NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

NEW CANEY ISD

NEW CANEY, TEXAS

FIELD HOUSE

TRACK STADIUM

NEW CANEY ISD

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REGISTERED ARCHITECT
BRUCE G. BOYTER
13929
STATE OF TEXAS

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

COVER

SHEET NO.

A0.01

NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

ABBREVIATIONS

A

A.F.F.	ABOVE FINISH FLOOR
A.C.T.	ACOUSTICAL CEILING TILE
ADDL.	ADDITIONAL
A.B.	AIR BARRIER
A.C.M.	ALUMINUM COMPOSITE PANEL
A.D.A.	AMERICANS WITH DISABILITIES ACT
AL/ALUM.	ALUMINUM
APPROX.	APPROXIMATE OR APPROXIMATELY
ARCH.	ARCHITECT OR ARCHITECTURAL

B

BD.	BOARD
B.O.W.	BOTTOM OF WALL
B.U.R.	BUILT-UP ROOFING
BLDG.	BUILDING

C

℄	CENTER LINE
C.R.	CLASSROOM
C.F.S.	COLD-FORMED STEEL
CONC.	CONCRETE
CMU	CONCRETE MASONRY UNIT
C.M.	CONSTRUCTION MANAGER
CONT.	CONTINUOUS
C.I.	CONTINUOUS INSULATION
C.J.	CONTROL JOINT
COORD.	COORDINATE
CORR.	CORRIDOR

D

DIA.	DIAMETER
D.O.	DOOR OPENING
DN.	DOWN
DS.	DOWNSPOUT

E

EA.	EACH
E.W.	EACH WAY
ELEC.	ELECTRICAL
E.W.C.	ELECTRIC WATER COOLER
ELEV.	ELEVATION
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXIST.	EXISTING
E.J.	EXPANSION JOINT
EXT.	EXTERIOR
EIFS	EXTERIOR INSULATION & FINISH SYSTEM

F

FT.	FEET or FOOT
F.R.P.	FIBERGLASS REINFORCED PLASTIC
F.V.	FIELD-VERIFY
FIN.	FINISH
F.F.	FINISH FLOOR
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER & CABINET
F.H.C.	FIRE HOSE CABINET
F.H.C.S.	FLAT-HEAD COUNTERSUNK
FLR.	FLOOR
F.D.	FLOOR DRAIN
FLUOR.	FLUORESCENT

G / H

GALV.	GALVANIZED
GA.	GAGE
G.C.	GENERAL CONTRACTOR
G.O.	GLAZED OPENING
GYP	GYPSUM
HT.	HEIGHT
H.P.	HIGH POINT
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
H.B.	HORIZONTAL BLINDS
H.D.G.	HOT-DIP GALVANIZED
HR.	HOUR

I / J / K

I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
I.B.C.	INTERNATIONAL BUILDING CODE

L

LAV.	LAVATORY
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
L.P.	LOW POINT
L.V.T.	LUXURY VINYL TILE

M

MFR.	MANUFACTURER
MFG.	MANUFACTURING
M.B.	MARKER BOARD
M.O.	MASONRY OPENING
MAX.	MAXIMUM
MECH.	MECHANICAL

M (CONT.)

MOD BIT	MODIFIED BITUMEN
MULL.	MULLION
M.E.P.	MECHANICAL-ELECTRICAL-PLUMBING
M.C.M.	METAL COMPOSITE MATERIAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS

N

NOM.	NOMINAL
N/A	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO./#	NUMBER

O

O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.H.	OPPOSITE HAND
OHD.	OVERHEAD
O.F.C.I.	OWNER-FURNISHED, CONTRACTOR-INSTALLED
O.F.O.I.	OWNER-FURNISHED, OWNER INSTALLED

P / Q

PR.	PAIR
P.LAM.	PLASTIC LAMINATE
PL.	PLATE
PLUMB.	PLUMBING
PT.	POINT
P.C.F.	POUNDS PER CUBIC FOOT
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
PREFAB.	PREFABRICATED
PROJ.	PROJECTOR or PROJECTION
Q.T.	QUARRY TILE

R

R.	RADIUS
REBAR	REINFORCING BAR
REF.	REFERENCE or REFER TO
R.C.P	REFLECTED CEILING PLAN
RE:	REGARDING
REFG.	REFRIGERATOR
REINF.	REINFORCE or REINFORCING
REQD.	REQUIRED
R.	RISER (STAIR)
R.D.	ROOF DRAIN
R.O.	ROUGH OPENING

S

SIM.	SIMILAR
S.C.	SOLID CORE
S.A.B.	SOUND ATTENUATION BLANKET
S.A.F.B.	SOUND ATTENUATION FIRE BLANKET
S.T.C.	SOUND TRANSMISSION CLASS
SPEC.	SPECIFICATION
SQ.	SQUARE
S.F.	SQUARE FOOT
S.S.	STAINLESS STEEL
STRUC.	STRUCTURAL
SUSP.	SUSPENDED

T

T.B.	TACKBOARD
T.W.	TACK WALL
T.C.	TEACHER'S CABINET
T.A.S.	TEXAS ACCESSIBILITY STANDARDS
T.	TREAD (STAIR)
T&B	TOP & BOTTOM
T.O.	TOP OF
T.C.	TOP OF CURB
T.O.D.	TOP OF DECK
T.O.J.	TOP OF JOIST
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TYP.	TYPICAL

U / V

U/C	UNDER COUNTER
U.L.	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
V.I.F.	VERIFY IN FIELD
VERT.	VERTICAL
V.C.T.	VINYL COMPOSITION TILE
V.W.C	VINYL WALL COVERING

W / X / Y / Z

W.C.	WATER CLOSET
W.R.B.	WATER-RESISTIVE BARRIER
WT.	WEIGHT
W.	WIDE
W/	WITH
W/O	WITHOUT
W.P.	WORKING POINT
W.W.F.	WELDED WIRE FABRIC

MATERIAL INDICATIONS

- EARTH
- POROUS FILL
- CONCRETE/ GROUT
- BRICK
- CMU (LARGE SCALE)
- MARBLE
- METAL (LARGE SCALE)
- METAL (SMALL SCALE)
- RESILIENT FLOORING
- ACOUSTICAL TILE
- TERRAZZO
- PLASTER, SAND, GROUT
- CERAMIC TILE
- GLASS (LARGE SCALE)
- INSULATION (RIGID FOAM BOARD)
- INSULATION (EPS FOAM BOARD)
- INSULATION (BATT/ BLANKET)
- INSULATION (SEMI-RIGID BOARD)
- WOOD, ROUGH (CONTINUOUS)
- WOOD, ROUGH (BLOCKING)
- WOOD, FINISH
- PLYWOOD (LARGE SCALE)
- FIBER CEMENT PANEL
- METAL LATH
- GYPSUM BOARD

PROJECT INFORMATION

PROJECT IDENTIFICATION

PROJECT NAME - NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

OWNER - NEW CANEY I.S.D.

PROJECT LOCATION - 22555 EAGLE DRIVE, NEW CANEY, TEXAS 77375

TDLR PROJECT REGISTRATION NUMBER - TABS_____

APPROXIMATE BUILDING AREAS

TOTAL BLDG AREA:

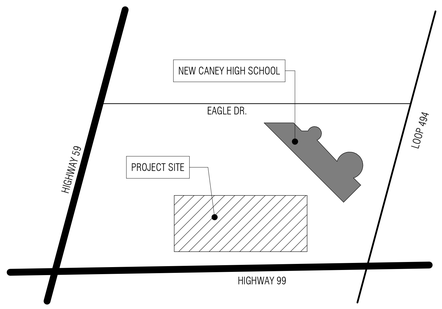
FIELD HOUSE .....30,281 SF
PRESSBOX / TICKETING.....400 SF

BUILDING CONSTRUCTION INFORMATION

TYPE OF CONSTRUCTION (TABLE 601 - IBC): TYPE II-B

FIRE PROTECTION SYSTEM: AUTOMATIC SPRINKLER SYSTEM THROUGHOUT

SITE LOCATION MAP



SYMBOLS LEGEND

- CLASSROOM / A201 — ROOM NAME & NUMBER
- A203 — DOOR NUMBER
- A — ALUMINUM-FRAMED GLAZED OPENING SYSTEM
- D.H. / H.M. — HOLLOW METAL-FRAMED GLAZED OPENING SYSTEM
- P1 — PARTITION TYPE
- ABC-01 — BUILDING ASSEMBLY TYPE
- A2/7 — SHEET NO. / DWG. NO. — BUILDING ELEVATION
- 1/A7.1 — DWG. NO. / SHEET NO. — BUILDING SECTION
- 1/A7.1 — DWG. NO. / SHEET NO. — WALL SECTION
- L / 5 — LOUVER
- 8 — KEYED NOTE
- NORTH ARROW
- HR — HORIZONTAL BLINDS
- DWG. NO. 3/A8.01 SHEET NO. — INTERIOR ELEVATION
- DWG. NO. 6/A4.05 SHEET NO. — SECTION DETAIL
- AC — ACCESS CONTROL
- DATUM ELEVATION

GENERAL NOTES

1. Refer to the CODE-series sheets for Code Information, Design Criteria and Fire Protection Requirements.
2. Verify and document existing dimensions and conditions at the site before beginning construction. Notify the Architect of conflicts or variations prior to commencement of construction.
3. Based on the applicable design criteria, submit Shop Drawings of the proposed pattern of control joints in masonry veneer, CMU, gypsum board, plaster and stucco to the Architect for review and approval prior to construction.
4. In case of discrepancies in or between the Contract Documents, the greater quantity or better quality shall be bid. Clarifications regarding the discrepancies shall be requested from the Architect prior to construction, and the resulting interpretations implemented in accordance with the Contract Documents.

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CODE.x	CODE REVIEW

CIVIL

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ARCHITECTURAL

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REGISTERED ARCHITECT — BRUCE G. BOYTER — 23927 — STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

INDEX TO DRAWINGS
GENERAL NOTES
ABBREVIATIONS

SHEET NO.

A0.02

NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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PROJECT INFORMATION

VLK Project Number: 23-155.00
Project: New Caney High School Extracurricular Improvements - Phase III (Field House)
Owner: New Caney Independent School District
Project Location: 22555 Eagle Drive, New Caney, Texas 77375

AHJ: Montgomery County

Building Codes: 2018 International Building Code (IBC) ER 31-19
Chapter 8 County Building Code
2018 International Building Code (IBC)
2015 International Fire Code (NFPA)
2015 NFPA 101 Lite Safety Code
2012 International Green Construction Code
2015 IBC Amendments
2018 International Energy Conservation Code (IECC)
2018 International Mechanical Code (IMC)
Montgomery County Code Chapter 8 (Mechanical)
Montgomery County Code Chapter 8 (Electrical)
NFPA 70 (National Electric Code)
2018 International Plumbing Code (IPC)

State Codes: 2012 Texas Accessibility Standards

Building Data:

FLOOR PLAN (Building Area): 30,281 sq. ft.

*Other at 50% 0 sq. ft.
Grand Total: 30,281 **sq. ft.**
Equipment Platforms, Canopies, Overhangs, Balconies

CHAPTER 3: USE AND OCCUPANCY CLASSIFICATION

Section 302.1 **Classification**
Educational (Section 305): Group E (with automatic fire sprinkler system throughout)

Section 305.1 **Educational Group E**
The two fundamental characteristics of a Group E facility are as follows:
1. The facility is occupied by more than five persons (excluding the instructor); and
2. The purpose of the facility is for educating persons at the 12th-grade level and below, but not including more than five occupants 2 1/2 years of age or less.

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS

Section 501.2 **Address Identification.**
New and existing buildings shall be provided with *approved* address identification. The address shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 1/2" inch (12.7mm). Where required by the fire *code official*, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other approved sign or means shall be used to identify the structure. Address identification shall be maintained.

Table 504.3 **ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE**
(Type II-B – Group E Occupancy w/ Automatic Sprinkler System)
Maximum Height – 75 feet

Table 504.4 **ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE**
Number of Stories- 3

Section 505.3 **Equipment Platforms.**
Equipment platforms in buildings shall not be considered as a portion of the floor below. Such equipment platforms shall not contribute to either the building area or number of stories as regulated by Section 503.1. The area of the equipment platform shall not be included in determining the fire area. Equipment platforms shall not be a part of any mezzanine and such platforms and the walkways, stairs, alternating tread devices and ladders providing access to an equipment platform shall not serve as a part of the means of egress from the building.

Section 505.3.1 **Area Limitation.**
The aggregate area of all equipment platforms within a room shall not be greater than two-thirds of the area of the room in which they are located.

Section 505.3.2 **Automatic Sprinkler System.**
Where located in a building that is required to be protected by an automatic sprinkler system, equipment platforms shall be fully protected by sprinklers above and below the platform, where required by the standards referenced in Section 903.3.

Section 505.3.3 **Guards.**
Equipment platforms shall have guards where required by Section 1015.2.

Section 506 **BUILDING AREA**
Section 506.1 **General.**
The floor area of a building shall be determined based on the type of construction, occupancy classification, whether there is an automatic sprinkler system installed throughout the building and the amount of building frontage on public way or open space.

Table 506.2 **ALLOWABLE AREA FACTOR IN SQUARE FEET**
Type IIB / S1 = 58,000 sq.ft.

Section 506.2.1 **Single-occupancy, one-story buildings.**
Equation 5-1 $A_a = A_t + (NS \times I_f)$ where:

A_a = 68,875 (Allowable area (square feet))
A_t = 58,000 (Tabular allowable area factor (NS, S1, S13R, of SM value, as applicable) in accordance with Table 506.2)
NS = 14,500 (Tabular allowable area factor in accordance with Table 506.2 for nonsprinklered building (regardless of whether the building is sprinklered))
I_f = .75 (Area increase factor increase due to frontage (percent) as calculated in accordance with Section 506.3

$A_a = A_t + (NS \times I_f)$
A_a = 58,000 + (14,500 x .75)
A_a = 58,000 + 10,875
A_a = **68,875 sq.ft.**

Section 506.3 **Frontage increase.**
Every building shall adjoin or have access to a public way to receive an area factor increase based on frontage. Area factor shall be determined in accordance with Sections 506.3.1 through 506.3.3.

Section 506.3.1 **Minimum percentage of perimeter.**
To qualify for an area factor increase based on frontage, a building shall have not less than 25 percent of its perimeter on a public way or open space. However, in order to qualify for an area increase, a building must have more than 25 percent of its perimeter on a public way or open space having a minimum width of at least 20 feet. When the calculations are done, the maximum percent increase for a fully open perimeter (full frontage-the entire perimeter fronts on a public way or open space) is 75 percent.

Section 506.3.2 **Minimum frontage distance.**
To qualify for an area factor increase based on frontage, the public way or open space adjacent to the building perimeter shall have a minimum distance (W) of 20 feet (6096 mm) measured at right angles from the building face to any of the following:
1. The closest interior lot line.
2. The entire width of a street, alley or public way.
3. The exterior face of an adjacent building on the same property.
Where the value of W is greater than 30 feet (9144 mm), a value of 30 feet (9144 mm) shall be used in calculating the building area increase based on footage, regardless of the actual width of the public way or open space. Where the value of W varies along the perimeter of the building, the calculation performed in accordance with Equation 5-5 shall be based on the weighted average calculated in accordance with Equation 5-4.

Equation 5-4 $W = (L_1 x\, w_1 + L_2 x\, w_2 + L_3 x\, w_3 ...)/F$ where:
W = (Width: weighted average) = Calculated width of public way or open space (feet)
L_n = Length of a portion of the exterior perimeter wall.
w_n = Width (>/ = 20 feet) of a public way or open space associated with that portion of the exterior perimeter wall
F = Building perimeter that fronts on a public way or open space having a width of 20 feet (6096 mm) or more.
Exception: Where a building meets the requirements of Section 507, as applicable, except for compliance with the minimum 60-foot (18 288 mm) public way or yard equipment, and the value of W is greater than 30 feet (9144 mm), the value of W shall not exceed 60 feet (18 288 mm).

Section 506.3.3 **Amount of Increase.**
The area factor increase based on frontage shall be determined in accordance with Equation 5-5:

Equation 5-5 $I_f = [F / P - 0.25] W / 30$ where:
I_f = .75 (Area increase factor due to frontage.)
F = 1,416 ft. (Building perimeter that fronts on a *public way* or open space having minimum distance of 20 feet)
P = 1,416 ft. (Perimeter of the entire building).
W = 30 ft. (Width of public way or open space (feet) in accordance with Section 506.3.2.)

$I_f = [F / P - 0.25] W / 30$
$I_f = [1,416 / 1,416 - 0.25] 30 / 30$
$I_f = [.75] 1$
I_f = **.75**

Section 508 **MIXED USE AND OCCUPANCY**
Section 508.1 **General.**
Each portion of a building shall be individually classified in accordance with Section 302.1. Where a building contains more than one occupancy group, the building or portion thereof shall comply with the applicable provisions of Sections 508.2, 508.3 or 508.4, or a combination of these sections.
Exceptions:
1. Occupancies separated in accordance with Section 510.
2. Where required by Table 415.6.2, areas of Group H-1, H-2 and H-3 occupancies shall be located in a detached building or structure.
3. Uses within live/work units, complying with Section 419, are not considered separate occupancies.

Section 508.2 **Accessory occupancies.**
Accessory occupancies are those occupancies that are ancillary to the main occupancy of the building or portion thereof. Accessory occupancies shall comply with the provisions of Sections 508.2.1 through 508.2.4.

Section 508.2.1 **Occupancy classification.**
Accessory occupancies shall be individually classified in accordances with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space.

Section 508.2.2 **Allowable building height.**
The allowable height and number of stories of the building containing accessory occupancies shall be in accordance with Section 504 for the main occupancy of the building.

Section 508.2.3 **Allowable building area.**
The allowable area of the building shall be based on the applicable provisions of Section 506 for the main occupancy of the building. Aggregate accessory occupancies shall not occupy more than 10 percent of the floor area of the story in which they are located and shall not exceed the tabular values for nonsprinklered buildings in Table 506.2 for each such accessory occupancy.

Section 508.2.4 **Separation of occupancies.**
No separation is required between accessory occupancies and the main occupancy.

Section 508.4 **Separated occupancies.**
Individual occupancies shall be separated from adjacent occupancies per Table 508.4.

CHAPTER 6: TYPES OF CONSTRUCTION
Section 601 **GENERAL**
Fire-Resistance Rating Requirements for Building Elements (Hours)

BUILDING ELEMENT	TYPE II-B
Primary Structural Frame	0 HR
Exterior Bearing Walls	0 HR
Interior Bearing Walls	0 HR
Exterior Non-Bearing Walls	0 HR
Interior Non-Bearing Walls	0 HR
Floor Construction and associated secondary members	0 HR
Roof Construction and associated secondary members	0 HR

Section 602 **CONSTRUCTION CLASSIFICATION**
Fire-Resistance Rating Requirements for Exterior Walls Based on Fire Separation Distance

Fire Separation Distance = X (feet)
10</= X < 30

Type of Construction: II-B
Occupancy Group E: 0 HR

Section 603 **COMBUSTIBLE MATERIAL IN TYPE I AND TYPE II CONSTRUCTION**
Section 603.1 **Allowable Materials.**
Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:
1. Fire-retardant-treated wood shall be permitted in:
1.1 Nonbearing partitions where the required fire-resistance rating is 2 hours or less.
1.2 Nonbearing exterior walls where fire-resistance-rated construction is not required.
1.3 Roof construction, including girders, trusses, framing and decking.
2. Thermal and acoustical insulation, other than foam plastics, having a flame spread index of not more than 25.

CHAPTER 7
FIRE AND SMOKE PROTECTION FEATURES

Section 705.3 **Buildings on the same lot.**
For the purposes of determining the required wall and opening protection, projections and roof-covering requirements, buildings on the same lot shall be assumed to have an imaginary line between them. Where a new building is to be erected on the same lot as an existing building, the location of the assumed imaginary line with relation to the existing building shall be such that the exterior wall and opening protection of the existing building meet the criteria as set forth in Sections 705.5 and 705.8.
Exceptions:
1. Two or more buildings on the same lot shall be either regulated as separate buildings or shall be considered as portions of one building if the aggregate area of such buildings is within the limits specified in Chapter 5 for a single building. Where the buildings contain different occupancy groups or are of different types of construction, the area shall be that allowed for the most restrictive occupancy or construction.

Section 705.4 **Materials.**
Exterior walls shall be of materials permitted by the building type of construction.

Section 705.5 **Fire-resistance ratings.**
Exterior walls shall be fire-resistance rated in accordances with Tables 601 and 602 and this section. The required fire-resistance rating of exterior walls with a fire separation distance of greater than 10 feet (3048 mm) shall be rated for exposire to fire from the inside. The required fire-resistance rating of exterior walls with a fire separation distance of less than or equal to 10 feet (3048mm) shall be rated for exposure to fire from both sides.

Section 705.6 **Structural stability.**
Exterior walls shall extend to the height required by Section 705.11. Interior structural elements that brace the exterior wall but that are not located within the plane of the exterior wall shall have the minimum fire-resistance rating required in Tably 601 for that structural element. Structural elements that brace the exterior wall but are located outside of the exterior wall or within the plane of the exterior wall shall have the minimum fire-resistance rating required in Tables 601 and 602 for the exterior wall.

Section 705.8 **Openings.**
Openings in exterior walls shall comply with Sections 705.8.1 through 705.8.6

Fire Separation Distance (feet): 25 to less than 30
Degree of Opening Protection: Unprotected, Sprinklered
Allowable Area: No Limit

Section 705.8.1 **Allowable area of openings.**
The maximum area of unprotected and protected openings permitted in an exterior wall in any story of a building shall not exceed the percentages specified in Table 705.8.
Exceptions:
1. In other than Group H occupancies, unlimited unprotected openings are permitted in the first story above grade plan either:
1.1. Where the wall faces a street and has a fire separation distance of more than 15 feet (4572mm); or
1.2. Where the wall faces an unoccupied space. The unoccupied space shall be on the same lot or dedicated for public use, shall not be less than 30 feet (9144mm) in width and shall have access from a street by a posted fire lane in accordance with the International Fire Code.
2. Buildings whose exterior bearing walls, exterior nonbearing walls and exterior primary structural frame are not required to be fire-resistance rated shall be permitted to have unlimited unprotected openings.

Section 705.8.3 **Unprotected openings.**
Where unprotected openings are permitted, windows and doors shall be constructed of any approved materials. Glazing shall conform to the requirements of Chapters 24 and 26.

Section 705.11 **Parapets.**
Parapets shall be provided on exterior walls of buildings.
Exceptions: A parapet need not be provided on an *exterior wall* where any of the following conditions exist:
1. The wall is not required to be fire-resistance rated in accordance with Table 602 because of the *fire separation distance*.
3. Walls that terminate at roofs or not less than 2-hour fire-resistance-rated construction or where the roof, including the deck or slab and supporting construction, is constructed entirely of nonsombustible materials.

Section 705.11.1 **Parapet construction.**
Parapets shall have the same fire-resistance rating as that required for the supporting wall, and on any side adjacent to a roof surface, shall have noncombustible faces for the uppermost 18 inches (457 mm), including counterflashing and coping materials. The height of the parapet shall be not less than 30 inches (762 mm) above the point where the roof surface and the wall intersect. Where the roof slopes toward a parapet at a slope greater than two units vertical in 12 units horizontal (16.7 - percent slope), the parapet shall extend to the same height as any portion of the roof within a fire separation distance where protection of wall openings is required, but in no case shall the height be less than 30 inches (762 mm).

Section 706 **FIRE WALLS**
Section 706.1 **General**
Each portion of a building separated by one of more fire walls that comply with the provisions of this sections shall be considered a separate building. The extent and location of such fire walls shall provide a complete separation. Where a fire wall separates occupancies that are required to be separated by a fire barrier wall, the most restrictive requirements of each separation shall apply.

Section 706.2 **Structural Stability.**
Fire walls shall be designed and constructed to allow collapse of the structure on either side without collapse of the wall under fire conditions. Fire walls designed and constructed in accordance with NFPA 221 shall be deemed to comply with this section.

Section 706.3 **Materials.**
Fire walls shall be of any approved non-combustible materials.

Section 706.4 **Fire-resistance rating.**
Fire walls shall have a fire resistance rating of not less than that required by Table 706.4

Table 706.4 **FIRE WALL FIRE-RESISTANCE RATINGS**
Group: E
Fire Resistance Rating: 3[a] HR
a. In Type II of V construction, walls shall be permitted to have a 2-hour *fire-resistance rating*.

Section 706.5 **Horizontal continuity.**
Fire walls shall be continuous from exterior wall to exterior wall and shall extend not less than 18 inches beyond the exterior surface of exterior walls.

Section 706.6 **Vertical continuity.**
Fire walls shall extend from the foundation to a termination point not less than 30 inches (762 mm) above both adjacent roofs.
Exceptions:
2. Two-hour fire-resistance walls shall be permitted to terminate at the underside of the roof sheathing, dech or slab, provided:
2.1. The lower roofassembly within 4 feet of the wall has not less than a 1-hour fire-resistance rating and the entire length and span of the supporting elements for the rated roof assembly has a fire-resistance rating of net less than 1 hour.
2.2 Openings in the roof shall not be located within 4 feet of the fire wall.
2.3 Each building shall be provided with not less than a Class B roof covering.

Section 706.7 **Combustible framing in fire walls.**
Adjacent combustible members entering into a concrete or masonry fire wall from opposite sides shall not have less than a 4-inch (102 mm) distance between embedded ends. Where combustible members frame into hollow walls or walls of hollow units, hollow spaces shall be solidly filled for the full thickness of the wall and for a distance not less than 4 inches (102 mm) above, below and between the structural members, with non-combustible materials approved for fireblocking.

Section 706.8 **Openings.**
Each opening through a fire wall shall be protected in accordance with Section 716.5 and shall not exceed 156 square feet (15 m^2). The aggregate width of openings at any floor level shall not exceed 25 percent of the length of the wall.
Exceptions:
2. Openings shall not be limited to 156 square feet (15 m^2) where both buildings are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

Section 708 **FIRE PARTITIONS**
General.
The following wall assemblies shall comply with this section.
3. Corridor walls as required by Section 1020.1

Section 708.2 **Materials.**
The walls shall be of materials permitted by the building type of construction.

Section 708.3 **Fire-resistance rating.**
Fire partitions shall have a fire-resistance rating of not less than 1 hour.

Section 708.4 **Continuity.**
Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto. In combustible construction where the fire partitions are not required to be continuous to the sheathing, deck or slab, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or draftstopped in accordance with Sections 718.2 and 718.3 at the partition line. The supporting construction shall be protected to afford the required fire-resistance rating of the wall supported, except for walls separating tenant spaces in covered and open mall buildings, walls separating tenant spaces in covered and open mall buildings, walls separating dwelling units, walls separating sleeping units and corridor walls, in buildings of Type IIB, IIIB and VB construction.

Section 711 **FLOOR AND ROOF ASSEMBLIES**
General.
Horizontal assemblies shall comply with Section 711.2. Nonfire-resistance-rated floor and roof assemblies shall comply with Section 711.3.

Section 711.3 **Nonfire-resistance-rated floor and roof assemblies.**
Nonfire-resistance-rated floor, floor/ceiling, roof and roof/ceiling assemblies shall comply with Sections 711.3.1 and 711.3.2.

Section 711.3.1 **Materials.**
Assemblies shall be of materials permitted by the building type of construction.

Section 711.3.2 **Continuity.**
Assemblies shall be continuous without vertical openings, except as permitted by Section 712.

CHAPTER 8
WALL AND CEILING FINISH MATERIALS

Section 803.1.1 **Interior wall and ceiling finish materials.**
Interior wall and ceiling finish materials shall be classified in accordance with ASTM E84 or UL 723. Such interior finish materials shall be grouped in the following classes in accordance with their flame spread and smoke-developed indexes.

CLASS A: = Flame spread index 0-25; smokedeveloped index 0-450.
CLASS B: = Flame spread index 26-75; smokedeveloped index 0-450.
CLASS C: = Flame spread index 76-200; smokedeveloped index 0-450.

Section 803.11 **Interior finish requirements based on group.**
Interior wall and ceiling finish shall have a flame spread index not greater than that specified in Table 803.11 for the group and location designated. Interior wall and ceiling finish materials tested in accordance with NFPA 286 and meeting the acceptance criteria of Section 803.1.2.1, shall be permitted to be used where a Class A classification in accordance with ASTM E84 or UL 723 is required.

Table 803.11 Interior wall and ceiling finish requirements by occupancy

GROUP	SPRINKLERED		
	Interior exit stairways and ramps and exit passageways	Corridors and enclosure for exit access stairways and ramps	Rooms and enclosed spaces
E	B	C	C

CHAPTER 9
FIRE PROTECTION SYSTEMS

Section 903 **Automatic Sprinkler Systems**
Group E
An automatic sprinkler system shall be provided for Group E occupancies as follows:
1. Throughout all Group E fire areas greater than 12,000 square feet (1115 m^2) in area.
2. Throughout every portion of educational buildings below the lowest level of exit discharge serving that portion of the building.

Section 906 **PORTABLE FIRE EXTINGUISHERS**
Where required.
Portable fire extinguishers shall be installed in all of the following locations:
1. In Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.
2. Within 30 feet (9144 mm) of commercial cooking equipment.
4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 3315.1 of the International Fire Code.
5. Where required by the International Fire Code sections indicated in Table 906.1

Section 906.2 **General requirements.**
Portable extinguishers shall be selected and installed in accordance with this section and NFPA 10.

Section 906.3 **Size and distribution.**
The size and distribution of portable fire extinguishers shall be in accordance with Sections 906.3.1 through 906.3.4.

Table 906.3 **FIRE EXTINGUISHERS FOR CLASS A FIRE HAZARDS**

	SPRINKLERED		
	LIGHT (Low) HAZARD OCCUPANCY	ORDINARY (Moderate) HAZARD OCCUPANCY	EXTRA (High) HAZARD OCCUPANCY
Minimum rated single extinguisher	2-A[c]	2-A	4-A[a]
Maximum floor area per unit of A	3,000 square feet	1,500 square feet	1,000 square feet
Maximum floor area for extinguisher	11,250 square feet	11,250 square feet	11,250 square feet
Maximum distance of travel to extinguisher	75 feet	75 feet	75 feet

Section 907 **FIRE ALARM AND DETECTION SYSTEMS**
General.
This section covers the application, installation, performance and maintenance of the fire alarm system and their components.

Section 907.2 **Where required - new buildings and structures.**
An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.

Group E.
A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E occupancies. When automatic sprinkler systems or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system.

Section 907.3 **Fire safety functions.**
Automatic fire detectors utilized for the purpose of performing fire safety functions shall be connected to the building's fire alarm control unit where a fire alarm system is required by Section 907.2. Detectors shall, upon actuation, perform the intended function and activate the alarm notification appliances or activate a visible and audible supervisory signal at a constantly attended location. In buildings not equipped with a fire alarm syste, the automatic fire detector shall be powered by normal electrical service and, upon actuation, perform the intended function. The detectors shall be located in accordance with NFPA 72.

Section 907.5.2 **Alarm notification appliances.**
Alarm notification appliances shall be provided and shall be listed for their purpose.

Section 907.5.2.1 Audible Alarms.
Audible alarm notification appliances shall be provided and emit a distinctive sound that is not to be used for any purpose other than that of a fire alarm.

Section 907.5.2.3 **Visible alarms.**
Visible alarm notification appliances shall be provided in accordance with Sections 907.5.2.3.1 through 907.5.2.3.3.

Section 907.5.2.3.1 **Public use areas and commond use areas.**
Visible alarm notification appliances shall be provided in public use areas and common use areas.

CHAPTER 10 **MEANS OF EGRESS**
DEFINITIONS
Floor Area, Gross = Floor area inside the perimeter of the exterior walls of the building. The gross area shall not include shafts with no openings or interior courts.
Floor Area, Net = The actual occupied area not including unoccupied accessory areas such as corridors, stairways, toilet rooms, mechanical rooms, and closets.

Section 1003 **General Means of Egress.**
All exits shall comply with Texas Accessibility Standards.

Section 1004 **OCCUPANT LOAD**
Occupant Load: 349

Section 1004.3 **Posting of occupant load.**
Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or the owner's authorized agent.

Section 1005 **MEANS OF EGRESS SIZING**

Section 1005.2 **Minimum width based on component.**
The minimum width, in inches (mm), of any means of egress components shall be not less than that specified for such component, elsewhere in this code.

Section 1005.3 **Required capacity based on occupant load.**
The required capacity, in inches (mm), of the means of egress for any room, area, space or story shall be not less than that determined in accordance with Sections 1005.3.1 and 1005.3.2.

Section 1005.3.2 **Other egress components.**
The capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.2 inche (5.1 mm) per occupant.

Section 1006 **NUMBER OF EXITS AND EXIT ACCESS DOORWAYS**

Section 1006.2 **Egress from spaces.**
Rooms, areas or spaces, including mezzanines, within a story or basement shall be provided with the number of exits or access exits in accordance with this section.

Section 1006.2.1 **Egress based on occupant load and common path of egress travel distance.**
Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1.

Table 1006.2.1

OCCUPANCY	MAXIMUM OCCUPANT LOAD OF SPACE	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet) With Sprinkler System (feet)	Occupant Load
E	49		75[a]

a. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occipancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.

Section 1006.3.1 **Egress based on occupant load.**
Each story and occupied roof shall have the minimum number of independent exits, or access to exits, as specified in Table 1006.3.1. A single exit or access to a single exit shall be permitted in accordance with Section 1006.3.2. The required number of exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be maintained until arrival at the exit discharge or a public way.

Table 1006.3.1

OCCUPANT LOAD PER STORY	MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS FROM STORY
1-500	2
501-1,000	3
More than 1,000	4

Section 1007 **Exit and exit access doorway configuration.**
General.
Exits, exit access doorways, and exit access stairways and ramps serving spaces, including individual building stories, shall be separated in accordance with the provisions of this section.

Section 1007.1.1 **Two exits or exit access doorways.**
Where two exits, exit access doorways, exit access stairways or ramps, or any combination thereof, are required from any portion of the exit access, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between them. Interlocking or scissor stairways shall be counted as one exit stairway.
Exceptions:
2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served.

Section 1009 **Accessible Means of Egress**
Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means or egress. Where more than one means of egress are required by Section 1006.2 or 1006.3 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress.

Section 1016 **EXIT ACCESS**
The exit access shall comply with the applicable provisions of Sections 1003 through 1015. Exit access arrangement shall comply with Sections 1016 through 1021.

Section 1017 **EXIT ACCESS TRAVEL DISTANCE**

Table 1017.2 **Exit Access Travel Distance (ft.):**

Occupancy	With Sprinkler System
E	250 feet

Section 1018 **CORRIDORS**
Table 1020.1 **Corridor Fire-Resistance Rating**

Occupancy	Occupant Load	With Sprinkler System
E	>30	0 hr

Section 1020.2 **Width and capacity.**
The required capacity of corridors shall be determined as specified in Section 1005.1, but the minimum width shall be not less than that specified in Table 1020.2 but not less than 44 inches
Min. width provided = 72in Corridors
(In Group E with a corridor having an occupant load of 100 or more)

Section 1020.4 **Dead ends.**
Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6096 mm) in length.
Exceptions:
2. In occupancies in Groups B, E, F, I-1, M, R-1, R-2, R-4, S and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead-end corridors shall not exceed 50 feet (15 240 mm).

CHAPTER 29 **PLUMBING SYSTEMS**
Section 2902.1 **Minimum number of fixtures.**
Plumbing fixtures shall be provided in the minimum number as shown in Table 2902.1 based on the actual use of the building or space. Uses not shown in Table 2902.1 based on the actual use of the building or space. Uses not shown in Table 2902.1 shall be considered individually by the code official. The number of occupants shall be determined by this code.

Group E & A Occupancy
The number of occupants used to calculate plumbing fixture requirements is based on section 2902 and Table 2902.1; reduced by the occupant loads for room which have not been included due to non-simultaneous use by the same students, staff and visitors who are already included.

Occupant Load for Plumbing Count (REF CODE.3 for Table): 418 occupant load (assume Males 209, Females 209)

Table 2902.1 **MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES**

GROUP E OCCUPANCY	MALE	FEMALE	REQUIRED		PROVIDED			DELTA
			MALE	FEMALE	MALE	FEMALE	UNISEX	
WATER CLOSETS	1 per 50	1 per 50	5	5	9	11	0	+10
URINALS	Urinals shall not be substituted for more than 67 percent of the required water closets				8	N/A	N/A	
LAVATORIES	1 per 50	1 per 50	5	5	10	6	0	+6
DRINKING FOUNTAINS	1 per 100		4		12			+8

Occupant Load for Plumbing Count for Track and Field Bleachers: Total Seating: 1301 (assume Males 650.5, Females 650.5)

GROUP A OCCUPANCY	MALE	FEMALE	REQUIRED		PROVIDED			DELTA
			MALE	FEMALE	MALE	FEMALE	UNISEX	
WATER CLOSETS	1 per 75 for first 1,500	1 per 40 for first 1,520	9	17	4	19	1	+3
URINALS	Urinals shall not be substituted for more than 67 percent of the required water closets				5	N/A	N/A	
LAVATORIES	1 per 200	1 per 150	4	5	4	5	1	+1
DRINKING FOUNTAINS	1 per 1,000		2		4			+2

VLK | ARCHITECTS

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT JORGE G. BOYTER 13924 STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director Approver Designer Designer Proj. Arch. Checker
Drawn By Author Quality Control

PROJECT NO.
23-155.00

SHEET TITLE
CODE REVIEW, BUILDING DESIGN CRITERIA & DIAGRAMS

SHEET NO.
A0.03

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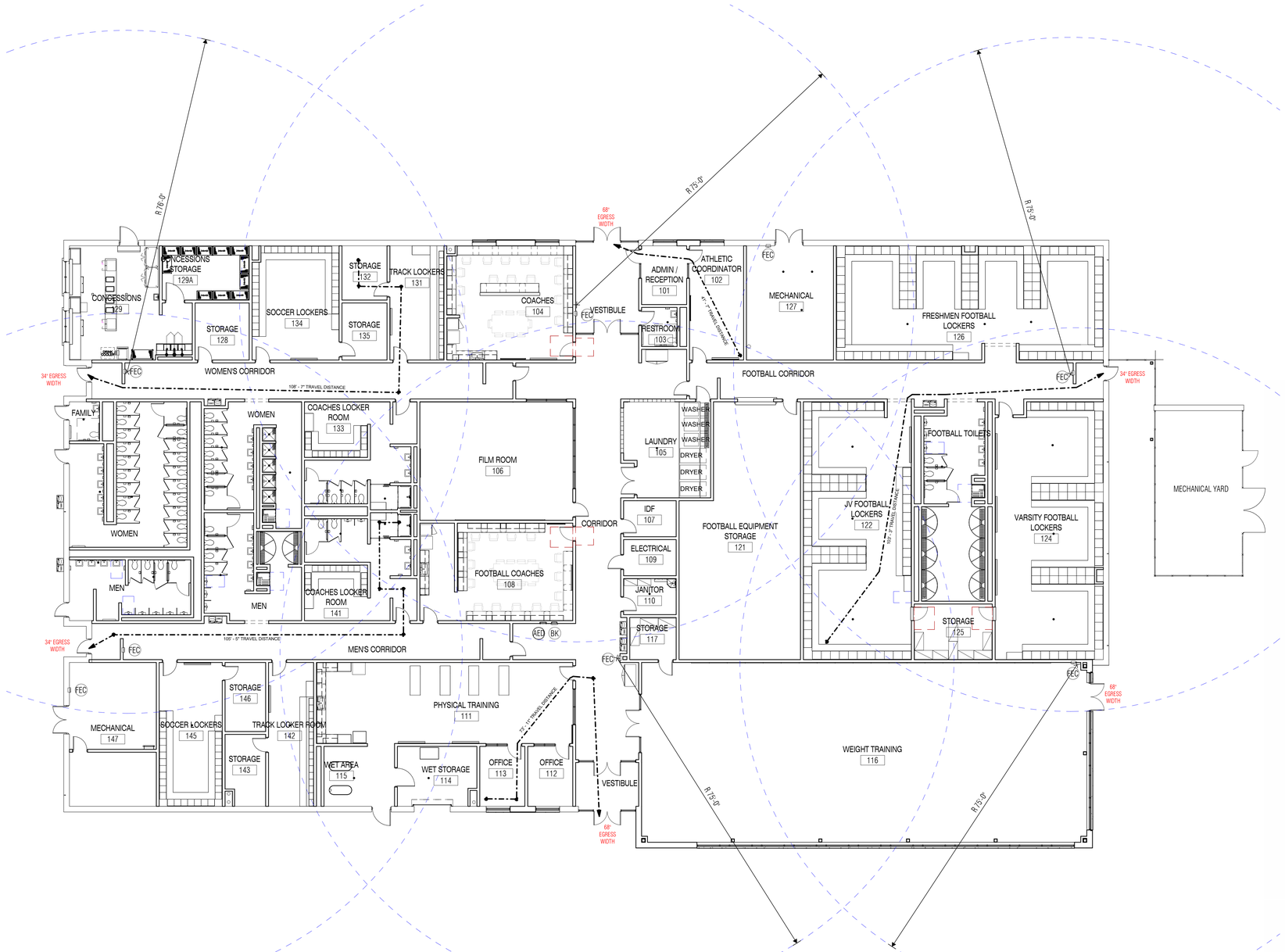

1 EGRESS / DEVICES PLAN
SCALE: 3/32" = 1'-0"

FIRE RESISTANCE LEGEND

LENGTH IN FEET	PATH OF TRAVEL
FEC	FIRE EXTINGUISHER CABINET
FE	FIRE EXTINGUISHER - WALL MOUNTED
AED	AED CABINET
BK	BLEED CONTROL KIT CABINET

Room no.	Primary Use Group:	OCCUPANCY TYPE	SF / OCCUPANT / TABLE 1004.1.1	OCCUPANCY SQUARE FEET	OCCUPANT LOAD
	GENERAL				
	Classrooms	E	SF NET / 20		
	Nonseparated Use Groups:				
	Office / Administration	B	SF GROSS / 150		
	Concessions	A-2	SF GROSS / 200		
	Locker / Exercise Rooms	E	SF GROSS / 50		
	Storage/Mech.	S-1	SF GROSS / 300		
Room no.	Floor Area				
100	Corridor				
101	Admin / Reception	B	SF NET / 150	175	2
102	Athletic Director	B	SF NET / 150	306	3
103	Restroom	E	SF GROSS / 50	69	2
104	Coaches	B	SF NET / 20	704	35
105	Laundry	B	SF NET / 300	389	2
106	Film Room	E	SF NET / 20	897	45
107	IDF	S-1	SF GROSS / 300	95	1
108	Football Coaches	E	SF NET / 20	729	36
109	Electrical	S-1	SF GROSS / 300	95	1
110	Janitor	S-1	SF GROSS / 300	95	1
111	Physical Training	E	SF GROSS / 50	1120	22
112	Office	B	SF NET / 150	156	2
113	Office	B	SF NET / 150	156	2
114	Wet Storage	S-1	SF GROSS / 300	187	1
115	Wet Area	E	SF GROSS / 50	123	2
116	Weight Training	E	SF GROSS /50	3889	78
117	Storage	S-1	SF GROSS / 300	97	1
118	Not Used				
119	Not Used				
120	Corridor				
121	Football Equipment Storage	S-1	SF NET / 300	1378	5
122	JV Football Lockers	E	SF GROSS / 50	1380	28
123	Football Toilets	E	SF GROSS / 50	597	SIMULTANEOUS USE
124	Varsity Football Lockers	E	SF GROSS / 50	1381	28
125	Storage	S-1	SF NET / 300	211	2
126	Freshman Football Lockers	E	SF GROSS / 50	1501	30
127	Mechanical	S-1	SF GROSS / 300	492	2
128	Storage	S-1	SF GROSS / 300	153	1
129	Concessions	A-2	SF GROSS / 200	833	4
130	Women's Corridor				
131	Track Lockers	E	SF GROSS / 50	306	6
132	Storage	S-1	SF GROSS / 300	121	1
133	Coaches Locker Room	E	SF GROSS / 50	534	11
134	Soccer Lockers	E	SF GROSS / 50	488	10
135	Storage	S-1	SF GROSS / 300	128	1
136	Women	E	SF GROSS / 50	510	SIMULTANEOUS USE
137	Family	E	SF GROSS / 50	59	2
138	Women	E	SF GROSS / 50	699	14
139	Men	E	SF GROSS / 50	333	7
140	Men's Corridor				
141	Coaches Locker Room	E	SF GROSS / 50	536	11
142	Track Lockers	E	SF GROSS / 50	321	6
143	Storage	S-1	SF GROSS / 300	140	1
144	Men	E	SF GROSS / 50	437	SIMULTANEOUS USE
145	Soccer Lockers	E	SF GROSS / 50	449	9
146	Storage	S-1	SF GROSS / 300	139	1
147	Mechanical	S-1	SF GROSS / 300	374	2
147A	Mechanical	S-1	SF GROSS / 300	232	1
	TOTAL				418

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRUCE G. BOYTER
13923
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

EGRESS PLAN

SHEET NO.

A0.04

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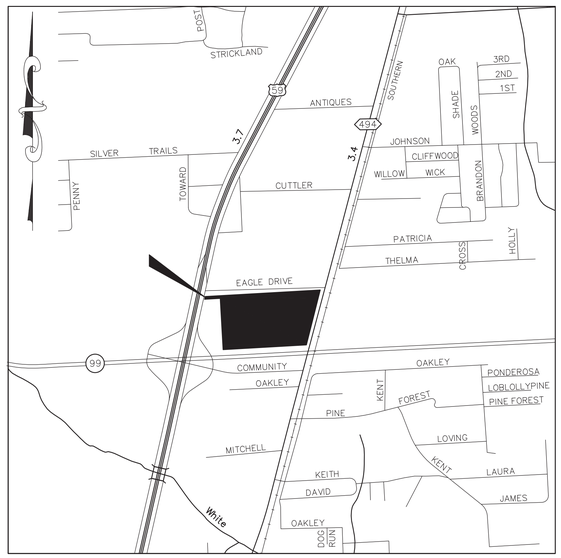
NEW CANEY INDEPENDENT SCHOOL DISTRICT

NEW CANEY HIGH SCHOOL

EXTRACURRICULAR IMPROVEMENTS - PHASE III

22555 EAGLE DRIVE
NEW CANEY, TEXAS 77357

VICINITY MAP



KEY MAP 256U
N.T.S.

CIVIL PLANS

C0.00	COVER SHEET
C0.01	GENERAL NOTES
SV0.01	TOPOGRAPHIC SURVEY (SHEET 1 OF 6)
SV0.02	TOPOGRAPHIC SURVEY (SHEET 2 OF 6)
SV0.03	TOPOGRAPHIC SURVEY (SHEET 3 OF 6)
SV0.04	TOPOGRAPHIC SURVEY (SHEET 4 OF 6)
SV0.05	TOPOGRAPHIC SURVEY (SHEET 5 OF 6)
SV0.06	TOPOGRAPHIC SURVEY (SHEET 6 OF 6)
C1.00	OVERALL LAYOUT
C1.01	SITE LAYOUT (SHEET 1 OF 2)
C1.02	SITE LAYOUT (SHEET 2 OF 2)
C1.03	SITE DEMOLITION PLAN (SHEET 1 OF 2)
C1.04	SITE DEMOLITION PLAN (SHEET 2 OF 2)
C1.05	FIRE LANE LAYOUT
C2.01	SITE GRADING LAYOUT (SHEET 1 OF 2)
C2.02	SITE GRADING LAYOUT (SHEET 2 OF 2)
C3.01	SITE STORM SEWER LAYOUT (SHEET 1 OF 2)
C3.02	SITE STORM SEWER LAYOUT (SHEET 2 OF 2)
C3.03	WEST DETENTION POND LAYOUT
C3.04	DRAINAGE AREA MAP (SHEET 1 OF 2)
C3.05	DRAINAGE AREA MAP (SHEET 2 OF 2)
C3.06	STORM SEWER CALCULATIONS
C3.07	STORMWATER DETENTION CALCULATIONS
C3.08	SWPPP (SHEET 1 OF 2)
C3.09	SWPPP (SHEET 2 OF 2)
C4.01	WATER & SANITARY SEWER LAYOUT (SHEET 1 OF 2)
C4.02	WATER & SANITARY SEWER LAYOUT (SHEET 2 OF 2)
C5.01	PAVEMENT JOINT LAYOUT (SHEET 1 OF 2)
C5.02	PAVEMENT JOINT LAYOUT (SHEET 2 OF 2)
C6.01	TRACK & FIELD 1 LAYOUT & DIMENSIONS
C6.02	TRACK & FIELD 1 GRADING LAYOUT
C6.03	TRACK & FIELD 1 STORM SUBDRAIN LAYOUT
C6.04	FIELDS 2 & 3 LAYOUT & DIMENSIONS
C6.05	FIELDS 2 & 3 GRADING LAYOUT
C6.06	FIELDS 2 & 3 STORM SUBDRAIN LAYOUT
C6.07	ATHLETIC DETAILS (SHEET 1 OF 4)
C6.08	ATHLETIC DETAILS (SHEET 2 OF 4)
C6.09	ATHLETIC DETAILS (SHEET 3 OF 4)
C6.10	ATHLETIC DETAILS (SHEET 4 OF 4)
C7.01	PAVING DETAILS
C7.02	STORM SEWER DETAILS
C7.03	WATER LINE DETAILS
C7.04	SANITARY SEWER DETAILS
C7.05	STORM WATER POLLUTION PREVENTION DETAILS
C7.06	STORM WATER PUMP STATION DETAILS

JANUARY 2025

TALON ENGINEERING
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PROFESSIONAL ENGINEER
01/06/2025

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION SCHEDULE WITH THE ENGINEER AND/OR ARCHITECT PRIOR TO COMMENCING WORK.
2. CONTRACTOR SHALL CONTACT ALL GOVERNING AGENCIES A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION AND COORDINATE ALL WORK WITH THE SAME.
3. WHETHER SHOWN ON DRAWINGS OR NOT THE CONTRACTOR SHALL PROVIDE ALL PIPING, APPURTENANCES, AND MISCELLANEOUS FITTINGS REQUIRED TO ACCOMPLISH THE DESIGN AS DRAWN AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL CONTACT ENGINEER IF UNSURE OF PIPING LAYOUT, SIZES OR LENGTHS.
4. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD BEFORE COMMENCING ANY WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT ANY DISCREPANCIES TO THE ENGINEER IN A TIMELY MANNER.
5. ALL DIMENSIONS SHOWN ARE APPROXIMATE AND ARE TO BE VERIFIED BY THE CONTRACTOR. CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENT ARE TO BE APPROVED BY THE ENGINEER.
6. THE DRAWINGS SHOW AS MUCH INFORMATION AS CAN BE REASONABLY OBTAINED FROM AN ON THE GROUND OBSERVATION, SURVEY AND EXISTING CONSTRUCTION DRAWINGS REGARDING THE TOPOGRAPHIC FEATURES, ELEVATIONS AS WELL AS THE LOCATION AND NATURE OF PIPELINES, NATURAL GAS LINES, UNDERGROUND CABLES, UTILITIES, ETC. HOWEVER, THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION TO PRECLUDE DAMAGE TO EXISTING UTILITIES. IN THE EVENT THAT UNDERGROUND UTILITIES NOT SHOWN ON THE DRAWINGS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
7. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK IN ANY RIGHT-OF-WAY OR EXISTING EASEMENT. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT (713) 223-4567, 1-800-545-6005 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
8. SOME OF THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON HAVE NOT BEEN FIELD VERIFIED.
9. CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT ALL "POINTS OF CROSSING" TO DETERMINE IF CONFLICT EXISTS BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICT.
10. IN THE EVENT OF DAMAGE TO UNDERGROUND UTILITIES OR FACILITIES, WHETHER SHOWN OR NOT ON THE DRAWINGS, THE CONTRACTOR SHALL MAKE THE NECESSARY REPAIRS TO REPLACE THE UTILITY OR FACILITY BACK IN SERVICE AT NO INCREASE IN THE CONTRACT PRICE. ALL SUCH REPAIRS SHALL CONFORM TO THE REQUIREMENTS OF THE COMPANY OR AGENCY SERVICING THE FACILITY.
11. ALL EXISTING POWER POLES, LIGHT STANDARDS, SIGNS, ETC. WHICH AFFECT THE PROPOSED CONSTRUCTION, SHALL BE REMOVED AND/OR RELOCATED AS REQUIRED WHETHER SHOWN ON DRAWINGS OR NOT AT NO ADDITIONAL COST TO THE OWNER.
12. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL ADHERE TO THE STANDARDS OF THE GOVERNING AUTHORITY.
13. INGRESS AND EGRESS SHALL BE PROVIDED AT ALL TIMES FOR THE PROPERTY OWNERS AND BUSINESSES OF THE ABUTTING PROPERTY AND THE CROSS STREETS WHICH ARE AFFECTED BY THE CONSTRUCTION OF THIS PROJECT.
14. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR MAINTAINING A SAFE PROJECT SITE 24 HOURS A DAY.
15. DURING THE ENTIRE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL MAINTAIN CONSTRUCTION WARNING SIGNS AT EACH END OF THE PROJECT TO WARN MOTORING AND PEDESTRIAN TRAFFIC THAT CONSTRUCTION IS IN PROGRESS AND OF POSSIBLE HAZARDOUS CONDITIONS GENERATED BY THE CONSTRUCTION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELINEATING THE PERIMETER OF CONSTRUCTION AREA WITH CONSTRUCTION FENCING AT NO ADDITIONAL COST. CONSTRUCTION FENCING SHALL BE ERECTED PRIOR TO CONSTRUCTION AND REMOVED UPON COMPLETION.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING TRAFFIC IN THE IMMEDIATE VICINITY OF CONSTRUCTION. ALL WORK SHALL BE IN SUCH A MANNER AND SEQUENCE AS TO PROVIDE MAXIMUM PROTECTION TO TRAFFIC AND PEDESTRIANS. CONTROLS SHALL BE CONSISTENT WITH THE TYPE OF WORK BEING PERFORMED.
18. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (TEXAS M.U.T.C.D. MOST RECENT EDITION WITH REVISIONS) DURING CONSTRUCTION.
19. DELINEATORS SHALL BE INSTALLED ALONG THE PAVEMENT EDGE TO WARN TRAFFIC OF ANY ROADSIDE OBJECTS OR HAZARDS AND TO DELINEATE THE ROADWAY EDGE DURING HOURS OF DARKNESS.
20. THE WORK AREA SHALL BE BARRICADED AND ILLUMINATED DURING DARKNESS AND PERIODS OF INACTIVITY, WHEN IN AN AREA OF DIRECT PUBLIC ACCESS.
21. UNOCCUPIED TRENCHES SHALL BE SECURED WITH SAFETY "SNOW" FENCING OR OTHER APPROPRIATE MEANS AT ALL TIMES. TRENCHES WHICH ARE NOT IMMEDIATELY BACKFILLED SHALL BE SECURELY COVERED OVERNIGHT AND BE SURROUNDED BY SAFETY "SNOW" FENCING.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING REQUIRED SECURITY TO PROTECT HIS OWN PROPERTY, EQUIPMENT, AND WORK IN PROGRESS.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ADEQUATE DRAINAGE BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE GOVERNING AUTHORITY AND/OR ENGINEER. THE CONTRACTOR SHALL ALSO MAINTAIN DRAINAGE AROUND BUILDING AS TO NOT HOLD WATER ADJACENT TO ANY POINT NEAR BUILDING.
24. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION OF ANY TEMPORARY DITCH OR DRAINAGE FACILITIES REQUIRED TO MAINTAIN ADEQUATE SITE DRAINAGE DURING CONSTRUCTION AT NO ADDITIONAL COST TO OWNER
25. THE CONTRACTOR IS TO INSTALL GROUND WATER CONTROL FACILITIES IF NEEDED, AT DIRECTION OF ENGINEER AT NO ADDITIONAL COST TO OWNER.
26. THE ARCHITECT SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS REQUIRED BY ALL GOVERNING AGENCIES.
27. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETION AND SUBMISSION OF ALL APPLICABLE STATE AND FEDERAL FORMS REQUIRED FOR STORM WATER POLLUTION PREVENTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION, IMPLEMENTATION, MAINTENANCE, AND INSPECTION OF STORM WATER POLLUTION PREVENTION CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, EROSION AND SEDIMENT CONTROLS, STORM WATER MANAGEMENT PLANS, WASTE COLLECTION AND DISPOSAL, OFF-SITE VEHICLE TRACKING, AND OTHER PRACTICES.
28. THE CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION, TRENCHING AND SHORING.
29. THE CONTRACTOR SHALL DESIGN AND PROVIDE A TRENCH SAFETY SYSTEM TO MEET APPROPRIATE REQUIREMENTS ESTABLISHED IN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY & HEALTH REGULATIONS, 29 CFR 1926, SUBPART P – EXCAVATIONS, TRENCHING AND SHORING, AND OSHA'S PROPOSED STANDARDS ON TRENCHING, EXCAVATION PUBLISHED IN VOLUME 52, NO. 72 OF THE FEDERAL REGISTER, APRIL 15, 1987, PAGES 12288-12339. SHOULD THE REFERENCED OSHA STANDARDS BE MODIFIED OR AMENDED, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
30. CONTRACTOR SHALL PROVIDE SHEETING, SHORING AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION.
31. IN ORDER TO COMPLY WITH HANDICAP REGULATIONS, THE CONTRACTOR SHALL ENSURE THAT THE SLOPE OF THE SIDEWALK AND/OR PAVING IN THE FIRST FIVE FEET OUTSIDE ANY DOOR DOES NOT EXCEED 2% IN ANY DIRECTION.
32. THE TEXAS DEPARTMENT OF TRANSPORTATION TxDOT 2004 STANDARD SPECIFICATIONS AND STANDARDS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE CONSIDERED PART OF THESE PLANS AND USED AS THE SPECIFICATIONS FOR ITEMS EXCEPT AS SHOWN OTHERWISE ON PLANS OR IN THE PROJECT SPECIFICATIONS.
33. NO CONSTRUCTION WHICH BLOCKS TRAFFIC ON ANY STREET, ALLEY, OR DRIVEWAY WILL BE ALLOWED DURING THE HOURS OF 6:30 A.M. – 8:30 A.M. AND 2:30-6:00 P.M.
34. THE CONTRACTOR MUST CLEAN MUD, DIRT OR DEBRIS TRACKED ONTO EXISTING STREETS BY HIMSELF OR SUBCONTRACTOR'S VEHICLES AND EQUIPMENT DAILY OR AS DIRECTED BY ENGINEER.
35. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB SHALL BE AS GOOD OR BETTER THAN PRIOR TO STARTING WORK.
36. ALL AREAS DISTURBED BY CONSTRUCTION WHICH ARE NOT TO BE REPAVED OR OTHERWISE COVERED SHALL BE HYDROMULCHED OR SHALL RECEIVE SOLID SOD.
37. CONTRACTOR SHALL STRIP AND STOCKPILE TOPSOIL. TOPSOIL SHALL BE SPREAD OVER ALL AREAS RECEIVING SOD AND OR HYDROMULCH. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AN 85% STAND OF GRASS WITH NO AREAS OF EROSION BEFORE FINAL ACCEPTANCE. TOPSOIL TO MEET THE CRITERIA IN THE SPECIFICATIONS.
38. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL WASTE MATERIAL GENERATED DURING CONSTRUCTION. WASTE MATERIAL MUST BE REMOVED FROM THE WORK SITE AND DISPOSED OF IN SUCH A MANNER AS TO NOT DAMAGE THE OWNER OR OTHER PERSONS AT NO ADDITIONAL COST.
39. ALL FILL PLACED ON SITE SHALL BE SELECT FILL PER THE RECOMMENDATION OF THE SOILS REPORT OR AS INDICATED IN THE SPECIFICATIONS.
40. FINISH GRADE ELEVATIONS INDICATE FINAL GRADE OF PROPOSED MATERIAL (I.E. SOD, DIRT, MULCH, ETC.). LANDSCAPED AREAS ADJACENT TO BUILDING, INCLUDING, DIRT, MULCH, AND/OR BEDDING MATERIALS SHALL NOT COVER WEEPHOLES. AREAS ADJACENT TO BUILDING, LANDSCAPED, OR OTHERWISE SHALL SHEET FLOW AWAY FROM BUILDING WITH NO AREAS OF STANDING WATER ADJACENT TO BUILDING.
41. GRADING AROUND BUILDINGS INCLUDING WALKWAYS SHALL BE COORDINATED WITH ENGINEER AND/OR ARCHITECT AND FINAL APPROVAL OF GRADES IN GRASS AREAS AND SWALES SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION OF LANDSCAPING MATERIALS.
42. AFTER INSTALLATION OF DRAINAGE SYSTEM, CONTRACTOR SHALL PERFORM FINAL GRADING AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY ENGINEER OR OWNER TO INSURE POSITIVE DRAINAGE OF ENTIRE SITE. FINAL GRADING SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION OF GRASS.
43. THE CONTRACTOR SHALL COORDINATE FINAL GRADING OF LANDSCAPED AREAS WITH THE LANDSCAPE ARCHITECT.
44. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING FINAL GRADES TO ENSURE POSITIVE DRAINAGE.
45. PLACE BACKFILL AS PROMPTLY AS PRACTICABLE AFTER COMPLETION OF EACH STRUCTURE OR PORTION OF A STRUCTURE. DO NOT PLACE BACKFILL AGAINST CONCRETE WALLS OR SIMILAR STRUCTURES UNTIL CONCRETE HAS CURED AT LEAST SEVEN (7) DAYS.
46. ALL STRUCTURES AND SEWER PIPE UNDER OR WITHIN TWO (2) FEET OF PROPOSED OR FUTURE PAVEMENT SHALL BE BEDDED AND BACKFILLED WITH CEMENT STABILIZED SAND UP TO THE BOTTOM OF THE PAVEMENT SUBGRADE.
47. CEMENT-SAND BACKFILL SHALL CONSIST OF NOT LESS THAN 1-1/2 SACKS OF CEMENT PER TON OF SAND WITH SUFFICIENT WATER TO HYDRATE THE CEMENT. THE MATERIAL SHALL BE PLACED IN LIFTS EIGHT (8) INCHES THICK MAXIMUM AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
48. WHERE PAVEMENT OR CURB IS BEING REMOVED AND REPLACED FULL DEPTH SAW CUT SHALL BE PERFORMED AT STREET CONNECTION.
49. CONCRETE PAVEMENT SHALL HAVE MINIMUM OF FIVE AND ONE-HALF SACKS OF CEMENT PER CUBIC YARD AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS.
50. ALL STEEL REINFORCEMENT SHALL CONFORM TO ASTM A615 GRADE 60.
51. DETAILING AND FABRICATION OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI-318 LATEST EDITION.
52. LAP ALL CONTINUOUS REINFORCING STEEL 36 DIAMETERS AT SPLICES, TEES, AND CORNERS UNLESS NOTED OTHERWISE ON PLANS.
53. WHERE CONCRETE CURB OR WALK IS INDICATED, ELEVATION SHALL BE 6 INCHES ABOVE TOP OF PAVEMENT ELEVATION SHOWN, UNLESS OTHERWISE SHOWN ON DRAWINGS.
54. MOW STRIPS SHALL BE INSTALLED SO AS NOT TO BLOCK ANY SHEET FLOW PATTERNS AS DESIGNED. ANY MOW STRIPS THAT BLOCK DRAINAGE SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER. IF CONTRACTOR HAS ANY QUESTIONS ON CORRECT ELEVATIONS FOR MOW STRIPS, CONTACT ENGINEER OR ARCHITECT.
55. A FIBERBOARD EXPANSION JOINT SHALL BE PLACED BETWEEN THE BUILDING FOUNDATION AND THE CONCRETE PAVEMENT.
56. THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL PROPOSED UTILITIES EXITING BUILDING PRIOR TO COMMENCING WORK ON SITE UTILITIES. UPON ANY DISCREPANCIES, ENGINEER IS TO BE NOTIFIED.
57. ELECTRIC METER AND SERVICE LINE INSTALLATION TO BE COORDINATED WITH ELECTRICAL PROVIDER BY THE CONTRACTOR.
58. GAS METER AND SERVICE LINE INSTALLATION TO BE COORDINATED WITH GAS COMPANY BY THE CONTRACTOR.
59. IF WITHIN THE CITY OF HOUSTON A STORM WATER QUALITY PERMIT IS REQUIRED FOR THIS PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING ITEMS:

    A.) PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL PROVIDE THE CITY OF HOUSTON WITH A PERFORMANCE BOND FOR ALL STORM WATER QUALITY PERMITS ISSUED BY THE CITY OF HOUSTON STORM WATER QUALITY DEPARTMENT.
60. THE CONTRACTOR WILL JET ALL DEBRIS OUT OF THE FLOATABLES COLLECTION SCREEN UNITS INSTALLED AND WILL PROVIDE THE ENGINEER WITH AN AS-BUILT SURVEY, SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR, SHOWING POSITIVE DRAINAGE PRIOR TO ENGINEER ISSUING AN AS-BUILT CERTIFICATE TO THE GOVERNING AGENCY.
61. CONTRACTOR IS RESPONSIBLE FOR PUMPING OUT STORM WATER QUALITY UNITS AND PROVIDING THE ENGINEER WITH A MANIFEST STATING THAT THE SILT AND DEBRIS WAS DISPOSED OF IN A LEGAL MANNER. MANIFEST AND TIME STAMPED PICTURES OF THE CLEAN UNITS MUST BE PROVIDED PRIOR TO ENGINEER SUBMITTING THE STORM WATER QUALITY AS-BUILT CERTIFICATE. CONTRACTOR TO NOTIFY ENGINEER WHEN PUMP OUT WILL TAKE PLACE.

STORM SEWER CONSTRUCTION NOTES

1. ON SITE STORM SEWERS 12-INCH DIAMETER AND LARGER SHALL BE CORRUGATED HIGH DENSITY POLYETHYLENE (PER AASHTO M-294, TYPE S, HANCOR SURE-LOK F477 PIPE, OR APPROVED EQUAL,) UNLESS OTHERWISE SHOWN ON PLANS. PRODUCT MUST HAVE GASKET JOINTS.
2. ON SITE STORM SEWERS 10-INCH DIAMETER AND LESS SHALL BE PVC (POLY-VINYL CHLORIDE) PIPE MEETING A.S.T.M. SPECIFICATIONS, ASTM D3034 AND HAVING A S.D.R. OF 26, UNLESS OTHERWISE SHOWN ON PLANS.
3. ANY CONCRETE PIPE USED ON THIS PROJECT SHALL BE REINFORCED CONCRETE MEETING ASTM C-76 CLASS III, AND HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS. CONCRETE PIPE IS ONLY TO BE USED WHERE REQUIRED IN PUBLIC RIGHT-OF-WAY AND/OR AT TIES TO PUBLIC STORM SEWER SYSTEMS. BEDDING BACKFILLING AND INSTALLATION OF PIPE AND CONSTRUCTION OF APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CIVIL DETAIL SHEETS.
4. THE CONTRACTOR SHALL USE PRECAST 4000 PSI REINFORCED CONCRETE STORM SEWER MANHOLES AND INLETS. INVERT SHALL BE INSTALLED WITH NON-SHRINK GROUT AND SLOPED TO ENSURE POSITIVE DRAINAGE FROM INLET TO STORM SEWER LINE. WITH SMOOTH FINISH AND NO STANDING WATER IN INLET. BRICK MANHOLES AND/OR INLETS MAY BE USED AS APPROVED BY THE ENGINEER WHEN SETTING STRUCTURES ON EXISTING UTILITY LINE. BRICK STRUCTURES MUST BE MORTARED INSIDE AND OUT. COORDINATE EACH INCIDENT WITH ENGINEER.
5. ALL INLETS, MANHOLES, CLEANOUTS, AND HEADWALLS SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND. CEMENT STABILIZED SAND FILL SHALL BE AT LEAST 12" ON BOTTOM OF STRUCTURE AND 12" AROUND OUTSIDE OF STRUCTURE.
6. NO CORNER CONNECTIONS WILL BE ALLOWED TO ANY INLETS, JUNCTION BOXES OR BOX MANHOLES.
7. CONTRACTOR SHALL CUT OFF PIPE FLUSH WITH INSIDE FACE OF INLETS AND MANHOLES. ALL PIPE PENETRATIONS SHALL BE GROUTED INSIDE AND OUT WITH NON-SHRINK GROUT. INVERTS SHAPED TO PROMOTE FLOW-NO STANDING WATER.
8. CONCRETE FOR DRAINAGE STRUCTURES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS.
9. CULVERT CROSSINGS LOCATED WITHIN 30 FEET OF THE RIGHT-OF-WAY SHALL HAVE MINIMUM 6:1 SLOPING ENDS KNOWN AS SAFETY END TREATMENTS (SETS). THE CULVERT SHALL HAVE SUFFICIENT LENGTH TO ALLOW THE 6:1 SLOPE TO BE ACHIEVED FROM THE EDGE OF PAVEMENT TO THE FLOWLINE AT THE END OF THE SET.
10. CULVERTS LARGER THAN SINGLE 30-INCH DIAMETER (OR LARGER THAN MULTIPLE 24-INCH DIAMETER CULVERTS) SHALL REQUIRE SAFETY PIPE RUNNERS IN ALL LOCATIONS.
11. CONTRACTOR SHALL HYDRO-FLUSH AND CLEAN ALL STORM SEWER LINES AND STRUCTURES PRIOR TO ACCEPTANCE.
12. UTILITIES ARE TO BE TAKEN TO WITHIN FIVE (5) FEET OF BUILDING. SEE PLUMBING SHEETS FOR CONTINUATION OF SERVICE CONNECTIONS INTO BUILDING.
13. TIE-INS TO EXISTING MANHOLES SHALL BE MADE SUCH THAT THE FINAL CONDITIONS UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN PRIOR TO STARTING WORK.
14. THE CONTRACTOR IS TO INSTALL WATER-TIGHT ADAPTORS OF A TYPE COMPATIBLE WITH THE MATERIALS BEING JOINED AT THE POINT OF CONNECTION OF THE SERVICE LINE TO THE BUILDING PLUMBING. NO CEMENT GROUT MATERIALS ARE PERMITTED.
15. THE CONTRACTOR IS TO INSTALL EACH CLEANOUT SO THAT IT OPENS IN A DIRECTION OPPOSITE TO THE FLOW OF THE WASTE AND, EXCEPT IN THE CASE OF A "WYE" BRANCH AND END-OF-THE-LINE CLEANOUTS, CLEANOUTS WILL BE INSTALLED VERTICALLY ABOVE THE FLOW LINE OF THE PIPE. CLEANOUTS WILL BE MADE WITH AIR-TIGHT MECHANICAL PLUG. DO NOT INSTALL NEAR DOORWAYS/SIDEWALKS.
16. ALL STORM SEWER MANHOLES LOCATED OUTSIDE OF PAVED AREAS SHALL BE SET AT FINISH GRADE WITH CONCRETE COLLAR UNLESS OTHERWISE NOTED ON PLANS.
17. ALL INLETS AND JUNCTION BOXES LOCATED OUTSIDE OF PAVED AREAS SHALL HAVE A PRE-CAST TOP WITH CAST-IN FRAME.
18. CONTRACTOR SHALL GROUT ALL JOINTS INSIDE OF ALL INLETS, JUNCTION BOXES, AND MANHOLES WITH NON-SHRINK GROUT & CONSTRUCT INVERTS.
19. ALL TYPE "A" GRATE INLETS SHALL HAVE SLOTTED GRATE TOPS (MODEL V-4880-3). GRATE TOPS IN WALK AREAS SHALL HAVE ADA COMPLIANT GRATES.
20. CEMENT-SAND BACKFILL SHALL CONSIST OF NOT LESS THAN 1-1/2 SACKS OF CEMENT PER TON OF SAND WITH SUFFICIENT WATER TO HYDRATE THE CEMENT. THE MATERIAL SHALL BE PLACED IN LIFTS EIGHT (8) INCHES THICK MAXIMUM AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
21. CONTRACTOR IS RESPONSIBLE FOR PUMPING OUT STORM WATER QUALITY UNITS AND PROVIDING THE ENGINEER WITH A MANIFEST STATING THAT THE SILT AND DEBRIS WAS DISPOSED OF IN A LEGAL MANNER. MANIFEST AND TIME STAMPED PICTURES OF THE CLEAN UNITS MUST BE PROVIDED PRIOR TO ENGINEER SUBMITTING THE STORM WATER QUALITY AS-BUILT CERTIFICATE. CONTRACTOR TO NOTIFY ENGINEER WHEN PUMP OUT WILL TAKE PLACE.
22. TRUE SDR-PVC OR SDR-HDPE FITTINGS ARE REQUIRED. NO RUBBER/FERNCO TYPE FITTINGS WILL BE ALLOWED.

SWPPP CONSTRUCTION NOTES

1 CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.

2 DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA

3 CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FORM THE EXCAVATED AREA.

4 CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.

5 CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN(14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.

- DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
- STRUCTURAL CONTROL MEASURES.
- LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

6 CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SODDING.

SANITARY SEWER CONSTRUCTION NOTES

1. SANITARY SEWER SHALL BE PVC (POLY-VINYL CHLORIDE) PIPE MEETING A.S.T.M. SPECIFICATIONS, D-3034-08 AND HAVING A S.D.R. OF 26 UNLESS OTHERWISE SHOWN ON PLANS. BEDDING BACKFILLING AND INSTALLATION OF PIPE AND CONSTRUCTION OF APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CIVIL DETAIL SHEETS.
2. THE CONTRACTOR SHALL USE 4000 PSI REINFORCED CONCRETE PRECAST SANITARY SEWER MANHOLES.
3. ALL MANHOLES, AND CLEANOUTS SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND. CEMENT STABILIZED SAND FILL SHALL BE AT LEAST 12" ON BOTTOM OF STRUCTURE AND 12" AROUND OUTSIDE OF STRUCTURE.
4. CONTRACTOR SHALL CUT OFF PIPE FLUSH WITH INSIDE FACE OF MANHOLES. ALL PIPE PENETRATIONS SHALL BE GROUTED INSIDE AND OUT WITH NON-SHRINK GROUT.
5. CONTRACTOR SHALL SEAL INTERIOR SURFACE OF PROPOSED SANITARY SEWER MANHOLES WITH THANECOAT FE-100, OR APPROVED EQUAL AS PER MANUFACTURER'S SPECIFICATIONS.
6. ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED.
7. ALL SANITARY SEWER LINES SHALL BE MANDREL AND AIR TESTED. ALL SANITARY SEWER LINES SHALL ALSO BE INSPECTED VIA CAMERA.
8. UTILITIES ARE TO BE TAKEN TO WITHIN FIVE (5) FEET OF BUILDING. SEE PLUMBING SHEETS FOR CONTINUATION OF SERVICE CONNECTIONS INTO BUILDING.
9. TIE-INS TO EXISTING MANHOLES SHALL BE MADE SUCH THAT THE FINAL CONDITIONS UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN PRIOR TO STARTING WORK.
10. THE CONTRACTOR IS TO INSTALL WATER-TIGHT ADAPTORS OF A TYPE COMPATIBLE WITH THE MATERIALS BEING JOINED AT THE POINT OF CONNECTION OF THE SERVICE LINE TO THE BUILDING PLUMBING. NO CEMENT GROUT MATERIALS ARE PERMITTED.
11. THE CONTRACTOR IS TO INSTALL EACH CLEANOUT SO THAT IT OPENS IN A DIRECTION OPPOSITE TO THE FLOW OF THE WASTE AND, EXCEPT IN THE CASE OF A "WYE" BRANCH AND END-OF-THE-LINE CLEANOUTS, CLEANOUTS WILL BE INSTALLED VERTICALLY ABOVE THE FLOW LINE OF THE PIPE. CLEANOUTS WILL BE MADE WITH AIR-TIGHT MECHANICAL PLUG.
12. ALL SANITARY SEWER MANHOLES LOCATED OUTSIDE OF PAVED AREAS SHALL BE SET 3" ABOVE FINISHED GRADE WITH CONCRETE COLLAR.
13. CEMENT-SAND BACKFILL SHALL CONSIST OF NOT LESS THAN 1-1/2 SACKS OF CEMENT PER TON OF SAND WITH SUFFICIENT WATER TO HYDRATE THE CEMENT. THE MATERIAL SHALL BE PLACED IN LIFTS EIGHT (8) INCHES THICK MAXIMUM AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
14. PVC TO SDR TRUE TRANSITION FITTINGS ARE REQUIRED.

WATER LINE CONSTRUCTION NOTES

1. DOMESTIC OR FIRE WATER LINES 4" AND LARGER SHALL BE POLYVINYL CHLORIDE PVC), DR-18, CLASS 150, CONFORMING TO AWWA C900 OR C905, AS CURRENTLY AMENDED UNLESS OTHERWISE NOTED ON THE PLANS.
2. WATER LINES 3" AND SMALLER SHALL BE SCHEDULE 40 PVC.
3. ALL VALVES SHALL BE LEFT HAND (COUNTERCLOCKWISE) OPEN.
4. SEE DETAIL SHEET FOR THRUST BLOCK DETAILS.
5. CONTRACTOR SHALL INSTALL METALLIC TRACER WIRE ON ALL UNDERGROUND PVC PIPING AND SECURE WIRE ENDS AT ALL VALVE BOXES.
6. CONTRACTOR SHALL ADJUST ELEVATION OF WATER LINES AS REQUIRED TO CLEAR OTHER UTILITIES. ADJUSTMENT MUST MEET TCEQ REQUIREMENTS FOR MINIMUM CLEARANCES, TYPE OF PIPE, ETC.
7. MINIMUM VERTICAL CLEARANCE BETWEEN WATER LINES AND OTHER UTILITIES SHALL BE TWELVE INCHES, UNLESS OTHERWISE NOTED ON THE PLANS.
8. EXISTING WATER SERVICES SHALL NOT BE INTERRUPTED DURING CONSTRUCTION.
9. NO CONNECTIONS SHALL BE MADE TO EXISTING WATER LINES UNTIL ALL PROPOSED WATER LINES HAVE BEEN THOROUGHLY CLEANED, TESTED, DISINFECTED AND APPROVED. ALL TESTING PROCEDURES SHALL CONFORM TO THE GOVERNING AGENCY.
10. UTILITIES ARE TO BE TAKEN TO WITHIN FIVE (5) FEET OF BUILDING. SEE PLUMBING SHEETS FOR CONTINUATION OF SERVICE CONNECTIONS INTO BUILDING.
11. METER AND BACKFLOW VAULTS SHALL BE SET 3" ABOVE FINISHED GRADE.
12. CONTRACTOR TO COORDINATE APPROPRIATE NOZZLE SIZE AND TYPE WITH LOCAL FIRE MARSHAL/FIRE INSPECTOR PRIOR TO OBTAINING FIRE HYDRANT.

SURVEY NOTE

ALL SURVEY INFORMATION, INCLUDING BUT NOT LIMITED TO DESCRIPTIONS OF PHYSICAL CHARACTERISTICS, LEGAL LIMITS, UTILITY LOCATIONS AND PERMANENT BENCHMARK FOR THE SITE OF THE PROJECT, WAS PROVIDED BY THE OWNER. THE ARCHITECTS AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY AND EXTENT OF ALL SURVEY INFORMATION PREPARED BY OTHERS AND FURTHER DISCLAIM RESPONSIBILITY FOR INTERPRETATION OF THAT DATA BY BIDDERS AND CONTRACTOR.

GEOTECHNICAL NOTES

1. THE GEOTECHNICAL INVESTIGATION & SOILS REPORT WAS PREPARED BY NINYO & MOORE; REPORT NO. 701551001, DATED AUGUST 4, 2023.

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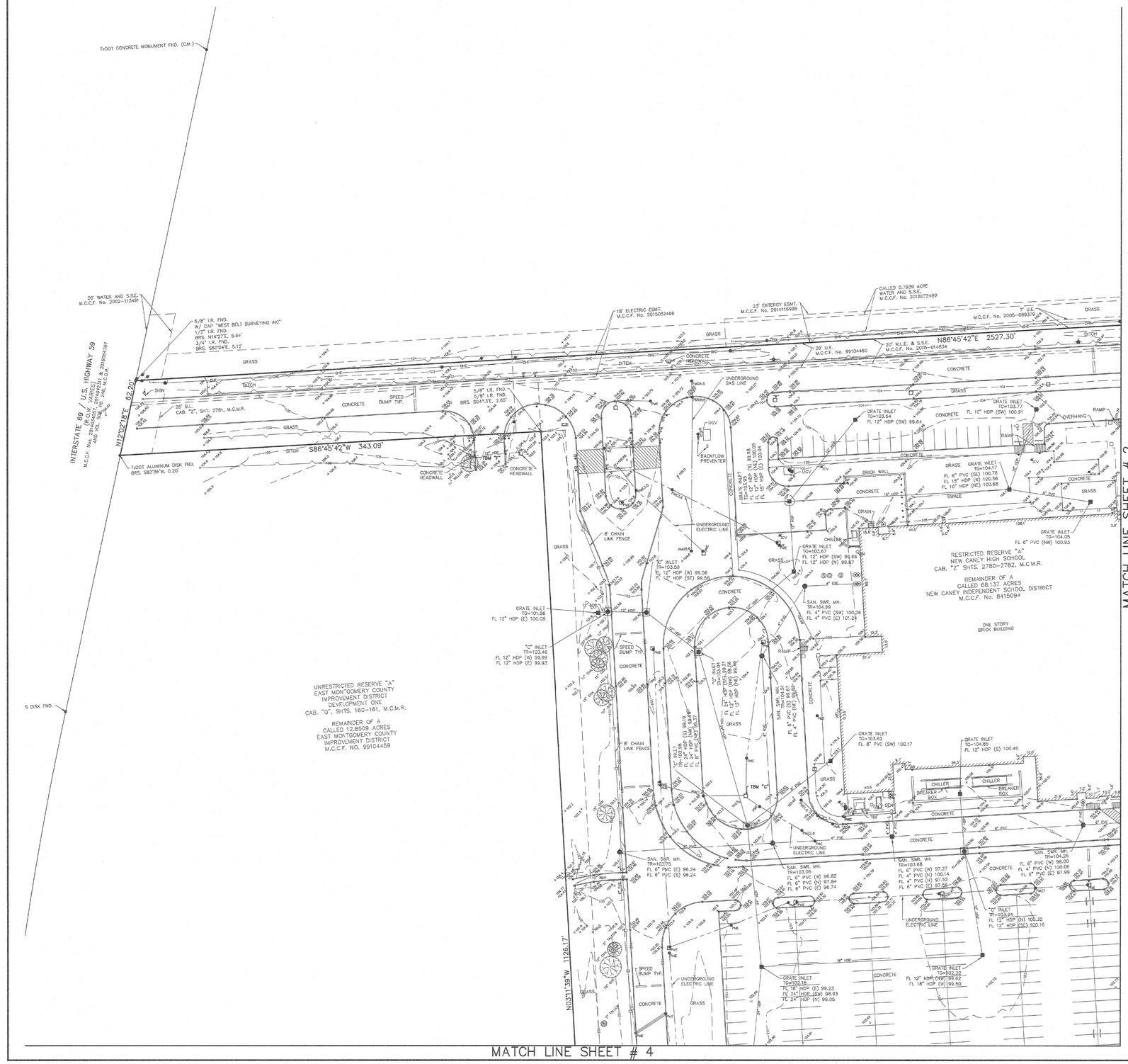

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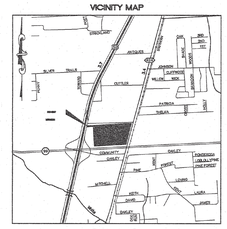


KEY MAP 256U ~~SCALE 1" = 3000'~~ N.T.S.

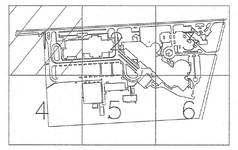
N.T.S.

ABBREVIATIONS

B.L.—BUILDING LINE
BRS.—BEARS
CAB.—CABINET
ESMT.—EASEMENT
FDC—FIRE DEPARTMENT CONNECT
FF—FINISH FLOOR
FL—FLOW LINE
FND.—FOUND
GEN.—GENERATOR
HDP—HIGH DENSITY POLYETHYLENE PIPE
I.R.—IRON ROD
M.C.C.F.—MONTGOMERY COUNTY CLERK'S FILE
M.C.D.R.—MONTGOMERY COUNTY DEED RECORDS
M.C.M.R.—MONTGOMERY COUNTY MAP RECORDS
MH—MANHOLE
OHE—OVERHEAD ELECTRIC
PGE—PLAYGROUND EQUIPMENT
PVC—POLYVINYL CHLORIDE PIPE
RCP—REINFORCED CONCRETE PIPE
R.O.W.—RIGHT-OF-WAY
S.S.E.—SANITARY SEWER EASEMENT
SAN.—SANITARY
SHT.—SHEET
STM.—STORM
SWR—SEWER
TBM—TEMPORARY BENCHMARK
TRF—PAD MOUNTED TRANSFORMER
TG—TOP OF GRATE
TR—TOP OF RIM
TYP.—TYPICAL
U.E.—UTILITY EASEMENT
UGV—UNDERGROUND VAULT
W.L.E.—WATER LINE EASEMENT
W.F.—WOOD FENCE

LEGEND

- AIR CONDITIONING UNIT
- "BB" INLET
- BENCHMARK
- BOLLARD
- "C" INLET
- CLEANOUT
- DOWN SPOUT
- "E" INLET
- ELECTRIC JUNCTION BOX
- FIRE HYDRANT
- FLAG POLE
- GAS METER
- GAS VALVE
- GATE POST
- GREASE TRAP
- GUY WIRE
- INLET
- IRRIGATION CONTROL VALVE
- LIGHT STANDARD
- MANHOLE
- PAINT MARKER (ELECTRIC)
- PAINT MARKER (GAS)
- PAINT MARKER (TELEPHONE)
- PEDESTAL
- PIPELINE MARKER
- POWER POLE
- SAMPLE WELL
- SHRUB
- SIGN
- STAND PIPE
- WATER METER
- WATER VALVE
- WHEEL STOP
- YARD LIGHT



SHEET 1 OF 6

JOEL D. WALKER 5189 REGISTERED PROFESSIONAL LAND SURVEYOR STATE OF TEXAS

TO: NEW CANEY INDEPENDENT SCHOOL DISTRICT

THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS STANDARDS AND SPECIFICATIONS FOR A CATEGORY 6, CONDITION III SURVEY AND THE CURRENT MINIMUM REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYING ACT.

8/5/24
DATE

Joel D. Walker
JOEL D. WALKER, R.P.L.S.
TEXAS REGISTRATION NO. 5189

SURVEYOR'S NOTES:

1. THE BEARINGS SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NAD 83

2. THE CAD FILE OF THE DRAWING SHOWN HEREIN IS BASED ON TEXAS CENTRAL ZONE NO. 4203, STATE PLANE SURFACE VALUE (NAD83) AND MAY BE CONVERTED TO GRID BY SCALING THE DRAWING BY THE FOLLOWING COMBINED SCALE FACTOR OF 0.999994548567.

3. ACCORDING TO F.I.R.M. MAP NO. 48339C0600G (COMMUNITY-PANEL NO. 480483060006), MAP REVISED DATE: AUGUST 18, 2014. THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED, DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD.

THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THE SUBJECT TRACT ON THE ABOVE REFERENCED MAP. THIS INFORMATION IS TO DETERMINE FLOOD INSURANCE RATES ONLY AND IS NOT INTENDED TO IDENTIFY SPECIFIC FLOODING CONDITIONS.

4. THE SUBJECT TRACT IS AFFECTED BY THE ABUTTER'S RIGHT AND RIGHTS OF DIRECT ACCESS TO U.S. HIGHWAY 59 (INTERSTATE 69) AS RECORDED UNDER VOL. 532, PG. 592, M.C.D.R.

5. UNDERGROUND UTILITY LOCATIONS PROVIDED BY LONESTAR LOCATING, LLC. PAINT MARKS WITH NUMERIC VALUES INDICATES COVER (FEET AND INCHES) DETERMINED BY ELECTRONIC TCNING.

ALWAYS CONTACT TEXAS 811 PRIOR TO DIGGING. SOME UTILITIES SUCH AS FIBER OPTIC W/O TRACERS, PLASTIC GAS, FIBERGLASS/PVC ARE NOT LOCATABLE BY TRANSMISSION SIGNAL.

6. → INDICATES AN UNDERGROUND SEWER LINE WITH UNKNOWN DIRECTION, SIZE OR LOCATION OR A POSSIBLE STUB-OUT.

REFERENCE BENCHMARK:

BL2200 – NATIONAL GEODETIC SURVEY MARKER BL2200 'S A BRASS DISC STAMPED "KEEFER 1942" LOCATED ON SOUTH SIDE OF DRIVEWAY FOR SOUTHWESTERN BELL COMPANY. ELEVATION=112.53' (NAVD88)

TBM"A" – BOX CUT ON TOP OF CONCRETE HEADWALL LOCATED ON THE NORTH SIDE OF EAGLE DRIVE WEST OF LOOP 494. ELEVATION = 103.06'

TBM"B" – BOX CUT ON TOP OF CONCRETE BASE FOR LIGHT STANDARD LOCATED ON THE SOUTH SIDE OF PARKING LOT IN THE GRASS ISLAND AREA NEAR THE SOUTHEAST CORNER OF THE SCHOOL BUILDING. ELEVATION = 105.14'

TBM"C" – BOX CUT ON TOP OF "BB" INLET LOCATED IN THE EAST SIDE OF CIRCLE DRIVE IN FRONT OF MAIN ENTRANCE. ELEVATION = 101.92'

TBM"D" – BOX CUT ON TOP OF CONCRETE BASE FOR LIGHT STANDARD LOCATED ON THE SOUTH SIDE OF EAGLE DRIVE ON THE FIRST LIGHT STANDARD WEST OF MAIN ENTRANCE DRIVEWAY. ELEVATION = 105.78'

TBM"E" – BOX CUT ON TOP OF CONCRETE BASE FOR LIGHT STANDARD LOCATED ON THE MOST EASTERLY LIGHT STANDARD IN GRASS ISLAND NORTH OF PARKING LOT ON THE NORTH SIDE OF THE NEW CANEY I.S.D. ANNEX BUILDING. ELEVATION = 105.70'

TBM"F" – BOX CUT ON TOP OF CONCRETE HEADWALL LOCATED ON THE WEST SIDE OF DRIVEWAY ±300 FEET EAST OF HIGHWAY 59 FEEDER ROAD. ELEVATION = 106.00'

TBM"G" – BOX CUT ON TOP OF CONCRETE BASE FOR LIGHT STANDARD LOCATED ON THE SOUTH SIDE OF GRASS AREA INSIDE CIRCLE DRIVEWAY ON THE WEST SIDE ON THE NEW CANEY I.S.D. ANNEX BUILDING. ELEVATION = 106.26'

TBM"H" – BOX CUT ON TOP OF CONCRETE BASE FOR LIGHT STANDARD LOCATED ON THE NORTH SIDE OF PARKING LOT ON THE SOUTH SIDE OF THE NEW CANEY ANNEX BUILDING ON THE FIRST ISLAND EAST OF THE OF THE CROSS WALK. ELEVATION = 106.48'

TBM"I" – BOX CUT ON THE MOST EASTERLY CORNER OF CONCRETE PARKING AREA ±62 FEET EAST OF THE TENNIS COURTS NEAR THE NORTHWEST CORNER OF THE PRACTICE FIELD. ELEVATION = 104.57'

TBM"J" – BOX CUT ON TOP OF "C" INLET LOCATED NEAR NORTHEAST CORNER OF PARKING LOT ON THE SOUTH SIDE OF THE NEW CANEY I.S.D. ANNEX BUILDING. ELEVATION = 103.25'

NEW CANEY INDEPENDENT SCHOOL DISTRICT

TOPOGRAPHIC SURVEY

NEW CANEY HIGH SCHOOL
55.323 ACRE TRACT
OUT OF THE
WILLIAM SMITH SURVEY
ABSTRACT NO. 540
MONTGOMERY COUNTY, TEXAS

WEST BELT SURVEYING, INC.
21020 PARK ROW, KATY, TX. 77449
PHONE: (281) 599-8288
FAX: (281) 492-6020
CERTIFIED FIRM NO. 10078800

NO.	DATE	REVISIONS	BY

DRAWN BY: DB	CHECKED BY: MDL
~~SCALE 1" = 20'~~ N.T.S.	APPROVED BY: JDW
PROJECT NO. 5639-00238	DATE: AUGUST 5, 2024

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
TOPOGRAPHIC SURVEY (SHEET 1 OF 6)

SHEET NO.
SV0.01

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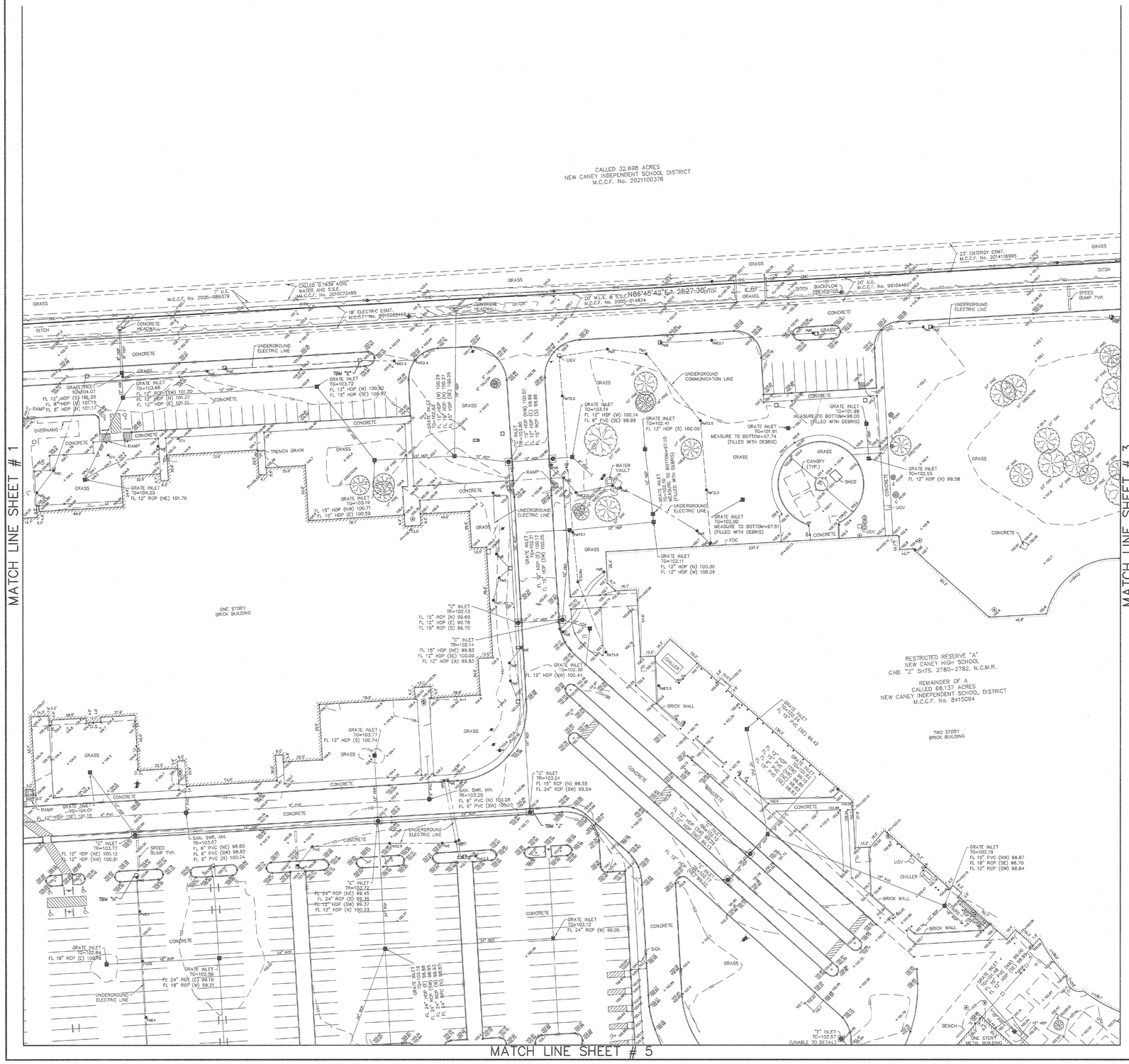

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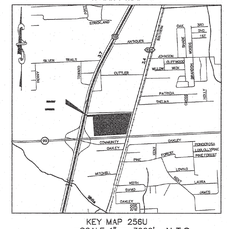

KEY MAP 256U
SCALE 1" = 3000' N.T.S.

SCALE 1" = 20'
N.T.S.

ABBREVIATIONS

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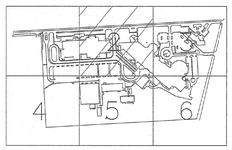
UGV–UNDERGROUND VAULT
W.L.E.–WATER LINE EASEMENT
W.F.–WOOD FENCE

LEGEND

AC	AIR CONDITIONING UNIT	IRCV	IRRIGATION CONTROL VALVE
	"BS" INLET		LIGHT STANDARD
BM	BENCHMARK		MANHOLE
	BOLLARD	PM	PAINT MARKER (ELECTRIC)
	"C" INLET	PM	PAINT MARKER (GAS)
	CLEANOUT	PM	PAINT MARKER (TELEPHONE)
D.S.	DOWN SPOUT		PEDESTAL
	"E" INLET	PM	PIPELINE MARKER
	ELECTRIC JUNCTION BOX		POWER POLE
	FIRE HYDRANT		SAMPLE WELL
	FLAG POLE		SHRUB
GM	GAS METER		SIGN
	GAS VALVE		STAND PIPE
	GATE POST	WM	WATER METER
	GREASE TRAP		WATER VALVE
	GUY WIRE		WHEEL STOP
	INLET		YARD LIGHT



SHEET 2 OF 6

TO: NEW CANEY INDEPENDENT SCHOOL DISTRICT

THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS STANDARDS AND SPECIFICATIONS FOR A CATEGORY 6, CONDITION III SURVEY AND THE CURRENT MINIMUM REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYING ACT.

8/5/24
DATE

JOEL D. WALKER, R.P.L.S.
TEXAS REGISTRATION NO. 5189

SURVEYOR'S NOTES:

1. THE BEARINGS SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NAD 83.

2. THE CAD FILE OF THE DRAWING SHOWN HEREIN IS BASED ON TEXAS CENTRAL ZONE NO. 4203, STATE PLANE SURFACE VALUE (NAD83) AND MAY BE CONVERTED TO GRID BY SCALING THE DRAWING BY THE FOLLOWING COMBINED SCALE FACTOR OF 0.999994548567.

3. ACCORDING TO F.I.R.M. MAP NO. 48339C0600G (COMMUNITY-PANEL NO. 480483060O0), MAP REVISED DATE: AUGUST 18, 2014. THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED, DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD.

THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THE SUBJECT TRACT ON THE ABOVE REFERENCED MAP. THIS INFORMATION IS TO DETERMINE FLOOD INSURANCE RATES ONLY AND IS NOT INTENDED TO IDENTIFY SPECIFIC FLOODING CONDITIONS.

4. THE SUBJECT TRACT IS AFFECTED BY THE ABUTTER'S RIGHT AND RIGHTS OF DIRECT ACCESS TO U.S. HIGHWAY 59 (INTERSTATE 69) AS RECORDED UNDER VOL. 532, PG. 592, M.C.D.R.

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ALWAYS CONTACT TEXAS 811 PRIOR TO DIGGING. SOME UTILITIES SUCH AS FIBER OPTIC W/O TRACERS, PLASTIC GAS, FIBERGLASS/PVC ARE NOT LOCATABLE BY TRANSMISSION SIGNAL.

6. –•– INDICATES AN UNDERGROUND SEWER LINE WITH UNKNOWN DIRECTION, SIZE OR LOCATION OR A POSSIBLE STUB–OUT.

REFERENCE BENCHMARK:

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NEW CANEY INDEPENDENT SCHOOL DISTRICT

TOPOGRAPHIC SURVEY

NEW CANEY HIGH SCHOOL
55.323 ACRE TRACT
OUT OF THE
WILLIAM SMITH SURVEY
ABSTRACT NO. 540
MONTGOMERY COUNTY, TEXAS

WEST BELT SURVEYING, INC.
21109 PARK ROW, KATY, TX. 77449
PHONE: (281) 599-8888
FAX: (281) 492-0701
CERTIFIED FIRM NO. 10075800

NO.	DATE	REVISIONS	BY

DRAWN BY: DB | CHECKED BY: MDL
SCALE 1" = 200' N.T.S. | APPROVED BY: JDW
PROJECT NO. 5639-00238 | DATE: AUGUST 5, 2024

VLK|ARCHITECTS

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VLK Architects, Inc.
20445 State Hwy 249, Suite 350
Houston, Texas 77070
Main Phone: 281.671.2300
www.vlkarchitects.com

CIVIL ENGINEER
Talon Engineering, LLC
1118 Wolfs Knoll
Houston, Texas 77094
Main Phone: 832.287.9874
www.taloncivil.com

NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
TOPOGRAPHIC SURVEY (SHEET 2 OF 6)

SHEET NO.
SV0.02

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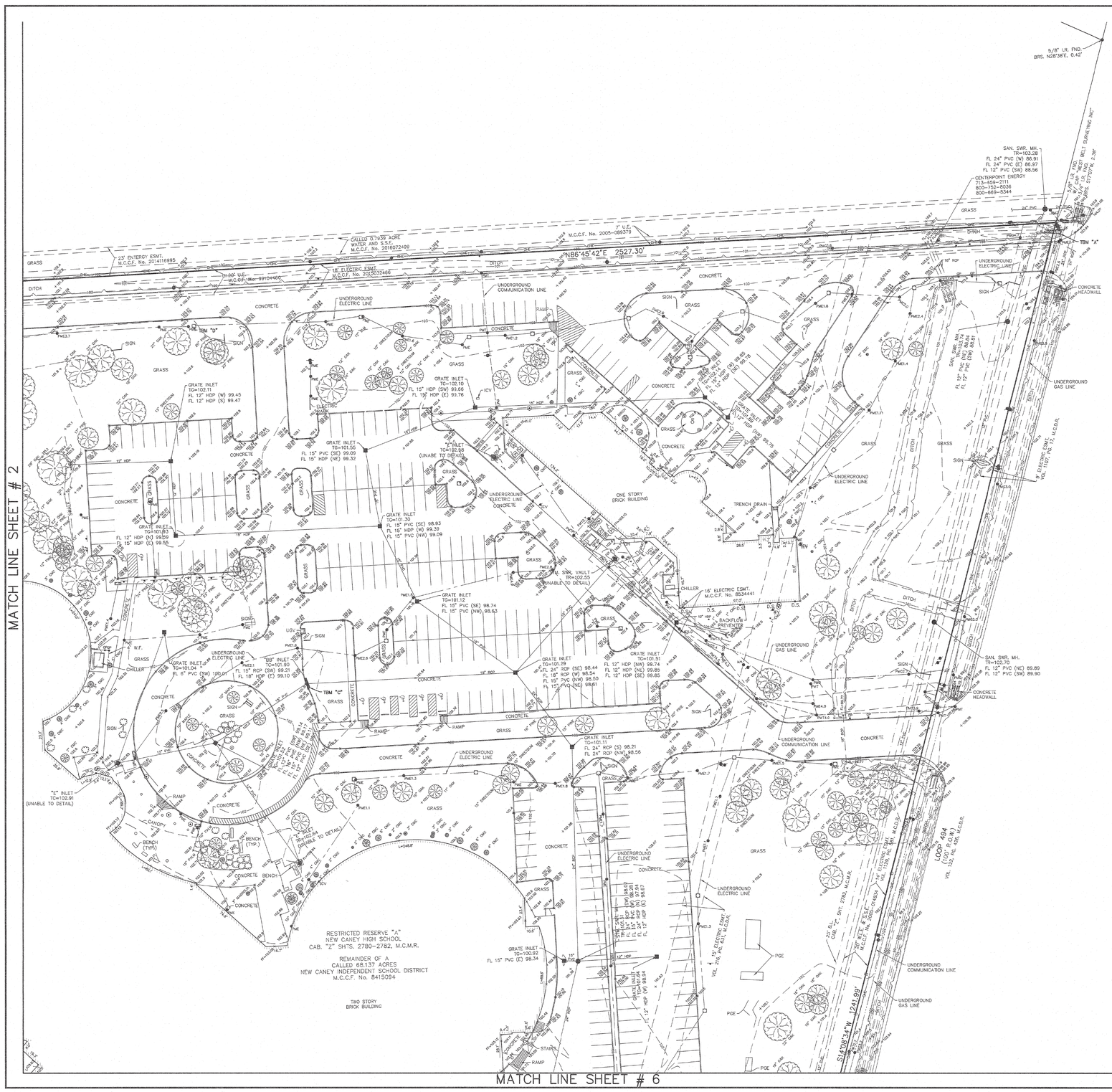
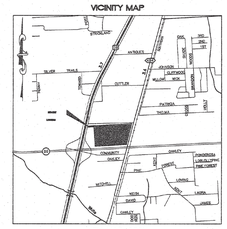
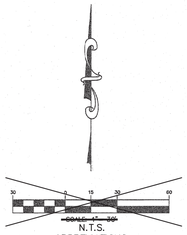


VICINITY MAP



KEY MAP 256U
~~SCALE 1" = 1000'~~ N.T.S.



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LEGEND

AIR CONDITIONING UNIT	IRRIGATION CONTROL VALVE
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BOLLARD	PAINT MARKER (ELECTRIC)
"C" INLET	PAINT MARKER (GAS)
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FIRE HYDRANT	SAMPLE WELL
FLAG POLE	SHRUB
GAS METER	SIGN
GAS VALVE	STAND PIPE
GATE POST	WATER METER
GREASE TRAP	WATER VALVE
GUY WIRE	WHEEL STOP
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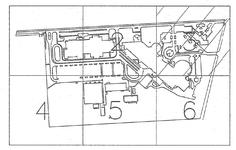

SHEET 3 OF 6

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8/5/24
DATE

Joel D. Walker
JOEL D. WALKER, R.P.L.S.
TEXAS REGISTRATION NO. 5189

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NEW CANEY INDEPENDENT SCHOOL DISTRICT

TOPOGRAPHIC SURVEY

NEW CANEY HIGH SCHOOL
55.323 ACRE TRACT
OUT OF THE
WILLIAM SMITH SURVEY
ABSTRACT NO. 540
MONTGOMERY COUNTY, TEXAS

WEST BELT SURVEYING, INC.
21020 PARK IOOW
KATY, TX. 77449
PHONE: (281) 599-8588
FAX: (281) 492-6020
CERTIFIED FIRM NO. 100728800

NO.	DATE	REVISIONS	BY

DRAWN BY: DB	CHECKED BY: MDL
~~SCALE: 1"=30'~~ N.T.S.	APPROVED BY: JDW
PROJECT NO. 5639–00223B	DATE: AUGUST 5, 2024

VLK|ARCHITECTS

ARCHITECT
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20445 State Hwy 249, Suite 350
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www.vlkarchitects.com

CIVIL ENGINEER
Talon Engineering, LLC
1118 Wolfs Knoll
Houston, Texas 77094
Main Phone: 832.287.9874
www.taloncivil.com

NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F–24281

BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
TOPOGRAPHIC SURVEY (SHEET 3 OF 6)

SHEET NO.
SV0.03

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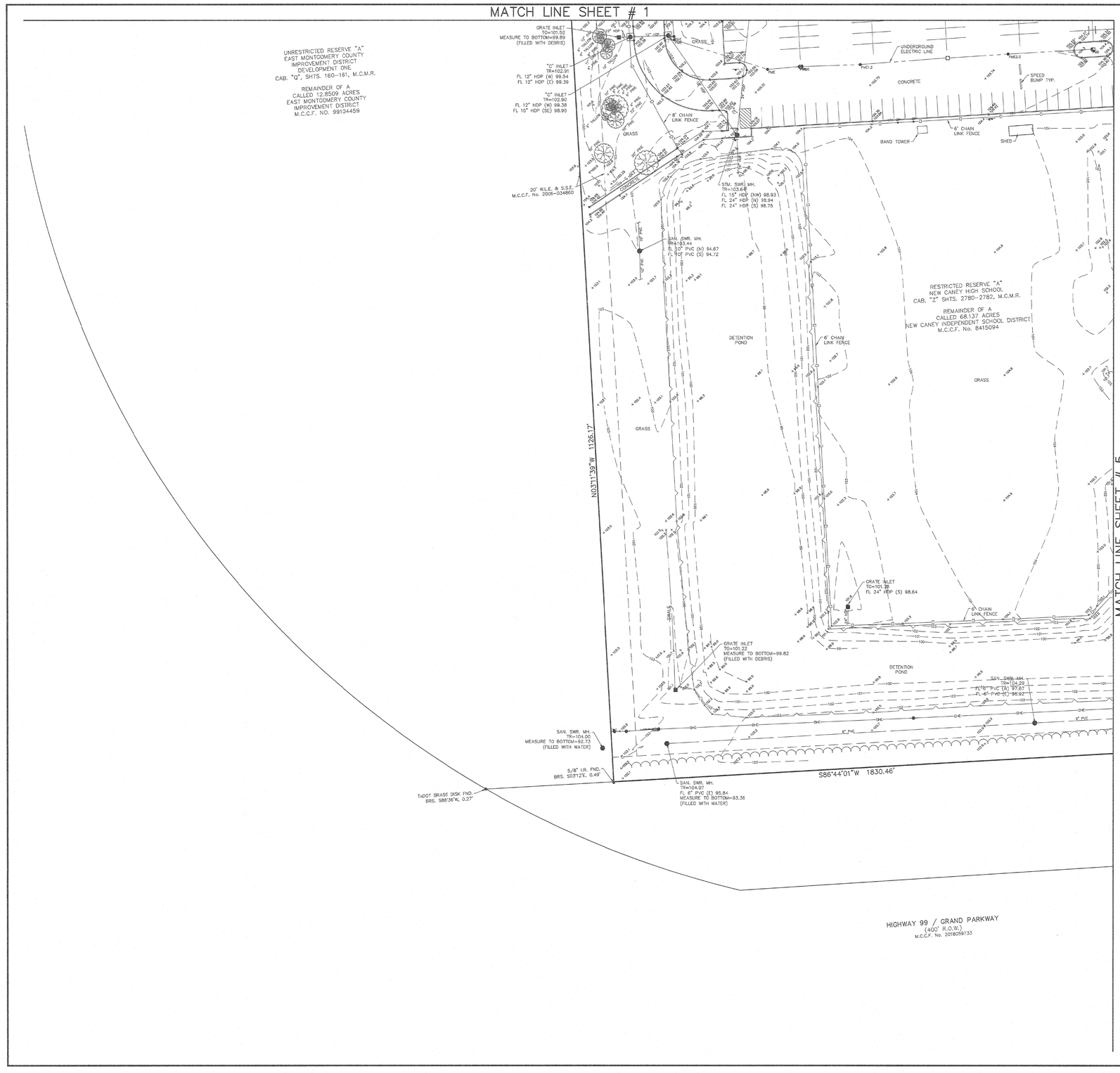
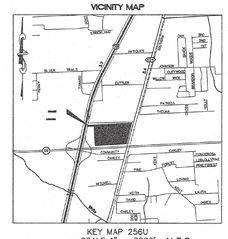
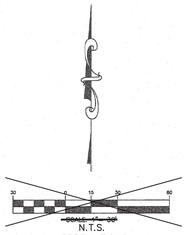


VICINITY MAP



KEY MAP 256U
~~SCALE 1" = 3000'~~ N.T.S.



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- GATE POST
- GREASE TRAP
- GUY WIRE
- INLET
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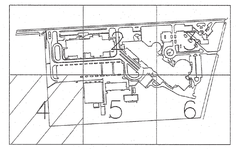

SHEET 4 OF 6

STATE OF TEXAS
REGISTERED
JOEL D. WALKER
5189
PROFESSIONAL
SURVEYOR

TO: NEW CANEY INDEPENDENT SCHOOL DISTRICT

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NEW CANEY INDEPENDENT SCHOOL DISTRICT

TOPOGRAPHIC SURVEY

NEW CANEY HIGH SCHOOL
55.323 ACRE TRACT
OUT OF THE
WILLIAM SMITH SURVEY
ABSTRACT NO. 540
MONTGOMERY COUNTY, TEXAS

WEST BELT SURVEYING, INC.

21000 PARK ROW
KATY, TX. 77449
PHONE: (281) 599-8888
FAX: (281) 492-6020
CERTIFIED FIRM NO. 100758600

NO.	DATE	REVISIONS	BY

DRAWN BY: DB	CHECKED BY: MDL
~~SCALE: 1" = 200'~~ N.T.S.	APPROVED BY: JDW
PROJECT NO. 5639-00238	DATE: AUGUST 5, 2024

VLK|ARCHITECTS

ARCHITECT
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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
TOPOGRAPHIC SURVEY (SHEET 4 OF 6)

SHEET NO.
SV0.04

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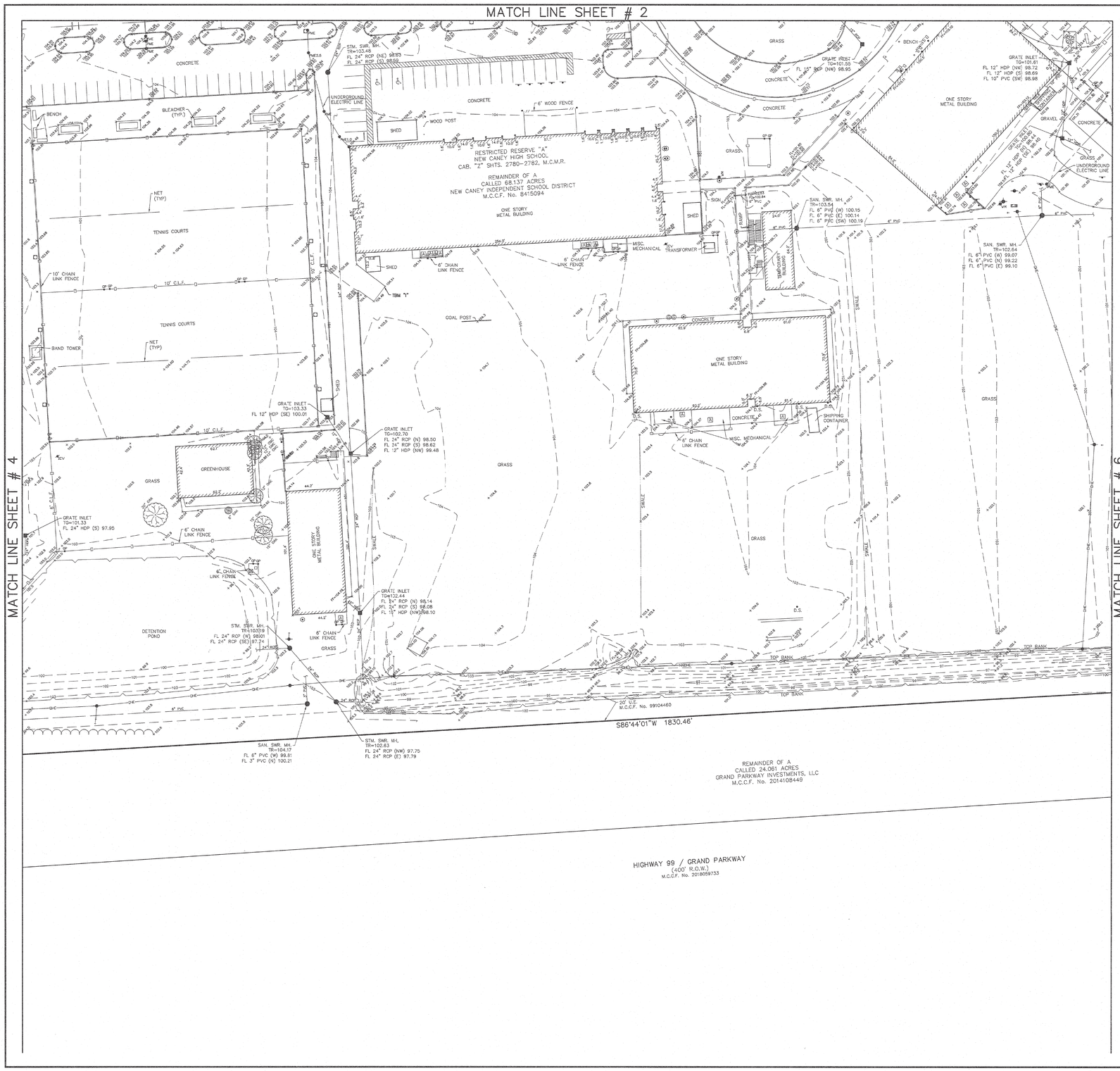

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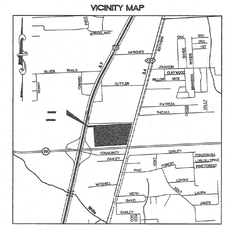
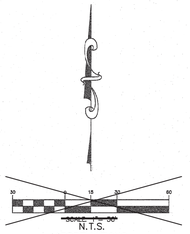


KEY MAP 256U

~~SCALE 1" = 3000'~~ N.T.S.



N.T.S.

ABBREVIATIONS

B.L.–BUILDING LINE
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- GUY WIRE
- INLET
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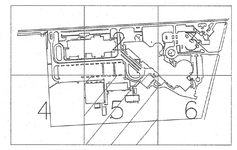
- LIGHT STANDARD
- MANHOLE
- PAINT MARKER (ELECTRIC)
- PAINT MARKER (GAS)
- PAINT MARKER (TELEPHONE)
- PEDESTAL
- PIPELINE MARKER
- POWER POLE
- SAMPLE WELL
- SHRUB
- SIGN
- STAND PIPE
- WATER METER
- WATER VALVE
- WHEEL STOP
- YARD LIGHT



SHEET 5 OF 6

JOEL D. WALKER 5189 REGISTERED PROFESSIONAL LAND SURVEYOR STATE OF TEXAS

TO: NEW CANEY INDEPENDENT SCHOOL DISTRICT

THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS STANDARDS AND SPECIFICATIONS FOR A CATEGORY 6, CONDITION III SURVEY AND THE CURRENT MINIMUM REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYING ACT.

8/5/24
DATE

Joel D. Walker
JOEL D. WALKER, R.P.L.S.
TEXAS REGISTRATION NO. 5189

SURVEYOR'S NOTES:

1. THE BEARINGS SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NAD 83

2. THE CAD FILE OF THE DRAWING SHOWN HEREIN IS BASED ON TEXAS CENTRAL ZONE NO. 4203, STATE PLANE SURFACE VALUE (NAD83) AND MAY BE CONVERTED TO GRID BY SCALING THE DRAWING BY THE FOLLOWING COMBINED SCALE FACTOR OF 0.999994548567.

3. ACCORDING TO F.I.R.M. MAP NO. 48339C0600G (COMMUNITY—PANEL NO. 48048306000), MAP REVISED DATE: AUGUST 18, 2014. THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED, DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD.

THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THE SUBJECT TRACT ON THE ABOVE REFERENCED MAP. THIS INFORMATION IS TO DETERMINE FLOOD INSURANCE RATES ONLY AND IS NOT INTENDED TO IDENTIFY SPECIFIC FLOODING CONDITIONS.

4. THE SUBJECT TRACT IS AFFECTED BY THE ABUTTER'S RIGHT AND RIGHTS OF DIRECT ACCESS TO U.S. HIGHWAY 59 (INTERSTATE 69) AS RECORDED UNDER VOL. 532, PG. 592, M.C.D.R.

5. UNDERGROUND UTILITY LOCATIONS PROVIDED BY LONESTAR LOCATING, LLC. PAINT MARKS WITH NUMERIC VALUES INDICATES COVER (FEET AND INCHES) DETERMINED BY ELECTRONIC TONING.

ALWAYS CONTACT TEXAS 811 PRIOR TO DIGGING. SOME UTILITIES SUCH AS FIBER OPTIC W/O TRACERS, PLASTIC GAS, FIBERGLASS/PVC ARE NOT LOCATABLE BY TRANSMISSION SIGNAL.

6. ⊣⊢ INDICATES AN UNDERGROUND SEWER LINE WITH UNKNOWN DIRECTION, SIZE OR LOCATION OR A POSSIBLE STUB-OUT.

REFERENCE BENCHMARK:

BL2200 – NATIONAL GEODETIC SURVEY MARKER BL2200 IS A BRASS DISC STAMPED "KEEFER 1942" LOCATED ON SOUTH SIDE OF DRIVEWAY FOR SOUTHWESTERN BELL COMPANY. ELEVATION=112.53' (NAVD88)

TBM"A" – BOX CUT ON TOP OF CONCRETE HEADWALL LOCATED ON THE NORTH SIDE OF EAGLE DRIVE WEST OF LOOP 494. ELEVATION = 103.06'

TBM"B" – BOX CUT ON TOP OF CONCRETE BASE FOR LIGHT STANDARD LOCATED ON THE SOUTH SIDE OF PARKING LOT IN THE GRASS ISLAND AREA NEAR THE SOUTHEAST CORNER OF THE SCHOOL BUILDING. ELEVATION = 105.14'

TBM"C" – BOX CUT ON TOP OF "BB" INLET LOCATED IN THE EAST SIDE OF CIRCLE DRIVE IN FRONT OF MAIN ENTRANCE. ELEVATION = 101.92'

TBM"D" – BOX CUT ON TOP OF CONCRETE BASE FOR LIGHT STANDARD LOCATED ON THE SOUTH SIDE OF EAGLE DRIVE ON THE FIRST LIGHT STANDARD WEST OF MAIN ENTRANCE DRIVEWAY. ELEVATION = 105.78'

TBM"E" – BOX CUT ON TOP OF CONCRETE BASE FOR LIGHT STANDARD LOCATED ON THE MOST EASTERLY LIGHT STANDARD IN GRASS ISLAND NORTH OF PARKING LOT ON THE NORTH SIDE OF THE NEW CANEY I.S.D. ANNEX BUILDING. ELEVATION = 105.70'

TBM"F" – BOX CUT ON TOP OF CONCRETE HEADWALL LOCATED ON THE WEST SIDE OF DRIVEWAY ±300 FEET EAST OF HIGHWAY 59 FEEDER ROAD. ELEVATION = 106.00'

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NEW CANEY INDEPENDENT SCHOOL DISTRICT

TOPOGRAPHIC SURVEY

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OUT OF THE
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CERTIFIED FIRM NO. 10073800

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PROJECT NO. 5639-0023B	DATE: AUGUST 5, 2024

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS BRIAN W. REED 128933 LICENSED PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

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Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
TOPOGRAPHIC SURVEY (SHEET 5 OF 6)

SHEET NO.
SV0.05

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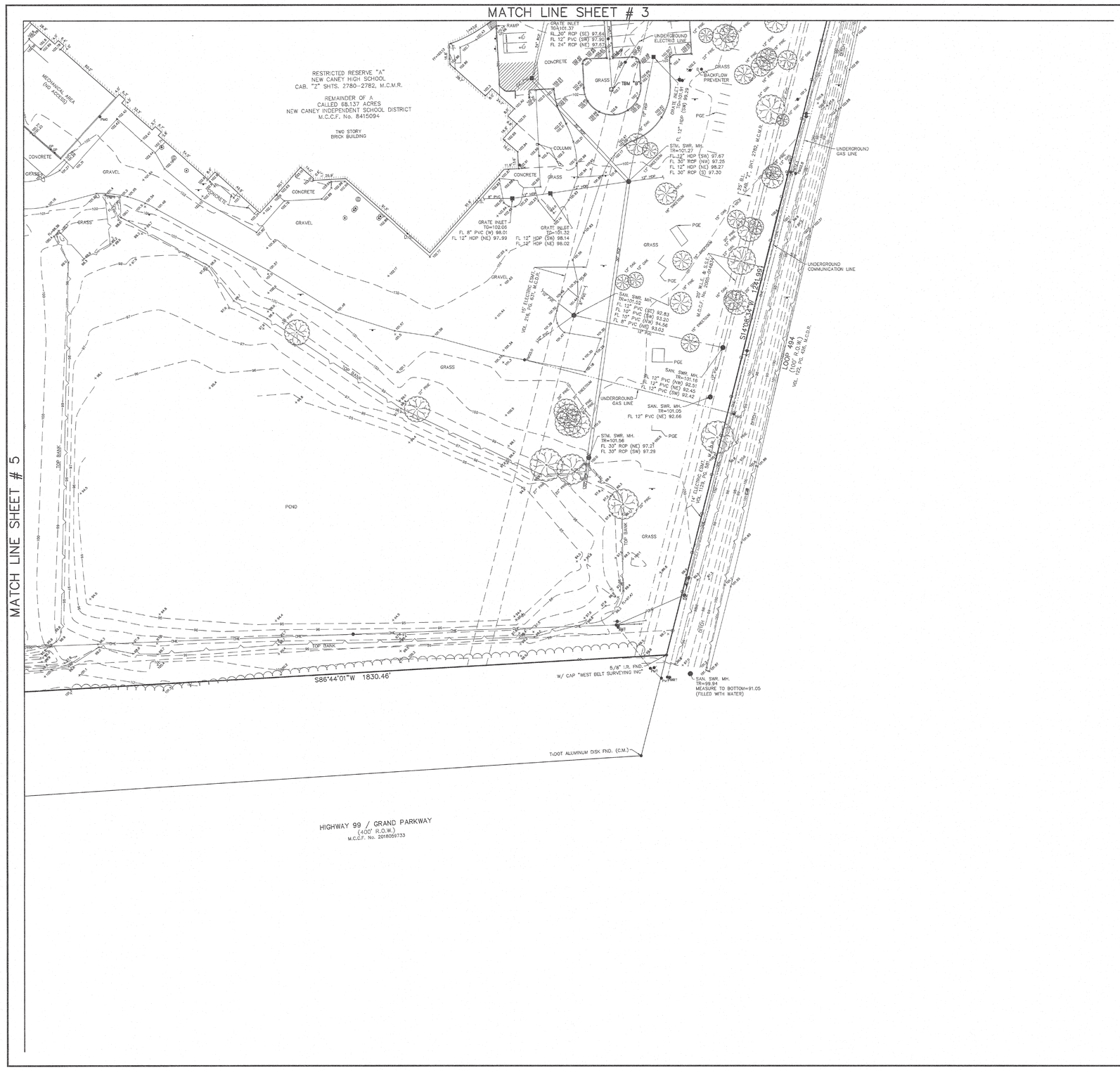

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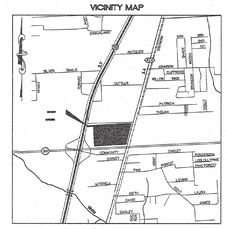

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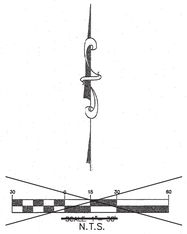

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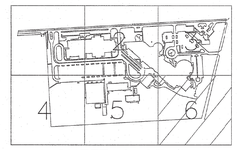
FLAG POLE	SHRUB
GAS METER	SIGN
GAS VALVE	STAND PIPE
GATE POST	WATER METER
GREASE TRAP	WATER VALVE
GUY WIRE	WHEEL STOP
INLET	YARD LIGHT



SHEET 6 OF 6

JOEL D. WALKER 5189 REGISTERED PROFESSIONAL LAND SURVEYOR

TO: NEW CANEY INDEPENDENT SCHOOL DISTRICT

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8/5/24
DATE

JOEL D. WALKER, R.P.L.S.
TEXAS REGISTRATION NO. 5189

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21039 PARK ROW, KATY, TX. 77449 PHONE: (281) 599-9288 FAX: (281) 492-9091
CERTIFIED FIRM NO. 10073800

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PROJECT NO. 5639-00238	DATE: AUGUST 5, 2024

VLK|ARCHITECTS

ARCHITECT

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NEW CANEY ISD
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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS BRIAN W. REED 128933 LICENSED PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
TOPOGRAPHIC SURVEY (SHEET 6 OF 6)

SHEET NO.
SV0.06

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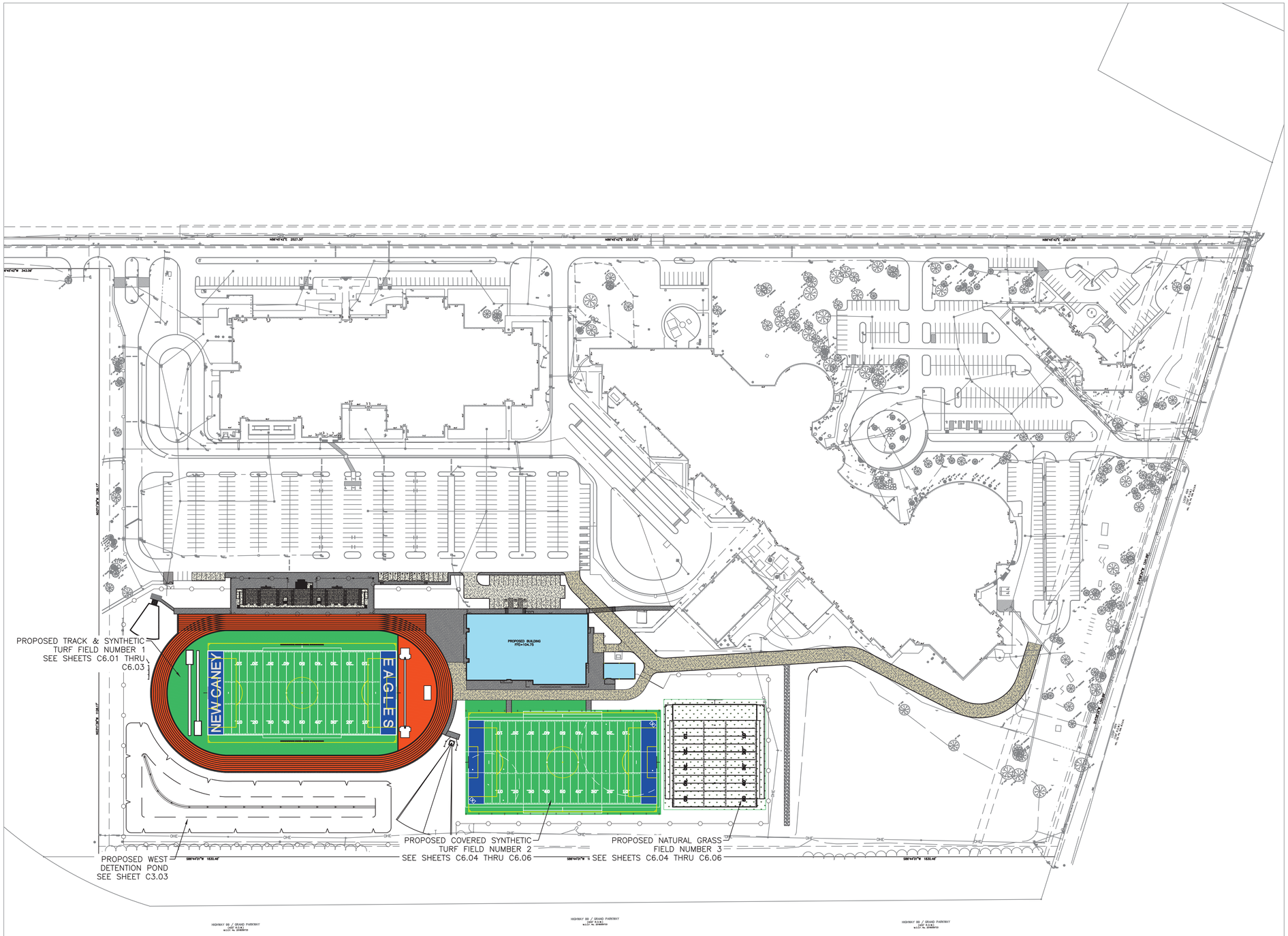

80 0 40 80
SCALE: 1"= 80'

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ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
OVERALL LAYOUT

SHEET NO.
C1.00

NOTES TO CONTRACTOR:

1. ALL UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE.
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UTILITY ONE CALL
CONTRACTOR TO CALL BEFORE DIGGING !!!!
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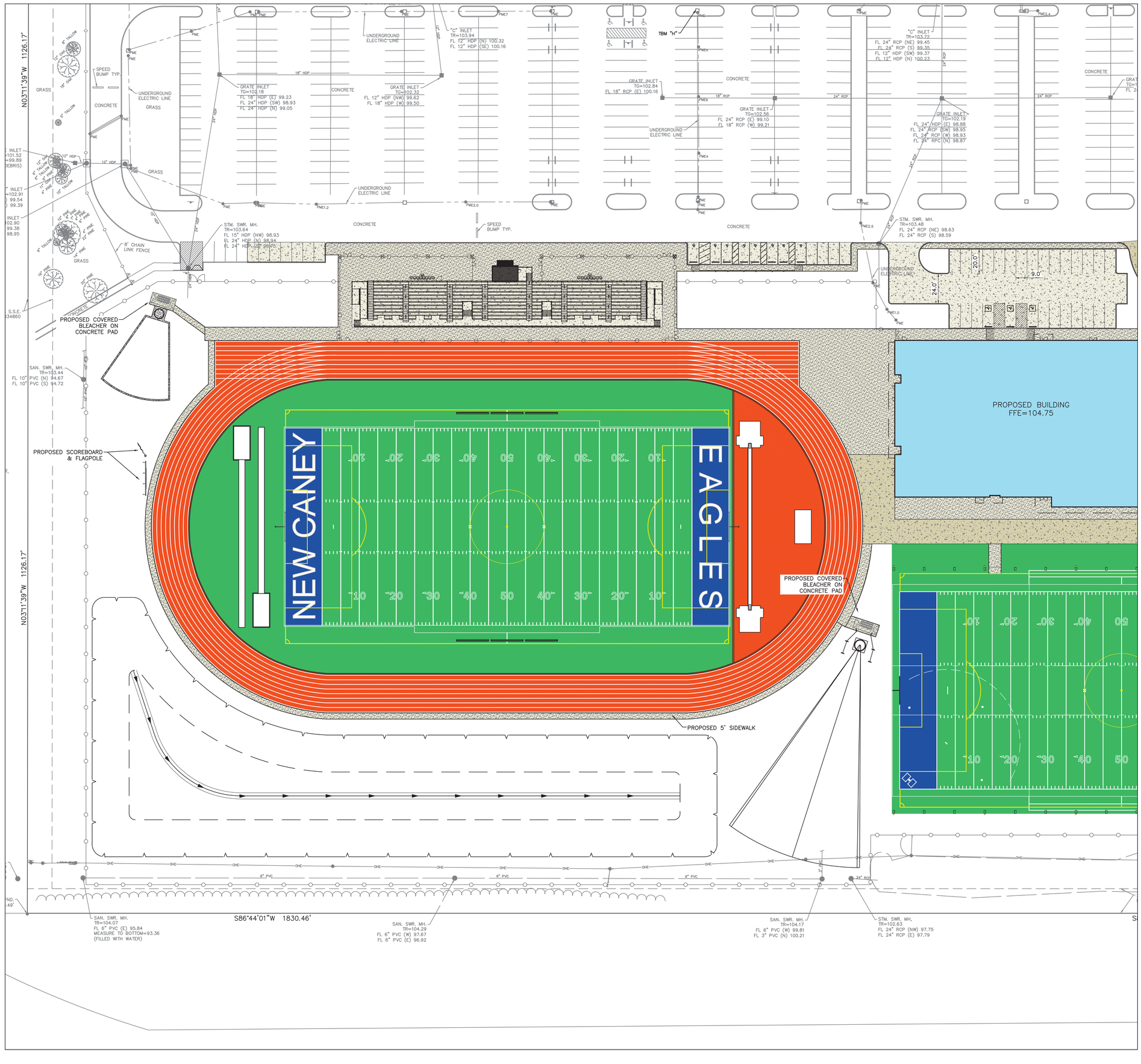

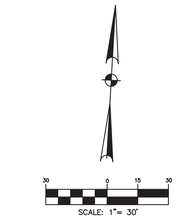

LEGEND:

- PROPOSED BUILDING FOOTPRINT
- 7" REINFORCED CONCRETE PAVEMENT
- 6" REINFORCED CONCRETE PAVEMENT
- 4.5" REINFORCED SIDEWALK

NOTES TO CONTRACTOR:

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

NEW CANEY ISD
NEW CANEY, TEXAS

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
SITE LAYOUT
(SHEET 1 OF 2)

SHEET NO.
C1.01

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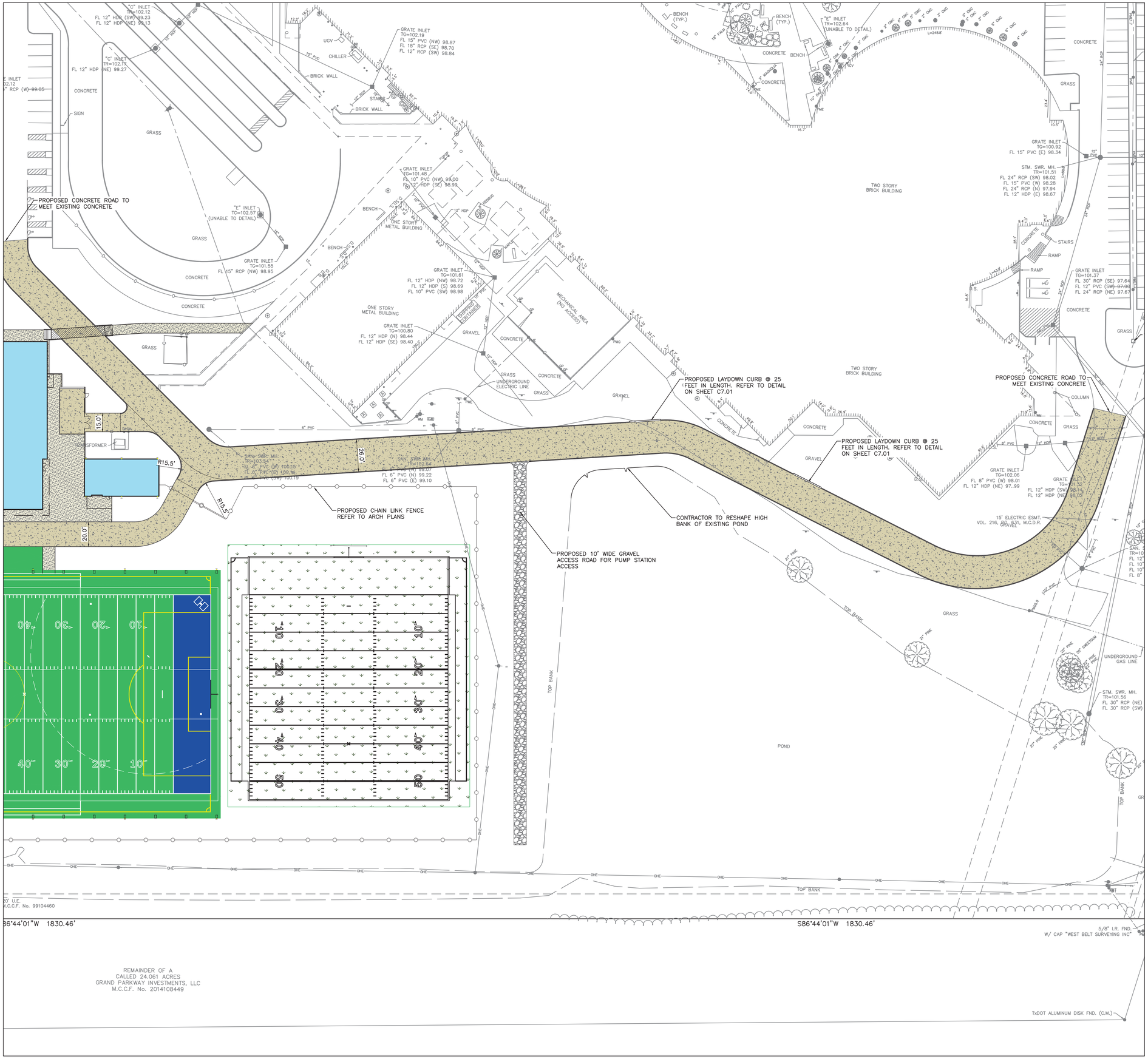

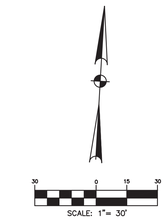

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- 7" REINFORCED CONCRETE PAVEMENT
- 6" REINFORCED CONCRETE PAVEMENT
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- GRAVEL ACCESS ROAD

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BRIAN W. REED
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LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.

23-155.00

SHEET TITLE

SITE LAYOUT
(SHEET 2 OF 2)

SHEET NO.

C1.02

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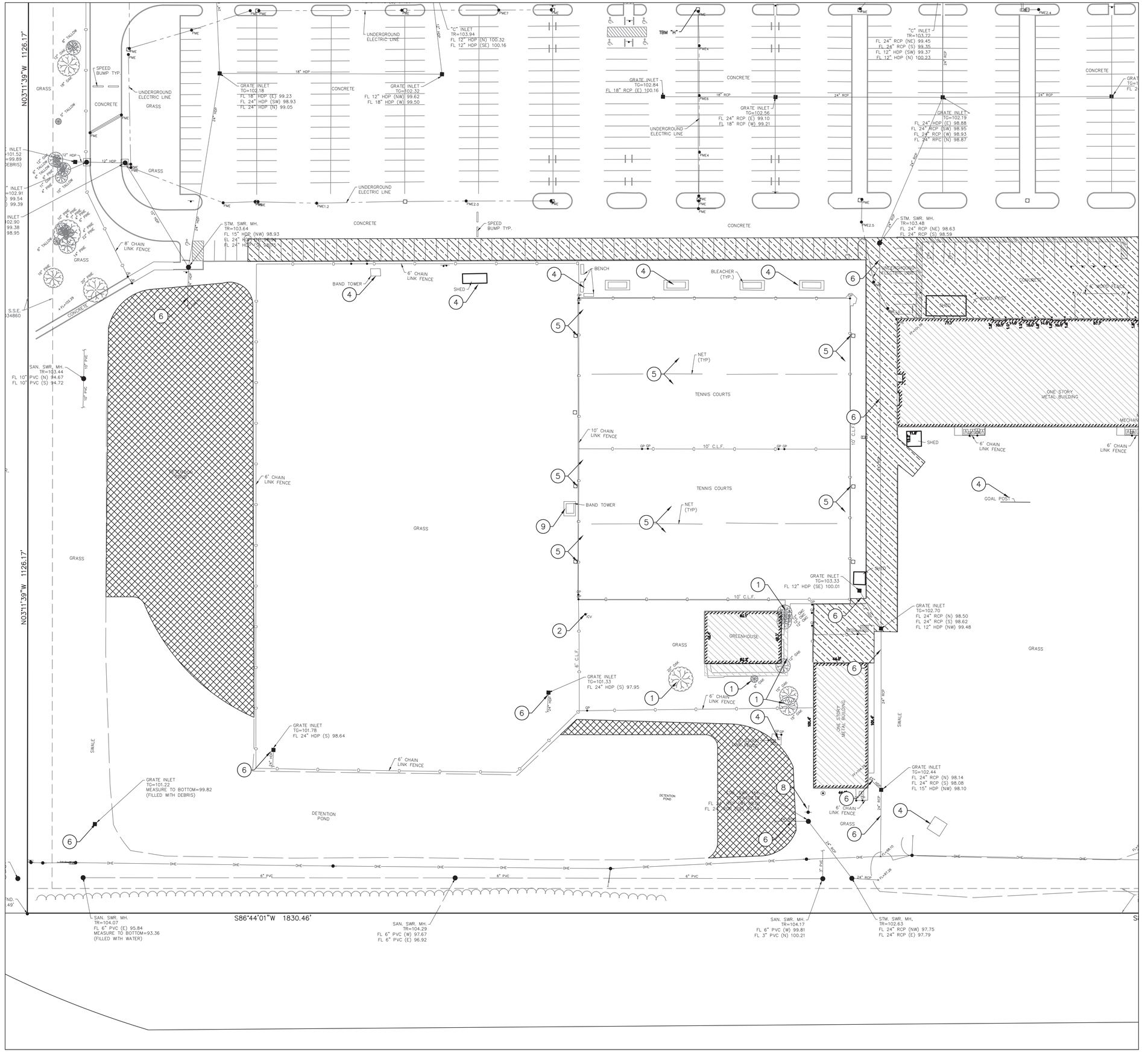

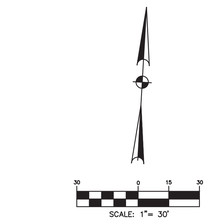

LEGEND:

- EXIST. UNDERGROUND UTILITIES TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING BUILDING TO BE REMOVED
- EXISTING POND TO BE FILLED IN PER SHEETS C2.01 & C3.03
- LIMITS OF CLEARING

KEYED NOTES TO SHEET:

1. EXISTING TREES TO BE REMOVED.
2. ALL EXISTING IRRIGATION LINES & IRRIGATION CONTROL APPURTENANCES TO BE REMOVED THAT ARE LOCATED WITHIN FIELD. CONTRACTOR SHALL CAP ALL EXISTING IRRIGATION LINES. (TYPICAL)
   CONTRACTOR SHALL COORDINATE WITH OWNER FOR FIRST RIGHT OF REFUSAL ON ALL EXISTING IRRIGATION EQUIPMENT & SPRINKLER HEADS.
   CONTRACTOR SHALL COORDINATE WITH SCHOOL MAINTENANCE DEPARTMENT TO ENSURE EXISTING IRRIGATION OUTSIDE OF THE LIMITS OF THE FIELD REMAINS OPERATIONAL AFTER DEMOLITION OF EXISTING FIELD IRRIGATION LINES.
3. EXISTING WATER METER TO BE REMOVED.
4. EXISTING MISC. SITE EQUIPMENT TO BE REMOVED.
5. EXISTING ENTIRE TENNIS COURT SLAB & LIGHTS TO BE REMOVED
6. EXISTING STORM SEWER TO BE REMOVED
7. EXISTING HEADWALLS TO BE REMOVED. EXISTING STORM SEWER TO BE REROUTED AS SHOWN ON SHEETS C3.01 & C3.02. HIGHBANK OF EXISTING POND TO BE RESHAPED AS SHOWN ON SHEET C1.02.
8. EXISTING POWER POLE TO BE REMOVED
9. EXISTING BAND TOWER TO BE SALVAGED. COORDINATE WITH OWNER ON NEW RELOCATED LOCATION.

NOTES TO CONTRACTOR:

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TALON ENGINEERING, LLC
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STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
SITE DEMOLITION PLAN (SHEET 1 OF 2)

SHEET NO.
C1.03

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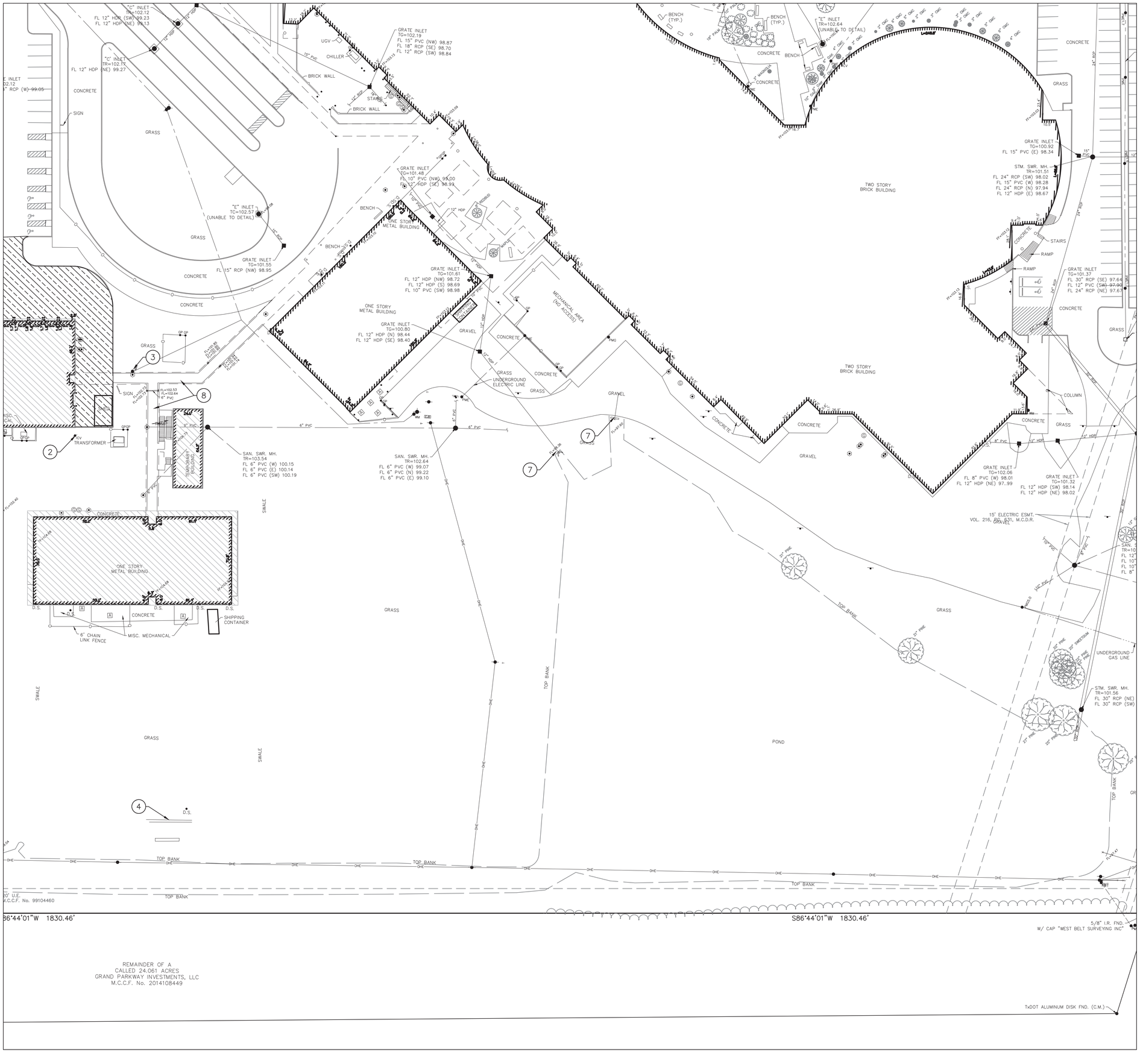

30 0 15 30
SCALE: 1"= 30'

LEGEND:

- EXIST. UNDERGROUND UTILITIES TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING BUILDING TO BE REMOVED
- EXISTING POND TO BE FILLED IN PER SHEETS C2.01 & C3.03
- LIMITS OF CLEARING

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5. EXISTING ENTIRE TENNIS COURT SLAB & LIGHTS TO BE REMOVED
6. EXISTING STORM SEWER TO BE REMOVED
7. EXISTING HEADWALLS TO BE REMOVED. EXISTING STORM SEWER TO BE REROUTED AS SHOWN ON SHEETS C3.01 & C3.02. HIGHBANK OF EXISTING POND TO BE RESHAPED AS SHOWN ON SHEET C1.02.
8. EXISTING SIDEWALK & CANOPY TO BE REMOVED TO THE EXTENT SHOWN ON SHEET C1.02.

NOTES TO CONTRACTOR:

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BWR	BWR,JDK
Designer	Quality Control
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Project Engineer	
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PROJECT NO.
23-155.00

SHEET TITLE
SITE DEMOLITION PLAN
(SHEET 2 OF 2)

SHEET NO.
C1.04

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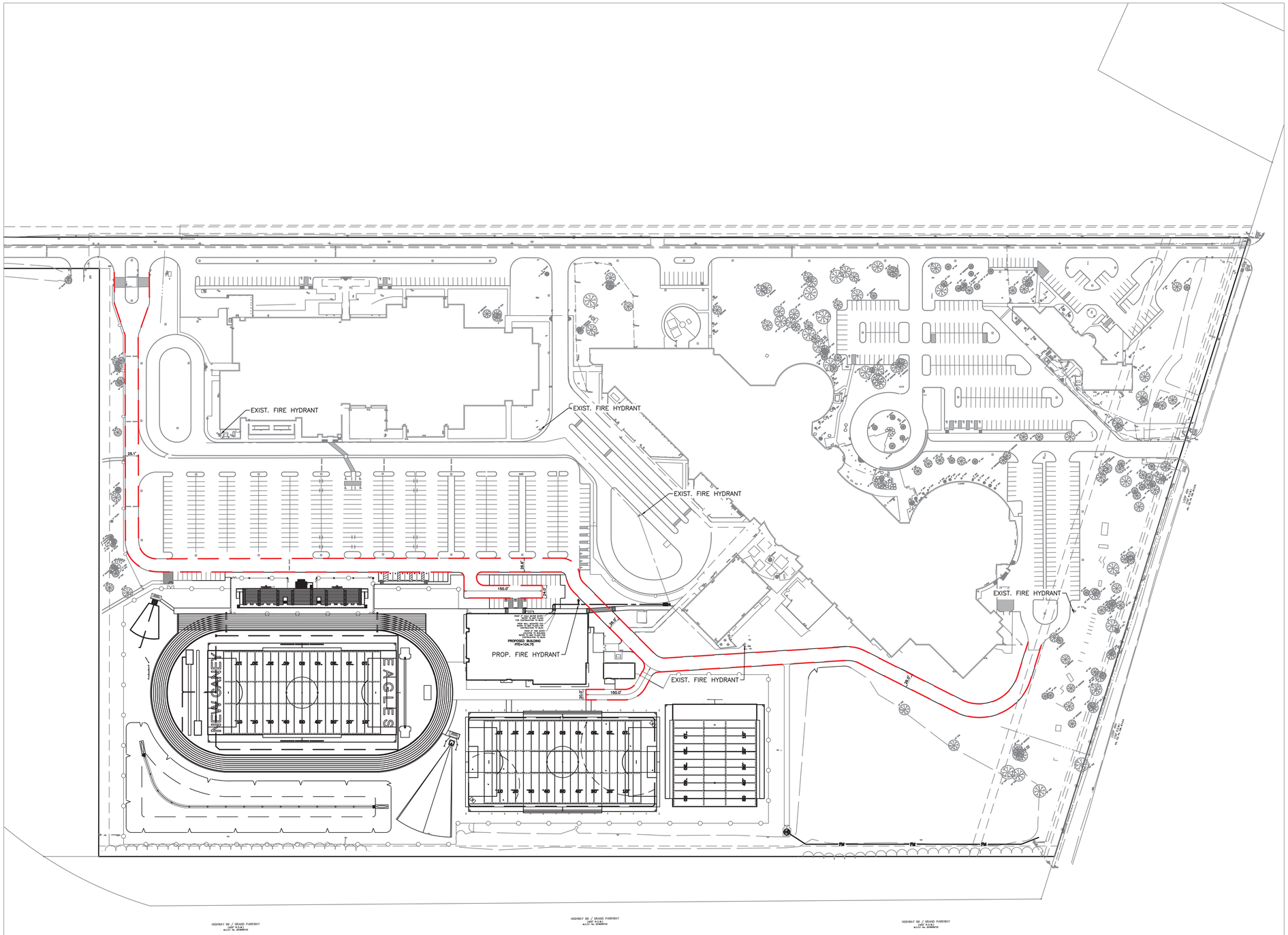
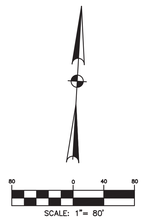




LEGEND:

SYMBOL	DESCRIPTION
— —	ACCESS ROAD/FIRE LANE PAINT RED LANE STRIPE
✧	PROPOSED FIRE HYDRANT
✦	EXISTING FIRE HYDRANT

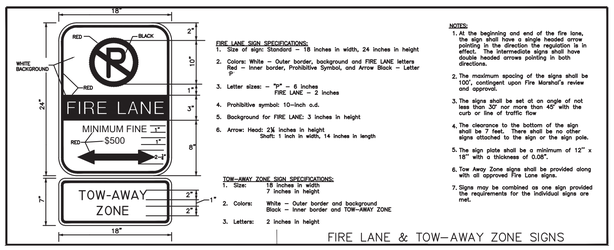
FIRE LANE NOTES

CURBS LOCATED ON EITHER SIDE OF A FIRE LANE SHALL BE PAINTED RED OR A RED STRIPE SHALL BE PLACED ALONG THE PAVEMENT WHERE THERE IS NO CURB. WHERE A FIRE LANE PASSES BETWEEN HEAD IN PARKING SPACES, THE RED STRIPE SHOULD BE PLACED ALONG THE REAR OF THESE SPACES CLEARLY DEFINING THE FIRE LANE. PAINTED CURBS AND FIRE LANE STRIPES SHALL ALSO BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE – TOW AWAY ZONE" IN WHITE LETTERS AT LEAST THREE (3) INCHES IN HEIGHT, AT INTERVALS NOT EXCEEDING (50) FEET. WHERE FIRE LANES ARE NOT CLEARLY DEFINED BY CURB/PAVEMENT STRIPING, FIRE LANE SIGNS ARE REQUIRED. FIRE LANE SIGNS SHOULD BE PLACED EVERY (100) FEET MAXIMUM, ALTERNATING PLACEMENT OF SIGNS ON EACH SIDE OF FIRE ACCESS LANE.

ANY COLOR OTHER THAN RED MAY BE USED IN "NO PARKING" AREAS THAT ARE NOT APPROVED FIRE LANES. RED COLORED CURBS; PAVEMENT STRIPING OR WHEEL STOPS SHALL BE USED ONLY TO DESIGNATE APPROVED FIRE LANES. THE PLANS WILL BE APPROVED WITH THE CIVIL SITE–PLAN REVIEW BUT MAY BE REVISED AT FIRE CODE REVIEW, BY THE BUILDING OFFICIAL.

CONTRACTOR TO PLACE FIRE LANE SIGN AT A MAXIMUM INTERVAL OF 100' ALONG PROPOSED FIRE LANE. CONTRACTOR TO COORDINATE WITH LOCAL FIRE MARSHAL/FIRE INSPECTOR FOR FINAL LOCATION OF PROPOSED SIGNAGE.

ALL FIRE LANE SHOWN SHALL BE 7" REINFORCED CONCRETE PAVEMENT
REFER TO SHEET C1.02.

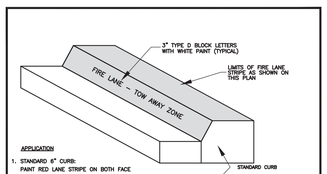


FIRE LANE SIGN SPECIFICATIONS:
1. Size of sign: Standard – 18 inches in width, 24 inches in height
2. Colors: White – Outer border, background and FIRE LANE letters
   Red – Inner border, Prohibitive Symbol, and Arrow Block – Letter R
3. Letter sizes: – "R" – 6 inches
   FIRE LANE – 2 inches
4. Prohibitive symbol: 10–inch o.d.
5. Background for FIRE LANE: 3 inches in height
6. Arrow: Head: 2¼ inches in height
   Shaft: 1 inch in width, 14 inches in length

TOW–AWAY ZONE SIGN SPECIFICATIONS:
1. Size: 18 inches in width
   7 inches in height
2. Colors: White – Outer border and background
   Black – Inner border and TOW–AWAY ZONE
3. Letters: 2 inches in height

NOTES:
1. At the beginning and end of the fire lane, the sign shall have a single headed arrow pointing in the direction the regulation is in effect. The intermediate signs shall have double headed arrows pointing in both directions.
2. The maximum spacing of the signs shall be 100', contingent upon Fire Marshal's review and approval.
3. The signs shall be set at an angle of not less than 30° nor more than 45° with the curb or line of traffic flow
4. The clearance to the bottom of the sign shall be 7 feet. There shall be no other signs attached to the sign or the sign pole.
5. The sign plate shall be a minimum of 12" x 18" with a thickness of 0.08".
6. Tow Away Zone signs shall be provided along with all approved Fire Lane signs.
7. Signs may be combined as one sign provided the requirements for the individual signs are met.

FIRE LANE & TOW–AWAY ZONE SIGNS



APPLICATION
1. STANDARD 6" CURB:
   PAINT RED LANE STRIPE ON BOTH FACE AND TOP OF CURB. PAINT WHITE LETTERS ON FACE OF CURB ONLY.
2. LOW CURB (HEADER CURB OR NO CURB):
   PAINT RED LANE STRIPE AND WHITE LETTERS ON TOP OF HEADER CURB OR PAVEMENT.
3. DESIGNATED CURBS SHALL BE PAINTED "RED" CURBS SHALL BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE – TOW AWAY ZONE" IN WHITE LETTERS AT LEAST 3" IN HEIGHT, AT INTERVALS NOT EXCEEDING 50'.
4. DESIGNATED STRIPE ON PAVEMENT SHALL BE PAINTED "RED". STRIPES SHALL BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE – TOW AWAY ZONE" IN WHITE LETTERS AT LEAST 3" IN HEIGHT, AT INTERVALS NOT EXCEEDING 50'.

FIRE LANE DETAIL
N.T.S.

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Designer	Quality Control
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Project Engineer	
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PROJECT NO.
23-155.00

SHEET TITLE
FIRE LANE LAYOUT

SHEET NO.
C1.05

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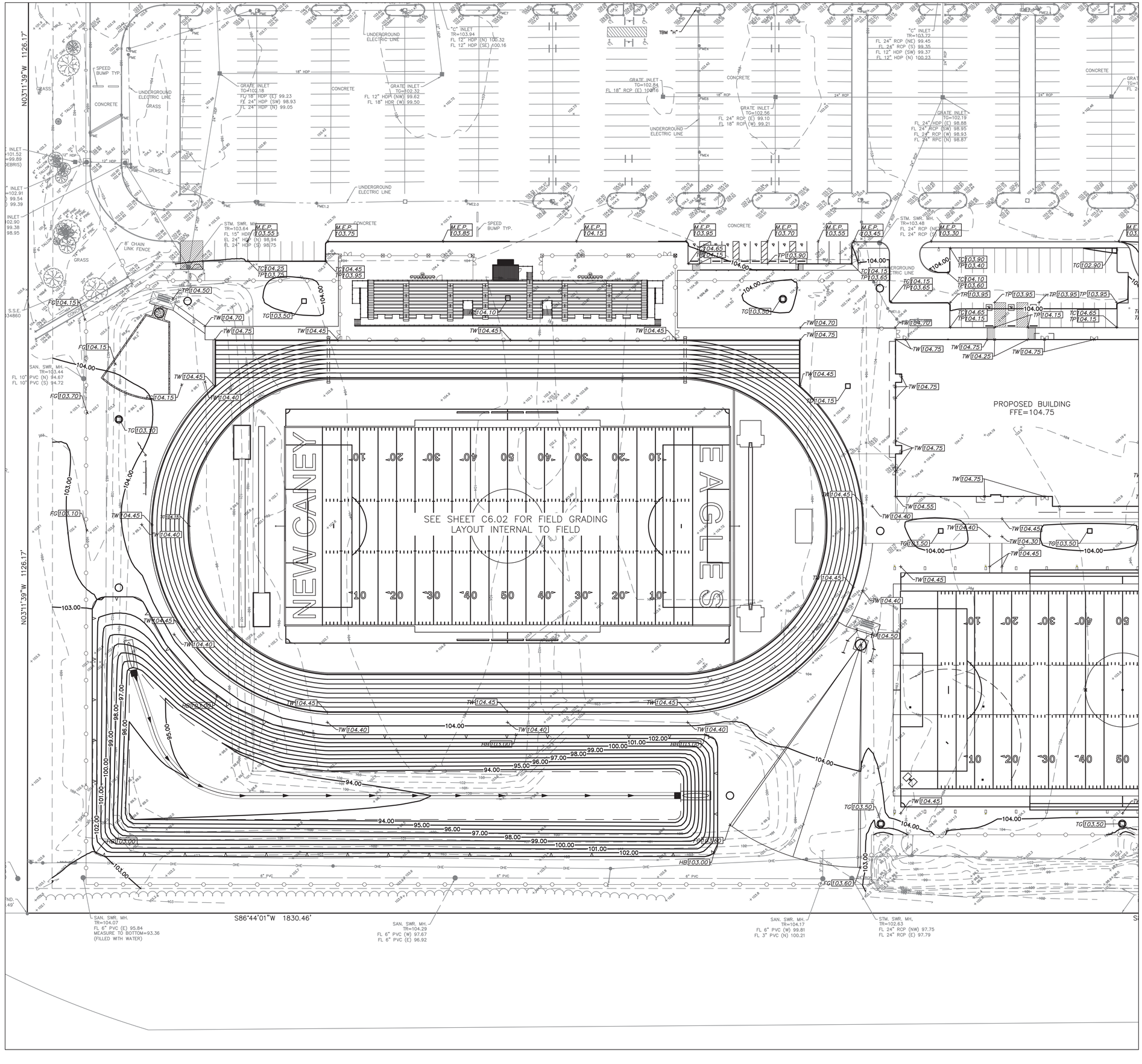

NOTES TO CONTRACTOR:

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UTILITY ONE CALL

CONTRACTOR TO CALL BEFORE DIGGING !!!!
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STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
SITE GRADING LAYOUT (SHEET 1 OF 2)

SHEET NO.
C2.01

NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

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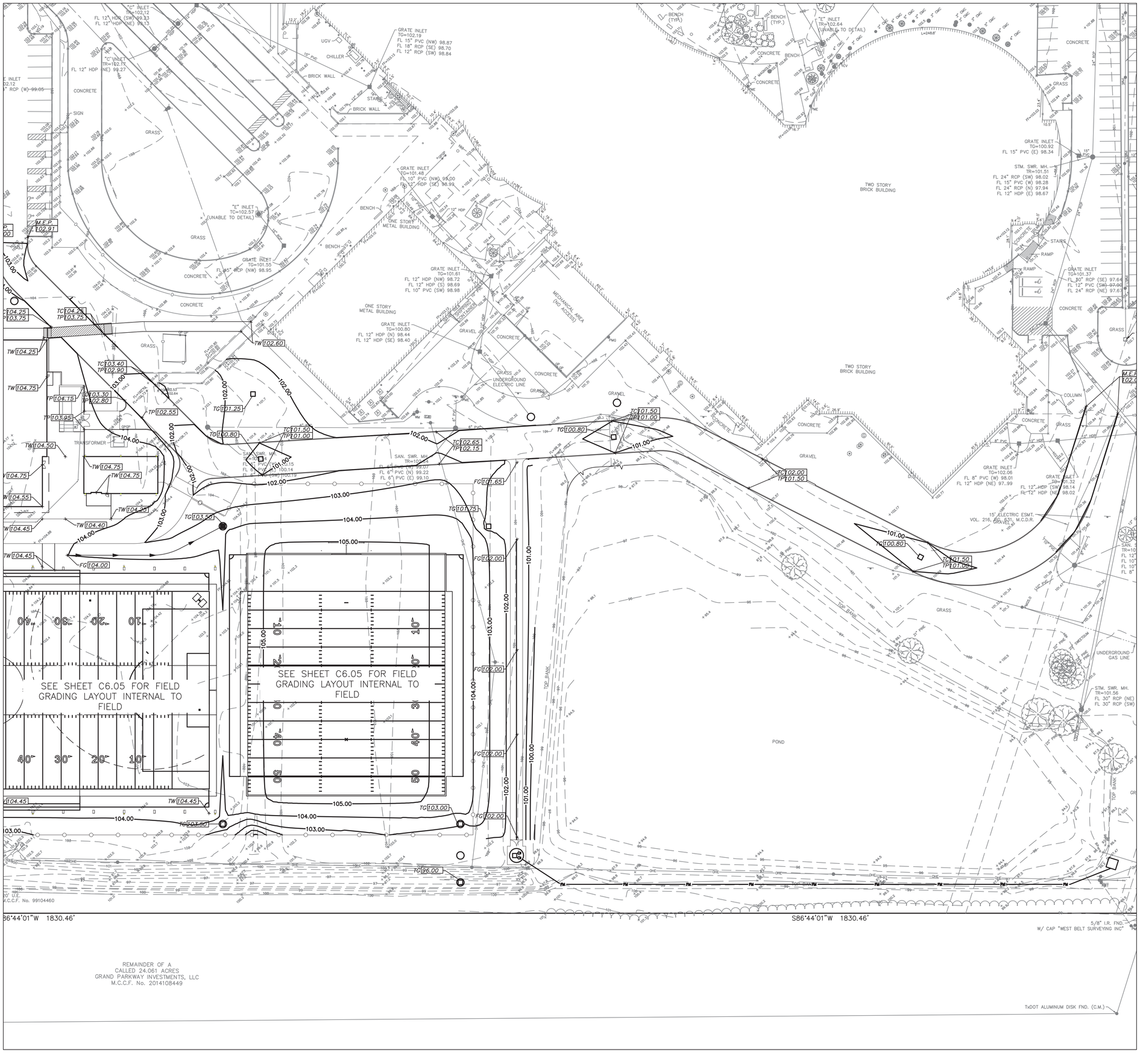

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30 0 15 30
SCALE: 1"= 30'

LEGEND:

- PROPOSED GRATE/CURB INLET
- PROPOSED STORM SEWER MANHOLE WITH GRATE TOP
- EXISTING INLET
- TC 100.00 — PROPOSED TOP OF CURB ELEV.
- TP 100.00 — PROPOSED TOP OF PVMT ELEV.
- TW 100.00 — PROPOSED TOP OF WALK ELEV.
- FL 100.00 — PROPOSED FLOWLINE ELEV.
- FG 100.00 — PROPOSED FINISHED GRADE ELEV.
- TG 100.00 — PROPOSED TOP OF GRATE ELEV.
- 100.00 — PROPOSED CONTOUR
- M.E.C. — MATCH EXIST. CURB & GUTTER
- M.E.P. — MATCH EXIST. PAVEMENT
- M.E.W. — MATCH EXIST. WALK
- DIRECTION OF FLOW
- PROPOSED GRADE BREAK

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NEW CANEY, TEXAS

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
SITE GRADING LAYOUT (SHEET 2 OF 2)

SHEET NO.
C2.02

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

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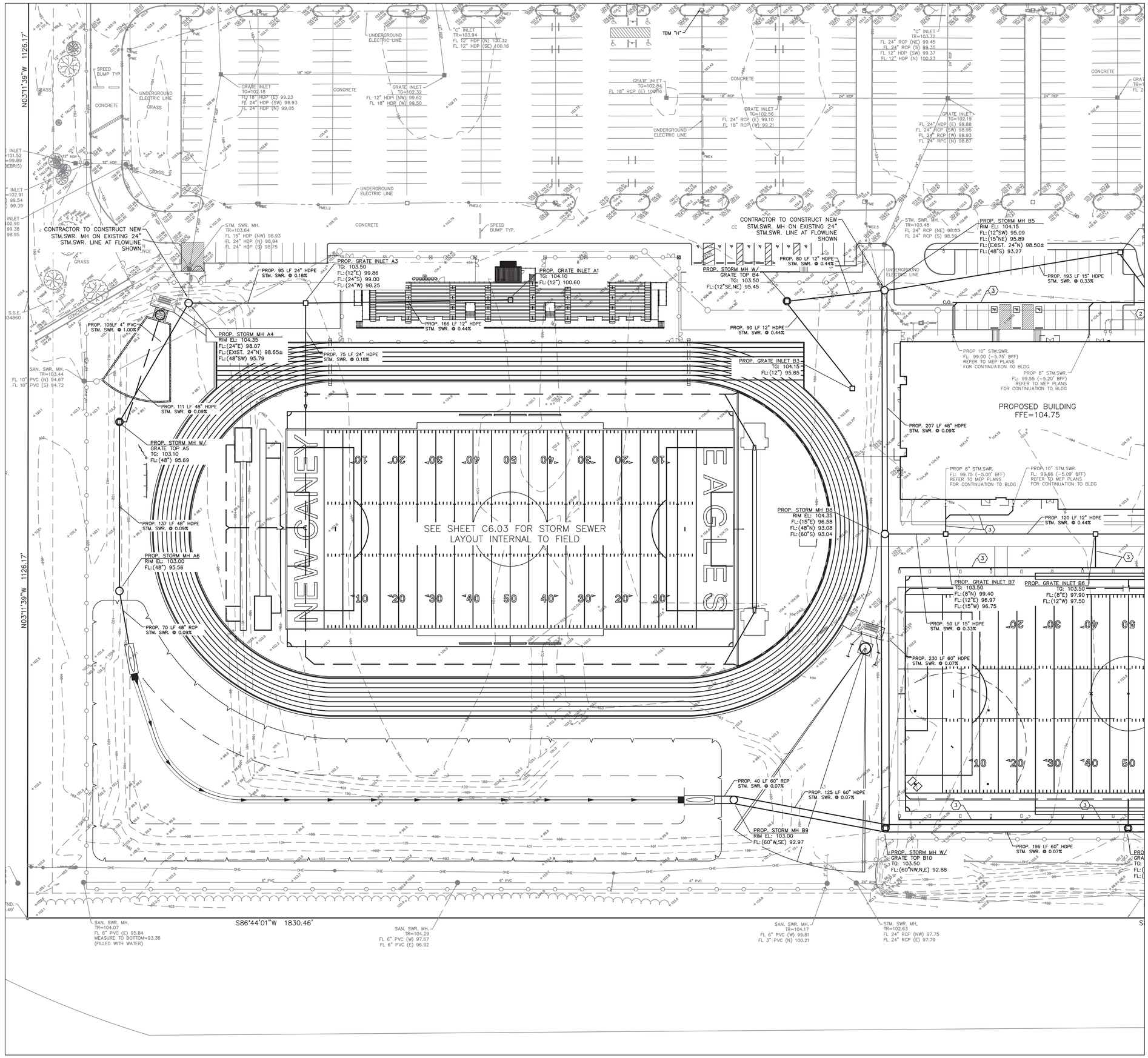

LEGEND:

- PROPOSED MANHOLE
- PROPOSED MANHOLE W/GRATE TOP
- PROPOSED GRATE/CURB INLET
- EXISTING INLET
- FL FLOW LINE
- C.O. PROPOSED CLEANOUT
- (1) PROP. 6" STM. SWR. @ 1.00% MIN.
- (2) PROP. 8" STM. SWR. @ 1.00% MIN.
- (3) PROP. 10" STM. SWR. @ 1.00% MIN.
- (4) PROP. 12" STM. SWR. @ 1.00% MIN.

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STATE OF TEXAS BRIAN W. REED 128933 LICENSED PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
SITE STORM SEWER LAYOUT (SHEET 1 OF 2)

SHEET NO.
C3.01

NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

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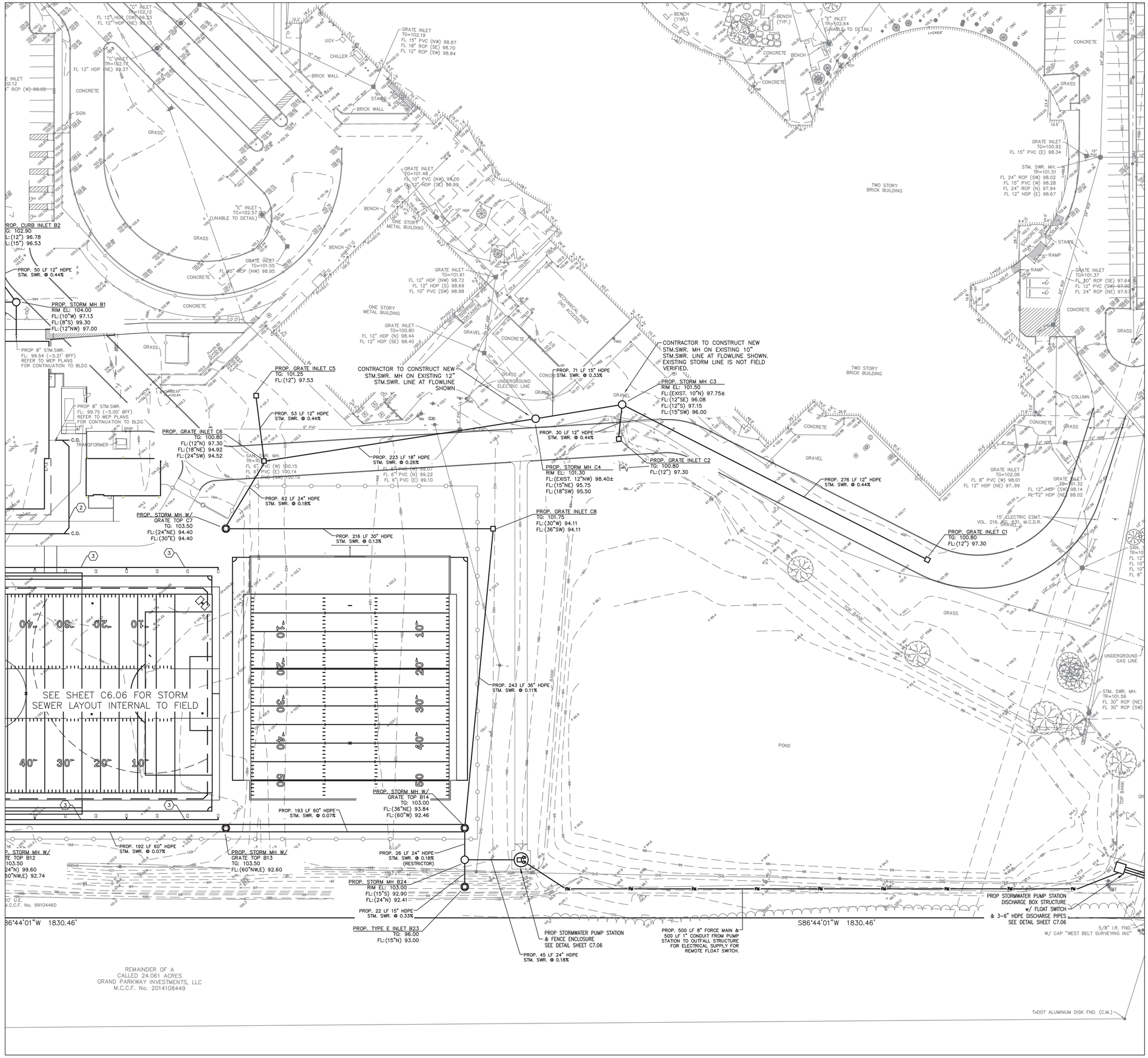

30 0 15 30
SCALE: 1"= 30'

LEGEND:

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- PROPOSED MANHOLE W/GRATE TOP
- PROPOSED GRATE/CURB INLET
- EXISTING INLET
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STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
SITE STORM SEWER LAYOUT (SHEET 2 OF 2)

SHEET NO.
C3.02

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

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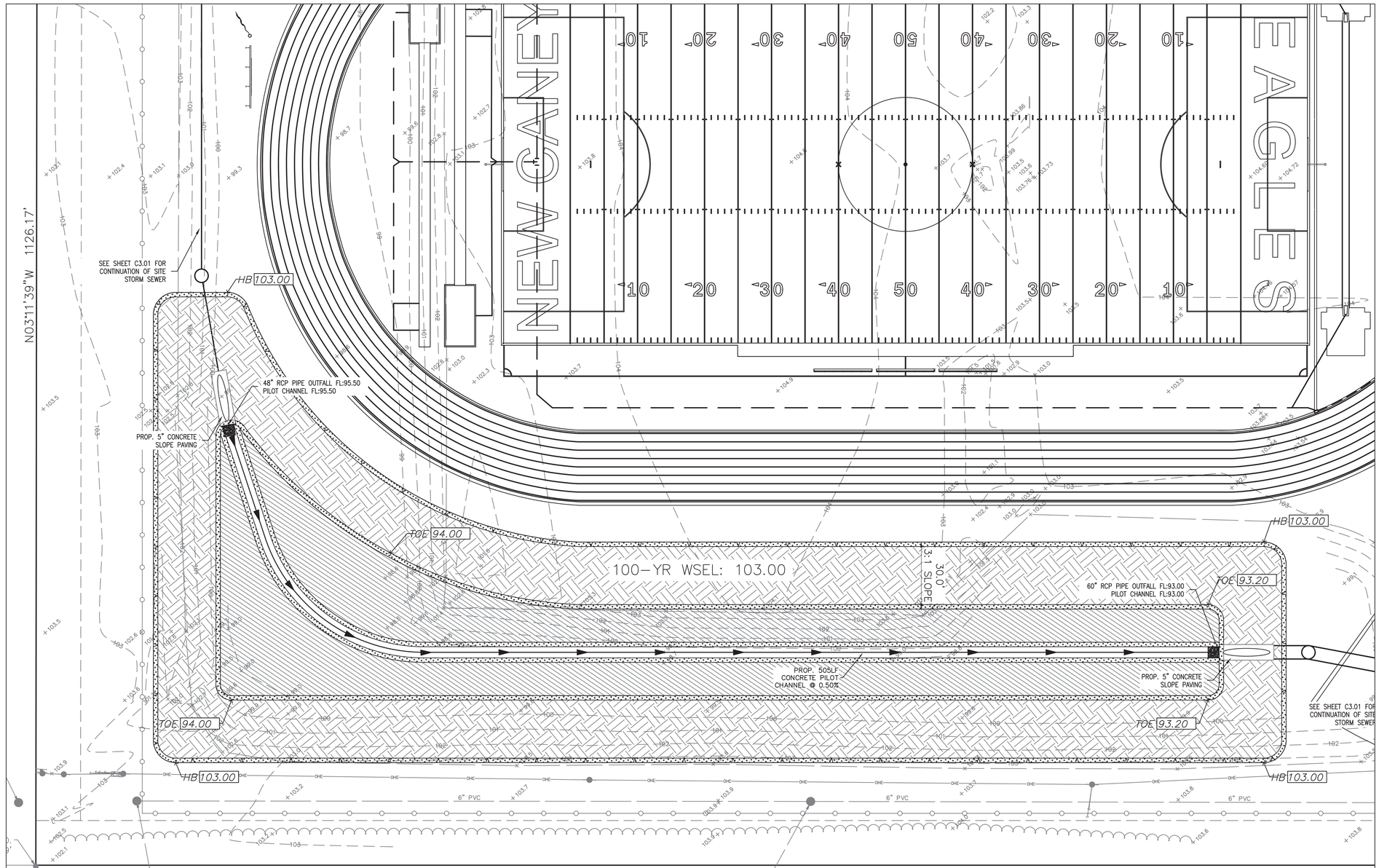

SCALE: 1"= 20'

LEGEND:

- PROP. LIMITS OF SOLID SOD OVER 6" TOPSOIL
- PROP. LIMITS OF FLEXTERRA OVER 6" TOPSOIL (INSTALLED PER MANUFACTURER'S RECOMMENDATIONS)
- PROP. LIMITS OF HYDROMULCH OVER 6" TOPSOIL (INSTALLED PER MANUFACTURER'S RECOMMENDATIONS) (CONTRACTOR TO ESTABLISH 85% STAND OF GRASS BEFORE FINAL ACCEPTANCE)
- PROPOSED GRATE/CURB INLET
- PROPOSED STORM SEWER MANHOLE WITH GRATE TOP
- FL 97.00 — PROPOSED FLOWLINE ELEV.
- TOW 97.00 — PROPOSED TOE OF SLOPE ELEV.
- FG 97.00 — PROPOSED FINISHED GRADE ELEV.
- TG 97.00 — PROPOSED TOP OF GRATE ELEV.
- HB 97.00 — PROPOSED HIGH BANK ELEV.
- DIRECTION OF FLOW

GENERAL NOTES TO SHEET:

1. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POND THROUGHOUT CONSTRUCTION. POND MUST BE CLEANED, FREE OF EROSION, AND HAVE AN 85% STAND OF GRASS BEFORE FINAL ACCEPTANCE.
2. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN AS-BUILT SURVEY OF POND, SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR FOR VOLUME VERIFICATION AT END OF PROJECT.
3. CONTRACTOR SHALL INSTALL A MINIMUM 2' (TWO FOOT) WDE SOD STRIP ALONG THE CONCRETE PILOT CHANNELS, OUTFALL/INFLUENT STRUCTURES TO PROTECT AGAINST EROSION. SOD SHALL BE PINNED AS IS NECESSARY.
4. AFTER POND IS COMPLETE CONTRACTOR SHALL HYDROMULCH ALL DISTURBED AREAS OF POND NOT RECEIVING SOD OR FLEXTERRA.
5. IN THE EVENT THE PROPOSED DETENTION POND ACCUMULATES STORM RUNOFF DURING CONSTRUCTION, CONTRACTOR SHALL BE RESPONSIBLE TO PUMP OUT WATER FROM DETENTION POND.
6. CONTRACTOR TO CONSTRUCT DETENTION POND PRIOR TO ANY OTHER CONSTRUCTION PROPOSED IN THIS PROJECT.
7. CONTRACTOR TO COMPLETE ALL CIVIL WORK (INCLUDING FINAL ACCEPTANCE OF DETENTION POND FROM CIVIL ENGINEER) PRIOR TO CENTERPOINT ENERGY RELEASING PERMANENT POWER.
8. CONTRACTOR TO MUCK OUT AND REMOVE ALL VEGETATION FROM PROPOSED PILOT CHANNEL PRIOR TO FINAL ACCEPTANCE.
9. CONTRACTOR TO MOW DETENTION POND PERIODICALLY KEEPING GRASS GROWTH UNDER 4". CONTRACTOR TO MAINTAIN GRASS GROWTH IN POND THROUGHOUT DURATION OF PROJECT AND UNTIL FINAL ACCEPTANCE.

DETENTION BASIN SHALL BE PROPERLY OPERATED AND MAINTAINED BY PROPERTY OWNER AFTER ACCEPTANCE.

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STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
WEST DETENTION POND LAYOUT

SHEET NO.
C3.03

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NEW CANEY, TEXAS

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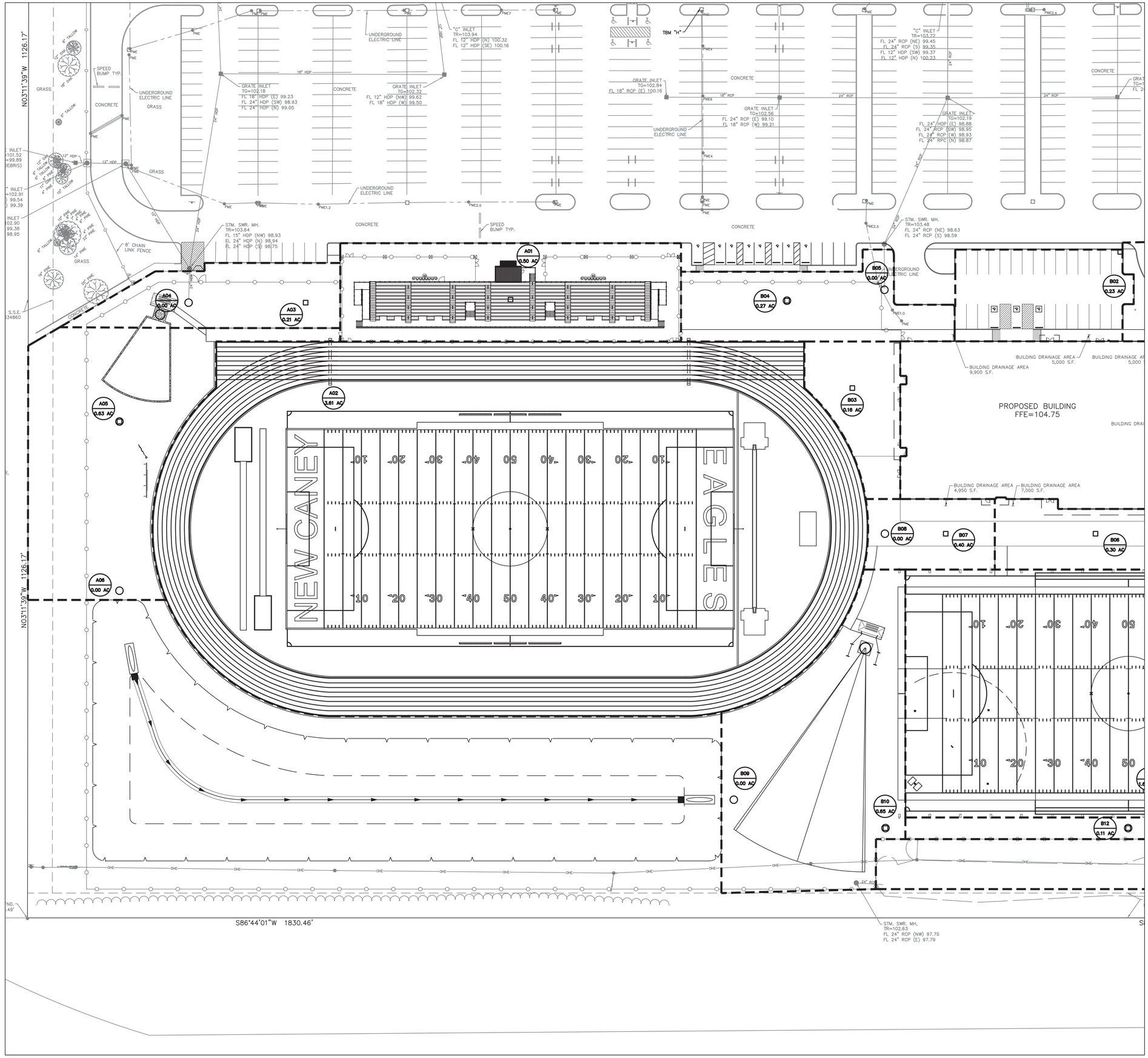

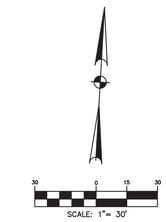

LEGEND:

XX / 0.00 — AREA (No.) / AREA (AC)

SYSTEM AREA

EXTREME EVENT SHEET FLOW DIRECTION

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
DRAINAGE AREA MAP (SHEET 1 OF 2)

SHEET NO.
C3.04

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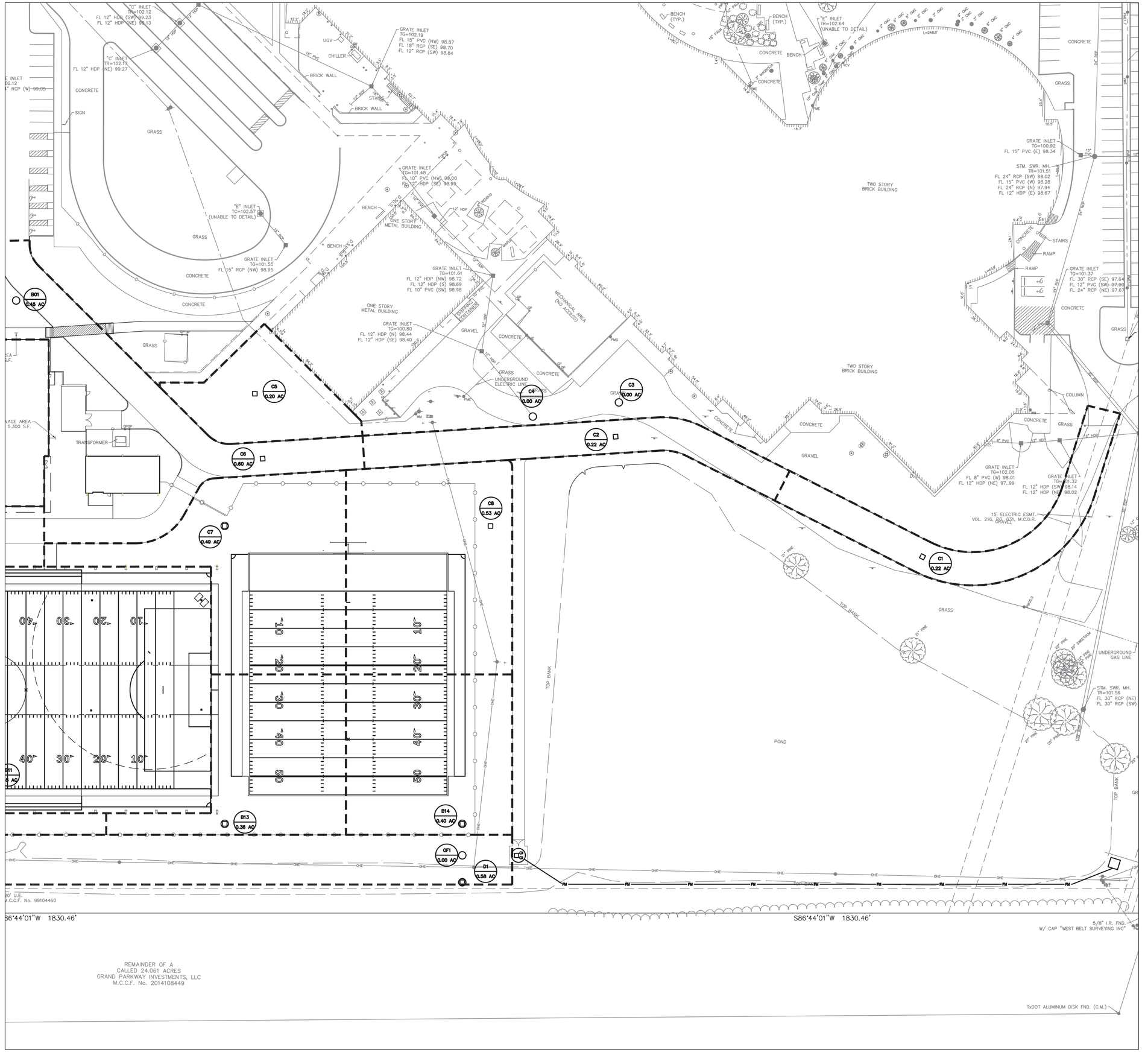

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PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
DRAINAGE AREA
MAP (SHEET 2 OF 2)

SHEET NO.
C3.05

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

10-YEAR STORM SEWER CALCULATIONS

Talon Engineering, LLC

STORM SEWER CALCULATION SHEET

Intensity = $\frac{b}{(t_c + d)^e}$

Harris County Region 2

	5	10	25	50	100	500
b	54.09	55.26	56.72	57.94	56.68	54.26
d	8.34	7.30	6.12	5.47	4.46	2.72
e	0.7051	0.6752	0.6397	0.6166	0.5857	0.5129

Project Information:
Project: New Caney ISD Extracurricular Improvements Phase 3
Job No.:
System: System "A"
Designed: BWR
Checked: BWR

HGL Tie-In (ft): 99.50
Frequency 10
b = 56.26
d = 7.30
e = 0.6752

Line	Manholes/Inlets from	Manholes/Inlets to	Local Area acre	Total Area acre	C Factor	Tc minutes	I in/hr	Local Q cfs	Add. Q cfs	Total Q cfs	Reach ft	Pipe Size in	Line Type	Slope %	n	Design Q cfs	Design V fps	Slope Fall ft	Friction Loss ft	Flowline Elevation upstrm	Flowline Elevation dwnstrm	Actual V fps	HGL Slope %	HGL upstrm	HGL dwnstrm	TG elev	TG-HGL ft	Pipe Cover ft
A1	1	3	0.50	0.50	0.80	23.85	5.42	2.17	0.00	2.17	166	12	HDPE	0.44	0.013	2.37	3.02	0.74	61.14	100.60	99.86	2.76	0.37	102.21	101.60	104.10	1.89	2.50
A2	2	3	3.61	3.61	0.80	27.54	5.03	14.52	0.00	14.52	75	24	HDPE	0.18	0.013	9.62	3.06	0.25	30.71	99.25	99.00	4.62	0.41	101.56	101.25	104.15	2.59	2.90
A3	3	4	0.21	4.32	0.80	27.54	5.03	0.84	0.00	17.53	95	24	HDPE	0.18	0.013	9.62	3.06	0.18	56.72	98.25	98.07	5.58	0.60	100.82	100.25	103.50	2.68	3.25
A4	4	5	0.00	4.32	0.80	28.07	4.97	0.00	0.00	17.53	111	48	HDPE	0.09	0.013	43.21	3.44	0.10	1.64	95.79	95.69	1.39	0.01	99.80	99.79	104.35	4.55	4.56
A5	5	6	0.63	4.95	0.80	28.74	4.91	2.46	0.00	20.00	137	48	HDPE	0.09	0.013	43.21	3.44	0.12	2.64	95.69	95.56	1.59	0.02	99.71	99.69	103.10	3.39	3.41
A6	6	Outfall A	0.00	4.95	0.80	29.08	4.88	0.00	0.00	20.00	70	48	HDPE	0.09	0.013	43.21	3.44	0.06	1.35	95.56	95.50	1.59	0.02	99.51	99.50	103.00	3.49	3.44

Talon Engineering, LLC

STORM SEWER CALCULATION SHEET

Intensity = $\frac{b}{(t_c + d)^e}$

Harris County Region 2

	5	10	25	50	100	500
b	54.09	55.26	56.72	57.94	56.68	54.26
d	8.34	7.30	6.12	5.47	4.46	2.72
e	0.7051	0.6752	0.6397	0.6166	0.5857	0.5129

Project Information:
Project: New Caney ISD Extracurricular Improvements Phase 3
Job No.:
System: System "B"
Designed: BWR
Checked: BWR

HGL Tie-In (ft): 97.46
Frequency 10
b = 55.26
d = 7.30
e = 0.6752

Line	Manholes/Inlets from	Manholes/Inlets to	Local Area acre	Total Area acre	C Factor	Tc minutes	I in/hr	Local Q cfs	Add. Q cfs	Total Q cfs	Reach ft	Pipe Size in	Line Type	Slope %	n	Design Q cfs	Design V fps	Slope Fall ft	Friction Loss ft	Flowline Elevation upstrm	Flowline Elevation dwnstrm	Actual V fps	HGL Slope %	HGL upstrm	HGL dwnstrm	TG elev	TG-HGL ft	Pipe Cover ft
B1	1	2	0.45	0.45	0.80	23.69	5.44	1.96	0.00	1.96	50	12	HDPE	0.44	0.013	2.37	3.02	0.22	15.02	97.00	96.78	2.49	0.30	98.59	98.44	104.00	5.41	6.00
B2	2	5	0.23	0.68	0.80	24.75	5.32	0.98	0.00	2.94	193	15	HDPE	0.33	0.013	3.72	3.03	0.64	39.67	96.53	95.89	2.39	0.21	98.44	98.05	102.90	4.46	5.12
B3	3	4	0.16	0.16	0.80	22.24	5.62	0.72	0.00	0.72	90	12	HDPE	0.44	0.013	2.37	3.02	0.40	3.65	95.85	95.45	0.92	0.04	98.70	98.66	104.15	5.45	7.30
B4	4	5	0.27	0.43	0.80	22.68	5.56	1.20	0.00	1.92	80	12	HDPE	0.44	0.013	2.37	3.02	0.36	23.12	95.45	95.09	2.45	0.29	98.28	98.05	103.50	5.22	7.05
B5	5	8	0.00	1.11	0.80	24.75	5.32	0.00	0.00	4.86	207	48	HDPE	0.09	0.013	43.21	3.44	0.19	0.24	93.27	93.08	0.39	0.00	98.05	98.04	104.15	6.10	6.88
B6	6	7	0.30	0.30	0.80	23.09	5.51	1.32	0.00	1.32	120	12	HDPE	0.44	0.013	2.37	3.02	0.53	16.45	97.50	96.97	1.68	0.14	98.66	98.50	103.50	4.84	5.00
B7	7	8	0.40	0.70	0.80	23.36	5.48	1.75	0.00	3.08	50	15	HDPE	0.33	0.013	3.72	3.03	0.17	11.27	96.75	96.58	2.51	0.23	98.16	98.04	103.50	5.34	5.51
B8	8	10	0.00	1.81	0.80	24.75	5.32	0.00	0.00	7.93	230	60	HDPE	0.07	0.013	69.09	3.52	0.16	0.21	93.04	92.88	0.40	0.00	98.04	98.04	104.35	6.31	6.31
B9	9	10	0.00	0.00	0.80	15.00	6.79	0.00	0.00	0.00	125	60	HDPE	0.07	0.013	69.09	3.52	0.09	0.00	92.97	92.88	0.00	0.00	97.97	97.97	103.00	5.03	5.03
B10	10	12	0.65	2.46	0.80	24.75	5.32	2.76	0.00	10.70	196	60	HDPE	0.07	0.013	69.09	3.52	0.14	0.33	92.88	92.74	0.54	0.00	97.88	97.88	103.50	5.62	5.62
B11	11	12	1.65	1.65	0.80	25.92	5.19	6.85	0.00	6.85	25	24	HDPE	0.18	0.013	9.62	3.06	0.05	2.28	99.65	99.60	2.18	0.09	101.67	101.65	104.50	2.83	2.86
B12	12	13	0.11	4.22	0.80	25.92	5.19	0.46	0.00	18.00	192	60	HDPE	0.07	0.013	69.09	3.52	0.14	0.91	92.74	92.60	0.92	0.00	97.75	97.74	103.50	5.75	5.76
B13	13	14	0.36	4.58	0.80	26.84	5.10	1.47	0.00	19.47	193	60	HDPE	0.07	0.013	69.09	3.52	0.14	1.07	92.60	92.46	0.99	0.01	97.47	97.46	103.50	6.03	5.90

Talon Engineering, LLC

STORM SEWER CALCULATION SHEET

Intensity = $\frac{b}{(t_c + d)^e}$

Harris County Region 2

	5	10	25	50	100	500
b	54.09	55.26	56.72	57.94	56.68	54.26
d	8.34	7.30	6.12	5.47	4.46	2.72
e	0.7051	0.6752	0.6397	0.6166	0.5857	0.5129

Project Information:
Project: New Caney ISD Extracurricular Improvements Phase 3
Job No.:
System: System "B"
Designed: BWR
Checked: BWR

HGL Tie-In (ft): 96.84
Frequency 10
b = 55.26
d = 7.30
e = 0.6752

Line	Manholes/Inlets from	Manholes/Inlets to	Local Area acre	Total Area acre	C Factor	Tc minutes	I in/hr	Local Q cfs	Add. Q cfs	Total Q cfs	Reach ft	Pipe Size in	Line Type	Slope %	n	Design Q cfs	Design V fps	Slope Fall ft	Friction Loss ft	Flowline Elevation upstrm	Flowline Elevation dwnstrm	Actual V fps	HGL Slope %	HGL upstrm	HGL dwnstrm	TG elev	TG-HGL ft	Pipe Cover ft
C1	1	3	0.22	0.22	0.80	22.66	5.56	0.98	0.00	0.98	276	12	HDPE	0.44	0.013	2.37	3.02	1.22	20.75	97.30	96.08	1.25	0.08	98.51	98.30	100.80	2.29	2.50
C2	2	3	0.22	0.22	0.80	22.66	5.56	0.98	0.00	0.98	30	12	HDPE	0.44	0.013	2.37	3.02	0.15	2.25	97.30	97.15	1.25	0.08	98.32	98.30	100.80	2.48	2.50
C3	3	4	0.00	0.44	0.80	22.66	5.56	0.00	0.00	1.96	71	15	HDPE	0.33	0.013	3.72	3.03	0.25	6.49	96.00	95.75	1.60	0.09	97.32	97.25	101.50	4.18	4.25
C4	4	6	0.00	0.44	0.80	23.88	5.42	0.00	0.00	1.96	223	18	HDPE	0.26	0.013	5.37	3.04	0.58	7.71	95.50	94.92	1.11	0.03	97.08	97.01	101.30	4.22	4.30
C5	5	6	0.20	0.20	0.80	22.53	5.58	0.89	0.00	0.89	53	12	HDPE	0.44	0.013	2.37	3.02	0.23	3.31	97.53	97.30	1.14	0.06	98.57	98.53	101.25	2.68	2.72
C6	6	7	0.60	1.24	0.80	23.88	5.42	2.60	0.00	5.45	62	24	HDPE	0.18	0.013	9.62	3.06	0.12	3.58	94.52	94.40	1.74	0.06	97.01	96.97	100.80	3.79	4.28
C7	7	8	0.49	1.73	0.80	25.07	5.28	2.07	0.00	7.52	216	30	HDPE	0.13	0.013	14.83	3.02	0.29	7.23	94.40	94.11	1.53	0.03	96.97	96.90	103.50	6.53	6.60
C8	8	B14	0.00	1.73	0.80	26.36	5.14	0.00	0.00	7.52	243	36	HDPE	0.11	0.013	22.18	3.14	0.27	3.07	94.11	93.84	1.06	0.01	96.87	96.84	103.00	6.13	5.89

100-YEAR STORM CALCULATIONS

Talon Engineering, LLC

STORM SEWER CALCULATION SHEET

Intensity = $\frac{b}{(t_c + d)^e}$

Harris County Region 2

	5	10	25	50	100	500
b	54.09	55.26	56.72	57.94	56.68	54.26
d	8.34	7.30	6.12	5.47	4.46	2.72
e	0.7051	0.6752	0.6397	0.6166	0.5857	0.5129

Project Information:
Project: New Caney ISD Extracurricular Improvements Phase 3
Job No.:
System: System "A"
Designed: BWR
Checked: BWR

HGL Tie-In (ft): 99.50
Frequency 100
b = 56.68
d = 4.46
e = 0.5857

Line	Manholes/Inlets from	Manholes/Inlets to	Local Area acre	Total Area acre	C Factor	Tc minutes	I in/hr	Local Q cfs	Add. Q cfs	Total Q cfs	Reach ft	Pipe Size in	Line Type	Slope %	n	Design Q cfs	Design V fps	Slope Fall ft	Friction Loss ft	Flowline Elevation upstrm	Flowline Elevation dwnstrm	Actual V fps	HGL Slope %	HGL upstrm	HGL dwnstrm	TG elev	TG-HGL ft	Pipe Cover ft
A1	1	3	0.50	0.50	0.80	23.85	8.00	3.20	0.00	3.20	166	12	HDPE	0.44	0.013	2.37	3.02	0.74	133.15	100.60	99.86	4.07	0.80	102.93	101.60	104.10	1.17	2.50
A2	2	3	3.61	3.61	0.80	27.54	7.45	21.50	0.00	21.50	75	24	HDPE	0.18	0.013	9.62	3.06	0.25	67.39	99.25	99.00	6.84	0.90	102.17	101.49	104.15	1.98	2.90
A3	3	4	0.21	4.32	0.80	27.54	7.45	1.25	0.00	25.95	95	24	HDPE	0.18	0.013	9.62	3.06	0.18	124.36	98.25	98.07	8.26	1.31	101.49	100.25	103.50	2.01	3.25
A4	4	5	0.00	4.32	0.80	28.07	7.37	0.00	0.00	25.95	111	48	HDPE	0.09	0.013	43.21	3.44	0.10	3.60	95.79	95.69	2.07	0.03	99.82	99.79	104.35	4.53	4.56
A5	5	6	0.63	4.95	0.80	28.74	7.29	3.67	0.00	29.63	137	48	HDPE	0.09	0.013	43.21	3.44	0.12	5.80	95.69	95.56	2.36	0.04	99.74	99.69	103.10	3.36	3.41
A6	6	Outfall A	0.00	4.95	0.80	29.08	7.24	0.00	0.00	29.63	70	48	HDPE	0.09	0.013	43.21	3.44	0.06	2.96	95.56	95.50	2.36	0.04	99.53	99.50	103.00	3.47	3.44

Talon Engineering, LLC

STORM SEWER CALCULATION SHEET

Intensity = $\frac{b}{(t_c + d)^e}$

Harris County Region 2

	5	10	25	50	100	500
b	54.09	55.26	56.72	57.94	56.68	54.26
d	8.34	7.30	6.12	5.47	4.46	2.72
e	0.7051	0.6752	0.6397	0.6166	0.5857	0.5129

Project Information:
Project: New Caney ISD Extracurricular Improvements Phase 3
Job No.:
System: System "B"
Designed: BWR
Checked: BWR

HGL Tie-In (ft): 97.46
Frequency 100
b = 56.68
d = 4.46
e = 0.5857

Line	Manholes/Inlets from	Manholes/Inlets to	Local Area acre	Total Area acre	C Factor	Tc minutes	I in/hr	Local Q cfs	Add. Q cfs	Total Q cfs	Reach ft	Pipe Size in	Line Type	Slope %	n	Design Q cfs	Design V fps	Slope Fall ft	Friction Loss ft	Flowline Elevation upstrm	Flowline Elevation dwnstrm	Actual V fps	HGL Slope %	HGL upstrm	HGL dwnstrm	TG elev	TG-HGL ft	Pipe Cover ft
B1	1	2	0.45	0.45	0.80	23.69	8.03	2.89	0.00	2.89	50	12	HDPE	0.44	0.013	2.37	3.02	0.22	32.71	97.00	96.78	3.68	0.65	99.24	98.91	104.00	4.76	6.00
B2	2	5	0.23	0.68	0.80	24.75	7.85	1.45	0.00	4.33	193	15	HDPE	0.33	0.013	3.72	3.03	0.64	86.42	96.53	95.89	3.53	0.45	98.91	98.05	102.90	3.99	5.12
B3	3	4	0.16	0.16	0.80	22.24	8.28	1.06	0.00	1.06	90	12	HDPE	0.44	0.013	2.37	3.02	0.40	7.92	95.85	95.45	1.35	0.09	98.93	98.85	104.15	5.22	7.30
B4	4	5	0.27	0.43	0.80	22.68	8.20	1.77	0.00	2.83	80	12	HDPE	0.44	0.013	2.37	3.02	0.36	50.22	95.45	95.09	3.60	0.63	98.55	98.05	103.50	4.95	7.05
B5	5	8	0.00	1.11	0.80	24.75	7.85	0.00	0.00	7.16	207	48	HDPE	0.09	0.013	43.21	3.44	0.19	0.51	93.27	93.08	0.57	0.00	98.05	98.05	104.15	6.10	6.88
B6	6	7	0.30	0.30	0.80	23.09	8.13	1.95	0.00	1.95	120	12	HDPE	0.44	0.013	2.37	3.02	0.53	35.78	97.50	96.97	2.48	0.30	98.86	98.50	103.50	4.64	5.00
B7	7	8	0.40	0.70	0.80	23.36	8.08	2.59	0.00	4.54	50	15	HDPE	0.33	0.013	3.72	3.03	0.17	24.52	96.75	96.58	3.70	0.49	98.29	98.05	103.50	5.21	5.51
B8	8	10	0.00	1.81	0.80	24.75	7.85	0.00	0.00	11.70	230	60	HDPE	0.07	0.013	69.09	3.52	0.16	0.46	93.04	92.88	0.60	0.00	98.05	98.04	104.35	6.30	6.31
B9	9	10	0.00	0.00	0.80	15.00	9.96	0.00	0.00	0.00	125	60	HDPE	0.07	0.013	69.09	3.52	0.09	0.00	92.97	92.88	0.00	0.00	97.97	97.97	103.00	5.03	5.03
B10	10	12	0.65	2.46	0.80	24.75	7.85	4.08	0.00	15.78	196	60	HDPE	0.07	0.013	69.09	3.52	0.14	0.72	92.88	92.74	0.80	0.00	97.88	97.88	103.50	5.62	5.62
B11	11	12	1.65	1.65	0.80	25.92	7.67	10.13	0.00	10.13	25	24	HDPE	0.18	0.013	9.62	3.06	0.05	4.99	99.65	99.60	3.22	0.20	101.69	101.65	104.50	2.81	2.86
B12	12	13	0.11	4.22	0.80	25.92	7.67	0.68	0.00	26.59	192	60	HDPE	0.07	0.013	69.09	3.52	0.14	1.99	92.74	92.60	1.35	0.01	97.76	97.74	103.50	5.74	5.76
B13	13	14	0.36	4.58	0.80	26.84	7.54	2.17	0.00	28.76	193	60	HDPE	0.07	0.013	69.09	3.52	0.14	2.34	92.60	92.46	1.46	0.01	97.48	97.46	103.50	6.02	5.90

Talon Engineering, LLC

STORM SEWER CALCULATION SHEET

Intensity = $\frac{b}{(t_c + d)^e}$

Harris County Region 2

	5	10	25	50	100	500
b	54.09	55.26	56.72	57.94	56.68	54.26
d	8.34	7.30	6.12	5.47	4.46	2.72
e	0.7051	0.6752	0.6397	0.6166	0.5857	0.5129

Project Information:
Project: New Caney ISD Extracurricular Improvements Phase 3
Job No.:
System: System "B"
Designed: BWR
Checked: BWR

HGL Tie-In (ft): 96.84
Frequency 100
b = 56.68
d = 4.46
e = 0.5857

Line	Manholes/Inlets from	Manholes/Inlets to	Local Area acre	Total Area acre	C Factor	Tc minutes	I in/hr	Local Q cfs	Add. Q cfs	Total Q cfs	Reach ft	Pipe Size in	Line Type	Slope %	n	Design Q cfs	Design V fps	Slope Fall ft	Friction Loss ft	Flowline Elevation upstrm	Flowline Elevation dwnstrm	Actual V fps	HGL Slope %	HGL upstrm	HGL dwnstrm	TG elev	TG-HGL ft	Pipe Cover ft
C1	1	3	0.22	0.22	0.80	22.66	8.20	1.44	0.00	1.44	276	12	HDPE	0.44	0.013	2.37	3.02	1.22	45.07	97.30	96.08	1.84	0.16	98.76	98.30	100.80	2.04	2.50
C2	2	3	0.22	0.22	0.80	22.66	8.20	1.44	0.00	1.44	30	12	HDPE	0.44	0.013	2.37	3.02	0.15	4.90	97.30	97.15	1.84	0.16	98.35	98.30	100.80	2.45	2.50
C3	3	4	0.00	0.44	0.80	22.66	8.20	0.00	0.00	2.89	71	15	HDPE	0.33	0.013	3.72	3.03	0.25	14.11	96.00	95.75	2.35	0.20	97.45	97.31	101.50	4.05	4.25
C4	4	6	0.00	0.44	0.80	23.88	7.99	0.00	0.00	2.89	223	18	HDPE	0.26	0.013	5.37	3.04	0.58	16.76	95.50	94.92	1.63	0.08	97.31	97.14	101.30	3.99	4.30
C5	5	6	0.20	0.20	0.80	22.53	8.23	1.32	0.00	1.32	53	12	HDPE	0.44	0.013	2.37	3.02	0.23	7.19	97.53	97.30	1.68	0.14	98.61	98.53	101.25	2.64	2.72
C6	6	7	0.60	1.24	0.80	23.88	7.99	3.84	0.00	8.04	62	24	HDPE	0.18	0.013	9.62	3.06	0.12	7.79	94.52	94.40	2.56	0.13	97.14	97.06	100.80	3.66	4.28
C7	7	8	0.49	1.73	0.80	25.07	7.80	3.06	0.00	11.10	216	30	HDPE	0.13	0.013	14.83	3.02	0.29	15.73	94.40	94.11	2.26	0.07	97.06	96.91	103.50	6.44	6.60
C8	8	B14	0.00	1.73	0.80	26.36	7.61	0.00	0.00	11.10	243	36	HDPE	0.11	0.013	22.18	3.14	0.27	6.69	94.11	93.84	1.57	0.03	96.91	96.84	103.00	6.09	5.89

25-YEAR STORM CALCULATIONS

Talon Engineering, LLC

STORM SEWER CALCULATION SHEET

Intensity = $\frac{b}{(t_c + d)^e}$

Harris County Region 2

	5	10	25	50	100	500
b	54.09	55.26	56.72	57.94	56.68	54.26
d	8.34	7.30	6.12	5.47	4.46	2.72
e	0.7051	0.6752	0.6397	0.6166	0.5857	0.5129

Project Information:
Project: New Caney ISD Extracurricular Improvements Phase 3
Job No.:
System: System "A"
Designed: BWR
Checked: BWR

HGL Tie-In (ft): 99.50
Frequency 25
b = 56.72
d = 6.12
e = 0.6397

Line	Manholes/Inlets from	Manholes/Inlets to	Local Area acre	Total Area acre	C Factor	Tc minutes	I in/hr	Local Q cfs	Add. Q cfs	Total Q cfs	Reach ft	Pipe Size in	Line Type	Slope %	n	Design Q cfs	Design V fps	Slope Fall ft	Friction Loss ft	Flowline Elevation upstrm	Flowline Elevation dwnstrm	Actual V fps	HGL Slope %	HGL upstrm	HGL dwnstrm	TG elev	TG-HGL ft	Pipe Cover ft
A1	1	3	0.50	0.50	0.80	23.85	6.44	2.58	0.00	2.58	166	12	HDPE	0.44	0.013	2.37	3.02	0.74	86.40	100.60	99.86	3.28	0.52	102.46	101.60	104.10	1.64	2.50
A2	2	3	3.61	3.61	0.80	27.54	5.98	17.28	0.00	17.28	75	24	HDPE	0.18	0.013	9.62	3.06	0.25	43.51	99.25	99.00	5.50	0.58	101.69	101.25	104.15	2.46	2.90
A3	3	4	0.21	4.32	0.80	27.54	5.98	1.01	0.00	20.86	95	24	HDPE	0.18	0.013	9.62	3.06	0.18	80.34	98.25	98.07	6.64	0.85	101.05	100.25	103.50	2.45	3.25
A4	4	5	0.00	4.32	0.80	28.07	5.92	0.00	0.00	20.86	111	48	HDPE	0.09	0.013	43.21	3.44	0.10	2.33	95.79	95.69	1.65	0.02	99.81	99.79	104.35	4.54	4.56
A5	5	6	0.63	4.95	0.80	28.74	5.85	2.95	0.00	23.81	137	48	HDPE	0.09	0.013	43.21	3.44	0.12	3.74	95.69	95.56	1.89	0.03	99.72	99.69	103.10	3.38	3.41
A6	6	Outfall A	0.00	4.95	0.80	29.08	5.81	0.00	0.00	23.81	70	48	HDPE	0.09	0.013	43.21	3.44	0.06	1.91	95.56	95.50	1.89	0.03	99.52	99.50	103.00	3.48	3.44

Talon Engineering, LLC

STORM SEWER CALCULATION SHEET

Intensity = $\frac{b}{(t_c + d)^e}$

Harris County Region 2

	5	10	25	50	100	500
b	54.09	55.26	56.72	57.94	56.68	54.26
d	8.34	7.30	6.12	5.47	4.46	2.72
e	0.7051	0.6752	0.6397	0.6166	0.5857	0.5129

Project Information:
Project: New Caney ISD Extracurricular Improvements Phase 3
Job No.:
System: System "B"
Designed: BWR
Checked: BWR

HGL Tie-In (ft): 97.46
Frequency 25
b = 56.72
d = 6.12
e = 0.6397

Line	Manholes/Inlets from	Manholes/Inlets to	Local Area acre	Total Area acre	C Factor	Tc minutes	I in/hr	Local Q cfs	Add. Q cfs	Total Q cfs	Reach ft	Pipe Size in	Line Type	Slope %	n	Design Q cfs	Design V fps	Slope Fall ft	Friction Loss ft	Flowline Elevation upstrm	Flowline Elevation dwnstrm	Actual V fps	HGL Slope %	HGL upstrm	HGL dwnstrm	TG elev	TG-HGL ft	Pipe Cover ft
B1	1	2	0.45	0.45	0.80	23.69	6.47	2.33	0.00	2.33	50	12	HDPE	0.44	0.013	2.37	3.02	0.22	21.23	97.00	96.78	2.96	0.42	98.82	98.61	104.00	5.18	6.00
B2	2	5	0.23	0.68	0.80	24.75	6.32	1.16	0.00	3.49	193	15	HDPE	0.33	0.013	3.72	3.03	0.64	56.06	96.53	95.89	2.84	0.29	98.61	98.05	102.90	4.29	5.12
B3	3	4	0.16	0.16	0.80	22.24	6.67	0.85	0.00	0.85	90	12	HDPE	0.44	0.013	2.37	3.02	0.40	5.15	95.85	95.45	1.09	0.06	98.78	98.73	104.15	5.37	7.30
B4	4	5	0.27	0.43	0.80	22.68	6.61	1.43	0.00	2.28	80	12	HDPE	0.44	0.013	2.37	3.02	0.36	32.64	95.45	95.09	2.91	0.41	98.37	98.05	103.50	5.13	7.05
B5	5	8	0.00	1.11	0.80	24.75	6.32	0.00	0.00	5.77	207	48	HDPE	0.09	0.013	43.21	3.44	0.19	0.33	93.27	93.08	0.46	0.00	98.05	98.04	104.15	6.10	6.88
B6	6	7	0.30	0.30	0.80	23.09	6.55	1.57	0.00	1.57	120	12	HDPE	0.44	0.013	2.37	3.02	0.53	23.24	97.50	96.97	2.00	0.19	98.73	98.50	103.50	4.77	5.00
B7	7

STORMWATER DETENTION SUMMARY

TOTAL DRAINAGE AREA	13.24	ACRE
	576,602.00	SF

PROPOSED IMPERVIOUS AREA		
* NEW FIELDHOUSE & TICKET OFFICE	31,996.00	SF
* WEST DETENTION POND	59,290.00	SF
* TRACK & SYNTHETIC TURF FIELD	156,422.00	SF
* COVERED SYNTHETIC TURF FIELD	74,867.00	SF
* PAVEMENT & SIDEWALK	97,497.00	SF
TOTAL PROPOSED IMPERVIOUS AREA	420,072.00	SF
	9.64	ACRE
NEW DETENTION VOLUME REQUIRED	3.43	AC-FT
100-Year	149,410.80	CF
EXISTING POND VOLUME	5.15	AC-FT
To Be Included in New Detention System	224,485.00	CF
TOTAL DETENTION VOLUME REQUIRED	8.58	AC-FT
	373,895.80	CF
DETENTION PROVIDED BY WEST DRY DETENTION POND	369,771.00	CF
DETENTION PROVIDED BY UNDERGROUND STORM SEWER		
865 LF 12" HDPE STORM SEWER	679.37	CF
314 LF 15" HDPE STORM SEWER	385.34	CF
223 LF 18" HDPE STORM SEWER	394.07	CF
257 LF 24" HDPE STORM SEWER	807.39	CF
216 LF 30" HDPE STORM SEWER	1,060.29	CF
243 LF 36" HDPE STORM SEWER	1,717.67	CF
525 LF 48" HDPE STORM SEWER	6,597.15	CF
936 LF 60" HDPE STORM SEWER	18,378.32	CF
TOTAL DETENTION VOLUME PROVIDED	399,790.59	CF
	9.18	AC-FT

STAGE STORAGE TABLE

ELEV	AREA (sq. ft.)	DEPTH (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)
93.00	22,106.08	N/A	N/A	0.00
94.00	25,428.82	1.00	23767.45	23767.45
95.00	28,836.80	1.00	27132.81	50900.26
96.00	32,330.03	1.00	30583.42	81483.67
97.00	35,908.52	1.00	34119.28	115602.95
98.00	39,572.25	1.00	37740.39	153343.34
99.00	43,321.24	1.00	41446.75	194790.08
100.00	47,155.48	1.00	45238.36	240028.44
101.00	51,074.97	1.00	49115.22	289143.67
102.00	55,079.71	1.00	53077.34	342221.00
103.00	20.23	1.00	27549.97	369770.97

Restrictor Calculations

$Q = CA(2gh)^{0.5}$

Allowable Q= 61.45 cfs

A=

G= 32.2

C= 0.8

H= 10.54 ft

A= 2.95sf

πr^2= 2.95sf

r= 0.97ft

diam= 1.94ft

diam= 23.28"

RESTRICTOR OPENING TO BE 23"

Q WITH 23" RESTRICTOR = 60.33 CFS

100-Year Detention Storage Calculations

SITE DATA: PRE-DEVELOPED CONDITIONS

* Total Drainage Area: 13.24 Acres
* 7.76 Acres: Existing Developed Playground: C=0.28 (Based on Montgomery County Drainage Manual)
* 5.48 Acres: Existing Impervious Cover: C=0.85 (Based on Montgomery County Drainage Manual)
* 100-Year 24-Hour Rainfall (Montgomery County) = 16.10 inch
* Weighted Pre Developed C_w = 0.51

EXISTING PRE-DEVELOPED CALCULATIONS

Time of Concentration Calculation

(Overland Flow)

$Tc = K(LxN)^{0.467}S^{-0.235}$

K= 0.828

L= 1,800 ft

N= 0.60

S= 0.295

Pre Developed Tc = 28.79 min

Intensity Calculation

$I = \frac{b}{(Tc+d)^e}$

b= 56.68

d= 4.46

e= 0.5857

Tc= 28.79

I_{100}=7.28 in/hr

Pre Developed Allowable Flow Calculations

A = 13.24 acre

C_w = 0.51

I = 7.28

C_f = 1.25

$Q = C*I*A*C_f$

Q = 61.45 cfs

Allowable Pre Developed Flow = 61.45 cfs

Pumped Flow @ 00.00 cfs (Less than allowable)

SITE DATA: POST-DEVELOPED CONDITIONS

* Total Drainage Area: 13.24 Acres
* 9.64 Acres: New Impervious Area/Pavement: CN = 98; C=0.85
* 3.60 Acres : Developed Grass Area: CN = 77; C=0.28
* 100-Year 24-Hour Rainfall (Montgomery County) = 16.10 inch
* Post Developed $CN_{(weighted)}$ = 92
* Post Developed $C_{(weighted)}$= 0.69

POST-DEVELOPED CALCULATIONS

Time of Concentration Calculation

Conduit

(See Storm Sewer Calculations-System A)

Post Developed Tc = 34.36 min

Intensity Calculation

$I = \frac{b}{(Tc+d)^e}$

b= 56.68

d= 4.46

e= 0.5857

Tc= 34.36

I_{100}=6.65 in/hr

Post Developed Flow Calculations

A = 13.24 acre

C_w = 0.69

I = 6.65

C_f = 1.25

$Q = C*I*A*C_f$

Q = 75.94 cfs

Total Post Developed Flow = 75.94 cfs

STORMWATER DETENTION DETERMINATION

S = 1000/92 - 10 = 0.87

V_f = (13.24)(1.26) = **16.68 Ac-Ft**

P = 16.10 inch

$Q = \frac{(16.10-(0.2x0.87))^2}{(16.10+(0.8x0.87))}$

Q = 15.10 inch = 1.26 ft

I = 75.94 cfs

O = 60.33 cfs

$B = \frac{(43560)(V_f)}{(0.5)(I)}$

$B = \frac{(43560)(16.68)}{(0.5)(75.94)}$

B = 19,135

$S = \frac{(0.5)(B)(I-O)}{43560}$

$S = \frac{(0.5)(19135)(75.94-60.33)}{43560}$

S= 3.43 Ac-Ft

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TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
STORMWATER DETENTION CALCULATIONS

SHEET NO.
C3.07

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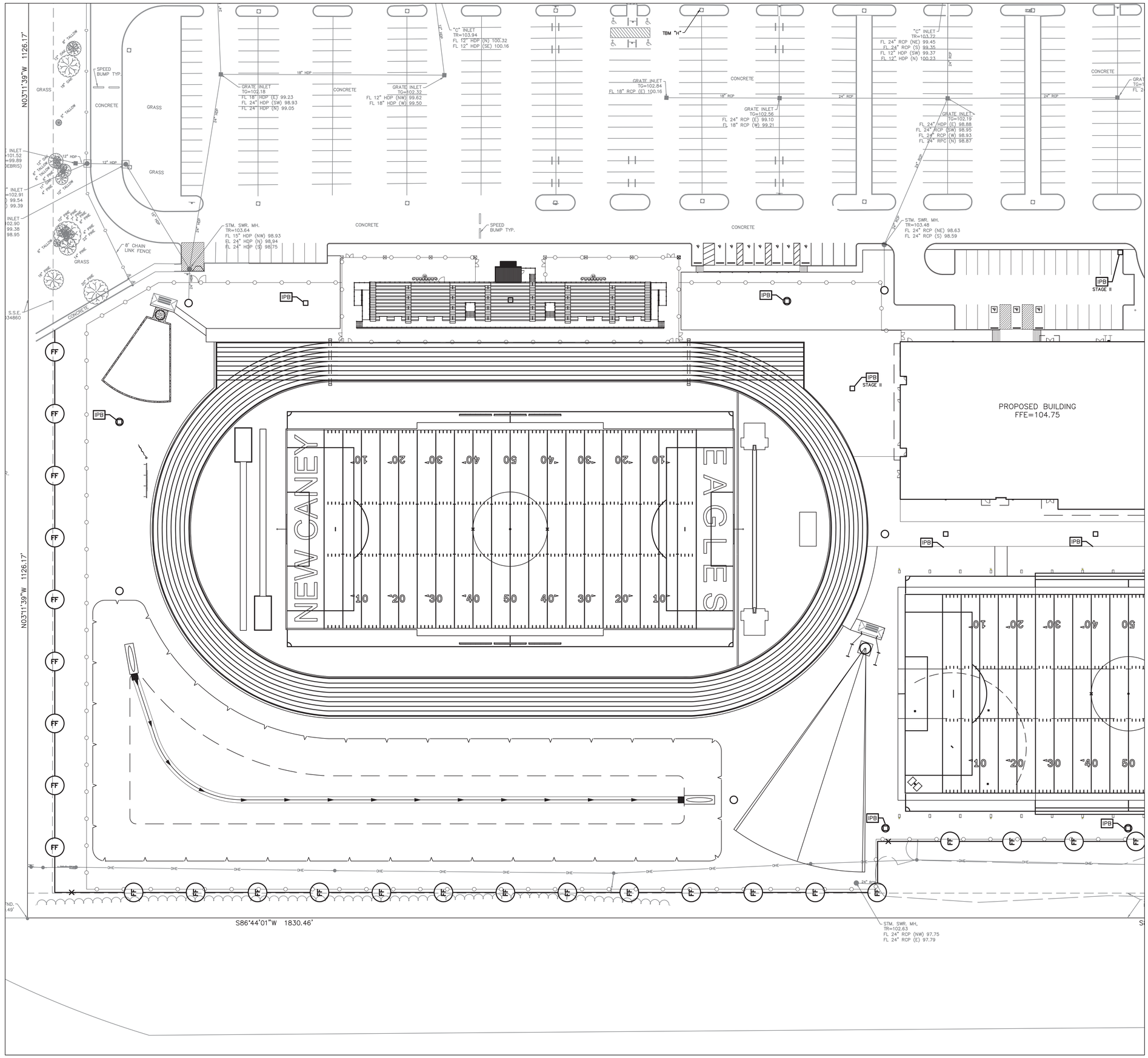

30 0 15 30

SCALE: 1"= 30'

LEGEND:

- PROPOSED INLET
- FF — PROPOSED FILTER FABRIC FENCE (SILT FENCE)
- SBF — PROPOSED STRAW BALE FENCE
- SC — STABILIZED CONSTRUCTION ACCESS
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- CONCRETE WASHOUT PIT

KEY NOTES:

1. CONTRACTOR TO COORDINATE FINAL PLACEMENT OF STABILIZED CONSTRUCTION ENTRANCE AND WASH OUT PIT WITH WILLIS INDEPENDENT SCHOOL DISTRICT.

CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION, MAINTENANCE, MODIFICATION AND INSPECTION OF STORM WATER POLLUTION PREVENTION DEVICES AND STRUCTURES TO ENSURE NO SILT OR CONTAMINATED WATER LEAVES THE PROJECT SITE.

SWPPP CONSTRUCTION NOTES

1 CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.

2 DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA

3 CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FORM THE EXCAVATED AREA.

4 CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.

5 CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN(14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.

- DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
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- LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

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UTILITY ONE CALL

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PHONE: 811
HOUSTON (713) 223-4567
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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
SWPPP (SHEET 1 OF 2)

SHEET NO.
C3.08

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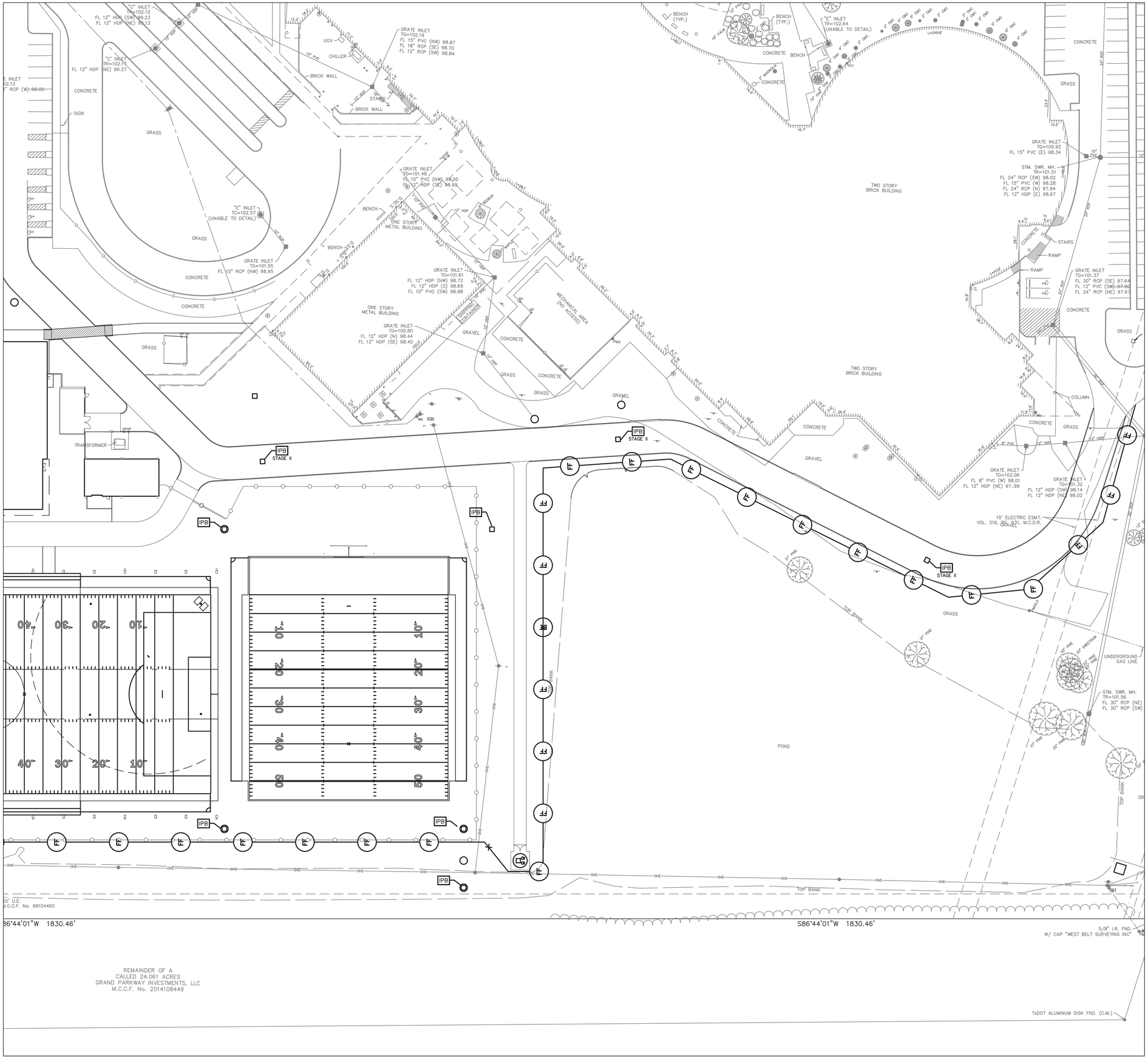

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BWR	BWR,JDK
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BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
SWPPP (SHEET 2 OF 2)

SHEET NO.
C3.09

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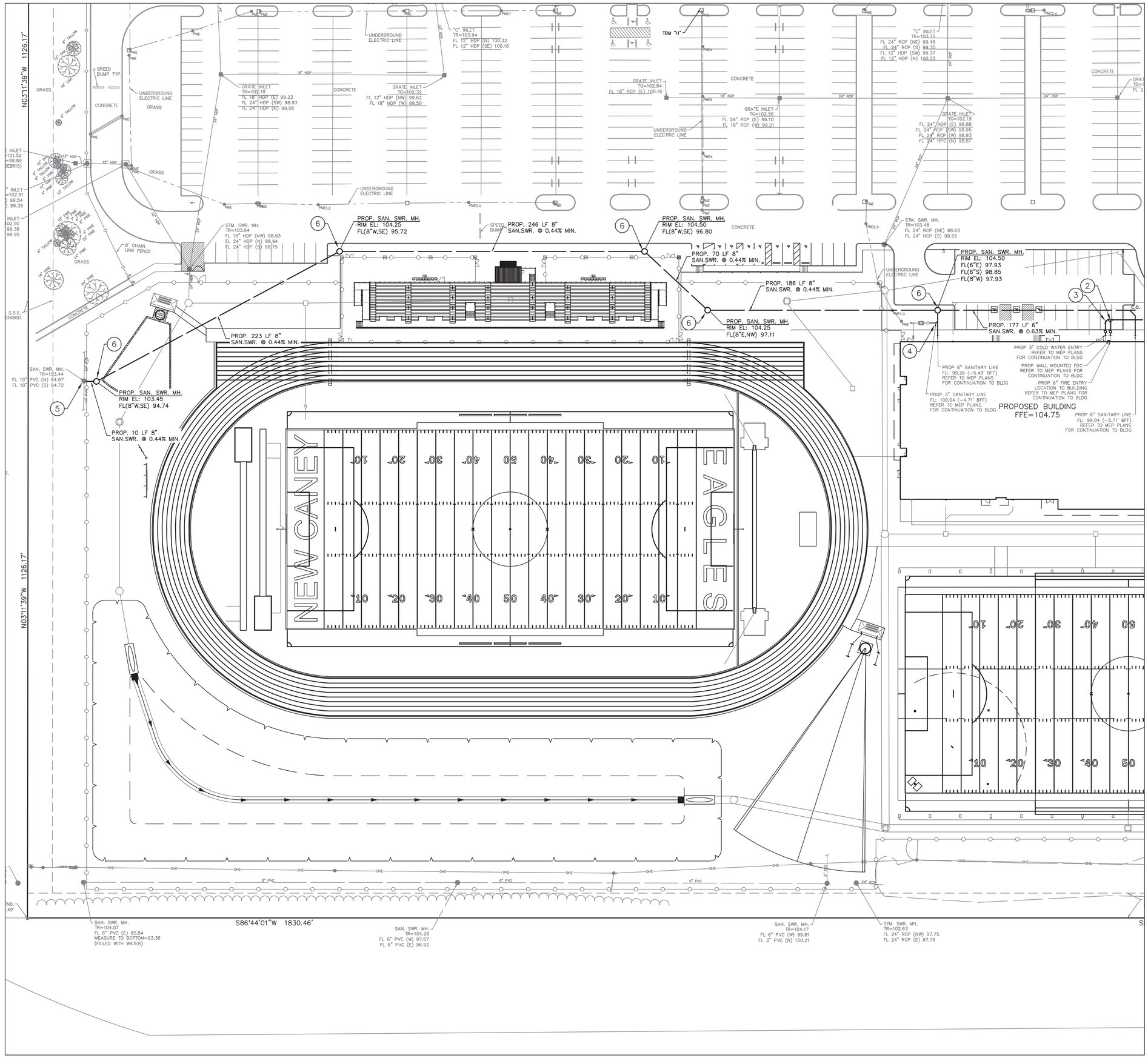

SCALE: 1"= 30'

LEGEND:

- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED T.S.&V.
- FL — FLOW LINE
- DIRECTION OF FLOW

GENERAL CONTRACTOR (GC) NOTES:

1. CONTRACTOR TO CENTER JOINT OF WATER LINE AT PROPOSED SANITARY SEWER. CONTRACTOR TO MAINTAIN MINIMUM 2' VERTICAL CLEARANCE. ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18–FOOT (OR LONGER) SECTION OF PIPE.
2. CONTRACTOR TO CENTER JOINT OF SANITARY SEWER AT PROPOSED WATER LINE. CONTRACTOR TO MAINTAIN MINIMUM 2' VERTICAL CLEARACE. ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18–FOOT (OR LONGER) SECTION OF PIPE.
3. CONTRACTOR TO INSTALL WATER LINE WITH MINIMUM 4' VERTICAL COVERAGE. IF 4' VERTICAL COVERAGE CANNOT BE MAINTAINED CONTRACTOR TO CONTACT ENGINEER.
4. CONTRACTOR TO INSTALL VAULT TOP 3" AOVE FINISHED GRADE IN AN EFFORT TO ELIMINATE STORM RUNOFF ENTERING VAULT.
5. CONTRACTOR TO INSTALL 12" OF CEMENT STABILIZED SAND UNDER VAULT AND 12" OUTSIDE OUTER EDGE OF VAULT.
6. CONTRACTOR TO PROVIDE ALL FITTINGS TO COMPLETE WATER LINE BENDS AND CONNECTIONS.

KEYED NOTES TO SHEET:

1. EXISTING WATER LINE NOT FIELD VERIFIED. LOCATION AND SIZE SHOWN ARE AN ESTIMATE AND NOT TO BE RELIED UPON WITHOUT FURTHER INVESTIGATION. CONTRACTOR TO CONFIRM LOCATION AND SIZE.
2. PROPOSED 6"x6" TEE & 1–6" GATE VALVE TO SERVE THE FIRE LINE CONNECTION.
3. PROPOSED 6" TO 3" REDUCER, 2–3"x45° BENDS, & 1–3" GATE VALVE TO SERVE THE DOMESTIC WATER LINE CONNECTION.
4. CONNECT 3" SAN.SWR. FROM M.E.P. TO 6" SAN.SWR.
5. CONNECT 8" SAN.SWR. TO EXISTING MANHOLE AT FLOWLINE ELEV: 94.70
6. ALL SANITARY MANHOLES SHALL HAVE THANE COATING (TYP)

NOTES TO CONTRACTOR:

1. ALL UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE.
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UTILITY ONE CALL

CONTRACTOR TO CALL BEFORE DIGGING !!!!
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(STATEWIDE OUTSIDE HOUSTON)
1-(800)-344-8377

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
WATER & SANITARY SEWER LAYOUT (SHEET 1 OF 2)

SHEET NO.
C4.01

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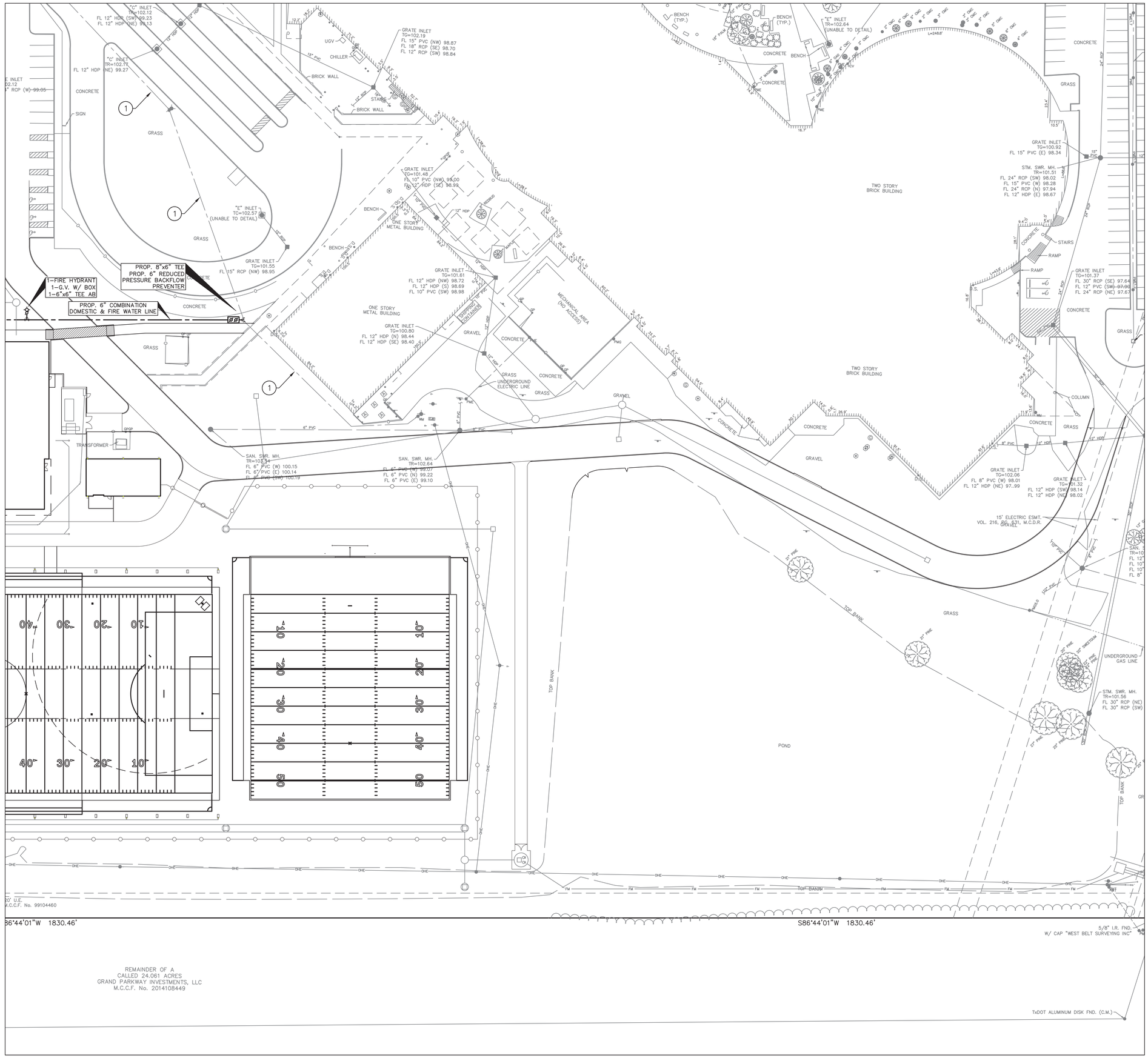

SCALE: 1"= 30'

LEGEND:

- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED T.S.&V.
- FL FLOW LINE
- DIRECTION OF FLOW

GENERAL CONTRACTOR (GC) NOTES:

1. CONTRACTOR TO CENTER JOINT OF WATER LINE AT PROPOSED SANITARY SEWER. CONTRACTOR TO MAINTAIN MINIMUM 2' VERTICAL CLEARANCE. ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18-FOOT (OR LONGER) SECTION OF PIPE.
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NOTES TO CONTRACTOR:

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ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
WATER & SANITARY SEWER LAYOUT (SHEET 2 OF 2)

SHEET NO.
C4.02

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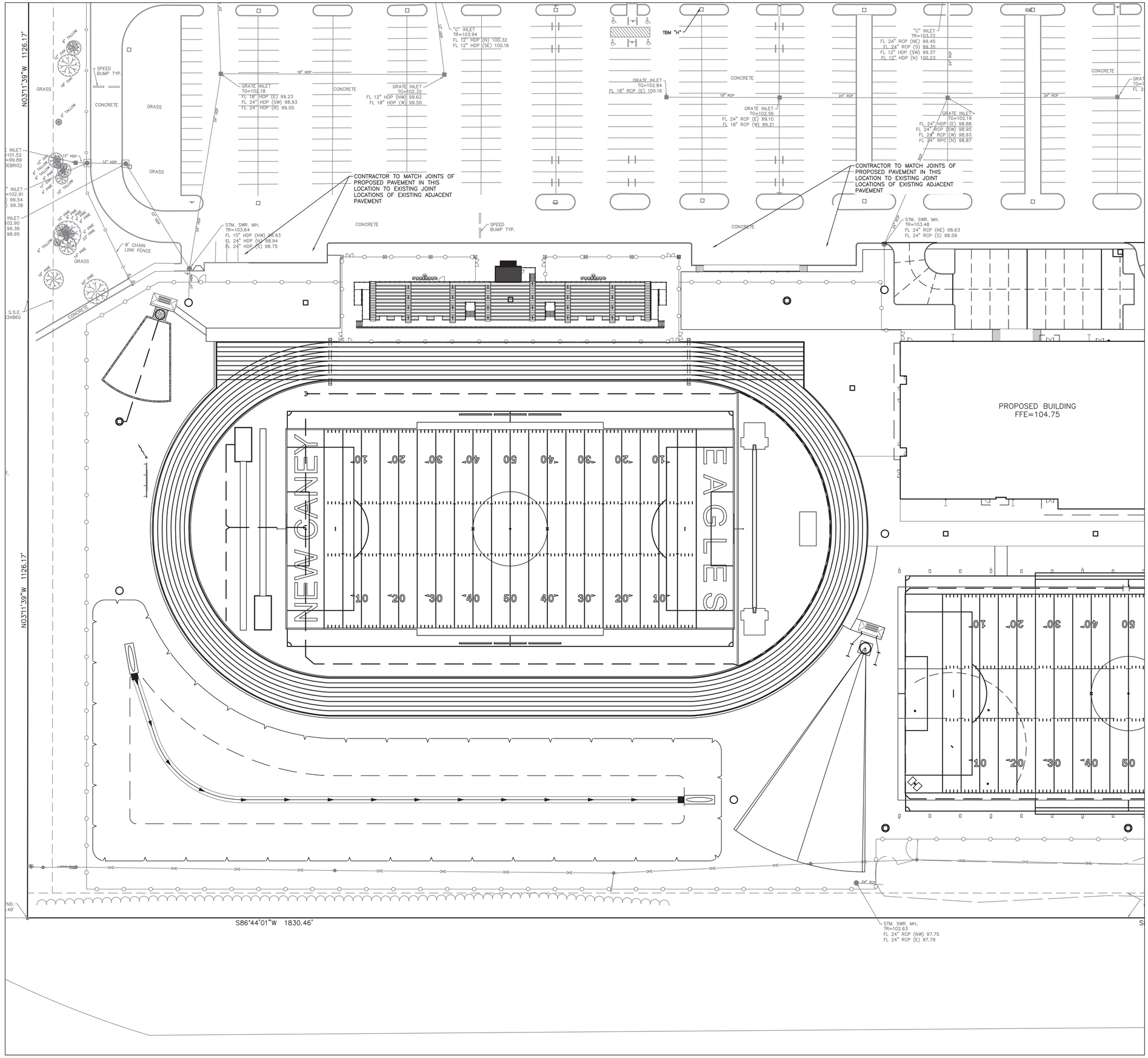
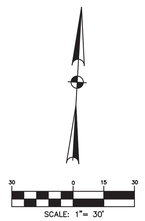




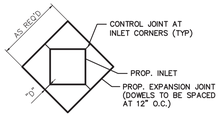
LEGEND:

SAWED JOINT

EXPANSION JOINT

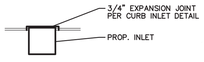
NOTES:

1. LOCATE EXPANSION JOINTS AS SHOWN. SAWED JOINTS SHALL BE SPACED EVENLY BETWEEN EXPANSION JOINTS AT 15' MAXIMUM SPACING.
2. ALL CURBS TO BE 6" UNLESS OTHERWISE NOTED.
3. LINE UP JOINTS IN SIDEWALK W/ JOINTS IN PARKING LOT.
4. INSTALL EXPANSION JOINTS IN ALL DRIVEWAYS AT ROW LINE.
5. SEE ARCHITECT'S PLANS FOR WHEELSTOP LOCATIONS AND SIDEWALK JOINTING.
6. CONTRACTOR TO DRILL 9" INTO EXISTING CONCRETE PAVEMENT AND EMBED 18" LONG #5 BAR (MATCHING EXISTING REBAR SPACING) AND EPOXY IN PLACE LEAVING 9" OF 18" LONG REBAR EXPOSED TO FACILITATE CONNECTION TO PROPOSED PAVEMENT.



D = 24" FOR MANHOLES & GRATE INLETS
D = 12" FOR AREA INLETS & AREA DRAINS

STORM SEWER INLET
W/ EXPANSION JOINT
N.T.S.



CURB INLET
W/ EXPANSION JOINT
N.T.S.

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
PAVEMENT JOINT LAYOUT (SHEET 1 OF 2)

SHEET NO.
C5.01

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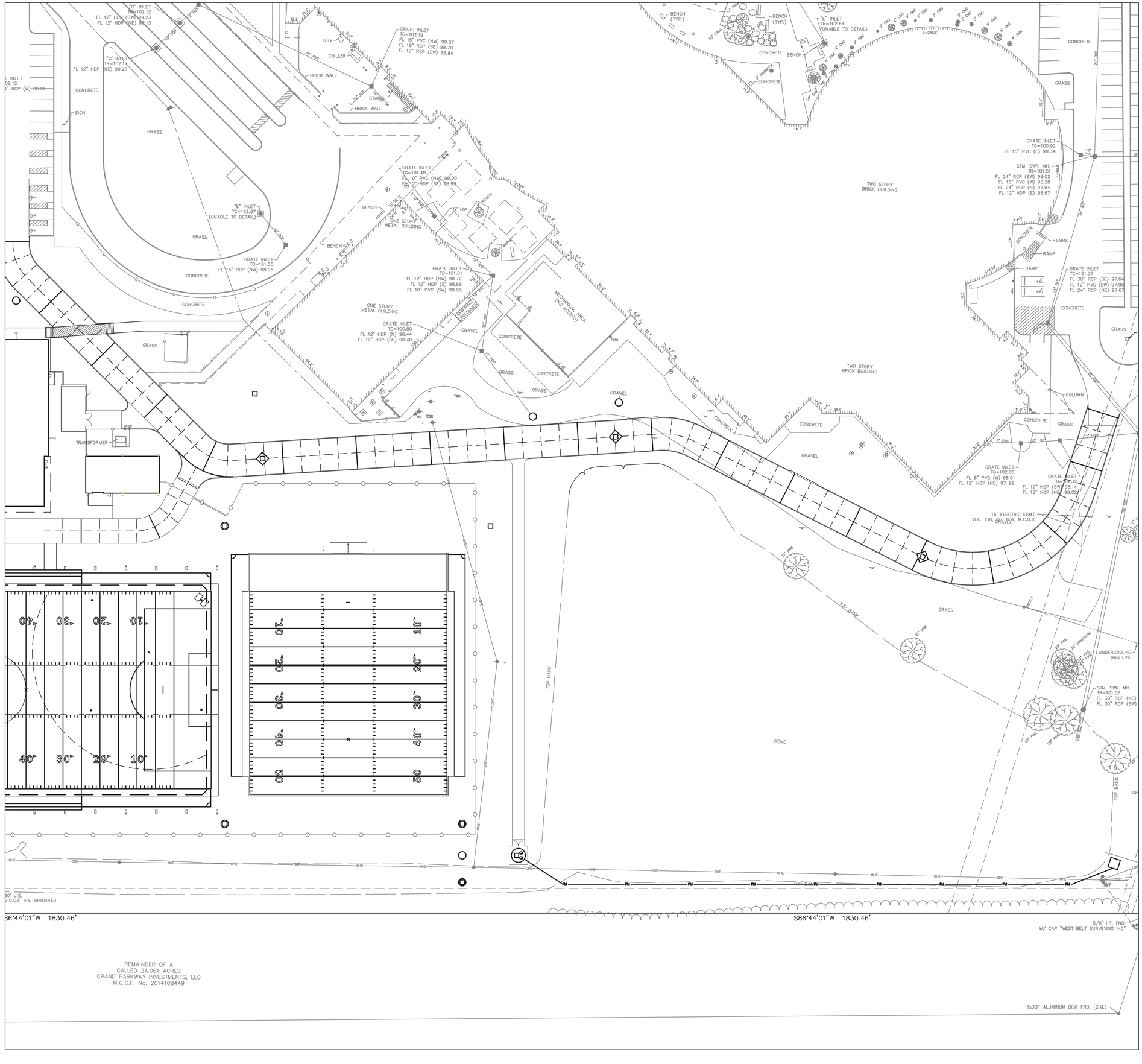

30 0 15 30
SCALE: 1"= 30'

LEGEND:

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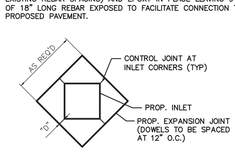

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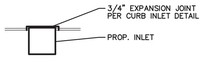
D = 12" FOR AREA INLETS & AREA DRAINS

STORM SEWER INLET
W/ EXPANSION JOINT
N.T.S.



CURB INLET
W/ EXPANSION JOINT
N.T.S.

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
PAVEMENT
JOINT LAYOUT
(SHEET 2 OF 2)

SHEET NO.
C5.02

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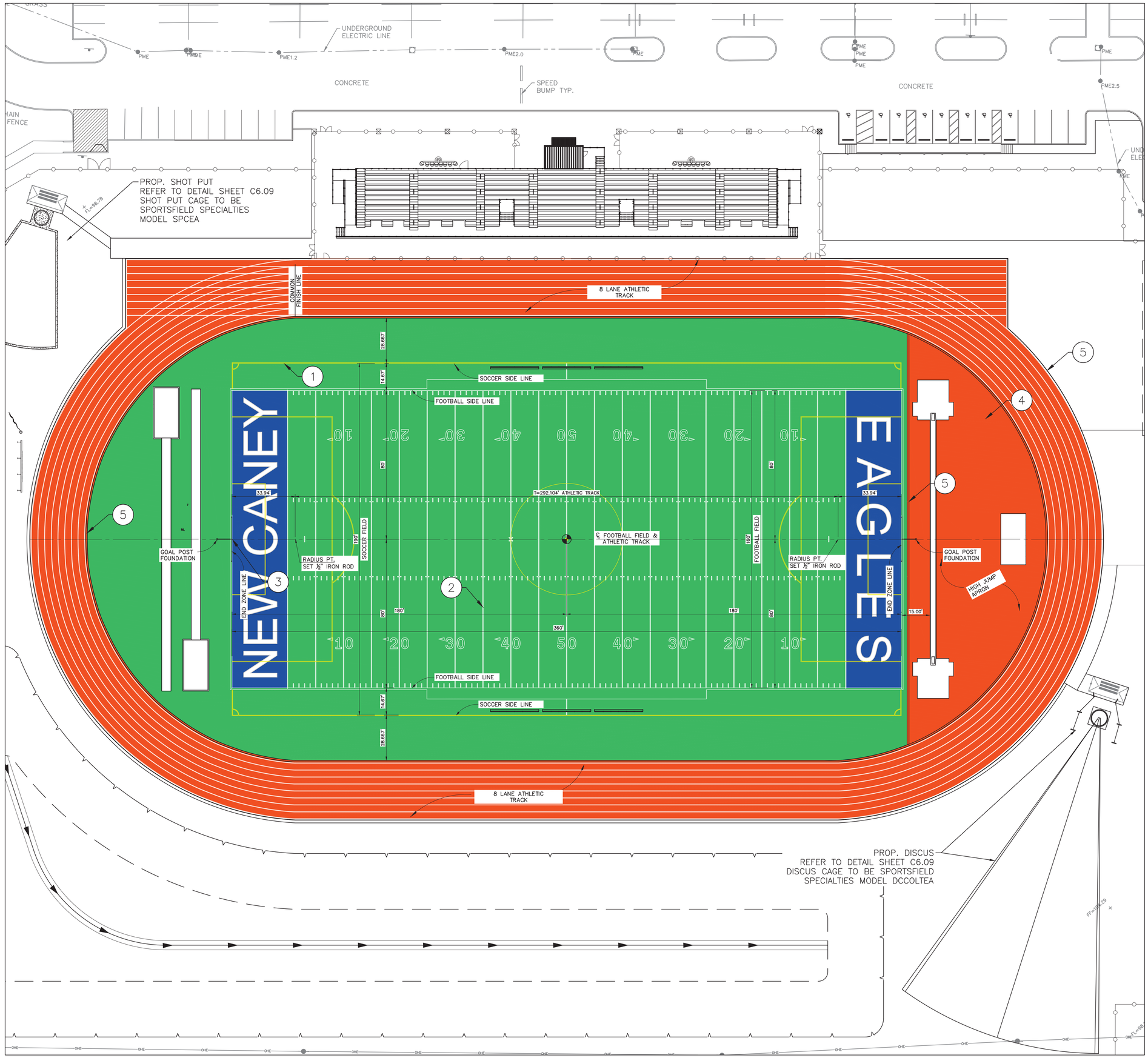

20 0 10 20

SCALE: 1"= 20'

LEGEND:

PROPOSED SYNTHETIC TURF. CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND OWNER ON TURF MANUFACTURER AND LEVEL OF TURF QUALITY

ATHLETIC TRACK SURFACE (CONTRACTOR TO REFER TO PROJECT MANUAL FOR APPROVED TRACK SURFACE TO INCLUDE MATERIAL, THICKNESS, & COLOR)

KEYED NOTES TO SHEET:

1. SOCCER FIELD LINE MARKINGS (YELLOW–TYPICAL)
2. FOOTBALL FIELD LINE MARKINGS (WHITE–TYPICAL)
3. PROPOSED GOAL POST
4. PROPOSED D ZONE/HIGH JUMP APRON. SAME SURFACE AS TRACK.
5. PROPOSED 12"x18" CONCRETE PERIMETER CURB.

NOTES TO CONTRACTOR:

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ISSUED: 01/06/2025

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BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
TRACK & FIELD 1 LAYOUT & DIMENSIONS

SHEET NO.
C6.01

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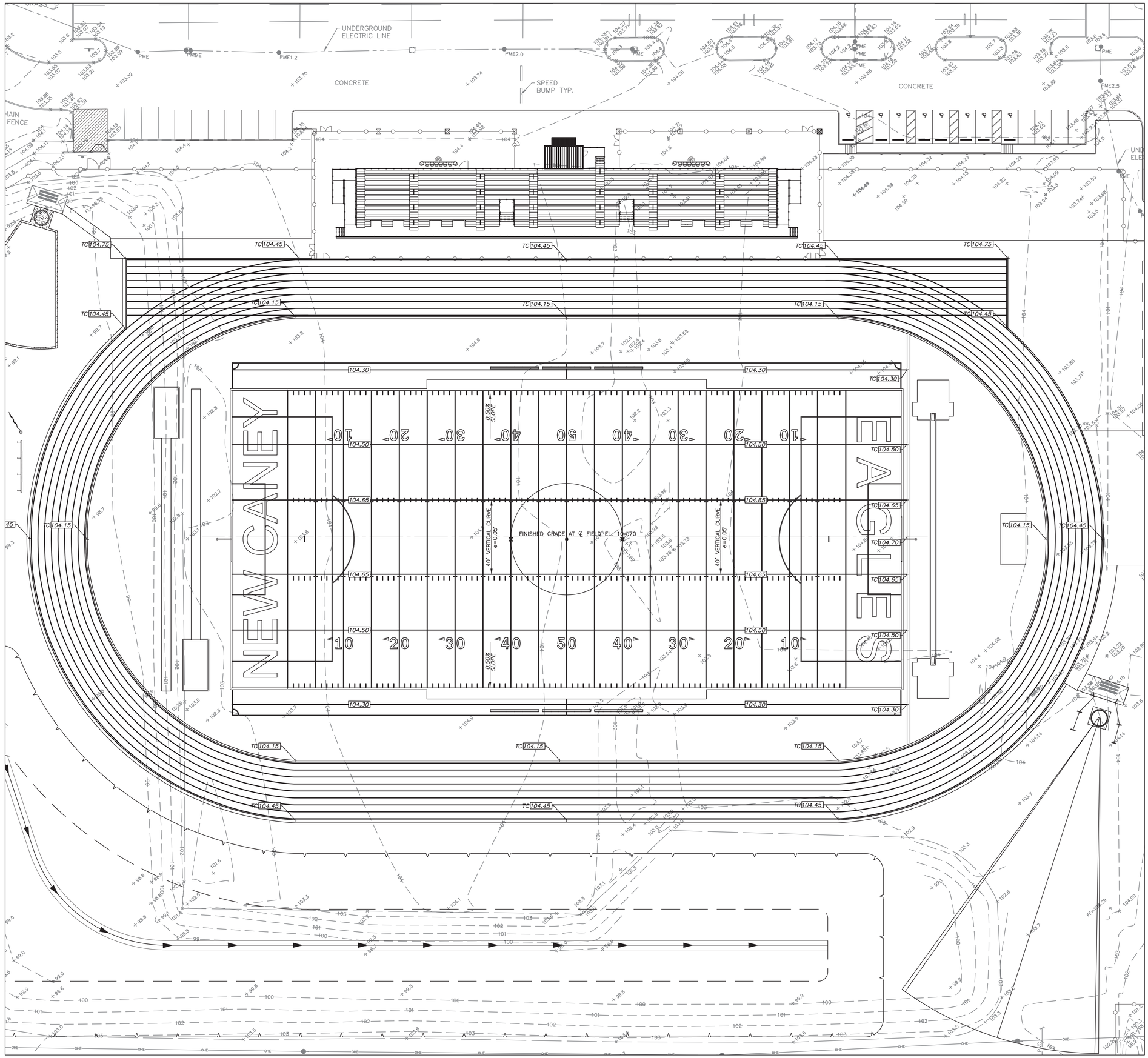

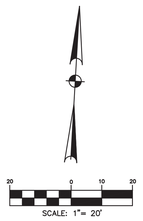

LEGEND:

- PROPOSED GRATE/CURB INLET
- PROPOSED STORM SEWER MANHOLE WITH GRATE TOP
- EXISTING INLET
- FG: 100.00 — PROPOSED FINISHED GRADE ELEV.
- 100.00 — PROPOSED CONTOUR OF FINISHED GRADE

GENERAL NOTES TO GRADING

1. ALL GRADES & CONTOURS SHOWN ARE FINISHED GRADES

NOTES TO CONTRACTOR:

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SHEET TITLE
TRACK & FIELD 1 GRADING LAYOUT

SHEET NO.
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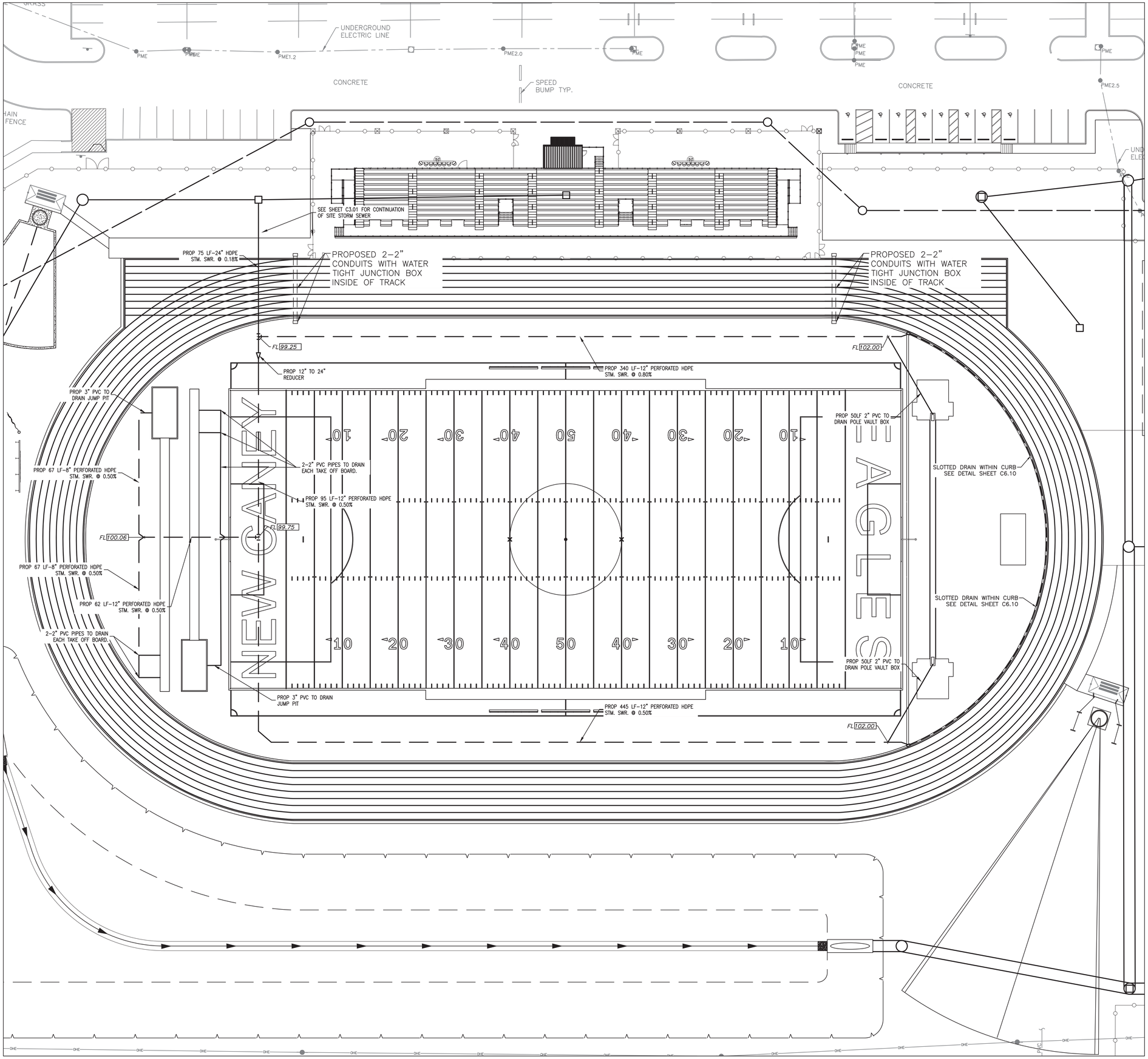

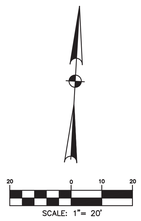

LEGEND:

FL 100.00	PROPOSED FLOW LINE ELEVATION
	PROPOSED PERFORATED SUBDRAIN PIPE
	PROPOSED STORM SEWER PIPE
(1)	PROPOSED 6" HDPE SUBDRAIN PIPE @ MIN. 0.50%
(2)	PROPOSED 12" HDPE SUBDRAIN PIPE @ MIN. 0.50%
(3)	PROPOSED 12" HDPE STORM PIPE @ MIN. 0.33%

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE ALL EXISTING FIELD NATURAL GRASS AND EXCAVATE SOIL WITHIN PROPOSED SYNTHETIC FIELD TO ELEVATIONS SHOWN ON GRADING PLAN. CONTRACTOR SHALL VERIFY LOCATION OF ANY EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA PRIOR TO CONSTRUCTION.
2. AFTER EXCAVATION OF EXISTING SOIL TO THE PROPER ELEVATIONS REQUIRED, THE NEW SUBGRADE WILL BE STABILIZED AND COMPACTED TO 95% MAX. DENSITY (ASTM D-698) WITH A SLOPE AS SHOWN TO ALLOW FOR DRAINAGE.
3. A NEW CONCRETE CURB WILL BE INSTALLED AROUND THE PERIMETER TO PROVIDE A SECURE EDGE FOR FASTENING THE SYNTHETIC TURF.
4. A 30MIL PVC IMPERMEABLE LINER WITH A 10oz. NON WOVEN (C-107NW) GEOTEXTILE WILL BE PLACED OVER THE SUBGRADE AND SECURED TO CURB. PVC LINER WILL HAVE 18 INCH MIN. LAPS AT SEAMS. PVC SEAMS SHALL BE HEAT WELDED. GEOTEXTILE SHALL HAVE 18 INCHES OVER LAPS AT PVC SEAMS.
5. THE SUBDRAINS WILL BE INSTALLED IN THE FIELD WHICH WILL BE CONNECTED TO AN EXISTING STORM SEWER.
6. CLEAN DRAINAGE STONE WILL BE PLACED OVER THE SUBDRAINS AND THE FIELD AND FINE GRADED FOR A FIELD WITH A SLOPE PER SHEET C6.02.
7. SYNTHETIC TURF WILL BE INSTALLED OVER THE DRAINAGE STONE.
8. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS FOR PIPE CONNECTIONS.
9. SUBDRAIN PIPE SHALL BE PERFORATED HDPE PIPE (NO FILTER FABRIC SOCK).

NOTES TO CONTRACTOR:

1. ALL UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE.
2. THE LOCATION OF ALL UNDERGROUND UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING ANY WORK. CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
3. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES (PRIVATE OR PUBLIC) IN THE FIELD PRIOR TO CONSTRUCTION. IF A CONFLICT IS DISCOVERED, CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

UTILITY ONE CALL

CONTRACTOR TO CALL BEFORE DIGGING !!!!
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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
TRACK & FIELD 1 STORM SUBDRAIN LAYOUT

SHEET NO.
C6.03

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20 0 10 20
SCALE: 1"= 20'

LEGEND:

- PROPOSED SYNTHETIC TURF. CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND OWNER ON TURF MANUFACTURER AND LEVEL OF TURF QUALITY
- NATURAL GRASS PLAYING FIELD

KEYED NOTES TO SHEET:

1. SOCCER FIELD LINE MARKINGS (YELLOW–TYPICAL)
2. FOOTBALL FIELD LINE MARKINGS (WHITE–TYPICAL)
3. PROPOSED GOAL POST
4. GRADE BEAM FOR PAVILION TO BE UTILIZED FOR NAILING SYNTHETIC TURF
5. BASEBALL FIELD LINE MARKINGS (WHITE–TYPICAL)
6. SOFTBALL FIELD LINE MARKINGS (WHITE–TYPICAL)

NOTES TO CONTRACTOR:

1. ALL UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE.
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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

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F-24281
STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
FIELDS 2 & 3 LAYOUT & DIMENSIONS

SHEET NO.
C6.04

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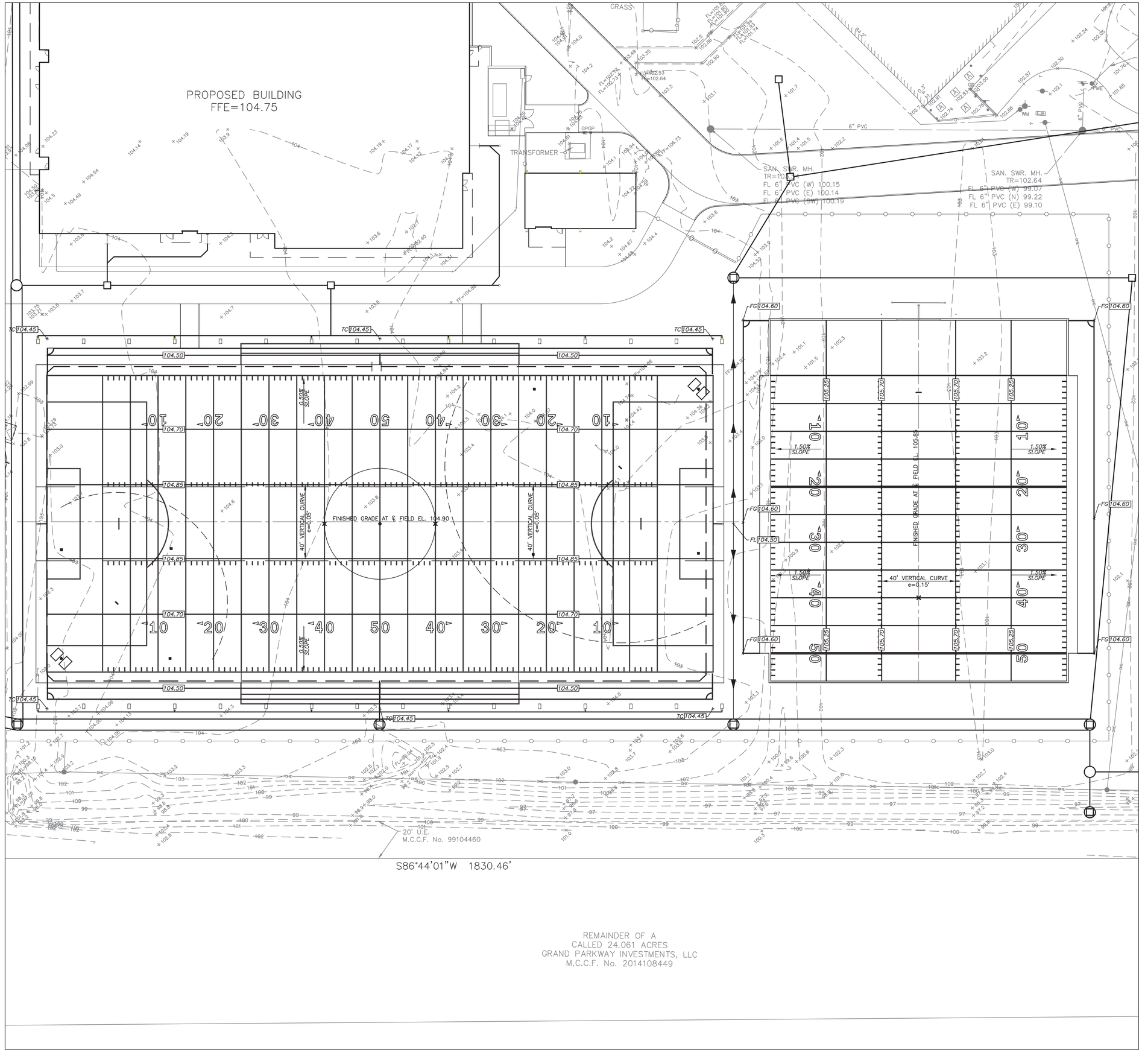

20 0 10 20
SCALE: 1"= 20'

LEGEND:

- PROPOSED GRATE/CURB INLET
- PROPOSED STORM SEWER MANHOLE WITH GRATE TOP
- EXISTING INLET
- FG: 100.00 — PROPOSED FINISHED GRADE ELEV.
- 100.00 — PROPOSED CONTOUR OF FINISHED GRADE

GENERAL NOTES TO GRADING

1. ALL GRADES & CONTOURS SHOWN ARE FINISHED GRADES

NOTES TO CONTRACTOR:

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
FIELDS 2 & 3
GRADING LAYOUT

SHEET NO.
C6.05

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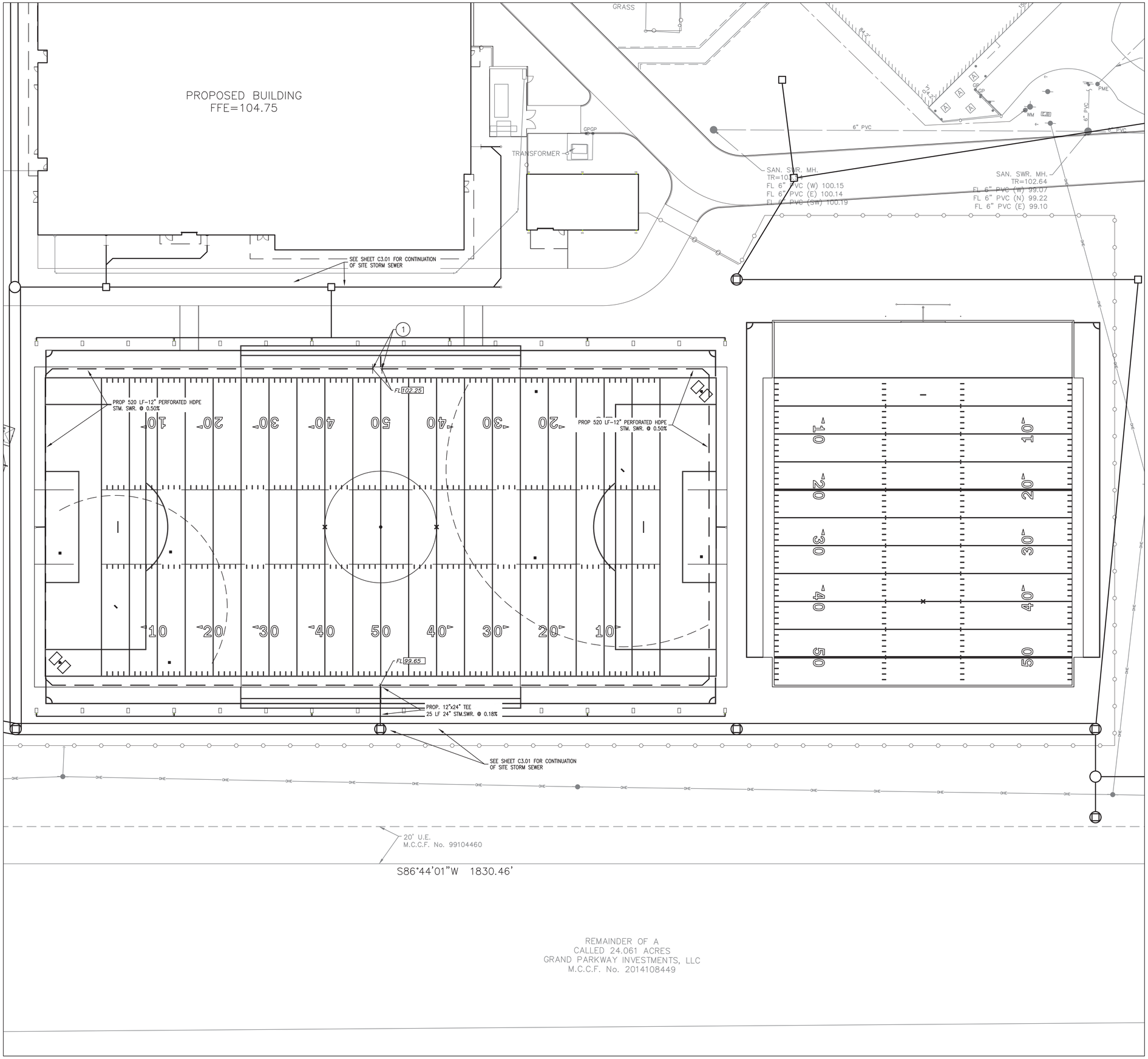

20 0 10 20
SCALE: 1" = 20'

LEGEND:

FL 100.00	PROPOSED FLOW LINE ELEVATION
— — —	PROPOSED PERFORATED SUBDRAIN PIPE
———	PROPOSED STORM SEWER PIPE
①	PROPOSED 6" HDPE SUBDRAIN PIPE @ MIN. 0.50%
②	PROPOSED 12" HDPE SUBDRAIN PIPE @ MIN. 0.50%
③	PROPOSED 12" HDPE STORM PIPE @ MIN. 0.33%

GENERAL NOTES:

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7. SYNTHETIC TURF WILL BE INSTALLED OVER THE DRAINAGE STONE.
8. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS FOR PIPE CONNECTIONS.
9. SUBDRAIN PIPE SHALL BE PERFORATED HDPE PIPE (NO FILTER FABRIC SOCK).

KEYED NOTES TO SHEET:

① INSTALL END CAP ON SUBDRAIN PIPE PER ADS DETAIL ON SHEET C6.10 OR APPROVED EQUAL.

NOTES TO CONTRACTOR:

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
FIELDS 2 & 3
STORM SUBDRAIN
LAYOUT

SHEET NO.
C6.06

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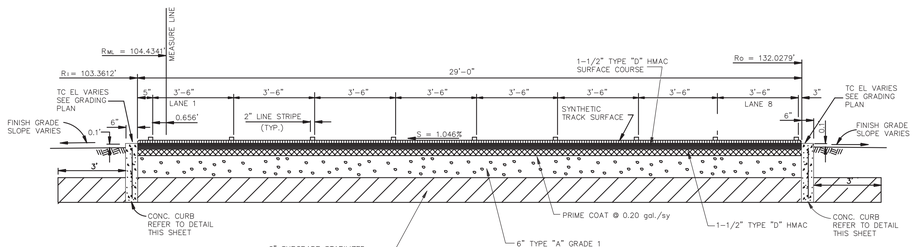
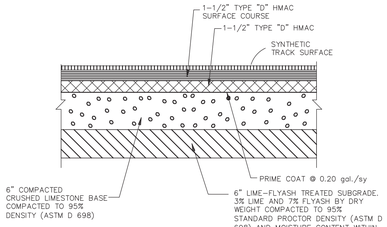


TRACK PARAMETERS	
L	= 1312.3688' (400.01M)
R_{ML}	= 104.4341'
R_1	= 103.3612'
R_0	= 132.0279'
T	= 328.095'
WHERE 1 FOOT = 0.3048 M	

TYPICAL SECTION
8 LANE ATHLETIC TRACK
SCALE: N.T.S.



HIGH JUMP "D" SECTION
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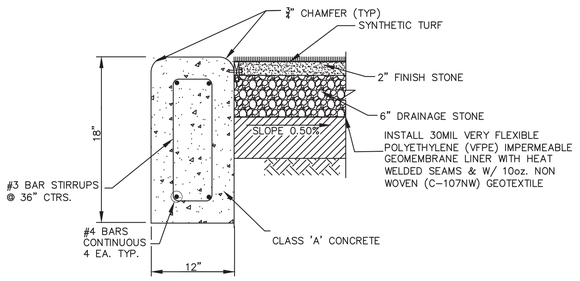
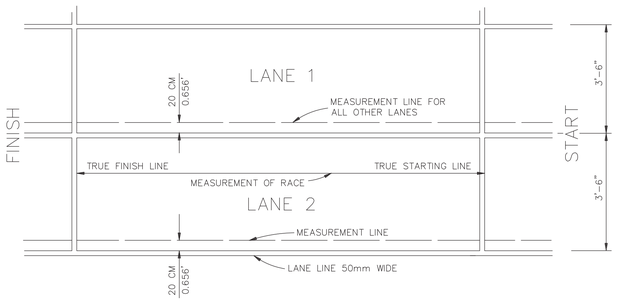


TYPICAL CONCRETE CURB & EDGE DETAIL



TYPICAL TRACK MEASUREMENTS
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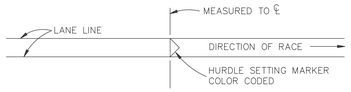

TYPICAL HURDLE SETTING MARKER
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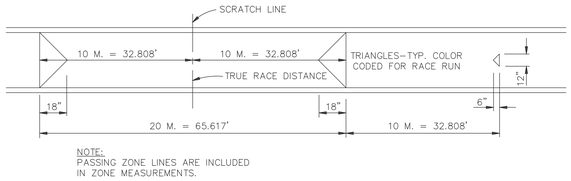
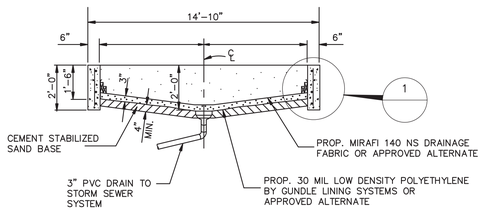
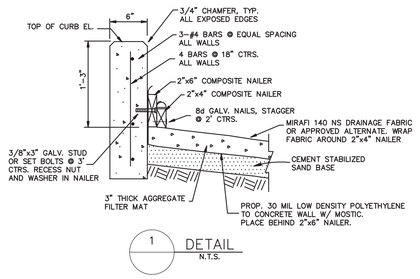


NOTE:
PASSING ZONE LINES ARE INCLUDED IN ZONE MEASUREMENTS.

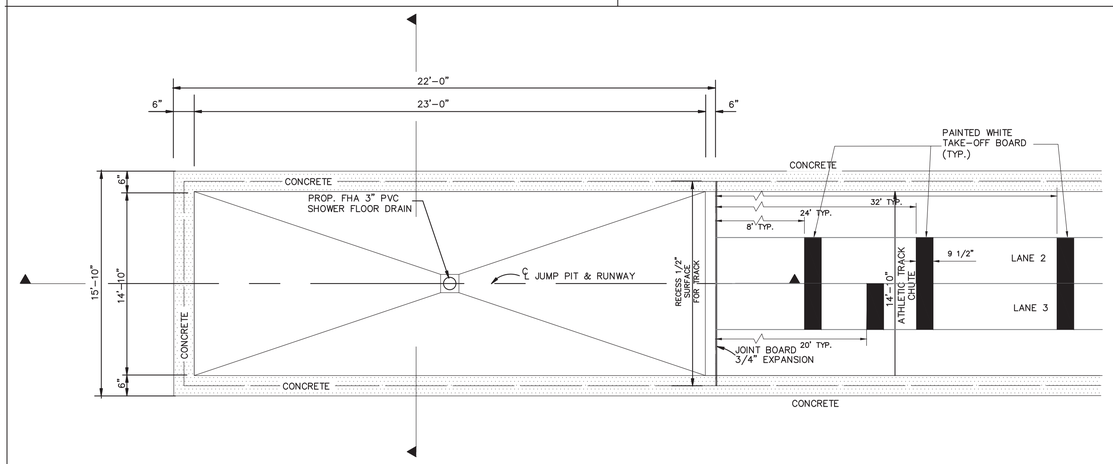
TYPICAL PASSING ZONE
N.T.S.



SECTION – JUMP PIT
SCALE: 1" = 3'-0" H & V



1 DETAIL
N.T.S.



CONCRETE WALL JUMP PIT PLAN
SCALE: N.T.S.

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01/06/2025

ISSUED: 01/06/2025

REVISIONS

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Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
ATHLETIC DETAILS (SHEET 1 OF 4)

SHEET NO.
C6.07

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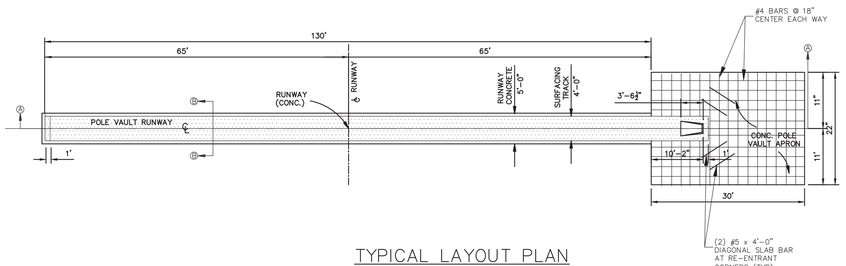
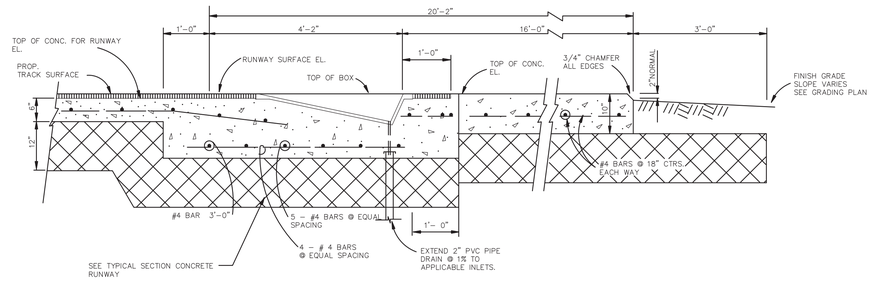


TYPICAL LAYOUT PLAN
POLE VAULT
SCALE 1"=10'

NOTE:
POLE VAULT CONCRETE POUR TO BE COMPLETED IN TWO STEPS:
1. RUNWAY WITH POLE VAULT BOX
2. POLE VAULT PAD

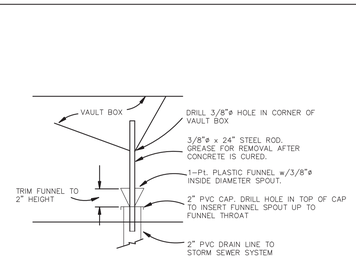
NOTES:
1. VAULT BOX SET IN RUNWAY



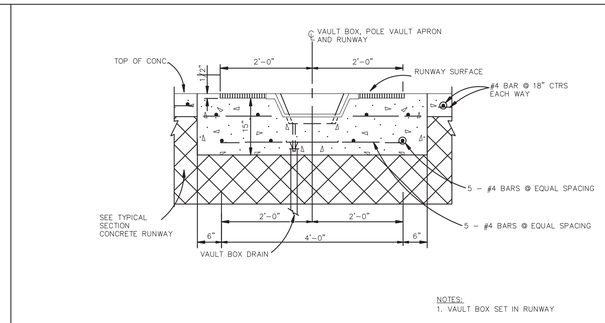
NOTE:
POLE VAULT CONCRETE POUR TO BE COMPLETED IN TWO STEPS:
1. RUNWAY WITH POLE VAULT BOX
2. POLE VAULT PAD

SECTION A-A – POLE VAULT BOX
N.T.S.

NOTES:
1. VAULT BOX SET IN RUNWAY

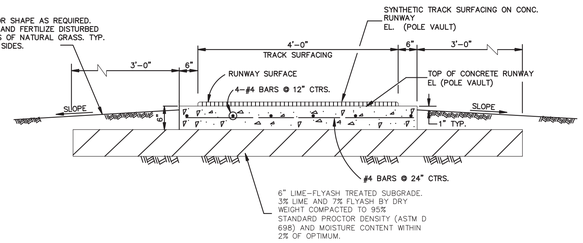


VAULT BOX DRAIN DETAIL
N.T.S.



NOTES:
1. VAULT BOX SET IN RUNWAY

SECTION – POLE VAULT BOX
N.T.S.



TYPICAL SECTION CONCRETE RUNWAY
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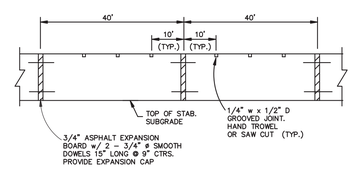
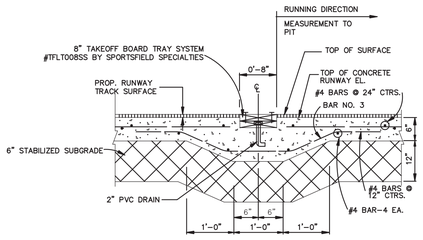
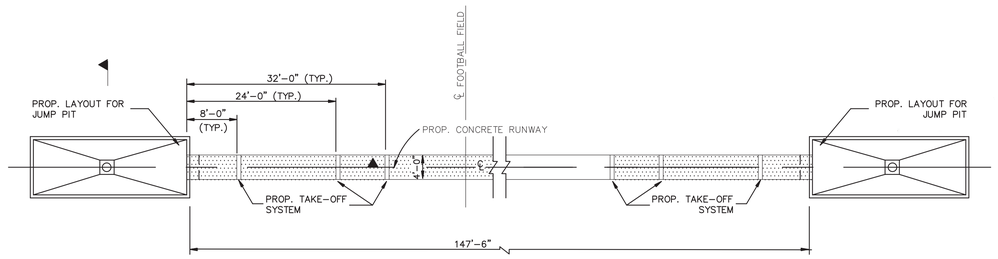


ELEVATION VIEW
LAYOUT FOR CONCRETE CURB EXPANSION & CONTRACTION JOINT
TYP. INNER AND OUTER CURBS
N.T.S.



SECTION
N.T.S.

TAKE-OFF BOARDS



TYPICAL LAYOUT PLAN
LONG JUMP / TRIPLE JUMP & PITS
SCALE: N.T.S.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
ATHLETIC DETAILS (SHEET 2 OF 4)

SHEET NO.
C6.08

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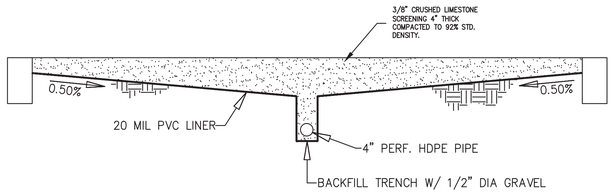
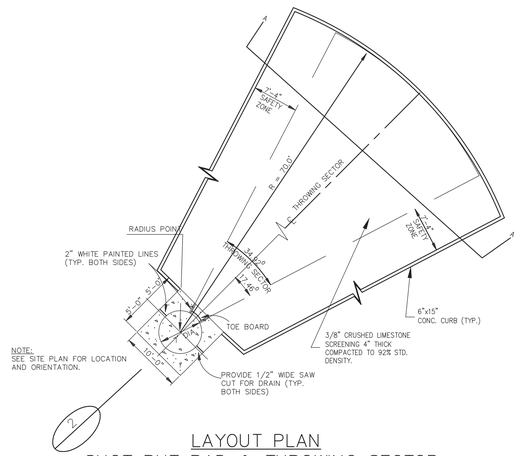
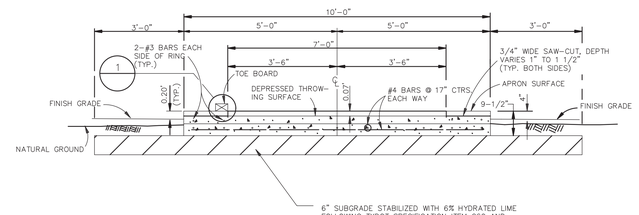


SECTION A–A



LAYOUT PLAN
SHOT PUT PAD & THROWING SECTOR

SCALE: N.T.S.

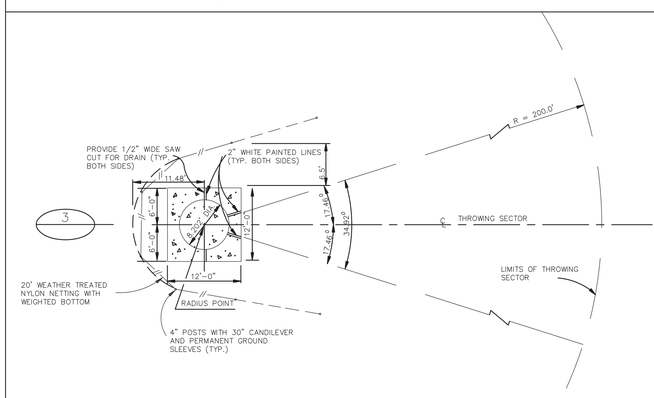


NOTES:

1. INSTALL RING SUPPORTS ON 1–1/2" ALUMINUM SHIMS AND FASTEN SUPPORTS AND SHIMS TO LOWER APRON.
2. SHOT PUT RING SHALL BE 2–1/2" x 1/4" ALUMINUM CIRCLE 7'–0" DIAMETER BY UCS, INC. OR APPROVED ALTERNATE.

2 SECTION SHOT PUT PAD

SCALE: 1/2" = 1'–0"

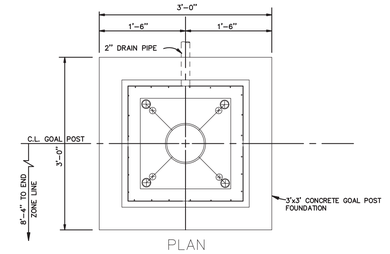


LAYOUT PLAN
DISCUS PAD AND THROWING SECTOR

SCALE: 1"=10'

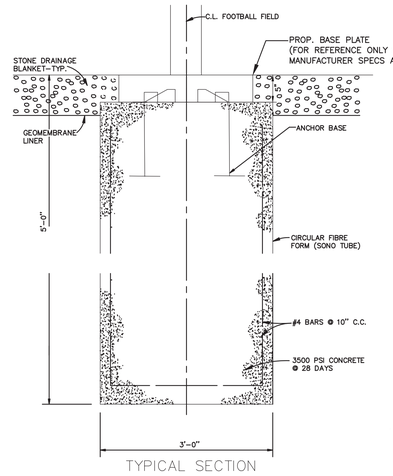
NOTES:

1. SEE SITE PLAN FOR LOCATION AND ORIENTATION.
2. DISCUS CAGE SHALL BE SPORTSFIELD SPECIALTIES MODEL DCCOLTEA



PLAN

(FOR REFERENCE ONLY SEE MANUFACTURER DETAILS)



TYPICAL SECTION

NOTES:

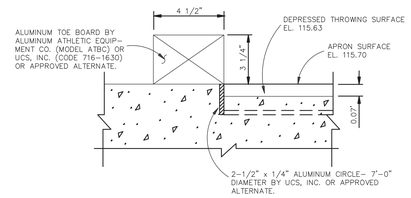
1. DEPTH OF INSERTED GOAL POST WILL BE ADJUSTED SUCH THAT THE ELEVATION FROM THE TOP OF THE CROSSBAR ON THE GOAL POST MEASURED AT THE UPRIGHT TO THE TOP OF THE TURF IS 10'0" AT THE END ZONE LINE.
2. CONTRACTOR SHALL CONFIRM INSTALL–ATION AND FOUNDATION DETAILS WITH GOAL POST MANUFACTURER.

NOTE:

1. TURF CONTRACTOR TO PROVIDE 2 SETS OF TURF COVERED COVERS FOR GOAL POST FOUNDATION. ONE FOR GOAL POST IN–PLACE AND ONE FOR GOAL POST REMOVED.

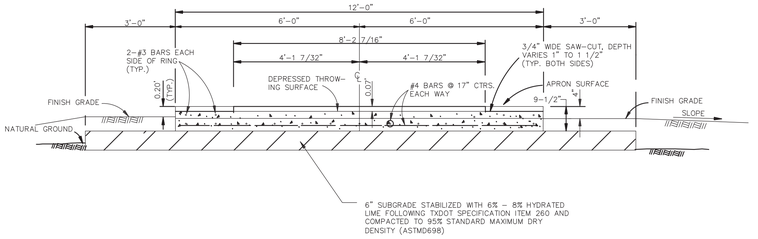
COMPETITION FOOTBALL FIELD
GOAL POST FOUNDATION

SCALE: N.T.S.



1 DETAIL SHOT PUT TOE BOARD

SCALE: 3" = 1'–0"



NOTES:

1. INSTALL RING SUPPORTS ON 1–1/2" ALUMINUM SHIMS AND FASTEN SUPPORTS AND SHIMS TO LOWER APRON.
2. DISCUS RING SHALL BE 2–1/2" x 1/4" ALUMINUM CIRCLE 8'–2–7/16" DIAMETER BY UCS, INC. OR APPROVED ALTERNATE.

3 SECTION DISCUS PAD

SCALE: 1/2" = 1'–0"

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
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STATE OF TEXAS
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01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.

23-155.00

SHEET TITLE

ATHLETIC DETAILS (SHEET 3 OF 4)

SHEET NO.

C6.09

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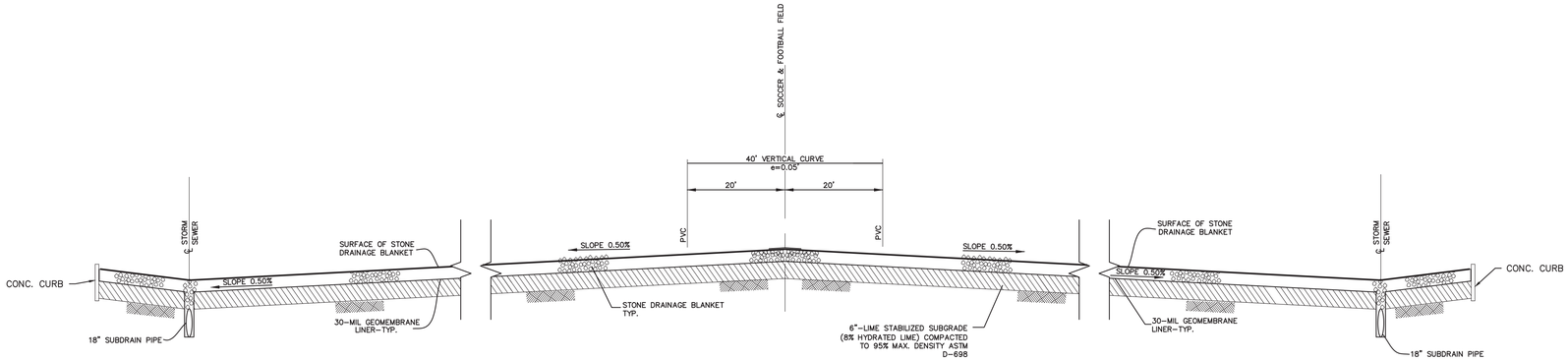
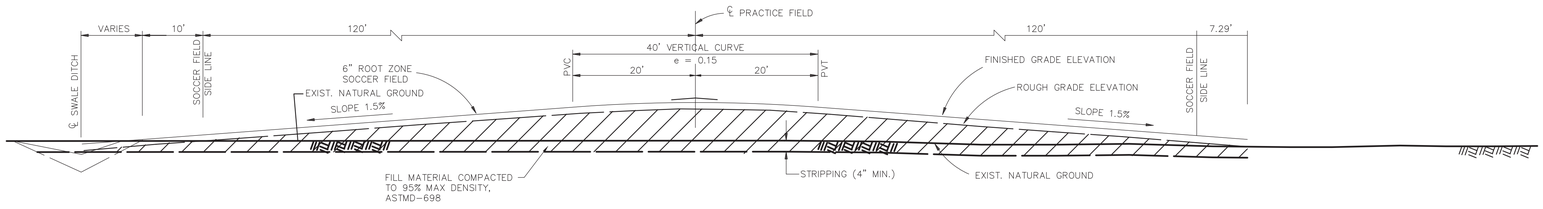


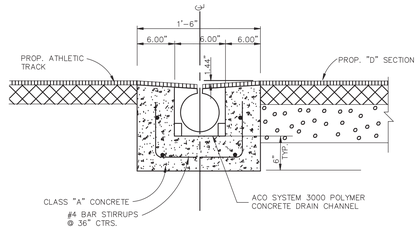
TYPICAL TRANSVERSE SECTION
PROPOSED SYNTHETIC TURF SOCCER & FOOTBALL FIELD

N.T.S.



TYPICAL TRANSVERSE SECTION
PROPOSED NATURAL GRASS SOCCER & FOOTBALL FIELD

N.T.S.

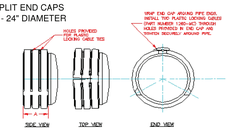


TYPICAL SLOTTED DRAIN

N.T.S.

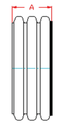
SPLIT END CAPS
8" - 24" DIAMETER

PART #	PIPE SIZE	A
1267AA	12 in (300 mm)	5.8 in (146 mm)
1567AA	15 in (375 mm)	7.9 in (197 mm)
1867AA	18 in (450 mm)	8.0 in (204 mm)
2467AA	24 in (600 mm)	9.5 in (240 mm)



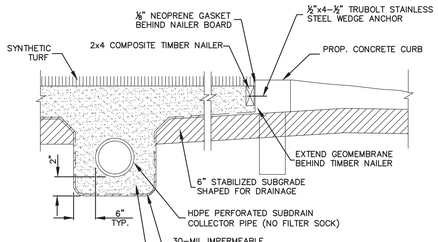
END CAPS
12" - 60" DIAMETER

PART #	PIPE SIZE	A
1201AN	12 in (300 mm)	11.5 in (293 mm)
1501AN	15 in (375 mm)	13.0 in (329 mm)
1801AN	18 in (450 mm)	13.4 in (340 mm)
2101AN	21 in (525 mm)	12.0 in (305 mm)
2401AN	24 in (600 mm)	12.6 in (320 mm)
3001AN	30 in (750 mm)	12.4 in (314 mm)
3601AN	36 in (900 mm)	15.5 in (394 mm)
4201AN	42 in (1050 mm)	15.6 in (395 mm)
4801AN	48 in (1200 mm)	15.8 in (400 mm)
6001AN	60 in (1500 mm)	18.0 in (457 mm)



NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY

DRAWING #	2100	
DRAWN BY:	JCB	09.05.06
APPROVED BY:	JCB	06.25.07
REVISIONS:	TJR	4/20/2018

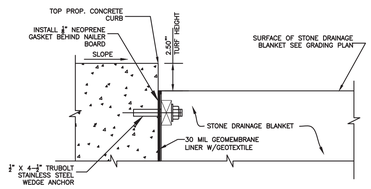


NOTES:

1. SECURE SYNTHETIC TURF NAILER USING STAINLESS STEEL STAPLES.
2. DRAINAGE STONE TO BE FLUSH WITH TOP OF NAILER.
3. STAINLESS STEEL WEDGE ANCHORS TO BE INSTALLED 2" FROM END OF 2x4 NAILER AND SPACED A MAXIMUM OF 24" ON CENTER.

TYPICAL EDGE DETAIL

N.T.S.

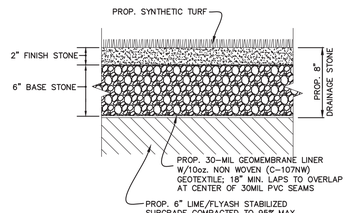


NOTES:

1. DEPTH OF NAILER VARIES DEPENDING ON TURF SYSTEM SELECTED. 2"X4" COMPOSITE MATERIAL NAILER BOARD TO BE USED.
2. FASTEN NAILER TO CONCRETE APRON WITH FOUR (4) ½" X 4-½" TRUBOLT STAINLESS STEEL WEDGE ANCHORS FOR EACH 20' SECTION. PLACE A BOLT 4" FROM END OF ANGLE SECTION. PLACE REMAINING 2 BOLTS AT EQUAL SPACING.
3. INSTALL ½" X 2" COMPRESSIBLE NEOPRENE JOINT SEALER AND GEOMEMBRANE LINER BEHIND NAILER.

COMPOSITE NAILER DETAIL

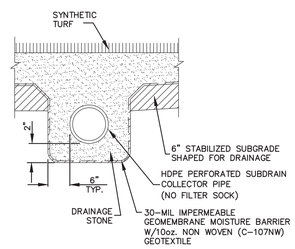
N.T.S.



NOTE:
CONTRACTOR SHALL VERIFY LIME FLY ASH AMOUNTS WITH TESTING LAB.

TYPICAL SECTION FOR SYNTHETIC TURF

N.T.S.



TYPICAL SUBDRAIN SECTION

N.T.S.

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ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
ATHLETIC DETAILS
(SHEET 4 OF 4)

SHEET NO.
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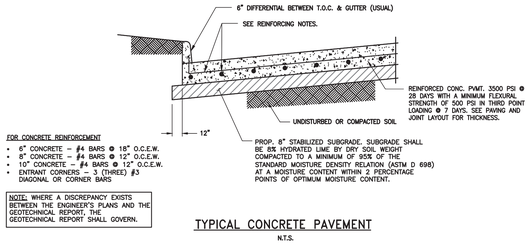
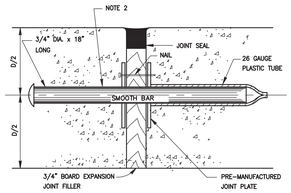


FOR CONCRETE REINFORCEMENT

- 6" CONCRETE – #4 BARS @ 18" O.C.E.W.
- 8" CONCRETE – #4 BARS @ 12" O.C.E.W.
- 10" CONCRETE – #4 BARS @ 12" O.C.E.W.
- ENTRANT CORNERS – 3 (THREE) #3 DIAGONAL OR CORNER BARS

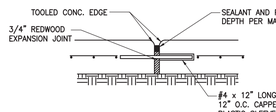
NOTE: WHERE A DISCREPANCY EXISTS BETWEEN THE ENGINEER'S PLANS AND THE GEOTECHNICAL REPORT, THE GEOTECHNICAL REPORT SHALL GOVERN.

TYPICAL CONCRETE PAVEMENT
N.T.S.

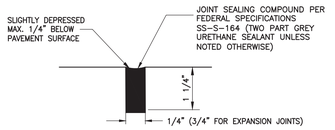


NOTES:
1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS. UNITS TO BE SPACED ON 12" CENTERS
2. CENTER DOWEL HORIZONTALLY ON JOINT
3. CENTER DOWEL VERTICALLY IN CONCRETE BASE.

DOWEL TYPE EXPANSION JOINT
N.T.S.

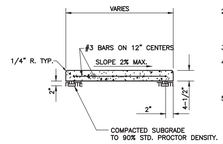


CONCRETE SIDEWALK EXPANSION JOINT
N.T.S.



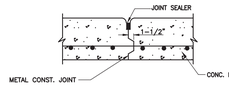
JOINT SEAL
N.T.S.

NOTE:
WHERE THE DEPTH DOES NOT PERMIT THE USE OF BACKER ROD, A BOND BREAKER (POLYETHYLENE STRIP) MUST BE USED TO PREVENT THREE-POINT BONDING

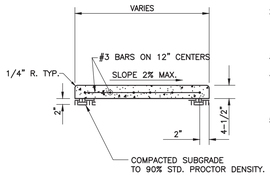


NOTES:
1. 1/2" FIBERBOARD EXPANSION MATERIAL REQUIRED WHERE SIDEWALK ABUTS BUILDING. 3/4" REDWOOD MATERIAL REQUIRED WHERE SIDEWALK ABUTS CURBS, DRIVEWAYS OR EXISTING SIDEWALKS.
2. WHERE NEW SIDEWALK IS PLACED AGAINST EXISTING SIDEWALK, SAWCUT EXISTING SIDEWALK TO AN EVEN STRAIGHT LINE PRIOR TO INSTALLATION OF THE NEW SIDEWALK AND INSTALL EXPANSION JOINT.
3. 1" MAX AGGREGATE.
4. CONTRACTOR SHALL INSTALL SIDEWALK EXPANSION JOINTS AT 20' MAX. INTERVALS AND CONSTRUCTION (SAWED JOINTS) ON 5' CENTERS FOR 5' WIDE SIDEWALKS AND 10' FOR ALL OTHER SIDEWALKS WIDER THAN 5'.
5. LINE UP JOINTS IN SIDEWALK W/ PAVING JOINTS.

TYPICAL CONCRETE SIDEWALK
N.T.S.



KEYED CONSTRUCTION JOINT WITH TIE BARS
N.T.S.



NOTES:
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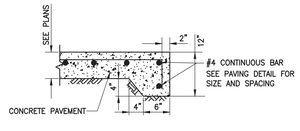
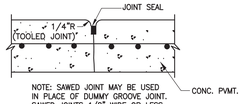
3. 1" MAX AGGREGATE.
4. CONTRACTOR SHALL INSTALL SIDEWALK EXPANSION JOINTS AT 20' MAX. INTERVALS AND CONSTRUCTION (SAWED JOINTS) ON 5' CENTERS FOR 5' WIDE SIDEWALKS AND 10' FOR ALL OTHER SIDEWALKS WIDER THAN 5'.
5. LINE UP JOINTS IN SIDEWALK W/ PAVING JOINTS.

TYPICAL CONCRETE SIDEWALK
N.T.S.

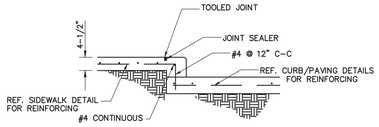


STANDARD CONCRETE PAVING HEADER
N.T.S.



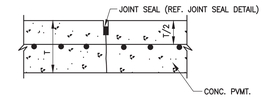
NOTE: SAWED JOINT MAY BE USED IN PLACE OF DUMMY GROOVE JOINT. SAWED JOINTS 1/8" WIDE OR LESS SHALL NOT BE SEALED

DUMMY GROOVE JOINT
N.T.S.



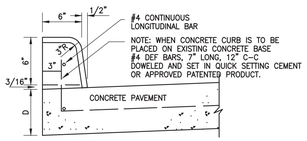
SIDEWALK SHALL BE DOWELED INTO CURB WITH #4 REBAR @ 12" C-C

SIDEWALK AT PAVEMENT
N.T.S.



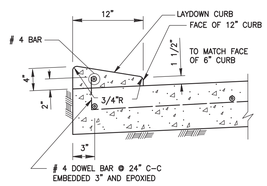
SAWED JOINTS 1/8" WIDE OR LESS SHALL NOT BE SEALED.

SAWED JOINT
N.T.S.

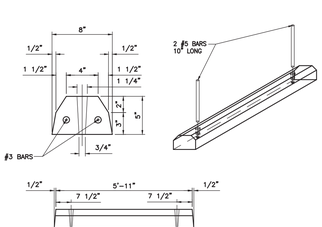


NOTES:
1. MORTAR FINISH NOT REQUIRED WHEN CURB IS POURED BY A MACHINE, BUT CURB SHALL HAVE THE SAME OUTSIDE DIMENSIONS.
2. PROP. VERTICAL JOINT IN CURB TO BE SEALED WITH VERTICAL SEALANT MATCHING COLOR OF JOINT SEALANT IN PAVEMENT.

CONCRETE CURB
N.T.S.



4-INCH x 12-INCH LAYDOWN CURB
N.T.S.

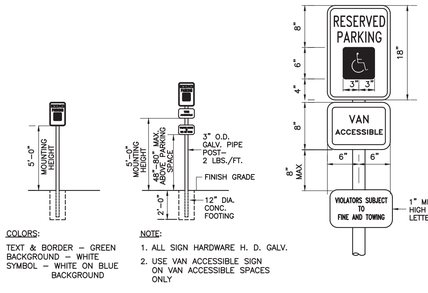


PRECAST CONCRETE WHEEL STOP
NTS

TYPICAL CONCRETE CURB REINFORCING
N.T.S.

DOWEL FITTING
N.T.S.

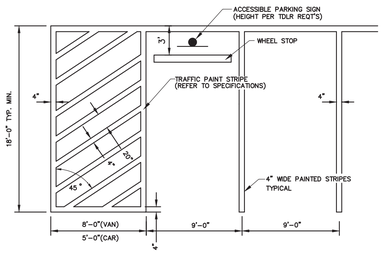
CONCRETE SIDEWALK CONTROL JOINT
N.T.S.



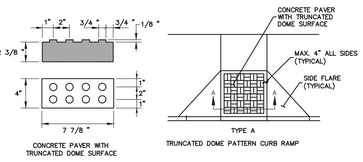
COLORS:
TEXT & BORDER – GREEN
BACKGROUND – WHITE
SYMBOL – WHITE ON BLUE BACKGROUND

NOTE:
1. ALL SIGN HARDWARE H. D. GALV.
2. USE VAN ACCESSIBLE SIGN ON VAN ACCESSIBLE SPACES ONLY

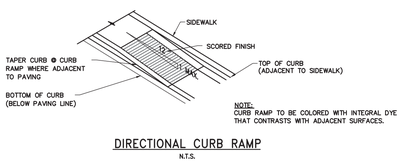
HANDICAPPED PARKING SIGN
N.T.S.



ACCESSIBLE PARKING LAYOUT
N.T.S.

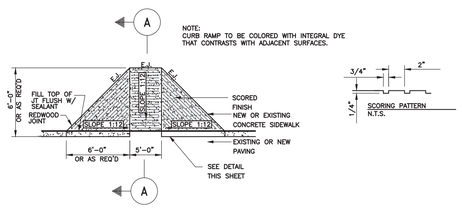


WHEEL CHAIR RAMP WITH TRUNCATED DOME PAVERS
NTS

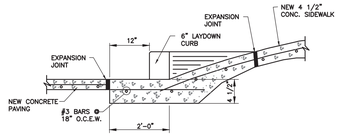


NOTE:
CURB RAMP TO BE COLORED WITH INTEGRAL DYE THAT CONTRASTS WITH ADJACENT SURFACES.

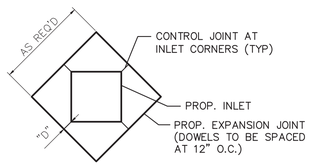
DIRECTIONAL CURB RAMP
N.T.S.



WHEEL CHAIR RAMP
NTS

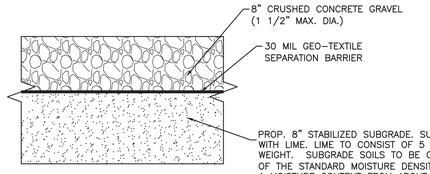


WHEEL CHAIR RAMP CROSS-SECTION "A-A"
N.T.S.



D = 24" FOR MANHOLES & GRATE INLETS
D = 12" FOR AREA INLETS & AREA DRAINS

EXPANSION JOINT AT GRATE INLET
N.T.S.



CRUSHED GRAVEL PAVEMENT DETAIL
N.T.S.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
PAVING DETAILS

SHEET NO.
C7.01

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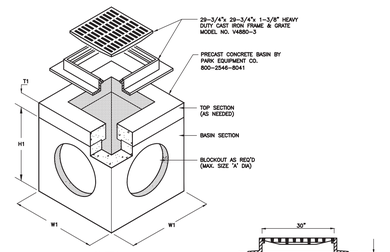
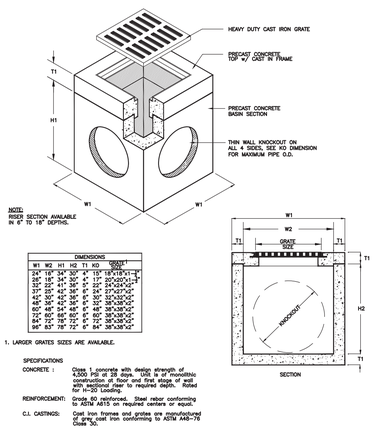


DIMENSIONS						
W1	W2	H1	H2	T1	K.O.	GRATE SIZE
42"	30"	36"	30"	6"	30"	30"x30"
48"	36"	42"	36"	6"	36"	30"x30"
60"	48"	54"	48"	6"	48"	30"x30"
72"	60"	66"	60"	6"	60"	30"x30"
84"	72"	78"	72"	6"	72"	30"x30"
96"	83"	78"	72"	6"	84"	30"x30"

SPECIFICATIONS
CONCRETE : Class II concrete with design strength of 4,500 PSI at 28 days. Use in all monolithic construction at floor and first stage of wall with sectional riser to required depth. Rated for H-20 Loading.
REINFORCEMENT: Grade 60 reinforced with steel rebar to conform to ASTM A615 on required centers or equal.
C.I. CASTINGS: Cast Iron frames and grates are manufactured of grey cast iron conforming to ASTM A48-76 Class 30.

GRATE INLET IN PAVEMENT
N.T.S.

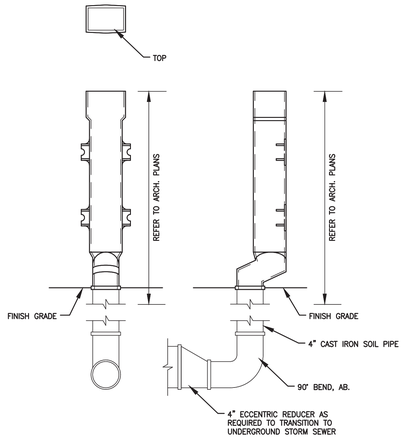


DIMENSIONS						
W1	W2	H1	H2	T1	KO	GRATE SIZE
24"	16"	24"	30"	4"	18"	18"x18"x1-4"
28"	18"	24"	30"	4"	17"	20"x20"x1-4"
33"	22"	41"	36"	6"	22"	24"x24"x2"
37"	25"	41"	36"	6"	25"	24"x24"x2"
42"	30"	42"	36"	6"	30"	30"x30"x2"
48"	36"	42"	36"	6"	32"	36"x36"x2"
60"	48"	54"	48"	6"	45"	48"x48"x2"
72"	60"	66"	60"	6"	60"	60"x60"x2"
84"	72"	78"	72"	6"	72"	72"x72"x2"
96"	83"	78"	72"	6"	84"	36"x36"x2"

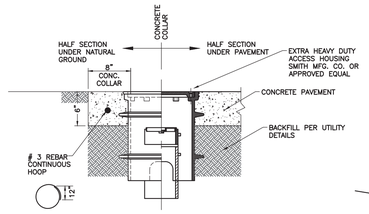
1. LARGER GRATES SIZES ARE AVAILABLE.

SPECIFICATIONS
CONCRETE : Class I concrete with design strength of 4,500 PSI at 28 days. Use in all monolithic construction at floor and first stage of wall with sectional riser to required depth. Rated for H-20 Loading.
REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.
C.I. CASTINGS: Cast Iron frames and grates are manufactured of grey cast iron conforming to ASTM A48-76 Class 30.

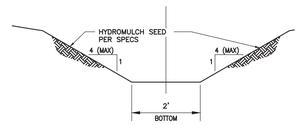
GRATE INLET IN GRASS/LANDSCAPED AREAS
N.T.S.



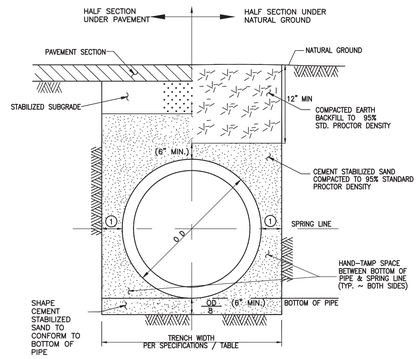
DOWNSPOUT DRAIN W/ OFFSET



STORM SEWER CLEANOUT
N.T.S.



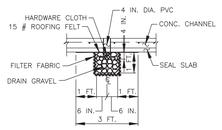
TYPICAL SWALE
N.T.S.



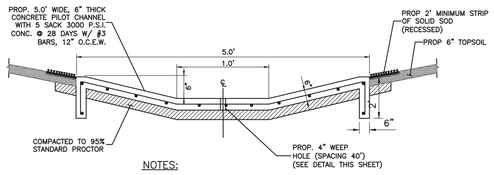
RECOMMENDED MINIMUM TRENCH WIDTHS
① 4" THRU 24" PIPE DIA. = 12" MIN. WIDTH.
30" AND GREATER PIPE DIA. = 18" MIN. WIDTH.

NOTES:
1. WHERE SOIL CONDITIONS REQUIRE, THE ENGINEER MAY ORDER USE OF GRANULAR MATERIAL IN LIEU OF CEMENT STABILIZED SAND BEDDING.
2. WHERE WET SAND IS ENCOUNTERED, REINFORCED CONCRETE PIPE SEWERS SHALL BE CONSTRUCTED USING APPROVED SPECIAL DESIGN AS SHOWN ON DRAWINGS.
3. MAX TRENCH WIDTH SHALL NOT BE GREATER THAN MIN. TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
4. CEMENT-SAND BACKFILL SHALL CONSIST OF NOT LESS THAN 1.5 SACKS OF CEMENT PER TON OF SAND WITH SUFFICIENT WATER TO HYDRATE THE CEMENT. THE MATERIAL SHALL BE PLACED IN LIFTS 8 INCHES THICK MAXIMUM AND COMPACTED TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE TO THE BOTTOM OF THE PAVEMENT SUBGRADE.
5. ALL BEDDING AND BACKFILL SHALL BE INCLUDED IN THE COST OF THE PIPE.

BEDDING FOR STORM SEWER
N.T.S.

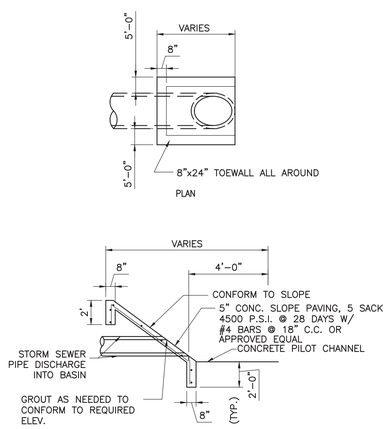


PILOT CHANNEL WEEP HOLE



NOTES:
1. PROVIDE REDWOOD EXPANSION JOINTS EVERY 40'.

PILOT CHANNEL
N.T.S.



SLOPE PAVING DETAIL
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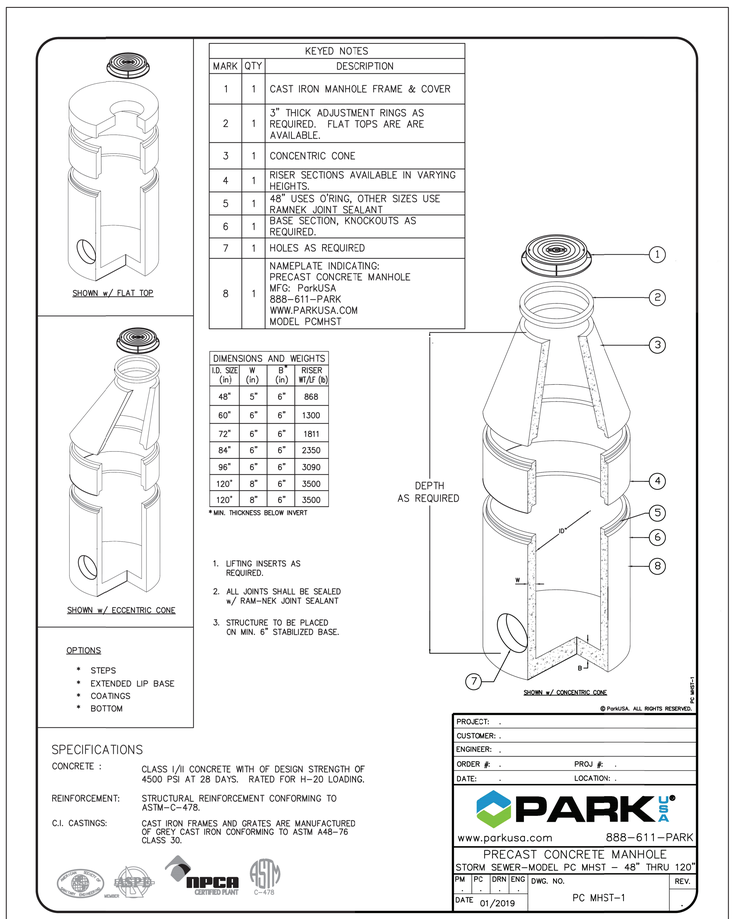

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F-24281
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
STORM SEWER DETAILS

SHEET NO.
C7.02

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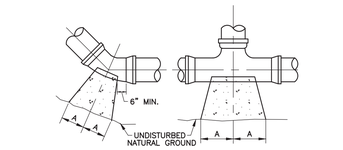
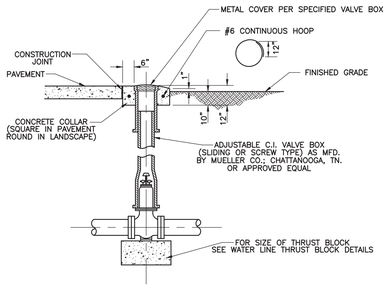


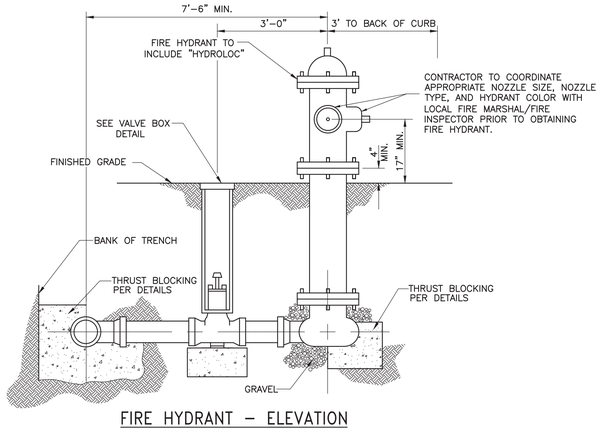
SIZE	90° BEND		45° BEND		22 1/2° BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	A	B
2 1/2"	12"	7"	6"	7"	6"	6"	7"	8"	8"	14"
6"	16"	10"	9"	10"	6"	12"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

ALL CONCRETE SHALL BE MIN. 5SK, 3,000 P.S.I.

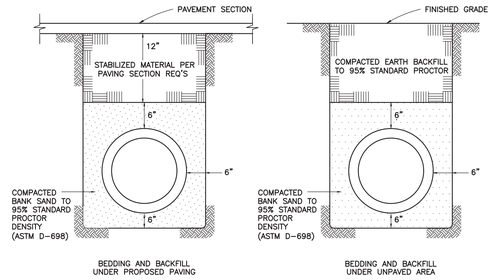
WATER LINE THRUST BLOCK
N.T.S.



VALVE BOX
N.T.S.



FIRE HYDRANT - ELEVATION
N.T.S.



WATER LINE TRENCH
N.T.S.

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STATE OF TEXAS
BRIAN W. REED
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LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

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Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
WATER LINE DETAILS

SHEET NO.
C7.03

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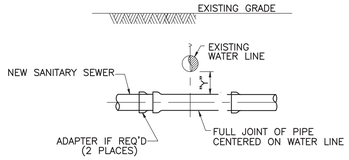
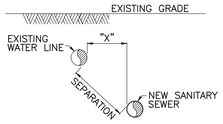


INSTALLATION REQUIREMENTS
1. IF "Y" IS GREATER THAN 6" AND "Y" IS LESS THAN 2', USE MINIMUM 18 FT JOINT OF PRESSURE-RATED PIPE PER TABLE 02730-04.
2. IF "Y" IS GREATER THAN 2' AND "Y" IS LESS THAN 9', USE GRAVITY SEWER PIPE IN CEMENT-STABILIZED SAND EMBEDMENT.
3. IF "Y" IS GREATER THAN 9', USE STANDARD EMBEDMENT AND NORMAL JOINT SPACING.

NEW SANITARY SEWER CROSSING EXISTING WATER LINE



INSTALLATION REQUIREMENTS
1. IF "X" IS LESS THAN 9' AND SEPARATION IS LESS THAN 9', USE PRESSURE-RATED PIPE MH TO MH. "X" MUST BE AT LEAST 4 FT.
2. IF "X" IS GREATER THAN OR EQUAL TO 4' AND SEPARATION IS 9' OR GREATER, USE STANDARD PIPE AND EMBEDMENT.

NEW SANITARY SEWER PARALLEL TO EXISTING WATER LINE

NOTES:

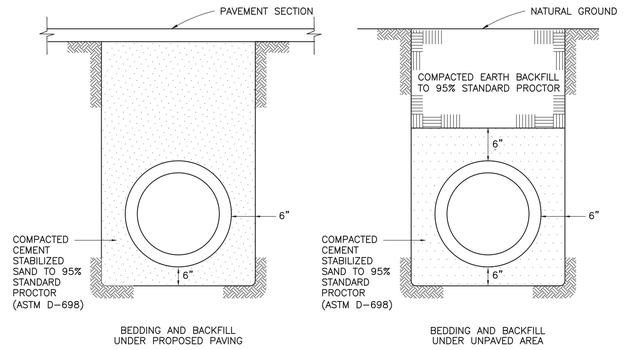
1. SANITARY SEWER MUST BE BELOW WATER LINE WHEREVER POSSIBLE. WHEN WATERLINE IS BELOW THE SANITARY SEWER PROVIDE MINIMUM 2 FT SEPARATION AND INSTALL PIPE SAME AS FOR SEWER BELOW WATER.
2. WHEN PRESSURE-RATED PIPE IS REQUIRED, PROVIDE PIPE WITH MINIMUM 150 psi PRESSURE RATING.
3. ADAPTERS MUST BE FACTORY MOLDED OR FABRICATED, WITH RING STIFFNESS AT LEAST EQUAL TO THE ADJOINING SANITARY SEWER PIPE, AND USING RESILIENT GASKET OR SEAL MATERIAL. FLEXIBLE RUBBER "BOOT" TYPE ADAPTERS WILL NOT BE ACCEPTED.
4. INSTALL FORCE MAINS SAME AS FOR GRAVITY SEWER, USING SPECIFIED PRESSURE PIPE.
5. "Y" MUST ALWAYS BE GREATER THAN OR EQUAL 6".
6. "X" MUST BE GREATER THAN OR EQUAL TO 4 FT.
7. ALTERNATIVES MAY BE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.
8. SEPARATION REQUIREMENTS SHOWN HERE DO NOT APPLY TO SERVICE CONNECTIONS - REFER TO PLUMBING CODE FOR APPLICABLE REQUIREMENTS.
9. CEMENT-STABILIZED SAND SHALL BE 1½ SACKS OF CEMENT PER CUBIC YARD OF SAND.

TABLE 02730-04
SEWER LINE CROSSING BELOW WATER LINE WITHIN 2 FT SEPARATION

GRAVITY SANITARY SEWER PIPE SIZE	PRESSURE-RATED PIPE SIZE & TYPE (NOTE 2)	ADAPTERS REQUIRED
6" TO 12" (ASTM D-3034)	SAME SIZE ASTM D-2241, SDR 26	ASTM D-3034 TO D-2665 (SEWER TO D.W.V.) ADAPTER COUPLING
15" (ASTM D-3034)	14" LINED DUCTILE IRON OR AWWA C-905, DR-25	NONE REQUIRED
18" AND 24"	SAME SIZE AWWA C-905, PRESSURE-RATED FRP, OR LINED DUCTILE IRON, MANHOLE TO MANHOLE	NONE REQUIRED
21" AND 27"	PRESSURE PIPE NOT AVAILABLE. SEE CASING ALTERNATIVE	NOT APPLICABLE
30" AND LARGER	SAME SIZE PRESSURE-RATED FRP OR LINED DUCTILE IRON, MANHOLE TO MANHOLE	NOT APPLICABLE
CASING ALTERNATIVE: ANY SIZE AND TYPE	INSTALL AS CASING PIPE MIN 18 FT JOINT OF PRESSURE PIPE AT LEAST 2 NOMINAL SIZES LARGER THAN SAN. SEWER CARRIER PIPE. GROUT ANNULAR SPACE WITH TUNNEL GROUT	NOT APPLICABLE

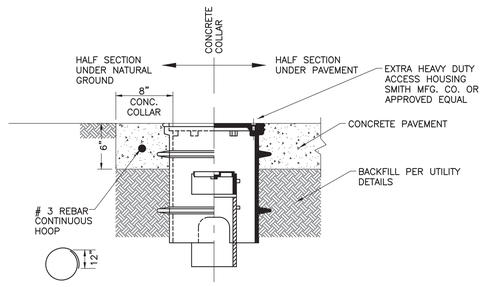
INSTALLATION OF SANITARY SEWER LINES CROSSING OR PARALLEL TO WATER LINES

N.T.S.



SANITARY SEWER TRENCH

N.T.S.



SANITARY SEWER CLEANOUT

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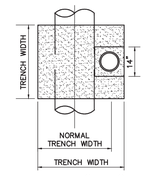

SECTION "A-A"

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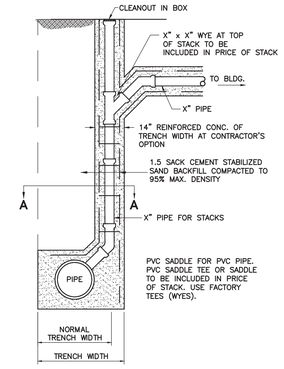
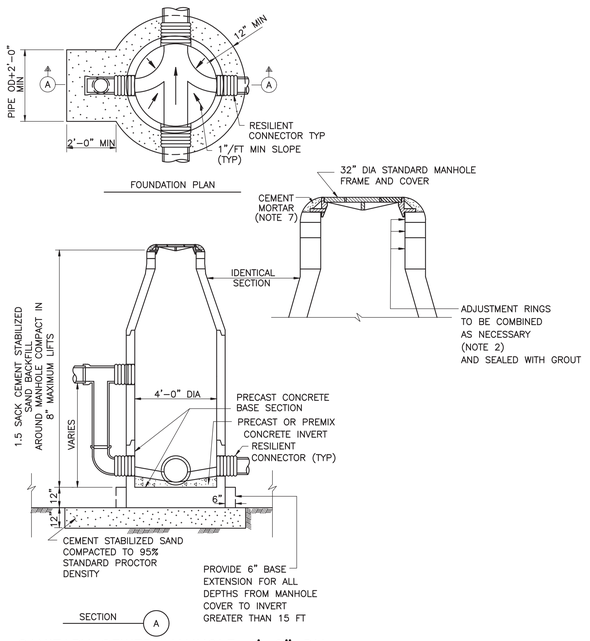


SANITARY SEWER STACK FOR BUILDING CONNECTIONS

N.T.S.

NOTES:

1. DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
2. PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
3. MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS. MIN THICKNESS 5".
4. MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR ON DRAWINGS OR WHEN DIFFERENCE IN FLOW LINE ELEVATIONS OF MANHOLE EXCEEDS 24".
5. SEAT MANHOLE FRAME IN SEALANT.
6. ECCENTRIC PRECAST CONCRETE MANHOLE MAY BE USED.
7. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
8. MIN REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 8" EW.
9. INTERIOR SURFACE OF MANHOLE SHALL BE SEALED WITH THANE COAT OR APPROVED EQUAL AS PER MANUFACTURERS SPECIFICATIONS.



SANITARY SEWER MANHOLE 4'-0" DIA

N.T.S.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
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STATE OF TEXAS
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PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
SANITARY SEWER DETAILS

SHEET NO.
C7.04

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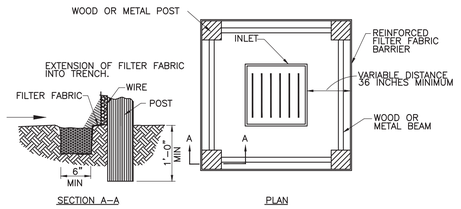
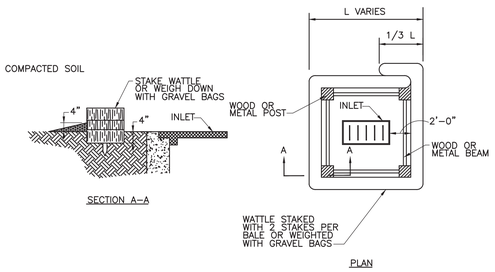


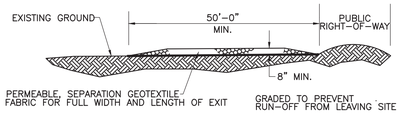
SEE REINFORCED FILTER FABRIC BARRIER DETAIL
FOR REINFORCED FILTER FABRIC BARRIER REQUIREMENTS

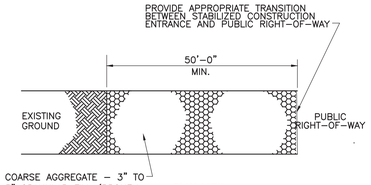


NOTE:
TYPICALLY STRAW BALES ARE NOT RECOMMENDED FOR INLET PROTECTION BARRIERS.

INLET PROTECTION BARRIERS FOR STAGE I INLETS

IPB
SYMBOL





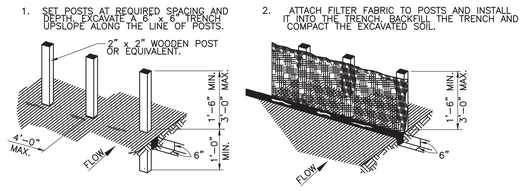
GENERAL NOTES:

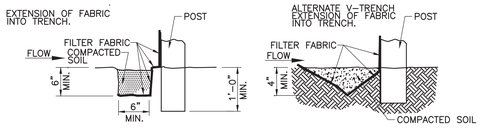
1. MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
2. CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
3. UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
4. WHEN SHOWN ON THE CONSTRUCTION DRAWINGS, WIDEN OR LENGTHEN STABILIZED AREA TO ACCOMMODATE A TRUCK WASHING AREA. PROVIDE OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING AREA.
5. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
6. PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
7. ALTERNATIVE METHODS OF CONSTRUCTION INCLUDE
   –CEMENT STABILIZED SOIL: COMPACTED CEMENT STABILIZED SOIL, LIMESTONE AGGREGATE, OR OTHER FILL MATERIAL IN AN APPLICATION OF THICKNESS OF 8 INCHES.
   –WOOD MATS: OAK OR OTHER HARDWOOD TIMBERS PLACED EDGE TO EDGE AND ACROSS SUPPORT WOODEN BEAMS WHICH ARE PLACED ON TOP OF EXISTING SOIL IN AN APPLICATION THICKNESS OF 6 INCHES.
   –STEEL MATS: PERFORATED MATS PLACED ACROSS PERPENDICULAR SUPPORT MEMBERS.

STABILIZED CONSTRUCTION ACCESS

SC

1. SET POSTS AT REQUIRED SPACING AND DEPTH. EXCAVATE A 6" x 6" TRENCH UPSLOPE ALONG THE LINE OF POSTS.
2. ATTACH FILTER FABRIC TO POSTS AND INSTALL IT INTO THE TRENCH. BACKFILL THE TRENCH AND COMPACT THE EXCAVATED SOIL.



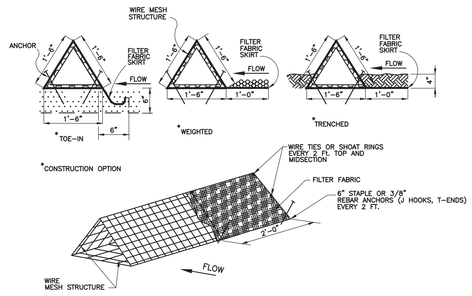


GENERAL NOTES:

1. SET POSTS AT 4–FEET MAXIMUM SPACING. IF FACTORY PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAXIMUM.
2. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT THE POST, FOLD TOGETHER, AND ATTACH TO THE POSTS.
3. REMOVE SEDIMENT DEPOSITS WHEN SILT DEPTH REACHES ONE–THIRD OF THE HEIGHT OF THE FENCE.

FILTER FABRIC FENCE

FF
SYMBOL

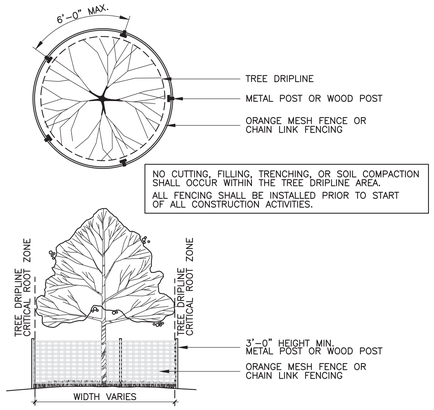


GENERAL NOTES:

1. PLACE BARRIER IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BARRIER.
2. USING ONE CONTINUOUS SECTION OF FILTER FABRIC, WRAP FABRIC AROUND WIRE MESH AND EXTEND FABRIC TO FORM SKIRT ON THE UPSTREAM SIDE.
3. WEIGHT SKIRT WITH A CONTINUOUS LAYER OF 3–INCH TO 5–INCH OPEN GRADED ROCK, OR TOE IN SKIRT WITH SIX INCHES WITH MECHANICALLY COMPACTED MATERIAL.
4. SECURELY ANCHOR BARRIER AND SKIRT IN PLACE USING 6–INCH WIRE STAPLES ON 2–FOOT CENTERS ON BOTH EDGES, OR STAKE USING 18–INCH BY 3/8 INCH REBARS (T–ENDS, J–HOOKS).
5. FILTER FABRIC SHALL BE LAPPED OVER ENDS 6 INCHES TO COVER SEGMENT JOINTS. FASTEN JOINTS WITH GALVANIZED SHOAT RINGS OR EQUIVALENT.
6. THE BARRIER STRUCTURE SHALL BE WELDED WIRE MESH, 18 INCHES ON EACH SIDE.

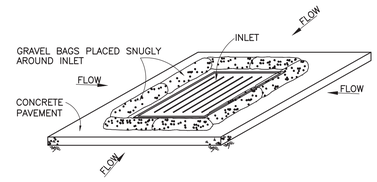
TRIANGULAR FILTER FABRIC FENCE

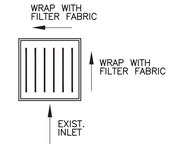
TFF
SYMBOL

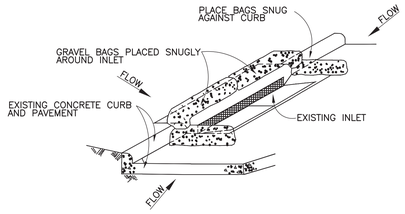


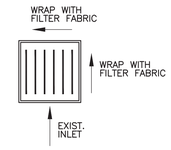
NO CUTTING, FILLING, TRENCHING, OR SOIL COMPACTION SHALL OCCUR WITHIN THE TREE DRIPLINE AREA.
ALL FENCING SHALL BE INSTALLED PRIOR TO START OF ALL CONSTRUCTION ACTIVITIES.

TREE PROTECTION DETAIL









GENERAL NOTES:

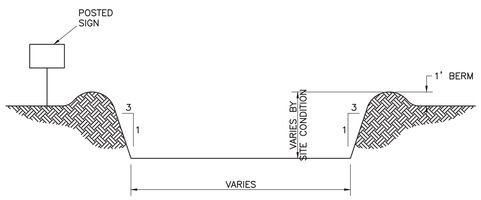
1. GRAVEL BAGS OR WATTLES CAN BE USED FOR THIS APPLICATION.
2. PROVIDE WOVEN OR UNWOVEN GEOTEXTILE FILTER FABRIC FOR BAGS.
3. PROVIDE GRAVEL FOR BAGS.
4. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE–THIRD THE HEIGHT OF THE BARRIER.

INLET PROTECTION BARRIERS FOR STAGE II INLETS

IPB
STAGE II
SYMBOL

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETION AND SUBMISSION OF ALL APPLICABLE STATE AND FEDERAL FORMS REQUIRED FOR STORM WATER POLLUTION PREVENTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION, IMPLEMENTATION, MAINTENANCE, AND INSPECTION OF STORM WATER POLLUTION PREVENTION CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, EROSION AND SEDIMENT CONTROLS, STORM WATER MANAGEMENT PLANS, WASTE COLLECTION AND DISPOSAL, OFF–SITE VEHICLE TRACKING, AND OTHER PRACTICES.
2. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL ADDITIONAL STORM WATER POLLUTION PREVENTION AND STORM WATER CONTROL MEASURES AND SUBMITTALS TO ALL GOVERNING AGENCIES INCLUDING THE EPA REQUIRED DURING CONSTRUCTION TO MEET THE GUIDELINES SET FORTH IN THE STORM WATER MANAGEMENT HANDBOOK FOR CONSTRUCTION ACTIVITIES PREPARED BY THE CITY OF HOUSTON, HARRIS COUNTY AND HARRIS COUNTY FLOOD CONTROL DISTRICT, LATEST EDITION.



SECTION A–A
N.T.S.

GENERAL NOTES:

1. POST A SIGN READING "CONCRETE WASH OUT PIT" NEXT TO THE PIT.
2. VERBALLY INSTRUCT THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASH OUT THEIR TRUCKS IN THE PIT AND NOWHERE ELSE.
3. UPON THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASH OUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN–SITU CONDITIONS, OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.
4. CONCRETE WASH OUT PITS SHALL NOT BE LOCATED DIRECTLY ADJACENT TO, NOR AT ANY TIME DRAIN INTO THE STORM SEWER SYSTEM OR ANY OTHER SWALE, DITCH, OR WATERWAY.
5. CONSTRUCT ENTRY ROAD AND BOTTOM OF WASH OUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS AND EQUIPMENT.

CONCRETE TRUCK WASH OUT AREA

CTW

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NEW CANEY ISD
NEW CANEY, TEXAS

TALON ENGINEERING, LLC
F–24281

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director BWR	Drawn By BWR,JDK
Designer BWR	Quality Control BWR,JDK
Project Engineer BWR	

PROJECT NO.
23-155.00

SHEET TITLE
STORM WATER POLLUTION PREVENTION DETAILS

SHEET NO.
C7.05

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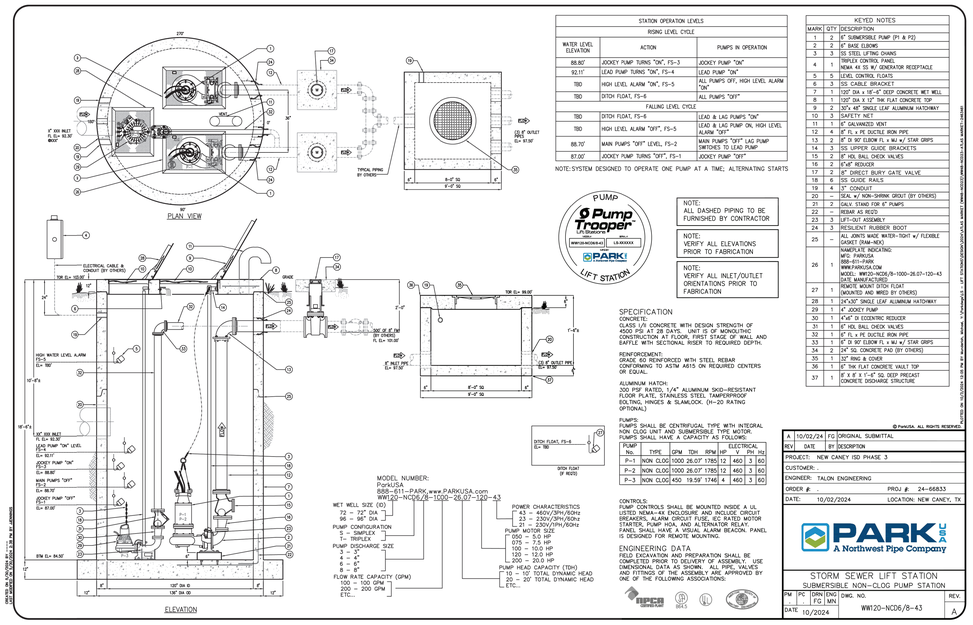

STATION OPERATION LEVELS		
RISING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMPS IN OPERATION
88.80'	JOCKEY PUMP TURNS "ON", FS–3	JOCKEY PUMP "ON"
92.11'	LEAD PUMP TURNS "ON", FS–4	LEAD PUMP "ON"
TBD	HIGH LEVEL ALARM "ON", FS–5	ALL PUMPS OFF, HIGH LEVEL ALARM "ON"
TBD	DITCH FLOAT, FS–6	ALL PUMPS "OFF"
FALLING LEVEL CYCLE		
TBD	DITCH FLOAT, FS–6	LEAD & LAG PUMPS "ON"
TBD	HIGH LEVEL ALARM "OFF", FS–5	LEAD & LAG PUMP ON, HIGH LEVEL ALARM "OFF"
88.70'	MAIN PUMPS "OFF" LEVEL, FS–2	MAIN PUMPS "OFF" LAG PUMP SWITCHES TO LEAD PUMP
87.00'	JOCKEY PUMP TURNS "OFF", FS–1	JOCKEY PUMP "OFF"

NOTE: SYSTEM DESIGNED TO OPERATE ONE PUMP AT A TIME; ALTERNATING STARTS

NOTE: ALL DASHED PIPING TO BE FURNISHED BY CONTRACTOR

NOTE: VERIFY ALL ELEVATIONS PRIOR TO FABRICATION

NOTE: VERIFY ALL INLET/OUTLET ORIENTATIONS PRIOR TO FABRICATION

SPECIFICATION

CONCRETE:
CLASS 1/3 CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR, FIRST STAGE OF WALL AND BAFFLE WITH SECTIONAL RISER TO REQUIRED DEPTH.

REINFORCEMENT:
GRADE 60 REINFORCED WITH STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

ALUMINUM HATCH:
300 PSF RATED, 1/4" ALUMINUM SKID–RESISTANT FLOOR PLATE, STAINLESS STEEL TAMPERPROOF BOLTING, HINGES & SLAMLOCK. (H–20 RATING OPTIONAL)

PUMPS:
PUMPS SHALL BE CENTRIFUGAL TYPE WITH INTEGRAL NON CLOG UNIT AND SUBMERSIBLE TYPE MOTOR. PUMPS SHALL HAVE A CAPACITY AS FOLLOWS:

PUMP No.	TYPE	GPM	TDH	RPM	ELECTRICAL HP	V	PH	Hz
P–1	NON CLOG	1000	26.07	1785	12	460	3	60
P–2	NON CLOG	1000	26.07	1785	12	460	3	60
P–3	NON CLOG	450	19.59	1746	4	460	3	60

CONTROLS:
PUMP CONTROLS SHALL BE MOUNTED INSIDE A UL LISTED NEMA–4X ENCLOSURE AND INCLUDE CIRCUIT BREAKERS, ALARM CIRCUIT FUSE, IEC RATED MOTOR STARTERS, PUMP HOA, AND ALTERNATOR RELAY. PANEL SHALL HAVE A VISUAL ALARM BEACON. PANEL IS DESIGNED FOR REMOTE MOUNTING.

KEYED NOTES		
MARK	QTY	DESCRIPTION
1	2	6" SUBMERSIBLE PUMP (P1 & P2)
2	2	6" BASE ELBOWS
3	3	SS STEEL LIFTING CHAINS
4	1	TRIPLEX CONTROL PANEL NEMA 4X SS W/ GENERATOR RECEPTACLE
5	5	LEVEL CONTROL FLOATS
6	3	SS CABLE BRACKET
7	1	120" DIA x 18'–4" DEEP CONCRETE WET WELL
8	1	120" DIA X 12" THK FLAT CONCRETE TOP
9	2	30"x 48" SINGLE LEAF ALUMINUM HATCHWAY
10	3	SAFETY NET
11	1	6" GALVANIZED VENT
12	4	6" FL x FL DUCTILE IRON PIPE
13	2	6" DI 90° ELBOW FL x MJ w/ STAR GRIPS
14	3	SS UPPER GUIDE BRACKETS
15	2	8" HDL BALL CHECK VALVES
16	2	8"x6" REDUCER
17	2	8" DIRECT BURY GATE VALVE
18	6	SS GUIDE RAILS
19	4	3" CONDUIT
20	--	SEAL w/ NON–SHRINK GROUT (BY OTHERS)
21	2	GALV. STAND FOR 6" PUMPS
22	--	REBAR AS REQ'D
23	3	S/FI–DUT ASSEMBLY
24	3	RESILIENT RUBBER BOOT
25	--	ALL JOINTS MADE WATER–TIGHT w/ FLEXIBLE GASKET (RAM–NEK)
26	1	NAMEPLATE INDICATING: MFG: PARKUSA (888–611–PARK WWW.PARKUSA.COM MODEL: WW20–NCD6/8–1000–26.07–120–43 DATE MANUFACTURED
27	1	REMOTE MOUNT DITCH FLOAT (MOUNTED AND WIRED BY OTHERS)
28	1	24"x30" SINGLE LEAF ALUMINUM HATCHWAY
29	1	4" JOCKEY PUMP
30	1	4"x4" DI ECCENTRIC REDUCER
31	1	6" HDL BALL CHECK VALVES
32	1	6" FL x FE DUCTILE IRON PIPE
33	1	6" DI 90° ELBOW FL x MJ w/ STAR GRIPS
34	2	24" SQ. CONCRETE PAD (BY OTHERS)
35	1	120" RING & COVER
36	1	6" THK FLAT CONCRETE VAULT TOP
37	1	6' x 6' x 1'–4" SQ. DEEP PRECAST CONCRETE DISCHARGE STRUCTURE

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REV	DATE	BY	DESCRIPTION
A	10/02/24	FG	ORIGINAL SUBMITTAL

CUSTOMER:
ENGINEER: TALON ENGINEERING
ORDER #: PROJ #: 24–6683
DATE: 10/02/2024 LOCATION: NEW CANEY, TX

PARK USA A Northwest Pipe Company

STORM SEWER LIFT STATION
SUBMERSIBLE NON–CLOG PUMP STATION

PM	PC	DRN	CHK	DWG. NO.	REV.
		FG	MN	WW120–NCD6/8–43	A
DATE: 10/2024					

CONTACT WILL DORAN AT PARK EQUIPMENT
WDORAN@PARKUSA.COM
(713) 849–7108

GRUNDFOS

SUBMITTAL

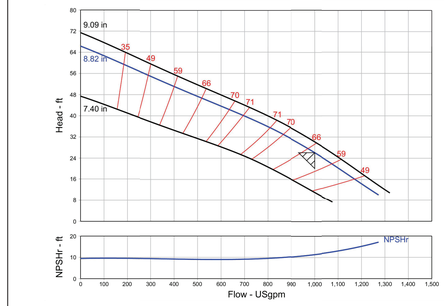
Grundfos Series SE Sewage Pump with Open S-Tube Impeller

QUOTE NUMBER / ID	2240687	UNIT TAG	001
		SERVICE	
REPRESENTATIVE		SUBMITTED BY	
ENGINEER		APPROVED BY	
CONTRACTOR		ORDER #	
		QUANTITY	1

SE.A60.120.4.52H.C.EX.61R.A.Z
1785 rpm

Part Number 99960550 Ref. Only

Conditions of Service		Pump Data		Motor Data	
Flow	1,000.0 USgpm	Impeller Diameter	8.82 in	Motor HP	12 HP
Head	26.07 ft	Cooling Jacket	YES	BHP	10.22 HP
Liquid	Cold Water	Efficiency	64.39 %	Enclosure	Explosion Proof
Temperature	68.00 deg F	Suction	6 in.	Voltage	460 V
NPSHr	11.37 ft	Discharge	6 in.	Phase	3 Phase
Viscosity	1.00 cP			Cycle	60
Specific Gravity	1.000 SG			Full Load Amps	16
				Locked Rotor Amps	192
				Nema Code Ltr	L



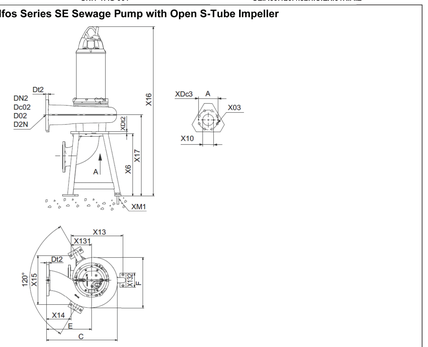
GRUNDFOS

GRUNDFOS

SUBMITTAL

QUOTE NUMBER / ID 2240687 | UNIT TAG 001 | SE.A60.120.4.52H.C.EX.61R.A.Z

Grundfos Series SE Sewage Pump with Open S-Tube Impeller



Units	C	E	F	X1	X2	X5	X6	X4	X13	X14	X15	X16	X17	X131	X132	XDt1	XDt2	DI2	Dc02	DD2	DDN	XDc3	XI23
inches	22.00	13.80	16.70	45.60	4.10	13.80	24.40	9.80	17.70	7.90	20.50	70.00	28.50	5.90	4.70	0.90	0.90	1.10	9.50	1.10	8.30	9.40	0.90

NOT FOR CONSTRUCTION, unless certified and referenced on order

GRUNDFOS

GRUNDFOS

SUBMITTAL

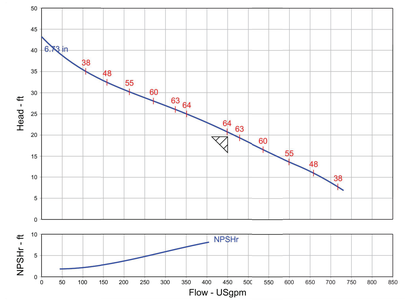
Grundfos Series SL/SLV Sewage Pump with S-tube®/SuperVortex Impeller

QUOTE NUMBER / ID	2240687	UNIT TAG	001
		SERVICE	
REPRESENTATIVE		SUBMITTED BY	
ENGINEER		APPROVED BY	
CONTRACTOR		ORDER #	
		QUANTITY	1

SL1.30.A40.40.EX.4.61R.C
1746 rpm

Part Number 99030131

Conditions of Service		Pump Data		Motor Data	
Flow	450.0 USgpm	Impeller Diameter	6.73 in	Motor HP	4 HP
Head	19.59 ft	Cooling Jacket	NO	BHP	3.67 HP
Liquid	Cold Water	Max Solid Size	3.15	Enclosure	Explosion Proof
Temperature	68.00 deg F	Efficiency	63.97 %	Voltage	460 V
NPSHr	8.88 ft	Suction	4 in.	Phase	3 Phase
Viscosity	1.00 cP	Discharge	4 in.	Cycle	60
Specific Gravity	1.000 SG			Full Load Amps	6.45
				Locked Rotor Amps	50
				Nema Code Ltr	J



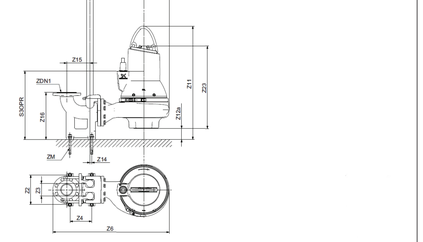
GRUNDFOS

GRUNDFOS

SUBMITTAL

QUOTE NUMBER / ID 2240687 | UNIT TAG 001 | SL1.30.A40.40.EX.4.61R.C

Grundfos Series SL/SLV Sewage Pump with S-tube®/SuperVortex Impeller



Units	Z2	Z3	Z4	Z6	Z7	Z8	Z9	Z10	Z11	Z12a	Z15	Z16	ZDN1	ZM	Z23 EX	S3OPR EX
inches	10.20	4.30	8.70	37.30	28.50	21.10	4.30	2.30	33.50	4.90	8.70	16.30	ANSI 4"	4 X M16	16.30	21.90

NOT FOR CONSTRUCTION, unless certified and referenced on order

GRUNDFOS

VLK | ARCHITECTS

ARCHITECT
VLK Architects, Inc.
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Main Phone: 281.671.2300
www.vlkarchitects.com

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Talon Engineering, LLC
1118 Wolfs Knoll
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www.taloncivil.com

NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS PHASE III

TALON ENGINEERING, LLC
F–24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
BWR	BWR,JDK
Designer	Quality Control
BWR	BWR,JDK
Project Engineer	
BWR	

PROJECT NO.
23-155.00

SHEET TITLE
STORM WATER PUMP STATION DETAILS

SHEET NO.
C7.06

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GENERAL NOTES:

A. GENERAL

1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES. THE CODES LISTED SHALL INCLUDE ALL AMENDMENTS AND ADDENDA IN FORCE AT THE DATE OF THE CONTRACT DOCUMENTS.

   2018 EDITION OF THE INTERNATIONAL BUILDING CODE.

2. WHERE CONFLICT EXISTS AMONG THE VARIOUS PARTS OF THE STRUCTURAL AND ARCHITECTURAL CONTRACT DOCUMENTS THE STRICTEST REQUIREMENTS SHALL GOVERN.

3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE JOB SITE AND REPORT ANY DISCREPANCIES OR INCONSISTENCIES FROM ASSUMED CONDITIONS TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.

4. DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT THEY ARE CUT AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ENGINEER.

5. DO NOT SCALE THE DRAWINGS.

6. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.

7. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO HYDROSTATIC, EARTH, WIND OR SEISMIC FORCES, AND CONSTRUCTION EQUIPMENT. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

9. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.

10. PERIODIC SITE OBSERVATION BY THE ENGINEER IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.

11. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN THE STRUCTURAL MEMBERS.

12. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER.

13. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

14. SEE THE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:

    SIZE AND LOCATION OF DOOR AND WINDOW OPENINGS,
    SIZE AND LOCATION OF INTERIOR AND EXTERIOR NON-LOAD BEARING PARTITIONS, SIZE AND LOCATION OF CONCRETE CURBS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHAMFERS, GROOVES, INSERTS, ETC., SIZE AND LOCATION OF FLOOR AND ROOF OPENINGS, FLOOR AND ROOF FINISHES,
    STAIR FRAMING AND DETAILS, DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, CEILING AND EXTERIOR WALL ASSEMBLIES.

15. SEE THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:

    PIPES, SLEEVES, HANGERS, TRENCHES, WALL, FLOOR AND ROOF OPENINGS, DUCT PENETRATIONS, ETC., EXCEPT AS SHOWN OR NOTED OTHERWISE ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS, CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL, OR PLUMBING FIXTURES, SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES AND ANCHOR BOLTS FOR MOUNTS.

B. DESIGN CRITERIA

1. DEAD LOAD MATERIALS ASSUMED IN THE DESIGN ARE SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

2. AN ALLOWANCE OF 15 PSF HAS BEEN MADE FOR PARTITIONS AS A UNIFORMLY DISTRIBUTED LIVE LOAD, WHEREVER PARTITIONS ARE USED AND LOCATION SUBJECT TO CHANGE INCLUDING PUBLIC LOBBIES, CORRIDORS, RESTROOMS, AND PLACES OF PUBLIC ASSEMBLY.

3. LIVE LOADS:

LOCATION	UNIFORM LOAD	CONCENTRATED LOAD
ROOF	20 PSF REDUCIBLE	300 LBS
STAIRS AND EXITS	100 PSF REDUCIBLE	300 LBS
TYPICAL FLOOR	100 PSF REDUCIBLE	
GROUND FLR, COMMON AREAS	100 PSF REDUCIBLE	
HANDRAILS AND GUARDRAILS	50 PLF OR 200 LBS APPLIED AT TOP RAIL IN ANY DIRECTION. 50 LBS IN ANY DIRECTION APPLIED AT INTERMEDIATE RAILS.	
GRAB BARS		250 LBS ANY DIRECTION

4. WIND LOADS

ULTIMATE WIND SPEED	138 MPH (3-SEC GUST)
NOMINAL WIND SPEED	107 MPH (3-SEC GUST)
RISK CATEGORY	III
EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFF.	+/- 0.18
COMPONENTS & CLADDING	SEE S1.02

5. HANDRAILS, GUARDRAILS AND GRAB BARS (INCLUDING ATTACHMENT TO STRUCTURE) SHALL BE DESIGNED BY THE FABRICATOR FOR THE LOADS INDICATED IN THE REFERENCED BUILDING CODE. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF WHERE THE PROJECT IS LOCATED, REPRESENTING THE FABRICATOR.

6. STAIRS SHALL BE DESIGNED BY THE STEEL FABRICATOR FOR CODE REQUIRED LOADS. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF WHERE THE PROJECT IS LOCATED, REPRESENTING THE FABRICATOR.

C. FOUNDATION

1. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING GEOTECHNICAL REPORT (AND ANY ADDENDA) PREPARED BY THE FOLLOWING COMPANY:

   COMPANY: HTS, INC. CONSULTANTS
   REPORT NO. 24-S3300
   DATED AUGUST 8, 2024

   ALL RECOMMENDATIONS THEREIN THAT RELATE TO THE WORK SHOWN ON THESE DRAWINGS SHALL BE FOLLOWED.

2. THE FOUNDATION SYSTEM IS DESIGNED BASED ON THE FOLLOWING
   STRAIGHT-SIDED DRILLED SHAFTS (AT FOOTBALL FIELD-PEMB BUIDLING)
   AXIAL CAPACITIES PER APPENDIX E OF ABOVEMENTIONED REPORT
   SPREAD/STRIP FOOTING (AT FIELD HOUSE, BLEACHES, PEMB STORAGE BUILDING)
   SUSTAINED LOAD 1600 PSF

3. THE GENERAL CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER OR OTHER AUTHORIZED INSPECTOR FOR REVIEW OF FOUNDATION BEARING SURFACE, INSPECTION OF FOUNDATION INSTALLATION, AND PLACEMENT OF REINFORCING STEEL. THE CONTRACTOR SHALL NOT PLACE CONCRETE WITHOUT INSPECTOR'S APPROVAL.

4. THE CONTRACTOR SHALL NOTIFY THE AUTHORIZED INSPECTOR 48 HOURS IN ADVANCE OF ANY MAJOR FOUNDATION POUR.

5. FORM EXPOSED FACES OF GRADE BEAMS.

6. GRADE BEAM BOTTOM STEEL SHALL BE CHAIRED AT 5 FOOT MAXIMUM CENTERS USING BEAM BOLSTERS PROVIDING 3 INCH BOTTOM COVER TO REINFORCING STEEL. BEAM BOLSTERS (NO BRICKS/CONCRETE) USED SHALL BE INTENDED FOR SUPPORT ON SOIL.

7. BOTTOM BARS OF GRADE BEAM SHALL BE SPLICED (WHERE REQUIRED) AT THE PIERS ONLY. TOP BARS SHALL BE SPLICED (WHERE REQUIRED) AT THE MIDSPAN OF THE GRADE BEAMS. LAP LENGTH SHALL BE TENSION LAP SPLICE UNLESS SPECIFIED OTHERWISE. PROVIDE CORNER BARS TO MATCH TOP AND BOTTOM STEEL.

8. ALL REINFORCING STEEL FOR SLABS SHALL BE CHAIRED WITH SLAB BOLSTERS FOR SUPPORT ON SOIL AT 4'-0" MAXIMUM CENTERS EACH WAY FOR REINFORCING FOR SLABS. DEPTH OF CHAIRS SHALL PROVIDE COVER TO REINFORCING AS NOTED ON PLANS/DETAILS.

9. SLAB ON GRADE CONSTRUCTION SHALL FOLLOW THE RECOMMENDATIONS OF GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION ACI 302.1R. PROVIDE (3) #3 X 4'-0" TOP AND BOTTOM AT ALL SLAB ON GRADE RE-ENTRANT CORNERS.

10. SUBGRADE PREPARATION SHALL CONFORM TO THE SOILS REPORT NOTED ABOVE. IF REPORT DOES NOT SPECIFY THE AMOUNT OF SELECT FILL, PROVIDE FILL AS REQUIRED ABOVE TO REDUCE PVR TO 1 INCH.

11. VAPOR RETARDER SHALL HAVE NO MORE THAN 0.01 PERMS AS TESTED BEFORE AND AFTER MANDATORY CONDITIONING (ASTM E 1745 SECTION 7.1 AND SUB-PARAGRAPHS 7.1.2-6). MEET OR EXCEED THE REQUIREMENTS OF ASTM E 1745 CLASS A AND BE NO LESS THAN 15 MILS THICK.

12. ALL VAPOR RETARDER SEAMS SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND TAPED WITH MANUFACTURER'S TAPE. ALL PENETRATIONS, BLOCK-OUTS, AND OPENINGS SHALL BE SEALED USING A COMBINATION OF THE VAPOR RETARDER, MASTIC AND MANUFACTURER'S TAPE.

13. ONCE FINAL OVEREXCAVATION HAVE BEEN ACHIEVED, INCLUDING OVEREXCAVATION OF THE EXISTING SOIL TO THE DEPTH REQUIRED TO PLACE THE RECOMMENDED THICKNESS OF SELECT FILL, THE EXPOSED SUBGRADE SHALL BE OBSERVED BY THE TESTING LAB. THE EXPOSED SUBGRADE SHALL BE CAREFULLY PROOFROLLED WITH HEAVY EQUIPMENTS. WEAK AREAS DETECTED DURING PROOFROLLING AND ZONES CONTAINING ORGANIC MATTER AND/OR DEBRIS SHALL BE REMOVED AND REPLACED WITH SOILS EXHIBITING SIMILAR CHARACTERISTICS OF ADJACENT IN-SITU SOILS.

14. SUBSEQUENT TO PROOFROLLING AND JUST PRIOR TO PLACEMENT OF FILL, THE EXPOSED SUBGRADE WITHIN THE CONSTRUCTION AREA SHALL BE EVALUATED FOR MOISTURE AND DENSITY.

15. STRUCTURAL FILL BENEATH THE BUILDING AREA SHALL CONSIST OF A CLAYEY SAND OR INACTIVE LEAN CLAY THAT EXHIBITS RELATIVELY LOW PLASTICITY INDICES AND VERY LOW TO LOW EXPANSIVE POTENTIAL. SELECT, ENGINEERED FILL SHOULD HAVE A LIQUID LIMIT LESS THAN 35 AND A PLASTICITY INDEX BETWEEN 8 AND 20. STRUCTURAL FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING EIGHT INCHES IN THICKNESS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN -2 TO +2% OF THE OPTIMUM VALUE.

16. THE CONTRACTOR SHALL ENSURE THE SELECT FILL MATERIAL IS PROPERLY MIXED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER AND TESTING LABORATOR.

17. VERIFICATION OF PI SAMPLES ARE TO BE TAKEN OF EVERY LIFT OF STRUCTURAL FILL PLACED TO ENSURE FILL CONSISTANCY.

18. DETERMINATION OF SOIL COMPACTION AND CONCRETE TESTING. SUBMIT RESULTS TO ARCHITECT.

19. THE GROUNDWATER LEVELS MAY FLUCTUATE SEASONALLY AND WITH CLIMATIC CHANGES. SEEPAGE OF GROUNDWATER INTO THE EXCAVATIONS IS POSSIBLE AND SEEPAGE FROM "PERCHED" WATER TRAPPED IN THE SOILS MAY ALSO OCCUR. THE CONTRACTOR SHALL MAKE PROVISIONS FOR DEWATERING THE FOOTING EXCAVATION IF GROUNDWATER IS ENCOUNTERED.

20. CONCRETE SHALL BE PLACED AS SOON AS POSSIBLE AFTER THE FOOTING EXCAVATIONS ARE COMPLETED TO REDUCE THE POTENTIAL FOR WATER SEEPAGE AND TO MINIMIZE THE DISTURBANCE TO THE BEARING AREA. IN NO CASE, SHOULD AN EXCAVATION BE LEFT OPEN OVERNIGHT

21. THE BEARING STRATUM OF EACH SPREAD FOOTING AND ALL STRIP FOOTINGS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR OTHER AUTHORIZED INSPECTOR PRIOR TO POURING OF CONCRETE.

22. PROVIDE AND INSTALL 1/8 INCH STEEL TEMPLATES TO ACCURATELY SET ANCHOR BOLTS FOR STEEL COLUMNS.

23. FOOTINGS SHALL BE NEAT EXCAVATED WHERE POSSIBLE WITH SIDES AND TOP EDGES FREE OF LOOSE OR WET MATERIALS. WHERE NEAT EXCAVATION IS NOT POSSIBLE, FOOTING EXCAVATION SHALL BE OPEN CUT WITH EDGES FORMED AND BRACED. ALL FOOTINGS WITH FORMED EDGES SHALL BE BACKFILLED FROM BOTTOM TO TOP OF FOOTING WITH LEAN CONCRETE OR CEMENT STABILIZED SAND. THE BOTTOM EXCAVATION SHALL BE CLEAN AND DRY WITH ALL LOOSE MATERIAL REMOVED FOR AN ESSENTIALLY FLAT BEARING SURFACE. EXCAVATIONS SHALL NOT BE LEFT OVERNIGHT UNLESS A 2 INCH UNREINFORCED SEAL (MUD) SLAB IS PLACED AT THE BOTTOM OF THE FOOTING EXCAVATION. WHERE SOFT OR UNSUITABLE BEARING SURFACES ARE ENCOUNTERED, THE AREA SHALL BE UNDERCUT AS REQUIRED AND REPLACED WITH COMPACTED FILL, CEMENT STABILIZED SAND, OR CONCRETE AS DIRECTED BY THE GEOTECHNICAL ENGINEER. FILL MATERIAL, IF USED, SHALL BE COMPACTED IN 6 INCHES MAXIMUM LOOSE LIFTS TO A MINIMUM 95% OF STANDARD PROCTOR DENSITY (ASTM D 698) UNLESS SPECIFIED OTHERWISE BY THE GEOTECHNICAL ENGINEER.

24. THE BEARING STRATUM OF EACH DRILLED PIER SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR OTHER AUTHORIZED INSPECTOR PRIOR TO POURING OF CONCRETE.

25. THE BOTTOM ELEVATION OF PIERS IS SHOWN ON THE DRAWINGS FOR BID PURPOSES. THE ACTUAL REQUIRED BEARING ELEVATION MAY VARY AS REQUIRED TO PROVIDE PROPER CAPACITY AS DETERMINED BY THE GEOTECHNICAL ENGINEER. FOOTINGS SHALL BE POURED IMMEDIATELY AFTER EXCAVATION.

26. PROVIDE AND INSTALL 1/8 INCH STEEL TEMPLATES TO ACCURATELY SET VERTICAL PIER REINFORCING STEEL, AND ANCHOR BOLTS FOR STEEL COLUMNS.

27. THE PRESENCE OF SAND SEAMS AND SLICKENSIDES IN THE LAYERS MAY CAUSE SLOUGHING DURING PIER EXCAVATION. THIS MAY REQUIRE THE USE OF TEMPORARY STEEL CASING.

D. CONCRETE

1. ALL ASPECTS OF WORK RELATING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   CURRENT EDITION OF ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   CURRENT EDITION OF ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
   CRSI MANUAL OF STANDARD PRACTICE

2. STRUCTURAL CONCRETE 28-DAY COMPRESSIVE STRENGTHS AND TYPES ARE AS FOLLOWS:

LOCATION	STRENGTH	TYPE	AGGREGATE SIZE
FOOTINGS & PIERS	3000 PSI	NORMAL WT	1 1/2"
GRADE BEAMS	3000 PSI	NORMAL WT	1"
PLINTHS	3000 PSI	NORMAL WT	1"
SLAB-ON-GRADE	3000 PSI	NORMAL WT	1 1/2"
METAL DECK SLAB	3000 PSI	NORMAL WT	1"

3. THERE SHALL BE NO HORIZONTAL COLD JOINT IN ANY CONCRETE POUR.

4. ADMIXTURES USED SHALL BE COMPATIBLE WITH FLOOR TREATMENTS. FINISH APPLICATOR SHALL APPROVE ADMIXTURES AND CURING COMPOUNDS PRIOR TO USE.

5. CONCRETE FOR SLAB-ON-GRADE SHALL HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.45. ALL OTHER CONCRETE SHALL HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.50. ADJUST CONCRETE STRENGTH BEYOND MINIMUM SPECIFIED ABOVE TO MAINTAIN MAXIMUM WATER-CEMENT RATIO.

6. CONCRETE FOR SLAB-ON-GRADE AND METAL DECK SHALL BE PROPORTIONED FOR A MAXIMUM ALLOWABLE UNIT SHRINKAGE OF 0.04% (400 MICROSTATIONS) AT 28 DAYS OF DRYING. LENGTH CHANGE SHALL BE MEASURED IN ACCORDANCE WITH ASTM C157.

7. FLY ASH CONFORMING TO ASTM C618, MAY BE USED UNLESS NOTED OTHERWISE. THE MAXIMUM AMOUNT OF FLY ASH SHALL BE 25% OF THE TOTAL CEMENTITIOUS MATERIAL BY WEIGHT.

8. CONCRETE FORMS SHALL BE LAID OUT AND CONSTRUCTED TO PROVIDE THE SPECIFIED CAMBERS INDICATED ON THE STRUCTURAL DRAWINGS.

9. SUBMIT SHOP DRAWINGS TO ARCHITECT AND ENGINEER INDICATING LOCATIONS OF CONCRETE JOINTS TO REVIEW PRIOR TO PLACING CONCRETE. PLACE JOINTS AT LOCATIONS TO MINIMIZE THE EFFECTS OF SHRINKAGE AS WELL AS BEING PLACED AT POINTS OF LOW STRESS.

10. ROUGHEN CONCRETE SURFACES TO 1/4 INCH AMPLITUDE WHERE MASONRY WALLS INTERSECT CONCRETE OR WHERE NEW CONCRETE INTERFACES WITH EXISTING CONCRETE.

11. MECHANICAL PIPES AND ELECTRICAL CONDUITS WHICH PASS THROUGH SLAB-ON-GRADE, FRAMED CONCRETE FLOORS, AND WALLS DO NOT REQUIRE SLEEVES UNLESS NOTED OTHERWISE ON THE PROJECT SPECIFICATIONS, MECHANICAL OR ELECTRICAL DRAWINGS. IF SLEEVES ARE REQUIRED, INSTALL SLEEVES BEFORE PLACING CONCRETE. DO NOT CUT ANY REINFORCING WHICH MAY INTERFERE WITH SLEEVE PLACEMENT. CORING OPENINGS IN CONCRETE IS NOT PERMITTED. NOTIFY THE ARCHITECT AND ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. NO PIPES OR ELECTRICAL CONDUIT SHALL PASS THROUGH CONCRETE BEAMS OR COLUMNS UNLESS SPECIFICALLY DETAILED.

12. WITH THE EXCEPTION OF SLABS ON GRADE, THE OUTSIDE DIAMETER OF MECHANICAL PIPES WITHIN ELECTRICAL CONDUITS (OTHER THAN THOSE PASSING THROUGH) SHALL NOT EXCEED 1/3 OF THE SLAB THICKNESS AND SHALL BE CENTERED BETWEEN THE TOP AND BOTTOM REINFORCING UNLESS SPECIFICALLY DETAILED OTHERWISE. CONCENTRATIONS OF MECHANICAL PIPES AND/OR ELECTRICAL CONDUITS SHALL BE AVOIDED EXCEPT WHERE DETAILED OPENINGS ARE PROVIDED. CONDUIT AND PIPE SHALL BE SPACED AT 3" OR 3 DIAMETERS ON CENTER, WHICHEVER IS GREATER.

13. FOR SLABS ON GRADE NO PIPES OR CONDUITS SHALL BE PLACED WITHIN THE INDICATED SLAB THICKNESS AND SHALL BE LOCATED BELOW THE SLAB UNLESS SPECIFICALLY DETAILED OTHERWISE.

14. THE DESIGN, CONSTRUCTION, AND SAFETY OF ALL FORMWORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ALL FORMS, INCLUDING SHORES, FALSEWORK, BRACING, AND OTHER TEMPORARY SUPPORTS SHALL BE ENGINEERED TO SUPPORT ALL LOADS IMPOSED INCLUDING THE WET WEIGHT OF CONCRETE, CONSTRUCTION EQUIPMENT, LIVE LOADS, LATERAL LOADS DUE TO WIND AND WET CONCRETE IMBALANCE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DETERMINING WHEN TEMPORARY SUPPORTS, SHORES, BACKSHORES, AND OTHER BRACING MAY BE SAFELY REMOVED.

15. AT POLISHED OR STAINED CONCRETE, THE FLY ASH ALLOWANCE IN NOTE 7 DOES NOT APPLY. NO FLY ASH IS PERMITTED IN THESE MIXES. ADDITIONALLY, NO AIR ENTRAINMENT IS ALLOWED EITHER. MAX WATER CEMENT RATION SHALL BE 0.45 WET DURING IS REQUIRED AT POLISHED CONCRETE. USE ONE SOURECE FOR CEMENT, AGGREGATES, AND POZZOLANS THROUGHOUT THE PROJECT. DO NOT USE CALCIUM CHLORIDE-BASED ADMIXTURES. NON-CHLORIDE ADMIXTURES MAY BE USED. GENERAL CONTRACTOR SHALL PROTECT AREAS TO RECEIVE CONCRETE FINISH AT LL TIMES DURING CONSTRUCTION TO PREVENT OILS, DIRT, METAL, EXCESSIVE WATER AND OTHER POTENTIALLY DAMAGING MATERIALS FROM AFFECTING THE FINISHED CONCRETE SURFACE.

E. REINFORCING STEEL

1. ALL ASPECTS OF WORK RELATING TO THE REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   CURRENT EDITION OF ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE CRSI MANUAL OF STANDARD PRACTICE

2. DEFORMED BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60.

3. WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A185, YIELD STRENGTH 65,000 PSI. WELDED DEFORMED WIRE FABRIC FOR ASTM A497, YIELD STRENGTH 70,000 PSI. ALL WELDED WIRE FABRIC SHALL BE FURNISHED IN FLAT SHEETS ONLY. WHEREVER WELDED WIRE FABRIC IS SPECIFIED AS REINFORCEMENT, IT SHALL BE CONTINUOUS ACROSS THE ENTIRE CONCRETE SURFACE AND NOT INTERRUPTED BY BEAMS OR GIRDERS AND PROPERLY LAPPED ONE CROSS WIRE SPACING PLUS 2 INCHES.

4. MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE FULL MESH AND ONE HALF, WHICHEVER IS GREATER.

5. WELDING OF REINFORCING IS PERMITTED ONLY WHERE SHOWN ON THE DRAWINGS OR WHEN APPROVED BY THE ENGINEER OF RECORD. WELDING OF REINFORCING BARS SHALL BE WITH LOW HYDROGEN ELECTRODES IN ACCORDANCE WITH THE RECOMMENDED PRACTICES OF AWS D1.4.

6. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.

7. REINFORCING DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME NUMBER, SIZE, SPACING, AND GRADE AS THE SPECIFIED VERTICAL REINFORCING, UNO.

8. IN ADDITION TO ALL OF THE REINFORCING STEEL INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL PROVIDE FOR AN ALLOWANCE OF A NET TWO AND HALF TONS OF REINFORCING BARS TO BE FURNISHED, FABRICATED, AND PLACED DURING THE PROGRESSION OF WORK AS MAY BE DIRECTED BY THE ENGINEER OF RECORD.

9. CLEAR COVERAGE OF CONCRETE OVER REINFORCING BARS SHALL BE AS FOLLOWS:

LOCATION OF CONCRETE	MINIMUM COVER
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER	
#6 THROUGH #18 BAR	2"
#5 BAR AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH GROUND	
SLABS, WALLS, JOISTS	3/4"
BEAMS, COLUMNS (INCLUDING TIES)	1 1/2"
SLAB ON GRADE	SEE DETAILS

F. NON-SHRINK GROUT FOR BASE PLATES AND BEARING PLATES

1. GROUT FOR BASE PLATES AND BEARING PLATES SHALL BE A NON-METALLIC, SHRINKAGE RESISTANT, PREMIXED, NON-CORROSIVE, NON-STAINING PRODUCT CONTAINING PORTLAND CEMENT, SILICA SANDS, SHRINKAGE COMPENSATING AGENTS, AND FLUIDITY IMPROVING COMPOUNDS.

2. GROUT SHALL CONFORM TO CORPS OF ENGINEERS SPECIFICATION FOR NON-SHRINK GROUT, CE-CRD-C621. TWENTY-EIGHT DAY COMPRESSIVE STRENGTH AS DETERMINED BY GROUT CUBE TESTS, SHALL BE 5,000 PSI. MINIMUM THICKNESS OF GROUT UNDER ALL BASE PLATES AND BEARING PLATES SHALL BE 1 INCH, UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.

3. GROUT SHALL BE PLACED IN A FLUID FLOWABLE STATE UNDER BASE PLATES THAT HAVE A FORM BUILT AROUND THEM FOR GROUT CONFINEMENT. GROUT SHOULD BE CURED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

4. GROUT SHALL BE PLACED AND HARDENED PRIOR TO POURING ANY ELEVATED CONCRETE FLOORS SUPPORTED ON THE ASSOCIATED COLUMN.

5. BASE PLATES SHALL BE LOCATED USING LEVELING NUTS OR SHIMS. SHIMS SHALL BE STEEL OR A PLASTIC/COMPOSITE PRODUCT WITH COMPRESSIVE STRENGTH GREATER THAN OR EQUAL TO MINIMUM 28 DAY COMPRESSIVE STRENGTH OF THE GROUT.

6. LEVELING NUTS MAY NOT BE USED WHERE ANCHOR RODS ARE DIRECLTY EMBEDDED IN SPREAD FOOTINGS. LEVELING NUTS MAY BE USED WHEN ANCHOR RODS ARE EMBEDDED IN PLINTHS SUPPORTED BY SPREAD FOOTINGS OR PIERS.

7. G.C. TO COORDINATE REQUIRED GROUT THICKNESS WITH SUBCONTRACTORS. IF A DIFFERENT GROUT THICKNESS THAN SHOWN ON THE DETAILS IS DESIRED SUBMIT REQUEST FOR ALTERNATE THICKNESS TO EOR.

G. STRUCTURAL STEEL

1. ALL ASPECTS OF WORK RELATING TO THE DESIGN, FABRICATION, DETAILING, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   FIFTEENTH EDITION OF THE AISC STEEL CONSTRUCTION MANUAL LATEST EDITION OF THE ANSI/AWS D1.1

2. STRUCTURAL STEEL MATERIALS SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:

WIDE FLANGE	ASTM A992
CHANNELS	ASTM A992
ANGLES, PLATES, BARS	ASTM A572 GR 50
PIPES	ASTM A53 GR B
HSS (RECTANGULAR OR SQUARE)	ASTM A500 GR B (Fy = 46 KSI) OR GR C (Fy = 50 KSI)
HSS (ROUND)	ASTM A500 GR B (Fy = 42 KSI) OR GR C (Fy = 46 KSI)
ANCHOR RODS	ASTM F1554-36 U.N.O
HIGH STRENGTH BOLTS	ASTM F3125 GR A325 OR GR F1852 U.N.O.
HEADED STUD ANCHORS (HSA)	ASTM A108
DEFORMED BAR ANCHORS (DBA)	ASTM A496

3. THE DESIGN OF ALL STEEL CONNECTIONS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED, EMPLOYED BY THE FABRICATOR. CALCULATIONS SEALED BY THE FABRICATOR'S PROFESSIONAL ENGINEER MUST BE SUBMITTED IF REQUESTED.

4. STRUCTURAL STEEL NOT EXPOSED TO WEATHER SHALL BE LEFT UNPAINTED UNLESS NOTED OTHERWISE IN THE ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS.

5. IT IS THE INTENTION OF THE PLANS AND SPECIFICATIONS THAT SHOP CONNECTIONS BE WELDED OR BOLTED AND THAT FIELD CONNECTIONS BE BOLTED, UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

6. ALL TYPICAL BEAM SIMPLE CONNECTIONS SHALL BE STANDARD DOUBLE ANGLE OR SINGLE ANGLE FRAMED BEAM CONNECTIONS UNLESS NOTED OTHERWISE. SHEAR TAB CONNECTIONS MAY BE USED AT LOCATIONS WHERE DOUBLE ANGLE CONNECTIONS ARE NOT POSSIBLE. SEATED BEAM CONNECTIONS SHALL NOT BE USED UNLESS INDICATED ON THE DRAWINGS. PROVIDE FULL DEPTH SHEAR TAB IF BEAM FRAMES ON ONLY ONE SIDE OF A GIRDER.

7. DESIGN CONNECTIONS OF NON-COMPOSITE BEAMS TO SUPPORT A REACTION R (UNLESS SPECIFIED OTHERWISE) EQUAL TO ONE HALF THE TOTAL UNIFORM LOAD CAPACITY FROM THE TABLE OF UNIFORM LOAD CONSTANTS IN THE AISC MANUAL.

8. ADD TO THE REACTION LISTED ABOVE, ANY LOADS OR REACTIONS OF MEMBERS SUPPORTED BY THE BEAM WITHIN THREE FEET OF BEAM END AND THE VERTICAL COMPONENTS OF FORCES IN BRACE MEMBERS FRAMING INTO THE BEAMS.

9. BRACING CONNECTIONS SHALL DEVELOP FULL TENSILE FORCES AT EACH END OF THE BRACING MEMBER UNLESS BRACING FORCES ARE SPECIFIED ON THE DRAWINGS.

10. ALL WELDING SHALL COMPLY TO THE AMERICAN WELDING SOCIETY STANDARD (AWS D1.1). ALL WELDED JOINTS SHALL BE DETAILED AS INDICATED BY THE PREQUALIFIED JOINT DETAILS IN THE STRUCTURAL WELDING CODE. WELD LENGTHS CALLED FOR ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WELD SIZE SHALL BE AISC MINIMUM UNLESS A LARGER SIZE IS NOTED. ALL WELDS SHALL USE MINIMUM E70XX ELECTRODES.

11. ALL WELDING SHALL BE PERFORMED BY A WELDER CERTIFIED IN ACCORDANCE WITH THE AWS STANDARDS.

12. MISCELLANEOUS STEEL CONNECTIONS SHALL BE WELDED ALL AROUND WITH AISC MINIMUM FILLET WELD UNLESS A LARGER WELD IS SPECIFIED. STEEL MEMBERS CONTINUOUSLY ATTACHED SHALL BE STITCH WELDED TOGETHER WITH AISC MINIMUM 2" LONG FILLET WELD AT 12" O.C. UNLESS A LARGER WELD OR DIFF

ABBREVIATIONS

ABBR.	ABBREVIATION
A.F.F.	ABOVE FINISH FLOOR
ADDNL	ADDITIONAL
AHU	AIR HANDLING UNIT
ALT.	ALTERNATE
ANCH.	ANCHOR
A.B.	ANCHOR BOLT
A.R.	ANCHOR ROD
APPROX.	APPROXIMATELY
ARCH.	ARCHITECT(URAL)
BM.	BEAM
BRG.	BEARING
BTW	BETWEEN
BOT.	BOTTOM
B.F.B.	BOTTOM FLANGE BRACE
B.O.	BOTTOM OF
BRDG.	BRIDGING
BLDG	BUILDING
C	CAMBER
CANT.	CANTILEVER
C.I.P.	CAST IN PLACE
C/C	CENTER TO CENTER
CL	CENTERLINE
CH	CHANNEL
CLR.	CLEAR(ANCE)
CFMF	COLD FORMED METAL FRAMING
COL.	COLUMN
CJP	COMPLETE JOINT PENETRATION
CONC.	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONN.	CONNECTION
CONST.	CONSTRUCTION
C.J.	CONSTRUCTION / CONTRACTION JOINT
CONT.	CONTINUOUS
COORD.	COORDINATE
DL	DEAD LOAD
DBA	DEFORM BAR ANCHOR
D	DEPTH
DET.	DETAIL
DIA. or Ø	DIAMETER
DIM.	DIMENSION
DWL.	DOWEL
D.N.	DOWN
DWG.	DRAWING
EA.	EACH
E.F.	EACH FACE
E.W.	EACH WAY
EL.	ELEVATION
ELEV.	ELEVATOR
EMBED.	EMBEDMENT
ENGR.	ENGINEER
EOR	ENGINEER OF RECORD
EQ.	EQUAL
EQUIP.	EQUIPMENT
EQUIV.	EQUIVALENT
EXIST.	EXISTING
E.J.	EXPANSION JOINT
EXT.	EXTERIOR
f'c=	28 DAY CONCRETE STRENGTH
FAB.	FABRICATE
F.S.	FAR SIDE
F/N	FINISH/FINISHED
FLR	FLOOR
F.D.	FLOOR DRAIN
FTG.	FOOTING
Fy=	YIELD STRENGTH
GALV.	GALVANIZED
GA.	GAUGE
GEN	GENERAL
G.C.	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GR.	GRADE/GRADING
HGR.	HANGER
HSA	HEADED STUD ANCHOR
HI	HIGH
HSS	HOLLOW STRUCTURAL SECTION
HORIZ. OR (H)	HORIZONTAL
H	HORIZONTAL REACTION
IN	INCH
INFO.	INFORMATION
ID	INSIDE DIAMETER
I.F.	INSIDE FACE
INT.	INTERIOR
JT.	JOINT
JST.	JOIST
K	KIPS (1000 LBS)
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	ANGLE
Ld	DEVELOPMENT LENGTH
LWC	LIGHTWEIGHT CONCRETE
LL	LIVE LOAD
LLBB	LONG LEG BACK TO BACK
LLV	LONG LEG VERTICAL
LLH	LONG LGE HORIZONTAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LONG	LONGITUDINAL
LO	LOW
LBS	POUNDS
MFR. / MNFR.	MANUFACTURER
MAS.	MASONRY
MAX.	MAXIMUM

MECH.	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M	MOMENT
M.C.	MOMENT CONNECTION
N.S.	NEAR SIDE
NWC	NORMAL WEIGHT CONCRETE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO.	NUMBER
O.C.	ON CENTER(S)
OPNG.	OPENING
OPP.	OPPOSITE
OPH.	OPPOSITE HAND
OD	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OA	OVERALL
O.H.	OVERHEAD
OVS.	OVERSIZED HOLE
P	AXIAL LOAD
P.J.	PANEL JOINT
PAR.	PARALLEL
PRKG.	PARKING
PJP	PARTIAL JOINT PENETRATION
PVMT	PAVEMENT
PVG	PAVING
PERP.	PERPENDICULAR
PL.	PLATE
PLBG	PLUMBING
PT	POST-TENSION(ED)
PCF	POUNDS PER CUBIC FOOT/FEET
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT/FEET
PSI	POUNDS PER SQUARE INCH
P/C	PRECAST CONCRETE
PRELIM.	PRELIMINARY
P.L.	PROPERTY LINE
QTY	QUANTITY
R	RADIUS, REACTION, REMAINDER
REC.	RECESSED
RE:	REFER TO
REF.	REFERENCE
REINF.	REINFORCED / REINFORCING
REBAR	REINFORCING BAR
REQ'D	REQUIRED
REV.	REVISION
R.D.	ROOF DRAIN
RTU	ROOF TOP UNIT
SCHED.	SCHEDULE
SECT.	SECTION
SHT.	SHEET
SLBB	SHORT LEG BACK TO BACK
SIM.	SIMILAR
SC	SLIP CRITICAL, SHEAR CONNECTOR
SPA.	SPACING
SPEC.	SPECIFICATION
SQ.	SQUARE
SF.	SQUARE FOOT/FEET
STD	STANDARD
STL	STEEL
STIFF.	STIFFENER
STIR.	STIRRUP
STRUCT.	STRUCTURE/STRUCTURAL
TEMP.	TEMPERED
THK	THICK(NESS)
t	THICKNESS, TREAD
THD	THREADED
T.O.	TOP OF
T.O.C.	TOP OF CONCRETE
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PARAPET
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
V.I.F.	VERIFY IN FIELD
VERT. OR (V)	VERTICAL
WT.	WEIGHT
WWR	WELD WIRE REINF.
WF	WIDE FLANGE
W	WIDTH
WL	WIND LOAD
W.P.	WORK POINT
XXS	DOUBLE EXTRA STRONG
XS	EXTRA STRONG
&	AND
≈	APPROXIMATELY EQUAL
@	AT
°	DEGREE
=	EQUAL
≥	GREATER THAN *or* EQUAL
≤	LESS THAN *or* EQUAL
#	NUMBER or POUNDS
/	PER
±	PLUS or MINUS
Ø	ROUND/DIAMETER

SYMBOLS LEGEND

SYMBOLS	DESCRIPTION
N	NORTH ARROW
XX S-X.XX	ENLARGE FLOOR PLAN REFERENCE OR ENLARGE DETAIL REFERENCE
XX S-X.XX	DETAIL SECTION (STRUCTURAL)
XX/SX.XX	BRACING ELEVATION
11 5/8" 5"	DIMENSIONS
XX/S-X.XX XX/S-X.XX	MATCHLINE
1	REVISION NUMBER & AFFECTED AREA
LEVEL NAME 0' - 0"	VERTICAL ELEVATION
EX: 152' - 6"	EXISTING ELEVATION
152' - 6"	NEW ELEVATION
	M.C. OR MOMENT CONNECTION
	DEPRESSION
	PANEL WALL TAG
12/36	BELL DIAMETER (IN)
	BELLED PIER
	SHAFT DIAMETER (IN)
P1	PILE SHAFT
F3	FOOTING

STRUCTURAL SHEET INDEX

SHEET NUMBER	SHEET NAME	Current Revision
S1.01	GENERAL NOTES	
S1.02	GENERAL NOTES	
S1.03	3D CONCEPTUAL	
S2.00	FOUNDATION PLAN - OVERALL	
S2.11	FOUNDATION PLAN - FIELD HOUSE	
S2.12	FOUNDATION PLAN - FOOTBALL FIELD	
S2.13	FOUNDATION PLAN - STORAGE BUILDING	
S2.14	FOUNDATION AND FRAMING PLANS - PRESS BOX	
S2.15	FOUNDATION PLAN - BLEACHERS	
S2.21	ROOF FRAMING PLAN - FIELD HOUSE	
S3.01	TYPICAL FOUNDATION DETAILS	
S3.02	TYPICAL FOUNDATION DETAILS	
S3.03	TYPICAL FOUNDATION DETAILS	
S3.04	TYPICAL FOUNDATION DETAILS	
S3.11	TYPICAL SITE DETAILS	
S3.12	TYPICAL SITE DETAILS	
S3.21	TYP. ANCHOR BOLTS & BASE PLATE DETAILS	
S4.01	TYPICAL STEEL FRAMING DETAILS	
S4.02	TYPICAL STEEL FRAMING DETAILS	
S4.03	TYPICAL STEEL ROOF FRAMING DETAILS	
S4.04	TYPICAL STEEL FRAMING DETAILS	
S4.05	TYPICAL STEEL ROOF FRAMING DETAILS	
S4.06	TYPICAL STEEL ROOF FRAMING DETAILS	
S5.01	TYPICAL CMU WALL DETAILS	
S5.02	TYPICAL CMU WALL DETAILS	
S5.03	CMU BRACING AT STEEL DETAILS	

K. STEEL FLOOR DECK (NON-COMPOSITE METAL DECK)

1. THE DESIGN, FABRICATION, AND ERECTION OF ALL FLOOR DECK SHALL CONFORM TO THE STEEL DECK INSTITUTE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS AS PUBLISHED BY THE STEEL DECK INSTITUTE (SDI).
2. STEEL DECK SHALL BE MANUFACTURED FROM STEEL CONFORMING TO ASTM A 653-94, STRUCTURAL QUALITY GRADE 33 OR HIGHER (60 KSI FOR 0.6C, 1.0C, 1.3C, AND 1.5 C24). SHEET METAL ACCESSORIES SHALL CONFORM TO ASTM A653-94, STRUCTURAL QUALITY.
3. STEEL DECK SHALL BE GALVANIZED WITH A PROTECTIVE ZINC COATING CONFORMING TO ASTM A 653-94 G60 CLASS.
4. MINIMUM BEARING OF STEEL DECK ON SUPPORTS SHALL BE 2 INCHES. SHEETS SHALL BE ATTACHED TO ALL SUPPORTING STEEL MEMBERS BY WELDING AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. UPON COMPLETION OF ERECTION, ALL WELDS ON STEEL DECK AREAS EXPOSED TO WEATHER SHALL BE DE-SLAGGED, CLEANED AND TOUCHED-UP WITH A ZINC RICH PRIMER.
5. DECK ENDS SHALL BE BUTTED OVER SUPPORTS.
6. METAL DECK SPANS SHALL NOT EXCEED THE MAXIMUM CENTER TO CENTER SPANS AS REQUIRED BY SDI CRITERIA. WHERE POSSIBLE, ALL METAL DECK SHALL EXTEND OVER THREE OR MORE SUPPORTS. TWO SPAN DECK SHALL BE USED ONLY WHERE DECK LAYOUT DOES NOT PERMIT THE USE OF THREE SPANS. SINGLE SPAN DECK IS NOT PERMITTED. ALL DECK SHALL BE DESIGNED AS UNSHORED CONSTRUCTION UNLESS NOTED OTHERWISE.
7. THE USE OF ADMIXTURES IN CONCRETE CONTAINING CHLORIDE SALTS SHALL NOT BE PERMITTED FOR METAL DECK CONCRETE.
8. THE GENERAL CONTRACTOR SHALL INCLUDE IN HIS BID ADDITIONAL CONCRETE REQUIRED FOR METAL DECK SLABS TO ACCOUNT FOR DECK DEFLECTION.
9. WELDING WASHERS SHALL BE USED ON ALL DECK UNITS WITH METAL THICKNESS LESS THAN 0.028 INCHES THICK. WELDING WASHERS SHALL BE A MINIMUM THICKNESS OF 0.0568 INCHES AND HAVE A NOMINAL 3/8 INCH DIAMETER HOLE. WHERE WELDING WASHERS ARE NOT REQUIRED, WHERE WELDING WASHERS ARE NOT REQUIRED A NOMINAL 5/8 INCH DIAMETER PUDDLE WELD SHALL BE USED. WELD METAL SHALL PENETRATE ALL LAYERS OF DECK MATERIAL AT END LAPS AND SIDE JOINTS AND SHALL HAVE GOOD FUSION TO THE SUPPORTING MEMBERS.
10. OPENINGS LESS THAN 6 INCHES SQUARE OR DIAMETER REQUIRE NO REINFORCEMENT. OPENINGS 6 INCHES TO 10 INCHES INCLUSIVE SHALL BE REINFORCED WITH A 20 GAUGE GALVANIZED PLATE WELDED TO THE DECK AT EACH CORNER AND 6 INCH MAXIMUM CENTERS WITH 5/8 INCH DIAMETER PUDDLE WELD OR SHEET METAL SCREWS. OPENINGS OVER 10 INCHES WIDE OR DIAMETER SHALL BE REINFORCED WITH AN ANGLE 2 1/2 X 2 1/2 X 1/4 FRAMING EACH SIDE OF THE OPENING AND SPANNING BETWEEN SUPPORTS FOR SPANS 4 FEET BUT LESS THAN 6 FEET. LARGER OPENINGS SHALL BE REFERRED TO THE ENGINEER OR RECORD FOR FRAMING.
11. METAL DECK MANUFACTURER SHALL FURNISH SHEET METAL CLOSURES AT ALL SLAB EDGES, COLUMNS, WALLS, AND OPENINGS UNLESS STEEL ANGLES OR PLATES ARE SPECIFIED IN DETAILS ON THE DRAWINGS. SUCH CLOSURES SHALL BE MINIMUM 14 GAGE COLD FORMED STEEL WELDED TO EDGE SUPPORTS WITH 1 INCH LONG WELD AT 12" MAXIMUM CENTERS. PROVIDE 2" MINIMUM BEARING OVER STEEL SUPPORT. CLOSURES AND SUPPORT WELDS SHALL BE DESIGNED TO SUPPORT THE WET CONCRETE WEIGHT AND A 150 POUND CONCENTRATED LOAD ACTING AT THE SLAB EDGE WITHOUT EXCEEDING A STRESS OF 0.8 FY, AND THE WET CONCRETE WEIGHT ALONE WITHOUT EXCEEDING A STRESS OF 0.6 FY AND A DEFLECTION OF 3/4" MAXIMUM. PROVIDE SHEET METAL CLOSURES FOR OPEN ENDS OF PANELS WHERE DECK STOPS OR CHANGES DIRECTION.

L. OPEN WEB STEEL JOISTS AND JOIST GIRDERS

1. OPEN WEB STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED, MANUFACTURED, AND ERECTED PER THE CURRENT APPLICABLE ISSUE OF THE STANDARD SPECIFICATIONS FOR STEEL JOISTS (K SERIES), LONGSPAN STEEL JOISTS (LH SERIES), OR DEEP LONGSPAN JOISTS (DLH SERIES), OR SUPER LONGSPAN STEEL INSTITUTE AND AISC.
2. JOISTS AND JOIST GIRDERS SHALL BE CAMBERED FOR REALISTIC DEAD LOAD. PROVIDE STANDARD SJI CAMBER UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.
3. TOP CHORD OF JOISTS SHALL BE DOUBLE ANGLES OR TEES. PROVIDE TOP CHORD EXTENSIONS WHERE SHOWN ON THE DRAWINGS. JOISTS AND JOIST GIRDERS WITH BOTTOM CHORD EXTENSIONS SHALL NOT HAVE END CONNECTIONS MADE TO COLUMN STABILIZER PLATE.
4. PROVIDE FLAT BEARING FOR ALL JOISTS AND JOIST GIRDERS. PROVIDE SJI STANDARD DEPTH OF BEARING FOR ALL JOISTS AND JOIST GIRDERS. IF SUFFICIENT BEARING DOES NOT EXIST, STAGGER THE END OF EACH JOIST AND CENTER OF BEARING OVER THE CENTER OF SUPPORT. WHERE K SERIES JOISTS BEAR ON THE SAME BEAM AS LH AND DLH JOISTS, THE K SERIES JOIST SEATS SHALL MATCH THE DEPTH OF THE LH OR DLH JOIST SEATS.
5. COORDINATION OF ALL JOIST SEAT DEPTHS WITH STRUCTURAL STEEL ELEVATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND STEEL FABRICATOR.
6. JOISTS AND JOIST GIRDERS SHALL BE SHOP PAINTED PER ARCHITECTURAL SPECIFICATIONS.
7. ALL JOISTS SHALL CARRY THE DESIGN LOADS AS SPECIFIED IN THE SJI LOAD TABLES AS THE MINIMUM REQUIREMENT. ADDITIONALLY, THE JOISTS SHALL BE DESIGNED TO CARRY ANY OTHER LOAD TYPES AND PATTERNS INDICATED ON THE STRUCTURAL DRAWINGS. REFER TO THE STRUCTURAL DRAWINGS FOR ANY OTHER LOADS REQUIRED TO BE CARRIED BY ANY JOIST.
8. WHERE UPLIFT FORCES ARE A DESIGN CONSIDERATION, ROOF JOISTS SHALL BE ANCHORED TO RESIST SUCH FORCES. ROOF JOISTS SHALL BE DESIGNED FOR A NET UPLIFT PRESSURE IN TABLE ON S1.02 UNLESS NOTED OTHERWISE ON THE DRAWINGS.

M. PRE-ENGINEERED METAL BUILDING (PEMB)

1. ALL ROOF COMPONENTS INCLUDING PURLINS AND BUILDING FRAME SHALL BE DESIGNED BY METAL FRAME SUPPLIER. ALL OTHER STEEL MEMBERS SHALL BE DESIGNED BY THE METAL BUILDING SUPPLIER.
2. ALL DESIGNS SHALL CONFORM TO AISC, AISI AND MBMA STANDARDS (LATEST EDITION).
3. ALL ROOF DECK SYSTEMS SHALL CONFORM TO THE UL WIND-UPLIFT RATING OF CLASS 90.
4. ALL BUILDING FRAMES SHALL BE DESIGNED FOR A MAXIMUM HORIZONTAL DEFLECTION OF H/240 UNDER LATERAL LOADS (H = HEIGHT OF BUILDING FRAME).
5. GIRTS SUPPORTING BRICK/CMU SHALL BE DESIGNED FOR A MAXIMUM HORIZONTAL DEFLECTION OF L/600 (L = SPAN OF GIRT). MEMBERS SUPPORTING BRICK/CMU SHALL HAVE A VERTICAL DEFLECTION OF L/600.
6. ALL PURLINS SHALL BE DESIGNED FOR DEAD LOADS SHOWN ON ARCHITECTURAL DRAWINGS, INCLUDING MISCELLANEOUS FRAMING TO CARRY SUPERIMPOSED DEAD LOADS.
7. BUILDING FRAMES SHALL BE DESIGNED FOR THE LATERAL STABILITY OF THE BUILDING IN BOTH DIRECTIONS. EXAMINE THE CONSTRUCTION DOCUMENTS TO DETERMINE THE PREFERRED LOCATIONS OF LATERAL FRAMES. NO X-BRACES OR ROD BRACES ARE ALLOWED IN THE VERTICAL PLANE AT ANY LOCATIONS IN THESE DOCUMENTS.
8. FOUNDATION DESIGN IS BASED ON THE ROOF LOADINGS SPECIFIED BY THE MBMA AND ANY OTHER ADDITIONAL LOADS IMPOSED BY THE BUILDING USE. SUBMIT REACTIONS FROM METAL BUILDING FRAME (AT LEAST 6 WEEKS PRIOR TO THE POURING OF THE FOUNDATION) TO CONFIRM THE DESIGN OF FOOTINGS. GENERAL CONTRACTOR SHALL CONFIRM FOOTING SIZES WITH THE STRUCTURAL ENGINEER AFTER ACTUAL REACTIONS ARE RECEIVED FROM THE METAL BUILDING FRAME SUPPLIER. MODIFICATIONS TO FOUNDATION AND/OR DETAILS RESULTING FROM SUCH REVIEW SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS METAL BUILDING SUPPLIERS. NO ADDITIONAL COST PROPOSALS WILL BE ENTERTAINED.
9. SUBMIT SHOP DRAWINGS FOR BUILDING METAL BUILDING FRAMES, INCLUDING ALL CONNECTIONS. ALL SHOP DRAWINGS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
10. ALL WELDING SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF AWS.
11. THE FOUNDATION HAS BEEN DESIGNED ASSUMING THAT RIGID FRAMES ARE PINNED AT THE BASE. THE FOOTINGS HAVE NOT BEEN DESIGNED FOR MOMENTS DUE TO FIXITY AT THE BASE.
12. THE METAL BUILDING MANUFACTURER SHALL TAKE INTO ACCOUNT LATERAL LOADS FOR BRACING PERIMETER/INTERIOR WALLS. THE TOP OF ALL WALLS SHALL BE BRACED BY THE METAL BUILDING STRUCTURE. PROVIDE STEEL MEMBERS AS REQUIRED.
13. THE METAL BUILDING MANUFACTURER SHALL REVIEW ALL PLANS (ARCHITECTURAL, STRUCTURAL, MEP, ETC.) DETAILS AND SPECIFICATIONS AND MAKE PROVISIONS FOR THE SUPPORT OF ALL ELEMENTS DESIGNATED TO BE SUPPORTED OR BRACED BY THE STRUCTURE. INCLUDING ANY HANGING ELEMENTS FROM THE ROOF, PIPING, DUCTS, CLADDING/WALL SUPPORT, MEP ELEMENTS SUPPORT, ETC. SUCH WORK IS NOT IN MSE'S SCOPE OF WORK. ANY SUCH MISSING ELEMENTS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS METAL FRAMING SUPPLIER.
14. MATRIX STRUCTURAL ENGINEER'S SCOPE OF WORK IS STRICTLY FOR FOUNDATION DESIGN ONLY. ANY FRAMING SHOWN ON THESE PLANS ARE SCHEMATIC IN NATURE AND IS PROVIDED FOR THE CONVENIENCE OF THE METAL BUILDING MANUFACTURER. IF ADDITIONAL MOMENT FRAMES AND/OR BRACED BAYS ARE REQUIRED, PLEASE COORDINATE SUCH LOCATIONS WITH ARCHITECT. ANY WORK RELATED TO STRUCTURAL FRAMING (INCLUDING MEZZANINES, SECOND FLOOR, STAIRS, HANDRAILS, ETC., LATERAL BRACING OF WALLS AND OTHER COMPONENTS) IS IN THE SCOPE OF THE GENERAL CONTRACTOR AND THE METAL BUILDING SUPPLIER.
15. ALL ANCHOR BOLTS SHALL BE SUPPLIED BY THE BUILDING MANUFACTURER. THE MINIMUM EMBEDMENT DEPTH INTO CONCRETE SHALL BE 1' - 6" U.N.O.
16. PROVIDE (3) - #5 (WITH 5' - 0" LEGS) V SHAPED HAIRPIN BARS AT THE BASE OF ALL EXTERIOR COLUMNS, U.N.O.
17. ALL EXPOSED STEEL MEMBERS (INCLUDING CONNECTIONS AND ASSOCIATED ACCESSORIES) SHALL BE PRIMED AND PAINTED AS SPECIFIED BY THE ARCHITECTURE DRAWINGS AND SPECIFICATIONS
18. NO EXCLUSIONS FROM PROVIDING A TOTAL AND COMPLETE BUILDING FRAMING PACKAGE WILL BE ENTERTAINED.

N. SUBMITTALS

1. THE GENERAL CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:

   CONCRETE MIX DESIGNS
   REINFORCING STEEL
   STRUCTURAL STEEL (*.^)
   METAL DECK
   MISCELLANEOUS STEEL
   STEEL STAIR (*.^)
   PRE-ENGINEERED METAL BUILDING (*.#)
   LIGHT-GAUGE FRAMING (*.^)
   CONCRETE MASONRY (MATERIAL AND REBAR PLACEMENT PLANS)
   SLAB ON GRADE CONTRACTION JOINTS LAYOUT
   SPORTS LIGHTING FOUNDATIONS (*.^)
   PRE-MANUFACTURED CANOPY (*.^)
   PRE-MANUFACTURED BLEACHERS (*.^)

   ITEMS MARKED (*) SHALL HAVE SHOP DRAWINGS SEALED BY A REGISTERED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. ITEMS MARKED (#) SHALL BE SUBMITTED TO ENGINEER FOR OWNER'S RECORD ONLY AND WILL NOT HAVE ENGINEER'S SHOP DRAWING STAMP. ITEMS MARKED (^) SHALL HAVE SEALED STRUCTURAL CALCULATIONS SUBMITTED TO ENGINEER FOR OWNER'S RECORD.
2. ALL SHOP DRAWINGS MUST BE REVIEWED AND SEALED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.
3. CONTRACTOR SHALL SUBMIT ELECTRONIC COPIES (E.G. PDFS) OF ALL SHOP DRAWINGS SPECIFIED TO BE RETURNED BY THE ENGINEER.
4. THE OMISSION FROM THE SHOP DRAWINGS OF ANY MATERIAL REQUIRED BY THE CONTRACT DOCUMENTS TO BE FURNISHED SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING AND INSTALLING SUCH MATERIALS, REGARDLESS OF WHETHER THE SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED.
5. SUBMIT TWO COPIES OF MANUFACTURER'S LITERATURE FOR ALL MATERIALS AND PRODUCTS USED IN CONSTRUCTION ON THE PROJECT.
6. THE USE OF REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREIN.

N. SPECIAL INSPECTION

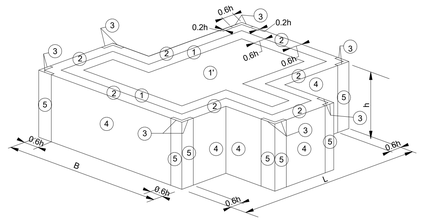
1. ALL ASPECTS OF WORK RELATING TO SPECIAL INSPECTION SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   2018 INTERNATIONAL BUILDING CODE (CHAPTER 17).
2. THE OWNER'S SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE ARCHITECT (OR ENGINEER) SHALL CALL A PRE-CONSTRUCTION MEETING WITH THE ARCHITECT, ENGINEER, BUILDING OFFICIAL, CONTRACTOR AND SPECIAL INSPECTORS TO REVIEW THE SPECIAL INSPECTION REQUIREMENTS.
4. DUTIES OF THE OWNER'S SPECIAL INSPECTOR INCLUDE (BUT ARE NOT LIMITED TO):
   A. ACKNOWLEDGE THE SPECIAL INSPECTION AND TESTING AGREEMENT PROVIDED BY THE LOCAL JURISDICTION.
   B. THE OWNER'S SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND TO THE BUILDING OFFICIAL.
   C. THE OWNER'S SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, ARCHITECT, REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, CONTRACTOR AND (OTHER DESIGNATED PARTIES), IN A TIMELY MANNER, AS ESTABLISHED AT THE PRE-CONSTRUCTION MEETING.
   D. THE OWNER'S SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE.
5. DUTIES OF THE CONTRACTOR INCLUDE (BUT ARE NOT LIMITED TO):
   A. NOTIFY THE SPECIAL INSPECTOR THAT THE WORK IS READY FOR INSPECTION AT LEAST 24 HOURS BEFORE SUCH INSPECTION.
   B. ALL WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT HAS BEEN OBSERVED AND INDICATED TO BE IN CONFORMANCE BY THE SPECIAL INSPECTOR AND APPROVED BY THE BUILDING OFFICIAL.
   C. PROVIDE THE SPECIAL INSPECTOR WITH ACCESS TO APPROVED CONSTRUCTION DOCUMENTS AT JOBSITE.
   D. MAINTAIN AT THE JOBSITE COPIES OF ALL REPORTS SUBMITTED BY THE SPECIAL INSPECTOR.
6. CONTINUOUS SPECIAL INSPECTION REFERS TO INSPECTIONS BY THE SPECIAL INSPECTOR WHO IS CONTINUOUSLY PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED.
7. PERIODIC SPECIAL INSPECTION REFERS TO INSPECTIONS BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.
8. SPECIAL INSPECTIONS AND TESTING SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK LISTED BELOW. SPECIAL INSPECTIONS AND TESTING SHALL FOLLOW THE REQUIREMENTS OF THE BUILDING AND MATERIAL CODE REFERENCES AND TABLES. IN THE EVENT OF A CONFLICT BETWEEN REFERENCES, THE OWNER'S SPECIAL INSPECTOR SHALL FOLLOW THE MORE STRINGENT REQUIREMENT.

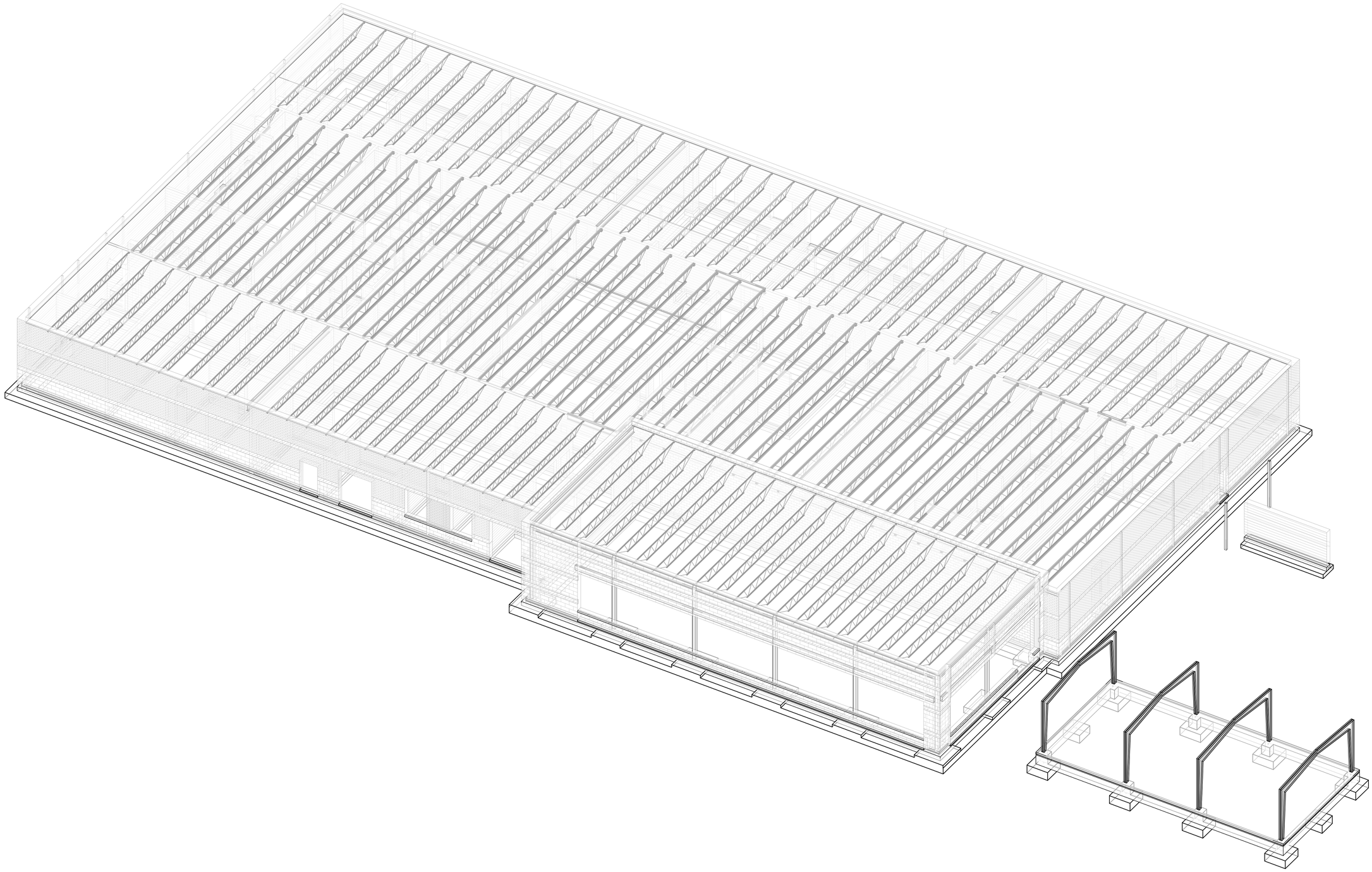
SOILS	IBC 1705.6 AND TABLE 1705.6, APPROVED GEOTECHNICAL REPORT AND CONSTRUCTION DOCUMENTS
CONCRETE	IBC 1705.3 AND TABLE 1705.3
CAST-IN-PLACE DEEP FOUNDATIONS	IBC 1705.8 AND TABLE 1705.8 APPROVED GEOTECHNICAL REPORT AND CONSTRUCTION DOCUMENTS
STEEL	IBC 1705.2 AND TABLE 1705.2.3 AND AISC 360 CHAPTER N AND SDI QA/QC DOCUMENT
SHOP FABRICATION	IBC 1704.2.5 (NOT REQUIRED IF FABRICATOR IS APPROVED IN ACCORDANCE WITH IBC 1704.2.5.1.)
MASONRY	IBC 1705.4, TMS 402/ACI 530/ASCE 5 SECTION 3.1 AND TABLE 3.1.2 TMS 602/ACI 530.1/ASCE 6 SECTION 1.6 AND TABLE 4
SPRAYED FIRE-RESISTANT MATERIALS	IBC 1705.14 AND CONSTRUCTION DOCUMENTS
EXPANSION/EPOXY ANCHORS	MANUFACTURER'S ICC REPORT

ROOF PRESSURE (GROSS)						
ZONE	0-10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	>100 SQ. FT.	>500 SQ. FT.	>1000 SQ. FT.
1'	+19,-43	+18,-43	+16,-43	+16,-29	+16,-23	+28,-35
1	+19,-74	+18,-69	+16,-63	+16,-47	+16,-47	+28,-57
2	+19,-98	+18,-92	+16,-83	+16,-62	+16,-62	+28,-72
3	+19,-133	+18,-121	+16,-104	+16,-62	+16,-62	+28,-72

WALL PRESSURE						
ZONE	0-10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	>100 SQ. FT.	>500 SQ. FT.	>1000 SQ. FT.
4	+43,-46	+41,-44	+38,-42	+36,-40	+32,-36	+32,-36
5	+43,-57	+41,-53	+38,-48	+36,-44	+32,-36	+32,-36



NOTES:
1. (0-10 SQ. FT.) EXAMPLE DENOTES EFFECTIVE WIND AREA.
2. + AND - SIGNS SIGNIFY PRESSURES ACTING TOWARD OR AWAY FROM THE SURFACES, RESPECTIVELY. ALL VALUES SHOWN ARE IN PSF.
3. WIND PRESSURE FOR EFFECTIVE WIND AREAS BETWEEN THE SPECIFIED RANGES MAY BE DETERMINED BY INTERPOLATION, OTHERWISE, USE THE VALUE ASSOCIATED WITH THE LOWER EFFECTIVE AREA.
4. h = EAVE HEIGHT.
5. ELEMENTS WITH TRIBUTARY AREAS GREATER THAN 700 SQ. FEET MAY BE DESIGNED USING MWFRS PROVISIONS.
6. VALUES SHOWN ARE BASED ON IBC 2018 / ASCE 7-16 WIND CALCULATIONS FOR COMPONENTS AND CLADDING AND ARE ULTIMATE VALUES (LRFD). VALUES SHOWN ARE FOR USE IN ASCE 7-16 LOAD COMBINATIONS SHOWN IN SECTION 2.3.1 (1.0W).
7. THE BUILDING LAYOUT SHOWN IS INTENDED TO BE SCHEMATIC, APPLY WIND PRESSURE PROVIDED SIMILARLY TO THE BUILDING(S) AT THIS PROJECT.
8. UNLESS OTHERWISE SPECIFIED, ROOF DEAD LOAD TO BE USED FOR NET UPLIFT CALCULATIONS SHALL NOT EXCEED 10 PSF. NET UPLIFT PRESSURE SHALL NOT BE LESS THAN 16



1 3D CONCEPTUAL
SCALE:

NOTE:
THIS 3D DIMENSIONAL VIEW IS PROVIDED AS A CONCEPTUAL SCHEMATIC ONLY. ACCORDINGLY, VARIOUS ITEMS, INCLUDING, BUT NOT LIMITED TO, MISC. STEEL, ROOF DECK, FLOOR DECKS, CONNECTION PLATES, AND REINFORCING MAY NOT BE SHOWN. REFER TO PLANS AND DETAILS FOR ALL MEMBER SIZES, LOCATIONS, DIMENSIONS, AND ADDN'L INFO.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

Matrix Structural Engineers
TBPE Firm Registration No. F-2640

STATE OF TEXAS
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FINAL
01/06/2025

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3D CONCEPTUAL

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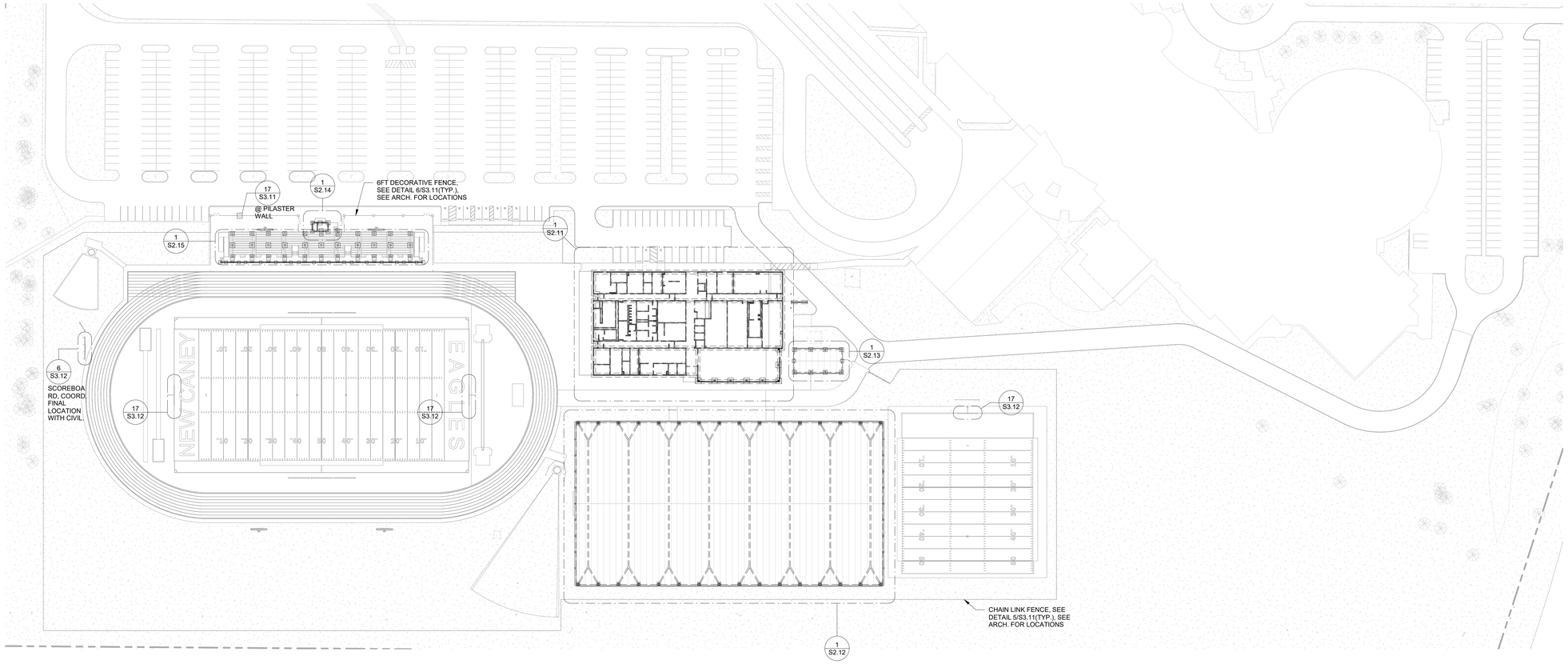

1 FOUNDATION PLAN - OVERALL
SCALE: 1" = 60'-0"

A | B

KEY PLAN

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PROFESSIONAL ENGINEER
01/06/2025

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Approver	Author
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FOUNDATION PLAN - OVERALL

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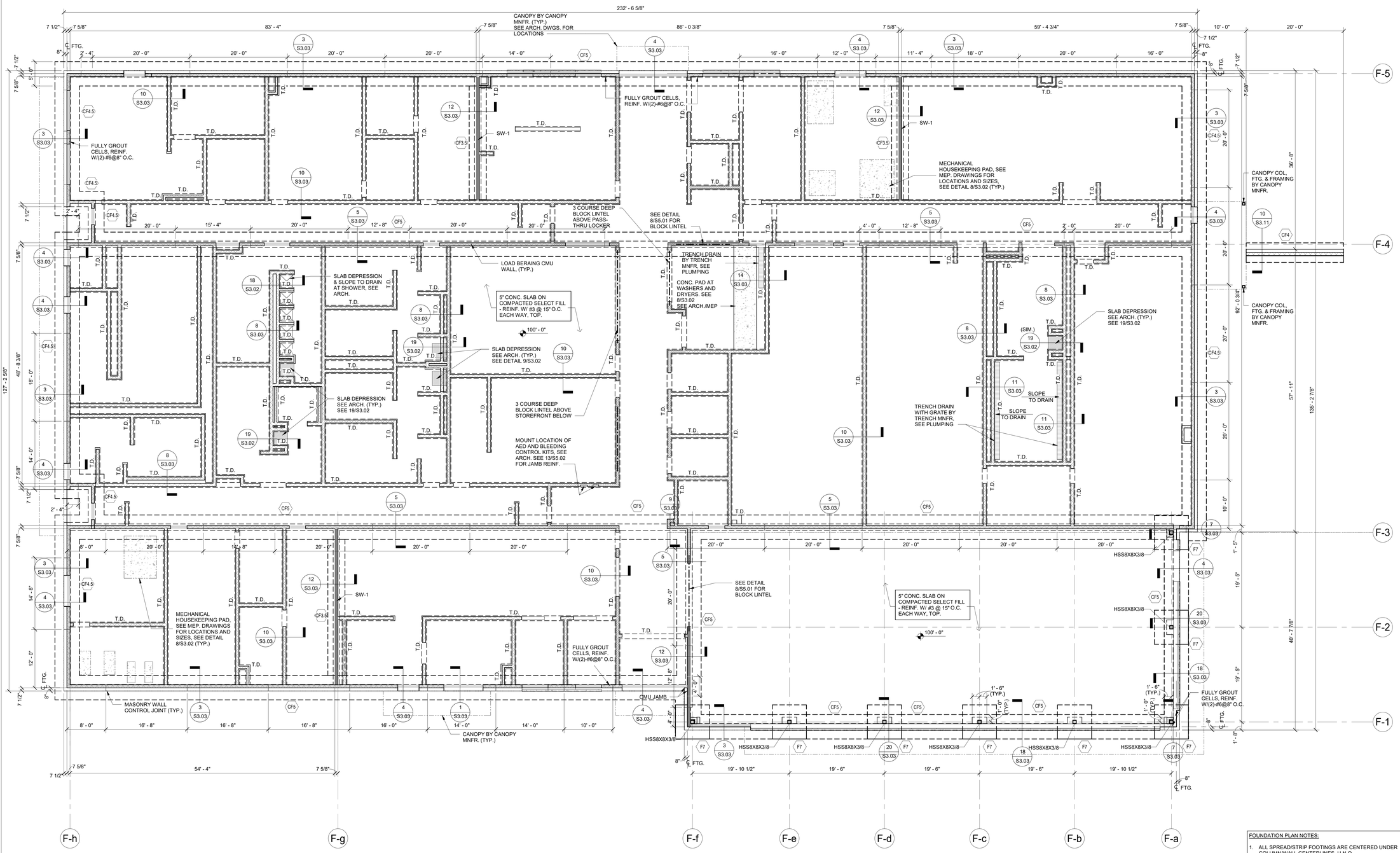

1 FOUNDATION PLAN - FIELD HOUSE

SCALE: 1/8" = 1'-0"

N

FOUNDATION PLAN NOTES:

1. ALL SPREAD/STRIP FOOTINGS ARE CENTERED UNDER COLUMN/WALL CENTERLINES, U.N.O.
2. LOCATIONS NOTED THUS: CF3 INDICATES STRIP FOOTING, SEE STRIP FOOTING SCHEDULE FOR SIZE.
3. SPREAD FOOTINGS OCCURRING AT INTERMEDIATE LOCATIONS SHALL BE CENTERED AT GRADE BEAM CENTERLINE.
4. LOCATIONS NOTED THUS: (1) INDICATES SPREAD FOOTING, SEE SPREAD FOOTING SCHEDULE FOR SIZE.
5. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC. SEE PLUMBING DRAWINGS FOR EXACT LOCATION OF FLOOR DRAIN.
6. COORDINATE ALL BRICK LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
7. LOCATIONS NOTED THUS: 0' - 0" INDICATES TOP OF SLAB ELEVATION.
8. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL ELEVATION 104.75', VERIFY WITH CIVIL.
9. SEE 10/S3.02, 7/S3.02 & 5/S3.02 FOR ADDITIONAL REBAR AT OPENINGS, DISCONTINUOUS JOINTS, AND RE-ENTRANT CORNERS IN SLAB-ON-GRADE.
10. PROVIDE CONTRACTION JOINTS AND DISCONTINUOUS SLAB REINFORCING AS SHOWN IN DETAIL 6/S3.02 & 7/S3.02.
11. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
12. SEE 13/S5.02 FOR INTERIOR NON-LOADING BEARING CMU WALL REINF. SCHED. SEE DETAILS ON SHEET S5.03 FOR CMU BRACING AT INTERIOR NON-LOADING BEARING CMU WALL.
13. SEE PLAN FOR CMU CONTROL JOINTS LOCATION IN LOAD BEARING OR EXTERIOR CMU WALLS PER DETAIL 1/S5.01. CONTROL JOINTS CAN BE ADJUSTED +\- 4" TO ALIGN WITH CMU COURSING. VERTICAL CONTROL JOINTS IN NON-LOAD BEARING WALLS SHALL BE LOCATED PER DETAIL 13/S5.02.
14. T.D. INDICATES TURNDOWN, SEE DETAILS 8/S3.03 & 10/S3.03.

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FOUNDATION PLAN - FIELD HOUSE

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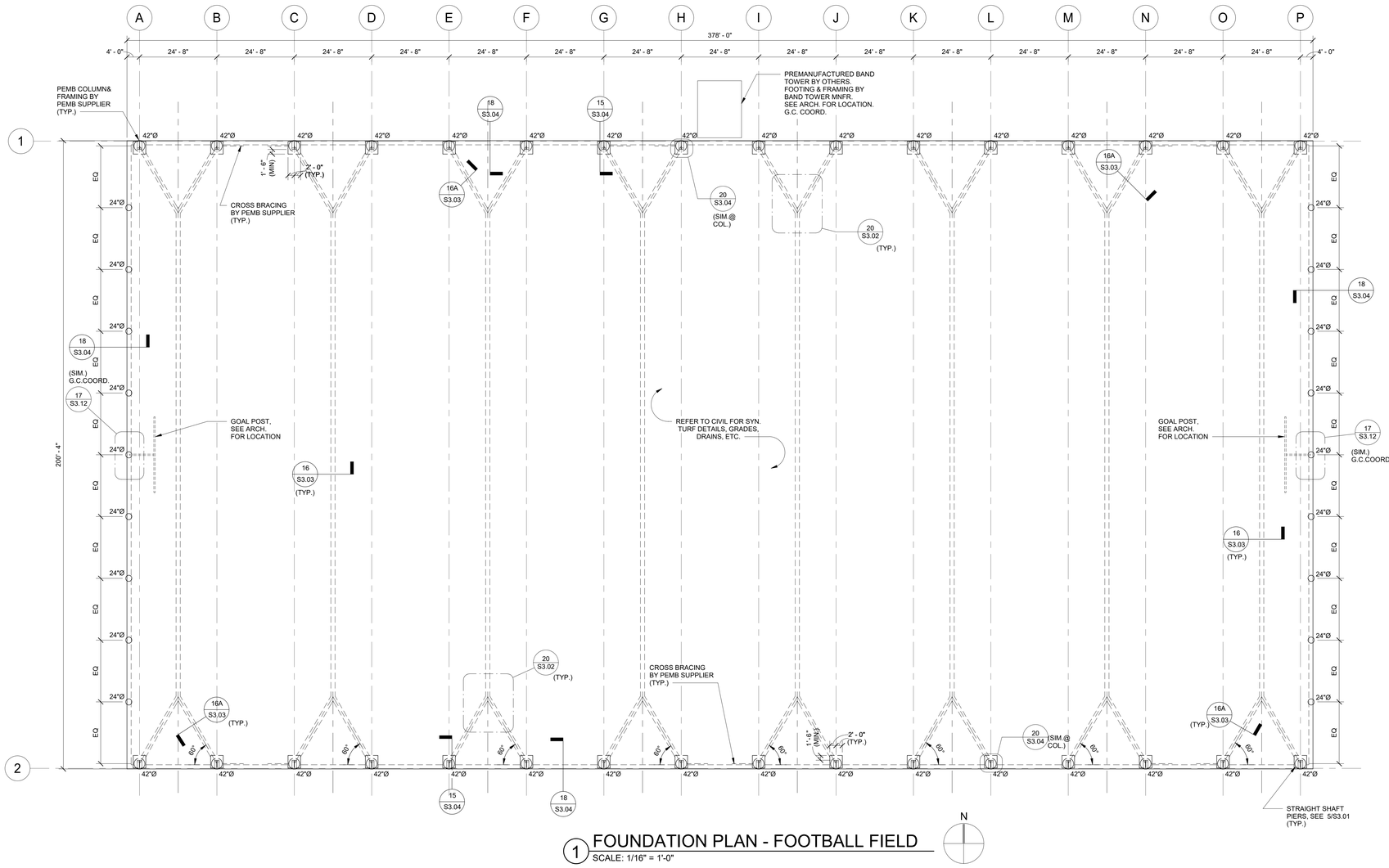

1 FOUNDATION PLAN - FOOTBALL FIELD
SCALE: 1/16" = 1'-0"

PEMB FOUNDATION PLAN NOTES:

1. ALL PIERS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. PIERS UNDER GRADE BEAM (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL/ CIVIL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. LOCATIONS NOTED THUS: 0' - 0" INDICATES TOP OF SLAB ELEVATION.
5. SEE PEMB FOR BASE PLATE INFORMATION.
6. REFER TO PEMB FOR SIZE, LOCATION AND ORIENTATION OF ALL COLUMNS, ANCHOR BOLTS. NOTIFY ARCH. OF ANY DISCREPANCIES BETWEEN PLANS FOR RESOLUTION PRIOR TO FABRICATION AND INSTALLATION.
7. REFER TO MEP FOR SLOPE - INVERT ELEVATION (I.E.) AT DRAINS.
8. TYPICAL SLOPE AT FLOOR IS 1/8" PER FOOT, U.N.O. ON ARCH.
9. ——► WHERE SHOWN ON PLAN INDICATES SLOPE DIRECTION. SEE ARCH. FOR INFORMATION.
10. ALL COLUMN LOCATIONS SHOWN AND ASSOCIATED FOUNDATIONS ARE PLACEHOLDERS IN THE ABSENCE OF A COMPLETE METAL BUILDING DESIGN SUBMITTAL. SEE GENERAL NOTES FOR SUBMITTAL REQUIREMENTS.

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FOUNDATION PLAN - FOOTBALL FIELD

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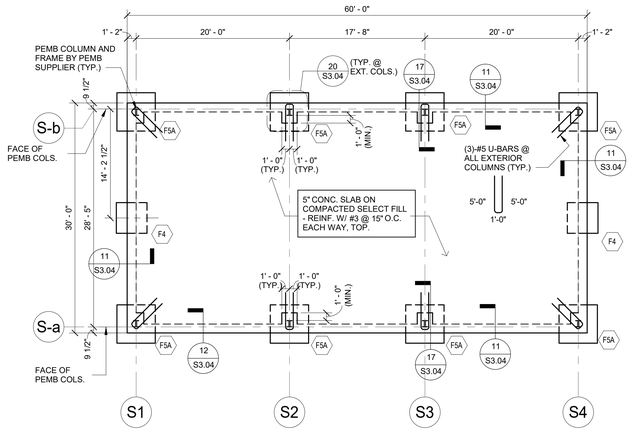

1 FOUNDATION PLAN - STORAGE BUILDING
SCALE: 1/8" = 1'-0"

N

PEMB FOUNDATION PLAN NOTES:

1. ALL FOOTINGS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. FOOTINGS UNDER GRADE BEAM (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. COORDINATE ALL METAL PANEL LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
5. LOCATIONS NOTED THUS: 0' - 0" INDICATES TOP OF SLAB ELEVATION.
6. SEE PEMB FOR BASE PLATE INFORMATION.
7. REFER TO PEMB FOR SIZE, LOCATION AND ORIENTATION OF ALL COLUMNS, ANCHOR BOLTS. NOTIFY ARCH. OF ANY DISCREPANCIES BETWEEN PLANS FOR RESOLUTION PRIOR TO FABRICATION AND INSTALLATION.
8. REFER TO MEP FOR SLOPE - INVERT ELEVATION (I.E.) AT DRAINS.
9. TYPICAL SLOPE AT FLOOR IS 1/8" PER FOOT, U.N.O. ON ARCH.
10. PROVIDE (3)-#4X4'-0" TOP & BOT. AT ALL RE-ENTRANT CORNERS AT SLAB ON GRADE. TOP REINFORCING SHALL BE PLACED AT 1 1/4" CLEAR FROM THE TOP OF THE SLAB.
11. ——► WHERE SHOWN ON PLAN INDICATES SLOPE DIRECTION. SEE ARCH. FOR INFORMATION.
12. SEE 10/S3.02, 7/S3.02 & 5/S3.02 FOR ADDITIONAL REBAR AT OPENINGS, DISCONTINUOUS JOINTS, AND RE-ENTRANT CORNERS IN SLAB-ON-GRADE.
13. PROVIDE CONTRACTION JOINTS AND DISCONTINUOUS SLAB REINFORCING AS SHOWN IN DETAIL 6/S3.02 & 7/S3.02.
14. ALL COLUMN LOCATIONS SHOWN AND ASSOCIATED FOUNDATIONS ARE PLACEHOLDERS IN THE ABSENCE OF A COMPLETE METAL BUILDING DESIGN SUBMITTAL. SEE GENERAL NOTES FOR SUBMITTAL REQUIREMENTS.

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FOUNDATION PLAN - STORAGE BUILDING

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S2.13

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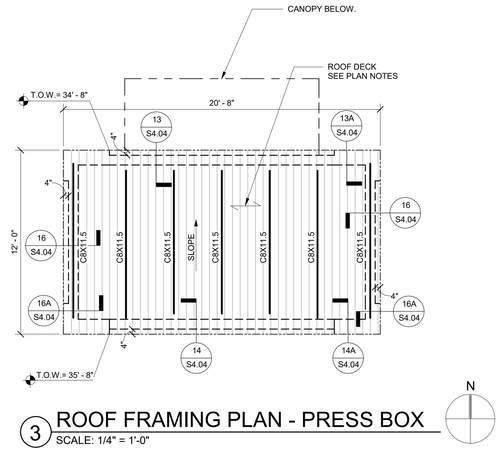
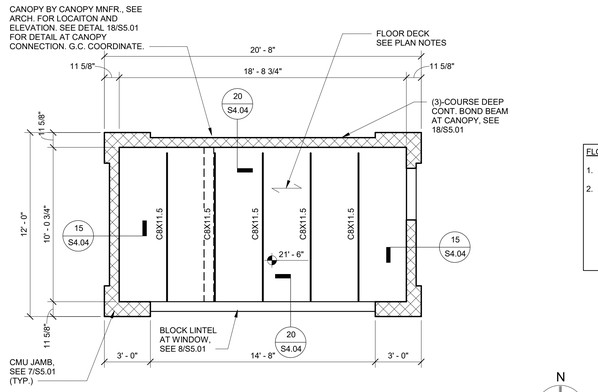


3 ROOF FRAMING PLAN - PRESS BOX

SCALE: 1/4" = 1'-0"

ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION..
3. SPACE BEAMS EQUALLY, U.N.O.
4. REFER TO ARCHITECTURAL DRAWINGS / MEP FOR LOCATIONS OF ROOF DRAINS, OVERFLOW DRAINS AND TAPERED INSULATION.
5. ROOF DECK SHALL BE 1.5B 22GA DECK AS MANUFACTURED BY VULCRAFT OR EQUIVALENT. SEE ARCHITECTURAL DRAWINGS FOR INSULATION, ROOFING, ETC. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS:
   a. PERPENDICULAR BEARING: 36/7 PATTERN.
   b. PARALLEL BEARINGS AND EDGE: AT 6"O.C.
   c. SIDE SEAMS: #10 TEK SCREWS AT 6"O.C.
6. ALL STEEL AND ACCESSORIES SHALL BE HOT DIPPED GALVANIZED.

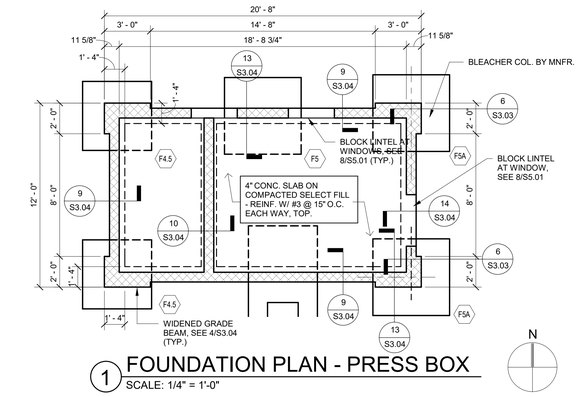


2 SECOND FLOOR FRAMING PLAN - PRESS BOX

SCALE: 1/4" = 1'-0"

FLOOR PLAN NOTES (SOFTBALL):

1. TOP OF CONCRETE ELEVATION = 21' - 6".
2. FLOOR SHALL BE 3" NORMAL WEIGHT CONCRETE OVER THE FLUTES OF 1" x 22 GA TYPE C STEEL DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT TO TOTAL THICKNESS = 4". REINFORCE CONCRETE WITH W2.9xW2.9 WIRE MESH AT 6" O.C. EACH WAY. PLACE WIRE (PARALLEL TO DECK) IN THE OUTSIDE LAYER. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS:
   a. PERPENDICULAR BEARING : 36/4 PATTERN.
   b. PARALLEL BEARING AND EDGE : AT 12" O.C.
   c. SIDE SEAMS : #12 TEK SCREWS AT 12"O.C..



1 FOUNDATION PLAN - PRESS BOX

SCALE: 1/4" = 1'-0"

FOUNDATION PLAN NOTES:

1. ALL FOOTINGS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. FOOTINGS UNDER GRADE BEAMS (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. COORDINATE ALL BRICK LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
5. LOCATIONS NOTED THUS: 4" INDICATES TOP OF SLAB ELEVATION.
6. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL FINISHED FLOOR ELEVATION . VERIFY WITH CIVIL.
7. SEE 10/S3.02, 7/S3.02 & 5/S3.02 FOR ADDITIONAL REBAR AT OPENINGS, DISCONTINUOUS JOINTS, AND RE-ENTRANT CORNERS IN SLAB-ON-GRADE.
8. PROVIDE CONTRACTION JOINTS AND DISCONTINUOUS SLAB REINFORCING AS SHOWN IN DETAILS 6/S3.02 & 7/S3.02.
9. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
10. ALL COLUMN LOCATIONS SHOWN AND ASSOCIATED FOUNDATIONS ARE PLACEHOLDERS IN THE ABSENCE OF A COMPLETE BLEACHER DESIGN SUBMITTAL. SEE GENERAL NOTES FOR SUBMITTAL REQUIREMENTS.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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STATE OF TEXAS
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01/06/2025

ISSUED: JANUARY 6, 2025

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Approver	Author
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FOUNDATION AND FRAMING PLANS - PRESS BOX

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S2.14

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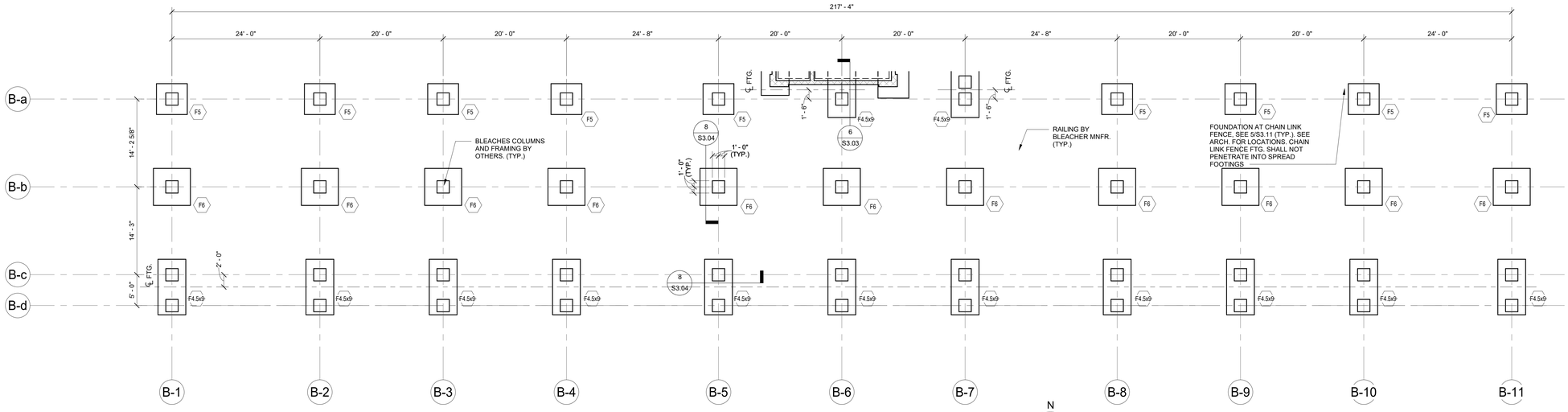

1 FOUNDATION PLAN - BLEACHERS
SCALE: 1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. ALL FOOTINGS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
3. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL FINISHED FLOOR ELEVATION. VERIFY WITH CIVIL.
4. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
5. ALL COLUMN LOCATIONS SHOWN AND ASSOCIATED FOUNDATIONS ARE PLACEHOLDERS IN THE ABSENCE OF A COMPLETE BLEACHER DESIGN SUBMITTAL. SEE GENERAL NOTES FOR SUBMITTAL REQUIREMENTS.

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ISSUED: JANUARY 6, 2025

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Approver	Author
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FOUNDATION PLAN - BLEACHERS

SHEET NO.

S2.15

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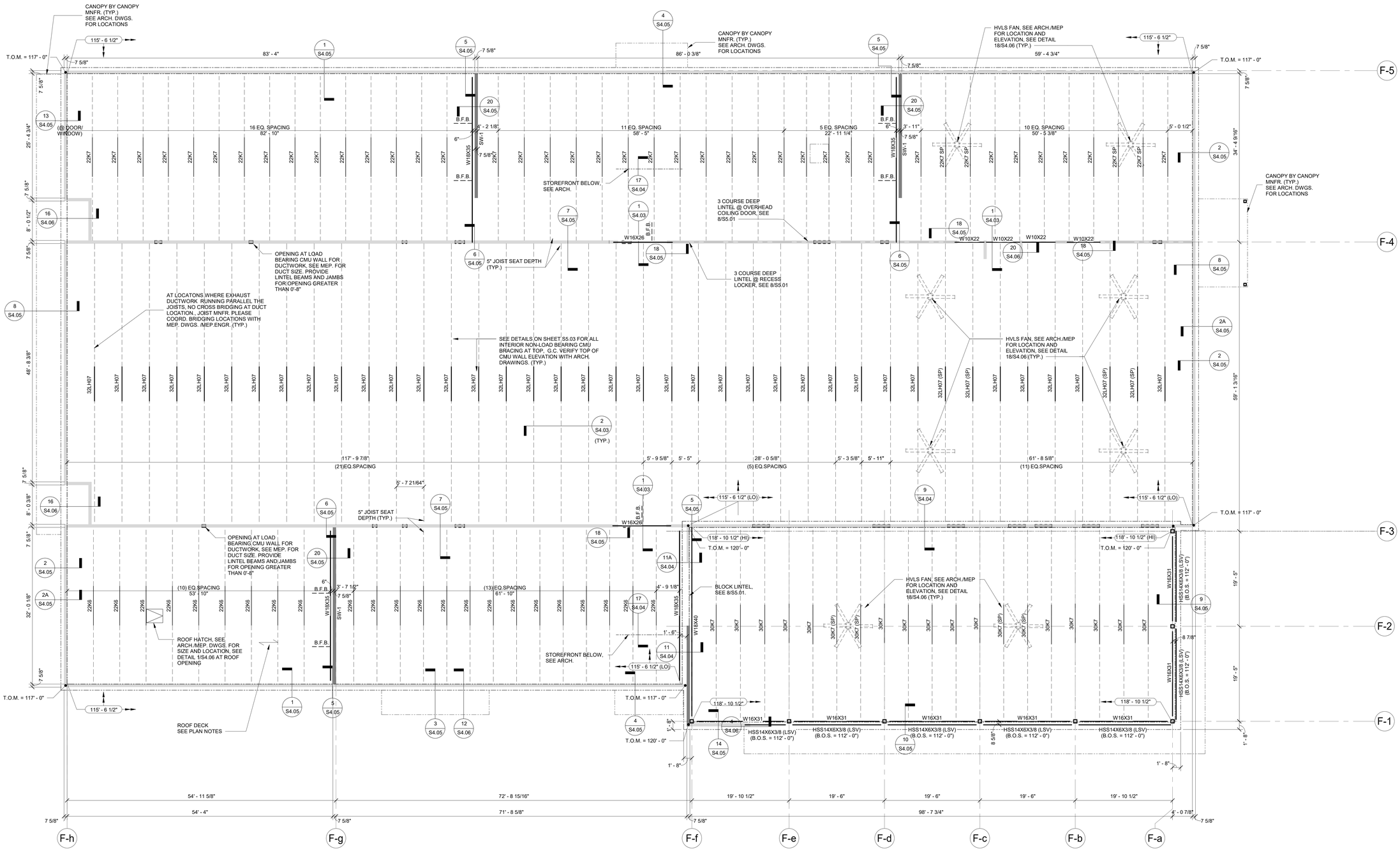

1 ROOF FRAMING PLAN - FIELD HOUSE

SCALE: 1/8" = 1'-0"

N

ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL OR DECK SUPPORT ANGLE ELEVATION AT MANSORY WALL. TOP OF STEEL=TOP OF JOIST / BOTTOM OF METAL DECK.
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
3. JOISTS SHALL BE DESIGNED FOR ADDITIONAL LOADS RESULTING FROM RTU'S AND OTHER MECHANICAL EQUIPMENT ON THE ROOF OR SUSPENDED FROM THE ROOF STRUCTURE. SEE ARCHITECTURAL AND MEP DRAWINGS FOR LOCATIONS.
4. SPACE BEAMS/JOISTS EQUALLY, U.N.O.
5. PROVIDE 3/16" CLOSURE PLATES AT ALL TUBE BEAMS.
6. REFER TO ARCHITECTURAL DRAWINGS / MEP FOR LOCATIONS OF ROOF DRAINS, OVERFLOW DRAINS AND TAPERED INSULATION.
7. ROOF SHALL BE 1.5BV (PROVIDE 1.5B 22 GA DECK AT ALTERNATE RIGID INSULATION ROOF), 22GA DECK AS MANUFACTURED BY VULCRAFT OR EQUIVALENT. SEE ARCHITECTURAL DRAWINGS FOR INSULATION, ROOFING, ETC. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS:
   a. PERPENDICULAR BEARING: 36/7 PATTERN.
   b. PARALLEL BEARINGS AND EDGE: AT 6"O.C.
   c. SIDE SEAMS: #10 TEK SCREWS AT 12"O.C.
8. IN LIEU OF THE DECK ATTACHMENT SHOWN ABOVE, ALTERNATE DECK ATTACHMENT SHALL BE AS FOLLOWS:
   a. REPLACE EACH 5/8"Ø WELD WITH ONE HILTI X-HSN 24 FASTENER FOR BASE STEEL FLANGE THICKNESS (tf) ≤ 3/8" AT THICKER BASE STEEL USE ONE HILTI X-ENP-19-L15 TYPE FASTENER.
   b. REPLACE EACH SIDE SEAM #10 SCREW WITH ONE HILTI S-SLC 01 M HWH FASTENER FOR DECK THICKNESS LESS THAN OR EQUAL TO 20 GAGE.
   c. ATTACHMENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
9. ▶—— = MOMENT CONNECTION
   LSH = LONG SIDE HORIZONTAL
   LSV = LONG SIDE VERTICAL
   HI = HIGH
   LO = LOW
10. B.F.B. INDICATES BOTTOM FLANGE BRACE, SEE 1/S4.03 & 5/S4.03 FOR DETAIL.
11. REFER TO A6.11 FOR PTD LOCATIONS.
12. AT LOCATIONS WHERE DUCTS RUNNING PARALLEL WITH JOISTS, , JOIST MNFR. PLEASE COORDINATE CROSS BRIDGING LOCATIONS WITH MEP. DWGS.

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01/06/2025

ISSUED: JANUARY 6, 2025

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Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

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SHEET TITLE

ROOF FRAMING PLAN - FIELD HOUSE

SHEET NO.

S2.21

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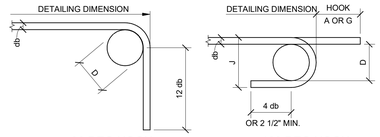


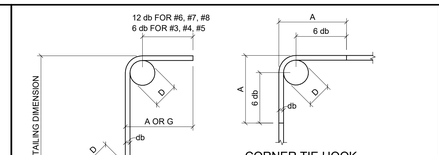
90 DEG HOOK 180 DEG HOOK

RECOMMENDED END HOOKS, ALL GRADES				
BAR SIZE	FINISHED BEND DIAMETER D, (IN.)	180 DEG HOOKS		90 DEG HOOKS
		A OR G, (IN.)	J, (IN.)	A OR G, (IN.)
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 3/4	19
#10	10 3/4	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/4	27	21 3/4	31
#18	24	36	28 1/2	41

D = INSIDE DIAMETER OF BEND

20 SCALE: N.T.S.

END HOOK TYPES

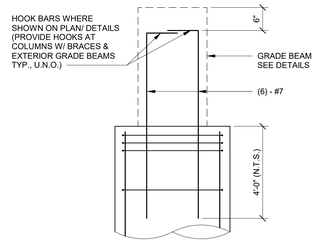


STIRRUP & TIE HOOK SCHEDULE			
BAR SIZE	D (IN.)	90 DEG HOOK A OR G (IN.)	135 DEG HOOK A OR G (IN.)
#3	1 1/2	4	4
#4	2	4 1/2	4 1/2
#5	2 1/2	6	5 1/2
#6	4 1/2	12	8
#7	5 1/4	14	9
#8	6	16	10 1/2

D=INSIDE DIAMETER OF BEND

16 SCALE: N.T.S.

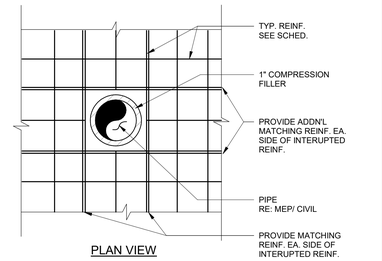
STIRRUP AND TIE HOOK TYPES



NOTES:
1. THIS DETAIL SHALL BE USED WHERE PIER REINFORCING STEEL CAN NOT BE ACCOMMODATED WITHIN WIDTH OF GRADE BEAMS.
2. SEE TYPICAL DRILLED PIER DETAIL FOR ADDITIONAL INFORMATION.

12 SCALE: N.T.S.

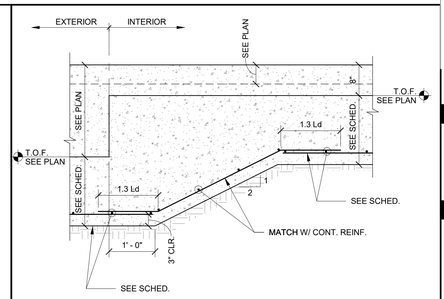
TYPICAL DETAIL SHAFT SIZE LARGER THAN GRADE BEAM WIDTH



PLAN VIEW

8 SCALE: N.T.S.

VERITCAL PENETRATION THROUGH SPREAD FOOTING

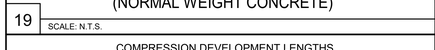


4 SCALE: 3/4" = 1'-0"

STRIP FOOTING AT ELEVATION CHANGE

DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION
GRADE 60 (UNCOATED) REINFORCEMENT
(NORMAL WEIGHT CONCRETE)

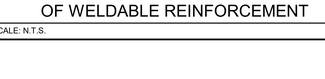
BAR SIZE	F'c = 3000		F'c = 4000		F'c = 5000		F'c = 6000		F'c = 7000		F'c = 8000		F'c = 9000		F'c = 10000	
	Lhb	0.7Lhb	Lhb	0.7Lhb	Lhb	0.7Lhb	Lhb	0.7Lhb	Lhb	0.7Lhb	Lhb	0.7Lhb	Lhb	0.7Lhb	Lhb	0.7Lhb
#3	9	6	8	6	7	6	6	6	6	6	6	6	6	6	6	6
#4	11	8	10	7	9	6	8	6	8	6	7	6	7	6	6	6
#5	14	10	12	9	11	8	10	7	9	7	9	6	8	6	8	6
#6	17	12	15	10	13	9	12	9	11	8	11	8	10	7	9	7
#7	20	14	17	12	15	11	14	10	13	9	12	9	12	8	11	8
#8	22	16	19	14	17	12	16	11	15	11	14	10	13	9	12	9
#9	25	18	22	15	20	14	18	13	17	12	16	11	15	10	14	10
#10	28	20	25	17	22	16	20	14	19	13	18	12	17	12	16	11
#11	31	22	27	19	24	17	22	16	21	15	19	14	18	13	17	12



NOTES:
1. ALL LENGTHS SHOWN IN THE TABLE ARE IN INCHES.
2. Lhb = TENSION DEVELOPMENT LENGTH.
3. Ldh = Lhb, UNLESS CONDITIONS OF ITEM 4 ARE SATISFIED.
4. Ldh = 0.7 Lhb, WHEN SIDE COVER NORMAL TO PLANE OF HOOK IS NOT LESS THAN 2 1/2 INCHES AND FOR 90° HOOK, COVER ON BAR EXTENSION BEYOND HOOK SHALL NOT BE LESS THAN 2 INCHES.
5. HOOKS SHALL NOT BE CONSIDERED EFFECTIVE IN DEVELOPING BARS IN COMPRESSION.

19 SCALE: N.T.S.

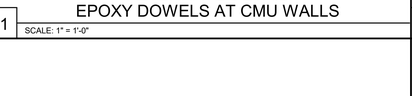
TYPICAL DETAIL DEVELOPMENT LENGTH OF STANDARD HOOKS IN TENSION (NORMAL WEIGHT CONCRETE)



DEVELOPMENT OF WELDABLE REINFORCEMENT GRADE 60 REINFORCEMENT, E80 ELECTRODE		
BAR SIZE	NOMINAL WELD SIZE (INCHES)	MINIMUM PLATE THICKNESS, T (INCHES)
#3	3/16	1/4
#4	1/4	1/4
#5	5/16	5/16
#6	5/16	7/16
#7	3/8	1/2
#8	7/16	9/16
#9	1/2	5/8
#10	9/16	11/16
#11	5/8	3/4

15 SCALE: N.T.S.

TYPICAL DEVELOPMENT OF WELDABLE REINFORCEMENT



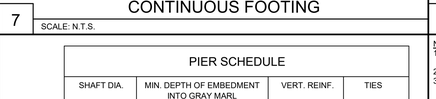
	d_b (IN.)	h_v (IN.)
#3	0.375	6"
#4	.500	7"
#5	0.625	8 1/2"
#6	0.750	10"
#7	0.875	15 1/4"
#8	1.000	17 1/2"

*SEE NOTE 2

NOTES:
1. THIS DETAIL MAY BE USED IN LIEU OF CAST-IN-PLACE DOWELS WHERE SHOWN ON STRUCTURAL DETAILS EXCEPT WHERE PROHIBITED BY NOTE 2.
2. THIS DETAIL IS NOT APPLICABLE AT CANTILEVER WALLS OR WALLS SUBJECTED TO MOMENT AT THE BASE.
3. USE HILTI HIT-HY200 ADHESIVE SYSTEM OR APPROVED EQUIVALENT.

11 SCALE: 1" = 1'-0"

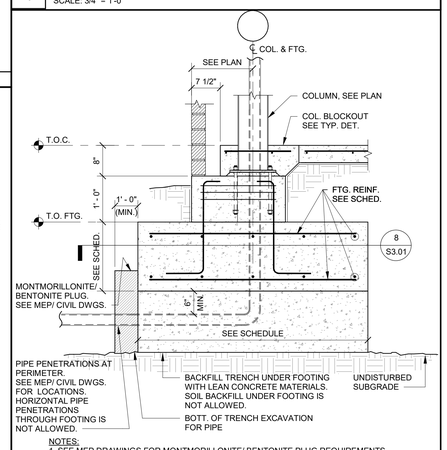
ALTERNATE DETAIL EPOXY DOWELS AT CMU WALLS



PLAN VIEW

7 SCALE: N.T.S.

VERITCAL PENETRATION THROUGH CONTINUOUS FOOTING



NOTES:
1. SEE MEP DRAWINGS FOR MONTMORILLONITE/ BENTONITE PLUG REQUIREMENTS.

3 SCALE: 3/4" = 1'-0"

TYPICAL DETAIL PIPE PENETRATION BELOW FOOTING

COMPRESSION DEVELOPMENT LENGTHS
AND COMPRESSION LAP SPLICE LENGTHS
GRADE 60 (UNCOATED) REINFORCEMENT
(NORMAL WEIGHT CONCRETE)

BAR SIZE	F'c = 3000		F'c = 4000		F'c ≥ 5000		BAR SIZE
	Ldc	Splice	Ldc	Splice	Ldc	Splice	
#3	9	12	8	12	8	12	#3
#4	11	15	10	15	9	15	#4
#5	14	19	12	19	12	19	#5
#6	17	23	15	23	14	23	#6
#7	20	27	17	27	16	27	#7
#8	22	30	19	30	18	30	#8
#9	25	34	22	34	21	34	#9
#10	28	39	25	39	23	39	#10
#11	31	43	27	43	26	43	#11
#14	38	51	33	51	31	51	#14
#18	50	68	43	68	41	68	#18

NOTES:
1. ALL LENGTHS SHOWN IN THE TABLE ARE IN INCHES.
2. Ldc = COMPRESSION DEVELOPMENT LENGTH.
3. THE ABOVE TABLE IS VALID FOR
   a. BEAMS AND COLUMNS WHERE CONCRETE COVER > = db, c/c BAR SPACING > = 2db AND WITH STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN THE CODE MINIMUM.
   b. OTHER ELEMENTS SUCH AS SLABS, WALLS, ETC. WHERE CONCRETE COVER > = db, c/c BAR SPACING > = 3db.
4. WHEN BARS OF A DIFFERENT SIZE ARE LAP SPLICED IN COMPRESSION, SPLICE LENGTH SHALL BE THE LARGER OF Ldc OF THE LARGER BAR AND COMPRESSION LAP SPLICE LENGTH OF SMALLER BAR.
5. BARS SPLICED BY NON-CONTACT LAP SPLICES SHALL NOT BE SPACED TRANSVERSELY FARTHER APART THAN THE SMALLER OF ONE-FIFTH THE REQUIRED LAP SPLICE LENGTH AND 6 IN.

18 SCALE: N.T.S.

TYPICAL DETAIL COMPRESSION DEVELOPMENT AND SPLICE LENGTHS (NORMAL WEIGHT CONCRETE)

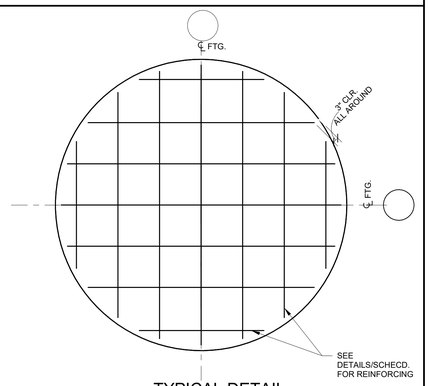
TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS
GRADE 60 (UNCOATED) REINFORCEMENT
(NORMAL WEIGHT CONCRETE)

BAR SIZE	F'c = 3000		F'c = 4000		F'c = 5000		F'c = 6000		F'c = 7000		F'c = 8000		F'c = 9000		F'c = 10000	
	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld
#3	17	22	15	19	13	17	12	16	12	16	12	16	12	16	12	16
#4	22	29	19	25	17	23	16	21	15	19	14	18	13	17	12	16
#5	28	36	24	31	22	28	20	26	18	24	17	22	16	21	15	20
#6	33	43	29	37	26	34	24	31	22	28	21	27	19	25	18	24
#7	48	63	42	54	38	49	34	45	32	41	30	39	28	36	27	35
#8	55	72	48	62	43	56	39	51	36	47	34	44	32	42	30	39
#9	62	81	54	70	48	63	44	57	41	53	38	50	36	47	34	44
#10	70	91	61	79	54	71	50	64	46	60	43	56	41	53	39	50
#11	78	101	67	87	60	78	55	71	51	66	48	62	45	58	43	55

NOTES:
1. ALL LENGTHS SHOWN IN THE TABLE ARE IN INCHES.
2. Ld = TENSION DEVELOPMENT LENGTH.
3. THE ABOVE TABLE IS VALID FOR
   a. BEAMS AND COLUMNS WHERE CONCRETE COVER > = db, c/c BAR SPACING > = 2db AND WITH STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN THE CODE MINIMUM.
   b. OTHER ELEMENTS SUCH AS SLABS, WALLS, ETC. WHERE CONCRETE COVER > = db, c/c BAR SPACING > = 3db.
4. FOR TOP BARS, MULTIPLY THE SPLICE LENGTHS BY 1.30. TOP BARS REQUIRE A MINIMUM OF 12" OF FRESH CONCRETE BELOW BAR.
5. WHEN BARS OF A DIFFERENT SIZE ARE LAP SPLICED IN TENSION, SPLICE LENGTH SHALL BE THE LARGER OF Ld OF THE LARGER BAR AND COMPRESSION LAP SPLICE LENGTH OF SMALLER BAR.
6. BARS SPLICED BY NON-CONTACT LAP SPLICES SHALL NOT BE SPACED TRANSVERSELY FARTHER APART THAN THE SMALLER OF ONE-FIFTH THE REQUIRED LAP SPLICE LENGTH AND 6

17 SCALE: N.T.S.

TYPICAL DETAIL TENSION DEVELOPMENT AND SPLICE LENGTHS (NORMAL WEIGHT CONCRETE)

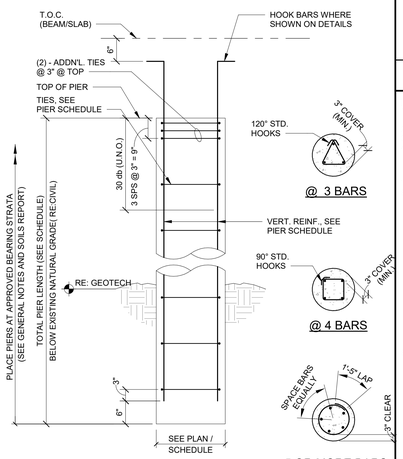


9 SCALE: N.T.S.

TYPICAL DETAIL CIRCULAR SPREAD FTTOING REINFOCING

PIER SCHEDULE			
SHAFT DIA.	MIN. DEPTH OF EMBEDMENT INTO GRAY MARL	VERT. REINF.	TIES
24" DIA.	18' - 0"	(6) - #7	#3 @ 10"
42" DIA.	30' - 0"	(11) - #9	#3 @ 12"

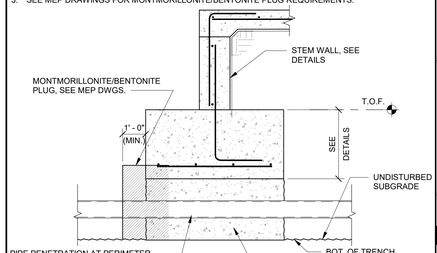
ALL PIER SIZES SHOWN MAY NOT BE USED ON THIS PROJECT.



5 SCALE: N.T.S.

TYPICAL FOOTING (STRAIGHT SHAFT)

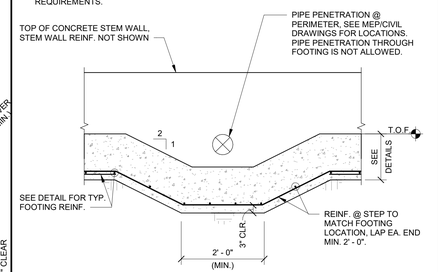
NOTES:
1. THIS DETAIL APPLIES AT LOCATIONS WHERE PIPE ELEVATION IS BELOW THE CONTINUOUS FOOTING. PIPES NOT ALLOWED BELOW COLUMN FOOTINGS.
2. PIPE PENETRATIONS IN FOOTINGS ARE NOT ALLOWED. SEE 1 / S3.01 FOR STEP FOOTING DETAIL.
3. SEE MEP DRAWINGS FOR MONTMORILLONITE/BENTONITE PLUG REQUIREMENTS.



2 SCALE: N.T.S.

TYPICAL DETAIL PIPE PENETRATION BELOW CONTINUOUS FOOTING

NOTES:
1. THIS DETAIL APPLIES AT LOCATIONS WHERE THE PIPE ELEVATION IS THROUGH FOOTING.
2. PIPE PENETRATIONS IN FOOTINGS ARE NOT ALLOWED.
3. SEE 2 / S3.01 FOR PIPES LOCATED UNDER FOOTINGS.
4. SEE MEP DRAWINGS FOR MONTMORILLONITE/BENTONITE PLUG REQUIREMENTS.



1 SCALE: N.T.S.

TYPICAL DETAIL STEPPED FOOTING AT PIPE PENETRATION LOCATIONS

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TBPE Firm Registration No. F-2640

STATE OF TEXAS
KHALIL TABAJA
103742
LICENSED PROFESSIONAL ENGINEER
01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL FOUNDATION DETAILS

SHEET NO.
S3.01

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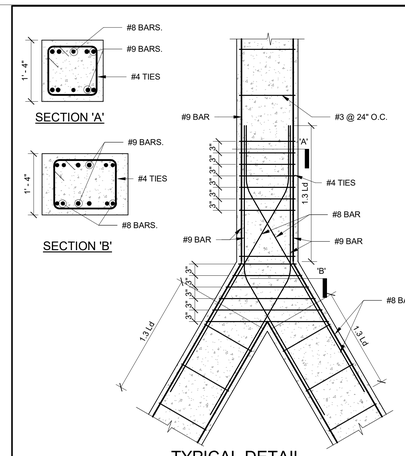
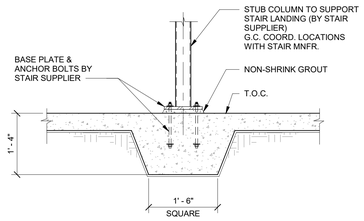


TYPICAL DETAIL
REINFORCING AT TIE BEAMS

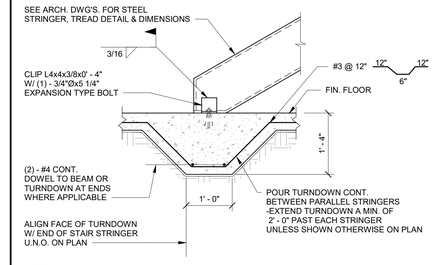
20 SCALE: N.T.S.



NOTES:
1. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF STAIR STRINGER LOCATIONS WITH ARCHITECTURAL DRAWINGS & PROVIDE TURNDOWNS WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT.
2. CLIP ANGLE TO BE HIDDEN BENEATH FIRST TREAD. WHERE OPEN RISERS ARE USED, COORDINATE THE LOCATION WITH THE ARCHITECT.

TYPICAL DETAIL
THICKENED SLAB BELOW
COLUMNS AT STAIR LANDING

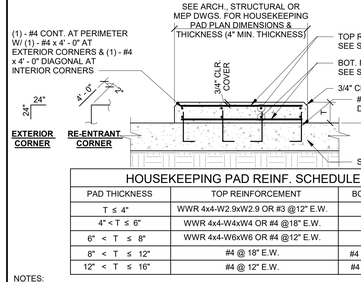
16 SCALE: 3/4" = 1'-0"



NOTES:
1. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF STAIR STRINGER LOCATIONS WITH ARCHITECTURAL DRAWINGS & PROVIDE TURNDOWNS WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT. COORDINATE DIMENSIONS AND OTHER SPECIAL REQUIREMENTS WITH EQUIPMENT MANUFACTURERS AS REQUIRED.
2. CLIP ANGLE TO BE HIDDEN BENEATH FIRST TREAD. WHERE OPEN RISERS ARE USED, COORDINATE THE LOCATION WITH THE ARCHITECT.

TYPICAL DETAIL
TURNDOWN AT STEEL STAIR
SLAB-ON-GRADE

12 SCALE: N.T.S.

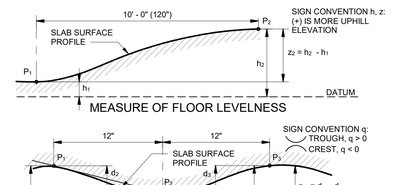


HOUSEKEEPING PAD REINF. SCHEDULE		
PAD THICKNESS	TOP REINFORCEMENT	BOTTOM REINF.
T ≤ 4"	WWR 4x4-W2.9xW2.9 OR #3 @12" E.W.	NONE
4" < T ≤ 6"	WWR 4x4-W4xW4 OR #4 @18" E.W.	NONE
6" < T ≤ 8"	WWR 4x4-W6xW6 OR #4 @12" E.W.	NONE
8" < T ≤ 12"	#4 @ 18" E.W.	#4 @ 18" E.W.
12" < T ≤ 16"	#4 @ 12" E.W.	#4 @ 12" E.W.

NOTES:
1. GENERAL CONTRACTOR TO COORDINATE WITH MECHANICAL DRAWINGS AND SPECIFICATIONS TO DETERMINE REQUIREMENTS FOR HOUSEKEEPING PADS OVER SLAB-ON-GRADE AND PROVIDE WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT. COORDINATE DIMENSIONS AND OTHER SPECIAL REQUIREMENTS WITH EQUIPMENT MANUFACTURERS AS REQUIRED.
2. PAD SHALL NOT BE POURED UNTIL AFTER SLAB HAS REACHED ITS SPECIFIED 28 DAYS STRENGTH.
3. CONCRETE FOR HOUSEKEEPING PAD SHALL BE NORMAL WEIGHT CONCRETE WITH f'c = 3,000 PSI.

TYPICAL DETAIL
CONCRETE ISLAND OR HOUSEKEEPING PAB
SLAB-ON-GRADE

8 SCALE: N.T.S.

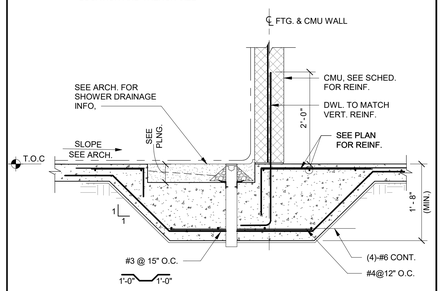


NOTES:
1. F_L = LEVELNESS F-NUMBER
   $F_L = \frac{12.5}{(3 \times S_Z) + z}$ WHERE z = MEAN VALUE OF ALL z FLOOR READINGS.
   S_Z = STANDARD DEVIATION OF ALL z FLOOR READINGS.
2. F_F = LEVELNESS F-NUMBER
   $F_F = \frac{4.57}{(3 \times S_Q) + q}$ WHERE q = MEAN VALUE OF ALL z FLOOR READINGS.
   S_Z = STANDARD DEVIATION OF ALL q FLOOR READINGS
3. F_L AND F_F SHALL BE STATISTICALLY DETERMINED ACCORDING TO ASTM E 1155 "STANDARD TEST METHOD FOR DETERMINING FLOOR FLATNESS AND LEVELNESS USING THE F-NUMBER SYSTEM."
4. REFER TO CONCRETE SPECIFICATIONS FOR REQUIRED F_F AND F_L VALUES.

TYPICAL DETAIL
SLAB SURFACE TOLERANCE

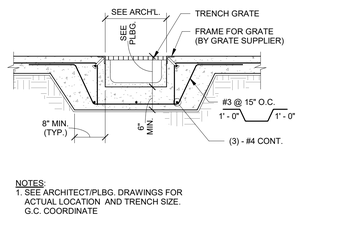
4 SCALE: N.T.S.

NOTE:
SEE PLUMBING DRAWINGS FOR ACTUAL LOCATION AND TRENCH SIZE



TYPICAL DETAIL
AT ACCESSIBLE SHOWER PAN DETAIL

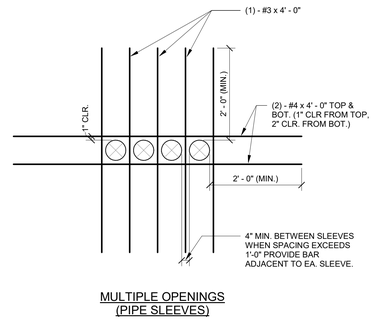
19 SCALE: 3/4" = 1'-0"



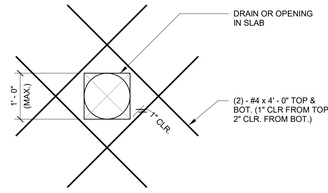
NOTES:
1. SEE ARCHITECT/PLBG. DRAWINGS FOR ACTUAL LOCATION AND TRENCH SIZE. G.C. COORDINATE

TYPICAL DETAIL
TRENCH DRAIN

15 SCALE: 3/4" = 1'-0"



MULTIPLE OPENINGS
(PIPE SLEEVES)

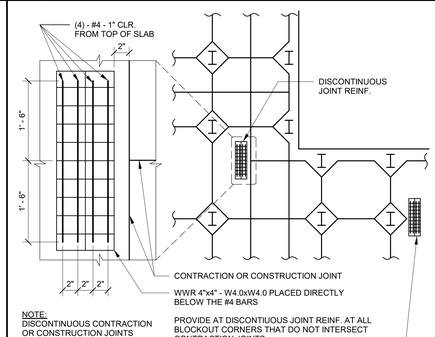


SINGLE DRAIN OR OPENING

NOTES:
1. COORDINATE OPENING SIZE AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. CONDUIT & PIPES OF ALUMINUM SHALL NOT BE PLACED IN CONCRETE UNLESS EFFECTIVELY COATED W/ PROTECTIVE MATERIAL TO PREVENT CHEMICAL REACTION.

TYPICAL DETAIL
ADDITIONAL REINFORCEMENT AT
OPENINGS AT SLAB-ON-GRADE

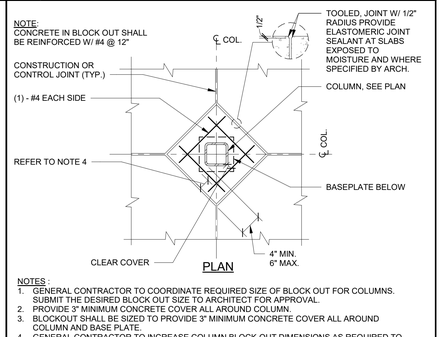
10 SCALE: N.T.S.



NOTE:
DISCONTINUOUS CONTRACTION OR CONSTRUCTION JOINTS SHOULD BE AVOIDED WHERE POSSIBLE.

TYPICAL DETAIL
ADDITIONAL REINFORCEMENT AT
DISCONTINUOUS JOINT IN SLAB-ON-GRADE

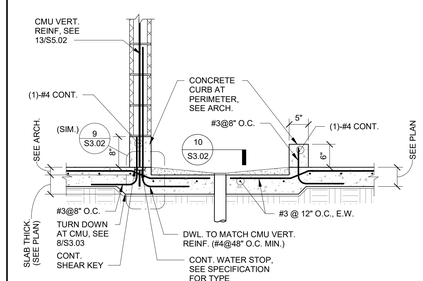
7 SCALE: N.T.S.



NOTES :
1. GENERAL CONTRACTOR TO COORDINATE REQUIRED SIZE OF BLOCK OUT FOR COLUMNS. SUBMIT THE DESIRED BLOCK-OUT SIZE TO ARCHITECT FOR APPROVAL.
2. PROVIDE 3" MINIMUM CONCRETE COVER ALL AROUND COLUMN.
3. BLOCKOUT SHALL BE SIZED TO PROVIDE 3" MINIMUM CONCRETE COVER ALL AROUND COLUMN AND BASE PLATE.
4. GENERAL CONTRACTOR TO INCREASE COLUMN BLOCK-OUT DIMENSIONS AS REQUIRED TO ACCOMMODATE GUSSET PLATES AT BRACE FRAMES.

TYPICAL DETAIL
BLOCK-OUT AROUND COLUMN
(SLAB-ON-GRADE)

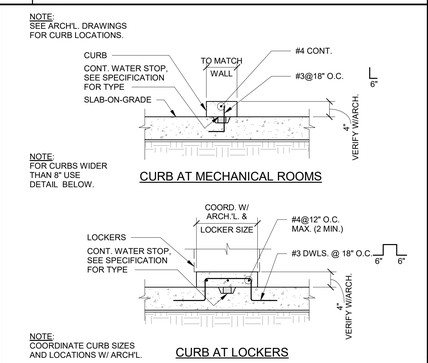
3 SCALE: N.T.S.



NOTE:
SEE ARCH. FOR LOCATIONS AND EXTENTS.

TYPICAL DETAIL
AT NON-ACCESSIBLE SHOWER & CURB

18 SCALE: 3/4" = 1'-0"



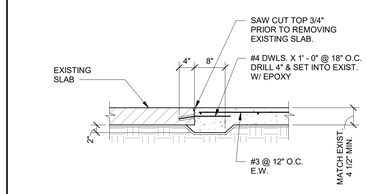
TYPICAL DETAIL
CURB AT MECH. ROOMS AND LOCKERS

14 SCALE: N.T.S.

NOTES:
1. COORDINATE DEPTH & LOCATIONS OF ALL FLOOR DEPRESSIONS WITH ARCHITECTURAL DRAWINGS.
2. PROVIDE (1) - #4 x 4' - 0" TOP AT INTERIOR CORNERS OF ALL DEPRESSIONS.

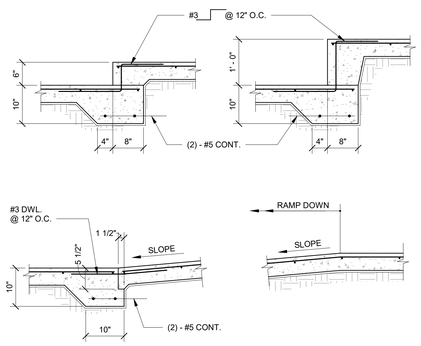
TYPICAL DETAIL
AT FLOOR DEPRESSIONS

9 SCALE: N.T.S.



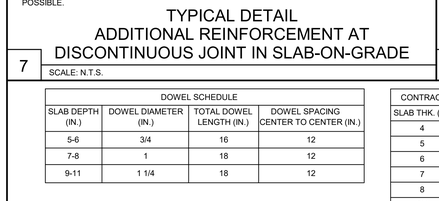
TYPICAL DETAIL
SLAB REPAIR AT EXISTING

17 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
AT RAMP

13 SCALE: 3/4" = 1'-0"



SCHEMATIC SLAB-ON-GRADE

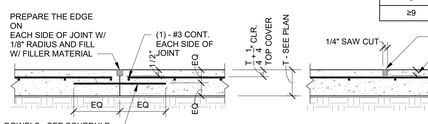
NOTES:
1. PROVIDE 1" CLR. AT TOP & 2" CLR. AT BOT.
2. DO NOT PLACE REINFORCEMENT ACROSS CONTRACTION OR CONSTRUCTION JOINTS.

TYPICAL DETAIL
RE-ENTRANT CORNER BARS AT
SLAB-ON-GRADE

5 SCALE: N.T.S.

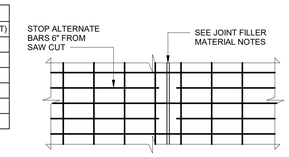
DOWEL SCHEDULE			
SLAB DEPTH (IN.)	DOWEL DIAMETER (IN.)	TOTAL DOWEL LENGTH (IN.)	DOWEL SPACING CENTER TO CENTER (IN.)
5-6	3/4	16	12
7-8	1	18	12
9-11	1 1/4	18	12

CONTRACTION JOINT SPACING	
SLAB THK. (IN.)	JOINT SPACING (FT)
4	11
5	13
6	14
7	16
8	17
≥9	18



CONSTRUCTION JOINT NOTES:
1. SLAB REINFORCEMENT SHALL BE CHAIRED BY SOIL SUPPORTED SLAB BOLSTERS.
2. BREAK BOND BETWEEN NEW AND PREVIOUSLY PLACED SLAB BY SPRAYING OR PAINTING EXPOSED SIDE WITH FORM OIL.
3. SUBGRADE SHALL BE FREE OF STANDING WATER AT THE TIME OF CONCRETE PLACEMENT.
4. ALL DOWELS IN THIS DETAIL SHALL BE SMOOTH BAR DOWELS.

JOINT SPACING NOTE:
1. PROVIDE CONTRACTION AND/OR CONSTRUCTION JOINTS AT EVERY COLUMN CENTERLINE AND AT A MAXIMUM SPACING AS SCHEDULED. ASPECT RATIOS OF SLAB PANELS ENCLOSED BY CONTROL JOINTS SHALL NOT EXCEED 1.5 TO 1.

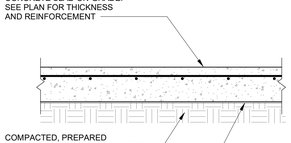


SAW CONTRACTION JOINT NOTES:
1. MAKE SAW CUT AS SOON AS SLAB IS ABLE TO SUPPORT WEIGHT OF WORKERS AND SAWING EQUIPMENT WITHOUT DAMAGE TO FINISH SURFACE OF SLAB.
2. ALL JOINTS SHALL BE CONTINUOUS. DO NOT OFFSET OR STAGGER JOINTS.
3. CLEAN JOINT PRIOR TO FILLING THE JOINT.

JOINT FILLER MATERIAL NOTES:
1. FILLER MATERIAL USED SHALL BE EPOXY RESINS WITH A MINIMUM SHORE "A" HARDNESS OF 80 AND SHALL CONFORM TO ASTM D2240. JOINT FILLER SHALL BE APPROVED BY ENGINEER PRIOR TO APPLICATION. INSTALL JOINT FILLER PER MANUFACTURER'S SPECIFICATIONS.
2. WHERE POSSIBLE, FILLER MATERIAL SHALL BE APPLIED WHEN BUILDING IS UNDER PERMANENT TEMPERATURE CONTROL. THIS SHALL BE EITHER AT THE END OF CONSTRUCTION OF THE COMPLETE BUILDING SHELL, OR A MINIMUM OF 90 DAYS AFTER SLAB CONSTRUCTION.
3. ALL EXPOSED SLAB JOINTS SHALL BE FILLED WITH FILLER MATERIAL.

TYPICAL DETAIL
CONSTRUCTION AND CONTRACTION JOINTS SLAB-ON-GRADE

6 SCALE: N.T.S.



NOTE:
1. UNLESS SPECIFIED ELSEWHERE, VAPOR RETARDER SHALL BE A MINIMUM OF 15 MILS THICK (UNLESS THICKER SPECIFIED IN SPECS/ARCH. DRAWINGS) MEETING OR EXCEEDING ASTM E-1745, CLASS C, AND HAVE NO MORE THAN 0.01 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E-96.

TYPICAL DETAIL
SLAB-ON-GRADE CONSTRUCTION
SUBGRADE PREPARATION

1 SCALE: N.T.S.

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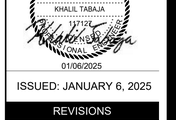

01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL FOUNDATION DETAILS

SHEET NO.
S3.02

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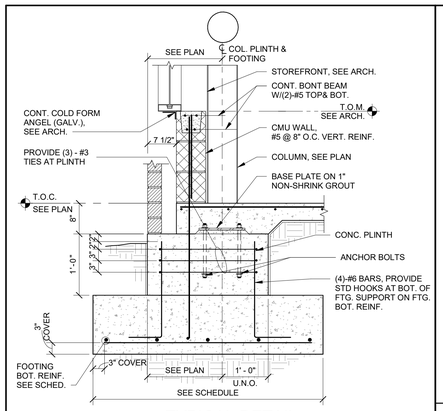
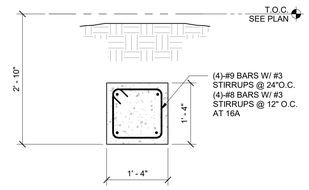


TYPICAL DETAIL
PERIMETER GRADE BEAM AT COLUMN

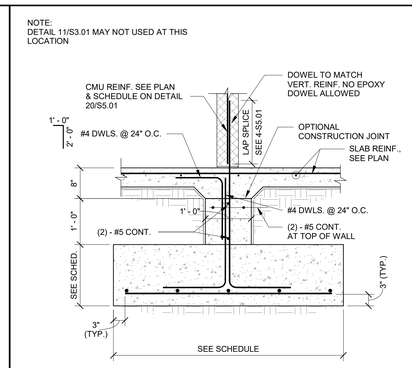
20 SCALE: 3/4" = 1'-0"



16A

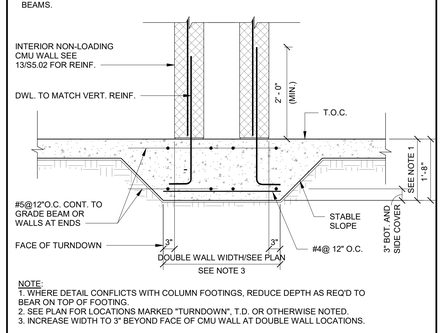
TIE BEAM AT PEMB BUILDING

16 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
INTERIOR CMU SHEAR WALL ON STRIP FTG.

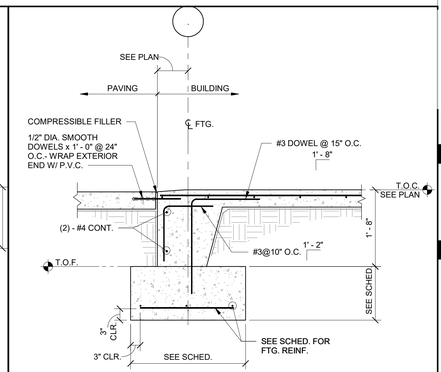
12 SCALE: 3/4" = 1'-0"



NOTE:
1. WHERE DETAIL CONFLICTS WITH COLUMN FOOTINGS, REDUCE DEPTH AS REQ'D TO BEAR ON TOP OF FOOTING.
2. SEE PLAN FOR LOCATIONS MARKED "TURNDOWN", T.D. OR OTHERWISE NOTED.
3. INCREASE WIDTH TO 3" BEYOND FACE OF CMU WALL AT DOUBLE WALL LOCATIONS.

TYPICAL DETAIL
TURNDOWN AT DOUBLE CMU WALL

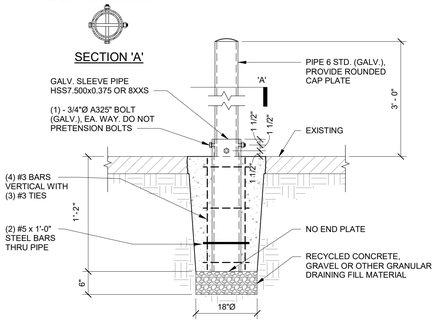
8 SCALE: 3/4" = 1'-0"

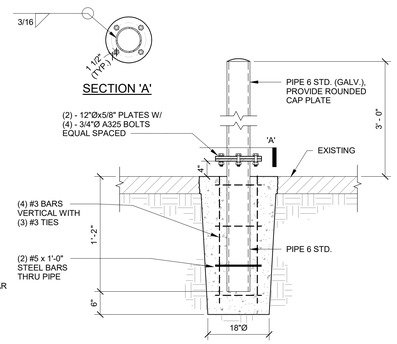


TYPICAL DETAIL
EXTERIOR STRIP FOOTING AT DOORS/FLATWORK

4 SCALE: 3/4" = 1'-0"

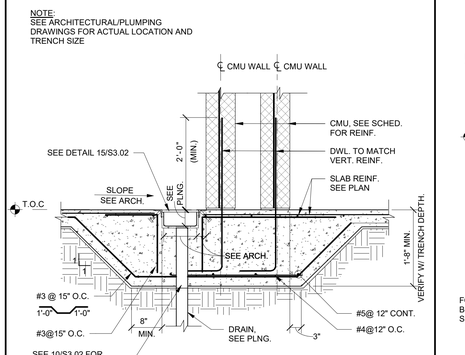
NOTES:
1. BOLLARD IS NOT DESIGNED AS A VEHICLE BARRIER, BUT RATHER IS INTENDED AS A TRAFFIC DIVERTER AND IS NOT DESIGNED FOR SIGNIFICANT IMPACT LOADS.
2. ALL STEEL SHALL BE HOT DIPPED GALVANIZED. RETOUCH GALVANIZING ON BOLT THREADS AFTER FASTENING





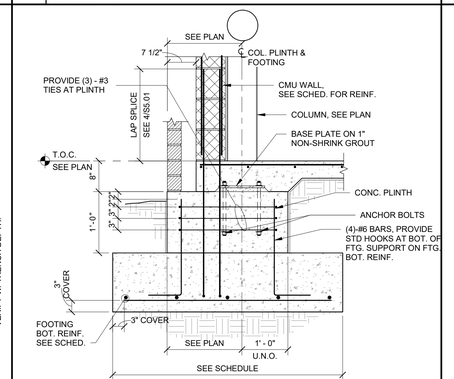
TYPICAL DETAIL
REMOVABLE TRAFFIC DIVERTER BOLLARD

19 SCALE: 3/4" = 1'-0"



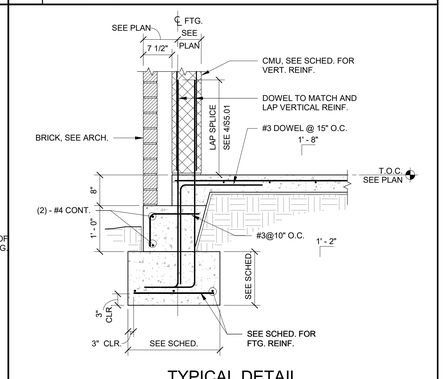
TYPICAL DETAIL
AT LAUNDARY DRAIN

11 SCALE: 3/4" = 1'-0"



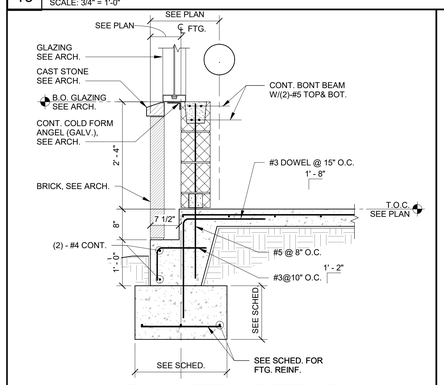
TYPICAL DETAIL
PERIMETER GRADE BEAM AT COLUMN

7 SCALE: 3/4" = 1'-0"



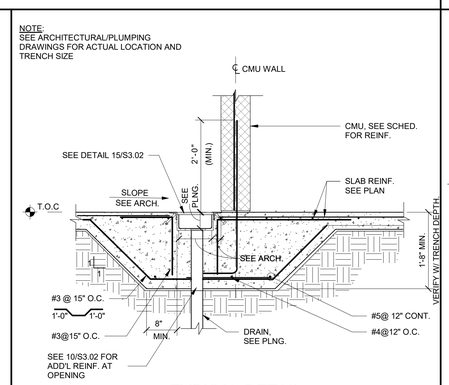
TYPICAL DETAIL
EXTERIOR
STRIP FOOTING AT CMU WALL

3 SCALE: 3/4" = 1'-0"



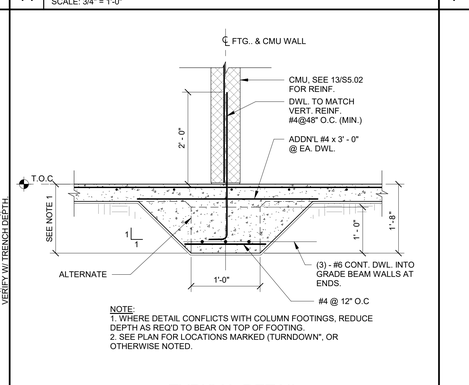
TYICAL DETAIL EXTERIOR
STRIP FOOTING AT STRIP WINDOWS

18 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
AT LAUNDARY DRAIN

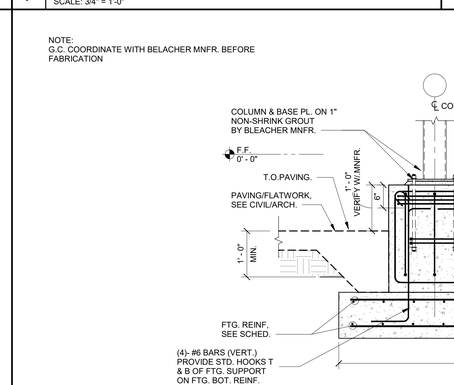
14 SCALE: 3/4" = 1'-0"



NOTE:
1. WHERE DETAIL CONFLICTS WITH COLUMN FOOTINGS, REDUCE DEPTH AS REQ'D TO BEAR ON TOP OF FOOTING.
2. SEE PLAN FOR LOCATIONS MARKED (TURNDOWN", OR OTHERWISE NOTED.

TYPICAL DETAIL
AT NON-LOAD BEARING CMU WALL

10 SCALE: 3/4" = 1'-0"



TYPICAL DETAILCOMBINED FOOTING AT PRESSBOX & BLEACHER

6 SCALE: 3/4" = 1'-0"

SPREAD FOOTING SCHEDULE

Mark	Length	Width	Thickness	Reinforcement Bottom (Short way)	Reinforcement Bottom (Long way)	Reinforcement Top (Short way)	Reinforcement Top (Long way)	Note
F3.5	3' - 6"	3' - 6"	2' - 0"	(6)-#5	(6)-#5			
F4	4' - 0"	4' - 0"	2' - 0"	(6)-#6	(6)-#6			
F4.5	4' - 6"	4' - 6"	2' - 0"	(6)-#6	(6)-#6			
F4.5x9	9' - 0"	4' - 6"	2' - 0"	(10-#7	(6)-#7	(10)-#7	(6)-#7	
F5	5' - 0"	5' - 0"	2' - 0"	(6)-#7	(6)-#7			
F5A	5' - 0"	5' - 0"	2' - 0"	(6)-#7	(6)-#7	(6)-#7	(6)-#7	
F6	6' - 0"	6' - 0"	2' - 0"	(7)-#7	(7)-#7			

SPREAD FOOTING (ROUND) SCHEDULE-ALTERNATE

RF4	ROUND.	4'-0" DIA.	2'-0"	(6)-#5	(6)-#5			IN LIEU OF F3.5
RF4.5	ROUND.	4'-6" DIA.	2'-0"	(6)-#6	(6)-#6			IN LIEU OF F4
RF5	ROUND.	5'-0" DIA.	2'-0"	(6)-#6	(6)-#6			IN LIEU OF F4.5
RF8.5	ROUND.	8'-6" DIA.	2'-0"	(9)-#7	(9)-#7	(9)-#7	(9)-#7	IN LIEU OF F4.5X9
RF5.5	ROUND.	5'-6" DIA.	2'-0"	(6)-#7	(6)-#7			IN LIEU OF F5
RF5.5A	ROUND.	5'-6" DIA.	2'-0"	(6)-#7	(6)-#7	(6)-#7	(6)-#7	IN LIEU OF F5A
RF7A	ROUND.	7'-0" DIA.	2'-0"	(7)-#7	(7)-#7			IN LIEU OF F6

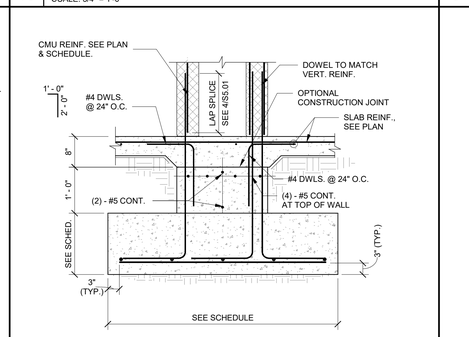
NOTE:
FOOTING REINFORCEMENT SHALL BE OFF SUB-GRADE WITH SPECIFIED CHAIRS/BOLSTERS. NO BRICK OR CONCRETE SUPPORT ALLOWED.

STRIP FOOTING SCHEDULE

CF3.5	CONT.	3'-6"	1'-6"	#6@12" O.C.	(5)-#6 CONT.			
CF4	CONT.	4'-0"	1'-6"	#6@12" O.C.	(5)-#6 CONT.			
CF4.5	CONT.	4'-6"	1'-6"	#6@12" O.C.	(6)-#6 CONT.			
CF5	CONT.	5'-0"	1'-6"	#6@12" O.C.	(6)-#6 CONT.			

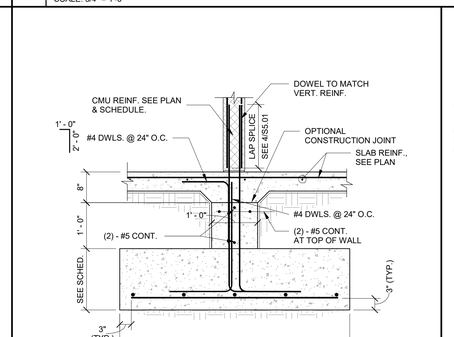
TYPICAL DETAIL
SPREAD FOOTING & STRIP FOOTING SCHEDULE

17 SCALE: N.T.S.



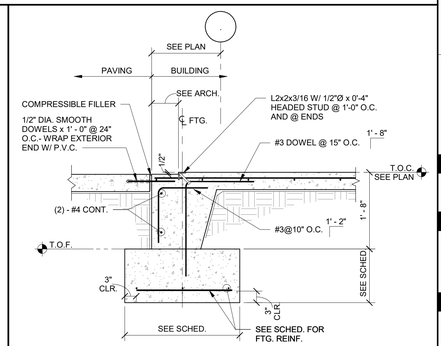
TYPICAL DETAIL
INTERIOR CMU ON STRIP FOOTING AT DOUBLE WALL

9 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
INTERIOR LOADBEARING CMU ON STRIP FTG.

5 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
EXTERIOR STRIP FOOTING AT OVERHEAD DOORS

1 SCALE: 3/4" = 1'-0"

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PROFESSIONAL ENGINEER
01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL FOUNDATION DETAILS

SHEET NO.
S3.03

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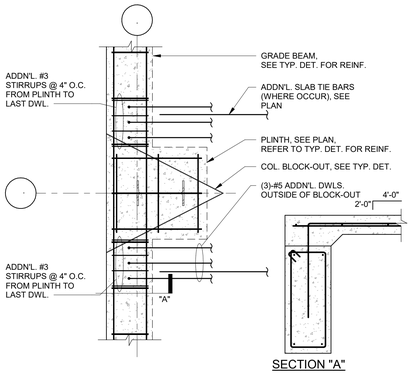
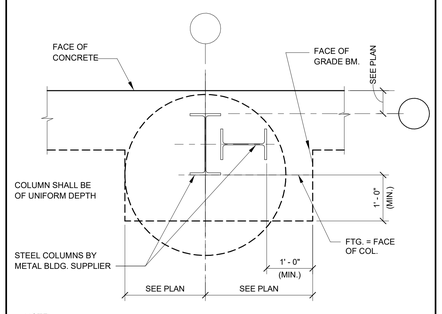


TYPICAL DETAIL
ADDITIONAL REINFORCING AT PERIMETER COLUMNS

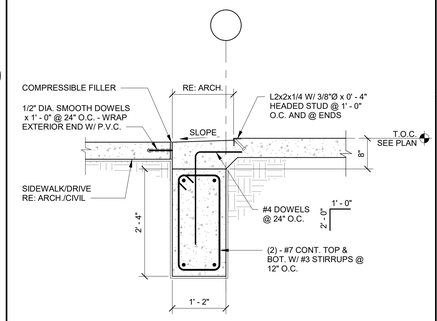
20 SCALE: 3/4" = 1'-0"



NOTE:
1. LOCATIONS OF PORTAL FRAMES ARE UNKNOWN UNTIL PEMB SHOP DRAWINGS ARE RECEIVED, G.C. TO COORDINATE LOCATIONS AND ADJUST PLINTH SIZES ACCORDINGLY

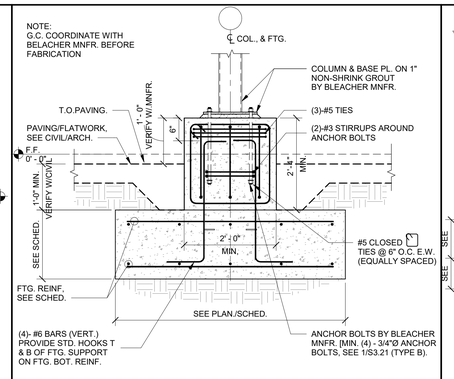
TYPICAL DETAIL
PLAN AT PORTAL FRAME

16 SCALE: 3/4" = 1'-0"



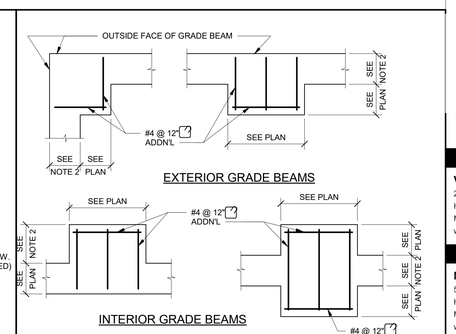
TYPICAL DETAIL
SLAB EDGE AT OVERHEAD DOORS

12 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
BLEACHER COLUMN AT SPREAD FOOTING

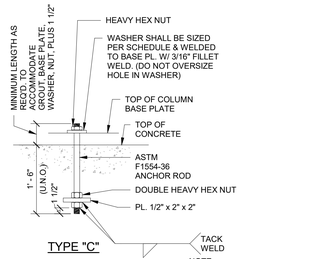
8 SCALE: 3/4" = 1'-0"



NOTES:
1. PLAN VIEWS FOR TYPICAL WIDENED GRADE BEAMS ARE SHOWN. FOR SIMILAR CONDITION NOT SHOWN, PROVIDE [4] ADDN'L. @ 12" O.C. MAX. IN WIDENED SECTION.
2. SEE DETAIL SHEETS FOR GRADE BEAM WIDTH.

TYPICAL DETAIL
ADDITIONAL BARS AT WIDENED GRADE BEAM (PLAN VIEW)

4 SCALE: N.T.S.



TYPE "C"

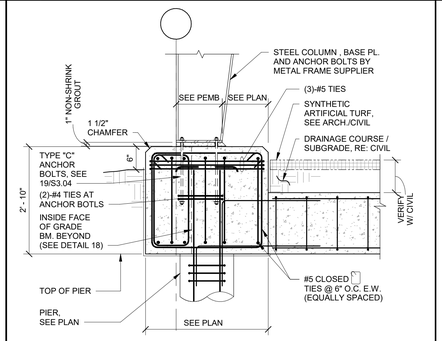
TYPE "B" WASHER SCHEDULE		
ANCHOR ROD DIA.	WASHER SIZE*	MIN. WASHER THICKNESS
3/4"	2"	1/4"
7/8"	2 1/2"	5/16"
1"	3"	3/8"
1 1/4"	3 1/2"	1/2"
1 1/2"	4"	1/2"
1 3/4"	4 1/2"	5/8"
2"	5"	3/4"
2 1/2"	5 1/2"	7/8"

NOTE:
USE TYPE "C" ANCHOR BOLTS AT COLUMNS WITH DIAGONAL BRACES, MOMENT CONNECTIONS, & AT CANOPY COLUMNS & AT PEMB COLUMNS

*CIRCULAR OR SQUARE WASHERS MEETING WASHER SIZE ARE ACCEPTABLE

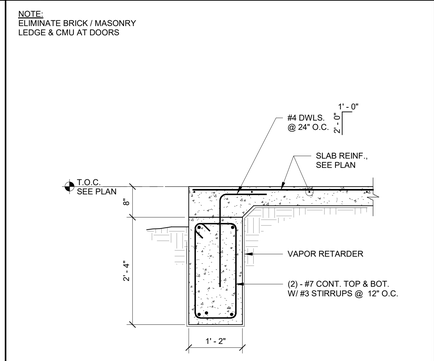
TYPICAL DETAIL
ANCHOR BOLT

19 SCALE: N.T.S.



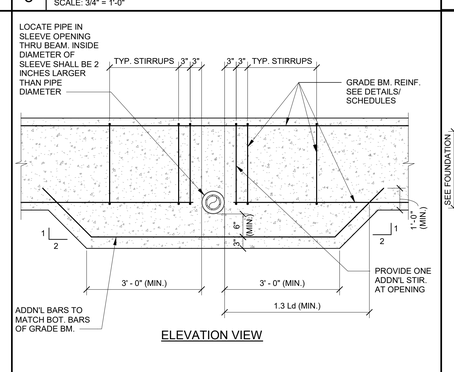
TYPICAL DETAIL
WIDENED GRADE BEAM AT EXTERIOR PRE-ENGINEERED METAL BUILDING COLUMN

15 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
EXTERIOR GRADE BEAM

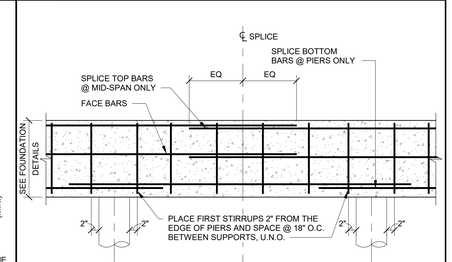
11 SCALE: 3/4" = 1'-0"



ELEVATION VIEW

TYPICAL DETAIL
OPENING THRU GRADE BEAM THAT CONFLICTS WITH BOTTOM REINFORCEMENT

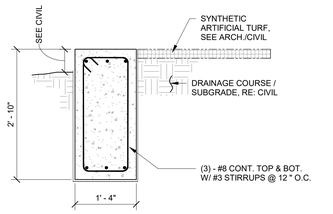
7 SCALE: N.T.S.



NOTES:
1. SLAB STEEL NOT SHOWN FOR CLARITY.
2. SEE TYPICAL DETAIL "TENSION DEVELOPMENT AND SPLICE LENGTH" FOR SPLICE DIMENSION.

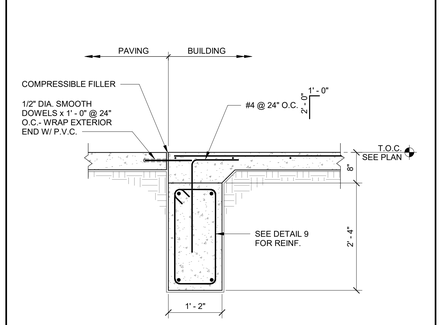
TYPICAL DETAIL
BEAM REINFORCING SPLICE DETAIL

3 SCALE:N.T.S.



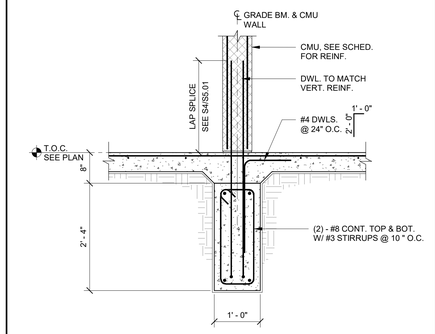
TYPICAL DETAIL
GRADE BEAM AT EXTERIOR PRE-ENGINEERED METAL BUILDING

18 SCALE: 3/4" = 1'-0"



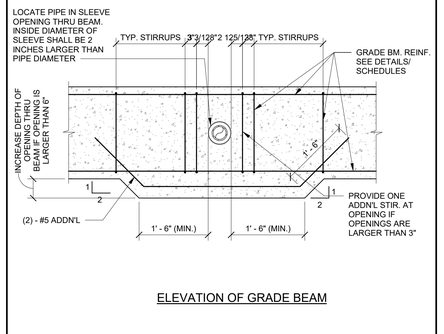
TYPICAL DETAIL
EXTERIOR GRADE BEAM AT DOORS/FLATWORK

14 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
INTERIOR GRADE BEAM AT NON-LOAD BEARING WALL

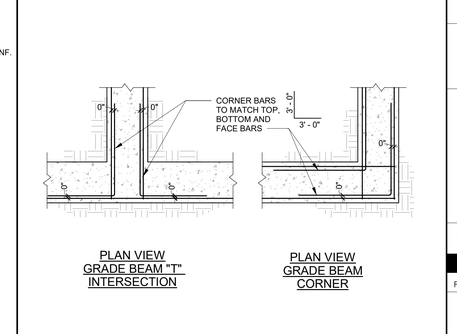
10 SCALE: 3/4" = 1'-0"



ELEVATION OF GRADE BEAM

TYPICAL DETAIL
OPENING THRU GRADE BEAM

6 SCALE: N.T.S.

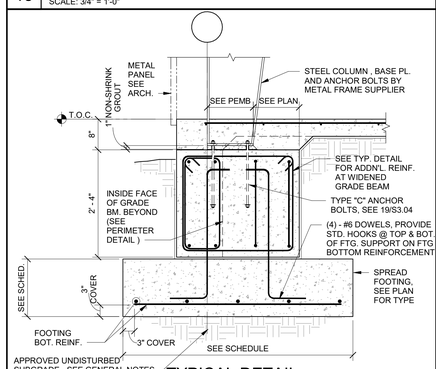


PLAN VIEW
GRADE BEAM "T" INTERSECTION

PLAN VIEW
GRADE BEAM CORNER

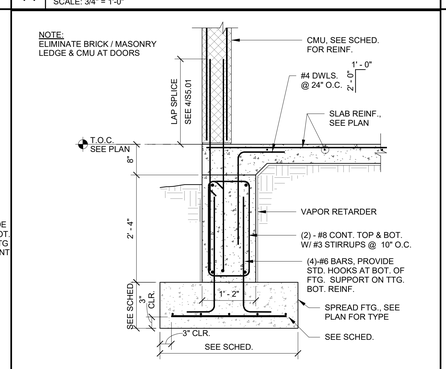
TYPICAL DETAIL
GRADE BEAM REINFORCEMENT STEEL CORNER BARS

2 SCALE: N.T.S.



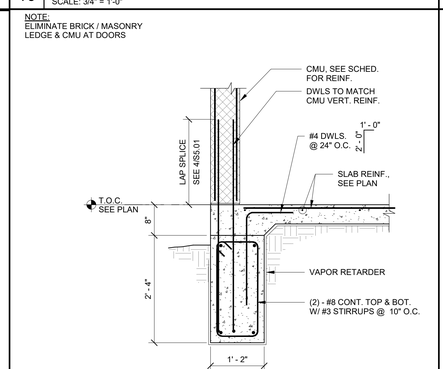
TYPICAL DETAIL
WIDENED GRADE BEAM AT EXTERIOR PRE-ENGINEERED METAL BUILDING COLUMN

17 SCALE: 3/4" = 1'-0"



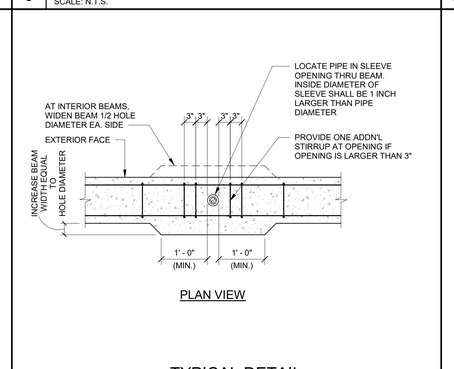
TYPICAL DETAIL
PERIMETER GRADE BEAM WITH SPREAD FTG.

13 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
EXTERIOR GRADE BEAM

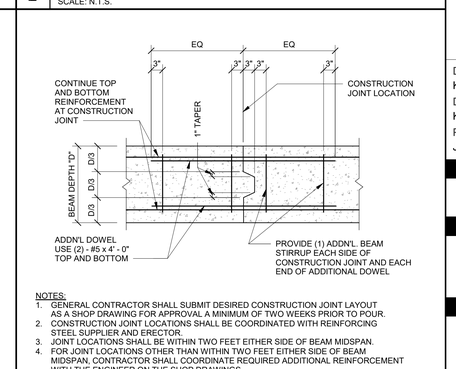
9 SCALE: 3/4" = 1'-0"



PLAN VIEW

TYPICAL DETAIL
VERTICAL HOLE THRU GRADE BEAM LARGER THAN 3" DIAMETER

5 SCALE: N.T.S.



NOTES:
1. GENERAL CONTRACTOR SHALL SUBMIT DESIRED CONSTRUCTION JOINT LAYOUT AS A SHOP DRAWING FOR APPROVAL A MINIMUM OF TWO WEEKS PRIOR TO POUR.
2. CONSTRUCTION JOINT LOCATIONS SHALL BE COORDINATED WITH REINFORCING STEEL SUPPLIER AND ERECTOR.
3. JOINT LOCATIONS SHALL BE WITHIN TWO FEET EITHER SIDE OF BEAM MIDSPAN.
4. FOR JOINT LOCATIONS OTHER THAN WITHIN TWO FEET EITHER SIDE OF BEAM MIDSPAN, CONTRACTOR SHALL COORDINATE REQUIRED ADDITIONAL REINFORCEMENT WITH THE ENGINEER ON THE SHOP DRAWINGS.

TYPICAL DETAIL
GRADE BEAM CONSTRUCTION JOINT

1 SCALE: N.T.S.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

Matrix Structural Engineers
TBPE Firm Registration No. F-2640
STATE OF TEXAS
KHALIL TABAJA
137127
LICENSED PROFESSIONAL ENGINEER
01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL FOUNDATION DETAILS

SHEET NO.
S3.04

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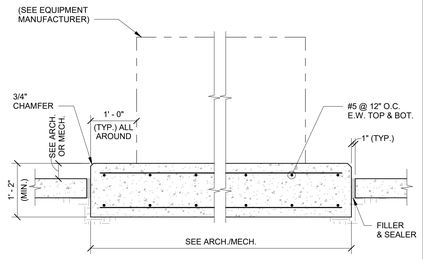
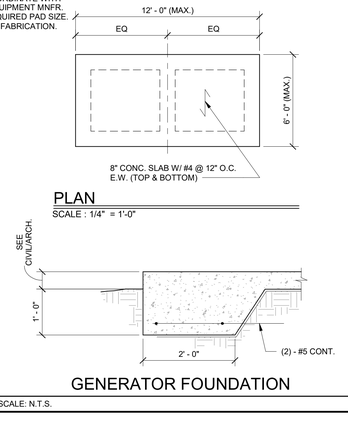
NOTE:
G.C. COORDINATE WITH MEP./EQUIPMENT MNFR. FOR REQUIRED PAD SIZE. BEFORE FABRICATION.



TYPICAL DETAIL
CHILLER PAD

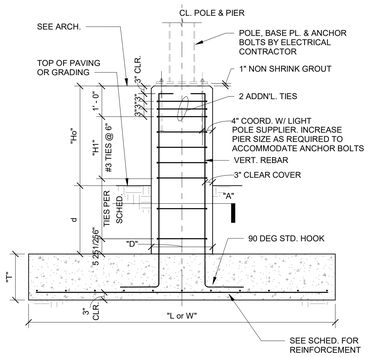
20 SCALE: N.T.S.

NOTE:
G.C. COORDINATE WITH MEP./EQUIPMENT MNFR. FOR REQUIRED PAD SIZE. BEFORE FABRICATION.



GENERATOR FOUNDATION

19 SCALE: N.T.S.

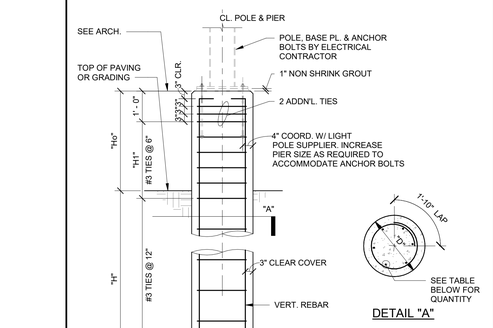


POLE MARK	NOM. POLE HEIGHT	ASSUMED EPA (sf)	"Ho" ABOVE GRADE	"H1"	"D" DIAMETER OF PIER	VERTICAL REINF	TIES	FOOTING (LxWxT)	"d" DEPTH OF FOOTING	FOOTING REINF.	REMARKS
LP0	10' - 0"	4.0	RE: ARCH.	1' - 0"	18"	5 - #5	#3 @ 12"	3'-6"x3'-6"x2'-0"	12"	(4) - #5 Ea. Way	PEDESTRIAN LIGHT POLE
LP1	15' - 0"	5.0	RE: ARCH.	1' - 6"	24"	6 - #6	#3 @ 12"	4'-6"x4'-6"x2'-0"	12"	(6) - #5 Ea. Way	TYPICAL PARKING
LP2	25' - 0"	10.0	RE: ARCH.	1' - 6"	24"	6 - #6	#3 @ 12"	5'-6"x5'-6"x2'-0"	18"	(6) - #6 Ea. Way	TYPICAL PARKING
LP3	35' - 0"	10.0	RE: ARCH.	1' - 6"	24"	6 - #7	#3 @ 12"	8'-0"x8'-0"x2'-0"	18"	(8) - #7 Ea. Way	
LP4	75' - 0"	60.0	RE: ARCH.	2' - 6"	42"	15- #9	#3 @ 18"	14'-6"x14'-6"x2'-0"	36"	(13) - #8 Ea. Way	RE: ARCH.

NOTES:
1. WIND LOAD CRITERIA IS PER IBC2018 Vult = 128 MPH.
2. CONCRETE COMPRESSIVE STRENGTH, F'C = 3,000 PSI (NWC), WITH A MAX WATER/CEMENT RATIO OF 0.54.
3. STEEL REINFORCEMENT SHALL BE ASTM A615, GR. 60.
4. REFER TO ARCH DRAWINGS/CIVIL DRAWINGS FOR LOCATIONS OF LIGHT POLES.
5. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION (AND SPECIFICATIONS FOR LIGHT STANDARDS).
6. VERIFY PROJECTION OF CONCRETE ABOVE GROUND WITH ARCHITECT.
7. EPA INDICATES MAXIMUM EXPOSED PROJECTED AREA AT THE TOP OF THE POLE IN ANY DIRECTION.
8. FOR A STATED POLE HEIGHT SHOWN ON THE TABLE, THE DEPTH OF PIER IS DEEMED ADEQUATE IF EPA IS LESS THAN SHOWN ON TABLE ABOVE.
9. CONCRETE SHALL BE POURED IMMEDIATELY AFTER EXCAVATION.

TYPICAL DETAIL
LIGHT POLE FOUNDATION SPREAD FOOTING ALTERNATE

15 SCALE: N.T.S.



POLE MARK	NOM. POLE HEIGHT	ASSUMED EPA (sf)	"H" DEPTH OF PIER	"Ho" ABOVE GRADE	"H1"	"D" DIAMETER OF PIER	VERTICAL REINF	TIES	REMARKS
LP0	10' - 0"	4.0	3' - 0"	RE: ARCH.	1' - 0"	18"	5 - #5	#3 @ 12"	PEDESTRIAN LIGHT POLE
LP1	15' - 0"	5.0	6' - 0"	RE: ARCH.	1' - 6"	24"	6 - #6	#3 @ 12"	TYPICAL PARKING
LP2	25' - 0"	10.0	9' - 0"	RE: ARCH.	1' - 6"	24"	6 - #6	#3 @ 12"	TYPICAL PARKING
LP3	35' - 0"	10.0	10' - 6"	RE: ARCH.	1' - 6"	24"	6 - #7	#3 @ 12"	
LP4	75' - 0"	40.0	20' -6 "	RE: ARCH.	3' - 6"	42"	15 - #9	#3 @ 18"	RE: ARCH.

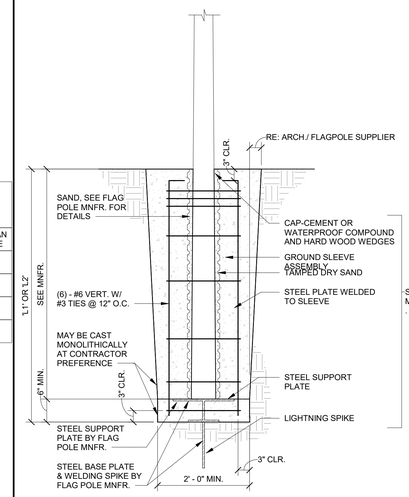
NOTES:
1. WIND LOAD CRITERIA IS PER IBC 2018. Vult = 128 MPH.
2. CONCRETE COMPRESSIVE STRENGTH, F'C = 3,000 PSI (NWC), WITH A MAX WATER/CEMENT RATIO OF 0.54.
3. STEEL REINFORCEMENT SHALL BE ASTM A615, GR. 60.
4. REFER TO ARCH DRAWINGS/CIVIL DRAWINGS FOR LOCATIONS OF LIGHT POLES.
5. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION (AND SPECIFICATIONS FOR LIGHT STANDARDS).
6. VERIFY PROJECTION OF CONCRETE ABOVE GROUND WITH ARCHITECT.
7. EPA INDICATES MAXIMUM EXPOSED PROJECTED AREA AT THE TOP OF THE POLE IN ANY DIRECTION.
8. FOR A STATED POLE HEIGHT SHOWN ON THE TABLE, THE DEPTH OF PIER IS DEEMED ADEQUATE IF EPA IS LESS THAN SHOWN ON TABLE ABOVE.

TYPICAL DETAIL
LIGHT POLE FOUNDATION

7 SCALE: N.T.S.

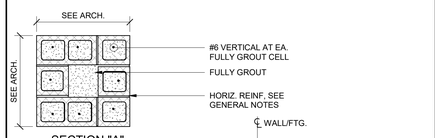
MIN. 'L' DEPTH			
MAX. POLE HEIGHT (ft.)	MAX. FLAG AREA ft²	'L1'	'L2'
20	24	5' - 6"	4' - 6"
25	30	6' - 6"	5' - 6"
30	60	7' - 0"	6' - 0"
35	60	7' - 6"	7' - 0"
45	96	10' - 0"	8' - 6"
50	150	11' - 0"	8' - 6"

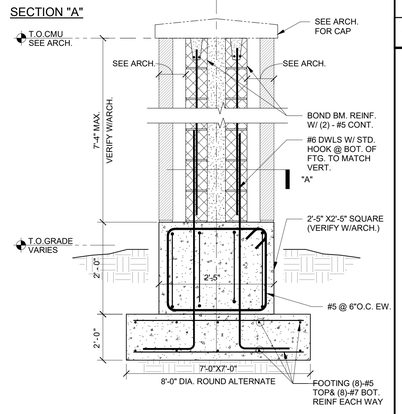
NOTES:
1. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH A MAXIMUM AGGREGATE SIZE OF 1 1/2" AND A MAXIMUM WATER / CEMENT RATIO OF 0.54.
2. ALL REINFORCEMENT SHALL CONFORM TO ASTM A615, GR. 60.
3. ASSUMPTIONS FOR FOUNDATION DESIGN INCLUDE A 5"-12", 20-50 FT. POLE W/ FIXTURES AND A MAXIMUM FLAG AREA OF 24-150 SQ. FT.
4. SEE MNFR. DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. WIND LOAD CRITERIA IS PER IBC 2018, Vult = 128 MPH.
6. FOR A STATED POLE HEIGHT SHOWN ON THE TABLE, THE DEPTH OF PIER IS DEEMED ADEQUATE IF THE MAX. FLAG AREA IS LESS THAN SHOWN ON TABLE ABOVE. WHERE MULTIPLE FLAGS ARE INSTALLED, THE COMBINED AREA OF THE FLAGS SHALL BE USED.
7. USE DEPTH 'L2' WHERE FLAG POLE IS CONFINED BY PAVING, AT BASE, OTHERWISE USE 'L1'.



TYPICAL DETAIL
FLAG POLE FOUNDATION

3 SCALE: 3/4" = 1'-0"

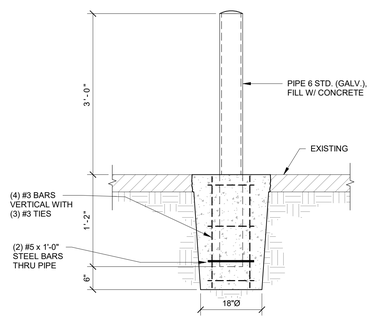




DETAIL AT CMU PILASTER

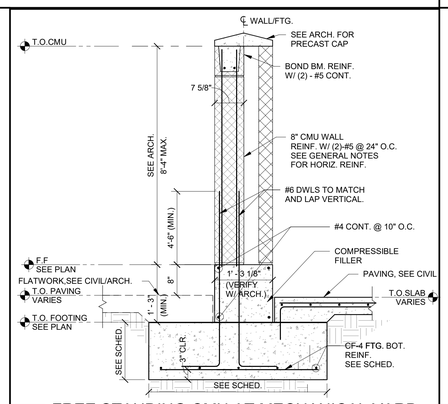
17 SCALE: 3/4" = 1'-0"

NOTES:
1. BOLLARD IS NOT DESIGNED AS A VEHICLE BARRIER, BUT RATHER IS INTENDED AS A TRAFFIC DIVERTER AND IS NOT DESIGNED FOR SIGNIFICANT IMPACT LOADS.



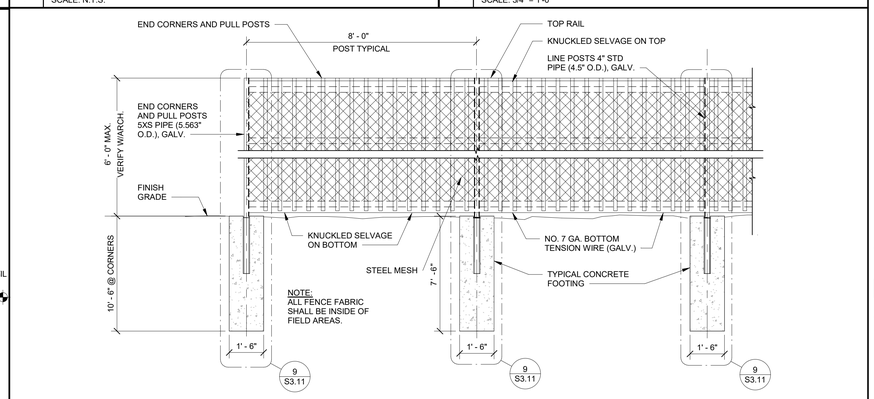
TYPICAL DETAIL
TRAFFIC DIVERTER BOLLARD

14 SCALE: 3/4" = 1'-0"



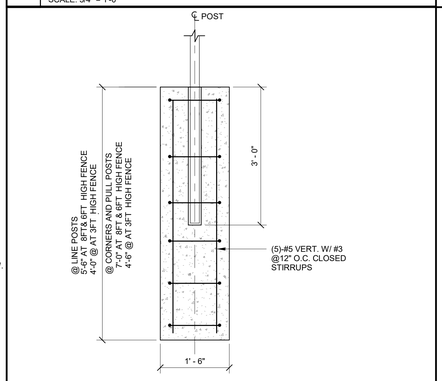
FREE STANDING CMU AT MECHANICAL YARD

10 SCALE: 3/4" = 1'-0"



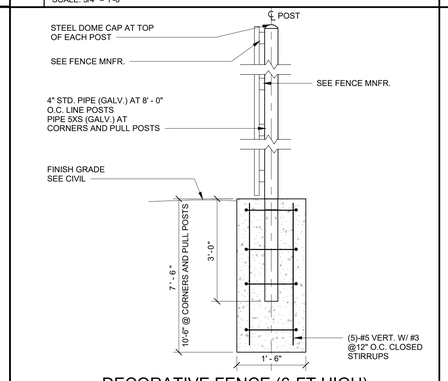
ELEVATION OF 6'-0" HIGH DECORATIVE FENCE

6 SCALE: N.T.S.



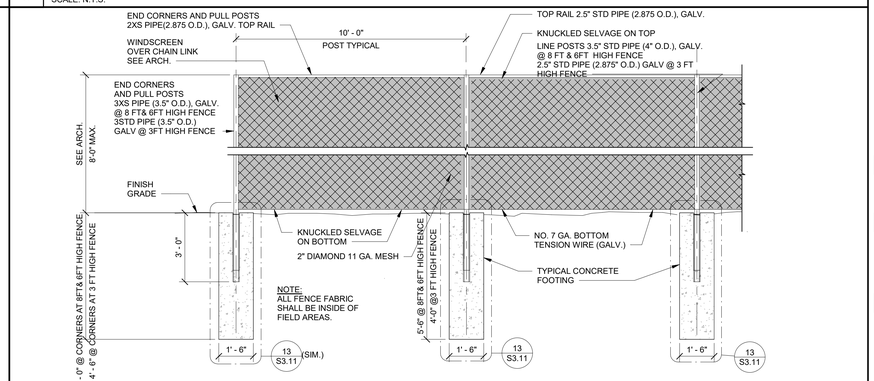
CHAIN-LINK FENCE DETAIL

13 SCALE: N.T.S.



DECORATIVE FENCE (6-FT HIGH) FOUNDATION DETAIL

9 SCALE: N.T.S.



ELEVATION OF CHAIN LINK FENCE WITH WINDSCREEN

5 SCALE: N.T.S.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

Matrix Structural Engineers
TBPE Firm Registration No. F-2640

01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL SITE DETAILS

SHEET NO.
S3.11

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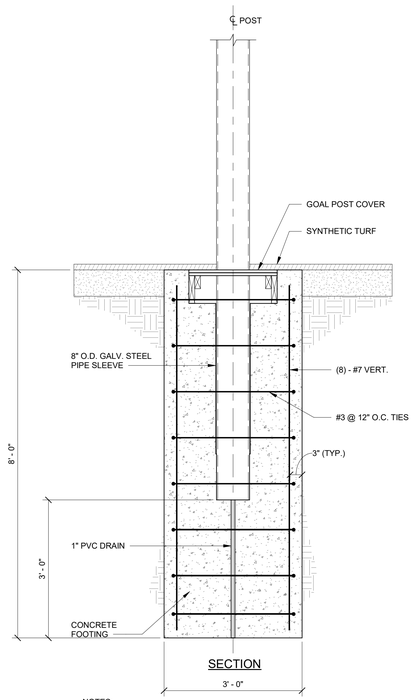
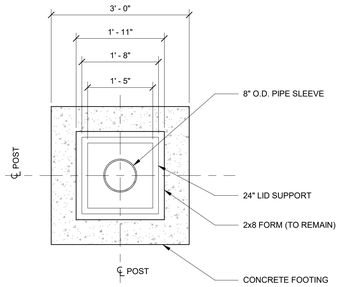


SECTION

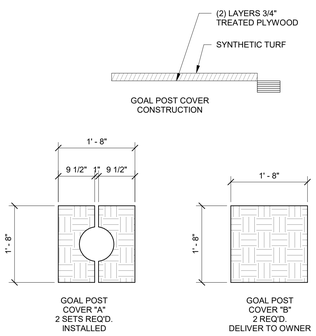
NOTES:
1. DEPTH INSET GOAL POST WILL BE ADJUSTED SUCH THAT THE ELEVATION FROM THE TOP OF THE SYNTHETIC TURF IS 10' - 0".
2. CONTRACTOR SHALL CONFIRM INSTALLATION AND FOUNDATION DETAILS WITH GOAL POST MANUFACTURER.



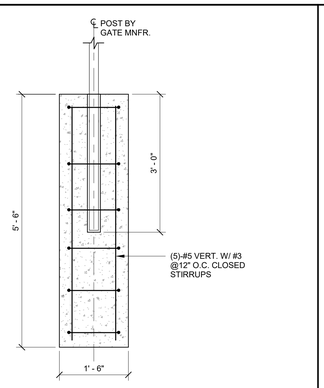
PLAN

GOAL POST FOUNDATION DETAIL

19 SCALE: 3/4" = 1'-0"



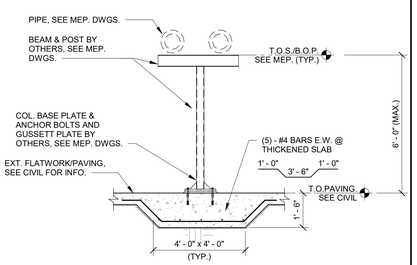
GOAL POST COVERS



DETAIL AT DECORATIVE EGRESS GATE

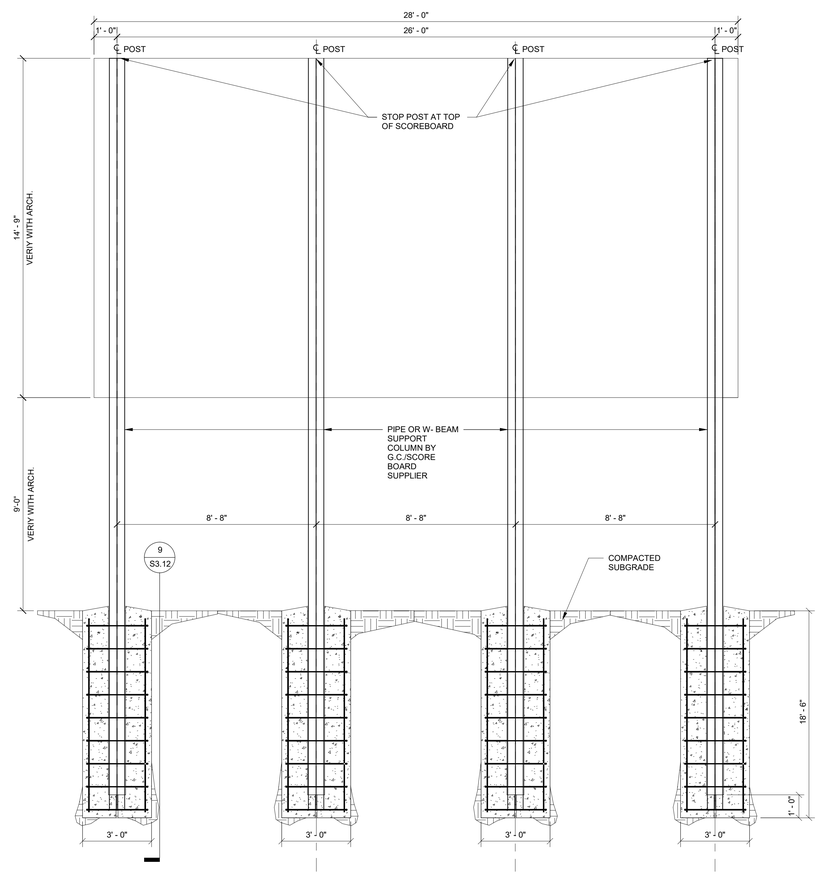
12 SCALE: N.T.S.

NOTES:
1. SEE MEP DRAWINGS FOR LOCATIONS, QUANTITY AND DIMENSIONS.
2. FRAME SPACING SHALL NOT EXCEED 10' - 0".
3. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED..



PIPE RACK SUPPORT (EXTERIOR)

11 SCALE: 3/8" = 1'-0"



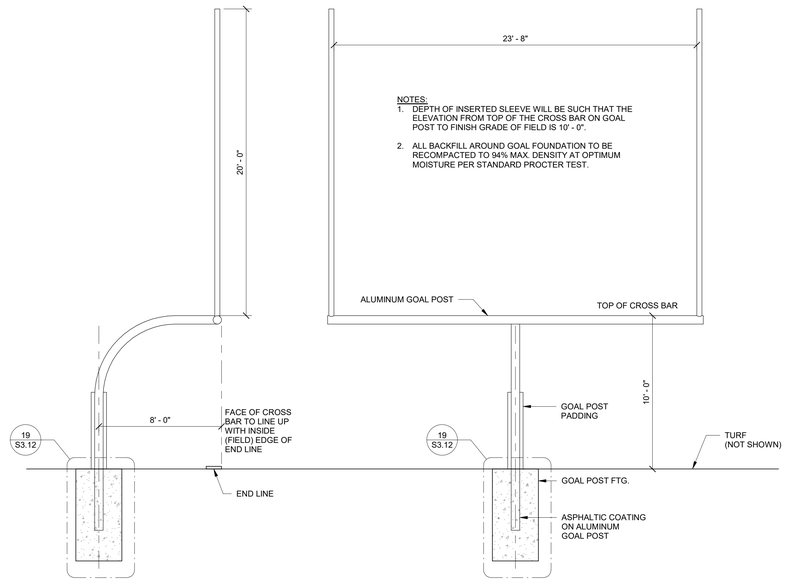
NOTE:
DESIGN BASED ON FAIR PLAY BASEBALL SCOREBOARD MODEL SB.9928-L.

DESIGN SCORE BOARD DIMENSION:
HEIGHT: 9'-0"
LENGTH: 28'-0"
DEPTH: 5"

SCOREBOARD-FOOTBALL DETAIL

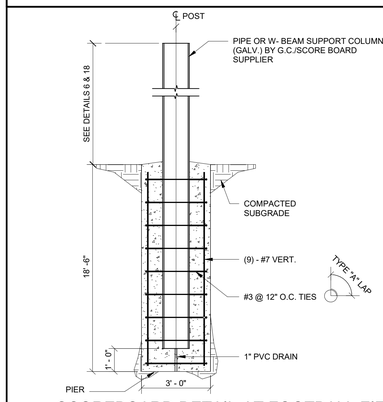
6 SCALE: N.T.S.

NOTES:
1. GOAL POSTS SHALL BE ALL ALUMINUM WITH POWDER COATED FINISH. COLOR TO BE YELLOW.
2. CONTRACTOR SHALL PROVIDE SET OF TWO GOAL POST PADS. PAD SHALL BE 84" HIGH WITH 5" DIAMETER HOLE. PROVIDE THE PADS IN TWO SEPARATE COLORS TO BE SELECTED BY OWNER.
3. CONTRACTOR SHALL PROVIDE ALUMINUM GOAL POST AS MANUFACTURED BY GILMAN GEAR OR APPROVED EQUAL. MAIN STANDARD SHALL BE 10' - 0" HIGH X 5"Ø. CROSS BAR SHALL BE 23' - 4" X 5" Ø. UPRIGHTS SHALL BE 20' - 0" HIGH X 4"Ø. GOAL POST SHALL BE SET IN 8'Ø GALVANIZED STEEL PIPE SLEEVE AND SECURED WITH STAINLESS STEEL HARDWARE.
4. REFER TO ARCH. FOR NUMBER OF GOAL POSTS AND THEIR LOCATIONS.



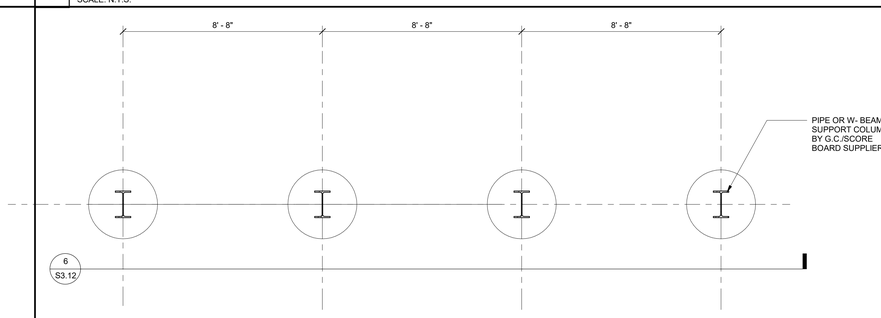
GOAL POST DETAIL

17 SCALE: 1/4" = 1'-0"



SCOREBOARD DETAIL-AT FOOTBALL FIELD

9 SCALE: N.T.S.



NOTES:
1. COORDINATE ALL DIMENSIONS WITH SCORE BOARD MANUFACTURER'S DRAWINGS.
2. SEE ARCH. FOR NUMBER OF SCORE BOARDS AND THEIR LOCATIONS.
3. SPLICING OF COLUMNS IS NOT ALLOWED WITHOUT ENGINEER'S APPROVAL.

SCOREBOARD-FOOTBALL FOUNDATION PLAN

5 SCALE: N.T.S.

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PROFESSIONAL ENGINEER
01/06/2025

NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
YQ/KT	

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL SITE DETAILS

SHEET NO.
S3.12

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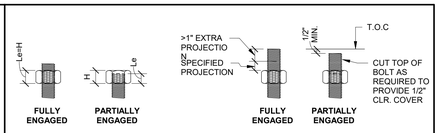
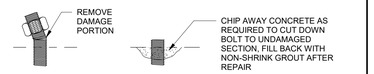


ANCHOR BOLT PROJECTION TOO SHORT

ANCHOR BOLT PROJECTION TOO LONG

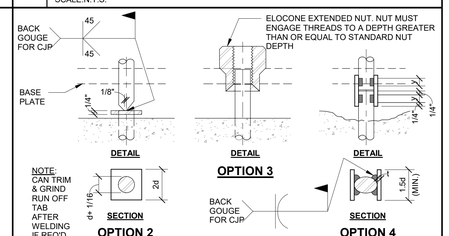


DAMAGED ANCHOR BOLT

NOTES:
1. WHERE ANCHOR BOLT PROJECTION IS TOO LONG, SUBMIT RFI TO EOR FOR APPROVAL AS THE BOTTOM OF ANCHOR BOLT ELEVATION MAY NOT BE ADEQUATE. CUT TOP OF BOLT DOWN AS REQUIRED TO PROVIDE COVER. FOR GRAVITY BASE PLATES CONTRACTOR MAY REPLACE OUT OF PLACE ANCHOR WITH EPOXY ANCHOR AS SHOWN IN DETAIL 5 / S3.21 .
2. WHERE ANCHOR BOLT PROJECTION IS LOWER THAN SPECIFIED BUT FULL THREAD ENGAGEMENT WAS ACHIEVED THE BOLT IS ACCEPTABLE. WHERE PROJECTION IS SUCH THAT THE NUT IS PARTIALLY ENGAGED, SUBMIT RFI TO EOR WITH Le AND H DIMENSIONS AS WELL AS THE COLUMN LOCATION.
3. AT DAMAGED ANCHOR BOLTS OR PARTIALLY THREADED FASTENERS DEEMED UNACCEPTABLE BY THE EOR, CONTRACTOR MAY REPAIR BOLT PER DETAIL 3 / S3.21 IN LIEU OF REPAIR. AT GRAVITY BASE PLATE CONTRACTOR MAY REPLACE BOLT WITH DRILLED AND EPOXIED ANCHOR PER DETAIL 5 / S3.21 .

TYPICAL DETAIL REPAIR AT ANCHOR BOLT

4 SCALE:N.T.S.



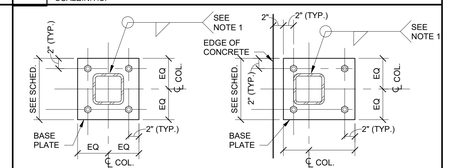
SCHEDULE (GRADE 36)*		
BOLT DIA.	t	y
3/4	1/4"	1"
7/8	1/4"	1 1/4"
1	5/16"	1 1/2"
1 1/4	3/8"	1 3/4"
1 1/2	7/16"	2 1/4"
1 3/4	1/2"	2 1/2"
2	9/16"	2 3/4"

* MULTIPLY CHART VALUES BY 1.3 FOR GRADE 55

NOTE: IF BASEPLATE IS GALVANIZED REPAIR MATERIAL MUST ALSO BE GALVANIZED

TYPICAL DETAIL REPAIR AT ANCHOR BOLT

3 SCALE:N.T.S.



A TYPICAL LOCATION

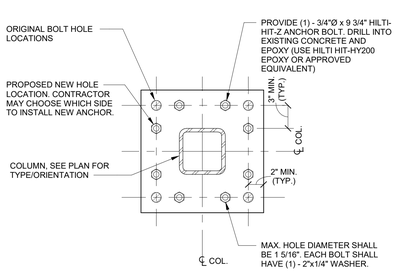
B AT EDGE LOCATIONS

BASE PLATE SCHEDULE		
COLUMN	BASE PLATE	ANCHOR BOLTS
HSS 8 x 8	15" x 15" x 3/4"	(4)-1"Ø TYPE A

NOTES:
1. MINIMUM FILLET WELD ACCORDING TO AISC (1/4" MIN.). WELDING AROUND CORNER RADIUS IS NOT REQUIRED U.N.O.
2. USE OVERSIZED HOLES FOR ANCHOR RODS ACCORDING TO AISC.
3. WASHERS SHALL BE INSTALLED OVER OVERSIZED HOLES.
4. CONTRACTOR SHALL PROVIDE 1/8" THICK TEMPLATE FOR ANCHOR ROD INSTALLATION.

TYPICAL DETAIL BASE PLATE AT HSS COLUMNS

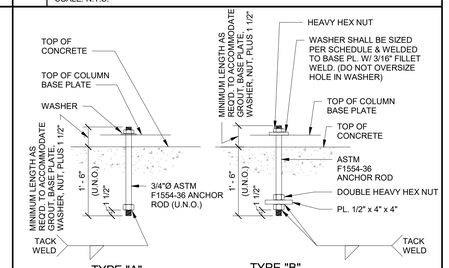
2 SCALE: N.T.S.



NOTES:
1. THIS DETAIL SHALL NOT BE USED AT BRACE FRAMES OR MOMENT FRAMES. ENGINEER APPROVAL IS REQUIRED PRIOR TO INSTALLATION FOR EA. LOCATION WITH DAMAGED ANCHOR BOLTS.
2. CUT AWAY DAMAGED ANCHOR BOLTS AND PROVIDE NEW HOLES FOR EPOXY ANCHOR.
3. HIT-Z-R ANCHORS SHALL BE USED IN LIEU OF HIT-Z ANCHORS AT COLUMNS EXPOSED TO WEATHER.

TYPICAL DETAIL REPAIR AT GRAVITY BASE PLATE

5 SCALE: N.T.S.



TYPE "B" WASHER SCHEDULE		
ANCHOR ROD DIA.	WASHER SIZE*	MIN. WASHER THICKNESS
3/4"	2"	1/4"
7/8"	2 1/2"	5/16"
1"	3"	3/8"
1 1/4"	3 1/2"	1/2"
1 1/2"	4"	1/2"
1 3/4"	4 1/2"	5/8"
2"	5"	3/4"
2 1/2"	5 1/2"	7/8"

NOTE: USE TYPE "B" ANCHOR BOLTS AT COLUMNS WITH DIAGONAL BRACES, MOMENT CONNECTIONS, & AT CANOPY COLUMNS

*CIRCULAR OR SQUARE WASHERS MEETING WASHER SIZE ARE ACCEPTABLE

TYPICAL DETAIL ANCHOR BOLT

1 SCALE: N.T.S.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

NEW CANEY ISD
NEW CANEY, TEXAS

Matrix Structural Engineers
TBPE Firm Registration No. F-2640

01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.

23-155.00

SHEET TITLE

TYP. ANCHOR BOLTS & BASE PLATE DETAILS

SHEET NO.

S3.21

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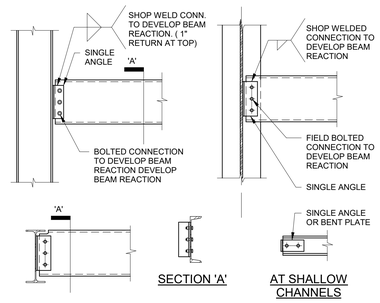
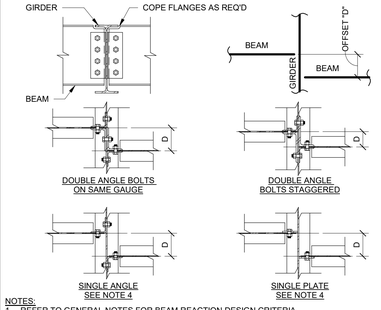


NOTES:
1. ANGLES MAY BE SHOP WELDED TO THE CHANNEL AND FIELD BOLTED TO THE COLUMN AT CONTRACTOR'S OPTION.
2. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
3. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN A.I.S.C. MANUAL WHERE APPLICABLE.
4. REFER TO GENERAL NOTES FOR BOLT TYPE.

TYPICAL DETAIL
CONNECTION AT CHANNELS

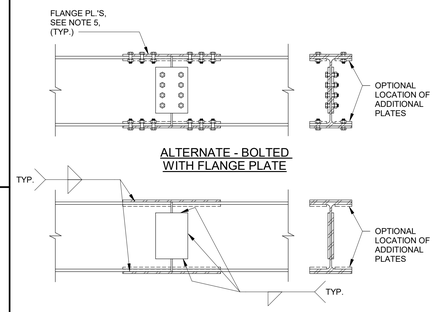
8 SCALE: N.T.S.



NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
2. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN AISC MANUAL WHERE APPLICABLE.
3. WELDED/BOLTED, WELDED/WELDED OR BOLTED/BOLTED CONNECTIONS PER AISC ARE PERMITTED.
4. SINGLE ANGLE AND SINGLE PLATE CONNECTIONS SHALL ONLY BE USED AT SUPPORTED BEAM ENDS. SEE 1 / S4.01 FOR DEFINITION FOR SUPPORTED BEAM.
5. IN LIEU OF DETAILS SHOWN, STEEL DETAILER MAY SUGGEST ALTERNATE DETAILS FOR REVIEW AND APPROVAL.

TYPICAL DETAIL
CONNECTION AT OFFSET BEAMS

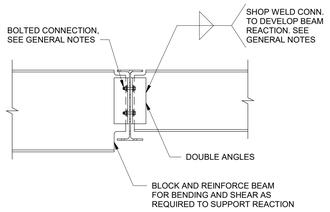
4 SCALE: N.T.S.



NOTES:
1. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.
2. ALL BOLTED MOMENT AND AXIAL CONNECTIONS SHALL USE SLIP CRITICAL BOLTS, ALLOWABLE STRENGTH OF BOLTS SHALL BE BASED ON A CLASS "A" FAYING SURFACE. DO NOT PAINT STEEL AT SLIP CRITICAL CONNECTIONS.
3. U.N.O. FLANGE PLATES, BOLTS, AND WELDS SHOWN SHALL BE DESIGNED FOR AN AXIAL TENSION/COMPRESSION EQUAL TO 90% OF THE BEAM PLASTIC MOMENT CAPACITY DIVIDED BY THE DISTANCE BETWEEN FLANGE CENTROIDS. T=C=0.90Mp/(D-tf) ,WHERE DESIGN MOMENTS ARE PROVIDED THEY MAY BE USED IN LIEU OF THE AFOREMENTIONED CRITERIA, T=C=Mu/(D-tf)
4. BOLTED MOMENT CONNECTIONS MAY BE USED IN LIEU OF A FULLY WELDED MOMENT CONNECTION AT CONTRACTOR PREFERENCE EXCEPT WHERE PROHIBITED IN NOTE 5.
5. BOLTED MOMENT CONNECTIONS MAY NOT BE USED AT ROOF BEAMS WHERE THE DECK IS DIRECTLY ATTACHED TO THE BEAM OR WHERE BOLTS WILL INTERFERE WITH JOIST SEATS OR OTHER BEARING CONNECTIONS.
6. BOLTS IN FLANGE SHALL BE SIZED SUCH THAT THE CROSS-SECTIONAL AREA OF THE FLANGE IS NOT REDUCED BY MORE THAN 30%, ANY VARIANCE MUST BE SUBMITTED TO E.O.R. FOR APPROVAL.
7. EXTENDED END PLATES MAY NOT BE USED WHERE PLATES INTERFERE WITH JOIST SEATS OR OTHER BEARINGS CONNECTIVES. LOCALLY CUT DECK IF REQUIRED.

TYPICAL DETAIL
MOMENT SPLICE AT BEAM

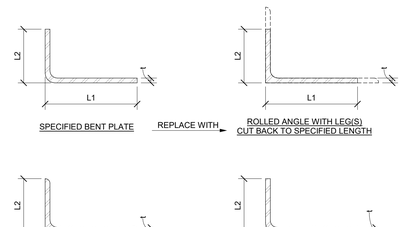
9 SCALE: N.T.S.



NOTES :
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
2. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN AISC MANUAL PART 4 WHERE APPLICABLE.
3. REFER TO GENERAL NOTES FOR BOLT TYPE.
4. ALL CONNECTIONS SHALL MEET THE ROTATIONAL DUCTILITY AND STABILITY REQUIREMENTS PROVIDED BY AISC.

TYPICAL DETAIL
BEAM TO BEAM DOUBLE ANGLE SHEAR CONNECTION

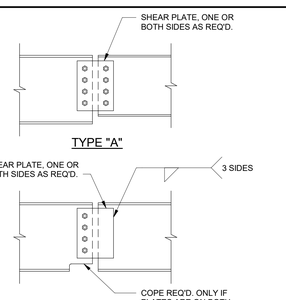
7 SCALE: N.T.S.



NOTE:
1. AT CONTRACTOR/FABRICATOR PREFERENCE ANGLE AND 90° BENT PLATES MAY BE SUBSTITUTED AS SHOWN U.N.O. BY EOR/ARCH.

TYPICAL DETAIL
ANGLE OR BENT PLATE SUBSTITUTION

3 SCALE: N.T.S.

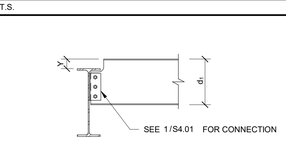


NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
2. REFER TO GENERAL NOTES FOR BOLT TYPE.
3. ALL CONNECTIONS SHALL MEET THE ROTATIONAL DUCTILITY AND STABILITY REQUIREMENTS PROVIDED BY AISC.

OPTION 2: ANGLE TYPE SHEAR SPLICE

TYPICAL DETAIL
SHEAR SPLICE AT BEAM

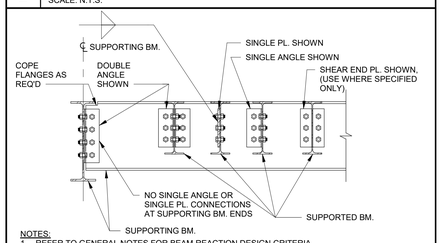
5 SCALE: N.T.S.



NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
2. REFER TO GENERAL NOTES FOR BOLT TYPE.
3. W8x10 BEAMS W/ Y = 2 1/2" MAY USE THE CONFIGURATION FOR Y > d_1.

TYPICAL DETAIL
CONNECTION TO RAISED BEAMS

2 SCALE: N.T.S.



NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
2. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN AISC MANUAL WHERE APPLICABLE.
3. REFER TO GENERAL NOTES FOR BOLT TYPE.
4. SUPPORTED BEAMS PRIMARILY SUPPORT DISTRIBUTED LOADS FROM SLABS OR DECKING.
5. SUPPORTING BEAMS SUPPORT SIGNIFICANT POINT LOADS FROM ONE OR MORE SUPPORTED BEAMS OR FROM COLUMNS BEING TRANSFERRED. SUPPORTING BEAMS MAY BE SUPPORTED BY COLUMNS OR BY OTHER SUPPORTING BEAMS.
6. FOR AISC SIMPLE SHEAR CONNECTIONS AT SUPPORTED BEAM ENDS, USE DOUBLE ANGLE, SINGLE PLATE, OR SINGLE ANGLE U.N.O.
7. WELDED/BOLTED, WELDED/WELDED OR BOLTED/BOLTED CONNECTIONS PER AISC ARE PERMITTED.
8. ALL CONNECTIONS SHALL MEET THE ROTATIONAL DUCTILITY AND STABILITY REQUIREMENTS
9. BEAMS WITH SHEAR END PLATES REQUIRE CLOSE CONTROL IN FABRICATION TO ENSURE PROPER LENGTH AND SQUARE BEAM ENDS, PARTICULARLY WHEN CAMBER IS SPECIFIED.

TYPICAL DETAIL
BEAM TO BEAM SHEAR CONNECTION (4 TYPES)

1 SCALE: N.T.S.

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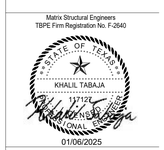
NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

Matrix Structural Engineers
TBPE Firm Registration No. F-2640



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ISSUED: JANUARY 6, 2025

REVISIONS

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Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL STEEL FRAMING DETAILS

SHEET NO.
S4.01

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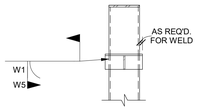
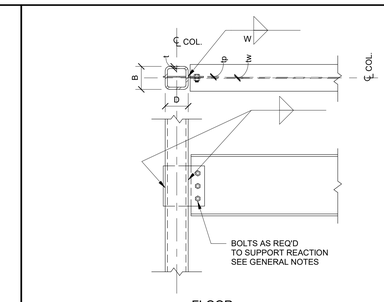


REINFORCED FILLET SIZE W5 SCHEDULE						
t \ W1	3/16	1/4	5/16	3/8	7/16	1/2
3/16	3/16	3/16	1/4	5/16	3/8	7/16
1/4	3/16	3/16	1/4	5/16	3/8	7/16
5/16	N/A	1/4	1/4	5/16	3/8	7/16
3/8	N/A	N/A	3/16	1/4	5/16	3/8
1/2	N/A	N/A	N/A	1/4	5/16	3/8
5/8	N/A	N/A	N/A	N/A	1/4	5/16

NOTES:
1. WHERE CONTRACTOR/FABRICATOR PREFERS SEAT WIDER THAN TUBE COLUMN FLAIR BEVEL WELDS SHALL BE REINFORCED TO MATCH W1 FILLET WELD CAPACITY AS SHOWN
2. REFERENCE S/S4.04 FOR INFORMATION NOT SHOWN.
3. t INDICATES NOMINAL COLUMN THICKNESS
4. THIS DETAIL MAY NOT BE USED FOR ARCHITECTURALLY EXPOSED CONNECTIONS U.N.O.

TYPICAL DETAIL
TUBE SEAT WIDER THAN TUBE COLUMN

8 SCALE:N.T.S.



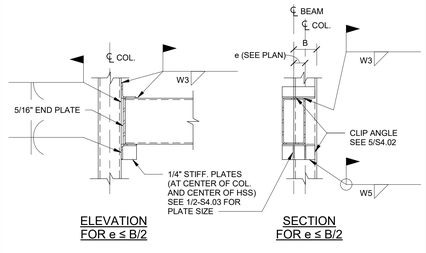
FLOOR

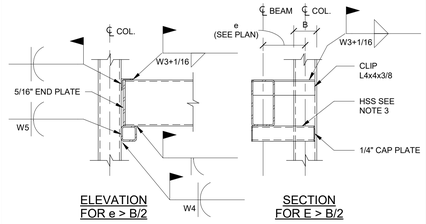
NOTES:
1. tp AND/OR tw SHALL BE LESS THAN OR EQUAL TO 1/4" AT 3/16" THICK HSS TUBES. AT THICKER TUBES tp AND/OR tw SHALL BE LESS THAN OR EQUAL TO 7/16" FOR CONNECTIONS WITH 2 TO 5 BOLTS, AND SHALL BE LESS THAN OR EQUAL TO 5/16" FOR CONNECTIONS WITH 6 OR MORE BOLTS.
2. PLATE DEPTH "L" SHALL NOT BE LESS THAN 1/2 THE "T" DIMENSION OF THE SUPPORTED BEAM.

TYPICAL DETAIL
STEEL BEAM TO HSS
COLUMN CONNECTION AT FLOOR

4 SCALE: N.T.S.

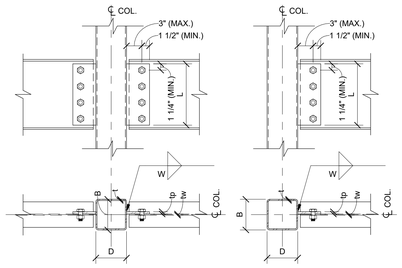
NOTES:
1. SEE S/S4.02 FOR INFORMATION NOT SHOWN.
2. W3 SHALL BE W1 + 1/16" FOR (e-B/2)<6", and W1+ 1/4" FOR (e-B/2)>6" U.N.O.
3. HSS SHALL MATCH ANGLE DEPTH, WIDTH AND THICKNESS IN S/S4.02(E.G. FOR L6x4x3/8 USE HSS6x4x3/8)





TYPICAL DETAIL OFFSET
TUBE BEAM TO COLUMN OFFSET CONNECTION

6 SCALE: N.T.S.



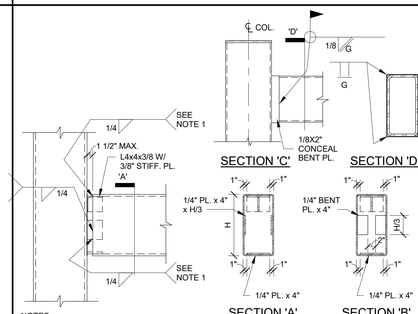
MAX. COLUMN WIDTH		MAX. DESIGN END REACTION Ru (KIPS)*					
t	B OR D MAX.	L (IN.)	t = 3/16"	t = 1/4"	t = 5/16"	t = 3/8"	t = 1/2"	t = 5/8"
3/16"	6"	5.5	15	20	25	30	40	50
1/4"	8"	8.5	36	48	60	73	97	121
5/16"	10"	11.5	66	89	111	133	178	222
3/8"	12"	14.5	106	142	177	212	283	354
1/2"	16"	17.5	154	206	258	309	412	516
5/8"	18"	20.5	212	283	354	425	566	708
		23.5	278	373	466	558	744	930
		26.5	354	474	592	710	946	1183

* - VALUES SHOWN FOR ASTM A500 GR. B STEEL. FOR ASTM A500 GR. C, MULTIPLY VALUES BY 1.07.

NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA, REACTIONS SHOWN ARE FACTORED LOADS (LRFD).
2. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN AISC MANUAL WHERE APPLICABLE.
3. REFER TO GENERAL NOTES FOR BOLT TYPE.
4. THIS CONNECTION MAY ONLY BE USED WITH THE GEOMETRY SHOWN ABOVE AND WHERE THE BEAM DESIGN REACTION IS LESS THAN THE VALUE SHOWN IN THE SCHEDULE. ALL VALUES SHOWN ARE ULTIMATE DESIGN (LRFD) VALUES.
5. tp SHALL BE LESS THAN OR EQUAL TO 1/4" AT 3/16" THICK HSS, AND LESS THAN OR EQUAL TO 3/8" AT 1/4" THICK HSS.
6. AT ALL PLATE CONNECTIONS WITH STANDARD HOLES, tp AND/OR tw SHALL BE LESS THAN OR EQUAL TO 7/16" FOR CONNECTIONS WITH 2 TO 5 BOLTS, AND SHALL BE LESS THAN OR EQUAL TO 5/16" FOR CONNECTIONS WITH 6 OR MORE BOLTS. AT ALL PLATE CONNECTIONS WITH HORIZONTAL SHORT SLOTTED HOLES, tp AND/OR tw SHALL BE LESS THAN OR EQUAL TO 7/16 FOR CONNECTIONS WITH 6 OR MORE BOLTS.
7. COLUMN WIDTH B OR D SHALL BE LESS THAN OR EQUAL TO THE MAXIMUM WIDTH SHOWN IN THE SCHEDULE.
8. W SHALL BE 5/8 (tp).
9. FOR TWO SIDED CONNECTIONS, ALL CRITERIA MUST BE MET AT BOTH SIDES. WHERE ONLY ONE SIDE FAILS THE CRITERIA A WT CONNECTION MAY BE PROVIDED AT THAT SIDE.
10. THIS DETAIL IS NOT ALLOWED AT BRACED FRAMES OR OTHER AXIALLY LOADED CONNECTIONS.
11. SEE 1/S4.02 FOR WT CONNECTIONS WHERE THIS DETAIL DOES NOT APPLY.
12. PLATE DEPTH "L" SHALL NOT BE LESS THAN 1/2 THE "T" DIMENSION OF THE SUPPORTED BEAM.

TYPICAL DETAIL
SINGLE PLATE TO RECTANGULAR HSS WALL CONNECTION

2 SCALE: N.T.S.

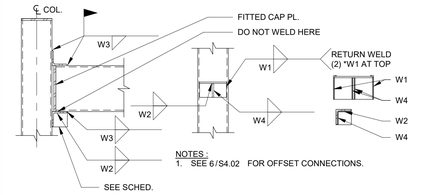


NOTES:
1. TO FACILITATE CONSTRUCTION SHOP WELD ALL CONNECTION PLATES AND ANGLES TO COLUMN AT ONE END OF THE HSS AND SHOP WELD ALL CONNECTION PLATES AND ANGLES TO HSS AT THE OTHER END. REMAINING CONNECTIONS TO BE FIELD WELDED.
2. PROVIDE SECTION 'B' WHERE HSS IS WIDER THAN COLUMN.
3. CONCEAL GAP WITH BENT PLATE AFTER ERECTION AS SHOWN IN SECTION C AND D

HSS BEAM TO HSS COLUMN
AT ENTRY
(HSS ALIGNED WITH COLUMN CENTER LINE)

9 SCALE: N.T.S.

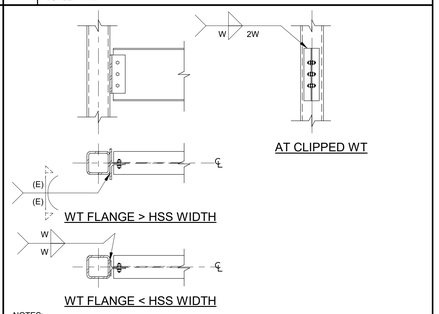
CONNECTION SCHEDULE							
GIRT SIZE	BOTTOM CONN.	STIFF. PL.	TOP ANGLE	W1	W2	W3	W4
HSS14x6	L6x4x1/2 (LLV)	1/2	L4x4x5/16	1/4	5/16	3/16	1/4



NOTES :
1. SEE 6/S4.02 FOR OFFSET CONNECTIONS.

TYPICAL DETAIL
TUBE BEAM TO COLUMN

5 SCALE: N.T.S.



NOTES:
1. WELD SIZES W & E SHALL MEET AISC MIN. SIZE TO ENSURE ROTATIONAL DUCTILITY.
2. WT WEB THICKNESS SHALL NOT EXCEED 7/16".
3. THIS DETAIL MAY BE USED IN LIEU OF THE TYPICAL CONN. DETAIL AT CONTRACTOR PREFERENCE.
4. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
5. REFER TO GENERAL NOTES FOR BOLT TYPE.
6. EITHER WELDED/BOLTED OR WELDED/WELDED CONNECTIONS ARE ACCEPTABLE.

ALTERNATE DETAIL
STEEL BEAM TO HSS COLUMN CONNECTION

1 SCALE: N.T.S.

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STATE OF TEXAS
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01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director KT
Drawn By RC
Designer KT
Quality Control
Proj. Arch. J.ORTIZ

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL STEEL FRAMING DETAILS

SHEET NO.
S4.02

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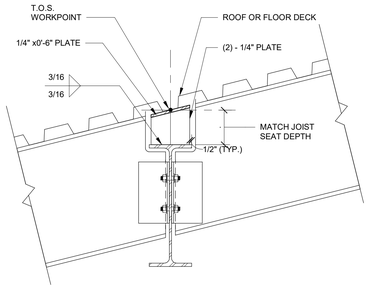
NEW CANEY ISD
NEW CANEY, TEXAS

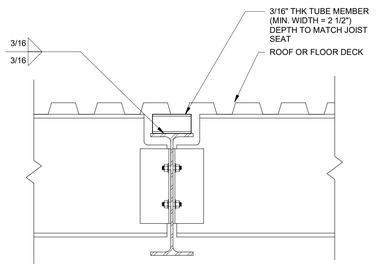
NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III



NOTE:
AT LOCATIONS WITH A JOIST ON ONE SIDE AND A BEAM ON THE OTHER SIDE, PROVIDE FILLER TS MEMBER ON HALF THE FLANGE. ALTERNATIVELY, THE TOP CHORD OF THE JOIST CAN BE EXTENDED TO THE EDGE OF THE MAIN BEAM FLANGE.

TYPICAL DETAIL
FILLER MEMBER FOR DECK AND SUPPORT AT SECONDARY BEAMS PARALLEL TO JOISTS

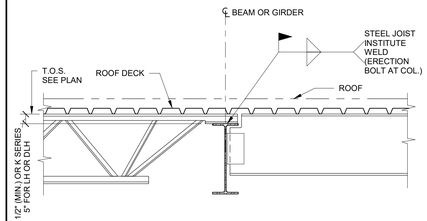
20 SCALE: 1 1/2" = 1'-0"



NOTE:
AT LOCATIONS WITH A JOIST ON ONE SIDE AND A BEAM ON THE OTHER SIDE, PROVIDE FILLER TS MEMBER ON HALF THE FLANGE. ALTERNATIVELY, THE TOP CHORD OF THE JOIST CAN BE EXTENDED TO THE EDGE OF THE MAIN BEAM FLANGE.

TYPICAL DETAIL
FILLER MEMBER FOR DECK AND SUPPORT AT SECONDARY BEAMS PARALLEL TO JOISTS

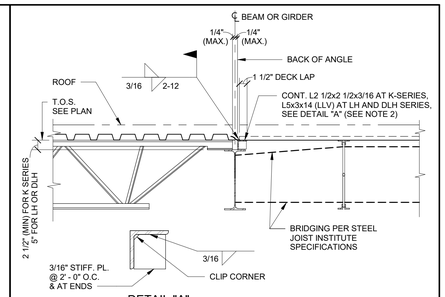
16 SCALE: N.T.S.



NOTE:
COORDINATE JOIST SEATS WITH JOIST SUPPLIER.

TYPICAL DETAIL
STEEL JOIST/STEEL BEAM AT INTERIOR STEEL BEAM, ROOF

12 SCALE: N.T.S.

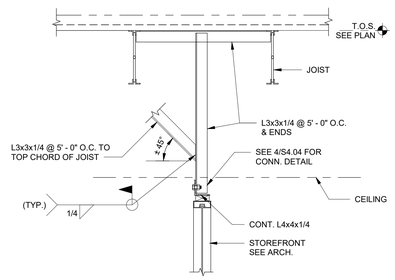


DETAIL "A"

NOTES:
1. PROVIDE JOIST BRIDGING AS REQUIRED BY STEEL JOIST INSTITUTE SPECIFICATIONS.
2. WHERE JOIST SEAT REQUIRES MORE THAN 1/2 THE FLANGE WIDTH FOR BEARINGS EXTEND JOIST SEATS TO THE EDGE OF FLANGE AND PROVIDE ANGLES BETWEEN JOISTS. WHERE JOIST SEAT DEPTH DIFFERS FROM ANGLE LENGTH SHOWN USE CONT. 1/4" BENT PLATE OF EQUAL DEPTH TO JOIST SEAT WITH 3" FLANGE.

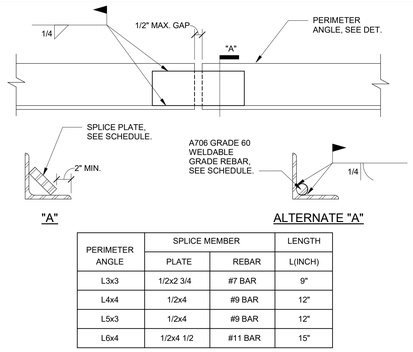
TYPICAL DETAIL OPEN WEB STEEL JOIST INTERIOR STEEL BEAM AT CHANGE IN METAL DECK DIRECTION, ROOF

4 SCALE: N.T.S.



TYPICAL DETAIL
BRACING OF STOREFRONT AT ENTRY

19 SCALE: N.T.S.

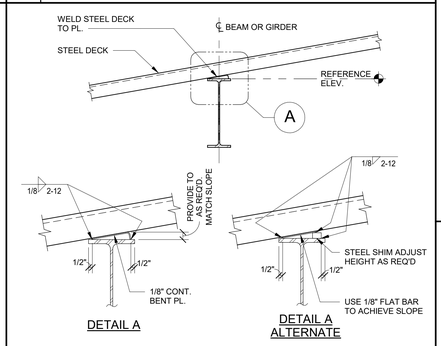


"A" ALTERNATE "A"

PERIMETER ANGLE	SPLICE MEMBER		LENGTH
	PLATE	REBAR	L(INCH)
L3x3	1/2x2 3/4	#7 BAR	9"
L4x4	1/2x4	#9 BAR	12"
L5x3	1/2x4	#9 BAR	12"
L6x4	1/2x4 1/2	#11 BAR	15"

TYPICAL DETAIL
SPLICE AT PERIMETER ROOF ANGLE

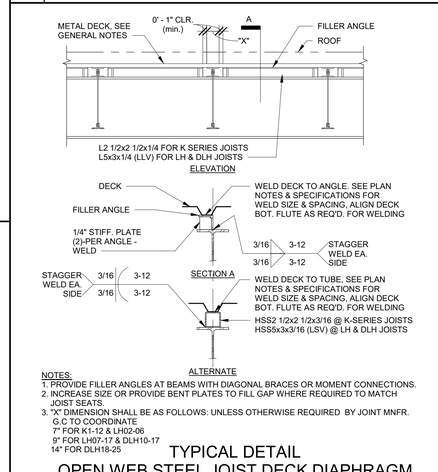
15 SCALE: N.T.S.



DETAIL A DETAIL A ALTERNATE

TYPICAL SLOPING STEEL DECK SUPPORT ON BEAM WITH VERTICAL WEB

11 SCALE: N.T.S.



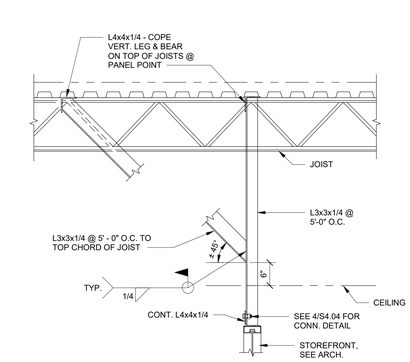
ELEVATION

ALTERNATE

NOTES:
1. PROVIDE FILLER ANGLES AT BEAMS WITH DIAGONAL BRACES OR MOMENT CONNECTIONS.
2. INCREASE SIZE OR PROVIDE BENT PLATES TO FILL GAP WHERE REQUIRED TO MATCH JOIST SEATS.
3. "X" DIMENSION SHALL BE AS FOLLOWS: UNLESS OTHERWISE REQUIRED BY JOINT MNFR.
   G.C TO COORDINATE
   7" FOR K1-12 & LH02-06
   9" FOR LH07-17 & DLH10-17
   14" FOR DLH18-25

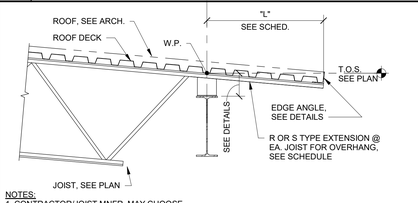
TYPICAL DETAIL
OPEN WEB STEEL JOIST DECK DIAPHRAGM CONNECTION TO STEEL BEAM

3 SCALE: N.T.S.



TYPICAL DETAIL
BRACING OF STOREFRONT AT ENTRY

18 SCALE: N.T.S.



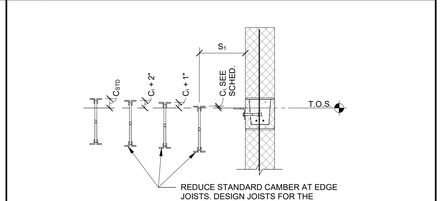
NOTES:
1. CONTRACTOR/JOIST MNFR. MAY CHOOSE EITHER TYPE JOIST EXTENSION SHOWN (OR LARGER) FOR "L" < MAX. "L" SHOWN.
2. FOR ANY "L" JOIST, MNFR. MAY DESIGN JOIST EXTENSION FOR THE FOLLOWING CRITERIA IN LIEU OF SIZE SHOWN, U.N.O.:
   TL = 240 PLF
   TOTAL DEFLECTION ≤ 2 x "L" / 240
   LL = 120 PLF
   LIVE LOAD DEFLECTION < 2 x "L" / 360
   MNFR. SHALL ACCOUNT FOR SKIP LOADING OF LIVE LOADS.
3. LOADS ON JOIST EXTENSIONS SHOWN ON PLAN OR IN DETAILS SHALL BE IN ADDITION TO THOSE SHOWN HERE. DEFLECTION CRITERIA SHALL REMAIN THE SAME AS SHOWN ABOVE. THE SCHEDULE SHOWN HERE DOES NOT APPLY WHERE ADDITIONAL LOADS ARE SHOWN.

TOP CHORD JOIST EXTENSION SCHEDULE*		
MAX "L"	R-TYPE	S-TYPE
≤ 1' - 6"	R1	S3
2' - 0"	R1	S7
2' - 6"	R1	S10
3' - 0"	R1	S12
3' - 6"	R1	N/A
4' - 0"	R3	N/A
4' - 6"	R8	N/A
5' - 0"	R11	N/A
≥ 5' - 6"	DESIGN SPECIAL EXTENSION	

*CONTRACTOR/FABRICATOR MAY CHOOSE EITHER TYPE JOIST EXTENSION FOR "L" ≤ MAX "L" SHOWN

TYPICAL DETAIL
K-JOIST EXTENSION SCHEDULE

14 SCALE: N.T.S.



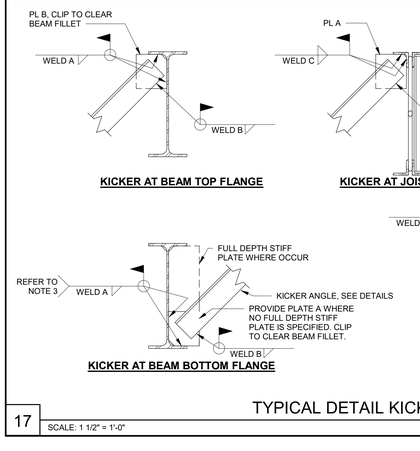
REDUCE STANDARD CAMBER AT EDGE JOISTS. DESIGN JOISTS FOR THE FOLLOWING ROOF LOAD:
DL = 20 PSF (ASD) LL = 20 PSF (ASD)

NOTES:
1. TO FACILITATE DECK INSTALLATION THE MAX. CAMBER OF THE NEAREST JOIST TO THE WALL SHALL BE AS SCHEDULED. ALL LOADING AND DEFLECTION CRITERIA REMAIN THE SAME U.N.O.
2. AT EACH SUBSEQUENT JOIST, CAMBER MAY BE INCREASED 1" UNTIL STANDARD CAMBER IS ACHIEVED.

	MAX. OUTSIDE JOIST CAMBER C_1 (INCHES)		
JOIST SPAN (FT.)	$S_1 \leq 2' - 0"$	$2' - 0" < S_1 \leq 4' - 6"$	$4' - 6" < S_1 \leq 6' - 0"$
0 - 59	0"	1/2"	3/4"
60 - 69	1/2"	3/4"	1"
70 - 79	3/4"	1"	1 1/4"
80 - 89	1"	1 1/4"	1 1/2"
90 - 99	1 1/4"	1 1/2"	1 3/4"
100 - 109	1 1/2"	1 3/4"	2"
110+	1.5 + 2.5 (SPAN - 110)/100	1.75 + 2.5 (SPAN - 110)/100	2 + 2.5 (SPAN - 110)/100

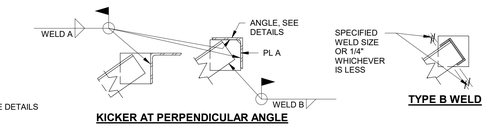
TYPICAL DETAIL
EXTERIOR JOIST CAMBER

10 SCALE: 3/4" = 1'-0"



KICKER AT BEAM TOP FLANGE KICKER AT JOIST TOP FLANGE KICKER AT PERPENDICULAR JOIST

KICKER AT BEAM BOTTOM FLANGE

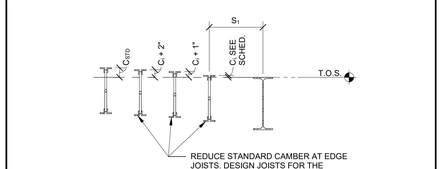


KICKER AT PERPENDICULAR ANGLE

SEE PLAN OR DETAILS FOR BRACE ANGLE SIZE (L3X3X1/4 U.N.O.)					
BRACE ANGLE SIZE	PL A	PL B	WELD A	WELD B	WELD C
L2X2	1/4X4X4	1/4X4X4	3/16	3/16	3/16
L2 1/2X2 1/2 OR L3X3	1/4X4X4	1/4X4X4	3/16	3/16	1/4
L4X4	1/4X5X5	1/4X5X5	5/16	1/4	3/8
L5X5	3/8X6X6	3/8X6X6	3/8	5/16	7/16

TYPICAL DETAIL KICKER ANGLE CONNECTIONS

17 SCALE: 1 1/2" = 1'-0"



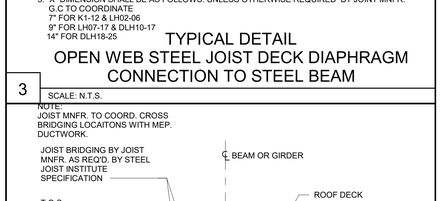
REDUCE STANDARD CAMBER AT EDGE JOISTS. DESIGN JOISTS FOR THE FOLLOWING ROOF LOAD:
DL = 20 PSF (ASD) LL = 20 PSF (ASD)

NOTES:
1. TO FACILITATE DECK INSTALLATION THE MAX. CAMBER OF THE NEAREST JOIST TO THE WALL SHALL BE AS SCHEDULED. ALL LOADING AND DEFLECTION CRITERIA REMAIN THE SAME U.N.O.
2. AT EACH SUBSEQUENT JOIST, CAMBER MAY BE INCREASED 1" UNTIL STANDARD CAMBER IS ACHIEVED.

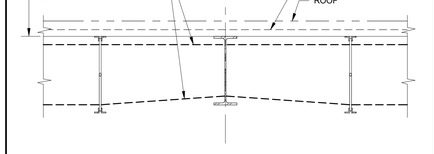
	MAX. OUTSIDE JOIST CAMBER C_1 (INCHES)		
JOIST SPAN (FT.)	$S_1 \leq 2' - 0"$	$2' - 0" < S_1 \leq 4' - 6"$	$4' - 6" < S_1 \leq 6' - 0"$
0 - 59	0"	1/2"	3/4"
60 - 69	1/2"	3/4"	1"
70 - 79	3/4"	1"	1 1/4"
80 - 89	1"	1 1/4"	1 1/2"
90 - 99	1 1/4"	1 1/2"	1 3/4"
100 - 109	1 1/2"	1 3/4"	2"
110+	1.5 + 2.5 (SPAN - 110)/100	1.75 + 2.5 (SPAN - 110)/100	2 + 2.5 (SPAN - 110)/100

TYPICAL DETAIL
EXTERIOR JOIST CAMBER

9 SCALE: 3/4" = 1'-0"



LOAD ON TOP CHORD

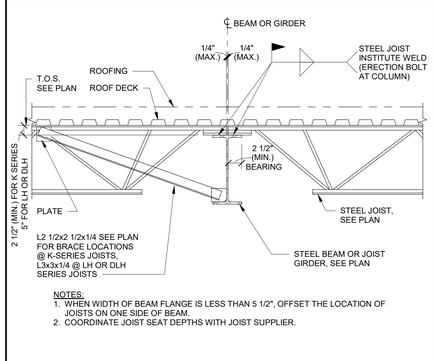


LOAD ON BOTTOM CHORD

NOTES:
1. DIAGONAL BRACE IS NOT REQUIRED FOR "A" LESS THAN 3".
2. PROVIDE DIAGONAL BRACE AT LOCATION OF CONCENTRATED LOADS SUCH AS HEAVY PIPES, MECHANICAL UNITS, HEAVY LIGHTS AND ANY OTHER CONCENTRATED LOADS AS DIRECTED BY EOR.
3. P = CONCENTRATED LOAD.

TYPICAL DETAIL
STIFFENING OF STEEL JOIST FOR CONCENTRATED LOADS

6 SCALE: N.T.S.



NOTES:
1. SEE PLAN/DETAILS FOR LOCATIONS OF ANGLE BRACES.
2. FIELD WELDING OF CONNECTION PLATES SHALL BE AT FABRICATOR'S OPTION.
3. ALL BRACING SHALL BE IN PLACE AND WELDED BEFORE DECK INSTALLATION.
4. BRACE SIZES SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE ON PLAN.
5. SEE GENERAL NOTES FOR DECK CONSTRUCTION.
6. SEE TYPICAL DETAIL "KICKER ANGLE CONNECTIONS FOR ALL PLATES AND WELD SIZES

TYPICAL DETAIL
BEAM BOTTOM FLANGE BRACE JOIST CONSTRUCTION

5 SCALE: N.T.S.

TYPICAL DETAIL
OPEN WEB STEEL JOIST AT INTERIOR TIE BEAM, ROOF

2 SCALE: N.T.S.

NOTES:
1. WHEN WIDTH OF BEAM FLANGE IS LESS THAN 5 1/2", OFFSET THE LOCATION OF JOISTS ON ONE SIDE OF BEAM.
2. COORDINATE JOIST SEAT DEPTHS WITH JOIST SUPPLIER.

TYPICAL DETAIL
OPEN WEB STEEL JOIST AT INTERIOR STEEL BEAM, ROOF

1 SCALE: N.T.S.

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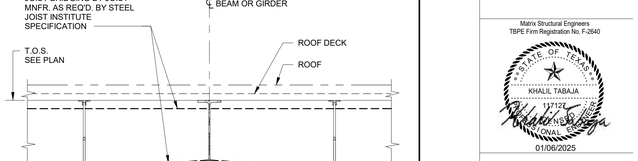
NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

Matrix Structural Engineers
TBPE Firm Registration No. F-2640



ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL STEEL ROOF FRAMING DETAILS

SHEET NO.
S4.03

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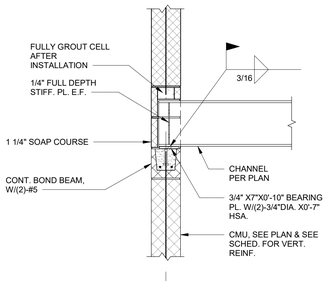
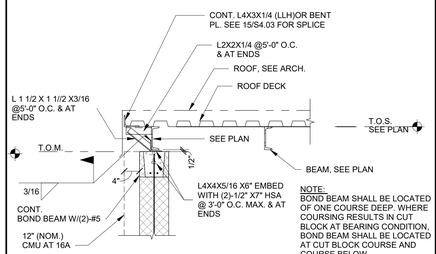


TYPICAL DETAIL
STEEL BEAM AT CMU WALL-AT FLOOR

20 SCALE: N.T.S.

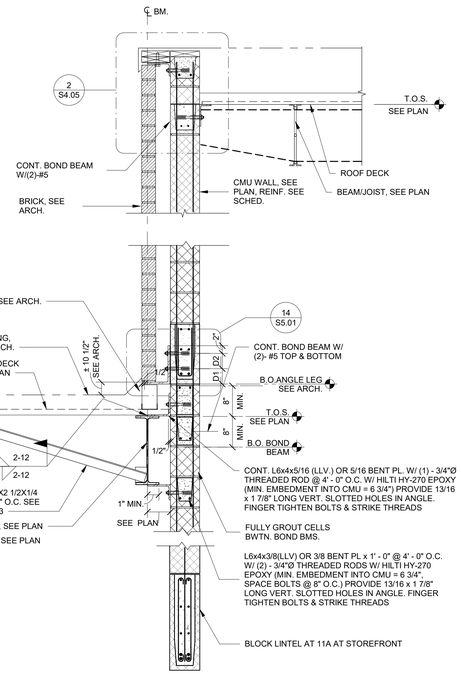


16A

TYPICAL DETAIL
DECK SUPPORT AT CMU WALL

16 SCALE: N.T.S.

NOTE:
BOND BEAM SHALL BE LOCATED OF ONE COURSE DEEP. WHERE COURSING RESULTS IN CUT BLOCK AT BEARING CONDITION, BOND BEAM SHALL BE LOCATED AT CUT BLOCK COURSE AND COURSE BELOW.

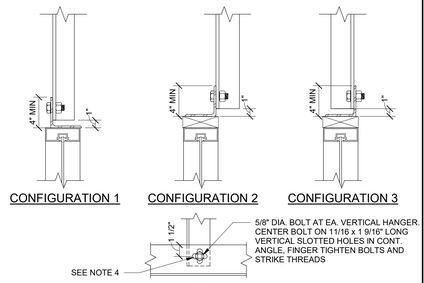


11A

VENEER SUPPORT AT LOW ROOF

11 SCALE: 3/4" = 1'-0"

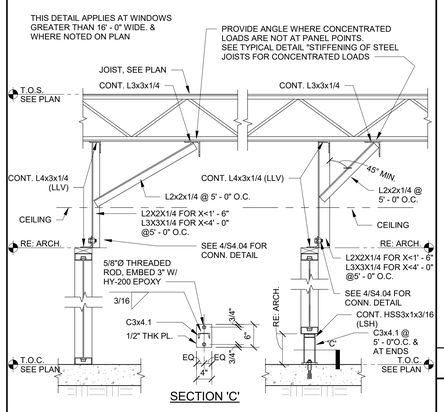
VERTICAL HANGER, SEE DETAILS FOR SIZE AND SPACING



NOTES:
1. SEE DETAILS FOR SIZE AND ORIENTATION OF CONTINUOUS ANGLE
2. REFER TO ARCH. DETAILS FOR THE PRESENCE OF BLOCKING
3. DO NOT WELD CONTINUOUS ANGLE TO VERTICAL HANGERS
4. AT CONTRACTOR OPTION PROVIDE HORIZONTAL SHORT SLOTTED OR LONG SLOTTED HOLES IN VERTICAL ANGLE FOR FIELD ADJUSTMENT

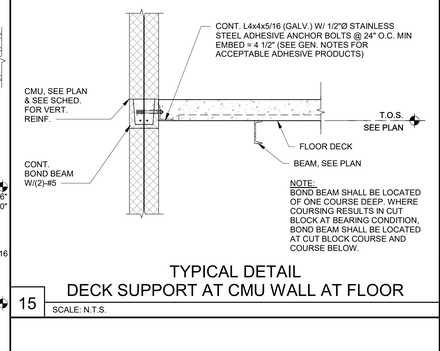
TYPICAL DETAIL
STEEL HEADER ANGLE AT GLAZING

4 SCALE: 1 1/2" = 1'-0"



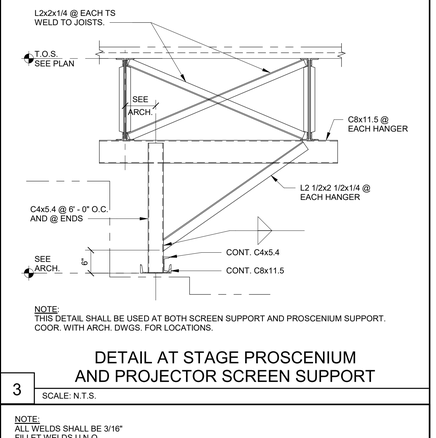
TYPICAL DETAIL
SUPPORT AT INTERIOR STRIP WINDOWS

17 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
DECK SUPPORT AT CMU WALL AT FLOOR

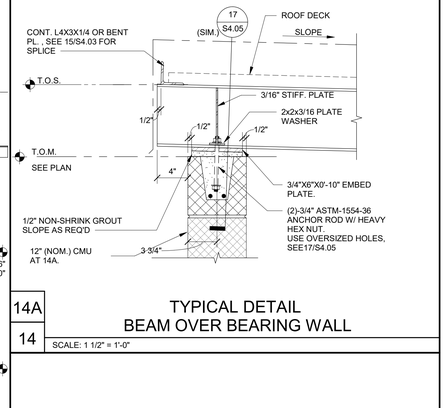
15 SCALE: N.T.S.



NOTE:
THIS DETAIL SHALL BE USED AT BOTH SCREEN SUPPORT AND PROSCENIUM SUPPORT. COOR. WITH ARCH. DWGS. FOR LOCATIONS.

DETAIL AT STAGE PROSCENIUM
AND PROJECTOR SCREEN SUPPORT

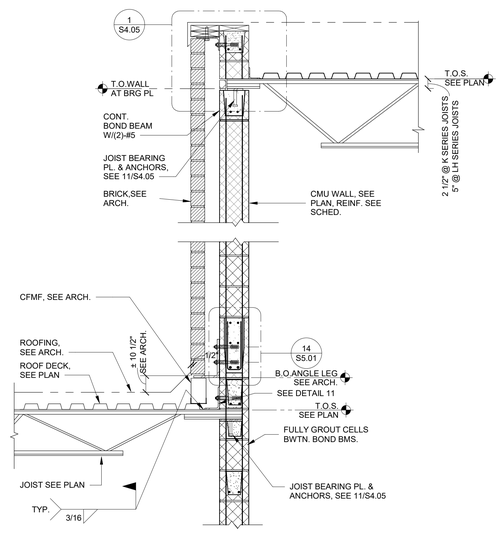
3 SCALE: N.T.S.



14A

TYPICAL DETAIL
BEAM OVER BEARING WALL

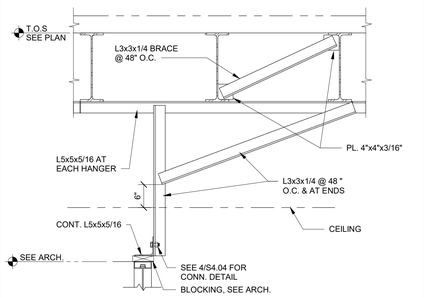
14 SCALE: 1 1/2" = 1'-0"



VENEER SUPPORT AT LOW ROOF

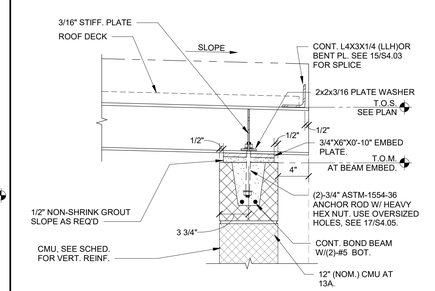
9 SCALE: 3/4" = 1'-0"

NOTE:
ALL WELDS SHALL BE 3/16" FILLET WELDS U.N.O.



TYPICAL DETAIL
STOREFRONT AT RECESSED DOORS
PARALLEL TO ROOF WIDE FLANGE BEAM

2 SCALE: N.T.S.

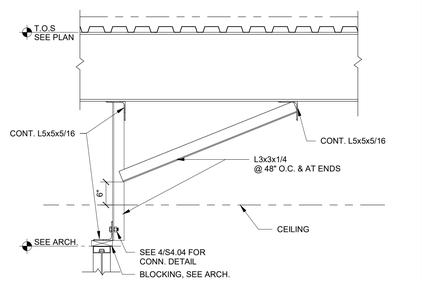


13A

TYPICAL DETAIL
BEAM OVER BEARING WALL

13 SCALE: 1 1/2" = 1'-0"

NOTE:
ALL WELDS SHALL BE 3/16" FILLET WELDS U.N.O.



TYPICAL DETAIL STOREFRONT AT RECESSED DOORS PERPENDICULAR TO ROOF WIDE FLANGE BEAM

1 SCALE: N.T.S.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

Matrix Structural Engineers
TBPE Firm Registration No. F-2640
STATE OF TEXAS
KHALIL TABAJA
01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.

23-155.00

SHEET TITLE

TYPICAL STEEL FRAMING DETAILS

SHEET NO.

S4.04

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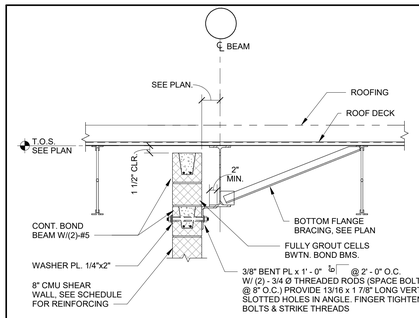
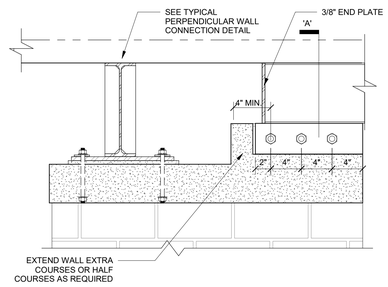
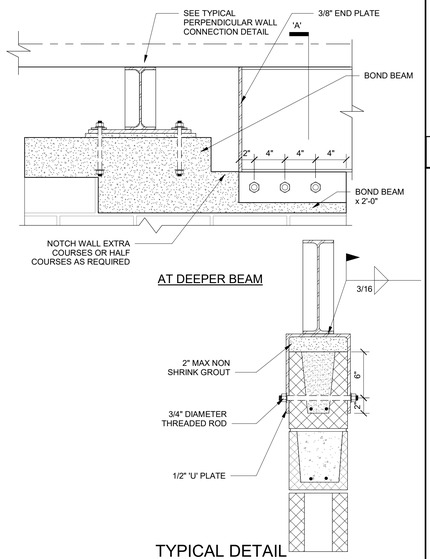


ROOF DETAIL AT INTERIOR SHEAR WALL (JOIST PARALLEL)

20 SCALE: 3/4" = 1'-0"



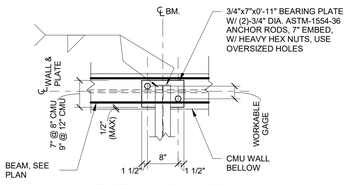
AT SHALLOWER BEAM



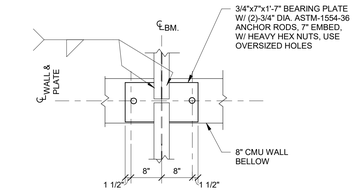
AT DEEPER BEAM

TYPICAL DETAIL BEAM PARALLEL TO END WALL CONNECTION

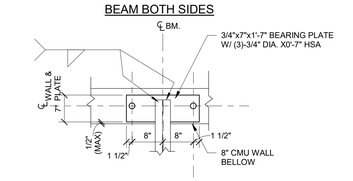
18 SCALE: 1 1/2" = 1'-0"



EDGE BEAM W/ FLANGE LESS OR EQUAL THAN 6" ONE SIDE



BEAM BOTH SIDES



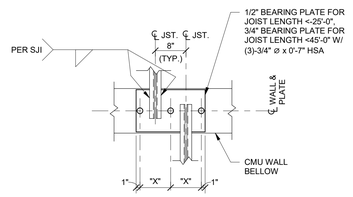
BEAM W/ FLANGE GREATER OR EQUAL THAN 6" ONE SIDE

TYPICAL DETAIL TYPICAL DETAIL-BEAM BEARING PLATE

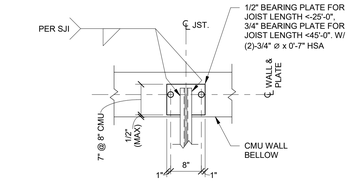
15 SCALE: N.T.S.

NOTE:

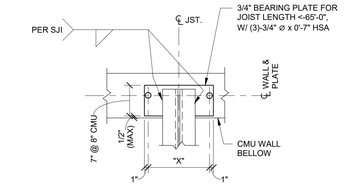
"X" DIMENSION SHALL BE AS FOLLOWS:
8" FOR K1-12 AND LH02-08
9" FOR LH07-17 & DLH10-17
14" FOR DLH15-25



JOIST BOTH SIDES



JOIST ONE SIDES

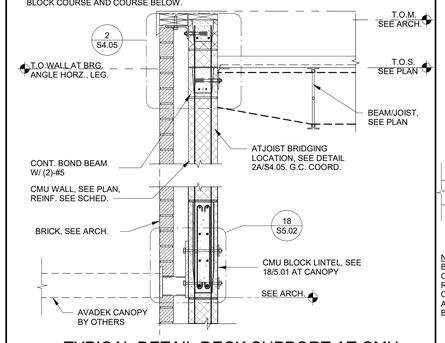


LH JOIST ONE SIDE

TYPICAL DETAIL JOIST BEARING PLATE

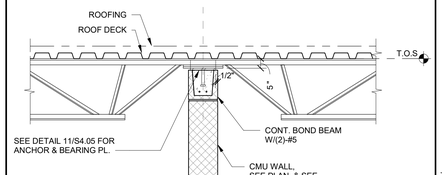
11 SCALE: 3/4" = 1'-0"

NOTE:
BOND BEAM SHALL BE LOCATED A MINIMUM OF ONE COURSE DEEP. WHERE COURSING RESULTS IN CUT BLOCK AT BEARING CONDITION, BOND BEAM SHALL BE LOCATED AT CUT BLOCK COURSE AND COURSE BELOW.



TYPICAL DETAIL DECK SUPPORT AT CMU WALL-JOIST PARALLEL

8 SCALE: N.T.S.

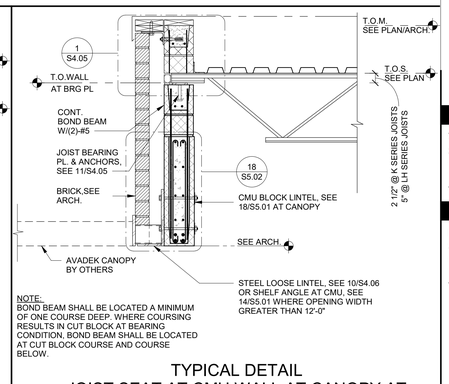


NOTE:
1. BOND BEAM SHALL BE A MINIMUM OF ONE COURSE DEEP. WHERE COURSING RESULTS IN CUT BLOCK AT BEARING CONDITION BOND BEAM SHALL BE LOCATED AT CUT BLOCK COURSE AND COURSE BELOW.
2. JOISTS SHALL BE STAGGERED AND EXTEND A MINIMUM OF 4" OVER CMU

TYPICAL DETAIL OPEN WEB STEEL JOIST AT INTERIOIR LOAD BEARING CMU, ROOF

7 SCALE: N.T.S.

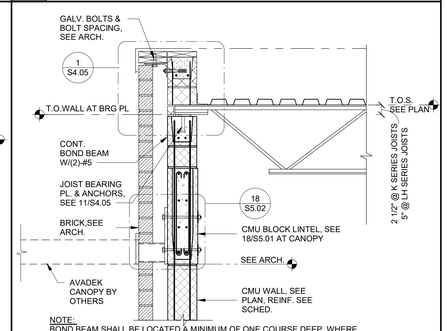
NOTE:
BOND BEAM SHALL BE LOCATED A MINIMUM OF ONE COURSE DEEP. WHERE COURSING RESULTS IN CUT BLOCK AT BEARING CONDITION, BOND BEAM SHALL BE LOCATED AT CUT BLOCK COURSE AND COURSE BELOW.



NOTE:
BOND BEAM SHALL BE LOCATED A MINIMUM OF ONE COURSE DEEP. WHERE COURSING RESULTS IN CUT BLOCK AT BEARING CONDITION, BOND BEAM SHALL BE LOCATED AT CUT BLOCK COURSE AND COURSE BELOW.

TYPICAL DETAIL JOIST SEAT AT CMU WALL AT CANOPY AT DOOR/WINDOWS-JOSIT PERPENDICULAR

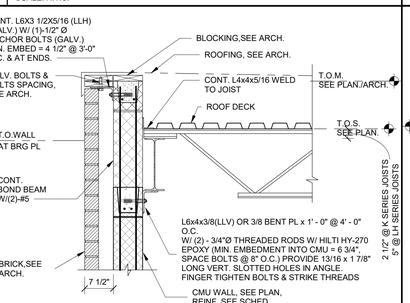
4 SCALE: N.T.S.



NOTE:
BOND BEAM SHALL BE LOCATED A MINIMUM OF ONE COURSE DEEP. WHERE COURSING RESULTS IN CUT BLOCK AT BEARING CONDITION, BOND BEAM SHALL BE LOCATED AT CUT BLOCK COURSE AND COURSE BELOW.

TYPICAL DETAIL JOIST SEAT AT CMU WALL AT CANOPY-JOIST PERPENDICULAR

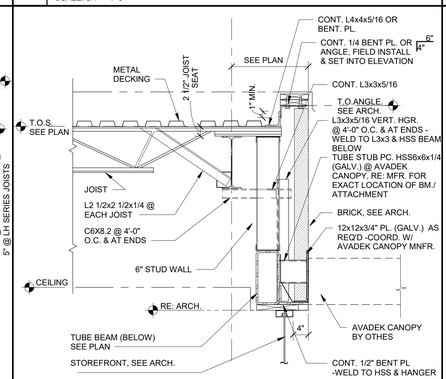
3 SCALE: N.T.S.



NOTE:
BOND BEAM SHALL BE LOCATED A MINIMUM OF ONE COURSE DEEP. WHERE COURSING RESULTS IN CUT BLOCK AT BEARING CONDITION, BOND BEAM SHALL BE LOCATED AT CUT BLOCK COURSE AND COURSE BELOW.

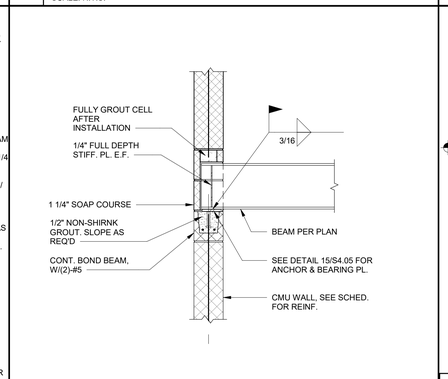
TYPICAL DETAIL JOIST SEAT AT CMU WALL-JOIST PERPENDICULAR

14 SCALE: N.T.S.



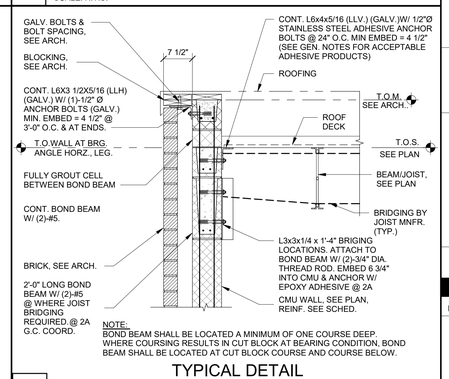
FRAMING DETAIL AT HIGH ROOF AT CANOPY

10 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL STEEL BEAM AT CMU WALL-AT ROOF

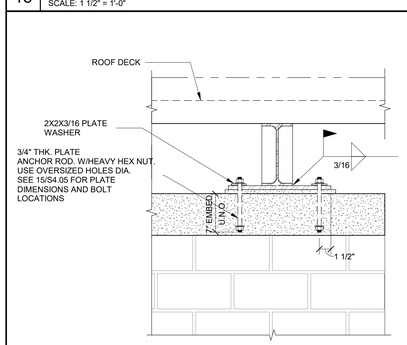
6 SCALE: N.T.S.



NOTE:
BOND BEAM SHALL BE LOCATED A MINIMUM OF ONE COURSE DEEP. WHERE COURSING RESULTS IN CUT BLOCK AT BEARING CONDITION, BOND BEAM SHALL BE LOCATED AT CUT BLOCK COURSE AND COURSE BELOW.

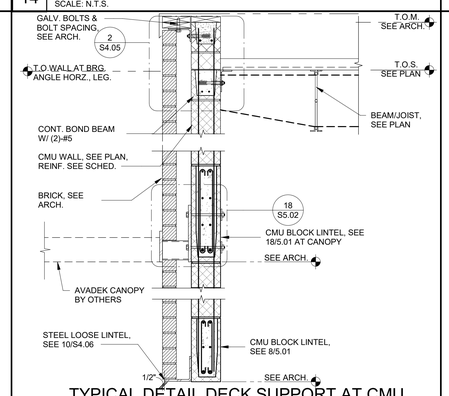
TYPICAL DETAIL DECK SUPPORT AT CMU WALL-JOIST PARALLEL

2A 2 SCALE: N.T.S.



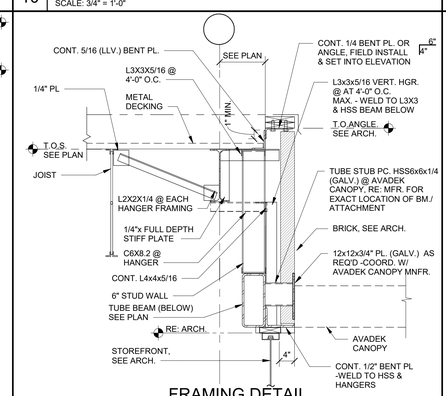
TYPICAL DETAIL BEAM AT BEARING WALL

17 SCALE: 1 1/2" = 1'-0"



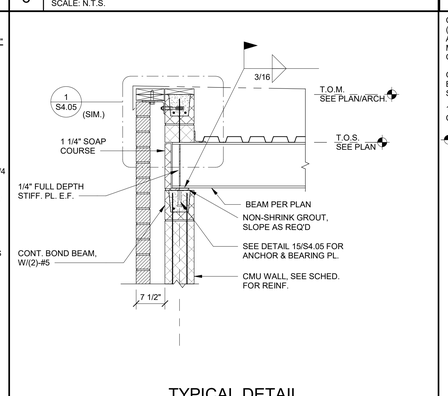
TYPICAL DETAIL DECK SUPPORT AT CMU WALL-JOIST PARALLEL

13 SCALE: N.T.S.



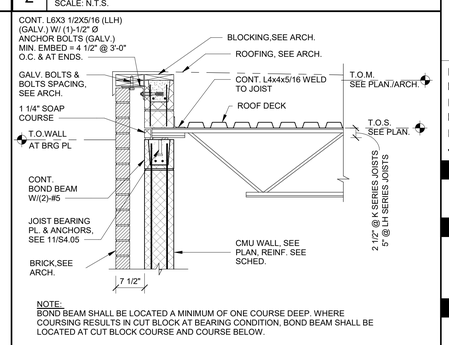
FRAMING DETAIL AT HIGH ROOF AT CANOPY

9 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL DECK SUPPORT AT CMU WALL

5 SCALE: N.T.S.



NOTE:
BOND BEAM SHALL BE LOCATED A MINIMUM OF ONE COURSE DEEP. WHERE COURSING RESULTS IN CUT BLOCK AT BEARING CONDITION, BOND BEAM SHALL BE LOCATED AT CUT BLOCK COURSE AND COURSE BELOW.

TYPICAL DETAIL JOIST SEAT AT CMU WALL-JOIST PERPENDICULAR

1 SCALE: N.T.S.

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

Matrix Structural Engineers
TBPE Firm Registration No. F-2640
STATE OF TEXAS
KHALIL TABAJA
FINAL RELEASE
01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.
23-155.00

SHEET TITLE
TYPICAL STEEL ROOF FRAMING DETAILS

SHEET NO.
S4.05

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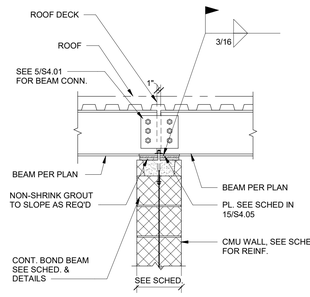
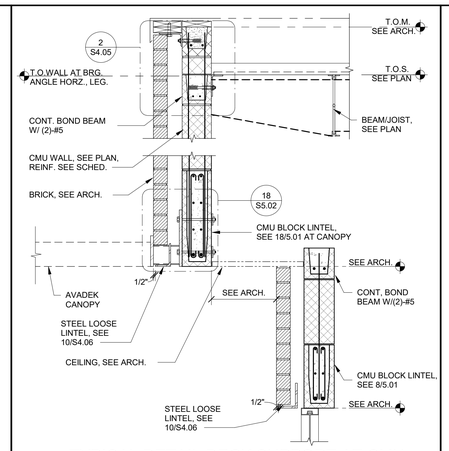


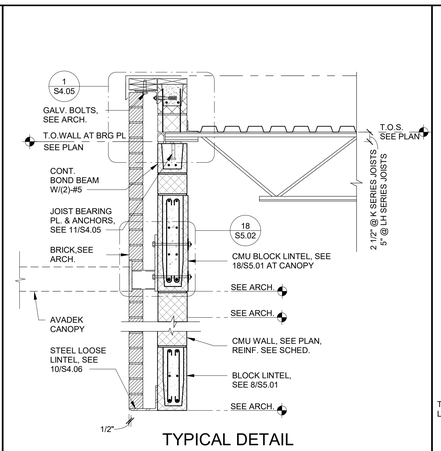
TYPICAL DETAIL STEEL BEAM AT CMU WALL

20 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL DECK SUPPORT AT CMU WALL-JOIST PARALLEL

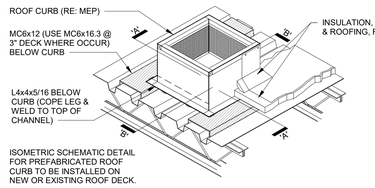
16 SCALE: N.T.S.



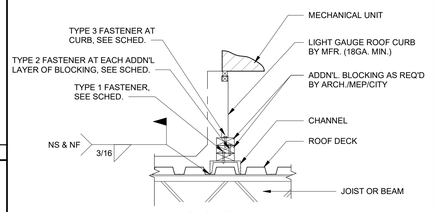
TYPICAL DETAIL JOIST SEAT AT CMU WALL AT CANOPY-JOIST PERPENDICULAR

12 SCALE: N.T.S.

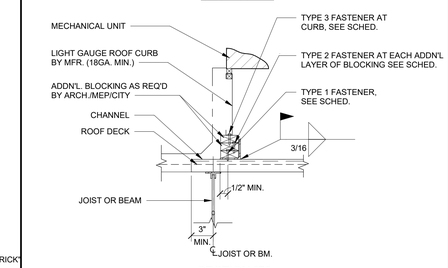
NOTE:
SIZES SHOWN ARE VALID ONLY FOR JOIST / BEAM SPACING ≤ 6' - 0" O.C.



ISOMETRIC SCHEMATIC DETAIL FOR PREFABRICATED ROOF CURB TO BE INSTALLED ON NEW OR EXISTING ROOF DECK.



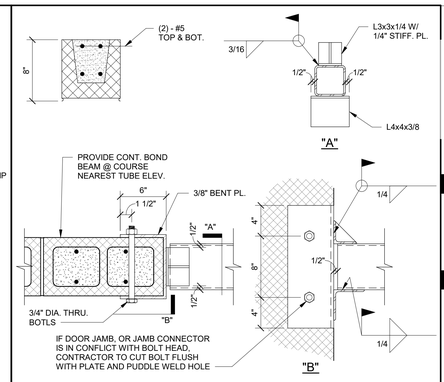
SECTION "A"



SECTION "B"

ALTERNATE DETAIL SUPPORT AT ROOFTOP MECHANICAL EQUIPMENT

7 SCALE: 1" = 1'-0"

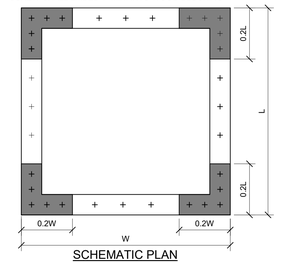


HSS TUBE AT CMU WALL

4 SCALE: 1 1/2" = 1'-0"

FASTENER SCHEDULE			
		SPACINGS	
TYPE	MINIMUM FASTENER SIZE	TYPICAL	CORNER
1	#8 SELF TAPPING SCREW	16" O.C.	6" O.C.
2	#10 SCREW*	12" O.C.	4" O.C.
3	#10 SCREW*	12" O.C.	4" O.C.

*SCREW SHALL EMBED 1" MIN. INTO WOOD BLOCKING



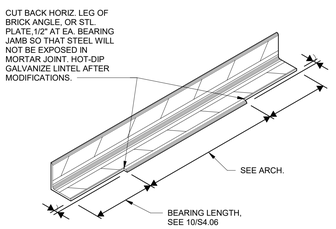
SCHEMATIC PLAN

NOTES:
1. FASTENING SCHEDULE SHALL ONLY APPLY UNDER THE FOLLOWINGS CONDITIONS.
   a. MEAN ROOF HEIGHT IS ≤ 60' - 0"
   b. MECHANICAL EQUIPMENT IS LESS THAN 6'-0" TALL.
   c. MECHANICAL UNIT HEIGHT TO WIDTH RATIO IS ≤ 1.5
   d. WIND SPEED IS LESS THAN OR EQUAL TO 140mph(V_{ULT}) OR 110mph (V_{ASD}). SEE GEN. NOTES FOR DESIGN WIND SPEED.
2. REFER TO MEP/MFR. FOR W & L DIMENSIONS.

TYPICAL DETAIL FASTENER SCHEDULE AT MECHANICAL UNITS

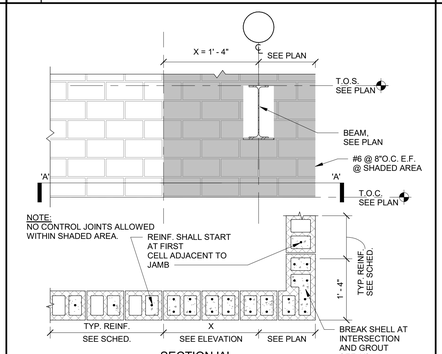
3 SCALE: 1/2" = 1'-0"

NOTE:
SEE 10/S4.06 FOR LINTEL SCHEDULE



TYPICAL DETAIL LOOSE LINTEL CUT BACK AND BEARING

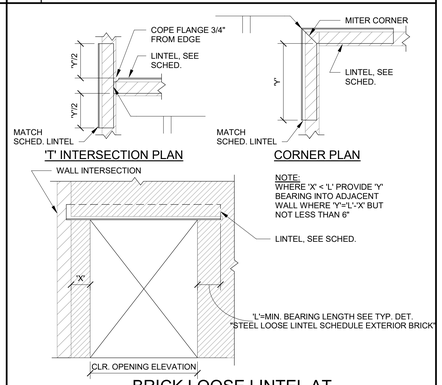
19 SCALE: N.T.S.



SECTION 'A'

TYPICAL DETAIL REINFORCING AT BEAM TO CMU WALL CONNECTION

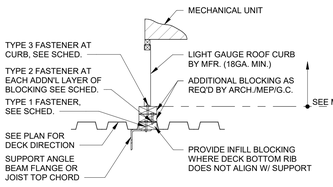
15 SCALE: N.T.S.



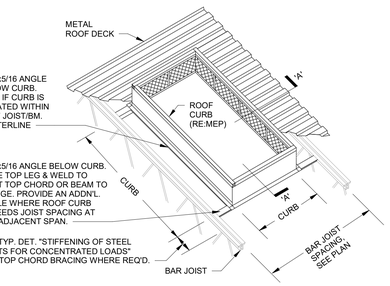
BRICK LOOSE LINTEL AT CORNER AND INTERSECTION

11 SCALE: N.T.S.

NOTE:
SIZES SHOWN ARE VALID ONLY FOR JOIST / BEAM SPACING ≤ 6' - 0" O.C.

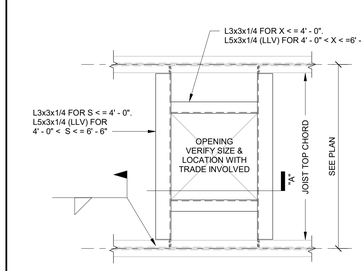


SECTION 'A'

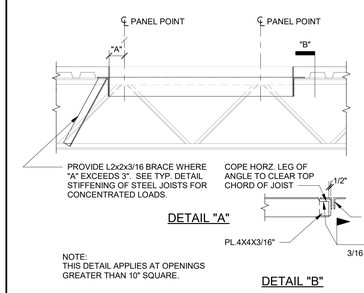


ALTERNATE DETAIL SUPPORT AT ROOFTOP MECHANICAL EQUIPMENT

5 SCALE: 1" = 1'-0"



PLAN



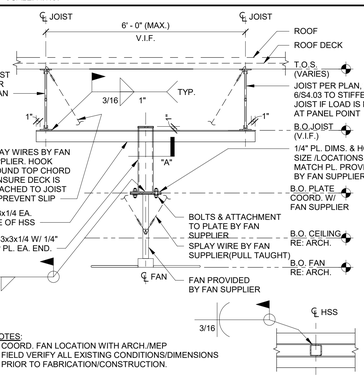
DETAIL "A"

NOTE:
THIS DETAIL APPLIES AT OPENINGS GREATER THAN 10" SQUARE.

DETAIL "B"

TYPICAL DETAIL OPEN WEB STEEL JOIST ROOF OPENING

1 SCALE: 3/4" = 1'-0"

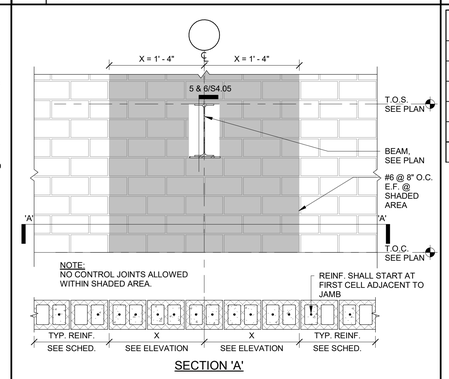


NOTES:
1. COORD. FAN LOCATION WITH ARCH./MEP.
2. FIELD VERIFY ALL EXISTING CONDITIONS/DIMENSIONS PRIOR TO FABRICATION/CONSTRUCTION.

DETAIL "A"

TYPICAL DETAIL BIG ASS FAN AT JOISTS

18 SCALE: N.T.S.



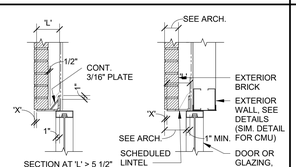
SECTION 'A'

TYPICAL DETAIL REINFORCING AT BEAM TO CMU WALL CONNECTION

14 SCALE: N.T.S.

CLEAR OPNG.	MINIMUM ANGLE SIZE
≤ 6'-0"	1 - L 3 1/2 x 'L' x 5/16
6'-8"	1 - L 4 x 'L' x 5/16
7'-4"	1 - L 5 x 'L' x 5/16
8'-0"	1 - L 6 x 'L' x 5/16
10'-0"	1 - L 7 x 'L' x 3/8
12'-0"	1 - L 8 x 'L' x 7/16

* 1/2" THK. ANGLE MAY ALSO BE USED



TYPICAL SECTION

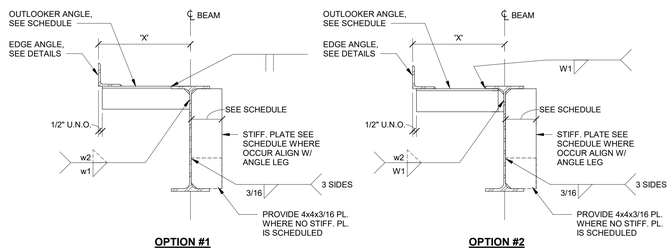
NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. PROVIDE 1" OF BEARING AT EACH JAMB FOR EACH FOOT OF CLEAR SPAN BUT NOT LESS THAN 6".
3. WHERE MINIMUM BEARING CANNOT BE ACHIEVED, PROVIDE ADEQUATE CONNECTION TO ADJACENT STRUCTURAL MEMBERS OR PROVIDE SEPARATE VERTICAL SUPPORTS. SUBMIT SUCH DETAILS FOR THE ENGINEER'S APPROVAL.
4. ALL LINTELS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
5. FOR MASONRY OPENINGS GREATER THAN 12'-0", SEE DETAILS ON THE DRAWINGS OR REFER TO ENGINEER.
6. BRICK HEIGHTS OVER OPENINGS GREATER THAN ONE HALF THE LINTEL SPAN SHALL BE SHORED UNTIL MORTAR HAS SET AND CURED.
7. 'L' DIMENSION SHALL NOT BE LESS THAN 4". FOR 'L' DIMENSION GREATER THAN 5 1/2", PROVIDE 3/16" PLATE STIFFENER.
8. UNLESS NOTED OTHERWISE BY ARCHITECT, 'X' DIMENSION SHALL BE 5/8" AT NOMINAL BRICK OR 4" CMU, AT KING BRICK 'X' SHALL BE 1/2".
9. WHERE MINIMUM ANGLE THICKNESS EXCEEDS GROUT BED THICKNESS. BOOT CUT BRICK AS REQ'D IN ORDER TO MAINTAIN LEVEL COURSING

TYPICAL DETAIL STEEL LOOSE LINTEL SCHEDULE EXTERIOR BRICK

10 SCALE: N.T.S.

OUTLOOKER AND STIFFENER SCHEDULE				
MAX 'X'	OUTLOOKER	w1	w2	STIFFENER
< 6"	L3X3X3/16 @ 5' - 0" O.C.	3/16	NA	NA
1' - 6"	L3X3X3/16 @ 5' - 0" O.C.	3/16	NA	1/4"X2" FULL DEPTH
2' - 0"	L3X3X1/4 @ 5' - 0" O.C.	3/16	NA	1/4"X3" FULL DEPTH
2' - 6"	L4X3X1/4(LLV) @ 5' - 0" O.C.	3/16	3/16	1/4"X3" FULL DEPTH
3' - 0"	L4X3X5/16(LLV) @ 5' - 0" O.C.	3/16	3/16	1/4"X4" FULL DEPTH
3' - 6"	L4X3X3/8(LLV) @ 5' - 0" O.C.	1/4	1/4	5/16"X4" FULL DEPTH
4' - 0"	L4X4X3/8 @ 5' - 0" O.C.	1/4	1/4	5/16"X4" FULL DEPTH
4' - 6"	L5X5X5/16 @ 5' - 0" O.C.	1/4	1/4	3/8"X4" FULL DEPTH

SEE DETAIL FOR 'X' DIMENSION



TYPICAL DETAIL OUTLOOKER ANGLE AT BEAM

17 SCALE: N.T.S.

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01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.

23-155.00

SHEET TITLE

TYPICAL STEEL ROOF FRAMING DETAILS

SHEET NO.

S4.06

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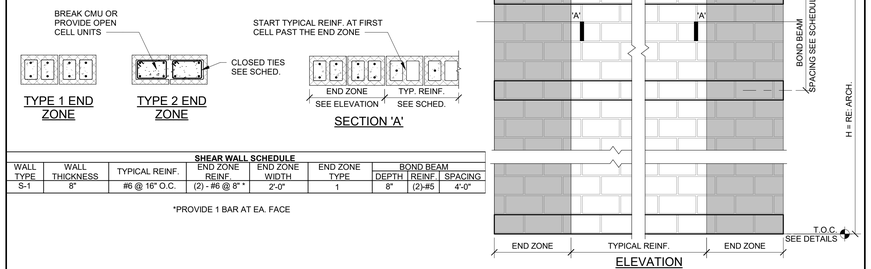
NOTE:
THIS DETAIL APPLIES TO ALL SHEAR WALLS SCHEDULED ON PLAN U.N.O.

NOTES:
1. SHEAR WALL SHALL BE RUNNING BOND U.N.O. LAP BLOCKS AT CORNERS AND INTERSECTIONS.
2. BOND BEAM SHALL LAP AT CORNERS AND INTERSECITONS SEE 5/S5.01.
3. DOWELS SHALL MATCH VERTICAL REINFORCMENT. DOWELS MAY NOT BE EPOXY GROUTED AND MUST BE CAST IN PLACE.
4. REINFORCING AT OPENINGS SHALL FOLLOW TYPICAL LINTEL AND JAMB REINFORCING DETAILS UNLESS NOTED OTHERWISE.



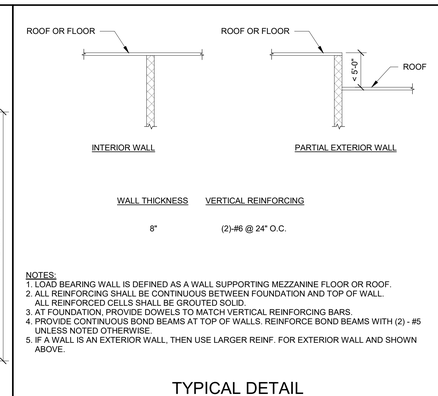
SHEAR WALL SCHEDULE

WALL TYPE	WALL THICKNESS	TYPICAL REINF.	END ZONE REINF.	END ZONE WIDTH	END ZONE TYPE	BOND BEAM		
						DEPTH	REINF.	SPACING
S-1	8"	#6 @ 16" O.C.	(2) - #6 @ 8" *	2'-0"	1	8"	(2)-#5	4'-0"

*PROVIDE 1 BAR AT EA. FACE

20 SCALE: 3/4" = 1'-0"

TYPICAL DETAIL REINFORCING AT SHEAR WALLS

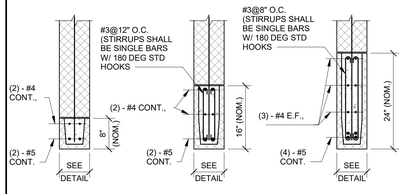


WALL THICKNESS	VERTICAL REINFORCING
8"	(2)-#6 @ 24" O.C.

NOTES:
1. LOAD BEARING WALL IS DEFINED AS A WALL SUPPORTING MEZZANINE FLOOR OR ROOF.
2. ALL REINFORCING SHALL BE CONTINUOUS BETWEEN FOUNDATION AND TOP OF WALL. ALL REINFORCED CELLS SHALL BE GROUTED SOLID.
3. AT FOUNDATION, PROVIDE DOWELS TO MATCH VERTICAL REINFORCING BARS.
4. PROVIDE CONTINUOUS BOND BEAMS AT TOP OF WALLS. REINFORCE BOND BEAMS WITH (2) - #5 UNLESS NOTED OTHERWISE.
5. IF A WALL IS AN EXTERIOR WALL, THEN USE LARGER REINF. FOR EXTERIOR WALL AND SHOWN ABOVE.

12 SCALE: N.T.S.

TYPICAL DETAIL INTERIOR LOAD-BEARING WALLS



FOR OPENING LESS THAN 3' - 4" WIDE | FOR OPENING 3' - 4" TO 6' - 4" WIDE | FOR OPENING OVER 6' - 4" UP TO 14' - 0" WIDE

NOTES:
1. SEE ARCH. DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. PROVIDE 1" OF BEARING @ EACH JAMB FOR EACH FOOT OF CLEARSPAN BUT NOT LESS THAN 8". REINF. SHALL PROJECT A MIN. OF 6" ONTO THE BEARING CMU.
3. BOND BEAMS SHALL BE FULLY GROUTED (2500 PSI @ 28 DAYS).

8 SCALE: N.T.S.

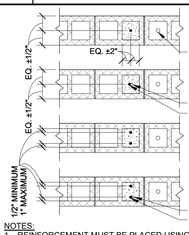
TYPICAL DETAIL BLOCK LINTEL

BAR SIZE	MINIMUM LAP SPLICE LENGTH: REINFORCEMENT AT CENTER OF WALL: 6" CMU	8" CMU	10" CMU	12" CMU	REINFORCEMENT OFF CENTER: ANY
3	12	12	12	12	19
4	20	15	12	12	34
5	32[4]	23	18	15	45
6	54[4]	43	34	28	54
7	NA[5]	60	46	38	63
8	NA[5]	72	71	57	72

NOTES:
1. TABLE FOR USE WITH GRADE 60 UNCOATED REINF. BARS IN CMU (f'm = 2000 psi)
2. BARS SPLICED BY NON-CONTACT LAP SPLICE SHALL NOT BE SPACED FARTHER APART THAN, ONE-FIFTH THE REQUIRED LAP LENGTH, OR 8".
3. LAP LENGTHS PER IBC 2018.
4. PERMITTED ONLY IF ALL MORTAR FINS ARE REMOVED ROM THE CELL TO BE GROUTED.
5. BAR EXCEEDS MAX. ALLOWABLE SIZE.

4 SCALE: N.T.S.

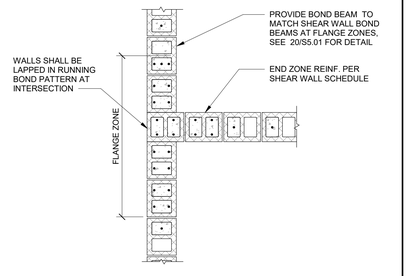
TYPICAL DETAIL MASONRY TENSION LAP SPLICE (INCHES)



NOTES:
1. REINFORCEMENT MUST BE PLACED USING REINFORCING BAR POSITIONERS THAT LOCATE THE BAR AS SPECIFIED AND PREVENT MOVEMENT OF THE BAR DURING CONSTRUCTION.
2. SPLICED REINFORCEMENT MUST BE A CONTACT LAP SPLICE WITH SPLICED BARS ALIGNED PARALLEL TO THE WALL AS SHOWN.
3. THE ENGINEER MUST BE NOTIFIED PRIOR TO PLACEMENT OF REINFORCEMENT THAT IS REQUIRED TO BE PLACED OUTSIDE OF THE TOLERANCES OF THIS DETAIL SUCH AS TO AVOID INTERFERENCE WITH OTHER REINFORCEMENT, CONDUITS, OR EMBEDDED ITEMS.
4. CONDUIT, PIPES AND SLEEVES SHALL BE NO CLOSER THAN 3 DIAMETERS ON CENTER (USE LARGER DIAMETER WHERE MULTIPLE SIZES ARE USED).
5. ALUMINUM PIPES MAY NOT BE USED UNLESS EFFECTIVELY COATED TO PREVENT CHEMICAL REACTION.
6. PIPES SHALL NOT BE EMBEDDED IN MASONRY WHEN:
   (a) CONTAINING LIQUIDS, GAS, OR VAPORS AT A TEMPERATURE HIGHER THAN 150°F (66°C).
   (b) UNDER PRESSURE IN EXCESS OF 55 PSI (379 KPA).
   (c) CONTAINING WATER OR OTHER LIQUIDS SUBJECT TO FREEZING.

3 SCALE: N.T.S.

TYPICAL DETAIL CMU VERTICAL BAR PLACEMENT

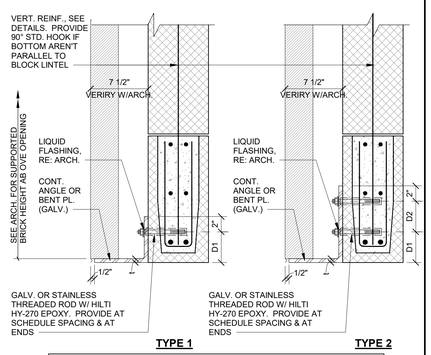


FLANGE ZONE SCHEDULE

ZONE LABLE	ZONE WIDTH	REINF.
F-1	48"	(2)-#6 @ 8" O.C.

19 SCALE: 3/4" = 1'-0"

TYPICAL DETAIL REINFORCING AT SHEAR WALL FLANGE ZONES



TYPE 1 SCHEDULE

MAX HEIGHT OF SUPPORTED BRICK	ANGLE t	THREADED ROD D1	DIA.	EMBEDMENT	SPACING
3'-0"	1/4"	4"	3/8"	3 3/8"	3'-0"
5'-0"	1/4"	4"	1/2"	4 1/2"	3'-0"
8'-0"	5/16"	5"	1/2"	4 1/2"	2'-6"
10'-0"	5/16"	5"	5/8"	5 5/8"	2'-0"
12'-0"	5/16"	5"	5/8"	5 5/8"	1'-4"

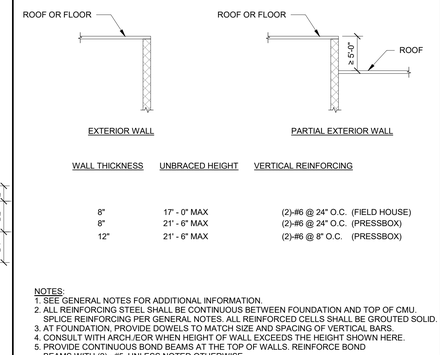
TYPE 2 SCHEDULE

MAX HEIGHT OF SUPPORTED BRICK	ANGLE t	THREADED ROD D1	D2	DIA.	EMBEDMENT	SPACING
10'-0"	5/16"	4"	4"	3/8"	3 3/8"	3'-0"
12'-0"	3/8"	4"	4"	1/2"	4 1/2"	3'-0"
15'-0"	3/8"	4"	4"	1/2"	4 1/2"	2'-6"
20'-0"	3/8"	4"	4"	5/8"	5 5/8"	2'-0"
25'-0"	3/8"	5"	4"	5/8"	5 5/8"	2'-0"
30'-0"	3/8"	5"	4"	5/8"	6 3/4"	1'-4"
35'-0"	7/16"	5"	4"	5/8"	6 3/4"	1'-4"

NOTES:
1. WHERE TWO SOLUTIONS ARE PROVIDED FOR A GIVEN HEIGHT, CONTRACTOR MAY CHOOSE BETWEEN TYPE 1 & TYPE 2.
2. MAX. HEIGHT OF SUPORTED BRICK SHALL BE FROM TOP OF OPENING TO TOP OF WALL UNLESS ANOTHER OPENING OF GHREATER OR EQUAL WIDTH IS PROVIDED ABOVE THE OPENING.
3. SEE TYPICAL DETAIL " ANGLE OR BENT PLATE SUBSTITUTION FOR OPTIONAL ALTERNATES.

14 SCALE: 1 1/2" = 1'-0"

TYPICAL DETAIL SHELF ANGLE AT CMU

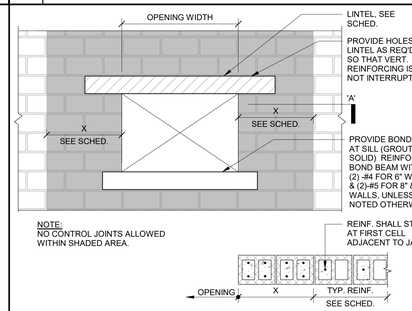


WALL THICKNESS	UNBRACED HEIGHT	VERTICAL REINFORCING
8"	17' - 0" MAX	(2)-#6 @ 24" O.C. (FIELD HOUSE)
8"	21' - 6" MAX	(2)-#6 @ 24" O.C. (PRESSBOX)
12"	21' - 6" MAX	(2)-#6 @ 8" O.C. (PRESSBOX)

NOTES:
1. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
2. ALL REINFORCING STEEL SHALL BE CONTINUOUS BETWEEN FOUNDATION AND TOP OF CMU. SPLICE REINFORCING PER GENERAL NOTES. ALL REINFORCED CELLS SHALL BE GROUTED SOLID.
3. AT FOUNDATION, PROVIDE DOWELS TO MATCH SIZE AND SPACING OF VERTICAL BARS.
4. CONSULT WITH ARCH./EOR WHEN HEIGHT OF WALL EXCEEDS THE HEIGHT SHOWN HERE.
5. PROVIDE CONTINUOUS BOND BEAMS AT THE TOP OF WALLS. REINFORCE BOND BEAMS WITH (2) - #5, UNLESS NOTED OTHERWISE.

11 SCALE: N.T.S.

TYPICAL DETAIL - EXTERIOR CMU WALL

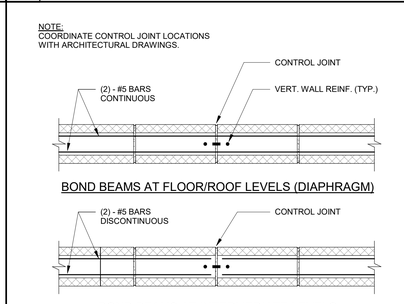


NOTE:
NO CONTROL JOINTS ALLOWED WITHIN SHADED AREA.

OPENING SIZE	JAMB WIDTH 'X'	JAMB REINF.
≤ 3' - 4"	2' - 0"	(2) - #6 @ 8" O.C.
>3'-4"& ≤ 6' - 4"	3' - 0"	(2) - #6 @ 8" O.C.
>6' - 4" & ≤ 14' - 0"	4' - 0"	(2) - #6 @ 8" O.C. ((2) - #7 @ 8" O.C. @ 12" CMU)

7 SCALE: N.T.S.

CMU JAMB REINFORCING SCHEDULE



AT FIELD HOUSE | AT PRESSBOX

NOTES:
1. SEE ARCH. DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. PROVIDE 1" OF BEARING @ EACH JAMB FOR EACH FOOT OF CLEARSPAN BUT NOT LESS THAN 8". REINF. SHALL PROJECT A MIN. OF 6" ONTO THE BEARING CMU.
3. BOND BEAMS SHALL BE FULLY GROUTED (2500 PSI @ 28 DAYS).

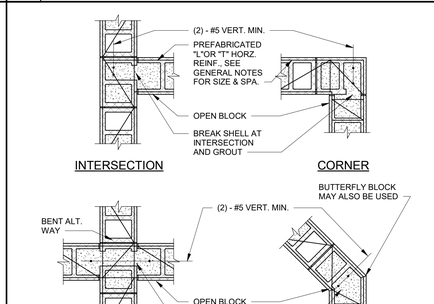
18 SCALE: N.T.S.

TYPICAL DETAIL BLOCK LINTEL/BOND BEAM AT CANOPY

NOTE:
COORDINATE CONTROL JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.

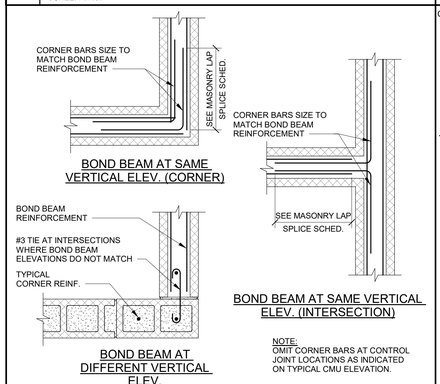
6 SCALE: N.T.S.

TYPICAL BOND BEAM AT CONTROL JOINTS



2 SCALE: N.T.S.

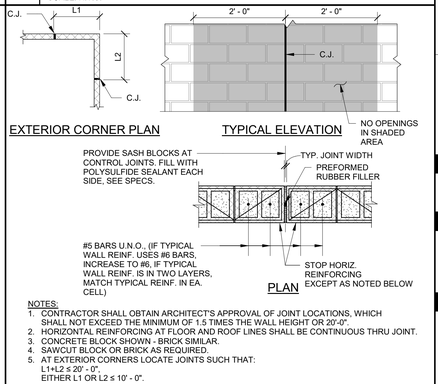
CMU WALL INTERSECTIONS



NOTE:
OMIT CORNER BARS AT CONTROL JOINT LOCATIONS AS INDICATED ON TYPICAL CMU ELEVATION.

5 SCALE: N.T.S.

TYPICAL CMU BOND BEAM REINFORCEMENT



NOTES:
1. CONTRACTOR SHALL OBTAIN ARCHITECT'S APPROVAL OF JOINT LOCATIONS, WHICH SHALL NOT EXCEED THE MINIMUM OF 1.5 TIMES THE WALL HEIGHT OR 20'-0".
2. HORIZONTAL REINFORCING AT FLOOR AND ROOF LINES SHALL BE CONTINUOUS THRU JOINT.
3. CONCRETE BLOCK SHOWN - BRICK SIMILAR.
4. SAWCUT BLOCK OR BRICK AS REQUIRED.
5. AT EXTERIOR CORNERS LOCATE JOINTS SUCH THAT: L1+L2 ≥ 20' - 0", EITHER L1 OR L2 ≥ 10' - 0".

1 SCALE: N.T.S.

MASONRY WALL CONTROL JOINT

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

Matrix Structural Engineers
TBPE Firm Registration No. F-2640

STATE OF TEXAS
KHALIL TABAJA
LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
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SHEET TITLE
TYPICAL CMU WALL DETAILS

SHEET NO.
S5.01

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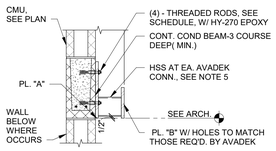
THROUGH BOLT AT SIMPLE SPAN				
SPAN LENGTH	MAX. CONN. SPACING	THROUGH BOLT DIA.	PLATE "A" THICKNESS	PLATE "B" THICKNESS
20' - 0"	15' - 0"	3/8"	1/2"	7/16"
30' - 0"	14' - 0"	1/2"	5/8"	1/2"
40' - 0"	10' - 0"	5/8"	5/8"	1/2"

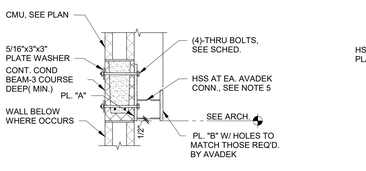
THREADED ROD WITH HY-270 AT SIMPLE SPAN					
SPAN LENGTH	MAX. CONN. SPACING	THREAD BOLT		PLATE "A" THICKNESS	PLATE "B" THICKNESS
		DIA.	EMBEDMENT		
10' - 0"	12" - 0"	3/8"	3 3/8"	3/8"	3/8"
15' - 0"	10' - 0"	1/2"	4 1/2"	3/8"	3/8"
20' - 0"	10' - 0"	1/2"	4 1/2"	7/16"	3/8"
30' - 0"	8' - 0"	3/4"	6 3/4"	1/2"	7/16"

THROUGH BOLT AT CANTILEVER				
CANTILEVER LENGTH	MAX. CONN. SPACING	THROUGH BOLT DIA.	PLATE "A" THICKNESS	PLATE "B" THICKNESS
5' - 0"	12" - 0"	3/8"	5/8"	5/8"
	15" - 0"	1/2"	3/4"	5/8"
8' - 0"	8' - 0"	1/2"	7/8"	3/4"
	12" - 0"	5/8"	1"	1"
10' - 0"	8' - 0"	5/8"	1"	1"
	11' - 0""	3/4"	1 1/4"	1 1/8"

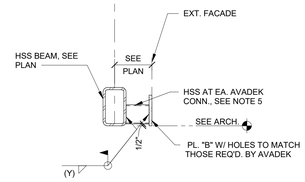
THREADED ROD W/ HY-270 AT CANTILEVER					
CANTILEVER LENGTH	MAX. CONN. SPACING	THREADED ROD		PLATE "A" THICKNESS	PLATE "B" THICKNESS
		DIA.	EMBEDMENT		
3' - 0"	5' - 0"	3/8"	3 3/8"	5/16"	5/16"
	12' - 0"	3/8"	3 3/8"	3/8"	3/8"
5' - 0"	5' - 0"	1/2"	4 1/2"	7/16"	3/8"
	8' - 0"	5/8"	5 5/8	1/2"	1/2"
	10' - 0"	3/4"	6 3/4"	5/8"	9/16"



AT CMU WALL



AT CMU WALL (FOR CANTILEVER CANOPIES LONGER THAN 5' - 0" OR WHERE REQ'D FOR STRENGTH)



AT HSS BEAM

NOTES:

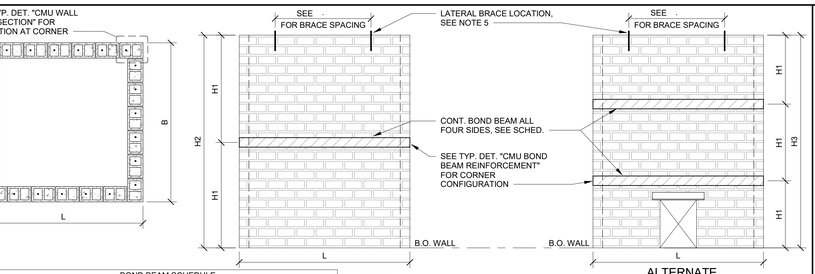
1. CONTRACTOR SHALL CONFIRM SPACING FROM CANOPY SUPPLIER PRIOR TO FABRICATION & SUBMIT SHOP DRAWINGS FOR APPROVAL.
2. SIMPLE SPAN INDICATES CANOPY IS SUPPORTED ON EXTERIOR COLUMNS.
3. ALL STEEL TO BE HOT DIPPED GALVANIZED
4. CONTRACTOR SHALL CONFIRM PLATE "B" DIMENSIONS WITH CANOPY SUPPLIER PRIOR TO FABRICATION. IF NO INFORMATION IS AVAILABLE AT BID DATE ASSUME "d" DIMENSION IS 12" FOR PRICING PURPOSES
5. HSS4x4x1/4 FOR CANTILEVER ≤ 5' - 0" AND SIMPLE SPANS ≤ 20' - 0"
   HSS6x4x5/16 (LSV) FOR CANTILEVER ≤ 8' - 0" AND SIMPLE SPANS ≤ 40' - 0"
   HSS6x4x3/8 (LSV) FOR CANTILEVER ≤ 10' - 0" @ EA. AVADEK CONN.
   MAX SPACING SEE SCHED. SEE EOR FOR CONN. IF GREATER SPACING IS REQUIRED

WELD SCHEDULE CANTILEVER LENGTH	"Y"
3' - 0"	3/16"
5' - 0"	1/4"
8' - 0"	5/16"
10' - 0"	3/8"

WELD SCHEDULE SIMPLE SPAN LENGTH	"Y"
30' - 0"	3/16"
40' - 0"	1/4"

TYPICAL DETAIL
AT CANOPY CONNECTION

18 SCALE: N.T.S.



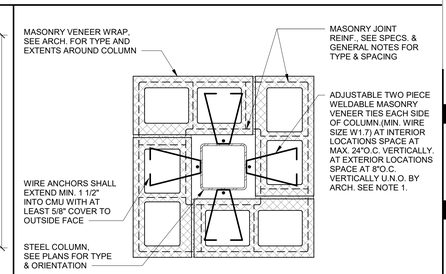
BOND BEAM SCHEDULE						
L OR B	6" WALL		8" WALL		12" WALL	
	BEAM DEPTH	REINF.	BEAM DEPTH	REINF.	BEAM DEPTH	REINF.
8'	8"	(2)-#5B	8"	(2)-#5B	8"	(2)-#5B
10'	8"	(2)-#5B (2)-#5T	8"	(2)-#5B	8"	(2)-#5B
15'	16"	(2)-#5B (2)-#5M (2)-#5T	8"	(2)-#5B (2)-#5T	8"	(2)-#5B
18'	N/A	N/A	16"	(2)-#5B (2)-#5T	8"	(2)-#5B
24'	N/A	N/A	N/A	N/A	16"	(2)-#5B (2)-#5T

NOTES:

1. WHERE H EXCEEDS MAXIMUM SPECIFIED IN TYPICAL DETAIL " NON-LOAD BEARING INTERIOR CMU WALLS BRACING & REINFORCING STEEL." PROVIDE CONT. BOND BEAM AS SHOWN.
2. WHERE CONT. BOND BEAMS ARE USED, WALLS SHALL BE REINFORCED FOR HEIGHT = H1, OTHERWISE REINFORCE WALLS FOR HEIGHT = H2 OR H3
3. SEE TYP. DET. "BOND BEAM AT CONTROL JOINTS" WHERE CONTROL JOINTS INTERSECT BOND BEAM. BOND BEAM SHALL BE TREATED AS A FLOOR (DIAPHRAGM) LEVEL CONDITION
4. H2 SHALL NOT EXCEED 32'-0", H3 SHALL NOT EXCEED 48'-0"
5. IN LIEU OF INTERIOR BRACES AT THE TOP OF WALL CONTRACTOR MAY PROVIDE A BOND BEAM AT THE TOP OF WALL SIZED & REINFORCED PER THE SCHEDULE SHOWN.

TYPICAL DETAIL TALL RECTANGULAR INTERIOR
NON-LOAD BEARING CMU WALL BRACING

12 SCALE: N.T.S.

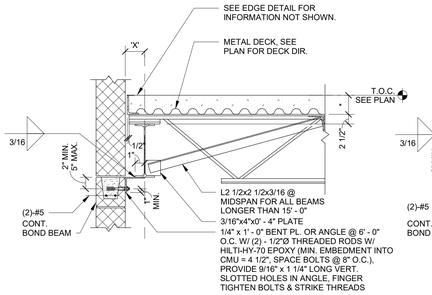


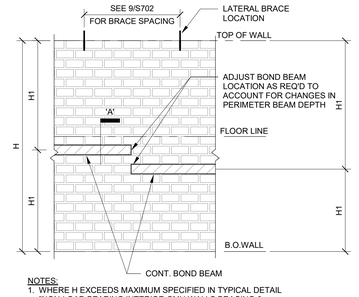
NOTES:

1. REDUCE ANCHOR SPACING OR PROVIDE DOUBLE ANCHORS AT EA. LOCATION AS REQ'D SO THAT THERE IS AT LEAST ONE ANCHOR FOR EACH 2.67 SQUARE FEET OF WALL AREA AT INTERIOR LOCATIONS & ONE ANCHOR FOR EACH 1.87 SQUARE FEET OF WALL AREA AT EXTERIOR LOCATIONS.
2. WHERE STUDS & SHEATHING ARE PROVIDED AROUND COLUMN, THIS DETAIL DOES NOT APPLY REFER TO ARCH. FOR DETAIL.
3. THIS DETAIL APPLIES AT BRICK CONCRETE & STONE MASONRY.

TYPICAL DETAIL
MASONRY WRAP AT STEEL COLUMN

4 SCALE: N.T.S.



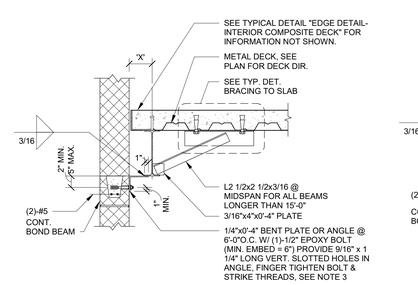


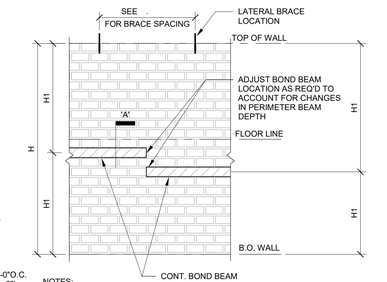
NOTES:

1. WHERE H EXCEEDS MAXIMUM SPECIFIED IN TYPICAL DETAIL "NON-LOAD BEARING INTERIOR CMU WALLS BRACING & REINFORCING STEEL " PROVIDE CONT. BOND BEAM AND ATTACH WALL AT FLOOR LINE AS SHOWN.
2. WHERE CONT. BOND BEAMS & FLOOR ATTACHMENTS ARE USED. WALLS SHALL BE REINFORCED FOR HEIGHT = H1, OTHERWISE REINFORCE WALLS FOR HEIGHT = H.
3. REDUCE BOLT EMBEDMENT TO 4" AT 6" THICK WALLS. USE HILTI HY70 EPOXY OR APPROVED EQUAL.
4. ALL WELDS ARE 3/16" FILLET ALL AROUND, U.N.O.

TYPICAL DETAIL
TALL INTERIOR NON-LOAD BEARING CMU WALL BRACING AT FLOOR LINE

11 SCALE: 3/4" = 1'-0"





NOTES:

1. WHERE H EXCEEDS MAXIMUM SPECIFIED IN TYPICAL DETAIL "NON-LOAD BEARING INTERIOR CMU WALLS BRACING & REINFORCING STEEL " PROVIDE CONT. BOND BEAM AND ATTACH WALL AT FLOOR LINE AS SHOWN.
2. WHERE CONT. BOND BEAMS & FLOOR ATTACHMENTS ARE USED. WALLS SHALL BE REINFORCED FOR HEIGHT = H1, OTHERWISE REINFORCE WALLS FOR HEIGHT = H.
3. REDUCE BOLT EMBEDMENT TO 4" AT 6" THICK WALLS. USE HILTI HY70 EPOXY OR APPROVED EQUAL.
4. ALL WELDS ARE 3/16" FILLET ALL AROUND, U.N.O.

TYPICAL DETAIL
TALL INTERIOR NON-LOAD BEARING CMU WALL
BRACING AT FLOOR LINE

10 SCALE: N.T.S.

INTERIOR NON-LOAD BEARING CMU WALL JAMB SCHEDULE								
WALL THICKNESS	SPANNING CMU HEIGHT	OPENING WIDTH						
		< 3' - 0"		< 6' - 0"		< 10' - 0"		
		# OF CELLS	REINF.	# OF CELLS	REINF.	# OF CELLS	REINF.	
6"	14' - 0"	1	#4	1	#4	1	#4	
6"	22' - 0"	1	#4	2	#4	2	#4	
6"	33' - 0"	3	#5	4	#5	7	#5	
6"	38' - 0"	5	#5	10	#5	NA	NA	
8"	20' - 0"	1	#5	1	#5	1	#5	
8"	37' - 6"	2	#5	2	(2)-#5	2	(2)-#5	
8"	50' - 0"	3	(2)-#5	4	(2)-#6	5	(2)-#6	
10"	24' - 0"	1	#5	1	#5	1	#5	
10"	48' - 0"	1	(2)-#5	2	(2)-#5	2	(2)-#6	
10"	58' - 0"	2	(2)-#5	3	(2)-#6	4	(2)-#6	
12"	27' - 0"	1	#5	1	#5	1	#5	
12"	52' - 0"	1	(2)-#5	2	(2)-#5	2	(2)-#6	
12"	63' - 0"	2	(2)-#6	4	(2)-#6	6	(2)-#6	

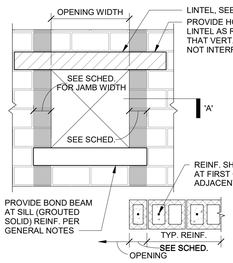
6" WALL SCHEDULE	
MAX HEIGHT	VERTICAL REINFORCING
14' - 0"	NONE
15' - 6"	GROUT @ 48"
20' - 0"	(1)-#4 @ 56"
22' - 0"	(1)-#4 @ 48"
29' - 6"	(1)-#4 @ 24"
33' - 0"	(1)-#4 @ 16"
38' - 0"**	(1)-#4 @ 8"

8" WALL SCHEDULE	
MAX HEIGHT	VERTICAL REINFORCING
20' - 0"	NONE
22' - 0"	GROUT @ 48"
27' - 0"	(1)-#5 @ 64"
33' - 6"	(1)-#5 @ 48"
37' - 6"	(1)-#5 @ 32"
43' - 0"	(2)-#5 @ 40"
50' - 0"	(2)-#5 @ 16"

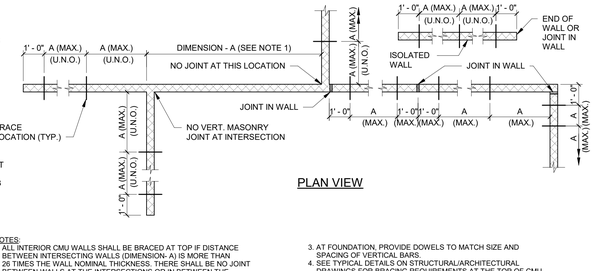
10" WALL SCHEDULE	
MAX HEIGHT	VERTICAL REINFORCING
24' - 0"	NONE
26' - 6"	GROUT @ 48"
31' - 6"	(1)-#5 @ 64"
34' - 6"	(1)-#5 @ 48"
48' - 0"	(2)-#5 @ 48"
51' - 6"	(2)-#5 @ 40"
58' - 0"	(2)-#5 @ 24"

12" WALL SCHEDULE	
MAX HEIGHT	VERTICAL REINFORCING
27' - 0"	NONE
31' - 0"	GROUT @ 48"
37' - 6"	(1)-#5 @ 56"
52' - 0"	(2)-#5 @ 56"
59' - 0"	(2)-#5 @ 40"
63' - 0"	(2)-#5 @ 32"

** ONLY ALLOWED IF MAX OPENING IN WALL IS LESS THAN 6'-0" WITH 7'-0" JAMBS TO THE SIDE OF OPENING



NOTE:
NO CONTROL JOINTS ALLOWED WITHIN SHADED AREA OR ABOVE OR BELOW OPENING

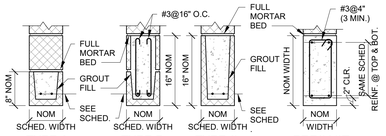


NOTES:

1. ALL INTERIOR CMU WALLS SHALL BE BRACED AT TOP IF DISTANCE BETWEEN INTERSECTING WALLS (DIMENSION- A) IS MORE THAN 26 TIMES THE WALL NOMINAL THICKNESS. THERE SHALL BE NO JOINT BETWEEN WALLS AT THE INTERSECTIONS OR IN BETWEEN THE INTERSECTING WALLS. THERE SHALL BE NO DOORS OR ANY OTHER OPENINGS LARGER THAN 24 INCHES WITHOUT JAMB REINFORCING, SEE SCHEDULE FOR LARGER OPENINGS. MINIMUM LENGTH OF INTERSECTING WALLS SHALL BE 4 FEET.
2. REINFORCE VERTICALLY SPANNING CMU WALLS AS FOLLOWS:
3. AT FOUNDATION, PROVIDE DOWELS TO MATCH SIZE AND SPACING OF VERTICAL BARS.
4. SEE TYPICAL DETAILS ON STRUCTURAL/ARCHITECTURAL DRAWINGS FOR BRACING REQUIREMENTS AT THE TOP OF CMU WALLS. THIS DETAIL SHALL APPLY IF SPECIFIC REINFORCING AND BRACING DETAILS ARE NOT SHOWN ON ARCHITECTURAL/STRUCTURAL DRAWINGS.
5. CONSULT WITH ARCHITECT/ENGINEER WHEN HEIGHT OF WALL EXCEEDS THE HEIGHT SHOWN ABOVE.
6. PROVIDE CONTINUOUS BOND BEAM AT THE TOP OF WALLS. REINFORCE BOND BEAMS WITH (2) - #4 FOR 6" WALLS & (2)-#5 FOR 8" & 12" WALLS, UNLESS NOTED OTHERWISE.
7. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
8. CONTACT E.O.R. FOR CONDITIONS NOT LISTED ON SCHEDULE.

TYPICAL DETAIL - NON-LOAD BEARING INTERIOR/CMU WALLS BRACING AND REINFORCING STEEL

13 SCALE: N.T.S.



NON-LOAD BEARING
BLOCK LINTEL SCHEDULE

17 SCALE: N.T.S.

CLEAR SPAN	REINFORCING REQUIREMENTS IN NOMINAL LINTEL SECTION								
	4x8	6x8	6x16	8x8	8x16	10x8	10x16	12x8	12x16
3-4	1-#3	1-#3	——	1-#3	——	2-#3	——	2-#3	——
4-0	1-#3	1-#4	——	2-#3	——	2-#3	——	2-#4	——
4-8	1-#4	1-#4	——	2-#4	——	2-#4	——	2-#4	——
5-4	1-#4	2-#4	——	2-#4	——	2-#4	2-#3	2-#5	——
6-0	1-#5	2-#4	1-#4	2-#4	2-#3	2-#5	2-#4	2-#5	2-#4
6-8	N/A	N/A	1-#5	N/A	2-#4	N/A	2-#4	2-#6	2-#4
7-4	↓	↓	1-#5	↓	2-#4	↓	2-#4	N/A	2-#5
8-0	↓	↓	1-#6	↓	2-#4	↓	2-#5	↓	2-#5
8-8	↓	↓	1-#6	↓	2-#5	↓	2-#5	↓	2-#6
9-4	N/A	N/A	1-#7	N/A	2-#5	N/A	2-#6	N/A	2-#6

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SIZE & LOCATION OF OPENINGS.
2. PROVIDE 1" OF BEARING AT EACH JAMB FOR EACH FOOT OF CLEAR SPAN BUT NOT LESS THAN 8". REINFORCEMENT SHALL PROJECT A MINIMUM OF 6" ONTO THE BEARING.
3. MINIMUM MASONRY COMPRESSIVE STRENGTH OF GROUTED PRISM F 'M = 2000 PSI.
4. LINTELS SCHEDULED AT 16" HIGH MAY BE EITHER TYPE "B" OR TYPE "C" AS DETAILED BELOW.
5. PRECAST CONCRETE LINTELS AS SHOWN MAY BE USED WITH ARCHITECT'S APPROVAL F ' C = 3000 PSI.

VLK | ARCHITECTS

ARCHITECT

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Houston, Texas 77070
Main Phone: 281.671.2300
www.vlkarchitects.com

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Houston, Texas 77056
Main Phone: 713.664.0130
www.matrixstructural.com

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

Matrix Structural Engineers
TBPE Firm Registration No. F-2640

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.

23-155.00

SHEET TITLE

TYPICAL CMU WALL DETAILS

SHEET NO.

S5.02

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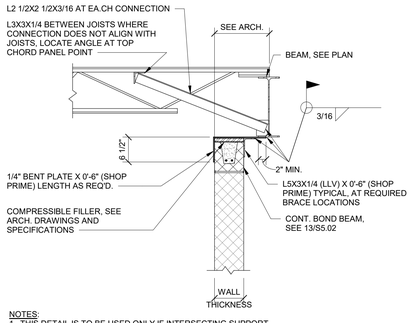
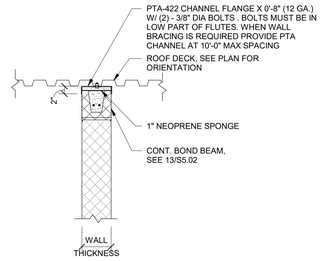


NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

12 SCALE: 3/4" = 1'-0"



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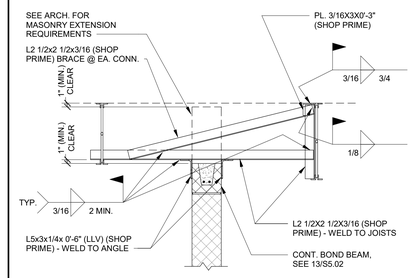
TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

8 SCALE: 3/4" = 1'-0"



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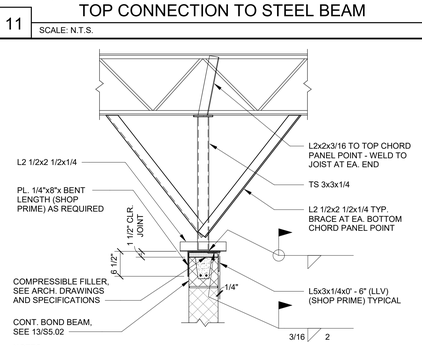
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PARALLEL TO UNEQUAL DEPTH BAR JOISTS

4 SCALE: 3/4" = 1'-0"



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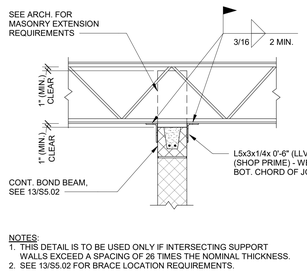
TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

11 SCALE: N.T.S.



NOTES:
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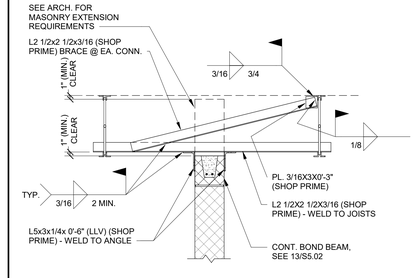
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PERPENDICULAR TO BAR JOISTS

7 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

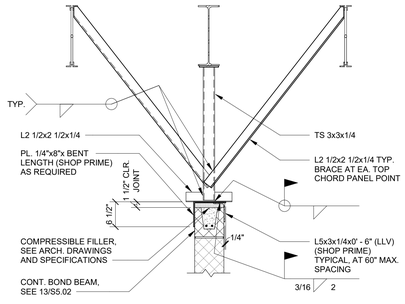
TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PARALLEL TO BAR JOISTS

3 SCALE: N.T.S.

NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PERPENDICULAR TO JOISTS

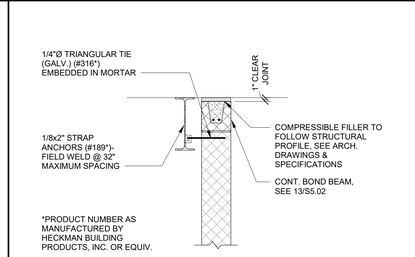
10 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

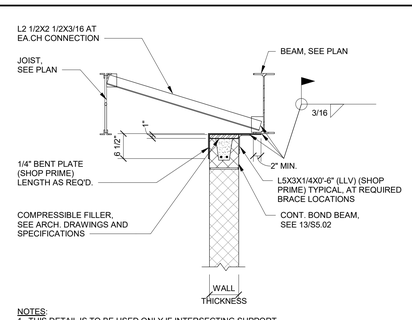
6 SCALE: N.T.S.



NOTE:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL SIDE CONNECTION TO STEEL BEAM

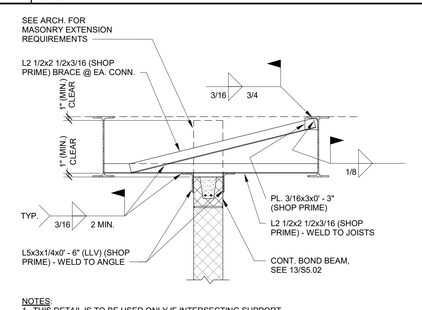
2 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

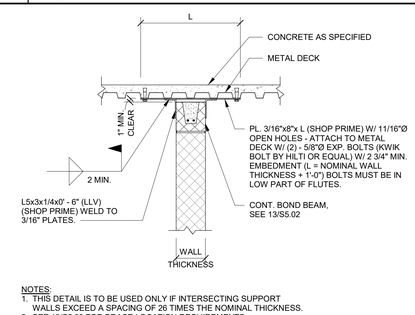
13 SCALE: 3/4" = 1'-0"



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PARALLEL TO STEEL BEAMS

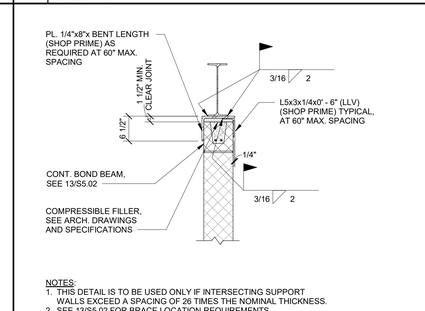
9 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO METAL DECK

5 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 13/S5.02 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

1 SCALE: N.T.S.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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Matrix Structural Engineers
TBPE Firm Registration No. F-2640

STATE OF TEXAS
KHALIL TABAJA
11/17/24
NATIONAL ENGINEER

01/06/2025

ISSUED: JANUARY 6, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
KT	RC
Designer	Quality Control
KT	
Proj. Arch.	
J.ORTIZ	

PROJECT NO.

23-155.00

SHEET TITLE

CMU BRACING AT STEEL DETAILS

SHEET NO.

S5.03

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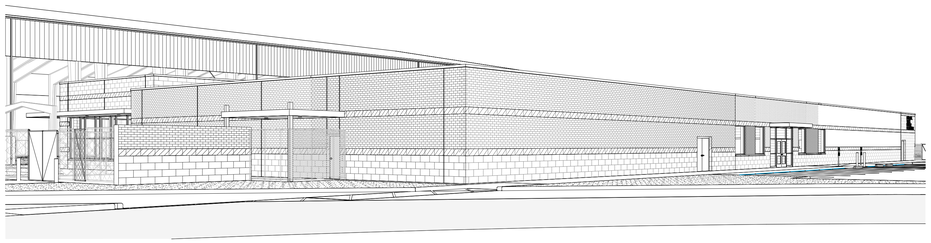
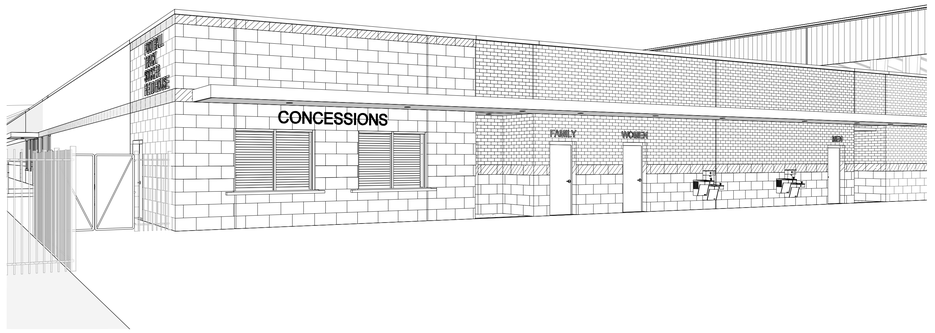
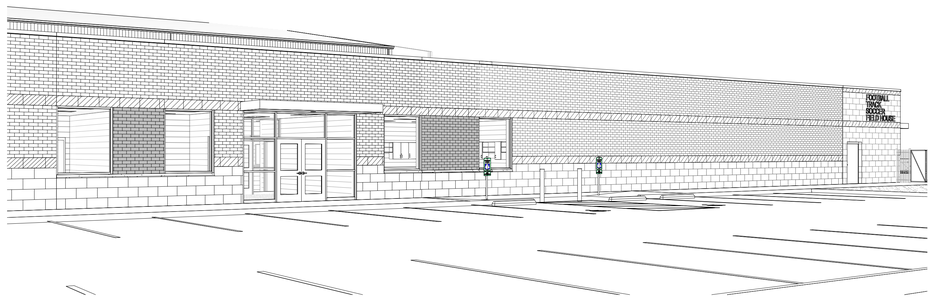


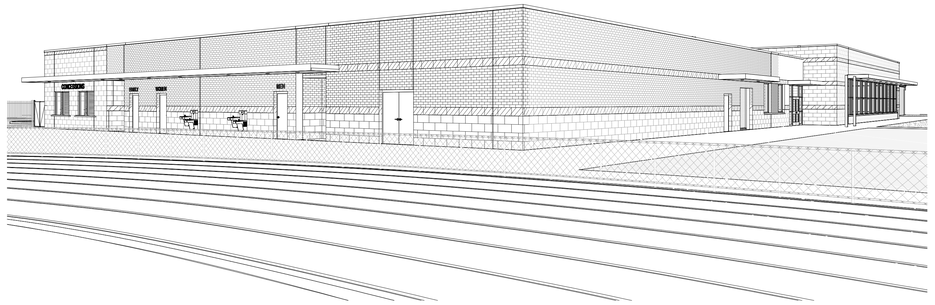
6 VIEW FROM HIGH SCHOOL
SCALE:



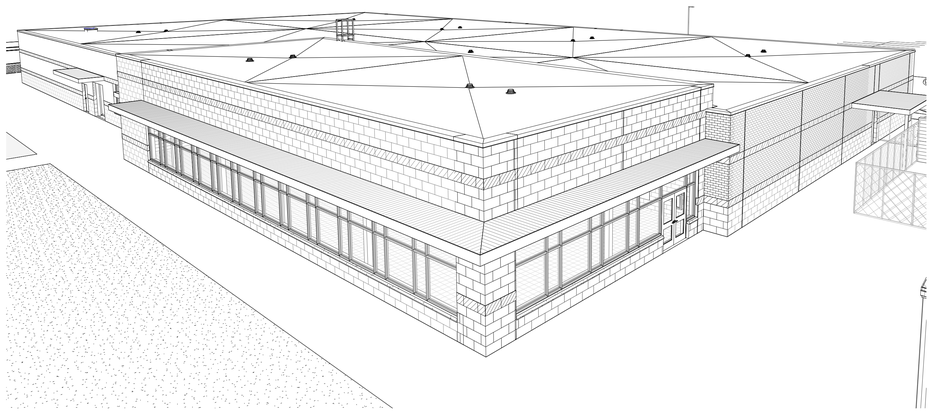
5 VIEW TOWARDS CONCESSIONS
SCALE:



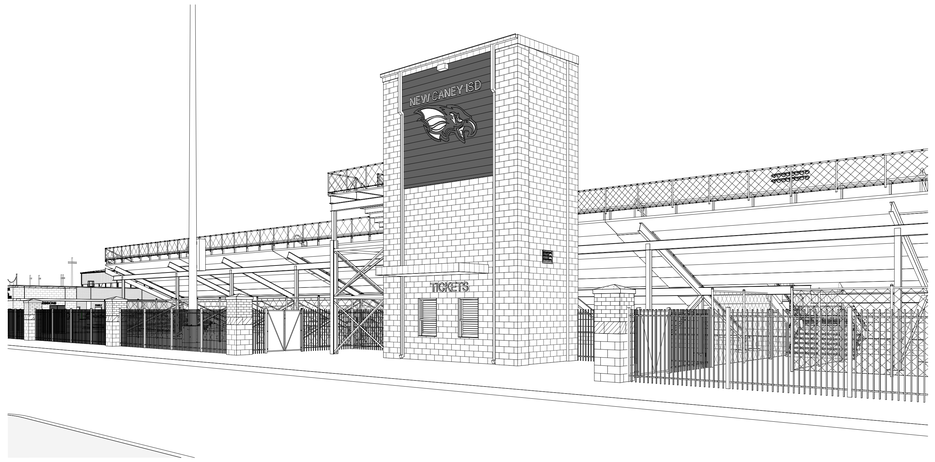
4 VIEW OF FRONT DOOR
SCALE:



3 VIEW FROM TRACK
SCALE:



2 VIEW
SCALE:



1 VIEW OF TICKET AREA
SCALE:

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REGISTERED ARCHITECT BRUCE G. BOYTER 13922 STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
3D VIEWS - FIELD HOUSE

SHEET NO.
A0.10

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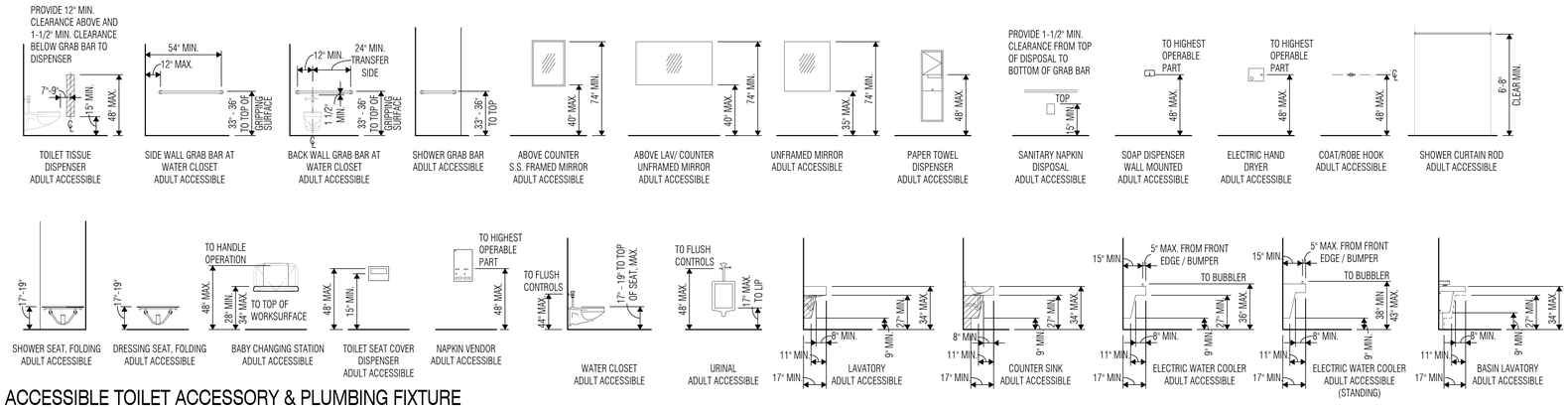
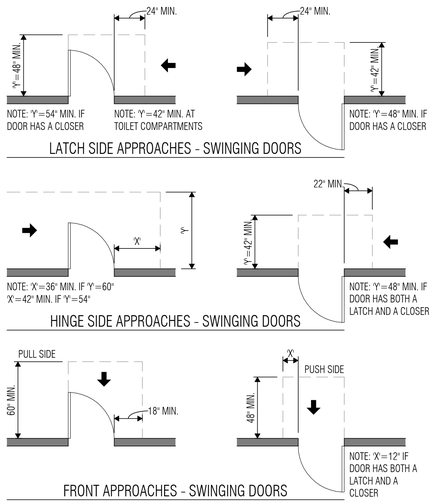


1 ACCESSIBLE TOILET ACCESSORY & PLUMBING FIXTURE MOUNTING CRITERIA

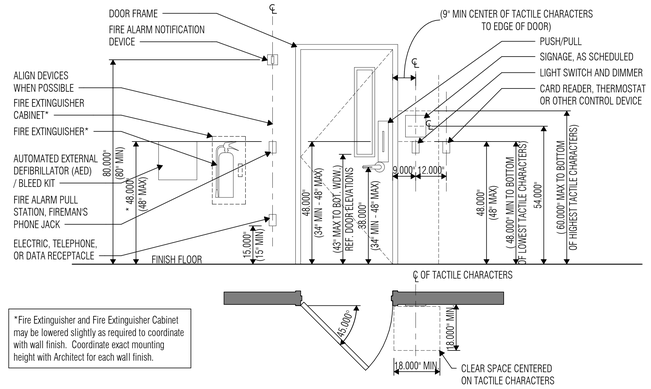
SCALE: 1/4" = 1'-0"



3 MINIMUM MANEUVERING CLEARANCES AT DOORS HC001

SCALE: 1/4" = 1'-0"

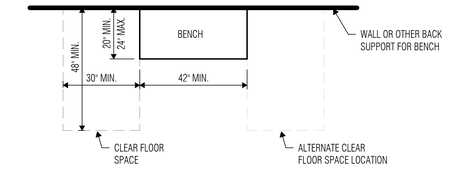
NOTES:
1. All items of the same type are to be located at the same height throughout the project, U.N.O. Notify Architect of any discrepancies.
2. Dimensions indicate project requirements. Dimensions in ( ) indicate maximum and/or minimum requirements per Authorities Having Jurisdiction.



*Fire Extinguisher and Fire Extinguisher Cabinet may be lowered slightly as required to coordinate with wall finish. Coordinate exact mounting height with Architect for each wall finish.

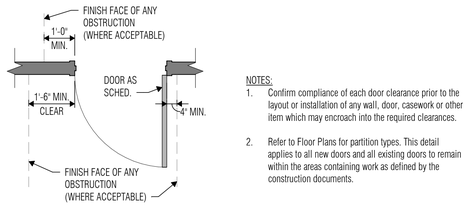
4 MISC ACCESSIBLE MOUNTING CRITERIA HC004

SCALE: 1/2" = 1'-0"



5 TYPICAL BENCH SIZE & CLEAR FLOOR SPACE

SCALE: 1/2" = 1'-0"



NOTES:
1. Confirm compliance of each door clearance prior to the layout or installation of any wall, door, casework or other item which may encroach into the required clearances.
2. Refer to Floor Plans for partition types. This detail applies to all new doors and all existing doors to remain within the areas containing work as defined by the construction documents.

HC002

6 TYPICAL DOOR CLEARANCES AT HINGE & STRIKE SIDE

SCALE: 1/2" = 1'-0"

TEXAS ACCESSIBILITY STANDARDS

PROVISIONS FOR ADULTS

REACH RANGES	
UNOBSTRUCTED FRONTAL AND SIDE APPROACH	15" MIN. - 48" MAX.
OBSTRUCTED FRONT APPROACH ≤ 20" D. (OPEN UNDER)	48" MAX.
OBSTRUCTED FRONT APPROACH > 20" D. - 25" D. MAX (OPEN UNDER)	44" MAX.
OBSTRUCTED SIDE APPROACH ≤ 10" D. - 34" H. MAX	48" MAX.
OBSTRUCTED SIDE APPROACH > 10" D. - 24" D. MAX & 34" H. MAX	46" MAX.
RAMPS AND STAIRS	
TOP OF HANDRAIL GRIPPING SURFACE	34" - 38"
DRINKING FOUNTAINS AND WATER COOLERS	
FRONTAL APPROACH	
SPOUT HEIGHT (TO OUTLET)	36" MAX.
KNEE CLEARANCE	27" MIN.
SIDE APPROACH	
SPOUT HEIGHT (TO OUTLET)	USE FRONT APPROACH
KNEE CLEARANCE	
STANDING	
SPOUT HEIGHT (TO OUTLET)	38" MIN. - 43" MAX.
WATER CLOSETS	
CENTERLINE TO WALL OR PARTITION	16" - 18"
CENTERLINE TO WALL OR PARTITION AT AMBULATORY STALL	17" - 19"
TOP OF SEAT	17" - 19"
GRAB BARS (TO TOP OF GRIPPING SURFACE)	33" - 36"
TOILET TISSUE DISPENSER HEIGHT	15" - 48"
HAND-OPERATED FLUSH CONTROLS	44" MAX.
URINALS	
RIM OF BASIN	17" MAX.
HAND-OPERATED FLUSH CONTROLS	44" MAX.
LAVATORIES AND SINKS	
RIM OR COUNTER SURFACE	34" MAX.
KNEE CLEARANCE (LAVATORIES)	27" MIN.
KNEE CLEARANCE (SINKS)	27" MIN.
TO FAUCET HANDLES FROM FRONT EDGE	25" MAX.[2]
MIRRORS	
TO TOP OF REFLECTING SURFACE	74" MIN.
TO BOTTOM OF REFLECTING SURFACE AT LAVS & COUNTERS	40" MAX.
TO BOTTOM OF REFLECTING SURFACE	35" MAX.
CONTROLS AND OPERATING MECHANISMS	
HIGHEST OPERABLE PART	
UNOBSTRUCTED FRONTAL AND SIDE APPROACH	48" MAX.
OBSTRUCTED FRONT APPROACH ≤ 20" D. (OPEN UNDER)	48" MAX.
OBSTRUCTED FRONT APPROACH > 20" D. - 25" D. MAX. (OPEN UNDER)	44" MAX.
OBSTRUCTED SIDE APPROACH ≤ 10" D. - 34" D. MAX. & 34" H. MAX.	48" MAX.
OBSTRUCTED SIDE APPROACH > 10" D. - 24" D. MAX. & 34" H. MAX.	46" MAX.
FIXED OR BUILT-IN SEATING, TABLES, & WORK STATIONS	
HEIGHT OF TABLES OR COUNTERS	28" - 34"
KNEE CLEARANCES	27" MIN.
DRESSING, FITTING & LOCKER ROOMS	
TOP OF BENCH	17" - 19"
BACK SUPPORT 18" H MIN. OR AFFIX BENCH TO WALL	
FOOD SERVICE LINES	
TOP OF TRAY SLIDE	28" - 34"

[1] NOTE: Dimension for Children is not specifically addressed in 2012 T.A.S.
[2] NOTE: Faucet handle location cannot be past the back of the allowable toe space, and only 6" deep toe space from the bottom portion of the provided kneespace is allowable for consideration.
[3] NOTE: Where required knee clearance is not provided, spout shall be 30" maximum a.f.f. and no greater than 3 1/2" from front edge/bumper.

TEXAS ACCESSIBILITY STANDARDS NOTES

1. The dimensional ranges included for items on this sheet are the maximum and minimum dimensions allowed by the Texas Accessibility Standards (TAS). There are no tolerances allowed for these dimensions.
2. Mounting criteria for Toilet Accessories on this sheet is the allowable criteria per the TAS. Refer to Sheet A2.3 _ _ for project-specific mounting criteria (if different than the TAS requirements), as well as for non-accessible mounting criteria.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT · BRUCE G. BOYTER · 13927 · STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director R.BOYTER	Drawn By M.FUENTE
Designer T.HANGAR	Quality Control VLK
Proj. Arch. B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
TEXAS ACCESSIBILITY STANDARDS REQUIREMENTS

SHEET NO.
A0.31

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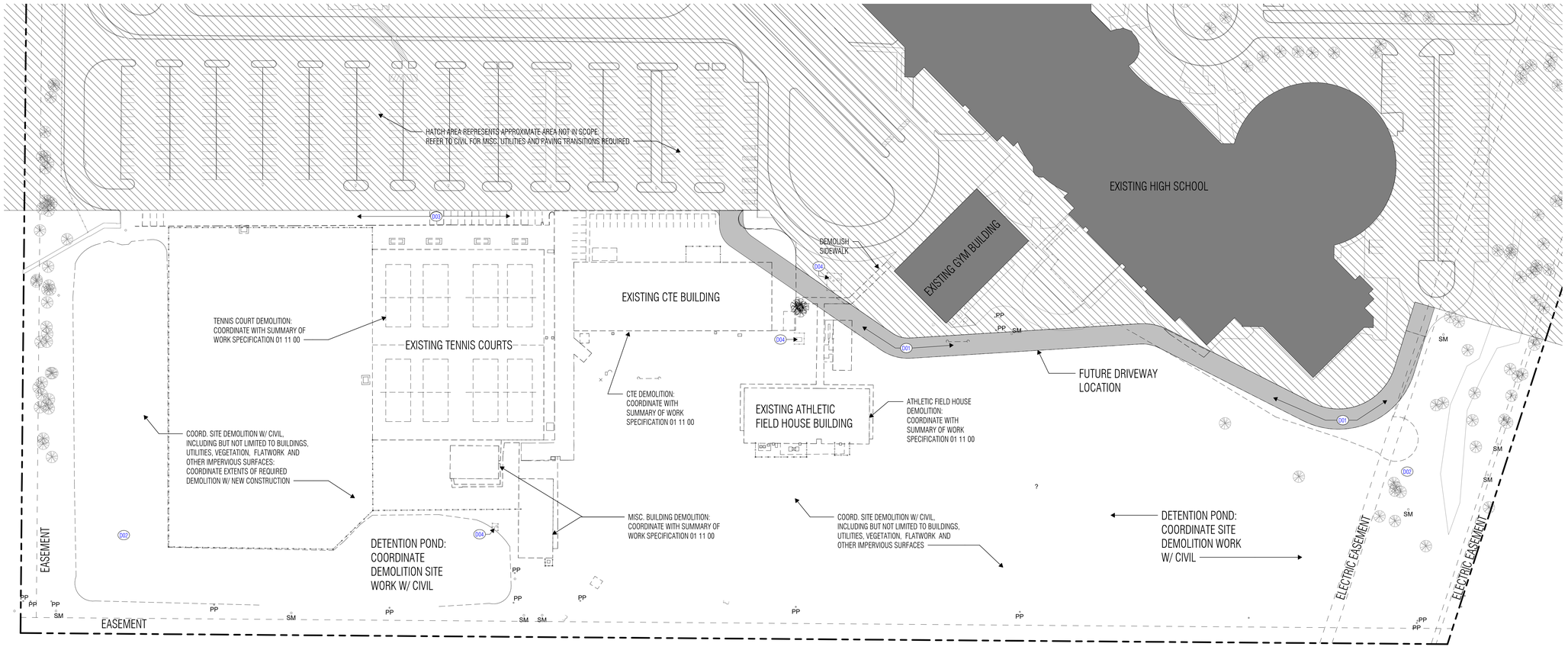

N

TRUE NORTH

1 DEMO ORIENTATION FLOOR PLAN - LEVEL ONE

SCALE: 1" = 60'-0"

KEYED NOTES

D01	DEMOLISH PORTION OF SITE FOR NEW CONCRETE DRIVE
D02	REFER TO CIVIL FOR DETENTION POND DEMOLITION
D03	DEMOLISH PORTION OF CONCRETE PAVING FOR NEW PARKING LOT LAYOUT.
D04	PROTECT EXISTING ELECTRICAL EQUIPMENT AND FENCING.

DEMOLITION LEGEND

EXISTING TO REMAIN

ITEMS TO BE DEMOLISHED

EXISTING TO REMAIN - NO SCOPE IN THIS AREA

DEMOLITION NOTES

1. Drawings show the general extent of demolition work, however it is impractical to indicate or note every item of demolition. Any items shown dashed are to be removed to make way for new construction, unless noted otherwise.
2. Existing materials containing asbestos to be removed under separate contract prior to construction by Owner's asbestos abatement contractor.
3. Contact the Owner prior to the start of demolition to determine items to be salvaged and returned to Owner.
4. Contractor shall protect items to remain from damage during demolition.
5. Repair or replace at no cost to the Owner any damages to the existing building and site as a result of construction activities.
6. Refer to civil, electrical, plumbing, and mechanical demolition plans for additional information.
7. Parking lots shall be existing to remain, U.N.O.
8. Repair or replace at no cost to the Owner any damages to the existing building and site as a result of construction activities.
9. All existing trees shall be protected during construction.

KEY PLAN

A B

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01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

DEMOLITION PLAN

SHEET NO.

A1.10

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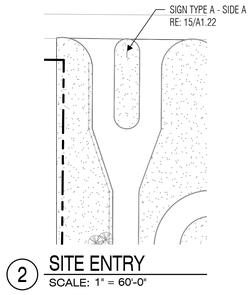


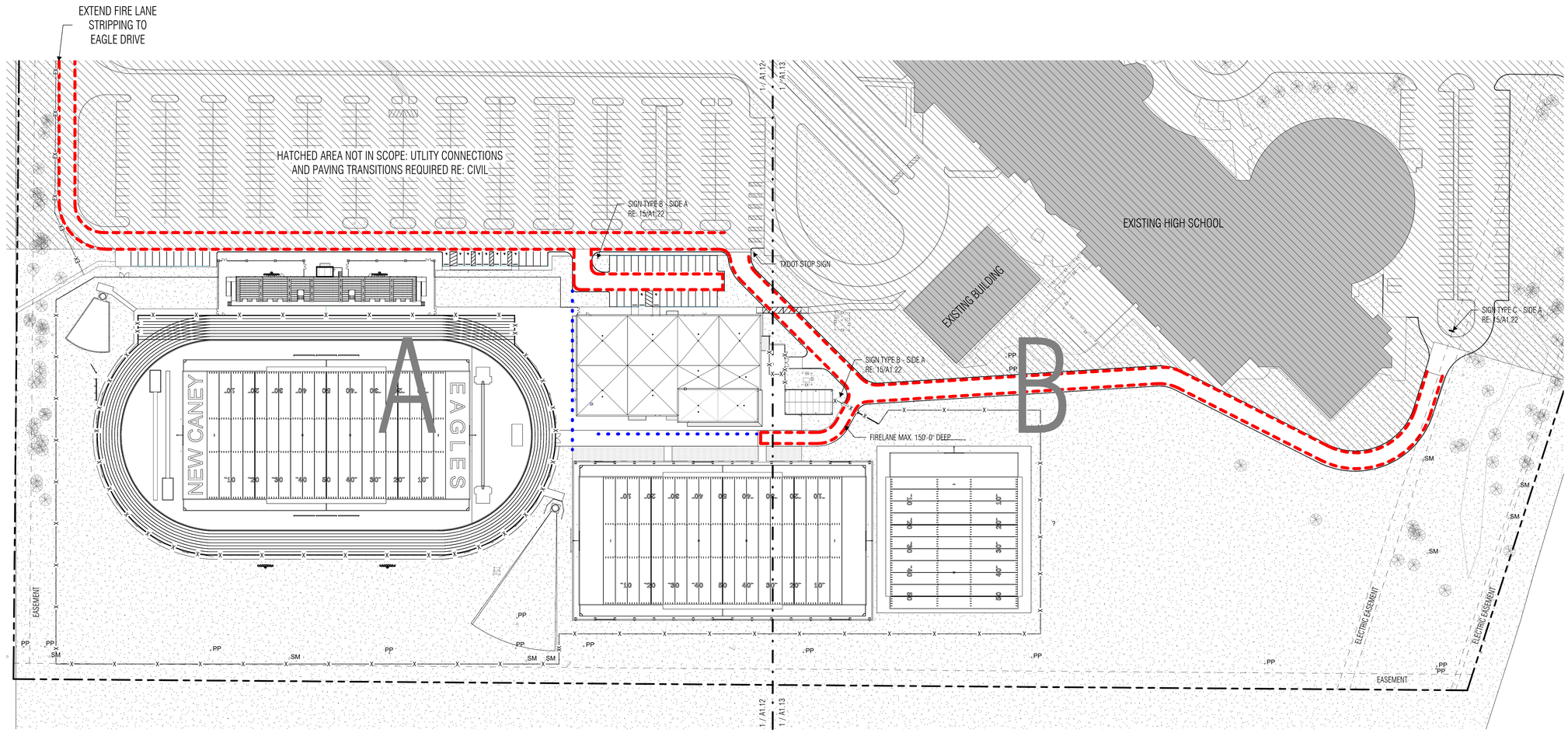
2 SITE ENTRY
SCALE: 1" = 60'-0"

SITE PLAN NOTES

1. Verify and document existing dimensions and conditions at the site before beginning construction. Notify the Architect of conflicts or variations prior to commencement of construction.
2. To prevent damage to existing trees and shrubs in proximity to the Work, provide and maintain protective barriers around those items in accordance with the specified procedures, or in the absence of those procedures, with recognized landscaping and horticultural practices.
3. The fire lane shall be marked using red and white traffic paint. The boundary of the fire lane shall be identified by red stripes that are 6 inches wide. The words "FIRE LANE - NO PARKING" shall appear in four inch tall white letters at every 25 feet and alternating intervals on the red border markings. (per code)

SITE PLAN LEGEND

- FIRE LANE (PER AHJ STANDARDS)
- FIRE HOSE LAY, LINE ON PLAN INDICATES EXACTLY 200' AT AREA THAT ARE NOT NEXT TO FIRE LANES (Per fully sprinklered Building Requirements)
- CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE
- ORNAMENTAL FENCE



1 SITE PLAN
SCALE: 1" = 60'-0"

N
TRUE NORTH

KEY PLAN

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
ROGER G. BOYTER
13923
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
SITE PLAN

SHEET NO.
A1.11

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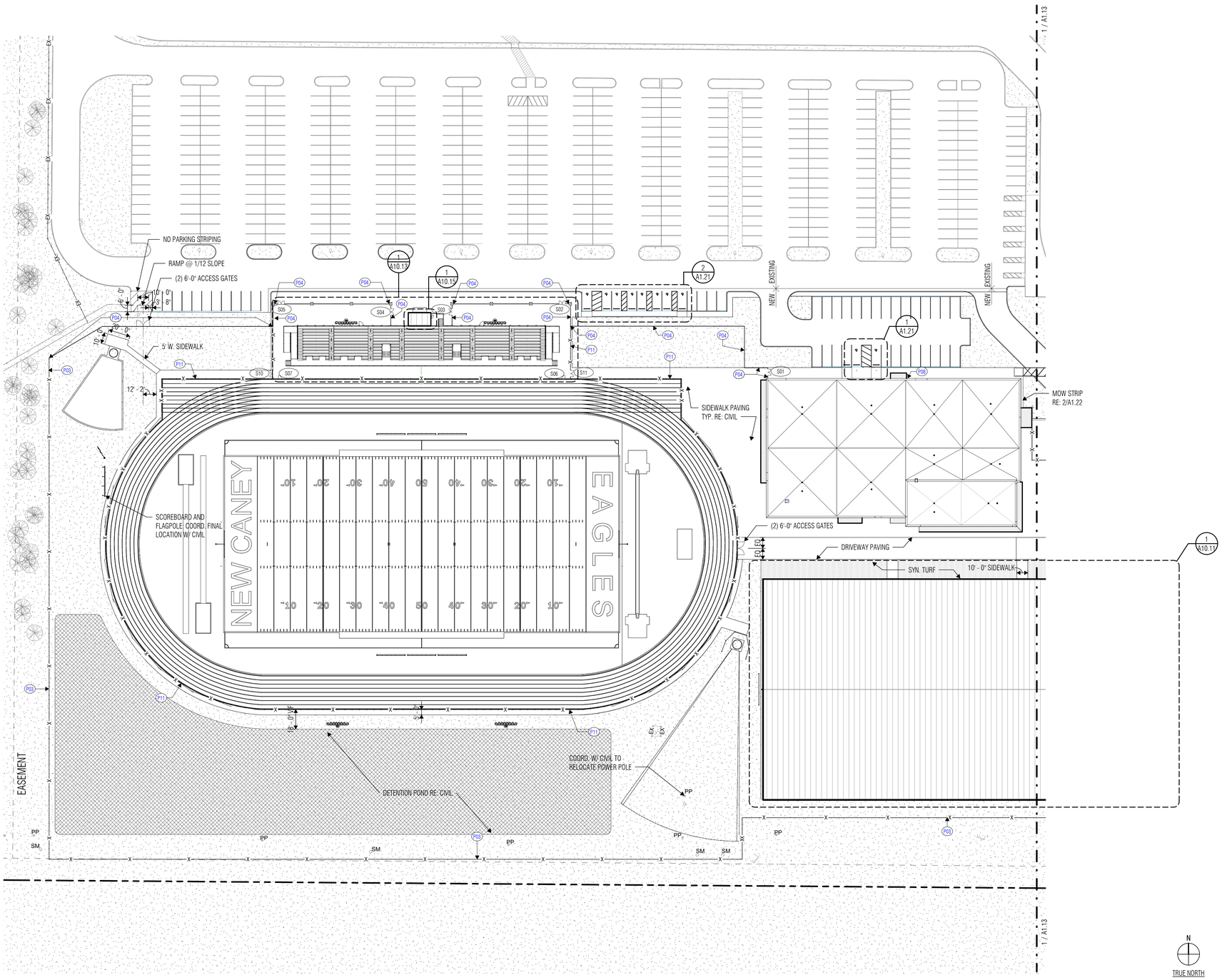

1 SITE PLAN
SCALE: 1" = 40'-0"

KEYED NOTES

P03	8' TALL CHAINLINK FENCE
P04	6' TALL DECORATIVE METAL FENCE
P08	LOCATION OF KNOX BOX. RECESSED IN BUILDING.
P11	4' TALL CHAINLINK FENCE

SITE PLAN LEGEND

- FIRE LANE (PER AHJ STANDARDS)
- FIRE HOSE LAY, LINE ON PLAN INDICATES EXACTLY 200' AT AREA THAT ARE NOT NEXT TO FIRE LANES (Per fully sprinklered Building Requirements)
- CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE
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SITE PLAN NOTES

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KEY PLAN

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRUCE G. BOYTER
13927
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.		Revision Date
1	OWNER COMMENTS	10/14/2024

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
SITE PLAN - AREA A

SHEET NO.
A1.12

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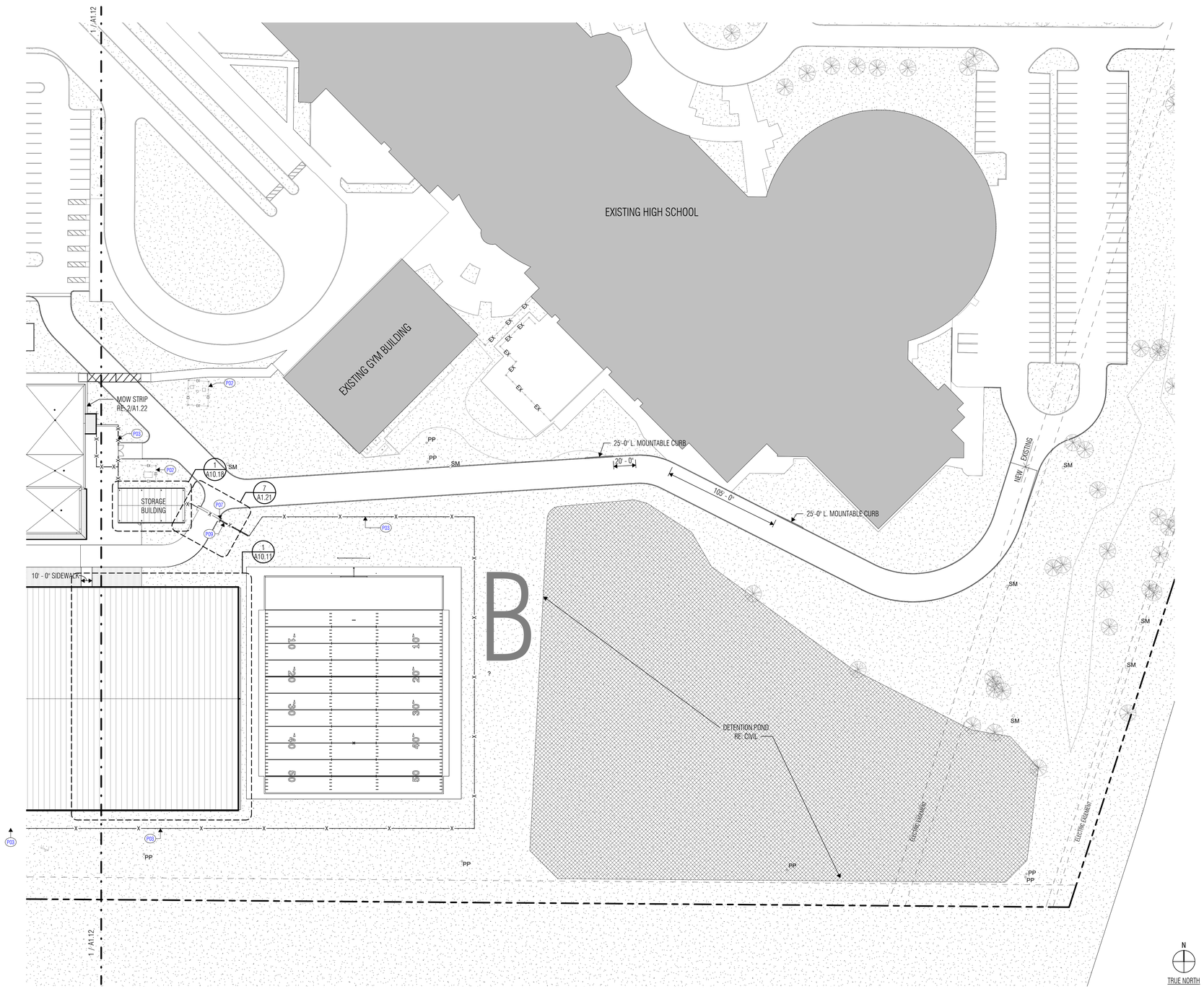

1 SITE PLAN
SCALE: 1" = 40'-0"

KEYED NOTES

P02	EXISTING FENCE TO REMAIN
P03	8' TALL CHAINLINK FENCE
P07	KNOX BOX MOUNTED ON POLE FOR GATE ACCESS.
P09	MANUAL CANTILEVER GATE. MATERIAL AND HEIGHT TO MATCH ADJACENT FENCING.

SITE PLAN LEGEND

- FIRE LANE (PER AHJ STANDARDS)
- FIRE HOSE LAY, LINE ON PLAN INDICATES EXACTLY 200' AT AREA THAT ARE NOT NEXT TO FIRE LANES (Per fully sprinklered Building Requirements)
- CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE
- ORNAMENTAL FENCE

SITE PLAN NOTES

1. Verify and document existing dimensions and conditions at the site before beginning construction. Notify the Architect of conflicts or variations prior to commencement of construction.
2. To prevent damage to existing trees and shrubs in proximity to the Work, provide and maintain protective barriers around those items in accordance with the specified procedures, or in the absence of those procedures, with recognized landscaping and horticultural practices.
3. The fire lane shall be marked using red and white traffic paint. The boundary of the fire lane shall be identified by red stripes that are 6 inches wide. The words "FIRE LANE - NO PARKING" shall appear in four inch tall white letters at every 25 feet and alternating intervals on the red border markings. (per code)

KEY PLAN
A | B

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NEW CANEY ISD
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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

JESSE G. BOYTER 13923 REGISTERED ARCHITECT STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.		Revision Date
1	OWNER COMMENTS	10/14/2024

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
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Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
SITE PLAN - AREA B

SHEET NO.
A1.13

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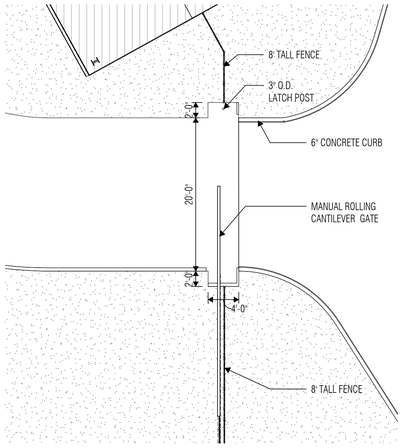
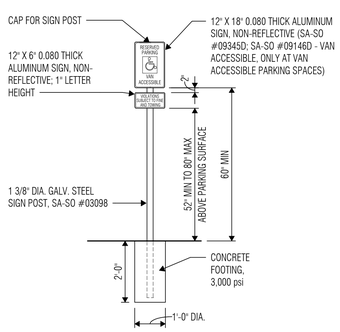
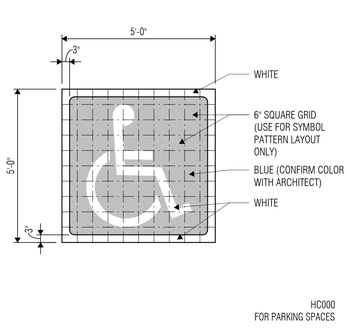


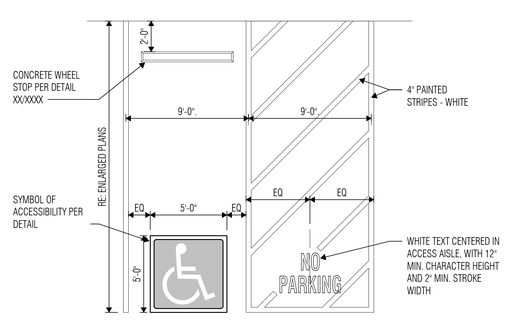
7 ROLLING GATE
SCALE: 1/8" = 1'-0"



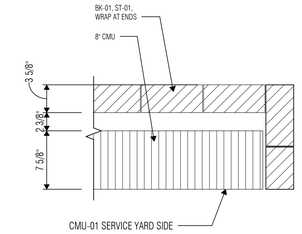
6 ACCESSIBLE PARKING SIGN
SCALE: 1/2" = 1'-0"



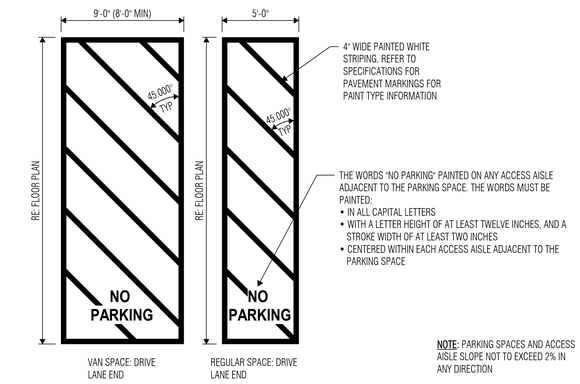
5 SYMBOL OF ACCESSIBILITY
SCALE: 1/2" = 1'-0"



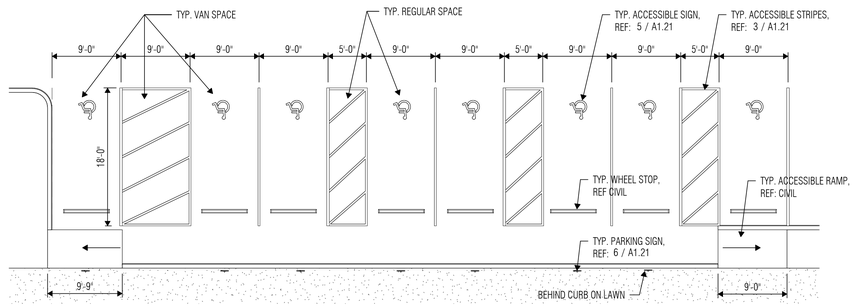
4 ACCESSIBLE PARKING STRIPING DETAIL
SCALE: 1/4" = 1'-0"



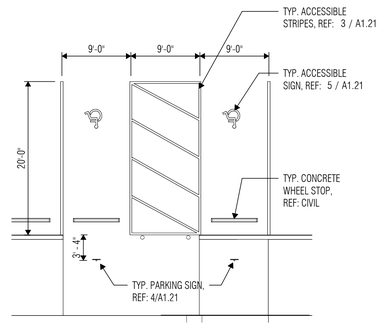
8 WALL TERMINATION DETAIL
SCALE: 1 1/2" = 1'-0"



3 ACCESS STRIPING DETAIL
SCALE: 1/4" = 1'-0"



2 ACCESSIBLE PARKING SPACES
SCALE: 1/8" = 1'-0"



1 ACCESSIBLE PARKING SPACES
SCALE: 1/8" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRUCE G. BOYTER
13923
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
SITE PLAN DETAILS

SHEET NO.
A1.21

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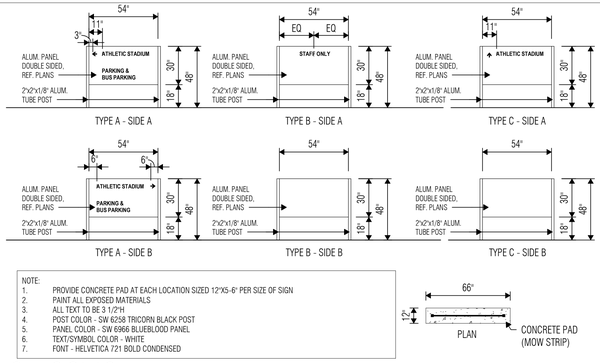
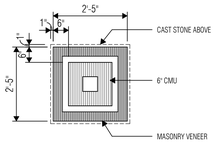
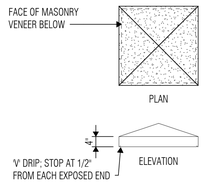


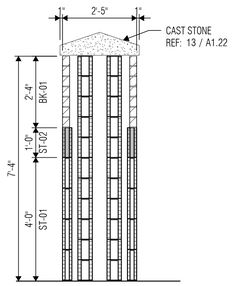
15 SITE SIGNAGE
SCALE: 1/4" = 1'-0"



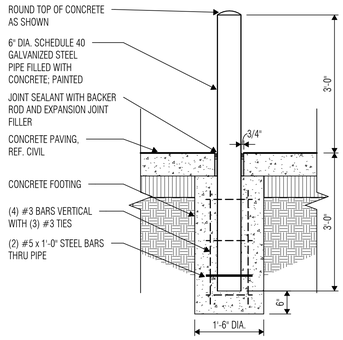
14 PILASTER PLAN DETAIL
SCALE: 1/2" = 1'-0"



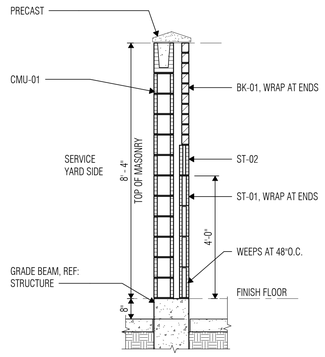
13 CAST STONE @ PILASTER
SCALE: 1/2" = 1'-0"



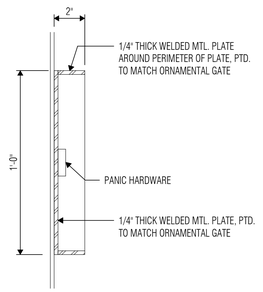
12 PILASTER SECTION
SCALE: 1/2" = 1'-0"



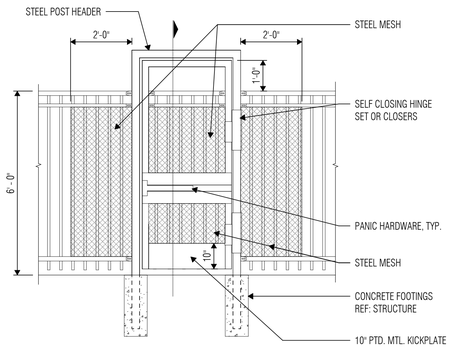
10 BOLLARD DETAIL
S500
SCALE: 3/4" = 1'-0"



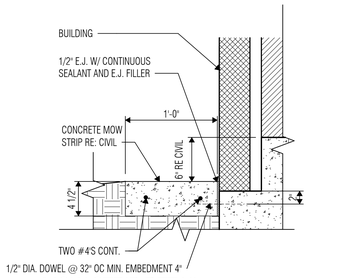
9 MECHANICAL YARD WALL SECTION
SCALE: 1/2" = 1'-0"



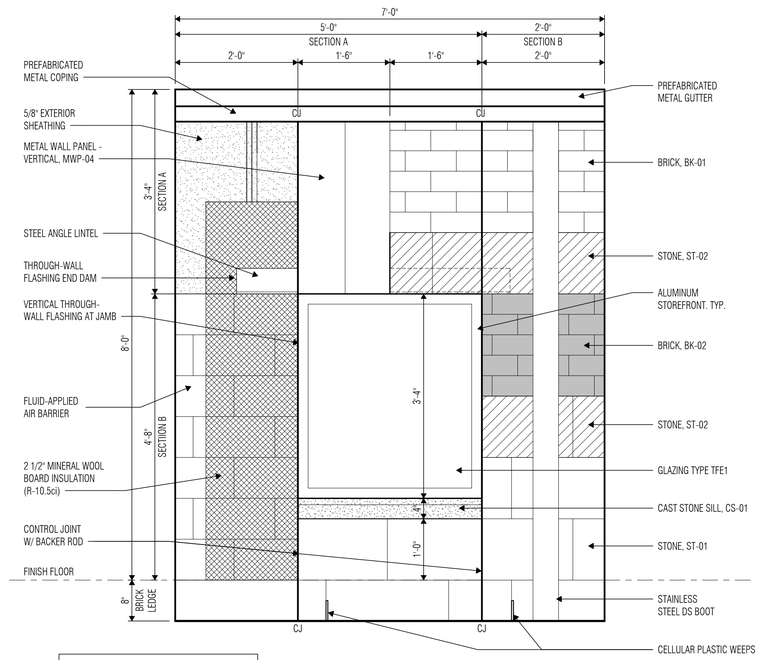
8 EGRESS GATE DETAIL
SCALE: 3" = 1'-0"



7 DECORATIVE EGRESS GATE
SCALE: 1/2" = 1'-0"



2 MOW STRIP DETAIL
SCALE: 1 1/2" = 1'-0"



NOTE:
CONSTRUCT SECTION 'A' WITH STUD BACKUP WALL
CONSTRUCT SECTION 'B' WITH CMU BACKUP WALL
(REFER TO WALL DETAILS FOR MORE INFORMATION)

1 EXTERIOR MOCK-UP WALL
SCALE: 1" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT ROYCE G. BOYTER 13921 STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
SITE PLAN DETAILS

SHEET NO.
A1.22

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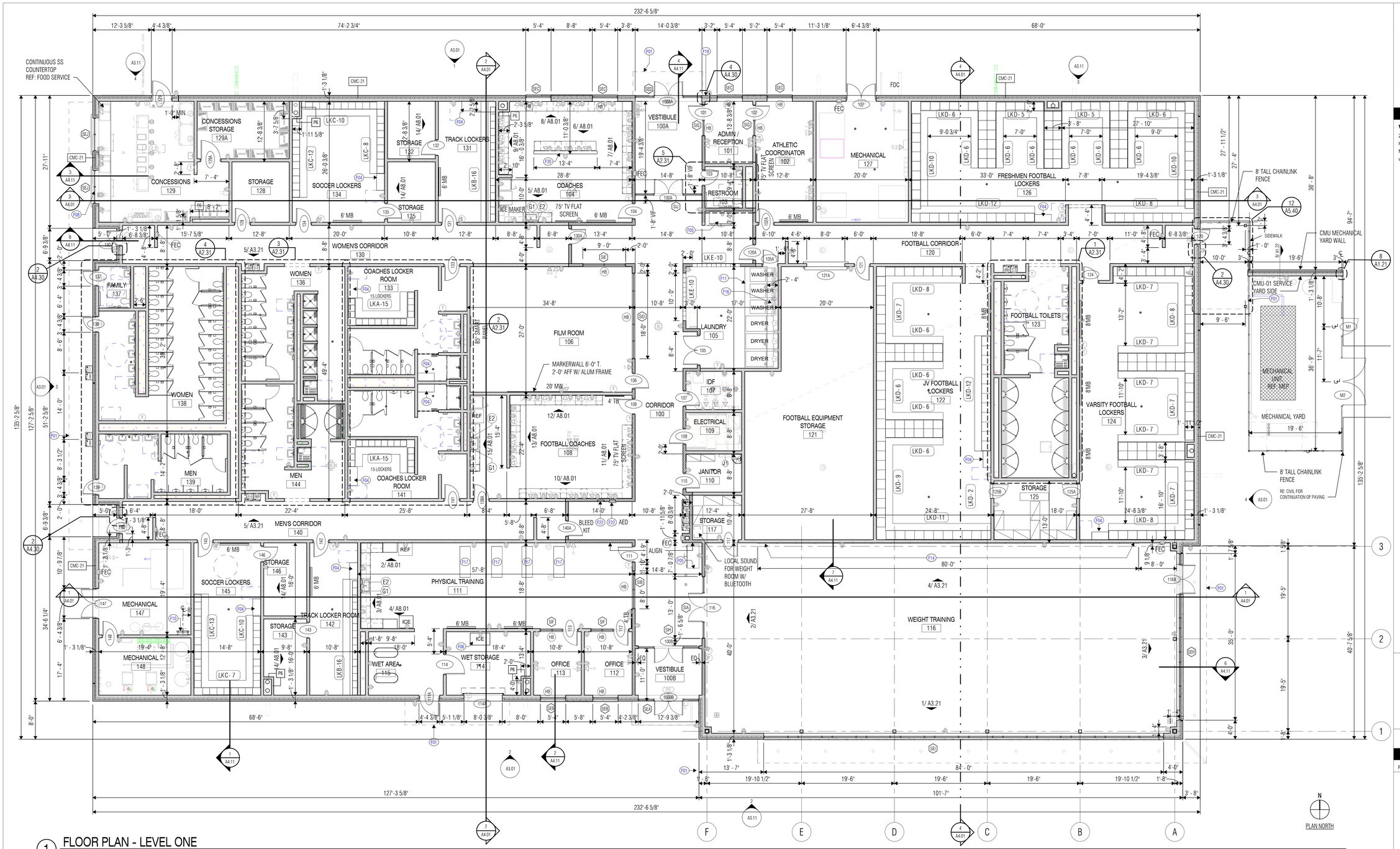

1 FLOOR PLAN - LEVEL ONE

SCALE: 1/8" = 1'-0"

KEYED NOTES

F04	20"X42" ADA FIXED BENCH; REF: 4/A0.31
F05	REFRIGERATED MERCHANDISER; REF: FOOD SERVICE
F06	COMMERCIAL ICE MACHINE; REF: FOOD SERVICE
F08	HORIZONTAL SLIDING MANUAL SERVICE WINDOW TO MATCH SIZE OF OPENING. WITHOUT BOTTOM TRACK, 1/4" LAMINATED GLAZING, AND JAMB LATCHES.
F10	STEEL WALL LADDER TO EXTEND TO ROOF HATCH
F11	4" CONCRETE HOUSEKEEPING PAD AT WASHERS AND DRYERS
F14	8'H MIRRORS MOUNTED AT 24"A.F.F.
F16	TRENCH DRAIN WITH GRATE
F17	TREATMENT TABLE
F19	RECESSED KNOX BOX LOCATION; COORDINATE FINAL LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION
F20	44"H 8"CMU WALL WITH SOLID TOP COURSE; BULLNOSE ALL EXPOSED EDGES, TYPICAL
F22	LOCATION OF AED AND BLEEDING CONTROL KITS PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR. MOUNT KITS SO THAT OPERABLE HANDLE IS AT OR BELOW 48"A.F.F. TO THE NEAREST MASONRY COURSE. RECESSES TO BE FRAMED AS OPENINGS IN CMU, SEE STRUCTURAL FOR OPENING REINFORCING

FLOOR PLAN LEGEND

METAL STUD PARTITION. Extend 4" above highest ceiling plane and brace to structure above as noted in Floor Plan Notes. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above.

CMU PARTITION. Extend 4" above highest ceiling plane and brace to structure above as detailed. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above.

CMU PARTITION - BURNISHED BLOCK. Extend 4" above highest ceiling plane and brace to structure above as detailed. Extend to bottom of deck exposed ceilings. Burnished CMU up to ceiling height and remaining height to be standard CMU. Burnished face to be on the corridor side. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above. ref: for CMU coursing pattern

LOCKER TYPE (LKA-2)
For locker types, ref. 5 / A2.21
LOCKER QUANTITY

FURNITURE, FIXTURE OR EQUIPMENT BY OWNER. Coordinate with adjacent electrical devices, casework, etc.

INDUSTRIAL METAL SHELVING. 24" x 48" unless noted otherwise

MB	MARKERBOARD. Preceding number is length, in feet.
TB	TACKBOARD. Preceding number is length, in feet.
TS	TACK STRIP. Preceding number is length, in feet.
IM	INTERACTIVE MARKERBOARD
IFP	INTERACTIVE FLAT PANEL
FEC	FIRE EXTINGUISHER WITH CABINET AND BRACKET
FE	FIRE EXTINGUISHER WITH BRACKET
FHC	FIRE HOSE CABINET
HB	HORIZONTAL BLINDS
RS	ROLLING WINDOW SHADES
DS	DOWNSPOUT

FLOOR PLAN NOTES

1. Primary Ground Level floor elevation is ____.____' (Mean Sea Level), which equals to 100'-0" datum.
2. Dimensions on Floor Plans are to face of stud or CMU unless noted otherwise.
3. Coordinate the location of electrical devices with casework, millwork, lockers, etc. Any electrical device that is not properly coordinated shall be relocated at no additional cost.
4. Exterior wall construction is identified on the Wall Sections. Refer to the A4-series sheets for Wall Sections, and to Sheet A4.10 for Exterior Wall Assemblies.
5. Refer to Exterior Elevation Notes for control joint requirements at all inside corners of masonry veneer.
6. Refer to Sheet A2.21 for Partition Types.
7. Interior partitions are Type "P7" unless noted otherwise.
8. Refer to Detail 4/A0.31 for Typical Door Maneuvering Clearances. All new doors shall meet the requirements of that detail. If any door is found that does not comply with these requirements, request clarification from the Architect prior to construction.
9. Refer to Sheet A2.22 for Typical Gypsum Board Control Joint Details at all CFS and light-gage steel stud partition openings.
10. Refer to Sheet A2.22 for Typical Partition Penetration Details, including pipe, conduit and ductwork penetrations.
11. Refer to Sheet A2.22 for Typical Bracing at Non-Loadbearing CMU Partitions.
12. Refer to Exterior Elevations for exact locations of downspouts.
13. Provide factory bullnose units at all interior exposed vertical edges of CMU.
14. Provide 8" starter courses at all CMU walls and partitions unless noted otherwise.
15. All typical CMU hinge side door jambs are 8" unless dimensioned or shown otherwise.
16. Provide steel or masonry lintels over all openings in CMU walls, including those required for mechanical ductwork and dampers, whether specifically indicated on the drawings or not.
17. At light-gage steel stud partitions that extend above the ceiling, provide diagonal 20 gage stud braces at 4'-0" o.c. to structure above (not to steel deck) as required to provide rigid anchorage and support of partitions.
18. Provide minimum 2 X 6 fire-retardant treated wood blocking in both new and existing stud walls and partitions, at mounting locations for wall-mounted accessories, handrails, casework, markerboards, tackboards, folding partitions, toilet partitions, and all other wall-mounted items. Refer to Sheet A2.22 for typical blocking requirements at various conditions.
19. At Mechanical, Electrical and Boiler Room partitions, seal tightly around all penetrations. Utilize fire safing material at rated partitions.
20. Provide sealant and/or fire safing at all floor penetrations, as applicable.
21. Provide horizontal blinds at all window systems below 10' H. Blinds to be placed on the inside of classroom and offices. Window glazing at all HM frames to be coordinated so that blind sits within frame on the privacy side of the space.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT BRANCE G. BOYTER 13927 STATE OF TEXAS

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director R.BOYTER	Drawn By M.FUENTE
Designer T.HANGAR	Quality Control VLK
Proj. Arch. B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

FLOOR PLAN

SHEET NO.

A2.11

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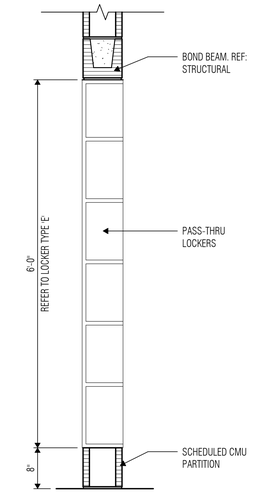


6 LAUNDRY LOCKER PASS-THRU DETAIL
SCALE: 1" = 1'-0"

PARTITION NOTES

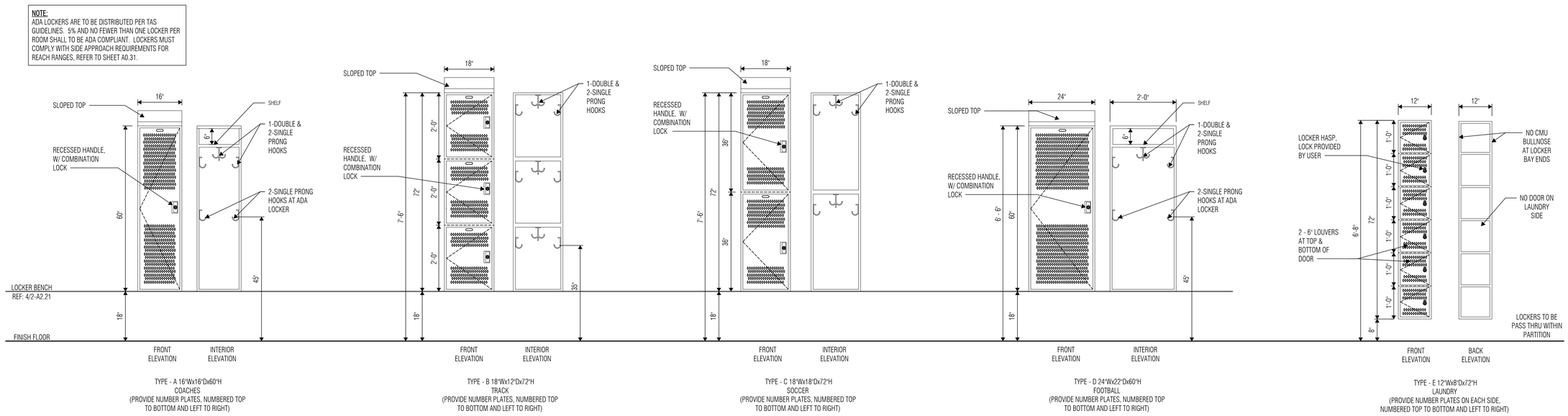
1. Refer to Floor Plan Notes for additional metal stud requirements at Ceramic Tile, Plaster, Anchored Masonry or Stone Veneer, and Adhered Masonry or Stone Veneer.
2. Refer to Floor Plan Notes for CMU starter course requirements.
3. Refer to Sheet A2.22 for typical partition details.
4. Refer to Reflected Ceiling Plans for location of fire rated partitions.
5. Refer to Reflected Ceiling Plans for location of non-rated partitions that extend to the structural deck above.
6. Provide firestopping as required to achieve the fire-resistive rating at all penetrations, gaps and other openings through or around rated floors, roofs, walls and partitions.
7. At all rated and acoustical partitions that extend to structural deck above, seal to the floor below and to the structure above. Provide firestopping at rated partitions, and acoustical sealant at acoustical and sound conditioned other partitions.
8. At all partitions that extend to structural deck above, provide gypsum board enclosure around beams, joists, ducts, etc. as required to maintain fire-resistive ratings and acoustical requirements.
9. Typical CMU notes, unless otherwise noted on structural drawings:
   A. Provide steel bracing as shown on Sheet A2.22.
   B. Provide continuous bond beam with (2) #4 reinforcing bars at top course of all 6" and 8" CMU partitions, whether indicated on details or not.
10. 4" CMU shall not be used for interior partitions, except at chase walls where specifically indicated.

STUD PARTITION SIZING SCHEDULE

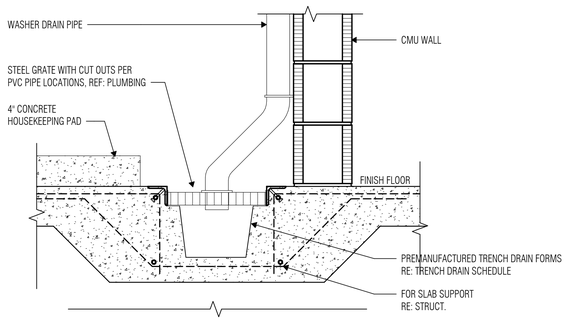
STUD DEPTH	STUD SPACING	STUD GAGE	EQ STUD	MAX LENGTH	MAX LENGTH (at Tile/Plaster)
2-1/2"	16" O.C	25 (18 mils)	25EQ	12'-0"	N/A
2-1/2"	16" O.C	20 (30 mils)	20EQ	12'-6"	11'-0"
3-5/8"	16" O.C	25 (18 mils)	25EQ	15'-6"	N/A
3-5/8"	16" O.C	20 (30 mils)	20EQ	16'-0"	14'-0"
6"	16" O.C	25 (18 mils)	25EQ	21'-6"	N/A
6"	16" O.C	20 (30 mils)	20EQ	22'-6"	19'-6"

NOTES:
1. All doors shall have a minimum of 20 gage framing where required by specifications.
2. See Floor Plan Notes and Partition Notes for additional metal stud requirements at ceramic tile, plaster, anchored masonry/stone veneer, or adhered masonry/stone veneer.
3. Max. Lengths assume both sides of studs braced full-height of partition.
4. Max. Lengths are based on 5 psf lateral loading and L/240 deflection (L/360 at tile/plaster).
5. Equivalent (EQ) studs are not allowable at abuse-resistant or impact-resistant gyp board. Provide true 20 gage studs with minimum 0.0312 inches design thickness at these locations.

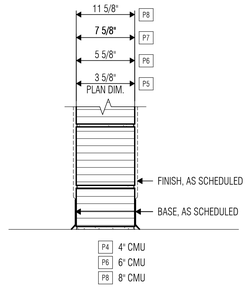
NOTE:
ADA LOCKERS ARE TO BE DISTRIBUTED PER TAS GUIDELINES. 5% AND NO FEWER THAN ONE LOCKER PER ROOM SHALL TO BE ADA COMPLIANT. LOCKERS MUST COMPLY WITH SIDE APPROACH REQUIREMENTS FOR REACH RANGES, REFER TO SHEET A0.31.



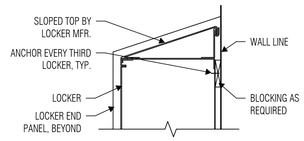
5 LOCKER TYPES
SCALE: 3/4" = 1'-0"



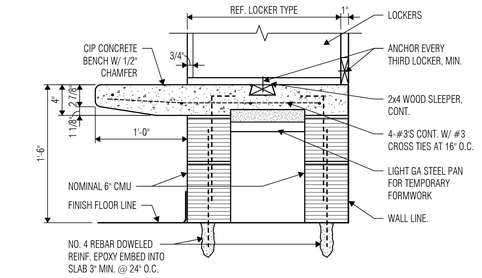
4 TRENCH DRAIN AT LAUNDRY
SCALE: 1 1/2" = 1'-0"



3 PARTITION TYPES
SCALE: 1 1/2" = 1'-0"



2 LOCKER CAP DETAIL
SCALE: 1 1/2" = 1'-0"



1 DETAIL - LOCKER/CONCRETE BENCH
SCALE: 1 1/2" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRUCE G. BOYTER
13929
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director R.BOYTER
Drawn By M.FUENTE
Designer T.HANGAR
Quality Control VLK
Proj. Arch. B.HEIL

PROJECT NO.
23-155.00

SHEET TITLE
PARTITION TYPES AND LOCKER TYPES

SHEET NO.
A2.21

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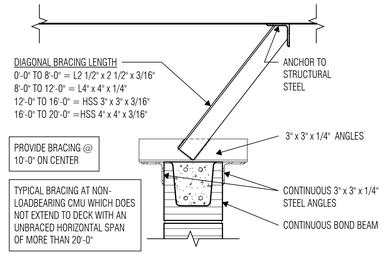
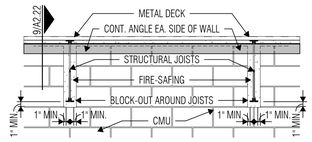
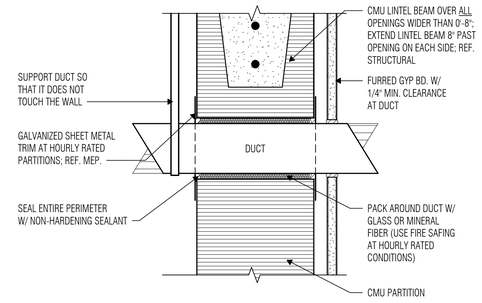


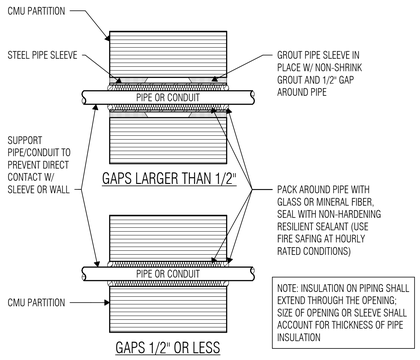
8 DETAIL MC022
SCALE: 1 1/2" = 1'-0"



7 DETAIL MC010
SCALE: 1/2" = 1'-0"



6 PARTITION DETAIL MC015
SCALE: 3" = 1'-0"



5 PARTITION DETAIL MC008
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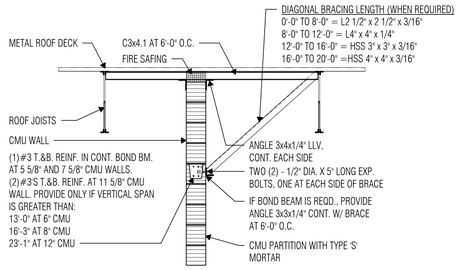

4 DETAIL MC009
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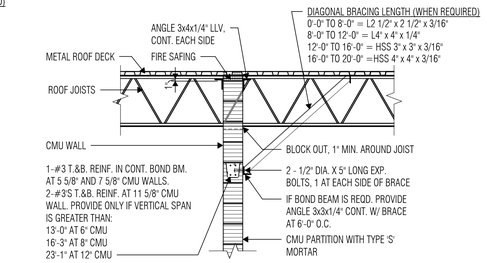
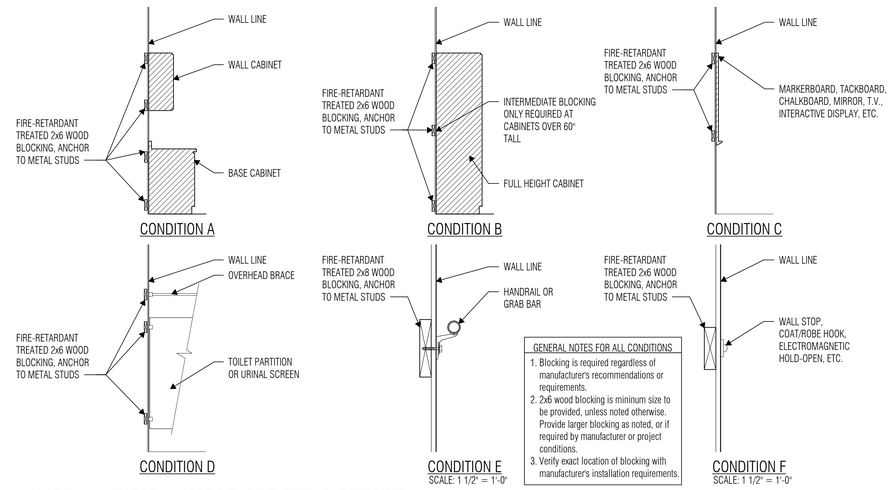


3 DETAIL MC013
SCALE: 1/2" = 1'-0"



1 MC005 - TYPICAL WOOD BLOCKING DETAILS MC005
SCALE: 3/8" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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01/06/2025

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REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
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SHEET TITLE
PARTITION DETAILS

SHEET NO.
A2.22

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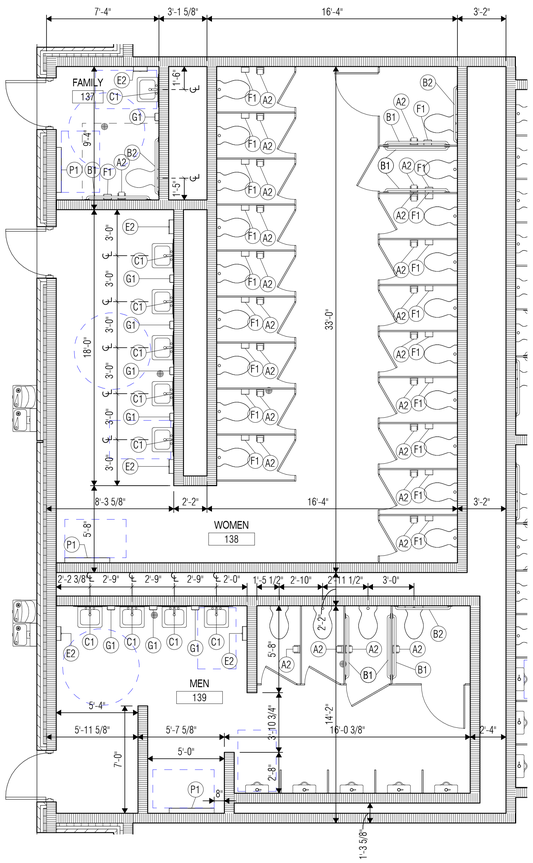
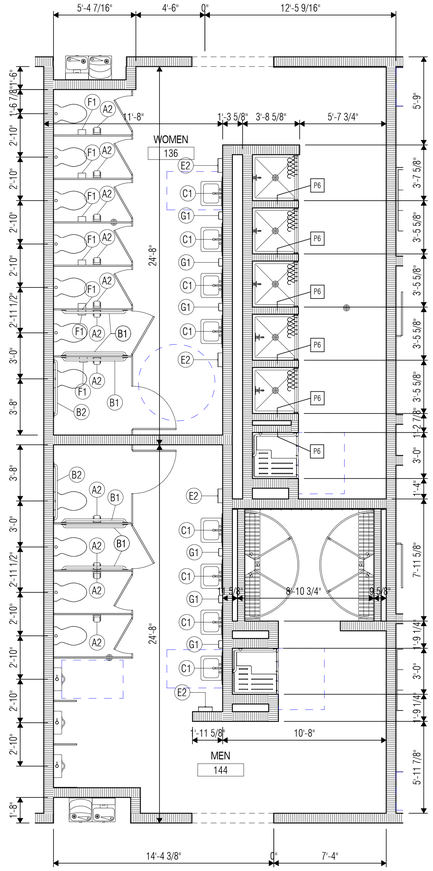
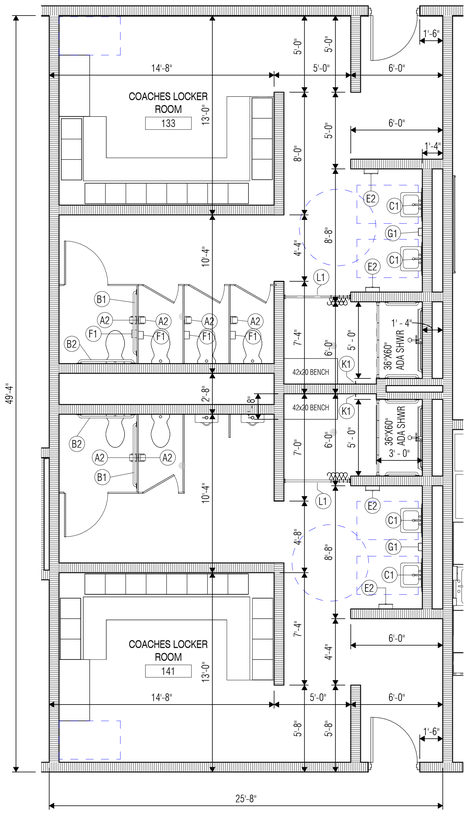


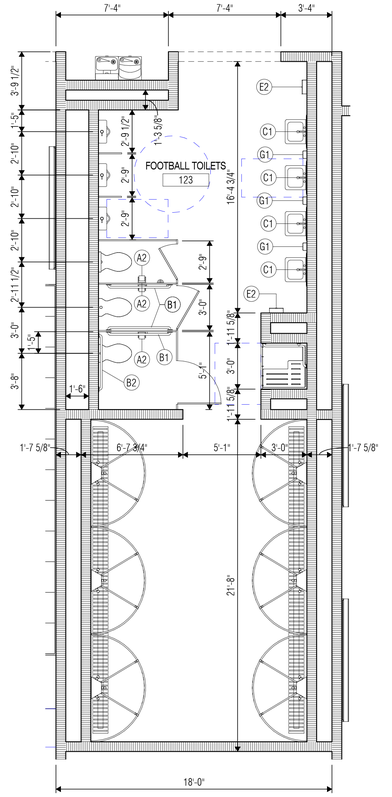
4 RESTROOMS 137 138 139
SCALE: 1/4" = 1'-0"



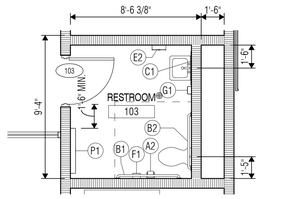
3 RESTROOM / SHOWERS AT SOCCER / TRACK
SCALE: 1/4" = 1'-0"



2 COACHES RR / SHOWER
SCALE: 1/4" = 1'-0"



1 FOOTBALL RR / SHOWERS
SCALE: 1/4" = 1'-0"



5 EP - RESTROOM 103
SCALE: 1/4" = 1'-0"

ENLARGED FLOOR PLAN NOTES

1. Dimensions on Enlarged Floor Plans are to face of wall finish material unless noted otherwise.
2. Dashed lines shown on Enlarged Floor Plans indicate accessibility requirements and are indicated for information only.
3. Install all accessible plumbing fixtures and toilet accessories in accordance with the Texas Accessibility Standards and as indicated on Sheets A0.31 and Sheet A2.32.
4. Install all non-accessible plumbing fixtures and toilet accessories at manufacturers' recommended mounting heights, unless noted otherwise.
5. Refer to Toilet Accessory Legend on Sheet A2.32 for Toilet Accessory information and mounting heights.
6. At accessible toilet compartments, install water closets with the centerline of fixture at 1'-5" off the side wall finish material. At both ambulatory-accessible and non-accessible toilet compartments, install water closets at the centerline of the compartment.
7. Install hand-operated flush controls for wheelchair accessible water closets on the open side of the water closet. Flush control assembly shall not extend above grab bar, and top of flush control assembly shall be held a minimum of 1-1/2" below the grab bar.
8. Provide pipe protection for all exposed piping at both accessible and non-accessible lavatories.
9. Floor drains are indicated for location purposes only. Refer to Plumbing Drawings for floor drain sizes and plumbing information.
10. All partition types are P7 unless noted otherwise
11. Install all toilets, sinks and urinals at adult accessible fixture heights as described in these notes and legends

TOILET PLUMBING FIXTURE LEGEND

MARK	PLUMBING FIXTURE ITEM	MOUNTING HEIGHT (A.F.F.)	NOTES
BLA	BASIN LAVATORY - ADULT ACCESSIBLE	34" TO RIM	3, 4
CLA	COUNTER LAVATORY- ADULT ACCESSIBLE	COUNTER HEIGHT	
LA	LAVATORY- ADULT ACCESSIBLE	34" TO RIM	4
EA	ELECTRIC WATER COOLER (HIGH/LOW UNIT) - ADULT ACCESSIBLE	36" TO LOW SPOUT	4
UA	URINAL - ADULT ACCESSIBLE	MAX 17" TO RIM	4
WA	WATER CLOSET - ADULT ACCESSIBLE	18" TOP OF SEAT	3
SH	SHOWER HEAD	PER MANUF.	

NOTES:
1. Note that the architectural marks in this legend may differ from the designations in the MEP Plumbing Legend.
2. Reference MEP Plumbing drawings and legends for additional fixtures.
3. Mounting height at floor-mounted fixture might vary slightly based on actual product selected.
4. Mounting height is based on maximum allowable and cannot be exceeded.
5. The TAS required kneespace of 27" is not provided using this mounting height; ensure spout is located 3-1/2" max. from front edge/bumper as required for parallel approach per the TAS.
6. For standard urinals at child-only facilities, provide 20" to rim.

ABBREVIATIONS:
ACCESS. = ACCESSIBLE

See INDEX Sheet for additional abbreviations

TOILET & SHOWER NOTES

1. Install all accessible plumbing fixtures and toilet accessories in accordance with the Texas Accessibility Standards, and as indicated on this sheet.
2. At accessible toilet rooms and compartments, install water closets with the centerline of fixture at 1'-5" off the side wall finish material. At both ambulatory-accessible and non-accessible toilet compartments, install water closets at the center of the compartment.
3. Install hand-operated flush controls for wheelchair accessible water closets on the open side of the water closet. Flush control assembly shall not extend above grab bar, and top of flush control assembly shall be held a minimum of 1-1/2" below the grab bar.

TOILET ACCESSORY LEGEND

MARK	TOILET ACCESSORY ITEM	SIZE	STANDARD MOUNTING HEIGHT	ACCESSIBLE MOUNTING HEIGHT		O.F.C.I.		NOTES
A2	TOILET TISSUE DISPENSER, MULTI-ROLL		MFR.	REF: A0.31		X		
B1	GRAB BAR (SIDE WALL AT WATER CLOSET)	48"		35 1/2" TO TOP				
B2	GRAB BAR (BACK WALL AT WATER CLOSET)	42"		35 1/2" TO TOP				
B4	GRAB BAR, TWO-WALL L-SHAPED (AT TRANSFER TYPE SHOWER)	16" x 31"		34" TO TOP				
C1	MIRROR, FRAMED (ABOVE LAVS AND COUNTERS)	24" x 36"	5" ABV LAV	40" TO BOT.R.S.				6
D1	MIRROR, UNFRAMED (ABOVE LAVS & COUNTERS)	PER DETAIL	PER DETAIL	40" TO BOT.				
E2	PAPER TOWEL DISPENSER (SURFACE-MOUNTED)		MATCH ACCESS	47" TO CTRL.		X		
F1	SANITARY NAPKIN DISPOSAL (SURFACE-MOUNTED)		MFR.	25" TO TOP				
G1	SOAP DISPENSER, WALL-MOUNTED		MATCH ACCESS	47" TO CTRL.		X		
J1	MOP & BROOM HOLDER/ CUSTODIAN UTILITY SHELF	36"	PER DETAIL					
J2	MOP & BROOM HOLDER	36"	PER DETAIL					
K1	COAT/TOWEL/ROBE HOOK		MFR.	48"				
L1	SHOWER CURTAIN ROD, CURTAIN & HOOKS (W/ SHOWER CURB)	72" H.	6'-6"					
L2	SHOWER CURTAIN ROD, CURTAIN & HOOKS (W/O SHOWER CURB)	78" H.		REF. A0.31				
M1	SHOWER SEAT, FOLDING, L-SHAPED (AT TRANSFER TYPE SHOWER)	14 1/2" x 33"		18"				
M2	SHOWER SEAT, FOLDING, RECTANGULAR (AT 30"X60" STD. ROLL-IN TYPE SHOWER)	14 1/2" x 25 1/2"		18"				4
N1	DRESSING SEAT, FOLDING, RECTANGULAR	14 1/2" x 18"	18"	18"				
P1	BABY CHANGING STATION	PER SPECS		REF. A0.31				
Q1	SANITARY NAPKIN VENDOR (RECESSED)	PER SPECS		REF. A0.31				
R1	TOILET SEAT COVER DISPENSER	PER SPECS	MFR.	REF. A0.31				

NOTES:
1. All items are contractor-furnished and installed unless noted otherwise.
2. Provide blocking in walls for all wall-mounted items, including O.F.C.I. and O.F.O.I. items. Refer to Sheet A2.2_.
3. All mounting heights are from finished flooring material at centerline of accessory.
4. Roll-in Type Showers larger than 30"x60" will require different toilet accessories.
5. Set height of curtain rod so curtain is 1" above threshold.
6. Mounting height of mirrors at Standard Height Lavatories should be installed such that the bottom of mirror aligns with bottom of accessible mirror when possible.

ABBREVIATIONS:
ACCESS. = ACCESSIBLE
BOT. = BOTTOM
BOT.R.S. = BOTTOM OF REFLECTIVE SURFACE
CTRL. = CONTROLS
STD. = STANDARD

See INDEX Sheet for additional abbreviations

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
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01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
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Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
ENLARGED TOILET PLANS AND ELEVATIONS

SHEET NO.
A2.31

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TOILET & SHOWER NOTES

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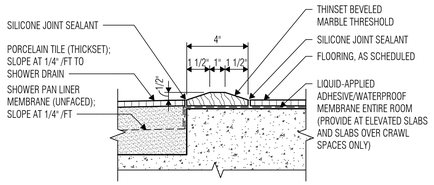
2. At accessible toilet rooms and compartments, install water closets with the centerline of fixture at 1'-5" off the side wall finish material. At both ambulatory-accessible and non-accessible toilet compartments, install water closets at the center of the compartment.
3. Install hand-operated flush controls for wheelchair accessible water closets on the open side of the water closet. Flush control assembly shall not extend above grab bar, and top of flush control assembly shall be held a minimum of 1-1/2" below the grab bar.

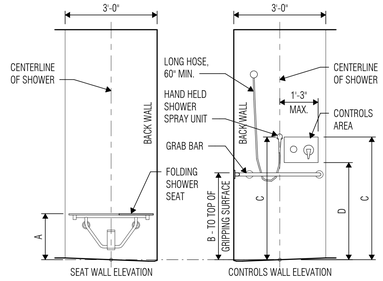


HC402

12 ACCESSIBLE SHOWER THRESHOLD

SCALE: 3" = 1'-0"

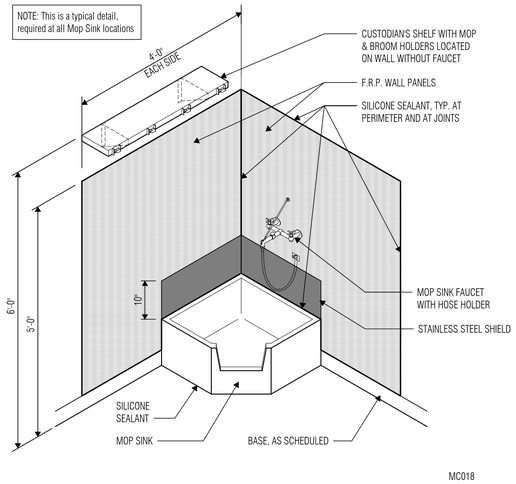
	HEIGHT ABOVE SHOWER FLOOR			
	A	B	C	D
ADULT	18"	34"	48"	38"



HC203
TRANSFER TYPE

11 ELEV. OF ACCESSIBLE SHOWER COMPARTMENT

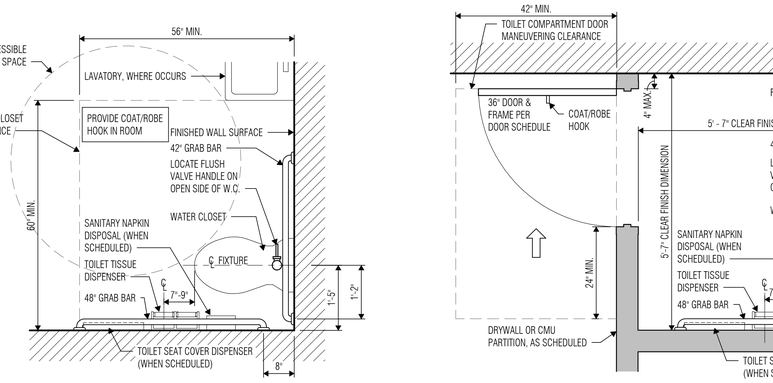
SCALE: 1/2" = 1'-0"



MC018

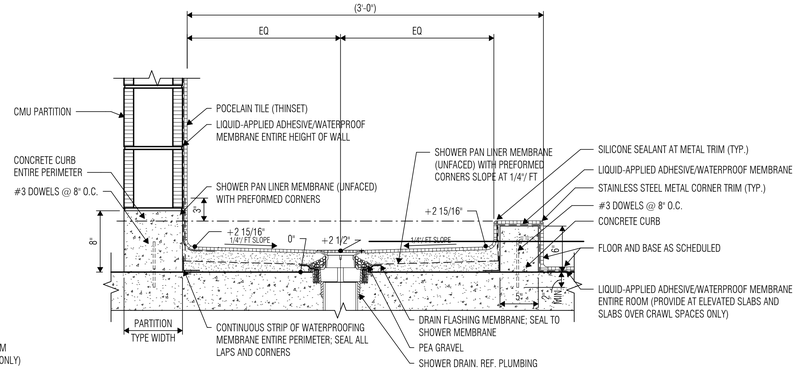
10 CUSTODIAN ROOM WAINSCOT & ACCESSORIES

SCALE: 3/4" = 1'-0"



9 ACCESSIBLE SHOWER PAN DETAIL

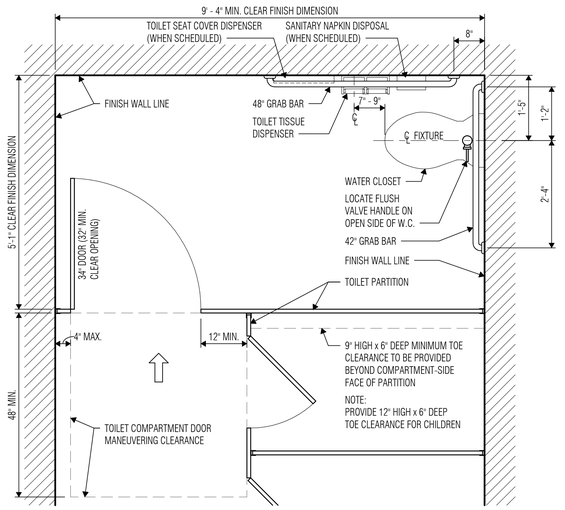
SCALE: 1 1/2" = 1'-0"



MC077

8 NON-ACCESSIBLE SHOWER PAN & CURB DETAIL

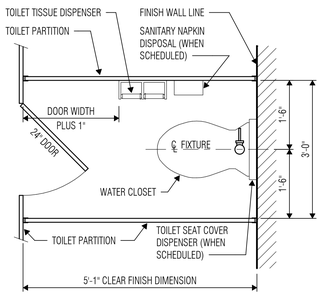
SCALE: 1 1/2" = 1'-0"



7 STANDARD TOILET COMPARTMENT

MC031

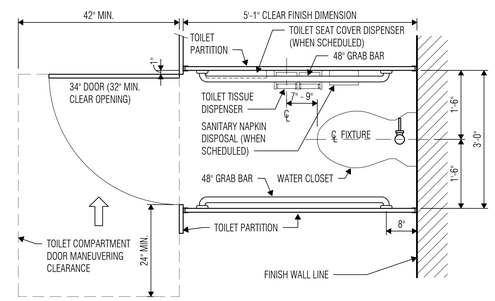
SCALE: 3/4" = 1'-0"



6 AMBULATORY TOILET COMPARTMENT

HC104

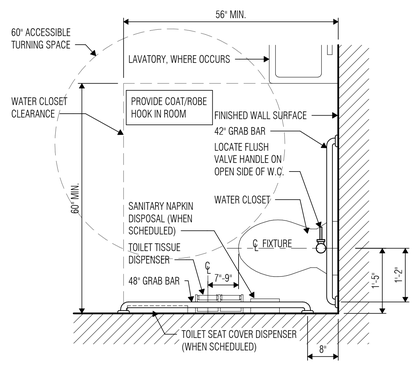
SCALE: 3/4" = 1'-0"



5 ACCESSIBLE TOILET COMPARTMENT (END OF AISLE)

HC103

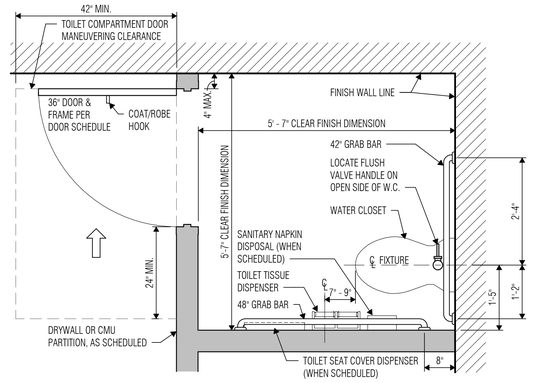
SCALE: 3/4" = 1'-0"



3 ACCESSIBLE TOILET ROOM

HC101

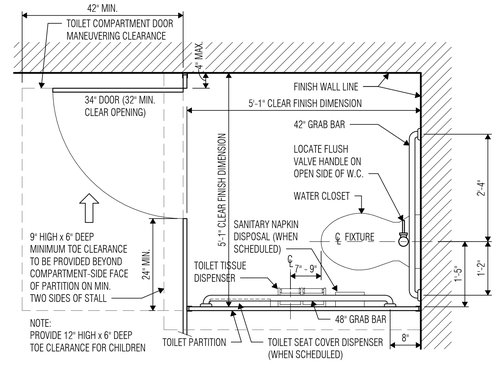
SCALE: 3/4" = 1'-0"



2 ACCESSIBLE TOILET COMPARTMENT (ENCLOSED)

HC102

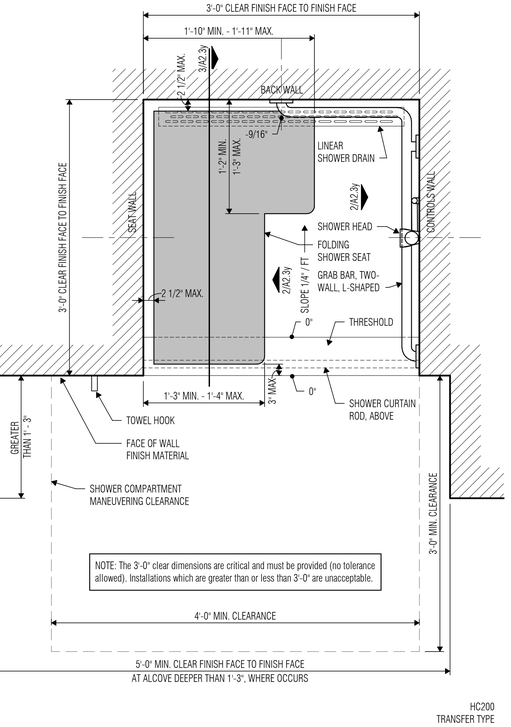
SCALE: 3/4" = 1'-0"



1 ACCESSIBLE TOILET COMPARTMENT

HC100
TYPICAL

SCALE: 3/4" = 1'-0"



HC200
TRANSFER TYPE

4 ACCESSIBLE SHOWER COMPARTMENT

SCALE: 1 1/2" = 1'-0"

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ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
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SHEET TITLE

TYPICAL TOILET ROOM DETAILS, TOILET ACCESSORY LEGEND

SHEET NO.

A2.32

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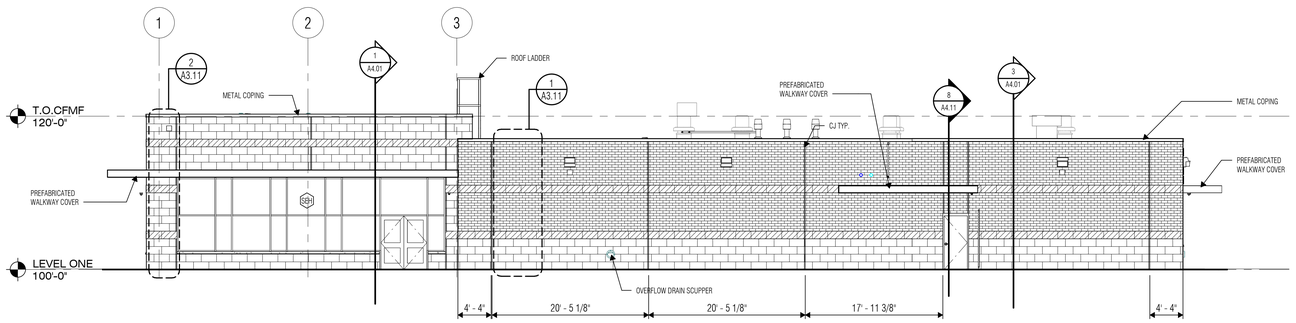
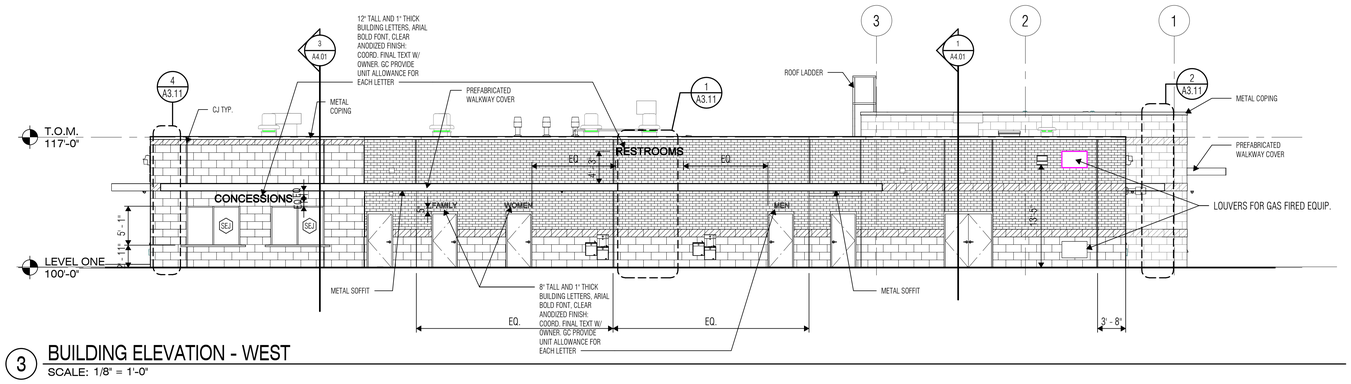
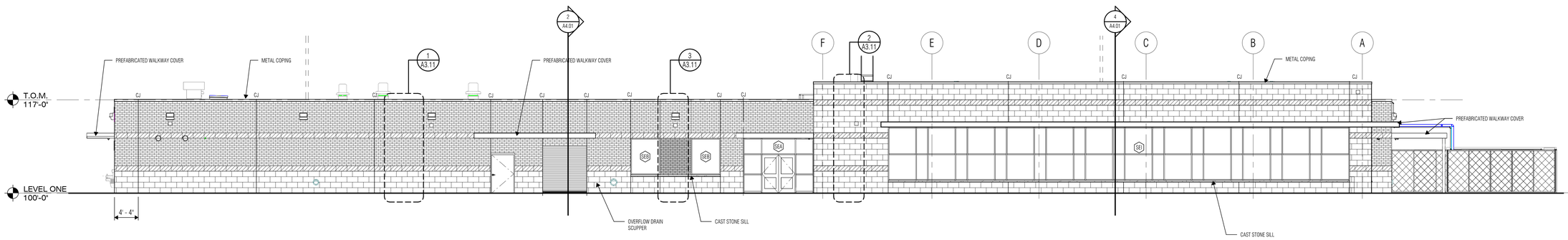


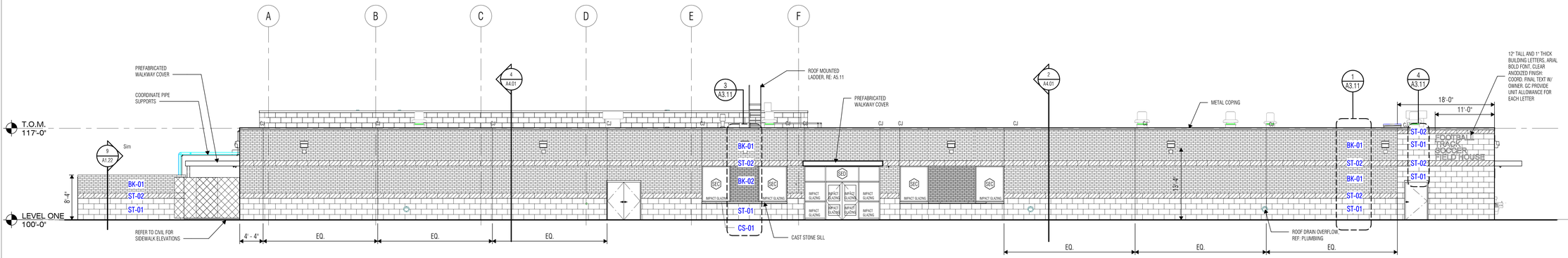
4 BUILDING ELEVATION - EAST
SCALE: 1/8" = 1'-0"



3 BUILDING ELEVATION - WEST
SCALE: 1/8" = 1'-0"



2 BUILDING ELEVATION - SOUTH
SCALE: 1/8" = 1'-0"



1 BUILDING ELEVATION - NORTH
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATION NOTES

1. Refer to Sheet A3.11 for Typical Control Joint and Building Expansion Joint Details.
2. Based on the applicable design criteria, submit the proposed pattern of control joints in masonry veneer, CMU and stucco/cement plaster to the Architect for review and approval prior to construction.
3. Verify mounting heights of all Electrical and Mechanical items on the exterior of the building prior to construction, whether specifically indicated on the Exterior Elevations or not.
4. Install cast stone in accordance with the recommendations of the Cast Stone Institute, unless specifically noted or detailed otherwise.
5. Refer to Sheet A3.11 for Loose Lintel Details. Refer to Structural Drawings for maximum span and bearing requirements.
6. Terminate recessed and projected masonry veneer courses at 4" from intersecting window frames, door frames, sloping roofs, etc., unless noted otherwise.
7. Provide solid bricks for soldier courses at exterior corners (do not miter).

EXTERIOR ELEVATION LEGEND

BK-01	BRICK VENEER
BK-02	BRICK VENEER
ST-01	STONE VENEER
ST-02	STONE VENEER
CS	CAST STONE SILL
DS	DOWNSPOUT
DSC	DOWNSPOUT W/ SCUPPER & CONDUCTOR HEAD
OS	OVERFLOW SCUPPER
CJ	CONTROL JOINT
SXX	ALUMINUM STOREFRONT, REF. SHEET A7.21.
000	DOOR NUMBER, RE: DOOR SCHEDULE

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT ROYCE G. BOYTER 13922 STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
EXTERIOR ELEVATIONS

SHEET NO.
A3.01

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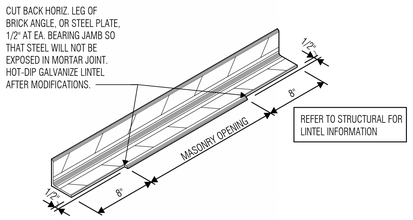
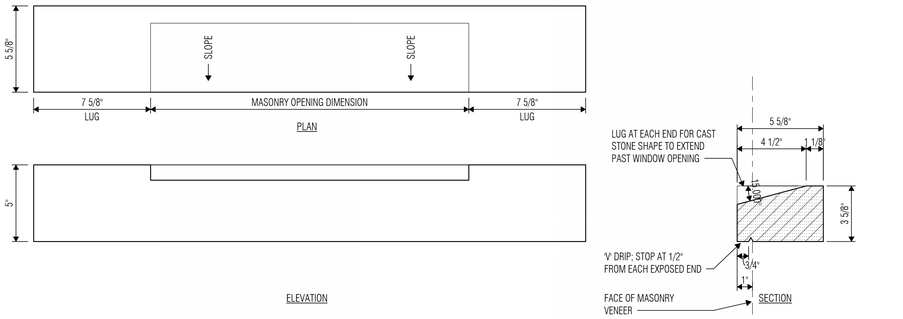


7 LOOSE LINTEL DETAIL, TYP.
SCALE: 1 1/2" = 1'-0"



*CS-1.BM.L.30

6 CAST STONE SHAPE - CS-1
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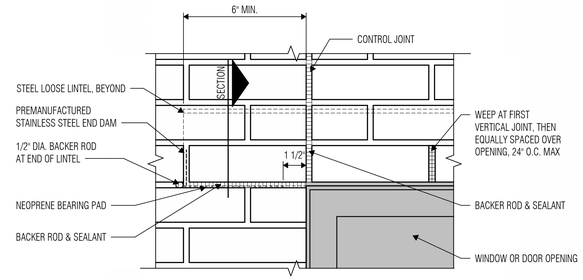
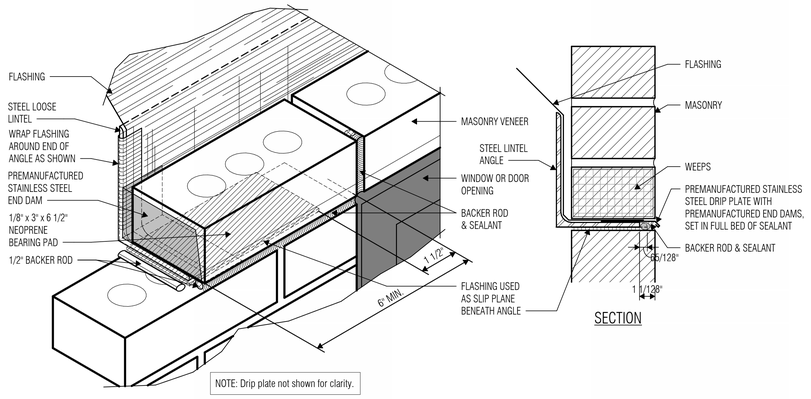


NOTE: Drip plate not shown for clarity.

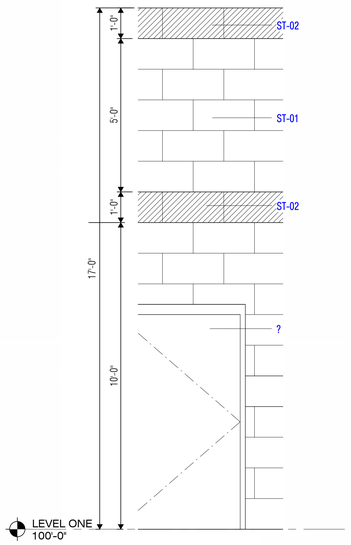
ELEVATION



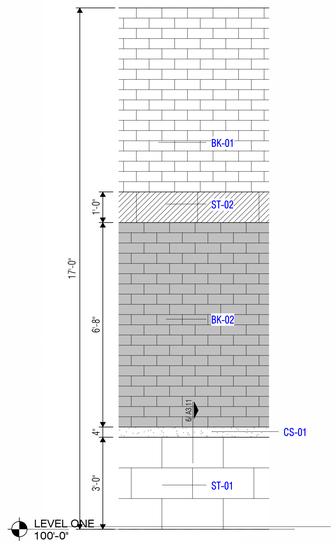
NOTE: Drip plate not shown for clarity.

X400 - MASONRY VENEER CONTROL JOINT AT LOOSE LINTEL
X400

5 SCALE: 3" = 1'-0"



4 MASONRY COURSING - 4
SCALE: 1/2" = 1'-0"



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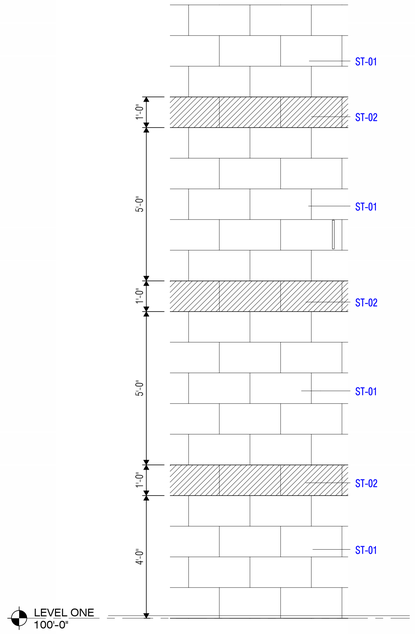

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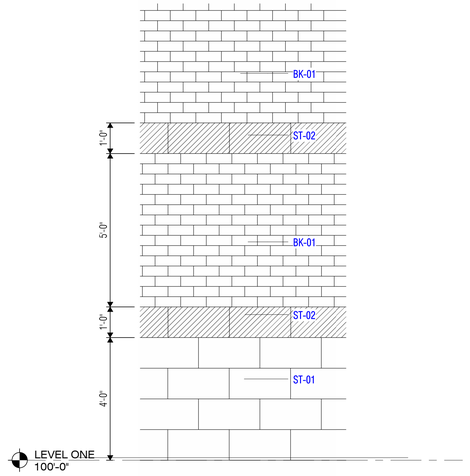

1 MASONRY COURSING - 1
SCALE: 1/2" = 1'-0"

EXTERIOR ELEVATION LEGEND

BK-01	BRICK VENEER
BK-02	BRICK VENEER
ST-01	STONE VENEER
ST-02	STONE VENEER
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DS	DOWNSPOUT
DSC	DOWNSPOUT W/ SCUPPER & CONDUCTOR HEAD
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CJ	CONTROL JOINT
SXX	ALUMINUM STOREFRONT, REF. SHEET A7.21.
OOO	DOOR NUMBER, RE: DOOR SCHEDULE

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT ROYCE G. BOYTER 13927 STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
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PROJECT NO.
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SHEET TITLE
EXTERIOR ELEVATION DETAILS

SHEET NO.
A3.11

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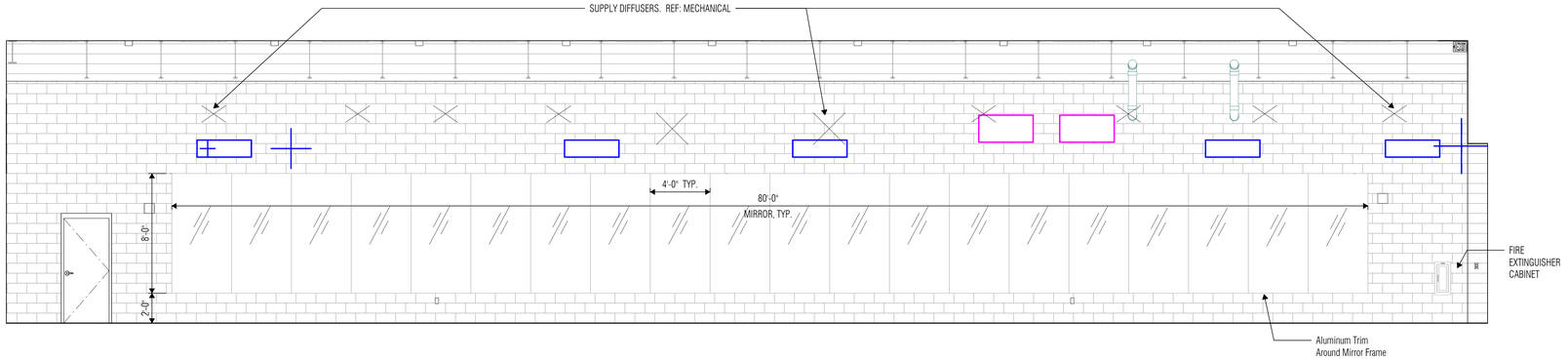

4 WEIGHT TRAINING
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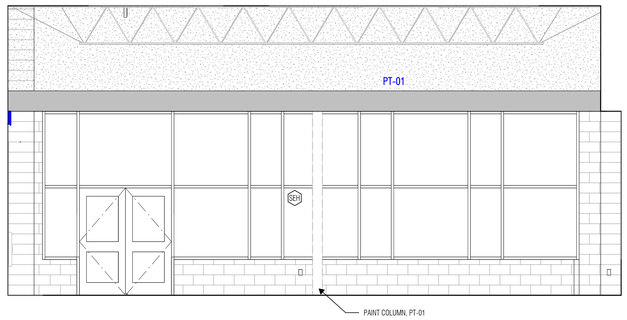

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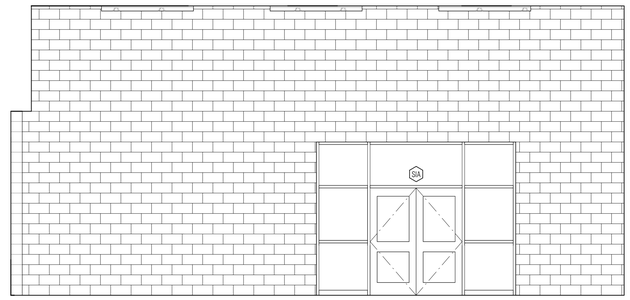

2 WEIGHT TRAINING - WEST
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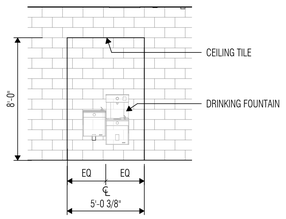

5 TYP. DRINKING FOUNTAIN
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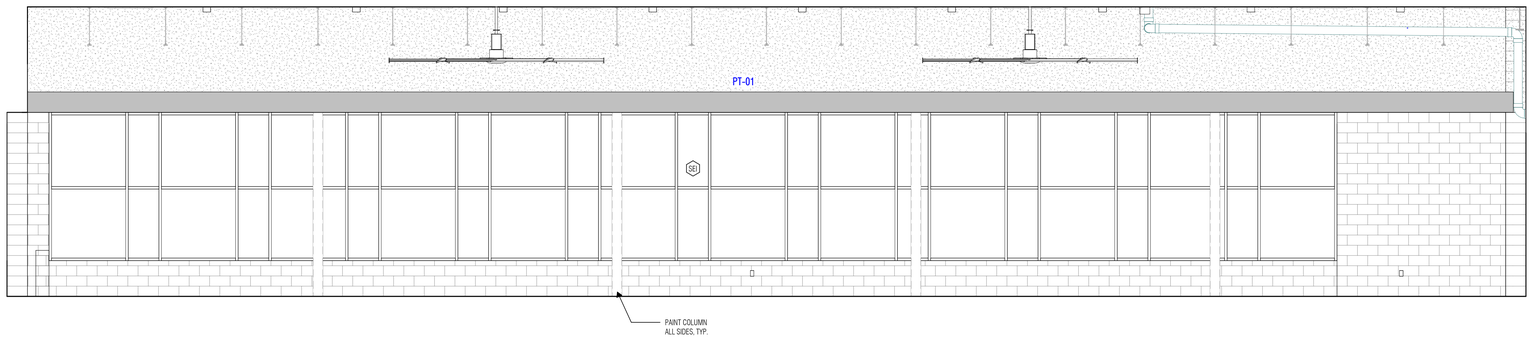

1 WEIGHT TRAINING - SOUTH
SCALE: 1/4" = 1'-0"

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01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
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23-155.00

SHEET TITLE
INTERIOR ELEVATIONS

SHEET NO.
A3.21

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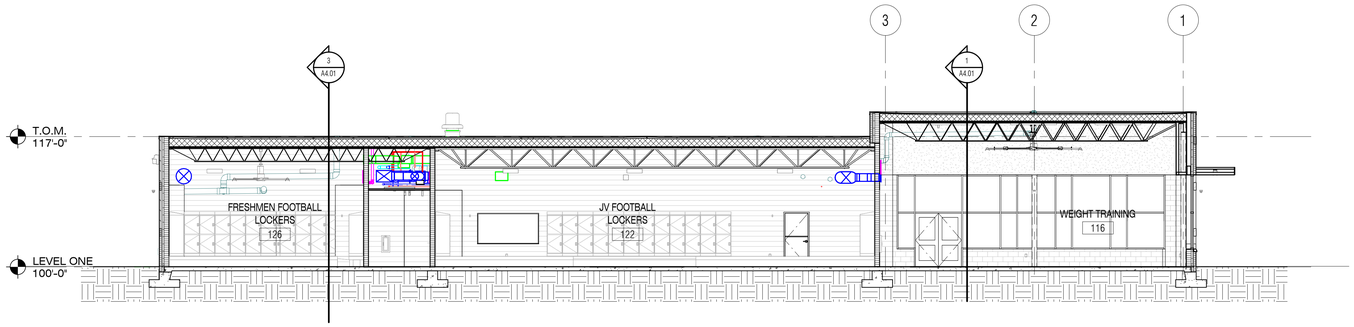

4 BUILDING SECTION
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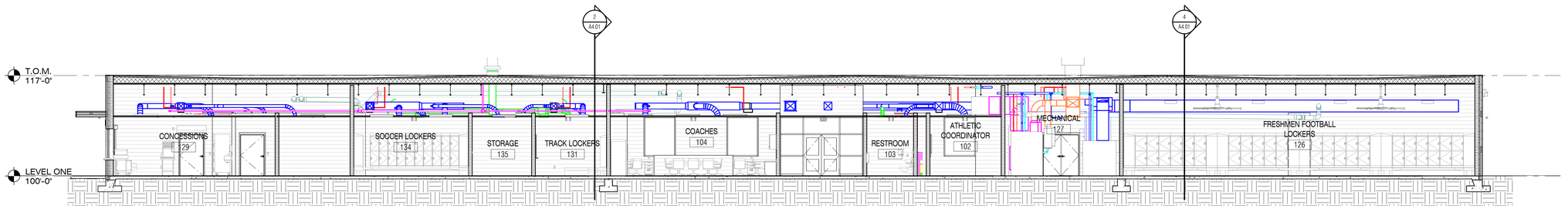

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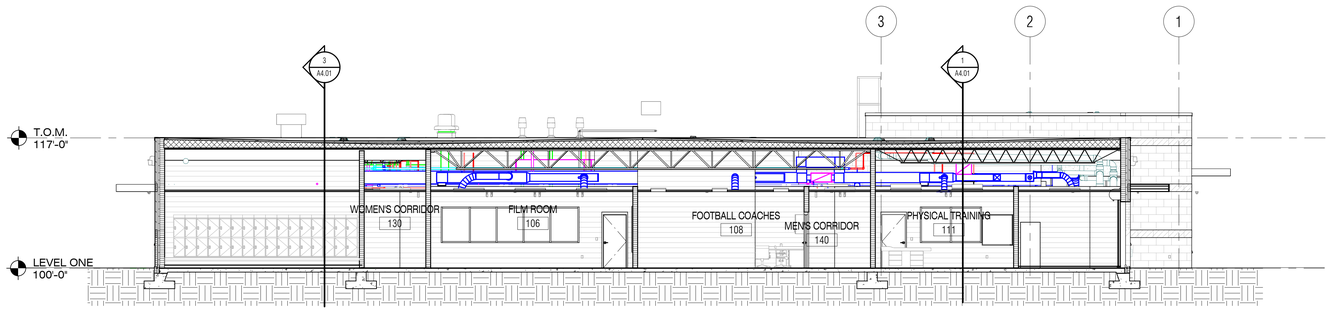

2 BUILDING SECTION
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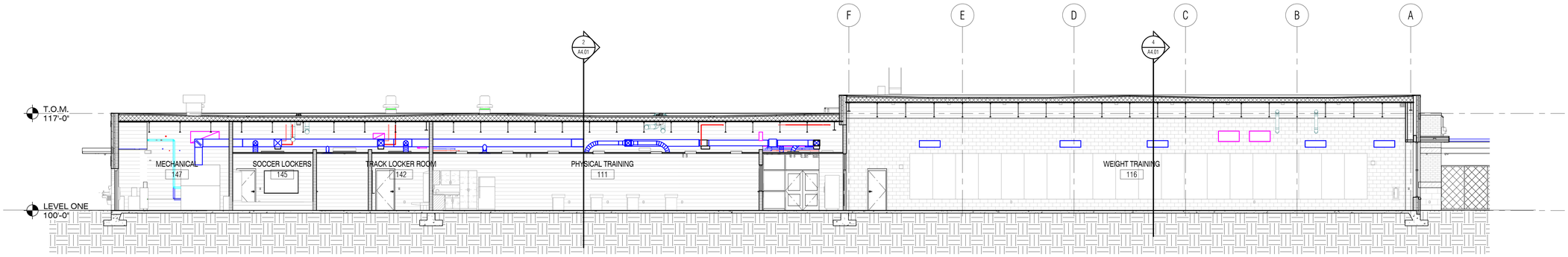

1 BUILDING SECTION
SCALE: 1/8" = 1'-0"

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01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
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B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
BUILDING SECTIONS

SHEET NO.
A4.01

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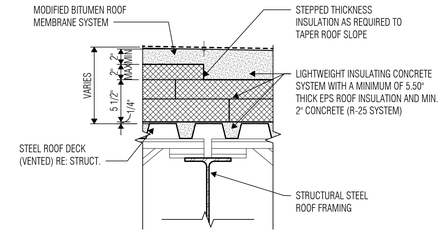
BUILDING ENVELOPE ASSEMBLY LEGEND - CLIMATE ZONE 2

KEY: CLADDING BACKUP CLIMATE ZONE MARK — BKS-21

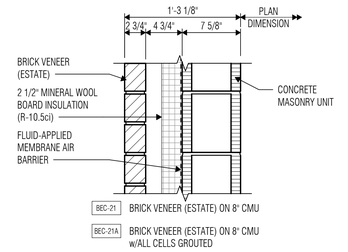
NOTES:
1. REFERENCE SHEET 2-A4.20 FOR BUILDING ENVELOPE ASSEMBLY TYPES
2. CLIMATE ZONE DESIGNATION REFERS TO BUILDING LOCATION PER ENERGY CODE. 0 = NO CLIMATE ZONE CRITERIA AT THAT ASSEMBLY.

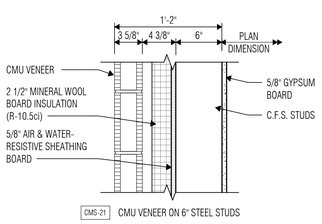
WALL ASSEMBLY	
Brick Veneer, Estate	
BES-21	Brick Veneer (Estate) on 6" Steel Studs
BEC-21	Brick Veneer (Estate) on 8" CMU
BEC-22	Brick Veneer (Estate) on 12" CMU
CMU Veneer	
CMS-21	CMU Veneer on 6" Steel Studs
CMC-21	CMU Veneer on 8" CMU
CMC-22	CMU Veneer on 12" CMU
STONE Veneer	
STC-21	STONE Veneer on 8" CMU
STC-22	STONE Veneer on 12" CMU

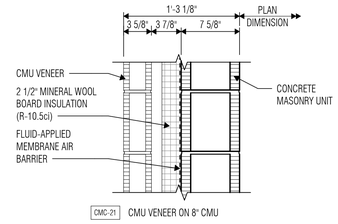
ROOF ASSEMBLY	
MBL-21	Modified Bitumen Roof System on Steel Deck & Framing w/Lightweight Concrete, Sloping
SOFFIT ASSEMBLY	
MSS-01	Metal Soffit Panel on Suspended Steel Framing
MSS-02	Metal Soffit Panel on Steel Stud Framing
FLOOR ASSEMBLY	
CSG-01	Concrete Slab on Grade
CSS-01	Concrete Slab on Steel Deck & Framing



3 BUILDING ENVELOPE ASSEMBLY ROOF TYPES_CZ2
SCALE: 1 1/2" = 1'-0"







2 BUILDING ENVELOPE ASSEMBLY WALL TYPES_CZ2
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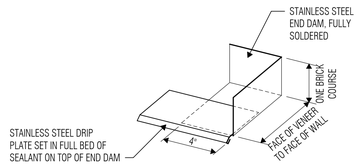
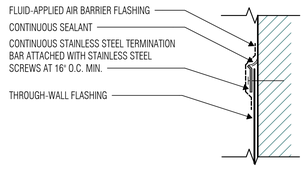


6 S.S. END DAM AT DOOR & WINDOW JAMBS
SCALE: 3" = 1'-0"



5 TERMINATION BAR DETAIL
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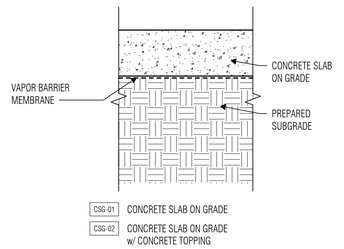

1 BUILDING ENVELOPE ASSEMBLY FLOOR TYPES_CZ2
SCALE: 1 1/2" = 1'-0"

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REGISTERED ARCHITECT — ROYCE G. BOYTER — 13923 — STATE OF TEXAS

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

BUILDING ASSEMBLY TYPES

SHEET NO.

A4.10

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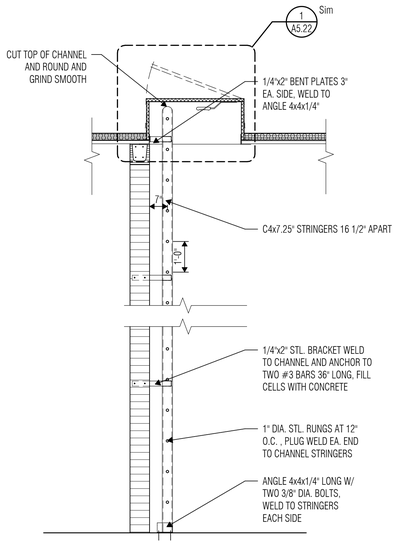
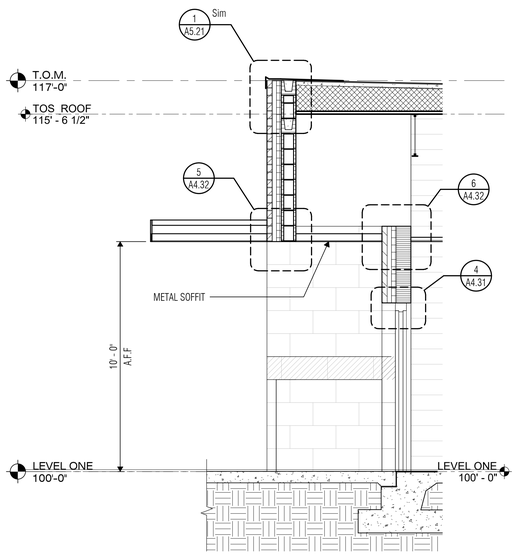
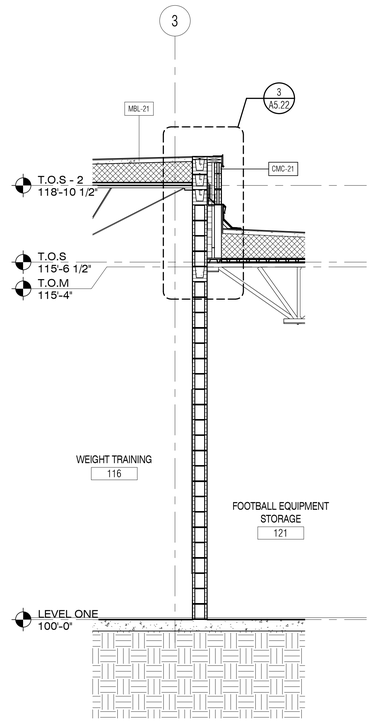


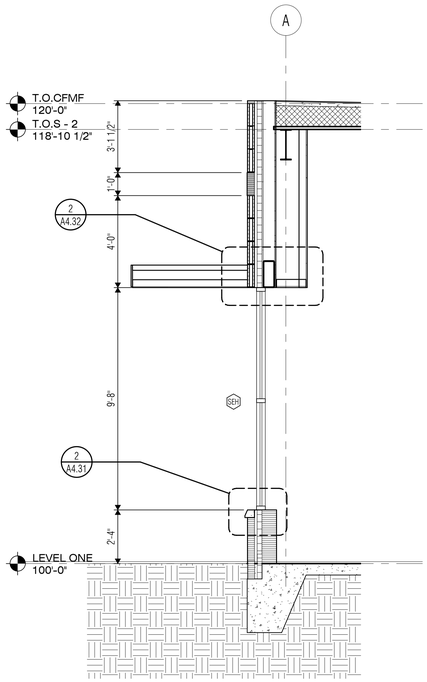
9 ROOF ACCESS LADDER HATCH
SCALE: 1/2" = 1'-0"



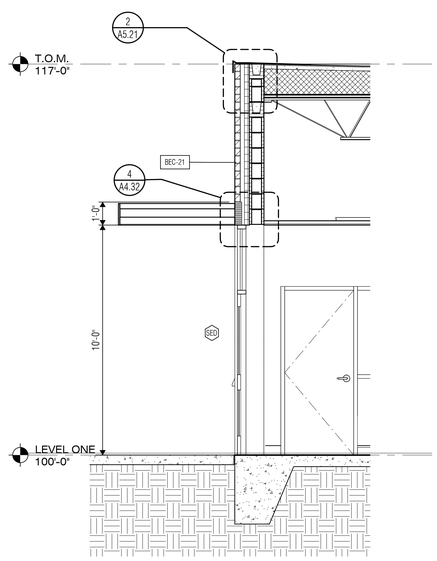
8 WALL SECTION
SCALE: 3/8" = 1'-0"



7 WALL SECTION
SCALE: 3/8" = 1'-0"



6 WALL SECTION
SCALE: 3/8" = 1'-0"



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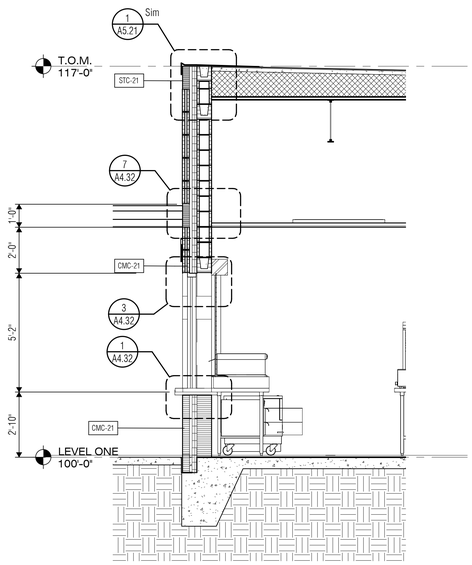
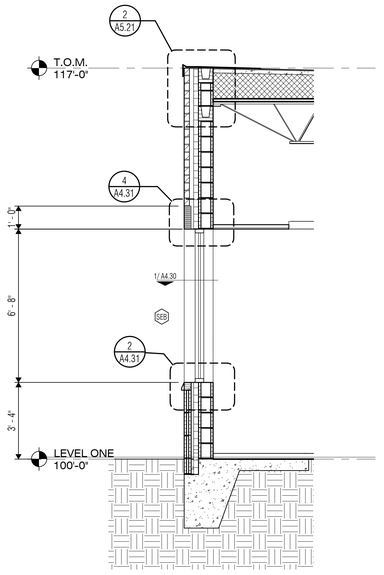
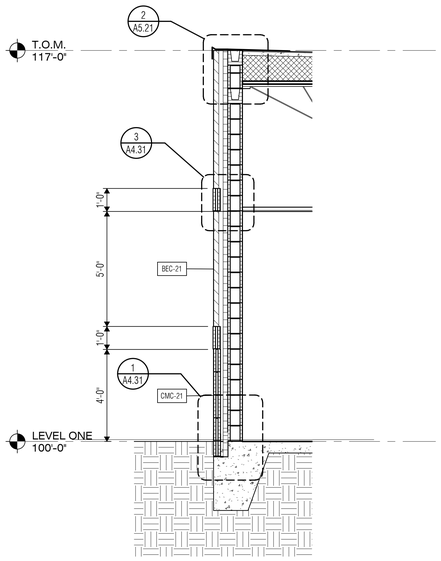
SCALE: 3/8" = 1'-0"



3 WALL SECTION
SCALE: 3/8" = 1'-0"



2 WALL SECTION
SCALE: 3/8" = 1'-0"



1 WALL SECTION
SCALE: 3/8" = 1'-0"

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R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
WALL SECTIONS

SHEET NO.
A4.11

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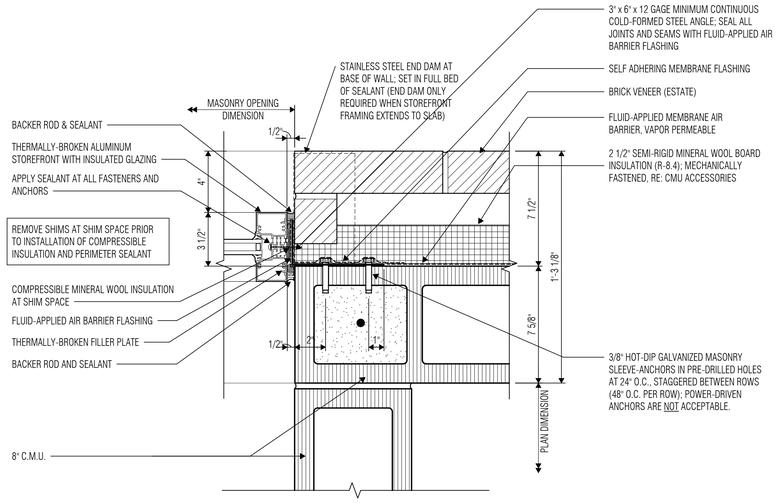

4 PLAN DETAIL
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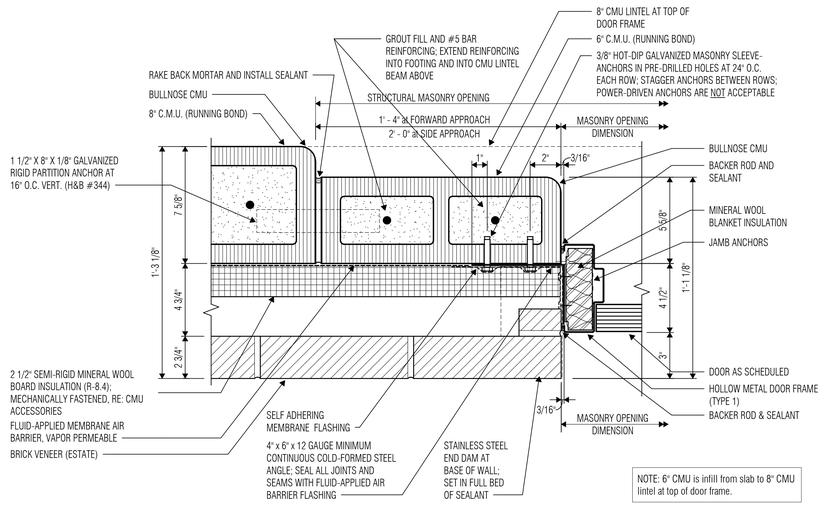
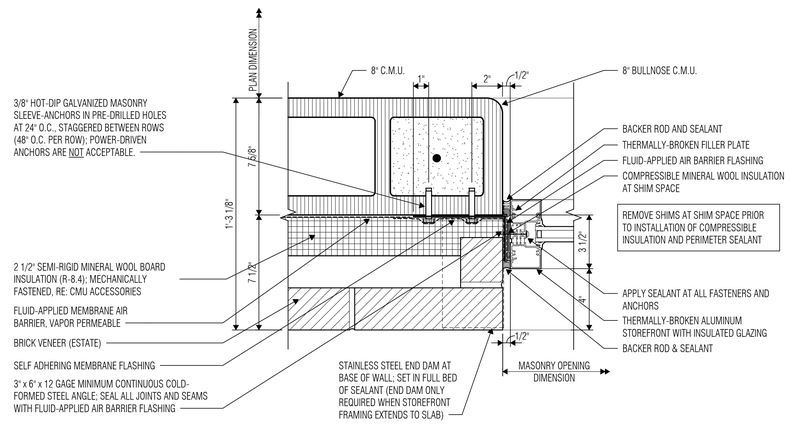


*BEC-21.J.HM1.STRIKE
USE AT STRIKE-JAMB ONLY OF OUTSWINGING ACCESSIBLE SINGLE DOORS

2 ESTATE BRICK/CMU WALL @ HOLLOW METAL JAMB - STRIKE SIDE ONLY
SCALE: 3" = 1'-0"



*BEC-21.J.45SF

1 BRICK/CMU WALL AT STOREFRONT JAMB
SCALE: 3" = 1'-0"

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRUCE G. BOYTER
13922
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
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Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
BUILDING PLAN DETAILS

SHEET NO.
A4.30

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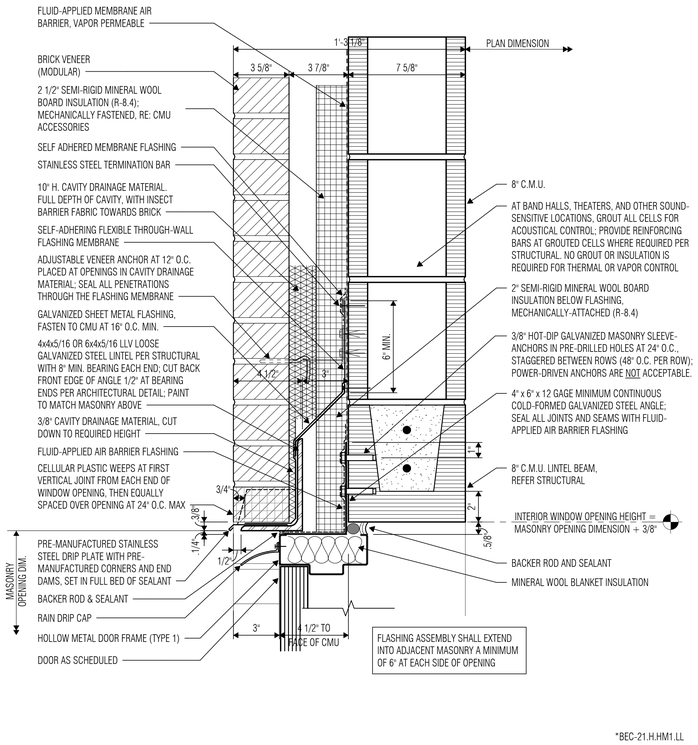

*BEC-21.H.HM1.LL

5 ESTATE BRICK/CMU WALL @ HOLLOW METAL FRAME HEAD - LOOSE LINTEL

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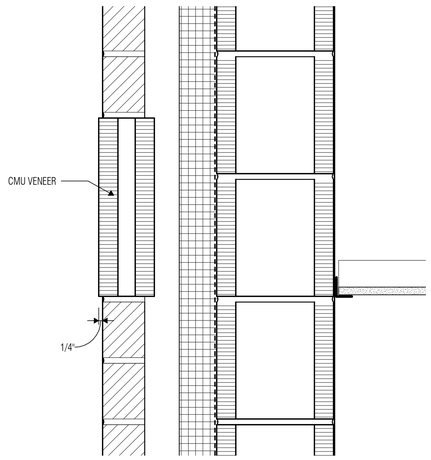

3 DETAIL AT ACCENT BLOCK

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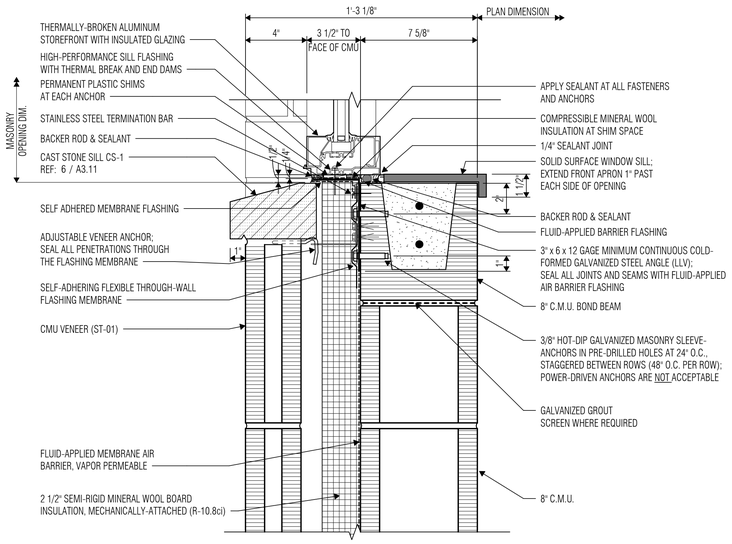

*CMC-21.S.45SF.SR

2 TYPICAL STOREFRONT SILL

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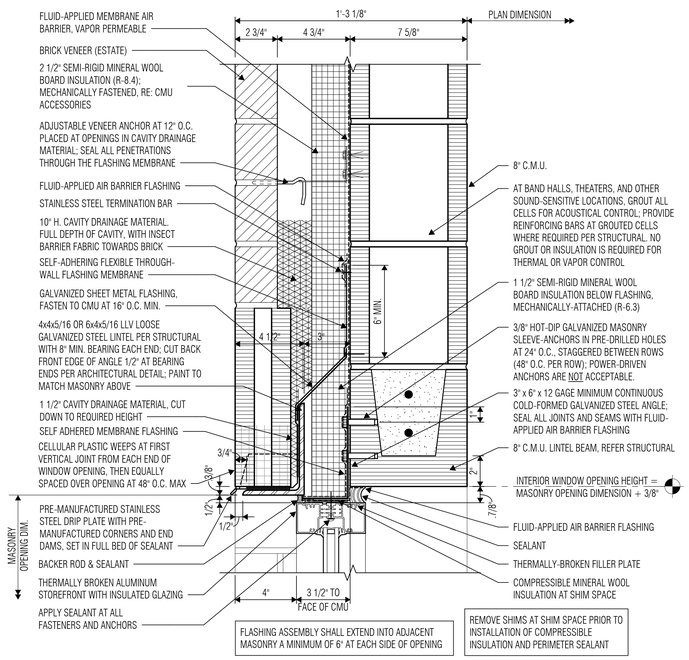
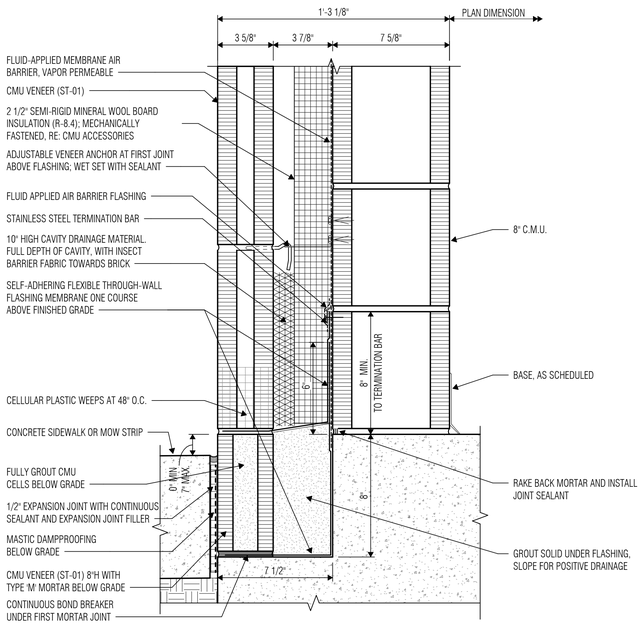


*BEC-21.45SF.LL

4 BRICK/CMU WALL AT STOREFRONT HEADER

SCALE: 3" = 1'-0"



*CMC-21.B.SW
WHERE GRADE IS LESS THAN 7" BELOW FINISH FLOOR

1 TYPICAL WALL BASE

SCALE: 3" = 1'-0"

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NEW CANEY ISD
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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT JOYCE G. BOYTER 13928 STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

BUILDING ASSEMBLY DETAILS

SHEET NO.

A4.31

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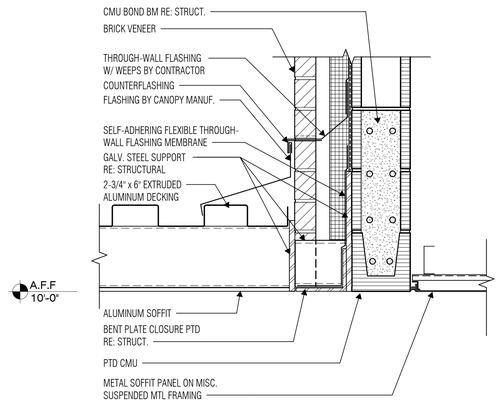
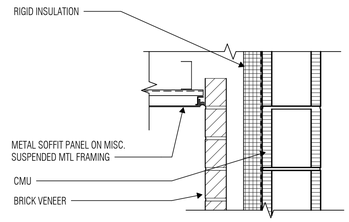


5 CANOPY CONNECTION DETAIL AT SOFFIT
SCALE: 1 1/2" = 1'-0"



6 CANOPY CONNECTION DETAIL @ SOFFIT HEAD EDGE
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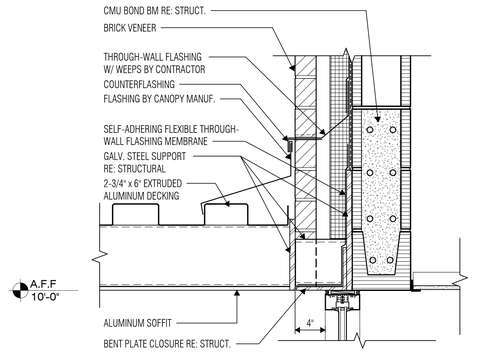

4 CANOPY CONNECTION DETAIL @STOREFRONT
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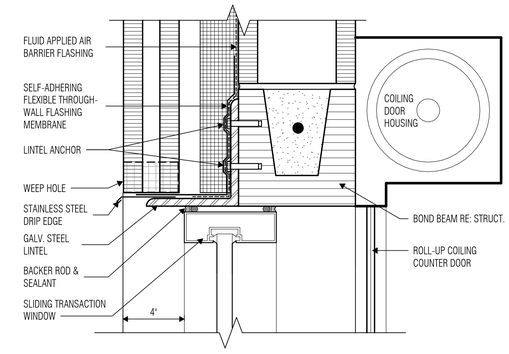
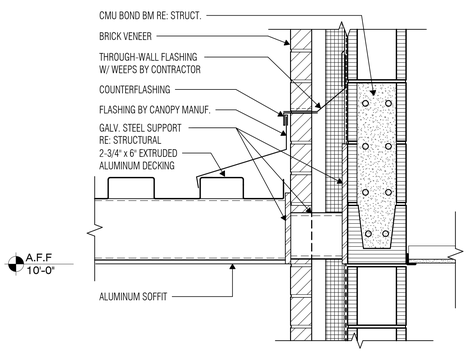


3 HEAD AT CONCESSION WINDOW
SCALE: 3" = 1'-0"



7 CANOPY CONNECTION DETAIL
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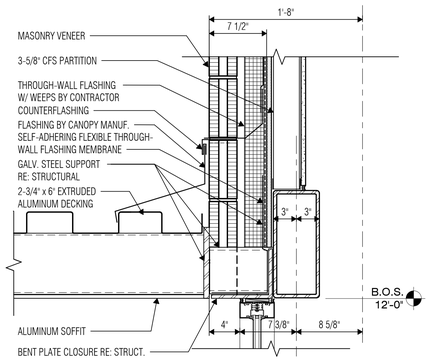
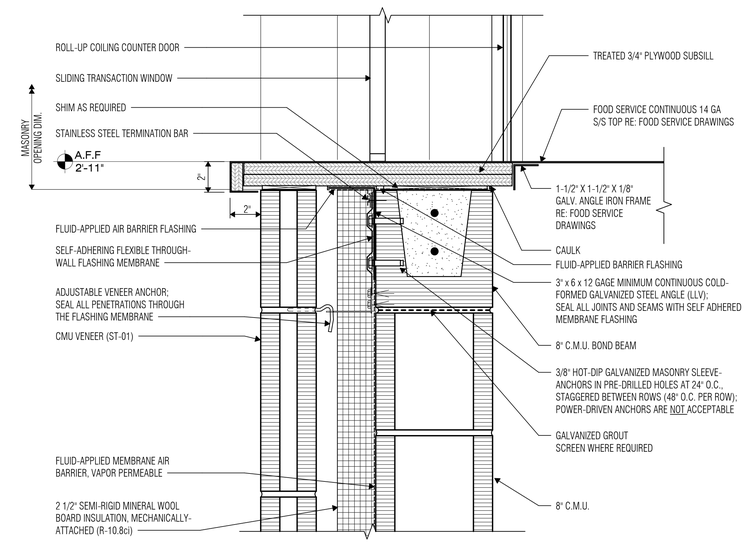


2 CANOPY CONNECTION DETAIL @STOREFRONT / WT RM
SCALE: 1 1/2" = 1'-0"



1 SILL AT CONCESSION WINDOW
SCALE: 3" = 1'-0"

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NEW CANEY ISD
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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRIDGET G. BOYTER
13923
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
BUILDING ASSEMBLY DETAILS

SHEET NO.
A4.32

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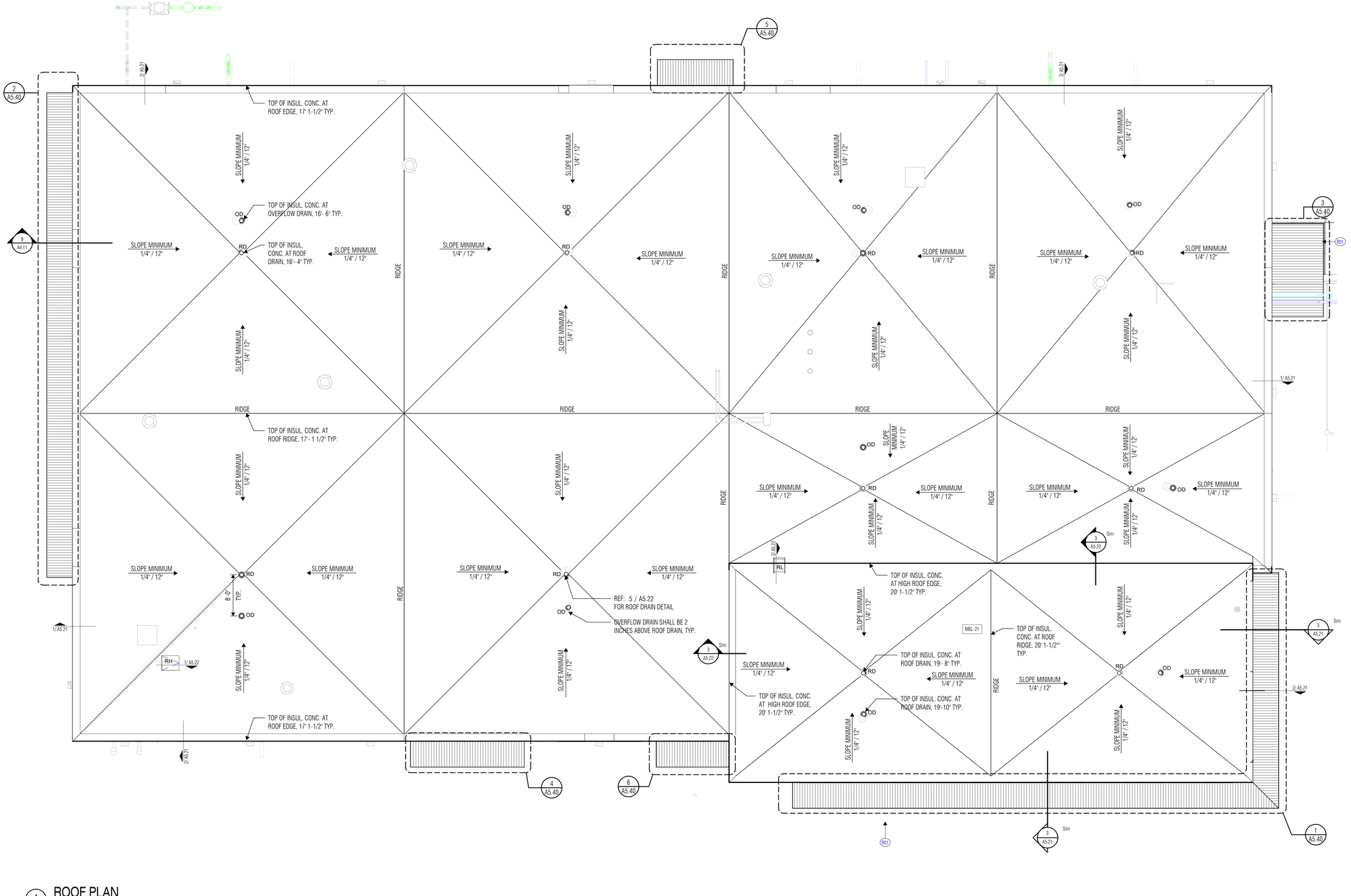

1 ROOF PLAN

SCALE: 1/8" = 1'-0"

KEYED NOTES

R01	PREMANUFACTURED CANOPY. REFER TO SHEET A5.40 FOR DETAILS.

ROOF PLAN LEGEND

BUR	BUILT-UP BITUMINOUS ROOFING
SPM	SINGLE-PLY MEMBRANE ROOFING
MBM	MODIFIED BITUMINOUS MEMBRANE ROOFING
MRP	PREFINISHED METAL ROOF PANELS
T.O.M.	TOP OF MASONRY ELEVATION
T.O.D.	TOP OF DECK ELEVATION
T.O.S.	TOP OF STEEL ELEVATION
RD	ROOF DRAIN, REF. _/A_.__
OD	OVERFLOW DRAIN WITH DOWNSPOUT NOZZLE, REF. _/A_.__
OS	OVERFLOW SCUPPER, REF. _/A_.__
DS	DOWNSPOUT, REF. _/A_.__
DSC	DOWNSPOUT WITH SCUPPER AND CONDUCTOR HEAD, REF. _/A_.__
MC	MANUFACTURED COPING, REF. _/A_.__
RH	ROOF HATCH, REF. _/A_.__
RL	ROOF LADDER, REF. _/A_.__
GP	GAS PIPE PENETRATION, REF. _/A_.__
RV	RELIEF VENT, REF. M.E.P.
EF	EXHAUST FAN, REF. M.E.P.

ROOF PLAN NOTES

1. Provide tapered insulation crickets at the high side of all rooftop curbs, mounting rails, and other miscellaneous roof penetrations as required to shed water around them and to ensure positive roof drainage, whether indicated on the drawings or not.
2. Crickets shall slope 1/2" per foot, unless noted otherwise.
3. Locate overflow scuppers per Building Elevations. If conflicts occur, contact Architect prior to construction.
4. Provide roof walkway protection at base of all roof ladders, around all sides of roof hatches, on all sides of rooftop units and condensing units, and on paths leading from roof access points to rooftop units and condensing units, whether indicated on drawings or not.
5. Provide layer of roof walkway protection under all pipe and conduit supports, fully-adhered to roof membrane.
6. Provide additional layer of single-ply roof membrane at the discharge point of downspouts, where splash pans are not provided.
7. Provide metal end closure at the ends of expansion joints, flashings and counterflashings.
8. Paint all exposed galvanized metal flashings, miscellaneous steel, piping, conduits, etc. that are not prefinished.
9. Roof hatch locations to be coordinted with wall ladders; Ref: Floor Plan

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT BRUCE G. BOYTER 13925 STATE OF TEXAS

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director R.BOYTER	Drawn By M.FUENTE
Designer T.HANGAR	Quality Control VLK
Proj. Arch. B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

ROOF PLAN

SHEET NO.

A5.11

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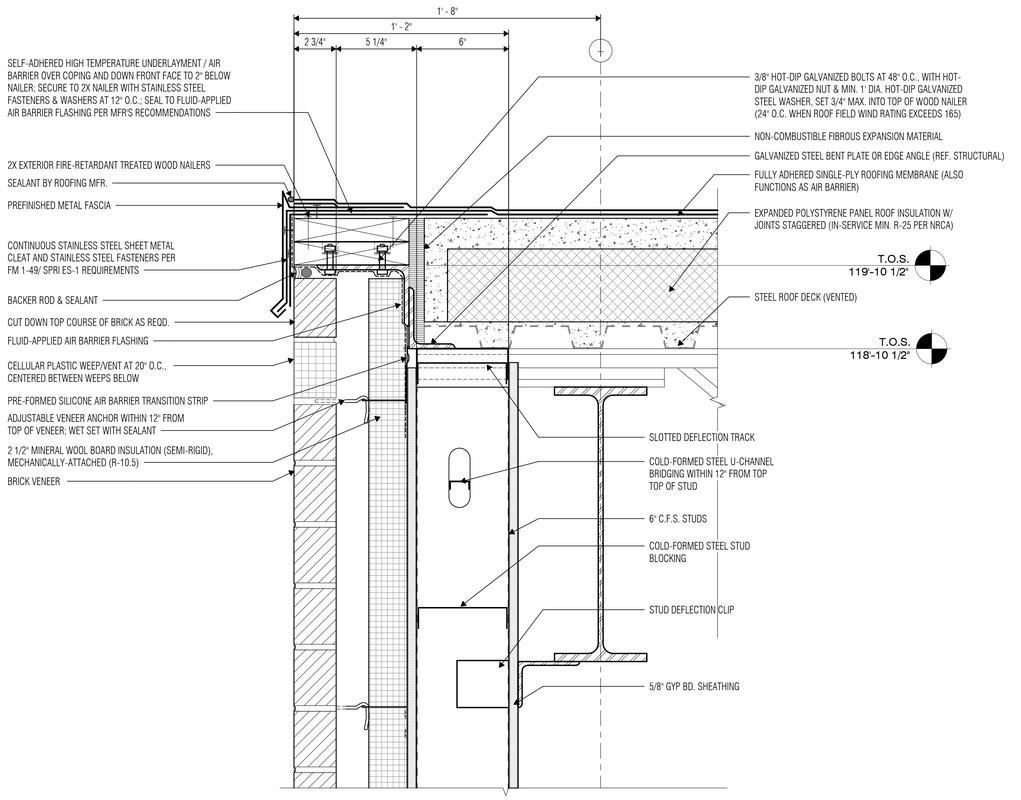

3 BRICK/STUD WALL - ROOF EDGE
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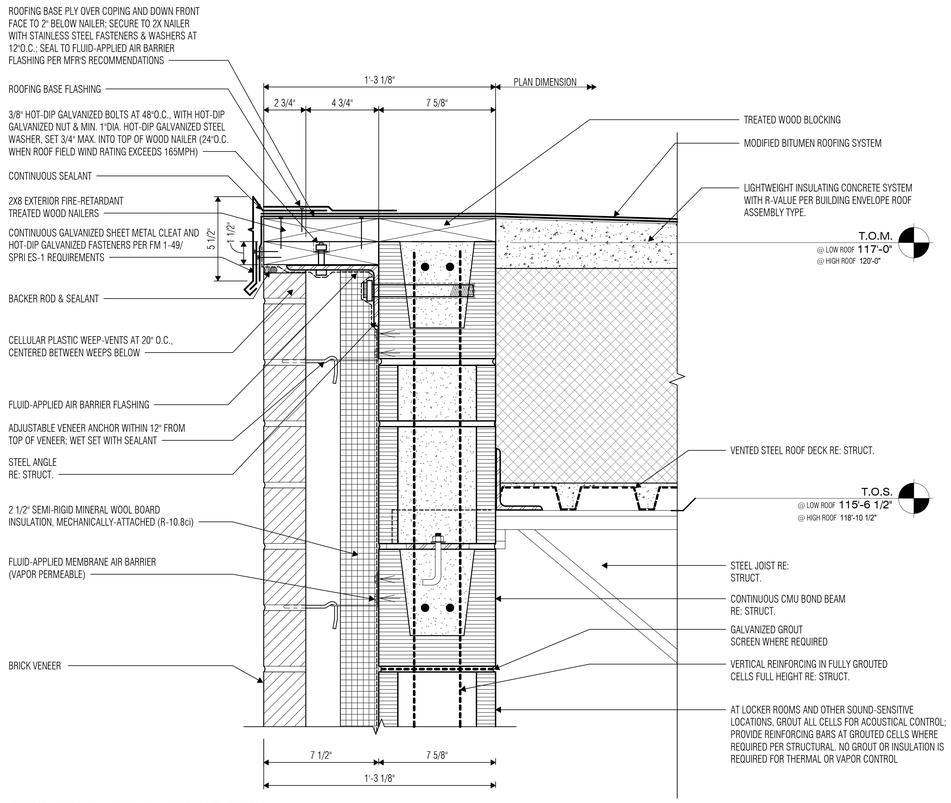

2 BRICK/CMU WALL - ROOF EDGE
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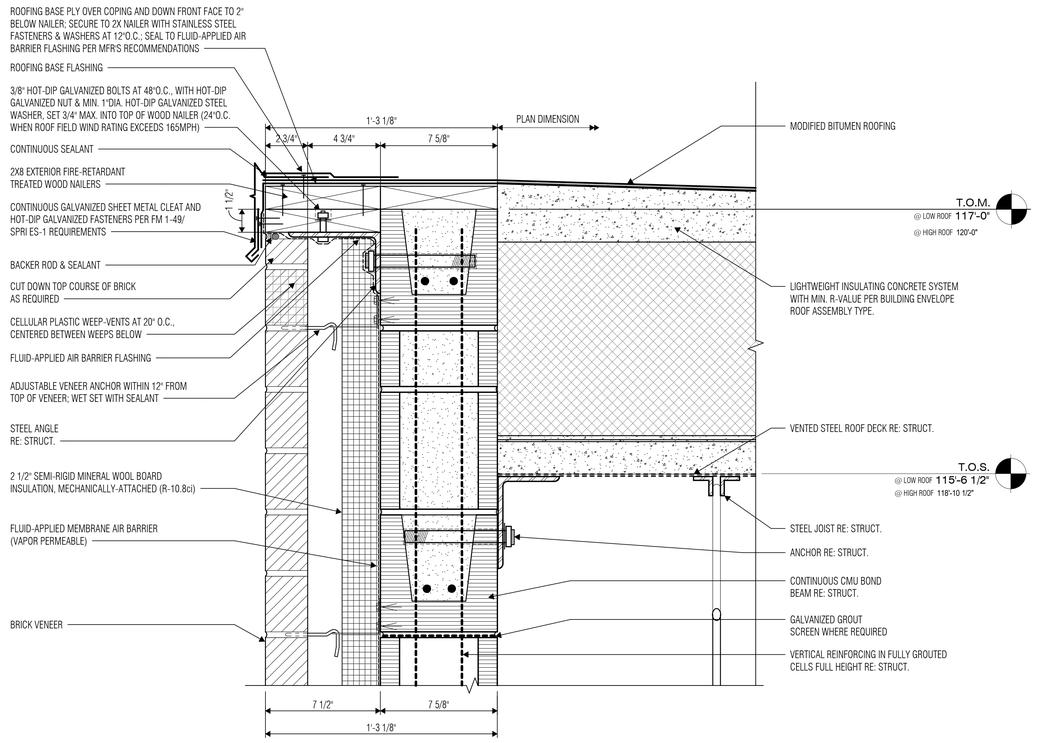

1 BRICK/CMU WALL - ROOF EDGE
SCALE: 3" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT BRUCE G. BOYTER 13921 STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
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Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
ROOF DETAILS

SHEET NO.
A5.21

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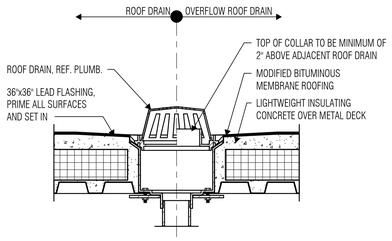
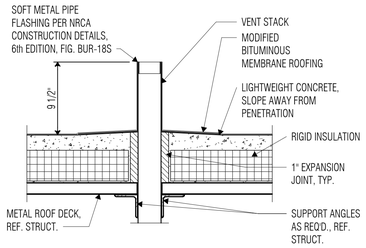


5 DETAIL @ ROOF DRAIN & OVERFLOW
SCALE: 1 1/2" = 1'-0"



4 VENT STACK FLASHING
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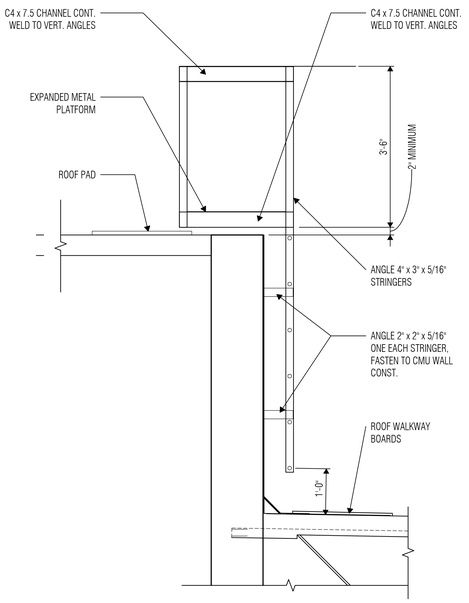

2 ROOF LADDER AT HIGH ROOF
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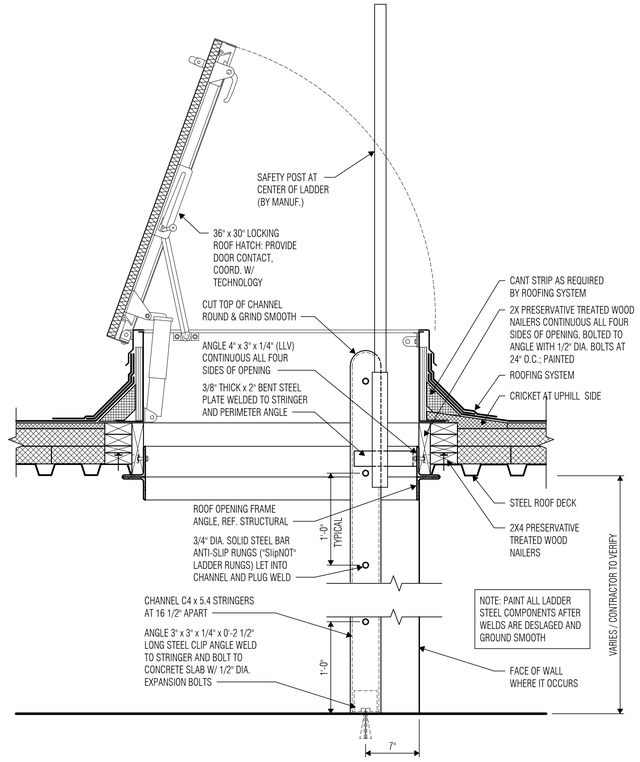
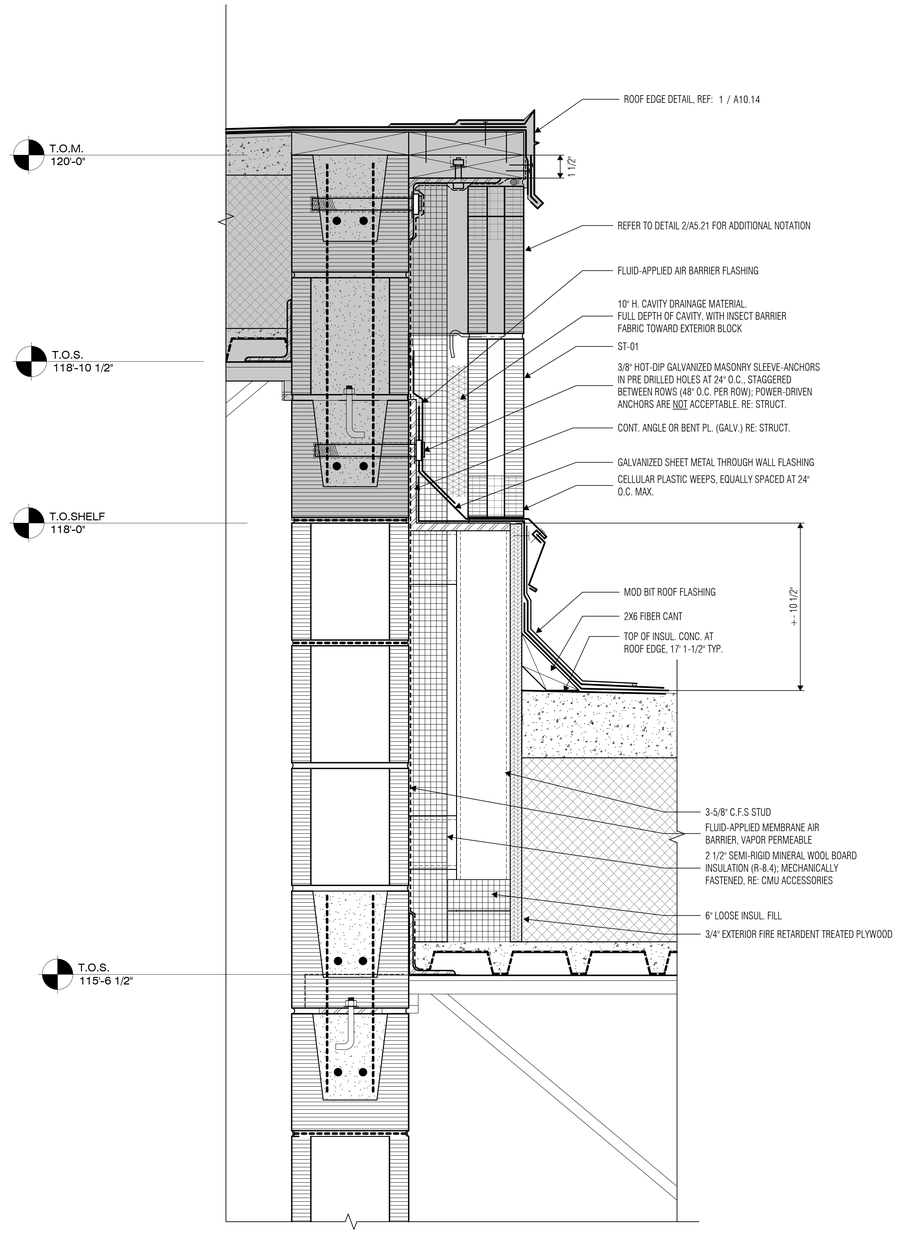


1 ROOF ACCESS LADDER & ROOF HATCH
SCALE: 1 1/2" = 1'-0"



3 DETAIL - HI/LOW ROOF TRANSITION
SCALE: 3" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRUCE G. BOYTER
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STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
ROOF DETAILS

SHEET NO.
A5.22

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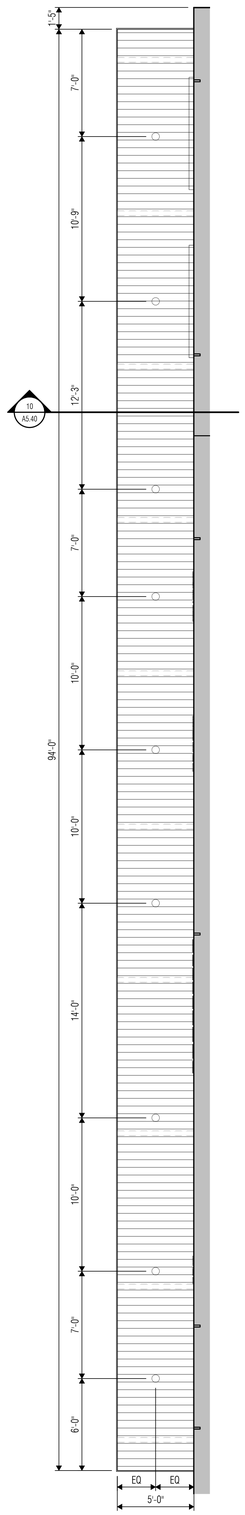
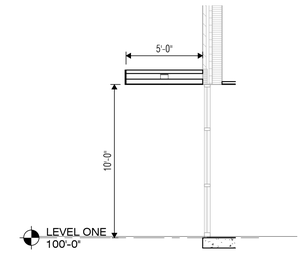


2 CANOPY PLAN - C
SCALE: 1/4" = 1'-0"



11 CANOPY SECTION - A
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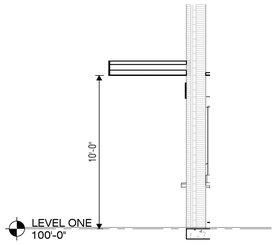

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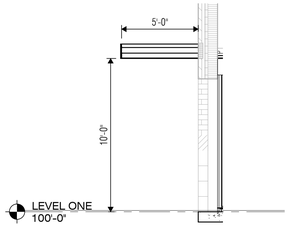

9 CANOPY SECTION - D
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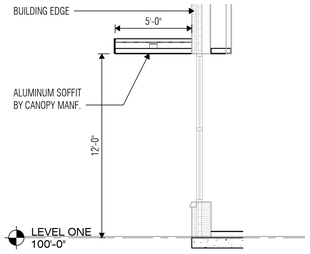

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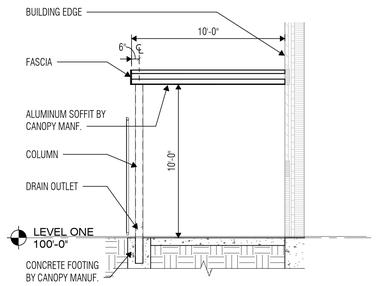

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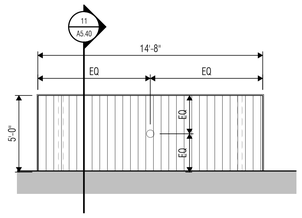

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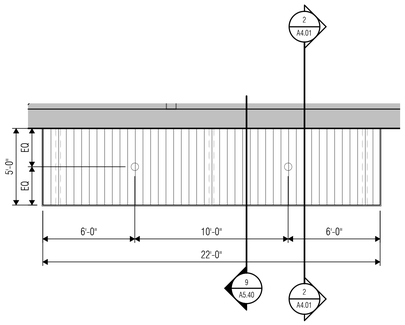

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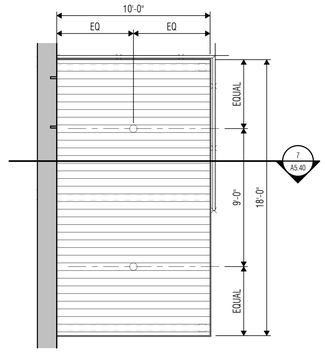
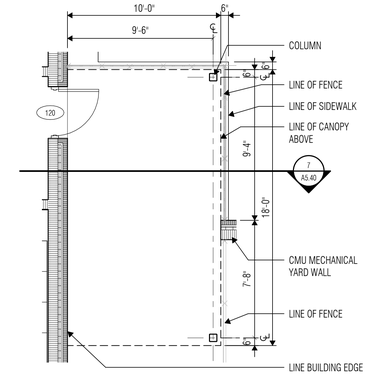
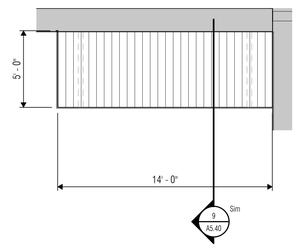


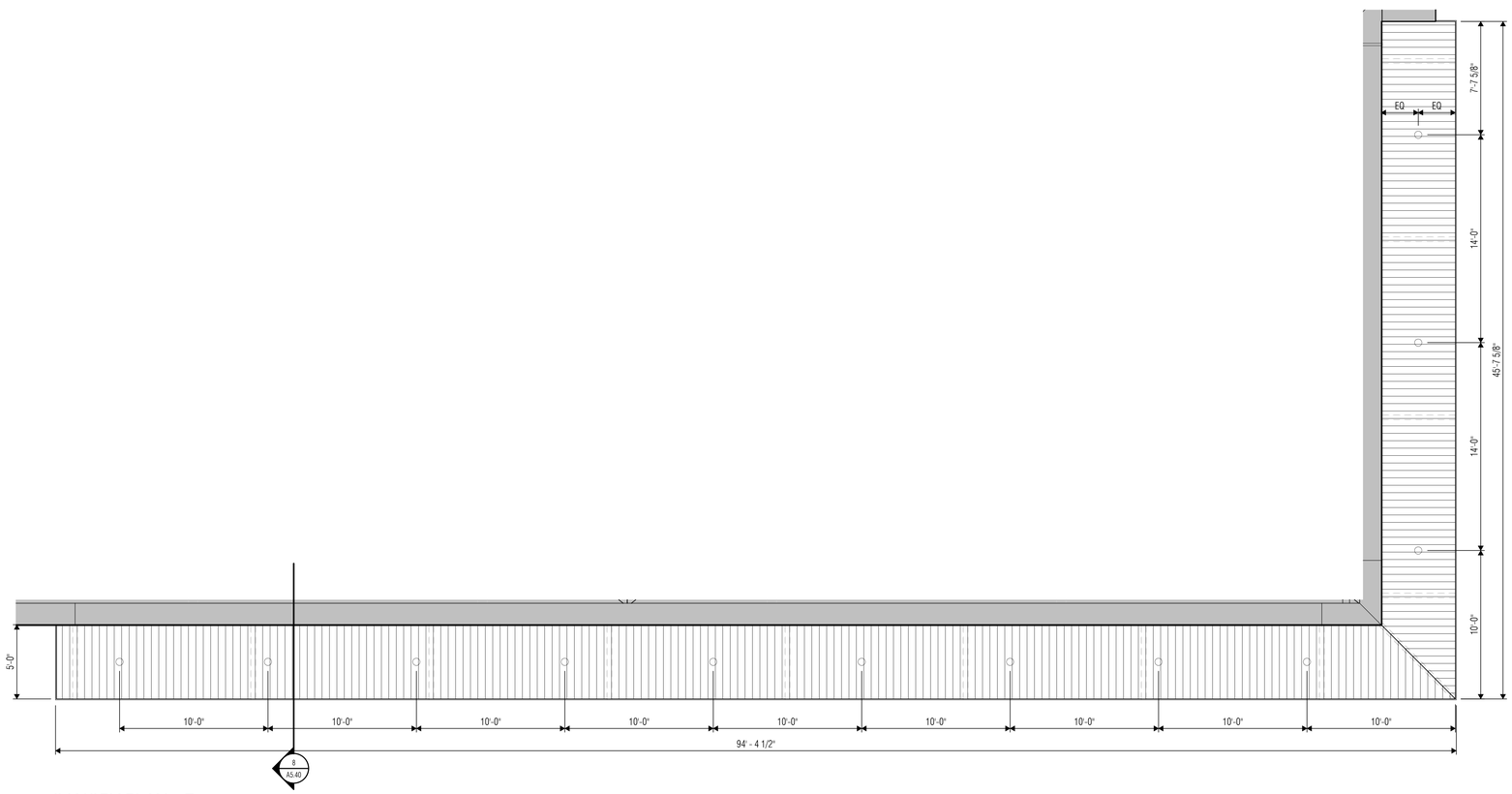
3 CANOPY RCP - F
SCALE: 1/4" = 1'-0"



12 CANOPY FLOOR PLAN - F
SCALE: 1/4" = 1'-0"



6 CANOPY RCP - B
SCALE: 1/4" = 1'-0"



1 CANOPY PLAN - E
SCALE: 1/4" = 1'-0"

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
JEFFREY G. BOYTER
13922
STATE OF TEXAS

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

CANOPY PLANS & DETAILS

SHEET NO.

A5.40

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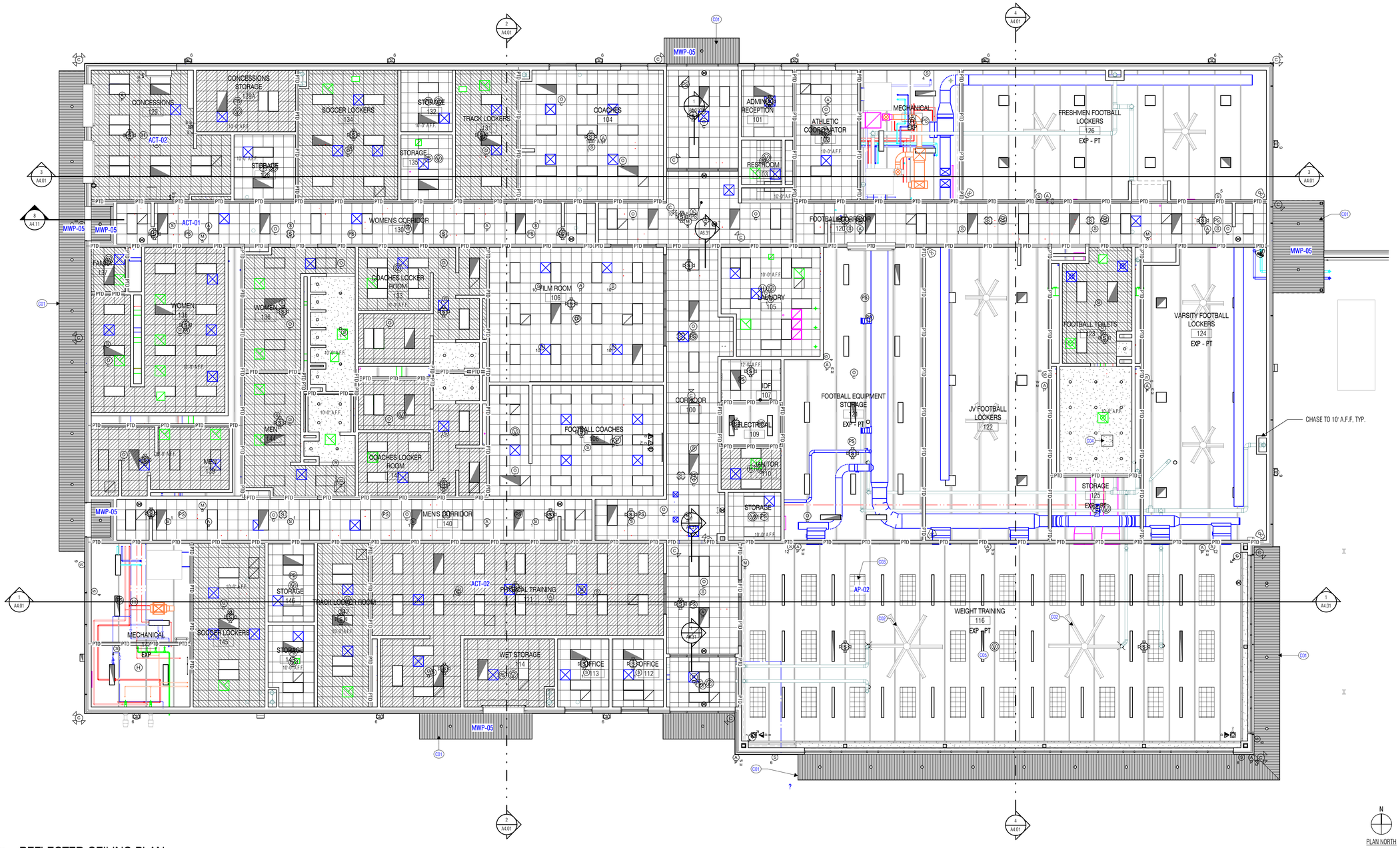

1 REFLECTED CEILING PLAN

SCALE: 1/8" = 1'-0"

KEYED NOTES

C01	PREMANUFACTURED CANOPY. RE: ROOF PLAN
C02	INDUSTRIAL FAN; REF: MECHANICAL
C03	RIGID FOAM DECK PANELS TO DECK ABOVE.
C04	ACCESS PANEL, COORDINATE WITH MEP.
C05	PAINT ALL EXPOSED WALLS, DECK, STEEL, DUCTWORK, AND PIPING ABOVE CEILING

PARTITION LEGEND

1HR — 1-HOUR FIRE BARRIER PARTITION. Extend partition to deck above and seal with firestopping sealant as required for fire-resistance requirements. Paint stenciled label on partitions above ceiling at 15'-0" o.c. as follows: *'1-HOUR FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS'*. Brace partitions per Floor Plan General Notes.

SMK — SMOKE PARTITION. Extend partition to deck above and seal with sealant as required to resist the passage of smoke. Seal all joints and penetrations. Brace partitions per Floor Plan General Notes.

SND — ACOUSTICAL DRYWALL PARTITION / SOUND-CONDITIONED CMU PARTITION. Extend partition to deck above and seal with acoustical sealant. Seal all joints and penetrations with acoustical sealant. Brace partitions per Floor Plan General Notes.

PTD — NON-RATED PARTITION TO DECK. Extend partition to deck above. Brace partitions per Floor Plan General Notes.

REFLECTED CEILING PLAN LEGEND

ACT-01	ACOUSTIC LAY-IN CEILING TILE 24" X 24"
ACT-02	ALUMINUM GRID W/ VINYL COATED LAY-IN GYPSUM CEILING TILE & HOLD-DOWN CLIPS 24" X 24"
PT-01	5/8" GYPSUM BOARD CEILING PAINTED PT-01, U.N.O.
MWP-	METAL SOFFIT PANEL WITH VENTED SOFFIT PER CODE
EXP	EXPOSED CEILING; PAINT ALL EXPOSED WALLS, DECK, STEEL, DUCTWORK, AND PIPING WHERE INDICATED
	LIGHT FIXTURES. Refer to Electrical Drawings.
	SUPPLY AND RETURN GRILLES. Shown for location purposes only. Refer to Mechanical Drawings.
P-C	CEILING MOUNTED PROJECTOR
M-C	CEILING MOUNTED MONITOR
	ACOUSTICAL PANEL

REFLECTED CEILING PLAN NOTES

1. All ceiling heights shall be 10'-0" A.F.F. unless noted otherwise.
2. Refer to Detail _/A9.__ for Typical Gypsum Board Ceiling Control Joint Detail.
3. Provide vented reveals at perimeter of all non-insulated exterior plaster soffits. Provide venting strips or perforated panels at perimeter of all non-insulated metal panel soffits (refer to Detail _/A6.__). Venting at non-insulated soffits shall be provided whether specifically indicated on the drawings or not.
4. Provide partition to deck (PTD) at walls surrounding spaces with exposed structure. Refer to Reflected Ceiling Plan Legend for PTD requirements.
5. Provide hold-down clips for all acoustic lay-in ceiling panels at vestibules, at sloped ceilings, at fire-rated ceilings, and within 6 feet of exterior doors without vestibules.
6. At ceiling furring details, the suspended assemblies, bracing, blocking, etc. shown on the details are for schematic representation only. Provide stable, secure and permanent assemblies at these locations in accordance with recommended light-gage steel framing installation practices.
7. At partitions that do not extend to deck above, extend partition 4" minimum above highest adjacent ceiling and brace per Floor Plan Legend and Floor Plan Notes.
8. Refer to structural drawings for load bearing wall locations that extend to deck.
9. Provide and coordinate all gyp bd ceiling metal access doors w/ MEP

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT — BRUCE G. BOYTER — 13925 — STATE OF TEXAS

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
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Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
REFLECTED CEILING PLAN

SHEET NO.
A6.11

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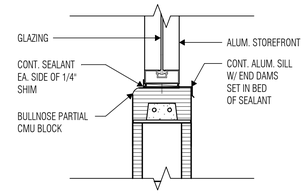
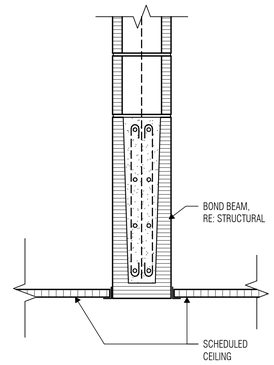
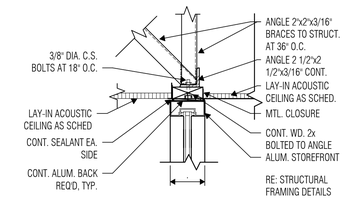


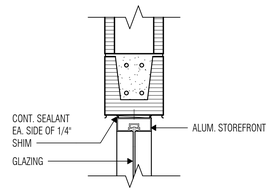
4 STOREFRONT SILL
SCALE: 1 1/2" = 1'-0"



2 CMU HEADER
SCALE: 1 1/2" = 1'-0"



3 Head Detail @ Storefront
SCALE: 1 1/2" = 1'-0"



1 STOREFRONT HEAD
SCALE: 1 1/2" = 1'-0"

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REGISTERED ARCHITECT
BRUCE G. BOYTER
13922
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

REFLECTED CEILING PLAN DETAILS

SHEET NO.

A6.31

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DOOR NUMBER	DOOR TYPE	FRAME TYPE	DOOR OPENING		DETAIL - REF. A7.11 U.N.O.			FIRE RATING	HDWR SET	KEYED NOTES	REMARKS
			WIDTH	HEIGHT	HEAD	JAMB	SILL				
FIELD HOUSE											
100A	ALw2	AL	6'-0"	7'-0"					710AMCV		
100AA	ALw2	AL	6'-0"	7'-0"					C714MA	2, 1	CARD READER
100B	ALw2	AL	6'-0"	7'-0"					710AMCV		
100BB	ALw2	AL	6'-0"	7'-0"					714MA	2, 1	CARD READER
101	Fsc	AL	3'-0"	7'-2"	16	15			501A		
102	Fsc	AL	3'-0"	7'-0"	16	15			103A		
102A	Fsc	HM	3'-0"	7'-0"	9	5			103		
103	Fsc	HM	3'-0"	7'-0"					341-FD		
104	NLsc	HM	3'-0"	7'-0"	9	5			503		
105	Fsc2	HM	6'-0"	7'-0"	9	5			510		PROVIDE KICK PLATE
105A	Fhm	HM	3'-0"	7'-0"	9	5			201		
106	Fsc	HM	3'-0"	7'-0"	9	5			501C		
107	Fsc	HM	3'-0"	7'-0"	9	5			201		
108	NLsc	HM	3'-0"	7'-0"	9	5			503		PROVIDE KICK PLATE
108A	Fsc	HM	3'-0"	7'-0"	9	5			503		PROVIDE KICK PLATE
109	Fsc	HM	3'-0"	7'-0"	9	5			711ELC		
110	Fsc	HM	3'-0"	7'-0"	9	5			203-CUS		
111	Fsc	HM	3'-0"	7'-0"	9	5			501		
111A	Fhm	HM	4'-0"	7'-0"	12	8		NA	715W	2	PROVIDE KICK PLATE
112	Fsc	AL	3'-0"	7'-0"	13	14			103A	4	
113	Fsc	AL	3'-0"	7'-2"	13	14			103A	4	
114	Fhm	HM	4'-0"	7'-0"	9	5		NA	203W.K		PROVIDE KICK PLATE
114A	ICDps	STL	8'-0 3/8"	8'-8"			2	----	001MAN	2, 3	MANUAL OVERHEAD DOOR
116	ALw2	AL	6'-0"	7'-0"					710AMCV		
116A	ALw2	AL	6'-0"	7'-0"					714MA	2, 1	CARD READER
117	Fsc	HM	3'-0"	7'-0"	9	5			203		
120	Fhm	HM	3'-0"	7'-0"	12	8			715	2, 1	PROVIDE KICK PLATE; CARD READER
120A	Fsc	HM	3'-0"	7'-0"	9	5			701		PROVIDE KICK PLATE
121	Fsc	HM	3'-0"	7'-0"	9	5			201		PROVIDE KICK PLATE
121A	UCCDps	STL	8'-0"	7'-4"	10	6			001MAN		MANUAL OVERHEAD COUNTER DOOR
124	Fhm	HM	3'-0"	7'-0"	9	5			201		
125A	ALw3	HM	3'-0"	7'-0"	9	5		----	203		SPLIT DOOR W/ SHELF
125B	ALw3	HM	3'-0"	7'-0"	9	5		----			SPLIT DOOR W/ SHELF
127	Fhm2	HM	6'-0"	7'-0"	12	8			214	2	
128	Fsc	HM	3'-0"	7'-0"	9	5			201	2	
129	Fhm	HM	4'-0"	7'-0"	12	8		NA	205W	2, 5	PROVIDE KICK PLATE, DOOR PEEP VIEWER
129A	Fhm	HM	4'-0"	7'-0"	9	5		NA	203W		
129B	S6	STL	7'-0"	7'-9"					001MAN		MANUAL OVERHEAD COUNTER DOOR
129C	S6	STL	7'-0"	7'-9"					001MAN		MANUAL OVERHEAD COUNTER DOOR
130	Fhm	HM	3'-0"	7'-0"	12	8			715	2, 1	PROVIDE KICK PLATE; CARD READER
130A	Fsc	HM	3'-0"	7'-0"	9	5			701		PROVIDE KICK PLATE
131	Fsc	HM	3'-0"	7'-0"	9	5			801LKR		PROVIDE KICK PLATE
132	Fsc	HM	3'-0"	7'-0"	9	5			203		
133	Fsc	HM	3'-0"	7'-0"	9	5			801LKR		
134	Fsc	HM	3'-0"	7'-0"	9	5			801LKR		PROVIDE KICK PLATE
135	Fsc	HM	3'-0"	7'-0"	9	5			203		
137	Fhm	HM	3'-0"	7'-0"	12	8			345		
138	Fhm	HM	3'-0"	7'-0"	12	8			805L		
139	Fhm	HM	3'-0"	7'-0"	12	8			805L		
140	Fhm	HM	3'-0"	7'-0"	12	8			715	2, 1	PROVIDE KICK PLATE; CARD READER
140A	Fsc	HM	3'-0"	7'-0"	9	5			701		PROVIDE KICK PLATE
141	Fsc	HM	3'-0"	7'-0"	9	5			801LKR		
142	Fsc	HM	3'-0"	7'-0"	9	5			801LKR		PROVIDE KICK PLATE
143	Fsc	HM	3'-0"	7'-0"	9	5			203		
145	Fsc	HM	3'-0"	7'-0"	9	5			801LKR		PROVIDE KICK PLATE
146	Fsc	HM	3'-0"	7'-0"	9	5			203		
147	Fhm2	HM	6'-0"	7'-0"	12	8			214	2	
148	Fhm	HM	3'-0"	7'-0"	9	5			203		
M1	S1		3'-6"	8'-0"				----	J715		CHAINLINK EGRESS GATE W/ LOCK
M2	S2		10'-0"	8'-0"					J-2PL		PR GATES W/ LOCK
S13	ALw7		12'-0"	8'-0"					J-2PL		PR GATES W/ LOCK
S14	ALw7		12'-0"	8'-0"					J-2PL		PR GATES W/ LOCK
SITE											
S01	S2	N/A	6'-0"	6'-0"	-	-	-				PR DECORATIVE METAL EGRESS GATES W/ LOCK AND PANIC HARDWARE
S02	S2		6'-0"	6'-0"							PR DECORATIVE METAL EGRESS GATES W/ LOCK AND PANIC HARDWARE
S03	S2		6'-0"	6'-0"							PR DECORATIVE METAL EGRESS GATES W/ LOCK AND PANIC HARDWARE
S04	S2		6'-0"	6'-0"							PR DECORATIVE METAL EGRESS GATES W/ LOCK AND PANIC HARDWARE
S05	S2		6'-0"	6'-0"							PR DECORATIVE METAL EGRESS GATES W/ LOCK AND PANIC HARDWARE
S06	S1		3'-0"	4'-0"					J-1PL		
S07	S1		3'-0"	4'-0"					J-1PL		
S08	S5		4'-0"	8'-0"					J-1PL		
S09	S5		4'-0"	8'-0"					J-1PL		
S10	S4		6'-0"	4'-0"					J-2PL		PR GATES W/ LOCK
S11	S4		6'-0"	4'-0"					J-2PL		PR GATES W/ LOCK

DOOR SCHEDULE NOTES

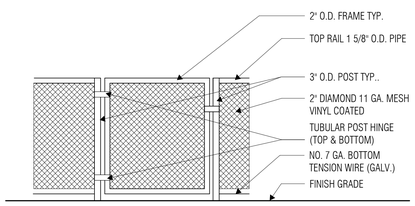
1. At Doors marked 'SND', provide sound seals at frame and door bottom.
2. At Doors without a Frame Type designation, the door frame is part of a Glazing System.
3. At Doors with a Frame Type designation "AL", the door frame is an interior aluminum frame that is not part of a glazing system
4. At Doors with a Frame Type designation "N/A", there is no door frame required (e.g. all-glass doors, gates, etc.).
5. At Doors with a Frame Type designation "REF DET", refer to the referenced Head and Jamb detail for frame information.
6. Refer to Hardware Schedule for additional information regarding hardware.
7. Vision panels at non-rated interior doors shall be 1/4" clear tempered glass (CT4) U.N.O. Vision panels at interior fire-rated glass (CC4) U.N.O. Vision panels at exterior doors shall be 1" tinted tempered insulating glass (TT1) U.N.O.
8. Refer to Glazing System Elevation Sheets for Glass Types.
9. At Doors schedule to receive a Card Reader, the card reader shall be mounted on the door. Refer to Technology drawings for location on door. Notify Architect of any discrepancies.

DOOR SCHEDULE KEYED NOTES

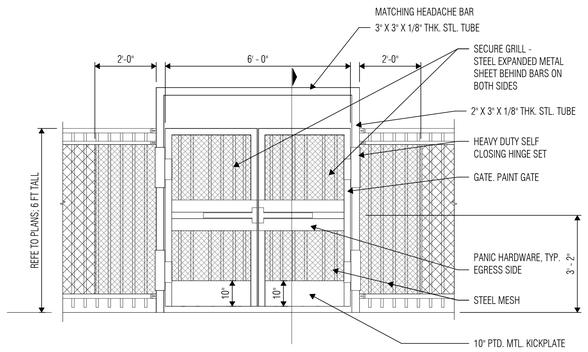
1. ACCESS CONTROL / CARD READER
2. DOOR CONTACT
3. FULL SIZE KEYED
4. APPLIED SOUND SEALS & THRESHOLD
5. DOOR PEEP VIEWER

DOOR SCHEDULE LEGEND

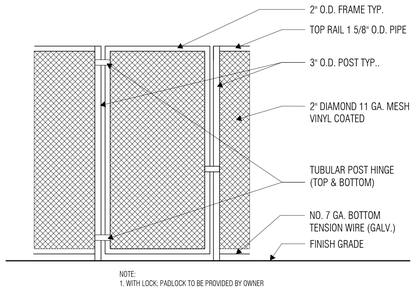
AL	ALUMINUM
HM	HOLLOW METAL
STL	STEEL
DM	DECORATIVE METAL
CL	CHAIN LINK



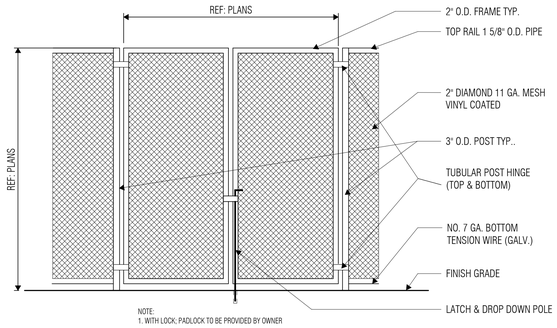
S1 SINGLE CHAINLINK ACCESS GATE



S2 DOUBLE PEDESTRIAN GATE

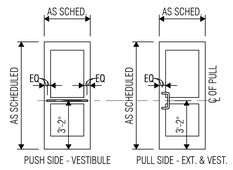


S5 SINGLE CHAINLINK GATE



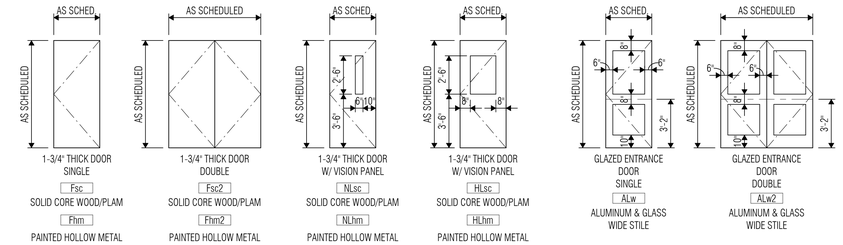
S4 DOUBLE CHAINLINK ACCESS GATE

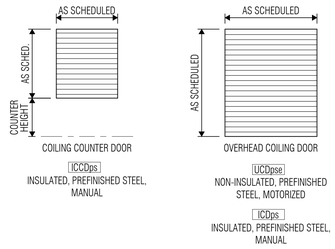
2 GATE TYPES
SCALE: 1/2" = 1'-0"



PUSH SIDE - VESTIBULE PULL SIDE - EXT. & VEST.

5 PUSH/ PULL HEIGHTS
SCALE: 1/4" = 1'-0"





1 DOOR TYPES
SCALE: 1/4" = 1'-0"

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT JOYCE G. BOYTER 13922 STATE OF TEXAS

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

DOOR SCHEDULE

SHEET NO.

A7.01

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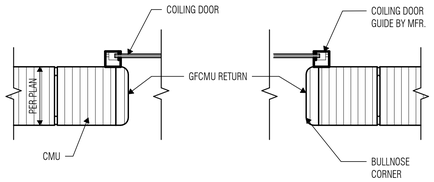
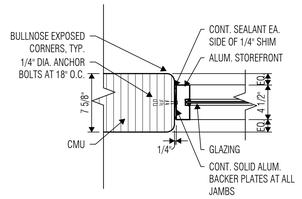
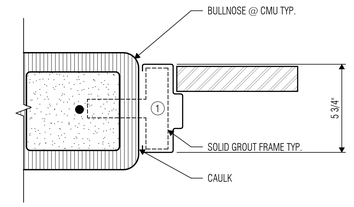


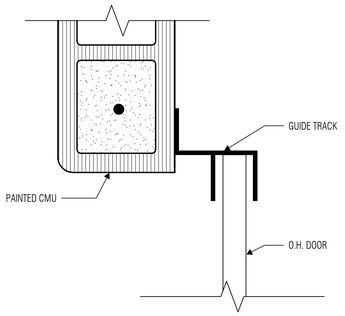
15 DETAIL FOR COILING DOOR_CMU @ TICKET BOOTH
SCALE: 1 1/2" = 1'-0"



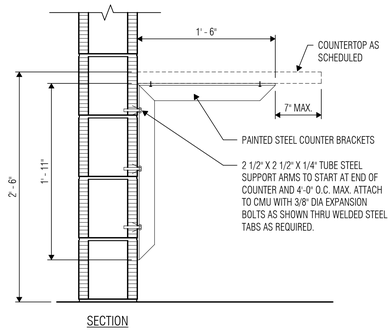
14 JAMB DETAIL @ STOREFRONT
SCALE: 1 1/2" = 1'-0"



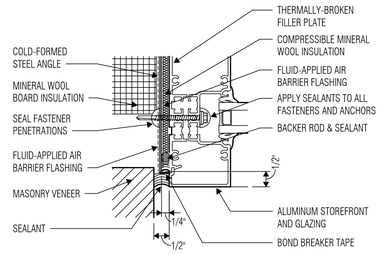
13 INT. JAMB DTL. @ HM DOOR FRAME
SCALE: 3" = 1'-0"



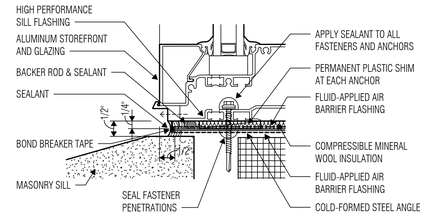
12 JAMB DETAIL AT OVERHEAD DOOR
SCALE: 3" = 1'-0"



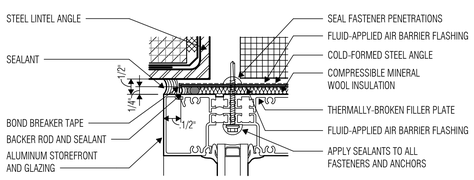
11 COUNTERTOP SUPPORT BRACKET @ CMU WALL
SCALE: 1 1/2" = 1'-0"



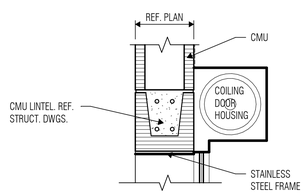
10 DETAIL @ STOREFRONT JAMB FLASHING
SCALE: 6" = 1'-0"



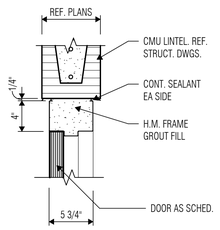
9 DETAIL @ STOREFRONT SILL FLASHING
SCALE: 6" = 1'-0"



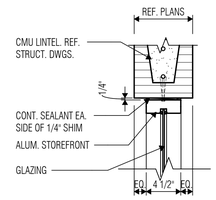
8 DETAIL @ STOREFRONT HEAD FLASHING
SCALE: 6" = 1'-0"



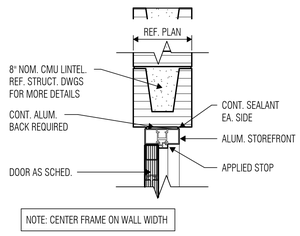
7 HEAD@ INTERIOR COILING DOOR
SCALE: 1 1/2" = 1'-0"



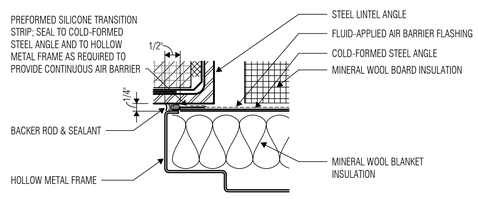
6 HEAD @ HM CMU INT.
SCALE: 1 1/2" = 1'-0"



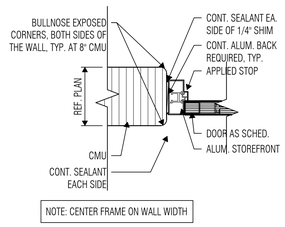
5 HEAD @ STOREFRONT CMU INT.
SCALE: 1 1/2" = 1'-0"



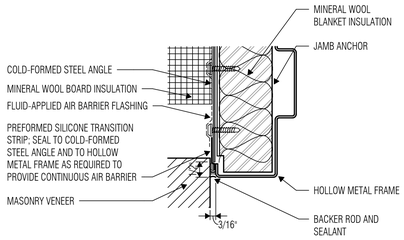
4 HEAD DETAIL @ CMU STOREFRONT INT
SCALE: 1 1/2" = 1'-0"



3 DETAIL @ HM FRAME HEAD FLASHING
SCALE: 6" = 1'-0"



2 JAMB DETAIL @ CMU STOREFRONT DOOR INT
SCALE: 1 1/2" = 1'-0"



1 DETAIL @ HM FRAME JAMB FLASHING
SCALE: 6" = 1'-0"

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT BRUCE G. BOYTER 13922 STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
DOOR & WINDOW DETAILS

SHEET NO.
A7.11

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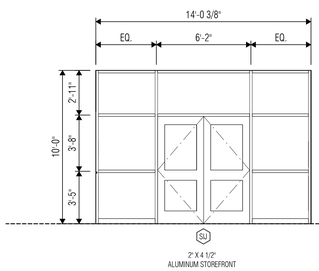
GLAZING SYSTEM NOTES

1. Overall dimensions of glazing system elevations reflect rough opening dimensions, inclusive of perimeter joints.
2. Provide 3/16" thick heavy wall framing members at all door frames in exterior and interior aluminum Storefront systems.
3. Provide 3/16" thick heavy wall door adapters at all door frame members in exterior and interior aluminum Curtain Wall systems.
4. Door opening dimensions in Curtain Wall systems reflect 1" door adapters at jamb conditions, and 1-3/4" door adapters at head conditions. Adjust dimensions between mullions at door openings in curtain wall systems as required for actual size of door adapters provided. Door sizes as identified in Door Schedule shall be maintained.
5. Refer to A7.01 for Typical Push/Pull Mounting Heights Detail for aluminum/glass doors

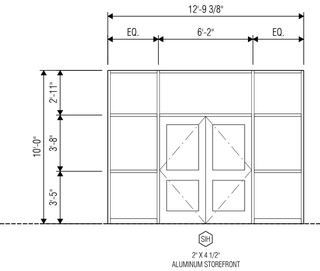
GLASS TYPE LEGEND

ALL **INTERIOR GLASS TO BE CT4** UNLESS NOTED OTHERWISE
ALL **EXTERIOR GLASS TO BE TT1** UNLESS NOTED OTHERWISE

TT1	TINTED, TEMPERED, 1" THICK INSULATING GLASS
TFE1	TINTED, TEMPERED, 1" THICK INSULATING GLASS, FORCED ENTRY RESISTANT
CT4	CLEAR, TEMPERED, 1/4" THICK GLASS
CFE4	CLEAR, TEMPERED, 1/4: THICK GLASS, FORCED ENTRY RESISTANT
CL1	CLEAR, LAMINATED, 1" THICK INSULATING GLASS
CL2	CLEAR, LAMINATED, 1/2" THICK GLASS
MT4	MIRRORED, TEMPERED, 1/4" THICK ONE-WAY GLASS



16 SIJ
SCALE: 1/4" = 1'-0"



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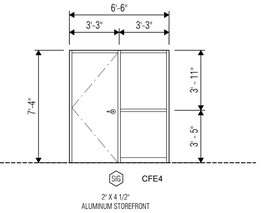

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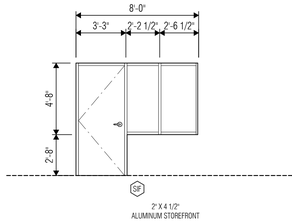

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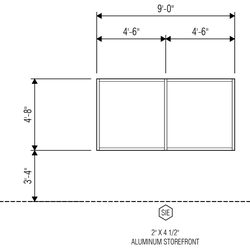

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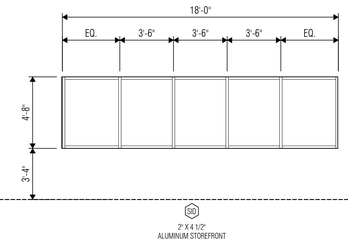
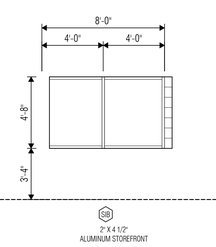


11 SID
SCALE: 1/4" = 1'-0"

10 NOT USED
SCALE: 1/4" = 1'-0"



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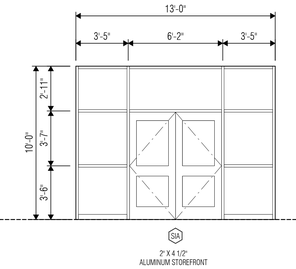
SCALE: 1/4" = 1'-0"



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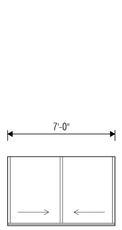
SCALE: 1/4" = 1'-0"



7 SEJ
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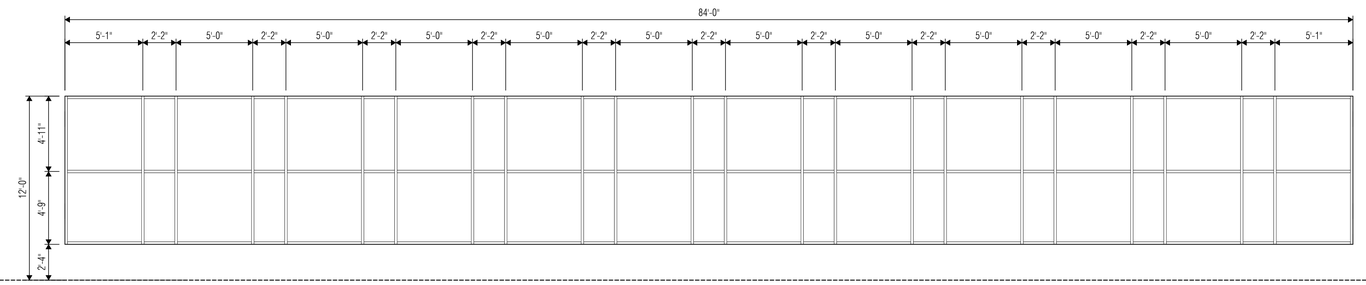

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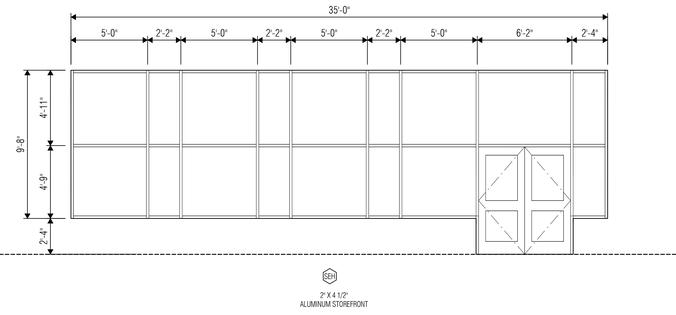

5 SEH
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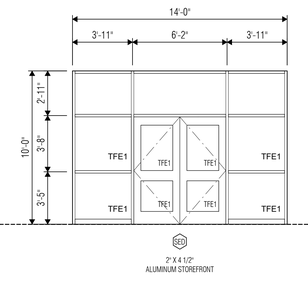
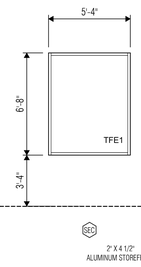


4 SED
SCALE: 1/4" = 1'-0"



3 SEC
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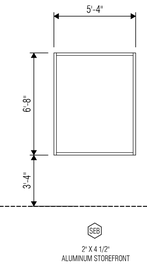

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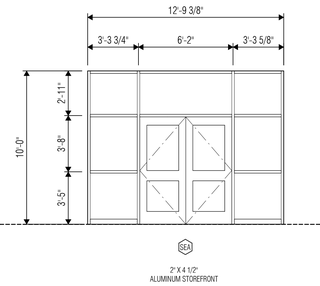

1 SEA
SCALE: 1/4" = 1'-0"

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRUCE G. BOYTER
13922
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
GLAZING ASSEMBLY ELEVATIONS

SHEET NO.
A7.21

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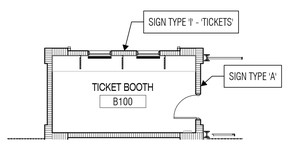
1 GRAPHICS PLAN

REFER TO SHEETS A7.32 AND A7.33 FOR SIGN TYPES

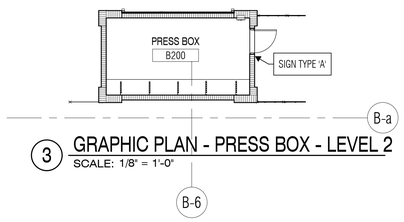
SCALE: 1/8" = 1'-0"

PLAN NORTH



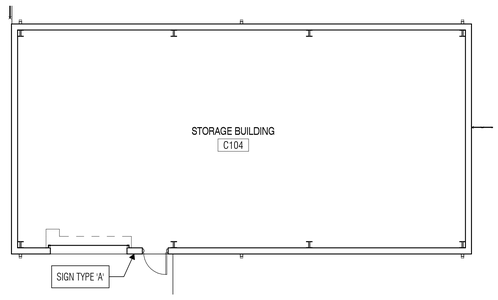
2 GRAPHICS PLAN - PRESS BOX LEVEL 1

SCALE: 1/8" = 1'-0"



3 GRAPHIC PLAN - PRESS BOX - LEVEL 2

SCALE: 1/8" = 1'-0"



4 GRAPHICS PLAN - STORAGE BLDG

SCALE: 1/8" = 1'-0"

SIGNAGE SCHEDULE

ROOM NAME	SIGN TYPE	CONSTRUCTION NUMBER	OWNER NUMBER	SIGN TEXT
VESTIBULE	A	100AA		ATHLECTICS FIELD HOUSE MAIN ENTRY
VESTIBULE	A	100BB		ALL VISITORS
ADMIN / RECEPTION	A	101	M101	RECEPTION
ATHLETIC DIRECTOR	A	102	M101A	ATHLETIC COORDINATOR
ATHLETIC DIRECTOR	A	103	M101A	ATHLETIC COORDINATOR
FAMILY RESTROOM	D	103	M103	RESTROOM
COACHES OFFICE	A	104	M102	COACHES OFFICE
LAUNDRY	A	105	M119	LAUNDRY ROOM
FILM ROOM	A	106	M120	FILM ROOM
IDF	A	107	M121T	IDF
FOOTBALL COACHES OFFICE	A	108	M122	FOOTBALL COACHES OFFICE
FOOTBALL COACHES OFFICE	A	108	M122	FOOTBALL COACHES OFFICE
ELECTRICAL	A	109	M123E	ELECTRICAL
JANITOR	A	110	M125	CUSTODIAL
PHYSICAL TRAINING	A	111	M124	PHYSICAL TRAINING
OFFICE	A	112	M124A	OFFICE
OFFICE	A	113	M124B	OFFICE
WET STORAGE	A	114	M124S	STORAGE
WEIGHT TRAINING	A / G	116	M127	WEIGHT TRAINING
WEIGHT TRAINING	A	116	M127	WEIGHT TRAINING
STORAGE	A	117	M127S	STORAGE
FOOTBALL CORRIDOR	A	120	M105	FOOTBALL LOCKER ROOM
FOOTBALL CORRIDOR	A / G	120	M105	FOOTBALL LOCKER ROOM
FOOTBALL EQUIPMENT STORAGE	A	121	M107	FOOTBALL EQUIPMENT STORAGE
FOOTBALL EQUIPMENT STORAGE	A	121	M119	FOOTBALL EQUIPMENT STORAGE
FOOTBALL EQUIPMENT STORAGE	A	121	M117	FOOTBALL EQUIPMENT STORAGE
JV FOOTBALL LOCKERS	A	122	M111	JV FOOTBALL LOCKERS
FOOTBALL TOILETS	E	123	M105	FOOTBALL TOILETS
STORAGE	A	125	M117S	STORAGE
STORAGE	A	125	M117S	STORAGE

SIGNAGE SCHEDULE

ROOM NAME	SIGN TYPE	CONSTRUCTION NUMBER	OWNER NUMBER	SIGN TEXT
FRESHMEN FOOTBALL LOCKERS	A	126	M115	FRESHMEN FOOTBALL LOCKERS
MECHANICAL	A	127	M109	MECHANICAL
STORAGE	A	128	M104S	STORAGE
CONCESSIONS	A	129	M114	CONCESSIONS
CONCESSION STORAGE	A	129A	M114S	STORAGE
WOMEN'S CORRIDOR	A	130	M104	WOMEN'S LOCKER ROOM
WOMEN'S CORRIDOR	A	130	M104	WOMEN'S LOCKER ROOM
TRACK LOCKERS	A	131	M108	TRACK LOCKER ROOM
STORAGE	A	132	M108S	STORAGE
COACHES LOCKER ROOM	A	133	M106	COACHES LOCKER ROOM
SOCCER LOCKER ROOM	A	134	M112	SOCCER LOCKER ROOM
STORAGE	A	135	M112S	STORAGE
FEMALE RESTROOM	E	136	M104	FEMALE RESTROOM
FAMILY RESTROOM	D	137	M118	
WOMEN'S RESTROOM	F	138	M116	
MEN'S RESTROOM	E	139	M136	
MEN'S CORRIDOR	A	140	M126	MEN'S LOCKER ROOM
MEN'S CORRIDOR	A	140	M126	MEN'S LOCKER ROOM
COACHES LOCKER ROOM	A	141	M128	COACHES LOCKER ROOM
TRACK LOCKERS	A	142	M130	TRACK LOCKER ROOM
STORAGE	A	143	M130S	STORAGE
MALE RESTROOM	E	144	M132	MALE RESTROOM
SOCCER LOCKERS	A	145	M134	SOCCER LOCKER ROOM
STORAGE	A	146	M134S	STORAGE
MECHANICAL	A	147	M138M	MECHANICAL
MECHANICAL	A	148	M140E	MECHANICAL

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT BRUCE G. BOYTER 13925 STATE OF TEXAS

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

GRAPHICS PLAN

SHEET NO.

A7.31

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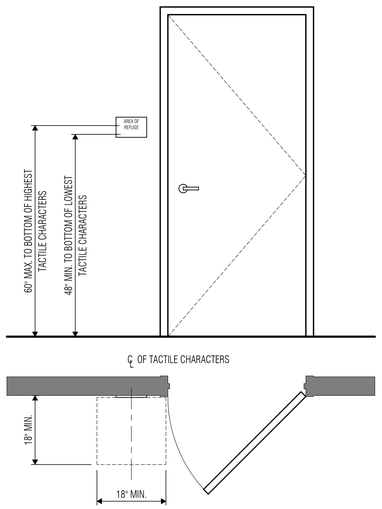
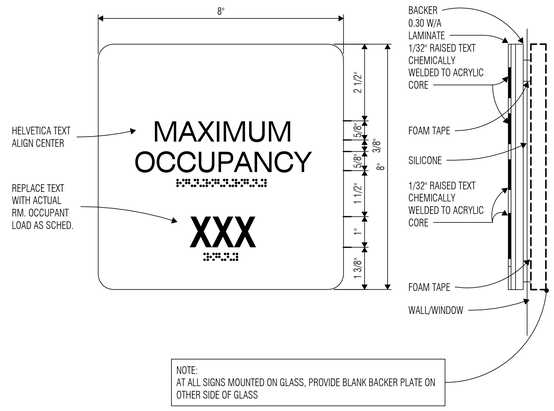
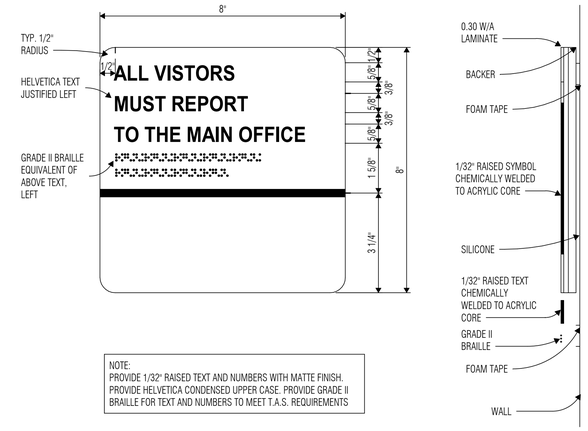


9 DETAIL/ELEV. DOOR SIGN
SCALE: 3/4" = 1'-0"



8 SIGN TYPE - H
SCALE: 6" = 1'-0"



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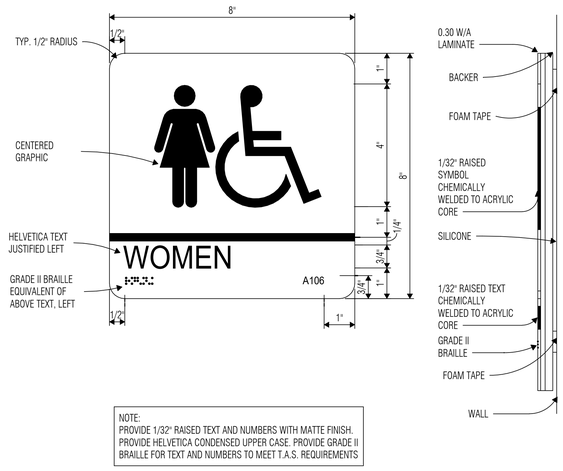
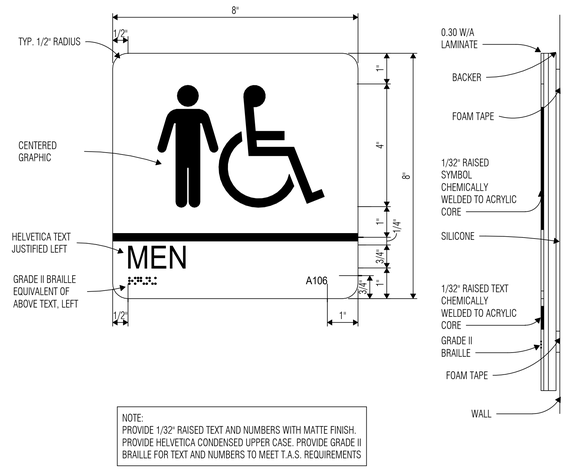
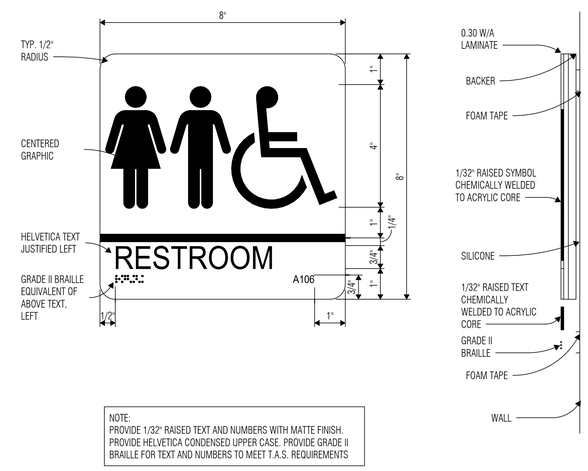


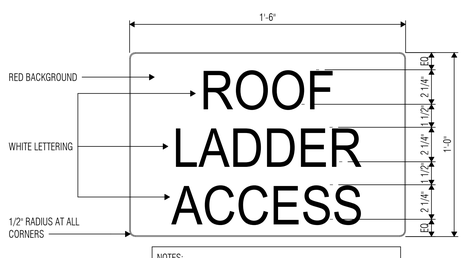
6 SIGN TYPE - F
SCALE: 6" = 1'-0"



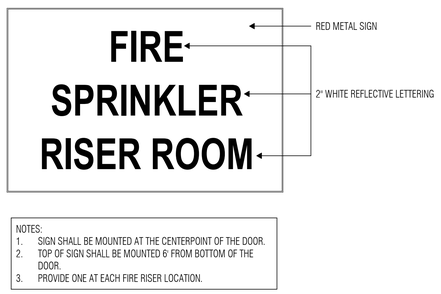
5 SIGN TYPE - E
SCALE: 6" = 1'-0"



4 SIGN TYPE - D
SCALE: 6" = 1'-0"



10 SIGN TYPE - X
SCALE: 3" = 1'-0"



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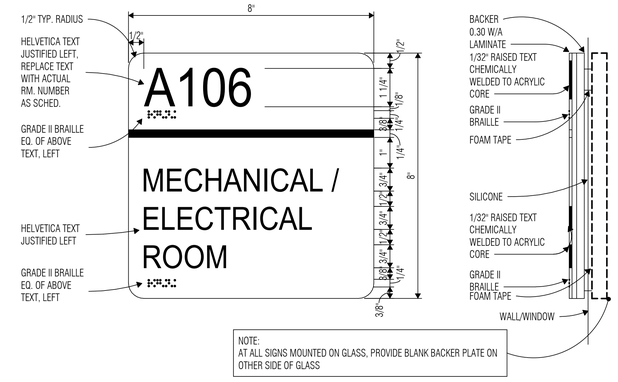

1 SIGN TYPE - A
SCALE: 6" = 1'-0"

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRIDGE G. BOYTER
13923
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
SIGNAGE TYPES

SHEET NO.
A7.32

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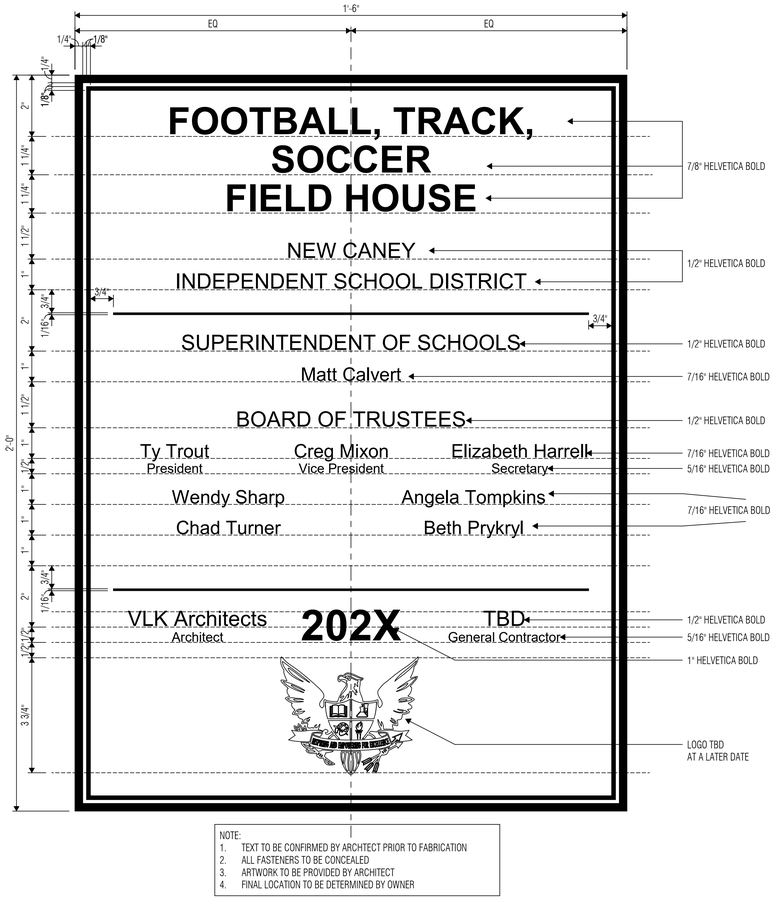
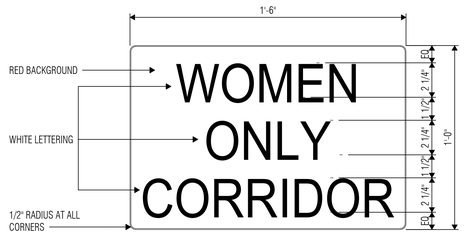
NOTES:
1. LETTERING AND NUMBER FONT TO BE A BLOCK STILE OR SIMILAR.
2. MOUNT SIGN 36" BEHIND F.D.C. VAULT ON A 2 3/8" ALUMINUM POST WITH CAP. MOUNTED WITH TWO PIPE POST BRACKETS. SIGN SHALL BE MOUNTED 60" ABOVE THE GROUND TO THE TOP OF THE SIGN.
3. F.D.C. SIGN SHALL BE FACING THE ROADWAY AND VISIBLE FROM BOTH TRAVEL DIRECTIONS. TWO SIGN MAYBE REQUIRED IF THE FDC IS INSTALLED TO FACE THE STRUCTURE.
4. COORDINATE WITH FIRE MARSHALL ON LOCATIONS. PROVIDE 2 SIGNS

4 SIGN TYPE - W
SCALE: 3" = 1'-0"



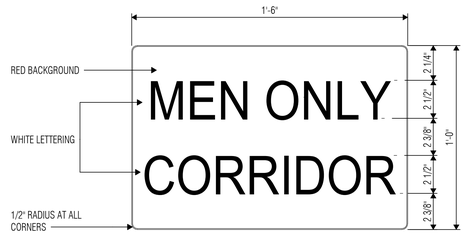
NOTE:
1. TEXT TO BE CONFIRMED BY ARCHTECT PRIOR TO FABRICATION
2. ALL FASTENERS TO BE CONCEALED
3. ARTWORK TO BE PROVIDED BY ARCHITECT
4. FINAL LOCATION TO BE DETERMINED BY OWNER

3 DEDICATION PLAQUE
SCALE: 6" = 1'-0"



NOTES:
1. MOUNT CENTER OF SIGN @ 60 INCHES

2 SIGN TYPE - ZW
SCALE: 3" = 1'-0"



NOTES:
1. MOUNT CENTER OF SIGN @ 60 INCHES

1 SIGN TYPE - ZM
SCALE: 3" = 1'-0"

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director R.BOYTER	Drawn By M.FUENTE
Designer T.HANGAR	Quality Control VLK
Proj. Arch. B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
SIGNAGE TYPES

SHEET NO.
A7.33

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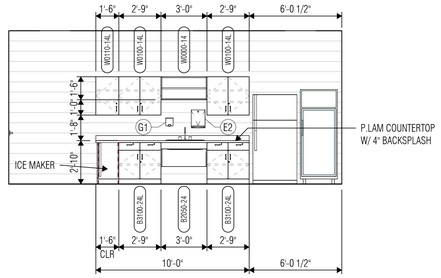
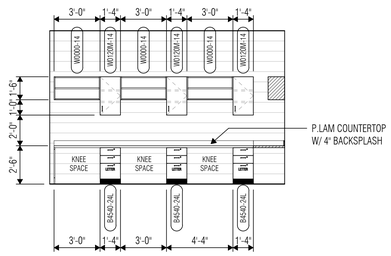
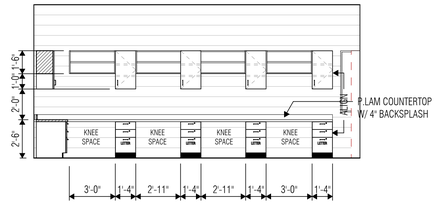


15 FOOTBALL COACHES SUITE
SCALE: 1/4" = 1'-0"

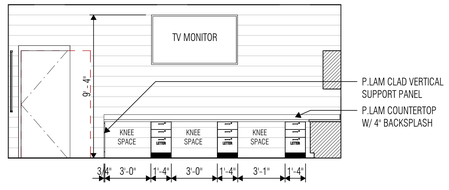
14 CLOTHES HANGING SHELVING
SCALE: 1/4" = 1'-0"



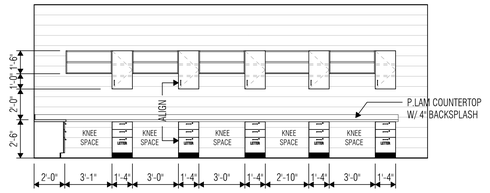
13 FOOTBALL COACHES SUITE
SCALE: 1/4" = 1'-0"



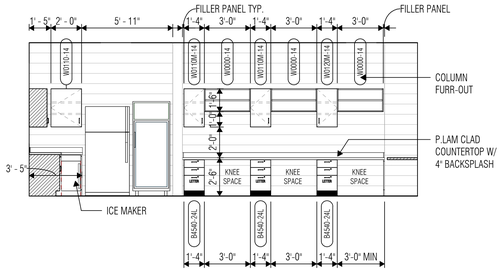
12 FOOTBALL COACHES SUITE
SCALE: 1/4" = 1'-0"



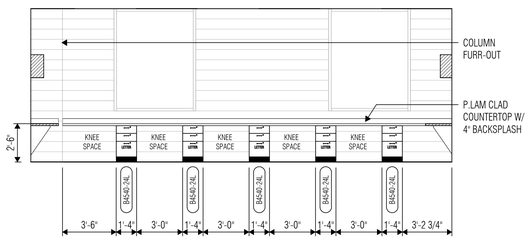
11 FOOTBALL COACHES SUITE
SCALE: 1/4" = 1'-0"



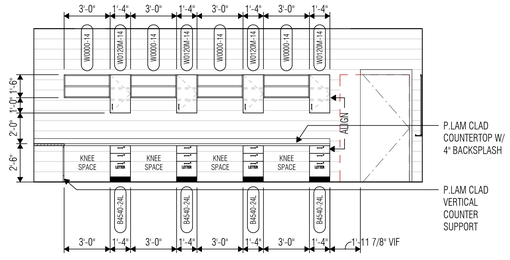
10 FOOTBALL COACHES SUITE
SCALE: 1/4" = 1'-0"



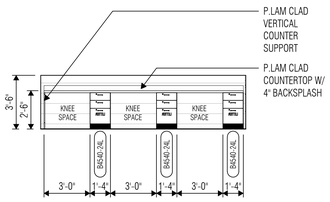
9 COACHES SUITE
SCALE: 1/4" = 1'-0"



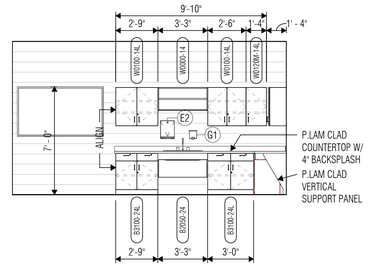
8 COACHES SUITE
SCALE: 1/4" = 1'-0"



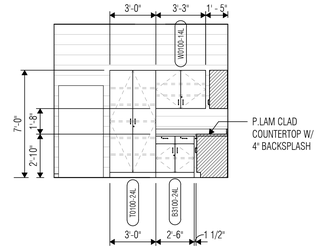
7 COACHES SUITE
SCALE: 1/4" = 1'-0"



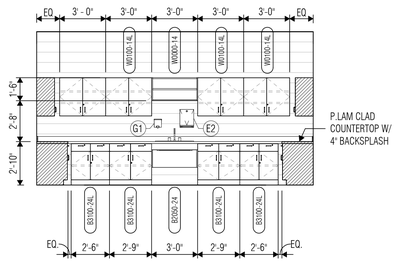
6 COACHES OFFICE ISLAND
SCALE: 1/4" = 1'-0"



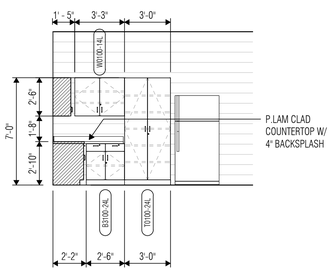
5 COACHES SUITE
SCALE: 1/4" = 1'-0"



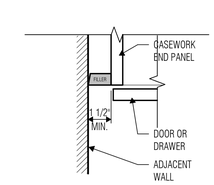
4 PHYSICAL TRAINING
SCALE: 1/4" = 1'-0"



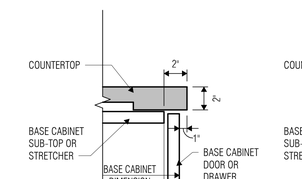
3 PHYSICAL TRAINING - WEST
SCALE: 1/4" = 1'-0"



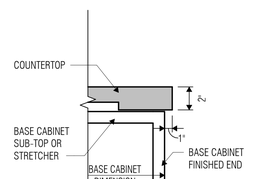
2 PHYSICAL TRAINING - NORTH
SCALE: 1/4" = 1'-0"



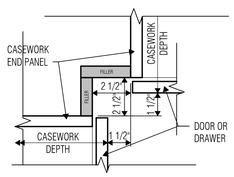
FILLER AT ADJACENT WALL



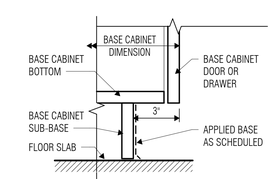
COUNTERTOP
FRONT OVERHANG



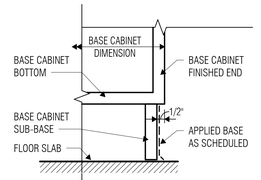
COUNTERTOP
END OVERHANG



INSIDE CORNER FILLER
AT ADJACENT CABINETS



BASE CABINET TOE KICK
AT FRONT

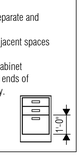


BASE CABINET SUB-BASE
AT FINISHED END

1 TYPICAL CASEWORK DETAILS
SCALE: 3" = 1'-0"

CASEWORK NOTES

1. Casework shall meet criteria set forth in Americans with Disabilities Act and Texas Accessibility Standards.
2. All casework model numbers are based on Case Systems, Inc. Refer to casework elevations for height and width of each unit.
3. Coordinate locations of electrical and/or plumbing within casework and millwork. Notify Architect of any conflicts prior to installation.
4. Coordinate all column locations prior to installation of casework.
5. Refer to Floor Plan Notes for blocking requirements at stud partitions.
6. All adjustable shelves longer than 2'-3", and shelves of any length at open shelving units, shall be 1" thick..
7. Provide finished surface on all exposed surfaces.
8. Plastic Laminate on all casework shall be PL-_ U.N.O.
9. Provide fillers and finished end panels (F.E.) as required. Refer to Detail 1/A8.01 for filler requirements.
10. Provide locks on all doors and drawers as indicated.
11. All counters shall have 4" high splashes, U.N.O.
12. At countertop locations, no joints in plastic laminate should occur over knee spaces, or within 24 inches of sinks and lavatories.
13. Casework cabinet doors and drawers shall be flush overlay.
14. Base cabinets should not extend to floor. Sub-base shall be separate and recessed 1/2" at sides of cabinet to receive rubber base.
15. Provide 1-1/2" thick divider panel between knee spaces and adjacent spaces (e.g. dishwasher openings, other knee spaces, etc.).
16. At front of casework, countertops shall extend 1/2" over base cabinet door/drawer (approximately 1-1/2" over base cabinet body). At ends of casework, countertops shall extend 1/2" over base cabinet body. Refer to Detail _/A8.___.
17. Provide custom height at all file-size drawers to be a minimum of 1'-0" deep. Provide locks at all file-size drawers.



C.S.I. CATALOG CASEWORK NUMBER — XXXXM-24LV

- CASEWORK NOMINAL DEPTH
- V = LIGHT VALANCE PANEL (C.S.I. #R9600-03)
- L = LOCKED CABINET
- M = MODIFIED FROM STANDARD CATALOG SELECTION

NOTE:
1. The height indicated at base cabinets includes the countertop.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRUCE G. BOYTER
13923
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.		Revision Date
1	OWNER COMMENTS	10/14/2024

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
CASEWORK ELEVATIONS

SHEET NO.
A8.01

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MATERIAL FINISH SCHEDULE

NOTE: ALL MATERIALS, PRODUCTS, SIZES, COLORS AND PATTERNS ARE THE BASIS OF DESIGN. REFERENCE PROJECT MANUAL FOR ADDITIONAL APPROVED MANUFACTURERS MEETING THE DESIGN INTENT. SUBSTITUTIONS WILL BE CONSIDERED WHEN SUBMITTED IN COMPLIANCE WITH SECTION 01 62 00 – PRODUCT OPTIONS.

MARK	DESCRIPTION	SPEC SECTION	MANUFACTURER INFO				COMMENTS
			MANUFACTURER	SERIES/STYLE	COLOR/FINISH	SIZE	
BASE FINISH							
RB-01	Base, Rubber Coved	09 65 00	Johnsonite	Cove	Gateway WG TA4	4"	
RF-02	Epoxy - Integral Resinous Base	09 66 23 16	Stonhard	Stonshield HRI	Match Flooring Finish	6"	
T-01	Tile - Porcelain Base	09 30 00	Crossville	Notorius	Leading Man UPS	6"	Cove Base
CEILING FINISH							
ACT-01	Acoustic Ceiling Tile (24X24)	09 51 00	Armstrong	Cortega	White	24" x 24" x 5/8" THK	
ACT-02	Acoustic Ceiling Tile - Vinyl Coated	09 51 00	Armstrong	Ceramaguard Non Perforated	White	24" x 24" x 5/8" THK	
AP-02	Rigid Foam Deck Panels	09 84 13	Acoustical Surfaces	Sound Sillencer	Color to be Selected by Architect	2' x 4' x 2" THK	
PT-05	Paint - Ceiling	09 91 00	Sherwin Williams	--	Felted Wool SW 9171	--	OPEN TO STRUCTURE
EXTERIOR FINISH							
BK-01	MASONRY - BRICK_MA-01	MA-01	ACME	Velour	Ebony	4" x 10"	Running Bond
BK-02	MASONRY - BRICK_MA-02	MA-01	ACME	Velour	Pewter Grey	4" x 10"	Running Bond
CMU-01	BURNISHED CMU	04 20 00	BEST BLOCK	Burnished	GREY GRANITE	8" & 12"	
CS-01	Cast Stone	04 72 00	Advanced Architectural Stone		Classic White	REF: 3/2-A3.11	
MWP-01H	METAL WALL PANEL-01 (HORIZONTAL)	07 42 13	PAC-CLAD	Box Rib 1	CHARCOAL		WALL PANEL, DOWNSPOUTS
MWP-01V	METAL WALL PANEL-01 (VERTICAL)	07 42 13	PAC-CLAD	R-PANEL	CHARCOAL		WALL PANEL, DOWNSPOUTS
MWP-05	Metal Wall Panel - MWP-05 (Metal Soffit)	07 42 13	Berridge	FW-12 Panel	Champagne	12" Coverage	Without Grooves, Vented Per Code
RP-01	Roof, Gutter, DS	07 41 20	PAC-CLAD	Tite-Loc Plus	Charcoal		
ST-01	MASONRY - STONE_ST-01	04 43 00	RockCast	Smooth	Bur Ridge	12" x 24"	Running Bond
ST-02	MASONRY - STONE_ST-02	04 43 00	RockCast	Chiseled	Bur Ridge	12" x 24"	Running Bond
FLOOR FINISH							
CO-01	Concrete Topical Treatement	03 35 46	Stonhard	Stongard TM	TBD	--	
CPT-01	Carpet - Broadloom	09 68 00	Tarkett	11569 Thread Craft	Warm Cashmere 60807	Roll	
CPT-02	Carpet - Walk-Off	09 68 00	Tarkett	Assertive Action 04837	Fusion 26271	Roll	
LVT-01	Luxury Vinyl Tile - Field	09 65 00	Tarkett	Event Wood PECF Crafted Plank +	11208 Genuine	6" x 48"	
RF-01	Epoxy - Resinous Floor	09 67 23	Stonhard	Stoneshield HRI	TBD	--	
T-01	Tile - Porcelain Field Floor	09 30 00	Crossville	Notorius	Leading Man UPS	12" x 24"	
MILLWORK & ARCHITECTURAL FINISHES							
PL-01	PLASTIC LAMINATE - COUNTERTOPS	06 40 00	Wilsonart	--	4945-38 ORGANIC COTTON		COUNTERTOPS, BACKSPLASH
PL-02	Plastic Laminate - Casework Cabinets	12 32 16	Wilsonart	--	Valley Forge Elm 8231	--	
PL-03	Plastic Laminate - Doors	08 14 23	Wilsonart	--	Valley Forge Elm 8231	--	
PT-01	Paint - Exterior Hollow Metal Doors & Frames	09 91 00	SHERWIN WILLIAMS	--	SW 7076 City Scape		
PT-04	Paint - Interior Hollow Metal Doors & Frames	09 91 00	SHERWIN WILLIAMS	--	SW7048 Urbane Bronze		
WALL FINISH							
PT-03	Paint - Field	09 91 00	Sherwin Williams	--	Agreeable Gray SW7029	--	
PT-06	Paint - Accent	09 91 00	Sherwin Williams	--	Intellectual Gray SW 7045	--	
T-01	Tile - Porcelain Field	09 30 00	Crossville	Notorius	Leading Man UPS	12" x 24"	

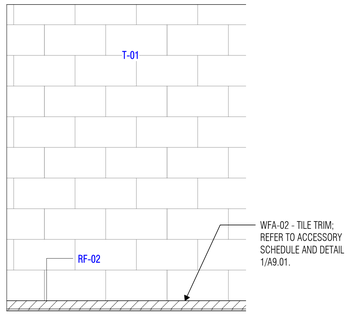
ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	COMMENTS
100	CORRIDOR	T-01	RB-01	PT-03	
100A	VESTIBULE	CPT-02	RB-01	PT-03	
100B	VESTIBULE	CPT-02	RB-01	PT-03	
101	ADMIN / RECEPTION	CPT-01	RB-01	PT-03	
102	ATHLETIC COORDINATOR	CPT-01	RB-01	PT-03	
103	RESTROOM	T-01	RB-01	PT-03	
104	COACHES	CPT-01	RB-01	PT-03	
105	LAUNDRY	CO-01	RB-01	PT-03	
106	FILM ROOM	CPT-01	RB-01	PT-03	
107	IDF	CO-01	RB-01	PT-03	
108	FOOTBALL COACHES	CPT-01	RB-01	PT-03	
109	ELECTRICAL	CO-01	RB-01	PT-03	
110	JANITOR	CO-01	RB-01	PT-03	
111	PHYSICAL TRAINING	LVT-01	RB-01	PT-03	
111A	PT STORAGE	LVT-01	RB-01	PT-03	
112	OFFICE	CPT-01	RB-01	PT-03	
113	OFFICE	CPT-01	RB-01	PT-03	
114	WET STORAGE	CO-01	RB-01	PT-03	
115	WET AREA	CO-01	RB-01	PT-03	
116	WEIGHT TRAINING	CO-01	RB-01	PT-03	
117	STORAGE	CO-01	RB-01	PT-03	
118	STORAGE	CO-01	RB-01	PT-03	
120	FOOTBALL CORRIDOR	CO-01/ CPT-02	RB-01	PT-03	
121	FOOTBALL EQUIPMENT STORAGE	CO-01	RB-01	PT-03	
122	JV FOOTBALL LOCKERS	CO-01	RB-01	PT-03	
123	FOOTBALL TOILETS	RF-01	RF-02	PT-03	FULL HEIGHT TILE AT SHOWERS. REFER TO FINISH PLAN FOR EXTENT.
124	VARSITY FOOTBALL LOCKERS	CO-01	RB-01	PT-03	
125	STORAGE	CO-01	RB-01	PT-03	
126	FRESHMEN FOOTBALL LOCKERS	CO-01	RB-01	PT-03	
127	MECHANICAL	CO-01	RB-01	PT-03	
128	STORAGE	CO-01	RB-01	PT-03	
129	CONCESSIONS	CO-01	RB-01	PT-03	
129A	CONCESSIONS STORAGE	CO-01	RB-01	PT-03	
130	WOMEN'S CORRIDOR	CO-01/ CPT-02	RB-01	PT-03	
131	TRACK LOCKERS	CO-01	RB-01	PT-03	
132	STORAGE	CO-01	RB-01	PT-03	
133	COACHES LOCKER ROOM	RF-01	RF-02	PT-03	FULL HEIGHT TILE AT SHOWERS. REFER TO FINISH PLAN FOR EXTENT.
134	SOCCER LOCKERS	CO-01	RB-01	PT-03	
135	STORAGE	CO-01	RB-01	PT-03	
136	WOMEN	RF-01	RF-02	PT-03	FULL HEIGHT TILE AT SHOWERS. REFER TO FINISH PLAN FOR EXTENT.
137	FAMILY	RF-01	RF-02	PT-03	
138	WOMEN	RF-01	RF-02	PT-03	
139	MEN	RF-01	RF-02	PT-03	
140	MEN'S CORRIDOR	CO-01/ CPT-02	RB-01	PT-03	
141	COACHES LOCKER ROOM	RF-01	RF-02	PT-03	FULL HEIGHT TILE AT SHOWERS. REFER TO FINISH PLAN FOR EXTENT.
142	TRACK LOCKER ROOM	CO-01	RB-01	PT-03	
143	STORAGE	CO-01	RB-01	PT-03	
144	MEN	RF-01	RF-02	PT-03	FULL HEIGHT TILE AT SHOWERS. REFER TO FINISH PLAN FOR EXTENT.
145	SOCCER LOCKERS	CO-01	RB-01	PT-03	
146	STORAGE	CO-01	RB-01	PT-03	
147	MECHANICAL	CO-01	RB-01	PT-03	
148	MECHANICAL	CO-01	RB-01	PT-03	

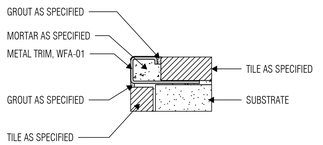
FINISH ACCESSORY, FURNITURE AND EQUIPMENT SCHEDULE

NOTE: ALL MATERIALS, PRODUCTS, SIZES, COLORS AND PATTERNS ARE THE BASIS OF DESIGN. REFERENCE PROJECT MANUAL FOR ADDITIONAL APPROVED MANUFACTURERS MEETING THE DESIGN INTENT. SUBSTITUTIONS WILL BE CONSIDERED WHEN SUBMITTED IN COMPLIANCE WITH SECTION 01 62 00 – PRODUCT OPTIONS.

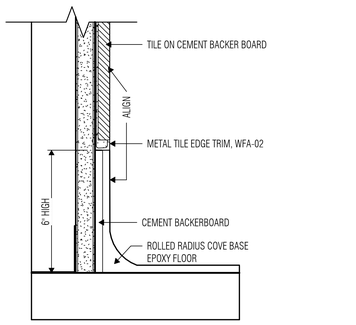
MARK	DESCRIPTION	SPEC SECTION	MANUFACTURER INFO			SIZE	COMMENTS
			MANUFACTURER	SERIES/STYLE	COLOR/FINISH		
FLOOR FINISH ACCESSORY							
FFA-01	FLOOR TRANSITION	09 68 00	Schluter	Schiene	Satin Nickel Anodized Aluminum (AT)		Tile to Resilient Flooring
FFA-02	FLOOR TRANSITION	09 68 00	Schluter	Reno-U	Satin Nickel Anodized Aluminum (AT)		Tile to LVT, Tile to Concrete
FFA-03	FLOOR TRANSITION	09 68 00	Johnsonite	Slimline Transition	Gateway WG TA4		Carpet to LVT
G-01	GROUT - COLOR A	09 30 13	Mapei	--	5009 Gray		Porcelain Floor Grout
SPECIALTY EQUIPMENT							
DC	Display Case (Manufactured/Millwork)	10 12 00	Claridge	Recessed Display Case C-395 Series	Valley Forge Elm #8231K-79/ Mushroom No. 1108	--	
HB	Horizontal Blinds	12 21 13	SWF Contract	--	Grey Haze 983		
ID	IDENTIFYING DEVICES	10 14 00	--	--	--		
LK-01	Lockers - Metal	10 51 13	Penco Products	--	Satin Black		
MB	Markerboard - Premanufactured	10 11 16	Claridge	LCS Porcelain Dry Erase Whiteboard	White No. 100		
TB	Tackboard	10 11 16	Claridge	Claridge Fabricork	KE510 Runway		
TC	Toilet Compartment - Solid Phenolic	10 21 13	ASI Accurate	Solid Plastic HDPE	Olive #9223		
WALL FINISH ACCESSORY							
G-02	GROUT - COLOR B	09 30 13	Mapei	--	5009 Gray	--	WALL TILE
WFA-01	Tile Edge/Corner Trim - Metal	09 30 00	Schluter	Quadec	Satin Nickel Anodized Aluminum (AT)	-	Corner and Edge Trim at Wall Tile
WFA-02	Tile Edge/Corner Trim - Metal	09 30 00	Schluter	Jolly	Satin Nickel Anodized Aluminum (AT)	-	Bottom trim at wall tile



3 WALL TILE PATTERN
SCALE: 1/2" = 1'-0"



2 TILE CORNER TRIM DETAIL
SCALE: 12" = 1'-0"



1 BASE - EPOXY COVE
SCALE: 6" = 1'-0"

FINISH SCHEDULE NOTES

1. **General Finish Notes**
   - A. Any finish conflict between finish schedules and finish floor plans to be brought to the architect's attention for resolution.
   - B. **Plastic Laminate**
     - a. Typical Casework/Millwork cabinet body, doors, and drawer fronts shall be PL-02, unless noted otherwise.
     - b. Countertops shall be PL-01.
     - c. Interior Plastic Laminate clad wood doors to be PL-03.
     - d. Window Sills shall be painted bullnose CMU, PT-03.
2. **Ceiling Finishes**
   - A. Refer to Reflected Ceiling Plans for scheduled finish.
   - B. At ceilings with exposed structure, all exposed elements shall be painted the scheduled color, including mechanical ductwork, electrical, piping, conduit, j-boxes, etc.
   - C. All interior gyp. bd. ceilings to be painted PT-05, unless noted otherwise.
   - D. All interior gyp. bd. furr-downs to be painted PT-05, unless noted otherwise.
3. **Floor Finishes**
   - A. Refer to Interior Finish Plans for floor finish patterns.
   - B. Refer to Interior Finish Plans for tile origin in each room. If origin point is not indicated, center in middle of the room or corridor.
   - C. All changes in floor material between rooms shall occur at centerline of doorway, unless noted otherwise.
   - D. Level and float flooring at public corridor walls.
   - E. All toilets and other areas capable of water mitigation shall have a 2" x ½" marble threshold with double ¼" bevel edge. The thresholds shall be held in place with thin set.
   - F. Sealant color shall match adjacent material.
   - G. Typical flooring application at brick walls:
     - a. LVT: Rake brick joint at floor level and install sealant between LVT and brick.
     - b. Carpet: Rake brick joint at floor level and tuck carpet tight into raked brick joint.
4. **Wall Finishes**
   - A. Finishes shall continue to inside corner, unless noted otherwise.
   - B. At painted CMU base, color shall match the wall above.
   - C. **Paint Information:**
     - a. **Interior Paint**
       - All exterior walls with gyp. bd. interior are to be painted PT-03, unless noted otherwise.
       - All interior sealants shall be painted to match adjacent wall.
     - b. **Hollow Metal Doors and Windows:**
       - Hollow metal interior doors to be painted PT-04, unless noted otherwise
       - Hollow metal interior door frames and vision panel frames shall be painted PT-04, unless noted otherwise.
       - Hollow metal exterior doors to be painted PT-01, unless noted otherwise
       - Hollow metal exterior door frames and vision panel frames shall be painted PT-01, unless noted otherwise.
       - At door frames with 2 different colors, transition color at inside corner of door stop, on the door side of the stop.
       - Hollow metal glazed opening frames shall be painted PT-04, unless noted otherwise.
5. **Tiling**
   - A. Refer to Detail 3/A9.01 for typical porcelain tile wall pattern.
   - B. At outside corners and exposed edges of ceramic or porcelain tile, provide anodized aluminum trim per accessory schedule, unless otherwise detailed.
   - C. Provide WFA-01 at all outside and/or exposed tile locations (top, bottom, and corners) in corridors, whether indicated on finish plans or not.

FINISH SCHEDULE NOTES
SCALE: 12" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
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STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
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Designer	Quality Control
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Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
MATERIAL FINISH SCHEDULES

SHEET NO.
A9.01

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N

PLAN NORTH

1 INTERIOR FINISH PLAN - LEVEL ONE

SCALE: 1/8" = 1'-0"

KEYED NOTES

M1	MARBLE THRESHOLD; REF: 1 / A2.32

INTERIOR FINISH LEGEND

CO-01	CONCRETE, SEALED	RF-01	RESINOUS FLOORING
CPT-01	CARPET - FIELD	LVT-01	LVT
CPT-02	CARPET - WALK-OFF	TL-01	PORCELAIN TILE

NOTE: TRANSITIONS REQUIRED AT ALL LOCATION WHERE FLOORING MATERIAL CHANGES. ALL CHANGES IN FLOOR MATERIAL BETWEEN ROOMS SHALL OCCUR AT CENTERLINE OF DOORWAY, UNLESS NOTED OTHERWISE.REFER TO FINISH ACCESSORY, FURNITURE AND EQUIPMENT SCHEDULE A9.01 FOR CORRESPONDING FLOOR TRANSITIONS.

WALL FINISH LEGEND

T	TILE - WAINSCOT [TILE SIZE]
CG	CORNER GUARD
PT	PAINT
	WALL TILE (T-01)

TRANSITION/TRIM LEGEND

	FLOOR FINISH ACCESSORY TRIM
OP	ORIGIN POINT

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Proj. Arch. B.HEIL	

PROJECT NO.

23-155.00

SHEET TITLE

INTERIOR FINISH PLAN

SHEET NO.

A9.11

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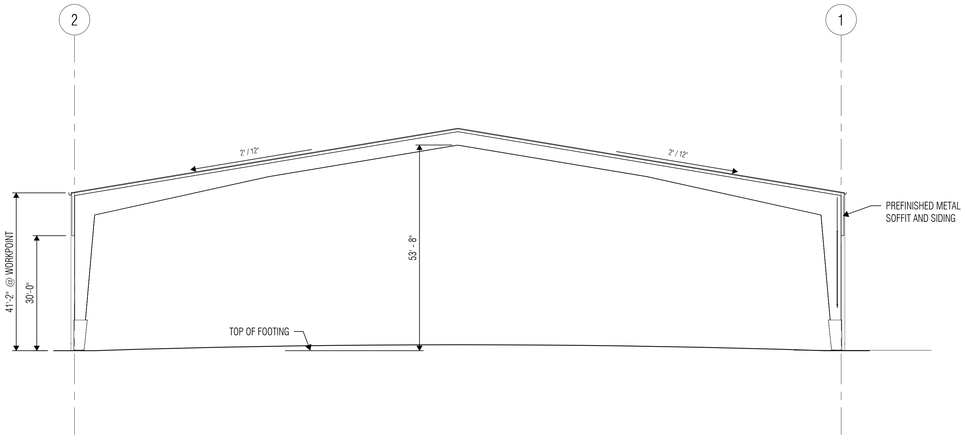
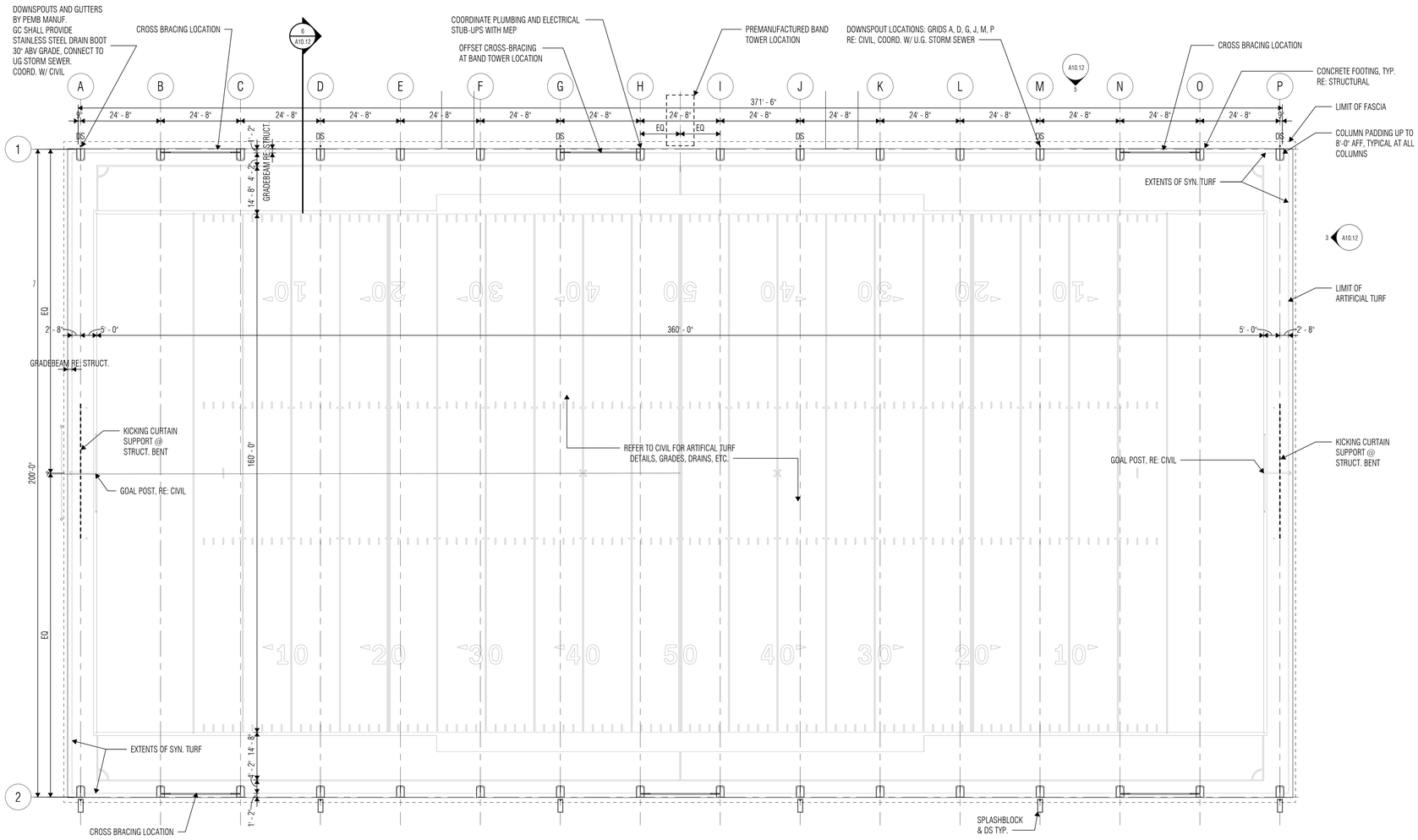


2 PRE-ENGINEERED METAL BUILDING - SECTION N/S
SCALE: 1/16" = 1'-0"



1 PRE-ENGINEERED METAL BUILDING FLOOR PLAN
SCALE: 1/16" = 1'-0"

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REVISIONS

Revision No.	Revision Date

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Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
PRE-ENGINEERED METAL BUILDING PLAN AND DETAILS

SHEET NO.
A10.11

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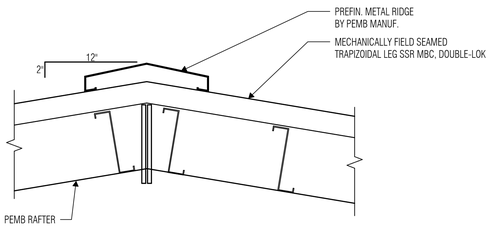
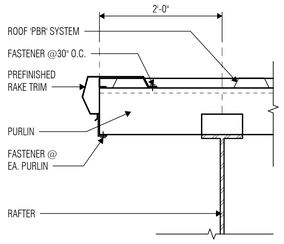
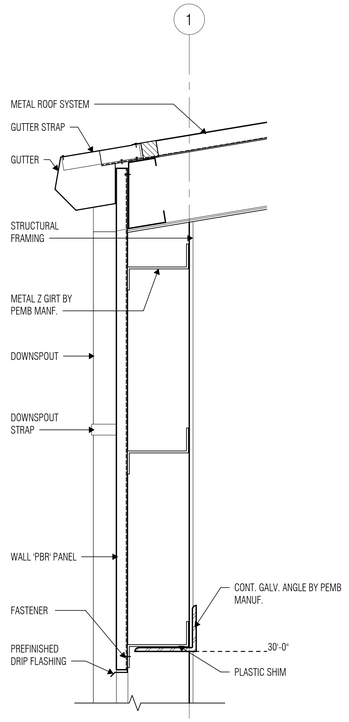


11 PEMB - ROOF EAVE DETAIL
SCALE: 1 1/2" = 1'-0"



10 PEMB ROOF RAKE
SCALE: 1" = 1'-0"



9 PEMB - ROOF EDGE
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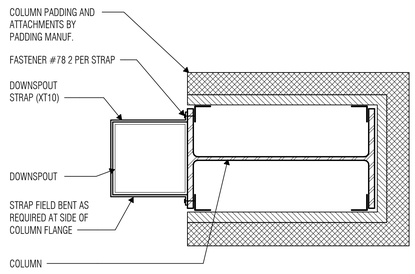

8 TYP. COLUMN ATTACHMENTS
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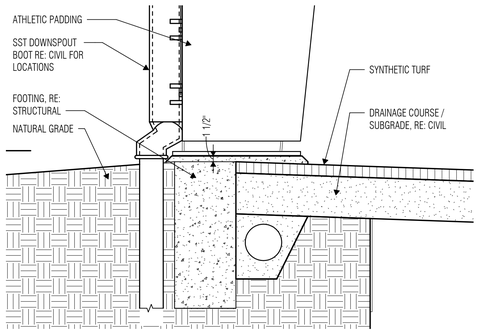

7 PEMB - WALL BASE
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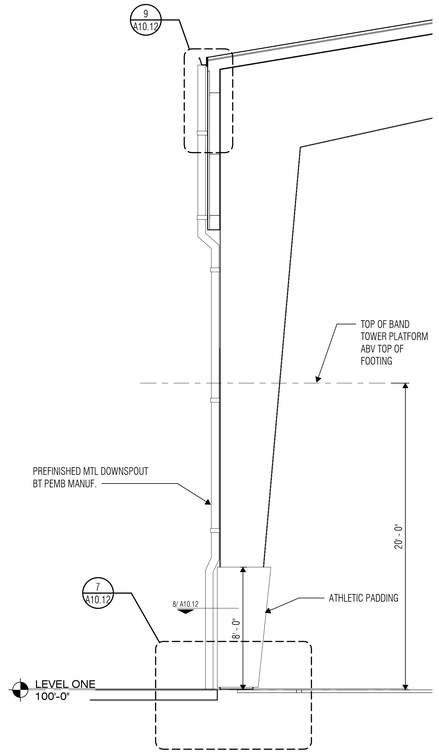

6 PEMB - WALL SECTION
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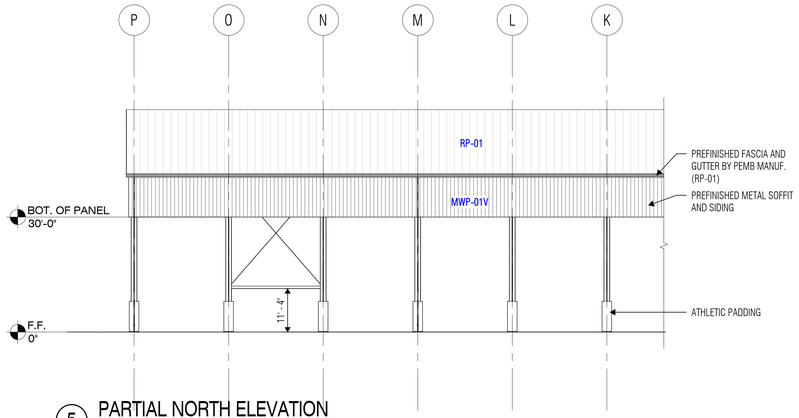

5 PARTIAL NORTH ELEVATION
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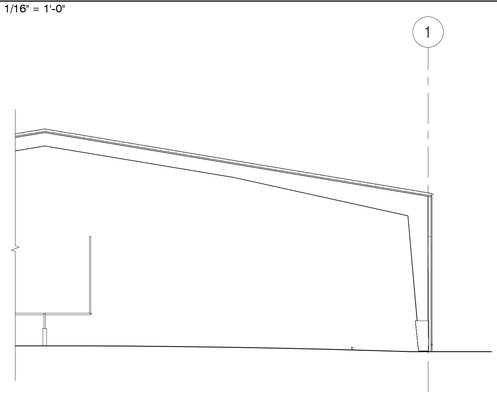

3 PARTIAL EAST ELEVATION
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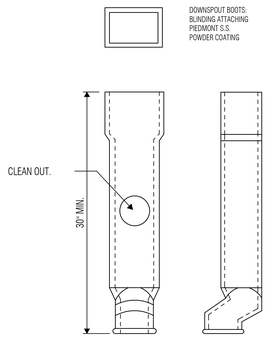
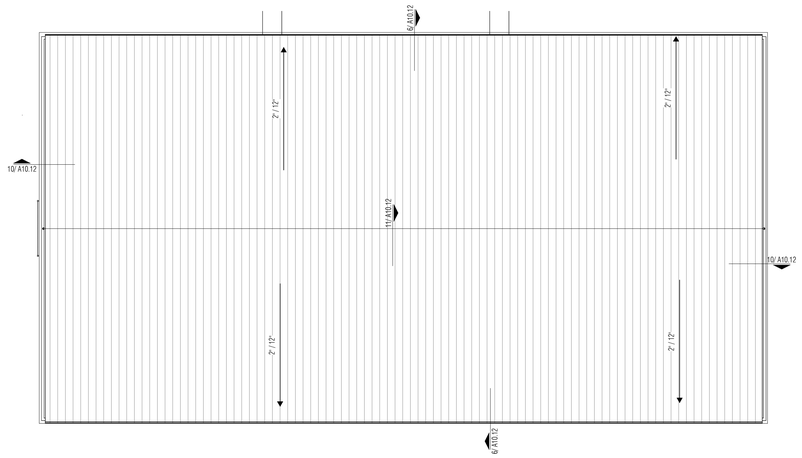


2 STAINLESS STEEL DS BOOT
SCALE: 1/4" = 1'-0"



1 PRE-ENGINEERED METAL BUILDING ROOF PLAN
SCALE: 1/32" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
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B.HEIL	

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SHEET TITLE
PRE-ENGINEERED METAL BUILDING DETAILS

SHEET NO.
A10.12

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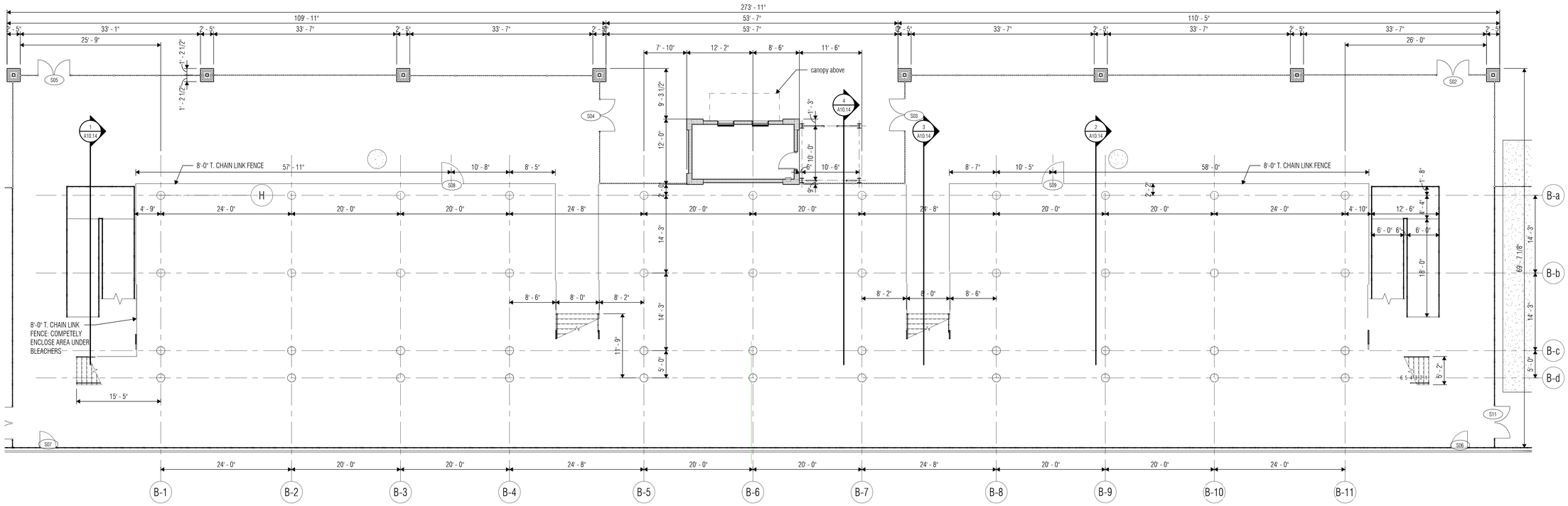
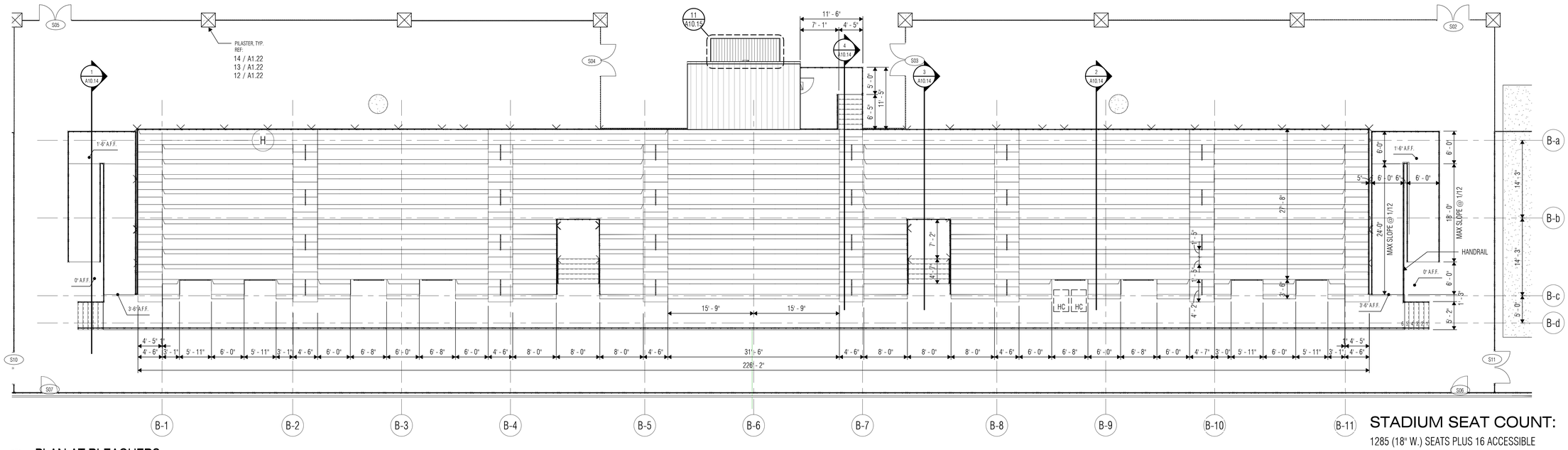


2 PLAN AT BLEACHERS
SCALE: 1/8" = 1'-0"



1 PLAN AT BLEACHERS
SCALE: 1/8" = 1'-0"

STADIUM SEAT COUNT:
1285 (18" W.) SEATS PLUS 16 ACCESSIBLE

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Proj. Arch. B.HEIL	

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23-155.00

SHEET TITLE
BLEACHER PLAN AND DETAILS

SHEET NO.
A10.13

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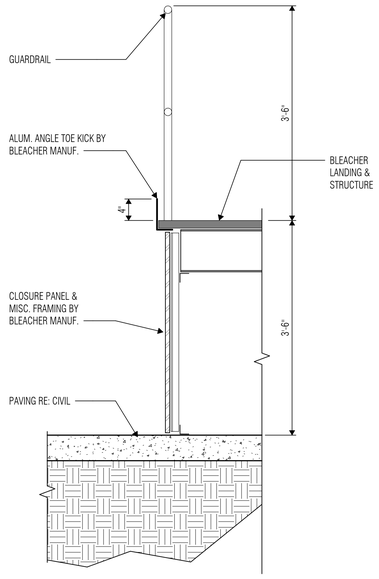

5 BLEACHER WALL
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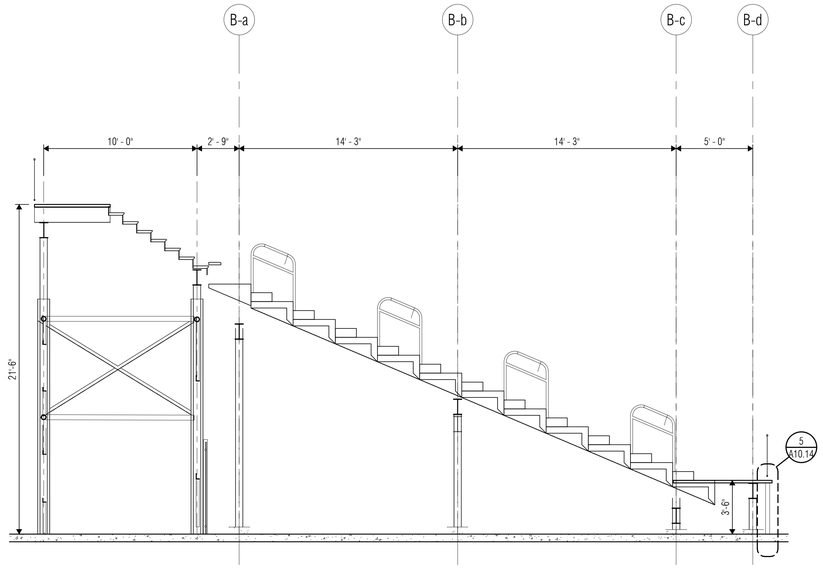

4 SECTION AT STAIRS
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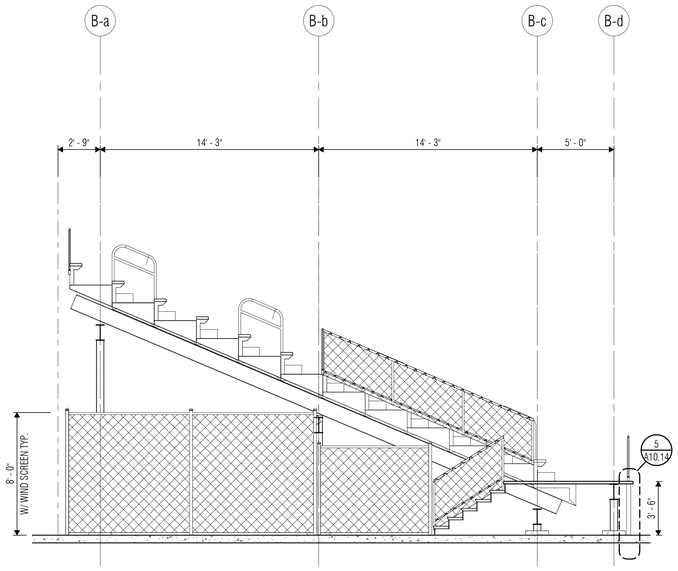

3 SECTION AT SEATING STAIRS
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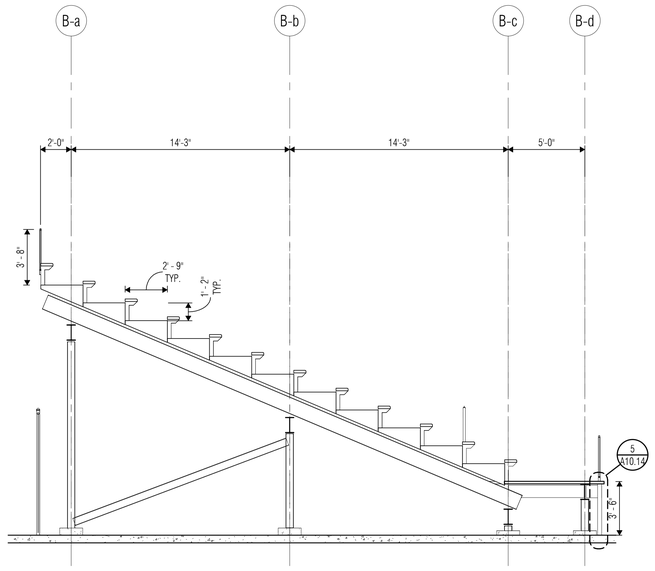

2 SECTION AT SEATING
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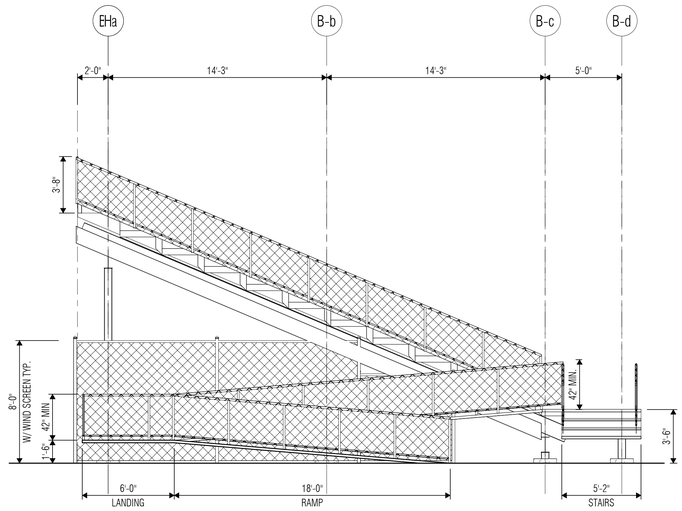

1 SECTION AT STAIRS
SCALE: 1/4" = 1'-0"

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01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	
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PROJECT NO.
23-155.00

SHEET TITLE
BLEACHER DETAILS

SHEET NO.
A10.14

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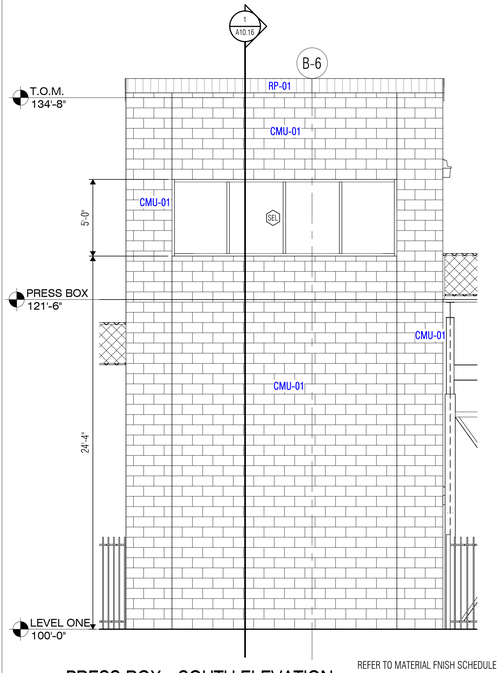
DOOR SCHEDULE - PRESS BOX

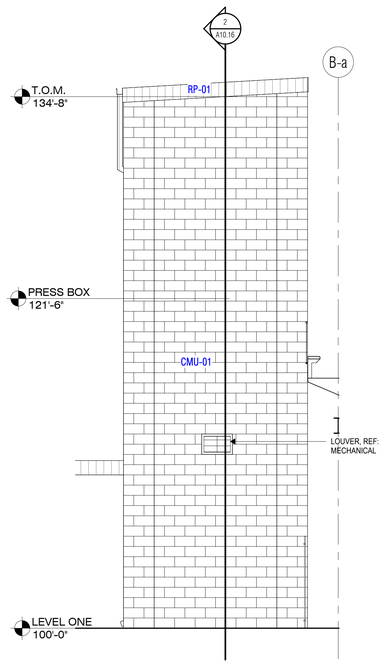
DOOR NUMBER	DOOR TYPE	FRAME TYPE	DOOR OPENING WIDTH	DOOR OPENING HEIGHT	DETAIL - REF. A7.11 U.N.O. HEAD	JAMB	SILL	FIRE RATING	HDWR SET	KEYED NOTES	REMARKS
B100	Fhm	HM	3'-0"	7'-0"							
B101	ICCDps	STL	3'-0"	4'-6"							MANUAL OVERHEAD COUNTER DOOR
B102	ICCDps	STL	3'-0"	4'-6"							MANUAL OVERHEAD COUNTER DOOR
B200	Fhm	HM	3'-0"	7'-0"							

ROOM FINISH SCHEDULE - PRESS BOX

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	COMMENTS
BLDG-LEVEL ONE					
B100	TICKET BOOTH				
LEVEL TWO					
B200	PRESS BOX				

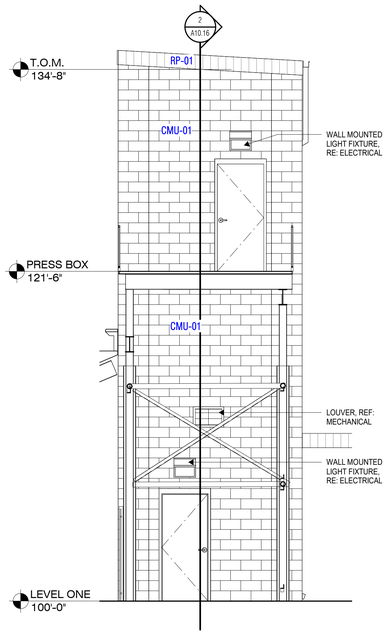


8 PRESS BOX - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

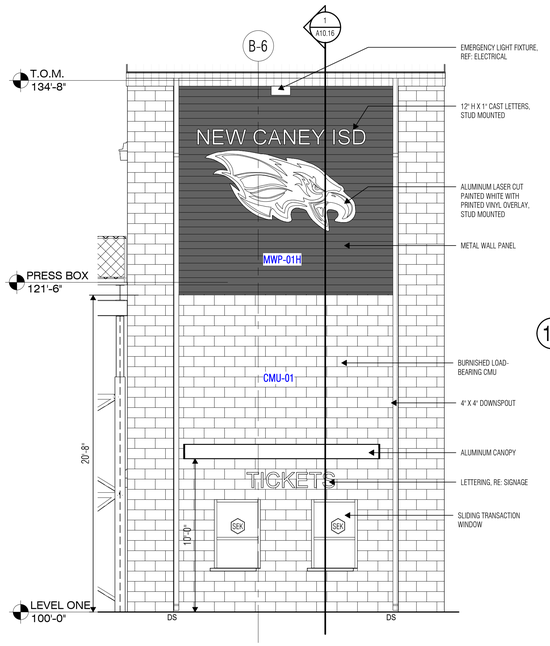


7 PRESS BOX - WEST ELEVATION
SCALE: 1/4" = 1'-0"

REFER TO MATERIAL FNISH SCHEDULE ON A9.01 FOR MATERIALS AND FINISHES

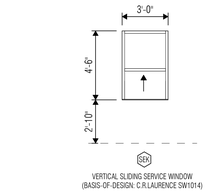


3 PRESS BOX - EAST ELEVATION
SCALE: 1/4" = 1'-0"



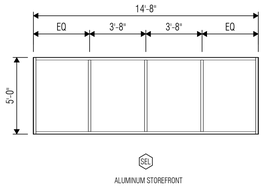
2 PRESS BOX - NORTH ELEVATION
SCALE: 1/4" = 1'-0"

REFER TO MATERIAL FNISH SCHEDULE ON A9.01 FOR MATERIALS AND FINISHES



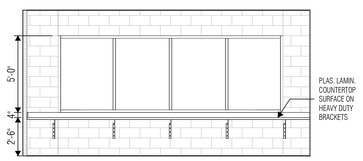
VERTICAL SLIDING SERVICE WINDOW (BASIS-OF-DESIGN: C.R.LAURENCE SW1014)

12 SEK
SCALE: 1/4" = 1'-0"

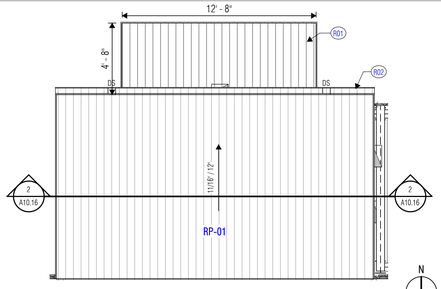


ALUMINUM STOREFRONT

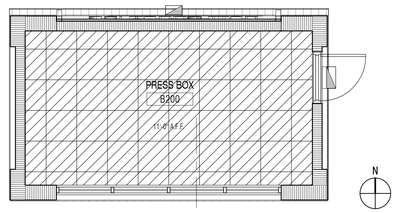
10 SEL - STOREFRONT ELEVATION
SCALE: 1/4" = 1'-0"



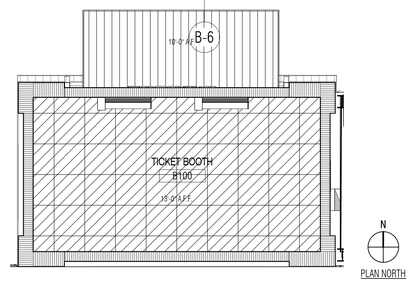
13 TICKET BOOTH - NORTH
SCALE: 1/4" = 1'-0"



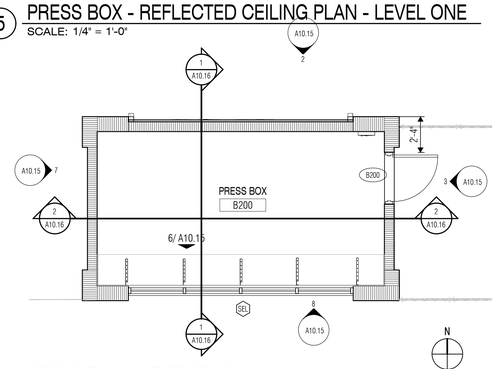
11 PRESS BOX - ROOF PLAN
SCALE: 1/4" = 1'-0"



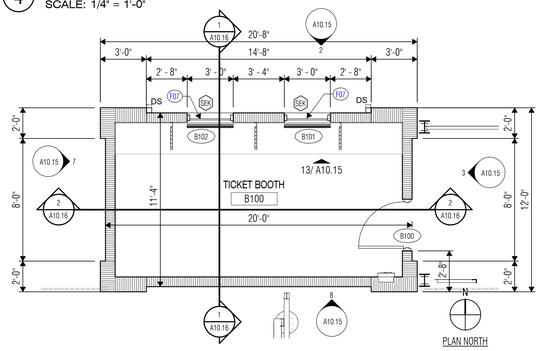
9 PRESS BOX - REFLECTED CEILING PLAN - LEVEL TWO
SCALE: 1/4" = 1'-0"



5 PRESS BOX - REFLECTED CEILING PLAN - LEVEL ONE
SCALE: 1/4" = 1'-0"



4 PRESS BOX - LEVEL TWO
SCALE: 1/4" = 1'-0"



1 PRESS BOX - LEVEL 1
SCALE: 1/4" = 1'-0"

FLOOR PLAN NOTES

1. Refer to Civil for Primary Ground Level floor elevations (Mean Sea Level), which equals to 100'-0" datum.
2. Dimensions on Floor Plans are to face of stud or CMU unless noted otherwise.
3. Coordinate the location of electrical devices with casework, millwork, lockers, etc. Any electrical device that is not properly coordinated shall be relocated at no additional cost.
4. Exterior wall construction is identified on the Wall Sections. Refer to the A4-series sheets for Wall Sections, and to Sheet A4.10 for Exterior Wall Assemblies.
5. Refer to Exterior Elevation Notes for control joint requirements at all inside corners of masonry veneer.
6. Refer to Sheet A2.21 for Partition Types.
7. Interior partitions are Type "P7" unless noted otherwise.
8. Refer to Detail 4/A0.31 for Typical Door Maneuvering Clearances. All new doors shall meet the requirements of that detail. If any door is found that does not comply with these requirements, request clarification from the Architect prior to construction.
9. Refer to Exterior Elevations for exact locations of downspouts.
10. Provide factory bullnose units at all interior exposed vertical edges of CMU, except at starter course with applied base material where square-edge units shall be provided in lieu of bullnose units.
11. Provide 8" starter courses at all CMU walls and partitions unless noted otherwise.
12. Provide steel or masonry lintels over all openings in CMU walls, including those required for mechanical ductwork and dampers, whether specifically indicated on the drawings or not.
13. At Mechanical, Electrical and Boiler Room partitions, seal tightly around all penetrations. Utilize fire safing material at rated partitions.
14. Provide sealant and/or fire safing at all floor penetrations, as applicable.
15. Provide horizontal blinds at all window systems. Window glazing at all HM frames to be coordinated so that blind sits within frame on the privacy side of the space.
16. All chainlink fencing to be galvanized unless noted otherwise
17. 4" backsplash at all countertops unless noted otherwise.
18. Provide 3" grommets at all casework knee spaces.

FLOOR PLAN LEGEND

CMU PARTITION. Extend 4" above highest ceiling plane and brace to structure above as detailed. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above.

B-a FURNITURE, FIXTURE OR EQUIPMENT BY OWNER. Coordinate with adjacent electrical devices, casework, etc.

HB HORIZONTAL BLINDS
DS DOWNSPOUT
KS KNEE SPACE

ROOF PLAN NOTES

1. Provide tapered insulation crickets at the high side of all rooftop curbs, mounting rails, and other miscellaneous roof penetrations as required to shed water around them and to ensure positive roof drainage, whether indicated on the drawings or not.
2. Provide metal end closure at the ends of expansion joints, flashings and counterflashings.
3. Paint all exposed galvanized metal flashings, miscellaneous steel, piping, conduits, etc. that are not prefinished.
4. Provide downspout boots at all downspouts unless noted otherwise.

GLAZING SYSTEM NOTES

1. Overall dimensions of glazing system elevations reflect rough opening dimensions, inclusive of perimeter joints.
2. All exterior glazing to be type TT1, unless noted otherwise.

GLASS TYPE LEGEND

TT1	TINTED, TEMPERED, 1" THICK INSULATING GLASS

KEYED NOTES

F07	VERTICAL MANUAL SLIDING TRANSACTION WINDOW AT TICKET WINDOW TO MATCH SIZE OF OPENING. WITH 1/4" LAMINATED GLAZING AND JAMB LATCHES.
R01	PREMANUFACTURED CANOPY. REFER TO SHEET A5.40 FOR DETAILS.
R02	6"X6" GUTTER AND DOWNSPOUT SYSTEM

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
PRESS BOX PLAN & DETAILS

SHEET NO.
A10.15

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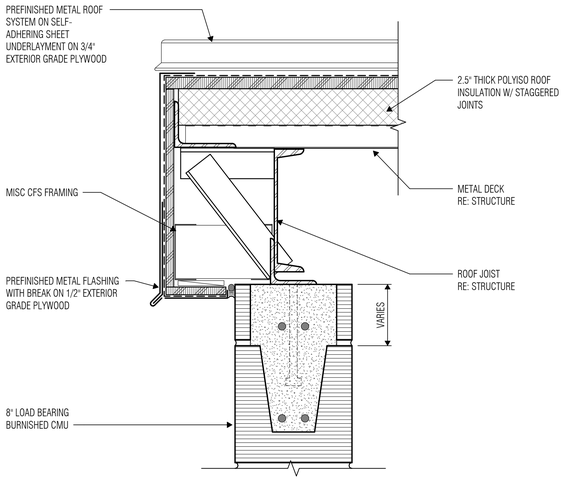
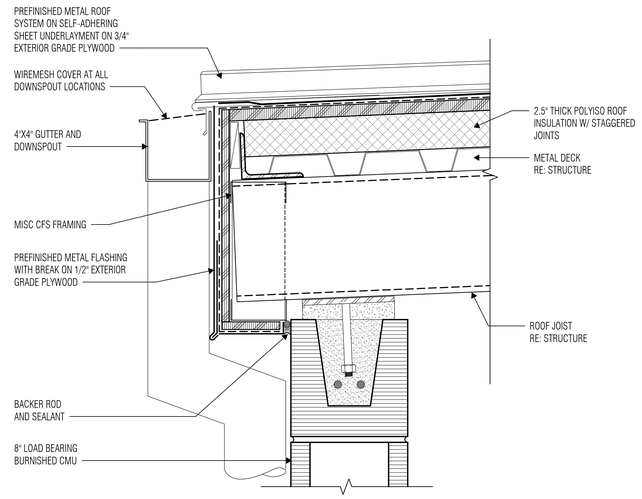
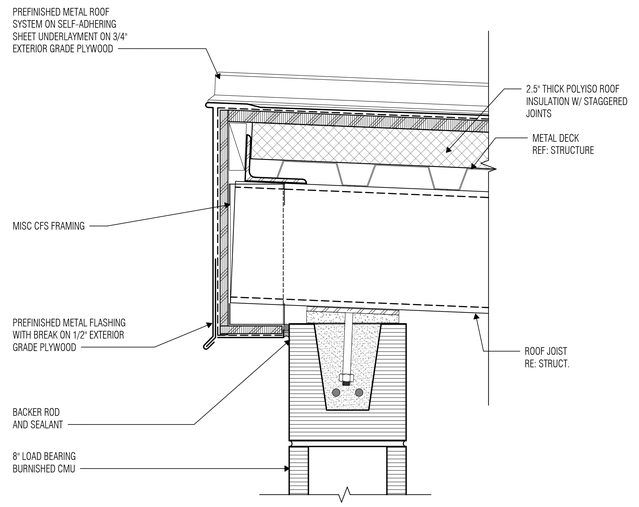


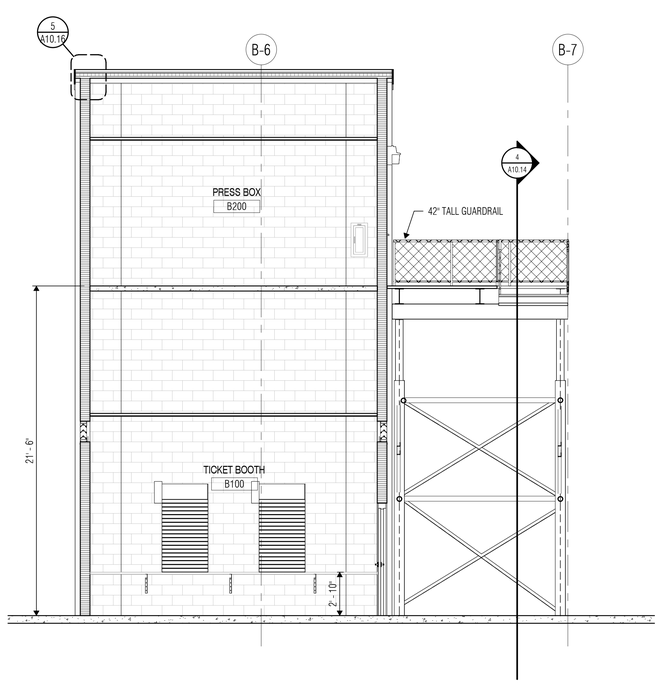
5 PRESS BOX DETAIL @ RAKE
SCALE: 3" = 1'-0"



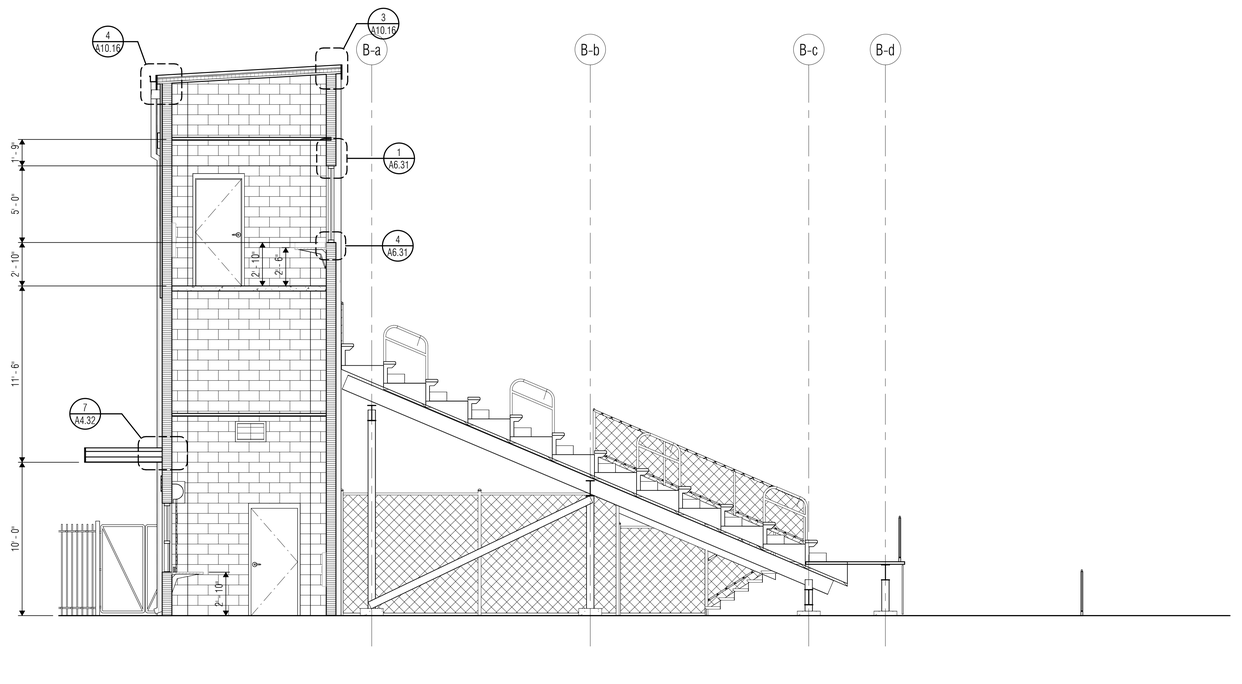
4 PRESS BOX DETAIL @ LOW EAVE
SCALE: 3" = 1'-0"



3 PRESS BOX DETAIL @ HIGH EAVE
SCALE: 3" = 1'-0"



2 BUILDING SECTION - PRESS BOX
SCALE: 1/4" = 1'-0"



1 BUILDING SECTION - PRESS BOX
SCALE: 1/4" = 1'-0"

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT
BRYCE G. BOYTER
13922
STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
PRESS BOX SECTION AND DETAILS

SHEET NO.
A10.16

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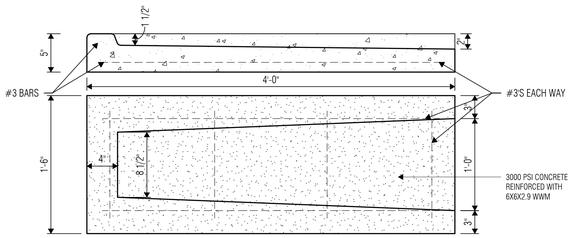
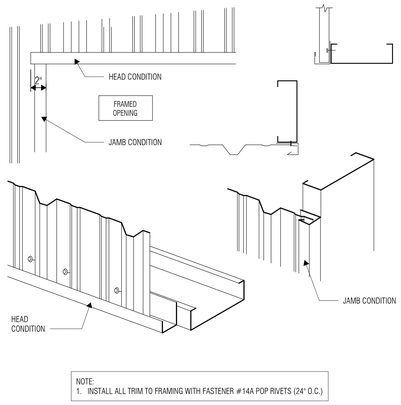
DOOR SCHEDULE - SITE STORAGE BUILDING

DOOR NUMBER	DOOR TYPE	FRAME TYPE	DOOR OPENING WIDTH	DOOR OPENING HEIGHT	DETAIL - REF. A10.16 U.N.O. HEAD	JAMB	SILL	FIRE RATING	HDWR SET	KEYED NOTES	REMARKS
C103	Fhm	STL	3'-0"	7'-0"							
C104	S4	STL	10'-0"	10'-0"							MOTORIZED OVERHEAD DOOR

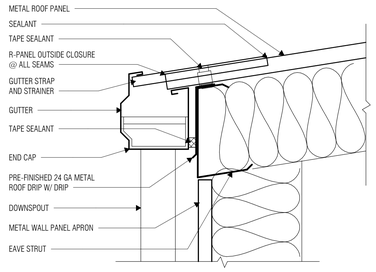


16 TYP CONCRETE SPLASH BLOCK
SCALE: 1 1/2" = 1'-0"

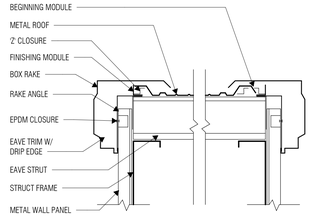


NOTE:
1. INSTALL ALL TRIM TO FRAMING WITH FASTENER #14A POP RIVETS (24" O.C.)

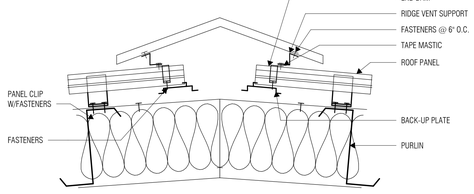
15 MISCELLANEOUS DETAIL
SCALE: 1 1/2" = 1'-0"



EAVE

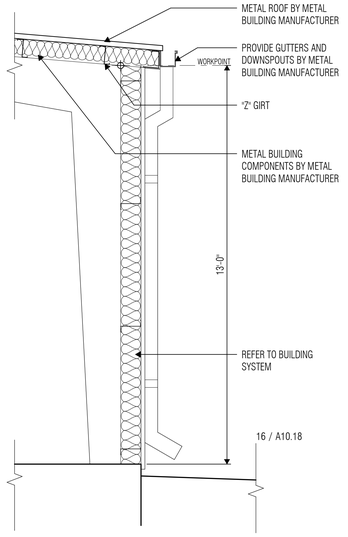


RAKE

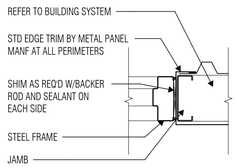


RIDGE VENT

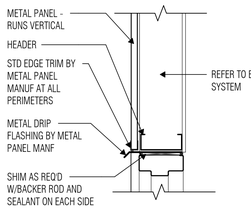
14 SECTION DETAILS - STORAGE BLDG
SCALE: 1 1/2" = 1'-0"



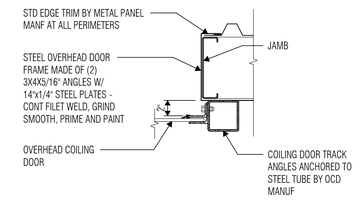
13 BUILDING WALL SECTION
SCALE: 1/2" = 1'-0"



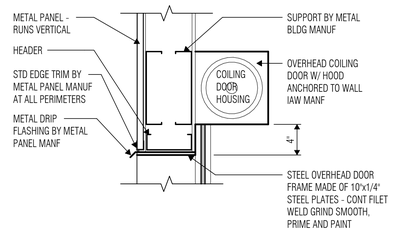
12 JAMB DETAIL @ DOOR
SCALE: 1 1/2" = 1'-0"



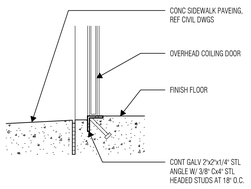
11 HEAD DETAIL @ DOOR
SCALE: 1 1/2" = 1'-0"



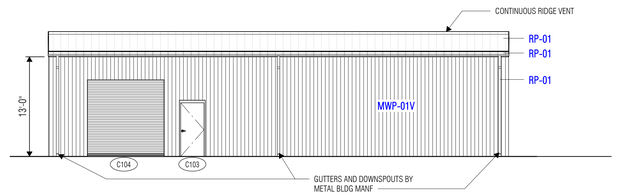
10 JAMB DETAIL @ OVERHEAD DOOR
SCALE: 1 1/2" = 1'-0"



9 HEAD DETAIL @ COILING DOOR
SCALE: 1 1/2" = 1'-0"

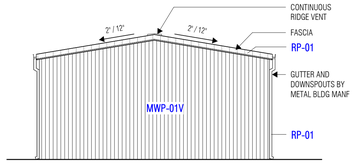


8 SILL DETAIL AT OVERHEAD
SCALE: 1 1/2" = 1'-0"



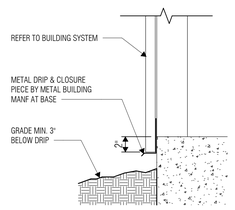
7 STORAGE BLDG - SOUTH
SCALE: 1/8" = 1'-0"

REFER TO MATERIAL FNISH SCHEDULE ON A9.01 FOR MATERIALS AND FINISHES

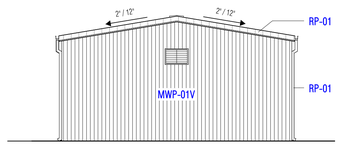


6 STORAGE BLDG - WEST
SCALE: 1/8" = 1'-0"

REFER TO MATERIAL FNISH SCHEDULE ON A9.01 FOR MATERIALS AND FINISHES

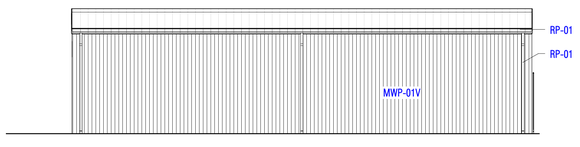


4 METAL PANEL BASE DETAIL
SCALE: 1 1/2" = 1'-0"



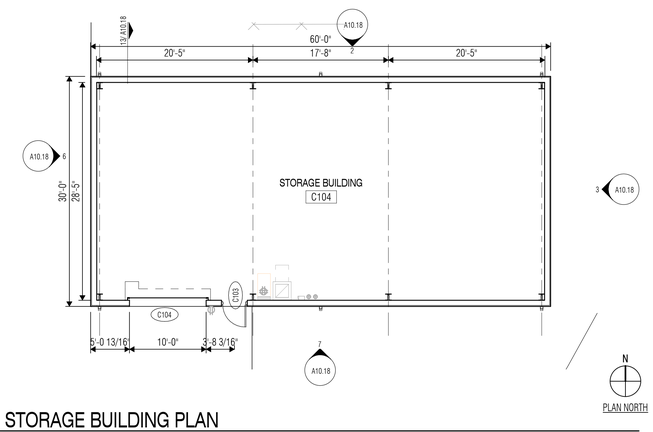
3 STORAGE BLDG - EAST
SCALE: 1/8" = 1'-0"

REFER TO MATERIAL FNISH SCHEDULE ON A9.01 FOR MATERIALS AND FINISHES

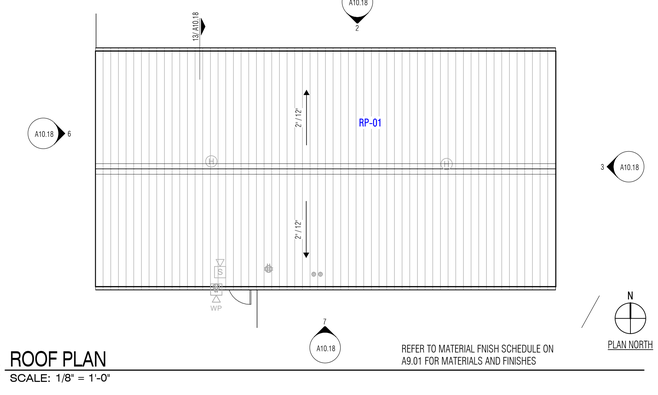


2 STORAGE BLDG - NORTH
SCALE: 1/8" = 1'-0"

REFER TO MATERIAL FNISH SCHEDULE ON A9.01 FOR MATERIALS AND FINISHES



1 STORAGE BUILDING PLAN
SCALE: 1/8" = 1'-0"



REFER TO MATERIAL FNISH SCHEDULE ON A9.01 FOR MATERIALS AND FINISHES

5 ROOF PLAN
SCALE: 1/8" = 1'-0"

VLK | ARCHITECTS

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

REGISTERED ARCHITECT · BRUCE G. BOYTER · 23927 · STATE OF TEXAS
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
R.BOYTER	M.FUENTE
Designer	Quality Control
T.HANGAR	VLK
Proj. Arch.	
B.HEIL	

PROJECT NO.
23-155.00

SHEET TITLE
SITE STORAGE BUILDING PLAN AND DETAILS

SHEET NO.
A10.18

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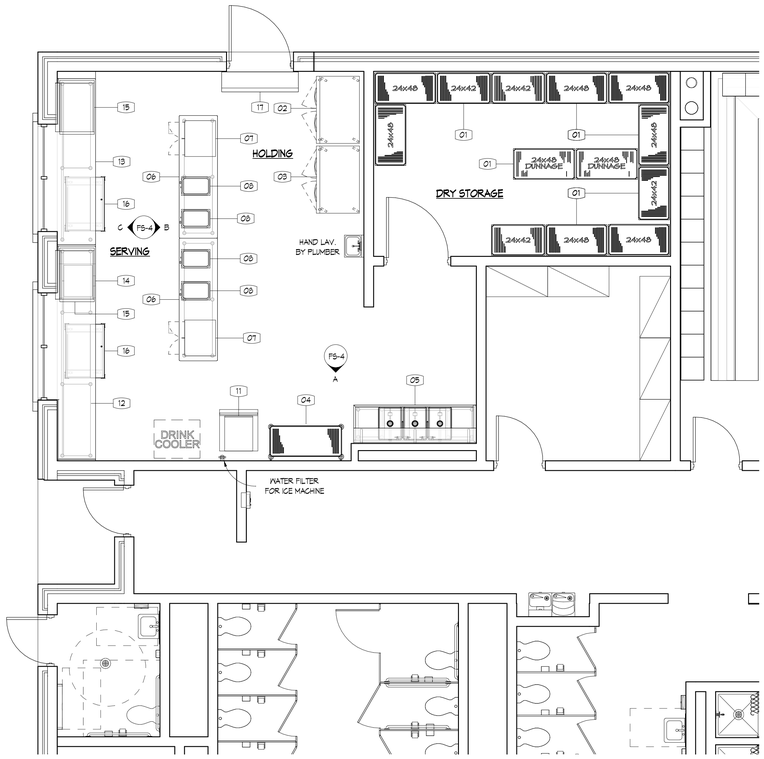
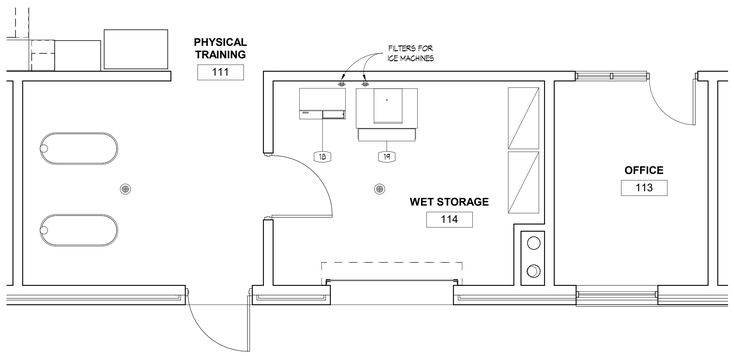


A FS-1 FOODSERVICE EQUIPMENT PLAN

SCALE : 1/4" = 1'-0"



B FS-1 FOODSERVICE EQUIPMENT PLAN

SCALE : 1/4" = 1'-0"

EQUIPMENT SCHEDULE

NO.	ITEM DESCRIPTION	REMARKS	MANUFACTURER	MODEL NO.	QTY.
01	DRY STORAGE SHELVING		METRO	METRO MAX	13
02	REACH-IN FREEZER		TRUE	STR2F-2S-HC	1
03	REACH-IN REFRIGERATOR		TRUE	STR2R-2S-HC	1
04	UTENSIL RACK		NEW AGE	96297	1
05	THREE COMPARTMENT SINK		CUSTOM FAB	---	1
06	WORKTABLE		CUSTOM FAB	---	2
07	POPCORN MACHINE		GOLD MEDAL	2553	2
08	COUNTERTOP HEATED WELLS		HATCO	HA-FUL	4
11	ICE MACHINE W/ BIN		HOSHIZAKI	F-450MAJ/B-500	1
12	WORKTABLE		CUSTOM FAB	---	1
13	WORKTABLE		CUSTOM FAB	---	1
14	DRAWER WARMERS		ALTO-SHAAM	500-2D	1
15	HEATED DISPLAY CASE		HATCO	GR2SDH-36	2
16	BEVERAGE COOLER		MCD-U-SERVE	MCT-BC1-S	2
17	FLY FAN		MARS	HV280-1UD	1
18	ICE MACHINE		HOSHIZAKI	F-300BAJ	1
19	ICE MACHINE W/ BIN		HOSHIZAKI	KM-320MAJ/B-115OSS	1

1. CONTRACT DRAWINGS ARE NOT TO BE TRACED OR REPRODUCED. DO NOT ROUGH-IN FROM THIS DRAWING. REFER TO FOODSERVICE EQUIPMENT SUPPLIER'S DIMENSIONED SHOP DRAWINGS.
2. ALL MEP UTILITIES ARE TO BE VERIFIED WITH MANUFACTURERS REQUIREMENTS PRIOR TO ISSUANCE OF ROUGH-IN SUBMITTAL FOR REVIEW.
3. ALL IN SLAB UTILITY PENETRATIONS MUST BE DIMENSIONED FROM MAJOR BUILDING ELEMENTS AND FROM NEW WALL LAYOUT. SUBMITTALS WITHOUT THIS INFORMATION WILL BE REJECTED. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL BACKGROUND FILES FOR ALL COLUMN GRIDS.
4. FOODSERVICE EQUIPMENT CONTRACTOR TO VERIFY AND COORDINATE ALL CRITICAL DIMENSIONS WITH GENERAL CONTRACTOR.
5. COORDINATE PIT AND WALK-IN ASSEMBLY WITH IRREGULAR WALLS AND COLUMNS.
6. 1 1/2" MINIMUM CLEARANCE BETWEEN WALK-IN WALLS AND BUILDING WALLS. FIELD VERIFY PRIOR TO ORDERING.
7. FOODSERVICE EQUIPMENT CONTRACTOR TO VERIFY ALL TABLE/COUNTER LEGS DO NOT LAND ON FLOOR SINKS OR FLOOR DRAINS.

C FS-1 GENERAL NOTES

SCALE NOT TO SCALE

01 FLOORS: STONE SHIELD EPOXY RESIN FLOORING OR QUARRY TILE (SEE ARCHITECT'S FINISH SCHEDULE FOR ACTUAL FINISH USED)

02 WALLS: IMPERVIOUS MATERIAL, LIGHT COLORED, SMOOTH NON ABSORBENT, FRP, GLASS BOARD, OR EQUAL BEHIND ALL PLUMBING FIXTURES AT LEAST 48" HIGH AND 24" ON EITHER SIDES AND FROM AT LEAST 48" AND 42" ON EITHER SIDE AND FROM THE BOTTOM OF THE HOOD TO FLOOR. (SEE ARCHITECT'S FINISH SCHEDULE FOR ACTUAL FINISH USED)

03 CEILING: SMOOTH EASILY CLEANABLE LIGHT COLORED NON ABSORBENT TILE, VINYL FACE NON-PERFORATED OR EQUAL (SEE ARCHITECT'S FINISH SCHEDULE FOR ACTUAL FINISH USED)

04 TOILET/DRESSING ROOMS: LOCATED ADJACENT TO KITCHEN AREA

05 LAVATORY: WALL HUNG WITH SOAP/TOWEL DISPENSER LOCATED IN WORK AREA.

06 UTENSIL CLEANING: THREE (3) COMPARTMENT SINK WITH 24" x 26" x 15" DEEP WASH COMPARTMENT, 24" x 26" x 15" DEEP RINSE COMPARTMENT, 24" x 26" x 15" DEEP SANITIZE COMPARTMENT WITH ALL COVED INTERIOR CORNERS.

07 MOP SINK: LOCATED IN JANITORS CLOSET ADJACENT TO KITCHEN.

08 LIGHTING/COVERS: AT LEAST 10 FOOT CANDLES (110 LUX) OF LIGHT SHALL BE PROVIDED AT A DISTANCE OF 30 INCHES (75 CM) ABOVE THE FLOOR IN WALK-IN REFRIGERATION UNITS AND DRY FOOD STORAGE AREAS AND IN OTHER AREAS AND ROOMS DURING PERIODS OF CLEANING.

D FS-1 HEALTH DEPARTMENT NOTES

SCALE NOT TO SCALE

Verify Note

Contractor Must Coordinate And Verify All Dimensions With Foodservice Equipment Shop Drawings & Manufactures Data.

Foodservice Sub-contractor Must Coordinate All Dimensions With Architects Drawings.

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director Approver
Designer Designer
Proj. Arch. Checker
Drawn By Author
Quality Control

PROJECT NO.

23-155.00

SHEET TITLE

FOODSERVICE EQUIPMENT PLAN

SHEET NO.

FS-1

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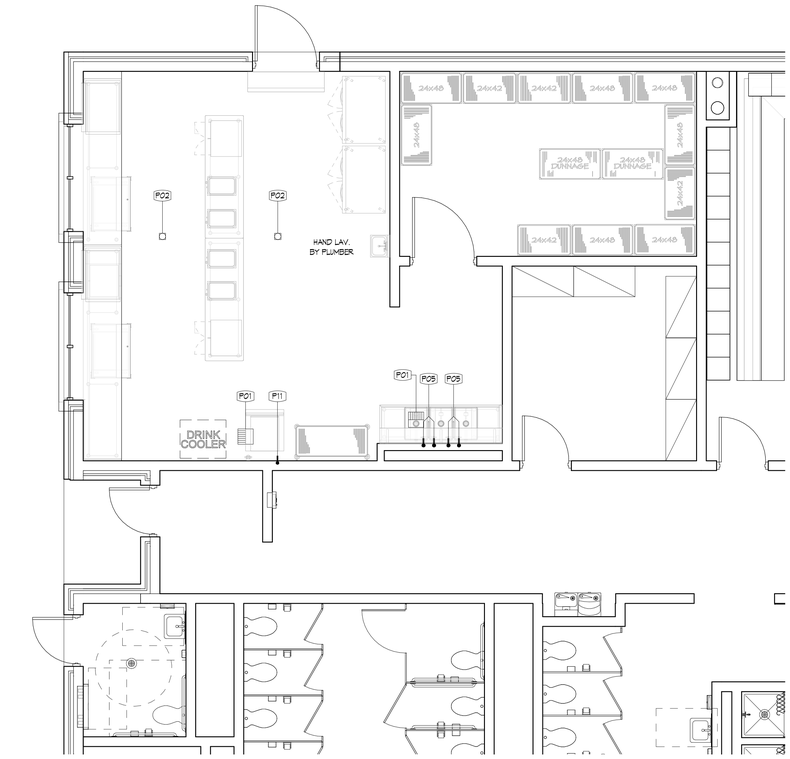
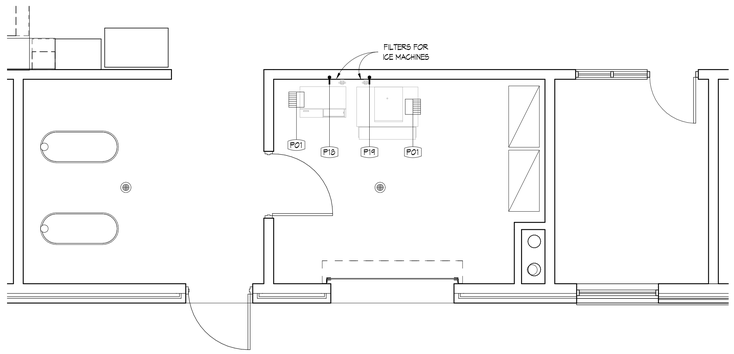


A FS-2 FOODSERVICE PLUMBING PLAN
SCALE : 1/4" = 1'-0"



B FS-2 FOODSERVICE PLUMBING PLAN
SCALE : 1/4" = 1'-0"

PLUMBING SCHEDULE

NO.	SIZE	DESCRIPTION	LOCATION	A.F.F.	SERVICE TO	REMARKS
P01	12"	SQ. FLOOR SINK	FLOOR	0"	EQUIPMENT DRAIN	BTC HALF GRATE
P02	---	FLOOR DRAIN	FLOOR	0"	GENERAL	
P05	1/2"	HOT & COLD WATER	WALL	18"	SINK FAUCET	BTC
P11	1/2"	COLD WATER	WALL	60"	ICE MACHINE	BTC THRU FILTER.
P18	1/2"	COLD WATER	WALL	18"	ICE MACHINE	BTC THRU FILTER
P19	1"	COLD WATER	WALL	60"	ICE MACHINE	BTC THRU FILTER; TEE (1/2") CONNECTION TO SUPPLY WATER CONDENSER.

	HOT WATER & COLD WATER		EVC (EXHAUST VENT CONNECTION)
	GAS CONNECTION & GAS LINE		SVC (SUPPLY VENT CONNECTION)
	AREA DRAIN		DIRECT CONNECT FLUE RISER
	FLOOR SINK		PIPE SLEEVE
	FUNNEL FLOOR DRAIN		STEAM SUPPLY
	GAS SUPPLY		CONDENSATE RETURN
	INDIRECT WASTE LINE (EXTEND TO FLOOR SINK)		A.F.F. (ABOVE FINISHED FLOOR)
			ST. (STUB UP/OUT)
			B.T.C. (BRANCH TO CONNECTION ON EQUIPMENT)
			D.F.A. (DROP FROM ABOVE)

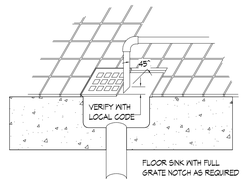
C FS-2 PLUMBING SYMBOLS
SCALE NOT TO SCALE

A. DO NOT ESTABLISH ROUGH-IN LOCATIONS FROM THIS PLAN. REFER TO DIMENSIONED PLANS PREPARED BY FOODSERVICE EQUIPMENT CONTRACTOR.
B. DIMENSIONS INDICATED ARE TO BE VERIFIED BY FOODSERVICE EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND/OR FIELD CONDITIONS.
C. THE FOLLOWING RELATED WORK IS NOT INCLUDED WITHIN FOODSERVICE EQUIPMENT SCOPE OF WORK AND IS TO BE COORDINATED WITH PLUMBING / MECHANICAL DIVISION.

* ROUGHING-IN AND FINAL CONNECTION TO FOODSERVICE EQUIPMENT.
* PROVISIONS AND INSTALLATION OF NECESSARY EXHAUST AND SUPPLY FANS, DUCTS, OR FLUES OF SIZE AND CAPACITIES REQUIRED TO OPERATE FOODSERVICE EQUIPMENT.
* DRAINLINES, TRAPS AND GREASE INTERCEPTORS CONNECTED TO FOODSERVICE EQUIPMENT.
* SERVICE SINKS, LAVATORIES, BLENDING HOSE BIBBS AND DRINKING FOUNTAINS.
* INSULATED 180 DEGREE HOT WATER LINE FROM BOOSTER HEATER TO DISHWASHING MACHINE, AND/OR UTENSIL WATER.
* PIPE SLEEVES IN STRUCTURE FOR REFRIGERANT LINES ETC. LOCATED BY DIVISION 11 CONTRACTOR SHOP DRAWINGS.
* FLUSHING OUT OF ALL PIPING AND DRAINAGE SYSTEMS PRIOR TO FINAL CONNECTION TO FOODSERVICE EQUIPMENT.
* VENTILATING REFRIGERATION MACHINERY ROOMS TO PROVIDE 95 DEGREE MAXIMUM AMBIENT TEMPERATURE.
* VENTILATING DRY STORAGE ROOMS TO PROVIDE 70 DEGREE MAXIMUM TEMPERATURE.
* VENTILATING OF DISHWASHING ROOMS TO ACCOMMODATE 40-60 AIR CHANGES PER HOUR.
* AIR CONDITIONING OF OFFICES.
* INSTALLATION OF FIRE SUPPRESSION GAS SOLENOID VALVE.
* WATER AND GREASEPROOF EXHAUST DUCTS FROM VENT CONNECTIONS OF DISHWASHING MACHINES, UTENSIL WASHERS AND EXHAUST HOODS.
* WATER SOFTENERS, FILTERS AND TREATMENT SYSTEMS.
* SPRINKLER SYSTEMS.
* GAS PRESSURE TO BE 4" TO 6" W.C. MAXIMUM AT COOKING EQUIPMENT.

D FS-2 PLUMBING GENERAL NOTES
SCALE NOT TO SCALE

PLUMBER TO EXTENDED INDIRECT WASTE LINE FROM EQUIPMENT TO FLOOR SINK OPEN GRATE AREA AND CUT BOTTOM OF LINE AT 45 DEG. ANGLE - HOLD BOTTOM OF ANGLE ABOVE GRATE TOP OPENING AS REQUIRED BY LOCAL PLUMBING CODE.



INDIRECT WASTE LINE

E FS-2 INDIRECT WASTE LINE
SCALE NOT TO SCALE

Verify Note

Contractor Must Coordinate And Verify All Dimensions With Foodservice Equipment Shop Drawings & Manufactures Data.

Foodservice Sub-contractor Must Coordinate All Dimensions With Architects Drawings.

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foodservice | designer | planners
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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

ISSUED: 01/06/2025

REVISIONS

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Approver
Designer
Designer
Proj. Arch.
Checker

Drawn By
Author
Quality Control

PROJECT NO.
23-155.00

SHEET TITLE
FOODSERVICE PLUMBING PLAN

SHEET NO.
FS-2

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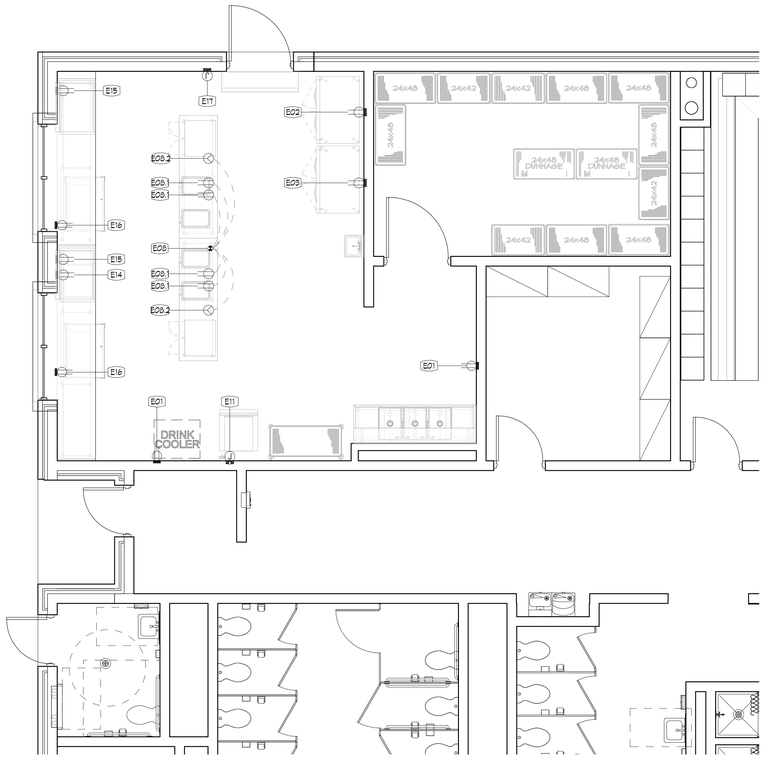
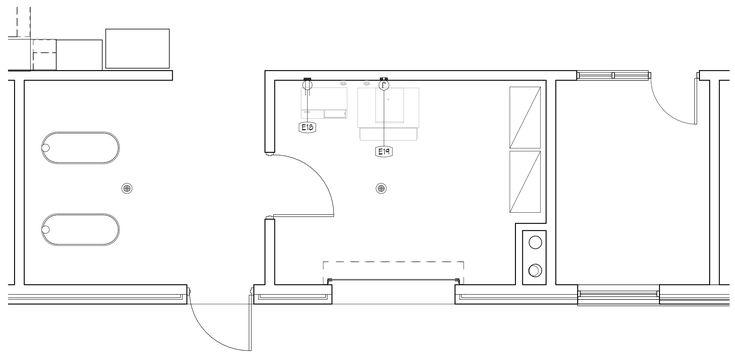


A FS-3 FOODSERVICE ELECTRICAL PLAN

SCALE : 1/4" = 1'-0"



B FS-3 FOODSERVICE ELECTRICAL PLAN

SCALE : 1/4" = 1'-0"

ELECTRICAL SCHEDULE

NO.	CONN.	SERVICE TO	ELEC RATING	VOLTS	PH.	LOCATION	A.F.F.	REMARKS
E01	DR	CONVENIENCE OUTLET	15.0A	120	1	WALL	18"	BTC
E02	DR	REACH-IN FREEZER	9.4A	120	1	WALL	18"	BTC NEMA 5-15P
E03	DR	REACH-IN REFRIGERATOR	5.9A	120	1	WALL	18"	BTC NEMA 5-15P
E08	CB	SERVING COUNTER	30.0A	120	3	FLOOR	6"	60.0 AMP CIRCUIT IN FLOOR STUB UP 6" A.F.F. TO LOAD CENTER
E08.1	DR	CONVENIENCE OUTLET	15.0A	120	1	EQUIPMENT	---	BTC OUTLET BOX MOUNTED UNDER COUNTER; POWER ROUTED FROM LOAD CENTER
E08.2	DR	GRAB-N-GO DISPLAY CASE	17.0A	120	1	WALL	18"	BTC NEMA 5-30P; POWER ROUTED FROM LOAD CENTER
E11	JB	FLY FAN	9.0A	120	1	WALL	90"	BTC THRU MICRO SWITCH
E14	DR	DRAWER WARMERS	5.3A	120	1	WALL	18"	BTC
E15	DR	HEATED DISPLAY CASE	10.2A	120	1	WALL	48"	BTC
E16	DR	MILK COOLER	8.0A	120	1	WALL	18"	BTC
E17	JB	FLY FAN	18.0A	120	1	WALL	90"	BTC THRU MICRO SWITCH
E18	DR	ICE MACHINE	7.8A	120	1	WALL	18"	BTC
E19	JB	ICE MACHINE W/ BIN	11.6A	120	1	WALL	60"	BTC

	DR	20 A. DUPLEX RECEPTACLE (GFCI AS NEEDED)	J	JB	JUNCTION BOX IN CEILING
	WPR	20 A. WEATHERPROOF RECEPTACLE (SPRING COVER)	J	JBP	JUNCTION BOX ON PEDESTAL
	PWR	PEDESTAL MOUNT RECEPTACLE	•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION
	DCR	DROP CORD RECEPTACLE		CSR	CS BTC ON RECEPTACLE FURNISHED W/ EQUIPMENT
	FR	FLUSH FLOOR RECEPTACLE			ST. (STUB UP ABOVE FINISHED FLOOR)
	SR	SINGLE PURPOSED RECEPTACLE SINGLE PHASE			A.F.F. (ABOVE FINISHED FLOOR)
	SR	SINGLE PURPOSED RECEPTACLE THREE PHASE			D.F.A. (DROP FROM ABOVE)
	JB	JUNCTION BOX IN WALL			B.T.C. (BRANCH TO CONNECTION ON EQUIPMENT)
	JB/DS	DISCONNECTED FURNISHED & INSTALLED BY ELEC.			

C FS-3 ELECTRICAL SYMBOLS

SCALE NOT TO SCALE

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B. DIMENSIONS INDICATED ARE TO BE VERIFIED BY FOODSERVICE EQUIPMENT CONTRACTOR AND ADJUST AS REQUIRED BY EQUIPMENT AND / OR FIELD CONDITIONS.
C. THE FOLLOWING RELATED WORK IS NOT INCLUDED WITHIN THE FOODSERVICE EQUIPMENT SCOPE OF WORK AND IS TO BE COORDINATED WITHIN ELECTRICAL DIVISION.

* ROUGHING-IN AND FINAL CONNECTIONS OF ELECTRICAL SYSTEM TO FOODSERVICE EQUIPMENT.
* COMMUNICATION SYSTEMS, CLOCKS AND STAFF TIME CLOCKS IN FOODSERVICE AREAS.
* CONDUIT AND WIRING FROM DISPOSER SWITCH TO TIME DELAY, MAGNETIC STARTER, MOTOR AND SOLENOID VALVE; ALL BELOW COUNTER TOP.
* WALL SWITCH FOR LIGHT FIXTURES IN EXHAUST HOODS.
* WALL SWITCH FOR FAN MOTOR EXHAUST HOODS SYSTEM.
* WIRING TO AND INSTALLATION OF ALL ACCESSORIES FURNISHED LOOSE WITH FOODSERVICE EQUIPMENT.
* EMERGENCY LIGHTING AND / OR POWER SYSTEM.
* ALL DISCONNECTION SWITCHES AS REQUIRED. (NEMA 4, WATERPROOF SUGGESTED)
* INSTALLATION OF SHUNT TRIP BREAKERS INTERCONNECTION ALL EQUIPMENT BENEATH EXHAUST HOOD PROVIDING FOR EQUIPMENT SHUT DOWN DURING FIRE.

D FS-3 ELECTRICAL GENERAL NOTES

SCALE NOT TO SCALE

Verify Note

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

ISSUED: 01/06/2025

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Designer	
Proj. Arch.	
Checker	

PROJECT NO.

23-155.00

SHEET TITLE

FOODSERVICE ELECTRICAL PLAN

SHEET NO.

FS-3

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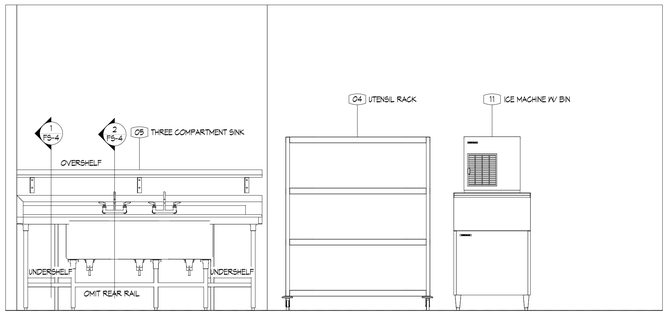
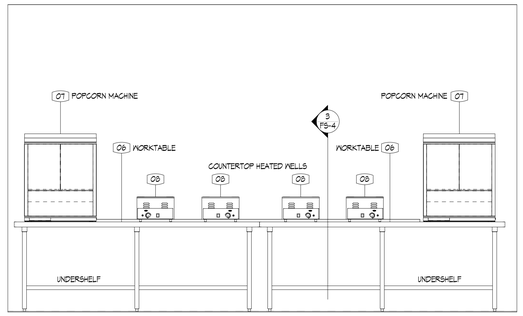


A ELEVATION
FS-4 SCALE : 1/2" = 1'-0"



B ELEVATION
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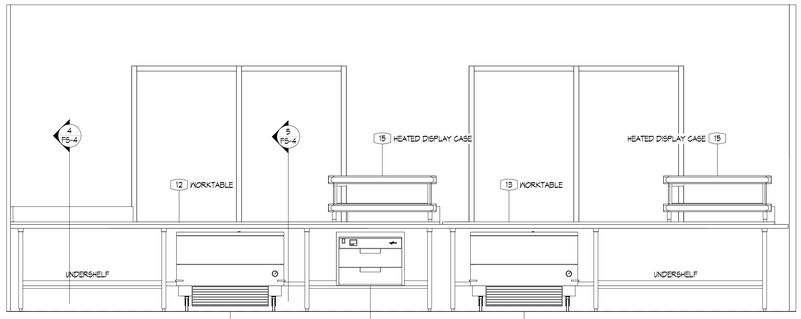
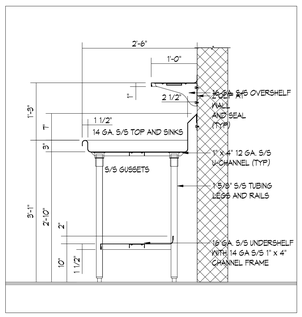


C ELEVATION
FS-4 SCALE : 1/2" = 1'-0"



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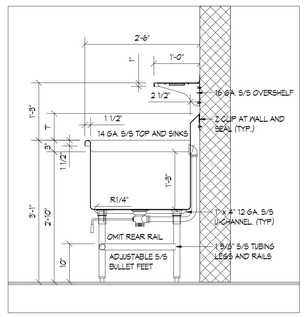

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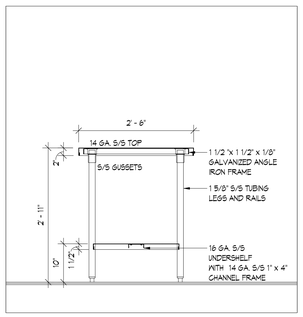

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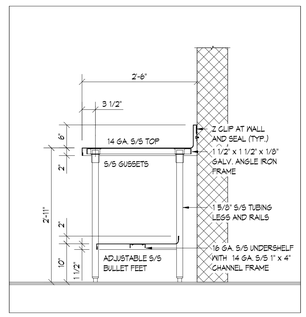

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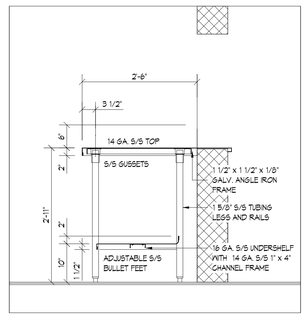

5 SECTION
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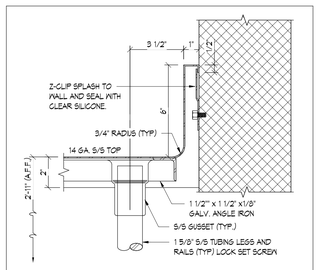
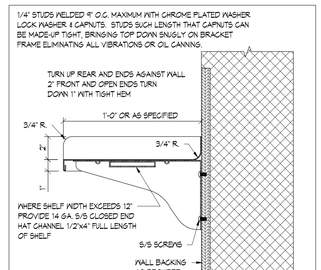


6 DETAIL
FS-4 SCALE : 1/4" = 1'-0"



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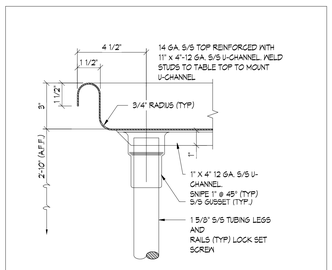
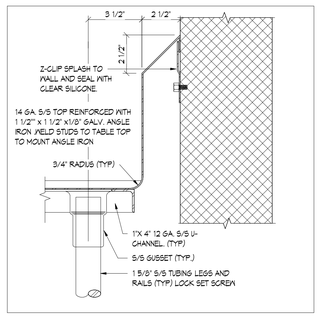
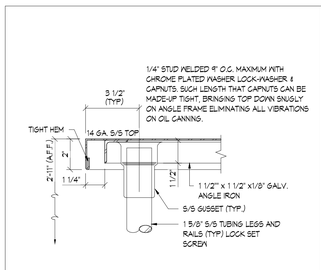
FS-4 SCALE : 1/4" = 1'-0"



8 DETAIL
FS-4 SCALE : 1/4" = 1'-0"



9 DETAIL
FS-4 SCALE : 1/4" = 1'-0"



10 DETAIL
FS-4 SCALE : 1/4" = 1'-0"

Verify Note

Contractor Must Coordinate And Verify All Dimensions With Foodservice Equipment Shop Drawings & Manufactures Data.

Foodservice Sub-contractor Must Coordinate All Dimensions With Architects Drawings.

FCA design, inc.
foodservice | designer | planners
11200 Broadway, Suite 2362
Pearland, Texas 77584 Job no. 1724

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

ISSUED: 01/06/2025

REVISIONS

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Director	Drawn By
Approver	Author
Designer	Quality Control
Designer	
Proj. Arch.	
Checker	

PROJECT NO.
23-155.00

SHEET TITLE
FOODSERVICE ELEVATIONS, SECTIONS, AND DETAILS

SHEET NO.
FS-4

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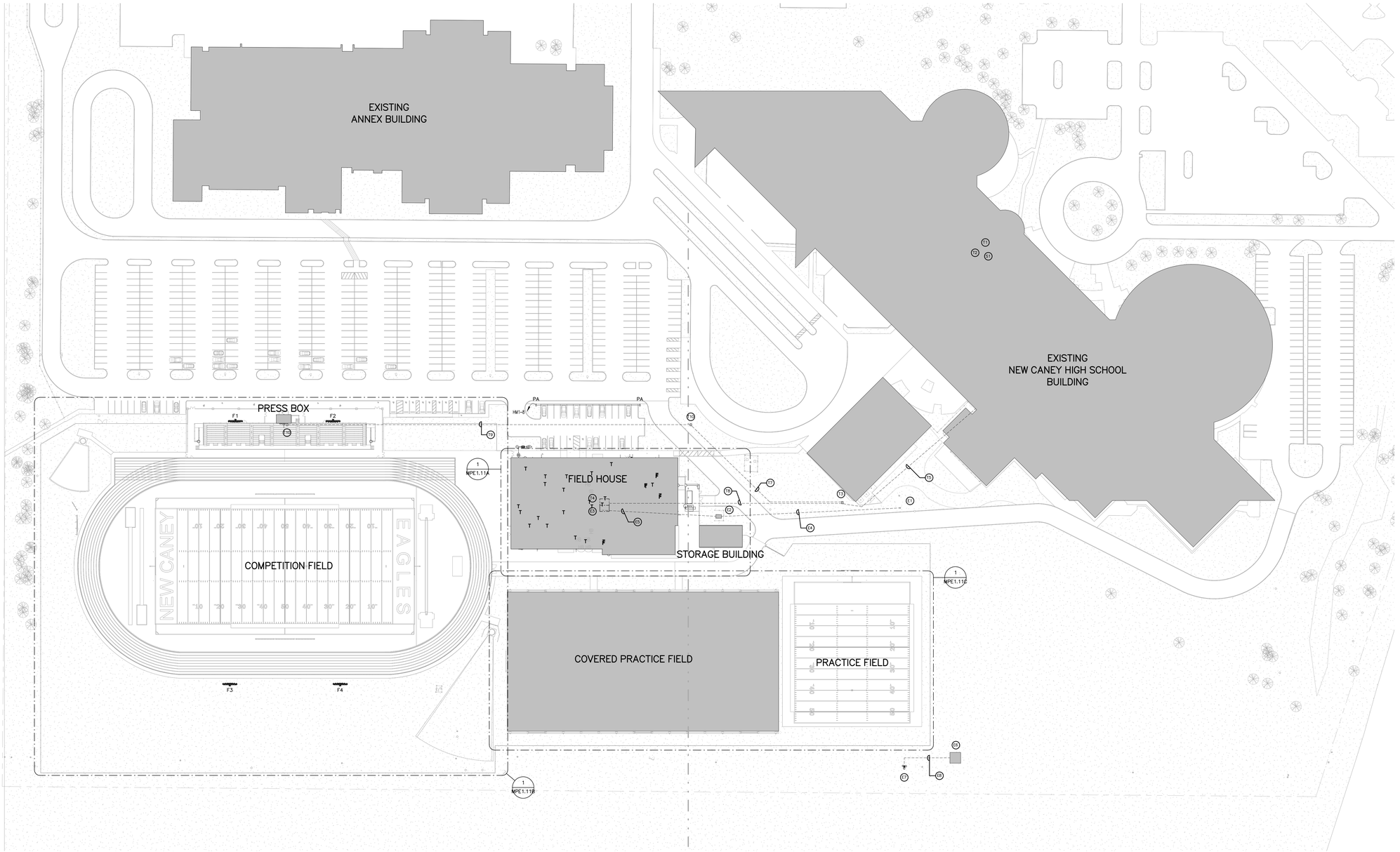
MPE Site Plan Key Notes	
#	Note Text
E1	EXISTING UTILITY TERMINAL POLES TO REMAIN. PROTECT DURING CONSTRUCTION.
E2	EXISTING UTILITY PAD MOUNT TRANSFORMER (PMT) TO REMAIN.
E3	NEW FIELD HOUSE ELECTRICAL ROOM.
E4	APPROXIMATE ROUTING OF EXISTING UTILITY MEDIUM VOLTAGE UNDERGROUND. FIELD LOCATE PRIOR TO BEGINNING SITE WORK.
E5	NEW UNDERGROUND SECONDARY FEEDER FROM UTILITY PMT TO MAIN DISTRIBUTION PANEL. REFERENCE ELECTRICAL RISER.
E6	APPROXIMATE LOCATION OF NEW PUMP STATION. REFER TO PUMP DETAIL SHEET C7.06 AND ELECTRICAL SHEET E4.02 FOR CONSTRUCTION OF ELECTRICAL CONTORL PANEL.
E7	APPROXIMATE LOCATION OF PROPOSED POWER COMPANY TRANSFORMER POLE.
E8	UNDERGROUND SECONDARY (UGS) ELECTRICAL FROM RISER AT UTILITY XFMR POLE TO SERVICE ENTRANCE EQUIPMENT INSTALLED PER POWER COMPANY REQUIREMENTS. COORDINATE EXACT ROUTING WITH SITE CONDITIONS. WHERE PEDESTAL IS REQUIRED BASED ON TOTAL RUN LENGH AND CONDUIT BENDS, THE PEDESTAL LOCATION SHALL BE APPROVED BY OWNER/ARCH AND POWER COMPANY PRIOR TO INSTALLATION.
S1	APPROXIMATE LOCATION OF EXISTING EDWARDS EST3 FIRE ALARM SYSTEM IN MAIN ADMIN AREA OF EXISTING HIGH SCHOOL. EXPAND EXISTING SYSTEM TO SUPPORT NEW BUILDINGS.
T1	APPROXIMATE LOCATION OF EXISTING MDF IN MAIN BUILDING. PROVIDE NEW FIBER PATCH PANEL IN EXISTING RACK FOR CONNECTION TO NEW BUILDINGS.
T2	APPROXIMATE LOCATION OF EXISTING PA SYSTEM IN MAIN ADMIN AREA OF EXISTING HIGH SCHOOL. EXPAND EXISTING SYSTEM TO SUPPORT NEW BUILDINGS.
T3	EXISTING LOW VOLTAGE HANDHOLE TO REMAIN.
T4	NEW FIELD HOUSE IDF.
T5	APPROXIMATE ROUTING OF EXISTING 2–4"C AND 4–2"C LOW VOLTAGE CONDUITS FROM EXISTING HANDHOLE TO MAIN BUILDING.
T7	PROVIDE NEW 1–4"C AND 2–2"C FROM EXISTING LOW VOLTAGE HANDHOLE TO NEW LOW VOLTAGE HANDHOLE.
T8	INTERCEPT EXISTING 2–4"C AND 4–2"C LOW VOLTAGE CONDUITS FROM EXISTING HANDHOLE AND EXTEND TO NEW BUILDING IDF.
T9	PROVIDE NEW 1–4"C AND 2–2"C FROM EXISTING LOW VOLTAGE HANDHOLE BY FIELD HOUSE TO NEW LOW VOLTAGE HANDHOLE BY TICKET BOOTH/PRESS BOX BUILDING.
T10	NEW LOW VOLTAGE HANDHOLE BY DIVISION 26.



1 MPE OVERALL SITE PLAN

1" = 60'–0"

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01/06/25

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SHEET TITLE
MPE OVERALL SITE PLAN

SHEET NO.
MPE1.11

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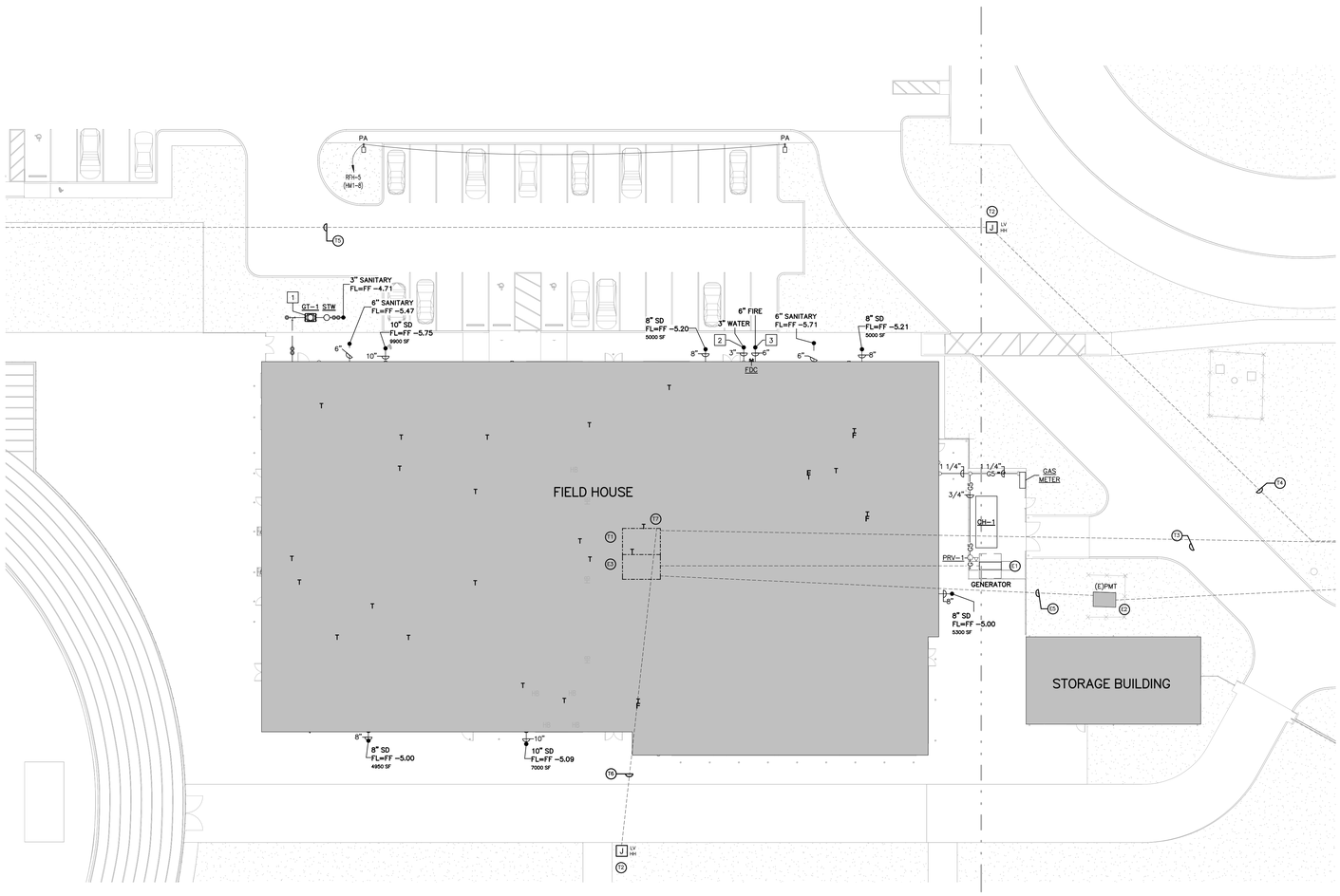
Plumbing Key Notes	
Key Note	Keynote Text
1	GREASE TRAP AND SAMPLE WELL, LOCATED IN GRASSY AREA OUTSIDE OF THE BUILDING. REFERENCE DETAILS 3 & 4/P3.01 FOR ADDITIONAL REQUIREMENTS.
2	DOMESTIC CW ENTRY, REFERENCE DETAIL 6/P3.03 FOR ADDITIONAL REQUIREMENTS.
3	FIRE SPRINKLER RISER, REFERENCE DETAIL 8/P3.03 FOR ADDITIONAL REQUIREMENTS.

Field House Site Plan Key Notes	
#	Note Text
E1	NEW NATURAL GAS GENERATOR AND SERVICE ENTRANCE EQUIPMENT BY DIVISION 26.
E2	EXISTING UTILITY PAD MOUNT TRANSFORMER (PMT) TO REMAIN.
E3	NEW FIELD HOUSE ELECTRICAL ROOM.
T1	NEW FIELD HOUSE IDF.
T2	NEW LOW VOLTAGE HANDHOLE BY DIVISION 26.
T3	INTERCEPT EXISTING 2–4"C AND 4–2"C LOW VOLTAGE CONDUITS FROM EXISTING HANDHOLE AND EXTEND TO NEW BUILDING IDF.
T4	PROVIDE NEW 1–4"C AND 2–2"C FROM EXISTING LOW VOLTAGE HANDHOLE TO NEW LOW VOLTAGE HANDHOLE.
T5	PROVIDE NEW 1–4"C AND 2–2"C FROM EXISTING LOW VOLTAGE HANDHOLE BY FIELD HOUSE TO NEW LOW VOLTAGE HANDHOLE BY TICKET BOOTH/PRESS BOX BUILDING.
T6	PROVIDE NEW 1–4"C FROM LOW VOLTAGE HANDHOLE TO FIELD HOUSE IDF.
T7	STUB SITE TECHNOLOGY CONDUITS UP AT IDF WALL BEHIND TELECOM RACKS.



1 MPE SITE PLAN - FIELD HOUSE

1" = 20'–0"

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01/06/25

ISSUED: 01/06/2025

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Approver	Author
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SHEET TITLE

MPE SITE PLAN - FIELD HOUSE

SHEET NO.

MPE1.11A

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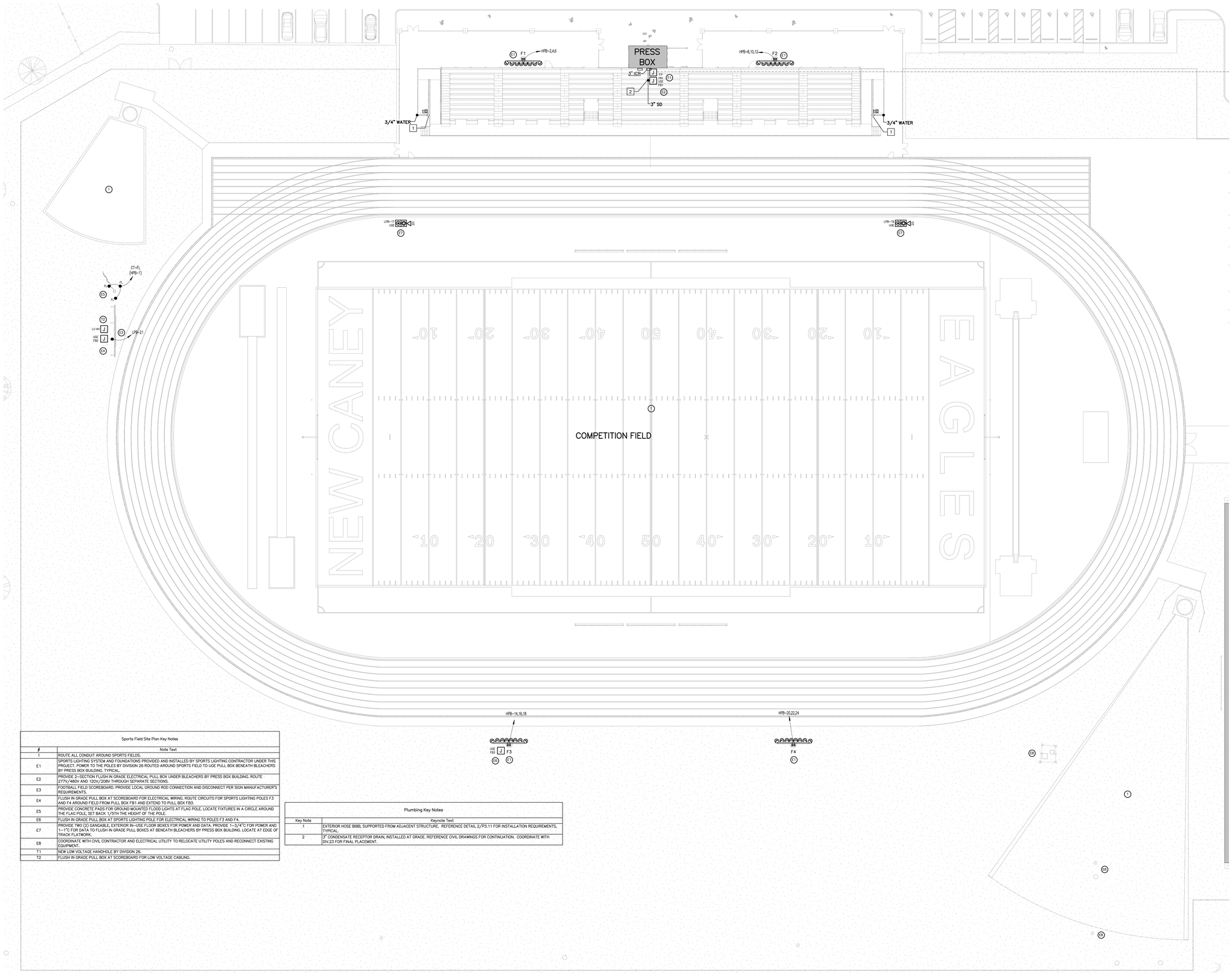

Sports Field Site Plan Key Notes	
#	Note Text
1	ROUTE ALL CONDUIT AROUND SPORTS FIELDS.
E1	SPORTS LIGHTING SYSTEM AND FOUNDATIONS PROVIDED AND INSTALLED BY SPORTS LIGHTING CONTRACTOR UNDER THIS PROJECT. POWER TO THE POLES BY DIVISION 26 ROUTED AROUND SPORTS FIELD TO UGE PULL BOX BENEATH BLEACHERS BY PRESS BOX BUILDING. TYPICAL.
E2	PROVIDE 2–SECTION FLUSH IN GRADE ELECTRICAL PULL BOX UNDER BLEACHERS BY PRESS BOX BUILDING. ROUTE 277V/480V AND 120V/208V THROUGH SEPARATE SECTIONS.
E3	FOOTBALL FIELD SCOREBOARD. PROVIDE LOCAL GROUND ROD CONNECTION AND DISCONNECT PER SIGN MANUFACTURER'S REQUIREMENTS.
E4	FLUSH IN GRADE PULL BOX AT SCOREBOARD FOR ELECTRICAL WIRING. ROUTE CIRCUITS FOR SPORTS LIGHTING POLES F3 AND F4 AROUND FIELD FROM PULL BOX FB1 AND EXTEND TO PULL BOX FB3.
E5	PROVIDE CONCRETE PADS FOR GROUND MOUNTED FLOOD LIGHTS AT FLAG POLE. LOCATE FIXTURES IN A CIRCLE AROUND THE FLAG POLE, SET BACK 1/5TH THE HEIGHT OF THE POLE.
E6	FLUSH IN GRADE PULL BOX AT SPORTS LIGHTING POLE FOR ELECTRICAL WIRING TO POLES F3 AND F4.
E7	PROVIDE TWO (2) GANGABLE, EXTERIOR IN–USE FLOOR BOXES FOR POWER AND DATA. PROVIDE 1–3/4"C FOR POWER AND 1–1"C FOR DATA TO FLUSH IN GRADE PULL BOXES AT BENEATH BLEACHERS BY PRESS BOX BUILDING. LOCATE AT EDGE OF TRACK FLATWORK.
E8	COORDINATE WITH CIVIL CONTRACTOR AND ELECTRICAL UTILITY TO RELOCATE UTILITY POLES AND RECONNECT EXISTING EQUIPMENT.
T1	NEW LOW VOLTAGE HANDHOLE BY DIVISION 26.
T2	FLUSH IN GRADE PULL BOX AT SCOREBOARD FOR LOW VOLTAGE CABLING.

Plumbing Key Notes	
Key Note	Keynote Text
1	EXTERIOR HOSE BIBB, SUPPORTED FROM ADJACENT STRUCTURE. REFERENCE DETAIL 2/P3.11 FOR INSTALLATION REQUIREMENTS, TYPICAL.
2	3" CONDENSATE RECEPTOR DRAIN, INSTALLED AT GRADE. REFERENCE CIVIL DRAWINGS FOR CONTINUATION. COORDINATE WITH DIV.23 FOR FINAL PLACEMENT.

1 MPE SITE PLAN - TRACK & FIELD

1" = 20'–0"

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PROFESSIONAL ENGINEER
01/06/25

ISSUED: 01/06/2025

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Approver	Author
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Designer	
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SHEET TITLE

MPE SITE PLAN - TRACK & FIELD

SHEET NO.

MPE1.11B

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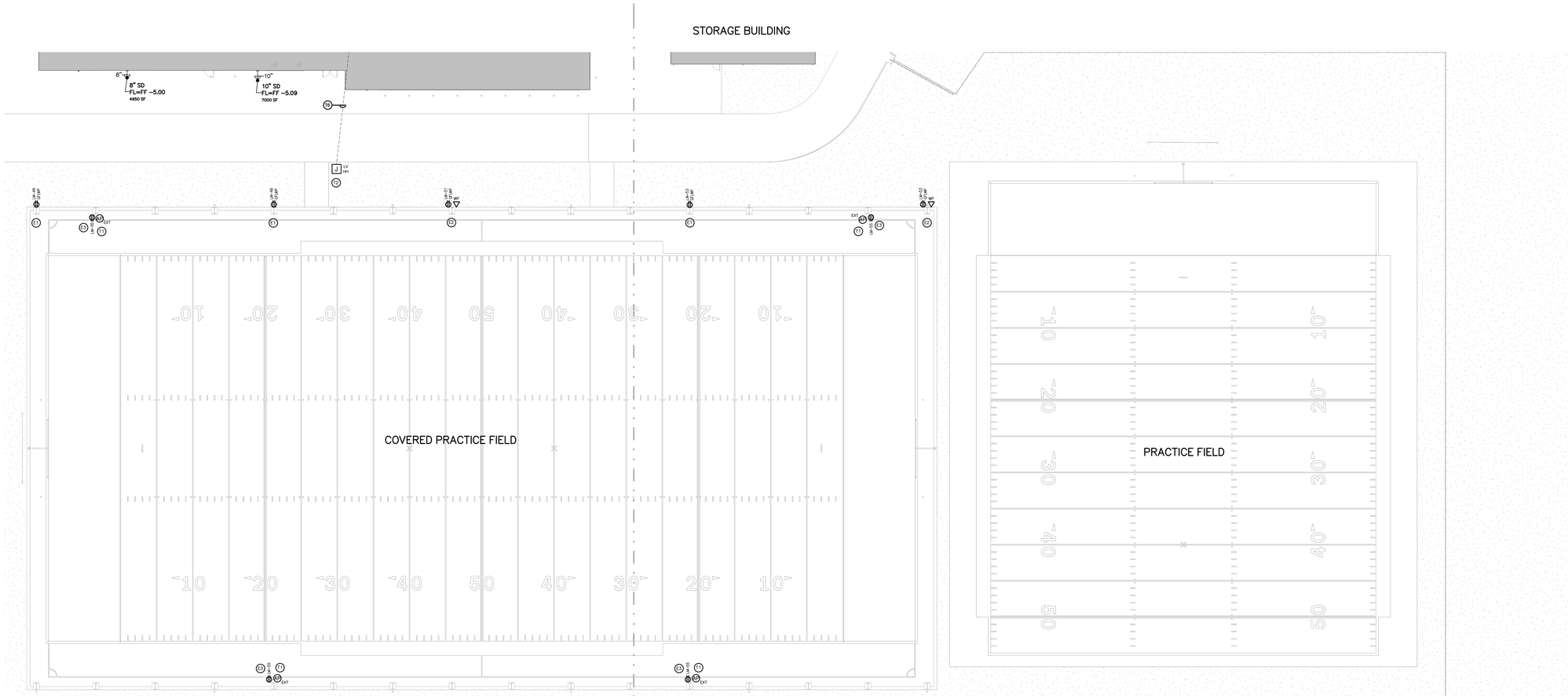
Practice Field Site Plan Key Notes	
#	Note Text
E1	STUB CONDUIT UP AND MOUNT RECEPTACLE TO COLUMN.
E2	STUB CONDUITS UP AND MOUNT RECEPTACLE AND DATA OUTLET TO COLUMN. ROUTE DATA CONDUIT UNDERGROUND TO LOW VOLTAGE HANDHOLE ADJACENT TO COVERED PRACTICE FIELD. PROVIDE BLANK GASKETED FACEPLATE ON DATA OUTLET.
E3	PROVIDE 12X12 NEMA 3R ENCLOSURE MOUNTED TO STRUCTURE FOR POWER AND OF/OI MEDIA CONVERTER. ROUTE 1"C FROM ENCLOSURE AT STRUCTURE TO COLUMN, ROUTE DOWN COLUMN, AND EXTEND UNDERGROUND TO LOW VOLTAGE HANDHOLE ADJACENT TO COVERED PRACTICE FIELD.
T1	FIBER FROM IDF TO OF/OI MEDIA CONVERTER IN NEMA 3R ENCLOSURE BY DIVISION 27 STRUCTURED CABLING CONTRACTOR.
T2	NEW LOW VOLTAGE HANDHOLE BY DIVISION 26.
T6	PROVIDE NEW 1-4"C FROM LOW VOLTAGE HANDHOLE TO FIELD HOUSE IDF.



1 MPE SITE PLAN - PRACTICE FIELDS

1" = 20'–0"

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Approver	Author
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Designer	
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SHEET TITLE

MPE SITE PLAN - PRACTICE FIELDS

SHEET NO.

MPE1.11C

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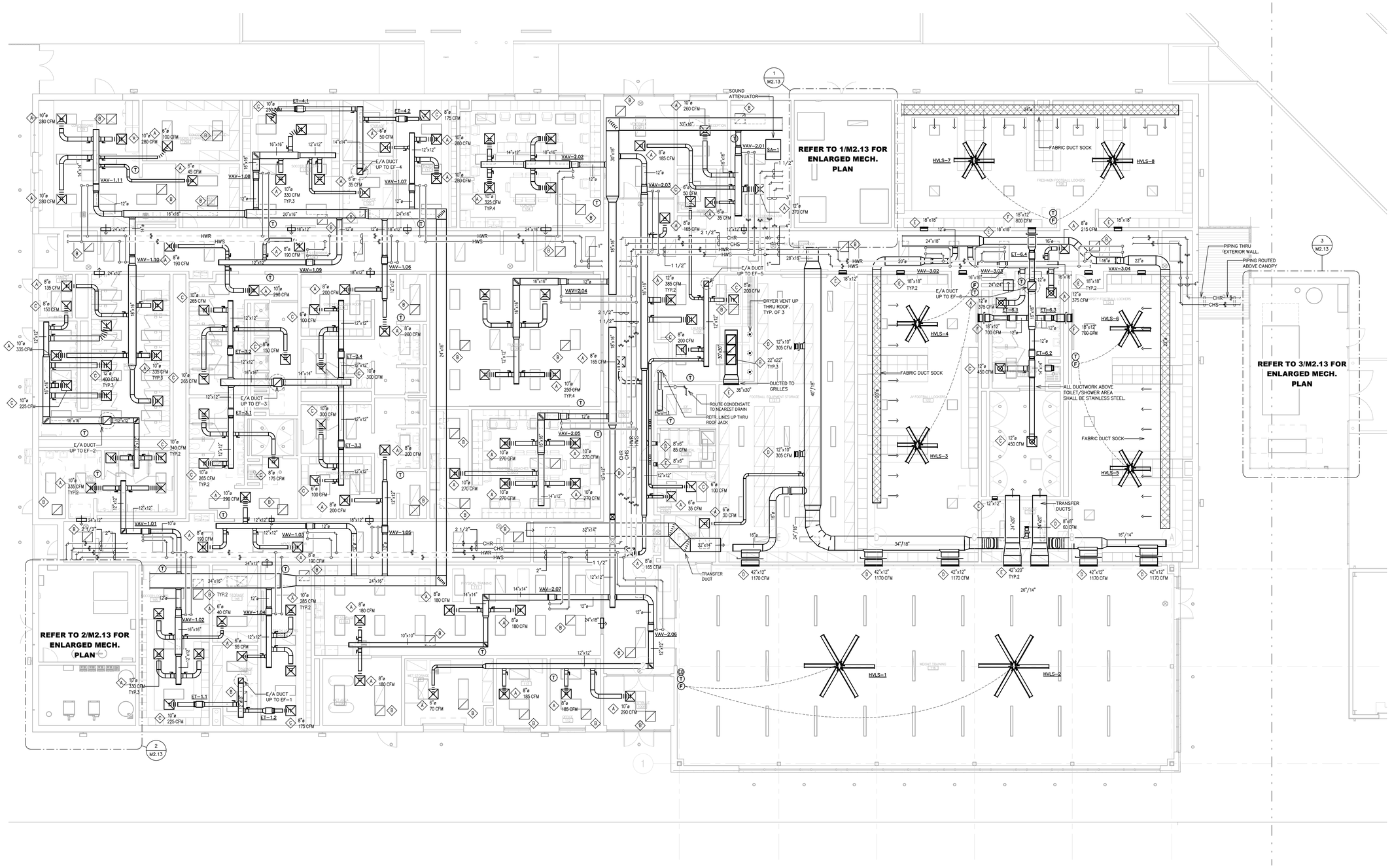

1 MECHANICAL FLOOR PLAN - FIELD HOUSE

1/8" = 1'-0"

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Proj. Arch. -	

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SHEET TITLE

MECHANICAL FLOOR PLAN - FIELD HOUSE

SHEET NO.

M2.11

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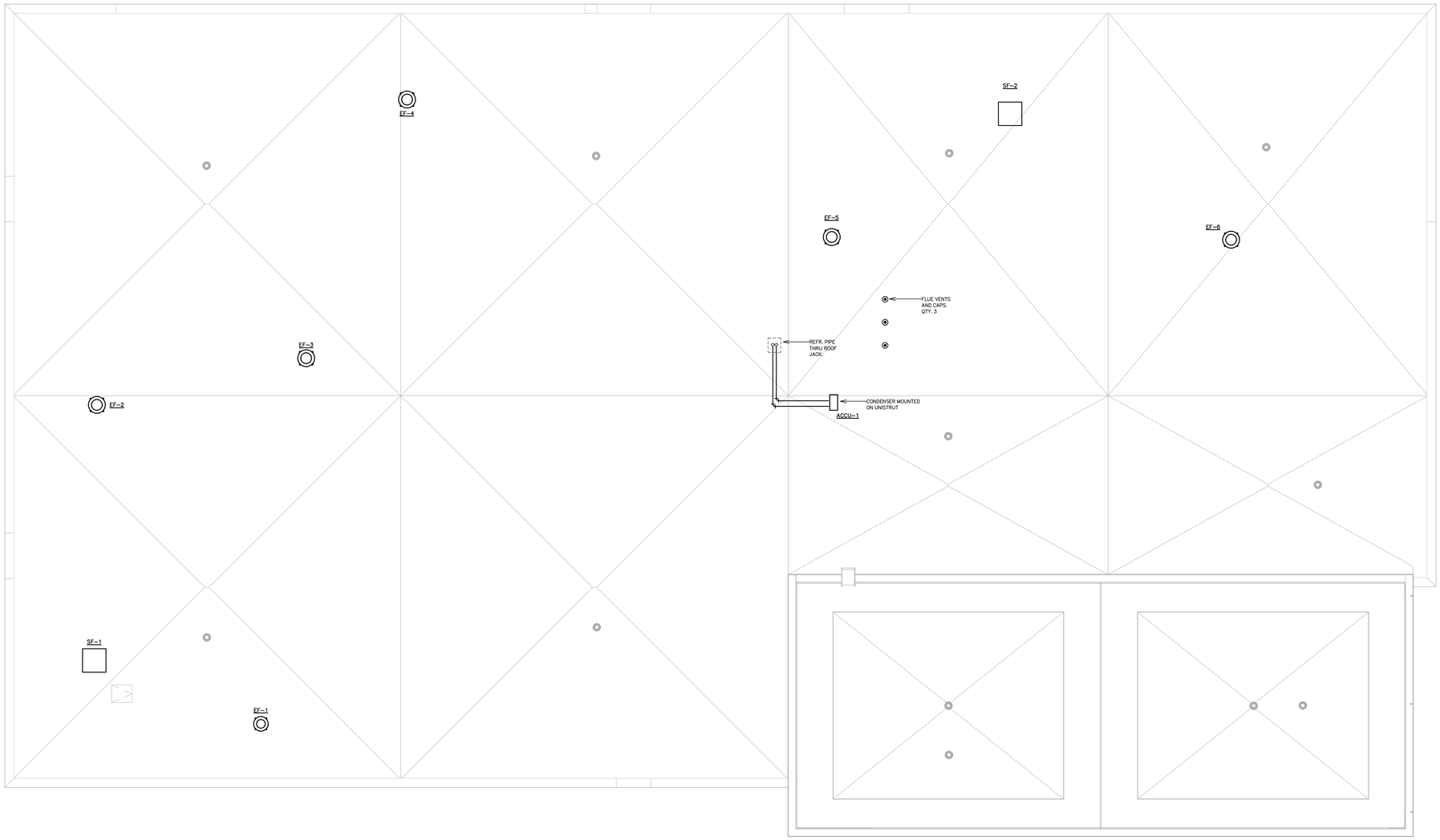

1 MECHANICAL ROOF PLAN

1/8" = 1'-0"

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MECHANICAL ROOF PLAN - FIELD HOUSE

SHEET NO.

M2.12

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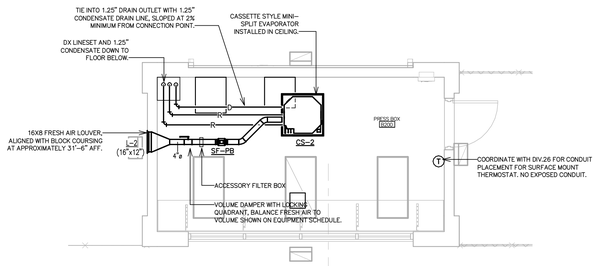
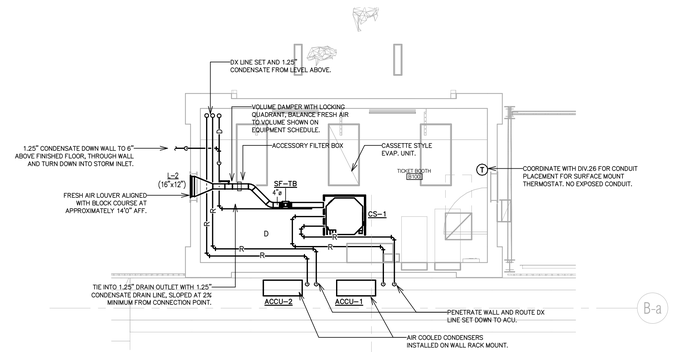


5 LEVEL 2 MECHANICAL FLOOR PLAN - PRESS BOX

1/4" = 1'-0"

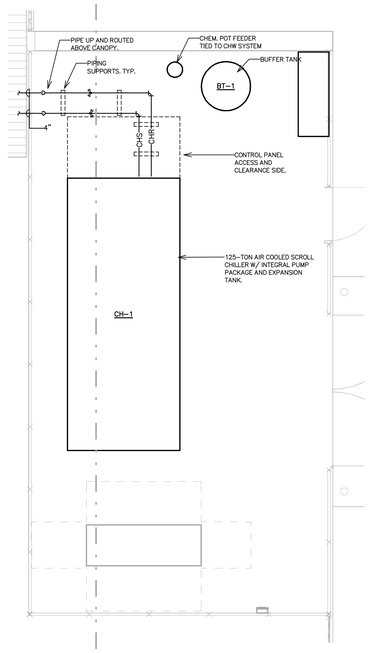
B-6



4 LEVEL 1 MECHANICAL FLOOR PLAN - PRESS BOX

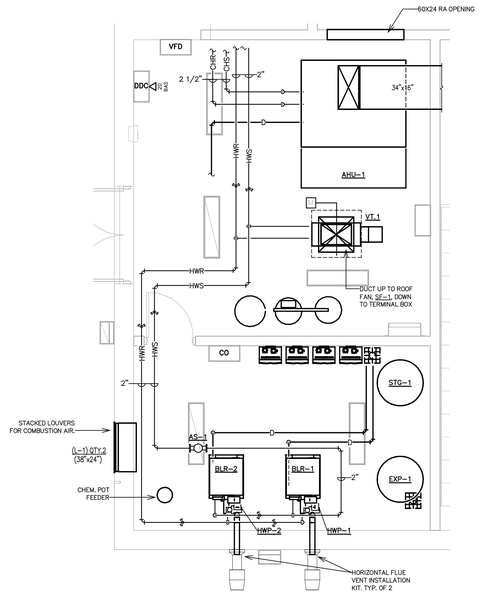
1/4" = 1'-0"

B-6



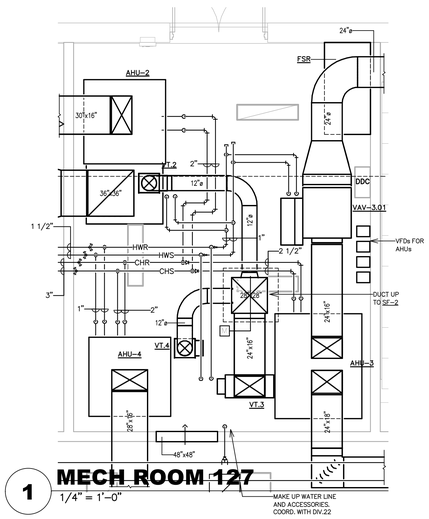
3 FIELD HOUSE CENTRAL PLANT MECH. PLAN

1/4" = 1'-0"



2 MECH ROOM 147

1/4" = 1'-0"



1 MECH ROOM 127

1/4" = 1'-0"

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ENLARGED MECHANICAL PLANS

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M2.13

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MECHANICAL SYMBOL SCHEDULE

CWS	CONDENSER WATER SUPPLY	A.P.	ACCESS PANEL
CWR	CONDENSER WATER RETURN	AHU	AIR HANDLING UNIT
CHS	CHILLED WATER SUPPLY	B	BOILER
CHR	CHILLED WATER RETURN	CH	CHILLER
HWS	HEATING WATER SUPPLY	CHP	CHILLED WATER PUMP
HWR	HEATING WATER RETURN	CVT	CONSTANT VOLUME TERMINAL
RS	REFRIGERANT SUPPLY	DH	DEHUMIDIFIER
RR	REFRIGERANT RETURN	E/A	EXHAUST AIR
D	CONDENSATE LINE	EF	EXHAUST FAN
T	PETE'S PLUG	F&B	FACE & BYPASS
	ISOLATION VALVE	FF	FLY FAN
	ELECTRONIC CONTROL VALVE	HDT	HORIZONTAL DRAW THROUGH
	BUTTERFLY VALVE	HWP	HOT WATER PUMP
	BALL VALVE	KEF	KITCHEN EXHAUST FAN
	UNION OR FLANGE	KSF	KITCHEN SUPPLY FAN
	STRAINER	O/A	OUTSIDE AIR
	AUTOMATIC AIR VENT	OBD	OPPOSED-BLADES DAMPER
T	LOCAL CONTROL THERMOSTAT	PT	PRE-TREAT
T	TEMPERATURE SENSOR	R/A	RETURN AIR
H	HUMIDITY SENSOR	RAHU	ROOF-MOUNTED AIR HANDLING UNIT
FD	FIRE DAMPER	S/A	SUPPLY AIR
SD	SMOKE DAMPER	SA	SOUND ATTENUATOR
FSD	FIRE/SMOKE COMBINATION DAMPER	SF	SUPPLY FAN
MD	MOTORIZED DAMPER	SPD	SPILTER DAMPER
C	CARBON MONOXIDE SENSOR	SZ	SINGLE ZONE
D	CARBON DIOXIDE SENSOR	VAV	VARIABLE AIR VOLUME
	SUPPLY AIR DIFFUSER	VB	VAV BOX
	RETURN AIR GRILLE	VD	VOLUME DAMPER
	EXHAUST GRILLE	VDT	VERTICAL DRAW THROUGH
RA	RETURN AIR OPENING IN WALL	VFD	VARIABLE FREQUENCY DRIVE
VD	VOLUME DAMPERS	WH	WATER HEATER
	DUCT ELEVATION CHANGE	ø	DESIGNATION FOR "ROUND"
	90° DUCT ELBOW WITH TURNING VANES	⊖	DESIGNATION FOR "OVAL"
	FLEXIBLE DUCT		

M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PS PH	STATIC PRESSURE SENSOR HI-LIMIT
A.P.	ACCESS PANEL

GENERAL MECHANICAL NOTES

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M3.03.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 2 & 3/M3.03.
4. PROVIDE CONDENSATE DRAIN TRAP FOR EACH AHU AND FCU, SEE DETAIL 14/M3.03.
5. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
6. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 700 CFM SUPPLY AIR.
7. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB-ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
8. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA FIGURE 2-10.

CHILLER SCHEDULE

SERVES	FIELDHOUSE
NOMINAL CAPACITY (TONS)	125
ACTUAL CAPACITY (TONS)	122.9
CHILLER TYPE	AIR COOLED
COMPRESSOR TYPE	SCROLL
COMPRESSOR SPEED CONTROL	STAGED/ ON-OFF
REFRIGERANT TYPE	R-32
DESIGN GPM	210.0
MINIMUM GPM	168.0
EWT/LWT (°F)	58/44°F
MAX. PRESSURE DROP (FT. HD.)	15
FOULING FACTOR	0.0001
AMBIENT TEMPERATURE (°F)	100°F
COMPRESSOR QUANTITY	4
COMPRESSOR #1 RLA	65 A
COMPRESSOR #2 RLA	43 A
COMPRESSOR #3 RLA	65 A
COMPRESSOR #4 RLA	43 A
CONDENSER FAN QUANTITY	10
FAN FLA (EACH)	3.3 A
VOLTS/PHASE/HERTZ	460/3/60
MCA	296 A
MOCP	350 A
FULL LOAD EFFICIENCY (EER)	10.5 EER
IPLV EFFICIENCY (EER)	17.59 EER
MANUFACTURER	DAIKIN
MODEL NUMBER	AGZ010F
NOTES	1 THRU 11

NOTES
1. INSTALL PER MANUFACTURERS SPECIFICATIONS.
2. UNIT SHALL BE HIGH EFFICIENCY MODEL.
3. INTEGRAL PUMP PACKAGE W/ SPEED CONTROLLER. COORDINATE WITH ELECTRICIAN TO HAVE PUMP ON GENERATOR POWER. SYSTEM: 210 GPM AND 60 FT. HEAD. POWER REQUIREMENTS 7.5 HP, FLA=24.2 A. INTEGRAL PUMP SHALL BE FIELD INSTALLED ON SEPARATE 208V CIRCUIT FROM CHILLER. PUMP CIRCUIT SHALL BE ON BACK UP GENERATOR
4. PROVIDE OPTIONAL AIR SEPARATOR AND EXPANSION TANK.
5. ELECTRONIC EXPANSION VALVE.
6. EPOXY COATED COILS.
7. HIGH STAGE RELIEF VALVE.
8. PROVIDE WITH INTEGRAL OVER-CURRENT PROTECTION.
9. PROVIDE FACTORY INSTALLED EVAPORATOR FLOW SWITCH.
10. PROVIDE LOW AMBIENT COOLING KIT.
11. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

BOILER SCHEDULE

MARK	BR-1,2
TYPE	CONDENSING
BTUH INPUT (MBH)	399
BTUH OUTPUT (MBH)	391
MIN. EFFICIENCY	98%
TURNDOWN RATIO	10:1
OPERATING PRESSURE	125 PSI
GAS PRESSURE	2" TO 14" PSI
GPM	20
EWT °F / LWT °F	140/180
MAX PD. FT. WATER	5FT.
FLUE VENT SIZE (DIA.)	4"
VOLTAGE	120V
FLA (AMPS)	7.5 A
MANUFACTURER	RAYPAK
MODEL	XVERS L 406L
NOTES	1 THRU 8

NOTES
1. INSTALL PER MANUFACTURERS SPECIFICATIONS.
2. UNIT SHALL BE FIRE TUBE TYPE.
3. PROVIDE WITH INTEGRAL DISCONNECT.
4. PROVIDE FACTORY INSTALLED FLOW SWITCH.
5. FACTORY MOUNTED BACNET INTERFACE CONTROLLER.
6. TEMPERATURE SENSOR WELL.
7. SOLENOID SAFETY VALVE.
8. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

PUMP SCHEDULE

MARK	HWP-1,2
SERVICE	BUILDING HW LOOP
TYPE	COMMERCIAL ECM CIRCULATOR
GPM	20
HEAD (FT. H20)	45
MIN. EFF. %	55%
MAX RPM	1800
MOTOR HP	.87 HP
MOTOR SPEED CONTROL	ECM
VOLTAGE	208V/1/60
PUMP SIZE (S/D)	2 X 1.25
SUCTION DIFF. (INLET/OUTLET)	1-1/2"/1-1/2"
MANUFACTURER	TACO
MODEL	1915ecm-F
NOTES	1 THRU 4

NOTES
1. INSTALL PER MANUFACTURERS SPECIFICATIONS.
2. PROVIDE DISCONNECT.
3. BACNET INTERFACE W/ SPEED CONTROLLER.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

AIR SEPARATOR SCHEDULE

MARK	AS-1
SYSTEM	HW
CONNECTION SIZE	3
OPERATING PRESSURE (PSI)	125
TACO MODEL #	4903A
NOTES	1,2

NOTES
1. INSTALL PER MANUFACTURERS SPECIFICATIONS.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

BUFFER TANK SCHEDULE

MARK	BT-1
SERVICE	CHW
TANK VOLUME (GAL.)	150
CONNECTION SIZE	4"
DIAMETER (IN.)	30"
HEIGHT (IN.)	60"
MANUFACTURER	TACO
MODEL NO.	BTH01500__-125NN
NOTES	1,2,3

NOTES
1. UNIT SHALL BE INSTALLED OUTDOORS IN VERTICAL CONFIGURATION.
2. PROVIDE WITH R-2 ARMAFLEX INSULATION WITH ALUMINUM JACKET.
3. VICTAULIC PIPING CONNECTION.

MOTOR STARTER SCHEDULE

EQUIPMENT	STARTER TYPE	PROVIDED UNDER	NOTES
CH-1	STANDARD	I	1
CHW PUMP (CH-1)	VFD	DIVISION 23	1
AHU-1 THRU AHU-4	VFD	DIVISION 23	2
SF-1,2	VFD	DIVISION 23	3
ALL OTHER MOTORS	STANDARD	DIVISION 23	-

NOTES
1. STARTER/VFD INTEGRAL TO EQUIPMENT.
2. REMOTE MOUNTED VFD. REFER TO MECH. PLANS FOR LOCATION.
3. STARTER TO BE EQUIPPED WITH INTEGRAL DISCONNECT.

INDOOR AHU SCHEDULE

MARK	AHU-1	AHU-2	AHU-3	AHU-4
UNIT CONFIGURATION	VERT. DRAW THRU	VERT. DRAW THRU	VERT. DRAW THRU	VERT. DRAW THRU
UNIT TYPE	MZ VAV	MZ VAV	MZ VAV	MZ VAV
SERVES	MISC. LOCKERS & CONCESSIONS	CLASSROOMS & OFFICES	FOOTBALL LOCKERS	WEIGHT ROOM
DESIGN SUPPLY AIR (CFM)	8585	7375	9975	6600
OUTSIDE AIR (CFM)	5150	1150	3100	1375
EXT. S.P. (IN W.G.)	1.50	1.25	0.85	0.85
FAN TYPE	PLENUM	PLENUM	PLENUM	PLENUM
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT
SPEED CONTROL	VFD	VFD	VFD	VFD
FAN QUANTITY	1	1	1	1
FAN HORSEPOWER	7.5 HP	7.5 HP	7.5 HP	7.5 HP
VOLTAGE	460V-3PH	460V-3PH	460V-3PH	460V-3PH
FLA	9.8 A	9.8 A	9.8 A	9.8 A
MCA	–	–	–	–
MOCP	–	–	–	–
HEATING COIL POSITION	–	–	–	REHEAT
PRE-HEAT COIL CFM	–	–	–	3000
EAT (°F)	–	–	–	50.0
LAT (°F)	–	–	–	95.0
EWT/LWT (°F)	–	–	–	180/140
HEATING CAPACITY (MBH)	–	–	–	145.8
COIL WATER FLOW (GPM)	–	–	–	7.3
COIL CONNECTION SIZE (IN.)				1.5"
MAX. WATER P.D. (FT. HD.)	–	–	–	10
CONDENSATE LINE SIZE	–	–	–	1-1/2"
COOLING COIL CFM	6,270	6,475	8,650	5,725
EAT DB/WB (°F)	92.8/75.8	78.4/65.4	82.3/72.9	78.0/67.3
LAT DB/WB (°F)	55/54	55/54	55/54.4	55/54
TOTAL COOLING CAPACITY (MBH)	452.1	218.9	517.2	226.2
SENSIBLE COOLING CAPACITY (MBH)	254.5	162.8	254.9	140.9
EWT/LWT (°F)	44/58	44/58	44/58	44/58
COIL WATER FLOW (GPM)	64.6	31.3	73.9	32.3
COIL CONNECTION SIZE (IN.)	2.5"	2"	2.5"	2"
MAX. WATER P.D. (FT. HD.)	10	10	10	10
CONDENSATE LINE SIZE	1.25"	1.25"	1.25"	1.25"
MANUFACTURER	DAIKIN	DAIKIN	DAIKIN	DAIKIN
MODEL NO.	VISION	VISION	VISION	VISION
NOTES	1 THRU 10	1 THRU 10	1 THRU 10	1 THRU 10

NOTES
1. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE MERV 13 FILTERS, COILS CASING CONVERSION.
2. DESIGN FAN HP IS MOTOR SIZE WIRED BY ELECTRICAL. MANUFACTURERS REQUIRING LARGER MOTORS MUST PAY FOR INCREASED CIRCUIT AND BREAKER COSTS. SMALLER MOTORS MAY BE PROVIDED IF BHP IS LESS THAN MOTOR DESIGN HP AND A 1/4"WG INCREASED PRESSURE DROP DOES NOT DROP DOES NOT OVERLOAD MOTOR.
3. PROVIDE ACCESS SECTIONS WITH MINIMUM 18" WIDE, DOUBLE-WALL DOORS DOWNSTREAM OF EACH COIL FOR CLEANING AND INSPECTIONS.
4. ALL UNITS SHALL HAVE 12" MINIMUM EXTENDED STAINLESS, SLOPED DRAIN PANS.
5. CONDENSATE DRAIN LINE FOR EACH HYDRONIC COIL SECTION.
7. FLAT FILTER SECTION. MAX. FILTER VELOCITY OF 500 FPM.
8. REMOTE MOUNTED VFD. REFER TO MECHANICAL PLANS FOR LOCATION.
9. PROVIDE 2-WAY AND 3-WAY VALVE COIL ARRANGEMENT PER CONTROL VALVE SCHEDULE.
10. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

DX MINI-SPLIT SCHEDULE (FIELD HOUSE)

OUTDOOR UNIT,MARK	ACCU-1
TYPE	COOLING ONLY
NOMINAL TONNAGE	3.0
RATED COOLING CAPACITY (MBH)	33.2
SENS. COOLING CAPACITY (MBH)	–
RATED HEATING CAPACITY (MBH)	–
EER/SEER	9.1/15.9
HEATING COP/HSPF	–
REFRIGERANT TYPE	R410A
NO. OF COMPRESSORS	1
NO. OF STAGES	SINGLE
AMBIENT AIR, °F	95
VOLTAGE	208/1/60
RATED LOAD AMPS	16.3 A
MCA/MOCP	16.6 A/20 A
MANUFACTURER	DAIKIN
OUTDOOR UNIT MODEL NO.	RK36WMVJU9
INDOOR UNIT, MARK	FCU-1
SERVES SPACES	IDF 107
SUPPLY AIR CFM (HI – MED – LO)	915-742-572
NO. OF FAN SPEEDS	3
VOLTAGE	FED FROM OUTDOOR
MCA/MOCP	FED FROM OUTDOOR
UNIT TYPE	HIGH WALL DUCTLESS
MANUFACTURER	DAIKIN
INDOOR UNIT MODEL NO.	FTX36WVJU9
NOTES	1 THRU 10

NOTES
1. INDOOR AND OUTDOOR UNIT SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
2. REFRIGERANT AND DRAIN LINES TO BE SIZED BY MANUFACTURER.
3. SYSTEM SHALL BE SINGLE POINT CONNECTION. OUTDOOR UNIT SHALL POWER INDOOR UNIT.
4. DRAIN LINES SHALL BE GRAVITY DRIVEN. NO CONDENSATE PUMPS PERMITTED.
5. PROVIDE INDOOR UNIT WITH WIRED WALL MOUNTED CONTROLLER.
6. CONTRACTOR SHALL PROVIDE ALL CLEARANCES AROUND UNIT AS REQUIRED BY MANUFACTURER.
7. PROVIDE LOW AMBIENT COIL KIT AND COIL GUARDS FOR OUTDOOR UNIT.
8. CONDENSATE DRAIN LINE FOR EACH HYDRONIC COIL SECTION.
9. WIND BAFFLE ACCESSORY, WALL BRACKET.
10. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

DX MINI-SPLIT SCHEDULE (PRESS BOX)

SYSTEM	1	2
TYPE	MINI-SPLIT HEAT PUMP	MINI-SPLIT HEAT PUMP
COOLING CAPACITY @ 95°F	18.0 MBH	18.0 MBH
HEATING CAPACITY @ 17°F	13.5 MBH	13.5 MBH
EER/SEER	24.6 SEER	24.6 SEER
REFRIGERANT TYPE	R410A	R410A
OUTDOOR UNIT		
MARK	ACCU-1	ACCU-2
SERVES INDOOR UNIT(S)	CS-1	CS-2
NO. OF COMPRESSOR	1	1
NO. OF STAGES	VARIABLE INVERTER DRIVEN	VARIABLE INVERTER DRIVEN
AMBIENT AIR, °F	96°F	96°F
VOLTAGE	208V / 1PH / 60HZ	208V / 1PH / 60HZ
MCA/MOCP	11A / 15A	11A / 15A
MODEL #	MITSUBISHI PUZ-A18NKA7-BS	MITSUBISHI PUZ-A18NKA7-BS
INDOOR UNIT		
MARK	CS-1	CS-2
SERVES SPACE(S)	TICKET BOOTH B100	PRESS BOX B200
COOLING CAPACITY	18 MBH	18 MBH
HEATING CAPACITY	19 MBH	19 MBH
TOTAL CFM	560	560
O/A CFM	35	35
NO. OF FAN SPEEDS	4	4
VOLTAGE	FED FROM OUTDOOR UNIT	FED FROM OUTDOOR UNIT
MCA/MOCP	FED FROM OUTDOOR UNIT	FED FROM OUTDOOR UNIT
UNIT TYPE	IN-CEILING CASSETTE	IN-CEILING CASSETTE
MODEL #	MITSUBISHI PLA-A18EA8	MITSUBISHI PLA-A18EA8
NOTES	1 THRU 7	1 THRU 7

NOTES:
1. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE LOW AMBIENT COOLING KIT.
3. PROVIDE WIRED TOUCHSCREEN REMOTE CONTROLLER.
4. DRAIN LINES SHALL BE GRAVITY DRIVEN. NO CONDENSATE PUMPS PERMITTED.
5. PROVIDE WALL BRACKET FOR INSTALLATION OF OUTDOOR UNIT ON WALL.
6. OUTDOOR UNIT SHALL HAVE CORROSION PROTECTION OPTION.
7. INDOOR UNIT SHALL BE RETROFIT WITH MITSUBISHI PAC-SJ41TM-E MULTI-FUNCTION CASEMENT FOR CONNECTION OF FRESH AIR DUCT.
8. CONTRACTOR SHALL NOT RUN UNIT DURING CONSTRUCTION. START-UP SHALL TAKE PLACE AFTER COMPLETION OF INTERIOR FINISHES TO LIMIT EXPOSURE OF COPPER EVAPORATOR COIL TO EXCESS DUST AND VOC.

AIR TERMINAL (VAV) SCHEDULE

MARK	TOTAL CFM	MIN. PRIMARY CFM	INLET SIZE	E.S.P. (W.G.)	MIN. HEATING CAPACITY, MHB	GPM/SIZE	MAX P.D. (WATER)	MAX P.D. (AIR)	MANUFACTURER	MODEL	SIZE	NOTES
VAV-1.01	675	225	10" ø	0.3"	9.8	0.5 / 3/4"	0.15	0.12	KRUEGER	LMHS	10	ALL
VAV-1.02	1075	325	12" ø	0.3"	14.1	0.7 / 3/4"	0.35	0.15	KRUEGER	LMHS	12	ALL
VAV-1.03	675	225	10" ø	0.3"	9.8	0.5 / 3/4"	0.15	0.12	KRUEGER	LMHS	10	ALL
VAV-1.04	650	200	10" ø	0.3"	8.7	0.4 / 3/4"	0.15	0.1	KRUEGER	LMHS	10	ALL
VAV-1.05	400	125	8" ø	0.3"	5.4	0.3 / 3/4"	0.2	0.09	KRUEGER	LMHS	8	ALL
VAV-1.06	400	125	8" ø	0.3"	5.4	0.3 / 3/4"	0.2	0.09	KRUEGER	LMHS	8	ALL
VAV-1.07	625	200	10" ø	0.3"	8.7	0.4 / 3/4"	0.25	0.1	KRUEGER	LMHS	10	ALL
VAV-1.08	1100	335	12" ø	0.3"	14.1	0.7 / 3/4"	0.15	0.15	KRUEGER	LMHS	12	ALL
VAV-1.09	675	225	10" ø	0.3"	9.8	0.5 / 3/4"	0.35	0.12	KRUEGER	LMHS	10	ALL
VAV-1.10	1500	500	14" ø	0.3"	21.7	1.1 / 3/4"	0.15	0.14	KRUEGER	LMHS	14	ALL
VAV-1.11	775	450	10" ø	0.3"	19.5	1 / 3/4"	0.15	0.24	KRUEGER	LMHS	10	ALL
VAV-2.01	850	500	12" ø	0.3"	21.7	1.1 / 3/4"	0.1	0.16	KRUEGER	LMHS	12	ALL
VAV-2.02	1450	450	14" ø	0.3"	19.5	1 / 3/4"	0.1	0.22	KRUEGER	LMHS	14	ALL
VAV-2.03	1400	425	14" ø	0.3"	18.4	0.9 / 3/4"	0.1	0.2	KRUEGER	LMHS	14	ALL
VAV-2.04	1025	325	12" ø	0.3"	14.1	0.7 / 3/4"	0.1	0.22	KRUEGER	LMHS	12	ALL
VAV-2.05	1375	425	14" ø	0.3"	18.4	0.9 / 3/4"	0.1	0.2	KRUEGER	LMHS	14	ALL
VAV-2.06	725	550	10" ø	0.3"	23.9	1.2 / 3/4"	0.2	0.21	KRUEGER	LMHS	10	ALL
VAV-2.07	750	275	10" ø	0.3"	11.9	0.6 / 3/4"	0.1	0.23	KRUEGER	LMHS	10	ALL
VAV-3.01	3600	1100	24X16	0.3"	47.7	2.4 / 3/4"	0.1	0.32	KRUEGER	LMHS	22	ALL
VAV-3.02	2550	775	16" ø	0.3"	33.6	1.7 / 3/4"	0.1	0.4	KRUEGER	LMHS	16	ALL
VAV-3.03	970	300	12" ø	0.3"	13.0	0.7 / 3/4"	0.1	0.21	KRUEGER	LMHS	12	ALL
VAV-3.04	2750	850	16" ø	0.3"	36.9	1.9 / 3/4"	0.1	0.46	KRUEGER	LMHS	16	ALL

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT.
2. 2-ROW HEATING COIL MINIMUM. HEATING CAPACITY IS BASED ON 180°F EWT AND 140°F LWT.
3. VAV HEATING CAPACITY IS BASED ON MINIMUM OUTDOOR AIR CFM, 55°F EAT AND 95°F LAT. LAT SHALL BE LIMITED TO 85°F DURING OCCUPIED HOURS.
4. FACTORY MOUNTED CONTROLLER.
5. BOTTOM CONTROL PANEL ACCESS.

EXHAUST TERMINAL (ET) UNIT SCHEDULE

MARK	INLET SIZE	CFM	E.S.P. (W.G.)	VOLTAGE	MANUFACTURER	MODEL	UNIT SIZE
ET-1.1	6	225	0.3"	24V	KRUEGER	LMHS	6
ET-1.2	6	175	0.3"	24V	KRUEGER	LMHS	6
ET-3.1	6	800	0.3"	24V	KRUEGER	LMHS	6
ET-3.2	10	775	0.3"	24V	KRUEGER	LMHS	10
ET-3.3	8	400	0.3"	24V	KRUEGER	LMHS	8
ET-3.4	6	400	0.3"	24V	KRUEGER	LMHS	6
ET-4.1	6	250	0.3"	24V	KRUEGER	LMHS	6
ET-4.2	6	175	0.3"	24V	KRUEGER	LMHS	6
ET-6.1	10	700	0.3"	24V	KRUEGER	LMHS	10
ET-6.2	10	900	0.3"	24V	KRUEGER	LMHS	10
ET-6.3	10	700	0.3"	24V	KRUEGER	LMHS	10
ET-6.4	10	800	0.3"	24V	KRUEGER	LMHS	10

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT.
2. TERMINAL BOX SHALL BE EXHAUST UNIT STYLE
3. FACTORY MOUNTED CONTROLLER.
4. BOTTOM CONTROL PANEL ACCESS.

VENTILATION TERMINAL (VT) SCHEDULE

MARK	TOTAL CFM	MIN. PRIMARY CFM	INLET SIZE	E.S.P. (W.G.)	MIN. HEATING CAPACITY, MHB	GPM/SIZE	MAX P.D. (AIR)	MAX COIL P.D. (FT. WATER)	MANUFACTURER	MODEL	SIZE
VT.1	5150	3500	24X16	0.3"	156.5	8 / 1"	0.6	1.5	KRUEGER	LMHS	22
VT.2	1150	575	14	0.3"	34.9	1.8 / 3/4"	0.2	0.2	KRUEGER	LMHS	14
VT.3	3100	1550	18	0.3"	94.2	4.8 / 1"	0.3	0.6	KRUEGER	LMHS	22
VT.4	1375	400	14	0.3"	–	– / 1"	0.3	–	KRUEGER	LMHS	14

NOTES
1. HEATING COIL CAPACITY AND FLOW RATE IS BASED ON 180/140 EWT/LWT.
2. 2-ROW HEATING COIL MINIMUM.
3. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
CARLOS A. RODRIGUEZ
120
PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director -	Drawn By CAR
Designer CAR	Quality Control
Proj. Arch. -	

PROJECT NO.
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SHEET TITLE
MECHANICAL SYMBOLS & SCHEDULES

SHEET NO.
M3.01

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SUPPLY FAN SCHEDULE

MARK	SF-1	SF-2	SF-TB	SF-PB
SERVES	AHU-1	AHU-2,3,4	CS-1	CS-2
TYPE	ROOF CENT.	ROOF CENT.	INLINE	INLINE
DRIVE	BELT	BELT	DIRECT	DIRECT
SPEED CONTROL	VFD	VFD	CONSTANT	CONSTANT
CFM	5150	5625	35	35
EXT. SP. (IN. W.G.)	0.85	0.75	.25"	.25"
IMP. SIZE (IN.)	18.00	18.00	4	4
HORSEPOWER	2 HP	2 HP	(26 WATTS)	(26 WATTS)
VOLTAGE	460V/3-PHASE	460V/3-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	S&P	S&P
MODEL	180 ASP	180 ASP	TD-100	TD-100
SONES (MAX.)	20.0	20.0	6	6
NOTES	1,2,3,4,5,6	1,2,3,4,5,6	7,8,9	7,8,9

NOTES

1. STATIC PRESSURE SHOWN IS EXTERNAL TO UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN.
2. PROVIDE WITH STARTER WITH INTEGRAL DISCONNECT SWITCH.
3. PROVIDE FAN WITH PREFABRICATED INSULATED ROOF CURB.
4. 24V MOTORIZED DAMPER INTERLOCKED WITH FAN OPERATION.
5. WIND RATING: FAN SHALL SHALL BE ABLE TO WITHSTAND WIND LOADS OF 140 MPH.
6. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
7. FAN SHALL BE CONTROLLED BY LOCAL OCCUPANCY SENSOR. COORDINATE WITH DIV. 26 FOR INTEGRATION.
8. DISCONNECT SWITCH SHALL BE PROVIDED ADJACENT TO FAN, IN CEILING PLENUM BY DIVISION 26.
9. PROVIDE OPTIONAL ACCESSORIES: VOLUME DAMPER WITH LOCKING QUADRANT SET TO SCHEDULED CFM, INLINE FILTER BOX S&P MODEL 'FB', BACKDRAFT DAMPER S&P MODEL MCA.

EXHAUST FAN SCHEDULE

MARK	EF-1	EF-2	EF-3	EF-4	EF-5	EF-6
SERVES	LOCK 145 & LOCK 142	MEN 139 & WOM. 138	RR & COACH LOCK	LOCK 134 & LOCK 131	LAUNDRY & JAN.	FOOTBALL LOCKERS
TYPE	ROOF CENT.	ROOF CENT.	ROOF CENT.	ROOF CENT.	ROOF CENT.	ROOF CENT.
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
SPEED CONTROL	CONSTANT	CONSTANT	ECM	CONSTANT	CONSTANT	ECM
CFM	400	2175	2375	425	550	3100
EXT. S.P. (IN. W.G.)	0.50	0.75	0.75	0.50	0.65	.75
IMP. SIZE (IN.)	10.0	16.5	15.0	10.0	12.0	18.0
HORSEPOWER (WATTS)	(144 W)	3/4 HP	3/4 HP	(144 W)	1/3 HP	3/4 HP
VOLTAGE	120V/1-PHASE	277V/1-PHASE	277V/1-PHASE	120V/1-PHASE	120V/1-PHASE	277V/1-PHASE
MANUFACTURER	COOK	COOK	COOK	COOK	COOK	COOK
MODEL	ACE-D 100C150H	ACE-D 165C11D	165C17D (VF)	ACE-D 100C150H	ACE-D 120C17D	180C17D (VF2)
SONES (MAX.)	15.0	15.0	15.0	15.0	15.0	15.0
NOTES	1 THRU 7	1 THRU 7	1 THRU 7	1 THRU 7	1 THRU 7	1 THRU 7

NOTES

1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT.
2. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN.
3. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY..
4. INSULATED ROOF CURB, BACKDRAFT DAMPER, AND BIRDSCREEN.
5. INTEGRAL DISCONNECT SWITCH.
6. FAN SHALL SHALL BE ABLE TO WITHSTAND WIND LOADS OF 140 MPH.
7. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.

HVLS FAN SCHEDULE

MARK	HVLS-1,2	HVLS-3,4,5,6,7,8
FAN DIAMETER	14'	8'
DRIVE TYPE	GEARLESS DIRECT DRIVE	GEARLESS DIRECT DRIVE
STARTER TYPE	VSD	VSD
HORSEPOWER	1 HP	1 HP
VOLTAGE	208V/1-PH	208V/1-PH
FLA	–	–
MANUFACTURER	BIG ASS FAN	BIG ASS FAN
MODEL NO.	ESSENCE	ESSENCE
NOTES	1,2,3,4,5	1,2,3,4,5

NOTES

1. MANUFACTURER PROVIDED DIGITAL REMOTE CONTROLLER. REFER TO MECH. PLANS FOR LOCATION.
2. FAN SHALL BE NFPA COMPLIANT, IP65 WASH DOWN RATED, AND UL 507 CERTIFIED.
3. FAN BLADES, HUB, AND FRAME SHALL HAVE 10 YEAR MECHANICAL WARRANTY.
4. MOTOR, CONTROLLER SHALL HAVE 10 YEAR STANDARD ELECTRICAL WARRANTY.
5. PROVIDE FAN WITH OPTIONAL DISCONNECT SWITCH.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, NECK SIZE SHOWN ON DRAWING TITUS TMS A1–12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH TITUS PAR B1–12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, NECK SIZE SHOWN ON DRAWING TITUS PAR C1–12" X 12"
D	SIDEWALL SUPPLY REGISTER – ADJUSTABLE DOUBLE DEFLECTION, 0.75" SPACING, AIRFOIL FRONT BLADES PARALLEL TO SHORT DIMENSION, ALUMINUM CONSTRUCTION, WHITE FINISH TITUS 300FS
E	SIDEWALL RETURN REGISTER – FIXED 35° DEFLECTION, 0.75" SPACING, AIRFOIL BLADES PARALLEL TO SHORT DIMENSION, ALUMINUM CONSTRUCTION, WHITE FINISH TITUS 350FS
F	SIDEWALL EXHAUST REGISTER – FIXED 35° DEFLECTION, 0.75" SPACING, AIRFOIL BLADES PARALLEL TO SHORT DIMENSION, ALUMINUM CONSTRUCTION, WHITE FINISH TITUS 350FS
G	ROUND ADJUSTABLE CEILING DIFFUSER – STEEL CONSTRUCTION, OPPOSED BLADE DAMPER WITH EQUALIZING GRID, 3 FIXED ADJUSTMENT POSITIONS, WHITE FINISH TITUS TMRA

LOUVER SCHEDULE

MARK	QUANTITY	SERVES	TYPE	CFM	PRESSURE DROP (IN.WG.)	WIDTH (IN.)	HEIGHT (IN.)	FREE AREA (SQ.FT.)	MANUFACTURER	TYPE	MODEL
L-1	2	BOILER	RELIEF	–	0.10	38	24	MIN. 2.78	RUSKIN	HURRICANE	HZ700MD
L-2	2	PRESS BOXES	INTAKE	35	0.10	16	12	0.41	RUSKIN	HURRICANE	HZ700MD

NOTES

1. LOUVERS ASSIGNED TO "BOILER" MUST MEET MINIMUM FREE AREA AT PRESSURE DROP AND AIR FLOW SPECIFIED. LOUVERS SHALL BE INSTALLED IN ACCORDANCE WITH 2015 IFGC SECTION 304.
2. LOUVERS SHALL MEET AMCA 540/550 STANDARD WITHOUT REQUIRING ADDITIONAL ACCESSORIES.

SOUND ATTENUTAOR SCH.

MARK	SA-1
WIDTH (IN.)	48
HEIGHT (IN.)	36
LENGTH (IN.)	36
CFM	7000
PRESSURE DROP (IN.WG.)	.08
VOLTAGE	208V/1-PH
FLA	10 A
MANUFACTURER	COMMERCIAL ACOUSTICS
MODEL NO.	HPA
NOTES	1,2,3

NOTES

1. GALVANIZED STEEL CONSTRUCTION..
2. AIRFOIL DESIGN.
3. MINERAL GLASS FIBER ACOUSTICAL FILL.

MOTORIZED CONTROL VALVE SCHEDULE

MARK	SERVICE	TYPE
AHU-1	CHW	3-WAY
AHU-2	CHW	2-WAY
AHU-3	CHW	2-WAY
AHU-4	HW	3-WAY
AHU-4	CHW	2-WAY
VAV-1.08 THRU 1.10, 3.02 THRU 3.04	HW	3-WAY
ALL OTHER VAV BOXES	HW	2-WAY
ALL VENT. TERMINAL (VT) BOXES	HW	2-WAY

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
CARLOS A. RODRIGUEZ
129140
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director -
Designer CAR
Proj. Arch. -

Drawn By CAR
Quality Control

PROJECT NO.
23-155.00

SHEET TITLE
MECHANICAL SCHEDULES (CONT'D.)

SHEET NO.
M3.02

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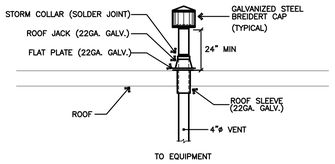
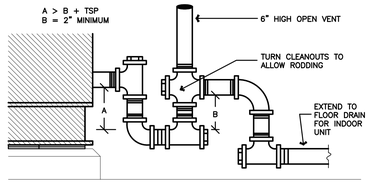


15 VENT DETAIL

NO SCALE

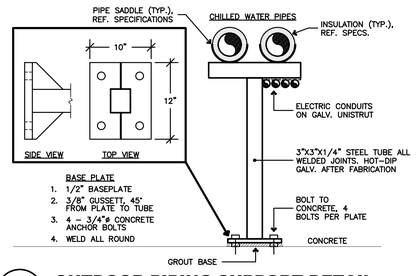


14 CONDENSATE DRAIN DETAIL

NO SCALE

NOTES:

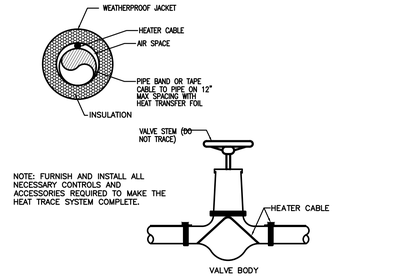
1. REFER TO AHU SCHEDULE FOR CONDENSATE PIPE SIZES.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



13 OUTDOOR PIPING SUPPORT DETAIL

NO SCALE

NOTE: SEE FLOOR PLANS AND ELEVATIONS FOR HEIGHT REQUIREMENTS.

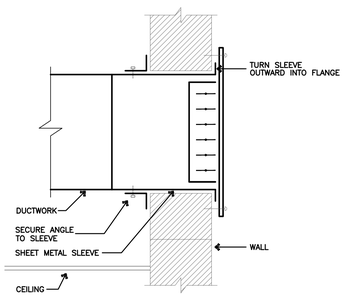


12 HEAT TRACE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

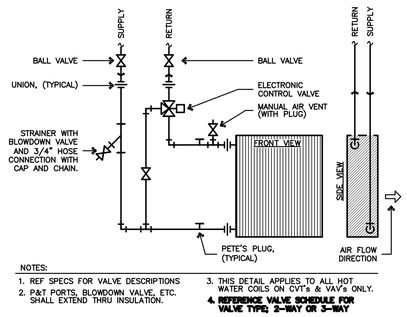


11 SIDEWALL GRILLE DETAIL

NO SCALE

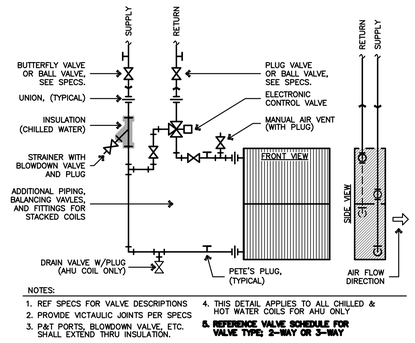
NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



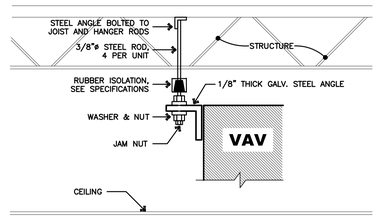
10 CVT & VAV COIL PIPING DETAIL

NO SCALE



9 AHU COIL PIPING DETAIL

NO SCALE

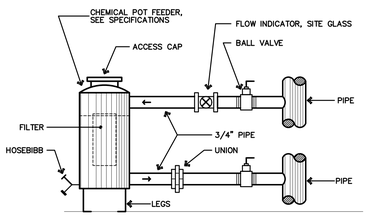


8 VAV HANGER DETAIL

NO SCALE

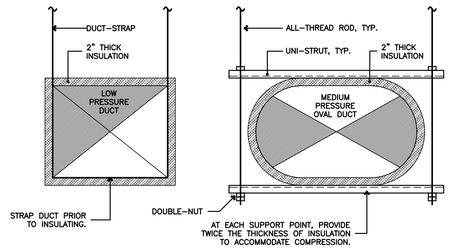
NOTES:

1. VAV BOXES WITHOUT FANS MAY BE HUNG WITH DUCT STRAPS.



7 CHEMICAL POT FEEDER/FILTER

NO SCALE

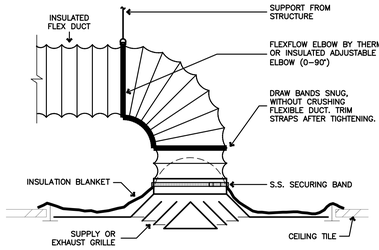


6 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:

1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

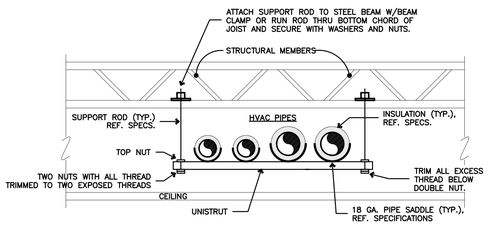


5 AIR DEVICE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

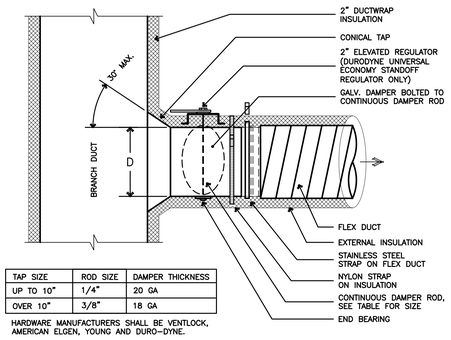


4 MULTIPLE PIPE HANGER DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

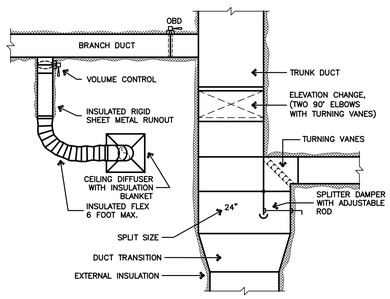
HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

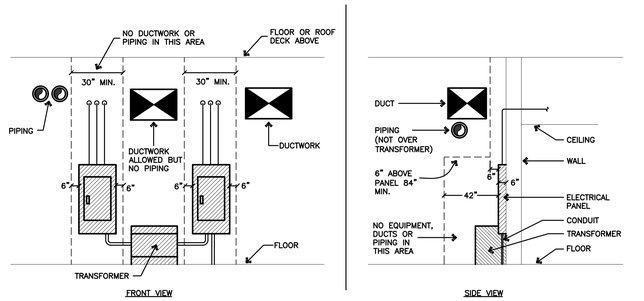


2 DUCTWORK DETAILS

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
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01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director -
Designer CAR
Proj. Arch. -

Drawn By CAR
Quality Control

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SHEET TITLE
MECHANICAL DETAILS

SHEET NO.
M3.03

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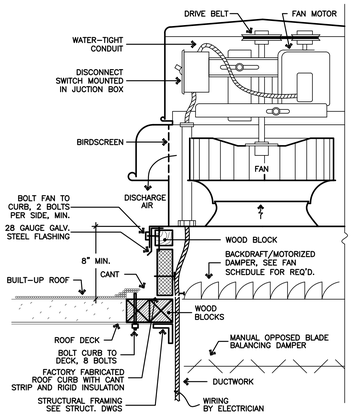
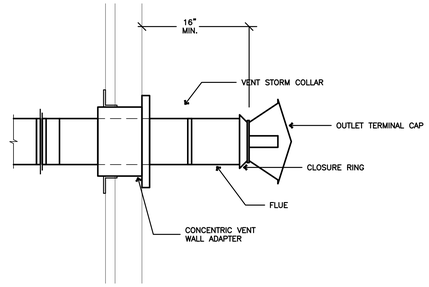


11 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

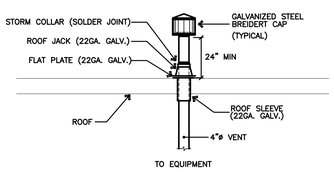


14 HORIZONTAL FLUE VENT INSTALLATION DETAIL

NO SCALE

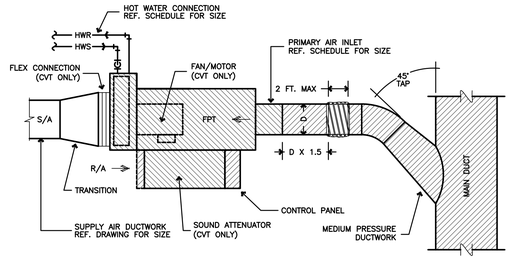
NOTES:

1. FLUE VENT SHALL BE PROVIDED BY BOILER SUPPLIER TO MATCH BOILER.
2. PROVIDE OFFSETS AS REQUIRED.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



13 VENT DETAIL

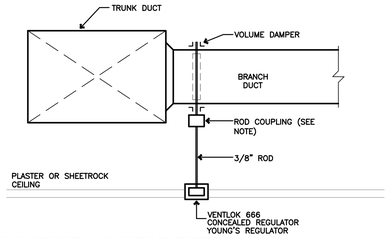
NO SCALE



12 AIR TERMINAL UNIT DETAIL-HW REHEAT

NO SCALE

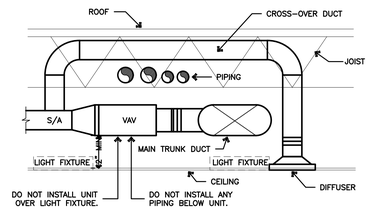
SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



10 DUCT REGULATOR DETAIL

NO SCALE

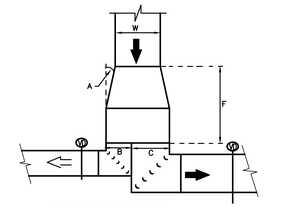
REGULATOR SHALL BE USED IN ALL AREAS WHERE DAMPER IS LOCATED ABOVE HARD CEILING.
NOTE: PROVIDE VENTLOK 680, 2 PIECE GEAR DRIVE ELBOW WHEN DAMPER ROD IS MOUNTED HORIZONTAL.



9 MECHANICAL SYSTEM INSTALLATION ORDER

NO SCALE

NOTE: INSTALL HVAC PIPING ABOVE DUCTWORK UNLESS INDICATED OTHERWISE ON FLOOR PLANS.



DIMENSIONAL RELATIONSHIPS

1. ANGLE 'A' TO BE 15° OR LESS (BOTH SIDES)
2. SEE FLOOR PLANS FOR B, C, & W.
3. VERTICAL DIMENSION TO BE MAINTAINED THRU F.
4. CHANGE IN VERTICAL DIMENSION TO OCCUR AFTER TURNS.

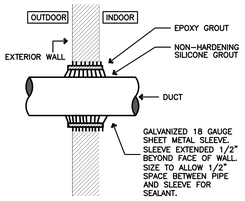
NOTE: VOLUME DAMPERS REQUIRED FOR LOW PRESSURE DUCT SYSTEMS ONLY.

8 DUCT TEE DETAIL

NO SCALE

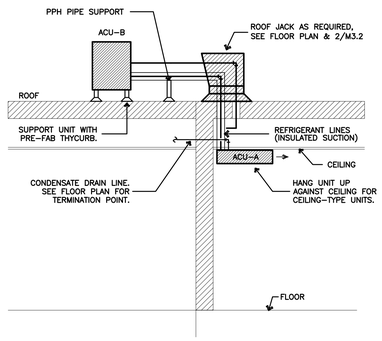
NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



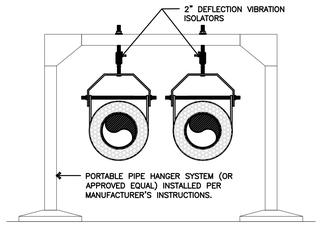
7 EXTERIOR WALL PENETRATION DETAILS

NO SCALE



6 ACU'S INSTALLATION DETAIL

NO SCALE

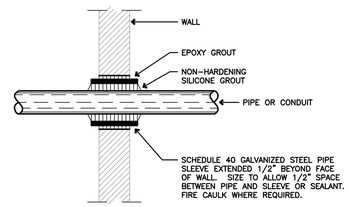


5 PIPE HANGER ON ROOF

NO SCALE

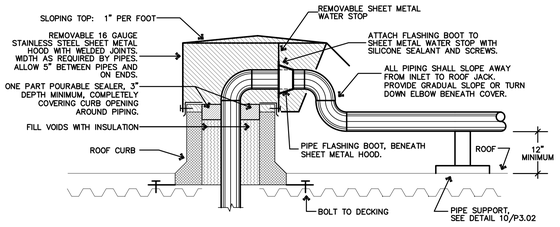
NOTES:

1. SPACE PIPE SUPPORTS AT MAXIUM INTERVALS OF 10'-0" ON CENTER AND WITHIN 2'-0" OF ALL CHANGES IN PIPE DIRECTION.
2. REFER TO ARCHITECTURAL PLANS FOR ROOF CONSTRUCTION DOCUMENTATION.



4 FLOOR & WALL PENETRATION DETAIL

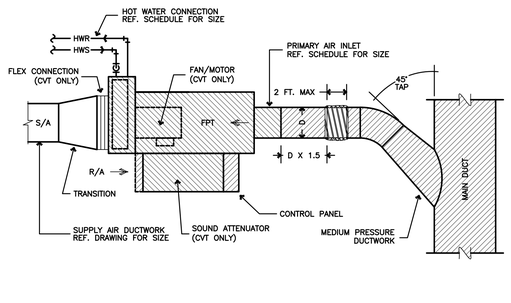
NO SCALE



3 ROOF PIPE JACK DETAIL

NO SCALE

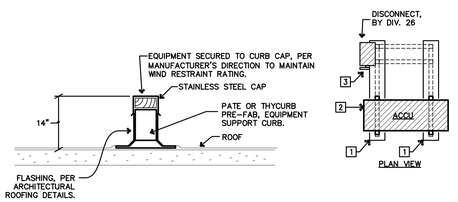
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



2 AIR TERMINAL UNIT DETAIL-HW REHEAT

NO SCALE

SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1. EQUIPMENT CURB, FASTENED TO ROOF AND SPACED TO MATCH CONDENSING UNIT FEET. CURB SHALL BE ENGINEERED AND CERTIFIED TO SECURE THE INSTALLED EQUIPMENT UP TO 140 MPH WINDS. ALL ENGINEERING AND INSTALLATION REQUIREMENTS SHALL BE PROVIDED BY THE CURB MANUFACTURER.
2. MINI-SPLIT TYPE CONDENSING UNIT, ATTACHED TO TOP OF EQUIPMENT SUPPORT CURB, IN ACCORDANCE WITH CURB MANUFACTURER'S REQUIREMENTS FOR WIND RESTRAINT.
3. EQUIPMENT CURBS, EXTENDED TO ALLOW FOR INSTALLATION OF ELECTRICAL DISCONNECT ON UNISTRUT RACK. PROVIDE A MINIMUM OF 12" BETWEEN DISCONNECT AND CONDENSING UNIT. DISCONNECT AND SUPPORTING UNISTRUT SHALL BE BY DIVISION 26.

1 ROOF CONDENSING UNIT SUPPORT DETAIL

NO SCALE

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

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-	CAR
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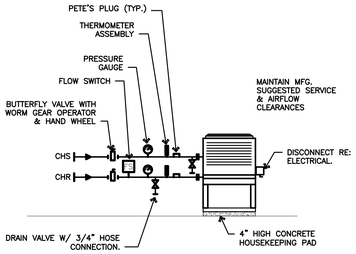
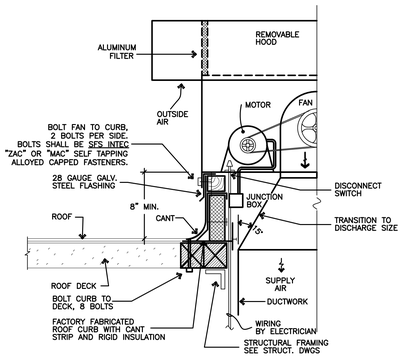


4 AIR COOLED CHILLER PIPING

NO SCALE

NOTES:

1. SUPPORT ALL PIPING FROM PIPE SUPPORTS AT GRADE; NO PIPE WEIGHT IS TO BE IMPOSED ON CHILLER CONNECTIONS.

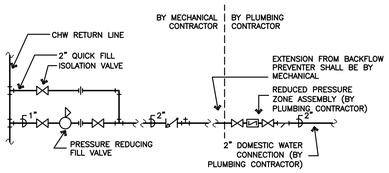


3 SUPPLY FAN DETAIL

NO SCALE

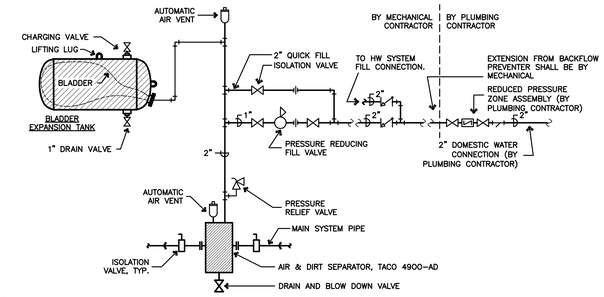
NOTES

1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
3. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 MAKE UP WATER CONNECTION DETAIL

NO SCALE



1 EXPANSION TANK DETAIL

NO SCALE

STATE OF TEXAS
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PROFESSIONAL ENGINEER

01/06/2025

ISSUED: 01/06/2025

REVISIONS

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MECHANICAL DETAILS

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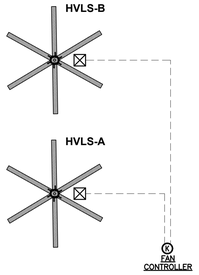
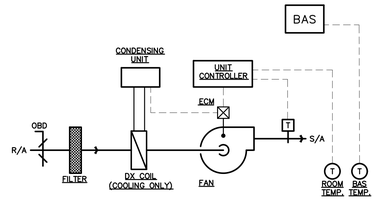


6 HVLS FAN CONTROL SCHEMATIC

NO SCALE

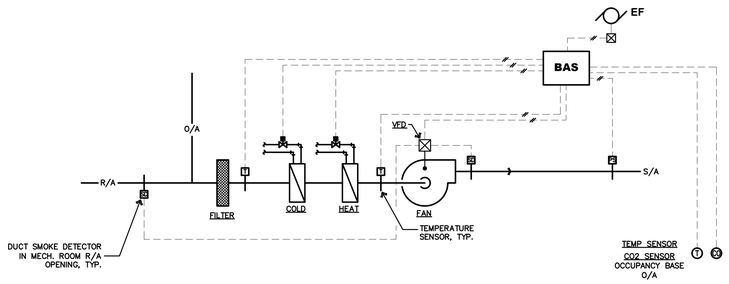
NOTES:
1. APPLIES TO HVLS-1 THRU 8.
2. FAN OPERATION SHALL BE CONTROLLED BY LOCAL CONTROLLER.
3. FANS SHALL BE CONTROLLED IN PAIRS.



5 DX MINI-SPLIT CONTROLS (IDF/MDF ROOMS)

NO SCALE

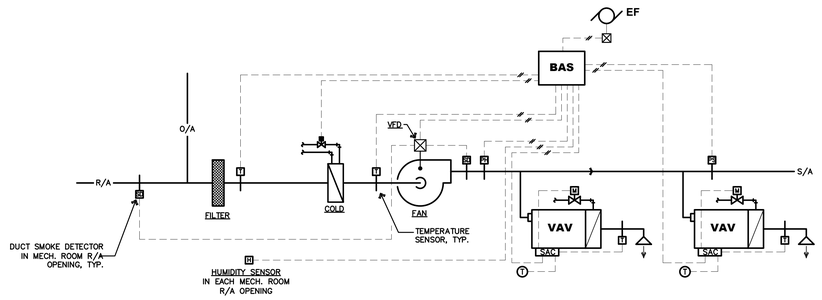
1. REFERENCE WRITTEN SPECIFICATIONS FOR SEQUENCE OF OPERATION.



4 SINGLE-ZONE VAV SYSTEM CONTROLS SCHEMATIC

NO SCALE (APPLICABLE TO AHU-4)

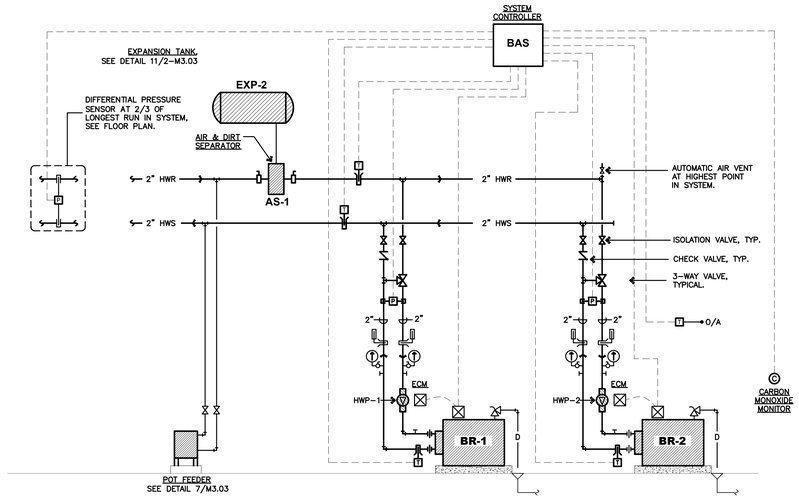
NOTES:
1. FOR VAV UNIT, SET INITIAL MINIMUM SUPPLY AIR VALVE CFM AT 30% PRIOR TO ACTIVATING REHEAT TO SATISFY SETPOINT.
2. REFERENCE SPECIFICATIONS FOR CONTROL SEQUENCE.



3 MULTI-ZONE VAV SYSTEM CONTROLS SCHEMATIC

NO SCALE (APPLICABLE TO AHU-1, 2, 3)

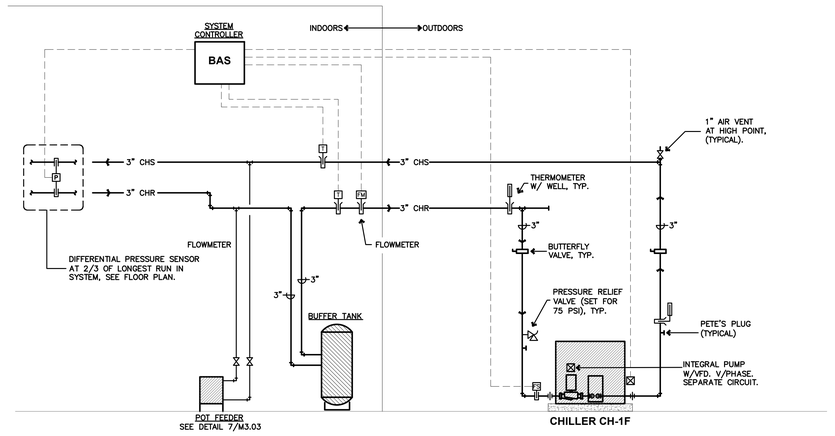
NOTES:
1. FOR VAV UNIT, SET INITIAL MINIMUM SUPPLY AIR VALVE CFM AT 30% PRIOR TO ACTIVATING REHEAT TO SATISFY SETPOINT.
2. REFERENCE SPECIFICATIONS FOR CONTROL SEQUENCE.



2 HOT WATER SYSTEM PIPING AND CONTROLS SCHEMATIC (VARIABLE PRIMARY)

NO SCALE

NOTES:
1. SYSTEM CONFIGURATION: CONSTANT PRIMARY
2. BR-1 AND BR-2 ARE CONDENSING BOILERS.
3. PIPE ALL DRAIN AND RELIEF VALVES, AND FLUE VENT DRAINS TO NEAREST FLOOR DRAIN.
4. CIRCULATOR PUMPS (CP) INTERLOCKED WITH BOILER OPERATION.
5. SEE SPECIFICATIONS FOR SEQUENCE OF OPERATION.



1 CHILLED WATER SYSTEM PIPING AND CONTROLS SCHEMATIC (VARIABLE PRIMARY)

NO SCALE

NOTES:
1. SYSTEM CONFIGURATION: VARIABLE PRIMARY
2. PUMP AND PUMP CONTROLLER SHALL BE INTEGRAL TO CHILLER.
3. SEE SPECIFICATIONS FOR SEQUENCE OF OPERATION.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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01/06/2025

ISSUED: 01/06/2025

REVISIONS

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Director -
Designer CAR
Proj. Arch. -
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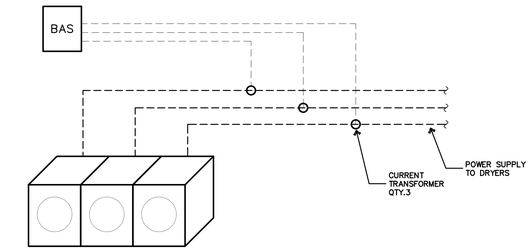
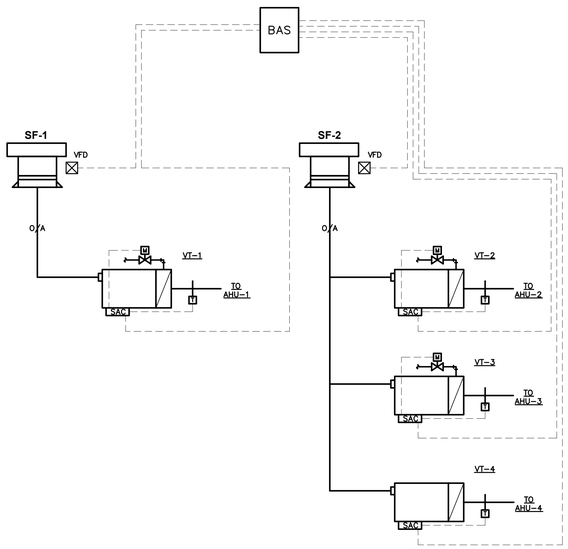


3 COMMERCIAL DRYER INTERLOCK

NO SCALE

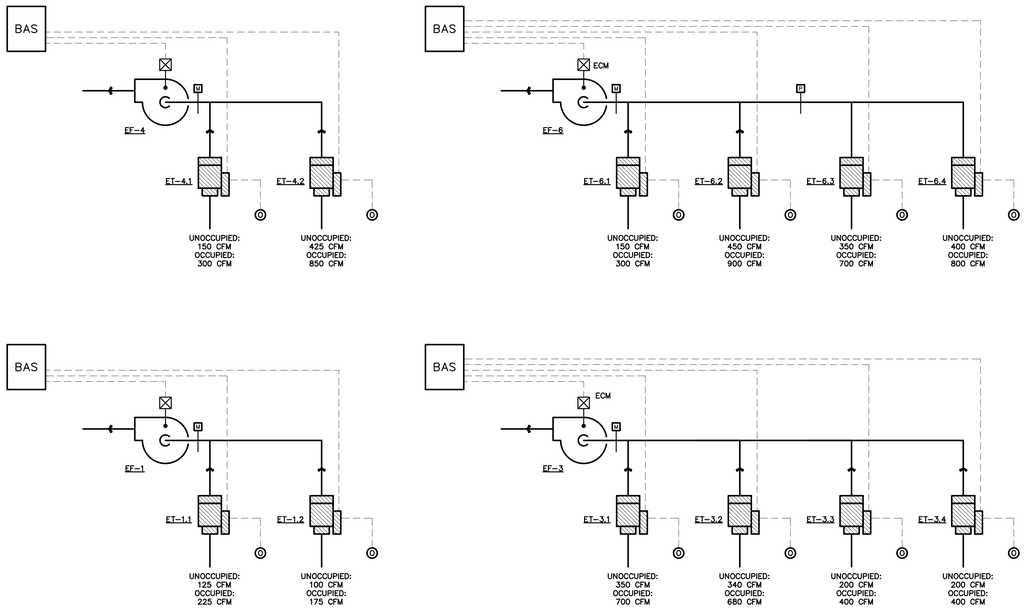
NOTES:
1. BAS SHALL MONITOR OPERATIONAL STATUS OF COMMERCIAL DRYERS BY UTILIZING CIRCUIT TRANSFORMERS ALONG THE POWER WIRING TO TO THE DRYERS.
2. BAS SHALL MODULATE DAMPERS AT VENTILATION TERMINALS TO MAINTAIN POSITIVE OR NEUTRAL PRESSURE IN THE BUILDING.
3. EACH DRYER, WHEN ENERGIZED, SHALL REPRESENT 1200 CFM OF EXHAUST AIR TO THE TOTAL BUILDING AIR BALANCE CALCULATION.



2 SUPPLY TERMINAL CONTROLS

NO SCALE

NOTES:
1. APPLICABLE TO VENTILATION TERMINAL BOXES.
2. VENTILATION TERMINAL (ST) BOXES SHALL MODULATE DAMPER POSITION BASED ON OCCUPANCY STATUS.
3. TERMINAL BOXES WITH HW REHEAT COILS SHALL MAINTAIN A 55 F° LAT.
4. BAS SHALL MONITOR FLOW THROUGH VENTILATION AND EXHAUST TERMINALS TO MAINTAIN A POSITIVE BUILDING PRESSURIZATION.



1 EXHAUST TERMINAL CONTROLS

NO SCALE

NOTES:
1. APPLICABLE TO EXHAUST TERMINAL BOXES.
2. EXHAUST TERMINALS SHALL MODULATE DAMPER POSITION BASED ON SPACE OCCUPANCY.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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01/06/2025

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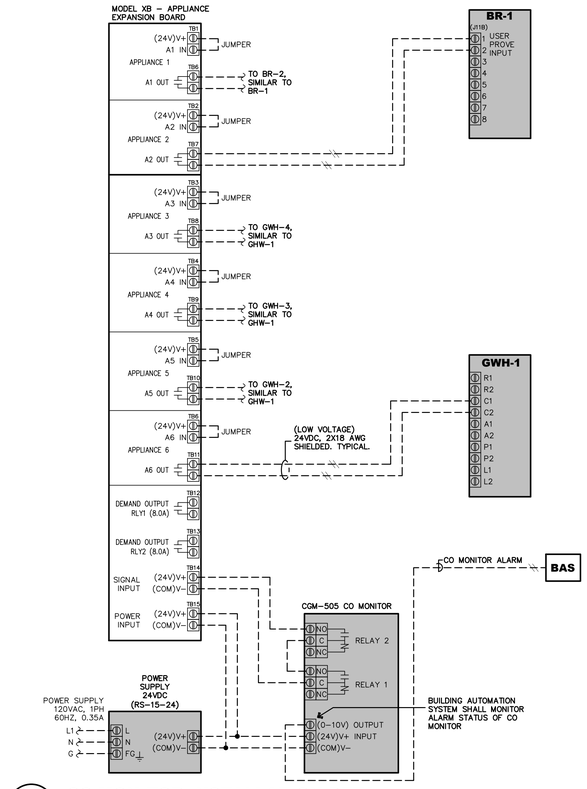

1 CO MONITOR INSTALLATION DETAIL

NO SCALE

NOTES:

1. CARBON MONOXIDE MONITOR SHALL BE INSTALLED TO MEET THE REQUIREMENTS OF THE TEXAS BOILER RULES – 65.603.
2. CARBON MONOXIDE (CO) MONITOR SHALL BE US DRAFT COMPANY MODEL CGM–505, OR EQUAL. MONITOR SHALL BE SUPPLIED WITH 24VDC POWER SUPPLY, MODEL RS–15–24. MONITOR & POWER SUPPLY ARE AVAILABLE DIRECTLY FROM LOCAL BOILER REPRESENTATIVE.
3. COORDINATE WITH ELECTRICIAN FOR POWER CONNECTIONS TO 24VDC POWER SUPPLY AND CO MONITOR.
4. COORDINATE WITH CONTROLS CONTRACTOR FOR CONNECTION OF ALARM OUTPUT FROM CO MONITOR TO BAS.
3. COORDINATE WITH ELECTRICIAN FOR LOW VOLTAGE CONNECTION OF CO MONITOR RELAY OUTPUT TO GWH TERMINAL STRIP.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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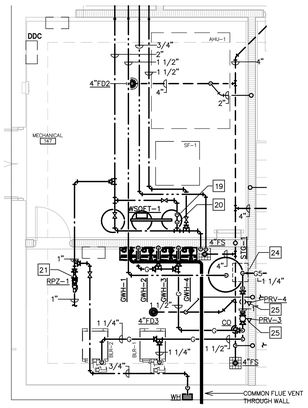
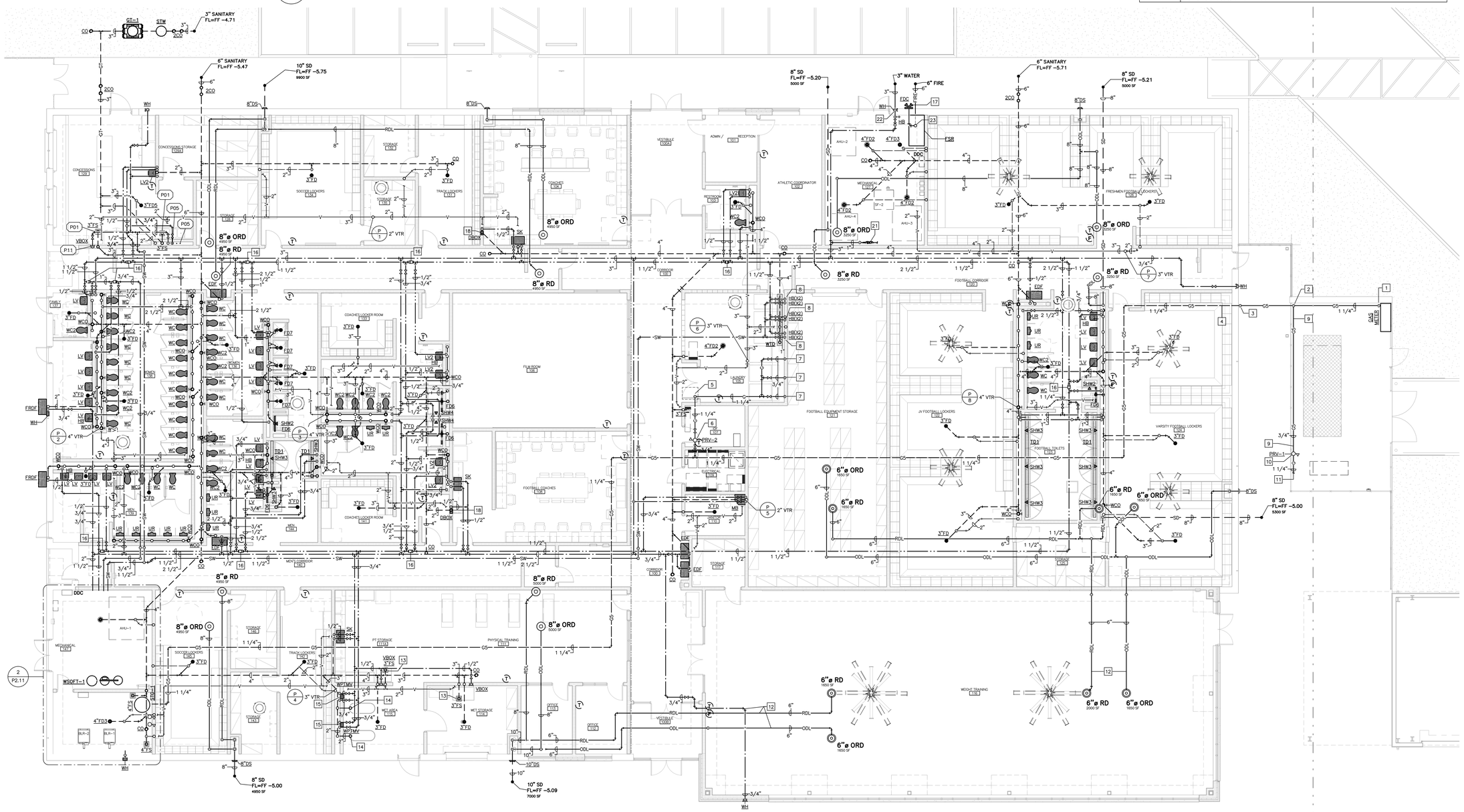


2 ENLARGED PLUMBING FLOOR PLAN - MECH ROOM

3/16" = 1'–0"

Plumbing Key Notes	
Key Note	Keynote Text
1	1.5" GS GAS LINE FROM METER, SUPPORTED FROM WALL AT 6FT AFF WITH UNISTRUT AND PIPE CLAMPS ON 5FT CENTERS.
2	TURN GAS LINE UP TO 6" ABOVE OVERHEAD CANOPY. PROVIDE PIPE SUPPORT FROM WALL AS HIGH AS POSSIBLE. PIPING SHALL SPAN CANOPY WITHOUT INTERMEDIATE SUPPORT.
3	PIPING SHALL TURN UP EXTERIOR WALL AND UP ONTO ROOF. PROVIDE TWO UNISTRUT & PIPE CLAMP PIPE SUPPORTS ON WALL, NEAR EACH ELBOW ON THE VERTICAL PIPING RISER.
4	GAS PIPING ROUTED ACROSS THE ROOF ON PIPE SUPPORTS. REFERENCE PIPE SUPPORT DETAIL 10/P3.02.
5	GAS PIPING DOWN THROUGH ROOF IN ROOF JACK, PROVIDED BY DIV.23 AND ALSO USED BY DIV.26. COORDINATE WITH OTHER UTILITIES BEING ROUTED THROUGH THE SAME ROOF JACK. DIV.22 IS RESPONSIBLE FOR INSTALLTION OF PIPING AND SEALING OF OPNEINGS INTO ROOF JACK, PER DETAIL 9/P3.02.
6	GAS PRV INSTALLED IN PIPING ON ROOF. REFERENCE SCHEDULE AND DETAIL 8/P3.02 FOR MORE INFORMATION.
7	GAS PIPING, ROUTED OVERHEAD AND DOWN INSIDE BLOCK WALL. STUB OUT AT 24" A.F.F. PROVIDE 1.5" CONTINUOUS SLEEVE FOR PIPING INSIDE WALL. TERMINATE WITH DRIP LEG AND ISOLATION VALVE, SIMILAR TO DETAIL 7/P3.02. MAKE FINAL CONNECTION TO APPLIANCE WITH UL LISTED FLEXIBLE GAS LINE.
8	3/4" HOSE BIB, INSTALLED ON WALL BEHIND WASHER/EXTRACTOR AT 60" AFF. FINAL CONNECTION TO WASHER BY DIVISION 22, USING FLEXIBLE HOSES PROVIDED WITH EQUIPMENT.
9	GAS PIPING ROUTED ALONG FENCELINE, SUPPORTED FROM GRADE WITH UNISTRUT AND PIPE CLAMPS.
10	GAS PRV, INSTALLED AT 12" AFF MINIMUM. REFERENCE SCHEDULE AND DETAIL 8/P3.02 FOR MORE INFORMATION.
11	EXTEND LOW PRESSURE GAS LINE FROM OUTLET OF PRV TO FINAL CONNECTION AT GENERATOR, INSTALLING DRIP LEG AND ISOLATION VALVE, SIMILAR TO DETAIL 7/P3.02, OUTSIDE OF GENERATOR HOUSING. SUPPORT FROM GRADE, SIMILAR TO 5PSI GAS. COORDINATE FINAL CONNECTION LOCATION WITH APPROVED GENERATOR SUBMITTAL.
12	ALL PIPING WITHIN WEIGHT ROOM SHALL BE INSTALLED AS HIGH AS POSSIBLE WITHIN THE STEEL JOIST SPACE AND ROUTED THROUGH THE JOIST WEBBING TO THE EXTERIOR WALL. TURN DOWN AT THE WALL AND INTO ADJACENT CEILING PLENUM. ALL PIPIGN SHALL BE INSULATED PER THE SPECIFICATIONS AND PAINTED TO MATCH ARCHITECTURAL.
13	COORDINATE FINAL LOCATION OF DRAIN WITH PROVIDED ICE MAKER LEG LAYOUT.
14	COORDINATE FINAL LOCATION OF 2" DRAIN STUB–UP WITH DIMENSIONS OF PROVIDED WHIRLPOOL DRAIN LOCATION.
15	WHIRLPOOL THERMOSTATIC MIXING VALVE AND SUPPLY VALVE/HOSE INSTALLED PER DETAIL 5/P3.01.
16	HW SUB–LOOP DIVERTING TEE, REFERENCE DETAIL 9/P3.03 FOR INSTALLATION REQUIREMENTS.
17	FIRE DEPARTMENT CONNECTION, MOUNTED TO BUILDING SIDEWALL FACING STREET. REFERENCE FIRE SPRINKLER RISER DETAIL 8/P3.03 FOR ADDITIONAL REQUIREMENTS.
18	DRAIN/VALVE BOX INSTALLED BELOW THE COUNTER FOR CONNECT TO UNDERCOUNTER ICE MAKER. ELEVATION SHALL BE AS LOW AS POSSIBLE TO FIT P–TRAP ABOVE SLAB AND ALLOW FOR GRAVITY DRAIN OF ICE MACHINE BASIN INTO DRAIN OPENING. FINAL CONNECTION TO ICE MACHINE WATER SUPPLY AND EXETNSION OF DRAIN LINE SHALL BE BY DIV.22.
19	1.5" CW DOWN TO WATER SOFTENER INLET. REFERENCE DETAIL 6/P3.01 FOR ADDITIONAL REQUIREMENTS FOR WATER SOFTENER PIPING.
20	1.5" SOFTENED WATER SUPPLY FROM SOFTENER OUTLET. SOFTENED WATER SHALL FEED GWH–FH1 & FH2, CONCESSIONS AREA, AND LAUNDRY EQUIPMENT.
21	DOMESTIC CW TO RPZ BACKFLOW PREVENTER SERVING HYDRONIC HOT AND CHILLED MAKE–UP WATER. RPZ INSTALLED BY DIVISION 22. PIPING DOWNSTREAM OF RPZ TO EQUIPMENT MAKE–UP WATER STATION SHALL BE BY DIVISION 23. ROUTE DRAIN LINE OVERHEAD AND TURN DOWN INTO WASTE RECEPTOR IN THE SAME ROOM.
22	DOMESTIC CW ENTRY, REFERENCE DETAIL 6/P3.03 FOR ADDITIONAL REQUIREMENTS.
23	FIRE SPRINKLER RISER, REFERENCE DETAIL 8/P3.03 FOR ADDITIONAL REQUIREMENTS.
24	GAS PIPING DOWN THROUGH ROOF IN ROOF JACK, PROVIDED BY DIV.23 AND ALSO USED BY DIV.26. COORDINATE WITH OTHER UTILITIES BEING ROUTED THROUGH THE SAME ROOF JACK. DIV.22 IS RESPONSIBLE FOR INSTALLTION OF PIPING AND SEALING OF OPNEINGS INTO ROOF JACK, PER DETAIL 9/P3.02.
25	GAS PRV–3 AND PRV–4, INSTALLED STACKED ON WALL 60" AFF AND BELOW FOR ACCESSIBILITY. EXTEND 1.5" LOW PRESSURE GAS LINE OVERHEAD TO BOILERS AND GWH AS SHOWN.



1 PLUMBING FLOOR PLAN - FIELD HOUSE

1/8" = 1'–0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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LICENSED PROFESSIONAL ENGINEER
06/01/21

ISSUED: 01/06/2025

REVISIONS

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Director	Drawn By
Approver	Author
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SHEET TITLE

PLUMBING FLOOR PLAN - FIELD HOUSE

SHEET NO.

P2.11

STANTON ENGINEERING GROUP

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PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB: SCHEDULE 40, DWV PVC.

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

STORM

BELOW SLAB: SCHEDULE 40, DWV PVC OR STANDARD WEIGHT BELL AND SPIGOT CAST IRON WITH TY-SEAL JOINTS

ABOVE STANDARD WEIGHT, NO-HUB CAST IRON PIPING.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD-FREE SOLDER, OR PRESS TYPE FITTINGS. REFERENCE SPECIFICATIONS FOR ALTERNATE MATERIALS AND ASSOCIATED REQUIREMENTS.

EXTERIOR: PRE-FABRICATED, 304L STAINLESS STEEL IN BUILDING RISER TO TRANSITION FROM INTERIOR COPPER PIPING (GROOVED CONNECTION) TO EXTERIOR PVC (PUSH-ON, BY CIVIL). ZURN WBR, OR EQUAL. WHERE WATER CONNECTION IS SMALLER THAN RISER, PROVIDE APPROPRIATE TRANSITION FITTINGS TO SMALLEST AVAILABLE RISER.

NATURAL GAS

ABOVE GRADE: PROVIDE ASTM A53 SCHEDULE 40, BLACK STEEL PIPE, PAINTED YELLOW. WELDED JOINTS 2" AND UP, THREADED FOR 1.5" AND UNDER.

SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.

GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P3.00) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC., OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF SERVICES, INVERT ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT. REFERENCE ELECTRICAL DRAWINGS FOR LOCATIONS OF ELECTRICAL EQUIPMENT AND COORDINATE WITH ELECTRICAL SUBCONTRACTORS ACCORDINGLY. SEE DETAIL 1/P3.02. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 5/P3.02. FIRE CAULK WHERE REQUIRED. THIS INCLUDES ALL WALLS, INTERIOR AND EXTERIOR. THIS INCLUDES FIRE SPRINKLER PIPING.
7. ALL CLEANOUTS SHALL BE CONNECTED TO SANITARY LINES USING WYES AND/OR LONG RADIUS ELLS. SANITARY TEES ARE NOT ACCEPTABLE. 2" MINIMUM SIZE.
8. ALL WASTE AND VENT PIPING BELOW SLAB SHALL BE 2" MINIMUM.
9. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS. SEE DETAIL 3/P3.02.
10. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
11. TOP OF FLOOR DRAINS IN MECHANICAL, AHU AND BOILER ROOMS SHALL BE SET 1-1/2" BELOW FINISHED FLOOR SURFACE. CONCRETE FLOOR SHALL BE SLOPED TO DRAIN, REFERENCE ARCHITECTURAL DRAWINGS.
12. PROVIDE A SHUTOFF VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVE SHALL BE BALL VALVE IF PIPE SIZE IS 2" OR LESS AND GATE VALVE OR BUTTERFLY VALVE IF LARGER THAN 2". SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE. PROVIDE 18" X 18", STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES (MIFAB MODEL MP-SS-C). BALL VALVES AND BUTTERFLY VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON BOTTOM OF PIPE. ISOLATING WATER VALVES ABOVE CEILINGS SHALL BE INSTALLED NO MORE THAN 24" ABOVE CEILING. VALVES ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN REASONABLE REACH OF CEILING MOUNTED ACCESS PANEL.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED AT ALL FIXTURES OR BANKS OF FIXTURES PER THE RISER DIAGRAMS. FOR ANY ARRESTERS INSTALLED INSIDE THE WALL OR ABOVE INACCESSIBLE CEILINGS, AN ACCESS PANEL SHALL BE PROVIDED FOR MAINTENANCE. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE TO PROVE FREE FLOWING, SEE SPECIFICATIONS.
15. PROVIDE VENTED SLEEVE (2 PIPE SIZES LARGER THAN GAS PIPE UNLESS NOTED OTHERWISE) FOR ALL GAS PIPING IN GROUND BELOW PAVING OR SIDEWALKS AND INSIDE BUILDING IN WALLS AND IN UNVENTILATED CEILING SPACES. SEE SPECIFICATIONS.
16. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON TOP OR SIDES ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR IN ANY INACCESSIBLE LOCATION. ALL GAS VALVES SHALL BE EASILY ACCESSIBLE. REFER TO DETAIL 7/P3.02 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 8/P3.02 FOR TYPICAL PRV INSTALLATION.
17. CENTER WALL HYDRANTS IN BRICK PATTERN OF EXTERIOR WALLS, REFERENCE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
18. ALL REFRIGERATORS WITH ICE MAKERS, COMMERCIAL TYPE COFFEE MAKERS, ICE MAKERS, COFFEE VENDING MACHINES AND OTHER ITEMS PROVIDED BY OTHERS THAT REQUIRE A WATER CONNECTION SHALL HAVE A CW VALVE BOX, "VBOX", INSTALLED TO ALLOW EASY ACCESS AND REMOVAL OF MACHINE. ALSO, INSTALL IN-LINE FILTER IN WATER CONNECTION.
19. REFER TO CIVIL DRAWINGS FOR SITE SANITARY, SITE STORM SEWER, FIRE SERVICE AND DOMESTIC WATER SERVICE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING INSIDE BUILDING TO OUTSIDE LOCATIONS SHOWN ON PLUMBING DRAWINGS. PLUMBING CONTRACTOR SHALL INCLUDE COST OF FINAL TIE-INS TO SITE SERVICES.
20. PER THE DRAWINGS, ALL DRAINS (FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, KITCHEN DRAINS, SHOWER DRAINS, ETC.) SHALL BE VENTED AND TRAP PRIMED - NO EXCEPTIONS. TRAP PRIMING SHALL BE ACCOMPLISHED USING WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES AT ALL LOCATIONS WHERE SHOWN ON RISER DIAGRAM, NO EXCEPTIONS. PROSET SYSTEMS TRAP GUARD SEWER GAS EMISSION PROTECTION DEVICES SHALL BE PROVIDED WHERE SHOWN ON THE RISER DIAGRAMS.
21. ALL PIPING LOCATED ON ROOF (GAS PIPING) SHALL BE INSTALLED ON ROOF PIPE SUPPORTS PER DETAIL 10/P3.02, 6-FOOT ON CENTER. INSTALL ROOF PIPE JACK PER DETAIL 9/P3.02 FOR ALL PIPING THROUGH ROOF.
22. COORDINATE LOCATIONS OF ALL ROOF DRAINS AND OVERFLOW ROOF DRAINS WITH ARCHITECTURAL DRAWINGS.
23. FOR COMBINATION WASTE AND VENT SYSTEMS (LOCATED IN CENTRAL PLANT AREA), DRAIN P-TRAPS SHALL BE SIZE OF PIPE SHOWN ON DRAWINGS (I.E. TWO PIPE SIZES LARGER THAN DRAIN SIZE). FOR EXAMPLE, A 4" FLOOR DRAIN SHALL HAVE A 6" P-TRAP.
24. FOR ALL PLUMBING FIXTURES, IF COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING AT DRAIN CONNECTION FOR EASE OF SERVICING AND REPAIRS. COPPER DRAIN PIPING WILL ONLY BE ALLOWED FOR DIRECT/STRAIGHT STUB-OUT OF FIXTURE DRAIN PIPING THROUGH WALL.
25. DO NOT INSTALL ANY PIPING BENEATH CVT OR VAV BOXES. THIS INCLUDES FIRE SPRINKLER PIPING.
26. WHERE UNDERGROUND VENT PIPE SIZE IS NOT NOTATED, VENT SHALL BE 2" DIAMETER.
27. WHERE UNDERGROUND SANITARY PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR SIZE. NOT BELOW GRADE SANITARY PIPE SHALL BE SMALLER THAN 2". NO SANITARY LINE OR P-TRAP FOR A DRAIN/FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE DRAIN/FIXTURE SCHEDULE.
28. WHERE ABOVE GROUND VENT PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR VENT SIZE.
29. WHERE CW/HW PIPING SIZE TO THE FIXTURE IS NOT SHOWN ON THE FLOOR PLAN, REFER TO THE RISER DIAGRAMS FOR CW/HW PIPE SIZE. NO PIPING TO FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE FIXTURE SCHEDULE.

PLUMBING SYMBOLS LEGEND

———	SANITARY WASTE BELOW SLAB	FD	FLOOR DRAIN
———	SANITARY WASTE ABOVE SLAB	FSINK	FLOOR SINK
--GT--	GREASE TRAP SANITARY	2CO	DOUBLE SAN. CLEANOUT
——V——	VENT PIPING ABOVE SLAB	CO	SANITARY SEWER CLEANOUT
———	VENT PIPING	WCO	WALL CLEANOUT
——AV——	ACID VENT PIPING	EXIST.	EXISTING
———	DOMESTIC COLD WATER PIPING	SAN.	SANITARY
———	DOMESTIC HOT WATER PIPING	CW	DOMESTIC COLD WATER
———	DOMESTIC HOT WATER RETURN PIPING	HW	DOMESTIC HOT WATER
——SW——	SOFTENED WATER	HWR	DOMESTIC HOT WATER RETURN
——TW——	TEMPERED WATER PIPING	V	VENT PIPING
——TWR——	TEMPERED WATER RETURN PIPING	WC	WATER CLOSET
——G25——	GAS SERVICE (BY LOCAL GAS CO.)	LAV	LAVATORY
——G5——	INTERMEDIATE PRESSURE GAS PIPING (5 PSIG)	UR	URINAL
——G——	LOW PRESSURE GAS PIPING (6-13" WG)	SK	SINK
——D——	DRAIN/RELIEF VENT PIPING	MB	MOP BASIN
		EDF	ELECTRIC DRINKING FOUNTAIN
		WH	WALL HYDRANT
		HB	HOSEBIBB
	STOP VALVE	WBOX	CLOTHES WASHER DRAIN/VALVE BOX
	WATTS 909 RPZ BACKFLOW PREVENTER	VBOX	REFRIGERATOR WATER VALVE BOX
P-1	RISER P-1, 2" VENT THROUGH ROOF	VB	VACUUM BREAKER
2" VTR		ESEW	EMERGENCY SHOWER - EYEWASH
PA-1	ACID WASTE RISER PA-1,	SK-AW	ACID WASTE LAB SINK
2" ACID VTR	2" ACID VENT THROUGH ROOF	WF	WASHFOUNTAIN
	GAS PRESSURE REDUCING/REGULATING VALVE	EW	EMERGENCY EYE/FACE WASH
A	COMPRESSED AIR OUTLET	SHW	SHOWER
G	LABORATORY GAS COCK	SS	SCULLERY/PAINT SINK
AS	WATER HAMMER ARRESTER (SIOUX CHIEF SIZE)	EWH	ELECTRIC WATER HEATER
GT	GREASE TRAP	GWH	GAS WATER HEATER
STW	SAMPLING TEST WELL	CP	HOT WATER CIRCULATOR PUMP
MH	SANITARY MANHOLE	SFAN	SUPPLY FAN
GM	GAS METER	OV	FRESH AIR VENT
WM	WATER METER	AHU	AIR HANDLING UNIT
ANT	ACID NEUTRALIZATION TANK	KSFAN	KITCHEN SUPPLY FAN
ACO	ACID WASTE CLEANOUT	KEF	KITCHEN EXHAUST FAN
AWCO	ACID WASTE WALL CLEANOUT	WSOFT	WATER SOFTENER
2ACO	DOUBLE ACID WASTE CLEANOUT	SP	SUMP PUMP
TYP.	TYPICAL	TMV	THERMOSTATIC MIXING VALVE
		WPTMV	WHIRLPOOL FILL ASSEMBLY

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF-CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO-LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7-210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV-GUARD VANDAL-PROOF INSULATION KITS OVER P-TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BROCAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS – REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

CAST-IN-PLACE TRENCH DRAIN SCHEDULE

MARK		WTD	
TRENCH WIDTH		12"	
BOTTOM GEOMETRY		FLAT	
TRENCH SLOPE		1%	
STARTING DEPTH		24"	
GRATE MATERIAL		SEE NOTES	
GRATE FINISH		SEE NOTES	
GRATE TYPE		SEE NOTES	
GRATE LOAD RATING		'C' (320 PSI)	
RAIL MATERIAL		STEEL	
RAIL FINISH		HOT DIPPED GALV.	
CATCH BASIN TYPE		N/A	
CATCH BASIN WIDTH		N/A	
UTILITY STRUT		NONE	
UTL. STRUT SPACING		–	
NOTES		1,2,3,4,5	

TRENCH SPECIFICATIONS

TRENCH SYSTEM SHALL CONSIST OF PRE-MANUFACTURED TRENCH FORMS, GALVANIZED GRATING AND FRAMES/RAILS.

FORMS - ABT TFX SERIES: PRE-MANUFACTURED TRENCH FORMS USING NON-CFC EPS FOAM. FORMS TO BE PRE-SLOPED OR NON-SLOPED FORM SEGMENTS. EACH SEGMENT TO HAVE A FULL LENGTH DEFORMING GROOVE. NON-SLOPING SECTIONS MUST HAVE WRITTEN APPROVAL BY ENGINEER PRIOR TO INSTALLATION. FORMS TO HAVE GRATE SEAT WIDTH 2" WIDER THAN FORM WIDTH. FORMS TO BE WITHIN .0625" (1.58MM) TOLERANCES. INVERT SLOPE IS AS NOTED ON PLANS. NON-PETROLEUM BASED FORM RELEASE IS TO BE USED FOR SMOOTH INTERIOR WALLS AND EASY FORM REMOVAL.

GRATING: GRATES MUST BE FLUSH WITH TOP OF RAILS. GRATING SHALL BE MADE IN U.S.A., AND SHALL CONFORM TO THE FHWA'S "BUY AMERICA" POLICY 23 CFR 635.410(B) AND FEDERAL ACQUISITIONS REGULATIONS (FAR) 52.225 'BUY AMERICAN ACT'.

FRAMES /RAILS-F21G: HOT DIPPED GALVANIZED 1.75" X 1.75" X .188" (44.45MM X 44.45MM X 4.76MM) STEEL ANGLE RAILS CONFORMING TO ASTM A36. STANDARD HEADED CONCRETE ANCHOR STUDS BISECT RAIL-ANCHORING DEVICE A MINIMUM EVERY 12" (305MM). GRATE RAILS TO PROVIDE A MINIMUM OF 1.187 SQUARE INCHES CONCRETE BEARING AREA PER INCH OF TRENCH LENGTH ON EACH SIDE. GRATES ARE RETAINED TO FRAME/RAIL WITH APPROPRIATE TOGGLE LOCKING DEVICE. AUXILIARY FRAMES ARE TO BE USED AS NOTED ON PLANS TO FACILITATE RADII, INTERSECTIONS, GRADE CHANGES AND EXPANSION, CONTROL & CONSTRUCTION JOINTS. FRAMES AND RETAINERS SHALL BE MADE IN USA, AND SHALL CONFORM TO THE FHWA'S "BUY AMERICA" POLICY 23 CFR 635.410(B) AND FEDERAL ACQUISITIONS REGULATIONS (FAR) 52.225 'BUY AMERICAN ACT'.

INSTALL ENTIRE SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND DETAILS.

APPROVED MANUFACTURERS:

ABT, INC TFX SERIES TRENCH FORMER SYSTEM IS THE BASIS OF DESIGN. ALTERNATE MANUFACTURERS ARE ACCEPTABLE WITH PRIOR APPROVAL ONLY.

NOTES:

1. TRENCH DRAIN SYSTEM IS BEING USED FOR WASHER/EXTRACTOR DRAIN INLET. BASIS OF DESIGN IS ABT MODEL TS-12FG-2SSLS
2. PROVIDE 1/4" ALUMINUM PLATE OVER BASIN IN LIEU OF GRATE.
3. PROVIDE FULL WIDTH 1/4" ALUMINUM PLATE WITH OPENING FOR WASHER/EXTRACTOR DISCHARGE CENTERED IN PLATE.
4. PROVIDE STAINLESS STEEL ANGLE AND FILTER SCREENS.
5. 4" DIAMETER OUTLET SHALL HAVE STAINLESS STEEL SEDIMENT CUP

PLUMBING DRAINS, CLEANOUTS AND HYDRANTS

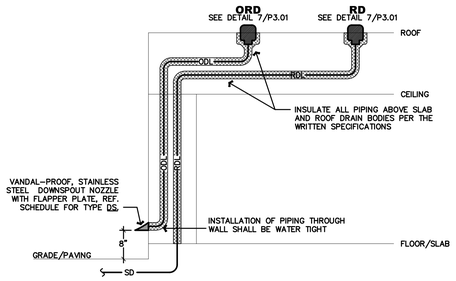
MARK	MIN. CONNECTION SIZES (IN.) SAN	VENT	CW	HW	DESCRIPTION/SPECIFICATION FOR FIXTURE OR EQUIPMENT
FD	VARIES	2	1/2	–	TOILET FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" DIAMATER HEAVY-DUTY STAINLESS STEEL STRAINER AND SECURITY SCREWS WADE 1100-MR6-85-X-VP.
FD2	4	2	–	–	EQUIPMENT FLOOR DRAIN – CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE-FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE AND PROSET SYSTEM SEWER GAS EMISSIONS PROTECTION DEVICE IN LIEU OF TRAP PRIMER TAP - WADE MODEL 1210-TD-304-PROSET. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD3	4	2	–	–	GRATED MECHANICAL ROOM FLOOR DRAIN – CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY-DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND PROSET SYSTEM SEWER GAS EMISSIONS PROTECTION DEVICE IN LIEU OF TRAP PRIMER TAP WADE MODEL 1310-304-PROSET.
FD4	VARIES	2	–	–	GENERAL PURPOSE FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 6" DIAMATER HEAVY-DUTY STAINLESS STEEL STRAINER AND SECURITY SCREWS AND PROSET SYSTEM SEWER GAS EMISSIONS PROTECTION DEVICE IN LIEU OF TRAP PRIMER TAP WADE 1100-MR6-85-X-VP-PROSET.
FD5	VARIES	2	–	–	KITCHEN FLOOR DRAINS SHALL BE SIMILAR TO TYPE FD-4 EXCEPT WITH 7" DIAMETER SOLID STAINLESS STEEL TRACTOR GRATE WADE 1100-A7-85-X-VP-PROSET. PROVIDE 4" DIAMETER STAINLESS STEEL FUNNEL WHERE SHOWN ON DRAWINGS.
FD6	2	2	–	–	LINEAR, BARRIER FREE, SHOWER DRAIN – STAINLESS STEEL GRATE, PVC CHANNEL, HAIR STRAINER, 2" THREADED OUTLET, 2" PVC FLOOR DRAIN BODY WITH MEMBRANE CLAMP. INFINITY DRAIN S-AG-65XX-CDP22. VERIFY LENGTH WITH SHOWER WIDTH PRIOR TO ORDERING. ALL DRAINS 84" OR LESS.
FD7	2	2	–	–	SHOWER FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 5" DIAMATER HEAVY DUTY STAINLESS STEEL STRAINER AND SECURITY SCREWS AND PROSET SYSTEM SEWER GAS EMISSIONS PROTECTION DEVICE IN LIEU OF TRAP PRIMER TAP WADE 1100-MR5-85-X-VP-PROSET.
TD1	2	2	–	–	SHOWER TRENCH DRAIN – 304 STAINLESS STEEL, PRE-FABRICATED TRENCH DRAIN SYSTEM; 6" WIDE WITH 4" WIDE INTERNAL DIMENSION, 1M OR 2M LONG SECTIONS, END TO END TO MATCH OVERALL LENGTH OF FLOOR PLAN; INTEGRATED 1/2" SLOPE; 4" NO-HUB BOTTOM OUTLET WITH PERFORATED DOME STRAINER; ANCHOR FLANGE AND MEMBRANE CLAMP; ADA COMPLIANT, PERFORATED STAINLESS STEEL GRATE WITH CLASS A WEIGHT RATING AND VANDAL RESISTANT HOLD DOWN HARDWARE. MIFAB P6060-6-C (WITH DOME STRAINER & OUTLET FROM P6060-LT)
HD	3	2	–	–	ADJUSTABLE HUB TYPE FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 4" DIAMETER CAST IRON HUB TOP WADE 1000-HD
FS	VARIES	2	–	–	FLOOR SINK – CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY CAST IRON TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE AND PROSET SYSTEM SEWER GAS EMISSIONS PROTECTION DEVICE. WADE MODEL 914-85-VP-16-26-48-PROSET
FS2	6	2	–	–	LARGE FLOOR SINK – CAST IRON, 12" DEEP SUMP, A.R.C. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 16" SQUARE HEAVY DUTY CAST IRON TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE AND WADE TRAP SEAL DEVICE IN LIEU OF TRAP PRIMER TAP WADE MODEL 9170-64-6NH-TSD-VP-16-26
CO	VARIES	–	–	–	FLOOR CLEANOUT – ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL-LINE-SIZE BRASS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL-PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES) WADE 6000-85-118-VP. PROVIDE CARPET FLANGE FOR CARPETED AREAS (CARPET MARKER SHALL NOT BE ACCEPTABLE) AND TERRAZZO RECESS FOR TERRAZZO FLOORS. OUTDOOR CLEANOUT – SAME AS TYPE "CO" EXCEPT WITH HEAVY-DUTY NICKEL BRONZE TOP WADE MODEL 6000-12-VP. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	VARIES	–	–	–	WALL CLEANOUT – CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL-LINE-SIZE PVC PLUG UP TO 4") ZURN MODEL Z-1440. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, NICKEL BRONZE WITH POLISHED TOP ACCESS DOOR WITH BEVELED EDGE AND VANDAL-PROOF SCREWS WADE 8303-85-VP. WALL CLEANOUT ACCESS SHALL BE INSTALLED FLUSH TO AND WITHIN 2" OF ACCESS PANEL. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH VANDAL-PROOF CENTER SCREW WADE 8304-6-85-VP.
2CO	4	–	–	–	DOUBLE CLEANOUTS – SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO-WAY RODDING. SINGLE CLEANOUT WITH 2-WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
HB	–	–	3/4	–	HOSEBIBB – 3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	–	–	3/4	–	RESTROOM WALL HYDRANT – NARROW WALL, WARM CLIMATE TYPE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5518
VBOX	–	–	1/2	–	CW VALVE BOX – 7" X 7" STAINLESS STEEL RECESSED BOX WITH ANGLE VALVE AND WATER HAMMER ARRESTER FOR CONNECTION TO APPLIANCE GUY GRAY MODEL SSMI86AB.
VBOX2	–	–	1/2	–	CW VALVE BOX – 7" X 7" STAINLESS STEEL RECESSED BOX WITH ANGLE VALVE AND WATER HAMMER ARRESTER FOR CONNECTION TO APPLIANCE GUY GRAY MODEL SSMI86AB.
WBOX	2	2	3/4	3/4	CLOTHES WASHER DRAIN/VALVE BOX – HEAVY-GAUGE GALVANIZED STEEL CONSTRUCTION, RECESSED IN WALL, VALVE AND DRAIN CONNECTIONS, WATTS DUO-CLOZ VALVE AND HAMMER ARRESTERS GUY GRAY MODEL WB-200HA.
DBOX	2	2	3/4	–	DRAIN/VALVE BOX – HEAVY-GAUGE STAINLESS STEEL CONSTRUCTION, RECESSED IN WALL, VALVE HOLES AND DRAIN CONNECTION, IPS 82174; PROVIDE ONE IPS 1/4 TURN LEAD FREE VALVE ONLY, CW FOR ICE MACHINE AND HW FOR DISHWASHER; PROVIDE J.H. VERNECO VA-4 AIR GAP IN DRAIN OUTLET.
DS	VARIES (STORM)	–	–	–	ROOF DRAIN OVERFLOW DOWNSPOUT NOZZLE – TYPE 304 STAINLESS STEEL DOWNSPOUT COVER, SECURING FLANGE, HINGED SLOTTED OR PERFORATED GRATE, SATIN FINISH, VANDAL PROOF SCREWS. ZURN 199-DC

KITCHEN PLUMBING CONNECTION SCHEDULE

MARK	DESCRIPTION
P01	FLOOR SINK – 4" OUTLET; FLUSH WITH FLOOR; CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY NICKEL BRONZE FRAME WITH 3/4-TRACTOR GRATE, PROSET SYSTEM SEWER GAS EMISSIONS PROTECTION DEVICE IN LIEU OF TRAP PRIMER TAP WADE MODEL 914-85-VP-16-26-48-PROSET.
P05	3/4" CW AND 3/4" HW – IN WALL 15" AFF, TO FAUCET. INSTALL SYMMONS THERMIXER 7-230-CK-FS MIXING VALVE ON HW SUPPLY SIDE OF FAUCET PER DETAIL 2/2-P3.02.
P11	1/2" CW – IN WALL, 60" AFF, TO ICE MAKER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO ICE MAKER FROM CHECK VALVE, THROUGH FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.

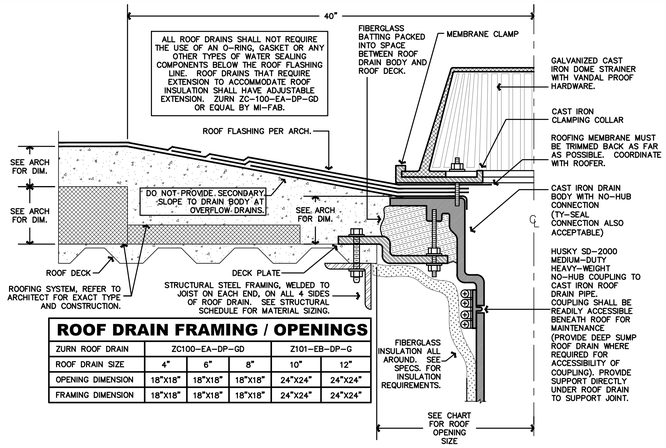
KITCHEN PLUMBING CONNECTION NOTES

1. REFERENCE KITCHEN CONSULTANT'S DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND INSTALLATION REQUIREMENTS.
2. ALL WATER PIPING INSTALLED EXPOSED BENEATH KITCHEN EQUIPMENT, INCLUDING PIPING INSTALLED BY DIVISION 11 (I.E. UNDER SINK COUNTERTOPS, SERVING TABLES, ETC.) SHALL BE INSULATED BY THE PLUMBING CONTRACTOR PER THE SPECIFICATIONS (INCLUDE ALUMINUM JACKETING FOR ALL PIPE INSULATION, PER SPECIFICATIONS).
3. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT IS NOT SHOWN; HOWEVER, PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THIS PIPING PER THE REQUIREMENTS OF THE KITCHEN CONSULTANT'S CONTRACT DOCUMENTS, PER THE REQUIREMENTS OF THE VARIOUS EQUIPMENT MANUFACTURERS PROVIDED AND PER THE IPC-2015, SECTION 802. ALL INDIRECT WASTE PIPING SHALL BE TYPE L COPPER. INSTALL 45° ELBOW AT END OF EACH INDIRECT WASTE PIPE TO DIRECT FLOW OF WATER INTO FLOOR SINK.
   - 3.1. IPC 2015 – SECTION 802.1.1 FOOD HANDLING – EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP, EACH WEL



8 ROOF DRAIN PIPING DETAIL

NO SCALE



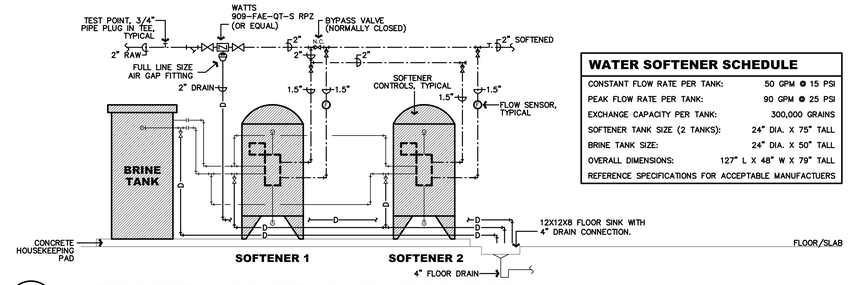
ROOF DRAIN FRAMING / OPENINGS					
ZURN ROOF DRAIN	ZC100-EA-DP-GD			ZI01-EB-DP-G	
ROOF DRAIN SIZE	4"	6"	8"	10"	12"
OPENING DIMENSION	18"X18"	18"X18"	18"X18"	24"X24"	24"X24"
FRAMING DIMENSION	18"X18"	18"X18"	18"X18"	24"X24"	24"X24"

7 ROOF DRAIN DETAIL

NO SCALE

NOTES:

1. PLUMBING CONTRACTOR SHALL CUT THE OPENINGS FOR THE ROOF DRAINS IN THE ROOF DECK BEFORE THE INSULATION BOARD AND TOP LAYER OF LIGHTWEIGHT CONCRETE ARE INSTALLED.
2. STRUCTURAL SHALL PROVIDE FRAMING FOR ROOF DRAIN OPENING. PLUMBING CONTRACTOR SHALL COORDINATE WITH STRUCTURAL FOR SIZE AND LOCATION OF FRAMING.
3. OVERFLOW ROOF DRAINS SHALL NOT BE PROVIDED WITH AN OVERFLOW COLLAR. DRAINS SHALL BE LOCATED SUCH THAT THE TOP OF DRAIN IS 2" TO 2.5" ABOVE THE INLET ELEVATION OF THE ADJACENT ROOF DRAIN. ELEVATION DIFFERENCE MUST BE FROM ROOF SLOPE & DRAIN BODY CLAMPING RING. A 2" COLLAR ONLY IS NOT ACCEPTABLE. LOCATE OVERFLOW DRAIN AWAY FROM ROOF DRAIN, 2" UP THE SLOPE OF ROOF, AS INDICATED ON THE FLOOR PLANS. COORDINATE EXACT LOCATION AND SLOPES WITH ROOFER PRIOR TO ROUGH-IN.



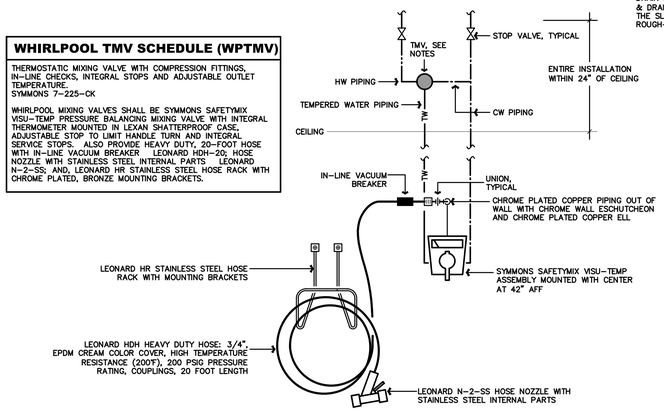
WATER SOFTENER SCHEDULE	
CONSTANT FLOW RATE PER TANK:	50 GPM @ 15 PSI
PEAK FLOW RATE PER TANK:	90 GPM @ 25 PSI
EXCHANGE CAPACITY PER TANK:	300,000 GRAINS
SOFTENER TANK SIZE (2 TANKS):	24" DIA. X 75" TALL
BRINE TANK SIZE:	24" DIA. X 50" TALL
OVERALL DIMENSIONS:	127" L X 48" W X 79" TALL
REFERENCE SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS	

6 WATER SOFTENING SYSTEM SCHEMATIC (WSOFT)

NO SCALE

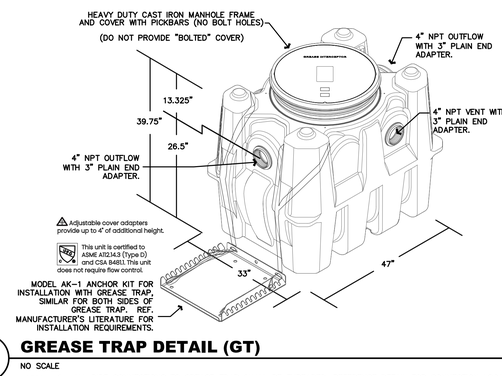
SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

WHIRLPOOL TMV SCHEDULE (WPTMV)
THERMOSTATIC MIXING VALVE WITH COMPRESSION FITTINGS, IN-LINE CHECKS, INTEGRAL STOPS AND ADJUSTABLE OUTLET TEMPERATURE. SYMMONS 7-225-CK WHIRLPOOL MIXING VALVES SHALL BE SYMMONS SAFETYMIX VSU-TEMP PRESSURE BALANCING MIXING VALVE WITH INTEGRAL THERMOMETER MOUNTED IN LEXAN SHATTERPROOF CASE, ADJUSTABLE STOP TO LIMIT HANDLE TURN AND INTEGRAL SERVICE STOPS. ALSO PROVIDE HEAVY DUTY, 20-FOOT HOSE WITH IN-LINE VACUUM BREAKER LEONARD HDH-20, HOSE NOZZLE WITH STAINLESS STEEL INTERNAL PARTS LEONARD N-2-SS AND, LEONARD HR STAINLESS STEEL HOSE RACK WITH CHROME PLATED, BRONZE MOUNTING BRACKETS.



5 WHIRLPOOL THERMOSTATIC MIXING VALVE DETAIL (WPTMV)

NO SCALE



GREASE TRAP SCHED	
MARK	GT-1
LOCATION	FB FIELD HOUSE
ACTUAL FIXTURE DFU	4 DFU
MAXIMUM ALLOWED GPM	75 GPM
CAPACITY (GAL)	125 GAL
GREASE CAPACITY (GAL)	118 GAL
SIZE (L X W X H)	33" X 47" X 40"
SCHIER PRODUCTS MODEL	GB-75

NOTES:

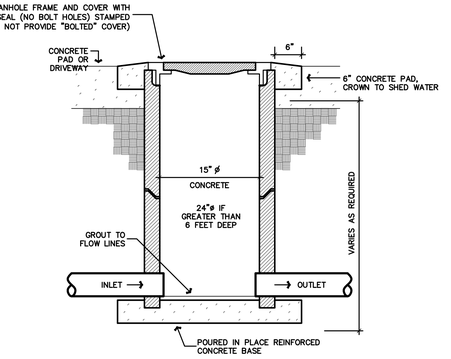
1. GREASE TRAP SHALL BE CONSTRUCTED OF POLYPROPYLENE AND DESIGNED FOR H-20 TRUCK LOADING WITH 24"ø PICKABLE CAST IRON TOP WITH SEAL.
2. GREASE TRAP SIZING IS BASED UPON TOTAL DRAINAGE FIXTURE UNITS OF ALL KITCHEN FIXTURES AND CORRESPONDING FLOW RATE. SIZING METHOD COMPLIES WITH REQUIREMENTS OF THE 2021 IPC.

4 GREASE TRAP DETAIL (GT)

NO SCALE

NOTES:

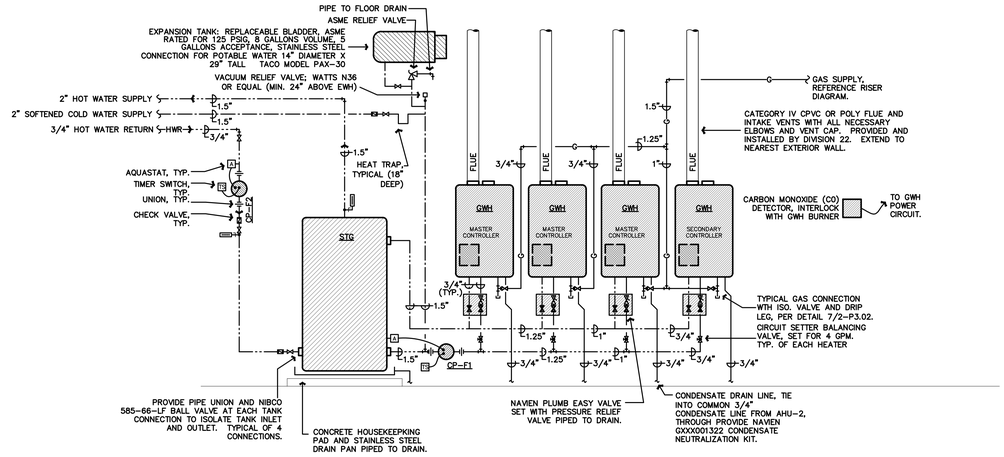
1. ALL PIPE CONNECTIONS TO GREASE TRAP SHALL BE THREADED, REFERENCE DETAIL FOR CONNECTION LOCATIONS AND FLOOR PLAN FOR PIPING SIZES.
2. IF GREASE TRAP IS SET IN UNPAVED AREA, MANHOLE COVERS SHALL BE INSTALLED IN 6" THICK CONCRETE PADS (MINIMUM 6" LARGER DIAMETER THAN MANHOLE COVER) CROWNED TO SHED WATER. ALSO, DOUBLE CLEANOUTS SHALL BE INSTALLED IN 6" THICK CONCRETE PADS PER THE WRITTEN SPECIFICATIONS.
3. PROVIDE MANUFACTURER DESIGNED ANCHOR KIT TO KEEP GREASE TRAP FROM FLOATING UP DUE TO HIGH WATER TABLE.
4. PLUMBING CONTRACTOR SHALL CLEAN AND PUMP OUT ALL SAND AND DEBRIS INSIDE GREASE TRAP AT SUBSTANTIAL COMPLETION OF PROJECT.



3 SAMPLE TEST WELL DETAIL (STW)

NO SCALE

NOTES:



GWH SCHEDULE			
MARK	GWH-1, 2, 3 & 4		
SERVES	FIELD HOUSE		
FUEL TYPE	NATURAL GAS		
NATURAL GAS INPUT	199,000 BTUH		
RECOVERY	230 GPH @ 100°F RISE		
TANK STORAGE	TANKLESS		
EFFICIENCY	96%		
FLUE VENT SIZE	2"		
INTAKE VENT SIZE	2"		
POWER REQ.	120V		
NAVIEN MODEL	NPE240S2		

1. PROVIDE PRESSURE GAUGE, LOW WATER CUT OFF (PROBE TYPE), SPARK IGNITION, INTAKE AND FLUE VENT, EIGHT (8) YEAR WARRANTY ON TANK AND HEAT EXCHANGER, AND ONE (1) YEAR WARRANTY ON ALL PARTS. TANKS SHALL BE ASME STAMPED.
2. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

STORAGE TANK	
MARK	STG-1
SERVES	GWH-1, 2, 3 & 4
CONSTRUCTION	GLASS LINED WITH MAG. ANODE
STORAGE CAPACITY	200 GALLONS
T&P VALVE	125 PSI
LOCHINVAR MODEL	RJA200

1. 5YR LIMITED TANK WARRANTY, BUILBWELL FOR CONTROL SENSOR, EXCEEDS ASHRAE ENERGY EFFICIENCY STANDARDS.

CIRCULATION PUMP SCHEDULE		
MARK	CP-F2	CP-F1
SERVES	BUILDING	STORAGE TANK
CONNECTION TYPE	FLANGED	FLANGED
CONNECTION SIZE	3/4"	1"
BODY MATERIAL	COMPOSITE - LF	SS - LF
NUMBER OF SPEEDS	5 SPEEDS	3 SPEED
GPM AT "X" FT H20	5 GPM @ 10FT	20 GPM @ 12FT
VOLTAGE	120V/1PH	120V/1PH
FLA	1 A	2 A
MANUFACTURER	TACO	TACO
MODEL	006e3-ECM	0013-MSSF2-IFC

1. PUMP SHALL BE SUITABLE FOR DOMESTIC WATER USE AND CERTIFIED LEAD FREE. PUMP SHALL HAVE CERAMIC SHAFT WITH CARBON BEARINGS (CIRCULATED WATER LUBRICATED), STAINLESS STEEL CAN TO ISOLATE MOTOR STATOR FROM FLUID, STAINLESS STEEL ROTOR SURFACES AND NON-OVERLOADING DESIGN AT ANY POINT ON THE PUMP CURVE.
2. PROVIDE B&G AUTOMATIC TIMER KIT TC-1 AND AQUASTAT AQS-3/4 FOR EACH PUMP.

1 DUPLEX GAS WATER HEATER WITH STORAGE AND TEMPERED SUPPLY LOOP DETAIL (GWH)

NO SCALE

NOTES:

1. ALL WATER HEATERS SHALL HAVE TEN (10) YEAR COMMERCIAL WARRANTY ON HEAT EXCHANGER AND FIVE (5) YEAR COMMERCIAL WARRANTY ON ALL PARTS. ANY ITEMS NOT COVERED BY WATER HEATER MANUFACTURER'S WARRANTY SHALL BE COVERED BY THE PLUMBING CONTRACTOR. SUBMITTAL SHALL INCLUDE WRITTEN DOCUMENTATION STATING THAT THE WARRANTY PERIOD SHALL BEGIN FROM DATE OF OWNER ACCEPTANCE OF BUILDING. WARRANTY DOCUMENTATION SHALL ALSO LIST WHO IS PROVIDING THE WARRANTY COVERAGE.
2. WATER HEATER SHALL BE HUNG FROM WALL WITH PROVIDED WALL BRACKETS. 3/4" PLYWOOD BACKING SHALL BE PROVIDED BEHIND SHEETROCK FOR SUPPORT OF UNIT.
3. ALL HW SYSTEMS SHALL STORE AND SUPPLY 140°F WATER.
4. ALL CIRCULATOR PUMPS SHALL BE CONTROLLED BY AQUASTAT & TIMER AND INSTALLED BY DIV 22 AND WIRED BY DIV 26.
5. ALL WATER PIPING (CW, HW & HWR) INSULATED WITH 1" THICK FIBERGLASS MEETING ALL REQUIREMENTS OF THE INTERNATIONAL ENERGY CODE. SEE WRITTEN SPECIFICATIONS.
6. PROVIDE NAVIEN GXXX001322 NEUTRALIZATION KIT FOR CONDENSATE DRAIN CONNECTION TO GWH.
7. CARBON MONOXIDE DETECTOR SHALL BE US DRAFT CO CGM-505, OR EQUAL. DETECTOR SHALL NEMA 1 ENCLOSURE, AUDIBLE AND VISUAL ALARMS, 0-10VDC CONTROL OUT SIGNAL, 120VAC INPUT VOLTAGE (PROVIDE TRANSFORMER AS REQURIED), AND 2 DRY CONTACTS.
   7.a. ALL CONTACT CLOSURES SHALL BE INTERLOCKED WITH GWH TO DE-ENERGIZE BURNERS WHEN CLOSED.
   7.b. RELAY #1 SHALL CLOSE IF CARBON MONOXIDE LEVEL REACHES 50PPM FOR 5 MIN. VISUAL AND AUDIBLE ALARM SHALL BE ACTIVATED.
   7.c. RELAY #2 SHALL CLOSE IMMEDIATELY IF CARBON MONOXIDE LEVEL REACHES 100PPM. VISUAL AND AUDIBLE ALARM SHALL BE ACTIVATED.

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STATE OF TEXAS
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106052
LICENSED PROFESSIONAL ENGINEER

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director | Drawn By
Designer | Quality Control
Proj. Arch.

PROJECT NO.
23-155.00

SHEET TITLE
PLUMBING DETAILS AND SCHEDULES

SHEET NO.
P3.01

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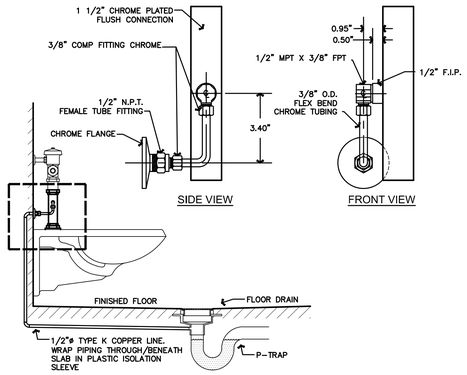
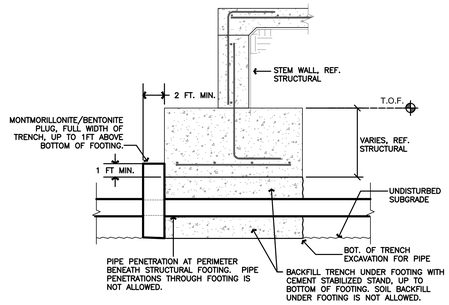


12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

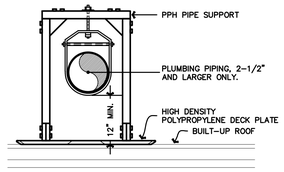
NO SCALE



13 TYPICAL DETAIL PIPE PENETRATION BELOW CONTINUOUS FOOTING

NO SCALE

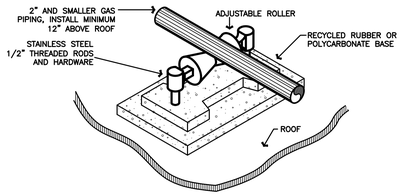
NOTES:
1. THIS DETAIL APPLIES AT LOCATIONS WHERE PIPE ELEVATION IS BELOW THE CONTINUOUS FOOTING. PIPES NOT ALLOWED BELOW COLUMN FOOTINGS.
2. PIPE PENETRATIONS IN FOOTINGS ARE NOT ALLOWED. COORDINATE WITH G.C. IF STEP FOOTING IS REQUIRED. REFERENCE STRUCTURAL DRAWINGS FOR SET FOOTING DETAIL.



11 ROOF PIPING SUPPORT DETAIL

NO SCALE

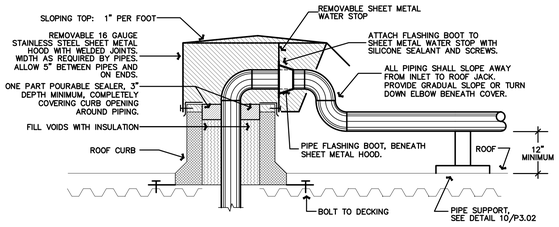
NOTES:
1. PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. PS-1-2.
2. INSTALL A MAXIMUM EIGHT (8) FEET ON CENTERS.
3. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.



10 ROOF PIPING SUPPORT DETAIL

NO SCALE

NOTES:
1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.
5. PIPE SUPPORT SHALL ONLY BE USED FOR PIPING 2" AND SMALLER. LARGER PIPING SHALL USE CLEVIS TYPE HANGER PER DETAIL 10/P5.02.

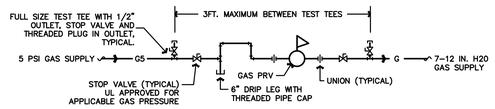


9 ROOF PIPE JACK DETAIL

NO SCALE

NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.

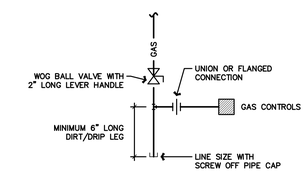
GAS PRV SCHEDULE					
MARK	PRV-1	PRV-2	PRV-3	PRV-4	
LOCATION	MECH YARD	BUILDING	BUILDING	BUILDING	
SERVES	GENERATOR	DRYERS	BOILERS	GWH	
GAS LOAD	500 CFH	645 CFH	798 CFH	796 CFH	
DISTANCE FROM METER	30 FT	400 FT	400 FT	400 FT	
DISTANCE TO LAST OUTLET	15 FT	30 FT	30 FT	30 FT	
INLET (SIZE/PRESSURE)	1" / 5PSI	1" / 5PSI	1" / 5PSI	1" / 5PSI	
OUTLET (SIZE/PRESSURE)	1.25" / 6-13" WG	1.5" / 6-13" WG	1.5" / 6-13" WG	1.5" / 6-13" WG	



8 GAS PRESSURE REGULATOR DETAIL (PRV)

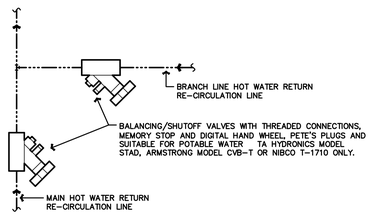
NO SCALE

NOTES:
1. GAS REGULATOR SHALL BE ANSI Z21.80 CERTIFIED FOR LINE PRESSURE REGULATION BETWEEN THE SERVICE REGULATOR AND CONNECTED EQUIPMENT.
2. ALL GAS REGULATORS WITH INLET PRESSURE ABOVE 2 PSI SHALL BE EQUIPPED WITH A FACTORY INSTALLED OVERPRESSURE PROTECTION DEVICE, AS PART OF THE ANSI Z21.80 CERTIFICATION.
3. GAS REGULATOR SHALL BE EQUIPPED WITH A VENT LIMITING DEVICE, SIZED IN ACCORDANCE WITH THE REGULATOR OUTLET PRESSURE.
4. ALL REGULATORS INSTALLED OUTDOORS SHALL BE RATED FOR OUTDOOR INSTALLATION.
5. BASIS OF DESIGN IN THE MAXITROL 325-L SERIES OF REGULATORS



7 TYPICAL GAS CONNECTION

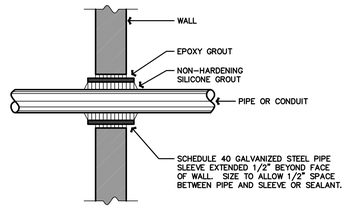
NO SCALE



6 HOT WATER BALANCING STATION

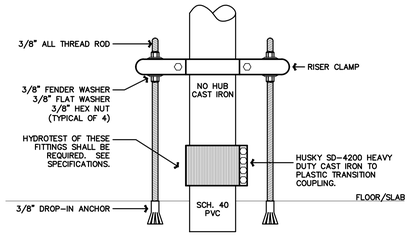
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

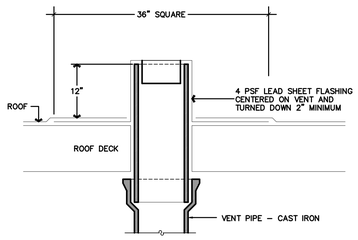
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

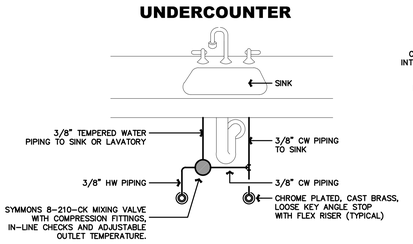
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

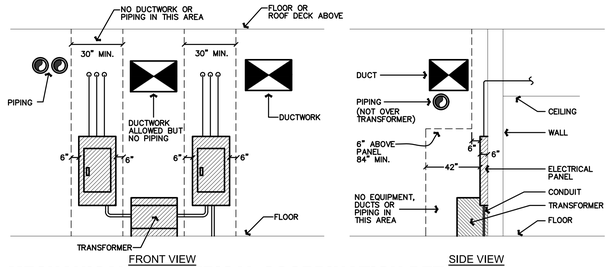
FLASHING SHOWN IS NOT IN LIEU OF ROOFING DETAIL SHOWN ON THE ARCHITECTURAL DRAWINGS. COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ALL FLASHING WITH ARCHITECTURAL DOCUMENTS TAKING PRECEDENT. HEIGHT OF VENT ABOVE ROOF SHALL MATCH THIS DETAIL AT MINIMUM.



2 MIXING VALVE DETAIL

NO SCALE

NOTES
1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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ISSUED: 01/06/2025

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SHEET TITLE
PLUMBING DETAILS AND SCHEDULES

SHEET NO.
P3.02

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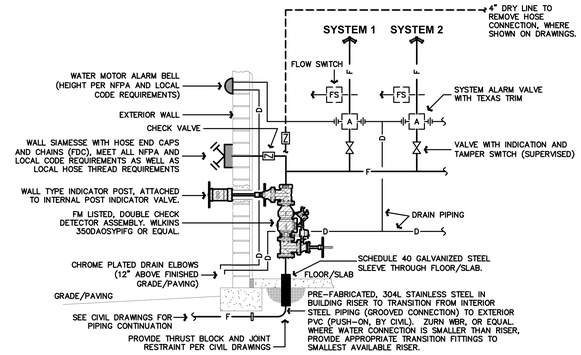
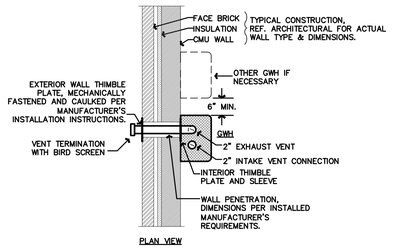


7 FIRE SPRINKLER SYSTEM RISER SCHEMATIC WITH BACKFLOW AND FDC

NO SCALE

NOTES

1. NUMBER OF FIRE SPRINKLER ZONES/SYSTEMS, PIPING SIZES AND ALL OTHER CRITERIA SHALL BE GOVERNED BY THE NFPA AND ALL OTHER LOCAL CODES AND REQUIREMENTS.
2. ENTIRE BUILDING SHALL BE FIRE SPRINKLERED.
3. SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. TEST VALVES SHALL NOT BE LOCATED EXPOSED IN FINISHED ROOMS AND SHALL NOT DISCHARGE TO EXTERIOR OF BUILDING. INSTALL IN MECHANICAL ROOMS ONLY WITH DISCHARGE LOCATED WITHIN CLOSE PROXIMITY OF FLOOR DRAIN OR FLOOR SINK.
5. ALL SPRINKLER HEADS IN AREAS WITH CEILING GRID SHALL BE CONCEALED TYPE AND SHALL BE CENTERED IN CEILING TILES. FOR EACH SPRINKLER HEAD, TAP TOP OF PIPE AND INSTALL SWING JOINT.
6. DOUBLE CHECK, AND POST INDICATOR VALVE WITH SUPERVISORY SWITCH PROVIDED WITH BACKFLOW PREVENTER SHALL BE INSTALLED WITHIN THE BUILDING AT THE RISER LOCATION.
7. FIRE DEPARTMENT CONNECTION SIAMESE SHALL BE LOCATED ON THE BUILDING EXTERIOR WALL, FACING THE STREET/FIRE LANE. FINAL LOCATION MUST BE APPROVED BY THE LOCAL AHJ.
8. SLEEVE AND SEAL ALL PIPING THROUGH WALLS PER DETAIL 5/2-P3.02.
8. PROVIDE PRE-FABRICATED, 304L STAINLESS STEEL IN BUILDING RISER TO TRANSITION FROM INTERIOR COPPER PIPING (GROOVED CONNECTION) TO EXTERIOR PVC (PUSH-ON, BY CIVIL). ZURN WBR, OR EQUAL. WHERE WATER CONNECTION IS SMALLER THAN RISER, PROVIDE APPROPRIATE TRANSITION FITTINGS TO SMALLEST AVAILABLE RISER.



6 GAS WATER INTAKE & FLUE VENT DETAIL

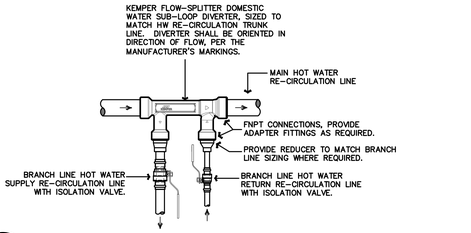
NO SCALE

NOTES:

1. ALL FLUE MATERIALS SHALL BE PROVIDED AND INSTALLED BY PLUMBER.
2. PROVIDE POLYPROPYLENE INTAKE AND FLUE PIPING. ALL PIPING AND FITTINGS SHALL BE BY THE SAME MANUFACTURER AND PART OF A UL-1738 LISTED GAS VENTING SYSTEM.
3. BASIS OF DESIGN FOR INTAKE/VENT PIPING IS CENTROTHERM INNOFLUE WITH LOW PROFILE SIDEWALL TERMINATION KIT.
4. SLOPE ALL PIPING AT A MINIMUM OF 2% BACK TOWARD THE CONNECTED APPLIANCE TO COLLECT ANY CONDENSATE IN THE PIPING.
5. INSTALLATION SHALL BE PER THE MANUFACTURER'S INSTALLATION GUIDE FOR THE PARTICULAR SYSTEM CHOSEN.

3 BUILDING CW ENTRY INSTALLATION DETAIL

NO SCALE

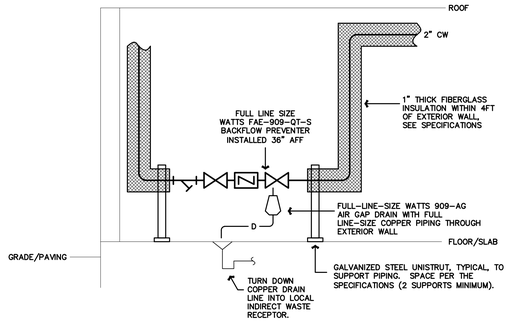


5 HOT WATER DIVERTING STATION

NO SCALE

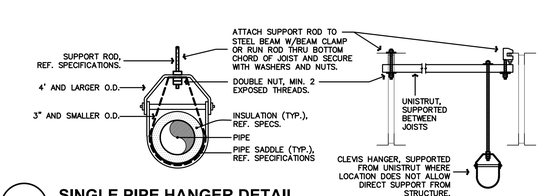
NOTES:

1. KEMPER KHS FLOW-SPLITTER IS THE BASIS OF DESIGN. SIMILAR DOMESTIC WATER FLOW DIVERTER ASSEMBLIES FROM ALTERNATE MANUFACTURERS ARE ALSO ACCEPTABLE.
2. PROVIDE FOR EACH HOT WATER SUB-LOOP TO WITHIN 12" OF HW STOPS AT ALL HAND WASHING LAVATORIES.



4 BACKFLOW PREVENTER INSTALLATION DETAIL

NO SCALE

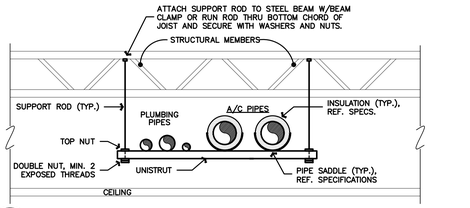


2 SINGLE PIPE HANGER DETAIL

NO SCALE

NOTES:

1. SEE SPECS FOR SUPPORT SPACING REQUIREMENTS.
2. DRILL-IN ANCHORS INTO ROOF DECK ARE NOT ACCEPTABLE. REFERENCE SPECIFICATION FOR ACCEPTABLE METHODS OF OVERHEAD ANCHORING.
3. FOR ALL UN-INSULATED COPPER PIPING, CLEVIS HANGERS SHALL BE COPPER CLAD, OR ISOLATION TAPE SHALL BE APPLIED TO THE COPPER PIPING. THE SPECIFICATION FOR SPECIFIC REQUIREMENTS.
4. FOR ALL INSULATED PIPING, A SECTION OF HARD INSULATION SHALL BE PROVIDED AT ALL SUPPORT POINTS, ALONG WITH A GALVANIZED PIPE SADDLE. REFERENCE THE SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.



1 MULTIPLE PIPE HANGER DETAIL

NO SCALE

NOTES:

1. SEE SPECS FOR SUPPORT SPACING REQUIREMENTS.
2. DRILL-IN ANCHORS INTO ROOF DECK ARE NOT ACCEPTABLE. REFERENCE SPECIFICATION FOR ACCEPTABLE METHODS OF OVERHEAD ANCHORING.
3. PIPE HANGER MAY BE SHARED BETWEEN TRADES. COORDINATE WITH OTHER TRADES AS REQUIRED.
3. FOR ALL UN-INSULATED COPPER PIPING, ISOLATION TAPE SHALL BE APPLIED TO THE COPPER PIPING. REF. THE SPECIFICATION FOR SPECIFIC REQUIREMENTS.
4. FOR ALL INSULATED PIPING, A SECTION OF HARD INSULATION SHALL BE PROVIDED AT ALL SUPPORT POINTS, ALONG WITH A GALVANIZED PIPE SADDLE. REFERENCE THE SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.

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106052
LICENSED PROFESSIONAL ENGINEER

ISSUED: 01/06/2025

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Proj. Arch.

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PLUMBING DETAILS AND SCHEDULES

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SHEET TITLE

PLUMBING RISER DIAGRAMS - FIELD HOUSE

SHEET NO.

P4.00

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ISSUED: 01/06/2025

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PLUMBING & NATURAL GAS RISER DIAGRAMS

SHEET NO.
P4.01

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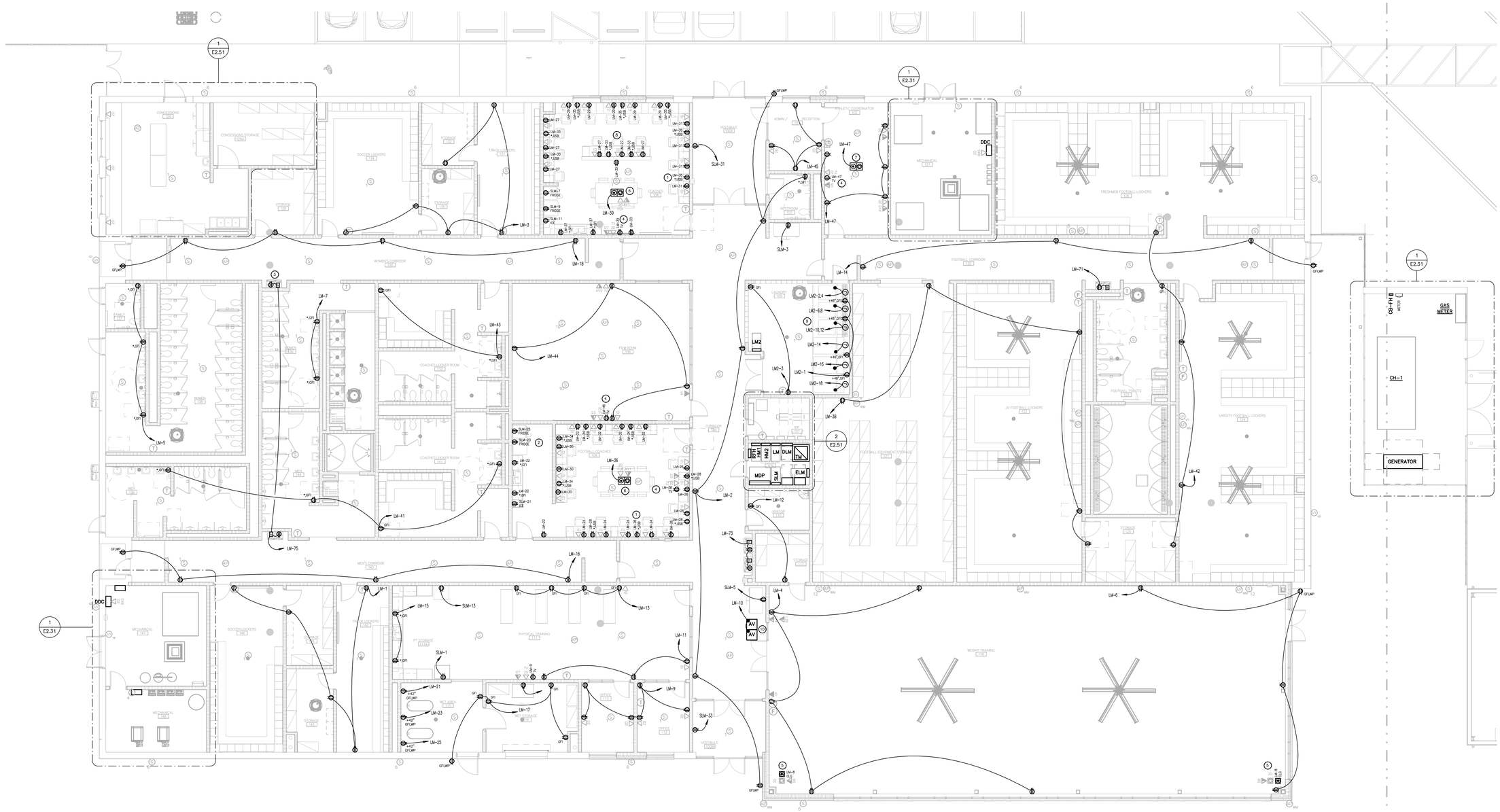
Field House Electrical Key Notes	
#	Note Text
1	INSTALL USB TYPE RECEPTACLES ABOVE COUNTER, TYPICAL.
2	LOCATE RECEPTACLES FOR FRIDGES AND ICE MAKERS MINIMUM 65" CORD LENGTH FROM SINK EDGE, TYPICAL.
3	COORDINATE RECEPTACLE AND GFI PROTECTION DEVICE ROUGH-IN WITH ELECTRONIC DRINKING FOUNTAIN. REFERENCE GFI PROTECTION DETAIL, TYPICAL.
4	INSTALL "TV" RECEPTACLE BEHIND DISPLAY ADJACENT TO LOW VOLTAGE OUTLET(S). REFERENCE TECHNOLOGY DRAWINGS AND ELEVATIONS FOR ADDITIONAL INFORMATION, TYPICAL.
5	CEILING MOUNTED DISPLAY. COORDINATE RECEPTACLE AND LOW VOLTAGE OUTLET LOCATIONS WITH A/V CONTRACTOR.
6	PROVIDE MULTI-SERVICE FLOOR BOX FOR POWER, DATA, AND A/V CABLING. LOCATION TO BE DIMENSIONED BY ARCHITECT. REFERENCE FLOOR BOX NOTES ON SHEET E5.00 FOR ADDITIONAL REQUIREMENTS.
7	PROVIDE MULTI-SERVICE FLOOR BOX FOR POWER, DATA, AND A/V CABLING. LOCATION TO BE DIMENSIONED BY ARCHITECT. REFERENCE FLOOR BOX NOTES ON SHEET E5.00 FOR ADDITIONAL REQUIREMENTS.
8	ROUTE CONDUIT BELOW GRADE FOR POWER AND LOW VOLTAGE CABLING TO PARTIAL HEIGHT WALL.
9	COORDINATE WITH MECHANICAL AND CONTROLS CONTRACTORS TO INSTALL CURRENT TRANSFORMERS ON DRYER CIRCUITS FOR HVAC CONTROLS INPUT.
10	RECESSED A/V CEILING BOXES FOR WEIGHT ROOM SOUND SYSTEM.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LM2-10,12
LM2-14
LM2-16
LM2-18
AV
AV
GFI/WP
GFI
GFI
GFI

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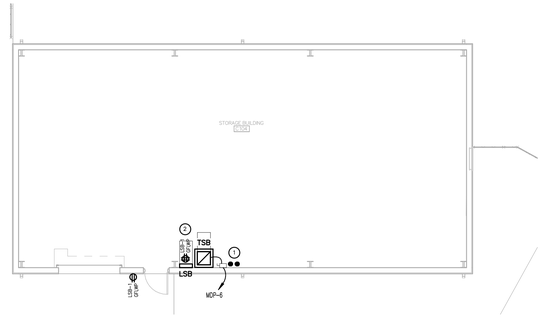
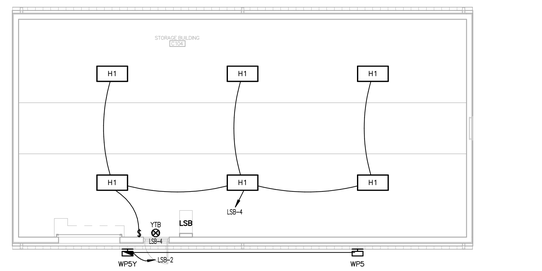
Storage Building Electrical Key Notes	
#	Note Text
1	ROUTE 2-2"C FROM FIELD HOUSE IDF TO STORAGE BUILDING. STUB UP AGAINST EXTERIOR WALL AND CAP FOR FUTURE USE.
2	MOUNT QUAD RECEPTACLE TO BOTTOM OF PANEL.



1 ELECTRICAL PLAN - STORAGE BUILDING
1/8" = 1'-0"



2 LIGHTING PLAN - STORAGE BUILDING
1/8" = 1'-0"

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ELECTRICAL & LIGHTING PLANS - STORAGE BUILDING

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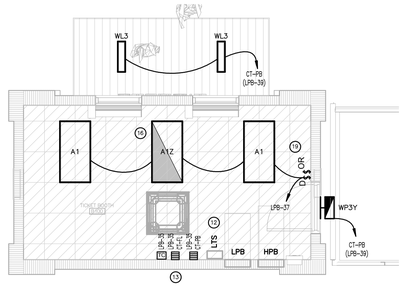
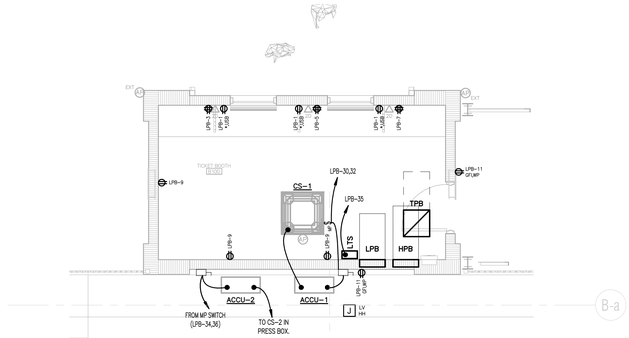
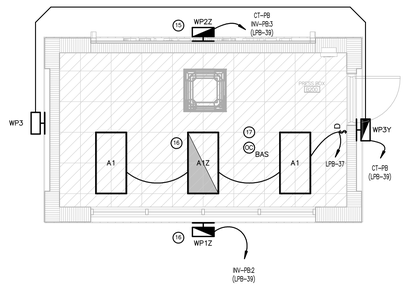


3 LEVEL 1 LIGHTING PLAN - TICKET BOOTH
1/4" = 1'-0"

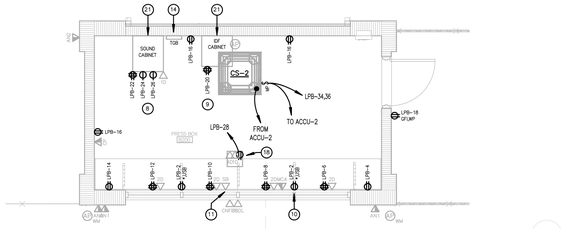


1 LEVEL 1 ELECTRICAL PLAN - TICKET BOOTH
1/4" = 1'-0"

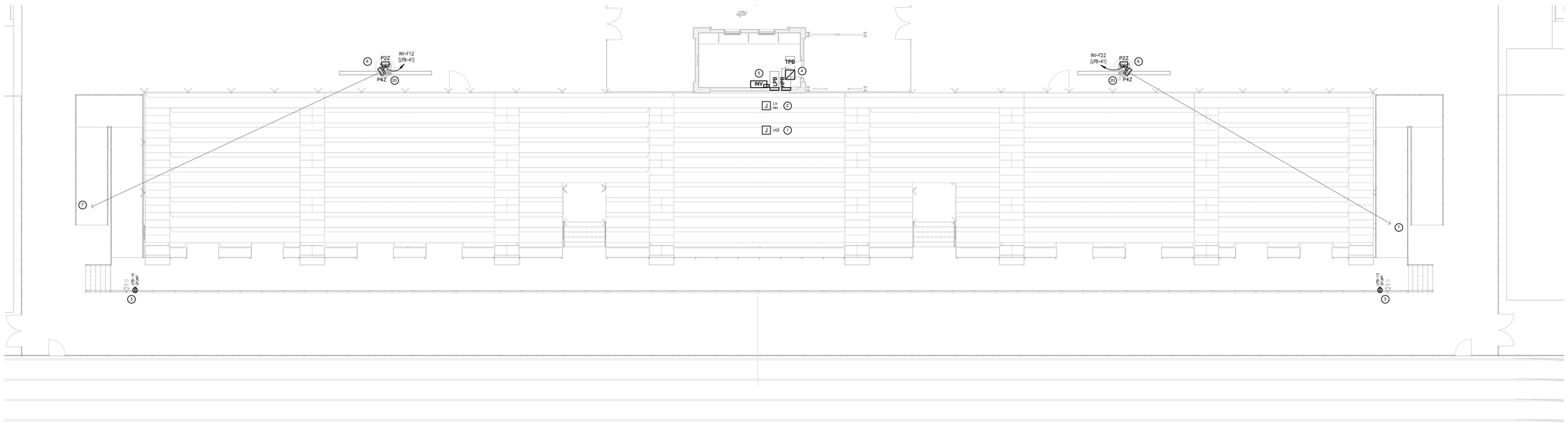
Press Box Electricol Key Notes	
#	Note Text
1	PROVIDE 2-SECTION FLUSH IN GRADE ELECTRICAL PULL BOX UNDER BLEACHERS BY PRESS BOX BUILDING. ROUTE 277V/480V AND 120V/208V THROUGH SEPARATE SECTIONS.
2	NEW LOW VOLTAGE HANDHOLE BY DIVISION 26. ROUTE CONDUIT FOR SPORTS FIELD LOW VOLTAGE CABLING TO HANDHOLE. PROVIDE 2-4"C AND 2-2"C FROM HANDHOLE TO 1ST FLOOR CEILING CAVITY.
3	ROUTE CONDUIT FOR RECEPTACLE AND DATA OUTLET BELOW GRADE FROM PULL BOXES AND STUB UP UNDERNEATH BLEACHERS AT BLEACHER EDGE. PROVIDE FLAT WEATHERPROOF COVERS FOR BOTH DEVICES. COORDINATE WITH BLEACHER INSTALLER TO PROVIDE ACCESS TO DEVICES FROM WALKWAY LEVEL.
4	TRANSFORMER INSTALLED ABOVE 1ST FLOOR CEILING USING FACTORY WALL MOUNT KIT. BOTTOM OF TRANSFORMER SHALL BE A MINIMUM 18" ABOVE CEILING LEVEL. COORDINATE LOCATION/HEIGHT WITH STRUCTURAL ELEMENTS.
5	INVERTERS FOR BUILDING AND AREA EMERGENCY LIGHTING INSTALLED ABOVE 1ST FLOOR CEILING USING FACTORY WALL MOUNT KIT. BOTTOM OF INVERTERS SHALL BE A +-6" ABOVE CEILING LEVEL. COORDINATE LOCATION/HEIGHT WITH STRUCTURAL ELEMENTS.
6	EM LIGHTING AREA LIGHTS MOUNTED ON SPORTS LIGHTING POLE @ 30FT ABOVE GRADE FED FROM EMERGENCY LIGHTING INVERTER IN PRESS BOX. COORDINATE FIXTURE BOLT PATTERN WITH SPORTS LIGHTING CONTRACTOR. FIXTURES SHALL BE NORMALLY OFF AND AUTO ON DURING A POWER OUTAGE. REFERENCE INVERTER SCHEDULE ON SHEET E6.00.
7	FIELD AIM AREA LIGHT WITH OWNER TO PROVIDE EGRESS ILLUMINATION.
8	RECEPTACLES AND DATA OUTLET TO BE INSTALLED WITHIN SOUND CABINET. COORDINATE LOCATIONS WITH LOCAL SOUND CONTRACTOR.
9	RECEPTACLES TO BE INSTALLED WITHIN IDF CABINET. COORDINATE LOCATIONS WITH STRUCTURED CABLING CONTRACTOR.
10	INSTALL USB TYPE RECEPTACLES HORIZONTALLY ABOVE COUNTER, TYPICAL.
11	J-BOX IN KNEE SPACE FOR SCOREBOARD CONTROLLER. PROVIDE 3/4"C TO SCOREBOARD AT FIELD FOR CONTROL WIRING.
12	SPORTS LIGHTING WIRELESS CONTROL HUB.
13	PROVIDE 2-CIRCUIT TIME CLOCK AND CONTACTORS FOR SCHEDULING OF EXTERIOR LIGHTING FIXTURES. REFERENCE SHEET E6.00 FOR ADDITIONAL INFORMATION. LOCATE ABOVE DEVICES ABOVE CEILING.
14	GROUND BARS AND CONDUCTORS FOR TELECOMMUNICATIONS GROUNDING SYSTEM PROVIDED AND INSTALLED BY DIVISION 26. COORDINATE WITH DIVISION 27 FOR LOCATION.
15	THIS WALL PACK SHALL BE NORMALLY OFF, AUTO ON BY EMERGENCY INVERTER WHEN THERE IS A LOSS OF POWER. DO NOT WIRE FIXTURE THROUGH LIGHTING CONTACTOR/TIME CLOCK.
16	THIS FIXTURE SHALL BE NORMALLY ON/OFF BY UPSTREAM LIGHTING CONTROLS UNDER NORMAL CONDITIONS, AUTO ON BY EMERGENCY INVERTER WHEN THERE IS A LOSS OF POWER.
17	PROVIDE OCCUPANCY SENSOR WITH NO/NC/COMMON BAS RELAY OUTPUT. COORDINATE WITH MECHANICAL CONTRACTOR FOR CONNECTION OF RELAY OUTPUT TO HVAC CONTROLS.
18	RECEPTACLE AND DATA OUTLETS TO BE INSTALLED IN ABOVE CEILING ENCLOSURE. ENCLOSURE PROVIDED AND SIZED BY DIVISION 26. FRONT EDGE OF ENCLOSURE SHALL BE 18" FROM EXTERIOR WALL. REFERENCE SHEET E3.23 FOR ADDITIONAL INFORMATION.
19	PROVIDE TOGGLE SWITCH FOR LOCAL OVERRIDE OF LIGHTING SCHEDULE. WHEN ACTIVATED THE
20	ROUTE 3/4"C FOR POWER AND 3/4"C FOR PA SPEAKERS FROM SPORTS LIGHTING POLE TO PULL BOXES BY PRESS BOX.
21	REFERENCE DETAIL 2/E5.30 FOR CONDUIT PATHWAYS INTO TECHNOLOGY CABINETS.



4 LEVEL 2 LIGHTING PLAN - PRESS BOX
1/4" = 1'-0"



2 LEVEL 2 ELECTRICAL PLAN - PRESS BOX
1/4" = 1'-0"



5 ELECTRICAL PLAN - BLEACHERS
1/8" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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01/06/25

ISSUED: 01/06/2025

REVISIONS

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Director GLS	Drawn By MAS
Designer MAS	Quality Control
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23-155.00

SHEET TITLE
ELECTRICAL & LIGHTING PLANS - BLEACHERS, TICKET BOOTH, & PRESS BOX

SHEET NO.
E2.13

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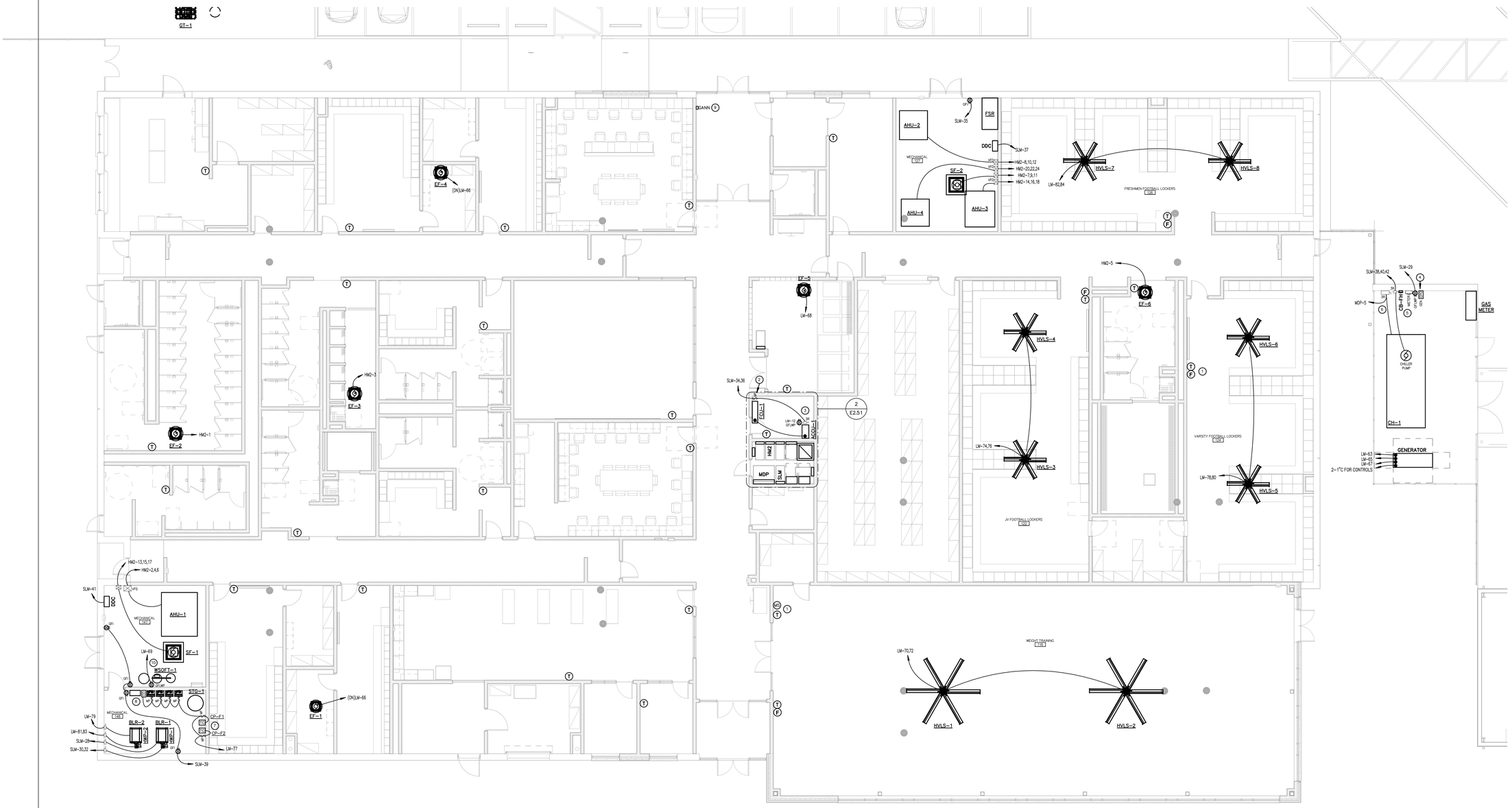
NOTE TO CONTRACTORS:
THE ELECTRICAL CONTRACTOR SHALL REFER TO THE MECHANICAL, PLUMBING, TECHNOLOGY, AUDIO/VIDEO, SECURITY, AND FIRE ALARM DRAWINGS FOR LOCATIONS AND ADDITIONAL ROUGH-IN AND CONNECTION REQUIREMENTS FOR EQUIPMENT PROVIDED BY OTHER TRADES.

Electrical Coordination Plan Key Notes	
#	Note Text
1	PROVIDE ROUGH-IN FOR HVAC CONTROL DEVICES, TYPICAL.
2	LOCATE SWITCH ADJACENT TO HIGH WALL HVAC UNIT. COORDINATE WITH MECHANICAL CONTRACTOR.
3	MOUNT DISCONNECT AND RECEPTACLE ON UNISTRUT RACK AT CONDENSING UNIT ON ROOF. BOLT RACK TO EXTENDED CURB PROVIDED BY MECHANICAL CONTRACTOR.
4	GENERATOR EMERGENCY SHUTOFF BUTTON SURFACE MOUNTED ON WALL BY SERVICE DISCONNECT.
5	SERVICE ENTRANCE, POWER COMPANY METER, AND SERVICE DISCONNECT IN EQUIPMENT YARD. PROVIDE RACK, GUTTER, CT CAN, AND ALL OTHER COMPONENTS AS NECESSARY TO COMPLY WITH THE UTILITY COMPANY REQUIREMENTS.
6	ROUTE CONDUIT FROM BUILDING TO CHILLER, PUMP, AND RECEPTACLE ON CANOPY ABOVE ALONG MECHANICAL PIPING.
7	COORDINATE WITH PLUMBING CONTRACTOR FOR GAS WATER HEATER CONNECTIONS AND SUPPORTING EQUIPMENT.
8	COORDINATE WITH MECHANICAL AND PLUMBING CONTRACTORS FOR CONNECTION OF CARBON MONOXIDE DETECTOR(S) TO GAS FIRED APPLIANCES.
9	GENERATOR REMOTE ANNUNCIATOR FLUSH MOUNTED IN WALL.
10	PROVIDE IN-USE WEATHERPROOF COVER FOR WATER SOFTENER RECEPTACLE.



1 LEVEL 1 ELECTRICAL COORDINATION PLAN - FIELD HOUSE

1/8" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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01/06/25

ISSUED: 01/06/2025

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ELECTRICAL COORDINATION PLAN - FIELD HOUSE

SHEET NO.
E2.31

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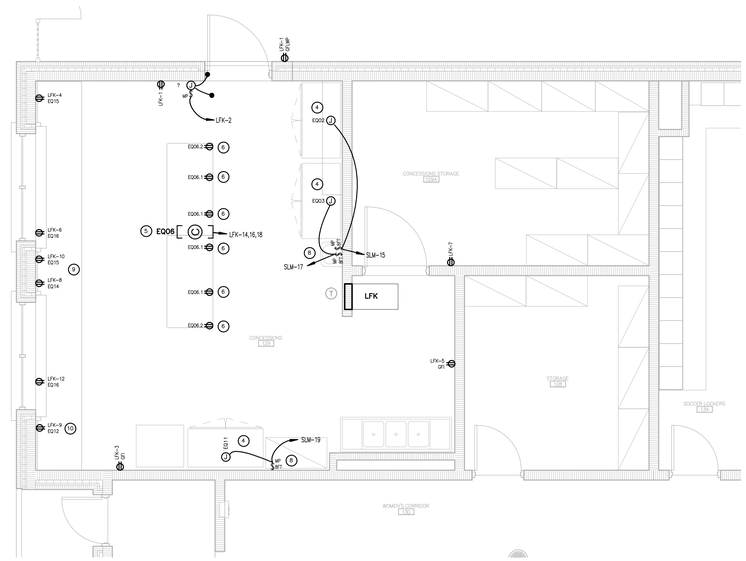
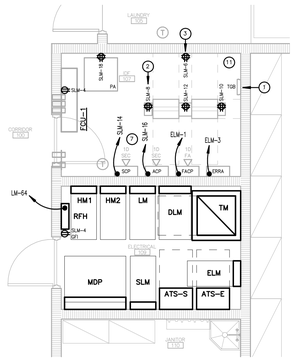
NOTE TO CONTRACTORS:
THE ELECTRICAL CONTRACTOR SHALL REFER TO THE MECHANICAL, PLUMBING, TECHNOLOGY, AUDIO/VIDEO, SECURITY, AND FIRE ALARM DRAWINGS FOR LOCATIONS AND ADDITIONAL ROUGH-IN AND CONNECTION REQUIREMENTS FOR EQUIPMENT PROVIDED BY OTHER TRADES.

Enlarged Electrical Plan Key Notes	
#	Note Text
1	GROUND BARS AND BACKBONE CONDUCTORS FOR TELECOMMUNICATIONS GROUNDING SYSTEM PROVIDED AND INSTALLED BY DIVISION 26. MOUNT GROUND BAR AT +8'-0" AFF. COORDINATE INSTALL LOCATION WITH DIVISION 27 STRUCTURED CABLING CONTRACTOR.
2	DEDICATED RACK EQUIPMENT RECEPTACLES INSTALLED WITHIN VERTICAL CABLE MANAGER. COORDINATE RECEPTACLE PLACEMENT AND CONDUIT ROUTING WITH OWNER AND DIVISION 27 STRUCTURED CABLING CONTRACTOR PRIOR TO ROUGH-IN. TYPICAL.
3	COORDINATE RECEPTACLE PLACEMENT WITH RACK LOCATIONS PRIOR TO ROUGH-IN. ALIGN QUAD RECEPTACLE WITH VERTICAL CABLE MANAGER.
4	MODIFY CORD/PLUG AND HARDWIRE EQUIPMENT.
5	ROUTE CONDUIT BELOW GRADE AND STUB UP AT SERVING COUNTER LOAD CENTER. COORDINATE STUB UP LOCATION WITH FS DRAWINGS AND FS CONTRACTOR.
6	OUTLET POWERED FROM LOAD CENTER, SHOWN FOR REFERENCE ONLY.
7	COORDINATE WITH STRUCTURED CABLING CONTRACTOR TO CONNECT IP DIALER TO BUILDING NETWORK.
8	PROVIDE MOTOR RATED SWITCH WITH PILOT LIGHT FOR LOCAL DISCONNECTING MEANS FOR HARDWIRED EQUIPMENT. MOUNT AT +8'-0" AFF. TYPICAL.
9	REFERENCE FOOD SERVICE DRAWINGS FOR FS EQUIPMENT DEVICE ELEVATIONS, TYPICAL.
10	PROVIDE ABOVE COUNTER RECEPTACLE FOR POINT OF SALE SYSTEM.
11	CONDUIT STUB UPS FOR SITE CABLING IN CORNER OF IDF BEHIND TELECOM RACKS. EXTEND MINIMUM 6" AFF. AT THE END OF THE PROJECT SEAL CONDUITS CONTAINING CABLING WITH REMOVABLE PUTTY. UNUSED CONDUITS SHALL BE PROVIDED WITH A REMOVABLE CAP FOR FUTURE USE. LABEL CONDUITS IDENTIFYING ROUTING.



1 ENLARGED ELECTRICAL PLAN - CONCESSIONS
1/4" = 1'-0"



2 ENLARGED ELECTRICAL PLAN - IDF
1/4" = 1'-0"

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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01/06/25

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
GLS	MAS
Designer	Quality Control
MAS	
Proj. Arch.	

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SHEET TITLE
ENLARGED ELECTRICAL PLANS - FIELD HOUSE

SHEET NO.
E2.51

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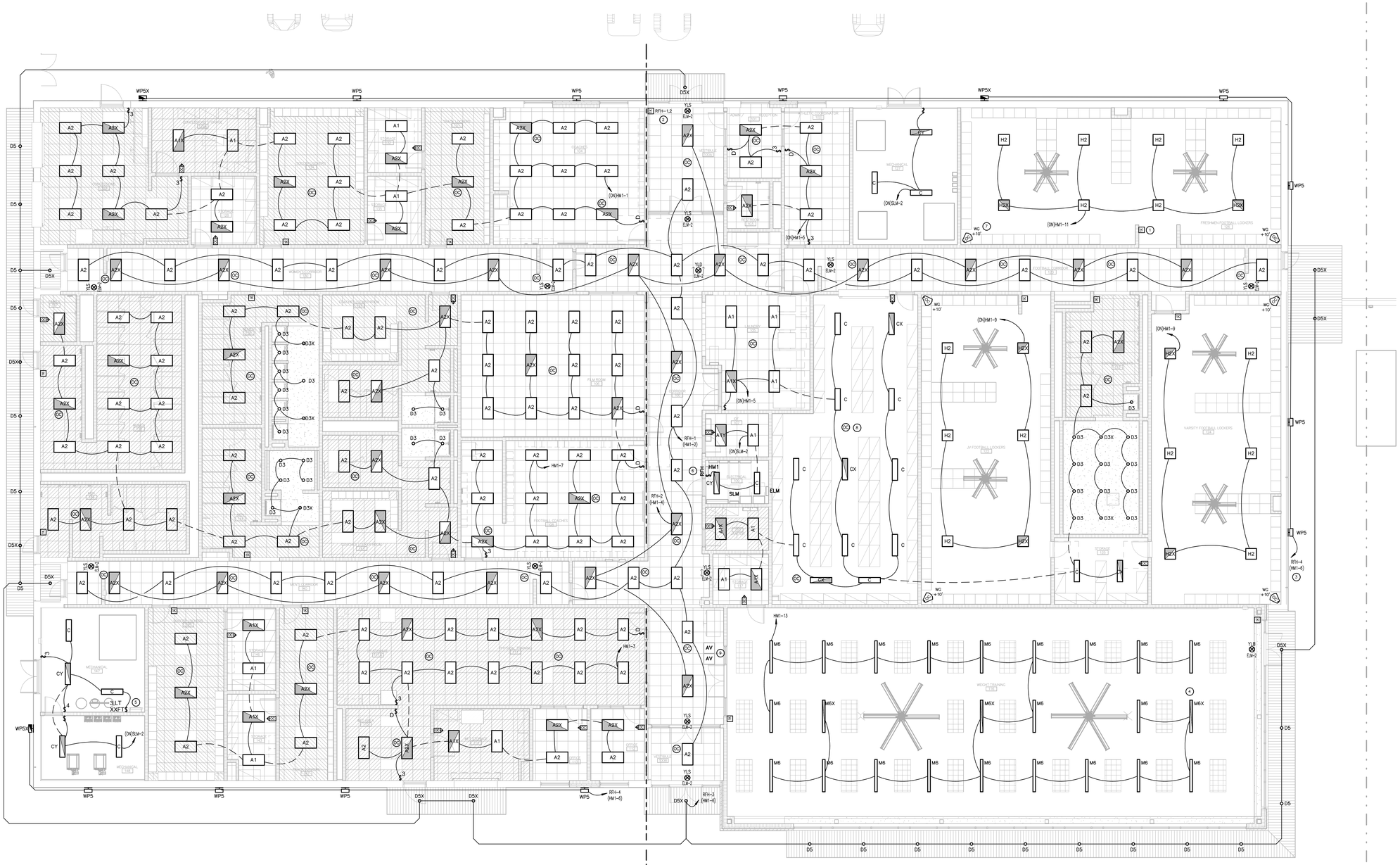
EMERGENCY LIGHTING NOTES:
1. CONNECT ALL TYPE "X" FIXTURES TO AN EMERGENCY LIGHTING CIRCUIT THROUGH A EM LIGHTING RELAY.
2. EM LIGHTING RELAY PROVIDED WITH THE LIGHTING CONTROLS.
3. EM LIGHTING REALY SHALL PASS LIGHTING CONTROL STATE DURING NORMAL OPERATION.
4. UPON LOSS OF NORMAL POWER THE EM LIGHTING RELAY SHALL TURN ALL TYPE "X" EMERGENCY FIXTURES ON AT 100%.

EMERGENCY LIGHTING CIRCUITS:
1. CONNECT EXIT SIGNS TO CIRCUITS AS INDICATED.
2. CONNECT CORRIDOR EM LIGHTING FIXTURES TO CIRCUIT ELM-4.
3. CONNECT EXTERIOR EM LIGHTING FIXTURES TO CIRCUIT ELM-10.
4. CONNECT ROOM EM LIGHTING FIXTURES TO CIRCUITS ELM-6 OR ELM-8 AS INDICATED BASED ON LOCATION WITHIN THE BUILDING.

Field House Lighting Key Notes	
#	Note Text
1	LIGHTING KEY SWITCH SHALL BE OWNER'S STANDARD KEY TYPE. REFERENCE 262726 WIRING DEVICES SPECIFICATION. TYPICAL.
2	CONNECT KEY SWITCH TO TURN ON/OFF THE INDICATED LIGHTING RELAYS AND ASSOCIATED FIXTURES.
3	FIXTURES CONNECTED TO INDICATED LIGHTING PANEL RELAY AND ELECTRICAL CIRCUIT.
4	"X" TYPE LIGHTING FIXTURES FED FROM EMERGENCY LIGHTING CIRCUITS. PROVIDE EMERGENCY LIGHTING RELAYS AS PART OF THE LIGHTING CONTROLS SYSTEM.
5	LIGHTED SWITCH LOCATED 12" BELOW ROOF HATCH.
6	LIGHTING CONTROL RELAY PANEL IN BUILDING ELECTRICAL ROOM.
7	PROVIDE WIREGUARDS ON WALL MOUNTED OCCUPANCY SENSORS IN LOCKER ROOMS, TYPICAL.
8	MOUNT OCCUPANCY SENSORS AT STRUCTURE ABOVE.
9	RECESSED A/V CEILING BOXES FOR WEIGHT ROOM SOUND SYSTEM.



1 LIGHTING PLAN - FIELD HOUSE
1/8" = 1'-0"

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01/06/25

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Proj. Arch.	

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SHEET TITLE
LIGHTING PLAN - FIELD HOUSE

SHEET NO.
E2.61

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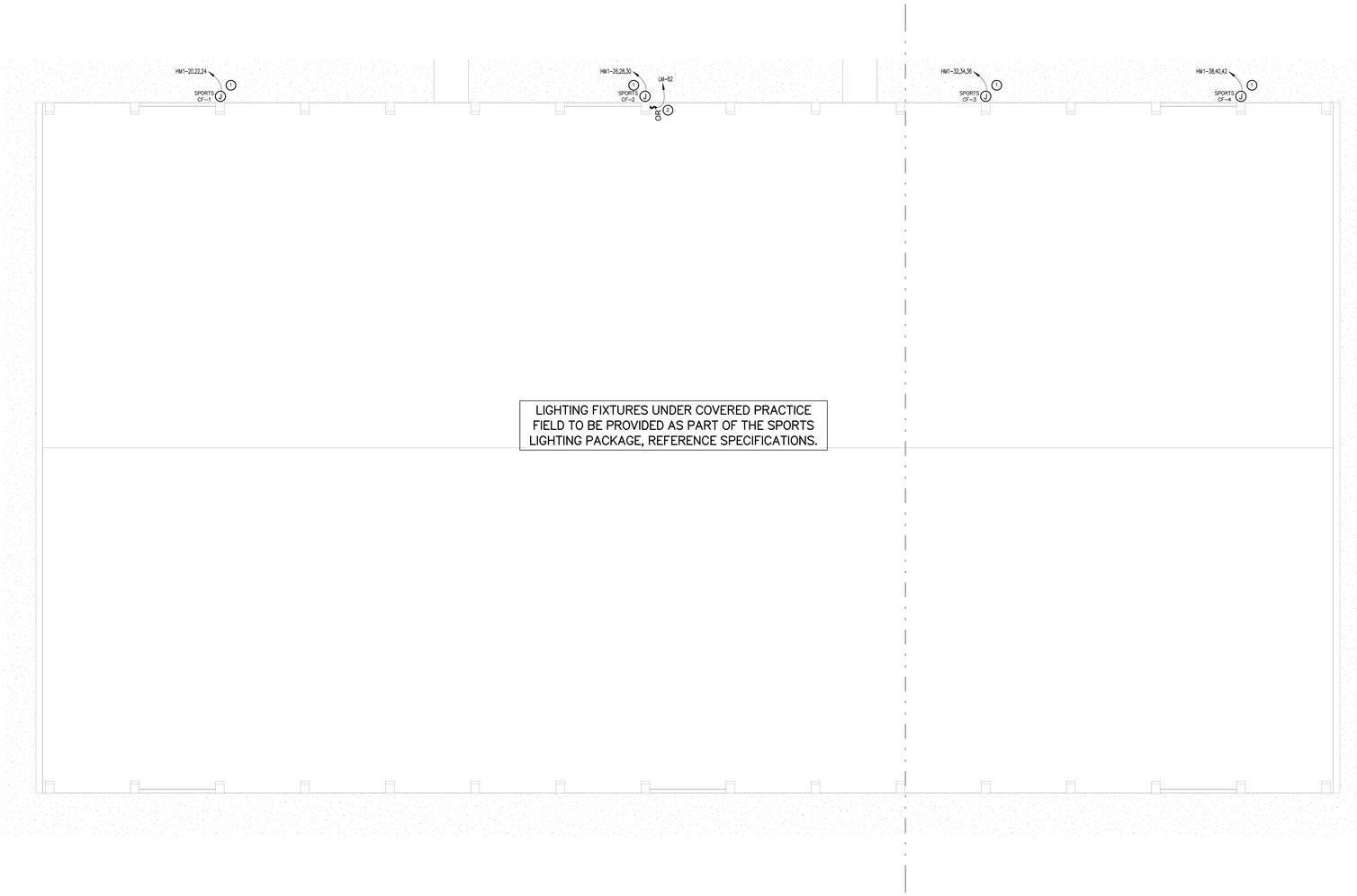
Covered Practice Field Lighting Key Notes	
#	Note Text
1	SPORTS LIGHTING CONTROL CABINET MOUNTED ON COLUMN.
2	SPORTS LIGHTING OVERRIDE SCENE SWITCH MOUNTED ON COLUMN.



1 LIGHTING PLAN - COVERED PRACTICE FIELD

1/16" = 1'-0"

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SHEET TITLE

LIGHTING PLAN - COVERED PRACTICE FIELD

SHEET NO.

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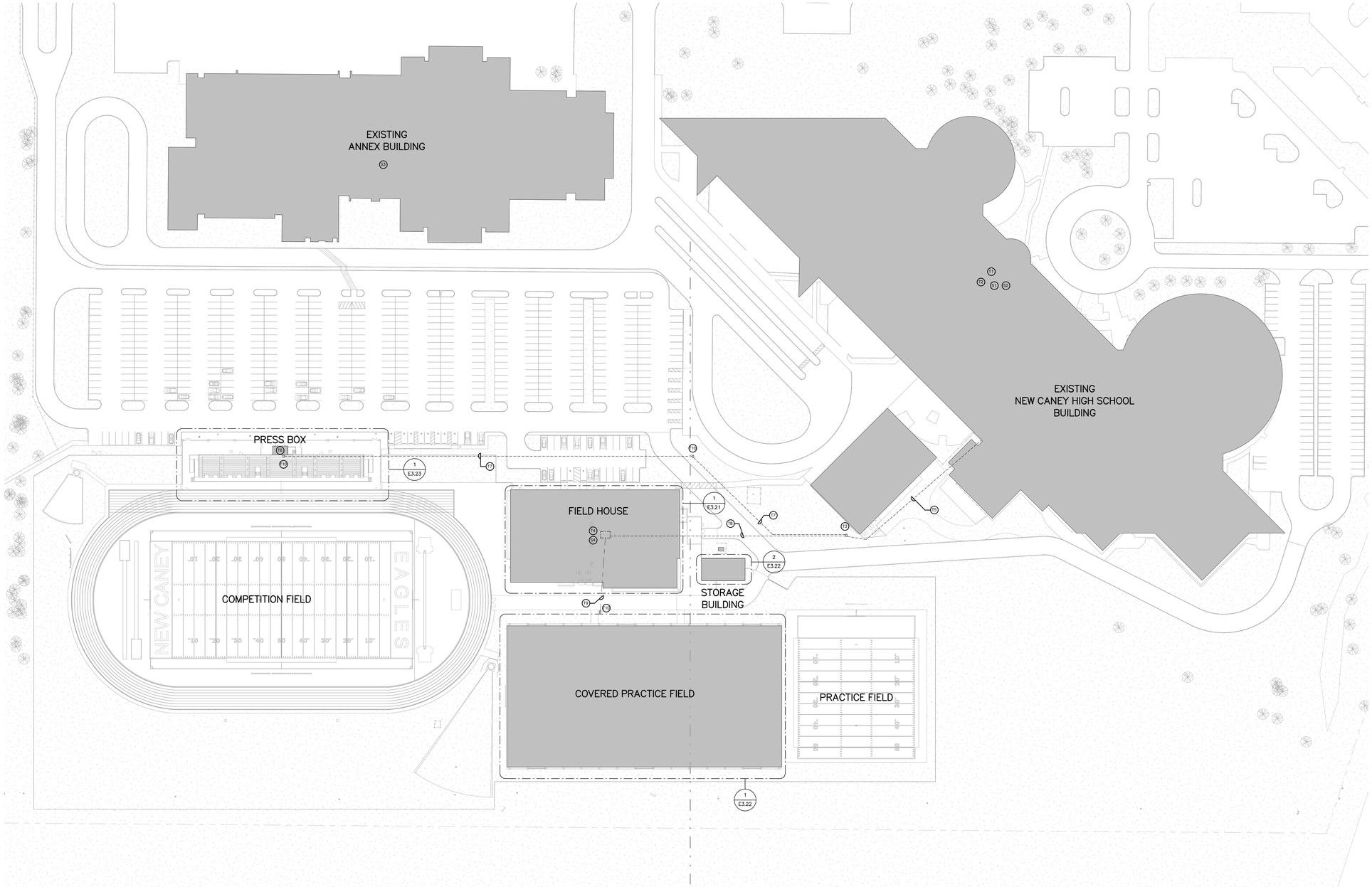
NOTE TO CONTRACTORS:
THE LOW VOLTAGE CONTRACTORS SHALL REFER TO THE MPE SITE PLAN SHEETS MPE1.11, MPE1.11A, MPE1.11B, AND MPE1.11C FOR ADDITIONAL DEVICES AND INFORMATION.

Low Voltage Site Plan Key Notes	
#	Note Text
S1	APPROXIMATE LOCATION OF EXISTING EDWARDS EST3 FIRE ALARM SYSTEM IN MAIN ADMIN AREA OF EXISTING HIGH SCHOOL. EXPAND EXISTING SYSTEM TO SUPPORT NEW BUILDINGS.
S2	PROVIDE NEW EMERGENCY RESPONDER RADIO ANTENNA (ERRA) SYSTEM FOR THE EXISTING HIGH SCHOOL. TIE SYSTEM INTO ONE CAMPUS WIDE SYSTEM WITH THE EXISTING CTE BUILDING AND BASEBALL FIELD HOUSE.
S3	PROVIDE NEW EMERGENCY RESPONDER RADIO ANTENNA (ERRA) SYSTEM FOR THE EXISTING ANNEX BUILDING. TIE SYSTEM INTO ONE CAMPUS WIDE SYSTEM WITH THE EXISTING CTE BUILDING AND BASEBALL FIELD HOUSE.
S4	PROVIDE NEW EMERGENCY RESPONDER RADIO ANTENNA (ERRA) SYSTEM FOR THE NEW FIELD HOUSE. TIE SYSTEM INTO ONE CAMPUS WIDE SYSTEM WITH THE EXISTING CTE BUILDING AND BASEBALL FIELD HOUSE.
T1	APPROXIMATE LOCATION OF EXISTING MDF IN MAIN BUILDING. PROVIDE NEW FIBER PATCH PANEL IN EXISTING RACK FOR CONNECTION TO NEW BUILDINGS. ROUTE INDOOR/OUTDOOR FIBER FROM MDF PATCH PANEL TO NEW BUILDINGS.
T2	APPROXIMATE LOCATION OF EXISTING PA SYSTEM IN MAIN ADMIN AREA OF EXISTING HIGH SCHOOL. EXPAND EXISTING SYSTEM TO SUPPORT NEW BUILDINGS.
T3	EXISTING LOW VOLTAGE HANDHOLE TO REMAIN.
T4	NEW FIELD HOUSE IDF.
T5	ROUTE NEW FIBER, PA, SECURITY, AND FIRE ALARM CABLING IN EXISTING CONDUITS FROM BUILDING TO EXISTING LOW VOLTAGE HANDHOLE.
T6	NEW PRESS BOX IDF AND LOCAL SOUND SYSTEM IN 2ND FLOOR OF PRESS BOX.
T7	NEW FIBER, AND PA CABLING TO NEW FOOTBALL PRESS BOX BUILDING.
T8	NEW FIBER, PA, SECURITY, AND FIRE ALARM CABLING TO NEW FIELD HOUSE IDF.
T9	NEW FIBER TO WIRELESS ACCESS POINTS IN COVERED PRACTICE FIELD.
T10	NEW LOW VOLTAGE HANDHOLE BY DIVISION 26.



1 TECHNOLOGY OVERALL SITE PLAN
1" = 60'–0"

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01/06/25

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LOW VOLTAGE SITE PLAN

SHEET NO.
E3.00

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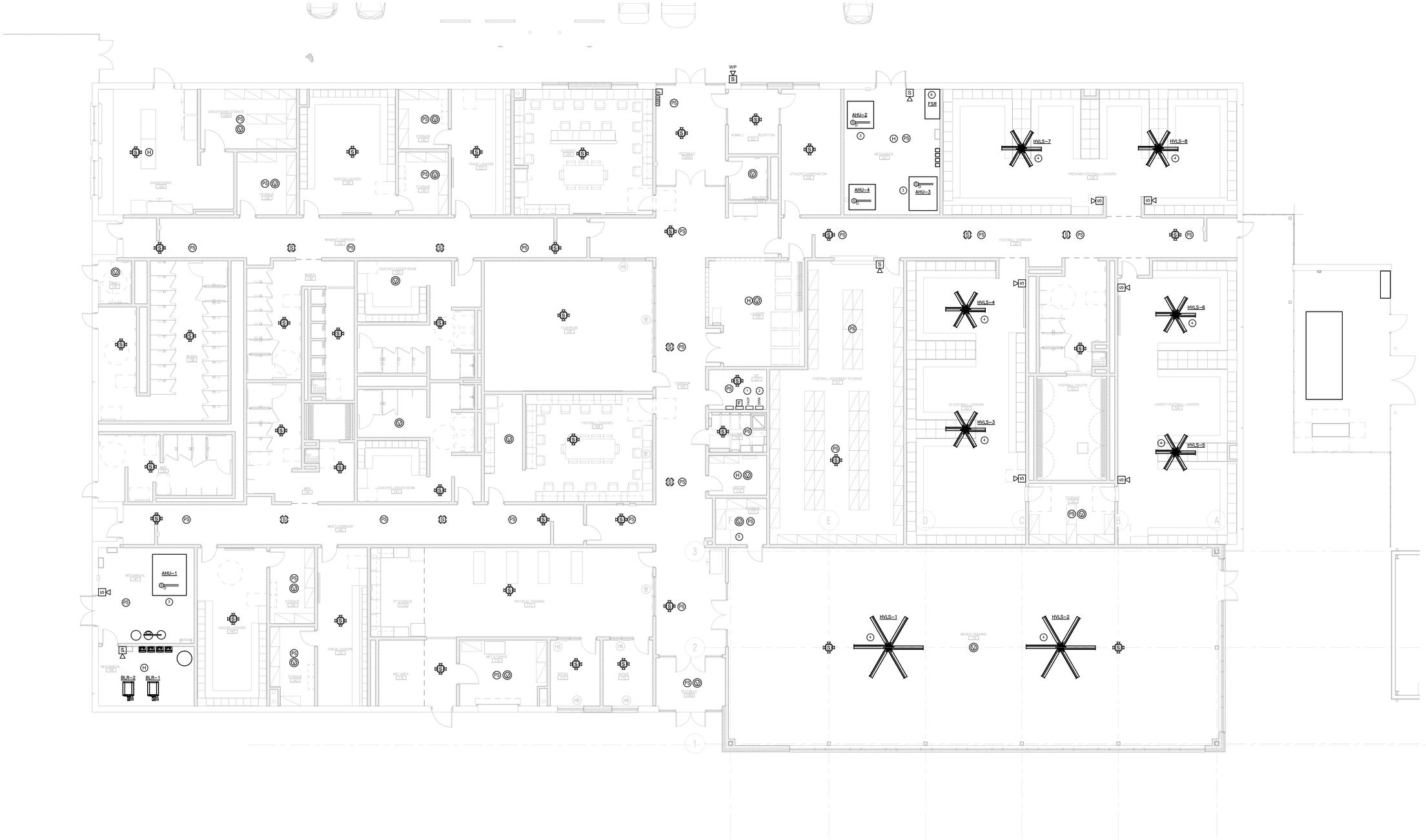
Fire Alarm Key Notes	
#	Note Text
1	LOCATE FIRE ALARM EXPANSION PANEL IN NEW IDF. INTEGRATE INTO EXISTING BUILDING FIRE ALARM SYSTEM.
2	PROVIDE NEW EMERGENCY RESPONDER RADIO SYSTEM IN NEW IDF.
3	PROVIDE REMOTE TEST STATION FOR DUCT DETECTORS, TYPICAL. REFERENCE SPECIFICATIONS.
4	PROVIDE FIRE ALARM RELAY TO SHUT DOWN HVLS FANS, TYPICAL.
5	INTERLOCK FIRE ALARM WITH LOCAL SOUND SYSTEM TO AUTOMATICALLY MUTE DURING ALARM.
6	MONITOR FIRE SPRINKLER RISER.



1 FIRE ALARM FLOOR PLAN - FIELD HOUSE

1/8" = 1'–0"

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01/06/25

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Proj. Arch.
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Quality Control

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23-155.00

SHEET TITLE
FIRE ALARM FLOOR PLAN - FIELD HOUSE

SHEET NO.
E3.11

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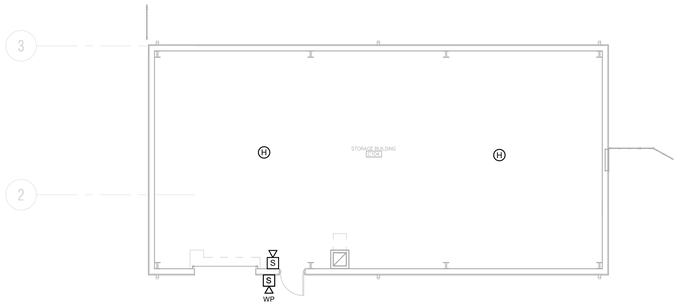
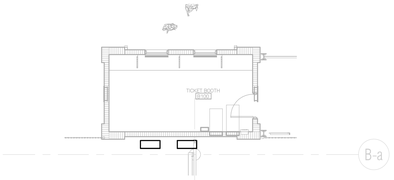


1 FIRE ALARM FLOOR PLAN - STORAGE BUILDING

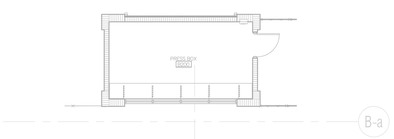
1/8" = 1'-0"



2 LEVEL 1 FIRE ALARM FLOOR PLAN - TICKET BOOTH

1/8" = 1'-0"

B-6



3 LEVEL 1 FIRE ALARM FLOOR PLAN - PRESS BOX

1/8" = 1'-0"

B-6

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
01/06/25

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
GLS	MAS
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23-155.00

SHEET TITLE

FIRE ALARM FLOOR PLANS

SHEET NO.

E3.12

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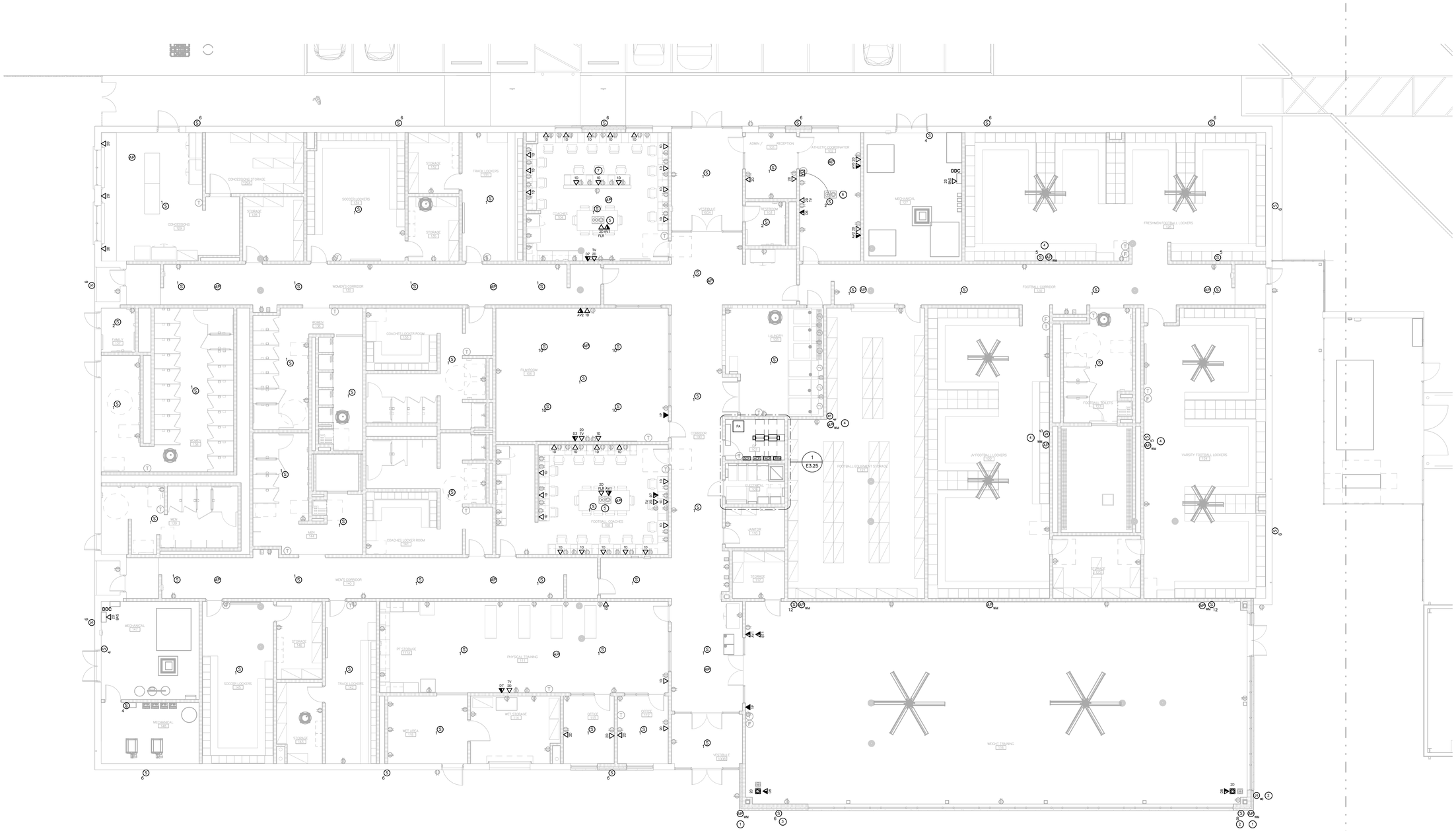
CONDUIT PENETRATIONS FOR EXTERIOR DEVICES SHALL SLOPE DOWNWARD AS THEY EXIT THE BUILDING TO PREVENT WATER INGRESS. SEAL CONDUITS TO MAINTAIN BUILDING ENVELOPE AFTER CABLE INSTALLATION. TYPICAL.

Field House Technology Key Notes

#	Note Text
1	AP TO BE WALL MOUNTED AT +11'-6", JUST BELOW CANOPY.
2	MOUNT SPEAKER HORN ABOVE CANOPY AT +14'-6" AFF.
3	EXTERIOR RECESSED PA SPEAKERS INSTALLED AT +12'-6" AFF TO CENTER, TYPICAL.
4	AP AND WALL SPEAKER MOUNTED AT +12'-0" AFF.
5	A/V AND DATA DEVICES INSTALLED IN FLOOR BOX. PROVIDE INDOOR/OUTDOOR CABLING FOR ANY CABLING ROUTED BELOW GRADE.
6	FLOOR BOX PREPARED FOR FUTURE A/V AND DATA DEVICES.
7	DATA DEVICES INSTALLED IN PARTIAL HEIGHT WALL. PROVIDE INDOOR/OUTDOOR CABLING FOR ANY CABLING ROUTED BELOW GRADE.



1 LOW VOLTAGE PLAN - FIELD HOUSE
1/8" = 1'–0"

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01/06/25

ISSUED: 01/06/2025

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SHEET TITLE
TECHNOLOGY PLAN - FIELD HOUSE

SHEET NO.
E3.21

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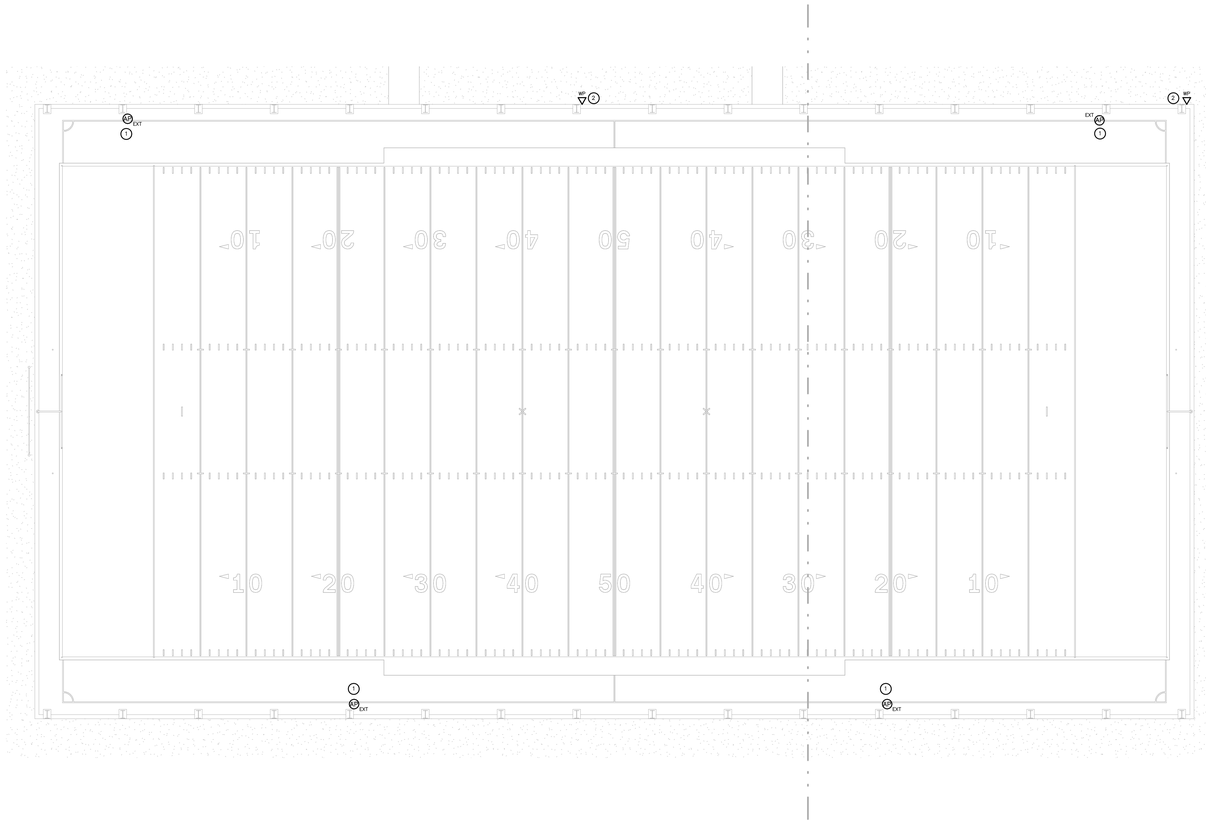
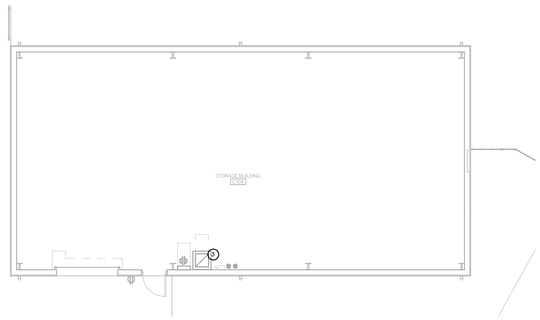
Practice Field Technology Key Notes	
#	Note Text
1	PROVIDE 2-STRAND, INDOOR/OUTDOOR FIBER FROM IDF TO OFOI MEDIA CONVERTER IN NEMA 3R ENCLOSURE. ENCLOSURE PROVIDED BY DIVISION 26.
2	EMPTY J-BOX WITH BLANK GASKETED FACEPLATE FOR FUTURE DATA OUTLET.
3	EMPTY 2-2"C FROM FIELD HOUSE IDF FOR FUTURE USE.



1 LOW VOLTAGE PLAN - COVERED PRACTICE
1" = 20'-0"



2 LOW VOLTAGE PLAN - STORAGE BUILDING
1/8" = 1'-0"

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01/06/25

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SHEET TITLE
TECHNOLOGY PLAN - PRACTICE FIELD & STORAGE BUILDING

SHEET NO.
E3.22

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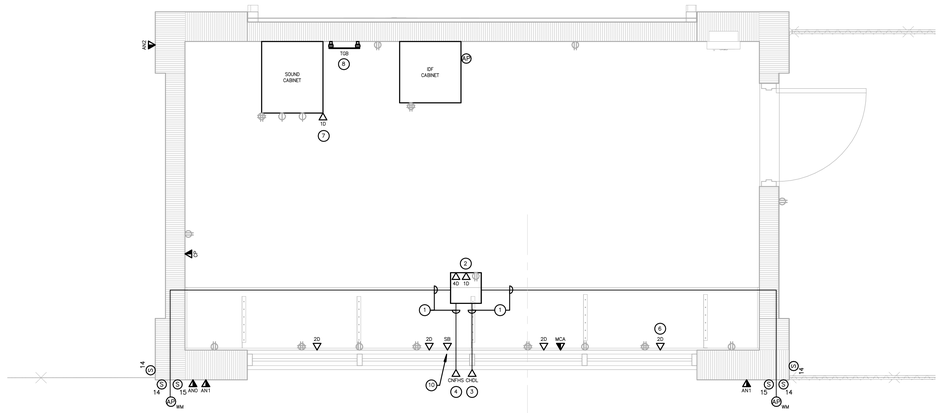
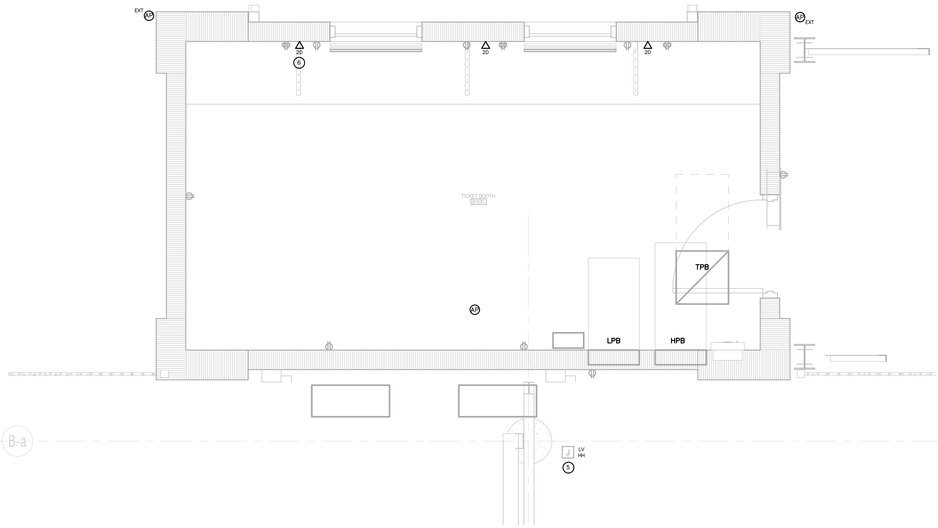
CONDUIT PENETRATIONS FOR EXTERIOR DEVICES SHALL SLOPE DOWNWARD AS THEY EXIT THE BUILDING TO PREVENT WATER INGRESS. SEAL CONDUITS TO MAINTAIN BUIDLING ENVELOPE AFTER CABLE INSTALLATION. TYPICAL.

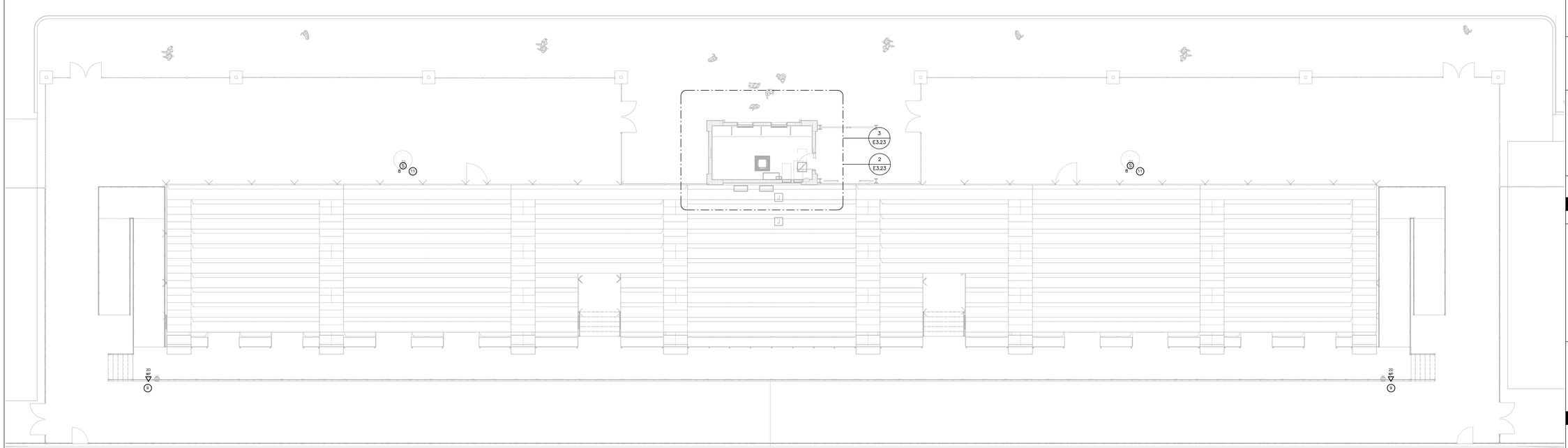
Press Box and Bleacher Technology Key Notes	
#	Note Text
1	ROUTE 3/4"C FROM EXTERIOR APs AND 1.5"C FROM CAMERAS TO ABOVE CEILING BOX.
2	DATA OUTLETS INSTALLED WITHIN ABOVE CEILING ENCLOSURE. ENCLOSURE PROVIDED BY DIVISION 26. ROUTE PATCH CORDS FROM DATA OUTLETS TO EXTERIOR END DEVICES.
3	OFOI HUDDLE (HDL) CAMERA CENTERED ON BUILDING AND 50 YARD LINE. HUDDLE CAMERA SHALL USE STANDARD DATA CABLING COLORS.
4	OFOI NFHS CAMERA INSTALLED 3FT TO THE LEFT OF THE HUDDLE CAMERA. NFHS CAMERA SHALL USE STANDARD DATA CABLING COLORS.
5	NEW LOW VOLTAGE HANDHOLE BY DIVISION 26. ROUTE DATA CABLING FOR SPORTS FIELD LOW VOLTAGE DEVICES TO HANDHOLE AND THEN INTO PRESS BOX BUILDING. REFERENCE SHEET MPE1.11B FOR ADDITIONAL DEVICES AT THE 'FIELD LEVEL'.
6	COORDINATE WITH OTHER TRADES TO PROVIDE GROMMETS IN COUNTERTOP FOR CABLE PASS THRU. TYPICAL.
7	DATA OUTLET TO BE INSTALLED WITHIN SOUND CABINET. COORDINATE LOCATION WITH LOCAL SOUND CONTRACTOR.
8	TELECOMMUNICATIONS GROUND BAR PROVIDED BY DIVISION 26.
9	DATA OUTLET INSTALLED BENEATH BLEACHERS.
10	SCOREBOARD CONTROL INPUT.
11	MOUNT PA SPEAKERS ON SPORTS LIGHTING POLES AT +35'-0" AFF.



3 LEVEL 2 LOW VOLTAGE PLAN - PRESS BOX
1/2" = 1'-0"



2 LEVEL 1 LOW VOLTAGE PLAN - TICKET BOOTH
1/2" = 1'-0"



1 LOW VOLTAGE PLAN - BLEACHERS
1/8" = 1'-0"

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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01/06/25

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

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GLS	MAS
Designer	Quality Control
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SHEET TITLE
TECHNOLOGY PLANS - BLEACHERS, TICKET BOOTH, & PRESS BOX

SHEET NO.
E3.23

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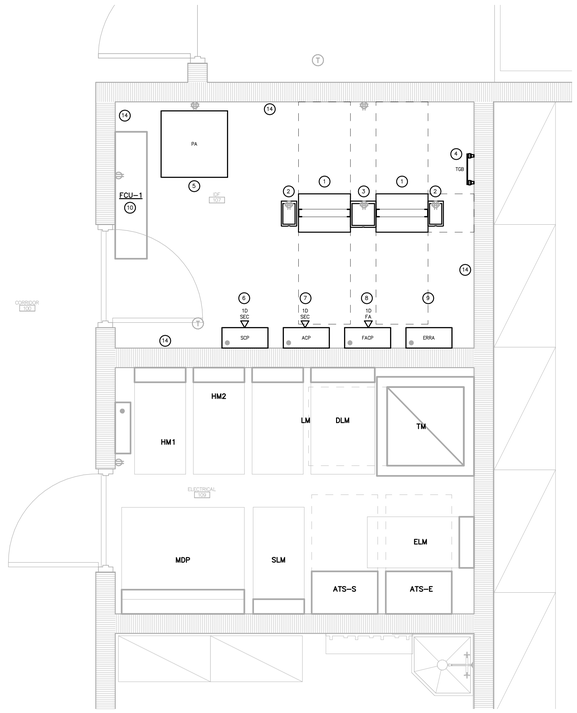
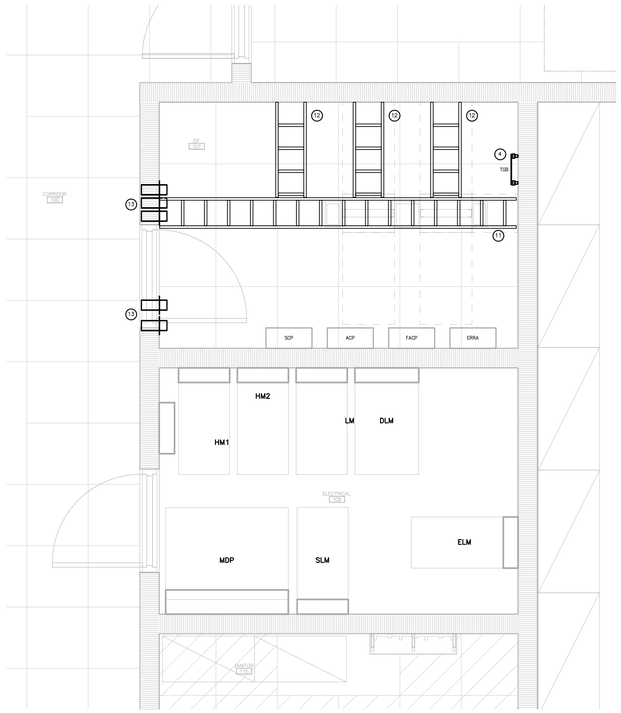


1 ENLARGED LOW VOLTAGE PLAN - IDF
1/2" = 1'-0"



2 ENLARGED LOW VOLTAGE PATHWAY PLAN - IDF
1/2" = 1'-0"

Enlarged Technology Plan Key Notes	
#	Note Text
1	2-POST RACK SECURED TO FLOOR WITH EXPANSION ANCHORS. PROVIDE NEOPRENE INSULATED FLOOR PAD WITH NYLON SHIELDS AROUND FOOR BOLTS AND NYLON WASHERS FOR CONNECTING NUTS.
2	8" VERTICAL WIRE MANAGER SECURED TO SIDE OF RACK.
3	10" VERTICAL WIRE MANAGER SECURED TO SIDE OF RACK.
4	GROUND BUS BAR MOUNTED AT 8FT AFF, PROVIDED AND INSTALLED BY DIVISION 26. COORDINATE WITH DIVISION 26 FOR MOUNTING LOCATION WITH RACKS AND LADDER TRAY.
5	PA IDF/EXPANSION CABINET.
6	SECURITY CONTROL PANEL.
7	ACCESS CONTROL PANEL.
8	FIRE ALARM CONTROL PANEL.
9	EMERGENCY RESPONDER RADIO ANTENNA (ERRA) SYSTEM.
10	WALL MOUNTED HIGH WALL HVAC UNIT. COORDINATE WITH MECHANICAL CONTRACTOR TO MOUNT ABOVE LADDER TRAY.
11	12" WIDE LADDER TRAY RUN PARRALLEL ABOVE RACKS. SECURE TO TOP OF RACKS WITH 3" RUNWAY ELEVATION KIT WITH MOUNTING PLATE AND STAND OFF BRACKETS. SECURE TO WALL WITH WALL ANGLE SUPPORT KIT. PROVIDE WATERFALL TRANSITION DEVICES INTO VERTICAL WIRE MANAGERS, TYPICAL.
12	12" WIDE LADDER TRAY CENTERED ON RACKS. TIE INTO PERPENDICULAR LADDER TRAY. SECURE TO WALL WITH WALL ANGLE SUPPORT KIT, TYPICAL.
13	4" PRE-MANUFACTURED ST/ EZ-PATH CABLE PATHWAYS WITH RADIUS CONTROL MODULE THROUGH WALL, QUANTITY AS SHOWN. PROVIDE FIRE RATED DEVICES THROUGH FIRE WALLS AND ACOUSTICAL DEVICES THROUGH UNRATED WALL. INSTALL MAXIMUM 2FT ABOVE CEILING.
14	COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE 4'X8'X3/4" FIRE RATED PLYWOOD, ACX, OR QUEAL ALIGNED VERTICALLY AND SECURED TO TELECOM ROOM WALL STARTING AT 22" AFF AROUND FULL PERIMETER OF ROOM. IF THE PLYWOOD IS PAINTED, THE PAINT SHALL BE FIRE RETARDANT PAINT ON BOTH SIDES AND THE RATING STAMP ON THE PLYWOOD SHALL BE EXPOSED.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

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PROFESSIONAL ENGINEER
01/06/25

ISSUED: 01/06/2025

REVISIONS

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Director	Drawn By
GLS	MAS
Designer	Quality Control
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Proj. Arch.	

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SHEET TITLE
ENLARGED TECHNOLOGY PLANS

SHEET NO.
E3.25

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Field House Security Key Notes	
#	Note Text
1	INSTALL CARD READERS ON DOORS AT HANDLE PULLS. TYPICAL.
2	PROVIDE DPDT DOOR CONTACTS ON ALL EXTERIOR DOORS. PROVIDE SEPARATE DOOR CONTACT AT EACH DOOR FOR DOUBLE DOORS. TYPICAL.
3	DOORS MARKED WITH "F" SHALL BE PREPARED FOR FUTURE CARD READER. TYPICAL.
4	PROVIDE DPDT DOOR CONTACT FOR ROOF HATCH.
5	CAMERA TO BE WALL MOUNTED AT +11'-6", JUST BELOW CANOPY.
6	CAMERA TO BE CORNER MOUNTED AT +11'-6", JUST BELOW CANOPY.
7	CAMERA TO BE CORNER MOUNTED AT +10'-0", JUST BELOW ARCHITECTURAL BRICK BAND.
8	CAMERA TO BE WALL MOUNTED AT +10'-0", JUST BELOW CANOPY.
9	PROVIDE WIREGUARD ON WALL MOUNTED SECURITY MOTION SENSOR.
10	COORDINATE WITH OWNER FOR LOCATION OF VIDEO INTERCOM MASTER STATION.

1 SECURITY PLAN - FIELD HOUSE
1/8" = 1'-0"

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SHEET TITLE
SECURITY FLOOR PLAN - FIELD HOUSE

SHEET NO.
E3.31

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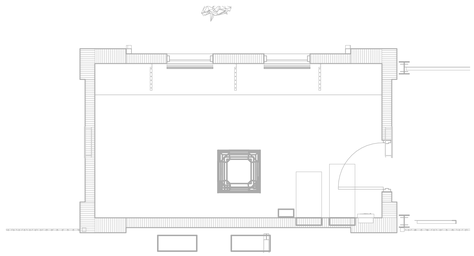
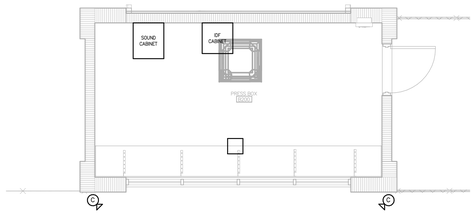
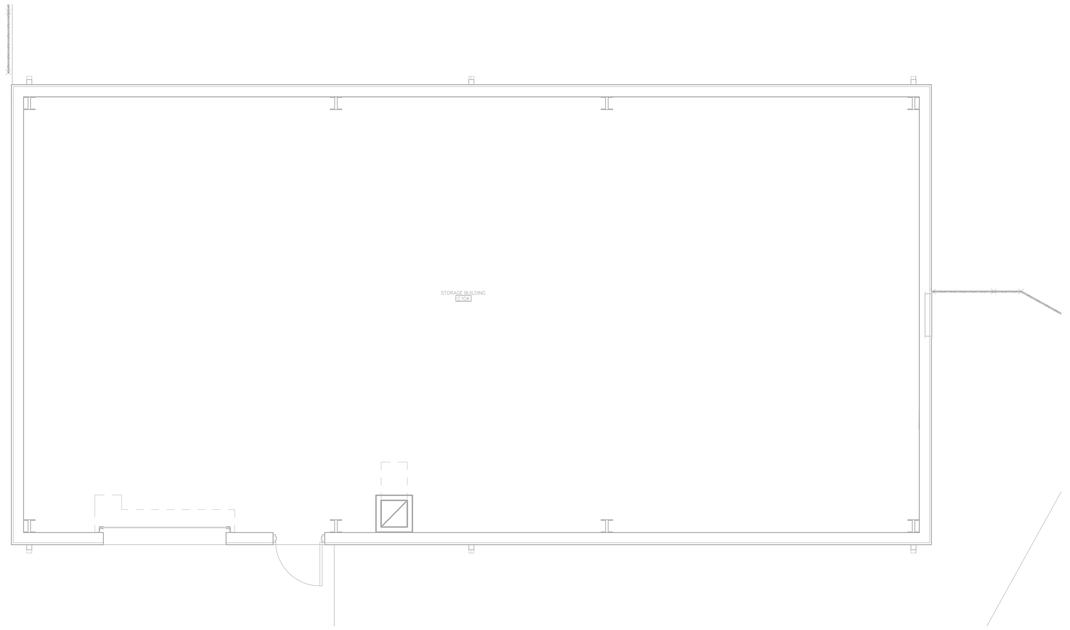


1 LEVEL 1 SECURITY PLAN - TICKET BOOTH
1/4" = 1'–0"



2 LEVEL 2 SECURITY PLAN - PRESS BOX
1/4" = 1'–0"



3 SECURITY PLAN - STORAGE BUILDING
1/4" = 1'–0"

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SHEET TITLE
SECURITY FLOOR PLANS

SHEET NO.
E3.32

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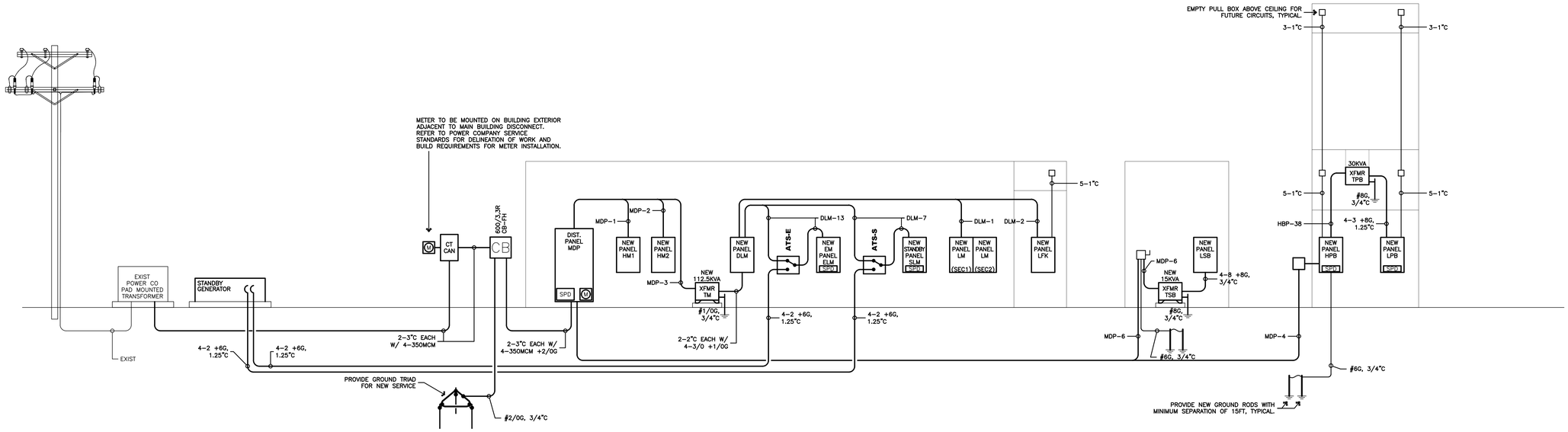

1 PARTIAL ELECTRICAL SCHEMATIC - NCHS FIELD HOUSE AND FOOTBALL FIELDS

NO SCALE

NOTES:

1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR EQUIPMENT AND BUILDING LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED WITH THE OWNER.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT. PROVIDE LAMACOID LABELS ON MAIN CIRCUIT BREAKER AND EACH SUBFEED BREAKER WITH BREAKER SIZE.

ELECTRICAL EQUIPMENT SCHEDULE

NOTES	NAME	DESCRIPTION	BASIS OF DESIGN	RATING	SERVES	NORMAL SOURCE CB	EM SOURCE CB	LOAD OUTPUT CB
	GENERATOR	NATURAL GAS STANDBY GENERATOR	KOHLER	36KW, 208Y/120V	BUILDING STANDBY POWER SYSTEMS	N/A	N/A	(2) 100A
	ATS-E	AUTOMATIC TRANSFER SWITCH	EATON ATC	100A, 208Y/120V, 3-POLE XFER	LIFE SAFETY POWER SYSTEMS	–	–	–
	ATS-S	AUTOMATIC TRANSFER SWITCH	EATON ATC	100A, 208Y/120V, 3-POLE XFER	STANDBY POWER SYSTEMS	–	–	–

1. REFERENCE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. REFERENCE GENERATOR SCHEDULE FOR ADDITIONAL INFORMATION.

NATURAL GAS STANDBY GENERATOR

208Y/120V, 3 PHASE, 4 WIRE
BASIS OF DESIGN: KOHLER 36CCL
LEVEL 2 SOUND ENCLOSURE
SEE SPECIFICATIONS FOR OTHER LISTED MANUFACTURERS.

36 KW / 45 KVA CAPABLE OF 100% FULL OUTPUT AT SINGLE PHASE.
(1) 100A CB OUTPUT – BUILDING EMERGENCY POWER SYSTEMS
(1) 100A CB OUTPUT – BUILDING STANDBY POWER SYSTEMS

ALL CIRCUIT BREAKERS SHALL BE THERMAL/MAGNETIC TRIP TYPE, 80% RATED AND COORDINATED WITH DOWNSTREAM PANELS AND CIRCUIT BREAKERS.

ACCESSORIES:
1500W, 120V BLOCK HEATER
300W ALTERNATOR HEATER
10A, 12/24V BATTERY CHARGER
REMOTE E-STOP
REMOTE ANNUNCIATOR

REFERENCE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NATURAL GAS CONSUMPTION AT FULL CAPACITY: 473 CFH
MINIMUM GAS PRESSURE: 5" H20
MAXIMUM GAS PRESSURE: 11" H20
SEE PLUMBING DRAWINGS FOR CONNECTIONS

PROVIDE PERMANENT SIGN ON GENERATOR READING: "STANDBY GENERATOR"
LOAD GENERATOR AFTER INSTALLATION AT FULL CAPACITY AND PARTIAL CAPACITY WITH LOAD BANK, REFERENCE SPECIFICATIONS.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director GLS	Drawn By MAS
Designer MAS	Quality Control
Proj. Arch.	

PROJECT NO.
23-155.00

SHEET TITLE
ELECTRICAL SCHEMATIC AND SCHEDULES

SHEET NO.
E4.00

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GENERAL ELECTRICAL NOTES

1. INSTALLATION OF LIFT STATION AND ASSOCIATED COMPONENTS SHALL COMPLY WITH LOCAL CODES INCLUDED AMENDMENTS AND THE LATEST EDITION OF NEC.
2. CONTRACTOR SHALL PROVIDE CONDUITS FOR MOTOR AND FLOAT CONDUCTORS.
3. PROTECTION DEVICES PROVIDED BY PUMP MANUFACTURER.
4. CONTRACTOR SHALL PROVIDE ALL APPURTENANCES, INCLUDING FEEDER WIRING AS NEEDED FOR A COMPLETE INSTALLATION.
5. CONTRACTOR SHALL COORDINATE POWER SOURCE WITH PUMP MANUFACTURER AND PROVIDE ALL NECESSARY PROTECTIVE DEVICES AT THE POWER SOURCE FOR A COMPLETE SYSTEM.
6. WHERE PROVIDED WITH AN AUTO-DIALER THE CONTRACTOR SHALL COORDINATE THE TELEPHONE LINE WITH DATA SYSTEM CONTRACTOR. TELEPHONE LINE WILL BE PROVIDED FROM THE OWNER'S BUILDING BY THE DATA CONTACTOR.

LIFT STATION KEYED NOTES

A. INCOMING CONDUIT AND CONDUCTORS TO BE SIZED PER NEC. CONTRACTOR TO COORDINATE CIRCUIT SIZING WITH ELECTRICAL DRAWINGS AND SPECIFICATIONS.

B. CONDUCTORS AND CONDUIT FROM METER CAN AND DISCONNECT SWITCHES TO MATCH INCOMING SERVICE FEEDER.

C. 100/100AF/3, NEMA 4XSS, SERVICE RATED MANUAL TRANSFER SWITCH.
BASIS OF DESIGN: EATON QUICK CONNECT DOUBLE THROW DISCONNECT SWITCH #DT-4-6-3-SN-SN-R-K-SN-LC-SS.
CONTRACTOR TO COORDINATE CAM-LOCK CONFIGURATION AND OTHER REQUIREMENTS WITH OWNER PRIOR TO PURCHASE AND INSTALLATION.

D. DUAL ELEMENT, TIME DELAY, CLASS RK5 FUSE
BASIS OF DESIGN: BUSSMANN #FRS-R-100 OR EQUAL BY LITTELFUSE.

E. 4-3 +8G, 1.25"C

F. 480Y/277V, 3PH 4W, N4X SURGE PROTECTION DEVICE WITH MINIMUM RATING OF 80KA PER MODE AND 160KA PER PHASE.
BASIS OF DESIGN: ACT COMMUNICATIONS ACT SURGE STRYKER #455-277Y-80.
SPD SHALL BE PROTECTED WITH A 60A, 3PH BREAKER AND CONNECTED USING 4-8 +10G.

G. 3-12 +12G, 3/4"C

H. WHERE REQUIRED, PROVIDE UTILITY METER/SUB-METERING PER THE APPLICABLE POWER COMPANY/OWNER STANDARDS.

I. INSTALL "EYE" TYPE SEAL-OFF IN ALL CONDUITS FROM LIFT STATION. USE NON-HARDENING CHICO 'A' TYPE SEALANT.

J. PROVIDE 2" CONDUIT WITH PULL WIRE BETWEEN CONTROLLER AND LIFT STATION FOR LOW VOLTAGE WIRING. CONTRACTOR TO COORDINATE WITH VENDOR FOR ALL REQUIREMENTS PRIOR TO COMMENCEMENT OF WORK.

K. HIGH LEVEL ALARM AUDIBLE/VISUAL SIGNAL FIXTURE TYPE:
BEACON FEDERAL SIGNAL AV1-LED-RED

L. 2-12 +12G, 1/2"C

M. CAM-LOK ENCLOSURE FOR MOBILE GENERATOR CONNECTION.

N. PROVIDE LOCAL GROUND CONNECTION PER NEC.
BOND NEUTRAL TO GROUND AT THIS LOCATION WHEN FED FROM A DEDICATED SERVICE.
DO NOT BOND NEUTRAL TO GROUND WHERE FED FROM A LOCAL BUILDING POWER SYSTEM.

O. #4G, 3/4"C

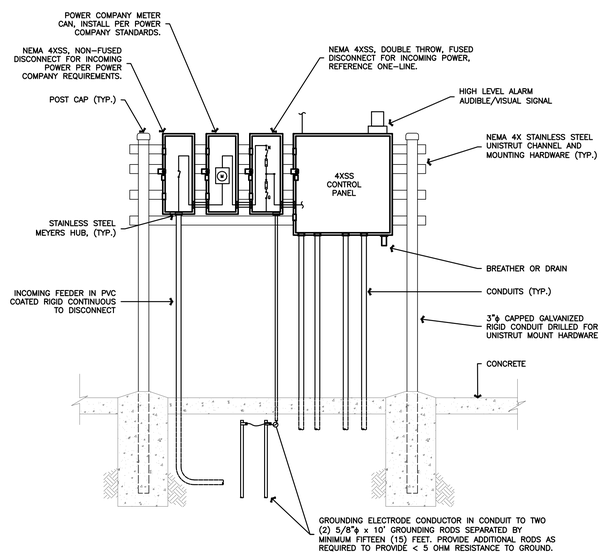
P. 2-12 +12N +12G

Q. 100/3, HEAVY DUTY, NEMA 4XSS, NON-FUSED DISCONNECT.

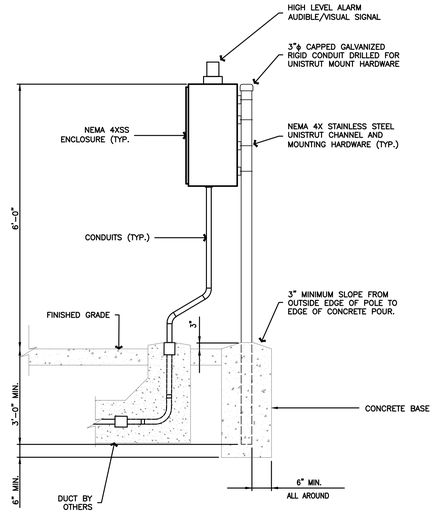
R. 3-10 +10G, 3/4"C

S. PUMP STARTER SHALL INCLUDE SOFT START OPTION.

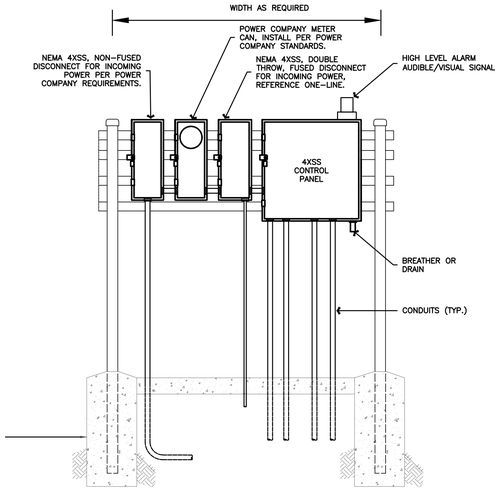
T. PROVIDE 3-12, 3/4"C FROM STARTER AUXILIARY POWER TRANSFORMER TO PUMP ANTI-CONDENSATION HEATER. COORDINATE CONNECTION POINTS AND ROUTING WITH LIFT STATION MANUFACTURER/INSTALLER.



DISTRIBUTION PANEL DETAIL
N.T.S.



SIDE ELEVATION

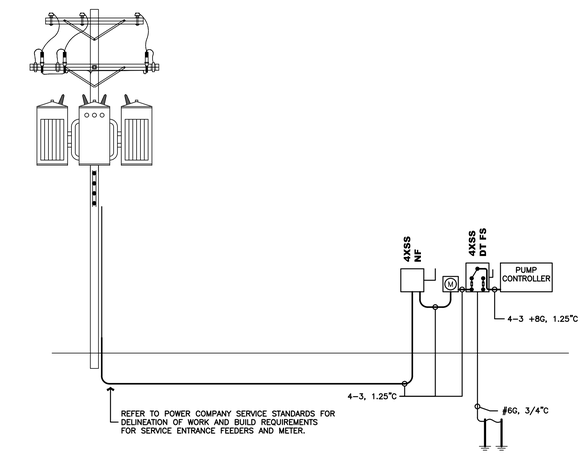


FRONT ELEVATION

PANEL MOUNTING DETAIL
N.T.S.

ONE- LINE SYMBOL SCHEDULE

- FUSE WITH INTEGRAL FUSE PULLER
- CONTACTOR
- THERMOSAT, NORMALLY OPEN CONTACT WITH CLOSING ON TEMPERATURE DECREASE
- PUSH-TO-TEST INDICATING LIGHT R=RED/MOTOR RUNNING G=GREEN/MOTOR STOPPED A=AMBER/ALARM
- CONTROL POWER TRANSFORMER
- GROUND
- DISCONNECT SWITCH
- HEATER/HEATING ELEMENT

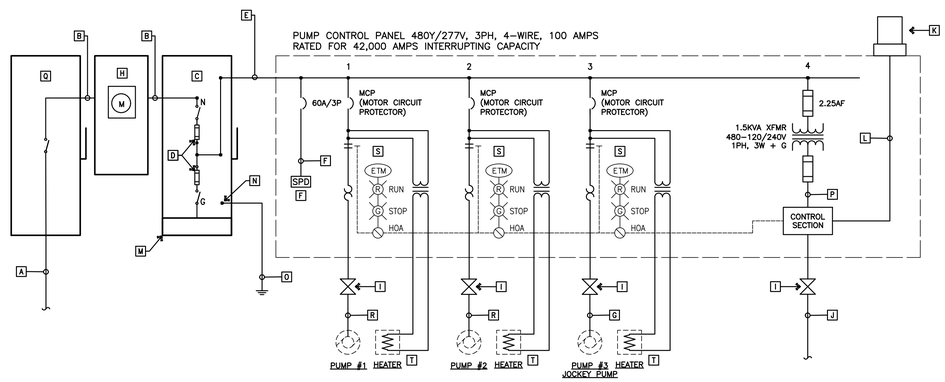


2 PARTIAL ELECTRICAL SCHEMATIC - DETENTION POND

NO SCALE

NOTES:

1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR EQUIPMENT LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED WITH THE OWNER.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT. PROVIDE LAMACOID LABELS ON MAIN CIRCUIT BREAKER AND EACH SUBFEED BREAKER WITH BREAKER SIZE.



1 LIFT STATION CONTROLLER ELECTRICAL ONE-LINE DIAGRAM

NO SCALE

LIFT STATION

SHORT CIRCUIT ANALYSIS — SEG PROJECT: 2320, 480Y/277V VOLTS

LOCATION	SHORT CIRCUIT AVAILABLE	EQUIPMENT AIC FULLY RATED
SERVICE ENTRANCE DT FS	<14,000A	100,000A
LIFT STATION CONTROL PANEL	<14,000A	42,000A
480V PANELS NOT SHOWN	<14,000A	14,000A
240V OR 208V PANELS NOT SHOWN	<10,000A	10,000A
SPD	SPD SHALL HAVE SAME AIC RATING AS SWITCHGEAR TO BE PROTECTED.	

WHERE CIRCUIT BREAKERS ARE APPLIED IN COMPLIANCE WITH THE SERIES COMBINATION RATINGS MARKED ON THE EQUIPMENT BY THE MANUFACTURER, THE ENCLOSURE(S) SHALL BE PERMANENTLY AND LEGIBLY MARKED IN THE FIELD TO INDICATE THE EQUIPMENT HAS BEEN APPLIED USING A SERIES COMBINATION RATING.
ELECTRICAL EQUIPMENT SUPPLIER SHALL PROVIDE A READILY VISIBLE, ENGRAVED NAMEPLATE TO BE PERMANENTLY AFFIXED TO THE EQUIPMENT STATING THE FOLLOWING:
CAUTION ____ SERIES COMBINATION SYSTEM RATED ____ AMPERES.
IDENTIFIED REPLACEMENT COMPONENTS REQUIRED.

A PERMANENTLY AFFIXED LABEL SHALL BE ATTACHED TO ALL NEW ELECTRICAL EQUIPMENT WITH THE AVAILABLE FAULT CURRENT AT THE TIME OF INSTALLATION AND CALCULATION. THE LABEL SHALL BE 2" X 3" IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. THIS LABEL SHALL ALSO INCLUDE THE DATE OF THE CALCULATION.

* MAIN CB FOR LOW VOLTAGE PANELS SHALL HAVE MINIMUM 22,000A SHORT CIRCUIT RATING.

ELECTRICAL LOAD ANALYSIS — SEG PROJECT: 2320, LIFT STATION

LOAD DESCRIPTION	SYSTEM VOLTAGE IS 480Y/277V VOLTS, 3 PHASE, 4 WIRE	VA	AMPS
LIFT STATION PUMP #1	(12 HP, 16FLA 192A STARTING)	13296.0	16.0
LIFT STATION PUMP #2	(12 HP, 16FLA 192A STARTING)	13296.0	16.0
LIFT STATION PUMP #3 (JOCKEY)	(4 HP, 6.45FLA, 50A STARTING)	5360.0	6.5
MISCELLANEOUS ELECTRICAL		1500	1.8
SUBTOTAL		33452.0	40.3
25% X LIGHTS		0	0.0
25% X LARGEST MOTOR		3324.0	4.0
TOTAL DIVERSIFIED LOAD		36776.0	44.3
SYSTEM CAPACITY		83100	100.0
SPARE CAPACITY		46324.1	55.7

THE SYSTEM HAS ADEQUATE CAPACITY FOR THE DESIGN LOADS.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director GLS
Designer MAS
Proj. Arch.

Drawn By MAS
Quality Control

PROJECT NO.
23-155.00

SHEET TITLE
ELECTRICAL SCHEMATIC AND SCHEDULES - LIFT STATION

SHEET NO.
E4.01

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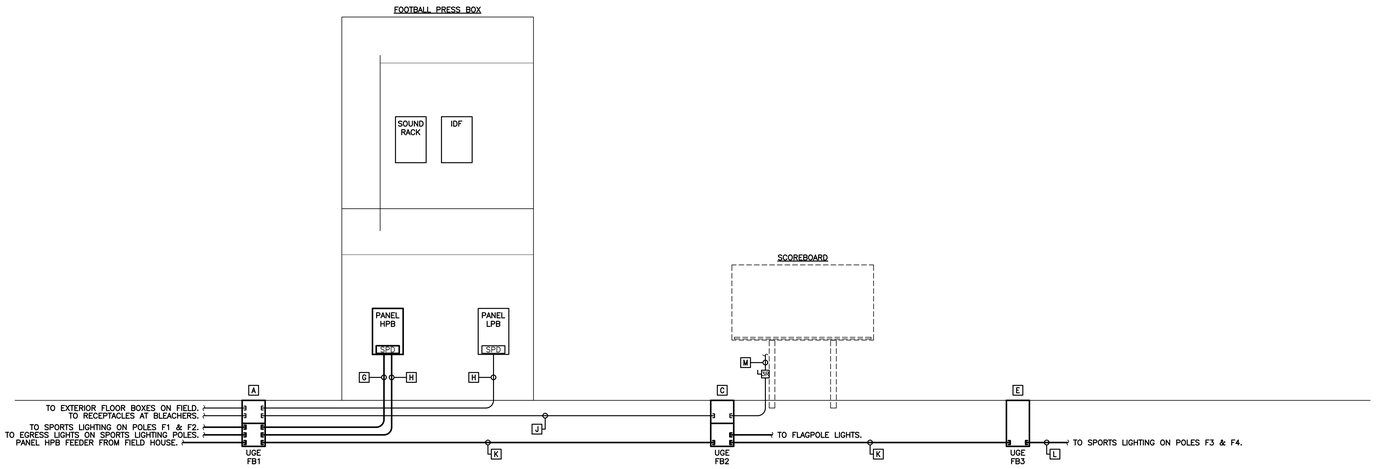
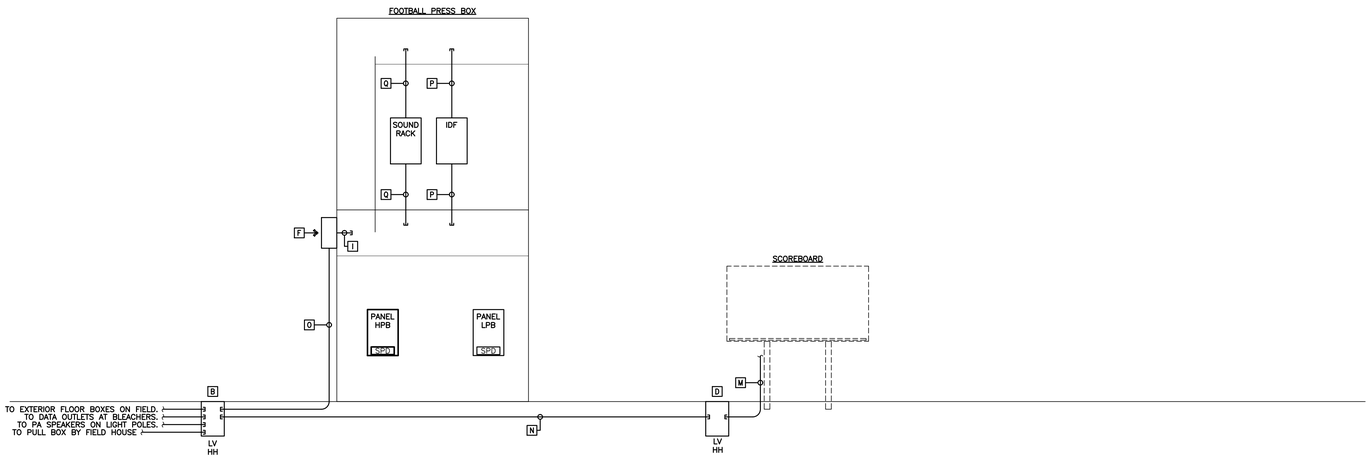


1 PARTIAL UNDERGROUND ELECTRICAL PATHWAY RISER - NCHS FOOTBALL FIELD

NO SCALE

NOTES:

1. PULL BOXES AND SHOWN HERE ARE INTENDED TO PROVIDE PATHWAYS AND CONSOLIDATION POINTS FOR FUTURE GROWTH. CIRCUITS BUILT AS PART OF THIS PROJECT MAY UTILIZE THESE PULL BOXES PROVIDED THERE IS SUFFICIENT SIZE PER NEC REQUIREMENTS. DO NOT COMBINE 480V AND 208V/120V CIRCUITS CONDUITS IN THE SAME PULL BOX SECTIONS.
2. ALL PULL BOXES SHALL BE SIZED BY THE CONTRACTOR.
3. PROVIDE ADDITIONAL PULL BOXES FOR INSTALLED CIRCUITS AS NEEDED TO MEET NEC REQUIREMENTS WHICH ARE NOT SHOWN HERE.



2 PARTIAL UNDERGROUND LOW VOTLAGE PATHWAY RISER- NCHS FOOTBALL FIELD

NO SCALE

NOTES:

1. PULL BOXES AND SHOWN HERE ARE INTENDED TO PROVIDE PATHWAYS AND CONSOLIDATION POINTS FOR FUTURE GROWTH. LOW VOLTAGE CABLING INSTALLED AS PART OF THIS PROJECT MAY UTILIZE THESE PULL BOXES PROVIDED THERE IS SUFFICIENT SIZE PER NEC REQUIREMENTS.
2. ALL PULL BOXES SHALL BE SIZED BY THE CONTRACTOR.
3. PROVIDE ADDITIONAL PULL BOXES FOR INSTALLED CABLING AS NEEDED TO MEET NEC REQUIREMENTS AND RELEVANT LOW VOLTAGE STANDARDS WHICH ARE NOT SHOWN HERE.

PATHWAY KEYED NOTES

A. 2-SECTION FLUSH IN GRADE PULL BOX ADJACENT TO PRESS BOX BENEATH BLEACHERS. INSTALL 120V & 208V CIRCUITS IN ONE SECTION AND 480V CIRCUITS IN 2ND SECTION.
B. FLUSH IN GRADE LOW VOLTAGE HANDHOLE ADJACENT TO PRESS BOX BENEATH BLEACHERS.
C. 2-SECTION FLUSH IN GRADE PULL BOX ADJACENT TO SCOREBOARD. INSTALL 120V & 208V CIRCUITS IN ONE SECTION AND 480V CIRCUITS IN 2ND SECTION.
D. FLUSH IN GRADE LOW VOLTAGE HANDHOLE AT SCOREBOARD FOR LOW VOLTAGE CABLING.
E. FLUSH IN GRADE PULL BOX ADJACENT TO FOOTBALL SPORTS LIGHTING POLE F3.
F. LOW VOLTAGE PULL BOX ON EXTERIOR WALL OF PRESS BOX BENEATH BLEACHERS. MOUNT ON WALL ABOVE 1ST FLOOR CEILING.
G. PANEL HPB FEEDER FROM FIELD HOUSE.
H. SITE ELECTRICAL CIRCUITS PLUS 1-2"C SPARE FOR FUTURE GROWTH.
I. 2-4"C & 4-2"C SLEEVES FROM EXTERIOR PULL BOX FOR LOW VOLTAGE CABLING.
J. 2-1"C FOR SCOREBOARD ELECTRICAL CIRCUIT AND FUTURE GROWTH.
K. LIGHTING CIRCUITS PLUS 1-2"C SPARE FOR FUTURE GROWTH.
L. LIGHTING CIRCUITS.
M. 3/4"C TO SCOREBOARD. COORDINATE WITH SCOREBOARD CONTRACTOR FOR FINAL CONNECTION.
N. 1-2"C FOR SCOREBOARD CONTROL CABLE AND FUTURE GROWTH.
O. 2-4"C AND 4-2"C FOR LOW VOLTAGE CABLING FROM LOW VOLTAGE HANDHOLE TO WALL MOUNTED PULL BOX.
P. CONDUITS FROM WALL MOUNTED IDF CABINET TO ACCESSIBLE CEILINGS. REFERENCE DETAIL 2/E5.30
Q. CONDUITS FROM LOCAL SOUND SYSTEM CABINET TO ACCESSIBLE CEILINGS. REFERENCE DETAIL 2/E5.30.

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ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director GLS	Drawn By MAS
Designer MAS	Quality Control
Proj. Arch.	

PROJECT NO.
23-155.00

SHEET TITLE
ELECTRICAL SCHEMATIC - UG PATHWAYS

SHEET NO.
E4.02

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Panelboard LM

AIC Rating: X New / Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB; 225 A BUS (Copper); ISO. GRND. BUS | X Single Double Feed - Thru | Mounting: X Surface Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT	CB	Wire	Description	Load (VA)	Note
	900 VA	5 Rec - Soccer & Track	3-12	20/1	1 2	20/1	3-12	7 Rec - Corr & Ext.	1260 VA	
	1080 VA	6 Rec - Soccer & Track	3-12	20/1	3 4	20/1	3-12	5 Rec - Weight Room	900 VA	
	540 VA	3 Rec - Women RR	3-12	20/1	5 6	20/1	3-12	4 Rec - Weight Room	720 VA	
	360 VA	2 Rec - Women RR	3-12	20/1	7 8	20/1	3-12	2 Displays - Weight Room	360 VA	
	1330 VA	6 Rec & Display - Training Office	3-12	20/1	9 10	20/1	3-12	Weight Room Sound System	500 VA	
	540 VA	3 Rec - Training Rm	3-12	20/1	11 12	20/1	3-12	3 Rec - Jator/Roof	540 VA	
	720 VA	4 Rec - Training Rm	3-12	20/1	13 14	20/1	3-10	4 Rec - Corr & Ext.	720 VA	
	360 VA	2 Rec - Training Rm	3-12	20/1	15 16	20/1	3-12	4 Rec - Corr & Ext.	720 VA	
	900 VA	5 Rec - Wet Area/Stor	3-12	20/1	17 18	20/1	3-12	5 Rec - Corr & Ext.	900 VA	
	1000 VA	Ice Machine - Wet Storage	3-12	20/1	19 20	--	--	Spare 20/1	0 VA	--
	1920 VA	Whirlpool Tub	3-12	20/1	21 22	20/1	3-10	3 Rec - Football Coaches	540 VA	
	1920 VA	Whirlpool Tub	3-12	20/1	23 24	20/1	3-10	4 Rec - Football Coaches	720 VA	
	1920 VA	Whirlpool Tub	3-12	20/1	25 26	20/1	3-10	4 Rec - Football Coaches	720 VA	
	1080 VA	6 Rec - Coaches	3-10	20/1	27 28	20/1	3-10	4 Rec - Football Coaches	720 VA	
	900 VA	5 Rec - Coaches	3-12	20/1	29 30	20/1	3-10	3 Rec - Football Coaches	540 VA	
	720 VA	4 Rec - Coaches	3-12	20/1	31 32	20/1	3-10	4 Rec - Football Coaches	720 VA	
	1080 VA	6 Rec - Coaches	3-12	20/1	33 34	20/1	3-10	4 Rec - Football Coaches	720 VA	
	900 VA	5 Rec - Coaches	3-12	20/1	35 36	20/1	3-12	Floor Box & Display - Football	610 VA	
	360 VA	2 Rec - Coaches	3-12	20/1	37 38	20/1	3-10	5 Rec - Stor & JV Football	900 VA	
	610 VA	Floor Box & Display - Coaches	3-12	20/1	39 40	--	--	Spare 20/1	0 VA	--
	720 VA	4 Rec - Men RR & Coach Locker	3-12	20/1	41 42	20/1	3-12	5 Rec - Football RR & Lockers	900 VA	
	360 VA	2 Rec - Coaches Locker	3-12	20/1	43 44	20/1	3-12	4 Rec - Film Room	720 VA	
	720 VA	4 Rec - Admin/Reception	3-12	20/1	45 46	20/1	3-12	Display - Film Room	250 VA	
	1510 VA	7 Rec & Display - Ath. Coor.	3-12	20/1	47 48	--	--	Spare 20/1	0 VA	--
	360 VA	2 Rec - Covered Field	3-10	20/1	49 50	--	--	Spare 20/1	0 VA	--
	180 VA	1 Rec - Covered Field	3-10	20/1	51 52	--	--	Spare 20/1	0 VA	--
	360 VA	2 Rec - Covered Field	3-10	20/1	53 54	--	--	Spare 20/1	0 VA	--
	720 VA	3 Rec - Covered Field AP	3-10	20/1	55 56	--	--	Spare 20/1	0 VA	--
--	0 VA	Spare 20/1	--	--	57 58	--	--	Spare 20/1	0 VA	--
--	0 VA	Spare 20/1	--	--	59 60	--	--	Spare 20/1	0 VA	--
--	0 VA	Spare 20/1	--	--	61 62	20/1	3-12	Covered Field Lighting Controls	0 VA	
	120 VA	Generator Battery Charger	3-10	20/1	63 64	20/1	3-12	Lighting Controls	250 VA	
	300 VA	Generator Alternator Heater	3-10	20/1	65 66	20/1	3-12	EF-1 & EF-4	288 VA	
	1508 VA	Generator Block Heater	3-8	20/1	67 68	20/1	3-12	EF-5 (1/3 HP)	864 VA	
	180 VA	Water Softener	3-12	20/1	69 70	15/2	2-12 +12G	HVLS-1,2 (Weight Room)	582 VA	
	500 VA	1 EDF	3-12	20/1	71 72					
	1000 VA	2 EDF	3-12	20/1	73 74	15/2	2-12 +12G	HVLS-3,4 (JV Football)	582 VA	
	1000 VA	2 EDF	3-12	20/1	75 76					
	1620 VA	GHW/CP/CO Monitor	3-10	20/1	77 78	15/2	2-12 +12G	HVLS-5,6 (Varsity Football)	582 VA	
	900 VA	Boiler BLR-2	3-10	20/1	79 80					
	1560 VA	HWP-2 (.87 HP)	2-12 +12G	15/2	81 82	15/2	2-12 +12G	HVLS-7,8 (Freshman Football)	582 VA	
					83 84					

Total Connected Load: 51162 VA = 142 A
Total Load (Diversified): 37837 VA = 105 A
Total Lighting Load: =
Location of Panel: ELECTRICAL 109

Panelboard LM2

AIC Rating: X New / Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB; 100 A BUS (Copper); ISO. GRND. BUS | X Single Double Feed - Thru | Mounting: X Surface Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT	CB	Wire	Description	Load (VA)	Note
	720 VA	5 Receptacle	3-12	20/1	1 2	20/2	2-12 +12N+12G	Commercial Washer	1747 VA	
	360 VA	2 Receptacle	3-12	20/1	3 4					
--	0 VA	Spare 20/1	--	--	5 6	20/2	2-12 +12N+12G	Commercial Washer	1747 VA	
--	0 VA	Spare 20/1	--	--	7 8					
--	0 VA	Spare 20/1	--	--	9 10	20/2	2-12 +12N+12G	Commercial Washer	1747 VA	
--	0 VA	Spare 20/1	--	--	11 12					
--	0 VA	Spare 20/1	--	--	13 14	20/1	3-12	Commercial Dryer	1248 VA	
--	0 VA	Spare 20/1	--	--	15 16	20/1	3-12	Commercial Dryer	1248 VA	
--	0 VA	Spare 20/1	--	--	17 18	20/1	3-12	Commercial Dryer	1248 VA	
--	0 VA	Spare 20/1	--	--	19 20	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	21 22	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	23 24	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	25 26	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	27 28	--	--	Prepared Space	0 VA	--
					29 30					

Total Connected Load: 10066 VA = 28 A
Total Load (Diversified): 10066 VA = 28 A
Total Lighting Load: =
Location of Panel: LAUNDRY 105

Panelboard LFK

AIC Rating: X New / Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MCB | 0 A MCB; 100 A BUS (Copper); ISO. GRND. BUS | X Single Double Feed - Thru | Mounting: Surface X Flush | Cover: Stainless Steel

Note	Load (VA)	Description	Wire	CB	CKT	CB	Wire	Description	Load (VA)	Note
	360 VA	2 Receptacles	3-12	20/1	1 2	20/1	3-12	EQ17-Fly Fan	1800 VA	
	180 VA	1 Receptacle	3-12	20/1	3 4	20/1	3-12	EQ15-Heated Display Case	1224 VA	
	180 VA	1 Receptacle	3-12	20/1	5 6	20/1	3-12	EQ16- Milk Cooler	960 VA	
	180 VA	1 Receptacle	3-12	20/1	7 8	20/1	3-12	EQ14-Drawer Warmers	636 VA	
	180 VA	1 Rec - Point of Sale System	3-12	20/1	9 10	20/1	3-12	EQ15-Heated Display Case	1224 VA	
--	0 VA	Spare 20/1	--	--	11 12	20/1	3-12	EQ16- Milk Cooler	960 VA	
--	0 VA	Spare 20/1	--	--	13 14	60/3	4-6 +10G, 1"C	EQ06- Counter Load Center	10800 VA	
--	0 VA	Spare 20/1	--	--	15 16					
--	0 VA	Spare 20/1	--	--	17 18					
--	0 VA	Spare 20/1	--	--	19 20	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	21 22	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	23 24	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	25 26	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	27 28	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	29 30	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	31 32	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	33 34	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	35 36	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	37 38	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	39 40	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	41 42	--	--	Prepared Space	0 VA	--

Total Connected Load: 18684 VA = 52 A
Total Load (Diversified): 17633 VA = 49 A
Total Lighting Load: =
Location of Panel: CONCESSIONS 129

1. Provide spare conduits from panel to empty gutters above first and second floor ceilings for future circuits. Reference electrical riser.

Panelboard LSB

AIC Rating: X New / Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MCB | 60 A MCB; 60 A BUS (Copper); ISO. GRND. BUS | X Single Double Feed - Thru | Mounting: X Surface Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT	CB	Wire	Description	Load (VA)	Note
	540 VA	2 Receptacles	3-12	20/1	1 2	20/1	3-12	Exterior Lighting	68 VA	
--	0 VA	Spare 20/1	--	--	3 4	20/1	3-12	Interior Lighting	473 VA	
--	0 VA	Spare 20/1	--	--	5 6	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	7 8	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	9 10	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	11 12	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	13 14	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	15 16	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	17 18	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	19 20	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	21 22	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	23 24	--	--	Prepared Space	0 VA	--

Total Connected Load: 1081 VA = 3 A
Total Load (Diversified): 1216 VA = 3 A
Total Lighting Load: 541 VA = 2 A
Location of Panel: STORAGE BUILDING C104

Panelboard DLM

AIC Rating: X New / Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MCB | 400 A MCB; 400 A BUS (Copper); ISO. GRND. BUS | X Single Double Feed - Thru | Mounting: X Surface Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT	CB	Wire	Description	Load (VA)	Note
	18684 VA	Panel LFK	4-2 +6G, 1.25"C	100/3	1 2	100/3	4-3 +6G 1.25"C	Transfer Switch ATS-S (Panel SLM)	31475 VA	
					3 4					
					5 6					
	10066 VA	Panel LM3	4-3 +8G, 1.25"C	100/3	7 8	100/3	4-3 +6G 1.25"C	Transfer Switch ATS-E (Panel ELM)	4387 VA	
					9 10					
					11 12					
--	0 VA	Prepared Space	--	--	13 14	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	15 16	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	17 18	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	19 20	60/3	4-6 +10G	Integral SPD	50 VA	
--	0 VA	Prepared Space	--	--	21 22					
--	0 VA	Prepared Space	--	--	23 24					
	51162 VA	Panel LM (Subfeed Breaker)	4-4/0 +4G, 2.5"C	225/3SF	25 26	225/3SF	-	Prepared Subfeed Space	0 VA	
					27 28					
					29 30					

Total Connected Load: 115324.... = 320 A
Total Load (Diversified): 99364 VA = 276 A
Total Lighting Load: 4375 VA = 12 A
Location of Panel: ELECTRICAL 109

Panelboard ELM

AIC Rating: X New / Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MCB | 100 A MCB; 100 A BUS (Copper); ISO. GRND. BUS | X Single Double Feed - Thru | Mounting: X Surface Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT	CB	Wire	Description	Load (VA)	Note
2	250 VA	Fire Alarm Panel	3-12	20/1	1 2	20/1	3-12	Exit Lights	65 VA	
2	250 VA	ERRA Panel	3-12	20/1	3 4	20/1	3-10	Corridor EM Lights	779 VA	
--	0 VA	Spare 20/1	--	--	5 6	20/1	3-10	East Room EM Lights	1374 VA	
--	0 VA	Spare 20/1	--	--	7 8	20/1	3-10	West Room EM Lights	1457 VA	
--	0 VA	Spare 20/1	--	--	9 10	20/1	3-10	Exterior EM Lights	212 VA	
--	0 VA	Spare 20/1	--	--	11 12	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	13 14	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	15 16	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	17 18	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	19 20	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	21 22	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	23 24	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	25 26	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	27 28	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	29 30	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	31 32	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	33 34	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	35 36	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	37 38	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	39 40	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	41 42	--	--	Prepared Space	0 VA	--

Total Connected Load: 4387 VA = 12 A
Total Load (Diversified): 5359 VA = 15 A
Total Lighting Load: 3887 VA = 11 A
Location of Panel: ELECTRICAL 109

1. Provide integral SPD with minimum rating of 100kAMPs per phase.
2. Provide a Locking Device for this Circuit Breaker. See Specifications

Panelboard SLM

AIC Rating: X New / Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MCB | 100 A MCB; 100 A BUS (Copper); ISO. GRND. BUS | X Single Double Feed - Thru | Mounting: X Surface Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT	CB	Wire	Description	Load (VA)	Note
	1000 VA	Ice Machine	3-12	20/1	1 2	20/1	3-12	Elec/Mech/IDF Lighting	488 VA	
	780 VA	Vending Machine	3-12	20/1GFI	3 4	20/1	3-12	1 Rec - IDF	360 VA	
	780 VA	Vending Machine	3-12	20/1GFI	5 6	20/1	3-12	Quad Rec - IDF	500 VA	2
	900 VA	Refrigerator	3-12	20/1	7 8	20/1	3-12	Quad Rec - IDF	500 VA	2
	900 VA	Refrigerator	3-12	20/1	9 10	20/1	3-12	Quad Rec - IDF	500 VA	2
	360 VA	UC Ice Maker	3-12	20/1	11 12	20/1	3-12	Quad Rec - IDF	500 VA	2
	900 VA	Refrigerator	3-12	20/1	13 14	20/1	3-12	Security Panel - IDF	250 VA	
	1128 VA	EQ02-Freezer	3-12	20/1	15 16	20/1	3-12	Access Control Panel - IDF	250 VA	
	708 VA	EQ03-Refrigerator	3-12	20/1	17 18	20/1	3-12	PA Cabinet - IDF	500 VA	
	1080 VA	EQ11-Ice Machine	3-12	20/1	19 20	--	--	Spare 20/1	0 VA	--
	360 VA	UC Ice Maker	3-12	20/1	21 22	--	--	Spare 20/1	0 VA	--
	900 VA	Refrigerator	3-12	20/1	23 24	--	--	Spare 20/1	0 VA	--
	900 VA	Refrigerator	3-12	20/1	25 26	--	--	Spare 20/1	0 VA	--
--	0 VA	Spare 20/1	--	--	27 28	20/1	3-10	Boiler BLR-1	900 VA	
	180 VA	1 Rec - Mech Yard	3-10	20/1	29 30	15/2	2-12 +12G	HWP-1 (.87 HP)	1560 VA	
	180 VA	1 Rec - North Vestibule	3-12	20/1	31 32					
	180 VA	1 Rec - South Vestibule	3-12	20/1	33 34	20/2	2-12 +12G	FCU-1 / ACCU-1 (IDF A/C Unit)	3390 VA	
	180 VA	1 Rec - Mech 127	3-12	20/1	35 36					
	250 VA	DDC Panel - Mech 127	3-12	20/1	37 38	50/3	3-6 +10G, 3/4"C	Chiller Pump (7.5 HP)	9141 VA	
	720 VA	4 Rec - Mech 147/148	3-12	20/1	39 40					
	250 VA	DDC Panel - Mech 147	3-12	20/1	41 42					

Total Connected Load: 30975 VA = 86 A
Total Load (Diversified): 33383 VA = 93 A
Total Lighting Load: 488 VA = 1 A
Location of Panel: ELECTRICAL 109

1. Provide integral SPD with minimum rating of 100kAMPs per phase.
2. Provide a Locking Device for this Circuit Breaker. See specifications.

Distribution Panel MDP

600 A MLO | 480/277 Wye Volt, 3 Phase, 4 Wire + GND | Mounting: Surface

CKT	Equipment	CB	Feeder Size	Amps
1	Panel HM1	100/3	4-3 +6G, 1.25"C	69 A
2	Panel HM2	100/3	4-3 +8G, 1.25"C	57 A
3	Transformer TM	175/3	3-2/0 +6G, 2"C	139 A
4	Panel HPB	225/3	4-350MCM +3G, 4"C	57 A
5	Chiller CH-1	300/3	3-350MCM +4G, 3"C	249 A
6	Transformer TSB	30/3	3-6+6G, 1"C	1 A
7	Integral SPD	60/3	4-6+10G	0 A
8	225/3 Prepared Space	--	--	--
9	100/3 Prepared Space	--	--	--
	Total Connected Load:	474501 VA	Total Amps:	571 A
	Total Load (Diversified):	475415 VA	Total Amps (Diversified):	572 A

Panelboard HM1

AIC Rating: X New / Existing

480/277 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB; 100 A BUS (Copper); ISO. GRND. BUS | X Single Double Feed - Thru | Mounting: X Surface Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT	CB	Wire	Description	Load (VA)	Note
	1345 VA	Room Lights North	3-12	20/1	1 2	20/1	3-12	Corridor Lights	1148 VA	
	1300 VA	Room Lights South	3-12	20/1	3 4	20/1	3-12	Corridor EM Lts	779 VA	
	1385 VA	Room Lights East	3-12	20/1	5 6	20/1	3-12	Exterior Lights	776 VA	
	2650 VA	Room Lights West	3-12	20/1	7 8	20/1	3-10	Parking Lot Lights	328 VA	
	1500 VA	Varsity/JV Football Lts	3-12	20/1	9 10	--	--	Prepared Space	0 VA	--
	1000 VA	Freshman Football Lts	3-12	20/1	11 12	--	--	Prepared Space	0 VA	--
	1267 VA	Weightroom Lights	3-12	20/1	13 14	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	15 16	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	17 18	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	19 20	30/3	3-8 +8G, 1"C	Covered Practice Field Lighting Driver CF-1	12240 VA	
--	0 VA	Spare 20/1	--	--	21 22					
--	0 VA	Spare 20/1	--	--	23 24					
--	0 VA	Spare 20/1	--	--	25 26	30/3	3-8 +8G, 1"C	Covered Practice Field Lighting Driver CF-2	13600 VA	
--	0 VA	Spare 20/1	--	--	27 28					
--	0 VA	Spare 20/1	--	--	29 30					
--	0 VA	Prepared Space	--	--	31 32	30/3	3-8 +8G, 1"C	Covered Practice Field Lighting Driver CF-3	10880 VA	
--	0 VA	Prepared Space	--	--	33 34					
--	0 VA	Prepared Space	--	--	35 36					
--	0 VA	Prepared Space	--	--	37 38	30/3	3-8 +8G, 1"C	Covered Practice Field Lighting Driver CF-4	6800 VA	
--	0 VA	Prepared Space	--	--	39 40					
					41 42					

Total Connected Load: 56966 VA = 69 A
Total Load (Diversified): 71207 VA = 86 A
Total Lighting Load: 56966 VA = 69 A
Location of Panel: ELECTRICAL 109

Panelboard HM2

AIC Rating: X New / Existing

480/277 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB; 225 A BUS (Copper); ISO. GRND. BUS | X Single Double Feed - Thru | Mounting: X Surface Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT	CB	Wire	Description	Load (VA)	Note
	1650 VA	EF-2 (3/4 HP)	3-12		1 2		3-10 +10G, 3/4"C	AHU-1 (7.5 HP)	9141 VA	
	1650 VA	EF-3 (3/4 HP)	3-12	15/1	3 4	20/3				
	1650 VA	EF-6 (3/4 HP)	3-12		5 6					
	2825 VA	SF-1 (2 HP)	3-12 +12G, 3/4"C	15/3	7 8	20/3	3-10 +10G, 3/4"C	AHU-2 (7.5 HP)	9141 VA	
					9 10					
					11 12					
	2825 VA	SF-2 (2 HP)	3-12 +12G, 3/4"C	15/3	13 14	20/3	3-10 +10G, 3/4"C	AHU-3 (7.5 HP)	9141 VA	
					15 16					
					17 18					
--	0 VA	Spare 20/1	--	--	19 20	20/3	3-10 +10G, 3/4"C	AHU-4 (7.5 HP)	9141 VA	
--	0 VA	Spare 20/1	--	--	21 22					
--	0 VA	Spare 20/1	--	--	23 24					
--	0 VA	Spare 20/1	--	--	25 26	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	27 28	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	29 30	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	31 32	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	33 34	--	--	Prepared Space	0 VA	--
--	0 VA	Spare 20/1	--	--	35 36	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	37 38	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	39 40	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	41 42	--	--	Prepared Space	0 VA	--

Total Connected Load: 47165 VA = 57 A
Total Load (Diversified): 147871 VA = 58 A
Total Lighting Load: =
Location of Panel: ELECTRICAL 109

VLK | ARCHITECTS

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ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

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Drawn By: MAS
Designer: MAS
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PROJECT NO.
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SHEET TITLE
ELECTRICAL PANEL SCHEDULES - FIELD HOUSE

SHEET NO.
E4.10

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Panelboard HPB

AIC Rating: X New / Existing

480/277 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MCB | 225 A MCB; 225 A BUS (Copper); ISO. GRND. BUS | X Single / Double Feed - Thru | Mounting: Surface / X Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT		CB	Wire	Description	Load (VA)	Note
	300 VA	Flagpole Lights	3-12	20/1	1	2		3-8 +10G, 1"C			
--	0 VA	Spare 20/1	--	--	3	4	30/3		Sports Lighting Pole - F1	7500 VA	
--	0 VA	Spare 20/1	--	--	5	6					
--	0 VA	Spare 20/1	--	--	7	8		3-8 +10G, 1"C			
--	0 VA	Spare 20/1	--	--	9	10	30/3		Sports Lighting Pole - F2	7500 VA	
--	0 VA	Spare 20/1	--	--	11	12					
--	0 VA	Spare 20/1	--	--	13	14		3-8 +10G, 1"C			
--	0 VA	Spare 20/1	--	--	15	16	30/3		Sports Lighting Pole - F3	7500 VA	
--	0 VA	Spare 20/1	--	--	17	18					
--	0 VA	Prepared Space	--	--	19	20		3-8 +10G, 1"C			
--	0 VA	Prepared Space	--	--	21	22	30/3		Sports Lighting Pole - F4	7500 VA	
--	0 VA	Prepared Space	--	--	23	24					
--	0 VA	Prepared Space	--	--	25	26	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	27	28	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	29	30	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	31	32	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	33	34	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	35	36	--	--	Prepared Space	0 VA	--
--	0 VA	Prepared Space	--	--	37	38		3-8 +10G, 3/4"C			
--	0 VA	Prepared Space	--	--	39	40	50/3		Transformer TPB	16697 VA	
--	0 VA	Prepared Space	--	--	41	42					

Total Connected Load:	46997 VA	=	57 A
Total Load (Diversified):	54765 VA	=	66 A
Total LIghting Load:	31391 VA	=	38 A

Location of Panel: TICKET BOOTH B100

1. Provide integral SPD with minimum rating of 100kAMPs per phase.
2. Provide spare conduits from panel to empty gutters above first and second floor ceilings for future circuits. Reference electrical riser.

Panelboard LPB

AIC Rating: X New / Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MCB | 100 A MCB; 100 A BUS (Copper); ISO. GRND. BUS | X Single / Double Feed - Thru | Mounting: Surface / X Flush | Cover: Front Cover Hinge To Box

Note	Load (VA)	Description	Wire	CB	CKT		CB	Wire	Description	Load (VA)	Note
	540 VA	3 Rec - Ticket Booth	3-12	20/1	1	2	20/1	3-12	2 Rec - Press Box	360 VA	
	360 VA	1 Quad - Ticket Booth	3-12	20/1	3	4	20/1	3-12	1 Rec - Press Box	180 VA	
	360 VA	1 Quad - Ticket Booth	3-12	20/1	5	6	20/1	3-12	1 Quad - Press Box	360 VA	
	360 VA	1 Quad - Ticket Booth	3-12	20/1	7	8	20/1	3-12	1 Quad - Press Box	360 VA	
	540 VA	3 Rec - Ticket Booth	3-12	20/1	9	10	20/1	3-12	1 Quad - Press Box	360 VA	
	360 VA	2 Rec - Exterior	3-12	20/1	11	12	20/1	3-12	1 Quad - Press Box	360 VA	
	180 VA	East Bleacher Receptacle	3-8	20/1	13	14	20/1	3-12	1 Rec - Press Box	180 VA	
	180 VA	West Bleacher Receptacle	3-8	20/1	15	16	20/1	3-12	3 Rec - Press Box	540 VA	
	360 VA	W. Ext. Floor Box	3-8	20/1	17	18	20/1	3-12	1 Rec - Exterior	180 VA	
	360 VA	E. Ext. Floor Box	3-8	20/1	19	20	20/1	3-12	IDF Cabinet	500 VA	
	520 VA	Scoreboard	3-6	20/1	21	22	20/1	3-12	Sound Cabinet - Electronics	500 VA	
--	0 VA	Spare 20/1	--	--	23	24	20/1	3-12	Sound Cabinet - Amp	1250 VA	
--	0 VA	Spare 20/1	--	--	25	26	20/1	3-12	Sound Cabinet - Amp	1250 VA	
--	0 VA	Spare 20/1	--	--	27	28	20/1	3-12	1 Rec - Cameras	180 VA	
--	0 VA	Spare 20/1	--	--	29	30	15/2	2-12 +12G	CS-1 / ACCU-1 (Ticket Booth)	2288 VA	
--	0 VA	Spare 20/1	--	--	31	32					
--	0 VA	Spare 20/1	--	--	33	34	15/2	2-12 +12G	CS-2 / ACCU-2 (Press Box)	2288 VA	
	350 VA	Lighting Control Circuit	3-12	20/1	35	36					
	234 VA	Interior Lighting	3-12	20/1	37	38	--	--	Spare 20/1	0 VA	--
	201 VA	Exterior Bldg Lighting	3-12	20/1	39	40	--	--	Spare 20/1	0 VA	--
	656 VA	Egress Pole Lighting	3-8	20/1	41	42	--	--	Spare 20/1	0 VA	--

Total Connected Load:	16697 VA	=	46 A
Total Load (Diversified):	16890 VA	=	47 A
Total Lighting Load:	1091 VA	=	3 A

Location of Panel: TICKET BOOTH B100

1. Provide integral SPD with minimum rating of 100kAMPs per phase.
2. Provide spare conduits from panel to empty gutters above first and second floor ceilings for future circuits. Reference electrical riser.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED PROFESSIONAL ENGINEER
01/06/25

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director GLS	Drawn By MAS
Designer MAS	Quality Control
Proj. Arch.	

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SHEET TITLE
ELECTRICAL PANEL SCHEDULES

SHEET NO.
E4.11

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DIVISION 27 LEGENDS

COMMUNICATIONS

- DATA (PHONE) OUTLET, #D (#P) DENOTES NUMBER OF DATA (PHONE) DROPS.
- SB — J-BOX FOR SCOREBOARD CONTROL INPUT
- SINGLE SERVICE LOW VOLTAGE FLOOR BOXES
- DATA CEILING OUTLET, #D DENOTES NUMBER OF DATA DROPS.
- AP — WIRELESS ACCESS POINT, REQUIRES ONE (1) DATA DROP WHERE SHOWN WITH "WM" INDICATES WALL MOUNTED.
- VP — WALL MOUNTED VOIP TELEPHONE, REQUIRES ONE (1) DATA DROP
- LOW VOLTAGE CABLING PATHWAY, REF. SPECIFICATIONS
- WB — RECESSED IN-WALL BOX, REFERENCE DETAILS.
- 2-POST DATA RACK
- WALL MOUNTED DATA CABINET

1D,2D,3D...	1, 2, 3, ETC. DATA DROPS IN A SINGLE OUTLET
1T,2T,3T...	1, 2, 3, ETC. PHONE DROPS IN A SINGLE OUTLET
1V,2V,3V...	1, 2, 3, ETC. VOICE DROPS IN A SINGLE OUTLET
1W,2W,3W...	1, 2, 3, ETC. DATA DROPS TO A WIRELESS ACCESS POINT
1C,2C,3C...	1, 2, 3, ETC. DATA DROPS TO A CAMERA
EMS, BAS	LV CONNECTION FOR BUILDING CONTROLS, COOR WITH MECH
FA	LV CONNECTION FOR FIRE ALARM, COOR WITH DIV28
SEC	LV CONNECTION FOR SECURITY, COOR WITH DIV28
TV	INDICATES DEVICES AT TELEVISION/DISPLAY LOCATION
IM	INDICATES DEVICES AT INTERACTIVE MEDIA LOCATION
PROJ	INDICATES DEVICES AT PROJECTOR LOCATION

AUDIO & VIDEO LEGEND

- TEACHER'S WORK STATION TWS, REF. WORK STATION DETAILS.
- AV# — AUDIO/VIDEO INPUT AV# DENOTES INPUT TYPE PER SCHEDULE, REF E5.02
- DP# — DISPLAY LOCATION, D# DENOTES DISPLAY TYPE PER SCHEDULE, REF E5.02
- WALL/CEILING MOUNTED PROJECTOR.
- CP — TOUCHSCREEN CONTROL PANEL

SOUND LEGEND

- ADP — PA COMMUNICATIONS ADMIN DESK PHONE, REQUIRES DATA TO PA SOUND RACKS.
- PA — PA COMMUNICATIONS REMOTE OUTLET PLATE (REF FLOOR PLANS AND DETAILS)
- CB — 1-GANG, DUAL PUSH-TO-CALL BUTTON FOR 2-WAY PA COMMUNICATIONS
- VC — VOLUME CONTROL SWITCH
- S — SOUND SPEAKER, # DENOTES SPEAKER TYPE PER SCHEDULE, REF E5.02
- WALL MOUNTED CLOCK, REF SPECIFICATIONS # DENOTES ONE OR TWO-SIDED
- ANT — ANTENNA, ANO = HEARING ASSIST, AN1 = WIRELESS MICROPHONE
- MC1 / MC2 — MICROPHONE INPUT PLATE MC1 = SINGLE INPUT, MC2 = DUAL INPUT
- SP1 — SPEAKER OUTPUT SP1 = SINGLE OUTPUT
- LSR — LOCAL SOUND RACK CABINET
- AH / ADP — ADMINISTRATIVE HANDSET/DESK PHONE
- WG — WIREGUARD
- WP — WEATHERPROOF
- +XXFT — MOUNTED XXFT AFF/AG
- Z1,Z2,Z3... — SPEAKER ZONES 1, 2, 3, ETC.

DIVISION 28 LEGENDS

FIRE ALARM

- F — FIRE ALARM PULL STATION W/ STOPPER II
- F / S — WALL FIRE ALARM AUDIO/VISUAL DEVICE
- WP / S — OUTDOOR WEATHERPROOF FIRE AUDIO/VISUAL DEVICE
- H — WALL FIRE ALARM AUDIO DEVICE
- V — WALL FIRE ALARM VISUAL DEVICE
- F / S — CEILING FIRE ALARM AUDIO/VISUAL DEVICE
- S — CEILING FIRE ALARM AUDIO DEVICE
- V — CEILING FIRE ALARM VISUAL DEVICE
- H / S — DUCT SMOKE DETECTOR
- I / SD — CEILING SMOKE DETECTOR
- H — CEILING HEAT DETECTOR
- CO — CEILING CARBON MONOXIDE DETECTOR
- CO / S — CEILING COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
- FR — FIRE ALARM RELAY FOR STAGE SOUND RACK OVERRIDE
- BEAM SMOKE DETECTOR
- FANN — FIRE ALARM REMOTE ANNUNCIATOR OR LOCAL OPERATOR'S CONSOLE
- FACP — FIRE ALARM CONTROL PANEL
- FAPS — FIRE ALARM POWER SUPPLY/AMPLIFIER

G	INDICATES DEVICE WITH PROTECTIVE GUARD
WG	INDICATES DEVICE WITH WIRE GUARD
HC	INDICATES DEVICE RATED FOR HAZARDOUS CONDITIONS

- SD — SMOKE DAMPER
- FSD — FIRE/SMOKE COMBINATION DAMPER

SECURITY AND ACCESS CONTROL

- SCP — SECURITY CONTROL PANEL WITH KEYPAD
- SKP — SECURITY KEYPAD @ +52" AFF, 16" OFF DOOR FRAMES
- SPS — SECURITY EQUIPMENT CABINET AND POWER SUPPLY
- MS — CEILING MOUNTED MOTION DETECTOR
- MS — WALL MOUNTED MOTION DETECTOR
- DC — DOOR CONTACT
- GB — GLASS BREAK SENSOR
- DR — SECURITY DOOR RELEASE
- DR — SECURITY DOOR PUSH BUTTON RELEASE(S), ONE PER DOOR COOR LOCATION IN KNEE SPACE W/ OWNER & ARCH.
- VI — VIDEO INTERCOM STATION REQUIRES ONE (1) DATA DROP.
- VI M — VIDEO INTERCOM MASTER STATION, REQUIRES ONE (1) DATA DROP.
- VI CR — VIDEO INTERCOM STATION WITH INTEGRAL CARD READER REQUIRES ONE (1) DATA DROP.
- CR — CARD READER
- REX — REQUEST TO EXIT DEVICE
- LD — LOCKDOWN CONTROL/BUTTON, COOR LOCATION IN KNEE SPACE W/ OWNER & ARCH.
- SR — SECURITY ALARM SIREN
- S — CEILING MOUNTED SECURITY STROBE
- C — SECURITY CAMERA, REQUIRES ONE (1) DATA DROP
- MULTI-LENS SECURITY CAMERA WITH # OF LENSES AS SHOWN, REQUIRES ONE (1) DATA DROP
- PTZ — QUAD LENS SECURITY CAMERA W/ 5TH PTZ LENS WHEN NOTED, REQUIRES ONE (1) DATA DROP

EXT	INDICATES EXTERIOR RATED DEVICE
PTZ	INDICATES CAMERA WITH PTZ CAPABILITIES
F	INDICATES ROUGH-IN FOR FUTURE DEVICES

ELECTRICAL AND FIRE ALARM LEGEND AND SYMBOLS

- A — TYPE 'A' LIGHT FIXTURE
- LIGHT FIXTURE WITH EMERGENCY BACKUP
- EXIT SIGN/EXIT SIGN WITH DIRECTIONAL ARROW
- EMERGENCY EGRESS LIGHT FIXTURE
- WALL MOUNTED FIXTURE OR SCONCE
- CEILING DOWNLIGHT OR CYLINDER
- WALL PACK FIXTURE
- $ — 20A, 277V TOGGLE/3-WAY/4-WAY SWITCH
- MP — MOTOR RATED ON/OFF SWITCH, MP W/ PILOT LIGHT (SWITCH RATING SHALL BE ≥ UPSTREAM OCPD & VOLTAGE)
- D — LINE VOLTAGE, 0-10V SLIDE DIMMER SWITCH
- OR — LINE VOLTAGE, LIGHTING OVERRIDE SWITCH
- TIMER SWITCH
- TC — TIME CLOCK
- 20A, 125V SIMPLEX/DUPLEX/QUAD RECEPTACLE
- GFI — 20A, 125V DUPLEX RECEPTACLE WITH GFCI PROTECTION
- GFI WP — 20A, 125V DUPLEX RECEPTACLE WITH GFCI PROTECTION AND WEATHERPROOF COVER.
- GFI — REMOTE GFCI DEVICE, REF SPECS AND EDF GFI DETAIL.
- 20A, 125V DUPLEX/QUAD RECEPTACLE W/ USB-A PORTS PROVIDE 2-5A PORTS PER DEVICE - HUBBELL USB20A5
- NEMA IEC CS — NEMA/IEC/CS NUMBERED POWER OUTLET MATCH PROVIDED EQUIPMENT CONNECTION OR CIRCUIT.
- CEILING MOUNTED RECEPTACLE
- CEILING MOUNTED LOW VOLTAGE OUTLET
- DROP CORD 120V
- XX CR — CORD REEL, REFERENCE SPECIFICATIONS FOR "XX" TYPE
  - 120V - 120V CORD REEL WITH DUAL GFCI DUPLEX
  - 120V/FM - 120V CORD REEL WITH DUAL GFCI DUPLEX AND RECESSED CEILING ENCLOSURE.
  - 120V/LT - 120V COMBINATION REC AND LED WORK LIGHT
  - 240V/1PH - WELDING POWER CORD REEL

(X)PP	POWER POLE
(X)SP	SERVICE POLE OR RACK
(X)XP	XFMR POLE
(X)LVP	LOW VOLTAGE POLE
(X)TP	TRANSITION POLE
OHP	OVERHEAD POWER WIRING
480V	480V OVERHEAD POWER WIRING
UGP	UNDERGROUND PRIMARY ELECTRICAL
UGS	UNDERGROUND SECONDARY ELECTRICAL
UGE	UNDERGROUND EMERGENCY ELECTRICAL

- SINGLE SERVICE FLOOR BOX WITH DUPLEX/QUAD REC
- SINGLE SERVICE FLOOR BOX WITH DUPLEX/QUAD IG REC
- SINGLE SERVICE LOW VOLTAGE FLOOR BOXES
- MULTI SERVICE FLOOR BOX
- EXT — GANGABLE, EXTERIOR IN-USE FLOOR BOX, LEGRAND XB814C SERIES OR APPROVED EQUAL.
- EXT — GANGABLE, EXTERIOR IN-USE LOW VOLTAGE FLOOR BOX, LEGRAND XB814C SERIES OR APPROVED EQUAL.
- J — J-BOX
- CEILING MOUNTED J-BOX
- CA J — J-BOX FOR ACCESS CONTROL DEVICE
- SPKR J — JUNCTION BOX AND FINAL CONNECTION TO LOCAL SOUND SPEAKER BY DIVISION 26.
- HDWR J — JUNCTION BOX AND FINAL CONNECTION TO ELECTRIFIED DOOR HARDWARE BY DIVISION 26.
- HEAT J — JUNCTION BOX AND FINAL CONNECTION TO HEAT TRACE EQUIPMENT BY DIVISION 26.
- UGE J — FLUSH IN GRADE PULL BOX, SIZED BY DIVISION 26.
- LV HH J — FLUSH IN GRADE LOW VOLTAGE HANDHOLE, PROVIDED AND SIZED BY DIVISION 26.

LIGHTING CONTROLS

- MULTIBUTTON LIGHTING SWITCH PROVIDE NUMBER OF BUTTONS INDICATED IN SINGLE PLATE.
- MULTIPLE DIMMER SWITCHES PROVIDE NUMBER OF SWITCHES INDICATED IN SINGLE PLATE.
- MULTIPLE KEY TYPE SWITCHES PROVIDE NUMBER OF SWITCHES INDICATED IN SINGLE PLATE.
- OCC — WALL SENSOR SWITCH
- $D — 20A, 277V, LINE VOLTAGE DIMMER SWITCH
- OS — 360° CEILING SENSOR
- OS — 360° CEILING SENSOR WITH INTEGRAL BAS RELAY OUTPUTS
- OC — WALL MOUNT SENSOR
- PC — DAYLIGHT PHOTOSENSOR
- ER — EMERGENCY LIGHTING RELAY/CONTROL UNIT
- HB BAS — HIGH BAY/CEILING DEVICE DEVICE WITH BAS INTERFACE RELAY

SITE PLAN

- UTILITY POLE
- POLE MOUNTED TRANSFORMER BANK
- SITE POLE LIGHT
- UGE J — FLUSH IN GRADE ELECTRICAL PULL BOX
- LV HH J — FLUSH IN GRADE, LOW VOLTAGE HAND HOLE
- (X)PP — POWER POLE
- (X)SP — SERVICE POLE OR RACK
- (X)XP — XFMR POLE
- (X)LVP — LOW VOLTAGE POLE
- (X)TP — TRANSITION POLE
- OHP — OVERHEAD POWER WIRING
- 480V — 480V OVERHEAD POWER WIRING
- UGP — UNDERGROUND PRIMARY ELECTRICAL
- UGS — UNDERGROUND SECONDARY ELECTRICAL
- UGE — UNDERGROUND EMERGENCY ELECTRICAL

- CONTACTOR
- NON-FUSED DISCONNECT SWITCH
- NON-FUSED DOUBLE THROW DISCONNECT
- FUSED DISCONNECT SWITCH
- DISCONNECT/CB WITH SHUNT TRIP
- CB — ENCLOSED CIRCUIT BREAKER
- MOTOR STARTER 'VFD' INDICATES VARIABLE FREQUENCY DRIVE MOTOR STARTER
- MOTOR STARTER WITH INTEGRAL DISCONNECT
- MOTOR
- ELECTRICAL PANELBOARD
- ELECTRICAL METER
- SPS — TVSS OR SPD
- LOAD CENTER, BY FOOD SERVICE
- PROVIDE UNDERGROUND CONDUIT STUBBED UP AT LOAD CENTER LOCATION PER SUBMITTAL SHOP DRAWINGS.
- DDC — HVAC CONTROL PANEL, REQUIRES POWER AND DATA CONNECTIONS WITHIN CABINET COOR EXACT LOCATION AND REQUIREMENTS WITH CONTROLS CONTRACTOR PRIOR TO ROUGH-IN.
- TMGB/TDB — TELECOM GROUND BAR
- PGP — ELECTRICAL PRINCIPAL GROUND POINT (PGP) GROUND BAR
- LOW VOLTAGE CABLING PATHWAY, REF. SPECIFICATIONS

DIVISION 28 LEGENDS

FIRE ALARM

- F — FIRE ALARM PULL STATION
- V — WALL FIRE ALARM VISUAL DEVICE
- V — CEILING FIRE ALARM VISUAL DEVICE
- H — WALL FIRE ALARM HORN
- F — WALL FIRE ALARM HORN/STROBE
- F — CEILING FIRE ALARM HORN/STROBE
- S — WALL FIRE ALARM SPEAKER/STROBE
- S — CEILING FIRE ALARM SPEAKER/STROBE
- S — WALL FIRE ALARM SPEAKER
- S — CEILING FIRE ALARM SPEAKER
- DUCT SMOKE DETECTOR
- I / SD — CEILING SMOKE DETECTOR
- H — CEILING HEAT DETECTOR
- CO — CEILING CARBON MONOXIDE DETECTOR
- CO / S — CEILING COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
- CO / S HT — CEILING COMBINATION SMOKE/HEAT DETECTOR
- FR — FIRE ALARM RELAY FOR STADIUM SOUND RACK OVERRIDE
- BEAM SMOKE DETECTOR
- LOC — FIRE ALARM LOCAL OPERATOR'S CONSOLE
- FACP — FIRE ALARM CONTROL PANEL
- FPS — FIRE ALARM POWER SUPPLY/AMPLIFIER

G	INDICATES DEVICE WITH PROTECTIVE GUARD
WG	INDICATES DEVICE WITH WIRE GUARD
WP	INDICATES DEVICE WEATHERPROOF RATED DEVICE
HC	INDICATES DEVICE RATED FOR HAZARDOUS CONDITIONS

- SD — SMOKE DAMPER
- FSD — FIRE/SMOKE COMBINATION DAMPER

MULTI-SERVICE FLOOR BOX NOTES

FLOOR POWER AND LOW VOLTAGE
PROVIDE HEAVY-DUTY MULTI-GANG FLUSH IN GRADE OR FIRE RATED POKE-THRU OUTLET WITH HEAVY DUTY METAL HINGED COVER WITH CABLE EXIT SLOT.
FLOOR BOX MUST BE RATED FOR INSTALLATION IN GRADE.

FOR EACH FLOOR BOX PROVIDE:
1. PROVIDE:
   - 1.A. TWO DUPLEX RECEPTACLES.
   - 1.B. PROVIDE IG RECEPTACLES WHERE WHERE CONNECTED TO AN IG PANELBOARD.
   - 1.C. POWER CONNECTION TO TABLE (WHERE SHOWN)
2. BLANK STAINLESS STEEL COVER FOR UN-USED GANGS.
3. PROVIDE ONE 3/4"C UNDERGROUND CONDUIT FOR POWER.
4. PROVIDE ONE 1.25"C UNDERGROUND CONDUIT WITH WATERPROOF INNER DUCT FOR DATA.
5. PROVIDE ONE 2"C UNDERGROUND CONDUIT WITH WATERPROOF INNER DUCT FOR LOW VOLTAGE CABLING
6. PROVIDE DIVIDERS TO MAINTAIN SEPARATION BETWEEN SERVICES.

UNDERGROUND CONDUITS MUST BE WATER TIGHT TO PREVENT MOISTURE ENTERING CONDUITS.
DO NOT COMBINE CONDUIT FOR POWER & LOW VOLTAGE.

REFERENCE FLOOR PLANS AND SPECIFICATIONS FOR QUANTITY OF DATA DROPS AND ADDITIONAL INFORMATION.

COORDINATE WITH ARCHITECT TO PROVIDE COVER/RING TO MATCH FLOOR MATERIAL AND SUBMIT COVER FINISH FOR ARCHITECT TO SELECT PRIOR TO ORDERING.

GENERAL NOTES / TAGS

+18"	INDICATES DEVICES AT +18" AFF
+42"	INDICATES DEVICES AT +42" AFF
+96"	INDICATES DEVICES AT +96" AFF
+12 FT	INDICATES DEVICES AT +12 FT AFF, ETC.
*	INDICATES DEVICES ABOVE COUNTER, REF ARCH
CLG	INDICATES DEVICES AT CEILING
PMR	INDICATES DEVICES PEDESTAL MOUNTED DEVICE, REF PMR DETAIL
TV	INDICATES DEVICES AT TELEVISION/DISPLAY LOCATION
IM	INDICATES DEVICES AT INTERACTIVE MEDIA LOCATION
PROJ	INDICATES DEVICES AT PROJECTOR LOCATION
S	INDICATES SURFACE MOUNTED DEVICE
GOGGLE	INDICATES DEVICES AT WALL MOUNTED GOGGLE CABINET
IEC	INDICATES IEC POWER OUTLET
NEMA	INDICATES NEMA NUMBERED POWER OUTLET
GFI	INDICATES GROUND FAULT INTERRUPT (GFI) PROTECTION
WP	INDICATES WEATHERPROOF DEVICES
WPGFI	INDICATES GFI PROTECTED WEATHERPROOF DEVICE
G	INDICATES DEVICE WITH PROTECTIVE GUARD
WG	INDICATES DEVICE WITH WIRE GUARD
3R	INDICATES NEMA 3R RATED DEVICE
4XSS	INDICATES NEMA 4XSS RATED DEVICE
EM	INDICATES DEVICE ON EM/STANDBY POWER
VFD	INDICATES VARIABLE FREQUENCY DRIVE (VFD)
E	EXISTING DEVICES TO REMAIN
D	EXISTING DEVICES TO BE DEMO/REMOVED
R	EXISTING DEVICES TO BE RELOCATED
REP	EXISTING DEVICES TO BE REPLACED (X) = (G) FOR EXISTING (X) = (D) FOR DEMO (X) = (R) FOR RELOCATION (X) = (N) FOR NEW

- HOMERUN TO CIRCUIT NOTED
- —E— ELECTRICAL FEEDER
- --E-- ELECTRICAL FEEDER BELOW GRADE/IN CEILING CAVITY BELOW
- —D— DATA/LOW VOLTAGE CONDUIT
- —LV— DATA/LOW VOLTAGE CONDUIT
- —S— SPARE (EMPTY) CONDUIT W/ PULLSTRING

1. RECEPTACLES AND DATA OUTLETS SHALL BE MOUNTED AT +18" AFF UNLESS NOTED ON THE DRAWINGS.
2. REF. SPECIFICATIONS FOR MOUNTING HEIGHT OF OTHER DEVICES.
3. ELECTRICAL RECEPTACLES, TELEPHONES, ETC... ARE SHOWN FOR GENERAL LOCATION. HEIGHTS ARE NOTED SO THE ESTIMATOR WILL KNOW WHETHER THEY ARE ABOVE OR BELOW COUNTERS. PRIOR TO INSTALLATION, REVIEW THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. IN THE EVENT OF CONFLICT, THE ARCHITECT'S LOCATION WILL GENERALLY PREVAIL BUT SHOULD BE CLARIFIED BY RFI. PROVIDE DEVICES SHOWN ON THE ELECTRICAL DRAWING EVEN IF NOT SHOWN ON ARCHITECTURAL DRAWINGS.
4. COORDINATE POWER AND DATA WITH THE FURNITURE SUPPLIER PRIOR TO ROUGH-IN. AT CASEWORK WITH KNEE SPACE, MOUNT RECEPTACLES AND DATA OUTLETS IN KNEE SPACE. COORDINATE WITH ARCHITECT AND FURNITURE SUPPLIER TO ENSURE THAT PROTECTIVE GROMMETS ARE PROVIDED IN THE COUNTER.
5. ALL DEVICES SHOWN AT THE SAME LOCATION AND ELEVATION SHALL BE GROUPED TOGETHER AND SPACED 2 INCHES BETWEEN BOXES.
6. PROVIDE SS COVER PLATE FOR ALL EMPTY JBOX.
7. ALL NON-LOCKING 125V AND 250V, 15A AND 20A RECEPTACLES SHALL BE TAMPER RESISTANT TYPE.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
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REGISTERED PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
GLS	MAS
Designer	Quality Control
MAS	
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SHEET TITLE
ELECTRICAL AND LOW VOLTAGE SYMBOL LEGENDS

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FIRE ALARM SCOPE OF WORK

1. PROVIDE WIRING AND DEVICES AS INDICATED TO PROVIDE COMPLETE AUDIBLE, INTELLIGIBLE AND VISUAL ALARM COVERAGE OF NEW AREAS.
   - 1.A. PROVIDE SMOKE DETECTOR COVERAGE OF ALL CORRIDORS, STORAGE ROOMS, AND ADDITIONALLY AS SHOWN ON THE DRAWINGS.
   - 1.B. PROVIDE HEAT DETECTOR COVERAGE OF THE KITCHEN, CONCESSIONS, CUSTODIAL ROOMS, MECHANICAL ROOMS, ELEVATOR, AND ADDITIONALLY AS SHOWN ON THE DRAWINGS.
   - 1.C. PROVIDE STI PROTECTIVE COVERS ON ALL FIRE ALARM DEVICES LOCATED IN THE LOCKER ROOMS, COMMUNAL RESTROOMS, AND ADDITIONALLY AS SHOWN ON THE DRAWINGS.
   - 1.D. PROVIDE DUCT MOUNTED DETECTORS AT EACH NEW AIR HANDLING UNIT SUPPLY AND RETURN CONNECTION EXCEEDING 2000 CFM. IF FREE AIR RETURN, PROVIDE FREE AIR DETECTOR COVERAGE OF THE RETURN AIR OPENINGS TO THE MECHANICAL ROOM. ENSURE AIR FLOW CANNOT PREVENT OPERATION OF THE DETECTORS AND PROVIDE ADEQUATE CLEARANCE PER NFPA 72.
   - 1.E. PROVIDE MONITORING OF FIRE SPRINKLER RISERS.
   - 1.F. PROVIDE MONITORING OF FIRE PUMP.
   - 1.G. INTERLOCK FIRE ALARM SYSTEM WITH ALL MAGNETIC HOLD OPENS.
   - 1.H. INTERLOCK FIRE ALARM SYSTEM WITH SECURITY ROLLUP GRILLES TO FAIL SAFE OPEN.
   - 1.I. INTERLOCK ELEVATOR RECALL SYSTEM.
   - 1.J. CONTROL RELAYS SHALL BE LOCATED WITHIN 3 FT OF THE CONTROLLED CIRCUIT OR APPLIANCE.
2. PROVIDE SMOKE DETECTORS AT EACH NEW FIRE ALARM PANEL, REMOTE TRANSPONDER PANEL, BOOSTER PANEL REMOTE ANNUNCIATOR, AND LOCAL OPERATOR'S CONSOLE PER NFPA 72.
3. PROVIDE LED REMOTE ALARM WITH ENGRAVED STAINLESS STEEL PLATE WHERE DUCT DETECTORS ARE NOT LOCATED IN MECHANICAL ROOM, LOCATED ABOVE CEILINGS OR WHERE MOUNTED TOO HIGH OR VIEW IS BLOCKED BY DUCTWORK IN MECHANICAL ROOM.
   - 3.A. REMOTE LED LIGHT INDICATOR FOR DUCT SMOKE DETECTORS SHALL BE MOUNTED FLUSH IN CEILING OR MOUNTED IN WALL AT +7FT.
   - 3.B. STAINLESS STEEL PLATE SHALL BE ENGRAVED WITH THE DUCT SMOKE DETECTOR AS-BUILT IDENTIFICATION NUMBER.
4. MAIN COMMUNICATIONS AND LOCAL SOUND REINFORCEMENT SYSTEM SPEAKERS SHALL BE AUTOMATICALLY MUTED DURING THE FIRE ALARM SYSTEM ACTIVATION. PROVIDE RELAY AND AUDIO OUT TO ALLOW THE FIRE ALARM AUDIO TO DELIVER VOICE INSTRUCTIONS OVER THE STADIUM COMMUNICATIONS SYSTEM, SUCH AS DIRECTING ATTENDEES TO EXIT THE BUILDING OR SHELTER IN PLACE. THE GENERAL CONTRACTOR SHALL COORDINATE WITH ALL RELEVANT CONTRACTORS (FIRE ALARM, SOUND SYSTEM, AUDIO/VIDEO, ETC.) FOR THIS REQUIREMENT DURING THE BIDDING PERIOD. INCLUDE THE COST FOR ALL CABLING, RELAYS, MODULES, ETC. AS REQUIRED TO MEET THESE REQUIREMENTS.
5. REFER TO THE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

FIRE ALARM SYSTEM NOTES

1. GENERAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL AND FIRE ALARM SUBCONTRACTOR FOR LOCATIONS OF REMOTE POWER SUPPLIES AND EXPANSION PANELS. A DEDICATED CIRCUIT HAS BEEN PROVIDED IN ELECTRICAL ROOMS WITHIN EACH BUILDING/CONCESSIONS FOR THIS PURPOSE. IT IS NOT THE INTENT OF THESE DRAWINGS TO INDICATE EXACT QUANTITIES OF FIRE ALARM POWER SUPPLIES AND EXPANSION PANELS WHICH SHALL BE PER THE FIRE ALARM SUBCONTRACTORS DESIGN IN ORDER TO ACCOMODATE HIS FIRE ALARM SYSTEM BATTERY AND VOLTAGE DROP CALCULATIONS PER MANUFACTURER'S RECOMMENDATION & NFPA REQUIREMENTS. THE CONTRACTOR SHALL INCLUDE THE COST FOR ANY ADDITIONAL REQUIRED DEDICATED 120V CIRCUITS IN BASE BID TO SERVE FIRE ALARM POWER SUPPLIES IN DIFFERENT AREAS. PROVIDE 2-12 +120, 3/4"C AND SPARE 20A/1P CB(S) IN LOCAL LIFE SAFETY EMERGENCY 120V PANELS TO SERVE REMOTE FIRE ALARM PANELS AND POWER SUPPLIES.
2. THE CONTRACTOR IS RESPONSIBLE FOR DETECTORS REQUIRED BY CODE EVEN IF NOT SHOWN ON DRAWING, LIKE A CLOSET. IF THERE IS UNCERTAINTY, THE FIRE ALARM CONTRACTOR SHALL SUBMIT AN RFI/QUESTION DURING THE BID PERIOD AND THEY WILL BE ADDRESSED DURING THE BIDDING PROCESS.
3. THE FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR DESIGN AND FOR FINAL CORRECT LOCATION OF DEVICES TO RELIEVE NUISANCE ALARMS, SUCH AS INSTALLING A HEAT DETECTOR IN FRONT OF AN OVEN WHICH WILL RELEASE STEAM, THUS POTENTIALLY SETTING OFF THE ALARM.
4. FIELD VERIFY ENVIRONMENTAL ISSUES THAT CAN ADVERSELY AFFECT OPERATION OF SMOKE DETECTORS. DO NOT LOCATE NEAR AIR FLOW DEVICES LEADING TO PREMATURE BUILD UP OF DUST CAUSING NUISANCE TROUBLE SIGNALS. DEVICE RELOCATION OR TYPE CHANGE WILL BE COVERED UNDER WARRANTY.

FIRE ALARM SYSTEM DESCRIPTION AND SEQUENCE OF OPERATION

1. FIRE ALARM SYSTEM SHALL BE DESIGNED TO MEET NFPA REQUIREMENTS AS WELL AS CITY AND NATIONAL BUILDING CODES. PROVIDE COMPLETE FIRE ALARM SYSTEM, DEVICES AND WIRING.
2. INSTALL NEW STADIUM FIRE ALARM CONTROL PANEL WITH VOICE EVACUATION IN THE ATHLETICS OFFICE LOCATED IN THE COMMUNITY CENTER.
   - 2.A. PROVIDE INTEGRAL TEST SWITCH/KEYPAD WITH FIRE ALARM PANEL CAPABLE OF ACTIVATING SYSTEM WITHOUT NOTIFYING THE MONITORING SERVICE FOR FIRE ALARM DRILLS AND TESTING.
3. EXPAND THE EXISTING M. O. CAMPBELL FIRE ALARM PANEL AS REQUIRED TO PROVIDE NEW DEVICES IN THE LOCKER ROOM RENOVATION AND TRAINING ROOM ADDITION.
   - 3.A. THE EXISTING SIEMENS CERBERUS PYROTRONICS FIRE ALARM SYSTEM IS LOCATED IN THE EXISTING ATHLETICS OFFICE WITHIN M. O. CAMPBELL EDUCATION CENTER.
4. FIRE ALARM PANEL, POWER SUPPLIES, DEVICES, ETC. SHALL BE MANUFACTURED BY THE SAME MANUFACTURER AS THE FIRE ALARM CONTROL PANEL.
5. FIRE ALARM REMOTE POWER SUPPLIES AND PANELS SHALL BE LOCATED IN MECHANICAL OR ELECTRICAL ROOMS ONLY. DO NOT LOCATE IN STORAGE ROOMS, DATA CLOSETS OR FINISHED SPACES.
6. PROVIDE AUDIBLE, INTELLIGIBLE AND VISUAL ALARM COVERAGE OF THE ENTIRE BUILDING.
7. PROVIDE SMOKE DETECTORS AT EACH NEW FIRE ALARM PANEL, REMOTE TRANSPONDER PANEL, BOOSTER PANEL REMOTE ANNUNCIATOR, AND LOCAL OPERATOR'S CONSOLE PER NFPA 72.
8. PROVIDE FIRE PULL STATION WITHOUT STOPPER II COVER AT NEW FIRE ALARM PANEL, LOCAL OPERATOR CONSOLES, AND ADDITIONAL LOCATIONS REQUIRED BY CODE.
9. IN ADDITION TO THE SPECIFIED FIRE ALARM EQUIPMENT, THE FIRE ALARM CONTRACTOR SHALL PROVIDE
   - 7.A. SURGE PROTECTORS FOR TWO PHONE LINES
   - 7.B. SURGE PROTECTORS FOR ALL 120V AC POWER
   - 7.C. SURGE PROTECTORS FOR ALL SIGNALING LINE CIRCUITS (SLC), NOTIFICATION CIRCUITS AND INITIATING CIRCUITS CONNECTED TO THE FIRE ALARM CONTROL PANEL WHICH LEAVE THE BUILDING.
10. SHOULD ANY DETECTOR, MONITOR OR PULL STATION ACTIVATE, ALL SPEAKERS/HORNS SHALL SOUND AND STROBES FLASH. AIR HANDLING EQUIPMENT SHALL BE DEACTIVATED IN THE AFFECTED BUILDING. AN ALARM SIGNAL SHALL BE SENT TO A REMOTE LOCATION VIA AUTOMATIC DIALER. ALSO, DE-ENERGIZE SUPPLY FANS, EXHAUST FANS AND OTHER AIR CIRCULATING DEVICES IF 2000 CFM OR OVER, SERVING THE AREA IN ALARM.
11. ALL LOW VOLTAGE WIRING SHALL BE FPLP RATED WIRE, WITH MINIMUM WIRE SIZE PER SPECIFICATIONS.
   - 9.A. PLENUM RATED CABLE ABOVE ACCESSIBLE CEILING SHALL BE SUPPORTED BY J-HOOKS, SPACED AT FOUR (4) FEET ON CENTER.
   - 9.B. INSTALL FIRE ALARM CABLES IN CONDUIT FOR AREAS WITHOUT CEILING OR ABOVE INACCESSIBLE CEILINGS.
   - 9.C. EXPOSED CONDUIT IN FINISHED SPACES SHALL BE ALLOWED WHERE NO OTHER OPTION EXISTS AND ONLY WITH PRIOR WRITTEN APPROVAL BY THE OWNER. ALL EXPOSED CONDUIT SHALL BE PAINTED TO MATCH.
   - 9.D. ALL CABLING THROUGH WALLS, FIRE WALLS AND FLOORS SHALL BE INSTALLED IN SLEEVES WITH PROTECTIVE BUSHINGS ON BOTH ENDS.
12. FIRE ALARM SYSTEM SHALL BE MONITORED BY A UL LISTED CENTRAL RECEIVING STATION.
13. INTERLOCK LIGHTING CONTROLS WITH FIRE ALARM SYSTEM TO ENABLE ALL LIGHTING UPON ACTIVATION.
14. REFER TO THE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SPARES

1. THE FIRE ALARM CONTRACTOR SHALL INCLUDE IN HIS BID THE COST TO PROVIDE AND INSTALL THE ADDITIONAL SPARE PARTS AND ASSOCIATED CABLING PER THE SPECIFICATIONS. SPARES SHALL BE INSTALLED AS INSTRUCTED BY THE OWNER. UNINSTALLED DEVICES SHALL BE DELIVERED TO THE OWNER AS ATTIC STOCK.

GENERAL ELECTRICAL NOTES

1. REFER TO THE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. INSTALL SYSTEMS IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
3. PROVIDE LIGHT FIXTURE FIRE PROTECTION AND CONDUIT FIRE SEALING TO MAINTAIN FIRE RATING OF WALLS AND CEILINGS PER ARCHITECT'S SCHEDULE. REF. SPECIFICATIONS AND ARCH. DRAWINGS FOR ADDITIONAL INFORMATION.
4. ELECTRICAL RECEPTACLES, TELEPHONES, ETC... ARE SHOWN FOR GENERAL LOCATION. HEIGHTS ARE NOTED SO THE ESTIMATOR WILL KNOW WHETHER THEY ARE ABOVE OR BELOW COUNTERS. PRIOR TO INSTALLATION, REVIEW THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. IN THE EVENT OF CONFLICT, THE ARCHITECT'S LOCATION WILL GENERALLY PREVAIL BUT SHOULD BE CLARIFIED BY RFI. PROVIDE DEVICES SHOWN ON THE ELECTRICAL DRAWING EVEN IF NOT SHOWN ON ARCHITECTURAL DRAWINGS.
5. COORDINATE POWER AND DATA WITH THE FURNITURE SUPPLIER PRIOR TO ROUGH-IN. AT CASEWORK WITH KNEE SPACE, MOUNT RECEPTACLES AND DATA OUTLETS IN KNEE SPACE. COORDINATE WITH ARCHITECT AND FURNITURE SUPPLIER TO ENSURE THAT PROTECTIVE GROMMETS ARE PROVIDED IN THE COUNTER.
6. DO NOT INSTALL ELECTRICAL PANELS AND TRANSFORMERS UNTIL 1/4" SCALE DRAWINGS SHOWING LOCATION OF THIS EQUIPMENT RELATIVE TO MECHANICAL/PLUMBING EQUIPMENT, DUCTWORK AND PIPING IS SUBMITTED AND APPROVED. NEC CODE CLEARANCE MUST BE MAINTAINED.
7. ELECTRICAL EQUIPMENT HAS BEEN COORDINATED WITH PIPING AND DUCTWORK. DO NOT RELOCATE PANELS WITHOUT PRIOR APPROVAL.
8. ELECTRICAL DEVICES IN FIRE RATED WALLS SHALL BE A MINIMUM OF 24" AWAY FROM DEVICES ON THE OPPOSITE SIDE OF THE WALL TO MAINTAIN FIRE RATING.
9. MINIMUM SIZE CONDUIT FOR POWER SHALL BE 3/4", MIN. SIZE FLEX CONDUIT MAY BE 1/2". MINIMUM SIZE CONDUIT FOR DATA SHALL BE 1"C. DO NOT COMBINE CONDUIT FOR DATA.
10. MAX. LENGTH FOR FLEX CONDUIT SHALL BE 6 FT. ALL FLEX CONDUIT SHALL BE LISTED FOR GROUNDING.
11. LIGHT FIXTURE WHIPS MAY BE MIN. 1/2" FLEX CONDUIT WITH MIN. #12 WIRE. LIGHT FIXTURE WHIPS SHALL BE NO MORE THAN 6 FT LONG.
12. PROVIDE GREEN GROUND WIRE WITH ALL CIRCUITS SIZED PER NEC. BOND GREEN GROUND WIRE TO EACH END OF CONDUIT.
13. GROUND TRANSFORMER SECONDARIES TO BUILDING STEEL AND GROUND ROD. PROVIDE CONDUIT TO PROTECT GROUNDING CONDUCTOR AND BOND EACH END OF CONDUIT TO GROUNDING SYSTEM. MIN. SIZE OF CONDUIT FOR GROUND WIRE SHALL BE 3/4"C.
14. PROVIDE J-BOXES, CONDUIT AND SLEEVES THRU ALL FIRE WALLS FOR DATA, TELEPHONE, SECURITY, FIRE ALARM AND SOUND SYSTEMS WIRINGS, ETC. SEE SPECIFICATIONS.
15. PROVIDE PULL BOXES, JUNCTION BOXES, WIRING TROUGHS AND CABINETS WHEREVER REQUIRED FOR PROPER INSTALLATION OF VARIOUS ELECTRICAL SYSTEMS.
16. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, PROVIDE AIR SEALING PER NEC TO PREVENT CIRCULATION OF AIR FROM WARMER TO A COOLER SECTION.
17. ALL WIRING SHALL BE 600 VOLT, SOFT DRAWN ANNEALED COPPER, 98% CONDUCTIVITY, CONTINUOUS FROM OUTLET TO OUTLET. MINIMUM WIRE SIZE #12. ALL WIRE SHALL BE STRANDED TYPE THHN OR THWN-2 (WET RATED FOR 90° C). ALL WIRES SHALL BE COLOR CODED WITH SAME COLOR CONNECTED TO SAME UNGROUNDED PHASE THROUGHOUT THE INSTALLATION.
18. ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT. NO SURFACE MOUNTED WIREMOLD SHALL BE ALLOWED IN FINISHED SPACES. MC CABLE SHALL BE ALLOWED INSIDE EXIST STUD WALLS OR CHASE WALLS.
19. ALL MATERIAL MUST BE NEW AND OF GOOD QUALITY AND SHALL BEAR THE STAMP OF APPROVAL OF THE UNDERWRITERS' LABORATORIES, INC. (U.L.).

GENERAL EQUIPMENT ELECTRICAL NOTE

THE ELECTRICAL DESIGN HAS BEEN COORDINATED FOR SPACE, INSTALLATION AND ELECTRICAL REQUIREMENTS WITH EQUIPMENT THAT IS SCHEDULED BY OTHER DIVISIONS. THE REQUIREMENTS FOR OTHER EQUIPMENT AND MODELS FROM ACCEPTABLE MANUFACTURERS HAVE NOT BEEN VERIFIED OR COORDINATED. THE GENERAL CONTRACTOR SHALL VERIFY THESE REQUIREMENTS PRIOR TO USING OTHER EQUIPMENT IN HIS BID AND INCLUDE ANY ADDITIONAL COSTS FOR INSTALLATION OF THE EQUIPMENT. THIS INCLUDES GENERAL CONSTRUCTION AND MEP COSTS.

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER/OTHER TRADES FOR EXACT ELECTRICAL REQUIREMENTS OF EQUIPMENT PRIOR TO ORDERING CB(S). FIELD VERIFY EQUIPMENT NAMEPLATE RATINGS AND EQUIPMENT CONNECTION LOCATIONS WITH OTHER TRADES PRIOR TO ROUGH-IN.

TYPICAL OF HVAC EQUIPMENT, SHOP EQUIPMENT, KITCHEN EQUIPMENT, ELECTRIC ROLLUP DOORS, ETC.

PROVIDE CONDUIT & SLEEVES THRU FIRE WALLS, WALLS AND FLOORS FOR LOW VOLTAGE CABLING WIRING, ETC.

PULL BOXES AND BELOW GRADE CONDUIT FOR LOW VOLTAGE CABLING, WIRING, ETC. BY ELEC CONTRACTOR.

ALL CONDUIT & J-BOXES FOR LOW VOLTAGE CABLING SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL LOW VOLTAGE CABLING IN WALLS, EXPOSED AREAS AND ABOVE INACCESSIBLE CEILINGS SHALL REQUIRE CONDUIT AND J-BOXES. REFERENCE SPECIFICATIONS AND TECHNOLOGY DOCUMENTS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

RESPONSIBILITY MATRIX

SCOPE ITEM	RESPONSIBILITY			COMMENTS
COMMUNICATIONS DIVISION 27	**OFOI**	**CFCI**	**OFCI**	
STRUCTURED DATA CABLING SYSTEM		X		SEE NOTE 7.
TELECOM ROOM (TR) BUILDOUT				
– NETWORK RACKS AND ASSOCIATED COMPONENTS.		X		SEE NOTE 7.
– CABLE TRAY WITHIN TR		X		SEE NOTE 7.
– LADDER TRAY WITHIN TR		X		SEE NOTE 7.
– TR GROUND BAR		X		SEE NOTE 8.
– TELECOM CLOSET/EQUIPMENT BONDING		X		SEE NOTE 7.
AUDIO/VIDEO DISTRIBUTION SYSTEMS		X		SEE NOTE 7.
PROJECTORS & MOUNTS		X		SEE NOTE 7.
PROJECTION SCREENS		X		SEE NOTE 7.
FLAT PANEL DISPLAYS & MOUNTS		X		SEE NOTE 7.
DIGITAL SIGNAGE		X		SEE NOTE 7.
BUILDING INTERCOM/PA SYSTEM		X		SEE NOTE 7.
TELECOM BONDING BACKBONE		X		SEE NOTE 4.
RACEWAY: CONDUIT, BACK BOXES, SLEEVES, ETC.		X		SEE NOTE 4.
PATHWAYS: CABLE TRAY, EZ-PATH DEVICES, ETC.		X		SEE NOTE 4.
ELECTRICAL POWER		X		SEE NOTE 4.
LIFE SAFETY AND SECURITY - DIVISION 28				
EMERGENCY RESPONDER RADIO ANDTENNA (ERRA) SYSTEM		X		SEE NOTE 9.
ELECTRONIC ACCESS CONTROL SYSTEM (EACS)		X		SEE NOTE 9.
INTRUSION DETECTION SYSTEM		X		SEE NOTE 9.
DOOR ACCESS VIDEO INTERCOM SYSTEM		X		SEE NOTE 9.
VIDEO SURVEILLANCE SYSTEM (VSS)		X		SEE NOTE 9.
FIRE ALARM SYSTEM		X		SEE NOTE 10.
RACEWAY: CONDUIT, BACK BOXES, SLEEVES, ETC.		X		SEE NOTE 4.
ELECTRICAL POWER		X		SEE NOTE 4.

OFOI – OWNER FURNISHED AND OWNER INSTALLED
CFCI – CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED
OFCI – OWNER FURNISHED AND CONTRACTOR INSTALLED

RESPONSIBILITY MATRIX NOTES:
1. NONE IN PROJECT.
2. NOT USED.
3. NOT USED.
4. BY DIVISION 26.
5. REFERENCE DIVISION 8 FOR DOOR HARDWARE.
6. BY DIVISION 11.
7. PROVIDED BY DIVISION 27, REFERENCE TECHNOLOGY DRAWINGS.
8. PROVIDED BY DIVISION 27 IT CONTRACTOR, INSTALLED BY DIVISION 26.
9. BY DIVISION 28 SECURITY CONTRACTOR, REFERENCE TECHNOLOGY DRAWINGS.
10. BY DIVISION 28 FIRE ALARM CONTRACTOR, REFERENCE 3-E3.1X SHEETS.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director GLS	Drawn By MAS
Designer MAS	Quality Control
Proj. Arch.	

PROJECT NO.
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SHEET TITLE
ELECTRICAL AND LOW VOLTAGE NOTES

SHEET NO.
E5.01

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DISPLAY SCHEDULE

		SOURCE		DIVISION	
TAG	DESCRIPTION	PROGRAM /REMOTE	LOCAL	PROVIDED BY	BASIS OF DESIGN
D0	PROVISIONS FOR FUTURE WALL MOUNTED DISPLAY		X	274150	PROVIDE 2-GANG DEEP A/V J-BOX WITH SINGLE GANG MUD RING AND 1.25"C TO CEILING CAVITY. COORDINATE LOCATION WITH POWER OUTLET.
D1	CEILING MOUNTED PROJECTOR		X	274150	NEC NP-PV710UL-W1-13ZL
D2	98" WALL MOUNTED DISPLAY		X	274150	
D3	86" WALL MOUNTED INTERACTIVE DISPLAY		X	274150	CLEARTOUCH 86" 6000A+ SERIES – CTI-6086A+UH40 PROVIDE CTI-PCMOD-PC65-ST-W10P PC MODULE AND CTI-WFMOD-11AC WIFI MODULE
D4	75" WALL MOUNTED INTERACTIVE DISPLAY		X	274150	CLEARTOUCH 75" 6000A+ SERIES – CTI-6075A+UH40 PROVIDE CTI-PCMOD-PC65-ST-W10P PC MODULE AND CTI-WFMOD-11AC WIFI MODULE
D5	75" WALL MOUNTED DISPLAY WITH INTEGRATED ATSC/NTSC TUNER		X	274150	NEC 75" M-SERIES M751-AVT3
D6	65" WALL MOUNTED INTERACTIVE DISPLAY		X	274150	CLEARTOUCH 65" 6000A+ SERIES – CTI-6065A+UH40 PROVIDE CTI-PCMOD-PC65-ST-W10P PC MODULE AND CTI-WFMOD-11AC WIFI MODULE
D7	65" WALL MOUNTED DISPLAY		X	274150	NEC 65" M-SERIES M651-2
D8	65" CEILING MOUNTED DISPLAY		X	274150	NEC 65" M-SERIES M651-2
D9	55" WALL MOUNTED DIGITAL DISPLAY	X		274150	NEC 55" M-SERIES M551-2

AUDIO/VIDEO DEVICE SCHEDULE

		SOURCE		DIVISION	
TAG	DESCRIPTION	PAGING	LOCAL	PROVIDED BY	COMMENTS
AV0	EMPTY 2-GANG J-BOX AND BLACK COVERPLATE FOR FUTURE A/V DEVICES			DIV26	REFER TO DEVICE DETAILS.
AV1	(1) HDMI INPUT WALL PLATE		X	274150	REFER TO DEVICE DETAILS.
AV2	(1) HDMI AND (1) USB INPUT IN FLOOR BOX		X	274150	REFER TO DEVICE DETAILS.
AV3	(2) HDMI INPUT AND (1) USB INPUT WALL PLATE		X	274150	REFER TO DEVICE DETAILS.
BT1	BLUETOOTH AND STEREO INPUT IN WALL PLATE		X	274150	REFER TO SYSTEM ONE-LINE DRAWINGS AND DEVICE DETAILS.
AN0	ASSISTED LISTENING SYSTEM ANTENNA		X	274150	REFER TO SYSTEM ONE-LINE DRAWINGS
AN1	WIRELESS MICROPHONE SYSTEM ANTENNA		X	274150	REFER TO SYSTEM ONE-LINE DRAWINGS
AN2	AM/FM ANTENNA		X	274150	REFER TO SYSTEM ONE-LINE DRAWINGS
MC1	(1) XLR INPUT WALL PLATE		X	274150	MICROPHONE INPUT LABEL TO MATCH DESIGNATION AT SOUND RACK
MC2	(2) XLR INPUT WALL PLATE		X	274150	MICROPHONE INPUT LABELS TO MATCH DESIGNATIONS AT SOUND RACK
MCA	COMBINATION (1) XLR MICROPHONE, (1) RCA AUDIO, AND (1) 1/8" AUDIO INPUT WALL PLATE		X	274150	BASIS OF DESIGN: PROCO IPLATE (CUSTOM) WITH INTEGRAL XLR INPUT, REFER TO DEVICE DETAILS. MICROPHONE INPUT LABEL TO MATCH DESIGNATION AT SOUND RACK
SP1	(1) SPEAKER OUTLET		X	274150	BASIS OF DESIGN: PROCO WPE135
CP	AUDIO/VIDEO CONTROL PANEL		X	274150	

AUDIO/VIDEO SPEAKER SCHEDULE

			SOURCE		DIVISION	
TAG	DESCRIPTION	BASIS OF DESIGN	PAGING	PROGRAM /LOCAL	PROVIDED BY	COMMENTS
S10	PASSIVE IN-CEILING A/V SPEAKER	BIAMP D8 COMMUNITY SPEAKER		X	274150	8" ROUND CUT-IN
S11	PASSIVE WALL MOUNTED A/V SPEAKER	JBL CONTROL 23		X	274150	
S12	POWERED WALL MOUNTED SPEAKER	QSC K12.2 JBL PRX912		X	274150	12-INCH 2-WAY SPEAKER
S13	POWERED WALL MOUNTED SUBWOOFER	QSC KS112 JBL PRX915XLF		X	274150	12-INCH LOW FREQUENCY SPEAKER
S14	PASSIVE ALL WEATHER SPEAKER	JBL AWC129		X	274150	12-INCH 2-WAY SPEAKER
S15	PASSIVE ALL WEATHER LF SPEAKER	JBL AWC15LF		X	274150	15-INCH LOW FREQUENCY SPEAKER

CAMPUS COMMUNICATIONS DEVICE & SPEAKER SCHEDULE

			SOURCE		DIVISION	
TAG	DESCRIPTION	BASIS OF DESIGN	PAGING	PROGRAM /LOCAL	PROVIDED BY	COMMENTS
VC	WALL MOUNTED VOLUME CONTROL	QUAM QC10	X		275100	
S1	2X2 LAY-IN CEILING SPEAKER	QUAM SYSTEM 12/VC	X		275100	INTEGRAL VOLUME CONTROL KNOB
S2	2X2 LAY-IN CEILING SPEAKER	QUAM SYSTEM 12	X		275100	
S3	8" ROUND CUT IN CEILING SPEAKER	QUAM SYSTEM 21 WITH BACKBOX	X		275100	
S4	SURFACE MOUNTED HORN	QUAM SYSTEM 3	X		275100	
S5	SURFACE MOUNTED VANDAL RESISTANT	QUAM SYSTEM 2VP	X		275100	
S6	RECESSED IN-WALL EXTERIOR HORN	QUAM H16/SVP SPEAKER W/ QUAM ES8 BACKBOX & BSBW BAFFLE	X		275100	CONFIRM WALL CAVITY SPACE PRIOR TO ROUGH-IN.
S7	SURFACE MOUNTED EXTERIOR HORN	QUAM QH 16T	X		275100	
S8	SURFACE MOUNTED WIDE ANGLE HORN	ATLAS SOUND APC-30T	X		275100	

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
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38582
REGISTERED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No,	Revision Date

Director GLS
Designer MAS
Proj. Arch.
Drawn By MAS
Quality Control

PROJECT NO.
23-155.00

SHEET TITLE
AUDIO/VIDEO AND PA DEVICE SCHEDULES

SHEET NO.
E5.02

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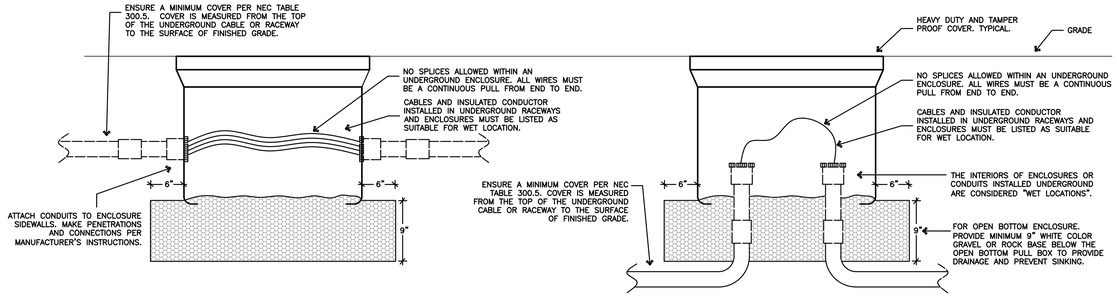
UG PULL BOX SPECIFICATIONS

UNDERGROUND ENCLOSURE SHALL BE HUBBELL QUAZITE SERIES UNDERGROUND ENCLOSURE, UL LISTED AND MANUFACTURED BY LENOIR CITY, INC.

EQUAL UNDERGROUND ENCLOSURE MANUFACTURED BY OLD CASTLE OR CDR WITH UL OR ETL VERIFICATION SHALL BE ALSO ACCEPTABLE.

ENCLOSURES, BOXES AND COVERS ARE REQUIRED TO CONFORM TO ALL TEST PROVISIONS OF THE MOST CURRENT ANSI/SCTE 77 - 'SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY ' FOR ANSI TIER 15 APPLICATIONS FOR BOTH COVERS AND BOXES. ALL COVERS ARE REQUIRED TO HAVE THE TIER LEVEL RATING EMBOSSED ON THE SURFACE WITH 2 BOLTS. IN NO ASSEMBLY CAN THE COVER DESIGN LOAD EXCEED THE DESIGN LOAD OF THE BOX. ALL COMPONENTS IN AN ASSEMBLY (BOX & COVER) ARE MANUFACTURED USING MATCHED SURFACE TOOLING. INDEPENDENT THIRD PARTY VERIFICATION OR TEST REPORTS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER CERTIFYING THAT ALL TEST PROVISIONS OF THIS SPECIFICATION HAVE BEEN MET ARE REQUIRED WITH EACH SUBMITTAL. ELECTRICAL CONTRACTOR SHALL PROVIDE PROPER SIZE OF UNDERGROUND ENCLOSURE TO COORDINATE WITH THE CONDUITS AND FEEDERS PER NATIONAL ELECTRICAL CODE.

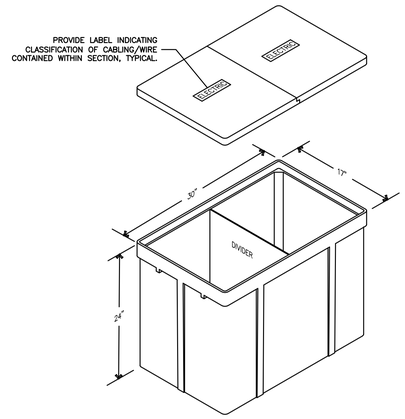


6 UNDERGROUND PULL BOX DETAILS

NO SCALE

NOTES:

1. SEE NATIONAL ELECTRICAL CODE FOR ADDITIONAL REQUIREMENTS.
2. COORDINATE PULL BOX LOCATION WITH OWNER AND OTHER TRADES PRIOR TO INSTALLATION.
3. PROVIDE SEPARATE PULL BOXES FOR LINE VOLTAGE AND LOW VOLTAGE WIRING.

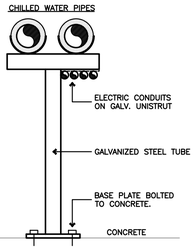


9 TWO SECTION UNDERGROUND PULL BOX DETAIL

NO SCALE

NOTES:

1. AS SHOWN BASIS OF DESIGN: QUAZITE ESR 120365
2. ELECTRICIAN TO CONFIRM SIZING IS SUFFICIENT FOR CONDUIT/CONDUCTORS TO BE ROUTED THROUGH EACH SECTION PRIOR TO ORDERING.

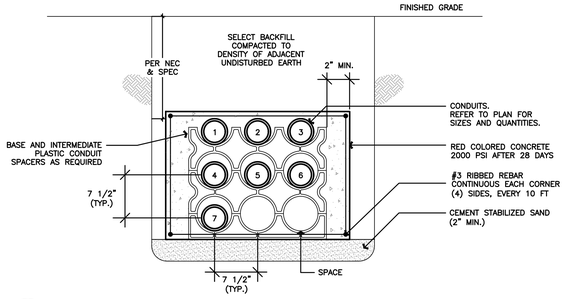


10 CHILLER YARD CONDUIT SUPPORT DETAIL

NO SCALE

NOTES:

1. ELECTRICAL CONTRACTOR SHALL ROUTE CHILLER CONDUIT ON PIPING SUPPORTS. PIPING SUPPORTS PROVIDED BY MECHANICAL CONTRACTOR. REF MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. CONDUIT SHALL BE ROUTED TO MAINTAIN ACCESS AND NOT INTERFERE WITH MECHANICAL EQUIPMENT, PIPING, DEVICES, ETC. COORDINATE WITH OTHER TRADES PRIOR TO ROUGH-IN.

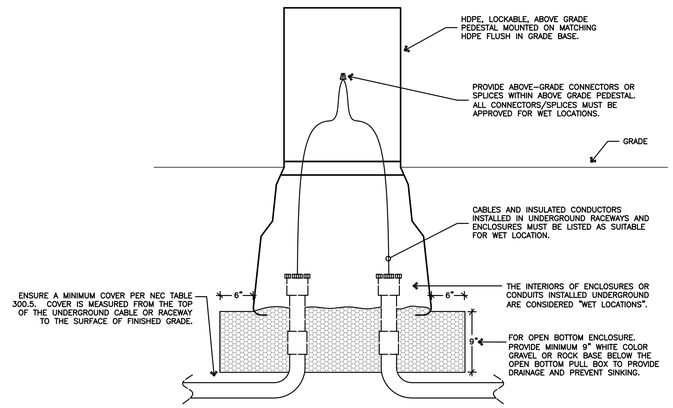


11 DUCT BANK DETAIL - SECTION

NO SCALE

NOTES:

1. REF. TO DRAWINGS FOR EXACT QUANTITY OF CONDUIT. PROVIDE ADDITIONAL ROWS AS REQUIRED.
2. INSTALL PVC COATED, RIGID GALVANIZED STEEL, LONG RADIUS ELBOWS & CONDUIT WHERE CONDUIT TURNS UP TO GRADE AND EXTEND TO FINAL EQUIPMENT.
3. ENCASE UNDERGROUND DUCT BANKS IN 3" RED CONCRETE ENVELOPE.
   - 3.1. THE BOTTOM OF THE TRENCH SHALL BE FILLED WITH CEMENT STABILIZED SAND AND CAREFULLY RAMMED UNTIL SOLID SO THAT UNDUE STRESS WILL NOT BE PLACED ON THE CONDUITS.
   - 3.2. THE CONDUIT IS PLACED OVER THE COMPACTED STABILIZED SAND USING SPACERS TO MAINTAIN THE CORRECT SEPARATION BETWEEN CONDUITS.
   - 3.3. THE 3 INCH BED OF CONCRETE IS THEN LAID OVER THE CONDUIT.
4. REFER TO POWER COMPANY REQUIREMENTS FOR CONDUIT ENTRY TO POWER COMPANY EQUIPMENT.



7 ABOVE GRADE PEDESTAL DETAIL

NO SCALE

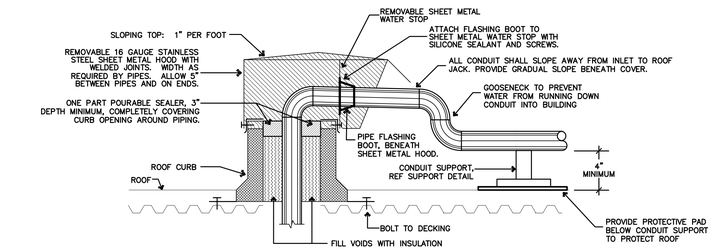
NOTES:

1. SEE NATIONAL ELECTRICAL CODE FOR ADDITIONAL REQUIREMENTS.
2. COORDINATE ENCLOSURE LOCATION WITH OWNER AND OTHER TRADES PRIOR TO INSTALLATION.
3. PROVIDE SEPARATE ENCLOSURES FOR LINE VOLTAGE AND LOW VOLTAGE WIRING.

ABOVE GRADE PEDESTAL SPECIFICATION

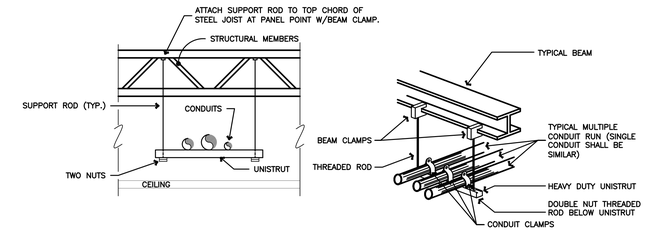
BASIS OF DESIGN SHALL BE HUBBELL POWER SYSTEMS, UL LISTED AND MANUFACTURED BY LENOIR CITY, INC.

EQUAL ABOVE GRADE ENCLOSURE SYSTEM MANUFACTURED BY OLD CASTLE OR CDL WITH UL OR ETL LISTING SHALL ALSO BE ACCEPTABLE.



8 CONDUIT ROOF PENETRATION DETAIL

NO SCALE

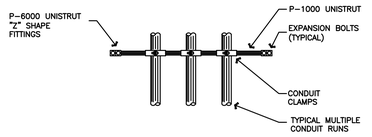


1 TRAPEZE MOUNTED CONDUIT DETAIL

NO SCALE

NOTES:

1. ALL SUPPORT DEVICES SHALL BE UL LISTED AND NEC APPROVED.
2. REFER TO NEC FOR CONDUIT SUPPORT SPACING.

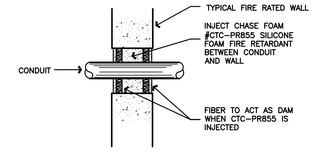


2 WALL MOUNTED CONDUITS

NO SCALE

NOTES:

1. ALL SUPPORT DEVICES SHALL BE UL LISTED AND NEC APPROVED.
2. REFER TO NEC FOR CONDUIT SUPPORT SPACING.

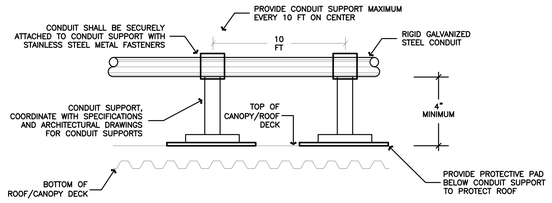


3 FIREWALL PENETRATION DETAIL

NO SCALE

NOTES:

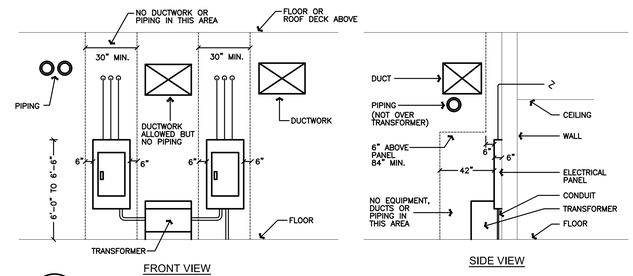
1. FIRE RATING OF COMPLETED FIREPROOFED ASSEMBLY SHALL BE EQUAL OR EXCEED RATING OF WALL.



4 ROOF AND CANOPY CONDUIT SUPPORT DETAIL

NO SCALE

1. COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS, SPECIFICATIONS AND OTHER TRADES.



5 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

COORDINATE WITH OTHER TRADES TO ENSURE NO PIPING AND DUCTWORK ABOVE ELECTRICAL EQUIPMENT AS SHOWN. PROVIDE WORKING CLEARANCE IN FRONT OF STARTERS, DISCONNECTS, PANELS, XFMRS AND ADDITIONALLY PER CODE.

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

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GLS	MAS
Designer	Quality Control
MAS	
Proj. Arch.	

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ELECTRICAL DETAILS

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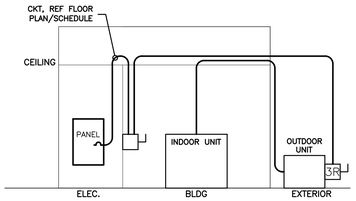
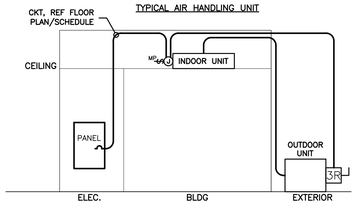
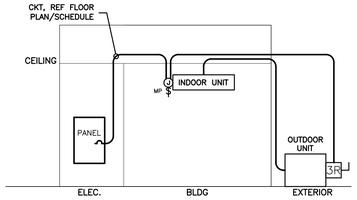


TYPICAL AIR HANDLING UNIT



TYPICAL CASSETTE OR FAN COIL UNIT



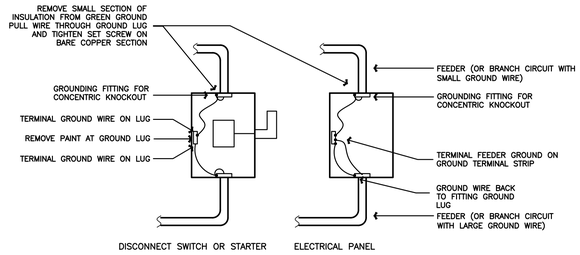
TYPICAL HIGH WALL UNIT

7 TYPICAL MINI SPLIT HVAC WIRING DETAIL

NO SCALE

NOTES:

1. REFERENCE PANEL SCHEDULE FOR CB AND WIRE SIZE.
2. MOTOR RATED PILOT SWITCH OR DISCONNECT AT INDOOR UNIT SHALL BE UPSTREAM OF DISCONNECT SWITCH AT EXTERIOR UNIT.
   - 2.A. MOUNT MOTOR RATED PILOT SWITCHES ADJACENT TO THE INDOOR UNIT THEY SERVE, DO NOT BLOCK ACCESS PANELS.
   - 2.B. DISCONNECTS SHALL BE MOUNTED ADJACENT TO OR WITHIN LINE OF SIGHT OF THE EQUIPMENT THEY SERVE.
3. PROVIDE LABELS ON MOTOR RATED PILOT SWITCHES & DISCONNECT SWITCHES IDENTIFYING THE ELECTRICAL CIRCUIT AND EQUIPMENT THEY SERVE.
   - 3.A. LABELS ON DISCONNECTS SHALL BE LAMACOID TYPE MECHANICALLY FASTENED TO THE EQUIPMENT.
   - 3.B. REFERENCE LABELING DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

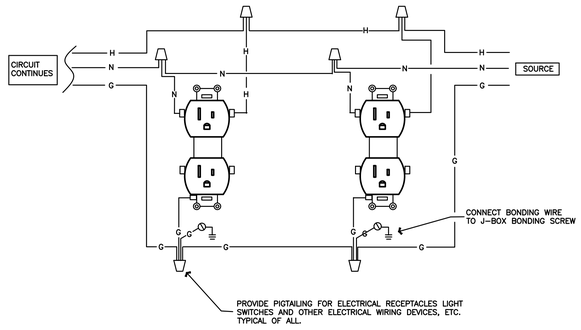


4 GROUNDING BUSHING WIRING DETAIL

NO SCALE

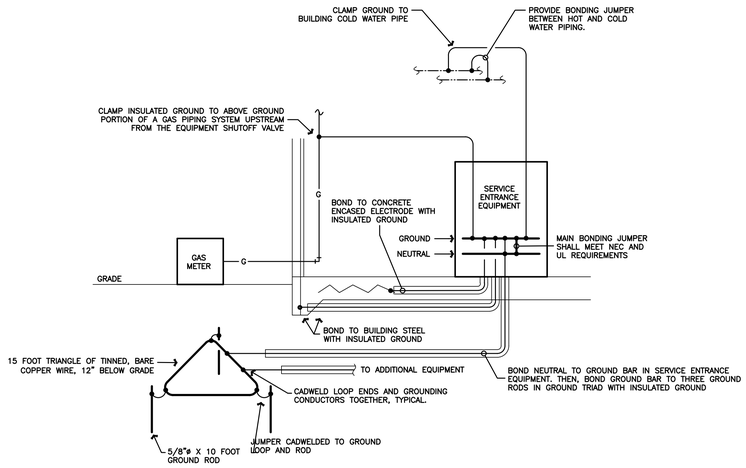
NOTE:

1. PROVIDE AND INSTALL GROUNDING BUSHINGS FOR DISCONNECT SWITCHES, PANELS AND TRANSFORMERS.



5 PIGTAIL WIRING DETAIL FOR ELECTRICAL DEVICE

NO SCALE

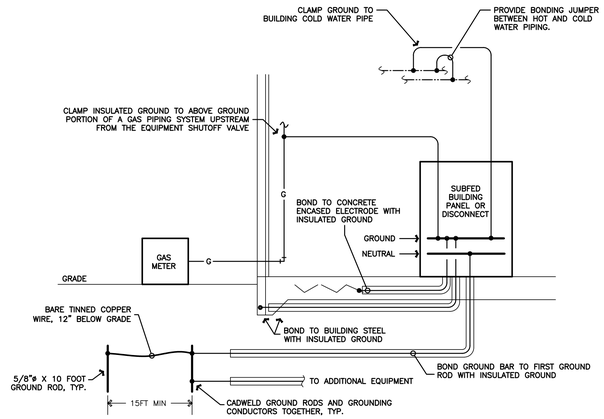


1 SERVICE ENTRANCE EQUIPMENT GROUNDING DETAIL

NO SCALE

NOTES:

1. INSTALL BONDING AND GROUNDING SYSTEMS PER NATIONAL ELECTRICAL CODE.
2. NOT ALL SYSTEMS SHOWN MAY BE PRESENT, COORDINATE WITH OTHER TRADES.

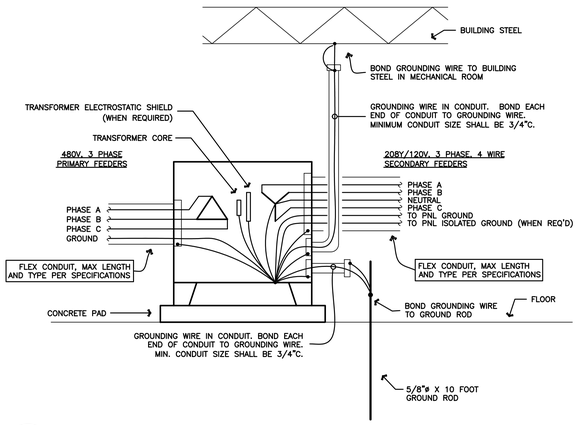


2 OUTBUILDING GROUNDING DETAIL

NO SCALE

NOTES:

1. INSTALL BONDING AND GROUNDING SYSTEMS PER NATIONAL ELECTRICAL CODE.
2. PROVIDE GROUNDING SYSTEM AT EACH INDIVIDUAL BUILDING BUT DO NOT BOND GROUND TO NEUTRAL EXCEPT AT THE SERVICE ENTRANCE EQUIPMENT.
3. SIZE BONDING/GROUNDING WIRE AT EACH BUILDING PER THE ELECTRICAL ONE-LINE.
4. NOT ALL SYSTEMS SHOWN MAY BE PRESENT, COORDINATE WITH OTHER TRADES.

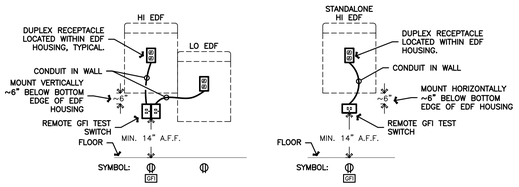


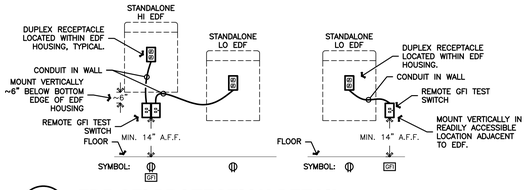
3 TRANSFORMER CONNECTION AND GROUNDING DETAIL

NO SCALE

NOTES:

1. INSTALL GROUND ROD ADJACENT TO TRANSFORMER AND SEAL PENETRATION AROUND GROUND ROD.
2. WHERE AN ISOLATED GROUND IS PROVIDED MAKE THE CONNECTION AT THE TRANSFORMER AND RUN DIRECTLY TO THE ISOLATED GROUND BAR IN THE PANELBOARD. DO NOT DEFINE THE ISOLATED GROUND AT THE PANELBOARD.
3. FINAL CONNECTIONS TO TRANSFORMERS SHALL BE MADE IN FLEXIBLE CONDUIT. PROVIDE LIQUID TIGHT CONSTRUCTION AND FITTINGS IN WET, DAMP OR OUTSIDE AREAS EXCEPT WHERE LOCATED IN AIR HANDLING ROOMS. REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.





8 EDF GFI PROTECTION DETAIL

NO SCALE

NOTES:

1. MODIFY EXISTING WALL AS NEEDED TO INSTALL NEW RECEPTACLE AND REMOTE GFI TEST SWITCH. PATCH/REPAIR WALL AS NEEDED TO MATCH EXISTING.
2. WIRE NEW RECEPTACLE DOWNSTREAM OF REMOTE GFI TEST SWITCH.
3. REMOTE GFI TEST SWITCH SHALL BE A DEAD FRONT GFI DEVICE TO BE INSTALLED FLUSH MOUNTED IN WALL WITH EDF SERVED AND PROVIDE GFI PROTECTION FOR THE RECEPTACLE LOCATED WITHIN THE EDF HOUSING.
4. GFI TEST SWITCH SHALL BE READILY ACCESSIBLE PER NEC 210.8.
5. COORDINATE RECEPTACLE LOCATION(S) WITHIN EDF HOUSINGS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

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NEW CANEY, TEXAS

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ISSUED: 01/06/2025

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Director GLS	Drawn By MAS
Designer MAS	Quality Control
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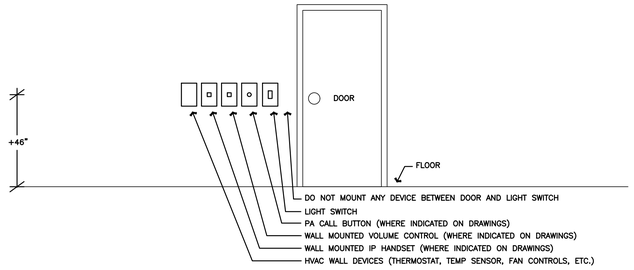
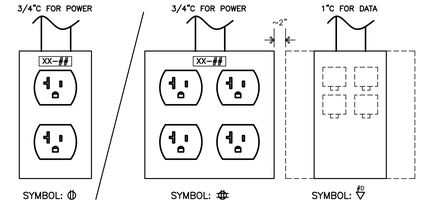


1 MOUNTING ORDER/SEQUENCE AND DETAIL

NO SCALE

NOTES:

1. WHERE ONE DEVICE IS NOT REQUIRED IN A GIVEN SPACE GROUP REMAINING DEVICES TOGETHER, DO NOT LEAVE A GAP.
2. COORDINATE SPACING BETWEEN J-BOXES WITH DEVICES TO BE INSTALLED.

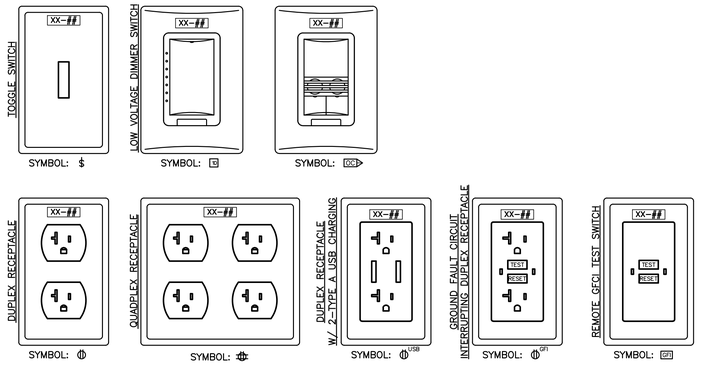


2 TYPICAL POWER & DATA OUTLET DETAIL

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY TOGETHER AS POSSIBLE.
   1.A. USE CADDY TSGB16, RBS16 OR SIMILAR MOUNTING BAR IN SHEETROCK WALLS.



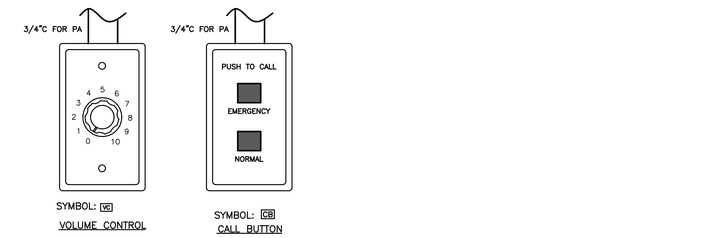
3 TYPICAL ELECTRICAL DEVICES

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR DEVICE AND FACEPLATE REQUIREMENTS. ALL DEVICE PLATES SHALL BE STANDARD SIZE ONLY, NO JUMBO FACEPLATES SHALL BE ALLOWED.
2. ONLY SELECT RECEPTACLES ARE SHOWN HERE. PROVIDE SIMILAR LABELS ON ALL SWITCHES, NEMA POWER OUTLETS, ETC.
3. PROVIDE LABEL WITH RED TEXT FOR DEVICES ON GENERATOR FED CIRCUITS.
4. PROVIDE TYPEWRITTEN OR PREMADE CIRCUIT LABELS INDICATING THE ELECTRICAL CIRCUIT ON:
   4.A. INSTALLED WIRING AT EACH SPLICE POINT
   4.B. EACH J-BOX ABOVE CEILING WITH WIRING INSTALLED OR MODIFIED AS PART OF THIS PROJECT.
   4.C. AFFIXED TO THE FRONT OF EACH NEW AND EXISTING DEVICE FACEPLATE IN THE AREA OF RENOVATION.

XX-## CIRCUIT LABEL
A. XX = PANEL DESIGNATION
B. ## = AS-BUILT CIRCUIT DESIGNATION



4 CAMPUS COMMUNICATIONS DETAILS

NO SCALE

NOTES:

1. PROVIDE 1-GANG BACK BOX AND STAINLESS STEEL WALL PLATES FOR CALL BUTTON AND VOLUME CONTROLS.

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ISSUED: 01/06/2025

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Designer MAS	Quality Control
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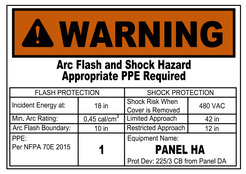
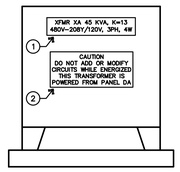


4 TYPICAL ARC FLASH LABEL DETAIL

NO SCALE

NOTES:

1. VALUES AND NAMES SHOWN HERE ARE FOR REFERENCE ONLY, MODIFY TO REFLECT PROJECT'S ARC FLASH STUDY VALUES AND EQUIPMENT NAMES.
2. IF MIN. ARC RATING IS OVER 40CAL/CM² MODIFY "WARNING" TEXT TO READ "DANGER" AND PROVIDE RED SHADING IN LIEU OF ORANGE SHOWN.



5 TYPICAL TRANSFORMER LABELING DETAIL

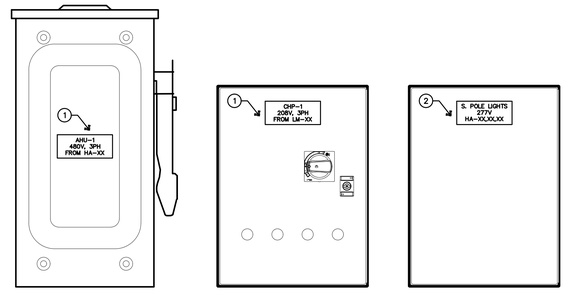
NO SCALE

NOTES:

1. LOCATIONS OF NAMEPLATES SHOWN FOR REFERENCE ONLY, FIELD LOCATE AS NEEDED BASED ON TRUE EQUIPMENT LAYOUT AND DIMENSIONS.

(1) PROVIDE AN ENGRAVED NAMEPLATE SHOWING EQUIPMENT NAME, RATING, AND VOLTAGE.

(2) PROVIDE AN ENGRAVED NAMEPLATE SHOWING WARNING TEXT AND WHERE EQUIPMENT'S POWER IS DERIVED.



1 TYPICAL DISCONNECT, STARTER, & CONTACTOR LABELING DETAIL

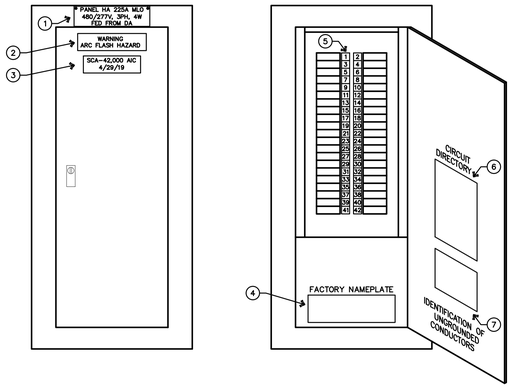
NO SCALE

NOTES:

1. LOCATIONS OF NAMEPLATES SHOWN FOR REFERENCE ONLY, FIELD LOCATE AS NEEDED BASED ON TRUE EQUIPMENT LAYOUT AND DIMENSIONS.

(1) PROVIDE AN ENGRAVED NAMEPLATE SHOWING LOAD SERVED, EQUIPMENT VOLTAGE, AND CIRCUIT NUMBER MATCHING AS-BUILT CONDITIONS.

(2) PROVIDE AN ENGRAVED NAMEPLATE SHOWING LOADS SERVED, VOLTAGES, AND CIRCUIT NUMBERS MATCHING AS-BUILT CONDITIONS FOR ALL CONTACTOR CIRCUITS. LOADS SERVED SHALL BE "LIGHTING", "FAN", "RECEPTACLES", "PUMP", "WATER HEATER", OR SIMILAR DESCRIPTIVE NOTE.



2 TYPICAL LIGHTING PANEL LABELING & NAMEPLATE DETAIL

NO SCALE

NOTES:

1. LAYOUT OF PANELBOARD, INCLUDING LOCATIONS OF NAMEPLATES, CIRCUIT DIRECTORY, AND OTHER LABELING IS SHOWN FOR REFERENCE ONLY, FIELD LOCATE AS NEEDED BASED ON TRUE EQUIPMENT LAYOUT AND DIMENSIONS.

(1) PROVIDE LAMACOID NAMEPLATE WITH 5/16" LETTERS SHOWING PANEL NAME, AMPERAGE RATING, VOLTAGE, AND FROM WHERE POWER IS DERIVED. ATTACH WITH MASTIC AND TWO SCREWS. COORDINATE TO GIVE SAME NAME AS PANEL SCHEDULE. IF USED AS MAIN SERVICE PANEL, PROVIDE SHORT CIRCUIT AVAILABLE AND RATING INFORMATION.

(2) PROVIDE PERMANENT ARC FAULT LABEL DISPLAYING RESULTS OF ARC FAULT STUDY USING INITIAL/CURRENT POWER COMPANY SERVICE VALUES.

(3) FOR ALL NEW ELECTRICAL EQUIPMENT, PROVIDE PERMANENTLY AFFIXED LABEL STATING FAULT CURRENT AT THE TIME OF INSTALLATION AND CALCULATION. THE LABEL SHALL BE MINIMUM 2" X 3" IN SIZE, AND INCLUDE THE DATE OF THE CALCULATION. REFERENCE ELECTRICAL DRAWINGS AND EQUIPMENT SHORT CIRCUIT ANALYSIS TABLE.

(4) PROVIDE INFORMATION PER INDUSTRY STANDARDS, BUT SHALL INCLUDE VOLTAGE, PHASE, BUS AMPERAGE, AND SHORT CIRCUIT RATING

(5) FOR EACH CIRCUIT PROVIDE PERMANENT LABEL INDICATING CIRCUIT BREAKER NUMBER, NUMBER SHALL MATCH CIRCUIT DIRECTORY.

(6) CIRCUIT DIRECTORY TO BE COMPLETED AT END OF JOB. TYPEWRITTEN, STATING EQUIPMENT OR ROOMS SERVED BY CIRCUIT. EVEN CIRCUIT ON RIGHT SIDE OF CARD, ODD ON LEFT. PROVIDE LAMINATED DIRECTORY FOR EXTERIOR OR WET LOCATIONS.

(7) PROVIDE PERMANENT LABEL INDICATING COLOR CODING OF PHASE CONDUCTORS BASED ON VOLTAGE, REFERENCE SPECIFICATIONS.

PANEL HA
225A/3P

3 CIRCUIT BREAKER LAMACOID LABELING

NO SCALE

NOTES:

1. PROVIDE LAMACOID LABEL FOR ALL SWITCHBOARD BREAKERS, DISTRIBUTION PANEL BREAKERS, AND BRANCH CIRCUIT PANELBOARD SUBFEED BREAKERS.
2. REPLACE "PANEL HA" WITH THE FIELD VERIFIED NAME OF THE EQUIPMENT BEING SERVED.
3. REPLACE BREAKER SIZE AND NUMBER OF POLES TO MATCH THE EQUIPMENT BEING LABELED.
4. PROVIDE LABEL FOR IDENTIFYING SPARES BREAKERS.
5. PROVIDE LABEL FOR SPACES NOTING THE NUMBER OF POLES AND MAXIMUM SIZE CB THAT CAN BE INSTALLED.
6. LABELING SHALL BE MECHANICALLY FASTENED TO THE EQUIPMENT DEADFRONT.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

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Director GLS	Drawn By MAS
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SHEET TITLE
ELECTRICAL DETAILS

SHEET NO.
E5.13

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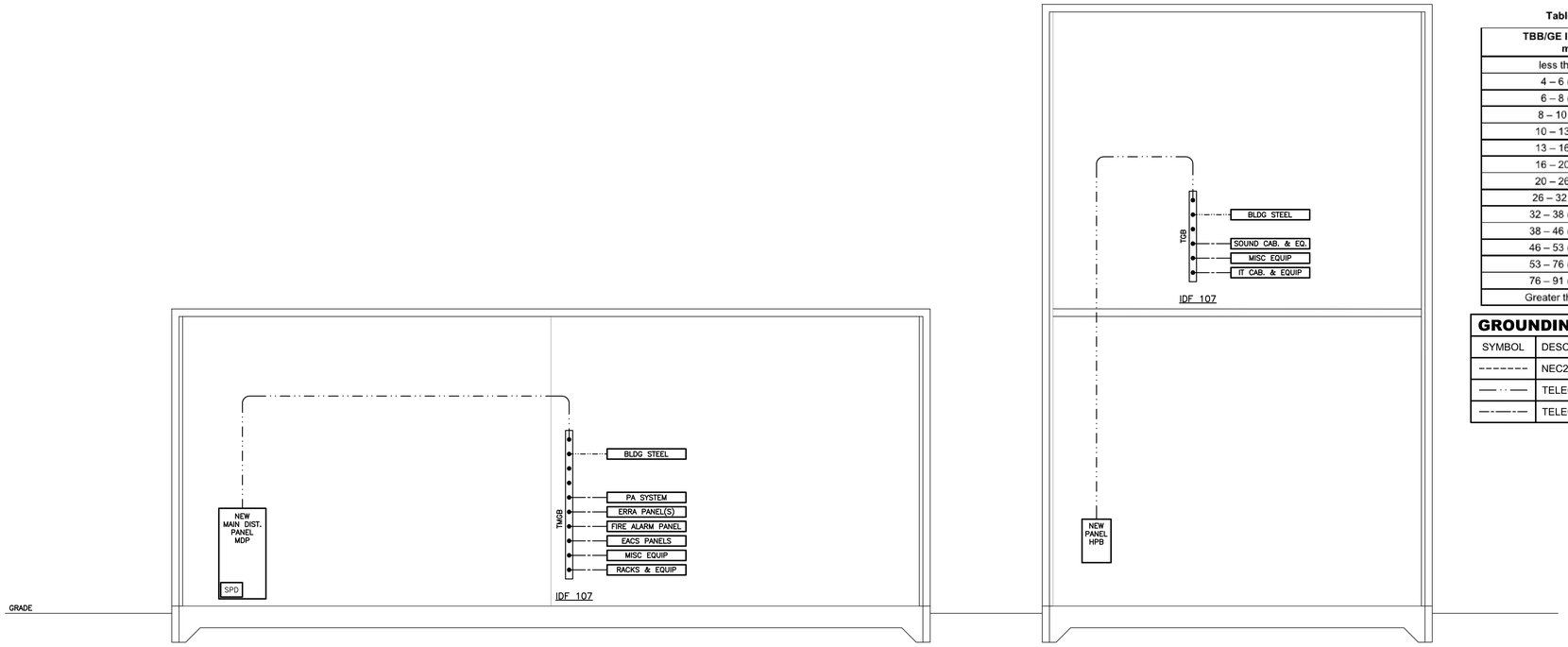


Table 1 –TBB conductor size vs length

TBB/GE linear length m (ft)	TBB/GE size (AWG)
less than 4 (13)	6
4 – 6 (14 – 20)	4
6 – 8 (21 – 26)	3
8 – 10 (27 – 33)	2
10 – 13 (34 – 41)	1
13 – 16 (42 – 52)	1/0
16 – 20 (53 – 66)	2/0
20 – 26 (67 – 84)	3/0
26 – 32 (85 – 105)	4/0
32 – 38 (106 – 125)	250 kcmil
38 – 46 (126 – 150)	300 kcmil
46 – 53 (151 – 175)	350 kcmil
53 – 76 (176 – 250)	500 kcmil
76 – 91 (251 – 300)	600 kcmil
Greater than 91 (301)	750 kcmil

GROUNDING/BONDING LEGEND

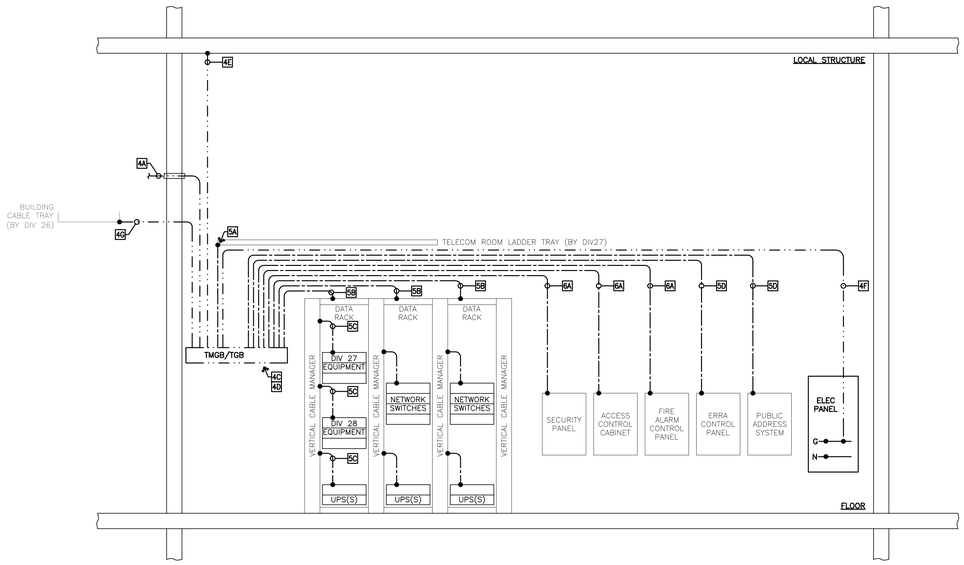
SYMBOL	DESCRIPTION
- - - - - - -	NEC250 GROUNDING SYTEM BY DIV26
—— ·· ——	TELECOM BONDING BACKBONE BY DIV26
—·—·—	TELECOM ROOM INTERNAL BONDING BY DIV 27/28

1 NETWORK GROUNDING RISER AND DETAIL

NO SCALE

NOTES:

1. REFERENCE ELECTRICAL RISER AND FLOOR PLANS FOR ADDITIONAL INFORMATION.
2. REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

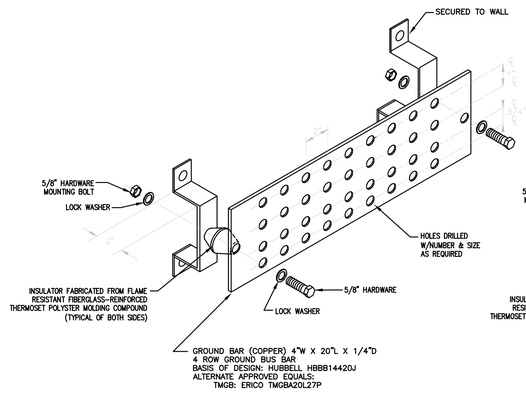


2 TYPICAL TELECOM ROOM GROUNDING/BONDING DETAIL

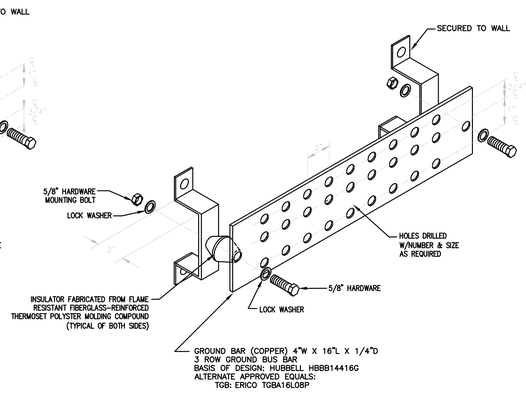
SCALE: NO SCALE

NOTES:

1. QUANTITIES OF RACKS, CABLE TRAY, EQUIPMENT, ETC. SHOWN FOR SCHEMATIC PURPOSES ONLY. REFERENCE FLOOR PLANS AND SPECIFICATIONS FOR TELECOM ROOM REQUIREMENTS.
2. DIVISION 27 STRUCTURED CABLING CONTRACTOR SHALL COORDINATE WITH DIVISION 26 FOR LOCATION OF TMGB/TGB IN EACH TELECOM ROOM.
3. DIVISION 27/28 BONDING CONDUCTORS WITHIN TELECOM ROOMS MAY BE INSTALLED WITHOUT CONDUIT AND SHALL BE SIZED PER ANSI/TIA–607–B, MINIMUM SIZE #6 AWG. REFERENCE TABLE 1 INCLUDED ON THIS SHEET.
4. DIVISION 26 RESPONSIBILITIES
   - 4.A. PROVIDE TELECOMMUNICATIONS BONDING BACKBONE (TBB) BETWEEN TELECOM ROOMS.
   - 4.B. NOT USED.
   - 4.C. TELECOMMUNICATIONS MAIN GROUND BAR (TMGB) IN THE MDF/MAIN TELECOM ROOM.
   - 4.D. TELECOMMUNICATIONS GROUND BAR (TG) IN THE 2ND FLOOR IDF.
   - 4.E. BONDING CONNECTION TO LOCAL STEEL STRUCTURE FROM TMGB/TGB IN EACH TELECOM ROOM.
   - 4.F. WHERE ELECTRICAL PANELS ARE LOCATED WITHIN TELECOM ROOMS BOND PANEL GROUND BAR TO TMGB/TGB.
   - 4.G. BONDING CABLE TRAY OUTSIDE THE TELECOM ROOMS INCLUDING JUMPERS BETWEEN CABLE TRAY SEGMENTS.
   - 4.H. ALL BONDING CONDUCTORS INSTALLED BY DIVISION 26 SHALL BE IN CONDUIT AND BONDED AT BOTH ENDS.
   - 4.I. REFERENCE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. DIVISION 27 RESPONSIBILITIES:
   - 5.A. BONDING CONNECTION TO LADDER TRAY INCLUDING JUMPERS BETWEEN TRAY SEGMENTS.
   - 5.B. BONDING CONNECTION TO EACH RACK, CABINET, VOLTAGE/SURGE PROTECTOR, EMR SHIELDING FLOORING/PAINT (WHERE PRESENT), AND OTHER DIVISION 27 LOW VOLTAGE SYSTEM METAL ENCLOSURES/FRAME.
   - 5.C. BONDING RACK MOUNTED EQUIPMENT TO RACK GROUND LUG/BAR.
   - 5.D. BONDING ALL OTHER DIV27 EQUIPMENT ENTERING OR RESIDING IN THE TELECOM ROOMS.
6. DIVISION 28 RESPONSIBILITIES:
   - 6.A. BONDING ALL DIV28 EQUIPMENT ENTERING OR RESIDING IN THE TELECOM ROOMS.



TELECOMMUNICATIONS MAIN GROUND BAR (TMGB)



TELECOMMUNICATIONS GROUND BAR (TGB)

3 TELECOM GROUND BAR DETAILS

NO SCALE

NOTES:

1. GROUND BARS PROVIDED AND INSTALLED BY DIVISION 26.
   - 1.A. DIVISION 27 TELECOM CONTRACTOR TO COORDINATE WITH DIVISION 26 TO MOUNT GROUND BARS ON WALL AT 8FT AFF ADJACENT TO LADDER TRAY FROM TELECOM RACKS.
2. ALL CONNECTIONS TO GROUND BARS SHALL BE MADE WITH DOUBLE LUG, IRREVERSIBLE COMPRESSION CONNECTORS.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS · GEORGE L. STANTON · 38582 · REGISTERED · PROFESSIONAL ENGINEER
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TELECOM GROUNDING RISER AND DETAILS

SHEET NO.

E5.20

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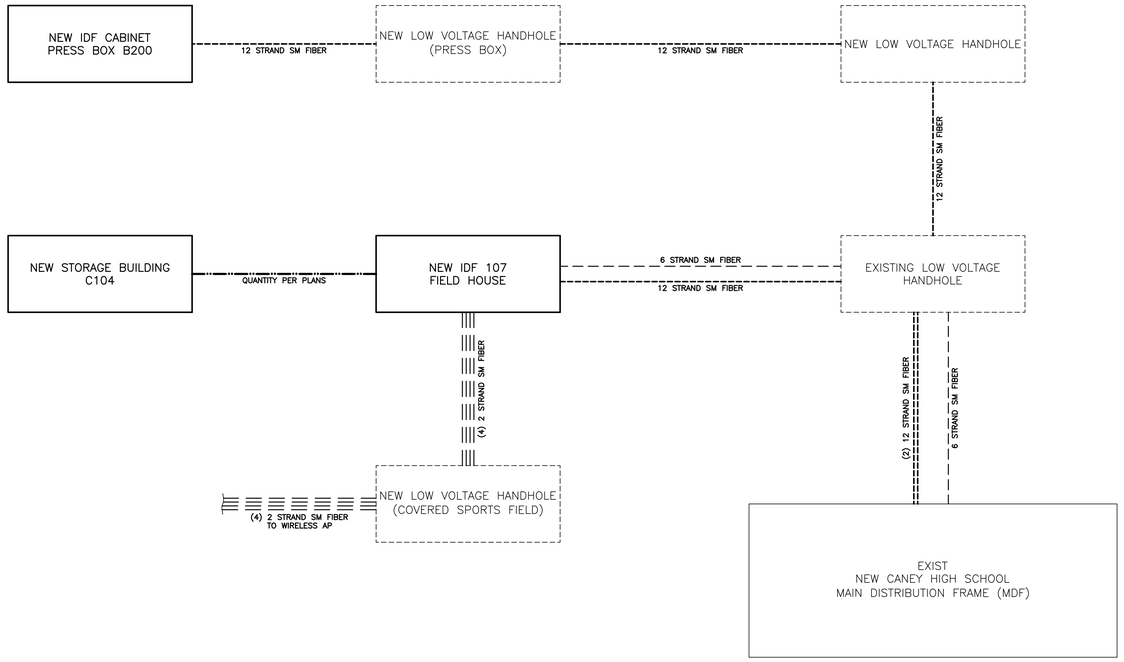


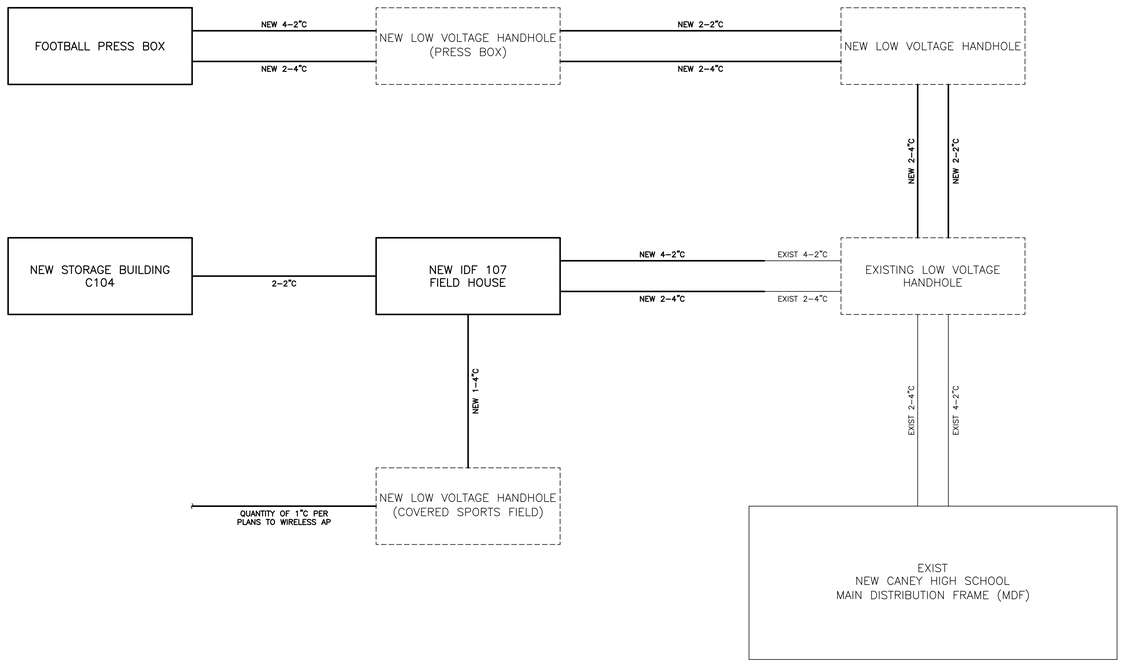
CABLE LEGEND	
SYMBOL	DESCRIPTION
— — —	2 STRAND SM FIBER
– – – –	6 STRAND SM FIBER
-------	12 STRAND SM FIBER
~~	WAN COPPER/FIBER
——•——•——	CAT6 COPPER CABLING
——··——··——	CAT6A COPPER CABLING
————	RG6 COPPER CABLING
————	XX PAIR COPPER

1 PARTIAL NCISD NEW CANEY HIGH SCHOOL STRUCTURED CABLING BACKBONE RISER

NO SCALE

NOTES:

1. ALL STRUCTURED CABLING RUNS SHALL BE PROVIDED AND INSTALLED BY THE DIVISION 27 STRUCTURED CABLING CONTRACTOR.
   1.A. REFERENCE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. COORDINATE WITH OTHER TRADES FOR CONNECTIONS TO THEIR ASSOCIATED EQUIPMENT/DEVICES.



2 PARTIAL NCISD NEW CANEY HIGH SCHOOL LOW VOLTAGE CABLING BACKBONE PATHWAYS

NO SCALE

NOTES:

1. ALL CONDUIT, INNERDUCT, AND PULL BOXES FOR STRUCTURED CABLING BACKBONE BETWEEN BUILDINGS SHALL BE PROVIDED AND INSTALLED BY THE DIVISION 26 ELECTRICAL CONTRACTOR.
   1.A. REFERENCE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS..

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
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REGISTERED
PROFESSIONAL ENGINEER
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TELECOM BACKBONE AND CONDUIT RISER

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TBPE#13401/TBEL#10 | TEXAS ENG. FIRM REG. NO. T-12753 | (713) 300–9292

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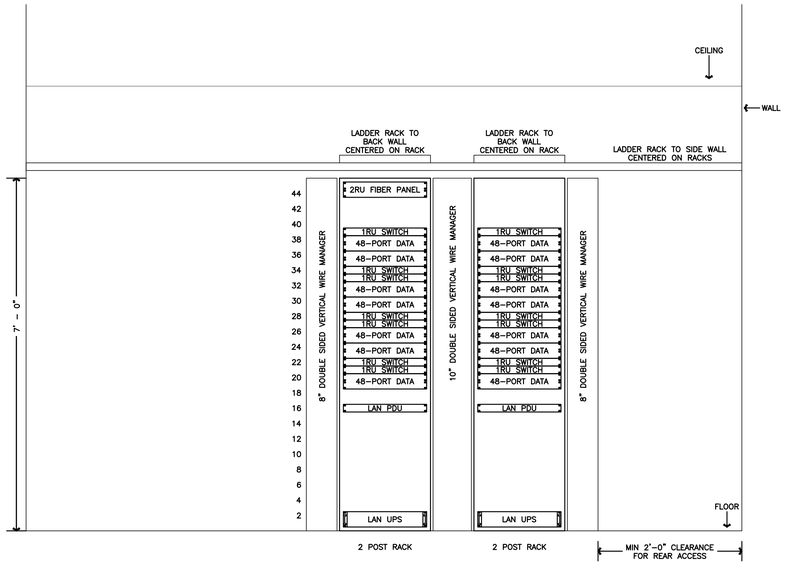
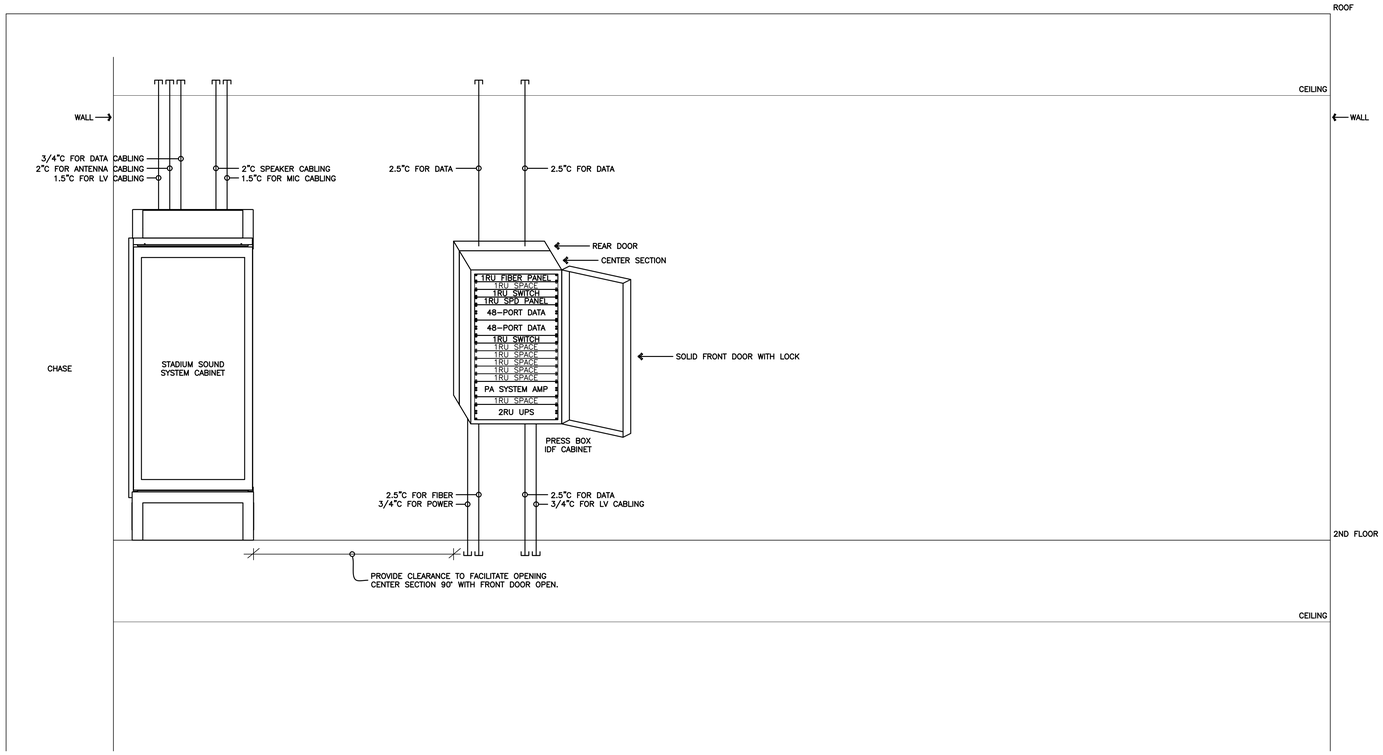


1 IDF 107 RACK ELEVATION

NO SCALE



2 PRESS BOX IDF ELEVATION

NO SCALE

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STATE OF TEXAS
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01/06/2025

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TELECOM RACK ELEVATIONS

SHEET NO.

E5.30

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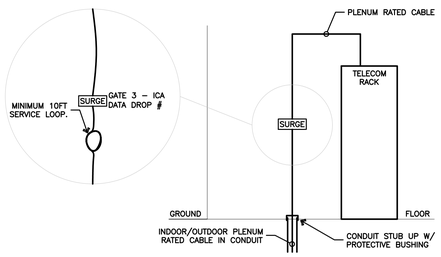
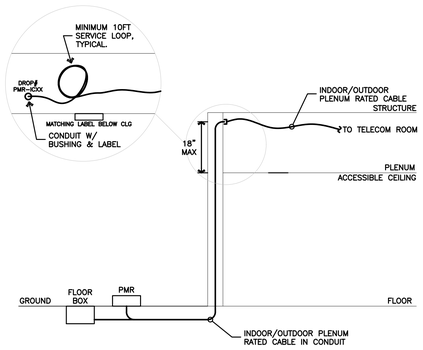


5 TYPICAL TELECOM ROOM SURGE CABLING DETAIL

NO SCALE

NOTES:

1. PROVIDE MINIMUM 10FT SERVICE LOOP, STORE IN EXTENDED LOOP OR FIGURE EIGHT CONFIGURATION.
2. PROVIDE INLINE SURGE PROTECTOR FOR NETWORK CABLING ADJACENT TO CONDUIT ENTRY INTO THE BUILDING.
   - 2.A. 110 PUNCH DOWN TERMINATIONS, SCREW DOWN COVER, GROUND WIRE, TIA/EIA CAT5E/CAT6/CAT6A COMPLIANT.
   - 2.B. SINGLE SURGE PROTECTORS MAY BE MOUNTED TO THE PLYWOOD WALL COVER ABOVE CONDUIT ENTRY. WHERE MULTIPLE SURGE PROTECTORS ARE INSTALLED IN A SINGLE TELECOM ROOM PROVIDE A WALL MOUNTED, LOCKING ENCLOSURE WITH DIN RAIL MOUNTED SURGE DEVICES.
   - 2.C. BOND SURGE SUPPRESSOR GROUND CONNECTION TO TELECOM ROOM GROUND BAR PER MANUFACTURER'S REQUIREMENTS.
   - 2.D. DITEK DTK-110C6APOE OR EQUAL.
3. WHERE CONDUIT STUB UP IS LOCATED REMOTE FROM A TELECOM ROOM REFER TO TYPICAL SURGE PROTECTION AT REMOTE CABLING ENTRY DETAIL.
4. LABEL SURGE PROTECTOR, ALL LABELS SHALL BE PERMANENT AND MACHINE GENERATED CONSISTING OF BLACK TEXT ON A WHITE BACKGROUND.
   - 4.A. LABELS SHALL CLEARLY INDICATE THE TERMINATION POINTS OF THE CABLE, EXAMPLE "GATE3-ICA" WHICH INDICATES TERMINATION POINTS AT GATE3 LOCATION AND WITHIN THE TELECOM ROOM DENOTED AS ICA USING AS-BUILT ROOM NAMES.
   - 4.B. LABELS SHALL INCLUDE AS-BUILT DATA DROP NUMBER USING BUILDING/PROJECT SPECIFIC NAMING STANDARDS/CONVENTIONS.

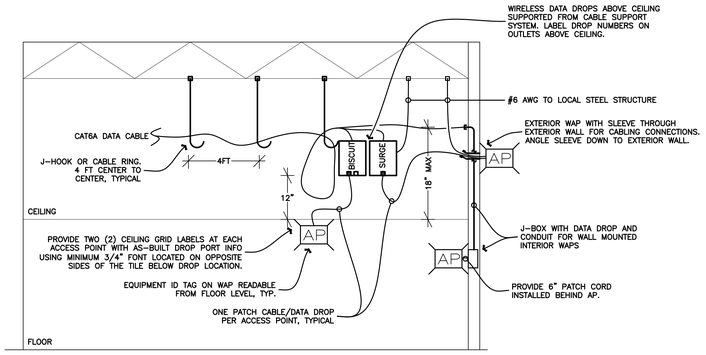


4 TYPICAL PMR / FLOOR BOX CABLING DETAIL

NO SCALE

NOTES:

1. PROVIDE MINIMUM 10FT SERVICE LOOP AT CONDUIT STUB OUT FOR TRANSITION TO BELOW GRADE, STORE IN EXTENDED LOOP OR FIGURE EIGHT CONFIGURATION.
2. PROVIDE END TO END INDOOR/OUTDOOR, PLENUM RATED CATEGORY CABLING FROM END DEVICE TO TELECOM ROOM.
   - 2.A. PEDESTAL MOUNTED RECEPTACLE AND FLOOR BOX SHOWN FOR REFERENCE, PROVIDE MATCHING INSTALLATION FOR SIMILAR DEVICES LOCATED WITHIN THE BUILDING.
   - 2.B. EXTERIOR DEVICES REMOTE FROM THE BUILDING SHALL BE PROVIDED WITH INLINE SURGE PROTECTION AND CABLE ENTRY POINT. TYPICAL OF SECURITY CAMERAS, VIDEO INTERCOMS, AND SIMILAR DEVICES.
3. LABEL END OF CONDUIT STUB OUT, ALL LABELS SHALL BE PERMANENT AND MACHINE GENERATED CONSISTING OF BLACK TEXT ON A WHITE BACKGROUND.
   - 3.A. LABELS SHALL CLEARLY INDICATE THE TERMINATION POINTS OF THE CABLE, EXAMPLE "PMR-ICA" WHICH INDICATES TERMINATION POINTS AT A PMR LOCATION AND WITHIN THE TELECOM ROOM DENOTED AS IC-A USING AS-BUILT ROOM NAMES.
   - 3.B. LABELS SHALL INCLUDE AS-BUILT DATA DROP NUMBER USING BUILDING/PROJECT SPECIFIC NAMING STANDARDS/CONVENTIONS.
   - 3.C. WHERE CONDUIT STUB OUT IS ABOVE CEILING PROVIDE MATCHING LABELING PERMANENTLY AFFIXED TO ACCESSIBLE CEILING IN ADDITION TO LABEL ON CONDUIT STUB OUT. LABEL SHALL BE CLEARLY VISIBLE WHEN LOOKED AT FROM A STANDING POSITION AT THE FLOOR.

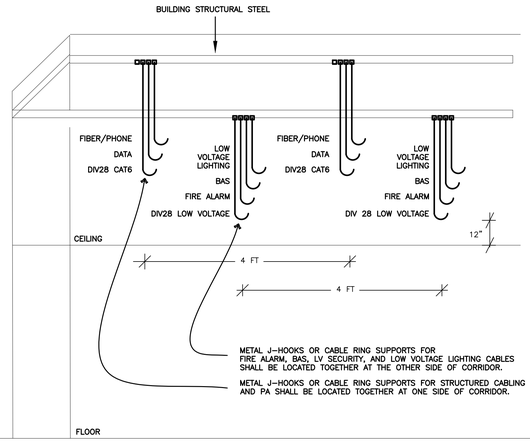


1 WIRELESS DATA CABLE WIRING DETAIL

NO SCALE

NOTES:

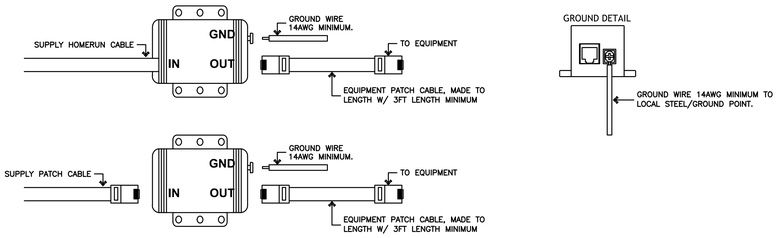
1. PROVIDE ENCLOSURE ABOVE CEILING FOR CONNECTION OF PATCH CORDS AND HOME RUN CABLING FOR CEILING MOUNTED AND EXTERIOR WIRELESS ACCESS POINTS (APs).
   - 1.A. PROVIDE 2-PORT BISCUIT JACK FOR INTERIOR CEILING MOUNTED APs.
   - 1.B. PROVIDE 110-RJ45 SURGE PROTECTOR FOR EXTERIOR MOUNTED APs.
   - 1.C. CONNECT AP TO ENCLOSURE WITH PATCH CORD.
   - 1.D. SUPPORT ENCLOSURE FROM CABLE SUPPORT SYSTEM ~12" ABOVE CEILING WITH PORT LABELS FACING DOWNWARD.
2. PROVIDE FLUSH MOUNTED DATA DROP IN WALL AT INTERIOR WALL MOUNTED APs.
   - 2.A. ROUTE DATA DROP IN CONDUIT INSIDE WALL.
   - 2.B. MOUNT AP OVER DATA DROP AND CONNECT WITH 6" PATCH CORD.
3. PROVIDE PROTECTIVE BUSHING ON END OF CONDUITS AND SLEEVES.
   - 3.A. ANGLE EXTERIOR AP SLEEVE UPWARD AND SEAL SLEEVES THROUGH EXTERIOR WALL TO MAINTAIN BUILDING ENVELOPE AND PREVENT WATER INGRESS.
4. CABLING:
   - 4.A. ALL APs SHALL HAVE INDIVIDUAL UNSPLICED HOME RUN DATA CABLE FROM BISCUIT JACK OR SURGE SUPPRESSOR TO NEAREST TELECOM DATA PATCH PANEL. PROVIDE 20 FOOT SERVICE LOOP FOR ALL WIRELESS DATA DROPS, TYPICAL.
   - 4.B. CONNECT ALL APs USING PATCH CORDS OF VARIOUS LENGTHS USING PREFABRICATED CABLES OF STANDARD LENGTHS. PATCH CORD LENGTH TO BE SIZED BY DIVISION 27 CONTRACTOR TO MATCH INSTALLATION CONDITIONS.
   - 4.C. PROVIDE SHIELDED PATCH CORDS FOR ALL EXTERIOR APs.
   - 4.D. GROUNDING WIRE FOR EXTERIOR APs CONNECTED TO LOCAL STEEL STRUCTURE BY DIVISION 27.
5. LABELING:
   - 5.A. PROVIDE PORT LABELS ON CEILING GRID BELOW ALL ABOVE CEILING DROPS.
   - 5.B. PROVIDE EQUIPMENT ID TAGS ON APs. ID TAG FORMAT TO BE PROVIDED BY OWNER.
6. INTERIOR CEILING MOUNTED APs IN LAY-IN CEILINGS SHALL BE RELOCATED AS DIRECTED BY THE OWNER/ENGINEER BASED ON AS-BUILT WIRELESS HEAT MAP.



2 LOW VOLTAGE AND STRUCTURED CABLE SUPPORTING DETAIL

NO SCALE

GC, ELECTRICAL CONTRACTOR, AND LOW VOLTAGE CONTRACTORS SHALL COORDINATE TO PROVIDE SUPPORTS FOR LOW VOLTAGE CABLES SEPARATED BY FUNCTION PER THIS DETAIL. SUBMIT SUPPORT LAYOUT DRAWINGS FOR APPROVAL DURING CONSTRUCTION PHASE AND COORDINATE WITH HVAC DUCT WORK AND PIPING AND PLUMBING PIPING.

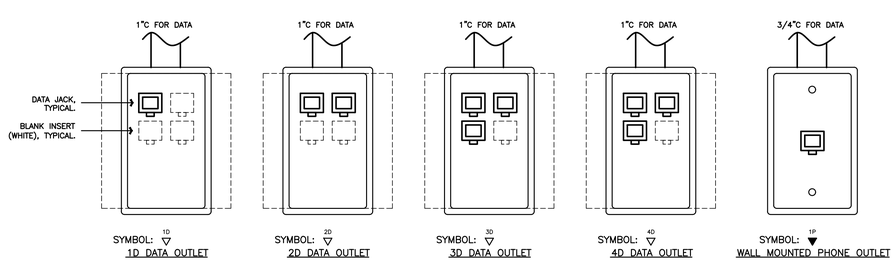


3 TYPICAL INLINE SURGE PROTECTION DETAIL

NO SCALE

NOTES:

1. PROVIDE MINIMUM 10FT SERVICE LOOP ON HOMERUN CABLE SIDE, STORE IN EXTENDED LOOP OR FIGURE EIGHT CONFIGURATION.
2. PROVIDE INLINE SURGE PROTECTOR FOR NETWORK CABLING ADJACENT TO CONDUIT ENTRY INTO THE BUILDING.
   - 2.A. 110 PUNCH DOWN TERMINATIONS, SCREW DOWN COVER, GROUND WIRE, TIA/EIA CAT5E/CAT6/CAT6A COMPLIANT.
   - 2.B. SINGLE SURGE PROTECTORS MAY BE MOUNTED TO THE PLYWOOD WALL COVER ABOVE CONDUIT ENTRY. WHERE MULTIPLE SURGE PROTECTORS ARE INSTALLED IN A SINGLE TELECOM ROOM PROVIDE A WALL MOUNTED, LOCKING ENCLOSURE WITH DIN RAIL MOUNTED SURGE DEVICES.
   - 2.C. BOND SURGE SUPPRESSOR GROUND CONNECTION TO TELECOM ROOM GROUND BAR PER MANUFACTURER'S REQUIREMENTS.
   - 2.D. DITEK DTK-110C6APOE OR EQUAL.
3. PROVIDE INLINE SURGE PROTECTOR FOR NETWORK CABLING AT POLE MOUNTED WIRELESS ACCESS POINTS AND CCTV CAMERAS.
   - 3.A. NEMA4X CONSTRUCTION WITH WATERPROOF COMPRESSION GLANDS.
   - 3.B. DITEK DTK-MRJPOEX.
4. LABEL SPLICE POINT, ALL LABELS SHALL BE PERMANENT AND MACHINE GENERATED CONSISTING OF BLACK TEXT ON A WHITE BACKGROUND.
   - 4.A. LABELS SHALL CLEARLY INDICATE THE TERMINATION POINTS OF THE CABLE, EXAMPLE "GATE3-ICA" WHICH INDICATES TERMINATION POINTS AT A GATE LOCATION AND WITHIN THE TELECOM ROOM DENOTED AS ICA USING AS-BUILT ROOM NAMES.
   - 4.B. LABELS SHALL INCLUDE AS-BUILT DATA DROP NUMBER USING BUILDING/PROJECT SPECIFIC NAMING STANDARDS/CONVENTIONS.
   - 4.C. FOR SPLICE POINTS ABOVE CEILING, PROVIDE THE ABOVE LABELING PERMANENTLY AFFIXED TO ACCESSIBLE CEILING IN ADDITION TO LABEL ON SPLICE POINT. LABEL SHALL BE CLEARLY VISIBLE WHEN LOOKED AT FROM A STANDING POSITION AT THE FLOOR.



NOTES:

1. PROVIDE NYLON BUSHING ON ENDS OF LOW VOLTAGE CONDUIT.
2. PROVIDE RADIUS SWEEP ABOVE CEILING IN DIRECTION OF CABLE PATH.
3. NO CONDUIT SHALL HAVE MORE THAN TWO (2) 90° SWEEPS.
4. WHERE LOW VOLTAGE DEVICES AND POWER OUTLETS ARE SHOWN AT THE SAME LOCATION IN THE PLANS INSTALL THE DEVICES GROUPED AND SPACED APPROXIMATELY 2" BETWEEN DEVICES. UTILIZE CADDY BAR SUPPORTS OR SIMILAR TO MAINTAIN SPACINGS.

6 TYPICAL DATA OUTLETS

NO SCALE

NOTES:

1. SHEETROCK WALLS:
   - 1.A. PROVIDE DEEP 2-GANG BACK BOX WITH A SINGLE GANG MUDRING FOR ALL DATA OUTLETS.
   - 1.B. PROVIDE DEEP 1-GANG BACK BOX FOR WALL MOUNTED PHONE OUTLET.
2. CMU WALLS:
   - 2.A. PROVIDE DEEP 1-GANG MASONRY BOX FOR ALL DATA OUTLETS.
   - 2.B. PROVIDE DEEP 1-GANG MASONRY BOX FOR WALL MOUNTED PHONE OUTLET.
3. SUBMIT FACEPLATE AND INSERT COLOR SELECTIONS FOR CONFIRMATION WITH SUBMITTAL PACKAGE.
4. REFER TO SPECIFICATIONS FOR LABELING SCHEME.

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NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
GLS	MAS
Designer	Quality Control
MAS	
Proj. Arch.	

PROJECT NO.

23-155.00

SHEET TITLE

STRUCTURED CABLING DETAILS

SHEET NO.

E5.31

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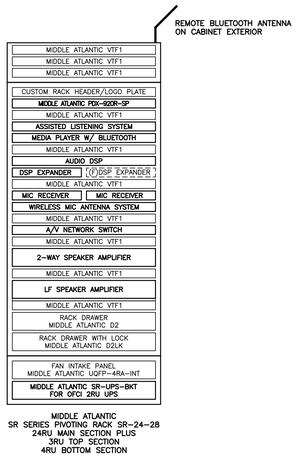


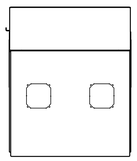
MIDDLE ATLANTIC
SR SERIES PIVOTING RACK SR-24-28
24RU MAIN SECTION PLUS
3RU TOP SECTION
4RU BOTTOM SECTION

3 PRESS BOX SOUND RACK EQUIPMENT ELEVATION

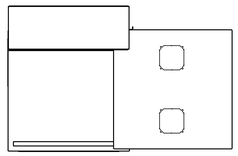
SCALE: NO SCALE

NOTES:

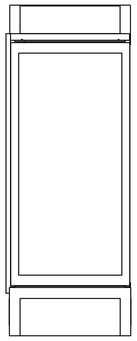
1. SOUND RACK, RACK MOUNTED AUDIO EQUIPMENT, VENTED PANELS, DRAWERS, AND ALL MISCELLANEOUS COMPONENTS NECESSARY FOR A COMPLETE SYSTEM PROVIDED AND INSTALLED BY THE DIVISION 27 SOUND SYSTEM CONTRACTOR. REFERENCE SPECIFICATIONS, FLOOR PLANS, AND SYSTEM ONE-LINE DRAWINGS FOR ADDITIONAL INFORMATION.
   - 1.A. PROVIDE MIDDLE ATLANTIC LVFD-24 24RU VENTED FRONT DOOR.
   - 1.B. REMOVE THERMAL KNOCKOUTS IN BASE OF MIDDLE SECTION TO ALLOW AIR FLOW FROM FAN INTAKE PANEL IN BOTTOM SECTION.
   - 1.C. PROVIDE CUSTOM RACK HEADER WITH INSTALLER'S LOGO AND CONTACT INFORMATION.
   - 1.D. PROVIDE ADDITIONAL VENTED FRONT PANELS (VTF1, VTF2, VTF3, VTF4) IN ALL UNUSED SPACES UNLESS NOTED OTHERWISE.
2. THE DIVISION 27 SOUND SYSTEM CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR INSTALLATION OF SUPPORTING SYSTEMS.
   - 2.A. POWER OUTLETS INSTALLED AT REAR OF CABINET BY THE DIVISION 26 ELECTRICAL CONTRACTOR.
   - 2.B. J-BOXES AND RACEWAY PROVIDED BY THE DIVISION 26 ELECTRICAL CONTRACTOR.
   - 2.C. DATA OUTLET INSTALLED AT REAR OF CABINET BY THE DIVISION 27 STRUCTURED CABLING CONTRACTOR.
3. 2RU UPS SHALL BE OWNER FURNISHED CONTRACTOR INSTALLED (OFCI).
   - 3.A. PROVIDE UPS MOUNTING BRACKETS AND INSTALL OFCI UPS AT THE INDICATED LOCATION.
   - 3.B. PROVIDE/INSTALL SOLID BLANK FRONT PANEL IN UNUSED SPACE IF OWNER ELECTS TO NOT PROVIDE A UPS FOR THE SOUND RACK.



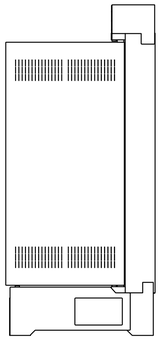
MIDDLE ATLANTIC SR-24-28
TOP VIEW (CLOSED)



MIDDLE ATLANTIC SR-24-28
TOP VIEW (OPEN) – RIGHT HANDED PIVOT



MIDDLE ATLANTIC
SR SERIES PIVOTING RACK SR-24-28
VFD-24 VENTED FRONT DOOR
FRONT VIEW



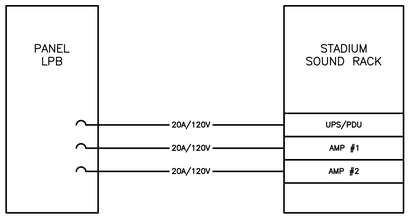
MIDDLE ATLANTIC SR-24-28
RIGHT VIEW

4 PRESS BOX SOUND CABINET ELEVATIONS

SCALE: NO SCALE

NOTES:

1. SOUND SYSTEM CABINET ELEVATIONS SHOWN FOR REFERENCE ONLY.

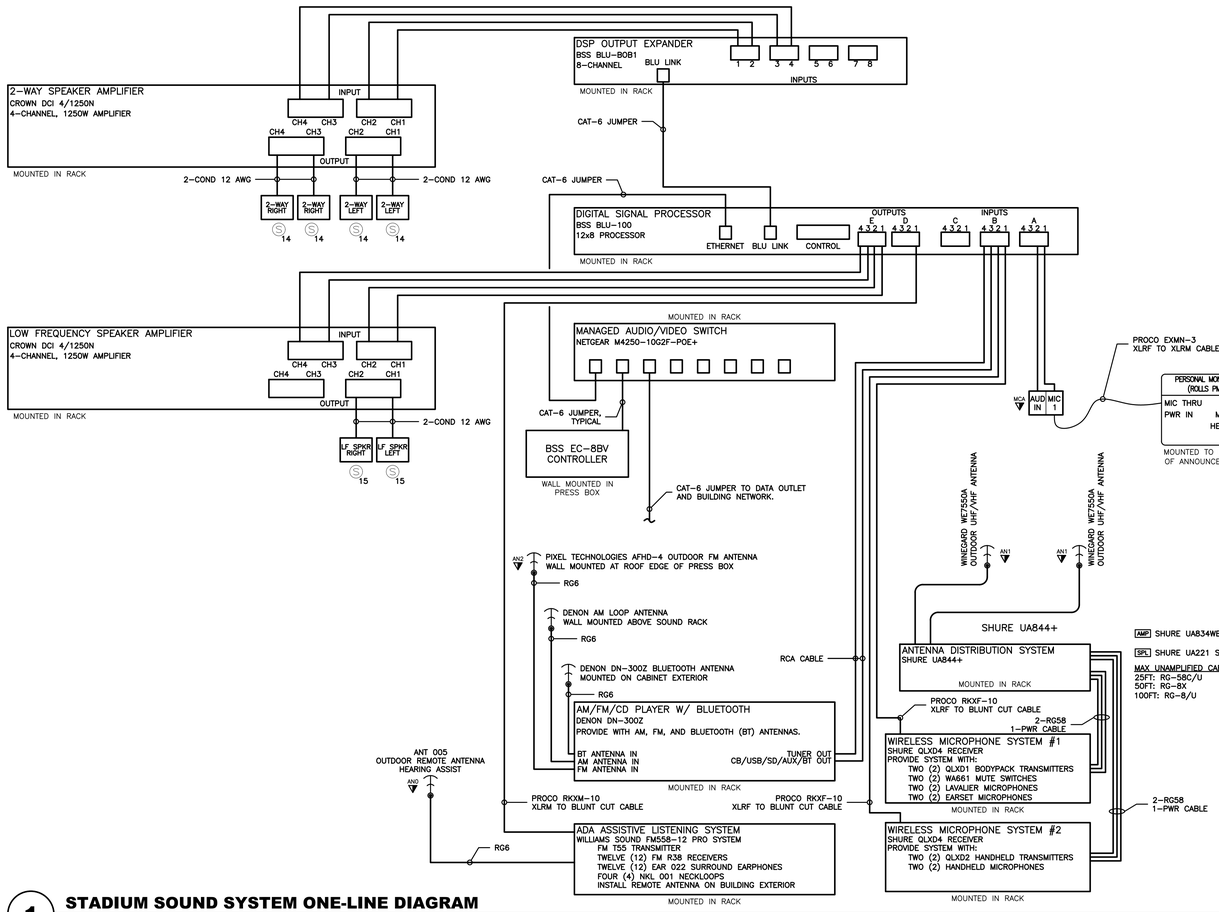


5 ELECTRICAL FOR PRESS BOX SOUND RACK

NO SCALE

NOTES:

1. COORDINATE WITH OTHER TRADES TO INSTALL OUTLETS AT REAR OF CABINET.

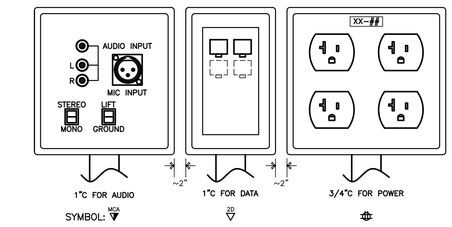


1 STADIUM SOUND SYSTEM ONE-LINE DIAGRAM

SCALE: NO SCALE

NOTES:

1. COORDINATE WITH ARCHITEGT FOR PLACEMENT OF HEARING ASSISTANCE NOTIFICATION SIGNS.
2. MISCELLANEOUS COMPONENTS:
   - 2.A. TWO (2) SHURE SM58 HANDHELD CONDENSER MICROPHONES WITH EIGHT (8) A58WS WINDSCREENS. (PROVIDE WITH THE SHURE QLXD4 RECEIVER PACKAGES.)
   - 2.B. TWO (2) SHURE WL185 CONDENSER LAVALIER MICROPHONE WITH TWO (2) RK183T1 TIE CLIPS AND EIGHT (8) RK183WS SNAP-FIT WINDSCREENS. (PROVIDE WITH THE SHURE QLXD4 RECEIVER PACKAGES.)
   - 2.C. TWO (2) POINT SOURCE CO-8WS-TAN SERIES 8 OMNI EARSET MICROPHONE. (PROVIDE WITH THE SHURE QLXD4 RECEIVER PACKAGES.)
   - 2.D. FOUR (4) SB900A RECHARGEABLE BATTERIES FOR THE SHURE QLXD1/QLXD2 TRANSMITTERS. (PROVIDE WITH THE SHURE QLXD4 RECEIVER PACKAGES.)
   - 2.E. TWO (2) SHURE SBC200 DUAL DOCKING RECHARGING STATIONS. (PROVIDE WITH THE SHURE QLXD4 RECEIVER PACKAGES.)
   - 2.F. ONE (1) CAD AUDIO 40-117 DESKTOP SHOCK MOUNT MICROPHONE BASE W/ LED AND PUSH-TO-TALK FUNCTIONALITY.
   - 2.G. ONE (1) HARMAN AKG DGN99E GOOSENECK MICROPHONE FOR PUSH-TO-TALK DESKTOP MICROPHONE BASE.
   - 2.H. ONE (1) SHURE SRH440A PROFESSIONAL STUDIO HEADPHONE.
   - 2.I. TWO (2) GATOR GFW-MIC-2120 DELUXE TRIPOD MICROPHONE STAND WITH CLUTCH HEIGHT ADJUSTMENT AND TELESCOPING BOOM.
   - 2.J. TWO (2) ATLAS SOUND SMS20BIR HEAVY DUTY STACKING MICROPHONE STAND WITH ISOLATION RING AND 3-PIECE CLUTCH HEIGHT ADJUSTMENT.
   - 2.K. TWO (2) GATOR GFW-MIC-0601 DESKTOP MICROPHONE STANDS WITH 6" ROUND BASE AND TWIST CLUTCH HEIGHT ADJUSTMENT.
   - 2.L. TWO (2) SHURE A25D WIRELESS MICROPHONE CLIPS FOR USE WITH MICROPHONE STANDS.
   - 2.M. TWO (2) 10' RCA PATCH CABLES.
   - 2.N. TWO (2) PROCO EXMN-10 10' MICROPHONE CABLES.
3. PROVIDE GUI INTERFACE FOR AUDIO/VIDEO SYSTEM CONTROL.
   - 3.A. PROVIDE SPLIT CONTROL PAGES FOR EACH FUNCTION. THE BELOW ARE SOME EXAMPLES FOR CLARITY. SUBMIT CONTROL PAGE MOCKUPS WITH SUBMITTAL PACKAGE.
     - 3.A.1. WIRED MICROPHONE PORTS AND WIRELESS MICROPHONE INPUTS
     - 3.A.2. PROGRAM SOURCES
     - 3.A.3. SPEAKER OUTPUTS
     - 3.A.4. VIDEO WALL ON/OFF AND CONTROLS
   - 3.B. FOR EACH AUDIO INPUT/OUTPUT USED PROVIDE VOLUME CONTROL AND MUTE BUTTONS.
     - 3.B.1. MUTE BUTTON TO CHANGE COLOR WHEN PRESSED: RED FOR MUTE, GREEN FOR ACTIVE.
     - 3.B.2. PROVIDE ON/OFF CONTROLS FOR EACH SPEAKER ZONE INDEPENDENT OF OTHER ZONES.
   - 3.C. PROVIDE MOCKUP OF GUI FOR OWNER/ENGINEER REVIEW. REVISE/REPROGRAM GUI AS DIRECTED UNTIL APPROVED.
     - 3.C.1. APPROVAL IN WRITING SHALL BE REQUIRED PRIOR TO ACCEPTANCE OF THE SYSTEM.
   - 3.D. PROVIDE SYSTEM SOURCE CODE AND ANY PASSWORDS TO OWNER AS PART OF THE CLOSEOUT DOCUMENTS.
4. COORDINATE WITH ELECTRICAL CONTRACTOR FOR LOCATION AND ROUTING OF THE TELECOMMUNICATIONS BONDING BACKBONE EQUIPMENT AND CONNECTIONS. AUDIO/VIDEO SYSTEM CONTRACTOR TO BE RESPONSIBLE FOR PROPERLY BONDING EQUIPMENT RACK AND EQUIPMENT TO THE TGB/TBB.



2 PRESS BOX PRESENTATION STATION

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY AS POSSIBLE.
   - 1.A. PRESS BOX PRESENTATION STATION DEVICES:
     - 1.A.A. PROCO IPLATE (CUSTOM) WITH INTEGRAL XLR INPUT
     - 1.A.B. DATA OUTLET
     - 1.A.C. DUPLEX RECEPTACLE.
2. 2-GANG DEEP BACK BOX FOR SOUND DEVICES, 1-GANG DEEP BACK BOX FOR DATA, AND ASSOCIATED RACEWAY BY ELECTRICAL CONTRACTOR
   - 2.A. 2-GANG SOUND INPUT PLATE BY DIV27 LOCAL SOUND CONTRACTOR.
   - 2.B. 1-GANG DATA OUTLET BY DIV27 STRUCTURED CABLING CONTRACTOR.
   - 2.C. ALL FACEPLATES SHALL BE COLOR/MATERIAL PER SPECIFICATIONS.
   - 2.D. PROVIDE PERMANENTLY ENGRAVED FACEPLATES FOR SOUND INPUTS IDENTIFYING SOURCE CONNECTIONS.
3. ROUTE CONDUIT FOR PRESS BOX PRESENTATION STATION DOWN IN WALL TO 1ST FLOOR ACCESSIBLE CEILING CAVITY.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
GLS	MAS
Designer	Quality Control
MAS	
Proj. Arch.	

PROJECT NO.
23-155.00

SHEET TITLE
STADIUM SOUND SYSTEM RISER AND DETAILS

SHEET NO.
E5.40

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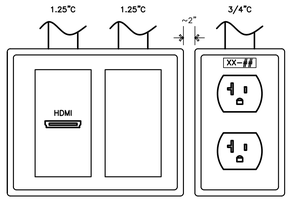


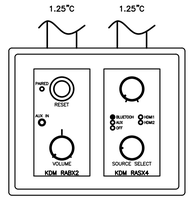
SYMBOL: AV1

2 WEIGHT ROOM PRESENTATION STATION

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY TOGETHER AS POSSIBLE.
   1.A. WEIGHT ROOM AUDIO/VIDEO INPUT PLATE AND RECEPTACLE SHALL BE LOCATED AT STANDARD OUTLET HEIGHT DIRECTLY BELOW WEIGHT ROOM SOUND SYSTEM INPUT PLATE.



SYMBOL: BT1

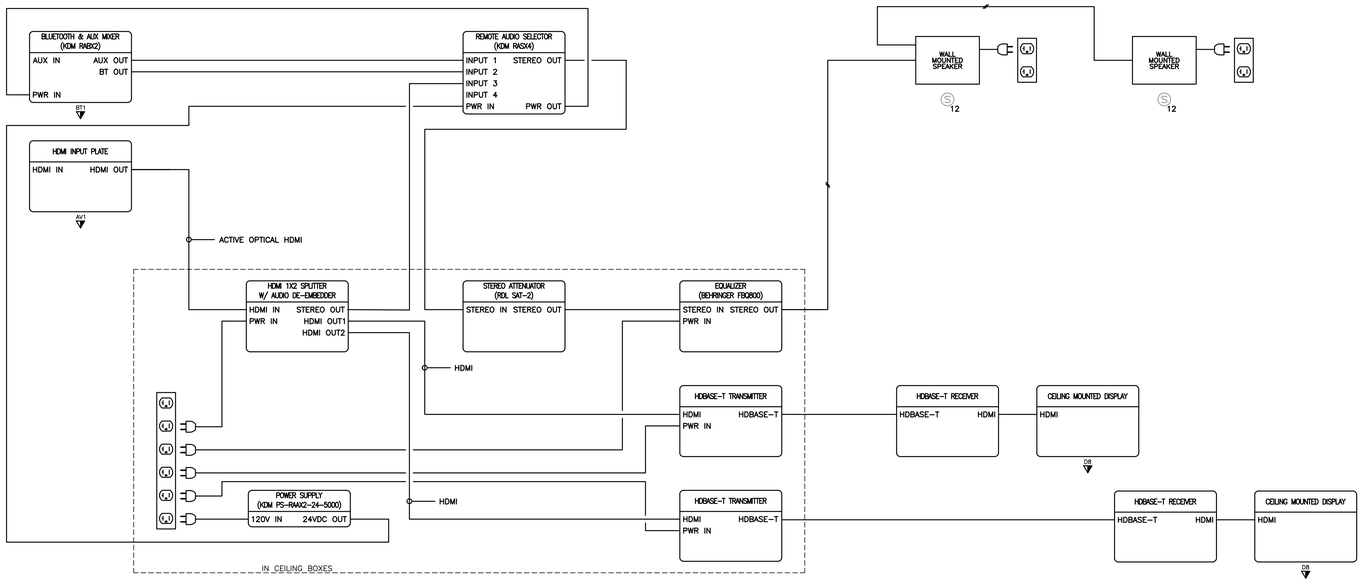
BLUETOOTH RECEIVER AND SOURCE SELECTOR IN SINGLE FACEPLATE

1 WEIGHT ROOM SOUND SYSTEM INPUT

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY AS POSSIBLE.
   1.A. WEIGHT ROOM SOUND STATION DEVICES:
      1.A.A. KDM RABX2 BLUETOOH AND AUXILIARY INPUT REMOTE AUDIO MIXER.
      1.A.B. KDM RASX4 4 CHANNEL REMOTE AUDIO SELECTOR WITH CUSTOM INPUT LABELS.
      1.A.C. SOUND STATION OUTLETS SHALL BE LOCATED AT SWITCH HEIGHT ABOVE A COUNTER FOR PLACING MOBILE DEVICES, REFERENCE DRAWINGS.
2. SOUND SYSTEM POWER:
   2.A. PROVIDE PS-RAAX2-24-5000 POWER SUPPLY FOR RASX4 4-CHANNEL REMOTE AUDIO SELECTOR.
   2.B. CONNECT OCTASOUND POWER SUPPLIES TO SAME CIRCUIT AS WEIGHT ROOM AUDIO/VIDEO CONTROL EQUIPMENT.
3. WEIGHT ROOM ROOM SOUND SYSTEM SHALL RECEIVE A SIGNAL FROM THE VIDEO SOURCE.
4. THE LOCAL SOUND CONTRACTOR SHALL COORDINATE WITH THE CAMPUS COMMUNICATION AND FIRE ALARM CONTRACTORS.
   4.A. THE WEIGHT ROOM SOUND SYSTEM SHALL AUTOMATICALLY DUCK WHEN RECEIVING A SIGNAL FROM THE PA OR FIRE ALARM SYSTEMS.
5. 2-GANG DEEP AV BACK BOX AND RACEWAY BY ELECTRICAL CONTRACTOR
   5.A. 2-GANG DECORA PLATE AND LOCAL SOUND INSERTS BY DIV27 LOCAL SOUND CONTRACTOR.
   5.B. ALL FACEPLATES SHALL BE COLOR/MATERIAL PER SPECIFICATIONS.
   5.C. PROVIDE PERMANENTLY ENGRAVED FACEPLATES FOR SOUND INPUTS IDENTIFYING SOURCE CONNECTIONS.



3 WEIGHT ROOM AUDIO VIDEO ONE-LINE DIAGRAM

SCALE: NO SCALE

NOTES:

1. COORDINATE WITH OTHER TRADES TO CONNECT THE LOCAL SOUND SYSTEM TO THE PA AND FIRE ALARM SYSTEMS TO AUTOMATICALLY MUTE.
2. INSTALL A/V CONTROL EQUIPMENT IN CEILING BOXES OUTSIDE WEIGHTROOM, REFERENCE FLOOR PLANS.

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REVISIONS

Revision No.	Revision Date

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Designer	Quality Control
MAS	
Proj. Arch.	

PROJECT NO.

23-155.00

SHEET TITLE

WEIGHT ROOM AUDIO/VIDEO RISER AND DETAILS

SHEET NO.

E5.41

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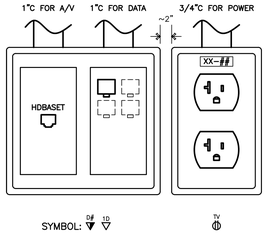
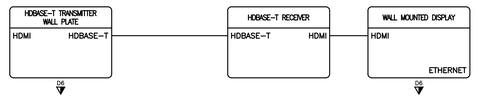


3 DISPLAY CONNECTION DETAIL

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY TOGETHER AS POSSIBLE.

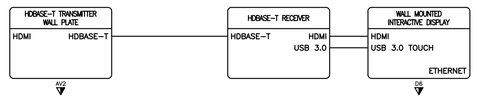


4 DISPLAYS WITH AV1 INPUT WIRING DIAGRAM

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY TOGETHER AS POSSIBLE.

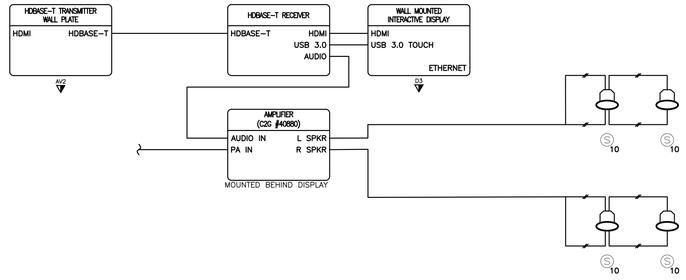


5 INTERACTIVE DISPLAYS WITH AV2 INPUT WIRING DIAGRAM

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY TOGETHER AS POSSIBLE.

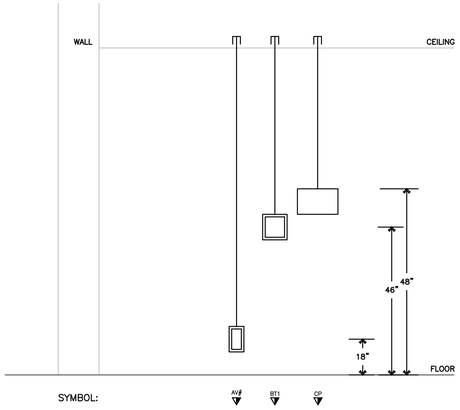


6 FILM ROOM AUDIO/VIDEO WIRING DIAGRAM

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY TOGETHER AS POSSIBLE.

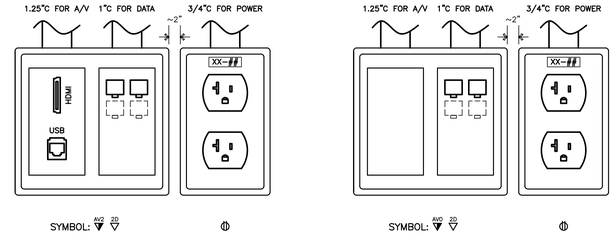


1 TYPICAL A/V ROUGH IN DETAIL

SCALE: NO SCALE

NOTES:

1. WALL MOUNTED SHELF AND ASSOCIATED A/V EQUIPMENT BY DIVISION 27. MOUNT SHELF DIRECTLY TO STUDS OR PROVIDE BLOCKING IN WALL TO SUPPORT SHELF. BLOCKING BETWEEN STUDS IF REQUIRED FOR A/V SHELF SHALL BE BY GENERAL CONTRACTOR.
2. PROVIDE RADIUS SWEEP AND NYLON PROTECTIVE BUSHING ON END OF CONDUIT, TYPICAL.

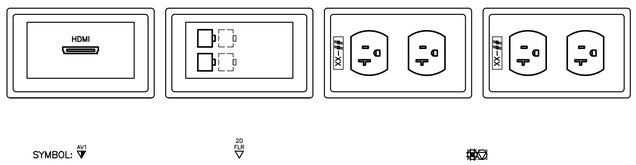


1 ATHLETIC COORDINATOR OFFICE PRESENTATION STATION

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY TOGETHER AS POSSIBLE.

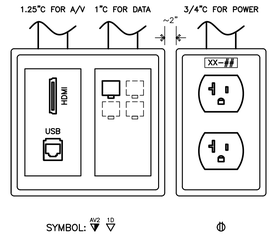


2 COACHES OFFICE FLOOR BOX OUTLETS

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY TOGETHER AS POSSIBLE.



3 FILM ROOM PRESENTATION STATION

NO SCALE

NOTES:

1. LOCATE DEVICES GROUPED TOGETHER AS CLOSELY TOGETHER AS POSSIBLE.

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NEW CANEY ISD
NEW CANEY, TEXAS

NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

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Revision No.	Revision Date

Director	Drawn By
GLS	MAS
Designer	Quality Control
MAS	
Proj. Arch.	

PROJECT NO.

23-155.00

SHEET TITLE

AUDIO/VIDEO RISERS AND DETAILS

SHEET NO.

E5.42

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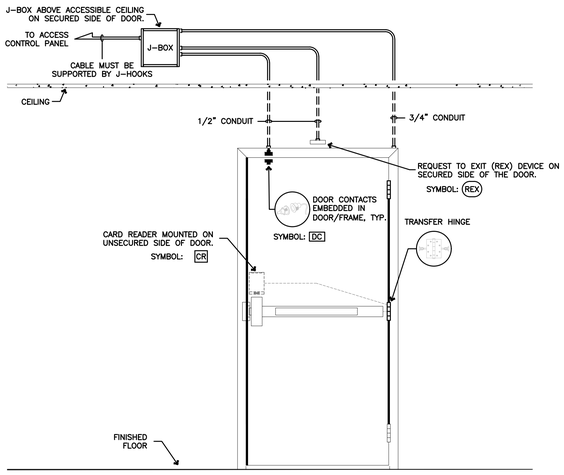
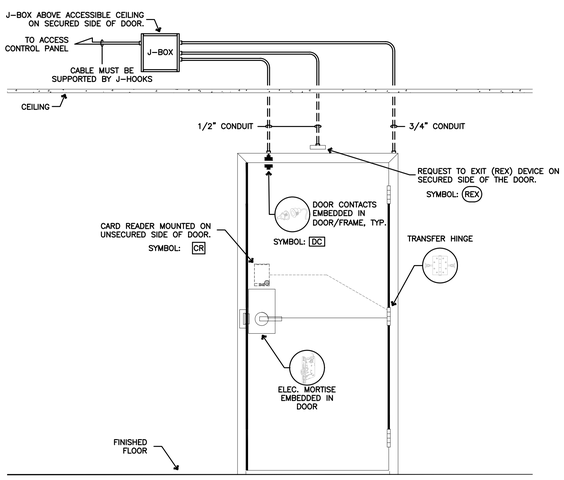


4 SINGLE DOOR CA & DC ROUGH-IN DETAIL

NO SCALE

NOTES:

1. REFERENCE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR MORE INFORMATION.



5 SINGLE DOOR W/ ELEC. MORTISE CA & DC ROUGH-IN DETAIL

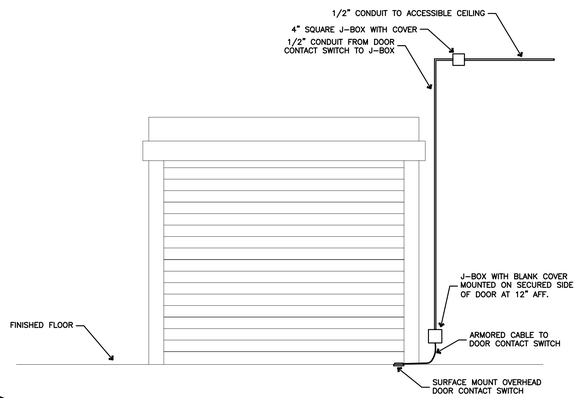
NO SCALE

NOTES:

1. REFERENCE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR MORE INFORMATION.

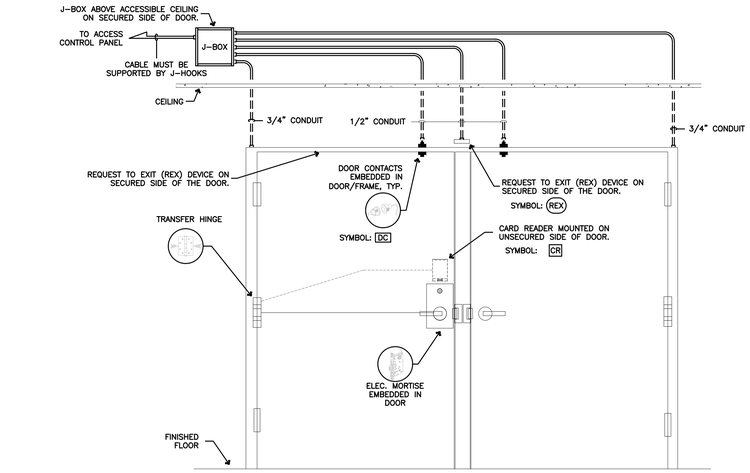
7 ROOF HATCH DC ROUGH-IN DETAIL

NO SCALE



6 OVERHEAD DOOR DC ROUGH-IN DETAIL

NO SCALE

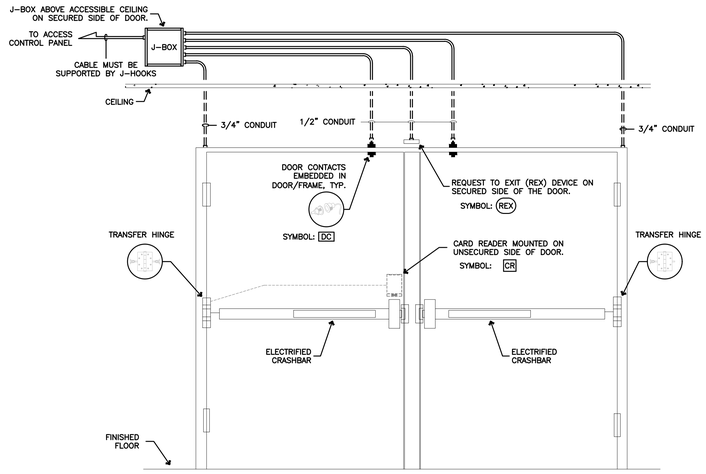


1 DOUBLE DOOR W/ ELEC. MORTISE CA & DC ROUGH-IN DETAIL

NO SCALE

NOTES:

1. REFERENCE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR MORE INFORMATION.

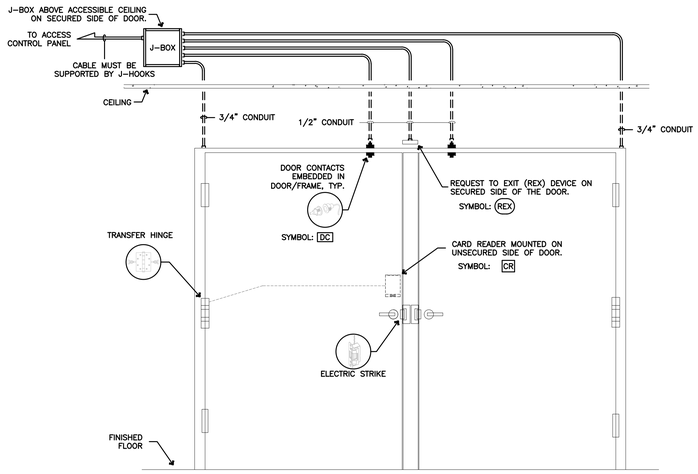


2 DOUBLE DOOR CA & DC ROUGH-IN DETAIL

NO SCALE

NOTES:

1. REFERENCE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR MORE INFORMATION.



3 DOUBLE DOOR W/ ELEC. STRIKE CA & DC ROUGH-IN DETAIL

NO SCALE

NOTES:

1. REFERENCE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR MORE INFORMATION.

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Designer	Quality Control
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SECURITY AND ACCESS CONTROL DETAILS

SHEET NO.

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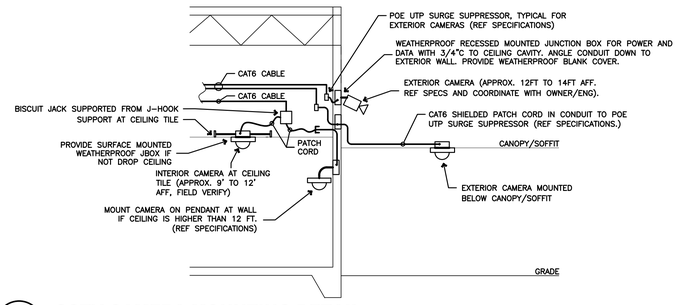

1 CCTV CAMERA MOUNTING DETAIL

NO SCALE

NOTES:

1. ALL IP CAMERAS SHALL BE PoE (POWER OVER ETHERNET) TYPE.
2. DIVISION 27 TO PROVIDE ENCLOSURE ABOVE CEILING FOR CONNECTION OF PATCH CORDS AND HOME RUN CABLING FOR ALL CCTV CAMERAS.
   - 2.A. PROVIDE 2-PORT BISCUIT JACK FOR INTERIOR WALL AND CEILING CAMERAS.
   - 2.B. PROVIDE 110-RJ45 SURGE PROTECTOR FOR EXTERIOR MOUNTED CAMERAS.
   - 2.C. CONNECT CAMERA TO ENCLOSURE WITH PATCH CORD.
   - 2.D. SUPPORT ENCLOSURE FROM CABLE SUPPORT SYSTEM ~12" ABOVE CEILING WITH PORT LABELS FACING DOWNWARD.
3. PROVIDE PROTECTIVE BUSHING ON END OF CONDUITS AND SLEEVES.
   - 3.A. ANGLE EXTERIOR CAMERA SLEEVE UPWARD AND SEAL SLEEVES THROUGH EXTERIOR WALL TO MAINTAIN BUILDING ENVELOPE AND PREVENT WATER INGRESS.
4. CABLING:
   - 4.A. ALL CAMERAS SHALL HAVE INDIVIDUAL UNSPLICED HOME RUN CAT6 DATA CABLE FROM BISCUIT JACK OR SURGE SUPPRESSOR TO NEAREST TELECOM DATA PATCH PANEL. PROVIDE 20 FOOT SERVICE LOOP FOR SECURITY CAMERA CABLES, TYPICAL.
   - 4.B. DIVISION 27 TO PROVIDE CAT6 PATCH CORDS AT IP CAMERAS AND TELECOM ROOMS.
   - 4.C. CONNECT ALL CAMERAS TO ABOVE CEILING ENCLOSURE WITH PATCH CORDS OF VARIOUS LENGTHS USING PREFABRICATED CABLES OF STANDARD LENGTHS. PATCH CORD LENGTH TO BE SIZED BY DIVISION 27 CONTRACTOR TO MATCH INSTALLATION CONDITIONS.
   - 4.D. PROVIDE SHIELDED PATCH CORDS FOR ALL EXTERIOR CAMERAS.
   - 4.E. GROUNDING WIRE FOR EXTERIOR CAMERAS CONNECTED TO LOCAL STEEL STRUCTURE BY DIVISION 27.
5. LABELING:
   - 5.A. PROVIDE PORT LABELS ON CEILING GRID BELOW ALL ABOVE CEILING DROPS.
6. FOR POLE MOUNTED CAMERAS REFERENCE DETAIL 6/E5.32 TYPICAL EXTERIOR DEVICE AND REMOTE CABLING ENTRY DETAIL.
7. ALL CAMERAS SHALL REQUIRE FIELD LOCATION AND SIGN-OFF BY OWNER AND ENGINEER PRIOR TO ROUGH-IN.

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EXTERIOR LIGHT FIXTURE SCHEDULE

APPLICATION	TYPE	DESCRIPTION	WATTS
6" DOWNLIGHT EXTERIOR RATED	D5 D5X	6" DIAMETER RECESSED LED DOWNLIGHT, SEMI-SPECULAR CLEAR ALUMINUM REFLECTOR, POLISHED FLANGE, 2000 LUMENS, 65° WIDE BEAM DISTRIBUTION, 4000K COLOR TEMPERATURE, 120-277 MULTIVOLT INPUT, 0-10V DIMMING DRIVER. HALO HC6-20-D010-HM6-525-840-61-WD-H	21W
LED FLOODLIGHT FLAGPOLE	FL	KNUCKLE MOUNTED LED FLOODLIGHT, ALUMINUM HOUSING, 6500 LUMENS, 4000K COLOR TEMPERATURE, WET LOCATION, 120-277V MULTIVOLT INPUT. PROVIDE THREADED KNUCKLE MOUNT AND 10"X10" CONCRETE BASE. FINISH TO BE SELECTED BY ARCHITECT FROM ALL AVAILABLE FINISHES. LIGMAN LIGHTING UOD-50153-M-W40-FINISH-120/277	54W
EXTERIOR AREA LIGHT - SINGLE HEAD PARKING LOT AND DRIVES MOUNTED ON 30FT POLE	PA PB PD	AREA LIGHT, SQUARE ALUMINUM HOUSING, XX FINISH, STANDARD POLE MOUNT ARM ON 30FT ROUND TAPERED ALUMINUM POLE, 28000 LUMENS, 1000mA LED LAMP, 4000K COLOR TEMPERATURE, 120-277 VOLTS, 0-10V DIMMING, 20KA SURGE PROTECTION. INTEGRAL DIMMING/DAYLIGHT CONTROLS. FIXTURE AND POLE FINISHES TO BE SELECTED BY ARCHITECT DURING SUBMITTAL PROCESS FROM ALL AVAILABLE FINISHES. REFERENCE MPE SITE PLAN FOR NUMBER/TYPE OF FIXTURES AND LOCATIONS. PA: TYPE 5 SQUARE WIDE, PB: TYPE 2 DISTRIBUTION, PD: TYPE 4 WIDE DISTRIBUTION MCGRAW-EDISON GALN-SA4-C-740-U-XX DISTRIBUTION-XX FINISH-ZW-WOFDP	213W
COVERED WALKWAY / CANOPY LIGHT WET LOCATION	WL3 WL3Y WL3Z	6"X2FT SURFACE MOUNTED LED, STEEL HOUSING, VANDAL RESISTANT, END FEED, OPAL POLYCARBONATE LENS, COLD WEATHER DRIVER, WET LOCATION, 1800 LUMENS, 4000K, 120-277 MULTIVOLT INPUT, 0-10V DIMMING DRIVER. FINISH TO BE SELECTED BY ARCHITECT FROM ALL AVAILABLE FINISHES. PARAMOUNT PMC3-2-SF-UNV-4K-CRI83-18L-XX FINISH-L9W-LD LUMINAIR LED VPF4-2FT-MIN10-20-40K-MVOLT-OP-WHT-PHSC-END FEED KENALL MLHA524-F-XX FINISH-PP-25L40K-DV-SIDE POWER FEED	20W
EXTERIOR WALL PACK	WP1 WP1Z	WALL MOUNTED LED, VISUAL COMFORT OPTIC, 4000K COLOR TEMPERATURE, 7200 LUMENS, 120-277 MULTIVOLT INPUT, 10KA SURGE PROTECTION, WET LOCATION. REFER TO ARCH FOR MOUNTING HEIGHT. FINISH TO BE SELECTED BY ARCHITECT FROM ALL AVAILABLE FINISHES. MCGRAW EDISON IST-SA1E-740-U-T3-XX FINISH LITHONIA WDGE3 LED-P1-40K-70CRI-R3-MVOLT-XX FINISH-SPD10KV GARDCO GWM-A10-740-T3M-UNV-XX FINISH	58W
EXTERIOR WALL PACK EM ONLY	WP2 WP2Z	SAME AS TYPE WP1Z EXCEPT NORMALLY OFF, AUTOMATICALLY SWITCHED ON BY INVERTER CONTROLS. FINISH TO BE SELECTED BY ARCHITECT FROM ALL AVAILABLE FINISHES. MCGRAW EDISON IST-SA1E-740-U-T3-XX FINISH LITHONIA WDGE3 LED-P1-40K-70CRI-R3-MVOLT-XX FINISH-SPD10KV GARDCO GWM-A10-740-T3M-UNV-XX FINISH	58W
EXTERIOR WALL PACK	WP3 WP3Y	WALL MOUNTED LED, VISUAL COMFORT OPTIC, 4000K COLOR TEMPERATURE, 1800 LUMENS, 120-277 MULTIVOLT INPUT, WET LOCATION. REFER TO ARCH FOR MOUNTING HEIGHT. FINISH TO BE SELECTED BY ARCHITECT FROM ALL AVAILABLE FINISHES. LUMARK AXCS1A-FINISH LITHONIA WDGE1 LED-P2-40K-80CRI-VF-MVOLT-XX FINISH (E4WH) SLG WSA-33-G2-4K-FINISH (REMOTE BATTERY)	14W
EXTERIOR WALL PACK	WP5 WP5X WP5Y	WALL MOUNTED LED, VISUAL COMFORT OPTIC, 4000K COLOR TEMPERATURE, 4500 LUMENS, 120-277 MULTIVOLT INPUT, 10KA SURGE PROTECTION, WET LOCATION. REFER TO ARCH FOR MOUNTING HEIGHT. FINISH TO BE SELECTED BY ARCHITECT FROM ALL AVAILABLE FINISHES. MCGRAW EDISON IST-SA1C-740-U-T3-XX FINISH LITHONIA WDGE2 LED-P4-40K-80CRI-VW-MVOLT-XX FINISH-SPD10KV GARDCO GWM-A10-740-T3M-UNV-XX FINISH	34W

INTERIOR LIGHT FIXTURE SCHEDULE

APPLICATION	TYPE	DESCRIPTION	WATTS
2X4 RECESSED LAY-IN	A1 A1X A1Y A1Z	2X4 BACKLIT LED FLAT PANEL, STEEL FRAME, 4500 LUMENS 4000K COLOR TEMPERATURE, 120-277 MULTIVOLT DRIVER, 0-10V DIMMING. METALUX 24CGT4540C LITHONIA CPX 2X4-5000-80CRI-40K-SWL-MIN10-ZT-MVOLT DAYBRITE 2-FPZ-48L-840-4-DS-UNV-DIM	39W
2X4 RECESSED LAY-IN	A2 A2X	2X4 CENTER BASKET TROFFER LED, STEEL FRAME, SMOOTH FROSTED ACRYLIC LENS, 5500 LUMENS 4000K COLOR TEMPERATURE, 120-277 MULTIVOLT DRIVER, 0-10V DIMMING. METALUX 24CZ2-55-S-UNV-L840-CD-1-U	41W
4FT STRIP LED MECHANICAL & STORAGE	C CX CY	4 FOOT STRIP LED, STEEL HOUSING, FROSTED ACRYLIC LENS, 4900 LUMENS, 4000K COLOR TEMPERATURE, CHAIN HANGING SET, 120-277 VOLT INPUT, 0-10V DIMMING DRIVER. PROVIDE CHAIN HANGING SET IN MECHANICAL ROOMS AND AREAS WITHOUT CEILINGS UNLESS NOTED OTHERWISE. METALUX 4SNLED-LD5-47SL-LW-UNV-L840-CD1-U / AYC-CHAIN/SET LITHONIA CLX-L48-5000LM-SEF-FDL-MVOLT-GZ10-40K-80CRI-WH / HC36 M12 DAYBRITE FSW4-55L-840-UNV-DIM / FKR-126	41W
6" DOWNLIGHT SHOWER RATED TRIM	D3 D3Y	6" DIAMETER RECESSED LED DOWNLIGHT, WHITE REFLECTOR, MATTE WHITE NON-CONDUCTIVE SHOWER TRIM FINISH, 1000 LUMENS, 60° MEDIUM BEAM DISTRIBUTION, 4000K COLOR TEMPERATURE, 120-277 MULTIVOLT INPUT, 0-10V DIMMING DRIVER. HALO HC6-10-D010-HM6-525-840-61PS-MD-W	11W
MID-BAY LED LOW LUMEN	H1 H1X	LED MID-BAY LUMINAIRE, HIGH IMPACT POLYCARBONATE LENS, ADJUSTABLE LUMEN OUTPUT SET TO 12,000 LUMENS, 4000K COLOR TEMPERATURE, WIDE DISTRIBUTION, 0-10V DIMMING, 120-277 VOLT INPUT, 0-10V HIGH AMBIENT DIMMING DRIVER. PROVIDE CHAIN HANGING SET IN METAL STORAGE BUILDING. COOPER VHB-12-HA-W-UNV-L840-CD-U / Y-TOGGLE-10	78W
MID-BAY LED MEDIUM LUMEN	H2 H2X	LED MID-BAY LUMINAIRE, HIGH IMPACT POLYCARBONATE LENS, ADJUSTABLE LUMEN OUTPUT SET TO 18,000 LUMENS, 4000K COLOR TEMPERATURE, WIDE DISTRIBUTION, 0-10V DIMMING, 120-277 VOLT INPUT, 0-10V DIMMING DRIVER. PROVIDE RIGID PENDANT MOUNTING IN THE LOCKER ROOMS SPACES. COOPER VHB-1824-W-UNV-L840-CD-U	125W
MID-BAY LED SHOP FIXTURES MEDIUM LUMEN	H3 H3X	SAME AS TYPE H2/H2X EXCEPT ADJUSTABLE LUMEN OUTPUT SET TO 24,000 LUMENS. COOPER VHB-1824-W-UNV-L840-CD-U / Y-TOGGLE-10 / VHB-WG	166W
SUSPENDED LINEAR M* = CONTINUOUS RUN OF *' M5=5', M6=6', M7=7', M8=8', ETC.	M* M*X	4IN WIDE LINEAR SUSPENDED DIRECT LED SLOT LIGHT, ALUMINUM HOUSING, POWDER COAT FINISH, SATIN WHITE DIFFUSER, 1020 LUMENS/FT, 4000K LED, 0-10V DIMMING, 120-277V MULTIVOLT INPUT. PROVIDE RIGID PENDANT MOUNT. FIXTURE AND HARDWARE FINISHES TO BE SELECTED BY ARCHITECT DURING SUBMITTAL PROCESS FROM ALL AVAILABLE FINISHES. NEORAY QS-S124DP-C1020D840-SXX-JB-HW COLOR-XX LENGTH-1-U-DD-F-XX FINISH	8.8W PER FT
EXIT SIGN AC ONLY	XB XS XD XSS XDS XWG	POLYCARBONATE LED EXIT LIGHT, RED LETTERS, WHITE HOUSING/FACE, UNIVERSAL ARROWS, 120/277 MULTIVOLT INPUT. VERIFY LETTER AND FACE COLOR WITH OWNER/ARCHITECT PRIOR TO ORDERING. XB=BACK MOUNTED, XS=SINGLE FACE, XD=DOUBLE FACE, XSS=SINGLE FACE END MOUNTED, XDS=DOUBLE FACE END MOUNTED XWG=BACK MOUNTED WITH WIREGUARD SURE-LITES LPX6	5W
COMBO EXIT SIGN EM BATTERY BACKUP WITH LIGHT BAR EMERGENCY LIGHT	YLB YLS YLD YLG	LED EXIT LIGHT, RED LETTERS, IMPACT RESISTANT THERMOPLASTIC HOUSING, WHITE HOUSING/FACE, UNIVERSAL ARROWS, EMERGENCY LIGHTING LIGHT BAR, 90 MINUTE BATTERY BACKUP, 120/277 MULTIVOLT INPUT. VERIFY LETTER AND FACE COLOR WITH OWNER/ARCHITECT PRIOR TO ORDERING. YLB=BACK MOUNTED, YLS=SINGLE FACE, YLD=DOUBLE FACE, YLG=BACK MOUNTED WITH WIREGUARD EVENLITE TLP-R-2U-W LITHONIA ECBR-LED-M6 SIGNTEX CLB-BB-U-R-W	5W
COMBO EXIT SIGN EM BATTERY BACKUP WITH TWIN HEAD EMERGENCY LIGHT	YTB YTS YTSS YTD YTDS	LED EXIT LIGHT, RED LETTERS, IMPACT RESISTANT THERMOPLASTIC, WHITE HOUSING/FACE, UNIVERSAL ARROWS, TWIN HEAD EMERGENCY LIGHTING, 90 MINUTE BATTERY BACKUP, 120/277 MULTIVOLT INPUT. VERIFY LETTER AND FACE COLOR WITH OWNER/ARCHITECT PRIOR TO ORDERING. YTB=BACK MOUNTED, YTS=SINGLE FACE, YTD=DOUBLE FACE, YTSS=SINGLE FACE END MOUNTED, YTDS=DOUBLE FACE END MOUNTED SURE-LITES LPXC-50-SD LITHONIA WLTC-1/2-R-SD-CW EMERGILITE WW-SVX12N-1/2-R-D-4X-2-LG-CW4	5W
TWIN HEAD HIGH OUTPUT EM LIGHT WITH INTEGRAL BATTERY WET LOCATION	YT2	TWIN HEAD EM LIGHT, INJECTION-MOLDED THERMOPLASTIC WHITE HOUSING, GASKETED CLEAR POLYCARBONATE COVER, HIGH OUTPUT LED LAMPS, 90-MINUTE EMERGENCY BATTERY. EVENLITE IPX-4N42-L67-SD-H BEGHELLI BRV-12-42-NC-IH EMERGILITE G-12SV40N-2-LJ-D-CW4	12W

1. LIGHT FIXTURE CATALOG NUMBERS AND DESCRIPTIONS ARE SCHEDULED FOR ESTABLISHING QUALITY, APPEARANCE AND PERFORMANCE OF THE FIXTURES. EXACT CATALOG NUMBERS DESCRIBING MOUNTING CONDITIONS, AND REQUIREMENTS RELATED TO TRIM FOR ALL FIXTURES SHALL BE CONFIRMED (BY THE ELECTRICAL CONTRACTOR) WITH THE ROOM FINISH SCHEDULE AND REFLECTED CEILING PLANS ON THE ARCHITECTURAL PLANS PRIOR TO BIDDING AND SUBMITTING LIGHT FIXTURES. PROVIDE DRY WALL KITS AS REQUIRED.

2. ALL 'X', 'Y', AND 'Z' TYPE FIXTURES SHALL HAVE EMERGENCY POWER BACKUP. EMERGENCY POWER SOURCES SHALL MONITOR POWER UPSTREAM OF THE LIGHTING CONTROLS TO SEE IF POWER IS LOST. BATTERY PACKS AND INVERTERS SHALL BE CAPABLE OF POWERING THE DESIGNATED FIXTURE(S) WITH AN OUTPUT OF 1400 LUMENS FOR A MINIMUM OF 90-MINUTES. PROVIDE REMOTE BATTERY PACKS OR INVERTERS AS NECESSARY. EMERGENCY LIGHTS SHALL OPERATE ONLY UPON LOSS OF POWER. ALSO, PROVIDE AND WIRE REMOTE TEST SWITCH AND LED INDICATOR LIGHT FOR EMERGENCY BATTERY FIXTURES. SEE WIRING INSTRUCTION SUPPLIED BY EMERGENCY BATTERY MANUFACTURER.
   - 2.A. 'X' TYPE FIXTURES (AX, ETC.) HAVE EMERGENCY POWER THROUGH EM RELAY AND EMERGENCY GENERATOR. EM LIGHTING RELAY DEVICES PROVIDED UNDER NETWORK LIGHTING CONTROLS.
   - 2.B. 'Y' TYPE FIXTURES (AY, ETC.) HAVE INDIVIDUAL 90-MINUTE EMERGENCY BATTERY POWER.
   - 2.C. 'Z' TYPE FIXTURES (AZ, ETC.) HAVE EMERGENCY POWER THROUGH 90 MINUTE REMOTE EMERGENCY INVERTER. REFERENCE INVERTER SCHEDULE FOR OPERATION.

3. PROVIDE BASE COVER FOR ALL LIGHT POLES.

4. ALL EXTERIOR FIXTURES SHALL BE WET RATED WITH COLD WEATHER BALLASTS AND BATTERY PACKS.

5. PROVIDE SPARE FIXTURES AND EMERGENCY DEVICES PER SPECIFICATIONS.

6. EQUAL BY PHILIPS (CW LIGHTING), COOPER (PETERSON SCHARCK), AND LITHONIA (LESCO) SHALL BE ACCEPTABLE.

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LIGHTING SCHEDULES

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LIGHTING CONTROL SEQUENCE OF OPERATIONS

	AUTO ON	MANUAL ON (VACANCY)	AUTO OFF (30 MIN MAX)	PARTIAL OFF AT NORMAL HOURS	AUTO OFF AFTER HOURS (30 MIN MAX)	TIME ON	TIME OFF	ASTRONOMIC OR PHOTOCELL ON/OFF	AUTO STEP CONTROL WITH OFF	AUTO CONTINUOUS DIM WITH OFF	MANUAL BI-LEVEL REDUCTION CONTROL	MANUAL CONTINUOUS DIM CONTROL	MANUAL ON/OFF SWITCH	MANUAL DIMMER SWITCH	DISPLAY, ACCENT, TASK CONTROL	D = DESIGNATION FOR DIMMING CONTROLS AND FIXTURES.
ROOM TYPE	**OCCUPANCY SENSOR**					**TIME SWITCH**			**DAYLIGHT CONTROL**		**LIGHT REDUCTION**		**MANUAL CONTROL**			**SEQUENCE OF OPERATION**
Office / Support		•	30 MIN									D	•	D		MANUAL ON; OCCUPANCY SENSOR AUTO OFF; LOCAL ON/OFF & DIMMING CONTROLS; MANUAL ON SHALL RETURN TO PREVIOUS DIMMING LEVEL. LOCAL CONTROLS ONLY.
Storage / Custodial Rooms		•	30 MIN										•			MANUAL ON 100%; OCCUPANCY SENSOR AUTO OFF; LOCAL ON/OFF CONTROLS; LOCAL CONTROLS ONLY.
Classroom / Instructional		•	30 MIN									D	•	D		MANUAL ON; OCCUPANCY SENSOR AUTO OFF; LOCAL ON/OFF & DIMMING CONTROLS; MANUAL ON SHALL RETURN TO PREVIOUS DIMMING LEVEL. LOCAL CONTROLS ONLY.
Administration Area Corridors & Reception Areas	•				30 MIN	PER OWNER'S BLDG SCHEDULE	PER OWNER'S BLDG SCHEDULE	•					•			TIME SWITCH CONTROLS; MORNING TIME AUTO ON AND EVENING TIME AUTO OFF AS A FUNCTION OF BUILDING OPERATIONS. LOCAL ON/OFF MOMENTARY KEYED SWITCH CONTROLS; AFTER HOURS AUTO ON/OFF VIA OCCUPANCY SENSORS. LIGHTING CONTROL TIME CLOCK BY BUILDING ENERGY MANAGEMENT SYSTEM.
Electrical/Mech/Equip Rooms													•			MANUAL ON/OFF, LOCAL CONTROLS ONLY.
MDF/IDF Rooms													•			MANUAL ON/OFF, LOCAL CONTROLS ONLY.
Locker Rooms	•		30 MIN										•			AUTO ON; OCCUPANCY SENSOR AUTO OFF; LOCAL ON/OFF MOMENTARY KEYED SWITCH CONTROLS; LOCAL CONTROLS ONLY.
Weight Rooms		•				PER OWNER'S BLDG SCHEDULE	PER OWNER'S BLDG SCHEDULE						•			TIME SWITCH CONTROLS; MORNING TIME AUTO ON AND EVENING TIME AUTO OFF AS A FUNCTION OF BUILDING OPERATIONS. LOCAL ON/OFF MOMENTARY KEYED SWITCH CONTROLS; AFTER HOURS MANUAL OVERRIDE BY LOCAL MOMENTARY KEYED SWITCH CONTROLS. LIGHTING CONTROL TIME CLOCK BY BUILDING ENERGY MANAGEMENT SYSTEM.
Concessions													•			MANUAL ON/OFF, LOCAL CONTROLS ONLY.
Single User Restroom		•	30 MIN										•			MANUAL ON 100%; OCCUPANCY SENSOR AUTO OFF; LOCAL ON/OFF CONTROLS; LOCAL CONTROLS ONLY.
Multi-User Restroom	•		30 MIN										•			AUTO ON 100%; OCCUPANCY SENSOR AUTO OFF; LOCAL ON/OFF KEY SWITCH CONTROLS; LOCAL CONTROLS ONLY.
Building Facade/Landscape						PER OWNER'S BLDG SCHEDULE	PER OWNER'S BLDG SCHEDULE	•								DUSK AUTO ON WITH ASTRONOMICAL TIME SWITCH OR PHOTOCELL; EVENING TIME AUTO OFF AS A FUNCTION OF CLOSE TIME. MORNING TIME ON AS A FUNCTION OF OPEN TIME; DAWN AUTO OFF. LIGHTING CONTROL TIME CLOCK AND PHOTOCELL BY BUILDING ENERGY MANAGEMENT SYSTEM.
Canopy Lighting						PER OWNER'S BLDG SCHEDULE	PER OWNER'S BLDG SCHEDULE	•								DUSK AUTO ON WITH ASTRONOMICAL TIME SWITCH OR PHOTOCELL; EVENING TIME AUTO OFF AS A FUNCTION OF CLOSE TIME. MORNING TIME ON AS A FUNCTION OF OPEN TIME; DAWN AUTO OFF. LIGHTING CONTROL TIME CLOCK AND PHOTOCELL BY BUILDING ENERGY MANAGEMENT SYSTEM.
Parking Lot Lighting						PER OWNER'S SCHEDULE	PER OWNER'S SCHEDULE	•								DUSK AUTO ON WITH ASTRONOMICAL TIME SWITCH OR PHOTOCELL; EVENING TIME AUTO OFF AS A FUNCTION OF CLOSE TIME. MORNING TIME ON AS A FUNCTION OF OPEN TIME; DAWN AUTO OFF. LIGHTING CONTROL TIME CLOCK AND PHOTOCELL BY BUILDING ENERGY MANAGEMENT SYSTEM.

LIGHTING SYSTEM FUNCTIONAL TESTING AND DOCUMENTATION NOTES:
1. PRIOR TO PASSING FINAL INSPECTION, THE CONTRACTOR SHALL PERFORM FUNCTIONAL TESTING IN THE PRESENCE OF THE REGISTERED DESIGN PROFESSIONAL, THE OWNER AND/OR THEIR AGENT. THE FUNCTIONAL TESTING SHALL BE AS REQUIRED BY SECTION C408.3.1 OF THE 2015 IECC.
   1.A. THE FUNCTIONAL TESTING SHALL PROVIDE EVIDENCE THAT THE LIGHTING CONTROL SYSTEMS, INCLUDING BOTH HARDWARE AND SOFTWARE, ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTRUCTIONS.
   1.B. THE FUNCTIONAL TESTING SHALL BE IN ACCORDANCE WITH SECTIONS C408.3.1.1 AND C408.3.1.2 OF THE 2015 IECC FOR THE APPLICABLE CONTROL TYPE.
   1.C. A WRITTEN REPORT SHALL BE GENERATED DOCUMENTING THE FUNCTIONAL TESTING RESULTS IN ACCORDANCE WITH THE 2015 IECC REQUIREMENTS.
2. ALL LIGHTING CONTROLS O&M MANUALS, AS-BUILTS, TESTING REPORTS AND DOCUMENTATION RELATED TO THE LIGHTING CONTROL SYSTEM SHALL BE PROVIDED IN THEIR FINAL AND APPROVED FORM WITHIN 60 DAYS OF THE CERTIFICATE OF OCCUPANCY. ALL DOCUMENTS CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET DOCUMENTED PERFORMANCE CRITERIA OF SECTION C405 OF THE 2015 IECC SHALL BE INCLUDED IN THE O&M MANUALS.
3. ALL DOCUMENTS FROM ITEMS #1 AND #2 ABOVE SHALL BE COMBINED AND PROVIDED TO THE OWNER WITHIN 90 DAYS FROM THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

RELAY PANEL RFH

EACH RELAY RATED 20A, 277 VOLTS
120V CONTROLS POWER (LM-64)

MOUNTING:
SURFACE

RELAY	NORMAL CB	EM CB	SERVES	NORMAL LOAD	EM LOAD	NOTES
RFH-1	HM1-2	–	CORRIDOR NORMAL POWER LIGHTS	1148	0	
RFH-2	HM1-4	ELM-4	CORRIDOR EM LIGHTS	779	779	
RFH-3	HM1-6	ELM-10	EXTERIOR CANOPY LIGHTS	320	110	
RFH-4	HM1-6	ELM-10	EXTERIOR WALL PACKS	510	102	
RFH-5	HM1-8	–	PARKING LOT LIGHTS			
RFH-6			SPARE			
RFH-7			SPARE			
RFH-8			SPARE			

1. PROVIDE LABELING SLEEVE FOR EACH WIRE CONTAINING RELAY NUMBER.
2. PROVIDE PRINTED LABEL ON EACH CONTROL SWITCH WITH CIRCUIT AND RELAY NUMBER.

NCHS FOOTBALL FIELD
INVERTER SCHEDULE

BASIS OF DESIGN	NOTES	INVERTER	INPUT CKT	MINIMUM WATTAGE	MOUNTING LOCATION	SERVES	OUTPUT	WIRE SIZE	OCPD	VOLTAGE	OPERATION	LOAD (VA)
EVENLITE PWI MINI DIMMING INVERTER (PWI-25-LC-AA)	1,2,3	INV-PB	LPB-39	200W	FOOTBALL PRESS BOX B100	SPARE	INV-PB:1	PER CIRCUIT	N/A	120V	NORMALLY ON	
						STANDS WALL PACKS	INV-PB:2	PER CIRCUIT	N/A	120V	NORMALLY OFF	58
						WALKWAY WALL PACKS	INV-PB:3	PER CIRCUIT	N/A	120V	SWITCHED	58
						INTERIOR FIXTURES	INV-PB:4	PER CIRCUIT	N/A	120V	SWITCHED	78
EVENLITE PWI MINI DIMMING INVERTER (PWI-37-LC-AA)	1,2,3	INV-F1	LPB-41	375W	FOOTBALL PRESS BOX B100	SPARE	INV-F1:1		N/A	120V	NORMALLY ON	
						POLE F1 FLOOD LIGHTS	INV-F1:2	PER CIRCUIT	N/A	120V	NORMALLY OFF	328
						SPARE	INV-F1:3		N/A	120V	SWITCHED	
						SPARE	INV-F1:4		N/A	120V	SWITCHED	
EVENLITE PWI MINI DIMMING INVERTER (PWI-37-LC-AA)	1,2,3	INV-F2	LPB-41	375W	FOOTBALL PRESS BOX B100	SPARE	INV-F2:1		N/A	120V	NORMALLY ON	
						POLE F2 FLOOD LIGHTS	INV-F2:2	PER CIRCUIT	N/A	120V	NORMALLY OFF	328
						SPARE	INV-F2:3		N/A	120V	SWITCHED	
						SPARE	INV-F2:4		N/A	120V	SWITCHED	

1. INVERTER SHALL BE PLENUM RATED AND INSTALLED ABOVE CEILING IN SAME ROOM AS UPSTREAM PANEL. COORDINATE WITH OTHER TRADES.
2. PROVIDE INVERTER WITH MINIMUM 20% SPARE CAPACITY IN THROUGHPUT AND BREAKERS FOR FUTURE GROWTH. ADDITIONAL BREAKER SLOTS NOT SHOWN SHALL BE FULLY BUSSED SPACES.
3. LIGHTING ZONE OPERATION SHALL BE NORMALLY ON, SWITCHED, OR NORMALLY OFF AS INDICATED. WHERE ZONES ARE SWITCHED EM FIXTURES SHALL BE WIRED THROUGH INVERTER AND ON/OFF BY UPSTREAM CONTROL DEVICE UNDER NORMAL OPERATION. UPON LOSS OF NORMAL POWER, INVERTER SHALL ACTIVATE ALL LIGHTS AT 100% FOR ALL OPERATION TYPES.

LIGHTING CONTACTOR SCHEDULE

CONTACTOR CT-PB - FOOTBALL PRESS BOX

ZONE	DESCRIPTION	NORMAL CKTS	EM CKTS	CONTROL ZONE	CIRCUIT/CONTACTOR LOCATION	CONTACTOR TYPE
1	EXTERIOR WALL PACKS – OVER DOORS	LPB-39	–	1	ELECTRICAL A100	N-O ELECTRICALLY HELD
2	EXTERIOR WALL PACKS – EM EGRESS	LPB-39	INV-PB	1	ELECTRICAL A100	N-O ELECTRICALLY HELD
3	SPARE				ELECTRICAL A100	N-O ELECTRICALLY HELD

CONTACTOR CT-FL - FOOTBALL PRESS BOX

ZONE	DESCRIPTION	NORMAL CKT	EM CKT	CONTROL ZONE	CIRCUIT/CONTACTOR LOCATION	CONTACTOR TYPE
1	FOOTBALL FIELD – FLAG POLE	HPB-1	–	2	ELECTRICAL A100	N-O ELECTRICALLY HELD
2	SPARE				ELECTRICAL A100	N-O ELECTRICALLY HELD
3	SPARE				ELECTRICAL A100	N-O ELECTRICALLY HELD

1. REFERENCE TYPICAL LIGHTING CONTACTOR WIRING DIAGRAM.
2. EMERGENCY FIXTURES SHALL BE WIRED THROUGH LOCAL EMERGENCY LIGHTING INVERTER WHICH SHALL PASS CONTROLS FUNCTIONS UNDER NORMAL OPERATION. THE INVERTER SHALL SENSE NORMAL POWER UPSTREAM OF CONTACTOR CONTROLS, UPON LOSS OF POWER EMERGENCY ZONE SHALL BYPASS CONTROLS AND COME ON TO 100%.
3. LIGHTING CONTACTORS SHALL BE SCHEDULED BY A LOCAL TIME CLOCK AND PHOTOCELL ROVIDED BY DIVISION 26. PROVIDE MECHANICALLY OR ELECTRICALLY HELD CONTACTORS AS INDICATED. CONNECT TIME CLOCK AND CONTACTOR CONTROL COIL TO LIGHTING CONTROL CIRCUIT LPB-35.
4. PROVIDE MINIMUM ONE (1) SPARE POLE WITHIN EACH CONTACTOR FOR FUTURE USE.

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NEW CANEY HIGH SCHOOL EXTRACURRICULAR IMPROVEMENTS - PHASE III

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
01/06/2025

ISSUED: 01/06/2025

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Designer MAS
Proj. Arch.

Drawn By MAS
Quality Control

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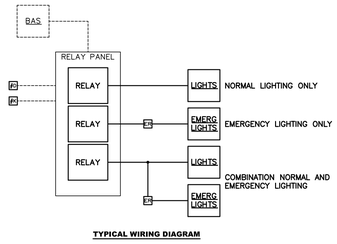


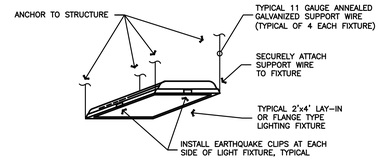
TYPICAL WIRING DIAGRAM

5 TYPICAL RELAY PANEL WIRING

NO SCALE

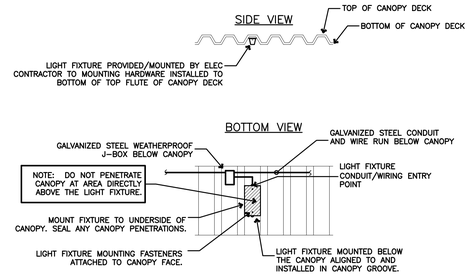
NOTES:

1. LOCATE EMERGENCY LIGHTING RELAYS ADJACENT TO RELAY PANELS.



1 LAY-IN FIXTURE SUPPORT DETAIL

NO SCALE

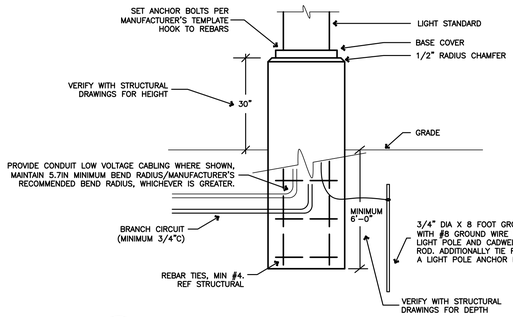


2 INSET CANOPY LIGHT MOUNTING DETAIL

NO SCALE

NOTES:

1. FIXTURES SHALL BE MOUNTED WITHIN THE CANOPY GROOVE AND ATTACHED TO THE TOP FLUTE TO PREVENT WATER FROM POOLING ABOVE THE FIXTURE.
2. MOUNTING CLIPS/HARDWARE SHALL BE ATTACHED TO THE CANOPY TO MOUNT LIGHT FIXTURES.
3. CANOPY PENETRATIONS ABOVE FIXTURES SHALL BE SEALED TO PREVENT WATER LEAKAGE.

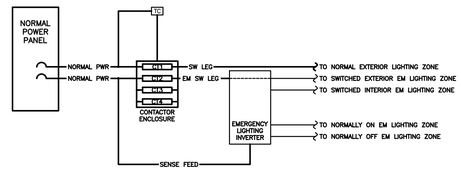


3 AREA LIGHT POLE BASE DETAIL

NO SCALE

NOTES:

1. ANCHOR BOLTS SHALL NOT BE EXPOSED. PROVIDE BASE COVERS ON ALL LIGHT POLES AND ADD GROUT AS REQUIRED.
2. PROVIDE LOW VOLTAGE CONDUIT(S) FOR LIGHTING CONTROLS, SECURITY, CCTV, ETC. WHERE INDICATED. REFERENCE PLANS AND DRAWINGS FOR ADDITIONAL INFORMATION.
3. MINIMUM POLE BASE REQUIREMENTS:
   - 3.A. POLE ≤ 25FT: BASE = 24"ϕ X 6FT BELOW GRADE.
   - 3.B. 25FT < POLE ≤ 35FT: BASE = 24"ϕ X 8FT BELOW GRADE.
   - 3.C. 35FT < POLE ≤ 45FT: BASE = 30"ϕ X 10FT BELOW GRADE.
   - 3.D. PROVIDE #5 REBAR TO
   - 3.E. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION. IN THE EVENT OF A CONFLICT, STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE.



4 TYPICAL LIGHTING CONTACTOR WIRING DIAGRAM

NO SCALE

NOTES:

1. LOCATE CONTACTOR AND TIME CLOCK ADJACENT TO UPSTREAM POWER PANELS.
2. COORDINATE MOUNTING LOCATIONS AND HEIGHTS TO MEET CODE REQUIREMENTS.

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