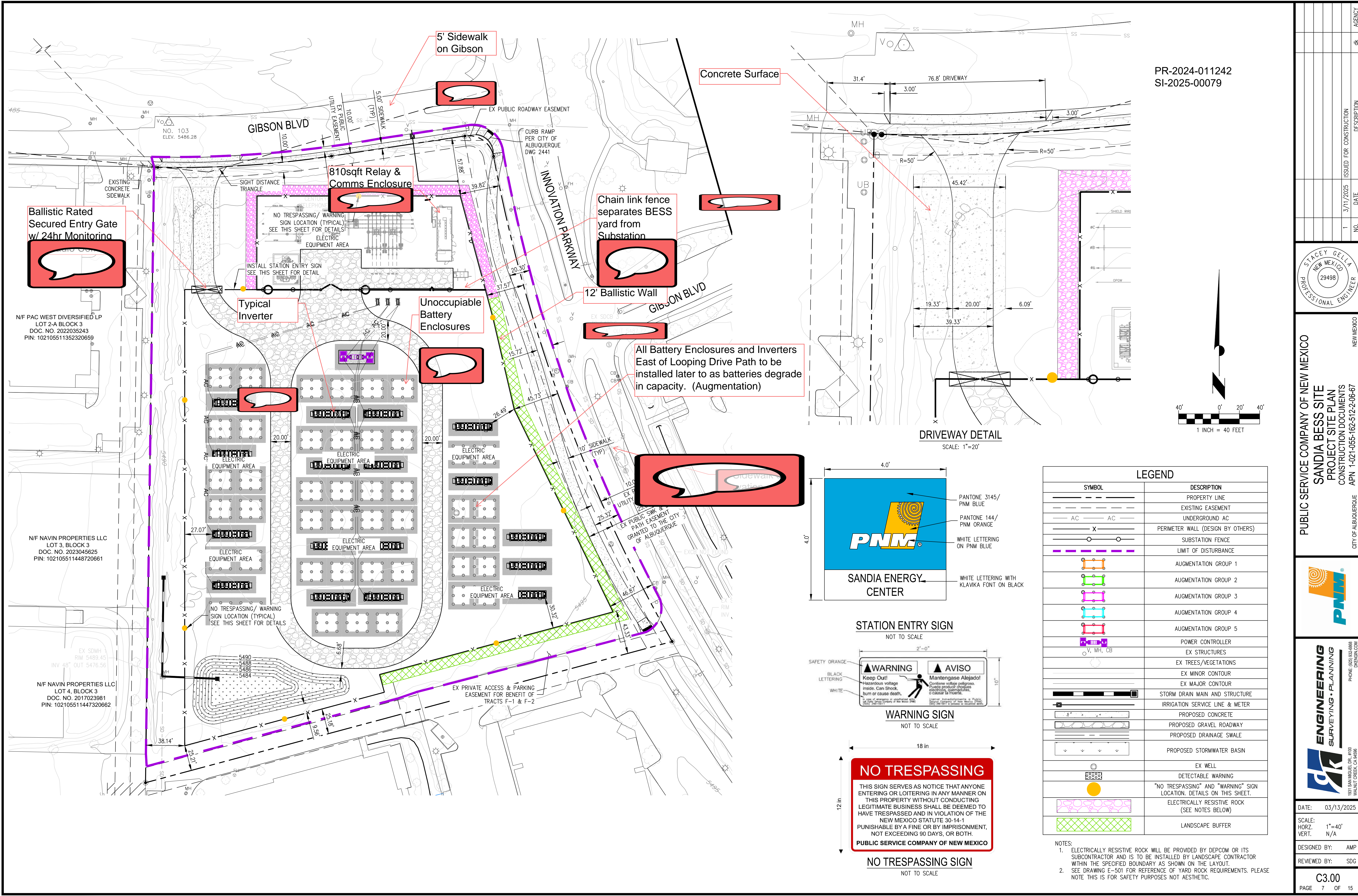
<u>Code Enforcement</u>	<u>Date</u>
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<u>* Environmental Health Department (conditional)</u>	<u>Date</u>
--	-------------

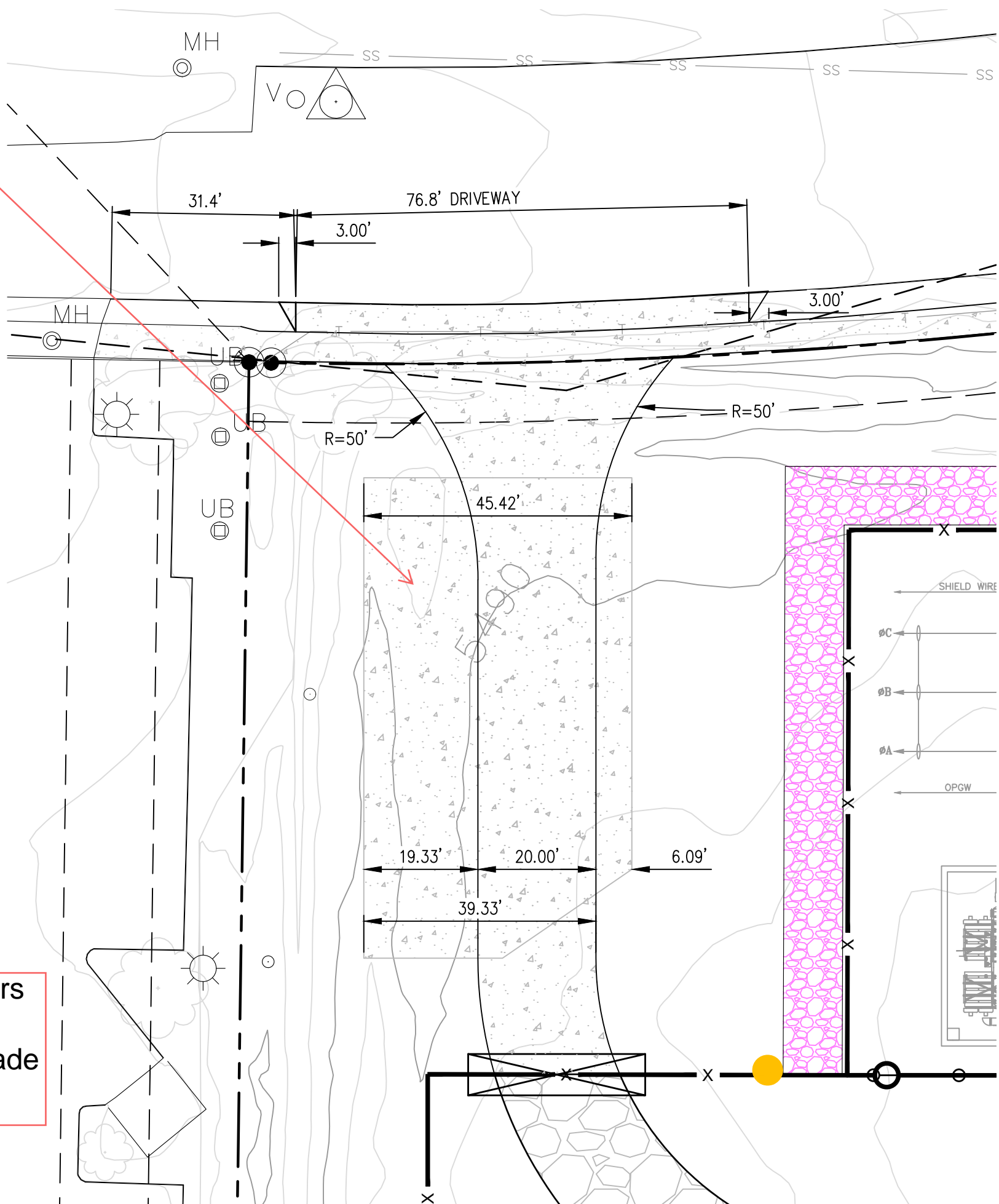
<u>Solid Waste Management</u>	<u>Date</u>
-------------------------------	-------------

<u>Planning Department</u>	<u>Date</u>
----------------------------	-------------

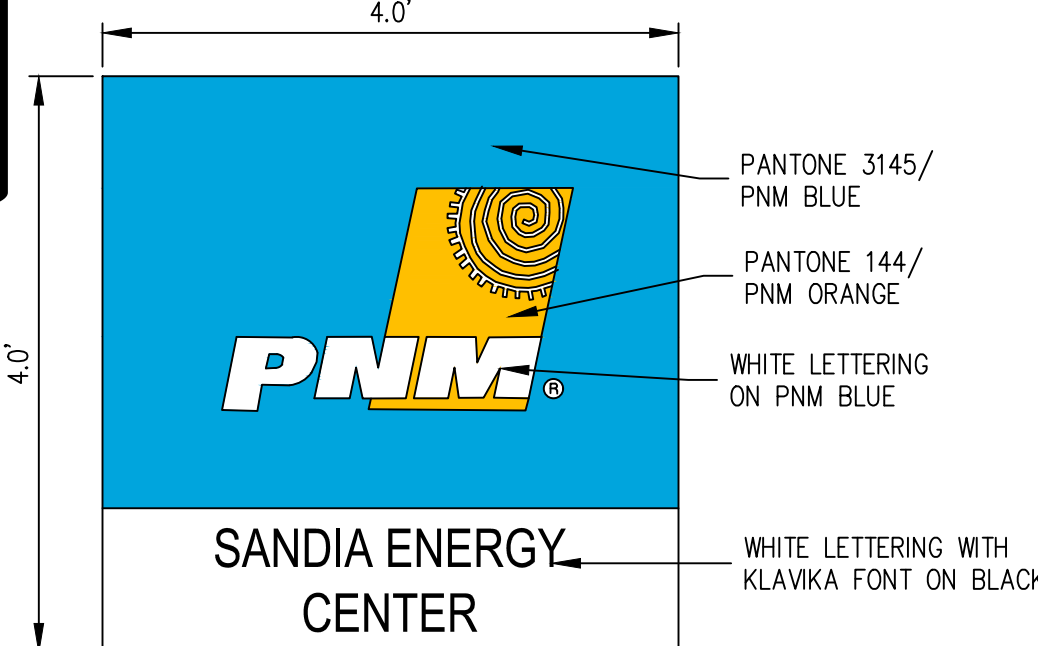
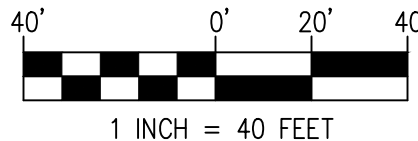
*Environmental Health, if necessary



PR-2024-011242
SI-2025-00079



DRIVEWAY DETAIL
SCALE: 1"=20'



STATION ENTRY SIGN
NOT TO SCALE



WARNING SIGN
NOT TO SCALE



NO TRESPASSING SIGN
NOT TO SCALE

LEGEND	
SYMBOL	DESCRIPTION
	PROPERTY LINE
	EXISTING EASEMENT
	UNDERGROUND AC
	PERIMETER WALL (DESIGN BY OTHERS)
	SUBSTATION FENCE
	LIMIT OF DISTURBANCE
	AUGMENTATION GROUP 1
	AUGMENTATION GROUP 2
	AUGMENTATION GROUP 3
	AUGMENTATION GROUP 4
	AUGMENTATION GROUP 5
	POWER CONTROLLER
	EX STRUCTURES
	EX TREES/VEGETATIONS
	EX MINOR CONTOUR
	EX MAJOR CONTOUR
	STORM DRAIN MAIN AND STRUCTURE
	IRRIGATION SERVICE LINE & METER
	PROPOSED CONCRETE
	PROPOSED GRAVEL ROADWAY
	PROPOSED DRAINAGE SWALE
	PROPOSED STORMWATER BASIN
	EX WELL
	DETECTABLE WARNING
	"NO TRESPASSING" AND "WARNING" SIGN LOCATION. DETAILS ON THIS SHEET.
	ELECTRICALLY RESISTIVE ROCK (SEE NOTES BELOW)
	LANDSCAPE BUFFER

- NOTES:
- ELECTRICALLY RESISTIVE ROCK WILL BE PROVIDED BY DEPCOM OR ITS SUBCONTRACTOR AND IS TO BE INSTALLED BY LANDSCAPE CONTRACTOR WITHIN THE SPECIFIED BOUNDARY AS SHOWN ON THE LAYOUT.
 - SEE DRAWING E-501 FOR REFERENCE OF YARD ROCK REQUIREMENTS. PLEASE NOTE THIS IS FOR SAFETY PURPOSES NOT AESTHETIC.

1

3/11/2025

ISSUED FOR CONSTRUCTION

DESCRIPTION

1

3/11/2025

DATE

NO.

1

3/11/2025

DATE

NO.

1

3/11/2025

DATE

NO.

STACEY GELLA

NEW MEXICO

29498

PROFESSIONAL ENGINEER

PUBLIC SERVICE COMPANY OF NEW MEXICO

SANDIA BESS SITE

PROJECT SITE PLAN

CONSTRUCTION DOCUMENTS

APN 1-021-055-162-512-2-06-67

ENGINEERING

SURVEYING • PLANNING

PHONE (505) 832-8888

WWW.PSCNM.COM

DATE:

03/13/2025

SCALE:

HORIZ. 1"=40'

VERT. N/A

DESIGNED BY:

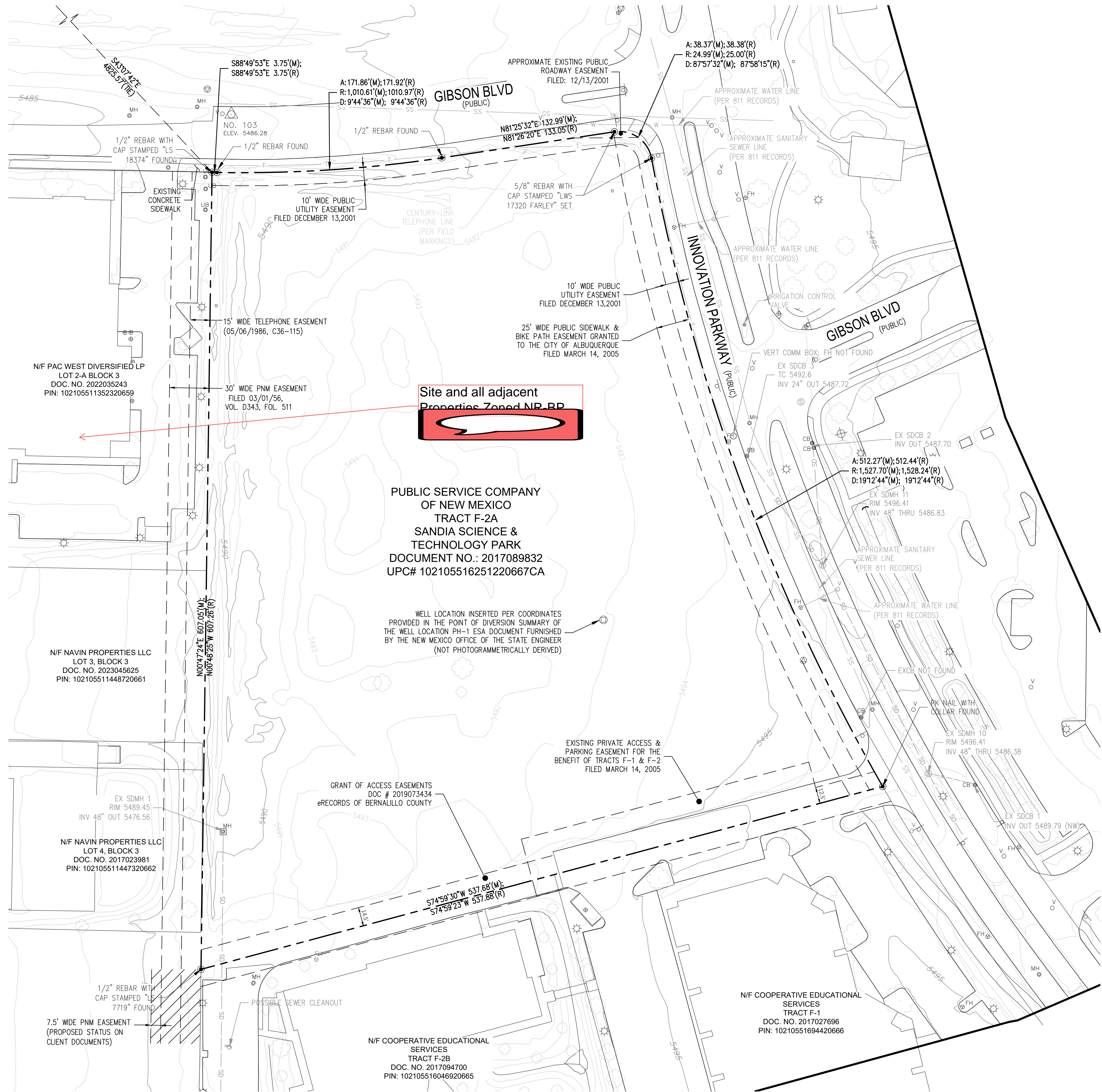
AMP

REVIEWED BY:

SDG

C3.00

PAGE 7 OF 15



Site and all adjacent
Properties Zoned NR, RP

PUBLIC SERVICE COMPANY
OF NEW MEXICO
TRACT F-2A
SANDIA SCIENCE &
TECHNOLOGY PARK
DOCUMENT NO.: 2017089832
UPC# 102105516251220667CA

WELL LOCATION INSERTED PER COORDINATES
PROVIDED IN THE POINT OF DIVERSION SUMMARY OF
THE WELL LOCATION PH-1 ESA DOCUMENT FURNISHED
BY THE NEW MEXICO OFFICE OF THE STATE ENGINEER
(NOT PHOTOGRAMMETRICALLY DERIVED)

EXISTING PRIVATE ACCESS &
PARKING EASEMENT FOR THE
BENEFIT OF TRACTS F-1 & F-2
FILED MARCH 14, 2005

GRANT OF ACCESS EASEMENTS
DOC # 2019073434
RECORDS OF BERNALILLO COUNTY

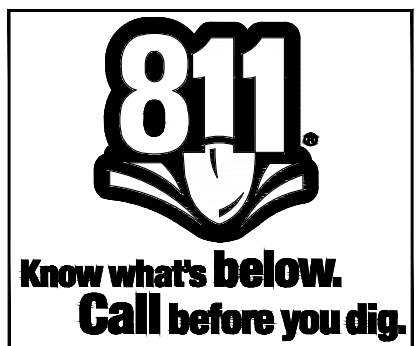
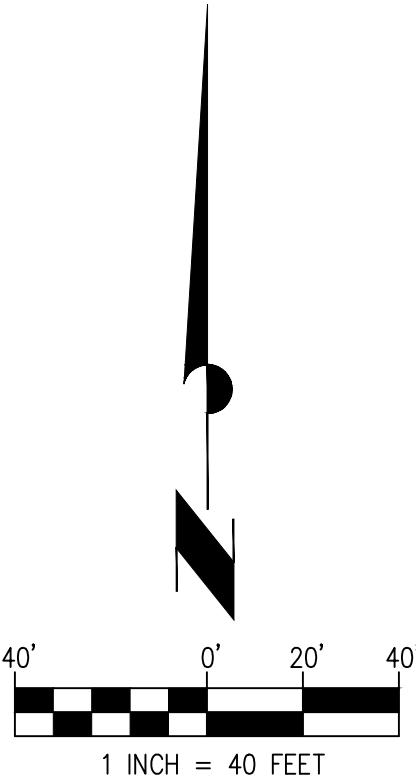
N/F COOPERATIVE EDUCATIONAL
SERVICES
TRACT F-2B
DOC. NO. 2017094700
PIN: 102105516046920665

N/F COOPERATIVE EDUCATIONAL
SERVICES
TRACT F-1
DOC. NO. 2017027696
PIN: 10210551694420666

LEGEND	
SYMBOL	DESCRIPTION
---	PROPERTY LINE
- - - -	EXISTING EASEMENT
○ V, MH, CB	EX STRUCTURES
○	EX TREES/VEGETATIONS
---	EX MINOR CONTOUR
---	EX MAJOR CONTOUR
⊙ FH	EX FIRE HYDRANT
⊙	EX WELL
SS	EX SEWER MAIN LINE
SD	EX STORM DRAIN MAIN LINE
W	EX WATER MAIN LINE
T	EX COMMUNICATIONS LINE
Ⓟ	EX SIGN

TOPO PREPARED BY: LW SURVEY CO

GRADING NARRATIVE:
THE EXISTING SITE IS UNDEVELOPED AND RANGES FROM ELEVATIONS
5489 TO 5495. THE ADJACENT PROPERTY IS FLAT WITH OFFICE
BUILDINGS TO THE WEST AND SOUTH AND ROADWAYS, INNOVATION
PARKWAY TO THE EAST SLOPES TOWARDS THE EAST INTERSECTION OF
INNOVATION PARKWAY AND GIBSON BLVD. GIBSON BLVD TO THE NORTH
SLOPES TOWARDS THE WEST. THE PROPOSED PROJECT WILL BE GRADED
WITH A 2:1 MAX SLOPE FROM EXISTING GROUND UP TO ELEVATION
5496-5499 TO PROTECT THE PROPOSED INFRASTRUCTURE.



STACEY GELLA
NEW MEXICO
29498
PROFESSIONAL ENGINEER

PUBLIC SERVICE COMPANY OF NEW MEXICO

SANDIA BESS SITE
EXISTING CONDITIONS
CONSTRUCTION DOCUMENTS

CITY OF ALBUQUERQUE

ENGINEERING
SURVEYING • PLANNING

1821 SAN ANGELO DRIVE, SUITE 100
ALBUQUERQUE, NEW MEXICO 87102
PHONE: (505) 832-8888
DAN@PS.COM

DATE: 03/13/2025

SCALE:
HORZ. 1"=40'
VERT. N/A

DESIGNED BY: AMP

REVIEWED BY: SDG

C1.00

PAGE 3 OF 15

1

3/11/2025

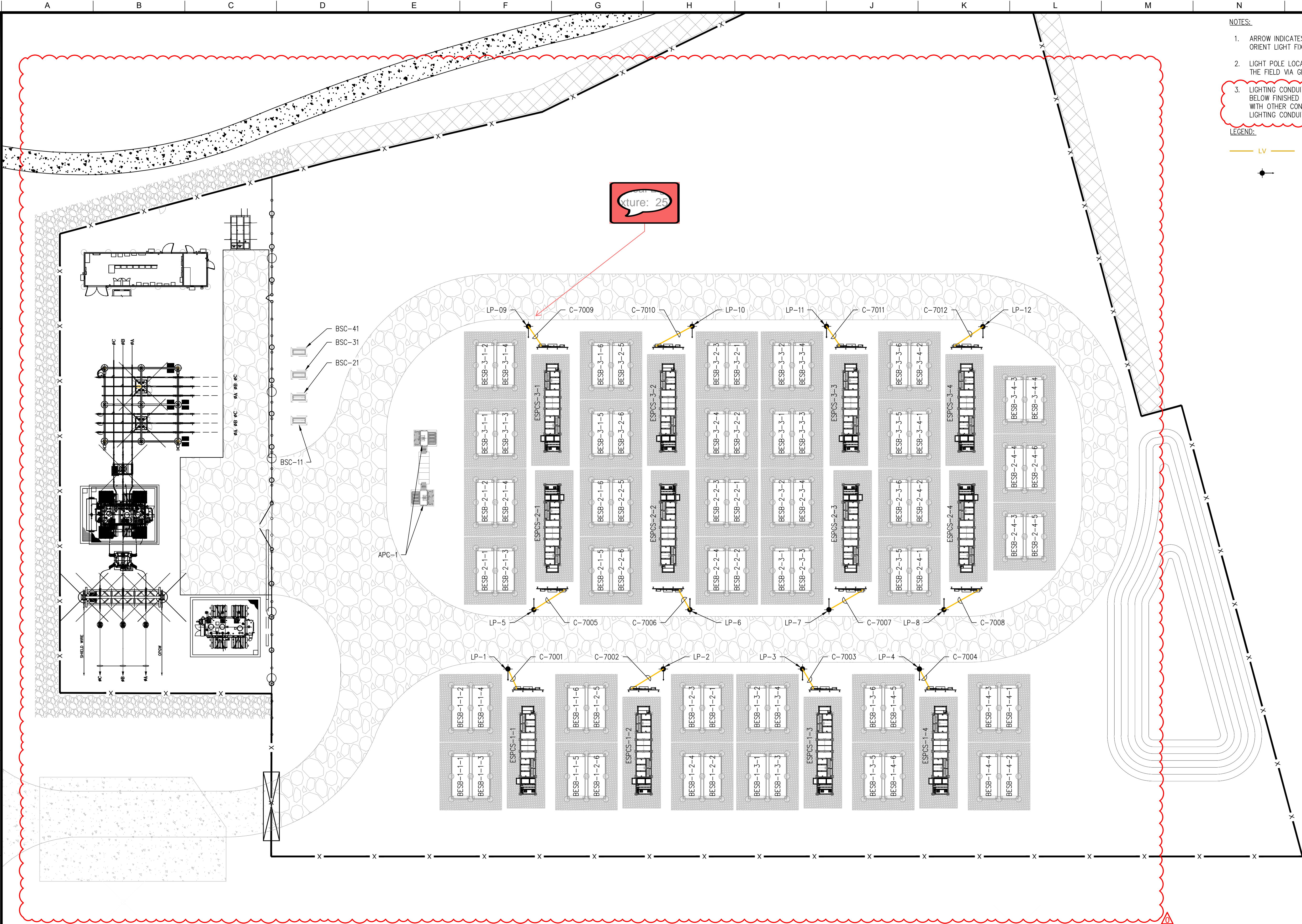
ISSUED FOR CONSTRUCTION

DESCRIPTION

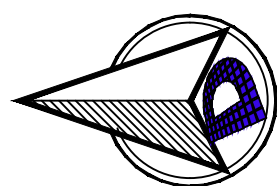
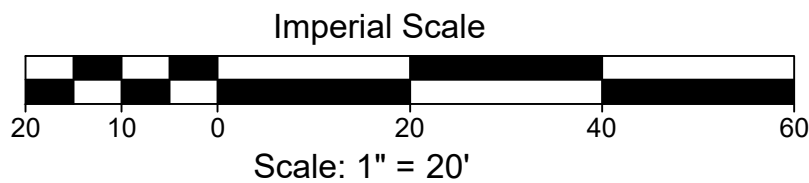
AGENCY

dk

J:\depcom-engineering\public service of new mexico\nm\240b4 - sandia\EPC\electrical\NM240b4_E-5001 - 2/28/2025 4:02 PM



THIS DRAWING CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION OF DEPCOM POWER, INCORPORATED. DEPCOM POWER RETAINS ALL COPYRIGHT RIGHTS TO IT UNDER U.S. SECTION 106 AND IS PROTECTED BY U.S. AND INTERNATIONAL LAW. ANY REPRODUCTION, DERIVATIVE WORKS, DISTRIBUTION, PUBLIC DISPLAY, DISCLOSURE, AND/OR USE OF ANY PORTION OF THIS DRAWING IN ANY FORM WITHOUT WRITTEN AUTHORIZATION FROM DEPCOM POWER IS STRICTLY PROHIBITED.



LIGHTING PLAN

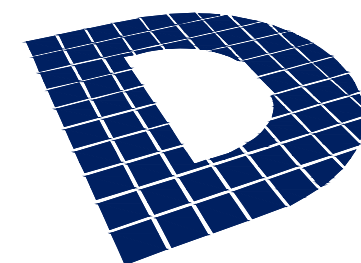
SCALE: 1" = 20'

NOTES:

1. ARROW INDICATES GENERAL DIRECTION TO ORIENT LIGHT FIXTURE ARM.
2. LIGHT POLE LOCATIONS SHALL BE PROVIDED TO THE FIELD VIA GPS COORDINATES.
3. LIGHTING CONDUITS SHALL BE BURIED 18" BELOW FINISHED GRADE. WHEN CONFLICTING WITH OTHER CONDUITS AT THE SAME DEPTH, LIGHTING CONDUITS SHALL GO BENEATH.

LEGEND:

- LV — 277V AC
- LIGHT POLE (SEE NOTE 1)



DEPCOM POWER
9185 E PIMA CENTER PARKWAY #100
SCOTTSDALE, AZ 85258
PHONE: (480) 270-6910
WWW.DEPCOMPOWER.COM

A KOCH ENGINEERED SOLUTIONS COMPANY



SANDIA BESS
(60MW/240MWh)
ALBUQUERQUE,
BERNALILLO COUNTY
NM, USA

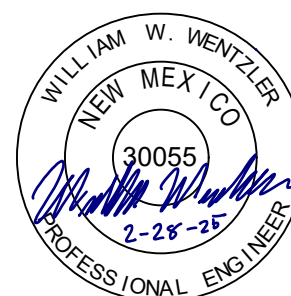
TITLE:

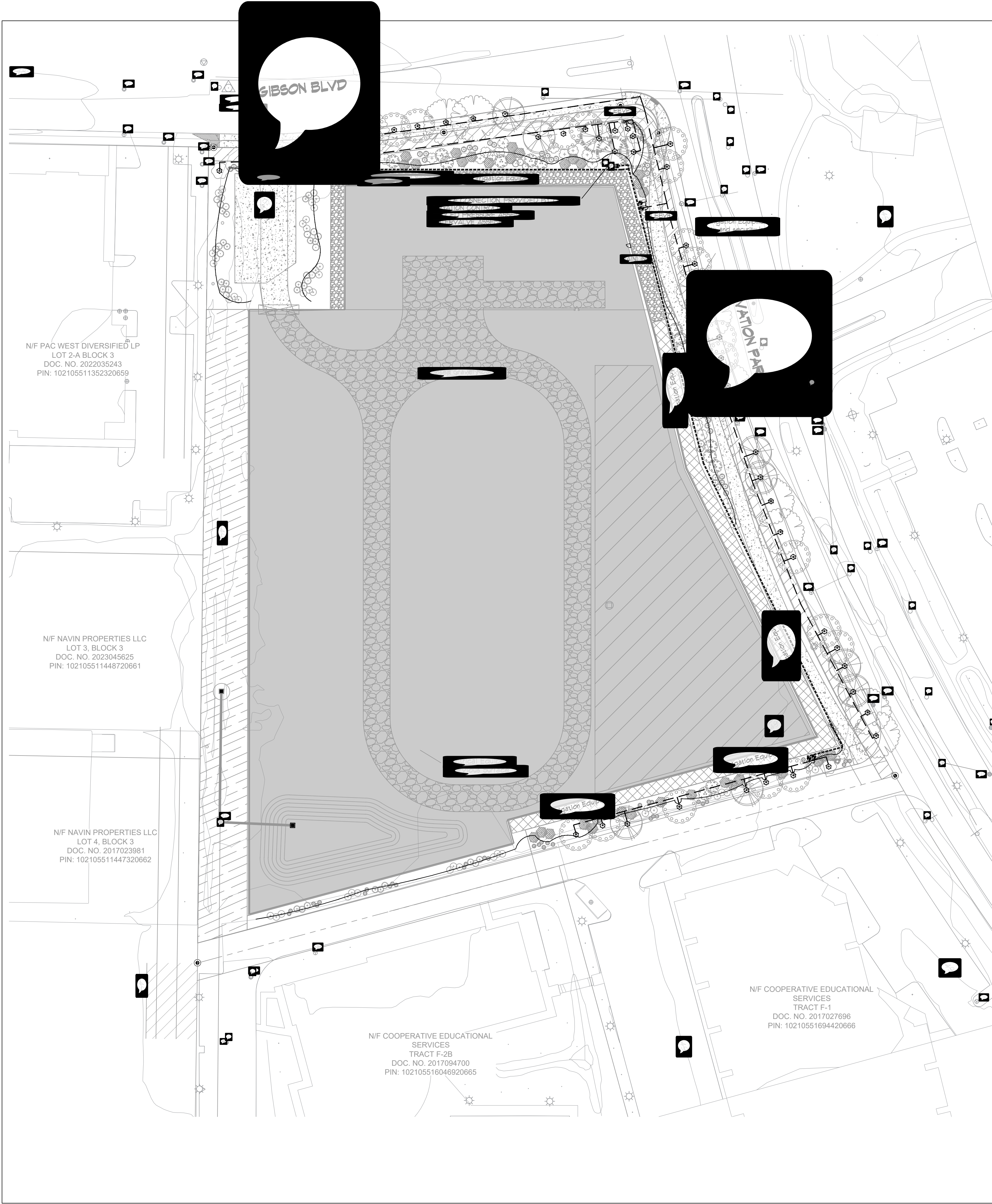
REV	DATE	REVISION DESCRIPTION	BY	CHK	APP
0	02-28-25	ISSUED FOR CONSTRUCTION (FC)	LC	EB	WW
C	09-27-24	ISSUED FOR 90% REVIEW (FR)	LC	CV	WW

SHEET TITLE:

LIGHTING PLAN

ENGINEER: WALKER WENTZLER	DR. BY: LC	CHK. BY: CV
DEPCOM JOB No: 23-0024-00	SCALE: AS NOTED	
DEPCOM PROJECT CODE: NM240b4	DRAWING NUMBER: E-5001	REV: 0
SHEET 42	OF 57	





IRRIGATION NOTES:

1. The location of controller to be field determined and the wiring for controller to be provided by the contractor.

2. Maintenance shall be the responsibility of the owner.

CONSTRUCTION NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, AND STATE REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION SYSTEMS MEET GOVERNMENT REGULATIONS, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND APPROVALS.

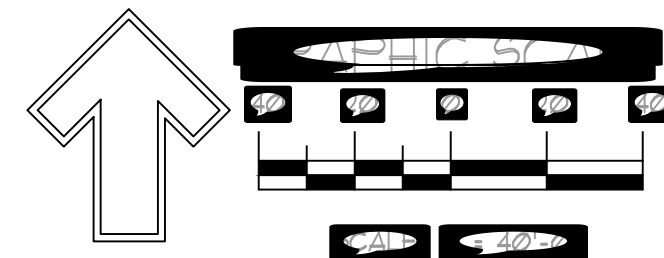
2. THIS PLAN IS SCHEMATIC AND DUE TO THE NATURE OF CONSTRUCTION, FIELD MODIFICATIONS MAY BE NECESSARY TO IMPLEMENT THE SYSTEMS CONNECTED TO POTABLE WATER. A BACKFLOW PREVENTER SHALL BE INSTALLED.

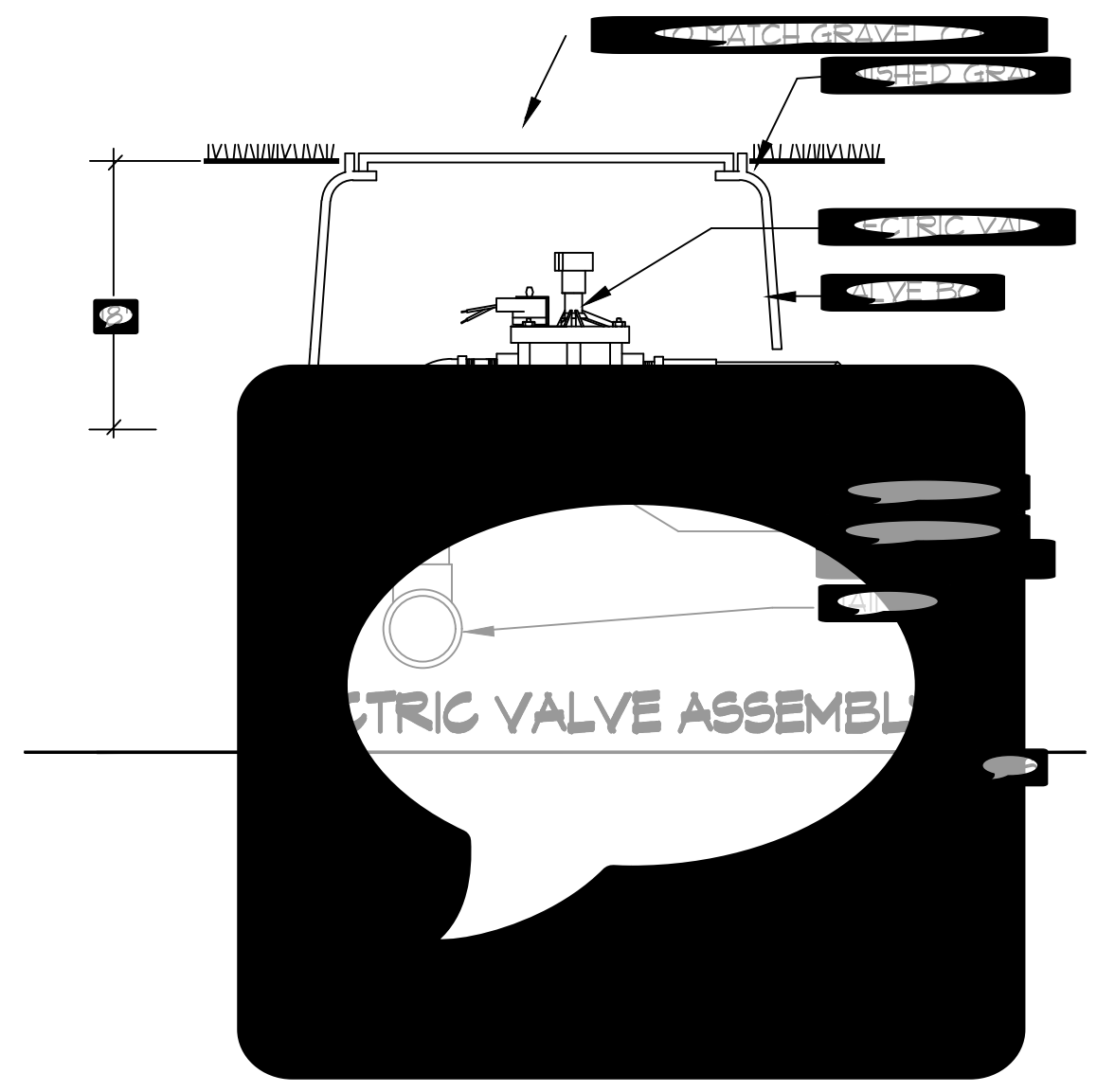
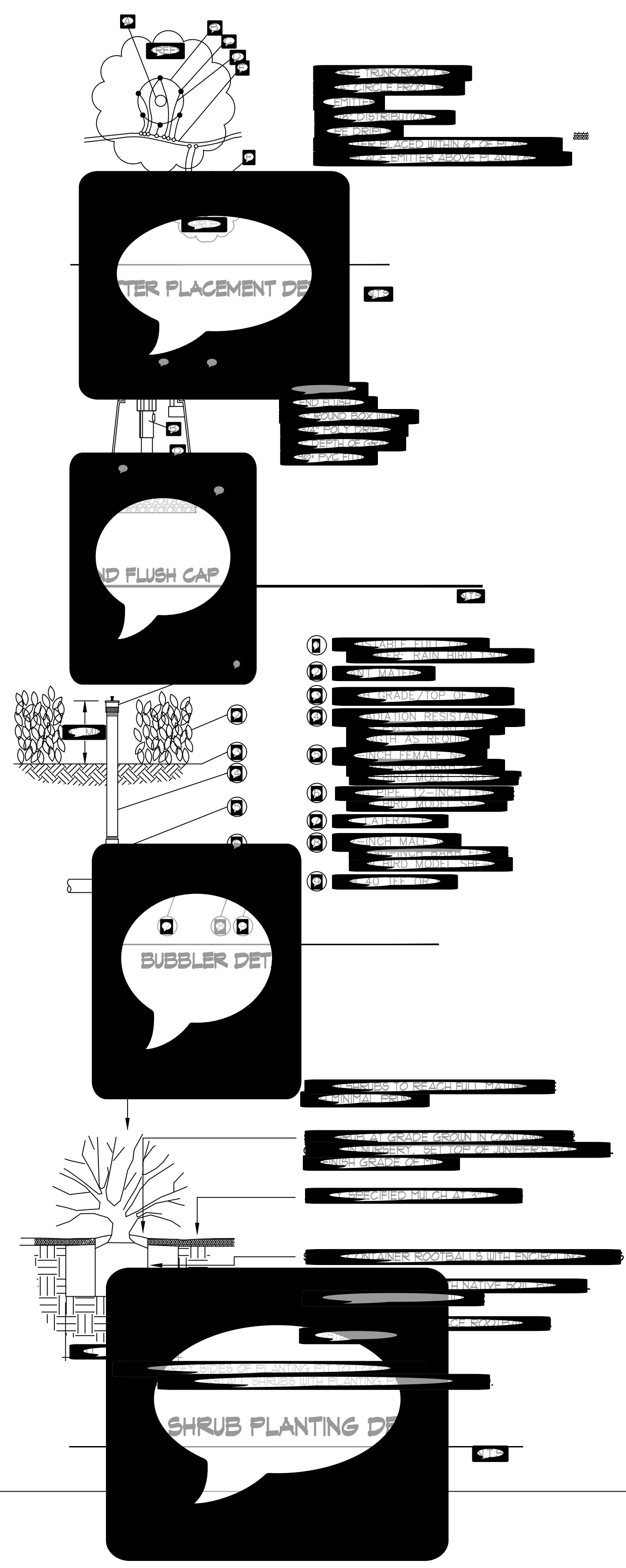
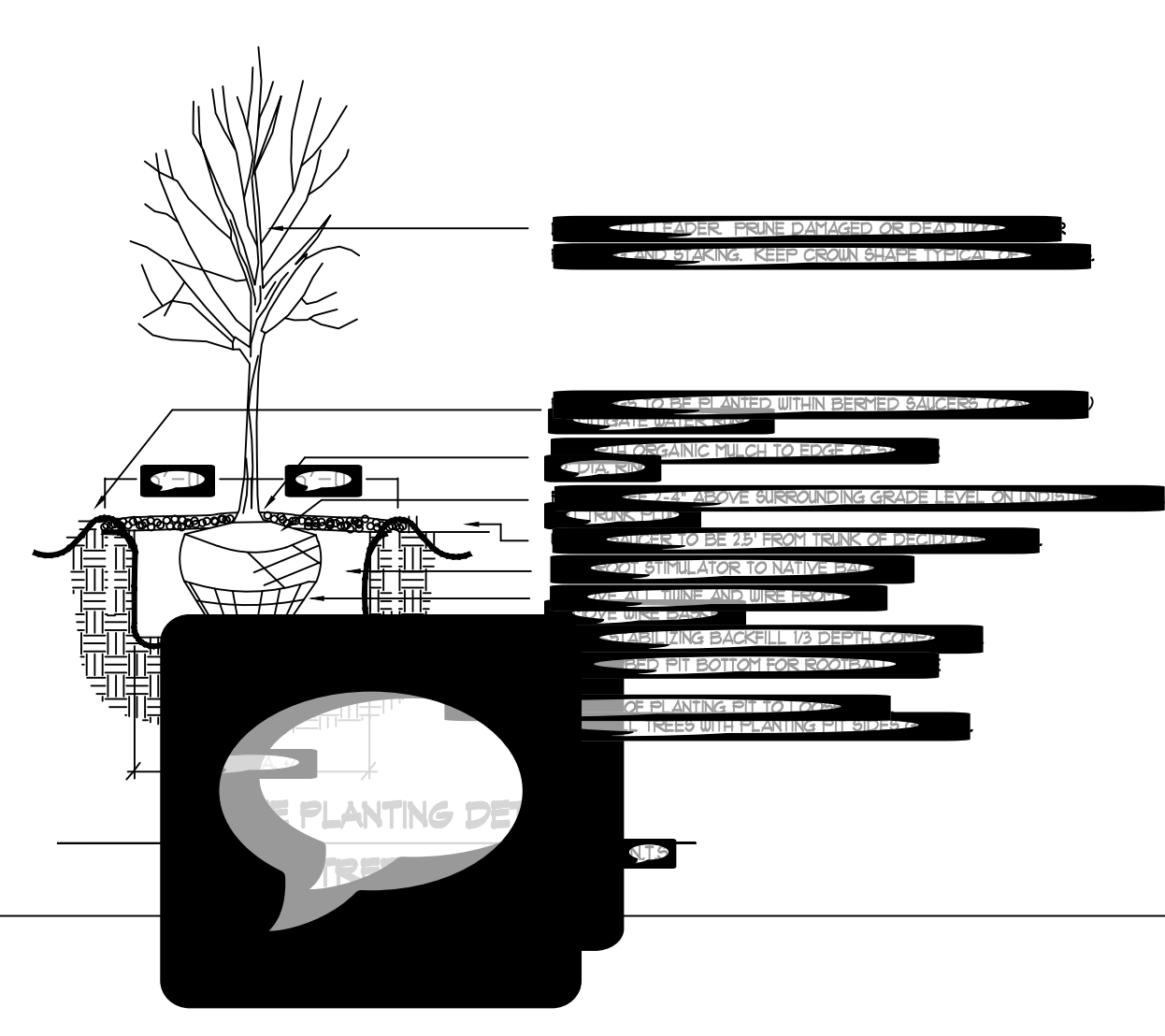
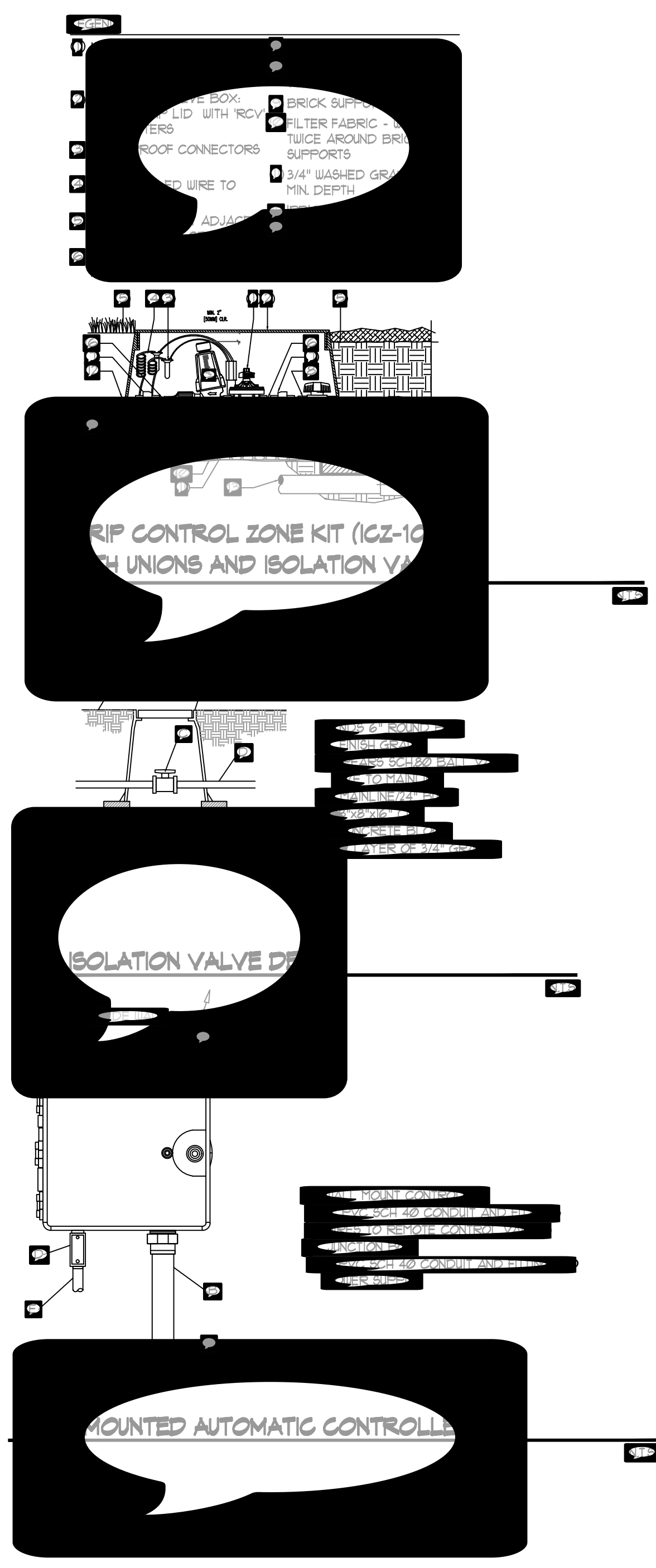
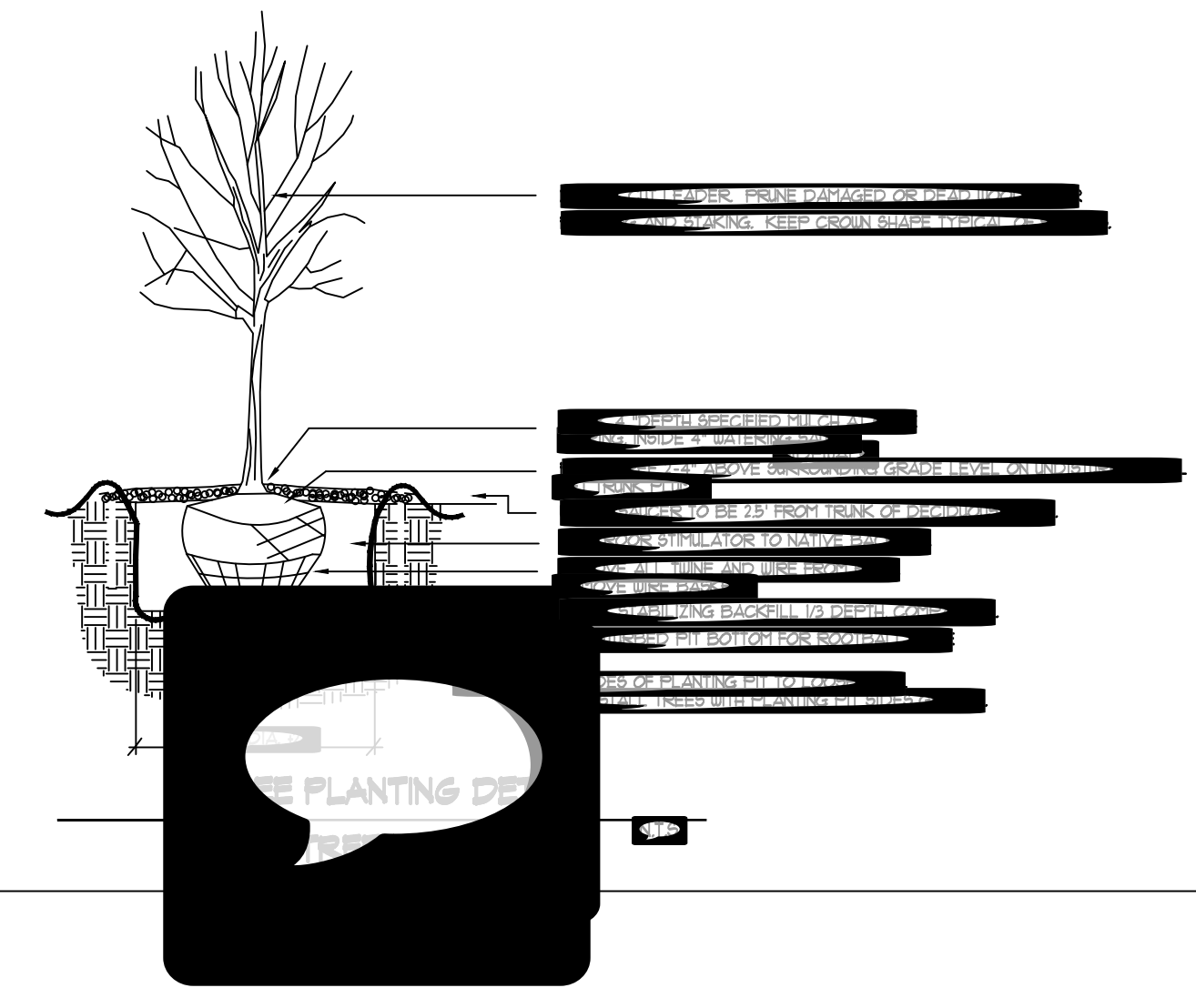
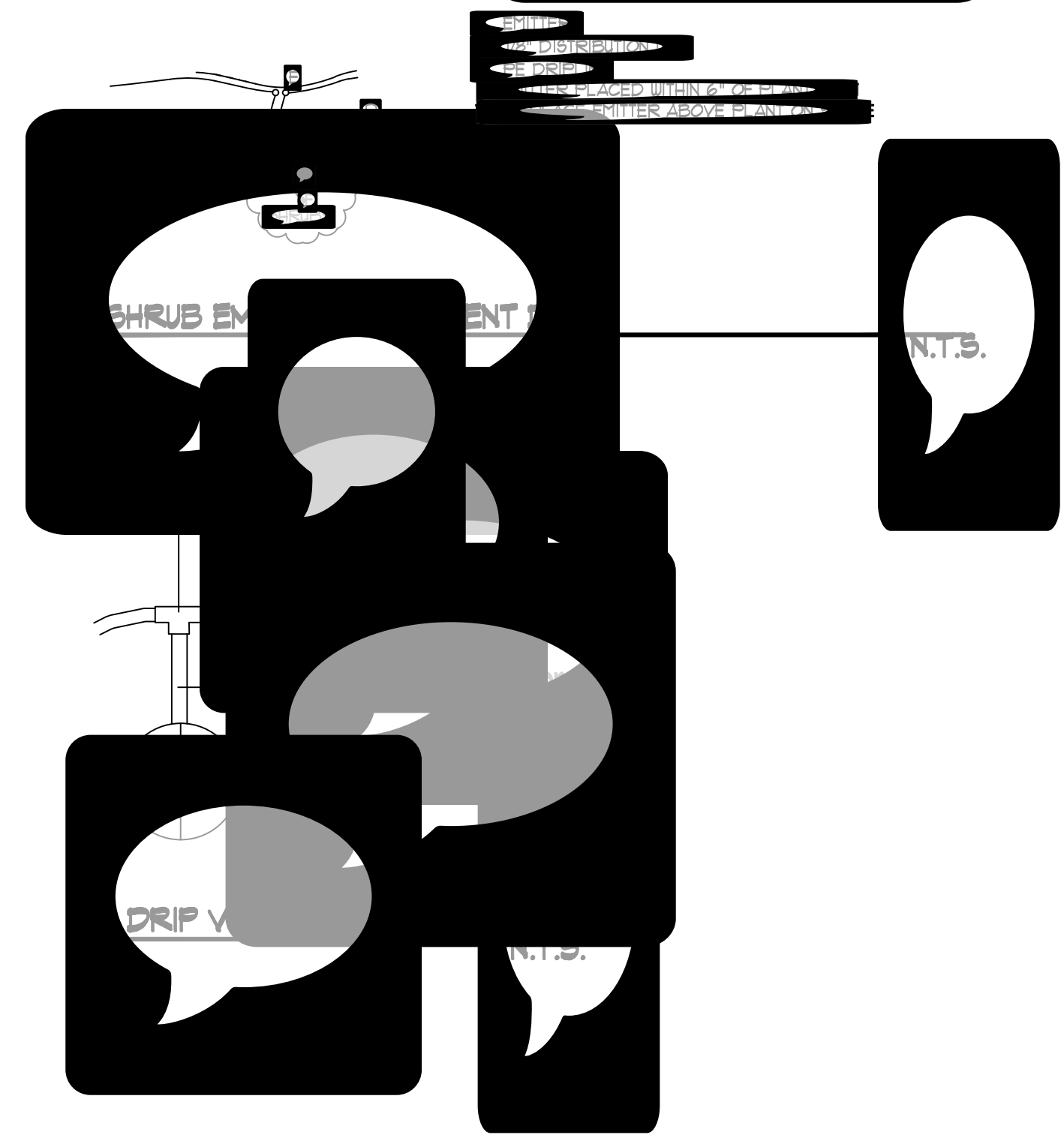
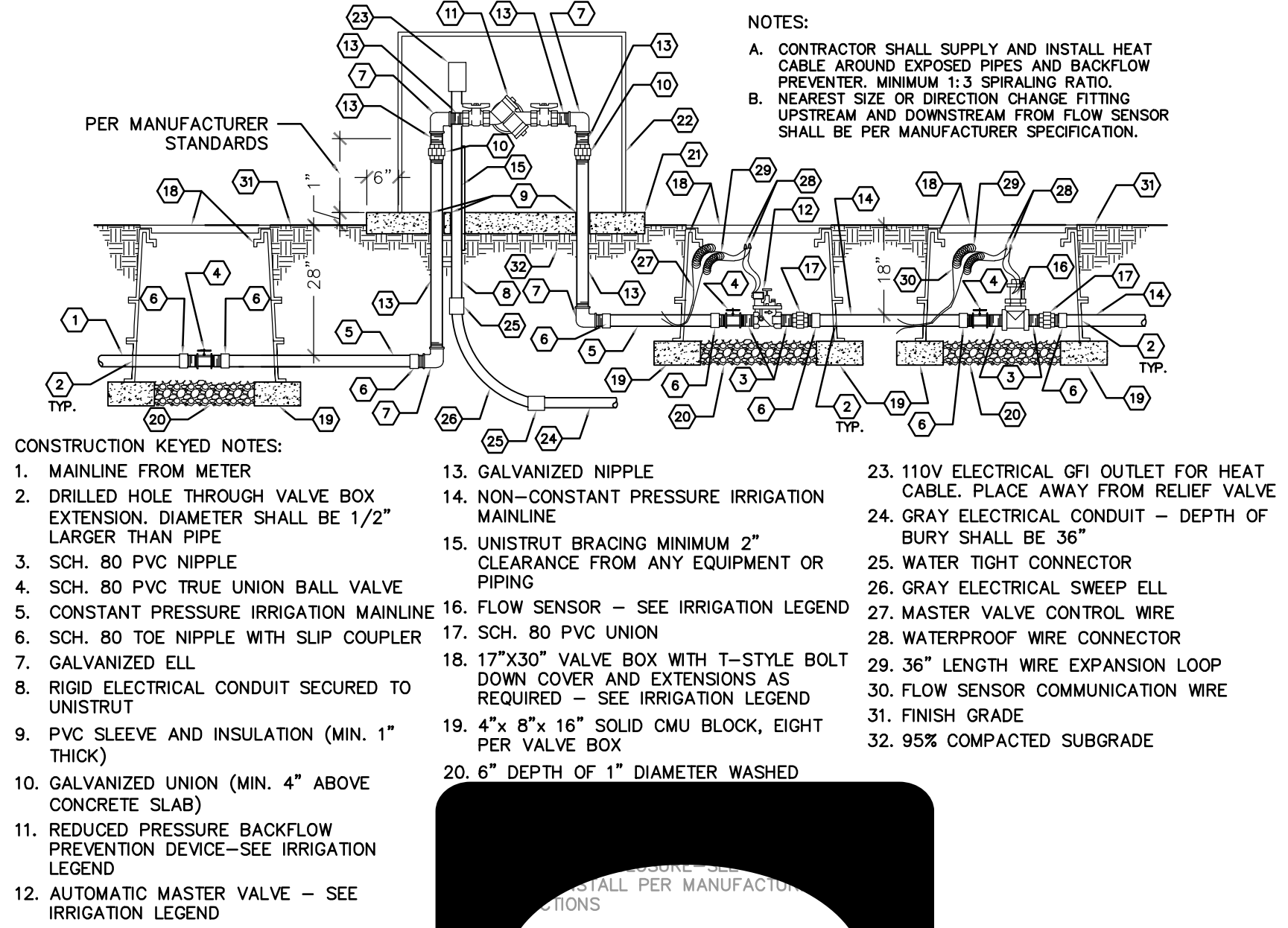
3. ALL IRRIGATION LINES, MAIN LINES AND EMITTERS SHALL BE INSTALLED ON THE PROPERTY LINES ON THIS PLAN. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND APPROVALS.

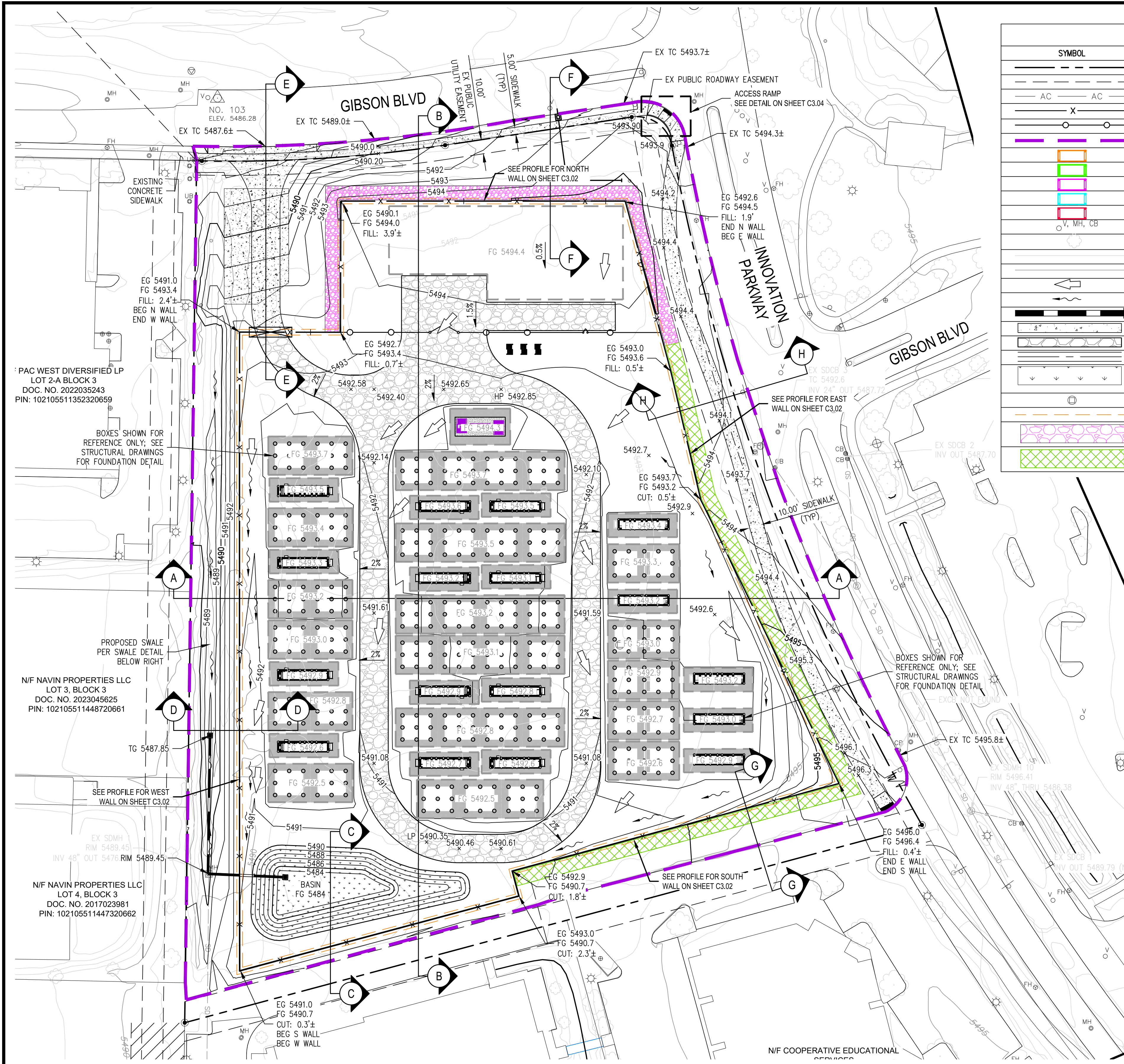
IRRIGATION NOTES:

1. The location of controller to be field determined and the wiring for controller to be provided by the contractor.

2. Maintenance shall be the responsibility of the owner.



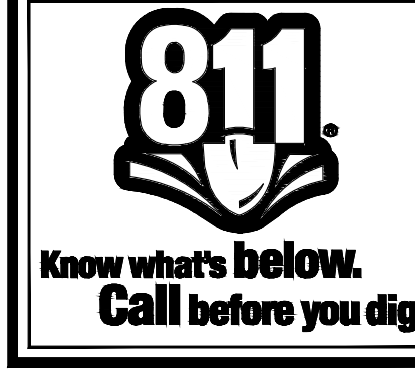




PAC WEST DIVERSIFIED LP
LOT 2-A BLOCK 3
DOC. NO. 2022035243
PIN: 102105511352320659

N/F NAVIN PROPERTIES LLC
LOT 3, BLOCK 3
DOC. NO. 2023045625
PIN: 102105511448720661

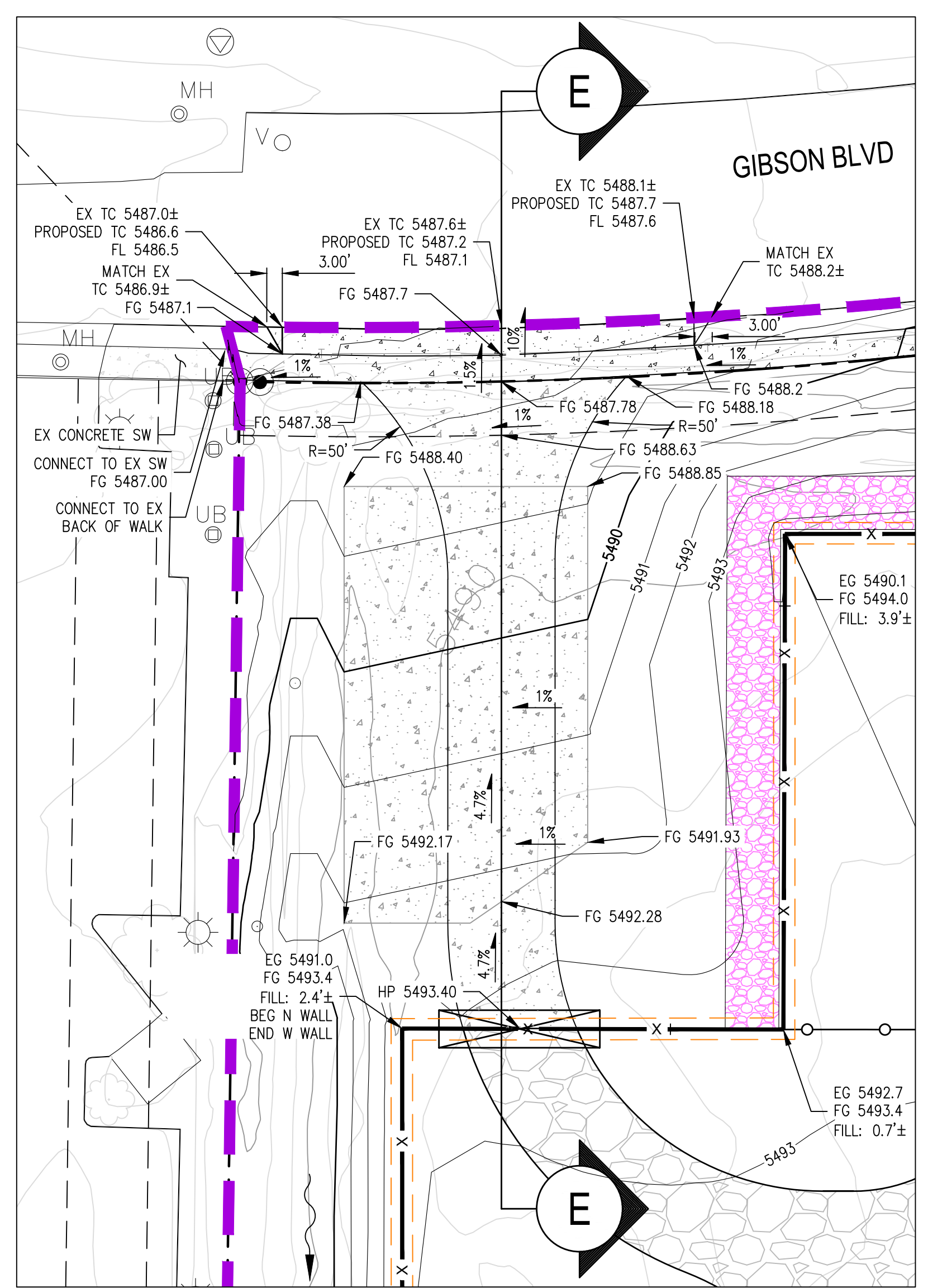
N/F NAVIN PROPERTIES LLC
LOT 4, BLOCK 3
DOC. NO. 2017023981
PIN: 102105511447320662



EARTHWORK ESTIMATE		
	CUT	FILL
RAW GRADING	4,546 CY	6,537 CY
SUBSTATION GRAVEL	233 CY	CY
BESS GRAVEL	942 CY	CY
ROADWAY GRAVEL	650 CY	CY
CONCRETE	166 CY	CY
SUBTOTAL	6,537 CY	6,537 CY
NET EXPORT	0 CY	

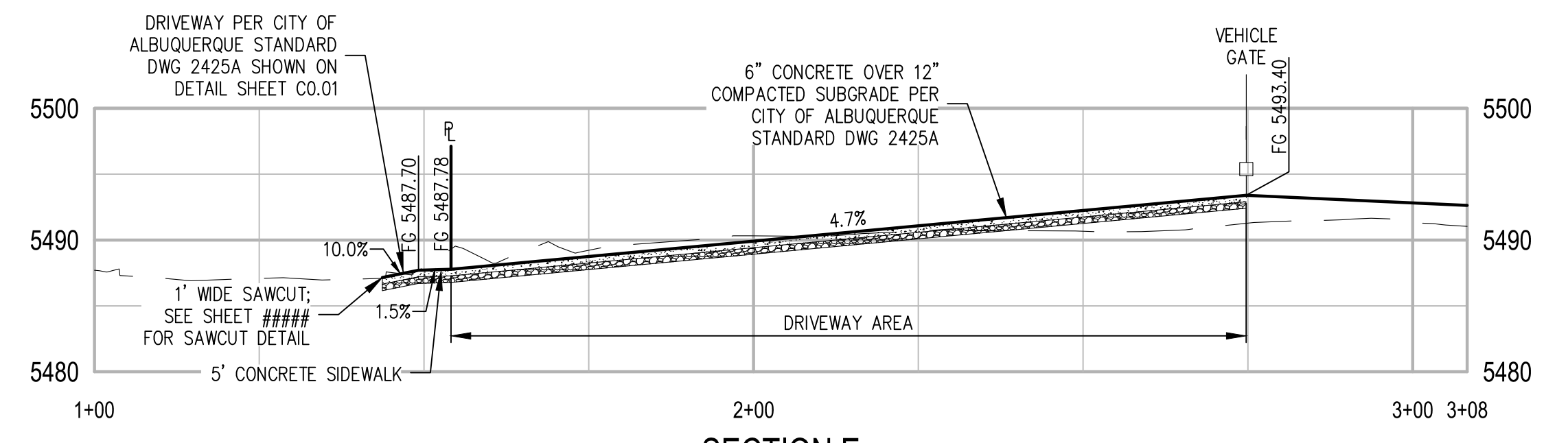
GRADING NARRATIVE:
THE EXISTING SITE IS UNDEVELOPED AND RANGES FROM ELEVATIONS 5489 TO 5495. THE ADJACENT PROPERTY IS FLAT WITH OFFICE BUILDINGS TO THE WEST AND SOUTH AND ROADWAYS, INNOVATION PARKWAY TO THE EAST SLOPES TOWARDS THE EAST INTERSECTION OF INNOVATION PARKWAY AND GIBSON BLVD. GIBSON BLVD TO THE NORTH SLOPES TOWARDS THE WEST. THE PROPOSED PROJECT WILL BE GRADED WITH A 2:1 MAX SLOPE FROM EXISTING GROUND UP TO ELEVATION 5496-5499 TO PROTECT THE PROPOSED INFRASTRUCTURE.

LEGEND	
SYMBOL	DESCRIPTION
---	PROPERTY LINE
---	EXISTING EASEMENT
---	UNDERGROUND AC
X	PERIMETER WALL (DESIGN BY OTHERS)
---	SUBSTATION FENCE
---	LIMIT OF DISTURBANCE
---	AUGMENTATION GROUP 1
---	AUGMENTATION GROUP 2
---	AUGMENTATION GROUP 3
---	AUGMENTATION GROUP 4
---	AUGMENTATION GROUP 5
---	EX STRUCTURES
---	EX TREES/VEGETATIONS
---	EX MINOR CONTOUR
---	EX MAJOR CONTOUR
---	OVERLAND DRAINAGE DIRECTION
---	DRAINAGE SWALE
---	STORM DRAIN MAIN AND STRUCTURE
---	PROPOSED CONCRETE
---	PROPOSED GRAVEL ROADWAY
---	PROPOSED DRAINAGE SWALE
---	PROPOSED STORMWATER BASIN
---	EX WELL
---	GRADE BREAK
---	ELECTRICALLY RESISTIVE ROCK
---	LANDSCAPE BUFFER



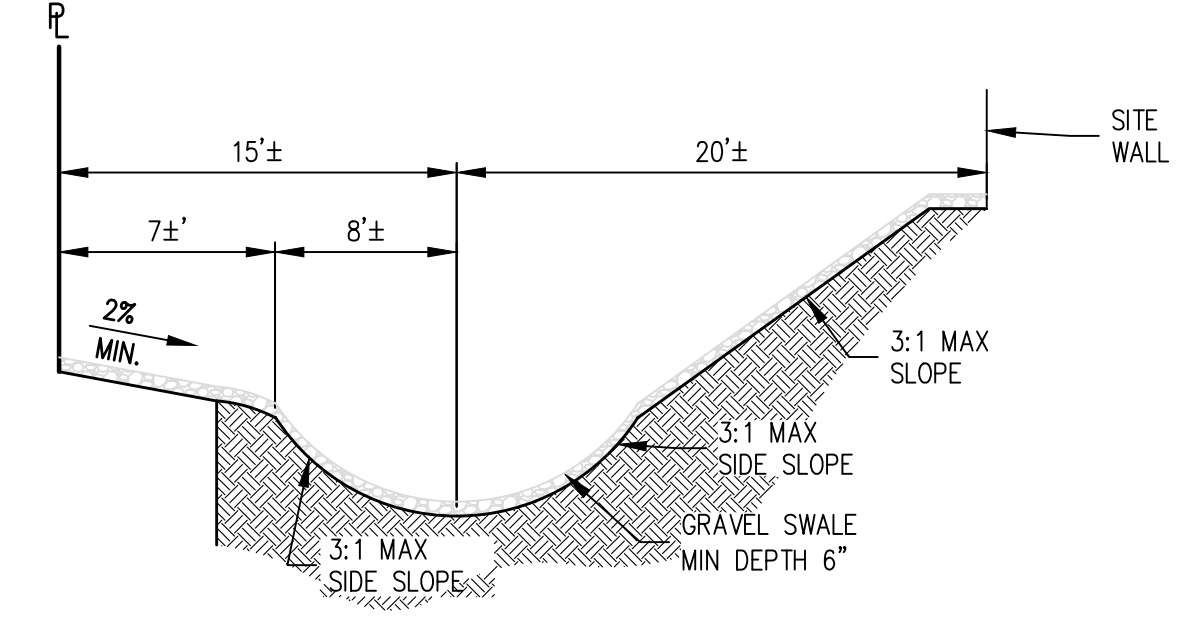
DRIVEWAY DESIGN DETAIL

SCALE: 1"=20'
NOTE: DRIVEWAY SECTION PER CITY OF ALBUQUERQUE STANDARD DWG 2425A SHOWN ON DETAIL SHEET C0.01



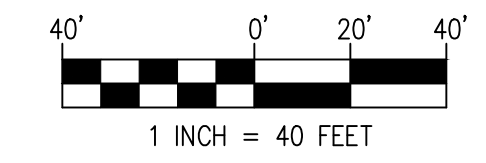
SECTION E

HORIZ: 1"=20'
VERT: 1"=10'

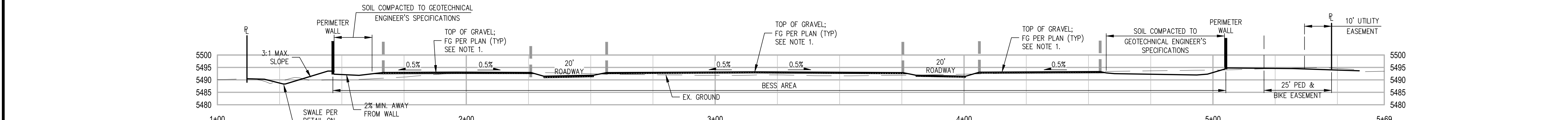


SWALE DETAIL

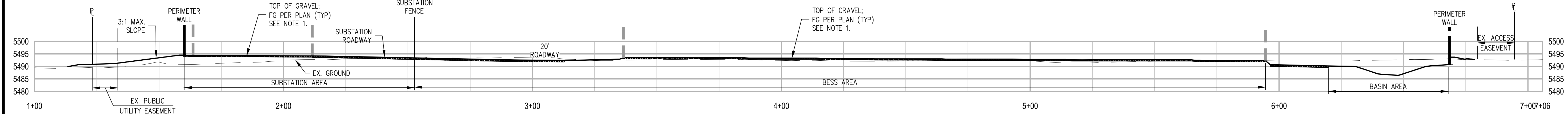
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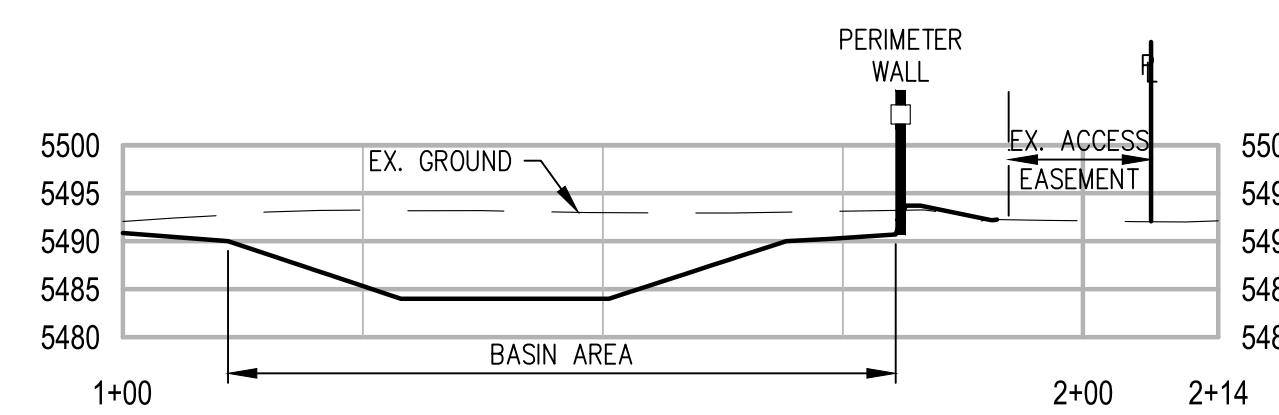
PUBLIC SERVICE COMPANY OF NEW MEXICO	
SANDIA BESS SITE	
SITE LAYOUT AND GRADING PLAN	
CONSTRUCTION DOCUMENTS	
CITY OF ALBUQUERQUE	APN 1-021-055-162-512-2-06-67
NEW MEXICO	
STACEY GELLA NEW MEXICO 29498 PROFESSIONAL ENGINEER	
DATE: 03/13/2025	SCALE: 1"=40'
DESIGNED BY: AMP	REVIEWED BY: SDG
C3.01	
PAGE 8	OF 15



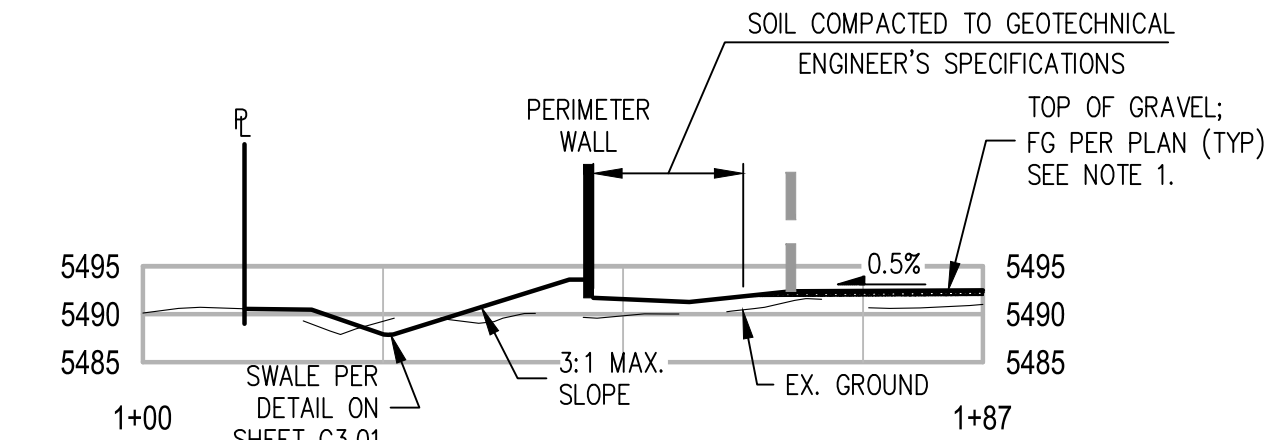
SECTION A
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VERT: 1"=20'



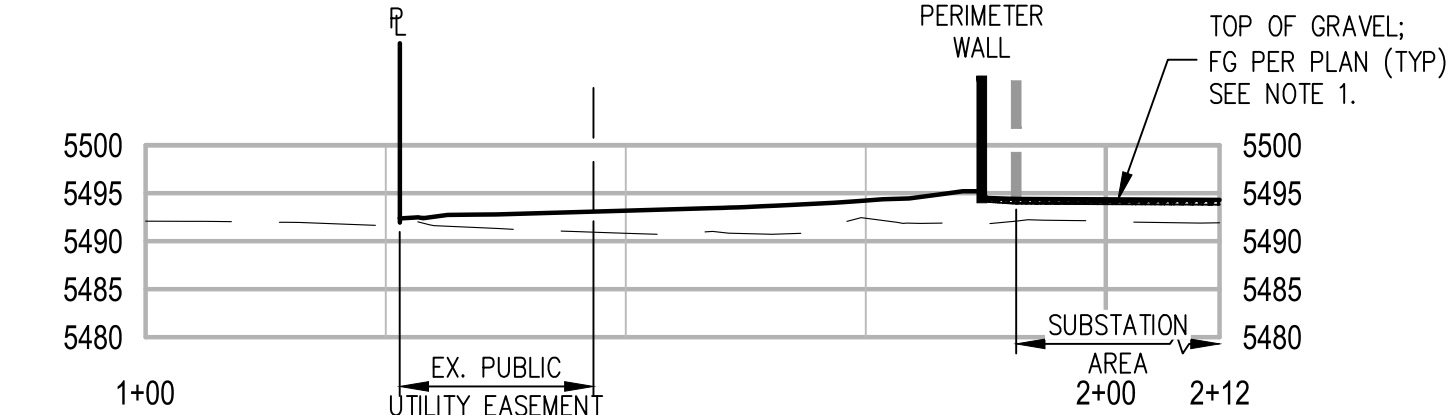
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HORZ: 1"=20'
VERT: 1"=20'



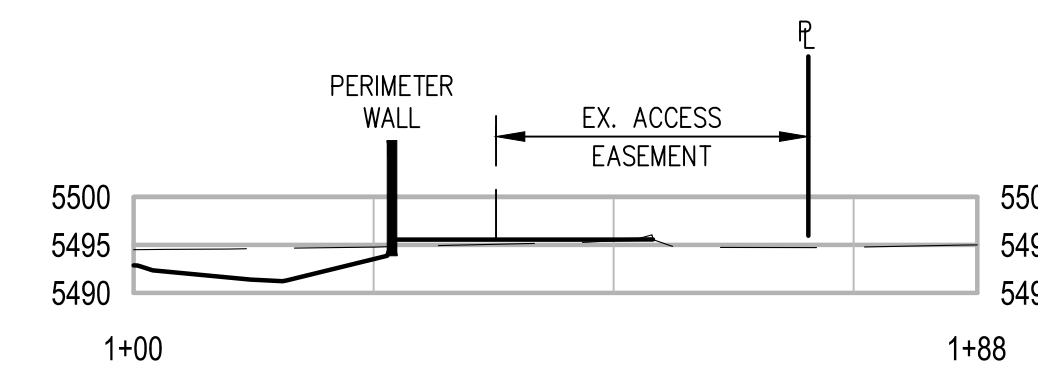
SECTION C
HORZ: 1"=20'
VERT: 1"=20'



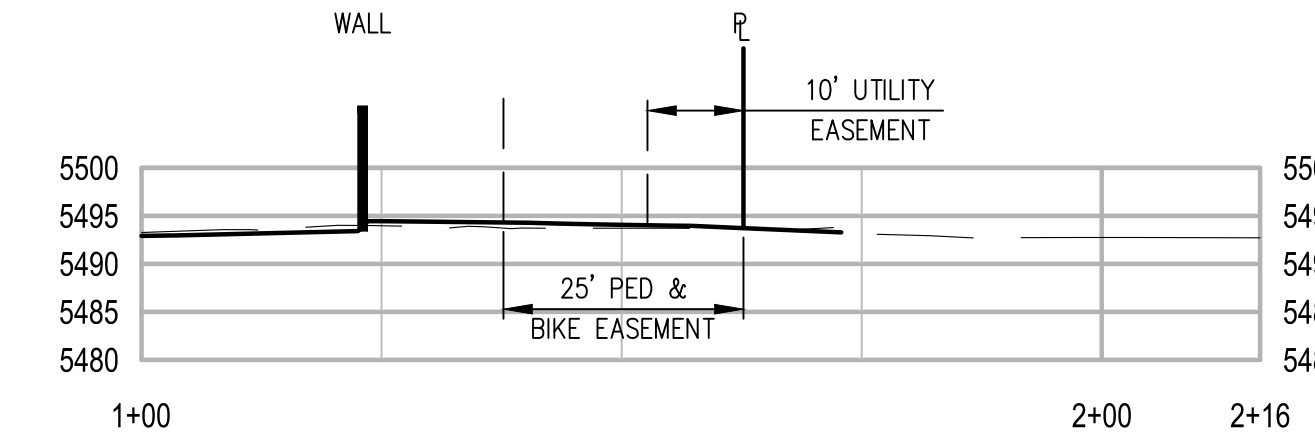
SECTION D
HORZ: 1"=20'
VERT: 1"=20'



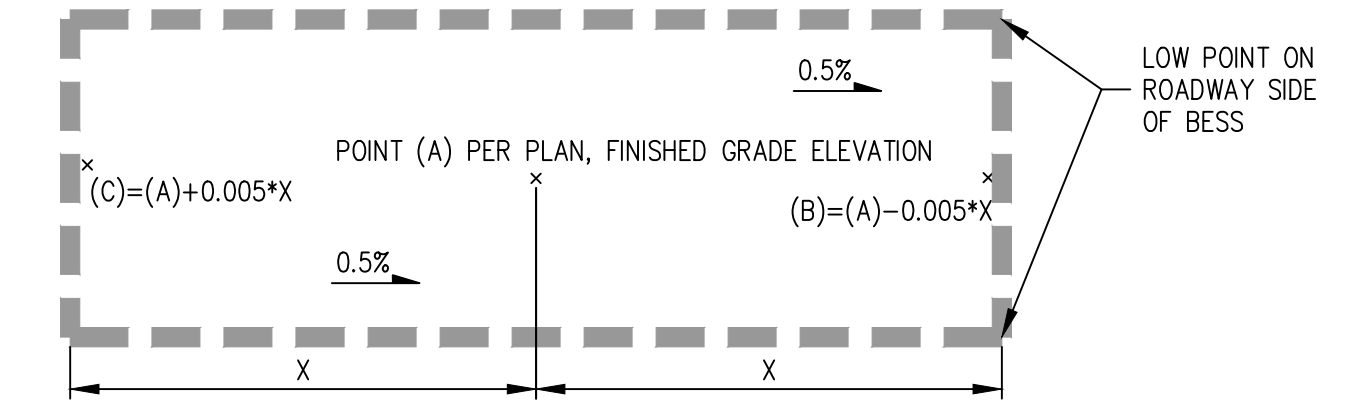
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HORZ: 1"=20'
VERT: 1"=20'



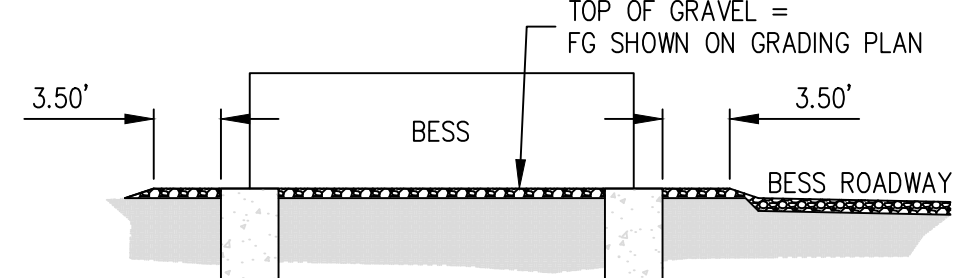
SECTION G
HORZ: 1"=20'
VERT: 1"=20'



SECTION H
HORZ: 1"=20'
VERT: 1"=20'



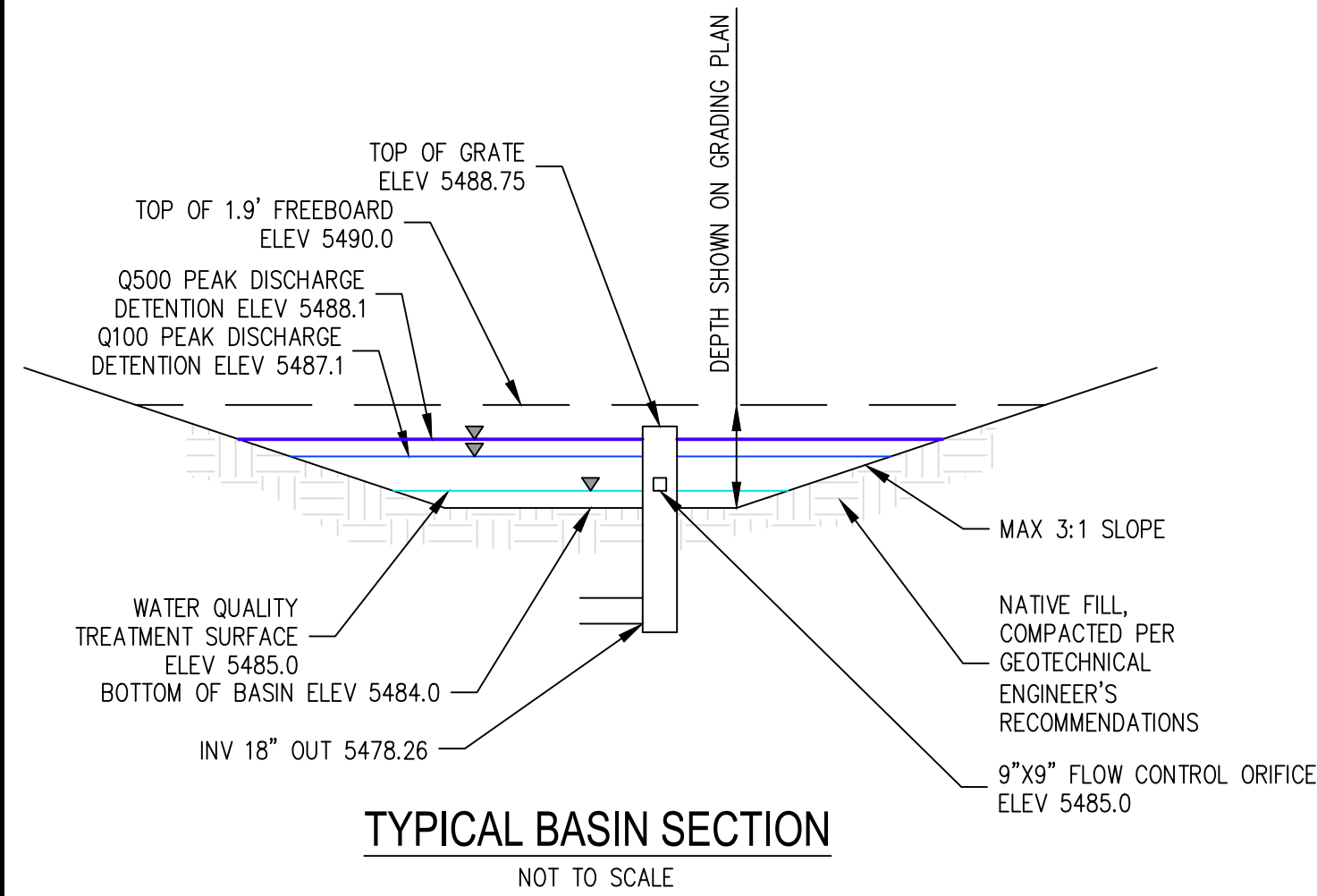
TYPICAL BESS GRADING DETAIL
NOT TO SCALE



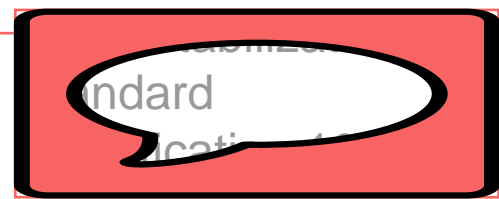
TYPICAL FOUNDATION SECTION
NOT TO SCALE
SEE STRUCTURAL PLANS PREPARED BY OTHERS FOR
FOUNDATION DESIGN DETAILS AND REQUIREMENTS

NOTE:
1. SEE STRUCTURAL PLANS FOR TYPICAL FOUNDATION
SECTIONS FOR BESS, PCS, AND SUB-STATION.

AGENCY	dk
ISSUED FOR CONSTRUCTION	DESCRIPTION
1	3/11/2025
NO.	DATE
STACEY GELLA NEW MEXICO 29498 PROFESSIONAL ENGINEER	
PUBLIC SERVICE COMPANY OF NEW MEXICO SANDIA BESS SITE GRADING SECTIONS CONSTRUCTION DOCUMENTS APN 1-021-055-162-512-2-06-67 NEW MEXICO CITY OF ALBUQUERQUE	
PNM PHONE (505) 824-8888 DASH@PNM.COM	
ENGINEERING SURVEYING • PLANNING 1821 SAN ANGELO DRIVE, SUITE 100 ALBUQUERQUE, NEW MEXICO 87102 PHONE (505) 824-8888 DASH@PNM.COM	
DATE: 03/13/2025	
SCALE: HORZ: 1"=40' VERT: N/A	
DESIGNED BY: AMP	
REVIEWED BY: SDG	
C3.03	
PAGE 10	OF 15



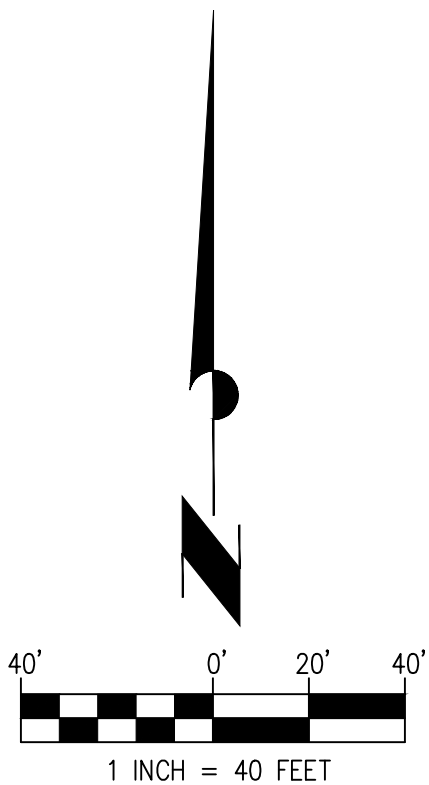
NOTE:
SEEDING MIX AND SLOPE STABILIZATION SHALL BE PER THE CITY OF ALBUQUERQUE "SLOPE STABILIZATION AND SEEDING REQUIREMENTS" DATED MARCH 25, 2022. INCLUDED AS APPENDIX O OF THE PROJECT SWPPP.



LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED TREATMENT AREA
	PROPOSED IMPERVIOUS AREA TREATED BY BASIN
	PROPOSED BASIN FOOTPRINT
	PROPOSED IMPERVIOUS AREA OUTSIDE TREATMENT AREA, DIRECTED TO ADJACENT LANDSCAPING
	ELECTRICALLY RESISTIVE ROCK(SEE ELECTRICAL DRAWINGS)
	LANDSCAPE BUFFER

DMA 1 AREA SUMMARY			
TOTAL TREATABLE AREA	IMPERVIOUS AREA	REQUIRED TREATMENT	PROVIDED TREATMENT
159,378 SF	25,041	0.032 AC-FOOT	0.036 AC-FOOT

CITY OF ALBUQUERQUE DESIGN MANUAL DATED 2020:
FOR REQUIRED TREATMENT VOLUME (GALLONS), MULTIPLY THE PROPOSED IMPERVIOUS AREA BY 0.42 INCHES.



STACEY GELLA
NEW MEXICO
29498
PROFESSIONAL ENGINEER

PUBLIC SERVICE COMPANY OF NEW MEXICO

SANDIA BESS SITE

STORMWATER CONTROL PLAN

CONSTRUCTION DOCUMENTS

ENGINEERING
SURVEYING • PLANNING

1851 SAN ANGELO DRIVE, SUITE 100
ALBUQUERQUE, NEW MEXICO 87102
PHONE: (505) 852-8888
DAN@PJM.COM

DATE: 03/13/2025

SCALE:
HORZ. 1"=40'
VERT. N/A

DESIGNED BY: AMP

REVIEWED BY: SDG

C5.00

PAGE 15 OF 15

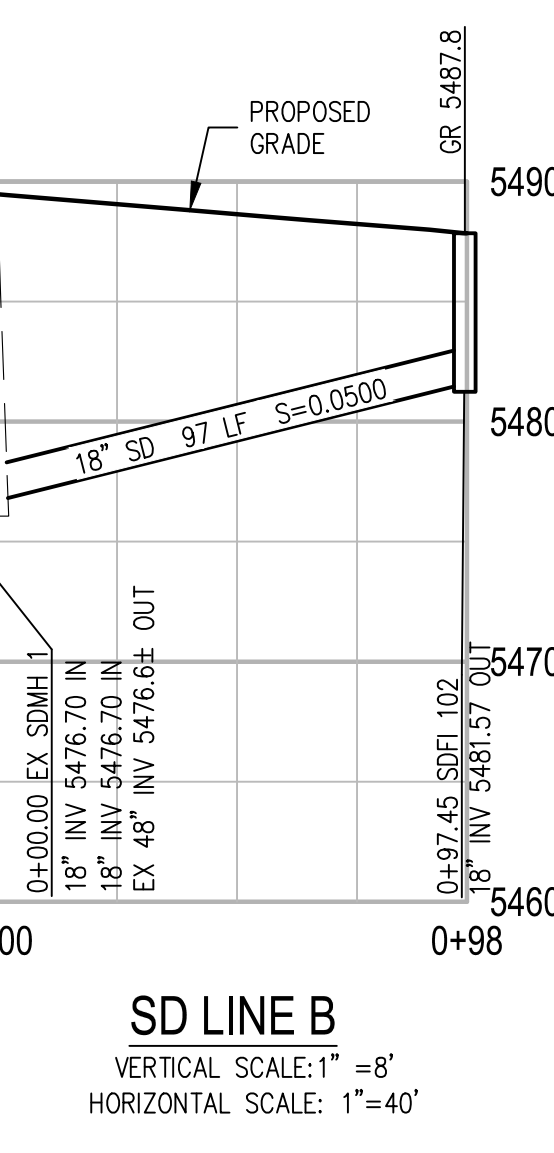
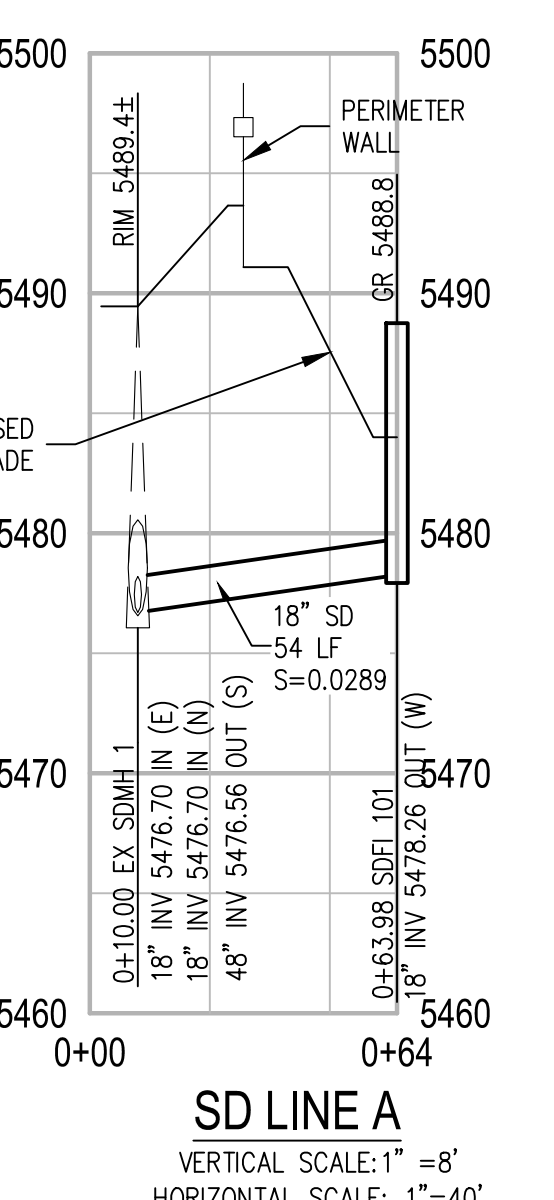
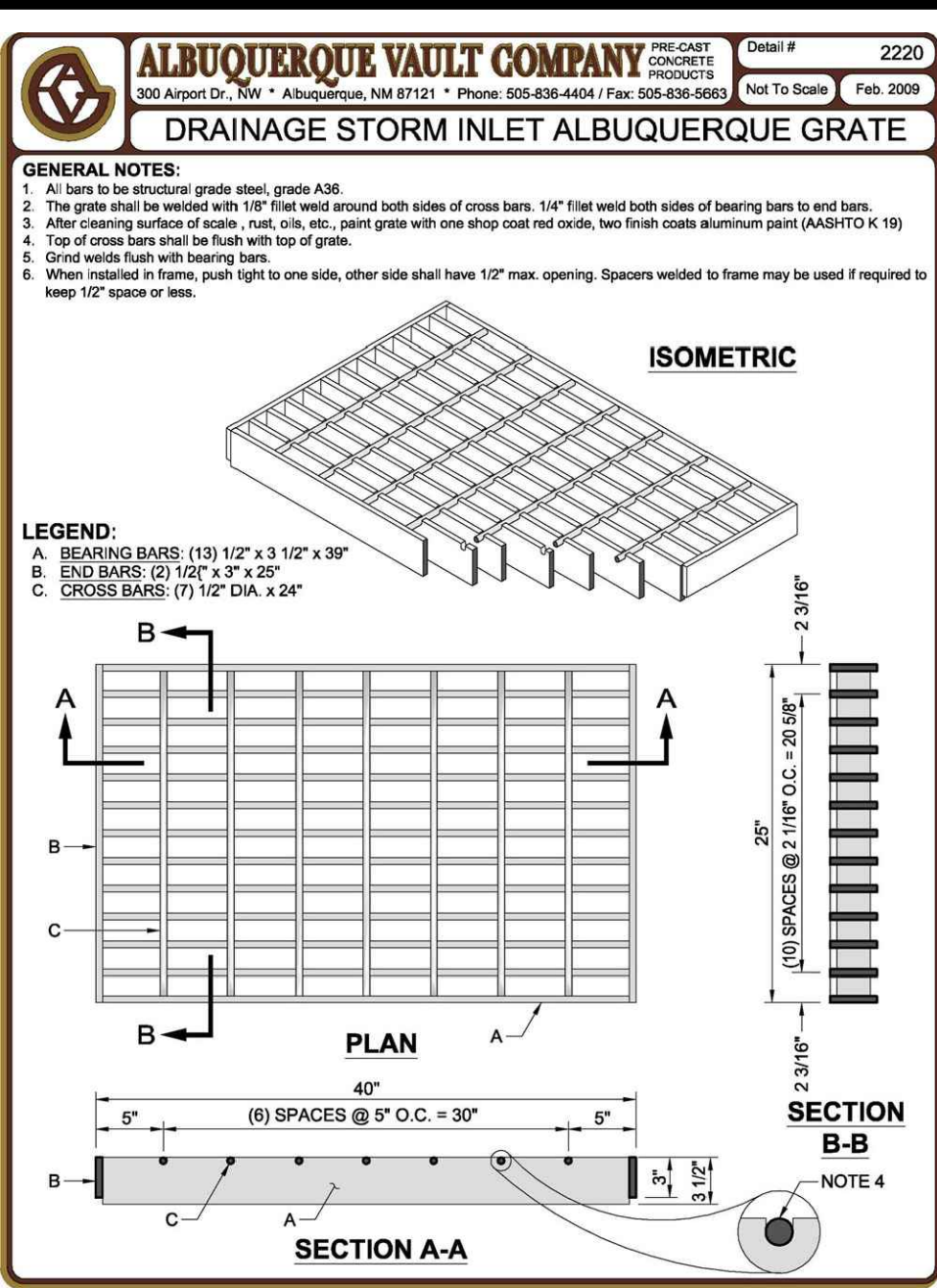
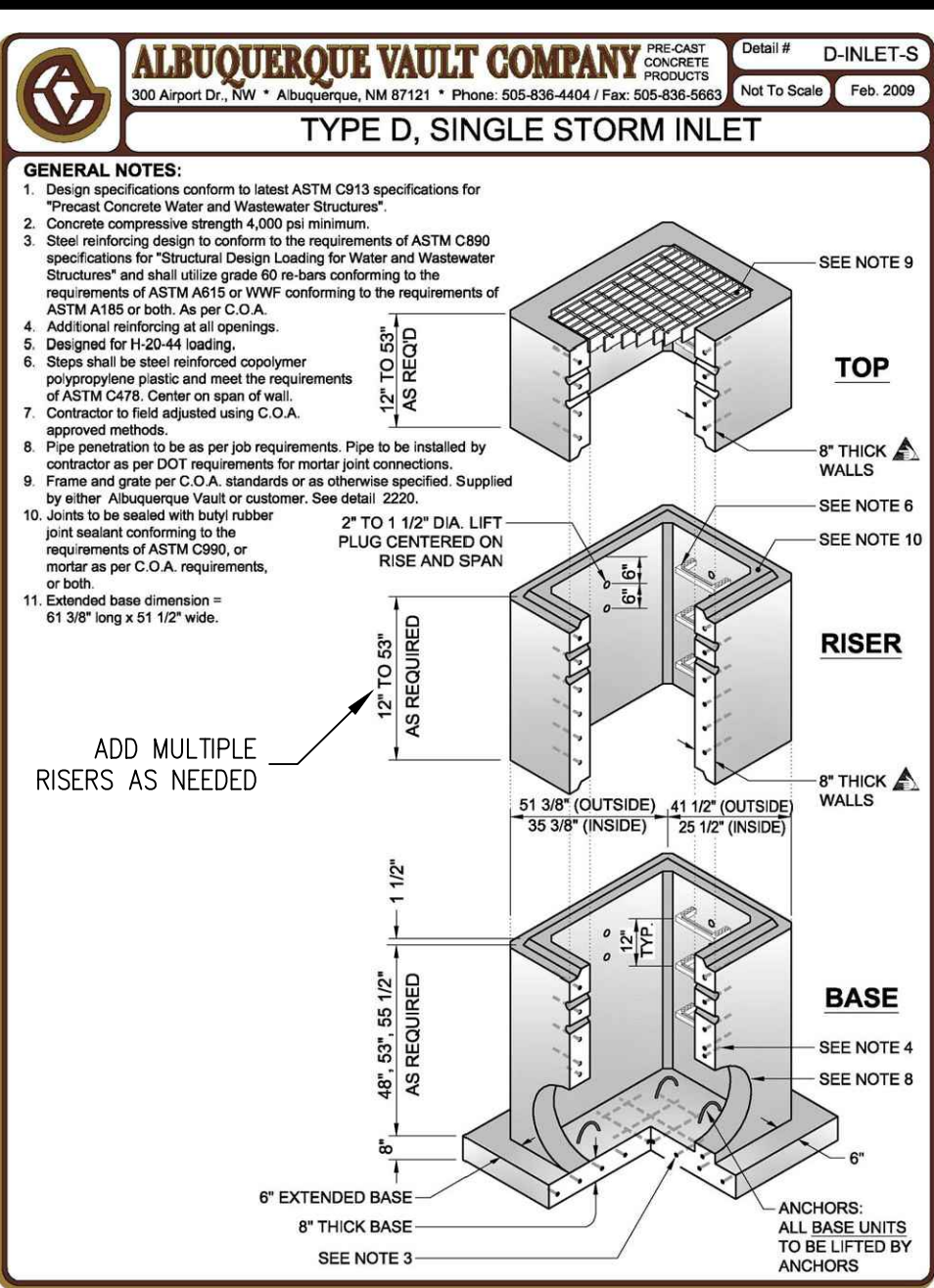
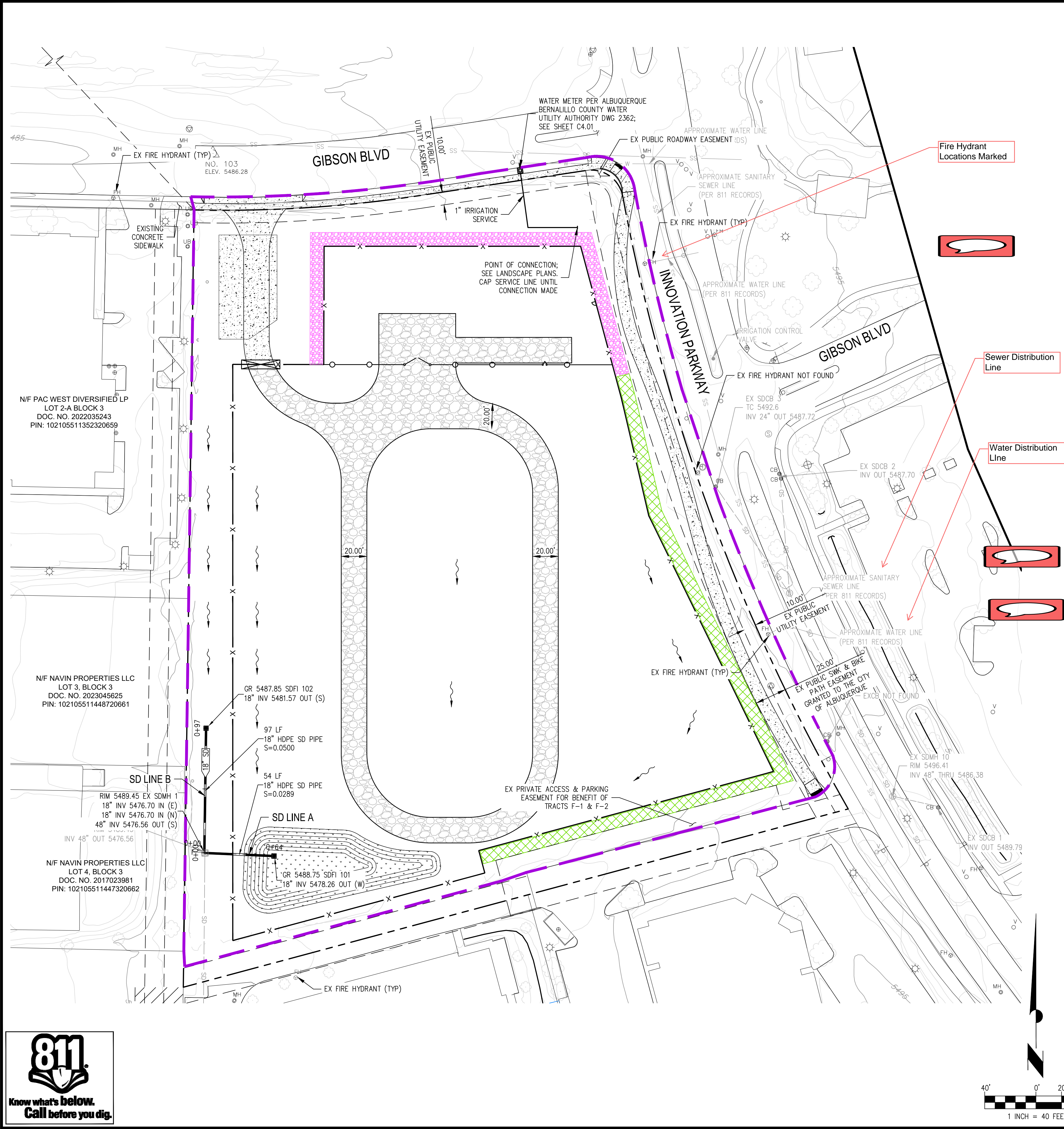
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DATE 3/11/2025

ISSUED FOR CONSTRUCTION

DESCRIPTION

AGENCY



SYMBOL	DESCRIPTION
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- - - -	EXISTING EASEMENT
X	PERIMETER WALL (DESIGN BY OTHERS)
---	SUBSTATION FENCE
---	LIMIT OF DISTURBANCE
---	EX STRUCTURES
---	EX TREES/VEGETATIONS
---	EX MINOR CONTOUR
---	EX MAJOR CONTOUR
---	DRAINAGE SWALE
---	STORM DRAIN MAIN AND STRUCTURE
---	IRRIGATION SERVICE LINE & METER
---	PROPOSED CONCRETE
---	PROPOSED GRAVEL ROADWAY
---	PROPOSED BASIN
---	EX FIRE HYDRANT
---	EX SEWER MAIN LINE
---	EX STORM DRAIN MAIN LINE
---	EX WATER MAIN LINE
---	EX COMMUNICATIONS LINE
---	ELECTRICALLY RESISTIVE ROCK (SEE ELECTRICAL DRAWINGS)
---	PROPOSED MONOPOLE LOCATION
---	LANDSCAPE BUFFER

IRRIGATION LINE SCHEDULE		
DESCRIPTION	DETAIL	QUANTITY
ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY WATER METER	SEE SHEET C4.01	1 EA
PIPES		
1\"/>		90 LF

STORM DRAIN SCHEDULE			
DESCRIPTION	STRUCTURE	DETAIL	QUANTITY
ALBUQUERQUE VAULT COMPANY DRAINAGE STORM INLET ALBUQUERQUE GRATE	SDFI 101-105	SEE THIS SHEET	2 EA
ALBUQUERQUE VAULT COMPANY TYPE D, SINGLE STORM INLET	SDFI 101-105	SEE THIS SHEET	2 EA
PIPES			
18\"/>			151 LF

AGENCY

DATE

NO.

DESCRIPTION

1

3/11/2025

ISSUED FOR CONSTRUCTION

dk

STACEY GELLA

NEW MEXICO

29498

PROFESSIONAL ENGINEER

PUBLIC SERVICE COMPANY OF NEW MEXICO

SANDIA BESS SITE

UTILITY PLAN

CONSTRUCTION DOCUMENTS

APN 1-021-055-162-512-2-06-67

NEW MEXICO

PNM

ENGINEERING

SURVEYING • PLANNING

1801 SAN ANGELO DRIVE, SUITE 100

IRVING, TEXAS 75039

PHONE (972) 502-8888

DAC@PNM.COM

DATE:

03/13/2025

SCALE:

HORZ. 1\"/>

DESIGNED BY:

AMP

REVIEWED BY:

SDG

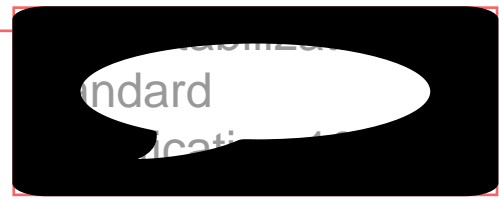
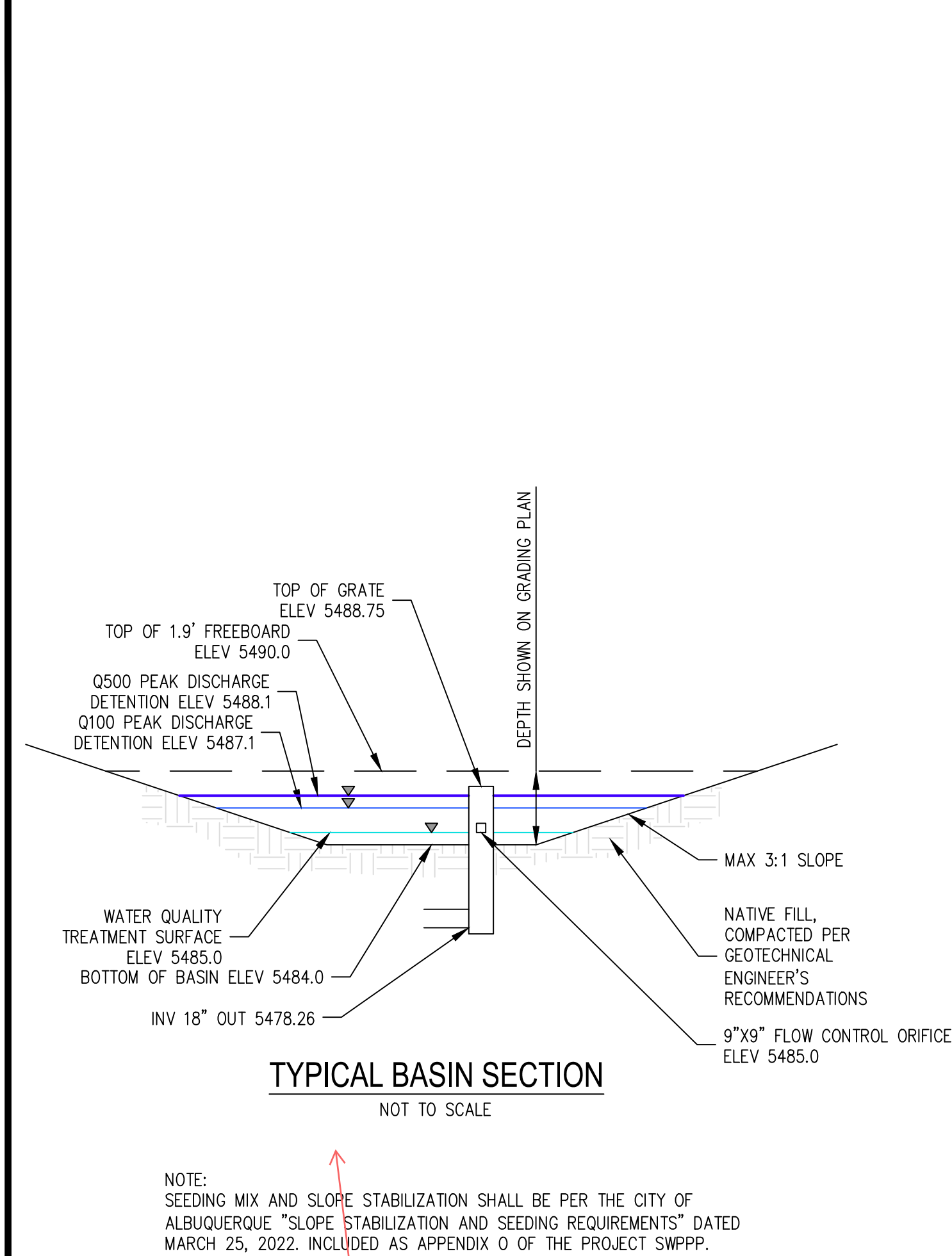
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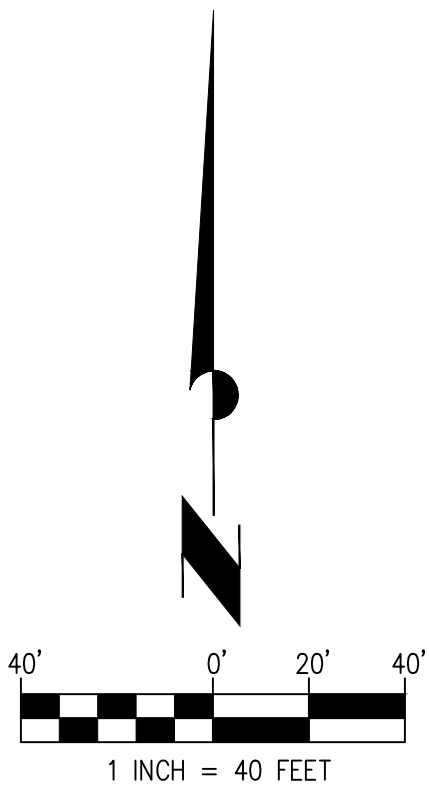
dk JOB NO: 24-1013



DMA 1 AREA SUMMARY			
TOTAL TREATABLE AREA	IMPERVIOUS AREA	REQUIRED TREATMENT	PROVIDED TREATMENT
159,378 SF	25,041	0.032 AC-FOOT	0.036 AC-FOOT

CITY OF ALBUQUERQUE DESIGN MANUAL DATED 2020:
FOR REQUIRED TREATMENT VOLUME (GALLONS), MULTIPLY THE PROPOSED IMPERVIOUS AREA BY 0.42 INCHES.

LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED TREATMENT AREA
	PROPOSED IMPERVIOUS AREA TREATED BY BASIN
	PROPOSED BASIN FOOTPRINT
	PROPOSED IMPERVIOUS AREA OUTSIDE TREATMENT AREA, DIRECTED TO ADJACENT LANDSCAPING
	ELECTRICALLY RESISTIVE ROCK(SEE ELECTRICAL DRAWINGS)
	LANDSCAPE BUFFER



STACEY GELLA
NEW MEXICO
29498
PROFESSIONAL ENGINEER

PUBLIC SERVICE COMPANY OF NEW MEXICO

SANDIA BESS SITE

STORMWATER CONTROL PLAN

CONSTRUCTION DOCUMENTS

CITY OF ALBUQUERQUE

NEW MEXICO

APN 1-021-055-162-512-2-06-67

ENGINEERING
SURVEYING • PLANNING

1821 SAN ANGELO DRIVE, SUITE 100
ALBUQUERQUE, NEW MEXICO 87102
PHONE: (505) 852-8868
DAN@PMP.COM

DATE: 03/13/2025

SCALE:
HORZ. 1"=40'
VERT. N/A

DESIGNED BY: AMP

REVIEWED BY: SDG

C5.00

PAGE 15 OF 15

1

3/11/2025

ISSUED FOR CONSTRUCTION

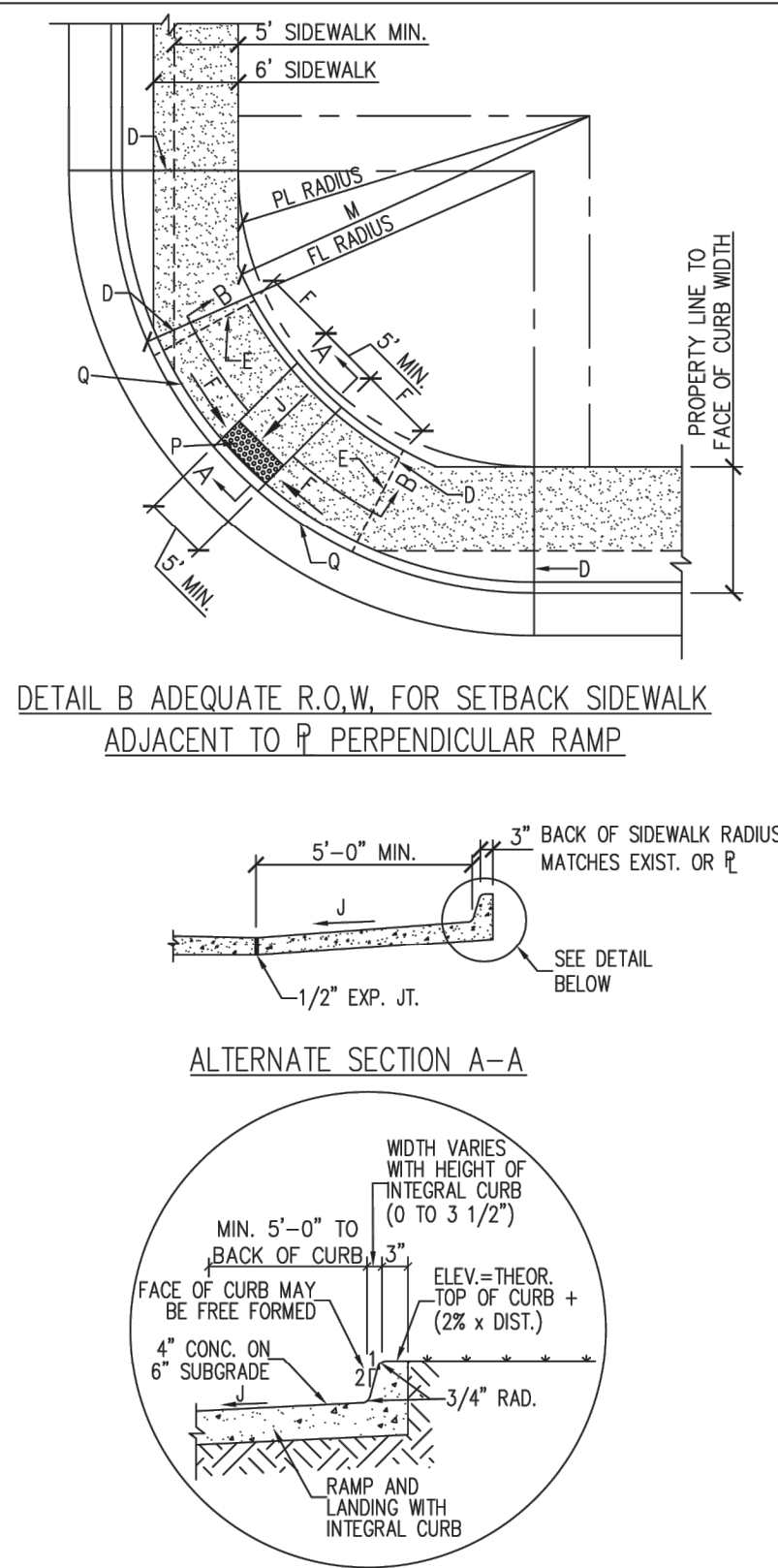
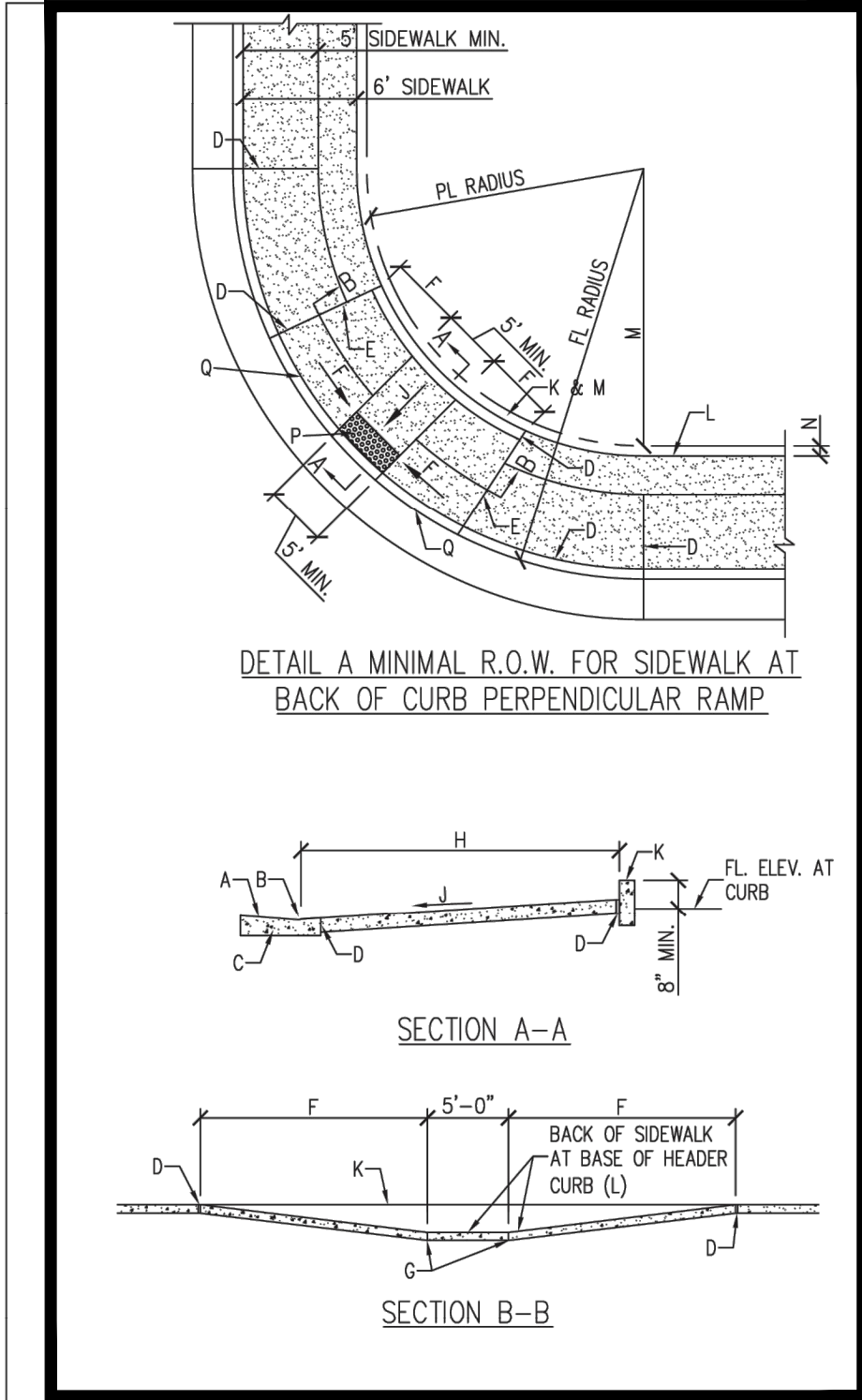
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DATE

DESCRIPTION

AGENCY



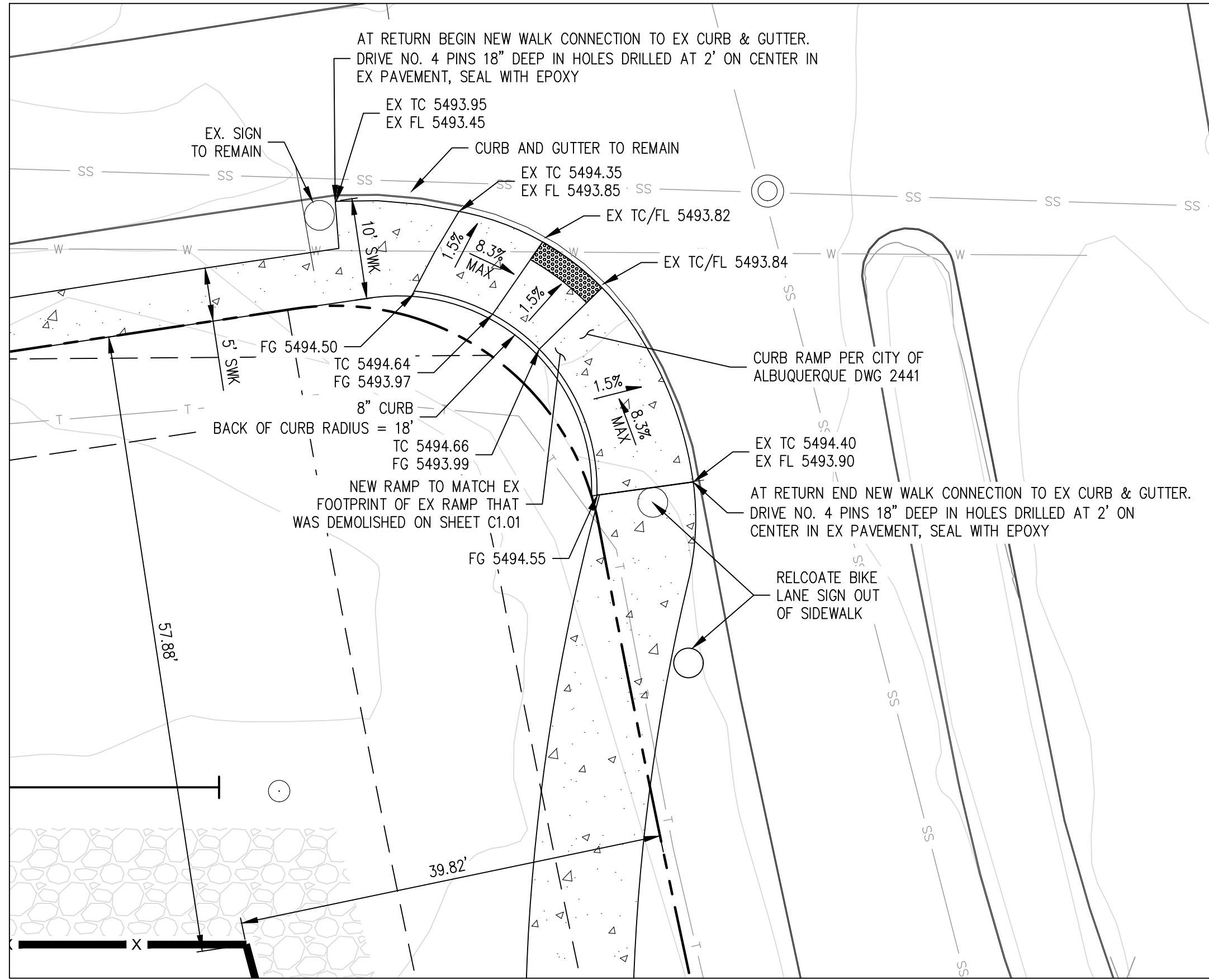
GENERAL NOTES

- CURB ACCESS RAMPS ARE NORMALLY TO BE LOCATED AT THE CENTER OF THE RETURN OR AS DIRECTED BY THE CITY TRAFFIC ENGINEER.
- WHEN MODIFYING ONE QUADRANT OF AN INTERSECTION TO IMPROVE ACCESSIBILITY, MODIFY THE REMAINING QUADRANTS SO THAT ALL QUADRANTS OF THE INTERSECTION COMPLY WITH ADA (PROWAG) REGULATIONS AS SHOWN ON PLANS.
- SURFACE TEXTURE OF CURB ACCESS RAMPS SHALL BE OBTAINED BY HEAVY BROOMING (TEXTURE DEPTH .0625"), TRANSVERSE TO THE SLOPE OF THE RAMP.
- GUTTER FLOW-LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP. DRAINAGE CATCH BASIN STRUCTURES SHALL NOT BE PLACED IN LINE WITH RAMPS.
- WIDTH OF SIDEWALK AND RAMP MUST BE MAINTAINED AT A MINIMUM OF 5'-0" THROUGH ENTIRE RAMP LENGTH.

CONSTRUCTION NOTES

- SLOPE OF GUTTER NOT TO EXCEED 2% ADJACENT TO RAMP. 1.5 % PREFERRED.
- FLUSH WITH RAMP AND GUTTER.
- CURB AND GUTTER (SEE STD. DWG. 2415 - GUTTER AT CURB ACCESS RAMP).
- 1/2" EXPANSION JOINT.
- RADIAL LINES - TOP AND BOTTOM OF RAMP.
- 8.3% MAX. SLOPE OF RAMP, 7% PREFERRED SLOPE OF RAMP.
- CONTRACTION JOINT.
- VARIES WITH AVAILABLE R.O.W.
- 2% MAXIMUM CROSS-SLOPE. 1.5% PREFERRED CROSS-SLOPE.
- HEADER CURB, SEE DWG. 2415C.
- BACK OF SIDEWALK.
- BACK OF SIDEWALK RADIUS TO BE ESTABLISHED SO AS TO MAINTAIN A 5'-0" RAMP WIDTH (MINIMUM) THROUGHOUT. SEE STD. DWG. 2440 (NOTE 6) IF LESS THAN 5'-0" IS AVAILABLE DUE TO UNRESOLVABLE CONSTRAINTS.
- 4-1/2" MAX.
- DETECTABLE WARNINGS (SEE STD. DWG. 2446).
- CURB TO MATCH SLOPE OF SIDEWALK.

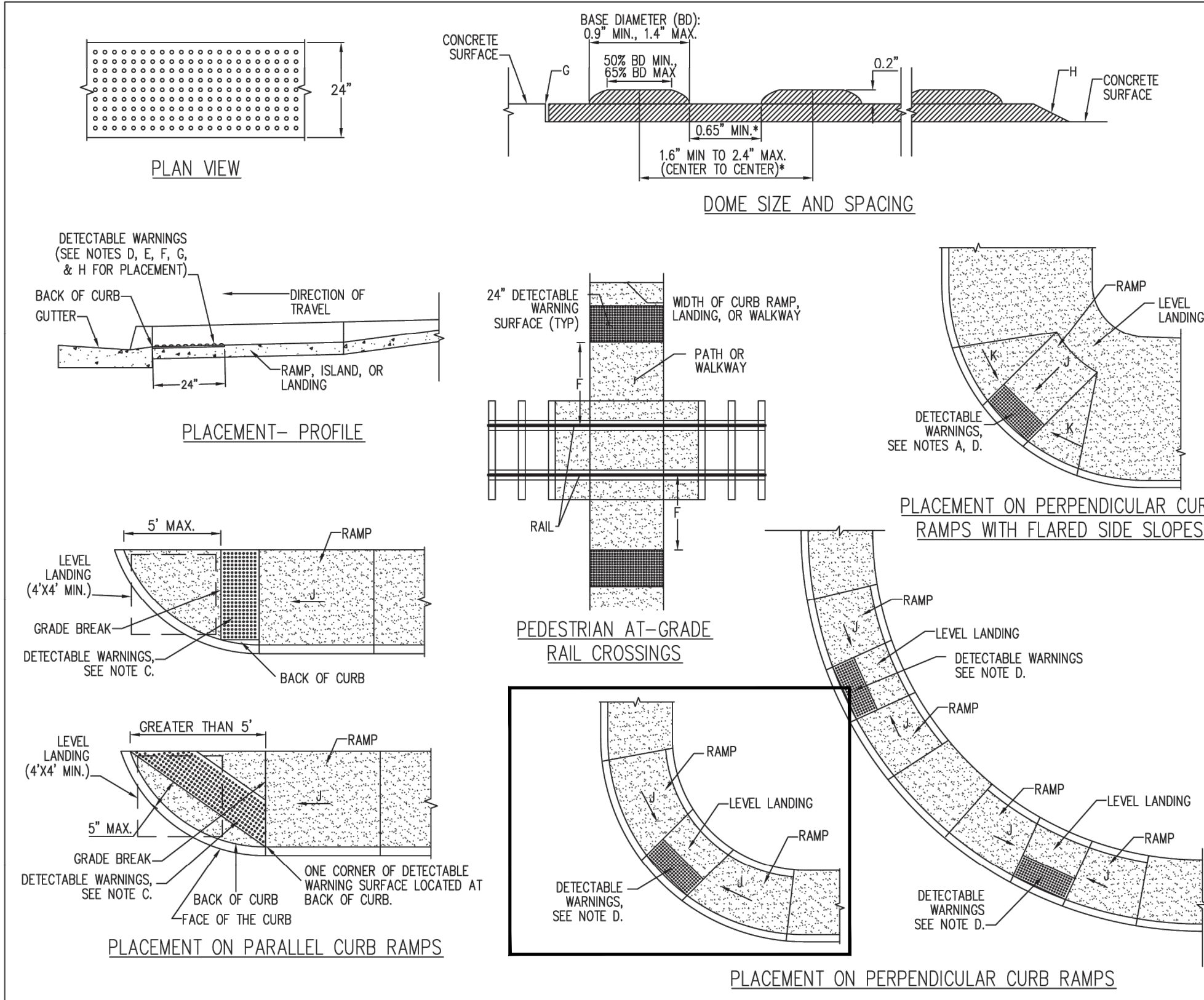
REVISIONS	CITY OF ALBUQUERQUE
	PAVING
	CORNER ACCESS RAMP
	DWG. 2441
	JUNE 2019



NOTE:
ALL CONCRETE WORK TO BE CONSTRUCTED
PER CITY OF ALBUQUERQUE STANDARD
SECTION 101 PORTLAND CEMENT CONCRETE.

LEGEND

SYMBOL	DESCRIPTION
---	PROPERTY LINE
- - - -	EXISTING EASEMENT
AC	UNDERGROUND AC
X	PERIMETER WALL (DESIGN BY OTHERS)
○	SUBSTATION FENCE
---	LIMIT OF DISTURBANCE
○	POWER CONTROLLER
○	EX STRUCTURES
○	EX TREES/VEGETATIONS
---	EX MINOR CONTOUR
---	EX MAJOR CONTOUR
---	PROPOSED CONCRETE
---	PROPOSED GRAVEL ROADWAY
---	PROPOSED DRAINAGE SWALE
---	PROPOSED STORMWATER BASIN
○	EX WELL
---	DETECTABLE WARNING



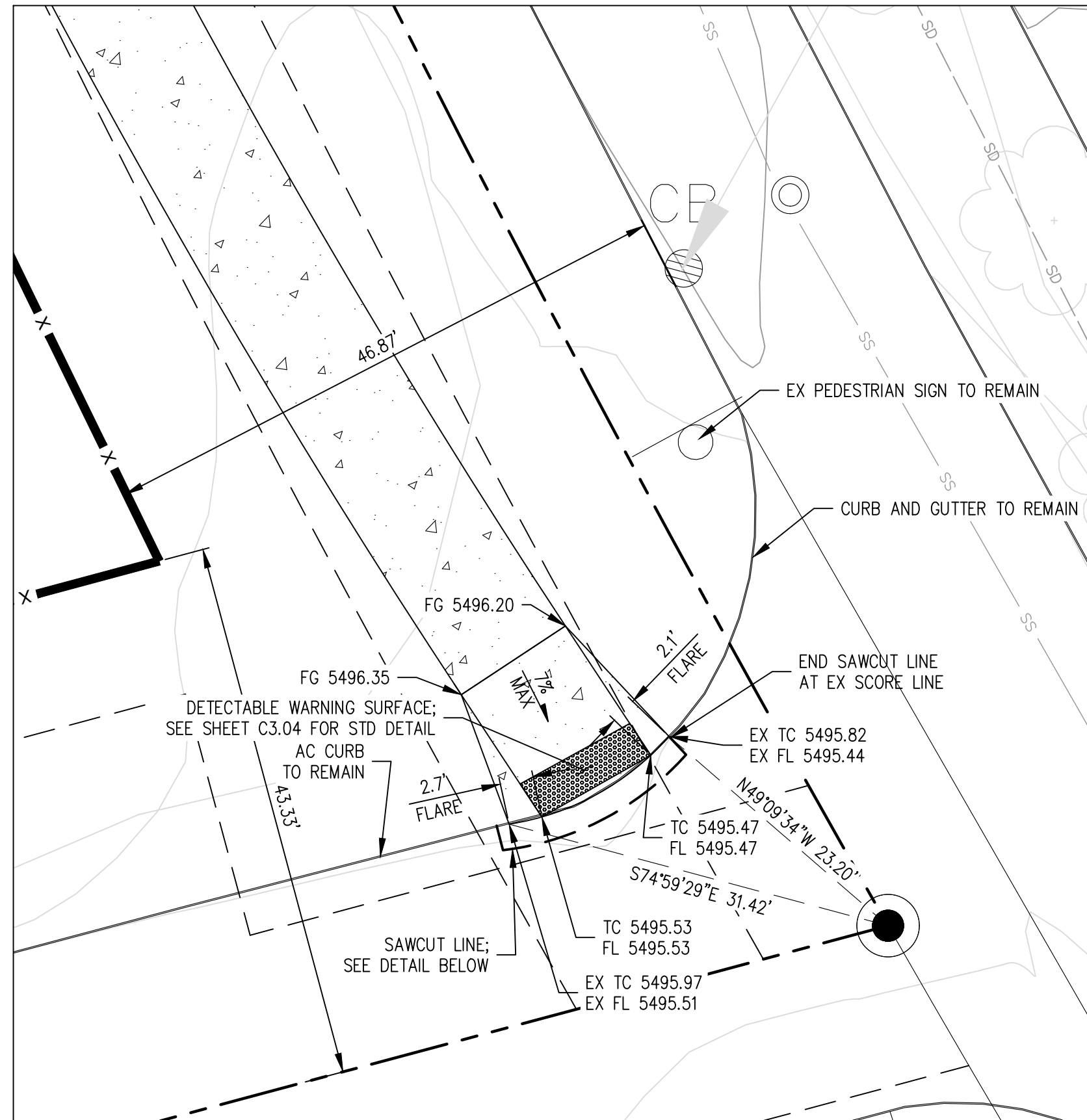
GENERAL NOTES

- PROVIDE DETECTABLE WARNINGS ON ANY CURB RAMP OR LANDING WHERE THE ACCESSIBLE ROUTE CROSSES A PUBLIC STREET. DETECTABLE WARNINGS ARE NOT REQUIRED AT DRIVEWAYS UNLESS THE DRIVEWAY IS PROVIDED WITH TRAFFIC CONTROL DEVICES OR IS PERMITTED TO OPERATE LIKE A PUBLIC STREET AS DETERMINED BY THE CITY ENGINEER.
- SELECT A DETECTABLE WARNING SURFACE THAT CONTRASTS VISUALLY (LIGHT-ON-DARK OR DARK-ON-LIGHT) WITH ADJACENT SURFACES.
- IN NEW CONSTRUCTION, INSTALL CAST-IN-PLACE REPLACEMENT DETECTABLE WARNING PLATES, PANELS, TILES, OR PAVERS. IN RETROFITS, INSTALL SURFACE-APPLIED DETECTABLE WARNING PANELS WITH BEVELED EDGES. SURFACE APPLIED PANELS SHALL BE MECHANICALLY ANCHORED.

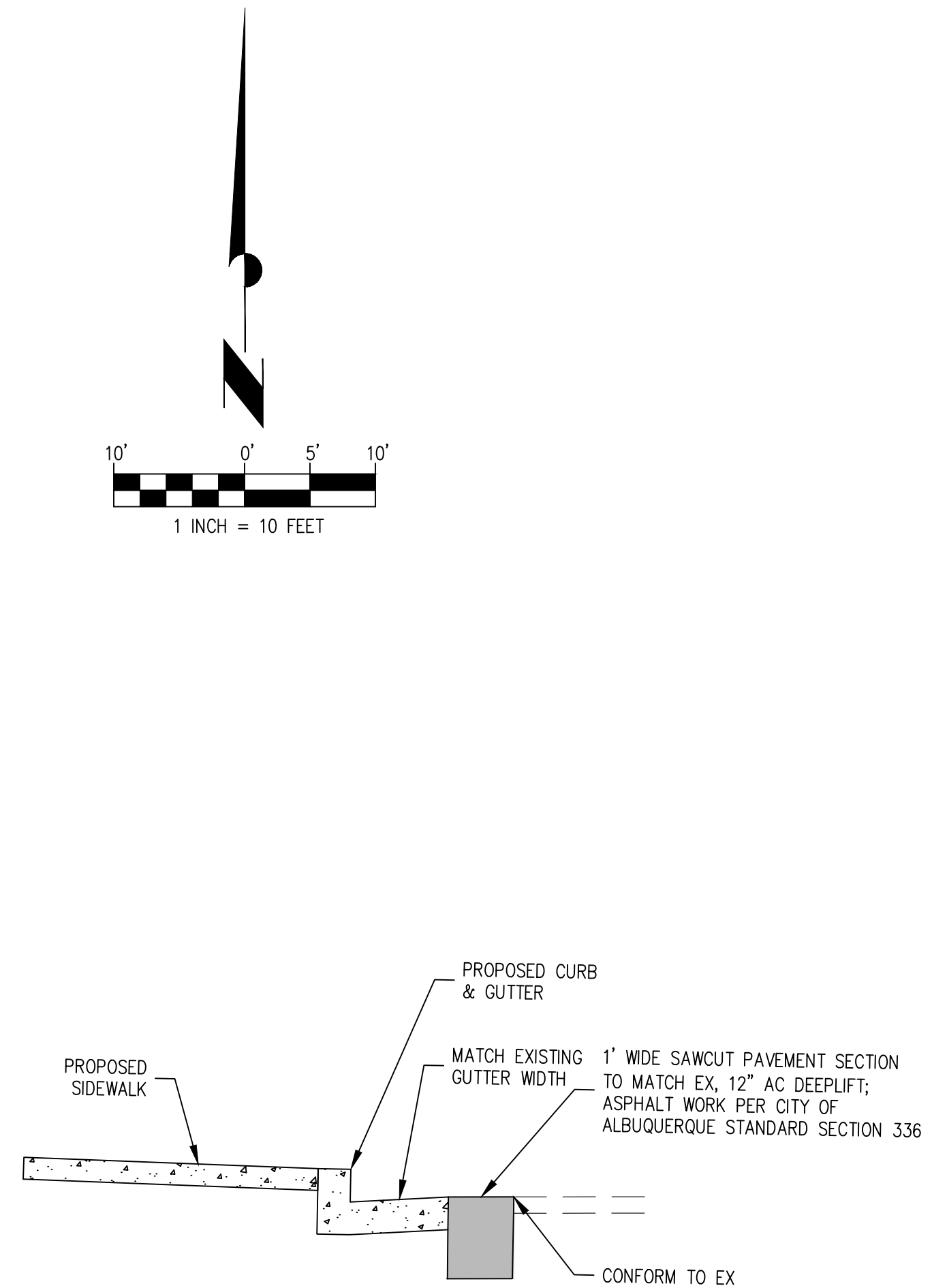
CONSTRUCTION NOTES

- INSTALL DETECTABLE WARNING SURFACE SO THAT IT EXTENDS 24" IN THE DIRECTION OF TRAVEL FOR THE FULL WIDTH (NOT INCLUDING SIDE FLARES) OF THE RAMP OR LANDING.
- PLACE DETECTABLE WARNINGS SO THAT THE ROWS OF TRUNCATED DOMES ARE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP OR LANDING AND THE ROADWAY.
- ON PARALLEL CURB RAMPS, PLACE DETECTABLE WARNINGS ON THE RAMP SURFACE AT THE GRADE BREAK IF GRADE BREAK IS WITHIN 5' FROM BACK OF CURB; IF THE GRADE BREAK IS GREATER THAN 5' FROM BACK OF CURB, PLACE DETECTABLE WARNINGS AT A DIAGONAL USING A MAXIMUM DISTANCE OF 5' FROM FACE OF CURB.
- ON PERPENDICULAR CURB RAMPS, PLACE DETECTABLE WARNINGS AT THE BACK OF CURB.
- ON CUT-THROUGH ISLANDS, PLACE DETECTABLE WARNINGS IN LINE WITH THE BACK OF CURB IF DETECTABLE WARNING SURFACES ON THE ENTRANCE AND EXIT SIDES OF THE ISLAND CAN BE SEPARATED BY 2' MIN. OF WALKWAY. IF NECESSARY TO ACHIEVE 2' MIN. SEPARATION, PLACE DETECTABLE WARNINGS IN LINE WITH THE FACE OF CURB. IF THE ISLAND HAS NO CURB, PLACE DETECTABLE WARNINGS AT THE EDGE OF ROADWAY. SEE CDA STD. DWG. 2448.
- PLACE DETECTABLE WARNINGS AT RAIL CROSSINGS SO THAT THE EDGE NEAREST THE RAIL IS 6' TO 15' FROM THE CENTERLINE OF THE NEAREST RAIL. ALIGN ROWS OF TRUNCATED DOMES PARALLEL TO THE DIRECTION OF TRAVEL.
- RECESS OR CAST-IN DETECTABLE WARNINGS SO THAT THE SURFACE TO WHICH THE TRUNCATED DOMES ARE ATTACHED IS FLUSH WITH THE ADJACENT CONCRETE.
- IN RETROFITS, DETECTABLE WARNING MAT MAY BE MECHANICALLY ANCHORED TO THE SURFACE OF THE CONCRETE IF THE MAT EDGE IS BEVELED WITH A MAXIMUM SLOPE OF 2H:1V.
- 8.3% MAX. SLOPE, 7% PREFERRED SLOPE.
- SIDE FLARED SLOPES.

REVISIONS	CITY OF ALBUQUERQUE
	PAVING
	DETECTABLE WARNINGS
	DWG. 2446
	JUNE 2019



NOTE:
ALL CONCRETE WORK TO BE CONSTRUCTED
PER CITY OF ALBUQUERQUE STANDARD
SECTION 101 PORTLAND CEMENT CONCRETE.

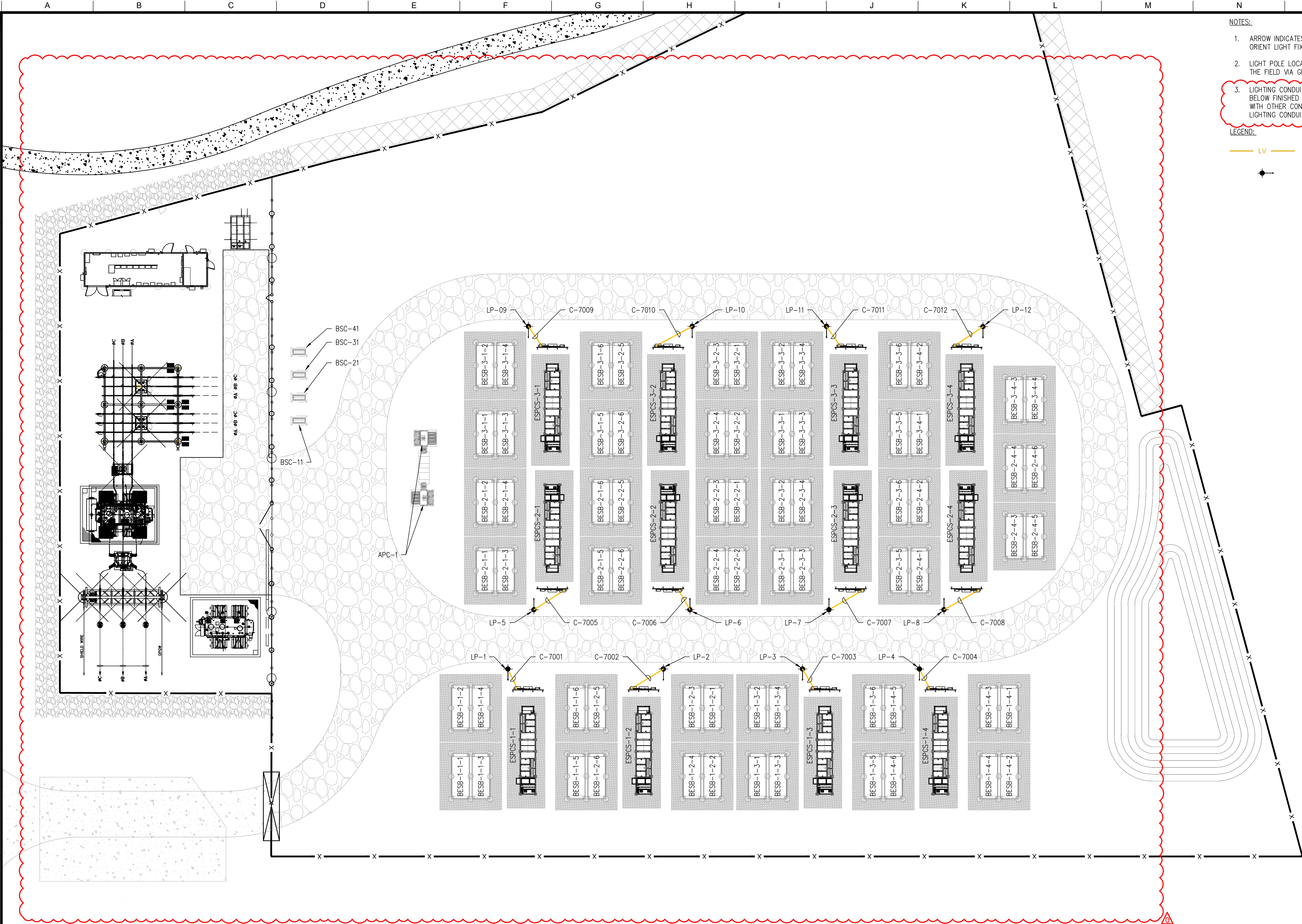


PUBLIC SERVICE COMPANY OF NEW MEXICO
SANDIA BESS SITE
ACCESS RAMP DETAILS
CONSTRUCTION DOCUMENTS
APN 1-021-055-162-512-2-06-67

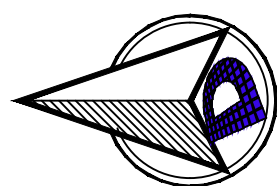
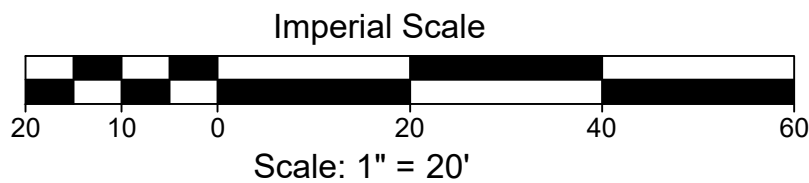
ENGINEERING
SURVEYING • PLANNING
1931 SAN ANGELO DRIVE, SUITE 100
ALBUQUERQUE, NEW MEXICO 87102
PHONE (505) 838-8888
FAX (505) 838-8888
WWW.PNH.COM

DATE: 03/13/2025
SCALE: HORZ. 1"=10"
VERT. N/A
DESIGNED BY: AMP
REVIEWED BY: SDG
C3.04
PAGE 11 OF 15

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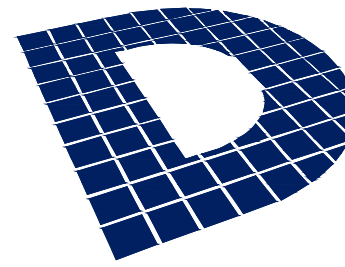


NOTES:

1. ARROW INDICATES GENERAL DIRECTION TO ORIENT LIGHT FIXTURE ARM.
2. LIGHT POLE LOCATIONS SHALL BE PROVIDED TO THE FIELD VIA GPS COORDINATES.
3. LIGHTING CONDUITS SHALL BE BURIED 18" BELOW FINISHED GRADE. WHEN CONFLICTING WITH OTHER CONDUITS AT THE SAME DEPTH, LIGHTING CONDUITS SHALL GO BENEATH.

LEGEND:

- LV — 277V AC
- LIGHT POLE (SEE NOTE 1)



DEPCOM POWER
9185 E PIMA CENTER PARKWAY #100
SCOTTSDALE, AZ 85258
PHONE: (480) 270-6910
WWW.DEPCOMPOWER.COM

A KOCH ENGINEERED SOLUTIONS COMPANY



SANDIA BESS
(60MW/240MWh)
ALBUQUERQUE,
BERNALILLO COUNTY
NM, USA

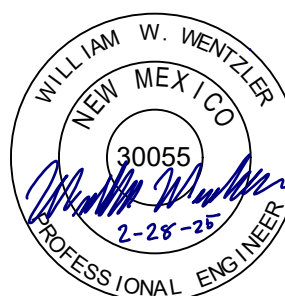
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C	09-27-24	ISSUED FOR 90% REVIEW (FR)	LC	CV	WW

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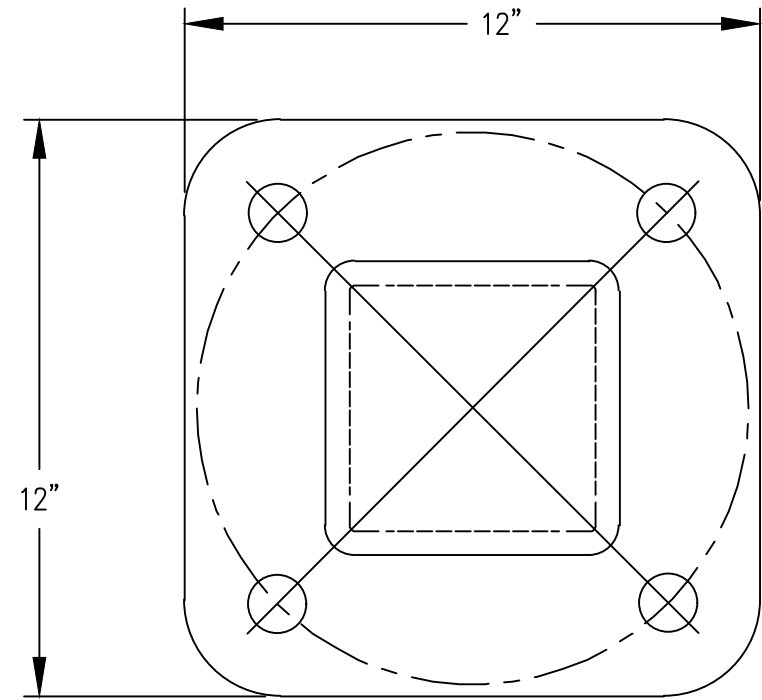
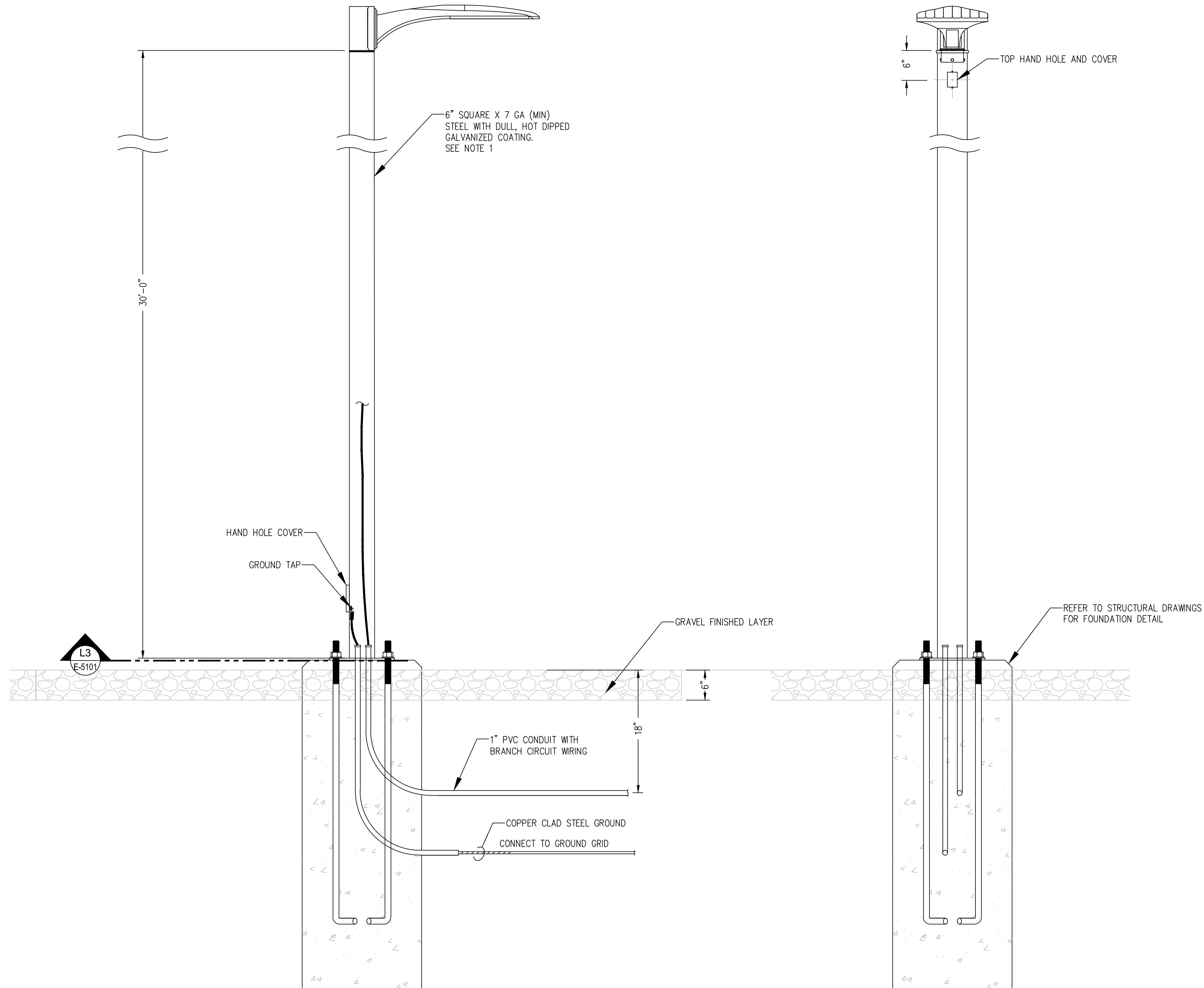
LIGHTING PLAN

ENGINEER: WALKER WENTZLER	DR. BY: LC	CHK. BY: CV
DEPCOM JOB No: 23-0024-00	SCALE: AS NOTED	
DEPCOM PROJECT CODE: NM240b4	DRAWING NUMBER: E-5001	REV: 0
SHEET 42	OF 57	



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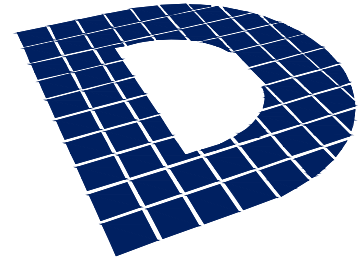
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DETAIL L3
LIGHTING POLE BASE
SCALE: NTS

LIGHTING POLE SPECIFICATIONS:

- POLE SHAFTS SHALL BE FABRICATED FROM HOT ROLLED AND WELDED STEEL TUBING OF ONE-PIECE CONSTRUCTION, WITH A MINIMUM YIELD STRENGTH OF 55KSI. WALL THICKNESS SHALL BE NOT LESS THAN 7-GAUGE (3/16-INCHES).
- OPENINGS IN THE POLE TUBE SHALL BE GENERALLY SQUARE OR RECTANGULAR, BASED ON THE DETAILS PROVIDED. ALL OPENINGS SHALL HAVE ROUNDED CORNERS TO RELIEVE STRESS IN THE TUBE.
- BASE COVERS SHALL BE TWO (2) PIECE AND SHALL BE FABRICATED STEEL, WITH A DULL GALVANIZED FINISH.
- ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 55 AND SHALL INCLUDE TWO (2) HEX NUTS AND TWO (2) FLAT WASHERS. ANCHOR BOLTS SHALL HAVE AN "L" BEND ON ONE (1) END AND SHALL BE GALVANIZED FOR NOT LESS THAN 10-INCHES ON THE THREADED END. ANCHOR BOLTS SHALL BE NOMINALLY 3-FOOT LONG X 4-INCH HOOK X 1-INCH DIAMETER. FOR THE FREE-STANDING LOCATIONS AND WASHERED RODS FOR TRANSFORMER PAD LOCATIONS, SEE STRUCTURAL DRAWINGS.
- ALL STRUCTURAL BOLTS OR FASTENERS SHALL BE GALVANIZED, HIGH STRENGTH CARBON STEEL. NON-STRUCTURAL FASTENERS AND HARDWARE SHALL BE STAINLESS STEEL OR BRASS.
- POLES AND COVERS SHALL BE FINISHED IN A DULL, NON-REFLECTIVE GALVANIZED COATING.
- POLES SHALL BE DESIGNED FOR A MAXIMUM EFFECTIVE PROJECTED AREA (EPA) OF NOT LESS THAN 10.7 SQ. FT. A MAXIMUM LOAD OF 265-POUNDS WITH AN 80 MPH WIND FORCE AND A GUST FACTOR OF 1.3.
- TRANSFORMER BASE SHALL BE WELDED STEEL WITH A HOT-DIPPED GALVANIZED DULL FINISH. BASE SHALL BE NOMINALLY 20-INCHES HIGH X 15.5-INCHES AT THE BASE. BASE SHALL INCLUDE A NOMINALLY 11-INCH HIGH X 8.5-INCHES WIDE DOOR. BASE SHALL BE GROUNDED TO THE #4/OAWG GROUND CABLE WITH 2 X 1/2-INCH STAINLESS STEEL THROUGH BOLTS, FLAT WASHERS, LOCK WASHERS AND HEX-NUTS AND A NEMA STANDARD 2-HOLE LUG - LUGS AND HARDWARE TO BE FURNISHED BY BOS SUBCONTRACTOR. FASTENING BOLTS FOR THE POLES TO THE BASE SHALL BE FURNISHED AND SHALL BE GALVANIZED, HIGH STRENGTH CARBON STEEL. NON-STRUCTURAL FASTENERS AND HARDWARE SHALL BE STAINLESS STEEL OR BRASS.



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**SANDIA BESS
(60MW/240MWh)
ALBUQUERQUE,
BERNALILLO COUNTY
NM, USA**

TITLE:

REV	DATE	REVISION DESCRIPTION	BY	CHK	APP
0	02-28-25	ISSUED FOR CONSTRUCTION (FC)	LC	EB	WW

SHEET TITLE:

**LIGHTING
CONTROL AND
POLE DETAIL**

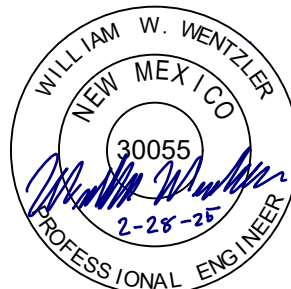
ENGINEER: WALKER WENTZLER DR. BY: LC CHK. BY: CV

DEPCOM JOB No: 23-0024-00 SCALE: AS NOTED

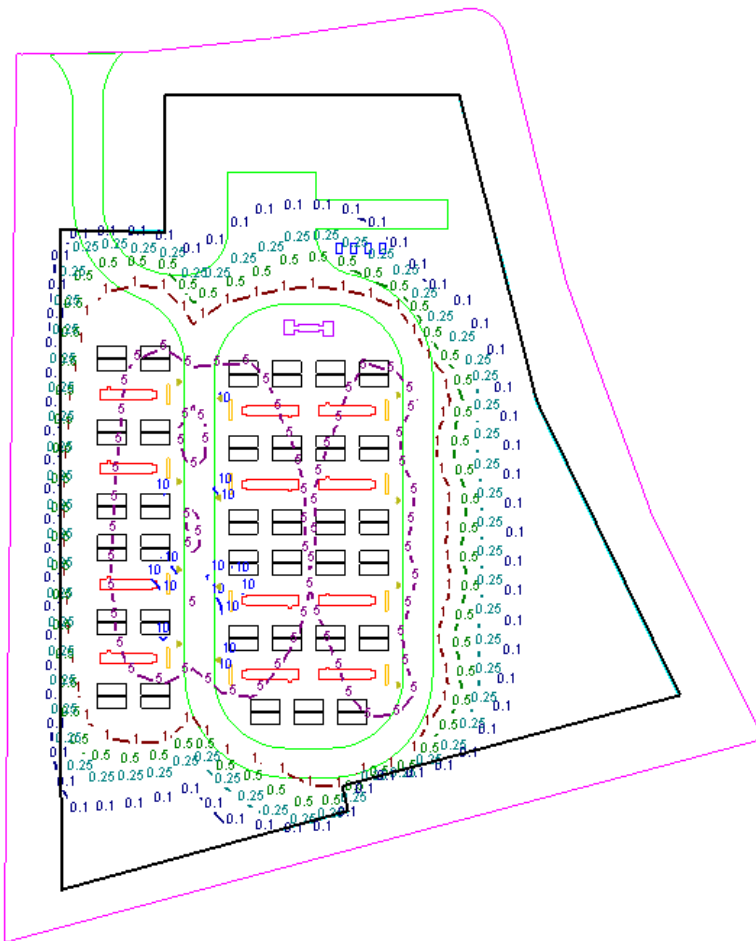
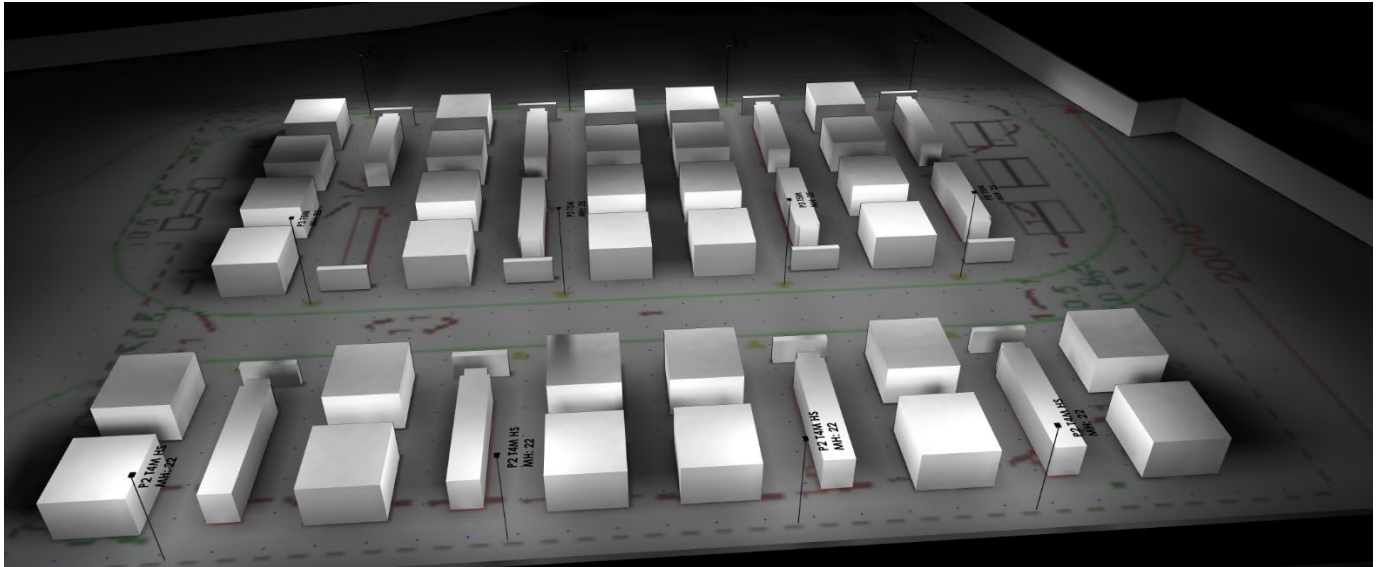
DEPCOM PROJECT CODE: **NM240b4**

DRAWING NUMBER: **E-5101** REV: **0**

SHEET 43 OF 57



Models Showing Light Output at Night. The lighting is designed to be contained within the perimeter of the site





TECHNICAL REPORT

PROJECT: DEPCOM – Sandia

JOB NUMBER: 23231

SUBJECT: Site Lighting Study

CALC NO.: E-416

BY: ASSET Engineering

DATE: 11/12/24

SHEET NO.: 1 OF 6

REV: B

SITE LIGHTING STUDY

(Issued For Construction)



TECHNICAL REPORT

PROJECT: DEPCOM – Sandia
JOB NUMBER: 23231

SUBJECT: Site Lighting Study

CALC NO.: E-416

BY: ASSET Engineering

DATE: 11/12/24

SHEET NO.: 2 OF 6

REV: B

TABLE OF CONTENTS

1.0	Purpose and Scope	3
2.0	Design Requirements	3
3.0	Design Methodology.....	3
4.0	Design Results	4
5.0	References.....	5
6.0	Revision Control	5

SUBJECT: Site Lighting Study**CALC NO.:** E-416**BY:** ASSET Engineering**DATE:** 11/12/24**SHEET NO.:** 3 OF 6**REV:** B

1.0 Purpose and Scope

The Purpose of this Site Lighting Study is to determine the lighting levels within the DEPCOM POWER 115/34.5 kV Substation, which is in Sandia Heights, New Mexico.

The Scope of this Study includes determining **general lighting levels**, fixtures, lamps, etc. for the areas directly associated with the substation yard which includes the control building's exterior lights, as detailed on the design drawings. The study does not account for light from existing sources, but this study does account for "dark sky" measures.

2.0 Design Requirements

Lighting levels are established in general accordance with the NESC/IEEE standards and with good engineering practice. NESC Foot-candle Recommendations are presented in Attachment C "Table 111-1 – Illumination levels". Lighting levels range from 0.2 foot-candles (fc) for general orientation in remote areas, to 2 fc for general exterior.

For the ranges of foot-candle values presented, the lower end value incorporates the Light Loss Factor (LLF) as described in Section 3.3 below, and represents the minimum target-maintained level. Values are horizontal values measured at the walking surface.

All lights used in the yard are dark sky compliant to conform with the "Outdoor Lighting Code for North Albuquerque Acres and Sandia Heights".

3.0 Design Methodology

3.1 Computer Software

Lighting calculations are determined using Visual 2020 (Version 2.11.0094) computer software by Acuity Brands Lighting, Inc. This software allows the user to import a CAD file of the facility, locate lighting fixtures in plan, assign fixture/lamp properties, and set the mounting height and orientation (direction and tilt angle) of the fixtures. The software also allows the user to assign a Light Loss Factor (LLF), which is described further in this section.

3.2 Fixtures and Mounting

Two different types of fixtures are used throughout the facility: LED wall mount lights, and ALED Field-Adjustable Area Lights. Lighting fixture information in the form of catalog cut sheets is included in Attachment A.

3.3 Light Loss Factor

A Light Loss Factor (LLF) is used to compensate for the physical conditions of the design. A LLF value of 1.00 indicates that there are no "real world" losses or gains compared to the design,

SUBJECT: Site Lighting Study**CALC NO.:** E-416**BY:** ASSET Engineering**DATE:** 11/12/24**SHEET NO.:** 4 OF 6**REV:** B

while values less than or greater than 1.00 indicate “real world” losses or gains compared to the design. The LLF is the product of several loss factors, including the following:

- Lamp Lumen Depreciation (LLD), which accounts for the diminished light output (lumens) as the lamp ages. This value is largely dependent on the lamp type (mercury vapor, metal halide, etc.).
- Luminaire Dirt Depreciation (LDD), which accounts for dirt accumulation on lamps and fixtures. A LDD factor of 0.80 is used for outdoor, which reflects cleaning every two years in a “Dirty” environment.
- Voltage Effects (VE), which accounts for the variation of light output (lumens) due to the variation in supply voltage. A VE factor of 0.95 is used for outdoor lighting.

The resulting $LLF = LLD * LDD * VE$ is calculated to be 0.60 for LED fixtures.

3.4 Design Clarifications

The following design assumptions and limitations are noted:

1. Outdoor lighting designs consider direct lighting only and do not consider reflectance.
2. The mounting angle of the lights are at a fixed angle of 45°.
3. RAB Field-Adjustable Flood lights are at a height of 35’.
4. The study will be updated with the control building’s exterior lights evaluated once vendor drawings are received.

4.0 **Design Results**

Design Results are presented in Attachment B in the form of a plan view, which shows spot lighting levels (and in some cases contoured lighting levels) plotted at the walking surface. A summary of the results with design recommendations follows:

4.1 General Yard Lighting

Results of the lighting study are shown on the overall plan view in Attachment B, with contoured lighting levels drawn at 0.2 and 2 fc. The minimum target lighting levels of 0.2 fc for remote areas and 2 fc for General Yard Lighting are well maintained. Lighting levels are lost around the East, and West fence line which is acceptable.

4.2 Other Considerations

1. LED lamps are rated for many thousands of hours and should not need to be replaced for several years. The lead time for lamps is expected to be relatively short, perhaps stock to two weeks. It is recommended that new lamps be ordered at the time of the first failure, and that



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all lamps be replaced at one time for preventive maintenance. Stocking of spare lamps is at the Customer’s discretion.

2. It is recommended that fixtures be cleaned as part of a regularly scheduled maintenance plan.

5.0 References

- 5.1 *National Electric Safety Code, 2023 Edition.*
5.2 *Visual 2020 (version 2.11.0094).*
5.3 *Outdoor Lighting Code for the City of Tucson, Arizona and Prima County Arizona, 2012.*

6.0 Revision Control

Rev. No.	By	Date	Purpose	Description
A	CTW	08/21/24	Issued For Construction	Original Issue
B	CTW	11/12/24	Issued For Construction	Original Issue



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<u>Attachment</u>	<u>Description</u>	<u>Page No.</u>
A	Lighting Fixture Information	7
B	Design Results	10
C	Selected Project Data	12



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DATE: 11/12/24

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Attachment A

Lighting Fixture Information



Color: Bronze

Weight: 21.6 lbs

Project:

Type:

Prepared By:

Date:

Driver Info

Type	Constant Current
120V	0.78A
208V	0.45A
240V	0.39A
277V	0.34A
Input Watts	78.9W

LED Info

Watts	78W
Color Temp	4000K (Neutral)
Color Accuracy	74 CRI
L70 Lifespan	100,000 Hours
Lumens	10,195 lm
Efficacy	129.2 lm/W

Technical Specifications

Compliance

UL Listed:

Suitable for wet locations. Suitable for mounting within 4ft (1.2m) of the ground.

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

IP Rating:

Ingress protection rating of IP66 for dust and water

Performance

Lifespan:

100,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

Wattage Equivalency:

Equivalent to 250W Metal Halide

LED Characteristics

LEDs:

Long-life, high-efficacy, surface-mount LEDs

Color Stability:

LED color temperature is warrantied to shift no more than 200K in color temperature over a 5-year period

Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Construction

EPA:

2

Ambient Temperature:

Suitable for use in up to -40°C (-40°F) to 40°C (104°F)

Lens:

Tempered glass lens included

Housing:

Die-cast aluminum housing and door frame

Mounting:

Heavy-duty slipfitter for 2 3/8"OD pipe

Finish:

Formulated for high durability and long-lasting color

Tilt Increment:

Rotates in 6 degree increments

Other

Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

Buy American Act Compliance:

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Electrical

Driver:

Constant Current, Class 2, 120-277V, 50/60 Hz, 120V: 0.66A, 208V: 0.38A, 240V: 0.33A, 277V: 0.29A

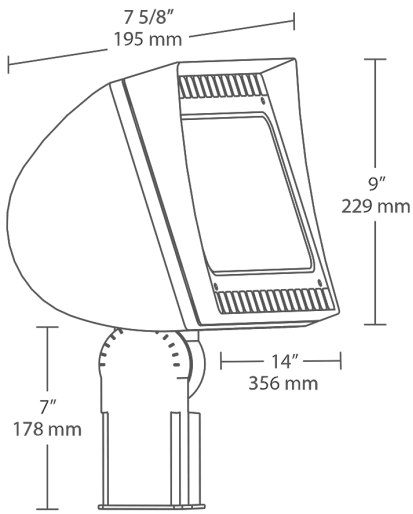
THD:

6.1% at 120V, 7.67% at 277V

Power Factor:

99.8% at 120V, 95% at 277V

Dimensions



Features

- 66% energy cost savings vs. HID
- NEMA Type - 6H x 6V
- "Air-Flow" technology heat dissipation
- 100,000-hour LED lifespan
- 5-Year, No-Compromise Warranty

Ordering Matrix

Family	Wattage	Mounting	Color Temp	Finish	Driver	Options	Other Option
FXLED	78	SF	N				
	105 = 105W 125 = 125W 150 = 150W 78 = 78W	SF = Slipfitter T = Trunnion	Blank = 5000K Cool N = 4000K Neutral Y = 3000K Warm	W = White Blank = Bronze	Blank = Standard /D10 = 0-10V Dimming /BL = Bi-Level /480 = 480V	Blank = No Option /LC = Lightcloud Controller /PCT = 100-277V Twistlock /PCT4 = 480V Twistlock	Blank = Standard USA = BAA Compliant



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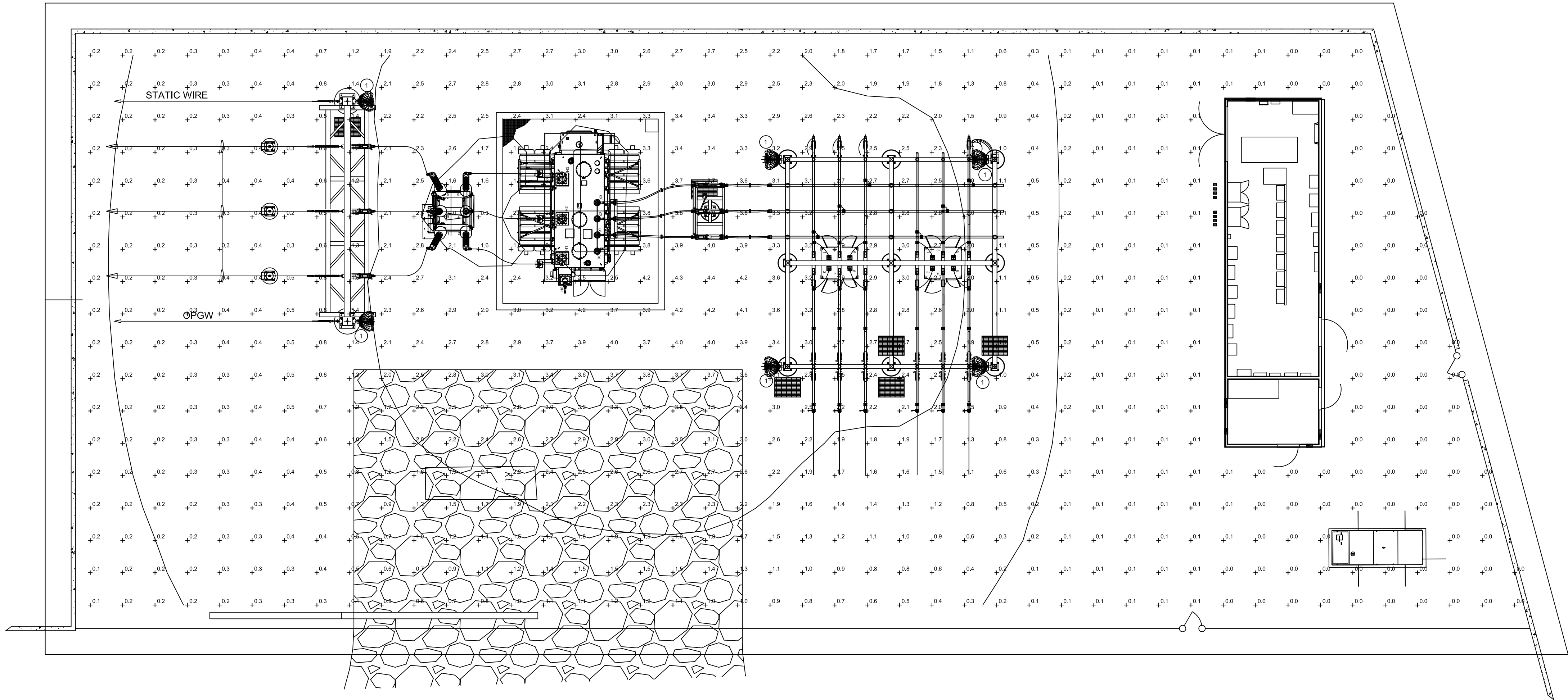
Attachment B


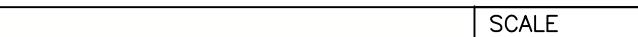

Design Results



- SCHEDULE:
- 1

RAB FIELD-ADJUSTABLE FLOOD LIGHTS MOUNTED AT 35', TILTED AT A 45 DEGREE ANGLE FROM GROUND.



						<div>STAMP</div>	<div><div><div><div><div>9185 E PIMA CENTER PKWY, SUITE 100 SCOTTSDALE, AZ 85258 WWW.DEPCOMPPOWER.COM</div></div><div><div><div>750 WOODLANDS PKWY, RIDGELAND, MS 39157 WWW.ASSETCOMPANY.COM</div></div><div><div><div>THIS DRAWING OR BILL OF MATERIAL IS CONFIDENTIAL AND MAY NOT BE LOANED, REPRODUCED OR COPIED, EITHER WHOLLY OR IN PART, OR MADE PUBLIC IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF ASSET ENGINEERING.</div></div></div></div></div></div></div>	SCALE NTS	PROJECT DEPCOM POWER-SANDIA SUBSTATION STORAGE PROJECT 115/34.5kV SUBSTATION	FILE NAME 23231-E-415					
								DATE 11/27/23	TITLE SUBSTATION LIGHTING PLAN	JOB NUMBER 23231					
								DRAWN CTW	LOCATION ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO	DRAWING NUMBER E-415					
								CHECKED JAM							
REV	DATE	DESCRIPTION	DRN	CKD	APP										
B	11/05/24	90% DESIGN REVIEW	CTW	JAM	ADJ										
A	08/21/24	60% DESIGN REVIEW	CTW	JAM	ADJ										



TECHNICAL REPORT

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Attachment C

Selected Project Documentation

Sec. 30-181. Title.

This division shall be known as the North Albuquerque Acres and Sandia Heights Light Pollution Ordinance.
(Ord. No. 1997-18, § 1, 11-4-97)

Sec. 30-182. Declaration of necessity.

WHEREAS, the regulation of the use of outdoor light fixtures can reduce light pollution and conserve energy;
and

WHEREAS, the night sky is an important aspect of our environment; and

WHEREAS, it is pleasing to the senses and intellect of mankind to be able to gaze at the night sky with
minimum interference from light pollution; and

WHEREAS, many of the residents of North Albuquerque Acres and Sandia Heights enjoy amateur astronomy,
but light pollution interferes with their enjoyment; and

WHEREAS, light pollution interferes with astronomical research facilities which are engaged in the study of
planets, comets, stars, galaxies, and satellites; and

WHEREAS, the residents of North Albuquerque Acres and Sandia Heights reside in an area of the
unincorporated area of Bernalillo County that contain highly significant views; and

WHEREAS, North Albuquerque Acres and Sandia Heights are bounded on the North by the Sandia Indian
Reservation; on the South by the City of Albuquerque; on the East by the Sandia Mountain and the West by the
City of Albuquerque.

NOW, THEREFORE, the Board of County Commissioners for the County of Bernalillo hereby, finds and
declares that the night sky is an important aspect of our environment and that it is essential for the County of
Bernalillo to regulate the use of outdoor light fixtures in North Albuquerque Acres and Sandia Heights.

(Ord. No. 1997-18, § 2, 11-4-97)

Sec. 30-183. Intent and purpose.

This division is intended to create standards for outdoor lighting so that its use does not unreasonably
interfere with the enjoyment of adjacent property owners, and with astronomical observations, and to promote
energy conservation without jeopardizing safety, utility, security and productivity. The purpose of this division is to
minimize light pollution, which has a detrimental effect on the night sky environment, interferes with the
enjoyment of the night sky, and causes unnecessary illumination of adjacent properties.

(Ord. No. 1997-18, § 3, 11-4-97)

Sec. 30-184. Conformance with applicable codes.

All outdoor electrically powered illuminating devices within the area controlled by this division, including
outdoor light fixtures on facilities or lands owned, operated, controlled or protected by the State of New Mexico,
the County of Bernalillo, the City of Albuquerque, or other public entity or public agencies, must comply with the
requirements of this division, unless exempted through the provisions of section 30-190 of this division, and shall
be installed and thereafter maintained in conformance with the provisions of this division, the Zoning Ordinance,
the Building Code, the Electrical Code and all other applicable provisions of the Bernalillo County Code.

Federally funded and state funded roadway construction projects, such as Paseo Del Norte and its intersections with other local streets and roadways are exempted from the requirements of this division only to the extent it is necessary to comply with federal and state requirements.

(Ord. No. 1997-18, § 4, 11-4-97)

Sec. 30-185. Definitions.

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning. The "IES" (Illuminating Engineering Society of North America) Lighting Handbook, 1981 most recent edition Application Volume, the Bernalillo County Zoning Ordinance, Building Code, and Electrical Code shall be used for the definition of terms used in this division but not defined herein. In the case where a definition of a term of this division is found to be in conflict with a definition of a term of any other ordinance, "IES" handbook or regulation, the more restrictive definition will apply.

Automatic timing device means a device that automatically controls the operation of a light fixture or fixtures, circuit or circuits. Photocells and light and or motion sensors shall be considered automatic-timing devices

Cutoff means a light fixture designed, installed, and operated so that the light distribution meets the following criteria: the candlepower per 1,000 lamp lumens does not numerically exceed 25 (2½ percent) at an angle of 90 degrees above nadir (horizontal), and 100 (10 percent) at an angle of 80 degrees above nadir. This applies to any lateral angle around the light fixture.

Filtration means outdoor light fixtures, which have glass, acrylic or translucent enclosures.

Installed means the attachment or assembly fixed in place whether or not connected to a power source.

Light pollution means artificial light which causes a detrimental effect on the night sky environment, interferes with astronomical observation, or diminishes enjoyment of the night sky.

Outdoor light fixtures means outdoor electrically powered illuminating devices, outdoor lighting, internally illuminated or reflective surfaces, bare lamps, and similar devices, permanently installed or portable. Such devices may be used for but are not limited to:

- (1) Outdoor lighting of buildings and structures, including building overhangs and canopies;
- (2) Outdoor lighting of recreational areas or parking lots;
- (3) Security lighting;
- (4) On-premises signs;
- (5) Street lighting;
- (6) Landscape lighting;
- (7) Building mounted area lighting; and
- (8) Building facade lighting.

Person means any individual, firm, co-partnership, joint venture, association, social club, fraternal organization, corporation, estate, trust, business trust, receiver, syndicate, political subdivision, or other group or combination, acting as a unit.

Premises means a tract, lot or parcel of land together with all buildings and structures thereon.

Private area light means a light installed by a public utility company under a public utility company's rate schedule for private use and owned by the public utility company.

Semicutoff means a light fixture designed, installed, and operated so that the light distribution meets the following criteria: the candlepower per 1000 lamp lumens does not numerically exceed 50 (five percent) at an angle of 90 degrees above nadir (horizontal) and 200 (20 percent) at a vertical angle of 80 degrees above nadir. This applies to any lateral angle around the light fixture.

Shielded means a technique or method of construction which causes all the light emitted from an outdoor light fixture to be projected below a horizontal plane passing through the fixture.

Shielded aimable means a technique or method of construction which causes all the light emitted to be directed to the surface or area to be illuminated, so that the emanating source of light is not visible from any angle except those angles that exist between the fixture and the target to be illuminated. The emanating source shall not be visible from any adjacent properties or roadways to minimize light pollution.

(Ord. No. 1997-18, § 5, 11-4-97)

Sec. 30-186. General requirements.

Searchlights, spotlights, floodlights or lighting fixtures used to illuminate off-premises signs are hereby prohibited. Any other outdoor light fixtures or illuminated on-premises signs installed after the effective date of this division shall comply with all applicable county ordinances and with the following:

- (1) All outdoor light fixtures and illuminated on-premises signs shall be (1) designed and operated as cutoff or shielded aimable fixtures, (2) equipped with and controlled by light and motion sensors or automatic timing devices, and (3) shall remain off between 11:00 p.m. and sunrise except for illuminating walkways or driveways.
- (2) Outdoor light poles and standards shall not exceed 16 feet in height above existing grade. Public streetlight poles and standards are exempt from this height requirement.
- (3) All outdoor lighting fixtures mounted on buildings or structures shall be mounted at a height no more than 16 feet above finished grade.
- (4) All outdoor lighting systems shall be designed, or re-designed, and operated so that the area ten feet beyond the property line of the premises receives no more than 0.25 (one quarter) of a footcandle of light from the premises lighting system.

(Ord. No. 1997-18, § 6, 11-4-97)

Sec. 30-187. Approved materials and methods of installation.

The provisions of this division are not intended to prevent the use of any design, material or method of installation or operation not specifically prohibited by this division, provided such alternative design, material or method conforms with the intent of this division and has been approved by the zoning administrator.

- (1) The zoning administrator may approve any such proposed alternative design provided he finds that;
 - a. It complies with the applicable specific requirements of this division; or
 - b. It has been designed or approved by a registered professional engineer and complies with the intent of this division.
- (2) Such determination shall be made in accordance with the procedures in the Administrative Section 24.A.4, of the Bernalillo County Zoning Ordinance.

(Ord. No. 1997-18, § 7, 11-4-97)

Sec. 30-188. Nonconforming outdoor fixtures.

All non-conforming outdoor fixtures installed prior to and operable on the effective date of this division shall be removed or converted to a conforming use within three years for non-residential use and five years for residential use.

(Ord. No. 1997-18, § 8, 11-4-97)

Sec. 30-189. Exemptions.

Existing public streetlights installed before the effective date of this division are exempt from the requirements of this division; however, when they become unrepairable, their replacements are subject to all provisions of this division.

(Ord. No. 1997-18, § 9, 11-4-97)

Sec. 30-190. Administrative exemption.

Any person may submit an application for an administrative exemption from the requirements of the division. This request shall be done in accordance with the procedures enumerated in the Administrative Section 24.A.4, of the Bernalillo County Zoning Ordinance. In addition the request shall state fully:

- (1) The circumstances and conditions relied upon as grounds for administrative exemptions; and
- (2) The circumstances and conditions by which strict application of the provisions of this division would deprive the applicant reasonable use of the land, building or outdoor light fixtures; and
- (3) The grounds by which the granting of the administrative exemption will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

(Ord. No. 1997-18, § 10, 11-4-97)

Sec. 30-191. Penalty.

Any owner, tenant, agent, or person in charge of any premises or any other person who violates any of the provisions of this division, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine not exceeding \$300.00 per day of the violation, or imprisonment in the county jail for a period not exceeding 90 days, or both fine and imprisonment. Unless otherwise specified, each day that a prohibited condition exists shall constitute a separate offense.

(Ord. No. 1997-18, § 11, 11-4-97)

Sec. 30-192. Severability.

The provisions of this division are severable, and if any provision, sentence, clause, section, or part thereof is held illegal, invalid, unconstitutional, or inapplicable to any person or circumstance, the illegality, invalidity, unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts of this division or their application to the persons or circumstances.

It is hereby declared to be the intent of the board of county commissioners that this division would have been adopted if such illegal, invalid, or unconstitutional provision, sentence, clause, section, or part had not been

included therein, and if the person or circumstance to which this division or part thereof is inapplicable had been specifically exempted therefrom.

(Ord. No. 1997-18, § 12, 11-4-97)

Secs. 30-193—30-200. Reserved.

E. Receptacles in damp or wet locations

All 120 V ac permanent receptacles shall be provided with one or more of the following:

1. Ground-fault circuit interrupter (GFCI) protection.
2. Be on a grounded circuit that is tested at such intervals as experience has shown to be necessary.
3. Be applied in conjunction with a GFCI device between the receptacle and the load.

Table 111-1—Illumination levels

Location	footcandles	lux
Generating station (interior)		
Highly critical areas occupied most of the time ¹	25	270
Areas occupied most of the time ²	15	160
Critical areas occupied infrequently ³	10	110
Areas occupied infrequently ⁴	5	55

Table 111-1—Illumination levels (continued)

Location	footcandles	lux
Generating station (exterior)		
Building pedestrian main entrance	10	110
Critical areas ⁵	5	55
Areas occupied occasionally by pedestrians ⁶	2	22
Areas occupied occasionally by vehicles ⁷	1	11
Areas occupied infrequently ⁸	0.5	5.5
Remote areas ⁹	0.2	2.2
Substation		
Control building interior	5	55
General exterior horizontal and equipment vertical	2	22
Remote areas ¹⁰	0.2	2.2

¹ Such as: Chemical laboratory, large centralized control room 66 in (1.68 m) above floor, section of duplex facing away from operator, bench boards (horizontal level), dispatch boards—horizontal plane (desk level), dispatch boards—vertical face of board [48 in (1.22 m) above floor, facing operator]—system load dispatch room.

² Such as: Ordinary control room 66 in (1.68 m) above floor, secondary dispatch room, turbine room.

³ Such as: Auxiliaries, battery areas, boiler feed pumps, tanks, compressors, gage area, burner platforms, hydrogen and carbon dioxide manifold area, screen house, power switchgear, communications equipment room, turbine bay sub-basement, visitors' gallery, water treating area.

⁴ Such as: Air-conditioning equipment, air preheater and fan floor, ash sluicing, boiler platforms, cable room, circulator, or pump bay, coal conveyor, crusher, feeder, scale area, pulverizer, fan area, transfer tower, condensers, de-aerator floor, evaporator floor, heater floors, area inside duplex switchboards, rear of all switchboard panels (vertical), precipitators, soot or slag blower platform, steam headers and throttles, piping tunnels or galleries.

⁵ Such as: Coal unloading dock (loading or unloading zone), coal unloading car dumper, gate house conveyor entrance, fuel-oil delivery headers, platforms—boiler, turbine deck.

⁶ Such as: Catwalks, coal unloading tippie, conveyors, secondary building entrances.

⁷ Such as: Oil storage tanks, roadway between or along buildings.

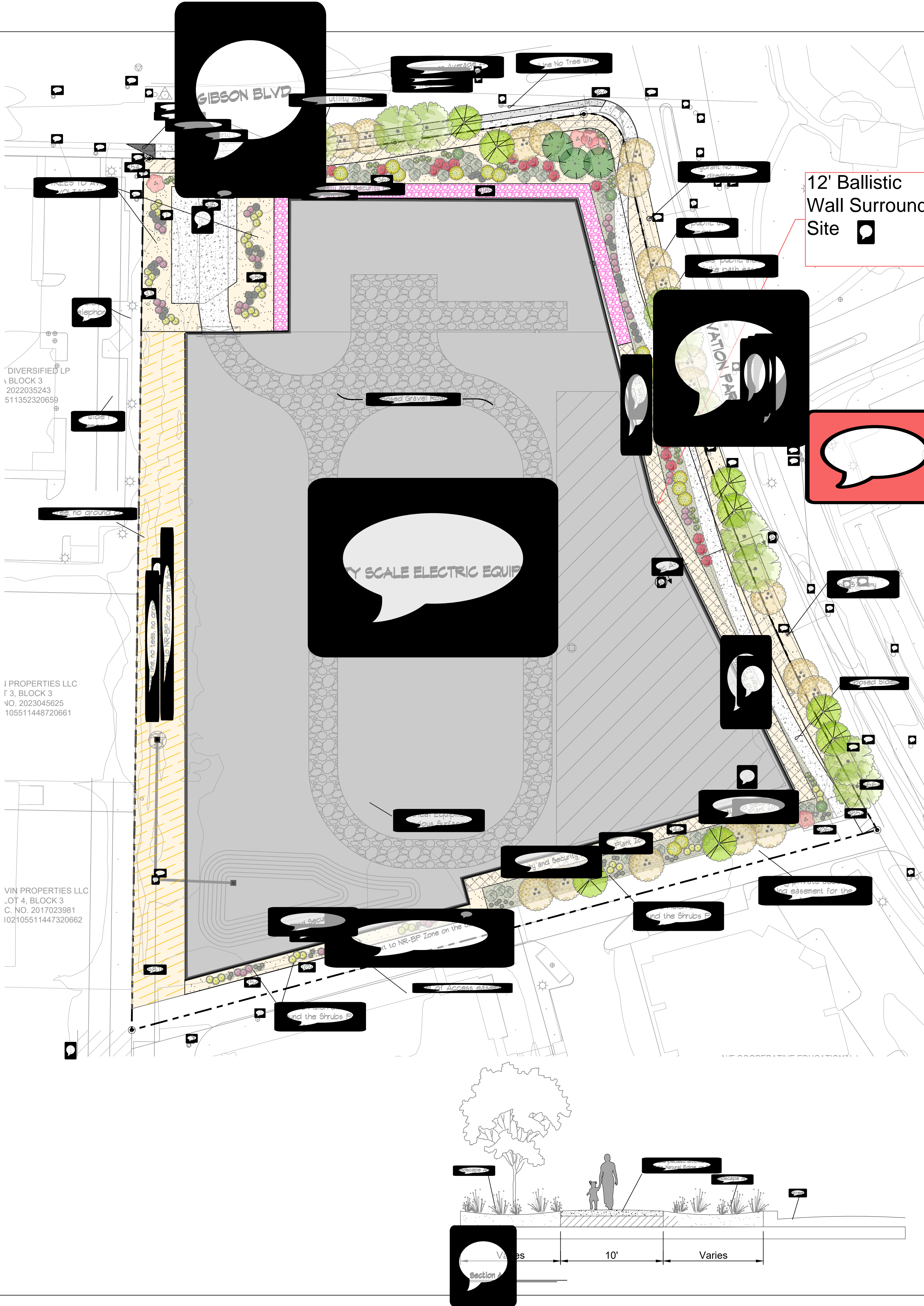
⁸ Such as: Coal unloading barge storage area, roadway not bordered by buildings.

⁹ Such as: Cinder dumps, fence, open yard.

¹⁰ Such as: Fence, open yard.

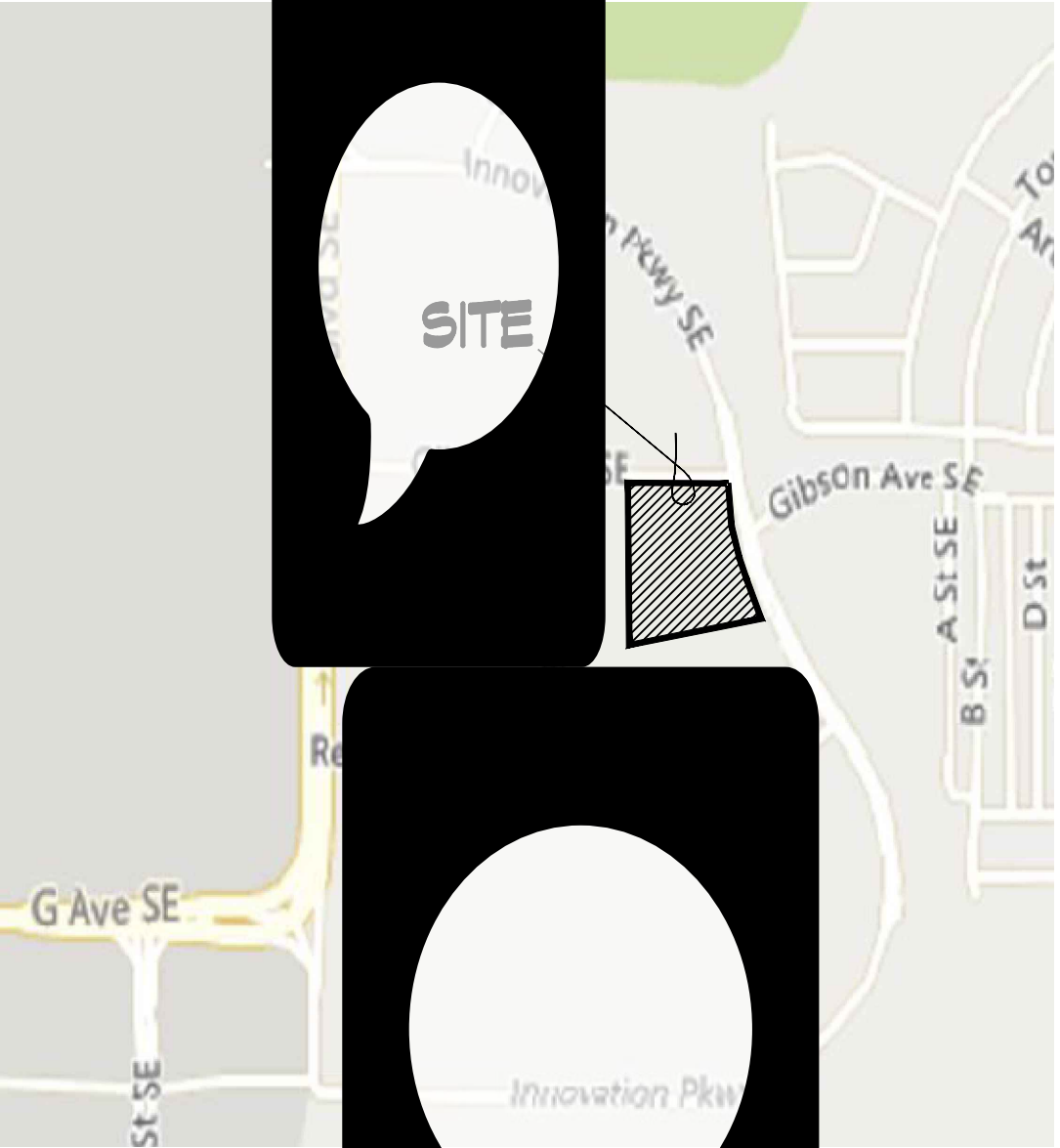
STANDARD PNM BALLISTIC WALL, 12' TALL,
PRECAST CONCRETE
Panel color: Iced Mocha SW9092
Column color: Jute Brown SW6096
Caulking is SIKA PL375
Wall Pattern : Ledgestone
Column Pattern: Ashlar



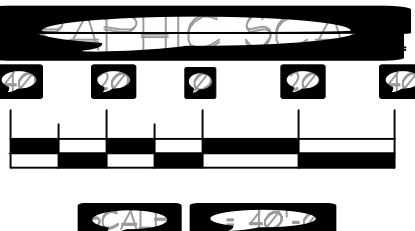
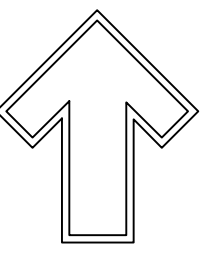
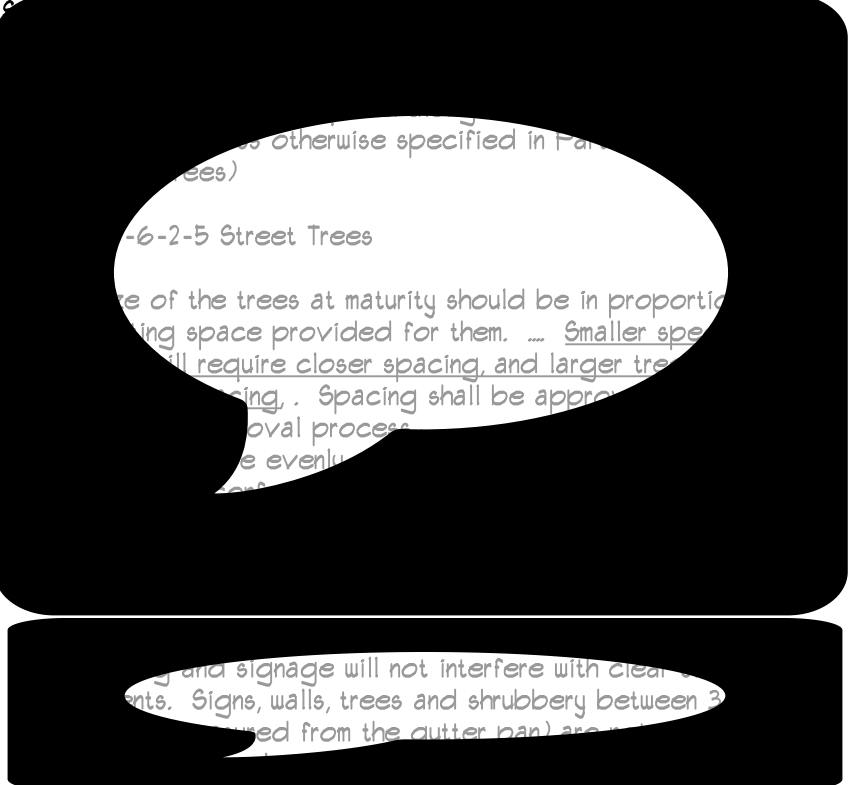
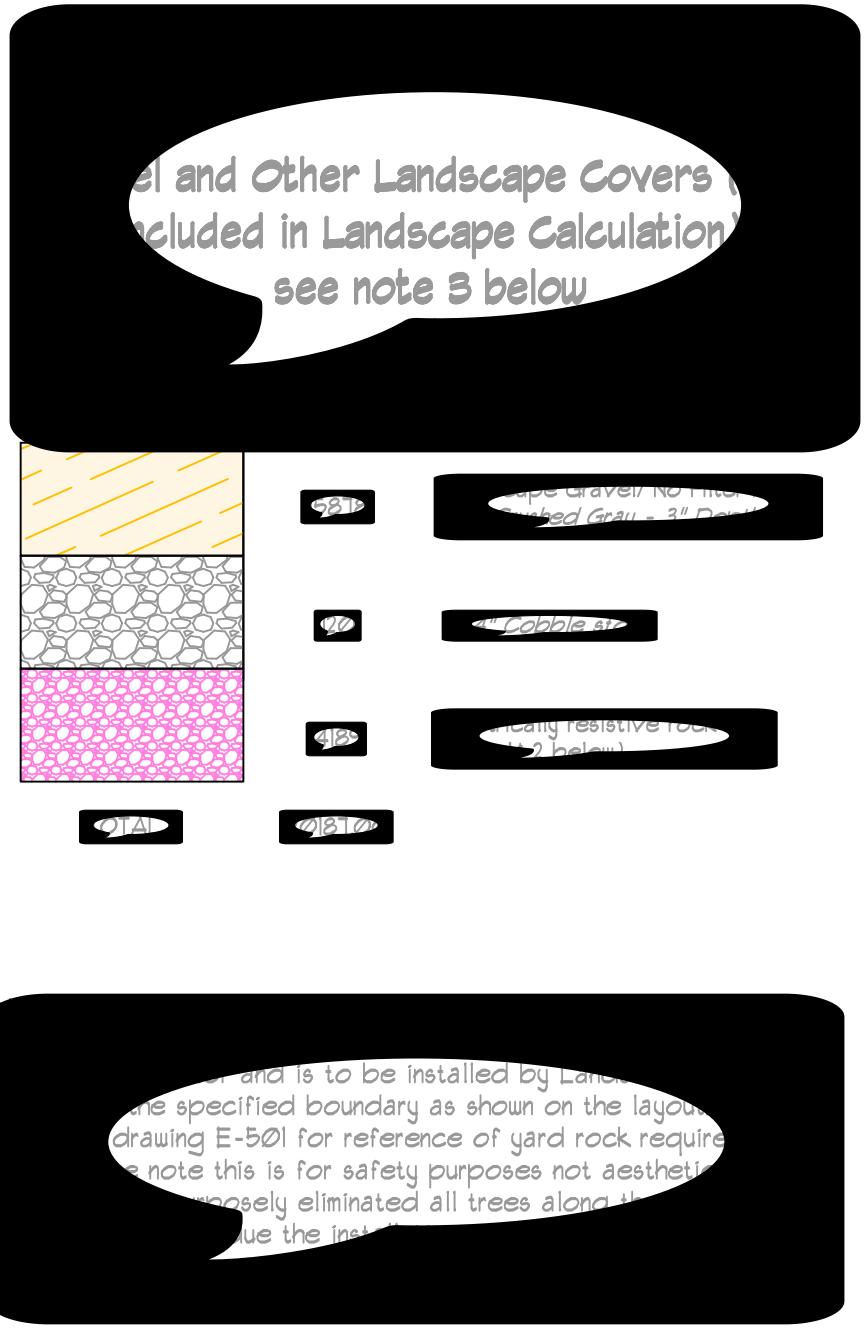


PLANT SCHEDULE

SYMBOL	QTY	SIZE	COMMON / BOTANICAL NAME	WATER USE			
TREES							
	8	2' Cal.	Gambel Oak <i>Quercus gambeli</i>	Low - Medium			
	18	2' Cal.	Golden Rain Tree <i>Koeleruteria paniculata</i>	Low - Medium			
	10	2' Cal.	Red Oak <i>Quercus gravesii</i>	Low - Medium			
	6	2' Cal.	Redbud <i>Cercis occidentalis</i> Pink pom pom's	Very low - Medium			
	3	4'-6'	Scotch Pine <i>Pinus sylvestris</i>	Medium			
SHRUBS							
	37	5 gal.	Apache Plume <i>Fallugia paradoxa</i>	Very low - Low			
	28	5 gal.	Blue Mist Bluebeard <i>Caryopteris x clandonensis</i> 'Blue Mist'	Low - Medium			
	37	5 gal.	Buffalo Juniper <i>Juniperus sabinia</i> 'Buffalo'	Low			
	44	5 gal.	Chamisa <i>Ericameria nauseosa</i> 'nauseosa'	Very low - Low			
	19	5 gal.	Gro-Low Fragrant Sumac <i>Rhus aromatica</i> 'Gro-Low'	Very low - Medium			
	39	5 gal.	Indian Hawthorn <i>Raphiolepis indica</i>	Low			
	4	5 gal.	Lilac <i>Syringa</i> x 'Balbelier'	Medium			
	42	5 gal.	Red Yucca <i>Hesperaloe parviflora</i>	Very low - Low			
	17	5 gal.	Yellow Bird of Paradise <i>Gesoplinia gillesii</i>	Low			

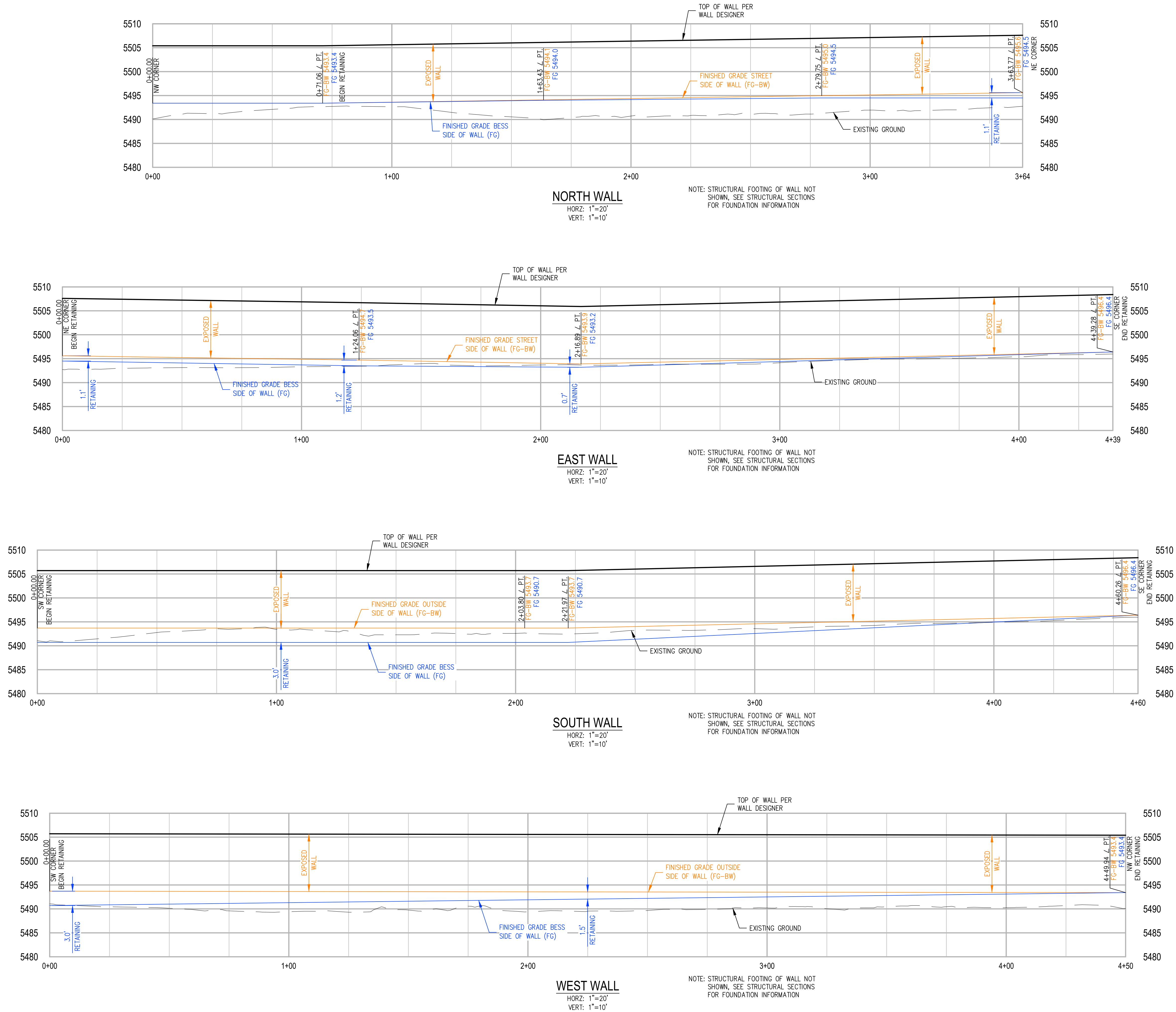


- LANDSCAPE NOTES:
- Landscape maintenance shall be the responsibility of the Property Owner.
 - The Property Owner shall maintain landscaping in a living, healthy, and attractive condition. Shrubs shall be left to grow in to natural form, and shall not be pruned, sheared or otherwise decimated. Trees shall not be pollarded. Only licensed, insured Certified Arborist shall be allowed to prune or shape trees.
 - It is the intent of this plan to comply with the City Of Albuquerque Water, IDO Ordinance.
 - It is the intent of this plan to comply with the City of Albuquerque Landscape Regulations Applicable to Apartments and Nonresidential Development, Revised 6/24.
 - Water management is the sole responsibility of the Property Owner.
 - Landscape Gravel over Filter Fabric to a minimum depth of 3" shall be placed in all landscape areas which are not designated to receive native seed, or other treatment.
 - Contractor shall supply to the owner samples of various gravel samples for approval prior to installing.
 - 25% of landscape area shall be covered with organic mulch per City of Albuquerque mandate. Mulch shall be a minimum of 4" deep in areas as shown on the plan. Landscape maintenance providers shall ensure that all organic mulch areas are maintained and freshened on a regular basis. Filter Fabric shall not be placed in areas to receive organic mulch.
 - Landscape shall be watered by a complete underground irrigation system operated by automatic timer.
 - Trees and shrubs shall be zoned separately.
 - Landscape shall be installed according to the approved plan. Installation shall be completed within 60 days of the related project's completion.
 - No substitutions or alterations to this plan without the express written permission of the Landscape Architect, and approval of the City of Albuquerque, approved permit set.





dk JOB NO: 24-1013



PUBLIC SERVICE COMPANY OF NEW MEXICO		NEW MEXICO	
SANDIA BESS SITE		NEW MEXICO	
WALL PROFILES		NEW MEXICO	
CONSTRUCTION DOCUMENTS		NEW MEXICO	
APN 1-021-055-162-512-2-06-67		NEW MEXICO	
CITY OF ALBUQUERQUE		NEW MEXICO	
STACEY GELLA		NEW MEXICO	
29498		NEW MEXICO	
PROFESSIONAL ENGINEER		NEW MEXICO	
DATE		DATE	
NO.		NO.	
ISSUED FOR CONSTRUCTION		ISSUED FOR CONSTRUCTION	
DESCRIPTION		DESCRIPTION	
dk		dk	
AGENCY		AGENCY	
ENGINEERING		ENGINEERING	
SURVEYING • PLANNING		SURVEYING • PLANNING	
PHONE (825) 522-8888		PHONE (825) 522-8888	
DAN@PSC.COM		DAN@PSC.COM	
181 SAN ANGELO DRIVE		181 SAN ANGELO DRIVE	
ALBUQUERQUE, NM 87102		ALBUQUERQUE, NM 87102	
DATE: 03/13/2025		DATE: 03/13/2025	
SCALE: 1"=40'		SCALE: 1"=40'	
HORZ: N/A		HORZ: N/A	
VERT: N/A		VERT: N/A	
DESIGNED BY: AMP		DESIGNED BY: AMP	
REVIEWED BY: SDG		REVIEWED BY: SDG	
C3.02		C3.02	
PAGE 9 OF 15		PAGE 9 OF 15	
3/7/2025		3/7/2025	

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APPROX FOR SITE PLAN - DET (ADMINISTRATIVE)

[illegible]





FINANCIAL GUARANTY AMOUNT

March 18, 2025

Type of Estimate: I.I.A. Procedure B Non Work Order with FG

Project Description:

Project ID #: 673782 PNM Sandia Energy Storage site

Requested By: Russell Brito

Approved Estimate Amount: \$ 105,938.08

Contingency Amount: 10.00% \$ 10,593.81

Subtotal: \$ 116,531.89

NMGRT: 7.625% \$ 8,885.56

Subtotal: \$ 125,417.44

Engineering Fee: 6.60% \$ 8,277.55

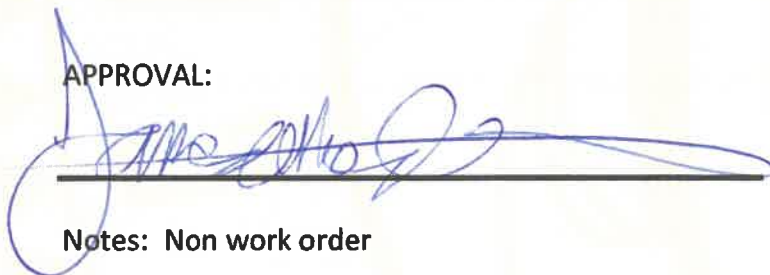
Testing Fee: 2.00% \$ 2,508.35

Subtotal: \$ 136,203.34

FINANCIAL GUARANTY RATE: 1.25

TOTAL FINANCIAL GUARANTY REQUIRED: \$ **170,254.19**

APPROVAL:



Notes: Non work order

DATE:

March 18, 2025

PNM - Sandia ESS

PROJECT NO. 673782 DATE 03/3/2025

SHEET 1 OF 1

[illegible]

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This column not needed

\$105,938.08

Employed as basis of financial guaranty, CPN 673782, Mar 1955

Amesbury

PNM - Sandia ESS

PROJECT NO. 673782 DATE 03/3/2025

SHEET 1 OF 1

[illegible]