

# ADDENDUM NO. 2

**July 25, 2022**

**LIBERTY AND WESTCHESTER INTERMEDIATE SCHOOLS -  
ATHLETIC SITE PROJECTS  
Chesterton, IN 46304**

**TO: ALL BIDDERS OF RECORD**

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated June 14, 2022 by Gibraltar Design. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 2-1 and attached Addendum No. 2 from Gibraltar Design dated July 22, 2022 and consisting of 3 pages, Specification Section 13 34 16 - Grandstands and Press Box, and 12 Drawings.

**A. SPECIFICATION SECTION 00 31 00 - INDIANA BID FORM**

**1. Replace:**

Specification Section 00 31 00 - Bid Form with the attached revised Bid Form.

**B. SPECIFICATION SECTION 01 23 00 - ALTERNATES**

**1. Add:**

- a. ALTERNATE NO. 13: Westchester IS, Provide concrete pad with outdoor electronic enclosure.
- b. ALTERNATE NO. 14: Liberty IS, Provide concrete pad with outdoor electronic enclosure.

CONTRACTOR'S BID FOR PUBLIC WORKS FORM NO. 96

Format (Revised 2013)  
(Amended for DSC)

**Liberty and Westchester Intermediate Schools –  
Athletic Site Projects**  
Duneland School Corporation  
Porter, IN

**PART I**

(To be completed for all bids. Please type or print)

Date (month, day, year): \_\_\_\_\_

BIDDER (Firm) \_\_\_\_\_

Address \_\_\_\_\_ P.O. Box \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Email Address: \_\_\_\_\_

Person to contact regarding this Bid \_\_\_\_\_

Pursuant to notices given, the undersigned offers to furnish labor and/or materials necessary to complete the public works project of:

\_\_\_\_\_  
Insert Category No. (s) and Name(s)

Of public works project, ***Liberty and Westchester Intermediate Schools – Athletic Site Projects***, in accordance with Plans and Specifications prepared by ***Gibraltar Design, 9102 N. Meridian St., Ste. #300, Indianapolis, IN 46260***, as follows:

BASE BID

For the sum of \_\_\_\_\_  
(Sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)  
(Sum in figures)

The undersigned acknowledges receipt of the following Addenda:

Receipt of Addenda No. (s) \_\_\_\_\_

**PROPOSAL TIME**

Bidder agrees that this Bid shall remain in force for a period of sixty (60) consecutive calendar days from the due date, and Bids may be accepted or rejected during this period. Bids not accepted within said sixty (60) consecutive calendar days shall be deemed rejected.

Attended pre-bid conference                      YES \_\_\_\_\_                      NO \_\_\_\_\_

Has visited the jobsite                              YES \_\_\_\_\_                      NO \_\_\_\_\_

The Bidder has reviewed the Guideline Schedule in Section 01 32 00 and the intent  
Of the schedule can be met.

YES \_\_\_\_\_                      NO \_\_\_\_\_

Bidder has included their Written Drug Testing Plan that covers all employees of the bidder who will perform work on the public work project and meets or exceeds the requirements set in IC 4-13-18-5 or IC 4-13-18-6.

YES \_\_\_\_\_                      NO \_\_\_\_\_

The Skillman Corporation's diversity initiative is to create a program to encourage, assist and measure the active participation of Minority- Owned, Women-Owned, Veteran – Owned and Disabled Individual-Owned Businesses. The Program is to ensure that MWVDBEs are provided full and equal opportunity to participate in all Skillman Corporation's Projects.

Bidder has included:	DBE: YES _____ %	NO _____
	MBE: YES _____ %	NO _____
	WBE: YES _____ %	NO _____
	VBE: YES _____ %	NO _____

The undersigned further agrees to furnish a bond or certified check with this Bid for an amount specified in the Notice to Bidders. If Alternate Bids apply, submit a proposal for each in accordance with the Plans and Specifications.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit bases, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin, or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS  
(if applicable)

I, the undersigned bidder, or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ALTERNATE BIDS

A blank entry or an entry of "No Bid", "N/A", or similar entry on any Alternate will cause the bid to be rejected as non-responsive only if that Alternate is selected. If no change in the bid amount is required, indicate "No Change".

**\*\*MARK "ADD" OR "DEDUCT" FOR EACH ALTERNATE\*\***

Alternate Bid No. 1 – WIS Grandstands & Press Box System

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)      ADD  
(sum in figures)      DEDUCT

Alternate Bid No. 2 – WIS Community Building

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)      ADD  
(sum in figures)      DEDUCT

Alternate Bid No. 3 – WIS Scoreboards and support structure - complete.

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)      ADD  
(sum in figures)      DEDUCT

Alternate Bid No. 4 – WIS Additional Lanes 9 & 10 of Asphalt/Base Stone, and Latex Track Surface - complete.

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 5 – WIS Sport/Field Lighting System - complete.

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 6 – LIS Grandstands & Press Box System

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 7 – LIS Community Building

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 8 – LIS Scoreboards and support structure - complete.

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 9 – LIS Additional Lanes 9 & 10 of Asphalt/Base Stone, and Latex Track Surface - complete.

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 10 – LIS Sport/Field Lighting System - complete.

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 11 – LIS New T-Ball Field system, 6' fencing, Backstop, concrete slab for benches- complete.

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 12 – LIS New 200' Softball Field system

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 13 – WIS Outdoor Electronic Enclosure

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

Alternate Bid No. 14 – LIS Outdoor Electronic Enclosure

Change the Base Bid the sum of \_\_\_\_\_  
(sum in words)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) ADD  
(sum in figures) DEDUCT

## PART II

(For projects of \$150,000 or more – IC 36-1-12-4)

These statements to be submitted under oath by each bidder with and as a part of his bid. (Attach additional pages for each section as needed.)

### SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you?\_\_\_\_\_If so, where and why?

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4. List references from private firms for which you have performed work.

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## SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed Work. (Examples could include a narrative of when you could begin, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)

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2. Please list the names and addresses of all subcontractors (i.e. persons or firms outside your own firm who have performed part of the work) that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

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3. If you intend to sublet any portion of the work, state the name and addresses of each subcontractor, equipment to be used by the subcontractor, and whether you will required a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

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4. What equipment do you have available to use for the proposed Project? Any equipment used by subcontractors may also be required to be listed by the governmental unit.

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5. Have you into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which corroborate the process listed.

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### **SECTION III CONTRACTOR'S FINANCIAL STATEMENT**

Attachment of Bidder's financial statement is mandatory. Any Bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the Contract must be specific enough in detail so that said governing body can make a proper determination of the Bidder's capability for completing the Project if awarded.

### **SECTION IV CONTRACTOR NON-COLLUSION AFFIDAVIT**

The undersigned Bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this Bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporations has, have, or will receive directly or indirectly, any rebate, fee, gift, commission, or thing of value on account of such contract.

## SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20

\_\_\_\_\_  
(Name of Organization)

By

\_\_\_\_\_  
(Title of Person Signing)

## ACKNOWLEDGEMENT

STATE OF \_\_\_\_\_ )  
 ) SS:  
COUNTY OF \_\_\_\_\_ )

Before me, a Notary Public, personally appeared the above-named

\_\_\_\_\_  
Swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_,  
\_\_\_\_\_  
(Title)

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

County of Residence: \_\_\_\_\_

END OF SECTION 00 31 00

## ADDENDUM TWO

**Addendum Two (AD.02)** to the drawings and specifications prepared by Gibraltar Design for **Liberty and Westchester Intermediate Schools – Athletic Site Projects** for Duneland School Corporation, Chesterton, Indiana.

All Contractors bidding on this project shall read all of the items covered below and shall comply with all of the requirements as set forth, including any necessary refinements or additions generated by Addendum One and this Addendum and required by the intent of the original contract documents. All Contractors shall acknowledge on their bid form that they have received this Addendum and include the appropriate content of same within their bid proposal.

## SPECIFICATIONS

### 1. Specification Section 13 34 16

#### Grandstands and Press Box

- A. Refer to the re-issued Specifications Section 13 34 16 in its entirety, included in this addendum.
- B. Note clarification of acceptable manufacturers, specific construction type, and design of stands and press box.

### 2. Specification Section 27 11 16

#### Communications Racks Frames and Enclosures

- A. Add paragraph "2.2.D. "Outdoor Cabinet" to read as follows:

- D. Outdoor Infrastructure Cabinet (I-Hub)

- 1. 32" Tall, 28" Wide, 22" Deep with 16 RU rack space
    - 2. Pad Mounted
      - a. 6" Ground Mounting Flange AM-62418GM
    - 3. 19" adjustable rails
    - 4. Powder Coated .090" Aluminum (Telcordia standards)
    - 5. All Stainless Steel Hardware
    - 6. 3 point Stainless Steel door latch (pad lockable)
    - 7. Required Accessories
      - a. 2nd Set of rack rails AM-322418-RR
      - b. 300 watt Heater with Thermostat AM-300W-115HTR
      - c. Copper Ground Bar AM-2x6-GB
      - d. Fan with thermostat AM-2418-FP-115
      - e. Insulation Set AM-322822F/F-INS
      - f. Door Alarm AM-DLRM-1
      - g. Latch Tool AM-CWTOOL
    - 8. Standard of Quality
      - a. American Products AM-322822-16RU-F-1DCE

## DRAWINGS

### 3. Sheet G-101

- A. Refer to revised, full-size drawing included in this Addendum, for the following revisions:
  - 1. Add Sheets C-2.0A, C-2.1A, and E-005 to the Sheet Index

### 4. Sheet C-2.0A

- A. Add sheet C-2.0A in this Addendum for notes on Irrigation.
  - 1. Contractor is to provide a complete and operational irrigation system for the natural turf field and miscellaneous grass areas indicated on the site plan included with this addendum. In Mechanical Room E-103, Contractor is to locate the water connection, pump sized as required for size of irrigation system, Irrigation Control Panel/Module, and utilize power connection to the closest electrical panel – install all wiring per Electrical Specifications. Contractor is to install the water connection underground from the Mechanical Room to the location of the Concession Building Mechanical Room, if that Alternate is not accepted, then the contractor is to utilize an inground control box to extend the system to the required locations. Contractor is to provide a fully designed system by an Irrigation company that has been operational for a minimum of five years and installed systems of comparable size as indicated for this project.

### 5. Sheet C-2.1A

- A. Add sheet C-2.0A in this Addendum for notes on Irrigation.
  - 1. Contractor is to provide a complete and operational irrigation system for the natural turf field and miscellaneous grass areas indicated on the site plan included with this addendum. In Custodial Room A-106, Contractor is to locate the water connection, pump sized as required for size of irrigation system, Irrigation Control Panel/Module, and utilize power connection to the closest electrical panel – install all wiring per Electrical Specifications. Contractor is to install the water connection underground from the Custodial Room to the location of the Concession Building Mechanical Room, if that Alternate is not accepted, then the contractor is to utilize an inground control box to extend the system to the required locations. Contractor is to provide a fully designed system by an Irrigation company that has been operational for a minimum of five years and installed systems of comparable size as indicated for this project.

### 6. Sheet E-003

- A. Refer to revised, full-size drawing included in this Addendum, for the following revisions:
  - 1. Delete one-line diagram.
  - 2. Revise panel HP-1 as indicated.

### 7. Sheet E-004

- A. Refer to revised, full-size drawing included in this Addendum, for the following revisions:
  - 1. Delete one-line diagram.
  - 2. Revise panel HP-1 as indicated.

### 8. Sheet E-005

- A. Add sheet E-005 in this Addendum
  - 1. Several scenarios depicted for separate alternate bids. Contractor shall adjust as

necessary based on alternate bids selected.

**9. Sheet ES-101**

- A. Refer to revised, full-size drawing included in this Addendum, for the following revisions:
  - 1. Clarify plan notes identifying Alternate Bids.
  - 2. Add low voltage pedestal per low voltage drawings.

**10. Sheet ES-102**

- A. Refer to revised, full-size drawing included in this Addendum, for the following revisions:
  - 1. Clarify plan notes identifying Alternate Bids.
  - 2. Add low voltage pedestal per low voltage drawings.

**11. Sheet TS-100**

- A. Replace Sheet TS-100 with full-size drawing included in this addendum.
  - 1. Added notes to clarify scope of work breakdown between base bid and alternates.

**12. Sheet TS-110**

- A. Replace Sheet TS-110 with full-size drawing included in this addendum.
  - 1. Added notes to clarify scope of work breakdown between base bid and alternates.

**13. Sheet TS-501**

- A. Replace Sheet TS-501 with full-size drawing included in this addendum.
  - 1. Added details for Outdoor Telecom Enclosure that is part of Alternates 13 and 14.

**14. Sheet T-601**

- A. Replace Sheet TS-601 with full-size drawing included in this addendum.
  - 1. Added notes to clarify scope of work breakdown between base bid and alternates.

Pages 1-3, inclusive, Specification Section 13 34 16, and Twelve (12) Full-Size Drawings, constitute the total makeup of **Addendum Two**.



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# SECTION 13 34 16

## GRANDSTANDS AND PRESS BOX

### 1 General

#### 1.1 Design Criteria

- A. The design shall be in accordance with the best engineering principles and shop practice. The stand shall be designed to support in addition to its own weight:
  - 1. A uniformly distributed live load of not less than 100 pounds per square foot of gross horizontal projection of the Grandstand and Press Box.
  - 2. Grandstand and Press Box shall be designed to withstand, with or without live loads, the horizontal and uplift pressures due to the wind.
  - 3. A horizontal swaying force applied to the seats, in a direction parallel to the length of seats, of 24 pounds per foot.
  - 4. A horizontal swaying force applied to the seats, in a direction perpendicular to the length of seats, of 10 pounds per foot.
  - 5. All seat and footboard members shall be designed for live loads of not less than 120 pounds per linear foot.
- B. The Grandstand and Press Box shall be designed and assembled so that the maximum expansion, contraction, settlement, or misalignment likely to occur will not cause stresses in excess of those permissible.
- C. Guard rails shall be capable of sustaining a vertical load of 100 pounds per linear foot and a horizontal thrust of 50 pounds per foot acting outwardly at the top of the rail.
- D. Seismic Performance: Design and engineer Grandstand and Press Box systems capable of withstanding the effects of earthquake motions determined according to the building code in effect for this Project or ASC 7, "Minimum Design Loads for Buildings and Other Structures": Section 9, "Earthquake Loads," whichever is more stringent.
- E. Owner verifies that the applicable building code is the Indiana Building Code, 2012 edition.

#### 1.2 Related Sections

- A. Section 03 30 00 – Concrete.

### 1.3 Quality Assurance

- A. Seating shall be designed to meet or exceed all required federal, state, and local building and fire codes.
- B. Manufacturer: Company specializing in spectator seating with a minimum of 10 years experience in manufacturing Grandstand and Press Box. All required structural steel shall be manufactured by a steel fabricator who has the personnel, organization, experience, procedures, knowledge, equipment, capability, and commitment to produce fabricated structural steel of required quality for Conventional and Complex Steel Structures and shall be certified by the American Institute of Steel Construction, Inc. (AISC) or follow a quality assurance program certified by the AISC.
- C. Engineer Qualifications: The Grandstand and Press Box shall be designed under the supervision of, and approved by, a professional engineer registered in the state of Indiana and all submittal drawings shall bear his stamp.

## 2 Products

### 2.1 Grandstands and Press Box - Acceptable Manufacturer

- A. Basis of Design: Southern Bleacher Company, Graham, Texas.
- B. Acceptable Manufacturers:
  - 1. Dant-Clayton Corporation, Louisville, Kentucky.
  - 2. Outdoor Aluminum, Inc., Geneva, Alabama.
  - 3. SturdiSteel, Waco, Texas.
  - 4. All Star Bleachers, Inc., Lakeland, Florida.

### 2.2 Technical Design (General Guidelines)

Description	Base Bid
Number of Rows	10
Length	94'-0" +/-
Front Walk Elevation	3'-6"
Type of Understructure:	
Elevated Galvanized Steel Angle Framing	X
Foot Brackets, Crossbracing, Brackets, Runners and Rail Posts – Aluminum Clear Anodized or Mill Finish – per manufacturers standards.	X
Riser Height	13"
Riser Finish:	
Clear Anodized	X
Tread Depth	26"
Read Depth last Row	30"
Deck Type:	
Aluminum Interlocking	X

Description	Base Bid
Seat Type:	
Aluminum 2" x 12" with Radius Comfort Edge	X
Bench Seat Finish:	
Clear Anodized	X
Seat Height above Tread	17"
Aluminum Back Plank	X
Aluminum Back Plank Finish:	
Clear Anodized	X
Type of Guardrail:	
Picket, Clear Anodized Aluminum	X
Type of Handrail:	
Clear Anodized Aluminum	X
Cross Aisle:	
Front	X
Wheel Chair Accessible – YES, with all compliant railing and clearances.	X
Press Box – Dimensions	9'-0" x 30'-0"
Steel Understructure	X
Steel or Wood Construction	X
Camera Deck with railing	X
<b>Total Net Seats</b>	<b>500</b>

## 2.3 Materials and Finishes

### A. Framework:

- Galvanized Steel: Structural fabrication with ASTM-A529 steel. Shop connections are seal welded. After fabrication, all steel is hot-dipped galvanized to ASTM-A123 specification.

### B. Extruded Aluminum:

- Seat Planks, Riser Planks, Step Risers: Minimum extruded aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II, and a wall thickness of .094". All bolts 1/2 inch diameter and smaller shall be ASTM A-307. All bolts 5/8" and above shall be ASTM A-325.
- Tread Planks: Minimum extruded aluminum alloy 6063-T6, mill finish and wall thickness of .094".

### C. Accessories:

- Channel End Caps: Aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II.
- Hardware:
  - Bolts, Nuts: Galvanized or plated.

- b. Hold-Down Clip Assembly: Aluminum alloy 6061-T6.
- 3. Guardrailing: Anodized aluminum rail 1-5/8" O.D. with galvanized chain link.
- 4. Crossbraces: Extruded aluminum angle alloy 6061-T6, mill finish.
- 5. Aisle Nose: Aluminum alloy, 6063-T6, black powder-coat finish.
- D. Provide cross bracing the length of the Grandstand as required for design compliance.
- E. Entry stairs shall be firmly anchored to poured concrete bases as shown on drawings, if not shown, provide minimum as width of stair, 2'-0" under stair edge and 5'-0" out from first stair riser.
  - 1. Stair Rise: 7 inches maximum with vertical aluminum closures.
  - 2. Stair Tread Depth: 11 inches minimum.
  - 3. Guardrails on stair shall be 42 inches above leading edge of step.
  - 4. Stairs shall have offset handrail extensions on each side of stair. The handgrip portion of handrails shall not be less than 1-1/2 inches or more than 2 inches in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. The top of handrails and handrail extensions shall be placed not less than 34 inches or more than 38 inches above the leading edge of the step. Handrails shall be continuous the full length of the ramp and shall extend in the direction of the ramp not less than 1'-11" beyond the end of the stair tread. Ends shall be returned or shall terminate at posts or safety terminals.
- F. Aisles:
  - 1. Aisles with seating on both sides to have 34 inch high pre-fabricated aluminum handrail with intermediate rail at approximately 22 inches above tread.
  - 2. Pre-fabricated anodized aluminum handrails with continuous rounded ends shall be discontinuous to allow access to seating through a space 22 inches, minimum, to 36 inches, maximum. External connectors, elbows, and swivels shall not be used to make any directional changes on mid-aisle handrails.
  - 3. Width of aisle shall be 54 inches minimum or wider if determined during code review.
  - 4. Handrails shall connect to decking/riser surface without penetration of the deck system.

G. Aluminum:

1. Extruded Tread Planks, Risers, Seats, Brackets, and Rails: ASTM-B221 extruded alloy 6063-T-6.
2. Aluminum Finishes:
  - a. Finish for Tread Planks, Risers, and Cast End Caps: Mill Finish.
  - b. Finish for Seats, Brackets, Rails, Back Rest, and Extruded End Caps: Clear anodized 204R1 AA, M10C22A31, Class II.
  - c. All decking intended for use as a walking or standing surface, excluding seat planks, shall be slip resistant in accordance with requirements of the Americans with Disabilities Act (ADA).

H. Guardrail/Handrail Systems:

1. Guardrail/handrail shall be of anodized aluminum extruded pipe 6061-T6 alloy, 1-5/8 inches OD.
2. Guardrail panel sections are a combination of 1-5/8 inches OD top and bottom rails welded together with 1/2 inch OD tubular vertical picket style steel sections supplied where needed for front, sides, rear, portals, ramps, and stairs with a maximum opening of less than 4 inches, anodized after fabrication.
3. All handrail connections shall be welded or constructed with Hollaender high tensile aluminum/magnesium alloy slip-on/bolt-on pipe fittings conforming to Federal Specification QQ-A-371 For QQ-A-601F; alloy B535.2 as regular manufactured by The Hollaender Manufacturing Company, 10285 Wayne Avenue, Box 156399, Cincinnati, Ohio 45215-6399.

I. Ramps:

1. Maximum Slope: 1 in 12.
2. Guardrails shall be 42 inches above ramp design same as Grandstand.
3. Handrail: Ramps shall have handrail extensions. The handgrip portion of handrails shall not be less than 1-1/2 inches or more than 2 inches in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. The top of handrails and handrail extensions shall be placed not less than 34 inches or more than 38 inches above the ramp surface. Handrails shall be continuous the full length of the ramp and shall extend in the direction of the ramp not less than 12 inches beyond the end of the ramp. Ends shall be returned or shall terminate the newel posts or safety terminals.

J. Handicap Provision:

1. Quantity of Wheelchair Spaces: As shown on Drawings and/or as required by code.
2. Riser area adjacent to wheelchair spaces shall have intermediate construction so 4 inch sphere cannot pass through opening.
3. Guardrail: Area directly behind handicap areas shall have two line anodized aluminum rail attached to the surface of the decking/riser members. These rails shall be pre-fabricated to match the appearance of the mid-aisle handrails.

K. Hardware:

1. Bolts, Nuts: Hot-dipped galvanized.
2. Tie-down Clip Assembly: Aluminum alloy 6061-T6.
3. Structural Hardware: Equal to or greater than hot-dipped galvanized ASTM-A307. No connections utilizing high strength bolts are classed as slip critical.

## 2.4 Press Box

- A. The intent of the Project Design is for the Contractor to provide a prefabricated modular type Press Box of the same configuration and design shown on the attached Drawings, however a voluntary alternate for the option of providing a site built Press Box in accordance with the Drawings and Specifications will be welcomed for review and consideration.

1. All work shall be provided by and shall be the responsibility of this Contractor.
2. Dimensions: Per Plan Drawings.
3. Frame: Manufacturers standard steel tube frame, minimum 3-inch x 3-inch x 0.120-inch ASTM A500 Grade B. With seams MIG welded. All exposed seams shall be ground flat and smooth before painting. Fabricator to provide all supports and bracing as required to maintain structural integrity for the live and dead loads, per State of Indiana codes. Provide engineered stamped drawings accordingly.
4. Base/Floor: Manufacturers standard flooring, to be minimum constructed on a minimum 4-inch galvanized steel tube frame with a 2-inch floor assembly of galvanized steel, laminated plywood, and aluminum tread plate floor.
5. Wall Panels: Exterior shall be minimum 3-inch, foam insulated, with 14-gauge, galvanized steel, painted on outside face and 16-gauge interior face. Interior partitions can be of same construction or similar to meet manufacturers standard system – however intent is to provide appropriate sound isolation between spaces.

6. Ceiling: Ceiling is to be manufacturers standard foam core panel system providing flat painted finish on interior. Minimum gauge of metal is 24-gauge.
7. Roof: Manufacturers standard insulated roof panels for observation deck, covered with an EPDM system for weather-tight system, complete with drainage direction to exterior side of Press Box, gutters, and downspouts. Provide walking pads on EPDM over entire roof area for owner use in filming and observation from roof location.
  - a. Roof Hatch: Manufacturers standard roof hatch for Press Box. Provide latch that can be locked with a pad lock from interior.
  - b. Steel Roof Ladder: From Press Box to Roof, provide manufacturers standard fully fixed steel rung ladder to roof access hatch. Provide safety extension bar at top of ladder.
8. Finish: Exterior panels to have a smooth, flat white finish, of epoxy/urethane prime to paint system.
9. Windows: Fixed and slider windows as indicated on drawings, 1" insulated grey, low E, tempered glazing, set in manufacturers standard aluminum frame system. Color is to be white to match wall panels, and all operable windows are to have locking devices.
10. Doors: Steel commercial grade insulated with three stainless steel ballbearing hinges, Panic Device hardware, lock cylinder matching Ben Davis locks (contractor to verify), overhead stops, aluminum thresholds, weather or sound seal gaskets, and drip covers at head and sill of exterior doors.
11. Aluminum Railing: Manufacturers standard 42-inch high aluminum picket railing system anchored securely to steel frame of Press Box, comply with all Sate of Indiana loading codes for railings. All connections are to be weather tight and sealed at roof attachment point. Aluminum Finish – Powder coated White. (Provide alternate pricing for a galvanized picket railing in lieu of the aluminum).
12. All Electrical Work is by This Contractor: (to be wired according to NEC Standards)
  - a. Provide electrical panel as required for quad receptacles every 3-feet under-counters and duplex receptacles on back and side walls, every 8-feet. Service is to match existing 100 Amp, Single phase, 208V Panel. All wiring to be inside wall panels unless approved otherwise.

- b. Provide 4-foot long lighting fixtures in at standard spacing, approximately 4-foot apart, 10-fixtures total. Fixtures to be LED style with wrap-around lense covers. Provide light switches at each door opening, in conjunction with ceiling mounted occupamncy sensors for controlling each spaces lighting accordingly. Provide for emergency lighting as required by code, either in lighting fixtures or as independent wall packs. Also, provide exit signs per code.
  - c. Provide all data receptacles adjacent to power receptacles under each counter and one data receptacle on each of the other walls. Provide conduit raceways for the voice/data/video cabling necessary to complete the installation – back to the Data Panel located on the back wall of the Press Box adjacent to the Power Panel. Provide pull strings in the conduit for Owner Technology Contractor. Provide for data conduit as required to bottom of Press Box.
  - d. Fire Alarm: Provide one alarm, simplex Grinnell unit or equal for each room, mounted per code. Provide support system as required.
13. HVAC: Thru-wall 11,600 Btuh cool A/C Units with 11,600 Btuh Electric Heat: 208 volts, single phase. Provide minimum of the four units undicated for each of the heating and cooling systems. Power to each is to be inside wall panels unless approved otherwise.
14. Counters: Plastic Laminate counters, 18" deep, Owner to select laminate finish. Typical mounting height is 30-inches. Provide all support brackets or vertical plastic laminated legs as required to support counters sufficiently.
15. Exit Signage: Provide above each of the exit doors for each space.

### **3 Execution**

#### **3.1 Installation**

- A. Installation: Shall be handled directly by the manufacturer or by a factory certified installation subcontractor.
- B. Erect per plans, shop drawings, and specifications.
- C. Securely anchor the stands to the concrete slabs.
- D. After installation, Grandstand and Press Box shall be checked for proper alignment and function by certified professional engineer. Same engineer must provide Owner with an occupancy safety certificate stating Grandstand and Press Box are ready to be occupied by the public.

#### **3.2 Cleaning**

- A. Clean all surfaces according to manufacturer's recommendations.
- B. Remove all packaging and construction debris.

**3.3 Maintenance**

- A. Provide owner with the suggested inspection and follow-on service check list which will insure maximum service life of the seating unit.

**3.4 On Grade Concrete (Refer to Concrete Specification)**

- A. Provide on grade slabs as required to connect to sidewalks as indicated on the Civil Drawings.
- B. Provide all required excavation and backfill required for the installation of concrete slabs and foundations as indicated on the structural drawings.

**3.5 Concrete Foundations (Refer to Concrete Specification)**

- A. Provide reinforced, poured-in-place concrete spread footings as shown on the Drawings and as required by the structural design and layout of the Grandstands.
- B. Perform all required excavation and backfill required for the installation of concrete foundations.
- C. Owner verifies that the soil bearing capacity is minimum 2000 P.S.F.

**END OF SECTION**



# LIBERTY & WESTCHESTER INTERMEDIATE SCHOOLS - ATHLETIC SITE PROJECTS

DUNELAND SCHOOL CORPORATION  
CHESTERTON, INDIANA

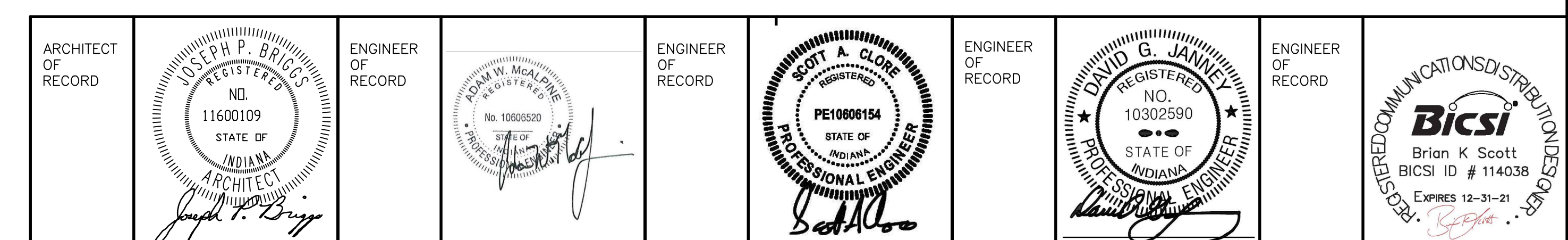


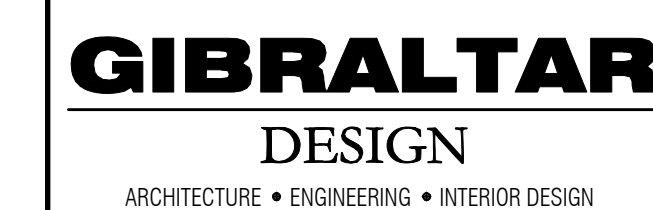
A-101 LIS - COMMUNITY BUILDING ARCHITECTURAL PLAN, ELEVATIONS, AND SCHEDULE  
A-102 WIS - COMMUNITY BUILDING ARCHITECTURAL PLAN, ELEVATIONS, AND SCHEDULE  
  
A-401 LIS - WALL SECTIONS & CASEWORK SCHEDULE AND ELEVATIONS  
A-402 WIS - WALL SECTIONS & CASEWORK SCHEDULE AND ELEVATIONS

TELECOMMUNICATIONS

T-401	TELECOMMUNICATIONS RACK DETAILS
TS-501	TELECOMMUNICATIONS SITE PLAN DETAILS
T-501	TELECOMMUNICATIONS DETAILS
T-511	TELECOMMUNICATIONS DETAILS
T-601	TELECOMMUNICATIONS DIAGRAMS
T-701	TELECOMMUNICATIONS PATHWAY AND ROUGH-IN
T-741	AUDIO VISUAL ROUGH-IN DETAILS
T-771	SECURITY ROUGH-IN DETAILS

GIBRALTAR DESIGN  
SHEET  
**G-101**





PROJECT

**LIBERTY AND  
WESTCHESTER  
INTERMEDIATE  
SCHOOLS-  
ATHLETIC SITE  
PROJECTS**

DUNELAND SCHOOL CORPORATION  
CHESTERTON, INDIANA



GIBRALTAR DESIGN

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PROJECT	21-139 & 21-141
DATE	06/22/22
COORDINATED BY	AM
DRAWN BY	EM
CHECKED BY	AM

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REVISIONS		
MARK	DATE	ISSUED FOR
AD.2	07/22/22	ADDENDUM NO. 2

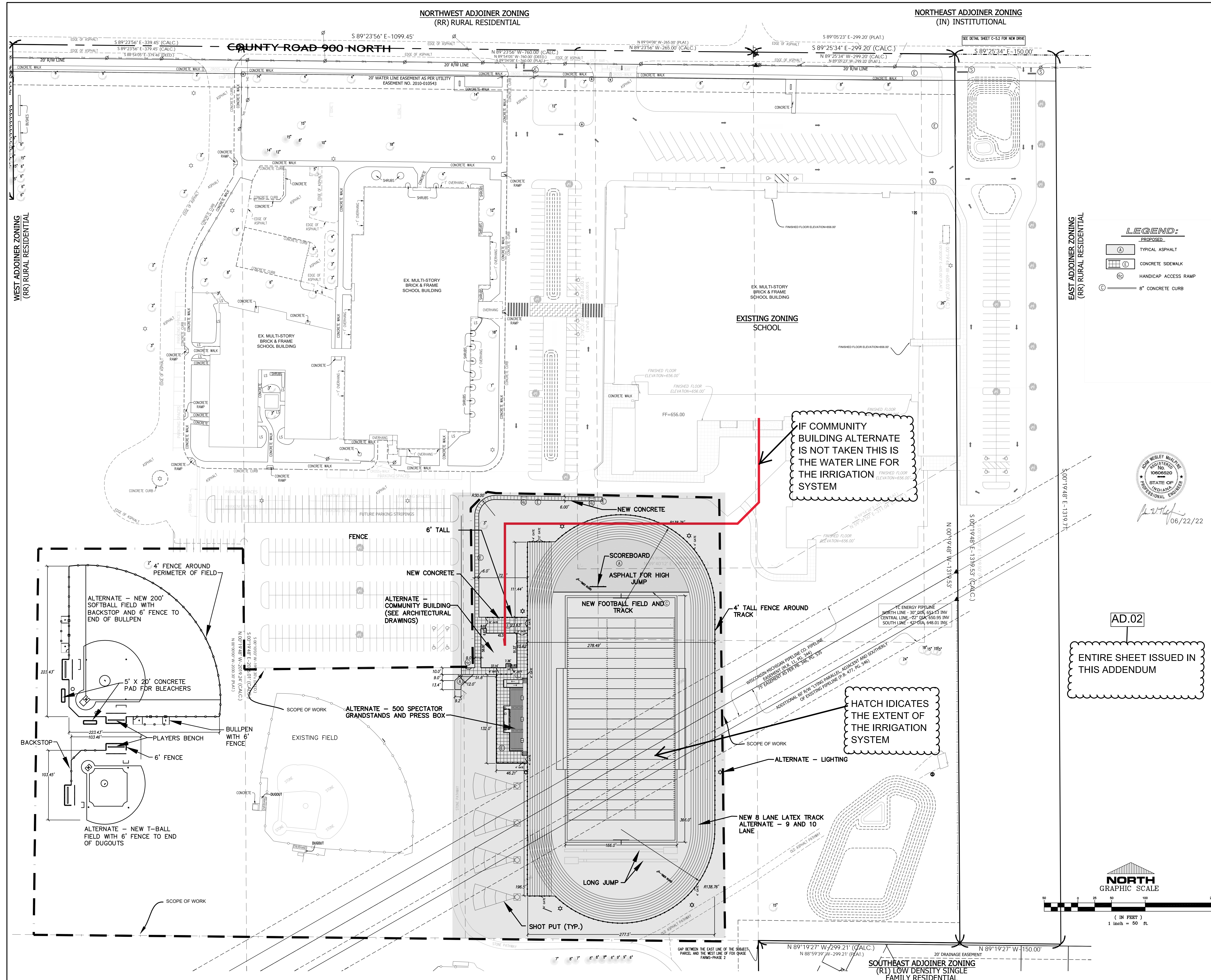

# DRAWING

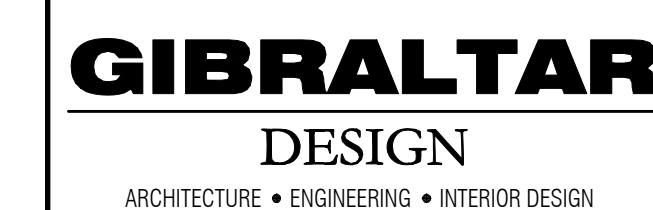
## IRRIGATION SITE PLAN

### PROJECT

#### LIBERTY AND WESTCHESTER INTERMEDIATE SCHOOLS- ATHLETIC SITE PROJECTS

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PROJECT

**LIBERTY &  
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PROJECTS**

**21-139 & 21-141**

**DUNELAND SCHOOL CORPORATION  
CHESTERSTON, INDIANA**



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PROJECT  
21-139  
21-141  
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AWM  
DRAWN BY  
BPL  
CHECKED BY  
AWM

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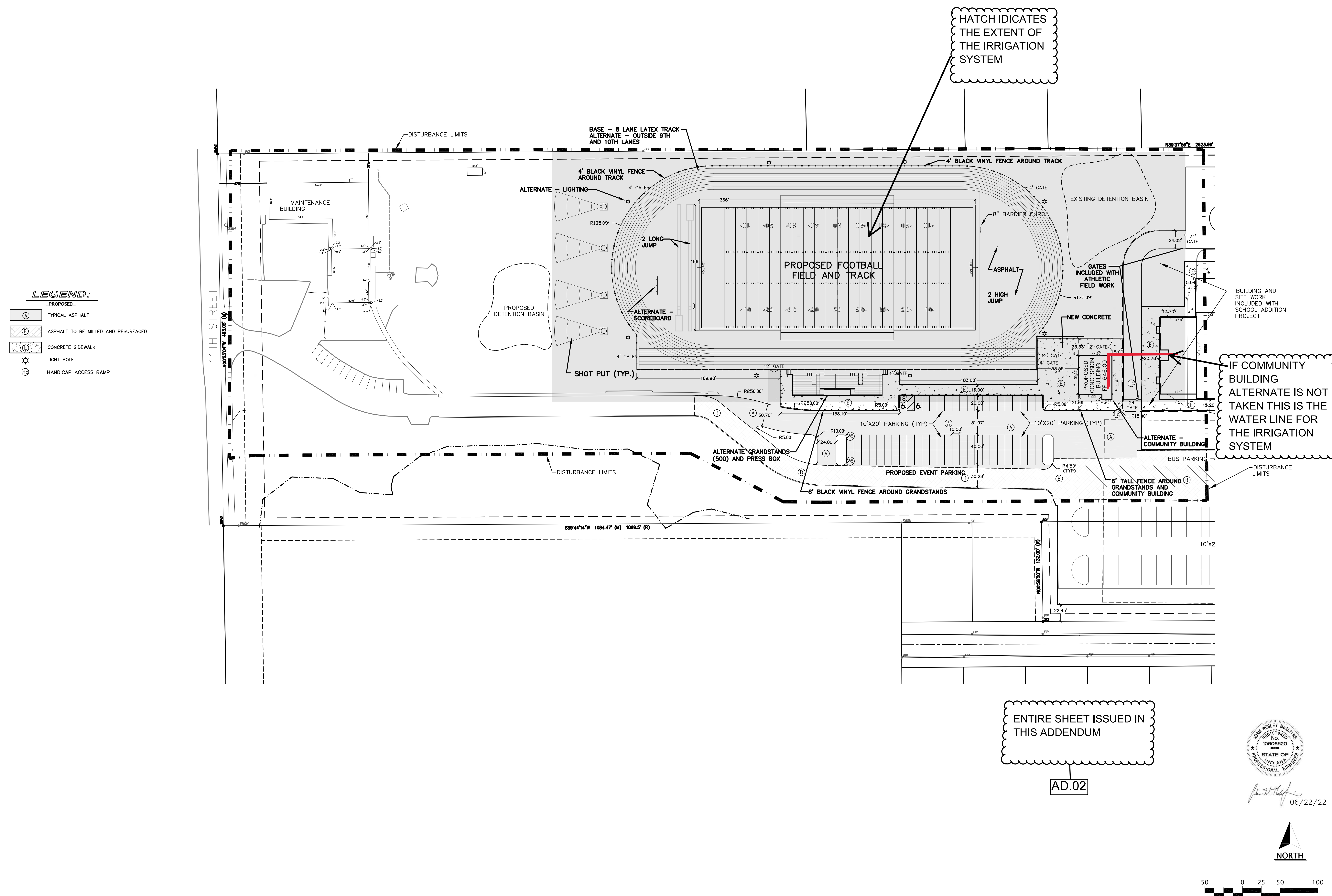
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AD.02	07/22/22	ADDENDUM NO. 2

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DRAWING  
IRRIGATION SITE PLAN

PROJECT  
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PROJECTS**

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CHESTERTON, INDIANA

## MECHANICAL EQUIPMENT CONNECTION SCHEDULE

TAG	DESCRIPTION	LOAD				MOCP	VOLT	PHASE	PANEL	CKT. NO.	RUBED SWITCH C/B	FEEDER		STARTER BY:		LOCATION	REMARKS
		WATTS	HP	MCA	FLA							CABLE	C	MC	EC		
TEF-1	ROOF MOUNTED TOILET EXHAUST FAN	1656	3/4	-	-	-	120	1	LP-1	44	25A/1P	2 * 12 # 1 # 12 GRD.	3/4"	-	X	-	-
GEF-1	ROOF MOUNTED GENERAL EXHAUST FAN	528	1/6	-	-	-	120	1	LP-1	38	20A/1P	2 * 12 # 1 * 12 GRD.	3/4"	-	X	-	-
GEF-2	ROOF MOUNTED GENERAL EXHAUST FAN	1656	3/4	-	-	-	120	1	LP-1	40	25A/1P	2 * 12 # 1 # 12 GRD.	3/4"	-	X	-	-
GEF-3	ROOF MOUNTED GENERAL EXHAUST FAN	696	1/4	-	-	-	120	1	LP-1	43	20A/1P	2 * 12 # 1 # 12 GRD.	3/4"	-	X	-	-
PTAC-1	PACKAGED TERMINAL AIR CONDITIONING UNIT w/ ELECTRIC HEAT	4264	-	-	-	20.5	30	208	1	LP-2	2-4	30A/2P	3 * 12 # 1 # 12 GRD.	3/4"	X	-	-

## ELECTRICAL EQUIPMENT CONNECTION SCHEDULE

TAG	DESCRIPTION	LOAD				MOCP	VOLT	PHASE	PANEL	CKT. NO.	RUBED SWITCH C/B	FEEDER		STARTER BY:		LOCATION	REMARKS
		WATTS	HP	MCA	FLA							CABLE	C	MC	EC		
ECH-1	WALL MOUNTED ELECTRIC CABINET HEATER	800	-	-	-	12.5	-	120	1	LP-1	10	20A/1P	2 * 12 # 1 # 12 GRD.	1/2"	-	X	-
ECH-2	CEILING MOUNTED ELECTRIC CABINET HEATER	5000	-	-	-	24	-	208	1	LP-1	VARIES	30A/2P	3 * 10 # 1 * 10 GRD.	1/2"	-	X	-
EUH-1	ELECTRIC UNIT HEATER	5000	-	-	-	24	-	208	1	LP-1	VARIES	30A/2P	3 * 10 # 1 * 10 GRD.	1/2"	-	X	-
EUH-2	ELECTRIC UNIT HEATER	3000	-	-	-	14.5	-	208	1	LP-1	VARIES	20A/2P	3 * 12 # 1 * 12 GRD.	1/2"	-	X	-

### PANEL LP-2

TOTAL KW: 6.5				ENCLOSURE: NEMA-1				PHASE: 3*				VOLTAGE: 120 / 208			
MOUNTING: SURFACE				BUSBING: COPPER				FAULT CURRENT RATING: 22000 AIC				MCB 100			
FEEDER: 4 * 1 1/2 GRD. - 1 1/2"				LOCATION:											
LOAD DESCRIPTION	TRIP	C/B			CCT. NO.	LOAD			C/B	LOAD DESCRIPTION					
		A*	B*	C*		A*	B*	C*							
REC - PRESS BOX	20	1	1400		1	2	2132		30	PTAC					
LTG - EM LIGHTS	20	1		70	3	4		2132	2						
LTG - BOX LIGHTS	20	1			5	6			20	1 SPARE					
SOUND SYSTEM	20	1	200		7	8			20	1 SPARE					
DATA	20	1		500	9	10			20	1 SPARE					
SPARE	20	1			11	12			20	1 SPARE					
SPARE	20	1			13	14			20	1 SPARE					
SPARE	20	1			15	16			20	1 SPARE					
SPARE	20	1			17	18			20	1 SPARE					
SPARE	20	1			19	20			20	1 SPARE					
SPARE	20	1			21	22			20	1 SPARE					
SPARE	20	1			23	24			20	1 SPARE					
SPARE	20	1			25	26			20	1 SPARE					
SPARE	20	1			27	28			20	1 SPARE					
SPARE	20	1			29	30			20	1 SPARE					
SPARE	20	1			31	32			20	1 SPARE					
SPARE	20	1			33	34			20	1 SPARE					
SPARE	20	1			35	36			20	1 SPARE					
SPARE	20	1			37	38			20	1 SPARE					
SPARE	20	1			39	40			20	1 SPARE					
SPARE	20	1			41	42			20	1 SPARE					
		1600		570	35				2132	2132	0				
NOTE: REFER TO GENERAL NOTE "B" FOR ADDITIONAL INFORMATION											A* 3,132 B* 2,102 C* 35 TOTAL: 6,469				

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

### PANEL LP-1

TOTAL KW: 57.5			ENCLOSURE: NEMA-1			PHASE: 3*			VOLTAGE: 120 / 208				
MOUNTING: SURFACE			BUSBING: COPPER			FAULT CURRENT RATING: 22000 AIC			MCB 250				
FEEDER: 4 #250 #1 #4 G IN 2 1/2"			LOCATION:										
LOAD DESCRIPTION		C/B		LOAD					C/B				
	TRIP	POLE	A*	B*	C*	CCT. NO.	A*	B*	C*	TRIP	POLE	LOAD DESCRIPTION	
REC - POPCORN POPPER	20	1	1320			1	2		1200	20	1	REC - COFFEE MAKER	
REC - HOT DOG WARMER	20	1		1300		3	4		1200	20	1	REC - HOT CHOCOLATE	
REC - SODA COOLER	20	1			800	5	6			1300	20	1	REC - NACHO WARMER
REC - REFRIGERATOR	20	1	1200			7	8	1400		20	1	REC - MICROWAVE	
REC - RM A-105 # 104	20	1			800	9	10		800	20	1	ECH-1	
REC - RM A-102 # A-103	20	1			400	11	12			2500	20	1	ECH-2 CONCESSIONS
REC - RM A-101	20	1	1000			13	14	2500		30	2		
REC - RM A-101 # 108	20	1			1200	15	16		2500	30		ECH-2 CONCESSIONS	
REC - RM A-106	20	1			800	17	18		2500	2			
REC - EXTERIOR RECEPT	20	1	200			19	20	2500		30		ECH-2 RM A-102	
CH DOOR RM A-101	20	1		1200		21	22		2500	2			
CH DOOR RM A-101	20	1		1200		23	24		2500	30		ECH-2 RM A-103	
CH DOOR RM A-105	20	1	1200			25	26	2500		2			
LTG - EM LIGHTS	20	1	210			27	28		2500	30	2	EUH-1 RM A-101	
LTG - INTERIOR LIGHTS	20	1		630	29	30				2			
LTG - EM EXTERIOR	20	1	85			31	32	2500		30	2	EUH-1 RM A-101	
LTG - EXTERIOR	20	1		102		33	34		2500	2			
DATA	20	1			500	35	36		2500	30	2	EUH-1 RM A-101	
FOOTBALL LTG CONTACT	20	1	100			37	38	528		20	1	GEF-1	
FOOTBALL LTG CONTACT	20	1		100		39	40		1656	25	1	GEF-2	
HAND DRYER	20	1			1300	41	42			636	20	1	GEF-3
HAND DRYER	20	1	1300			43	44	1656		25	1	TEF-1	
HAND DRYER	20	1			1500	45	46			20	1	SPARE	
HAND DRYER	20	1			1200	47	48			20	1	SPARE	
SPARE						49	50			20	1	SPARE	
SPARE						51	52			20	1	SPARE	
SPARE						53	54			20	1	SPARE	
SPARE						55	56	3132		100			
SPARE						57	58		2102	35	3	PANEL LP-2 FEED	
SPARE						59	60						
			5105	4312	6230	13128 13656 14436							








NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

### PANEL HP-1

TOTAL KW: 109.7			ENCLOSURE: NEMA-1			PHASE: 3*			VOLTAGE: 277 / 480				
MOUNTING: SURFACE			BUSBING: COPPER			FAULT CURRENT RATING: 22,000			AIC: MCB/AMPS: 400				
FEEDER: 4 #200KCMIL #1 #3 GRD. - 3-1/2"			LOCATION:										
C/B			LOAD			LOAD			C/B				
LOAD DESCRIPTION		TRIP	POLE	A*	B*	C*	CCT. NO.	A*	B*	C*	TRIP	POLE	LOAD DESCRIPTION
POLE F1 - CONT 1		20		3908			1	2	1066		20		POLE F3 F4 - CONT 5
							3	4					
							5	6	1066				
							7	8		1066	20	1	SCORE BOARD
POLE F2 - CONT 2		20	3	4085			9	10	1000		20	1	8PARE
							11	12			20	1	8PARE
							13	14			20	1	8PARE
POLE F3 - CONT 3		20	3	3908			15	16			20	1	8P3
							17	18			20	1	8P
							19	20					8PARE
POLE F4 - CONT 4		20	3	4085			21	22					8PARE
							23	24					8PARE
							25	26					8PARE
8PARE							27	28					8PARE
8PARE							29	30					8PARE
8PARE							31	32					8PARE
8PARE							33	34					8PARE
8PARE							35	36					8PARE
8PARE							37	38	18233		125		8PARE
8PARE							39	40		18568			TSKVA XSTR (LP-1)
8PARE							41	42		20726	3		
				15986	15986	15986	20739			13634	21792		

NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION

## INTERIOR LIGHTING LUMINAIRE SCHEDULE

TAG	SYMBOL	DESCRIPTION	MANUFACTURER SERIES OR CATALOG NUMBER	VOLTAGE/ BALLAST	LAMPS/CROSS SECTION	MOUNTING	REMARKS
EA		6" DIAMETER LED DOWNLIGHT WITH SEMI-SPECULAR ALZAK REFLECTOR, IRIDESCENT FREE FINISH, & WHITE FLANGE	LITHONIA *LDN6-40-15-LOE-AR-L86-MVOLT-EZ10-XX OR EQUAL BY PRESCOLITE OR PORTOLIO LIGHTING	MULTIVOLT 0-10V DIM -	LED 4000K CRI 90 MIN 1500 LM	RECESSED LAY-IN/ DRYWALL	-VERIFY TRIM FINISH WITH ARCHITECT
EB		EXTERIOR LED WALLPACK	LITHONIA *RMU-LED-F4-SR3-40K-MVOLT OR EQUAL	MVOLT -	LED 6700 LM 61 W 4000K	WALL MTD 10'-6" AFG	-INTEGRAL EMERGENCY OPERATION BATTERY
FA		4" SURFACE THIN PROFILE FIXTURE WITH LENS TYPE TO BE SELECTED BY ARCHITECT	LITHONIA* *STL4-40L-MV-EZ1-LP835 OR APPROVED EQUAL	MULTIVOLT 0-10V DIM -	LED 3500K 35 W MIN 3854 LM	SURFACE MOUNTED -	-VERIFY FINISH AND LENS TYPE WITH ARCHITECT
AA		2' X 4' LED FIXTURE	LITHONIA *STL4-60L-EZ1-LP835 OR APPROVED EQUAL	MULTIVOLT 0-10V DIM -	LED 3500K MAX 48 W MIN 6000 LM	RECESSED LAY-IN -	- - -
PA		4" LED WALL BRACKET FIXTURE	LITHONIA *BLM4-30L-ADH-MV-EZ1-LP835-DM10 OR APPROVED EQUAL	MULTIVOLT 0-10V DIM -	LED 3500 K MIN3000 LM MAX 25 W	WALL MOUNT	-
XA		SINGLE FACE EXIT 6" GREEN LETTERS CAST ALUM BODY, AC ONLY	LITHONIA LE SERIES OR APPROVED EQUAL	MY VOLT	L.E.D. MAX 5W -	CEILING/ WALL	FURNISH WITH ARROWS AS REQ'D BY CODE
EM		EMERGENCY BATTY FIXTURE WITH 90 MINUTE OPERATION	LITHONIA *ELM1L OR APPROVED EQUAL	120 VOLT	L.E.D. MAX 16W	IN FIXTURE/ REMOTE	-
I. ALL INTERIOR AND EXTERIOR FIXTURE STANDARD FINISHES TO BE SELECTED BY ARCHITECT.							

## MECHANICAL EQUIPMENT CONNECTION SCHEDULE

TAG	DESCRIPTION	LOAD					MOCP	VOLT	PHASE	PANEL	CKT. NO.	RUBED SWITCH	FEEDER		STARTER BY:		LOCATION	REMARKS
		WATTS	HP	MCA	FLA	AMPS							C/B	C	MC	EC		
GEF-1	ROOF MOUNTED GENERAL EXHAUST FAN	696	1/4	-	-	-	-	120	1	LP-1	38	20A/1P	2 #2 + 1 #2 GRD	¾"	-	X	-	-
GEF-2	ROOF MOUNTED GENERAL EXHAUST FAN	696	1/4	-	-	-	-	120	1	LP-1	40	20A/1P	2 #2 + 1 #2 GRD	¾"	-	X	-	-
GEF-3	ROOF MOUNTED GENERAL EXHAUST FAN	1176	1/2	-	-	-	-	120	1	LP-1	42	20A/1P	2 #2 + 1 #2 GRD	¾"	-	X	-	-
GEF-4	ROOF MOUNTED GENERAL EXHAUST FAN	696	1/4	-	-	-	-	120	1	LP-1	44	20A/1P	2 #2 + 1 #2 GRD	¾"	-	X	-	-
PTAC-1	PACKAGED TERMINAL AIR CONDITIONING UNIT w/ ELECTRIC HEAT	4264	-	-	-	205	30	208	1	LP-2	2-4	30A/2P	3 #10 + 1 #10 GRD	¾"	X	-	-	-

## ELECTRIC EQUIPMENT CONNECTION SCHEDULE

TAG	DESCRIPTION	LOAD					MOCP	VOLT	PHASE	PANEL	CKT. NO.	FUSED SWITCH C/B	FEEDER		STARTER BY:		LOCATION	REMARKS
		WATTS	HP	MCA	FLA	AMPS							CABLE	C	MC	EC		
ECH-1	WALL MOUNTED ELECTRIC CABINET HEATER	800	-	-	-	12.5	-	120	1	LP-1	10	20A/1P	2 * 12 + 1 * 12 GRD.	¾"	-	X	-	-
ECH-2	CEILING MOUNTED ELECTRIC CABINET HEATER	5000	-	-	-	24	-	208	1	LP-1	VARIES	30A/2P	3 * 10 + 1 * 10 GRD.	¾"	-	X	-	-
EUH-1	ELECTRIC UNIT HEATER	5000	-	-	-	24	-	208	1	LP-1	VARIES	30A/2P	3 * 10 + 1 * 10 GRD.	¾"	-	X	-	-
EUH-2	ELECTRIC UNIT HEATER	3000	-	-	-	14.5	-	208	1	LP-1	VARIES	20A/2P	3 * 12 + 1 * 12 GRD.	¾"	-	X	-	-

## PANEL LP-2

TOTAL KW: 6.5		ENCLOSURE: NEMA-1			PHASE: 3*			VOLTAGE: 120 / 208					
MOUNTING: SURFACE		BUSING: COPPER			FAULT CURRENT RATING:			22,000 AIC [MCO(AMP'S): 100]					
FEEDER: 4 # 4 1/2 GRD. - 1 1/2".					LOCATION:								
		C/B		LOAD				LOAD		C/B			
		TRIP		POLE		A* B* C*		TRIP		POLE			
LOAD DESCRIPTION													
PTAC -1		30 2		2132 B1		C* 1 2		1400 35		20 1			
DATA		20 1				5 6		10 20		1			
SOUND SYSTEM		20 1		200		5 6							
SPARE						7 8							
SPARE						9 10							
SPARE						11 12							
SPARE						13 14							
SPARE						15 16							
SPARE						17 18							
SPARE						19 20							
SPARE						21 22							
SPARE						23 24							
SPARE						25 26							
SPARE						27 28							
SPARE						29 30							
SPARE						31 32							
SPARE						33 34							
SPARE						35 36							
SPARE						37 38							
SPARE						39 40							
SPARE						41 42							
				2332 2132 500				1400 35 10					
												A = 3.132 B = 2.161 C = 5.10 TOTAL = 6.469	
NOTE: REFER TO GENERAL NOTE "B" FOR ADDITIONAL INFORMATION													

## PANEL LP-1

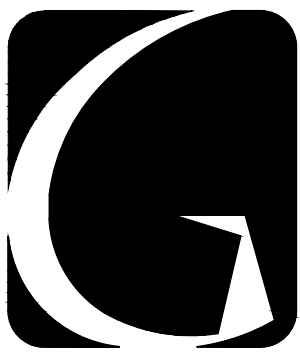
TOTAL KW: 49.6		ENCLOSURE: NEMA-1		PHASE: 3*		VOLTAGE: 120 / 208							
MOUNTING: SURFACE		BUSING: COPPER		FAULT CURRENT RATING: 22,000 AIC		MCO (AMP'S): 250							
FEEDER: 4 #12 1/4 GRD. - 2 1/2"		LOCATION:											
LOAD DESCRIPTION	C/B	LOAD			C/B	LOAD DESCRIPTION							
TRIP	POLE	A*	B*	C*	CCT. NO.	A*	B*	C*	TRIP	POLE	LOAD DESCRIPTION		
OVERHEAD DOOR A-105	20	1	1200		1	2	1500		20	1	REC - NACHO WARMER		
OVERHEAD DOOR A-106	20	1		1200	3	4		1200	20	1	REC - HOT CHOCOLATE		
OVERHEAD DOOR A-103	20	1		1200	5	6		1200	20	1	REC - COFFEE MAKER		
REC - POPCORN POPPER	20	1	1320		7	8	1400		20	1	REC - MICROWAVE		
REC - HOT DOG WARMER	20	1		1300	9	10		800	20	1	ECH-1		
REC - SODA COOLER	20	1			11	12			2500	30	2	ECH-2 - CONCESSIONS	
REC - REFRIGERATOR	20	1		1200	13	14	2500		2500	30	2	ECH-2 - CONCESSIONS	
REC - A-102, A-103 & A-104	20	1		800	15	16		2500	30	2	ECH-2 - CONCESSIONS		
REC - RM A-101	20	1			17	18			2500	30	2	EUH-1 - A-105	
REC - A-105	20	1	1000		19	20	2500		2500	30	2	EUH-1 - A-105	
REC - A-106	20	1		1000	21	22		2500	30	2	EUH-1 - A-105		
EXTERIOR RECEPTACLES	20	1			200	23	24		2500	30	2	EUH-1 - A-106	
LTG - INTERIOR LIGHTS	20	1	350		25	26	2500		2500	30	2	EUH-1 - A-106	
LTG - NIGHT LIGHTS	20	1		175		27	28		2500	30	2	EUH-1 - A-106	
LTG - EXTERIOR	20	1			60	29	30		2500	30	2	EUH-2 - A102	
LTG - EXT. EMERGENCY	20	1	60		31	32	1500		1500	30	2	EUH-2 - A102	
DATA	20	1		500	33	34		1500	30	2	EUH-2 - A102		
FOOTBALL LTG CONTACT.	20	1			100	35	36			20	1	SPARE	
FOOTBALL LTG CONTACT.	20	1	100			37	38	696		20	1	GEF-1	
SPARE	20	1				39	40		696	20	1	GEF-2	
SPARE	20	1				41	42			1176	20	1	GEF-3
SPARE	20	1				43	44	696		20	1	GEF-4	
SPARE	20	1				45	46			20	1	SPARE	
SPARE	20	1				47	48			20	1	SPARE	
SPARE	20	1				49	50			20	1	SPARE	
SPARE	20	1				51	52			20	1	SPARE	
SPARE	20	1				53	54			20	1	SPARE	
SPARE	20	1				55	56	3732		100		PANEL LP-2 FEED	
SPARE	20	1				57	58		2161				
SPARE	20	1				59	60			510			
		5238	4975	2968				12396	11696	12316			
NOTE: REFER TO GENERAL NOTE 'B' FOR ADDITIONAL INFORMATION												A = 17.634 B = 16.671 C = 15.344 TOTAL = 49.649	

## INTERIOR LIGHTING LUMINAIRE SCHEDULE

TAG	SYMBOL	DESCRIPTION	MANUFACTURER SERIES OR CATALOG NUMBER	VOLTAGE/BALLAST	LAMPS/CROSS SECTION	MOUNTING	REMARKS
EA		6" DIAMETER LED DOWNLIGHT WITH SEMI-SPECULAR ALZAK REFLECTOR, IRIDESCENT FREE FINISH, 4 WHITE FLANGE	LITHONIA *LDM6-40-15-LO6-AR-150-MVOLT-EZ10-XX OR EQUAL BY PRESCOLITE OR PORTFOLIO LIGHTING	MULTIVOLT 0-10V DIM -	LED 4000K CRI 90 MIN 5000 LM	RECESSED DRYWALL	-VERIFY TRIM FINISH WITH ARCHITECT
EB		EXTERIOR LED WALLPACK	LITHONIA *FWL-LED-IP4-5R3-40K-MVOLT OR EQUAL	1VOLT -	6" LED LM 61 W 4000K	WALL MID 12'-6" AFS	-INTEGRAL EMERGENCY OPERATION BATTERY
FA		4" SURFACE THIN PROFILE FIXTURE WITH LENS TYPE TO BE SELECTED BY ARCHITECT	LITHONIA *STL4-40L-MV-EZ1-LP835 OR APPROVED EQUAL	MULTIVOLT 0-10V DIM -	LED 3500K 35 W MIN 3834 LM	SURFACE MOUNTED -	-VERIFY FINISH AND LENS TYPE WITH ARCHITECT
AA		2' X 4' LED FIXTURE	LITHONIA *GTL4-60L-EZ1-LP835 OR APPROVED EQUAL	MULTIVOLT 0-10V DIM -	LED 3500K MAX 48 W MIN 6000 LM	RECESSED LAY-IN -	-
PA		4" LED WALL BRACKET FIXTURE	LITHONIA *BLWP4-30L-AD84-MV-EZ1-LP835-DIM0 OR APPROVED EQUAL	MULTIVOLT 0-10V DIM -	LED 3500 K MIN3000 LM MAX 25 W	WALL MOUNT -	-
XA		SINGLE FACE EXIT 6" GREEN LETTERS CAST ALUM BODY, AC ONLY	LITHONIA LE SERIES OR APPROVED EQUAL	1V VOLT -	LED, MAX 5W -	CEILING/ WALL	-FURNISH WITH ARROWS AS REQ'D BY CODE
EM		EMERGENCY BATTY FIXTURE WITH 90 MINUTE OPERATION	LITHONIA *ELM2L OR APPROVED EQUAL	120 VOLT -	LED, MAX 16W -	IN FIXTURE/ REMOTE	-
1. ALL INTERIOR AND EXTERIOR FIXTURE STANDARD FINISHES TO BE SELECTED BY ARCHITECT.							

## EXTERIOR WESTCHESTER LIGHTING LUMINAIRE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER SERIES OR CATALOG NUMBER	VOLTAGE/BALLAST	LAMPS/CROSS SECTION	MOUNTING	REMARKS
F1	LED TYPE SPORTR LIGHTING, 10'-0" POLE WITH AERIAL LIGHT AT 16'-0" ABOVE GRADE	MUSCO OR APPROVED EQUAL *TLC-LED-1500 X 4 *TLC-LED-1200 X 1 *TLC-LED-900 X 1 *TLC-ST-575 X 2	480V -	LED 5100K 27240W - MIN 160000 LM	10' POLE MOUNTED -	-
F2	LED TYPE SPORTR LIGHTING, 10'-0" POLE WITH AERIAL LIGHT AT 16'-0" ABOVE GRADE	MUSCO OR APPROVED EQUAL *TLC-LED-1500 X 4 *TLC-LED-1200 X 1 *TLC-LED-900 X 1 *TLC-ST-575 X 2	480V -	LED 5100K 27240W - MIN 160000 LM	10' POLE MOUNTED -	-
F3	LED TYPE SPORTR LIGHTING, 10'-0" POLE WITH AERIAL LIGHT AT 16'-0" ABOVE GRADE	MUSCO OR APPROVED EQUAL *TLC-LED-1500 X 4 *TLC-LED-1200 X 1 *TLC-LED-900 X 1 *TLC-ST-575 X 2	480V -	LED 5100K 25660W - MIN 160000 LM	10' POLE MOUNTED -	-
F4	LED TYPE SPORTR LIGHTING, 10'-0" POLE WITH AERIAL LIGHT AT 16'-0" ABOVE GRADE	MUSCO OR APPROVED EQUAL *TLC-LED-1500 X 4 *TLC-LED-1200 X 1 *TLC-LED-900 X 1 *TLC-ST-575 X 2	480V -	LED 5100K 32460W - MIN 160000 LM	10' POLE MOUNTED -	-



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# ONE-LINE SCHEMATIC RISER DIAGRAM

UTILITY COMPANY PAD MOUNTED SERVICE TRANSFORMER. FURNISH AND INSTALL TRANSFORMER PAD PER UTILITY COMPANY STANDARDS AND SPECIFICATIONS, INCLUDING GROUNDING, PAD SIZE, ETC.

UTILIZE EXISTING CONDUIT AND TRANSFORMER PAD INSTALLED FOR FUTURE USE IN PRIOR PHASE OF CONSTRUCTION

4 500KCMIL - 3-1/2".

480/277V/3PH, METER AND CT CABINET PER UTILITY COMPANY STANDARDS AND SPECIFICATIONS. PROVIDE WITH NEMA-3R ENCLOSURE.

400A, 480/277V, 3PH, SERVICE ENTRANCE RATED MAIN DISCONNECT SWITCH WITH NEMA-3R ENCLOSURE.

GENERAL NOTE:  
1. RISER DIAGRAM DEPICTS ENTIRE ELECTRICAL DISTRIBUTION IF ALL ALTERNATE BIDS ARE ACCEPTED. PROVIDE SEPARATE PRICING FOR PANEL LP2 4 FOOTBALL FIELD CONTROL IF ONLY COMMUNITY BUILDING IS ACCEPTED.

4 500KCMIL 4113 GRD. - 3-1/2".

4 411% GRD. - 1-1/2".

113.9 KW. CONN.

HP1

SPD

T-1 75 KVA, 480V TO 120/208V, 3ø, 4W TRANSFORMER

LP1

LP2 PRESS BOX

FOOTBALL FIELD CONTROL (BY OTHERS)

4 250 KCMIL 4114 GRD. - 2-1/2".

4 211% GRD. - 1-1/2".

FEED THROUGH CIRCUITS TO SPORTS LIGHTING.

## ALTERNATE BID: COMMUNITY BUILDING

# ONE-LINE SCHEMATIC RISER DIAGRAM

The diagram illustrates the following components and connections:

- UTILITY COMPANY PAD MOUNTED SERVICE TRANSFORMER:** FURNISH AND INSTALL. TRANSFORMER PAD PER UTILITY COMPANY STANDARDS AND SPECIFICATIONS, INCLUDING GROUNDING, PAD SIZE, ETC.
- UTILIZE EXISTING CONDUIT AND TRANSFORMER PAD INSTALLED FOR FUTURE USE IN PRIOR PHASE OF CONSTRUCTION**
- 4 #00KCMIL - 3-1/2"C.** (Main service conductors)
- 480/277V/3PH, METER AND CT CABINET PER UTILITY COMPANY STANDARDS AND SPECIFICATIONS. PROVIDE WITH NEMA-3R ENCLOSURE.**
- 400A, 480/277V, 3PH, SERVICE ENTRANCE RATED MAIN DISCONNECT SWITCH WITH NEMA-3R ENCLOSURE.**
- 4 #00KCMIL 4 1/2" GRD. - 3-1/2"C.** (Grounding conductors)
- HPI 50 KVA CONN.** (High Pressure Interphase Connector)
- T-1 30 KVA, 480V TO 120/208V, 3ø, 4W FULLY ENCLOSED, NON-VENTILATED TRANSFORMER IN NEMA 3R ENCLOSURE.**
- LV PEDESTAL** (Low Voltage Pedestal)
- 4 #5 4 1/8" GRD. - 3/4"C.** (Grounding conductors for LV pedestal)
- PROVIDE 50A/3P CIRCUIT BREAKER FOR 30KVA TRANSFORMER**
- GENERAL NOTE:**
  - 1. PROVIDE 120/208V, 3-PH, 100A MCB, 24POLE LOAD CENTER IN NEMA 3R ENCLOSURE FOR LOW VOLTAGE (L.V.) PEDESTAL. REFER TO LOW VOLTAGE DRAWINGS FOR ADDITIONAL INFORMATION AND DETAILS.
- 400AMP, 480/277 VOLT, 3 PH, MAIN SERVICE SWITCH, FUSED, WITH NEMA-3R ENCLOSURE.**
- 400AMP 480/277 VOLT, 3 PH, C.T./METER ENCLOSURE WITH NEMA-3R ENCLOSURE.**
- 400AMP 480/277 VOLT, 3 PH, PANEL "HP-I" WITH NEMA-3R ENCLOSURE.**
- 30KVA TRANSFORMER WITH NEMA-3R ENCLOSURE.**
- CAP AND SEAL STEEL POST WEATHER TIGHT - TYPICAL**
- PROVIDE UNISTRUT FRAME WITH STEEL POSTS SET IN CONCRETE.**

**Dimensions:**

- in** (Inches)
- ft** (Feet)
- b** (Base)
- d** (Depth)
- s** (Side)

## ALTERNATE BID: SCORE BOARD

# ONE-LINE SCHEMATIC RISER DIAGRAM

UTILITY COMPANY PAD MOUNTED SERVICE TRANSFORMER FURNISH AND INSTALL TRANSFORMER PAD PER UTILITY COMPANY STANDARDS AND SPECIFICATIONS INCLUDING GROUNDING, PAD SIZE, ETC.

UTILIZE EXISTING CONDUIT AND TRANSFORMER PAD INSTALLED FOR FUTURE USE IN PRIOR PHASE OF CONSTRUCTION

4 500KCHIL- 3-1/2".

480/277V/3PH. METER AND CT CABINET PER UTILITY COMPANY STANDARDS AND SPECIFICATIONS. PROVIDE WITH NEMA-3R ENCLOSURE.

400A, 480/277V, 3PH. SERVICE ENTRANCE RATED MAIN DISCONNECT SWITCH WITH NEMA-3R ENCLOSURE.

FEED THROUGH CIRCUITS TO SPORTS LIGHTING.

4 500KCHIL 4 1/2 GRD. - 3-1/2".

HPI 8FD

2 #2 4 1/2 GRD. - 3/4".

FOOTBALL FIELD CONTROL (BY OTHERS)

T-1 2 KVA. 480V TO 120/208V, 3A, 4W, FULLY ENCLOSED, NON-VENTILATED CONTROL POWER TRANSFORMER IN NEMA 3R ENCLOSURE.

400AMP, 480/277 VOLT, 3 PH. MAIN SERVICE SWITCH, FUSED, WITH NEMA-3R ENCLOSURE.

400AMP 480/277 VOLT, 3 PH. CT/METER ENCLOSURE WITH NEMA-3R ENCLOSURE.

400AMP 480/277 VOLT, 3 PH. PANEL 78"1" WITH NEMA-3R ENCLOSURE.

FOOTBALL LIGHTING CONTROL PANEL

CAP AND SEAL STEEL POST WEATHER TIGHT - TYPICAL

PROVIDE UNISTRUT FRAME WITH STEEL POSTS SET IN CONCRETE.

2 KVA. 480V TO 120/208V, 3A, CONTROL POWER TRANSFORMER

## ALTERNATE BID: FOOTBALL LIGHTING

# ONE-LINE SCHEMATIC RISER DIAGRAM

The diagram consists of two parts: a one-line schematic riser diagram at the top and a cross-section of a press box at the bottom.

**One-line Schematic Riser Diagram:**

- Top:** A transformer symbol with a note: "UTILITY COMPANY PAD MOUNTED SERVICE TRANSFORMER FURNISH AND INSTALL TRANSFORMER PAD PER UTILITY COMPANY STANDARDS AND SPECIFICATIONS, INCLUDING GROUNDING, PAD SIZE, ETC."
- Line 1:** A line with a tap labeled "4 #500KCMIL - 3-1/2'C." and an arrow pointing right with the note "UTILIZE EXISTING CONDUIT AND TRANSFORMER PAD INSTALLED FOR FUTURE USE IN PRIOR PHASE OF CONSTRUCTION".
- Line 2:** A line with a tap labeled "4 #500KCMIL - 4' 1 3/4' GRD. - 3-1/2'C." leading to a dashed box containing a circle with the number "3". A note points to this box: "480/277V/3PH, METER AND CT CABINET PER UTILITY COMPANY STANDARDS AND SPECIFICATIONS. PROVIDE WITH NEMA-3R ENCLOSURE." A meter symbol is shown to the right of this box.
- Line 3:** A line with a tap labeled "4 #500KCMIL - 4' 1 3/4' GRD. - 3-1/2'C." leading to a diamond-shaped disconnect switch symbol. A note points to it: "400A, 480/277V, 3PH, SERVICE ENTRANCE RATED MAIN DISCONNECT SWITCH WITH NEMA-3R ENCLOSURE."
- Line 4:** A line leading to a box labeled "HP-1" with "50A" and "3P" inside. A note points to it: "PROVIDE 50A/3P CIRCUIT BREAKER FOR 30KVA TRANSFORMER".
- Line 5:** A line with a tap labeled "3 # 4 1/2 GRD. 3/4'C." leading to a transformer symbol. A note points to it: "T-1 30 KVA, 480V TO 200/208V, 34, 4W FULLY ENCLOSED, NON-VENTILATED TRANSFORMER IN NEMA 3R ENCLOSURE."
- Line 6:** A line with a tap labeled "4 # 4 1/2 GRD. - 3/4'C." leading to a box labeled "LF-1 PRESS BOX".
- Other Labels:** "58 KW, CONN." is labeled near the HP-1 box.

**Cross-section of Press Box:**

- The box is shown in cross-section, revealing internal components and structural details.
- Labels:**
  - "CAP AND SEAL STEEL POST WEATHER TIGHT - TYPICAL" points to the top edge.
  - "400AMP 480/277 VOLT, 3 PH, MAIN SERVICE SWITCH, PULB, WITH NEMA-3R ENCLOSURE" points to the main disconnect switch.
  - "400AMP 480/277 VOLT, 3 PH, C.T.-METER ENCLOSURE WITH NEMA-3R ENCLOSURE" points to the meter cabinet.
  - "400AMP 480/277 VOLT, 3 PH, PANEL 'HP-1' WITH NEMA-3R ENCLOSURE" points to the circuit breaker panel.
  - "30KVA TRANSFORMER WITH NEMA-3R ENCLOSURE" points to the transformer.
- Dimensions:**
  - "in" (inches) for the top width.
  - "6'-4"
  - "1'-0"
  - "5'-0"
- Notes:**
  - "PROVIDE UNISTRUT FRAME WITH STEEL POSTS SET IN CONCRETE" points to the base structure.

**ALTERNATE BID: PRESS BOX**



NEW SHEET ADDED TO  
CONSTRUCTION DOCUMENTS  
IN THIS ADDENDUM

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GENERAL NOTES

- 1. SITE LIGHTING CONDUCTORS SHALL BE #8 AWG MINIMUM AND SIZED TO MEET NEC VOLTAGE DROP REQUIREMENTS.
- 2. UNLESS OTHERWISE NOTED, ROUTE LIGHTING TO COMMUNITY BUILDING.
- 3. NOT USED.
- 4. NOT USED.
- 4. SITE SHALL BE PROVIDED WITH HANDHOLES AS REQUIRED.

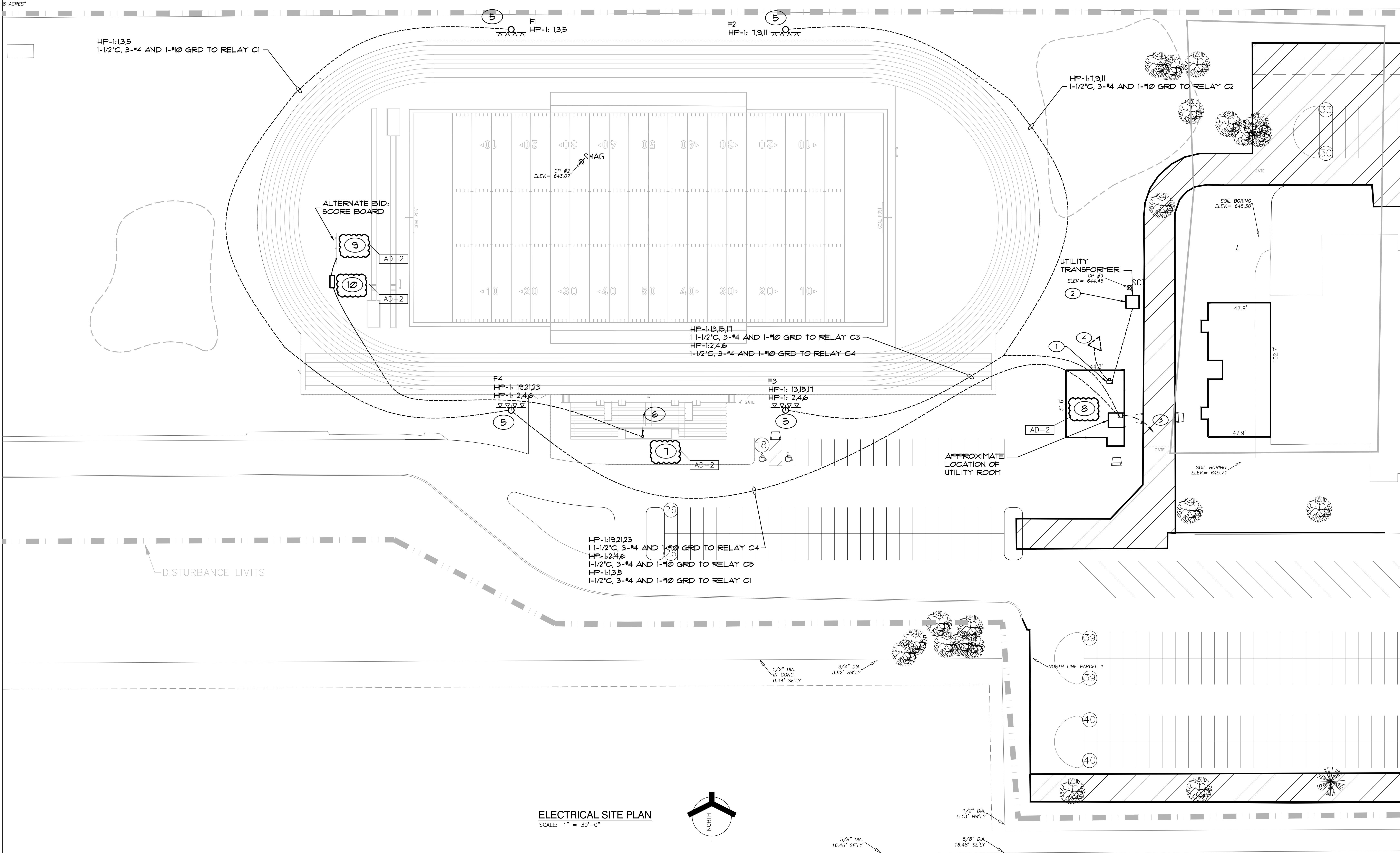
AD-2

SHEET NOTES

- 1. UTILITY METER AND C/T CABINET. PROVIDE WEATHERPROOF FULL BOX PRIOR TO METERS FOR INCOMING SECONDARY FEEDERS. VERIFY EXACT LOCATION AND REQUIREMENTS IN FIELD AND WITH UTILITY.
- 2. UTILITY COMPANY PAD MOUNTED SERVICE TRANSFORMER. UTILIZE EXISTING PAD INSTALLED FOR FUTURE USE.
- 3. DIRECTIONAL BORE ONE (1) 3" C ROUTED CONCEALED BELOW GRADE TO MAIN BUILDING FOR NEW LOW VOLTAGE SERVICE. VERIFY EXACT LOCATION, COMPLETE AS REQUIRED. EXISTING PARKING PAVEMENT SHALL BE MINIMALLY DISTURBED, USE OF HDPE CONDUIT WITH DIRECTIONAL BORE IS ACCEPTABLE.
- 4. GROUND TRIAD. VERIFY EXACT LOCATION IN FIELD. ALL SERVICES SHALL BE PROVIDED WITH BONDING AS GROUNDING PER CODE REQUIREMENTS.
- 5. ALTERNATE BID: FOOTBALL FIELD LIGHTING FIXTURES, CROSS ARMS AND 10' (ABOVE GROUND) POLE AND CONCRETE BASE. WIRE FIXTURES TO LIGHTING CONTROL CABINET LOCATED WITHIN COMMUNITY BUILDING. MUSCO LIGHTING PROVIDED SUMMARY FOR LIGHT POLES AND PLACEMENT.
- 6. REFER TO LOW VOLTAGE DRAWINGS. PROVIDE A NEW SOUND SYSTEM EQUIPMENT CABINET, MIC INPUT JACKS, AUX INPUT JACKS AND POWER RECEPTACLE.

- 7. ALTERNATE BID: PRESS BOX, REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 8. ALTERNATE BID: COMMUNITY BUILDING, REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 9. ALTERNATE BID: SCORE BOARD, REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 10. ALTERNATE BID: OUTDOOR ELECTRONICS ENCLOSURE FOR LOW VOLTAGE. REFER TO LOW VOLTAGE DRAWINGS FOR ADDITIONAL INFORMATION.

AD-2



ELECTRICAL SITE PLAN

SCALE: 1" = 30'-0"



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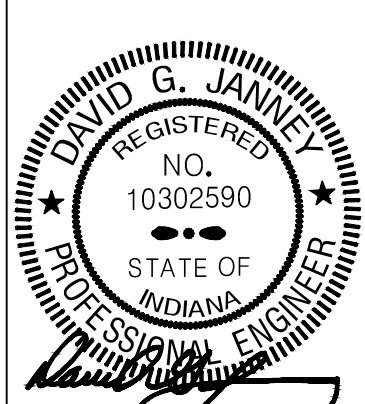


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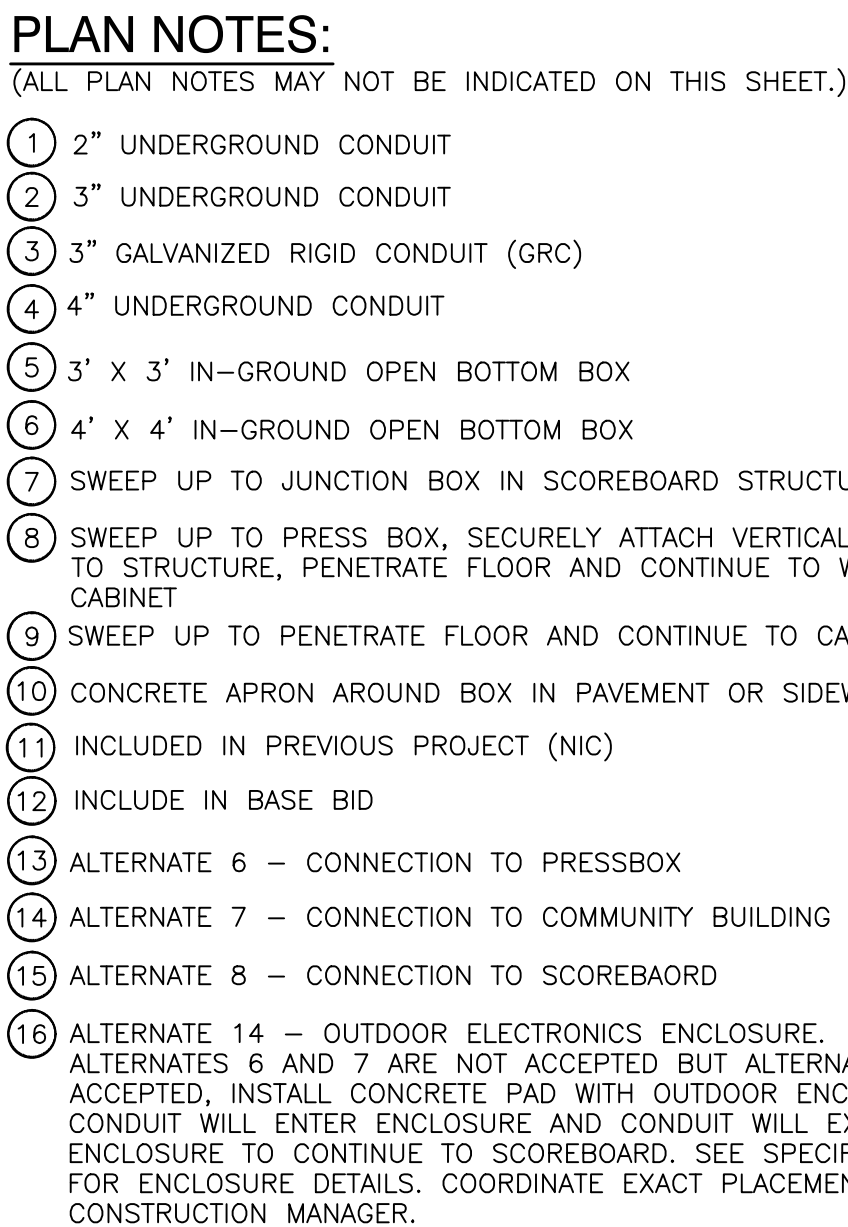
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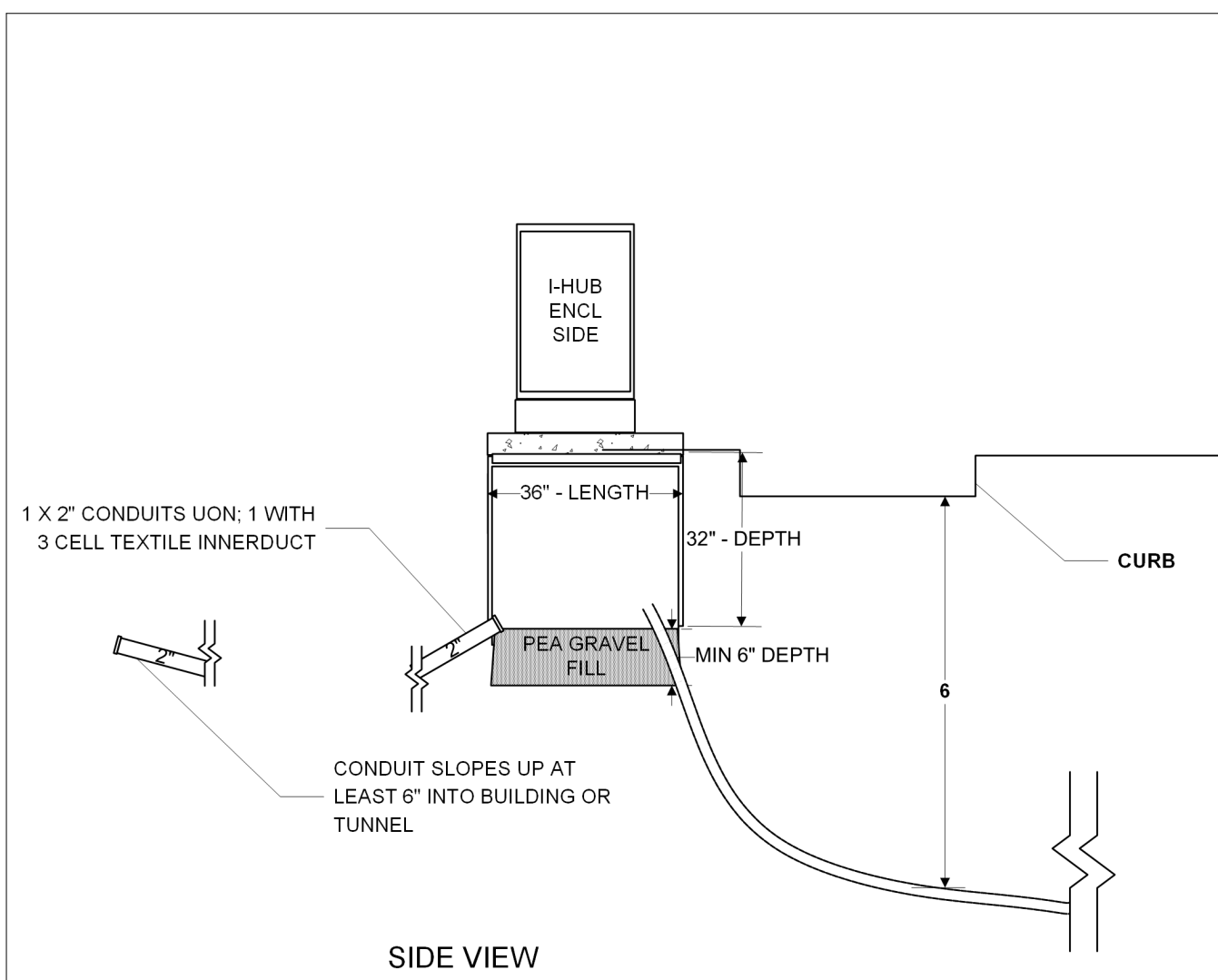
#### GENERAL NOTES:

- 1) FIELD VERIFY ALL UTILITIES, STRUCTURES, AND OBSTRUCTIONS ALONG PLANNED ROUTE.
- 2) UTILITY MARKING SERVICES SHALL BE NOTIFIED PRIOR TO WORK BEING PERFORMED.
- 3) ALL TRENCHES DEEPER THAN 5' SHALL HAVE SIDE WALLS SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED PER OSHA REQUIREMENTS UNLESS THE SIDE WALLS ARE CUT TO A SLOPE OF 12" HORIZONTALLY FOR EACH 24" VERTICALLY.
- 4) MINIMUM BEND RADI SHALL BE OBSERVED (FOR CONCRETE ENCASEMENT, COMPACTED FILL, OR DIRECTIONALLY BORED).
- 5) 1/2" NYLON PULL ROPES SHALL BE INSTALLED IN EACH DUCT AND TIED OFF AT EACH PULLING SPACE.
- 6) DUCTS ROUTED UNDER PUBLIC ROADWAYS SHALL BE DIRECTIONALLY BORED.
- 7) DIRECTIONALLY BORED DUCTS UNDER ROADWAYS SHALL BE AT A MINIMUM 6" DEPTH TO DISPERSE LIVE LOADS OR SHALL BE INSTALLED IN A STEEL CASING WITH SAND BACKFILL.
- 8) ALL CONDUITS ENTERING A BUILDING OR TUNNEL SHALL SLOPE UPWARD AT LEAST 1 PERCENT FROM THE LAST PULL BOX/UTILITY VAULT.
- 9) ALL DUCTS ENTERING A FACILITY SHALL BE EQUIPPED WITH PROPERLY SIZED DUCT PLUGS.
- 10) ALL OSP CABLE INSTALLED IN DUCTS SHALL BE PULLED UTILIZING PROPERLY SELECTED BREAK-AWAY SWIVEL EYES TO AVOID CABLE TWISTING AND DAMAGE.
- 11) ALL UNDERGROUND CONDUIT ROUTES SHALL BE INSTALLED WITH A #8 COPPER (OR EQUIVALENT) LOCATE CONDUCTOR CONTINUOUSLY ALONG THE ENTIRE PATH. CONDUCTOR SHALL NOT BE CONNECTED WITHIN A FACILITY AT EITHER END.

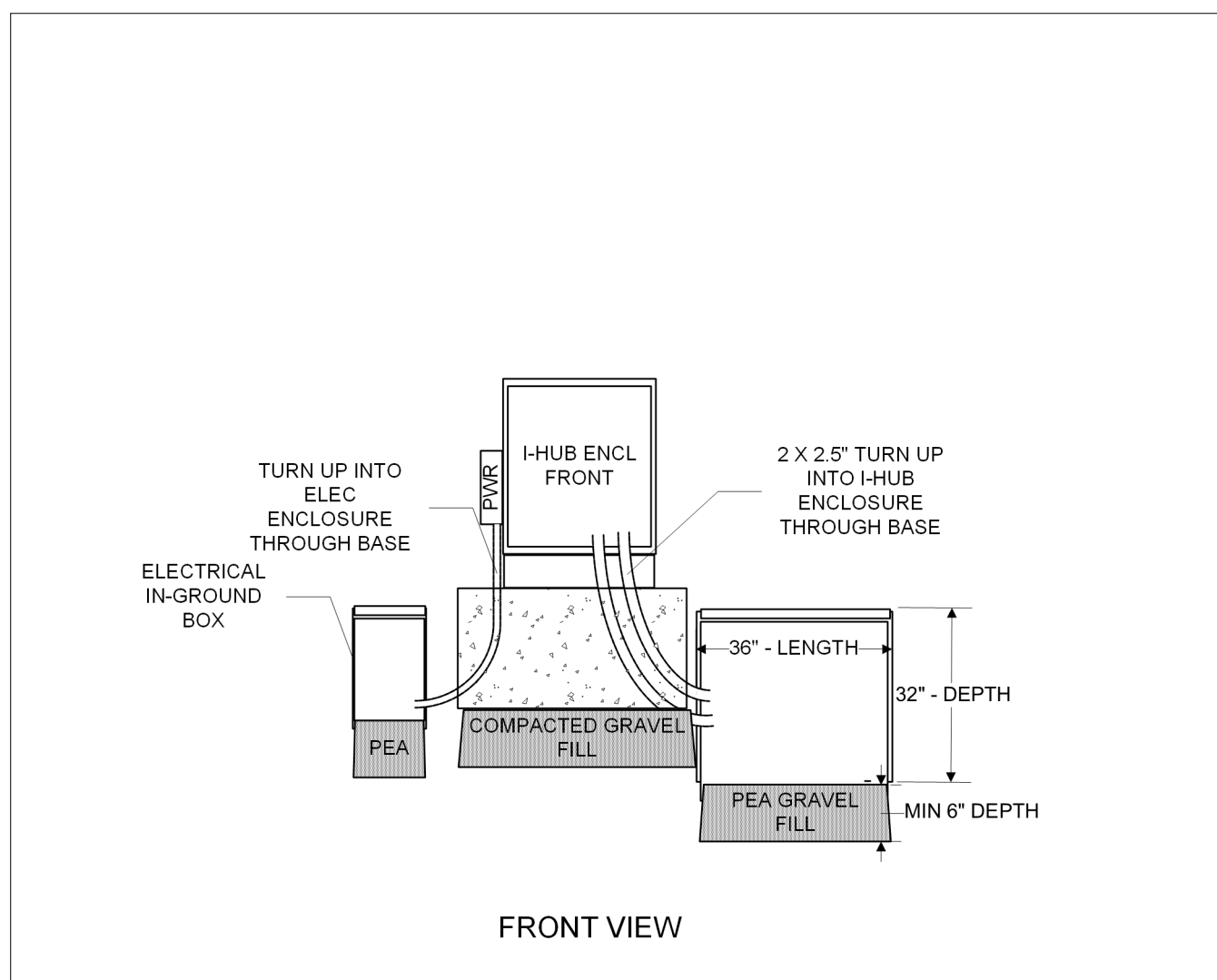
#### NOTES:

- NOTES:
1. WHERE POSSIBLE INSTALL CONDUITS TO DRAIN INTO HAND HOLES
  2. CONDUITS SHALL BE INSTALLED AT A MINIMUM OF 24-30" DEPTH TO THE TOP OF THE CONDUIT AT MINIMUM DEPTH OF RUN
  3. IN MAIN CONDUIT RUNS, WHERE POSSIBLE, SLOPE OF THE CONDUIT SHALL BE 6" PER 100' AND MAY SLOPE FROM THE MIDDLE TO BOXES AT BOTH ENDS (SEE "A" ABOVE)
  4. WHEN BOX MOUNTING ELEVATIONS WILL CAUSE SLOPE BETWEEN BOXES NATURALLY EQUAL TO 5% GRADE (6" PER 100'), NO FURTHER SLOPE WILL BE REQUIRED (SEE "B" ABOVE)
  5. ALL CONDUITS SHALL BE MULTI-CHANNEL CONDUIT WITH PULL STRINGS IN EACH CHANNEL, EQUIPPED WITH MULTIPLE INNER-DUCTS WITH PULL ROPES IN EACH, OR EQUIPPED WITH MAXCELL FLEXIBLE INNER-DUCT SYSTEM WITH PULL ROPE IN EACH CHANNEL
  6. PATHWAY ALTERATION REQUIRED TO AVOID OBSTRUCTIONS IN THE CABLE PATHWAY SHALL UTILIZE VERY LONG SWEEPS OR ADDITIONAL HAND HOLES WILL BE REQUIRED (SEE "C" ABOVE)
  7. NO MORE THAN 180 DEGREES OF BENDS BETWEEN HAND HOLES

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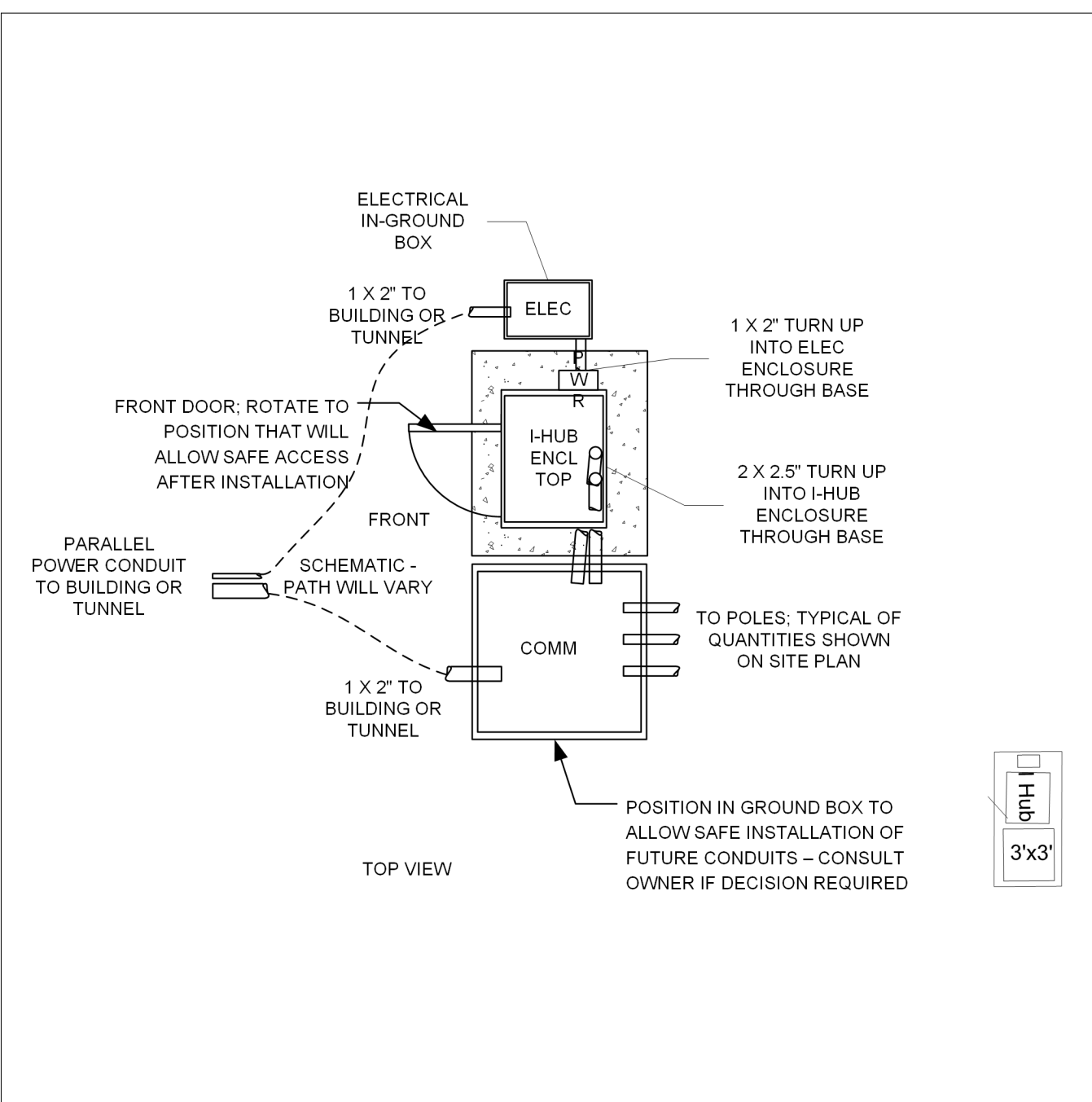
REMOTE ENCLOSURE PAD MOUNT  
VIEW  
NTS



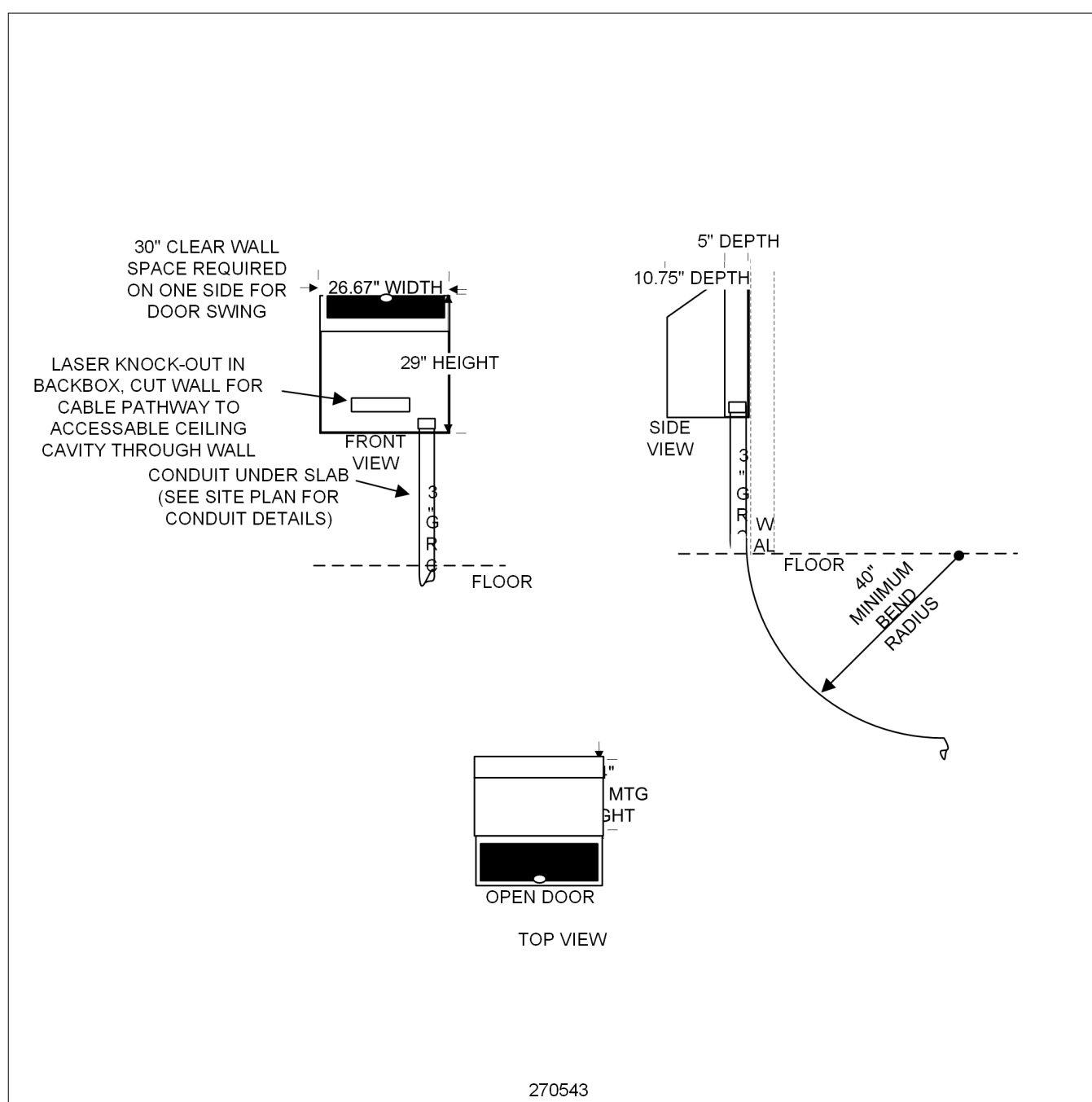
REMOTE ENCLOSURE PAD MOUNT  
FRONT VIEW  
NTS

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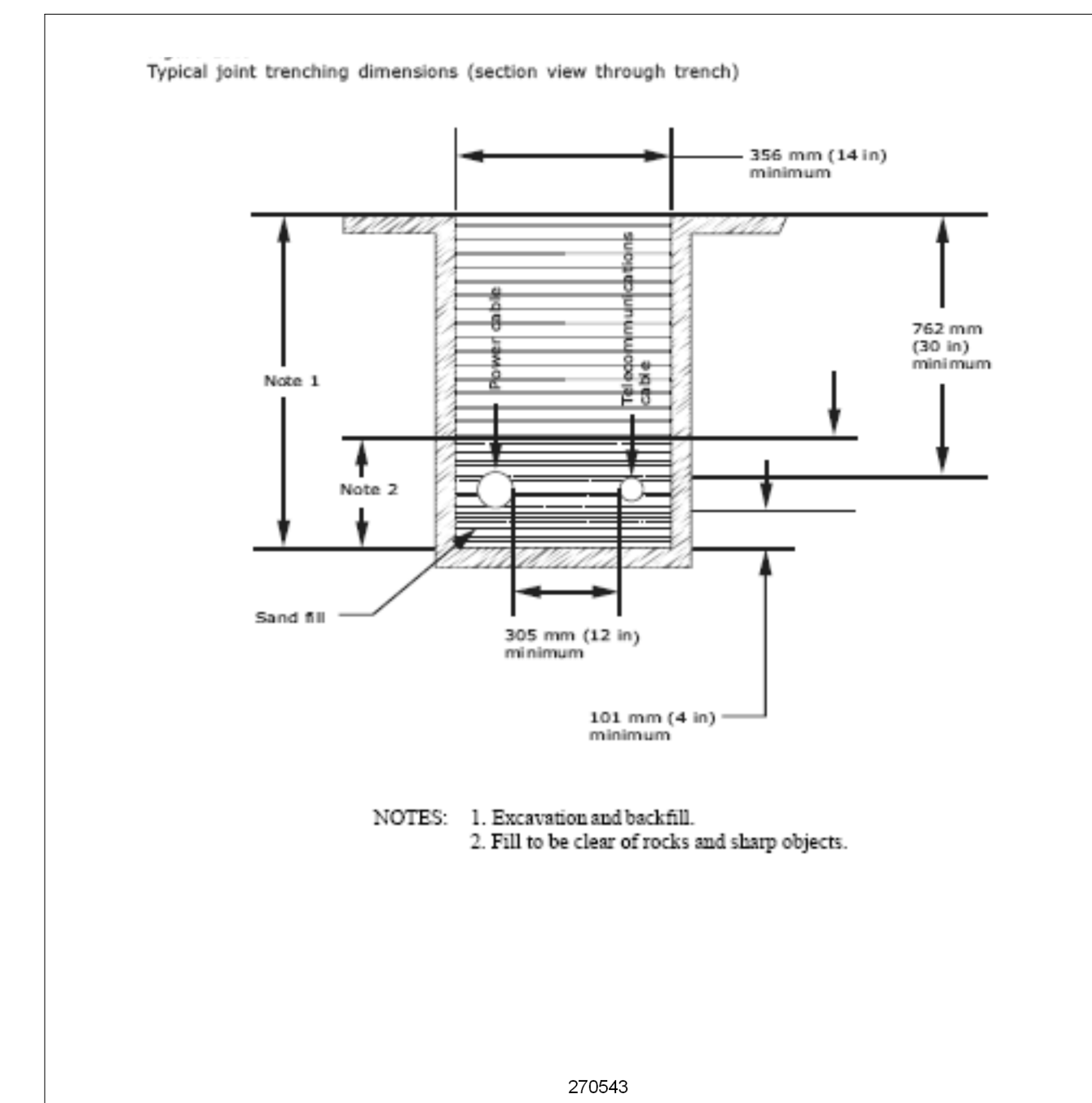
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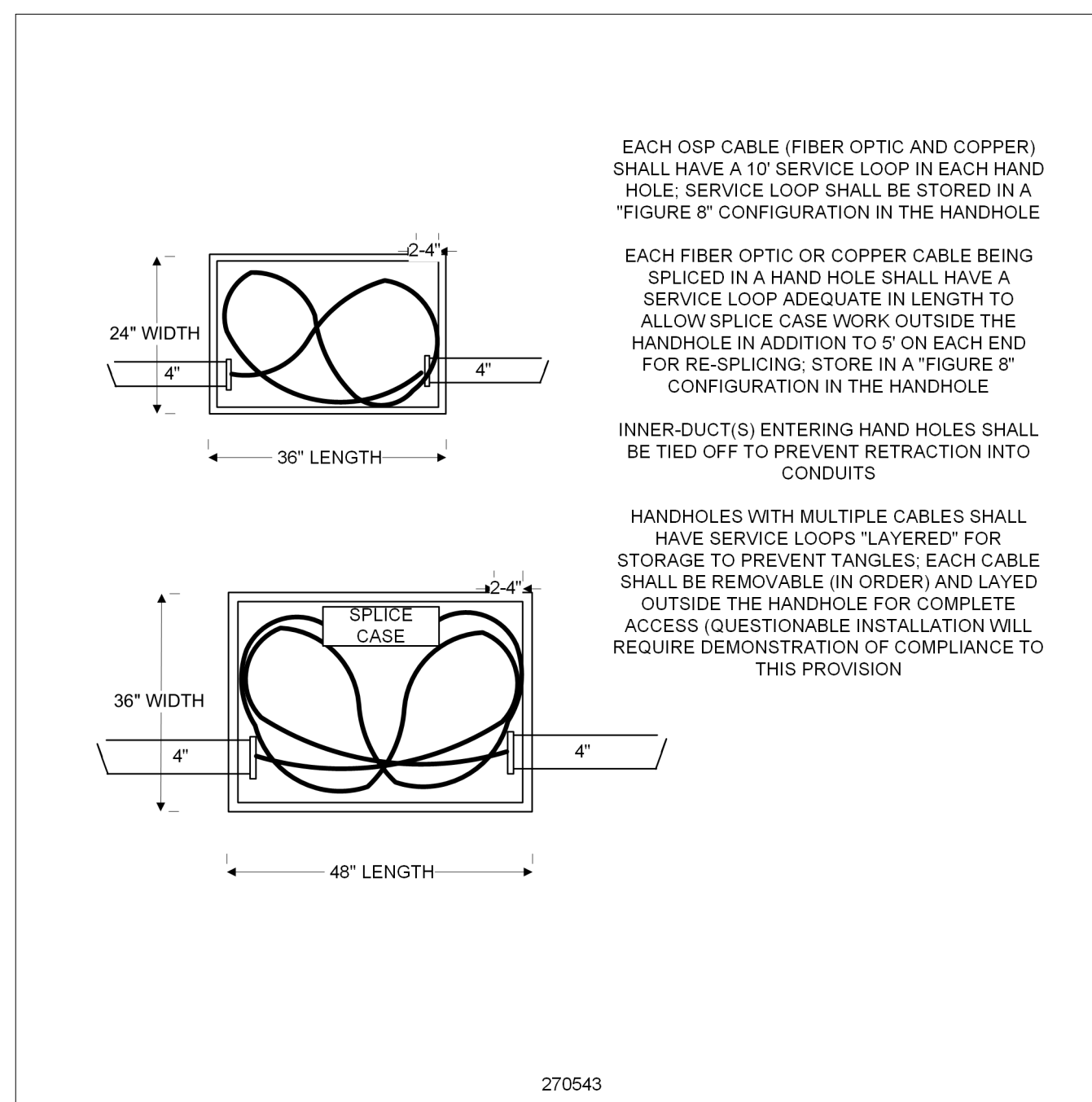
REMOTE ENCLOSURE PAD ROUGH-IN  
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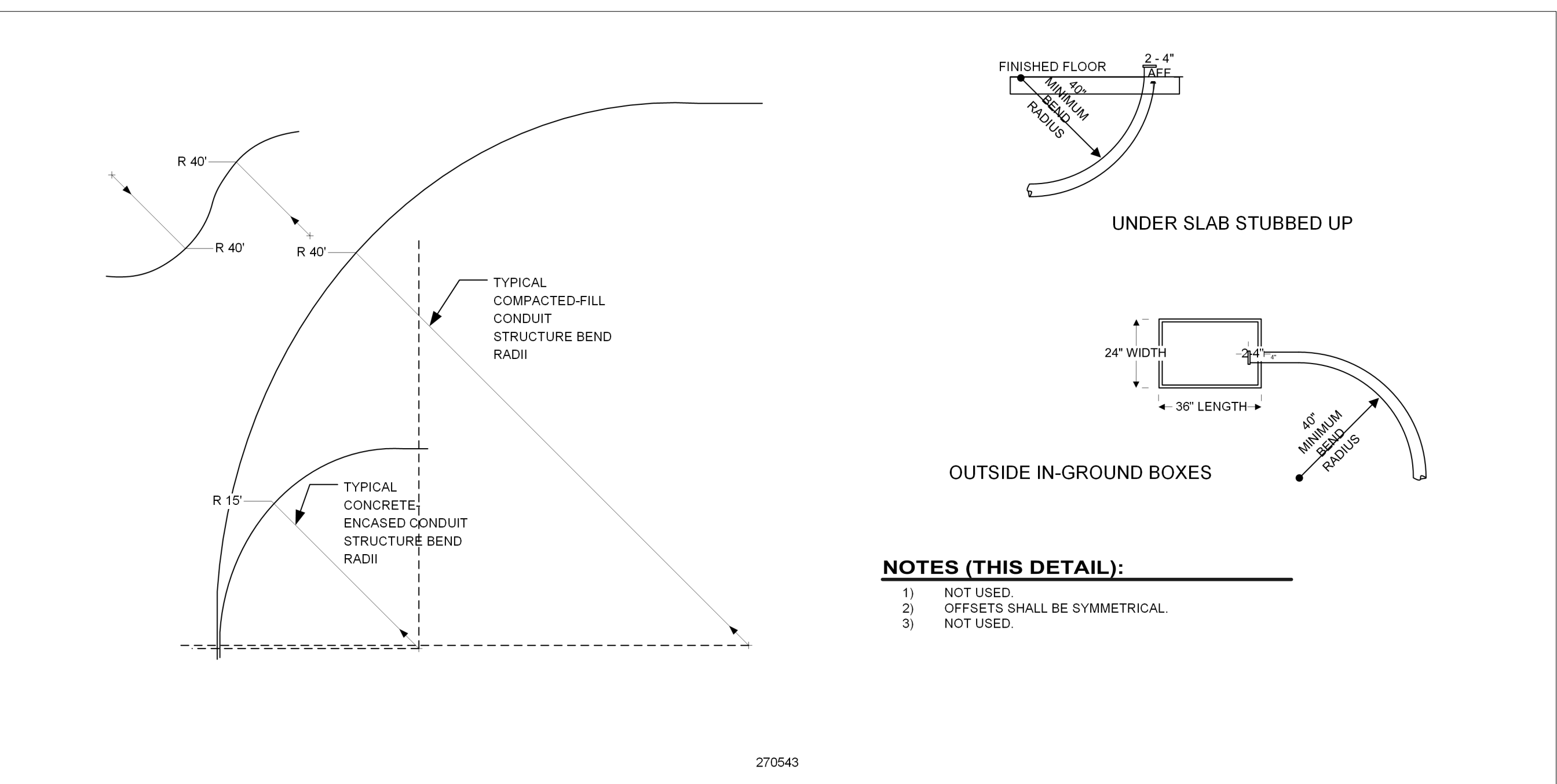
REMOTE CABINET  
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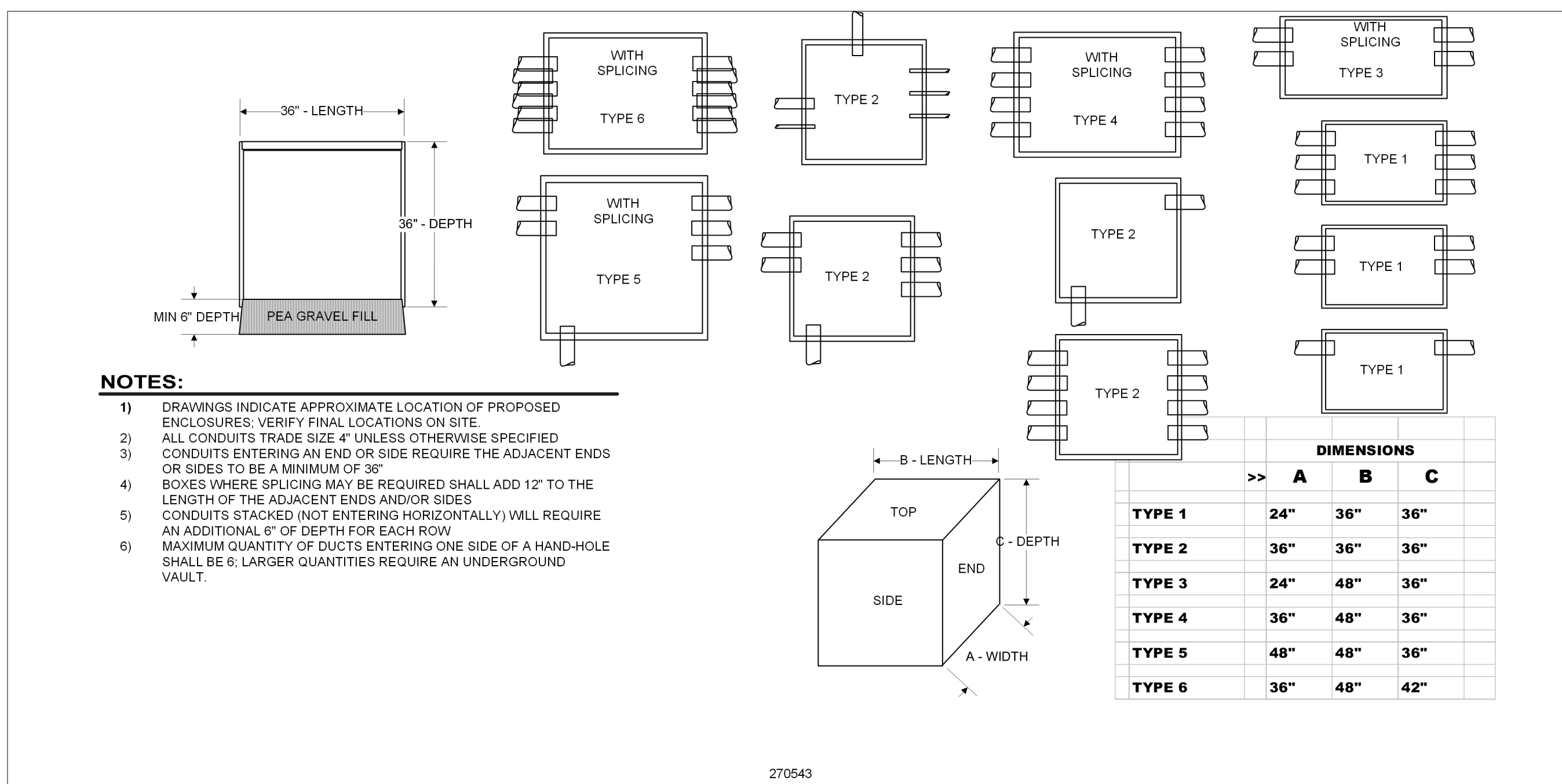
OSP JOINT TRENCH  
NTS



OSP BOX SERVICE LOOPS  
NTS



OSP CONDUIT BEND RADIUS  
NTS



OSP IN-GROUND PULL BOX SIZING  
NTS

#### GIBRALTAR DESIGN

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PROJECT  
21-139  
21-141  
DATE  
6/14/22

COORDINATED BY  
BKS  
DRAWN BY  
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REVISIONS		
MARK	DATE	ISSUED FOR
AD.02	7-22-22	ADDENDUM 02

DRAWING  
TELECOMMUNICATION SITE PLAN  
DETAILS

PROJECT  
LIBERTY & WESTCHESTER  
INTERMEDIATE SCHOOLS -  
ATHLETIC SITE PROJECTS

GIBRALTAR DESIGN SHEET

TS501

### CONDUCTOR SIZING

Recommended Sizing of the Telecommunications Bonding Backbone Conductor (TBBC) and Grounding Equalizer (GE) per J-STD-607-A

The TBBC, BC, and BCT shall be copper conductors. The TBBC shall be sized at 2 kmil per linear foot of conductor length up to a maximum size of a 3/0 AWG. The TBBC may be insulated. The Bonding conductor for Telecommunications (BCT) and Bonding Conductor (BC) shall be, as a minimum, the same size as the largest TBBC used (1)

SIZE (AWG)	TBBC LENGTH LINEAR M (FT)	TBBC
LESS THAN 4 (13)		6
4-6 (14-20)		4
6-8 (21-28)		3
8-10 (27-33)		2
10-13 (34-41)		1
13-16 (42-52)		1/0
16-20 (53-66)		2/0
GREATER THAN 20 (66)		3/0"

The TBBC minimum conductor size shall be a No. 6 AWG.

\*3/0 may not always be available, 4/0 is a more common size that may be substituted.

(1), Telecommunications Industry Association, Commercial Building Grounding (Earthing) and Bonding Requirements For Telecommunications, J-STD-607-A, October 2002.

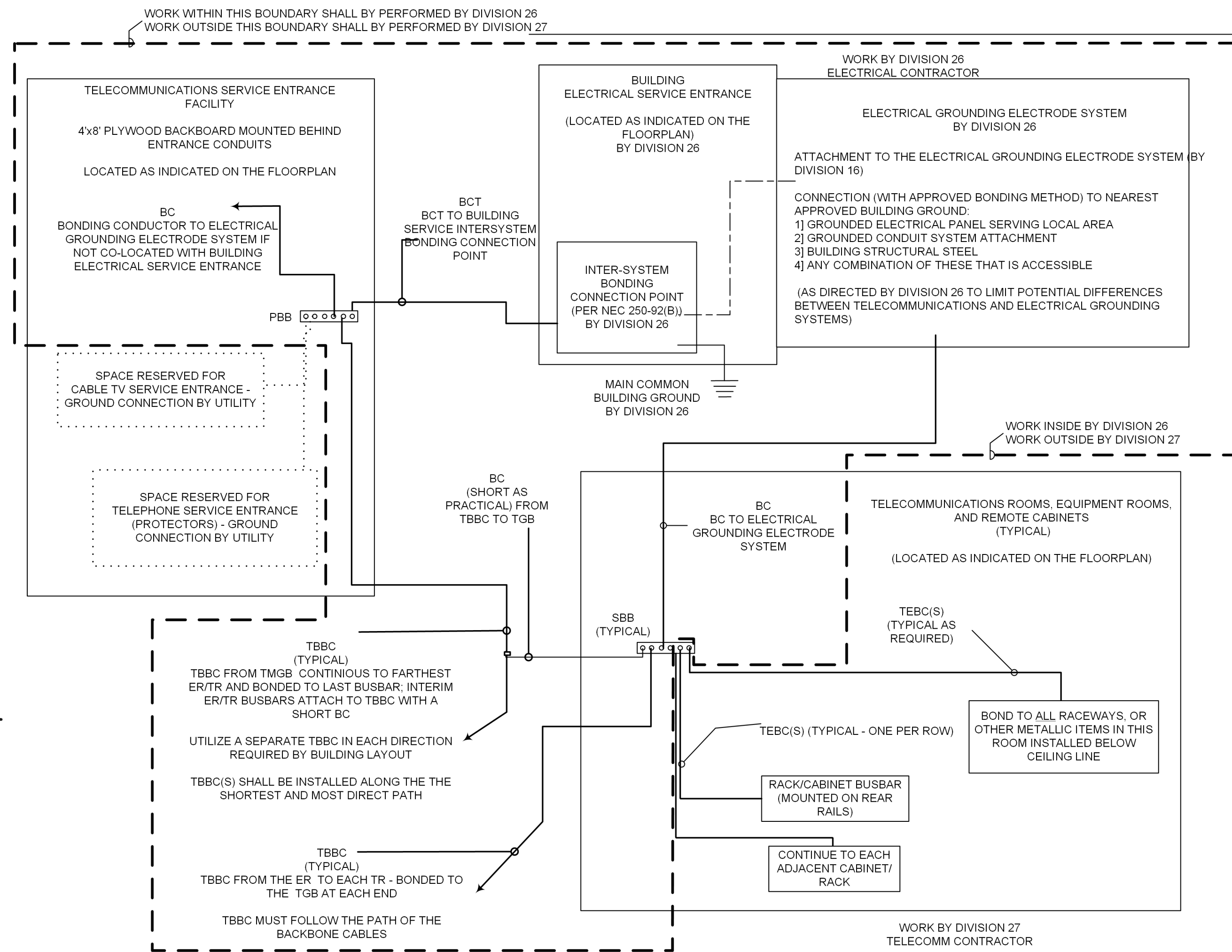
### ABBREVIATIONS

TR	= TELECOMMUNICATIONS ROOM
BBC	= BACKBONE BONDING CONDUCTOR
TBBC	= TELECOMMUNICATIONS BONDING BACKBONE CONDUCTOR
TEBC	= TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR
PBB	= PRIMARY GROUNDING BUSBAR
SEB	= SECONDARY GROUNDING BUSBAR
RR	= RACK GROUNDING BUSBAR
ER	= EQUIPMENT ROOM
TBC	= TELECOMMUNICATIONSBONDING CONDUCTOR
EF	= ENTRANCE FACILITY

### GROUNDING SYSTEM NOTES: (THIS DETAIL)

- TBBC, TEBC, and BC GROUNDING CONDUCTORS MUST BE INSTALLED IN COMPLIANCE WITH LOCAL CODES; THIS MAY REQUIRE INSTALLATION IN METALLIC CONDUIT IF RUN THROUGH PLENUM CEILING CAVITIES.
- GROUNDING CONDUCTORS RUN THROUGH A CONDUIT SHALL BE BONDED TO THE CONDUIT AT EACH END.
- ALL GROUND CONDUCTORS SHALL BE INSTALLED IN THE SHORTEST AND MOST DIRECT PATH PRACTICAL.
- WHERE THE ENTRANCE FACILITY IS LOCATED IN THE ER, THE TMGB SHALL ALSO SERVE AS A TGB FOR THE ROOM; THE TBBCS REQUIRED FROM THE ER TO EACH TR ALONG THE BACKBONE CABLE PATH WILL ALSO BE USED TO CONNECT THE TGBS TO THE TMGB.
- REMOTE CABINETS SHALL SUBSTITUTE A R/C BUSBAR IN PLACE OF THE TGB.

### TELECOMMUNICATIONS GROUNDING DIAGRAM NTS



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### BACKBONE CABLE CONSTRUCTION NOTES

#### PREFACE

- CABLE CONSTRUCTION OPTIONS ARE AVAILABLE TO FIT MOST ENVIRONMENTS. IN DETERMINING THE PROPER CABLE CONSTRUCTION AND INSTALLATION METHOD, UTILIZE THE FOLLOWING GUIDELINES.
- THE FOLLOWING ARE PRE-APPROVED GUIDELINES FOR SELECTION OF CONSTRUCTION TYPE AND INSTALLATION METHOD. ANY DEVIATION FROM THESE GUIDELINES SHALL REQUIRE CONSULTANT'S APPROVAL PRIOR TO WORK BEING PERFORMED.

#### A - INDOOR CABLES

- COPPER CABLES UTILIZED INSIDE CLOSED CONDUIT SYSTEMS SHALL HAVE A MINIMUM OF A 'RISER' (UL) RATING.
- COPPER CABLES USED IN INDOOR PATHWAYS SUCH AS J-HOOKS, LADDER RACK, CABLE TRAY, ETC., SHALL HAVE A MINIMUM OF A 'RISER' (UL) RATING. IF ANY PORTION OF THE CABLE(S) PASSES THROUGH A SPACE DEFINED AS A 'PLENUM' AIR SPACE, THE CABLE(S) SHALL HAVE A MINIMUM 'PLENUM' RATINGS (UL).
- FIBER OPTIC CABLES UTILIZED INSIDE CLOSED CONDUIT SYSTEMS SHALL HAVE A MINIMUM OF A 'RISER' (UL) RATING. INNER-DUCT (TUBULAR OR TEXTILE) SHALL BE UTILIZED FOR CONDUITS LARGER THAN 3" TRADE SIZE.
- FIBER OPTIC CABLES USED IN INDOOR PATHWAYS SUCH AS J-HOOKS, LADDER RACK, CABLE TRAY, ETC., SHALL HAVE A MINIMUM OF A 'RISER' (UL) RATING. IF ANY PORTION OF THE CABLE(S) PASSES THROUGH A SPACE DEFINED AS A 'PLENUM' AIR SPACE, THE CABLE(S) SHALL HAVE A MINIMUM 'PLENUM' RATINGS (UL). FIBER OPTIC CABLES SHALL BE INSTALLED WITHIN A TUBULAR INNER-DUCT CARRYING THE SAME RATING AS THE CABLE.
- FIBER OPTIC CABLES IN INDOOR PATHWAYS MAY BE SUPPLIED WITH A FLEXIBLE ARMORED CONSTRUCTION WHICH WILL FULFILL THE INNER-DUCT REQUIREMENT.
- NOT USED

#### B - OUTDOOR CABLEING

- CABLES UTILIZED WITHIN A PATHWAY WHERE THE CABLE IS SUBJECT TO MOISTURE AND FREEZING/THAWING CYCLES SHALL BE OF AN 'OSP' GRADE. NOTE: ALL CABLING ABOVE OR BELOW GROUND, CONNECTING TWO OR MORE FACILITIES (WITH THE EXCEPTION OF A TUNNEL PATHWAY) SHALL BE CONSIDERED TO BE IN A WET ENVIRONMENT. THIS IS INCLUSIVE OF ALL CONDUITS BELOW THE SLAB WITHIN THE PERIMETER OF A FACILITY.
- CABLES USED IN OUTDOOR OVERHEAD (AERIAL) PATHWAYS SHALL BE SUPPORTED BY LASHING TO A MESSENGER STRAND (SIZED AND INSTALLED SO AS TO ALLOW LESS THAN 1% SAG) OR PLACED WITHIN A CABLE TRAY. THESE CABLES SHALL BE UN-RATED AND SHALL BE CLASSIFIED AS HAVING 'AERIAL/DUCT' CONSTRUCTION.
- PAIRED COPPER CABLES UTILIZED INSIDE CLOSED UNDERGROUND CONDUIT SYSTEMS SHALL INCORPORATE WATER BLOCKING TECHNOLOGY AND SHALL HAVE AN OVERALL SHIELD. THE SHIELD SHALL BE BONDED TO TELECOMMUNICATIONS GROUND (ALONG WITH THE PROTECTOR GROUND). (NOTE: A SHIELD ISOLATION SHALL BE CREATED IN ONE POINT ALONG THE ROUTE TO PREVENT A GROUND PATH BETWEEN BUILDINGS).
- FIBER OPTIC CABLES USED INSIDE CLOSED UNDERGROUND CONDUIT SYSTEMS SHALL INCORPORATE WATER BLOCKING TECHNOLOGY AND BE OF LOOSE-TUBE CONSTRUCTION. INNER-DUCTS SHALL BE UTILIZED (TUBULAR OR TEXTILE AS SPECIFIED) TO PROTECT THE CABLE FROM DAMAGE WITHIN THE CONDUIT.
- NOT USED

#### C - COMBINATION OF INDOOR AND OUTDOOR CABLEING

- ALL REQUIREMENTS ABOVE APPLY TO THESE APPLICATIONS. THE FOLLOWING ITEMS ARE EXCEPTIONS AND KEY INFORMATION FOR PROPER APPLICATION.
- CABLES THAT ARE UNLISTED AND CONSTRUCTED FOR OSP USE SHALL TERMINATE WITHIN 50' OF THE BUILDING ENTRANCE.
- CABLES THAT ARE UNLISTED AND CONSTRUCTED FOR OSP USE SHALL NOT BE IN A 'PLENUM' AIR SPACE. ENTRANCE CONDUITS MUST CONTINUE THROUGH THIS TYPE SPACE TO BE TERMINATED.
- COPPER CABLES BETWEEN ANY TWO FACILITIES SHALL BE PROTECTED AT EACH END WITH GROUNDED PROTECTOR UNITS WITH GAS TUBE PROTECTORS ON EACH PAIR.
- FIBER OPTIC CABLE MAY BE OF AN INDOOR/OUTDOOR CONSTRUCTION AND CARRY THE APPROPRIATE UL LISTING (OFNR OR OFNP) FOR THE ENVIRONMENT TO AVOID SPLICING AT THE BUILDING ENTRANCE(S).
- COPPER CABLES UTILIZED WITHIN A UNDERGROUND PATHWAY WHERE THE CABLE IS SUBJECT TO MOISTURE AND NOT SUBJECT TO FREEZING/THAWING CYCLES (BETWEEN TWO POINTS WITHIN A FACILITY). THESE CABLES MAY BE OF INDOOR CONSTRUCTION (WITH APPLICABLE RATING) IN INSTALLED WITHIN A CONTINUOUS PROTECTIVE TUBULAR INNER-DUCT WITHIN THE CONDUIT PROTECTING IT FROM MOISTURE.

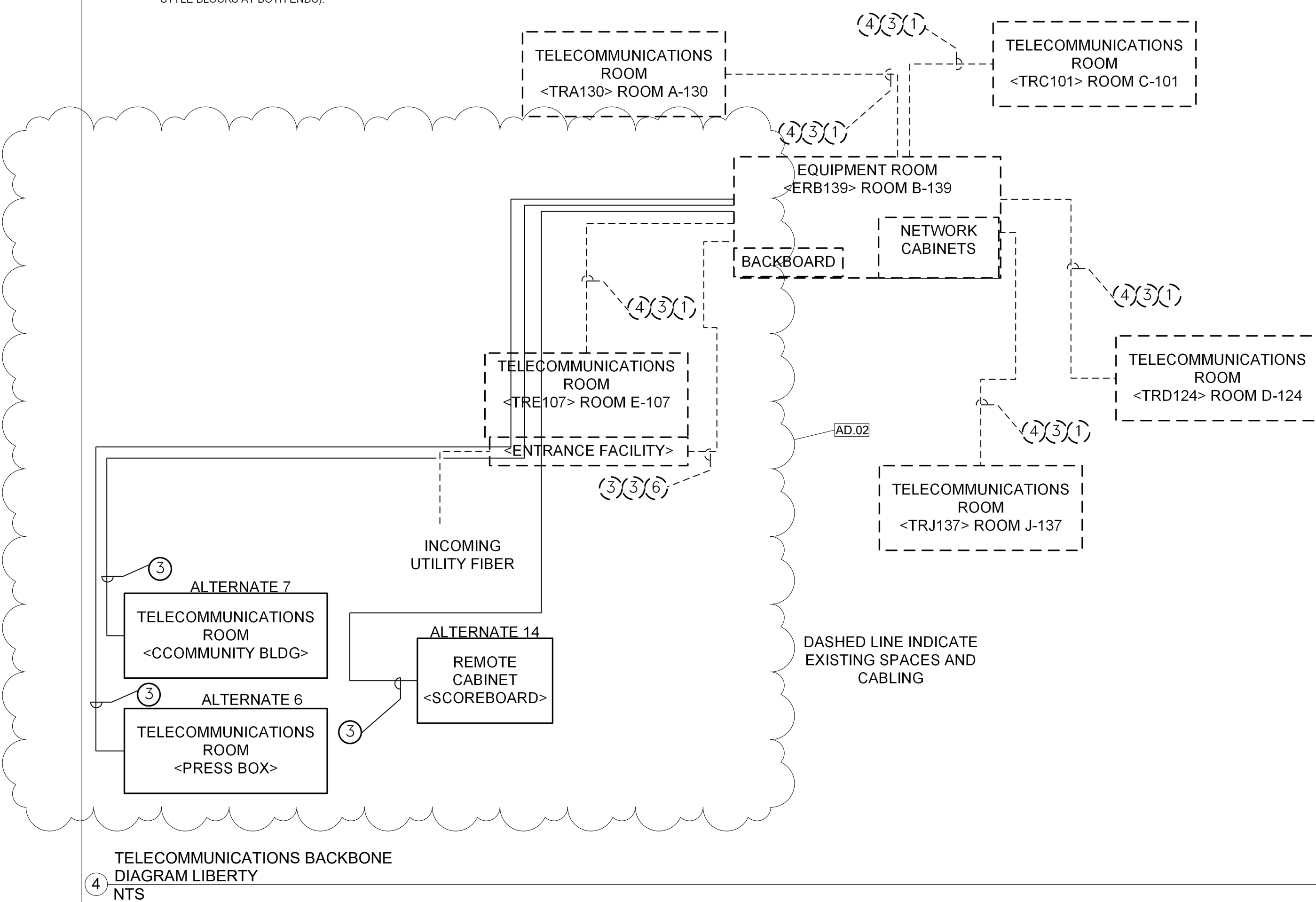
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### BACKBONE NOTES (THIS DETAIL)

- BACKBONE CABLES ENTERING THE EQUIPMENT ROOM AND TELECOMMUNICATIONS ROOM(S) SHALL CONTINUE WITHIN EACH ROOM TO THEIR SPECIFIED TERMINATION POINT WITH ADEQUATE SERVICE LOOP (SEE NOTES THIS DETAIL).
- NOT USED.
- THIS DIAGRAM IS INTENDED TO SHOW BACKBONE CABLES REQUIRED BETWEEN MAJOR TERMINATION POINTS IN THIS PROJECT. THIS DIAGRAM IS NOT INTENDED TO INDICATE CABLE OR CONDUCTOR ROUTING OR TERMINATION METHODS OR LOCATIONS. UTILIZE DETAIL DRAWINGS AND FLOORPLANS FOR ADDITIONAL INFORMATION.
- UNLESS OTHERWISE NOTED, BACKBONE TERMINATIONS SHALL BE AS FOLLOWS:  
1) FIBER OPTIC CABLE WILL TERMINATE IN PATCH PANELS IN THE RACKS/CABINETS AT EACH END.  
2) 4 PAIR COPPER CABLES SHALL BE TERMINATED WITH COLOR CODED RJ45 JACKS AND LANDED IN CONFIGURABLE/MODULAR PATCH PANELS AT EACH END.  
3) WHERE REQUIRED, VIDEO COAX CABLES SHALL TERMINATE ON BACKBOARDS AT EACH END COILED FOR ATTACHMENT DIRECT TO EQUIPMENT.  
4) UTP COPPER (VOICE) BACKBONE CABLES SHALL TERMINATE ON PATCH PANEL(S) IN THE TRS AND ON 110 STYLE BLOCKS ON A BACKBOARD IN THE ER (CABLE FROM THE BUILDING ENTRANCE FACILITY TO THE ER BACKBOARD SHALL TERMINATE ON 110 STYLE BLOCKS AT BOTH ENDS).

### BACKBONE LEGEND: (THIS DETAIL)

- QTY (2) 4 PAIR CATEGORY 6 CABLES
- 6 STRANDS MULTIMODE FIBER OPTIC CABLE
- 6 STRANDS SINGLEMODE FIBER OPTIC CABLE
- 12 STRANDS MULTIMODE FIBER OPTIC CABLE
- 12 STRANDS SINGLEMODE FIBER OPTIC CABLE
- 24 STRANDS SINGLEMODE FIBER OPTIC CABLE
- 25 PAIR CATEGORY 3 UNSHIELDED TWISTED PAIR CABLE



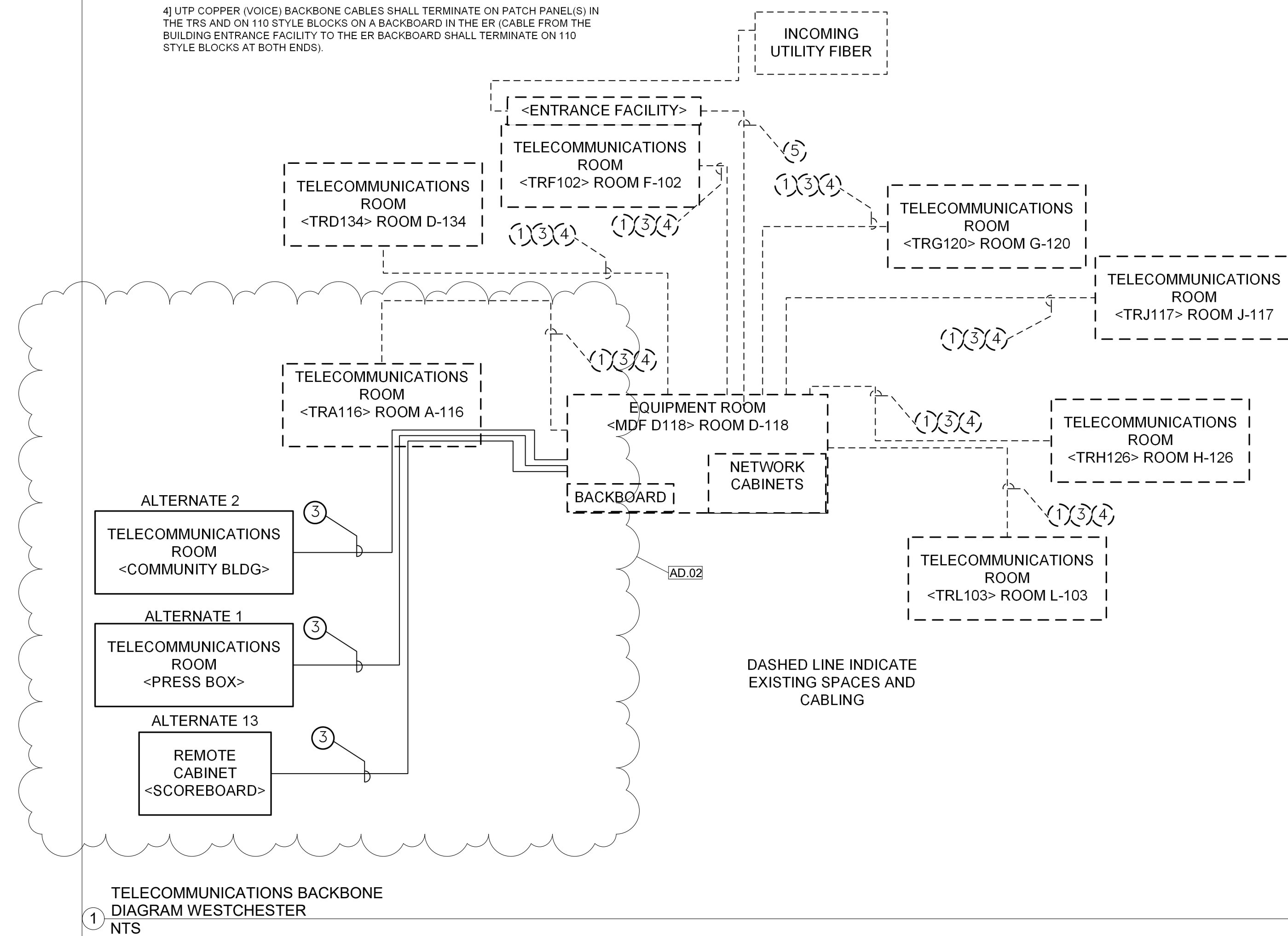
### TELECOMMUNICATIONS BACKBONE DIAGRAM LIBERTY NTS

### BACKBONE NOTES (THIS DETAIL)

- BACKBONE CABLES ENTERING THE EQUIPMENT ROOM AND TELECOMMUNICATIONS ROOM(S) SHALL CONTINUE WITHIN EACH ROOM TO THEIR SPECIFIED TERMINATION POINT WITH ADEQUATE SERVICE LOOP (SEE NOTES THIS DETAIL).
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### BACKBONE LEGEND: (THIS DETAIL)

- QTY (2) 4 PAIR CATEGORY 6 CABLES
- 6 STRANDS MULTIMODE FIBER OPTIC CABLE
- 6 STRANDS SINGLEMODE FIBER OPTIC CABLE
- 12 STRANDS MULTIMODE FIBER OPTIC CABLE
- 12 STRANDS SINGLEMODE FIBER OPTIC CABLE
- 25 PAIR CATEGORY 3 UNSHIELDED TWISTED PAIR CABLE



### TELECOMMUNICATIONS BACKBONE DIAGRAM WESTCHESTER NTS



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**LIBERTY &  
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INTERMEDIATE  
SCHOOLS -  
ATHLETIC SITE  
PROJECTS**  
DUNELAND SCHOOL CORPORATION  
CHESTERTON, INDIANA

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DRAWING

TELECOMMUNICATIONS DIAGRAMS

PROJECT

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INTERMEDIATE SCHOOLS -

ATHLETIC SITE PROJECTS

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