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NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D. NEW CANEY, TEXAS

Revision / Date

Project: NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D. NEW CANEY, TEXAS

09-18-2025

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COVER SHEET

Job No.	Sheet No.
1971-05-01	G1.01
Drawn By: Author	
Date: 09/18/2025	

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ALTERNATE 1A: PROVIDE AIR COOLED ROTARY SCREW CHILLERS BY JCI/YORK

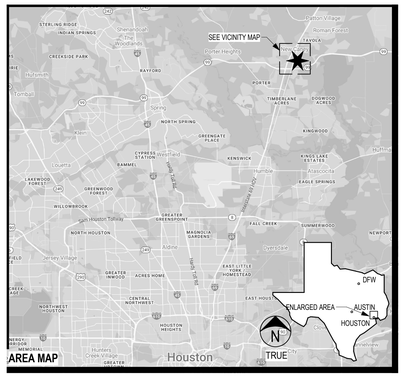
ALTERNATE 1B: PROVIDE AIR COOLED ROTARY CHILLERS BY DAIKIN

ALTERNATES

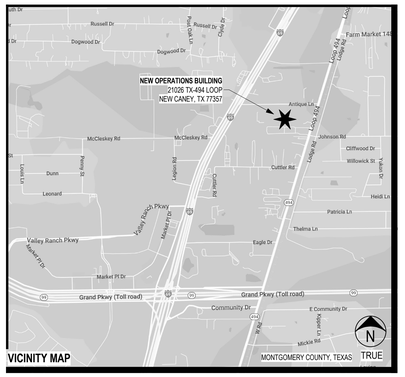
AB	ANCHOR BOLT	JT	JOINT
AC	AIR CONDITIONER	JST(S)	JOIST(S)
ACC	ACCESSIBLE	L	ANGLE
ACMU	ARCHITECTURAL CONCRETE MASONRY UNIT	LAB	LABORATORY
ADA	AMERICANS WITH DISABILITIES ACT / ADA STANDARDS FOR ACCESSIBLE DESIGN (LATEST VERSION)	LAV	LAVATORY
		LEPC	LOCAL EMERGENCY PLANNING COMMITTEE
		LONG	LONGITUDINAL
ADDN'L	ADDITIONAL	LVT	LUXURY VINYL TILE
ADJ	ADJUSTABLE	MAS	MASONRY
ADH	ADHESIVE/ADHERE	MATL	MATERIAL
ADMIN	ADMINISTRATION	MAX	MAXIMUM
AFF	ABOVE FINISHED FLOOR	MB	MARKER BOARD
AFG	ABOVE FINISHED GRADE	MCM	METAL COMPOSITE MATERIAL
AG	AGRICULTURE	MDF	MAIN DISTRIBUTION FRAME
AHU	AIR HANDLING UNIT	MECH	MECHANICAL
AL	ALUMINUM	MEZZ	MEZZANINE
ALT	ALTERNATE	MFG	MANUFACTURER
ALUM	ALUMINUM	MFR	MANUFACTURER
AP	ACOUSTICAL PANELS	MIN	MINIMUM
AP	ASSISTANT PRINCIPAL	MISC	MISCELLANEOUS
APPROX	APPROXIMATE	MO	MASONRY OPENING
ARCH	ARCHITECTURAL	MP	METAL WALL PANELS
B	BEYOND	MPF	MULTI-PURPOSE FACILITY
B/B	BACK TO BACK	MSK	MOP SINK
BD	BOARD	MS	METAL SOFFIT
BLDG	BUILDING	MSL	MEAN SEA LEVEL
BLKG	BLOCKING	MTL	METAL
BOD	BOTTOM OF DECK	NB	NO BASE
BOM	BOTTOM OF MASONRY	NF	NO FINISH
BOS	BOTTOM OF STEEL	NIC	NOT IN CONTRACT
BOT	BOTTOM	NO	NUMBER
BP	BASE, PORCELAIN TILE	NS	NATURAL STONE
BR	BASE, RUBBER	NTS	NOT TO SCALE
BRES	BASE, RESINOUS INTEGRAL	OC	ON CENTER
BRG	BEARING	OCC	OCCUPANTS / OCCUPANCY
BRK	BRICK	OCEW	ON CENTER EACH WAY
BRV	BASE, RUBBER VENTED	OCD	OVERHEAD COILING DOOR
BTC	BASE, TILE CERAMIC	OCG	OVERHEAD COILING GRILLE
BTZP	BASE, TERRAZZO PRECAST	OD	OUTSIDE DIAMETER
BS	BOTH SIDES	OF	OUTSIDE FACE
BTWN	BETWEEN	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
BW	BOTH WAYS	OFF	OFFICE
BWD	BASE, WOOD	OFOI	OWNER FURNISHED OWNER INSTALLED
C/C	CENTER TO CENTER	OH	OPPOSITE HAND
CAB	CABINET	OHD	OVERHEAD
CCD	COILING COUNTER DOOR	OPP	OPPOSITE
CCPS	CERAMIC CLADDING PANEL SYSTEM	OS	OVERFLOW SCUPPER
CDW	CUSTOM DIGITAL WALLCOVERINGS	P/C	PRECAST CONCRETE
CDAP	CUSTOM DIGITALLY PRINTED ACOUSTIC PANEL	PCP	PORTLAND CEMENT PLASTER
CFMF	COLD-FORMED METAL FRAMING	PEMB	PRE-ENGINEERED METAL BUILDING
CH	CHANNEL	PERIM	PERIMETER
CI	CONTINUOUS INSULATION	PERP	PERPENDICULAR
CJ	CONTROL JOINT	PLA	PLATE
CL	CENTERLINE	PL	PLASTIC LAMINATE
CLG	CEILING	PLP	PLASTIC LAMINATE PANEL SYSTEM
CLR	CLEAR	PNT	PAINT
CMU	CONCRETE MASONRY UNIT	PR	PRACTICE ROOM
CNTRD	CENTERED	PREFIN	PREFINISHED
CO	CLEAN OUT/CASED OPENING	PREP	PREPARATION
COL	COLUMN	PROJ	PROJECTION
CONC	CONCRETE	PS	PROJECTION SCREEN
CONF	CONFIGURATIONS / CONFERENCE	PT	POINT
CONN(S)	CONNECTION(S)	PW	PLYWOOD
CONT	CONTINUOUS	QTZ	QUARTZ SURFACING
COORD	COORDINATE	R	RISER
COP	CONCRETE (POLISHED)	RAD	RADIUS
CORR	CORRIDOR	RAFF	RESILIENT ATHLETIC FLUID FLOORING
COS	CONCRETE SEALED	RAFP	RESILIENT ATHLETIC FLOORING POLYURETHANE
CPT	CARPET, SHEET	RAFS	RUBBER FLOORING SHEET
CPY	CANOPY	RAFV	RESILIENT ATHLETIC FLOORING VINYL
CR	CLASSROOM	L	ANGLE
CS	CAST STONE	RD	ROOF DRAIN
CSM	CONCRETE STONE MASONRY	REF	REFERENCE
CU	CONDENSING UNIT	REINF	REINFORCING
CUST	CUSTODIAN	RES	RESINOUS
CT	CARPET, TILED	REQ'D	REQUIRED
CTE	CAREER TRAINING ED	RM	ROOM
CTRL	CONTROL	RO	ROUGH OPENING
CW	CURTAIN WALL	RR	RESTROOM
CWF	CUSTOM WINDOW FILM	RT	RUBBER TILE
DBL	DOUBLE	RTR	RUBBER TREADS AND RISERS
DET	DETAIL	RTU	ROOFTOP UNIT
DH	DOOR HARDWARE	SB	SPLASH BLOCK
DIA	DIAMETER	SCHED	SCHEDULE
DIAG	DIAGONAL	SEC	SECURITY
DIM	DIMENSION	SECT	SECTION
DN	DOWN	SF	STOREFRONT / SQUARE FEET
DS	DOWNSPOUT	SHT	SHEET
DTL	DETAIL	SIM	SIMILAR
DWG	DRAWING	SL	SLOPE
DWR	DRAWER	SP	SPLASH PAN (METAL)
EA	EACH	SPEC	SPECIFICATIONS
EBWS	EPOXY BASED WALL SYSTEM	SPF	SPLIT-FACE CONCRETE MASONRY UNIT
ED	EDUCATION	SPS	SOLID POLYMER SURFACE
EF	EACH FACE	SS	STAINLESS STEEL
EJ	EXPANSION JOINT	SSM	SOLID SURFACE MATERIAL
EL	ELEVATION	STD	STANDARD
ELEC	ELECTRICAL	STL	STEEL
ELEV	ELEVATOR	STN	STAIN
ENGR	ENGINEER	STOR	STORAGE
EPNT	EPOXY PAINT	STRUCT	STRUCTURE
EQ	EQUAL (EQUALLY)	SVT	SOLID VINYL TILE
EQUIP	EQUIPMENT	SYMM	SYMMETRICAL
EW	EACH WAY	T&B	TOP & BOTTOM
EWC	ELECTRIC WATER COOLER	T&G	TONGUE & GROOVE
EXIST	EXISTING	TAS	TEXAS ACCESSIBILITY STANDARDS (LATEST VERSION)
EXP	EXPANSION	TB	TACK BOARD
EXT	EXTERIOR	TC	TILE, CERAMIC
EXTNG	EXTINGUISHER	TH	THRESHOLD
F/F	FACE TO FACE	TLT	TOILET
FC	FURRING CHANNEL	TOB	TOP OF BEAM
FD	FLOOR DRAIN	TOC	TOP OF CURB
FDC	FIRE DEPARTMENT CONNECTION	TOJ	TOP OF JOIST
FDN	FOUNDATION	TOM	TOP OF MASONRY
FE	FIRE EXTINGUISHER (SURFACE MOUNT)	TOS	TOP OF STEEL
FEC	FIRE EXTINGUISHER CABINET (SEMI-RECESSED)	TOSF	TOP OF METAL STUD FRAMING
		TOW	TOP OF WALL
FFE	FINISHED FLOOR ELEVATION	TPC	TILE: PORCELAIN
FHC	FIRE HOSE CABINET (SEMI-RECESSED)	TQ	TILE: QUARRY
FIN	FINISH(ED)	TR	TREATED
FIN FLR	FINISHED FLOOR	TRAN	TRANSVERSE / TRANSPARENT
FL	FLUSH (FLUSHED)	TRIM	METAL FLASHINGS AND COPINGS
FLR	FLOOR	TS	TACKABLE SURFACE
FR	FRAME	TYP	TYPICAL
FRP	FIBERGLASS REINFORCED PLASTIC PANEL SYSTEM FIBERGLASS REINFORCED PANELING	TZ	TERRAZZO
		TZP	TERRAZZO, PRECAST STAIR TREADS AND RISERS
FRT	FIRE RETARDANT TREATED	TZT	TERRAZZO TILE
FRTW	FIRE RETARDANT TREATED WOOD	U	URINAL
FTG	FOOTING	UL	UNDERWRITERS LABORATORIES
FV	FIELD VERIFY	UNO	UNLESS NOTED OTHERWISE
GA	GAGE OR GAUGE	UP	UPHOLSTERY
GALV	GALVANIZED	VCT	VINYL COMPOSITION TILE
GB	GRAB BAR / GRADE BEAM	VERT	VERTICAL
GEN	GENERAL	VEST	VESTIBULE
GFRC	GLASS FIBER REINFORCED CONCRETE	VSF	VINYL SHEET FLOORING
GRF	GROUND FACE CMU (BURNISHED)	W	WITH
GUT	GUTTER	WITN	WITHIN
GYM	GYMNASIUM	W/O	WITHOUT
GYP	GYPSUM	WASH	WASH STATION
HB	HOSE BIB	WC	WATER CLOSET
HDWD	HARD WOOD	WD	WOOD
HM	HOLLOW METAL	WH	WATER HEATER / WALL HYDRANT
HO	HOLD OPEN	WMP	WOOD (MAPLE) STRIP AND PLANK FLOORING
HORIZ	HORIZONTAL	WMS	MASONITE WOOD FLOORING
HSS	HOLLOW STRUCTURAL SECTION	WOM	WALK-OFF MAT
HT	HEIGHT	WOT	WALK-OFF TILE
HVAC	HEATING, VENTILATION, & A/C	WP	WORKPOINT
ICF	INSULATED CONCRETE FORMS / INSULATED CONCRETE FORMING	WT	WEIGHT
		WWF	WELDED WIRE MESH (FABRIC)
IDF	INTERMEDIATE DISTRIBUTION FRAME	XB	X-BRACING
INFO	INFORMATION	>=	LARGER THAN OR EQUAL TO
INSUL	INSULATION	<=	LESS THAN OR EQUAL TO
INT	INTERIOR		

(NOT ALL ABBREVIATIONS MAY BE USED)

ABBREVIATIONS



AREA MAP



VICINITY MAP

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Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRIAN K. BANNISTER
21109
STATE OF TEXAS
09-18-2025

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GENERAL DATA

Job No. 1971-05-01	Sheet No. G1.02
Drawn By: JT	
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EGRESS (SPRINKLERED)

1. **(SPRINKLERED)** 3'-0" DOOR (32" CLR) AT 0.15" / OCCUPANT = 213 OCCUPANTS
2. PAIR OF 3'-0" DOOR (68" CLR) AT 0.15" / OCCUPANT = 453 OCCUPANTS
3. STAIRS (30" CLEAR WIDTH) AT 0.2"/OCCUPANT = 150 OCCUPANTS

EGRESS (NON-SPRINKLERED)

4. 3'-0" DOOR (32" CLR) AT 0.2" / OCCUPANT = 160 OCCUPANTS

EGRESS FACTORS LEGEND

CLASSIFICATION	OCCUPANTS MALE / FEMALE	WATER CLOSETS MALE / FEMALE	LAVATORIES	DRINKING FOUNTAIN
				(TOTAL NO. OF OCCUPANTS = 621)
A-2 ASSEMBLY (U) UNCONCENTRATED	191 / 191	1 PER 75 / 1 PER 75 2.55 / 2.55	1 PER 200 0.96 / 0.96	1 PER 500 0.76
B BUSINESS	32 / 32	1 PER 25 / 1 PER 25** 1.26 / 1.26	1 PER 40*** 0.79 / 0.79	1 PER 100 0.63
F INDUSTRIAL	77 / 77	1 PER 100 / 1 PER 100 0.77 / 0.77	1 PER 100 0.77 / 0.77	1 PER 400 0.39
S STORAGE	11 / 11	1 PER 100 / 1 PER 100 0.11 / 0.11	1 PER 100 0.11 / 0.11	1 PER 1000 0.02
TOTAL	REQUIRED PROVIDED	5 / 5 13 / 13	3 / 3 9 / 7	

** FOR THE FIRST 50 & 1 PER 50 FOR THE REMAINDER EXCEEDING 50
*** FOR THE FIRST 80 & 1 PER 80 FOR THE REMAINDER EXCEEDING 80

PLUMBING FIXTURE REQUIREMENTS

THE EMERGENCY ACCESS LOCK BOX(ES) SHALL BE AS SPECIFIED. REFER TO SPECIFICATIONS SECTION 10 4400. BOTTOM ELEVATION OF BOX SHALL BE 6'-0" ABOVE GROUND LEVEL (VERIFY WITH FIRE MARSHAL)

FIREMAN'S EMERGENCY LOCK BOX(ES)

1 HR. FIRE BARRIER ——————————

TO RESIST PASSAGE OF SMOKE (NOT REQUIRED BY CODE TO BE A SMOKE PARTITION) - - - - - - - - - - - - - - -

WALLS SHALL MEET ALL CODE REQUIREMENTS FOR RATED CONSTRUCTION. WINDOW ASSEMBLIES SHALL COMPLY WITH IBC AND BE U.L. LABELED. DOORS SHALL HAVE CLOSERS, BE U.L. LABELED, AND RATED AS SCHEDULED.

FIRE RATED CONSTRUCTION LEGEND

COUNTY: MONTGOMERY
CLIMATE ZONE: 2A

THE I.E.C.C. ESTABLISHES THE REQUIREMENTS FOR INSULATING THE BUILDING. THE MINIMUM REQUIREMENTS THAT ARE ACCEPTABLE (FOR STANDARD OCCUPIED BUILDINGS) ARE: ROOF= R-25c. MASS WALLS= R-5.7c. MTL FRAMED= R-13 + 5ci. METAL BUILDINGS= R-13 + 6.5ci & METAL BUILDING ROOF = R-19 + R-11LS

ENERGY CODE R VALUES

NEW CONSTRUCTION

PRIMARY OCCUPANCY: GROUP S-1 & B **TYPE:** II-B
ALLOWABLE HEIGHT: 75 FEET (SPRINKLERED)
TOTAL HEIGHT PROVIDED: 40' - 5"
ALLOWABLE NUMBER OF STORIES: 4

ALLOWABLE AREA FACTOR:
(SM) MULTI-STORY, SPRINKLERED: 52,500 SQ. FT.

TOTAL AREA ALLOWED: 105,000 SQ. FT. [52,500 SQ. FT. PER STORY]

TOTAL AREA PROVIDED: 45,217 SQ. FT.
FIRST FLOOR: 31,447 SQ. FT.
SECOND FLOOR: 13,432 SQ. FT.
ROOF OVERHANG: 338 SQ. FT.

TOTAL OCCUPANT LOAD: 621 OCCUPANTS

TOTAL EGRESS CAPACITY REQUIRED
FIRST FLOOR: 432 OCCUPANTS
SECOND FLOOR: 189 OCCUPANTS

TOTAL EGRESS CAPACITY PROVIDED
FIRST FLOOR: 1,545 OCCUPANTS
SECOND FLOOR: 426 OCCUPANTS

CALCULATIONS PER IBC 2024

INFORMATION PROVIDED FOR CODE COMPLIANCE EVALUATION; NOT TO BE USED FOR BIDDING PURPOSES.

1) PROJECT IDENTIFICATION
A. OWNER: NEW CANEY I.S.D.
B. PROJECT NAME: NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D.
C. PHYSICAL ADDRESS: 21026 TX-494 LOOP, NEW CANEY, TX 77357

3) APPLICABLE CODES
A. INTERNATIONAL BUILDING CODE (IBC) 2024
B. INTERNATIONAL PLUMBING CODE 2024
C. INTERNATIONAL MECHANICAL CODE 2024
D. NATIONAL ELECTRICAL CODE (NEC) 2023
E. INTERNATIONAL FIRE CODE 2024
F. ELIMINATION OF ARCHITECTURAL BARRIERS ACT; TEXAS DEPT. OF LICENSING AND REGULATION
G. INTERNATIONAL ENERGY CONSERVATION CODE 2015
H. INTERNATIONAL EXISTING BUILDING CODE 2024
I. LOCAL AMENDMENTS

4) OCCUPANCY CLASSIFICATION
A. OCCUPANCY: GROUP S-1 & B
B. SEPARATED USES: NONE
C. INCIDENTAL USE AREAS: RATED PER TABLE 509
D. ACCESSORY OCCUPANCIES

5) TYPE OF CONSTRUCTION / FIRE-RESISTIVE REQUIREMENTS
A. CONSTRUCTION TYPE: II-B

TABLE 601	
BUILDING ELEMENT	TYPE II B
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS EXTERIOR	0
BEARING WALLS INTERIOR	0
NON-BEARING WALLS & PARTITIONS (EXTERIOR)	0
NON-BEARING WALLS & PARTITIONS (INTERIOR)	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION & SECONDARY MEMBERS	0

7) FIRE-PROTECTION SYSTEMS
A. AUTOMATIC SPRINKLER SYSTEM: REF. BUILDING CODE SUMMARY SHEETS
B. PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED PER INTERNATIONAL FIRE CODE
C. FIRE ALARM PROVIDED: YES
D. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM PROVIDED: YES

9) EXIT REQUIREMENTS
A. TRAVEL DISTANCES
1. ALLOWED, SPRINKLERED BUILDING:
TO EXIT FROM WITHIN A SPACE FOR OCCUPANCY LOAD GREATER THAN 50 = 250 FT.
TO EXIT FROM WITHIN BUILDING = 250 FT.
COMMON PATH OF EGRESS TRAVEL = 100 FT.

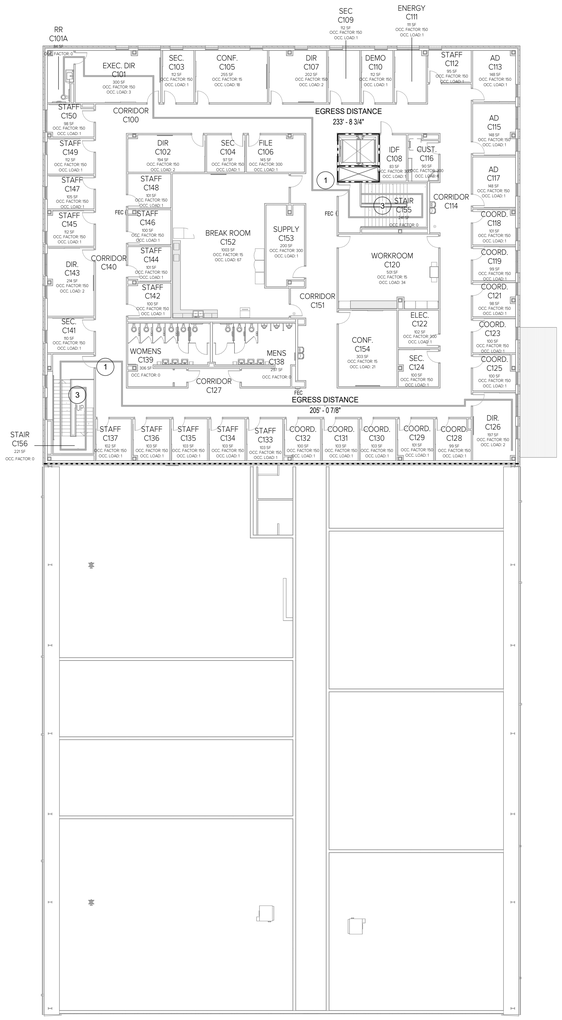
1. ALLOWED, NON-SPRINKLERED BUILDING:
TO EXIT FROM WITHIN A SPACE FOR OCCUPANCY LOAD GREATER THAN 50 = 200 FT.
TO EXIT FROM WITHIN BUILDING = 200 FT.
COMMON PATH OF EGRESS TRAVEL = 75 FT.

2. ACTUAL - REFER TO PLAN FOR PATHS & DISTANCE

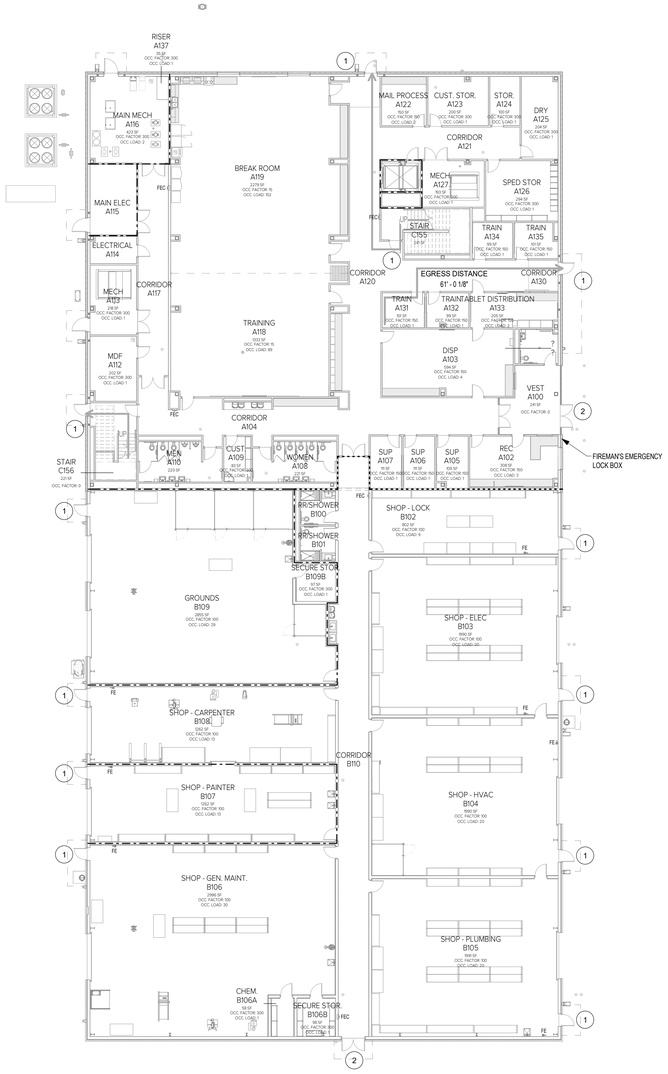
BUILDING DESIGN CRITERIA

1. THIS CODE ANALYSIS PLAN IS PROVIDED AS A TOOL FOR VIEWING THE OVERALL CODE COMPLIANCE FOR THE ENTIRE FACILITY. WHILE STATED U.L. RATINGS REQUIRED THROUGH WALLS MUST BE MET, ALL CONTRACTORS MUST CONSTRUCT THIS FACILITY FROM THE MATERIALS AND IN THE DIMENSIONS DESCRIBED IN THE CONSTRUCTION DOCUMENTS. ANY APPARENT CONFLICT SHALL BE RESOLVED WITH THE ARCHITECT.
2. FIRE RATED WALLS NOT DESIGNED TO EXTEND ABOVE ROOF LEVEL SHALL EXTEND TO THE ROOF DECK WITH U.L. APPROVED CLOSURE TO THE DECK U.N.O.
3. ALL PENETRATIONS OF FIRE RATED WALLS SHALL BE CLOSED WITH CODE APPROVED METHODS AND MATERIALS TO MAINTAIN THE SPECIFIED RATING, INCLUDING FIRE TREATED BLOCKING / PLYWD.
4. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS FOR FIRE AND SMOKE DAMPERS.
5. REFER TO G3 SHEETS FOR TYP WALL CONSTRUCTION DETAILS.
6. SQUARE FOOT (SF) AREAS INDICATED ARE FOR CODE ANALYSIS ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING AREAS FOR CONSTRUCTION PURPOSES.

CODE ANALYSIS PLAN NOTES



2 CODE ANALYSIS PLAN - LEVEL 2 - OPERATIONS BUILDING
1/16" = 1'-0"



1 CODE ANALYSIS PLAN - LEVEL 1 - OPERATIONS BUILDING
1/16" = 1'-0"

TRUE

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRIAN R. BANNISTER
71169
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

CODE ANALYSIS PLANS - OPERATIONS BUILDING

Job No. 1971-05-01	Sheet No. G2.01
Drawn By: JT	
Date: 09/18/2025	

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EXISTING CONSTRUCTION: TIRE STORAGE EXPANSION

PRIMARY OCCUPANCY: GROUP S-1 **TYPE:** II-B
COMPLIANCE METHOD: PRESCRIPTIVE
ALTERATION : ADDITION

EXISTING HEIGHT: 15' - 0"
EXISTING NUMBER OF STORIES: 1
ALLOWABLE AREA: **17,500 SQ. FT.**

TOTAL EXISTING AREA: 1,000 SQ. FT.
TOTAL ADDED AREA: 1,000 SQ. FT.

TOTAL AREA: **2,000 SQ. FT.**

EXISTING OCCUPANT LOAD: *4 PEOPLE*
ADDED OCCUPANT LOAD: *3 PEOPLE*
TOTAL OCCUPANT LOAD: **7 PEOPLE**

TOTAL EGRESS CAPACITY PROVIDED: **160 PEOPLE**

CALCULATIONS PER IEBC 2024

EXISTING CONSTRUCTION: STORAGE RENOVATION

PRIMARY OCCUPANCY: GROUP S-1 **TYPE:** II-B
COMPLIANCE METHOD: PRESCRIPTIVE
ALTERATION : LEVEL 2

EXISTING HEIGHT: 12' - 6"
EXISTING NUMBER OF STORIES: 1
ALLOWABLE AREA: **17,500 SQ. FT.**

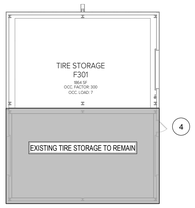
TOTAL EXISTING AREA: 400 SQ. FT.
TOTAL ADDED AREA: 0 SQ. FT.

TOTAL AREA: **400 SQ. FT.**

EXISTING OCCUPANT LOAD: *2 PEOPLE*
ADDED OCCUPANT LOAD: *0 PEOPLE*
TOTAL OCCUPANT LOAD: **2 PEOPLE**

TOTAL EGRESS CAPACITY PROVIDED: **160 PEOPLE**

CALCULATIONS PER IEBC 2024



3 CODE PLAN - STORAGE ADDITION
1/16" = 1'-0"

N
TRUE

EGRESS (SPRINKLERED)

1. **(SPRINKLERED)** 3'-0" DOOR (32" CLR) AT 0.15" / OCCUPANT = 213 OCCUPANTS
2. PAIR OF 3'-0" DOOR (68" CLR) AT 0.15" / OCCUPANT = 453 OCCUPANTS
3. STAIRS (30" CLEAR WIDTH) AT 0.2"/OCCUPANT = 150 OCCUPANTS

EGRESS (NON-SPRINKLERED)

4. 3'-0" DOOR (32" CLR) AT 0.2" / OCCUPANT = 160 OCCUPANTS

EGRESS FACTORS LEGEND

			(TOTAL NO. OF OCCUPANTS = 123)	
CLASSIFICATION	**OCCUPANTS MALE / FEMALE**	**WATER CLOSETS MALE / FEMALE**	**LAVATORIES**	**DRINKING FOUNTAIN**
A-2 ASSEMBLY (U) UNCONCENTRATED	18 / 18	1 PER 75 / 1 PER 75 0.23 / 0.23	1 PER 200 0.09 / 0.09	1 PER 500 0.07
B BUSINESS	2 / 2	1 PER 25 / 1 PER 25** 0.11 / 0.11	1 PER 40*** 0.04 / 0.04	1 PER 100 0.03
F INDUSTRIAL	11 / 11	1 PER 100 / 1 PER 100 0.11 / 0.11	1 PER 100 0.11 / 0.11	1 PER 400 0.06
S STORAGE	32 / 32	1 PER 100 / 1 PER 100 0.32 / 0.32	1 PER 100 0.32 / 0.32	1 PER 1000 0.06
TOTAL	REQUIRED **PROVIDED**	1 / 1 **1 / 2**	1 / 1 **1 / 2**	1 **2**

** FOR THE FIRST 50 & 1 PER 50 FOR THE REMAINDER EXCEEDING 50
*** FOR THE FIRST 80 & 1 PER 80 FOR THE REMAINDER EXCEEDING 80

PLUMBING FIXTURE REQUIREMENTS (WAREHOUSE)

THE EMERGENCY ACCESS LOCK BOX(ES) SHALL BE AS SPECIFIED. REFER TO SPECIFICATIONS SECTION 10 4400. BOTTOM ELEVATION OF BOX SHALL BE 6'-0" ABOVE GROUND LEVEL (VERIFY WITH FIRE MARSHAL)

FIREMAN'S EMERGENCY LOCK BOX(ES)

1 HR. FIRE BARRIER ——————————

TO RESIST PASSAGE OF SMOKE (NOT REQUIRED BY CODE TO BE A SMOKE PARTITION) - - - - - - - - - - - - - - - -

WALLS SHALL MEET ALL CODE REQUIREMENTS FOR RATED CONSTRUCTION. WINDOW ASSEMBLIES SHALL COMPLY WITH IBC AND BE U.L. LABELED. DOORS SHALL HAVE CLOSERS, BE U.L. LABELED, AND RATED AS SCHEDULED.

FIRE RATED CONSTRUCTION LEGEND

COUNTY: MONTGOMERY
CLIMATE ZONE: 2A

THE I.E.C.C. ESTABLISHES THE REQUIREMENTS FOR INSULATING THE BUILDING. THE MINIMUM REQUIREMENTS THAT ARE ACCEPTABLE (FOR STANDARD OCCUPIED BUILDINGS) ARE: ROOF= R-25ci, MASS WALLS= R-5.7ci, MTL FRAMED= R-13 + 5ci, METAL BUILDINGS= R-13 + 6.5ci & METAL BUILDING ROOF = R-19 + R-11LS

ENERGY CODE R VALUES

NEW CONSTRUCTION: WAREHOUSE AND BUS WASH

OCCUPANCY WAREHOUSE: GROUP S-1 **TYPE:** II-B, SPRINKLERED
ALLOWABLE HEIGHT: 75 FEET (S), 55 FEET (NS)
TOTAL HEIGHT PROVIDED: 26' - 0"
ALLOWABLE NUMBER OF STORIES: 4 (S), 2 (NS)
ALLOWABLE AREA FACTOR:
(NS) NON-SPRINKLERED: 17,500 SQ. FT.
(S1) SINGLE-STORY, SPRINKLERED: 70,000 SQ. FT.
TABULAR AREA (At) IN ACCORDANCE WITH TABLE 506.2

TOTAL AREA ALLOWED: 70,000 SF

OCCUPANCY BUSWASH: GROUP B **TYPE:** II-B, NON-SPRINKLERED
ALLOWABLE HEIGHT: 55 FEET (NS)
TOTAL HEIGHT PROVIDED: 24' - 3"
ALLOWABLE NUMBER OF STORIES: 3
ALLOWABLE AREA FACTOR:
(NS) NON-SPRINKLERED: 23,000 SQ. FT.
TABULAR AREA (At) IN ACCORDANCE WITH TABLE 506.2

TOTAL FRONTAGE INCREASE ALLOWED: **11,500 SQ. FT.**
IBC 2024, TABLE 506.3.3.1
PERCENTAGE OF BUILDING PERIMETER = 70%
If > (30' OR GREATER) = 0.50

TOTAL AREA ALLOWED PER STORY: **34,500 S.F.**
SINGLE-OCCUPANCY, ONE-STORY
Aa = At + (NS x If)
At = 23,000sf If = 50%
Aa = 23,000 + (23,000 x 50%)

TOTAL AREA PROVIDED: 33,659 SQ. FT.
WAREHOUSE (S): 31,011 SQ. FT.
BUS WASH (NS): 2,648 SQ. FT.

TOTAL OCCUPANT LOAD: **123 OCCUPANTS**

TOTAL EGRESS CAPACITY REQUIRED
FIRST FLOOR: **123 OCCUPANTS**

TOTAL EGRESS CAPACITY PROVIDED
FIRST FLOOR: **1,305 OCCUPANTS**

CALCULATIONS PER IBC 2024

INFORMATION PROVIDED FOR CODE COMPLIANCE EVALUATION; NOT TO BE USED FOR BIDDING PURPOSES.

1) PROJECT IDENTIFICATION
A. OWNER: NEW CANEY I.S.D.
B. PROJECT NAME: NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D.
C. PHYSICAL ADDRESS: 21026 TX-494 LOOP, NEW CANEY, TX 77357

3) APPLICABLE CODES
A. INTERNATIONAL BUILDING CODE (IBC) 2024
B. INTERNATIONAL PLUMBING CODE 2024
C. INTERNATIONAL MECHANICAL CODE 2024
D. NATIONAL ELECTRICAL CODE (NEC) 2023
E. INTERNATIONAL FIRE CODE 2024
F. ELIMINATION OF ARCHITECTURAL BARRIERS ACT; TEXAS DEPT. OF LICENSING AND REGULATION
G. INTERNATIONAL ENERGY CONSERVATION CODE 2015
H. INTERNATIONAL EXISTING BUILDING CODE 2024
I. LOCAL AMENDMENTS

4) OCCUPANCY CLASSIFICATION
A. OCCUPANCY: GROUP S-1 & B
B. SEPARATED USES: NONE
C. INCIDENTAL USE AREAS: RATED PER TABLE 509
D. ACCESSORY OCCUPANCIES

5) TYPE OF CONSTRUCTION / FIRE-RESISTIVE REQUIREMENTS
A. CONSTRUCTION TYPE: II-B

TABLE 601

BUILDING ELEMENT	TYPE II B
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS EXTERIOR	0
BEARING WALLS INTERIOR	0
NON-BEARING WALLS & PARTITIONS (EXTERIOR)	0
NON-BEARING WALLS & PARTITIONS (INTERIOR)	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION & SECONDARY MEMBERS	0

7) FIRE-PROTECTION SYSTEMS
A. AUTOMATIC SPRINKLER SYSTEM: REF. BUILDING CODE SUMMARY SHEETS
B. PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED PER INTERNATIONAL FIRE CODE
C. FIRE ALARM PROVIDED: YES
D. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM PROVIDED: YES

8) EXIT REQUIREMENTS
A. TRAVEL DISTANCES
1. ALLOWED, SPRINKLERED BUILDING:
TO EXIT FROM WITHIN A SPACE FOR OCCUPANCY LOAD GREATER THAN 50 = 250 FT.
TO EXIT FROM WITHIN BUILDING = 250 FT.
COMMON PATH OF EGRESS TRAVEL = 100 FT.

1. ALLOWED, NON-SPRINKLERED BUILDING:
TO EXIT FROM WITHIN A SPACE FOR OCCUPANCY LOAD GREATER THAN 50 = 200 FT.
TO EXIT FROM WITHIN BUILDING = 200 FT.
COMMON PATH OF EGRESS TRAVEL = 75 FT.

2. ACTUAL - REFER TO PLAN FOR PATHS & DISTANCE

BUILDING DESIGN CRITERIA

1. THIS CODE ANALYSIS PLAN IS PROVIDED AS A TOOL FOR VIEWING THE OVERALL CODE COMPLIANCE FOR THE ENTIRE FACILITY. WHILE STATED U.L. RATINGS REQUIRED THROUGH WALLS MUST BE MET, ALL CONTRACTORS MUST CONSTRUCT THIS FACILITY FROM THE MATERIALS AND IN THE DIMENSIONS DESCRIBED IN THE CONSTRUCTION DOCUMENTS. ANY APPARENT CONFLICT SHALL BE RESOLVED WITH THE ARCHITECT.
2. FIRE RATED WALLS NOT DESIGNED TO EXTEND ABOVE ROOF LEVEL SHALL EXTEND TO THE ROOF DECK WITH U.L. APPROVED CLOSURE TO THE DECK U.N.O.
3. ALL PENETRATIONS OF FIRE RATED WALLS SHALL BE CLOSED WITH CODE APPROVED METHODS AND MATERIALS TO MAINTAIN THE SPECIFIED RATING, INCLUDING FIRE TREATED BLOCKING / PLYWD.
4. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS FOR FIRE AND SMOKE DAMPERS.
5. REFER TO G3 SHEETS FOR TYP WALL CONSTRUCTION DETAILS.
6. SQUARE FOOT (SF) AREAS INDICATED ARE FOR CODE ANALYSIS ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING AREAS FOR CONSTRUCTION PURPOSES.

CODE ANALYSIS PLAN NOTES

EXISTING CONSTRUCTION: MECHANICS BUILDING EXPANSION

PRIMARY OCCUPANCY: GROUP S-1 **TYPE:** II-B
COMPLIANCE METHOD: PRESCRIPTIVE
ALTERATION : ADDITION

EXISTING HEIGHT: 23' - 2"
EXISTING NUMBER OF STORIES: 1
ALLOWABLE AREA: **17,500 SQ. FT.**

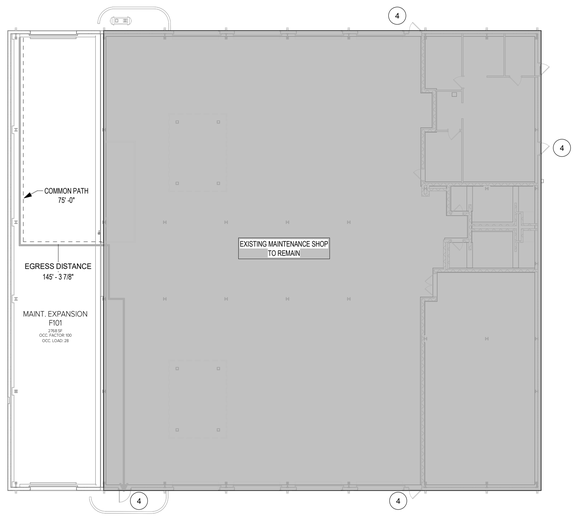
TOTAL EXISTING AREA: 13,780 SQ. FT.
TOTAL ADDED AREA: 2,954 SQ. FT.

TOTAL AREA: **16,734 SQ. FT.**

EXISTING OCCUPANT LOAD: *59 PEOPLE*
ADDED OCCUPANT LOAD: *28 PEOPLE*
TOTAL OCCUPANT LOAD: **87 PEOPLE**

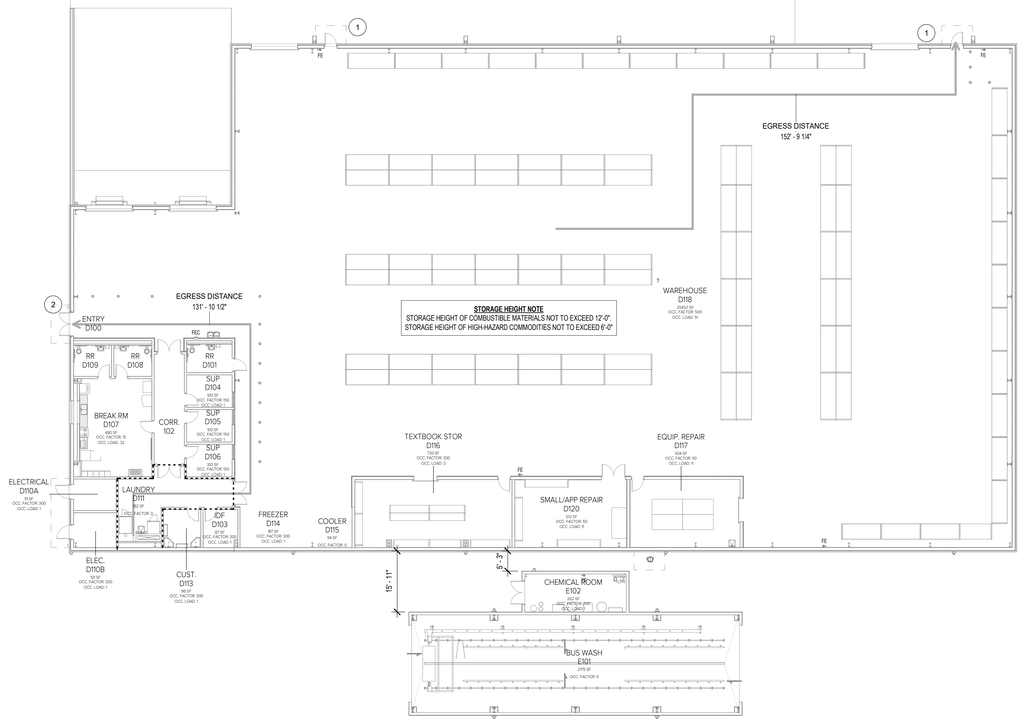
TOTAL EGRESS CAPACITY PROVIDED: **640 PEOPLE**

CALCULATIONS PER IEBC 2024



2 CODE PLAN - MAINTENANCE ADDITION
1/16" = 1'-0"

N
TRUE



1 CODE ANALYSIS PLAN - WAREHOUSE
1/16" = 1'-0"

N
TRUE

Date
Revision /

Project:
NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRIAN R. BANISTER
31109
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

CODE ANALYSIS PLAN - WAREHOUSE & SITE BUILDINGS

Job No. 1971-05-01	**Sheet No.** G2.02
Drawn By: JT	
Date: 09/18/2025	

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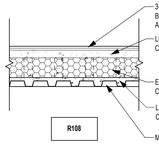
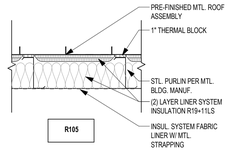


R108



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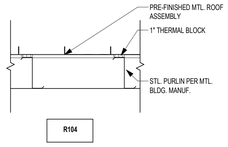


R104

ROOF TYPE TAGS

R100

ROOF ASSEMBLY IN SECTION VIEW

LETTER INDICATES TYPE

NUMBER INDICATES CONSTRUCTION AS FOLLOWS:

R104 - MTL. ROOFING, PEMB GIRT
R105 - MTL. ROOFING, INSUL., PEMB GIRT
R108 - MOD. BIT., LIGHTWEIGHT CONC., INSUL., MTL. DECK

5'-0" WIDE WALK PADS

ROOF TYPE LEGEND

EXTERIOR WALL TYPE TAGS

W100

WALL ASSEMBLY IN SECTION VIEW

LETTER INDICATES EXTERIOR WALL

NUMBER INDICATES BACKUP CONSTRUCTION AS FOLLOWS:
100 - CFMF

EXTERIOR WALL TYPE LEGEND

PARTITION TYPE TAGS

A3 | D

WALL ASSEMBLY IN PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

- D — WALL TO **D**ECK / STRUCTURE
- C — WALL TO 6" (MIN.) ABOVE **C**EILING
- FR — **F**IRE **R**ATED WALL TO DECK / STRUCTURE
- AD — **A**COUSTICAL WALL TO **D**ECK / STRUCTURE
- AC — **A**COUSTICAL WALL TO 6" (MIN.) ABOVE **C**EILING
- AR — **A**COUSTICAL **R**ATED WALL TO DECK / STRUCTURE
- GD — GYP WALL ABOVE TO **D**ECK / STRUCTURE
- SR — **S**MOKE **R**ESISTANT PARTITION TO DECK / STRUCTURE

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

- 1 - 7/8" HAT CHANNEL
- 2 - 1 5/8" CFMF
- 3 - 2 1/2" CFMF
- 4 - 3 5/8" CFMF OR CMU
- 6 - 6" CFMF OR 5 5/8" CMU OR 6" CORE ICF
- 8 - 8" CFMF OR 7 5/8" CMU OR 8" CORE ICF
- 10 - 9 5/8" CMU OR 10" CORE ICF
- 12 - 11 5/8" CMU OR 12" CORE ICF

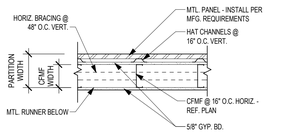
WALL / PARTITION NOTES:

1. ALL INTERIOR WALL/PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.
2. **UNTAGGED WALL/PARTITIONS AND COLUMN FURRINGS** SHALL BE ASSUMED TO BE **"TYPICAL"**, AS FOLLOWS, FOR BIDDING PURPOSES:
   GYP BOARD
   WALL/PARTITIONS - TYPE **M4**, ACOUSTICAL TO DECK (AD)
   COLUMN FURRING - **M4**, NON-ACOUSTICAL (EXTENDS TO 6" ABOVE CEILING U.N.O.)

   ANY UNTAGGED PARTITIONS WHICH APPEAR INCONSISTENT WITH THE DESCRIPTIONS ABOVE SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO BIDDING.
3. WALL TYPES IDENTIFIED AS CMU MAY INCLUDE ACMU. FLOOR PLAN HATCH PATTERNS WILL DIFFERENTIATE REGULAR SMOOTH FACE CMU FROM ARCHITECTURAL CMU. FINISH PLANS AND SCHEDULES WILL IDENTIFY ACMU SELECTIONS (GROUND FACE, SPLIT FACE, ETC.) AND IDENTIFY WHICH SIDE OF A SINGLE WYTHE ACMU WALL IS THE FINISH SIDE.
4. WALL/PARTITION TYPES IDENTIFIED AS INCLUDING VENEER MAY INCLUDE BRICK, STONE, OR ACMU. FLOOR PLAN HATCH PATTERNS WILL DIFFERENTIATE REGULAR SMOOTH FACE CMU, BRICK, STONE, OR ARCHITECTURAL CMU. FINISH PLANS AND SCHEDULES WILL IDENTIFY ACMU SELECTIONS (GROUND FACE, SPLIT FACE, ETC.)
5. WALL/PARTITIONS INDICATED BY TAG "GYP WALL ABOVE TO DECK" SHALL BE CONSTRUCTED OF THE SPECIFIED WALL TYPE TO ONE FULL COURSE (MIN.) ABOVE THE CEILING, BRACED, AND AN H4 (OR M4) WALL/PARTITION (H6 (OR M6 WHERE REQUIRED BY UNBRACED HEIGHT) SHALL BE BUILT FROM THE TOP OF WALL TO DECK. WALL/PARTITIONS INDICATED BY TAG "ACOUSTICAL GYP WALL ABOVE TO DECK" SHALL BE CONSTRUCTED OF THE SPECIFIED WALL TYPE TO A ONE FULL COURSE (MIN.) ABOVE THE CEILING, BRACED, AND AN H4 (OR M4) WALL/PARTITION (H6 OR M6 WHERE REQUIRED BY UNBRACED HEIGHT) WITH BATT INSULATION SHALL BE BUILT FROM THE TOP OF WALL TO DECK. WHERE INDICATED BY THE FIRE CODE PLAN TO BE FIRE RATED, ALL CONNECTIONS SHALL MEET RATING REQUIREMENTS.
6. FIRE-RATED WALL/PARTITIONS ARE INDICATED ON THE FIRE CODE PLANS ON THE G2 SHEETS. ALL GYP BOARD IN A RATED ASSEMBLY MUST BE 5/8" TYPE "X" AND CONSTRUCTION MUST MATCH THE ASSIGNED UL NUMBER. REFERENCE THE TYPE SCHEDULES ON THIS SHEET FOR UL NUMBERS WHERE APPLICABLE. SUBSTITUTE UL ASSEMBLIES MAY BE PRESENTED FOR THE CONSIDERATION OF THE ARCHITECT , BUT MUST NOT BE USED UNLESS APPROVED IN WRITING. PARTITIONS NOT IDENTIFIED AS RATED SHALL BE BUILT WITH STANDARD GYP BOARD.
7. WHERE FIRE-RATED MASONRY WALL/PARTITIONS ARE INDICATED TO EXTEND TO DECK, ANY VENEER OR ACMU MAY TERMINATE ABOVE CEILING LEVEL. THE CMU WALL/PARTITION SHALL EXTEND TO DECK WITH REGULAR CMU OF SAME THICKNESS AS THE CMU (OR ACMU) IN THE WALL ASSEMBLY.
8. ALL ACOUSTICAL GYP BD WALL/PARTITIONS REQUIRE HIGHER QUALITY CONSTRUCTION AND SHALL BE FULL HEIGHT SOUND ATTENUATING BATT INSULATION. IN ORDER TO ACHIEVE THE INDICATED STC RATING, ALL WALL/PARTITIONS ARE TO HAVE ALL PIN HOLES & VOIDS, PIPES, DUCTS, CONDUITS, ETC ACOUSTICALLY FILLED ON BOTH SIDES. ALL WALL BOXES ON BOTH SIDES OF WALL/PARTITION ARE TO HAVE ACOUSTICAL PUTTY PADS ON THE INTERIOR SIDE AS DETAILED. BOTH SIDES OF WALL/PARTITION SHALL BE SEALED TIGHT TO DECK AS DETAILED. THE FLOOR TRACK SHALL BE SET ON AN ACOUSTICAL ISOLATOR PAD.
9. ALL ACOUSTICAL CMU WALL/PARTITIONS REQUIRE A HIGHER QUALITY CONSTRUCTION, SHALL BE NORMAL WEIGHT CMU BLOCK, EXTEND TO DECK AND HAVE FULL HEAD JOINTS. ALL PENETRATIONS SHALL BE ACOUSTICALLY SEALED ON BOTH SIDES OF WALL. MORTAR JOINTS TO BE FILLED W/ NO PIN HOLES OR VOIDS. HEAD OF WALL SHALL BE SEALED TIGHT TO DECK AS DETAILED.
10. ALL COLD FORM METAL FRAMING ARE SUBJECT TO THE DESIGN OF A QUALIFIED STRUCTURAL ENGINEER. FINAL DETERMINATION OF GAUGE AND DIMENSIONS OF FRAMING WILL BE DETERMINED BY STRUCTURAL DESIGN. ENGINEERS RECOMMENDATIONS WHICH WOULD SIGNIFICANTLY IMPACT WALL THICKNESS MUST BE COORDINATED WITH THE ARCHITECT FOR ALIGNMENT PRIOR TO CONSTRUCTION.
11. REFER TO TYPICAL INTERIOR WALL/PARTITION BRACING DETAILS FOR ADDITIONAL INFORMATION REGARDING FLOOR AND DECK CONNECTIONS. FIRE-RATED WALLS SHALL USE FIRE STOPPING SEALANTS OR ASSEMBLIES WHERE THE WALL/PARTITION ABUTS THE DECK, INCLUDING MINERAL WOOL INSULATION WHERE APPLICABLE. NON-RATED PARTITIONS SHALL USE ACOUSTICAL SEALANTS AND INSULATION WHERE THE WALL/PARTITION ABUTS THE DECK.
12. FOR ANY DISCREPANCY BETWEEN WALL/PARTITION TYPES AND WALL SECTIONS, WALL SECTION SHALL SUPERCEDE.
13. NOT ALL WALL/PARTITION TYPES SHOWN MAY BE USED.

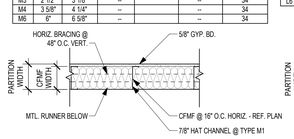
INTERIOR PARTITION TYPE LEGEND

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
AA4	3 5/8"	7"	--	--	--	34
AA6	6"	9 3/8"	--	--	--	34
AA8	8"	11 3/8"	--	--	--	34



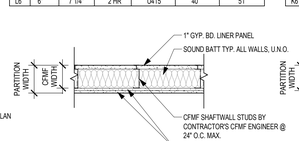
AA — **METAL PANEL ON GYP. BD. FURRING**

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
M1	7/8"	1 1/2"	--		--	34
M2	1 5/8"	2 1/4"	--		--	34
M3	2 1/2"	3 1/8"	--		--	34
M4	3 5/8"	4 1/4"	--		--	34
M6	6"	6 5/8"	--		--	34



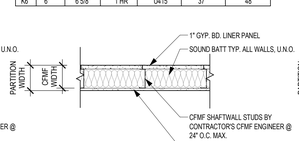
M — **GYP. BD. FURRING ON CFMF**

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
L3	2 1/2"	3 3/4"	2 HR	U415	40	51
L4	4"	5 1/4"	2 HR	U415	40	51
L6	6"	7 1/4"	2 HR	U415	40	51



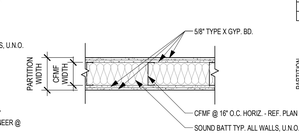
L — **GYP. BD. ON SHAFT LINER**

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
K3	2 1/2"	3 1/8"	1 HR	U415	37	48
K4	4"	4 5/8"	1 HR	U415	37	48
K6	6"	6 5/8"	1 HR	U415	37	48



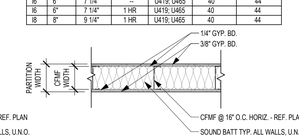
K — **GYP. BD. ON SHAFT LINER**

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
J4	3 5/8"	6 1/8"	2 HR	U411; U419	45	53
J6	6"	8 1/2"	2 HR	U411; U419	45	53



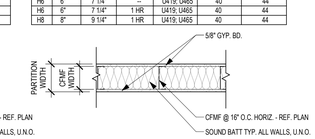
J — **GYP. BD. ON CFMF - FIRE RATED**

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
I4	3 5/8"	4 7/8"	--	U419; U465	40	44
I4	3 5/8"	4 7/8"	1 HR	U419; U465	40	44
I6	6"	7 1/4"	--	U419; U465	40	44
I6	6"	7 1/4"	1 HR	U419; U465	40	44
I8	8"	9 1/4"	1 HR	U419; U465	40	44

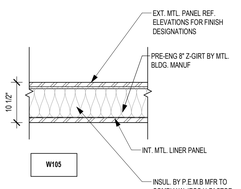


I — **GYP. BD. ON CURVED CFMF**

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
H4	3 5/8"	4 7/8"	--	U419; U465	40	44
H4	3 5/8"	4 7/8"	1 HR	U419; U465	40	44
H6	6"	7 1/4"	--	U419; U465	40	44
H6	6"	7 1/4"	1 HR	U419; U465	40	44
H8	8"	9 1/4"	1 HR	U419; U465	40	44



H — **GYP. BD. ON CFMF**



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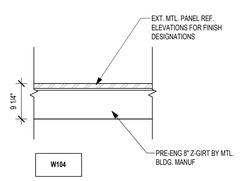

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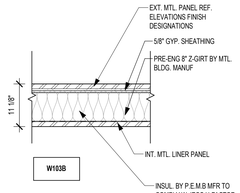

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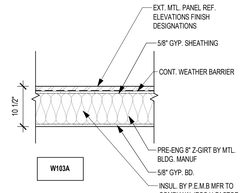

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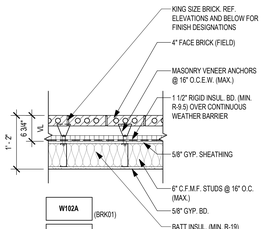
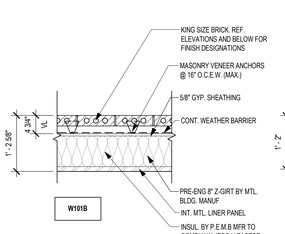


W102A (BRK01)
W102B (BRK02)



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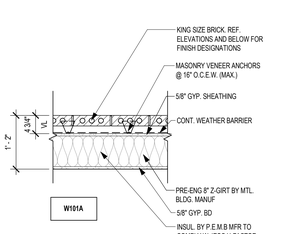

W101A

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRENT N. BANNISTER
21160
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

EXTERIOR WALL & INTERIOR PARTITION TYPES

Job No. 1971-05-01
Drawn By: JT
Date: 09/18/2025
Sheet No. G3.01

ISSUED FOR BID

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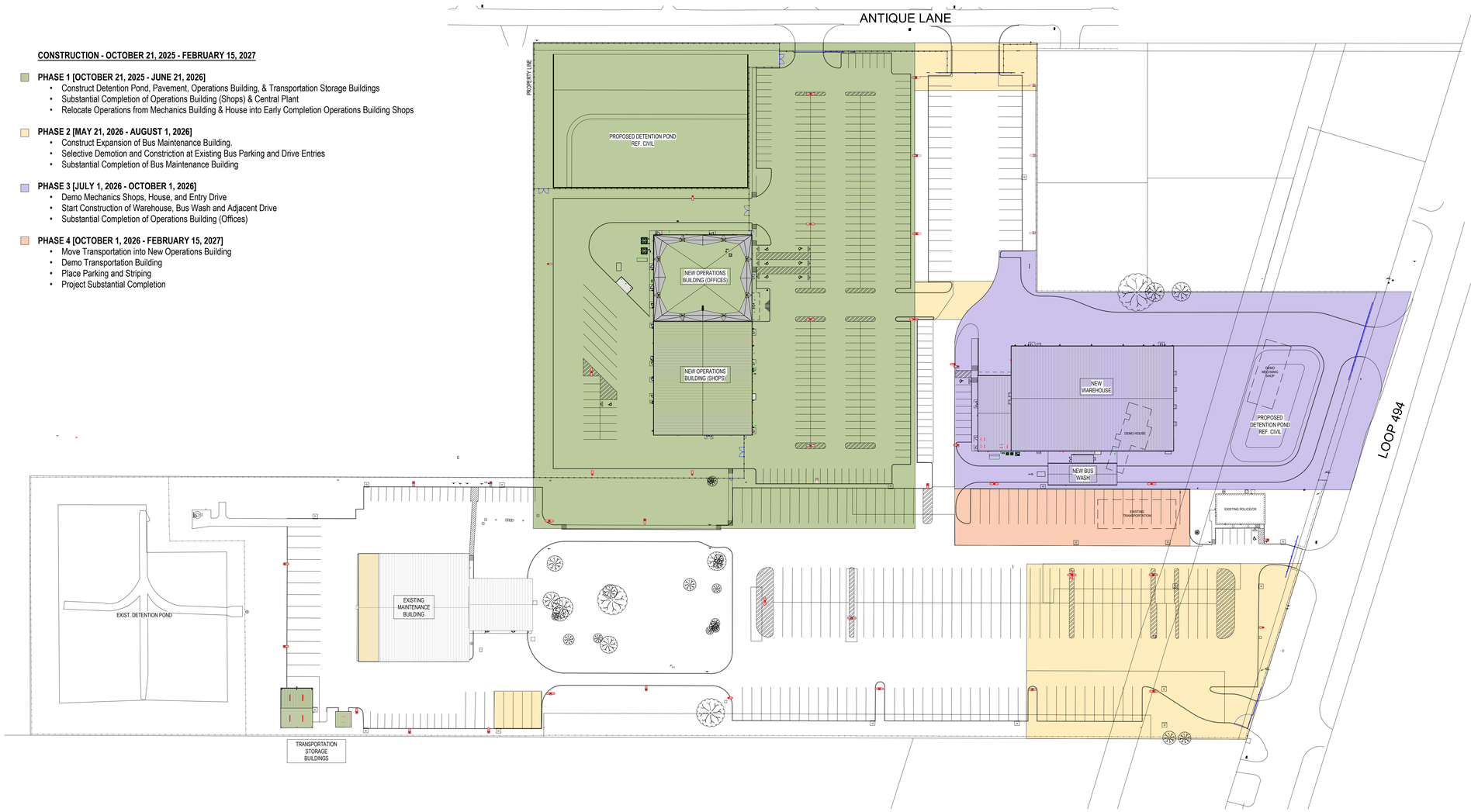
CONSTRUCTION - OCTOBER 21, 2025 - FEBRUARY 15, 2027

PHASE 1 [OCTOBER 21, 2025 - JUNE 21, 2026]
- Construct Detention Pond, Pavement, Operations Building, & Transportation Storage Buildings
- Substantial Completion of Operations Building (Shops) & Central Plant
- Relocate Operations from Mechanics Building & House into Early Completion Operations Building Shops

PHASE 2 [MAY 21, 2026 - AUGUST 1, 2026]
- Construct Expansion of Bus Maintenance Building.
- Selective Demotion and Constriction at Existing Bus Parking and Drive Entries
- Substantial Completion of Bus Maintenance Building

PHASE 3 [JULY 1, 2026 - OCTOBER 1, 2026]
- Demo Mechanics Shops, House, and Entry Drive
- Start Construction of Warehouse, Bus Wash and Adjacent Drive
- Substantial Completion of Operations Building (Offices)

PHASE 4 [OCTOBER 1, 2026 - FEBRUARY 15, 2027]
- Move Transportation into New Operations Building
- Demo Transportation Building
- Place Parking and Striping
- Project Substantial Completion



1 MASTER PHASING PLAN
1" = 60'-0"

N
TRUE

Revision / Date

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

REGISTERED ARCHITECT
PATRICK R. BARRINGTON
37169
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

PHASING PLAN

Job No. 1971-05-01	Sheet No. G4.01
Drawn By: JT	
Date: 09/18/2025	

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DIVISION 3 - CONCRETE
03 3000 - CAST-IN-PLACE CONCRETE

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
COS	CONCRETE, SEALED	SHERWIN WILLIAMS	H&C CLARISHIELD			NATURAL LOOK			

03 3543 - BONDED ABRASIVE POLISHED CONCRETE FLOORS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
COP	CONCRETE, POLISHED			CLEAR	3" THICK TOPPING SLAB				CLEAR SEALANT

DIVISION 4 - MASONRY
04 2000 - UNIT MASONRY

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
BRK01	BRICK MASONRY UNIT	CLOUD CERAMICS		COFFEE	KING	VELOUR	RUNNING BOND	FEILD BRICK	
BRK02	BRICK MASONRY UNIT	CLOUD CERAMICS		DOVE GREY	KING	VELOUR	RUNNING BOND	ACECENT BRICK	

DIVISION 5 - METALS
05 5000 - METAL FABRICATIONS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
	METAL GUARDRAILS & HANDRAILS, EXTERIOR					GALVANIZED			
	METAL GUARDRAILS, INTERIOR			CUSTOM: SATUEED MUSHROOM 417-5					CCE COLOR CAST 0Z 32 64 128 W1 WHITE - 14 - - B1 BLACK - 27 - 1 R2 MAROON - 11 - - Y3 DEEP GOLD 2 11 1 1
	METAL HANDRAILS, INTERIOR			STAINLESS STEEL					

DIVISION 6 - WOOD-PLASTICS
06 8316 - FIBERGLASS REINFORCED PANELING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
FRP01	FIBERGLASS REINFORCED PANELING	PANOLAM	FRP	SILVER FRP					

DIVISION 7 - THERMAL AND MOISTURE PROTECTION
07 6200 - SHEET METAL FLASHING AND TRIM

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
	SHEET METAL FLASHING & TRIM			MATCH MP02					
	GUTTERS & DOWNSPOUTS			MATCH MP02					

DIVISION 8 - OPENINGS
08 1113 - HOLLOW METAL DOORS AND FRAMES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
HM	HOLLOW METAL, INTERIOR			CUSTOM: SATUEED MUSHROOM 417-5					CCE COLOR CAST 0Z 32 64 128 W1 WHITE - 14 - - B1 BLACK - 27 - 1 R2 MAROON - 11 - - Y3 DEEP GOLD 2 11 1 1
HM	HOLLOW METAL, EXTERIOR	SHERWIN WILLIAMS		SANDERLING / SW7513					

08 1416 - FLUSH WOOD DOORS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
SC	SOLID CORE (DOOR)			PL02					

08 3323 - OVERHEAD COILING DOORS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
OCD	OVERHEAD COILING DOORS			MATCH MP01					

08 4313 - ALUMINUM FRAMED STOREFRONTS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
AL	ALUMINUM	KAWNEER		CLEAR ANODIZED					

DIVISION 9 - FINISHES
09 3000 - TILING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
BAT01	BASE, ALUMINUM TRIM	SCHLUTER	DILEX-AHKA	SATIN ANODIZED ALUMINUM					
TC01	TILE, CERAMIC	DALTILE	COLOR WHEEL LINEAR	ALMOND	6"x18"	GLOSSY		MULTI-USER RESTROOM WALLS, FIELD	
TC02	TILE, CERAMIC	DALTILE	COLOR WHEEL LINEAR	ARCHITECTURAL GREY	6"x18"	GLOSSY		MULTI-USER RESTROOM WALLS, ACCENT	
TP01	TILE, PORCELAIN	DALTILE	SYNCHRONIC	BIEGE	12"x24"			CORRIDOR WALLS	
TP02	TILE, PORCELAIN	DALTILE	SYNCHRONIC	TAUPE	12"x24"			CORRIDOR FLOORS	
TP03	TILE, PORCELAIN	DALTILE	CALGARY	LEGACY	12"x24"	MATTE		SINGLE-USER RESTROOM WALLS, FIELD	
TP04	TILE, PORCELAIN	DALTILE	CALGARY	FAWN	12"x24"	MATTE		SINGLE-USER RESTROOM FLOOR AND ACCENT WALL TILE	
GR01	GROUT	MAPEI							

09 5100 - ACOUSTICAL CEILINGS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
L1	LAY-IN SUSPENDED CEILING	ARMSTRONG	SCHOOLFINE FISSURED 1728	WHITE, U.N.O.	2'x2'x5/8"	NON DIRECTIONAL			STANDARD

09 6500 - RESILIENT FLOORING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
BR01	BASE, RUBBER	TARKETT	BASEWORKS THERMOSET RUBBER	PEPPERCORN					
LVT01	LAYERED VINYL TILE	TARKETT	CONTOUR WOOD	MEDLEY MAPLE					
RTR01	RUBBER TREADS AND RISERS	JOHNSONITE	ANGLED FIT RUBBER STAIR TREAD & INTEGRATED RISER	PEPPERCORN		RAISED ROUNDS			

09 6723 - RESINOUS FLOORING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
BRES01	BASE, RESINOUS INTEGRAL	DEX-O-TEX		DFS-B-12	6" CONT.			MULTI-USER RESTROOM	
RES01	RESINOUS FLOORING	DEX-O-TEX		DFS-B-12				MULTI-USER RESTROOM	

09 6813 - TILE CARPETING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
WOM	WALK-OFF MAT	TARKETT	ASSERTIVE ACTION	FUSION					

09 6816 - SHEET CARPETING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
CPT01	CARPET, SHEET	TARKETT	CREATE BALANCE	TOGETHER					

09 9000 - PAINTING AND COATING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
EPNT01	PAINT, EPOXY	SHERWIN WILLIAMS		FUNCTIONAL GRAY					
EPNT02	PAINTED, EPOXY	SHERWIN WILLIAMS		DRIFT OF MIST					
PNT01	PAINT	SHERWIN WILLIAMS		FUNCTIONAL GRAY					
PNT02	PAINT	SHERWIN WILLIAMS		CUSTOM - CENTRAL OFFICE GREY					CCE COLORANT 0Z 32 64 128 B1-BLACK - 14 - - R2-MAROON - 1 1 - Y3-DEEP GOLD - 12 1 -
PNT03	PAINT	SHERWIN WILLIAMS		DRIFT OF MIST					

DIVISION 10 - SPECIALTIES
10 1400 - SIGNAGE

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
	EXTERIOR SIGNAGE								
	INTERIOR ROOM SIGNS	APCO		PL02					TYPE A: OFFICES
	INTERIOR ROOM SIGNS	APCO		PL02					TYPE B: GENERAL LOCATIONS
	INTERIOR ROOM SIGNS	APCO		PL02					TYPE C: RESTROOM
	INTERIOR ROOM SIGNS	APCO		PL02					TYPE D: PICTOGRAM

10 2113.19 - PLASTIC TOILET COMPARTMENTS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
TAP	TOILET ACCESSORY, PARTITION	SCRANTON PRODUCTS	HINY HIDERS	BLACK					CLASS A, NFPA 286

10 2239 - FOLDING PANEL PARTITIONS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
OP	OPERABLE PARTITION	MODERCO	SIGNATURE 800	CARPET, TO BE SELECTED FROM MANUF. FULL RANGE OF COLORS					

10 2600 - WALL AND DOOR PROTECTION

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
CG	CORNER GUARD	ACROVYN		OYSTER GRAY					

10 5100 - LOCKERS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
LCK	LOCKERS	REPUBLIC STORAGE	SINGLE POINT II CORRIDOR	DOVE GRAY	18X18X36 (DOUBLE TIER)				

DIVISION 12 - FURNISHINGS
12 3200 - MANUFACTURED WOOD CASEWORK

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
PL01	PLASTIC LAMINATE	WILSONART		HI RISE				COUNTERTOP & WINDOW SILLS	
PL02	PLASTIC LAMINATE	WILSONART		FRISTON ASH				DOORS/DRAWERS	

12 3600 - COUNTERTOPS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
SSM01	SOLID SURFACE MATERIAL	CORIAN		ARTIC ICE				RR/SHOWER B100 & B101; CORRIDOR B110	

DIVISION 13 - SPECIAL CONSTRUCTION
13 3419 - METAL BUILDING SYSTEMS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
MP01	METAL WALL PANEL	BERRIDGE	'R' PANEL	SIERRA TAN	36" X 1-1/4"		VERTICAL		
MP02	METAL ROOF PANEL	BERRIDGE	DOUBLE-LOCK ZEE-LOCK PANEL	COPPER BROWN	2" RIB				
MP03	METAL WALL PANEL	BERRIDGE	'R' PANEL	MATCH EXISTING				MECHANICS SHOP	
MS	METAL SOFFIT PANELS	BERRIDGE	FW-12	COPPER BROWN	12"	WITHOUT GROOVES		ENTRY CANOPY	

DIVISION 14 - ELEVATORS
14 2400 - HYDRAULIC ELEVATORS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES
	ELEVATOR CAB FLOOR			LVT01					
	ELEVATOR CAB WALLS			PL02					
	ELEVATOR HOISTWAY DOORS			STAINLESS STEEL					

REFER TO PROJECT SPECIFICATIONS SECTION 09 9000 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

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MATERIAL TYPE — FINISH COLOR AND MATERIAL SIZE AS NOTED

ACB - ACOUSTICAL CEILING BAFFLE
ACC - ACOUSTICAL CEILING CLOUD
ACMU - ARCHITECTURAL CONCRETE MASONRY UNIT
AL - ALUMINUM (DOORS AND FRAMES)
AP - ACOUSTICAL PANELS
AWC - ACOUSTICAL WALL COVERING
B - HORIZONTAL BLINDS
BCT - BASE, COVE FLOOR-TO-WALL TRANSITION
BRES - BASE, RESINOUS INTEGRAL
BRK - BRICK
BR - BASE, RUBBER
BRV - BASE, RUBBER VENTED
BTC - BASE, TILE, CERAMIC
BTG - BACK-PAINTED, TEMPERED GLASS
BTM - BASE, TILE, MOSAIC
BTP - BASE, TILE, PORCELAIN
BTQ - BASE, TILE, QUARRY
BTZ - BASE, TERRAZZO PRECAST
BWD - BASE, WOOD
BVSF - BASE, VINYL SHEET FLOORING
CC - CUBICLE CURTAIN
CCD - COILING COUNTER DOOR
CDAP - CUSTOM DIGITALLY PRINTED ACOUSTIC PANEL
CDF - CUSTOM DIGITAL FILM
CDW - CUSTOM DIGITAL WALLCOVERINGS
CG - CORNER GUARD
COP - CONCRETE, POLISHED
COS - CONCRETE, SEALED
COST - CONCRETE, STAINED
CPT - CARPET, SHEET
CS - CAST STONE
CSM - CONCRETE STONE MASONRY
CSMU - CALCIUM SILICATE MASONRY UNIT
CT - CARPET, TILED
CWF - CUSTOM WINDOW FILM
DCT - DECORATIVE CONTRETE TOPPING
DEW - DRY ERASE WALLCOVERING
EPNT - EPOXY PAINT
ERC - EPOXY RESIN COUNTERTOP
FRP - FIBERGLASS REINFORCED PLASTIC PANEL SYSTEM
FSS - FIXED SUN SCREENS
GFRC - GLASS FIBER REINFORCED CONCRETE
GRF - GROUND FACE CMU (BURNISHED)
HM - HOLLOW METAL
IFP - INTUMESCENT FIRE PROTECTION
L - LAY-IN SUSPENDED CEILING TILE
LCK - LOCKERS
LCS - LINEAR CEILING SYSTEM
LF - LINOLEUM FLOORING
LVT - LUXURY VINYL TILE
LWS - LINEAR WALL SYSTEM
MB - MARKER BOARD
MCM - METAL COMPOSITE MATERIAL
MP - METAL WALL PANEL
MRP - METAL ROOF PANEL
MS - METAL SOFFIT
NS - NATURAL STONE
OCD - OVERHEAD COILING DOOR
OCG - OVERHEAD COILING GRILLE
OHGL - OVERHEAD GLASS DOOR
OP - OPERABLE PARTITION
PC - PROTECTIVE COVERS
PCP - PORTLAND CEMENT PLASTER
PL - PLASTIC LAMINATE
PLP - PLASTIC LAMINATE PANEL SYSTEM
PNT - PAINT
PWC - PAINT, WOOD CASEWORK
QTZ - QUARTZ SURFACING
RAFF - RESILIENT ATHLETIC FLUID FLOORING
RAFS - RUBBER ATHLETIC FLOORING SHEET
RAFV - RESILIENT ATHLETIC FLOORING VINYL
RES - RESINOUS FLOORING
RP - RESIN PANEL
RS - RUBBER SHEET
RT - RUBBER TILE
RTR - RUBBER TREADS AND RISERS
S - WINDOW SHADES
SAC - SEAMLESS ACOUSTICAL CEILING SYSTEM
SB - BLACKOUT WINDOW SHADES
SC - SOLID CORE (DOOR)
SM - MOTORIZED WINDOW SHADES
SMB - MOTORIZED BLACKOUT WINDOW SHADES
SPEC - SPECIAL FINISHES, REF. ROOM FINISH SCHEDULE & INTERIOR ELEVATIONS
SPF - SPLIT-FACE CONCRETE MASONRY UNIT
SS - STAINLESS STEEL
SSM - SOLID SURFACE MATERIAL
STG - STAGE CURTAIN
TAP - TOILET ACCESSORY, PARTITION
TB - TACK BOARD
TC - TILE, CERAMIC
TM - TILE, MOSAIC
TP - TILE, PORCELAIN
TQ - TILE, QUARRY
TRC - TERRACOTTA RAINSCREEN CLADDING
TS - TACKABLE SURFACE
TZ - TERRAZZO
TZP - TERRAZZO, PRECAST STAIR TREADS AND RISERS
TZT - TERRAZZO TILE
UP - UPHOLSTERY
VCT - VINYL COMPOSITION TILE
VSF - VINYL SHEET FLOORING
VTR - VINYL TREADS AND RISERS
VWC - VINYL WALL COVERING
WAF - WOOD ATHLETIC FLOORING
WDF - WOOD FLOORING
WMS - WOOD MASONITE FLOOR SYSTEM
WOM - WALK-OFF MAT
WOT - WALK-OFF TILE
WVC - WOOD VENEER CASEWORK

FINISH KEY (NOT ALL ABBREVIATIONS MAY BE USED)

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Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRENT N. BANNISTER
21163
STATE OF TEXAS
09-18-2025

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SCHEDULE OF MATERIALS AND COLORS

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GRADING CONSTRUCTION NOTES

1. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES, UTILITY LOCATIONS AND DIMENSIONS BEFORE STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
2. BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.
3. THE CONTRACTOR SHALL GRADE THE SITE AS INDICATED BY THE SPOT ELEVATIONS, CONTOUR LINES AND SLOPE ARROWS. ALL GRADING SHALL VARY UNIFORMLY BETWEEN SPOT ELEVATIONS SHOWN. WHEN SPOT ELEVATIONS ARE SHOWN ALONG THE EDGE OF PAVEMENT, CURB, SIDEWALK, ETC., THE GRADING SHALL VARY UNIFORMLY ALONG THAT EDGE. THE CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE WITH NO STANDING WATER.
5. DITCH AND SWALE SIDESLOPES SHALL BE 5:1 (HORZ:VERT) FROM FLOWLINE OF DITCH OR SWALE TO THE TOP OF BANK UNLESS NOTED OTHERWISE.
6. SITE TO BE CLEARED OF FENCES, POWER POLES, VEGETATION, DEBRIS, ETC. AS NECESSARY TO COMPLETE PROJECT OR AS DIRECTED BY ENGINEER. STRIPPINGS, IF CLEAN, ARE TO BE STOCKPILED AND USED AS DRESSING FOR GRADING, OTHERWISE THE STRIPPINGS SHALL BE DISPOSED OF BY THE CONTRACTOR.
7. ALL DEBRIS AND/OR WASTE MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY. ALL ASSOCIATED COSTS SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
8. BACKFILL TO TOP OF NEW PAVEMENT OR CURBS WITH CLEAN SOIL FREE OF CLODS. ALL DISTURBED AREAS AND AREAS REQUIRING GRADING SHALL BE FINE GRADED. REMOVE ALL TRASH/DEBRIS AND PROVIDE A SMOOTH SURFACE FOR PROPER TURF MANAGEMENT. APPLY HYDROMULCH TO ALL DISTURBED AREAS NOT NOTED TO RECEIVE SOLID SOD OR OTHER STABILIZATION.
9. GRASS ISLANDS SHALL BE BACKFILLED TO TOP OF CURB. PROVIDE MINIMUM 3% GRADE UP TO CENTER OF ISLAND TO PROVIDE ADEQUATE SHEET FLOW OVER TOP OF CURB.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING AND PROPOSED STRUCTURES TO FINISH GRADE.

WATERLINE CONSTRUCTION NOTES

1. WATER LINES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
2. WATER LINES AND FITTINGS SMALLER THAN 2" SHALL CONFORM TO ALL REQUIREMENTS OF ASTM D-1784 SCH 40.
3. 2" THROUGH 3" WATER LINES SHALL BE ASTM D-2241 SDR 21 PVC PIPE.
4. 4" THROUGH 12" WATER LINES SHALL BE AWWA C-900 PVC DR-18 BLUE PRESSURE RATED WATER MAIN.
5. 2" AND LARGER FITTINGS SHALL BE MECHANICAL JOINT FITTINGS CONFORMING WITH AWWA C-153.
6. ALL WATER LINES TO HAVE 4' MINIMUM COVER TO FINISH GRADE AND MINIMUM 12" CLEARANCE TO OTHER UTILITIES AT CROSSING UNLESS OTHERWISE NOTED ON PLANS. ALL WATER LINE INSTALLED OVER 8' DEEP SHALL UTILIZE RESTRAINED JOINT FITTINGS.
4. ALL TRENCH BACKFILL SHALL BE PLACED IN 8 INCH LIFTS AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 92% OF THE MAXIMUM DRY DENSITY FOR LANDSCAPED AREAS OR 95% OF THE MAXIMUM DRY DENSITY FOR PAVED AREAS AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99).
5. CONTRACTOR SHALL KEEP WATER PIPE CLEAN AND CAP (OR OTHERWISE EFFECTIVELY COVER) OPEN PIPE ENDS TO EXCLUDE INSECTS, ANIMALS OR OTHER SOURCES OF CONTAMINATION FROM UNFINISHED PIPE LINES AT TIMES WHEN CONSTRUCTION IS NOT IN PROGRESS.
6. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AS NECESSARY TO PREVENT PIPE MOVEMENT.
7. WHERE WATER LINES AND NEW SANITARY SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN 9' THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) OR 30 TAC §290.44(E). THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 12" VERTICAL CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS AND A MINIMUM OF 24" VERTICAL CLEARANCE AT WATER LINE AND SANITARY SEWER CROSSINGS.
8. ALL WATER VALVES SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C-509 AND SHALL BE OF THE RESILIENT SEAT TYPE.
9. ALL WATER LINES TO BE DISINFECTED IN CONFORMANCE WITH AWWA C-651 AND THE TEXAS STATE DEPARTMENT OF HEALTH. AT LEAST ONE BACTERIOLOGICAL SAMPLE SHALL BE COLLECTED FOR EVERY 1,000 LINEAR FEET OF WATER LINE AND SHALL BE REPEATED IF CONTAMINATION PERSISTS.
10. ALL WATER PIPE SHALL BE TESTED FOR LEAKAGE AT 125 PSI FOR A PERIOD OF 8 HOURS. TESTS ARE TO BE PERFORMED ON THE ENTIRE FOOTAGE OF WATER LINE INCLUDED IN THE PROJECT.

SANITARY SEWER CONSTRUCTION NOTES

1. NORMAL BEDDING AND BACKFILL FOR SANITARY SEWER LINES AND STRUCTURES SHALL BE 1.5 SACK PER CUBIC YARD CEMENT STABILIZED SAND TO 12" ABOVE THE PIPE. FOR SANITARY SEWER LINES OR STRUCTURES UNDER OR WITHIN 3' OF PAVEMENT THE CEMENT STABILIZED SAND SHALL BE EXTENDED TO THE BOTTOM OF THE PAVEMENT.
2. ALL MANHOLES ARE TO BE CONSTRUCTED OF PRECAST CONCRETE AND MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF SANITARY SEWER MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE SANITARY SEWER MANHOLE.
3. ALL SANITARY SEWER LINES ENTERING A MANHOLE AT A FLOW LINE GREATER THAN 36" ABOVE THE MANHOLE INVERT MUST BE PROVIDED WITH AN EXTERNAL DROP CONNECTION AND HAVE THE INVERT FILLETED.
4. SANITARY SEWER MANHOLE RIMS OUTSIDE OF PROPOSED PAVING WILL BE SET 3" - 6" ABOVE THE SURROUNDING LEVEL FINISHED GRADE WITH SLOPED BACKFILL ADDED FOR STORM WATER TO DRAIN AWAY FROM MANHOLE RIM.
5. ALL SANITARY SEWER MANHOLE COVERS SHALL HAVE THE CASTING CURRENTLY USED BY THE AUTHORITY HAVING JURISDICTION AND MUST INCLUDE THE WORDS "SANITARY SEWER". MANHOLES SHALL HAVE STAINLESS STEEL INSERTS (INFLOW PREVENTERS).
6. SANITARY SEWER PIPE AND FITTINGS SMALLER THAN 8" SHALL CONFORM TO TO ASTM D-1784 SCH 40.
7. SANITARY SEWER PIPE AND FITTINGS 8" AND LARGER SHALL CONFORM WITH ASTM D3034 SDR 26 SEWER PIPE, ASTM D2241 SDR 26 PRESSURE RATED SEWER PIPE OR AWWA C-900 DR-18 GREEN PVC PRESSURE RATED SEWER PIPE BASED ON CONSTRUCTION CONDITION REQUIREMENTS.
8. ALL BENDS IN THE LINES SHALL BE MADE WITH EITHER "WYES" OR DOUBLE 45° BENDS, NO 90° BENDS SHALL BE USED.
9. ALL TRENCH BACKFILL SHALL BE PLACED IN 8 INCH LIFTS AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 92% OF THE MAXIMUM DRY DENSITY FOR LANDSCAPED AREAS OR 95% OF THE MAXIMUM DRY DENSITY FOR PAVED AREAS AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99).
10. CONTRACTOR SHALL PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF 9' BETWEEN WATER LINES AND SANITARY SEWER MANHOLES AND LINES.
11. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN 9' THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) OR 30 TAC §290.44(E).
12. DEFLECTION TESTS MUST BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIDGID SANITARY SEWER PIPES IN ACCORDANCE WITH 30 TAC §217.57(B).
13. ALL SANITARY SEWER MANHOLES MUST BE VACUUM TESTED IN ACCORDANCE WITH 30 TAC §217.58(B)(2).
14. ALL SANITARY SEWER LINES MUST BE LOW PRESSURE AIR TESTED IN ACCORDANCE WITH 30 TAC §217.57(A)(1).
15. ALL SANITARY SEWER MANHOLES MUST BE TESTED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC §217.58.

STORM SEWER CONSTRUCTION NOTES

1. NORMAL BEDDING AND BACKFILL FOR STORM SEWER LINES SHALL BE 1.5 SACK PER CUBIC YARD CEMENT STABILIZED SAND TO 12 INCHES ABOVE THE PIPE. FOR STORM SEWER LINES UNDER OR WITHIN 3 FEET OF PAVEMENT OR STRUCTURES THE CEMENT STABILIZED SAND SHALL BE EXTENDED TO THE BOTTOM OF THE PAVEMENT OR STRUCTURE.
2. ALL STRUCTURES ARE TO BE CONSTRUCTED OF PRECAST CONCRETE. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF STORM SEWER STRUCTURES.
3. STORM SEWER SHALL BE HIGH DENSITY POLYETHYLENE CORRUGATED EXTERIOR/SMOOTH INTERIOR PIPE (ASTM F2306) WITH WATER TIGHT JOINTS (ASTM D3212) OR REINFORCED CONCRETE PIPE (C-76, CLASS III) WITH RUBBER GASKET JOINTS (ASTM C443), UNLESS OTHERWISE SHOWN ON THE DRAWINGS. STORM SEWER LESS THAN 12" IN NOMINAL DIAMETER MUST BE ASTM D3034 SDR 26 SEWER PIPE.
4. HIGH DENSITY POLYETHYLENE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION OR THE PLANS/SPECIFICATIONS; WHICHEVER IS MORE RESTRICTIVE
5. ALL TRENCH BACKFILL SHALL BE PLACED IN 8 INCH LIFTS AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 92% OF THE MAXIMUM DRY DENSITY FOR LANDSCAPED AREAS OR 95% OF THE MAXIMUM DRY DENSITY FOR PAVED AREAS AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99).
6. ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES AND INLET LEADS ARE TO BE PLUGGED WITH 8" BRICK WALLS UNLESS OTHERWISE NOTED.
7. MINIMUM HORIZONTAL CLEARANCE BETWEEN ANY STORM PIPE OR STRUCTURE SHALL BE AT LEAST 48 INCHES FROM EXTERIOR OF THE STORM PIPE OR STRUCTURE TO THE EXTERIOR OF THE EXISTING OR PROPOSED UTILITY AND OTHER APPURTENANCES. MINIMUM VERTICAL CLEARANCE BETWEEN ANY STORM PIPE OR STRUCTURE SHALL BE AT LEAST 12 INCHES FROM EXTERIOR OF THE STORM PIPE OR STRUCTURE TO THE EXTERIOR OF THE EXISTING OR PROPOSED UTILITY AND OTHER APPURTENANCES.
8. ALL BUILDING AND CANOPY DOWNSPOUTS SHALL BE CONNECTED TO THE UNDERGROUND STORM SEWER SYSTEM WITH ASTM D3034 SDR 26 SEWER PIPE, AT A MINIMUM GRADE OF 1.00% UNLESS NOTED OTHERWISE. LINES SHALL BE A 6 INCH MINIMUM FOR DOWNSPOUTS. ONCE TWO OR MORE DOWNSPOUTS ARE CONNECTED THE COLLECTOR LINE SHALL BE 12" UNLESS NOTED OTHERWISE. WHERE DOWNSPOUT COLLECTORS ARE LOCATED IN PAVED AREAS, PROVIDE A 24"X24" BLOCKOUT AROUND PIPE. REFER TO DETAILS.
8. ALL BENDS IN THE LINES SHALL BE MADE WITH EITHER "WYES" OR DOUBLE 45° BENDS, NO 90° BENDS SHALL BE USED.
9. THE CONTRACTOR SHALL INSTALL DRIVEWAY CULVERT(S), SET'S, AND JUNCTION BOX(ES) LOCATED IN THE RIGHT-OF-WAY PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
10. ALL DITCHES SHALL BE GRADED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY DRAINAGE SYSTEM DISTURBED AS A RESULT OF THIS WORK.

PAVING CONSTRUCTION NOTES

1. FILL AREAS ON PLANS SHALL BE FILLED IN LAYERS NOT EXCEEDING 8" IN DEPTH AND EACH COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY.
2. EXISTING PAVEMENTS, CURBS, DRIVEWAYS, AND SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO THE STANDARDS OF THE AUTHORITY HAVING JURISDICTION.
3. SIDEWALKS AND WHEEL CHAIR RAMPS SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT ADDITION TEXAS ACCESSIBILITY STANDARDS (TAS).
4. THE CONTRACTOR SHALL SUBMIT A DRAWING SHOWING THE PROPOSED POURING PLAN AND ANY MODIFICATIONS TO THE PROPOSED JOINT LAYOUT TO THE ENGINEER FOR REVIEW.
5. REFERENCE THE ARCHITECTURAL SITE PLAN FOR SIDEWALK JOINT PATTERN. SIDEWALK JOINTS SHALL ALIGN WITH PAVING JOINTS WHEN SIDEWALK IS ADJACENT TO PAVING.
6. THE PAVEMENT JOINTING PLAN SHALL BE COORDINATED WITH THE LOCATION OF INLETS, MANHOLES LIGHT POLES, ETC. IN PAVED AREAS.
7. SAWED JOINTS ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS.
8. SAWING OF JOINTS MUST BEGIN AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO AVOID EXCESSIVE RAVELING. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
9. EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN BUILDING FOUNDATIONS AND PERIMETER CONCRETE PAVING. SEAL JOINT AS REQUIRED FOR PAVING JOINTS.
10. REFER TO STRUCTURAL FOR ANY DOWELS REQUIRED TYING THE BUILDING FOUNDATION AND ADJACENT CONCRETE PAVING TOGETHER.
11. WHERE NEW CONCRETE PAVING MEETS EXISTING CONCRETE PAVING, SAW CUT AND EXPOSE 15" OF EXISTING REINFORCING STEEL. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS (#6 BARS 24" LONG) 24" C-C DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL. WHEN PAVING UP TO BUILDING FOUNDATIONS, ALSO INSTALL IMPREGNATED FIBER BOARD EXPANSION MATERIAL WITH TOP PULL STRIP FOR CAULKING.
12. CONCRETE PAVEMENT SHALL BE PLACED DIRECTLY ON COMPACTED STABILIZED SUBGRADE. STABILIZED SUBGRADE SHALL EXTEND A MINIMUM OF 2-FT BEYOND BACK OF CURB AND/OR EDGE OF PAVEMENT, WHERE SIDEWALK IS ADJACENT TO THE PAVEMENT THE SUBGRADE SHALL EXTEND TO THE EDGE OF THE WALK OR A MAXIMUM OF 10-FT. SAND LEVELING OF SIDEWALKS IS NOT ALLOWED.
13. PAVEMENT SUBGRADE SHALL BE STABILIZED BY MIXING LIME OR A LIME-FLY ASH MIXTURE INTO THE SUBGRADE AT THE RATE AND DEPTH DETERMINED BY THE GEOTECHNICAL ENGINEER.

CIVIL GENERAL CONSTRUCTION NOTES

1. ALL CONTRACT ITEMS SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATION AND THE REQUIREMENTS OF ANY LOCAL AUTHORITIES HAVING JURISDICTION.
2. THE CONTRACTOR SHALL NOTIFY ALL AUTHORITIES HAVING JURISDICTION A MINIMUM OF 48-HOURS IN ADVANCE OF COMMENCING CONSTRUCTION FOLLOWED BY A LETTER OF CONFIRMATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR CONSTRUCTION.
4. THE DRAWINGS SHOW AS MUCH INFORMATION AS CAN BE REASONABLY OBTAINED FROM ON THE GROUND OBSERVATION AND EXISTING CONSTRUCTION DRAWINGS REGARDING THE TOPOGRAPHY, CONTOURS, SUB-SURFACE SOILS, LOCATION AND NATURE OF PIPELINES, STORM SEWERS, WATERLINES, NATURAL GAS LINES, UNDERGROUND CABLES, ETC. HOWEVER, THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION IS NOT GUARANTEED.
5. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE BEGINNING CONSTRUCTION. VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK.
6. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTACTING THE SURVEYOR AND VERIFYING THE BENCHMARK AND ON SITE TBM'S IN THE FIELD.
7. IRON RODS OR BENCHMARKS DISTURBED DURING CONSTRUCTION ARE TO BE REPLACED BY A REGISTERED PUBLIC LAND SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
8. CONSTRUCTION STAKING WILL BE PROVIDED BY THE CONTRACTOR. TWO COPIES OF STAKING NOTES SHALL BE PROVIDED TO THE OWNER PRIOR CONSTRUCTION.
9. THE CONTRACTOR STAGING AREA SHALL BE DETERMINED BY THE CONTRACTOR WITH CONCURRENCE BY THE OWNER PRIOR TO BEGINNING CONSTRUCTION.
10. INGRESS AND EGRESS SHALL BE PROVIDED FOR TRAFFIC DURING CONSTRUCTION.
11. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS A MINIMUM OF TWO WEEKS PRIOR TO BLOCKING DRIVEWAYS OR ENTERING EASEMENTS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIAL AND EQUIPMENT STORED ON THE JOBSITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF MATERIALS IN A SAFE AND WORKMANLIKE MANNER TO PREVENT INJURIES, DURING AND AFTER WORKING HOURS, UNTIL PROJECT COMPLETION.
13. THE CONTRACTOR SHALL COMPLY WITH O.S.H.A. REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION. CONTRACTOR SHALL PROVIDE SHEETING, SHORING AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION.
14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE PROJECT SITE REASONABLY AND IN USEABLE CONDITION THROUGHOUT THE PROGRESS OF THE WORK. AT THE COMPLETION OF THE PROJECT ALL EXCESS MATERIALS, TRASH AND DEBRIS, ETC., SHALL BE REMOVED FROM THE JOB BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER AND THE SITE LEFT IN A CLEAN AND WORKMANLIKE CONDITION BEFORE FINAL ACCEPTANCE.
15. THE CONTRACTOR SHALL KEEP ALL STREETS FREE OF DIRT, MUD, ETC. DURING THE COURSE OF CONSTRUCTION.
16. UPON COMPLETION OF THE WORK THE CONDITION OF THE ROAD, RIGHT-OF-WAY AND/OR DISTURBED AREAS SHALL BE RESTORED TO AS GOOD OR BETTER CONDITION THAN EXISTED PRIOR TO THE START OF CONSTRUCTION.
17. UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF SEDIMENT IN ALL DRAINAGE STRUCTURES IMPACTED BY THE WORK.
18. THE CONTRACTOR IS RESPONSIBLE FOR MOWING MAINTENANCE AND CLEAN-UP OF THE PROJECT FOR THE ENTIRE LIMITS OF THE PROJECT AND FOR THE ENTIRE DURATION OF THE PROJECT, REGARDLESS OF THE CONTRACTOR'S SCOPE OF ACTIVITIES WITHIN THE PROJECT LIMITS.
19. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION OF NEW SWALES/DITCHES AND MAINTAINING EXISTING DITCHES AND/OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AUTHORITY.
20. THE REMOVAL OR RELOCATION OF ANY UTILITIES, CULVERTS, FENCES, ETC. REQUIRED TO COMPLETE THE WORK IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY PROTECTING EXISTING STRUCTURES, UTILITIES, PAVEMENT, PAVEMENT MARKINGS, TREES, SHRUBS, FENCES AND OTHER IMPROVEMENTS TO REMAIN FROM DAMAGE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER AT THE CONTRACTOR'S EXPENSE.
22. IT IS THE CONTRACTOR'S RESPONSIBILITY TO STOCKPILE NECESSARY MATERIAL ON-SITE OR SECURED OFF-SITE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SPOILS FROM STORM SEWER, ROADWAY AND CHANNEL EXCAVATION, IF SUITABLE, SHALL BE CONSUMED BEFORE FILL IS BROUGHT ON SITE.
23. ALL FILL UNDER AND WITHIN FIVE (5) FEET OF PAVEMENT, SIDEWALKS AND STRUCTURES SHALL BE COMPACTED TO 95% ASTM D698 DRY DENSITY. FILL IN ALL OTHER AREAS SHALL BE COMPACTED TO 92% OF ASTM D968 DRY DENSITY.
24. THE CONTRACTOR SHALL NOT LEAVE ANY TRENCHES OR PITS OPEN OVER NIGHT. ALL OPEN CUTS SHALL BE COVERED WITH STEEL PLATES WHEN WORK IS NOT IN PROGRESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP THE PUBLIC OUT OF THE WORK AREA.
25. THE CONTRACTOR SHALL MAINTAIN UPDATED REDLINE RECORD DRAWINGS ON SITE FOR INSPECTION BY THE OWNER.
26. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH THE MOST RECENT EDITION OF "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT NO ADDITIONAL COST TO THE OWNER.
27. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA PRIOR TO COMMENCING WORK. CONTRACTOR SHALL NOTIFY TEXAS 811 AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.
28. THE CONTRACTOR SHALL COORDINATE WITH ANY OTHER CONTRACTOR(S) OF ANY TRADE OR DISCIPLINE WORKING ADJACENT TO THE PROJECT PRIOR TO AND THROUGHOUT CONSTRUCTION.
29. WHEELCHAIR RAMPS SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT TXDOT & TAS STANDARDS AT ALL INTERSECTIONS WHERE SIDEWALKS EXIST OR ARE TO BE CONSTRUCTED AS PART OF THIS PROJECT.
30. EXCAVATION, BEDDING AND BACKFILL SHALL BE INCIDENTAL TO THE PAY ITEMS FOR PIPE AND SHALL NOT BE PAID FOR DIRECTLY. REFER TO DETAILS. IF WET SAND CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER IMMEDIATELY.
31. MANHOLES, JUNCTION BOXES, INLETS AND RISERS ARE TO BE PRE-CAST OR CAST-IN-PLACE.
32. PIPE SLEEVES ARE TO BE 6" PVC, SCHEDULE 40 PIPE CAPPED AT EACH END. THE TOP OF THE PIPE SLEEVE SHALL BE 12" TO 18" BELOW THE BOTTOM OF CONCRETE PAVEMENT OR WALK. EACH END SHALL EXTEND A MINIMUM OF TWO (2) FEET BEYOND THE EDGE OF CONCRETE PAVEMENT OR WALK. LOCATION OF EACH END TO BE MARKED IN CURB OR PAVEMENT WITH BRASS BOLTS.
33. MARK LOCATIONS OF ALL CABLE AND TELEPHONE LINES EXTENDING BENEATH PAVING BY SETTING A 60D GALVANIZED NAIL FLUSH WITH TOP OF CURB (OR TOP OF PAVEMENT WHERE THERE IS NO CURB).
34. CONNECTION TO EXISTING MANHOLES / INLETS SHALL BE MADE IN A NEAT AND WORKMANLIKE MANNER. NON-SHRINK GROUT SHALL BE USED TO SEAL THE CONNECTION ON BOTH THE INSIDE AND OUTSIDE OF EXISTING MANHOLES / INLETS. ANY DAMAGE TO EXISTING STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
35. EXISTING UTILITIES SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PERIOD, UNTIL SUCH TIME THAT NEW UTILITIES CAN BE MADE OPERATIONAL.
36. THE CONTRACTOR SHALL EXPOSE ALL EXISTING UTILITIES WHERE THEY CROSS PROPOSED UTILITIES AND ENSURE THAT THERE ARE NO CONFLICTS PRIOR TO BEGINNING CONSTRUCTION. ADDITIONALLY, CONTRACTOR SHALL PLAN UTILITY LINE INSTALLATIONS IN A MANNER TO AVOID CONFLICTS WITH PROPOSED UTILITIES.
37. WHEN CONNECTING TO EXISTING SANITARY SEWERS OR STORM DRAINAGE SYSTEMS, THE CONTRACTOR SHALL START AT THE DOWNSTREAM END AND PROCEED UPSTREAM. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF THE UPSTREAM AND DOWNSTREAM CONNECTIONS PRIOR TO STARTING WORK. IF ELEVATIONS ARE NOT AS SHOWN ON THE DRAWINGS, CONTACT THE ENGINEER. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR START UPSTREAM AND WORK DOWNSTREAM. ANY OTHER WORK SEQUENCE WILL BE AT THE CONTRACTOR'S RISK.
38. THE CONTRACTOR SHALL INSTALL AN 24-INCH WIDE STRIP OF BERMUDA GRASS SOLID SOD ADJACENT TO ALL CURBS, DRIVES, WALKS AND/OR INLETS. COORDINATE W/LANDSCAPE DRAWINGS.
39. MATCH ALL ELEVATIONS WHERE PROPOSED PAVEMENT ADJOINS EXISTING PAVEMENT.

CIVIL CLOSEOUT REQUIREMENTS

IN ADDITION TO ALL ITEMS LISTED IN THE SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE FOLLOWING ITEMS AS PART OF THE CLOSEOUT DOCUMENTS:

1. AN AS-BUILT SURVEY COMPLETED BY A TEXAS REGISTERED PROFESSIONAL LAND SURVEYOR. THE AS-BUILT SURVEY SHALL BE IN THE SAME VERTICAL AND HORIZONTAL DATUM AS THE PROJECT DOCUMENTS AND CLEARLY SHOW THE CONSTRUCTED HORIZONTAL AND AND VERTICAL DATA FOR ALL IMPROVEMENTS. AS-BUILT SURVEY SHOTS SHALL BE TAKEN AT THE SAME LOCATIONS AS SHOWN ON THE PLANS FOR EASE OF COMPARISON. AT A MINIMUM THE SURVEY MUST INCLUDE THE FOLLOWING ITEMS:
   - BUILDINGS, PAVEMENT, CURBS, SIDEWALKS, DRIVEWAYS, FENCES, AND APPURTENANCES
   - WATER LINES AND APPURTENANCES INCLUDING (METERS, BACKFLOW PREVENTERS, VALVES, FIRE HYDRANTS, VAULTS, ETC.)
   - SEWER PIPES AND STRUCTURES (INCLUDING CLEANOUTS)
   - STORM PIPES AND STRUCTURES (INCLUDING CLEANOUTS)
   - FORCE MAINS, GAS MAINS, ELECTRIC AND COMMUNICATION DUCT BANKS AND OTHER UTILITIES (INCLUDING METERS, PULL BOXES, CABINETS, TRANSFORMERS, AND OTHER ITEMS)
   - IRRIGATION LINES (2-INCH AND LARGER)
2. SIGNED DOCUMENTATION OF THE HYDROSTATIC TESTING OF THE WATER LINES.
3. COPIES OF BACTERIAL TEST RESULTS FROM THE TESTING LABORATORY.
4. COPIES OF THE TELEVISION INSPECTION OF THE SANITARY SEWER SYSTEM AND ASSOCIATED TELEVISION INSPECTION REPORTS.
5. SIGNED DOCUMENTATION OF THE DEFLECTION TESTS PERFORMED ON ALL FLEXIBLE AND SEMI-RIDGID SANITARY SEWER PIPES.
6. SIGNED DOCUMENTATION OF THE VACUUM TEST ON ALL SANITARY SEWER MANHOLES.
7. SIGNED DOCUMENTATION OF THE LOW PRESSURE AIR TEST FOR ALL SANITARY SEWER PIPES.

EROSION CONTROL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPMENT, IMPLEMENTATION, INSPECTION, AND MAINTENANCE OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. ANY EROSION CONTROL SHOWN IN THESE DRAWINGS IS PROVIDED FOR PERMITTING/REFERENCE ONLY.
2. THE CONTRACTOR IS REQUIRED TO SUBMIT A NOTICE OF INTENT (NOI) TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) AND PAY ANY FEES AT LEAST 7 DAYS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITIES. THE CONTRACTOR SHALL PROVIDE A COPY OF THE NOI AND A DECLARATION THAT IT HAS BEEN SUBMITTED TO THE ENGINEER.
3. CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES, REINFORCED FILTER FABRIC BARRIERS, ROCK FILER DAMS, ETC. AS REQUIRED TO KEEP SILT AND/OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.
4. 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.
5. 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.
6. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
7. 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 B

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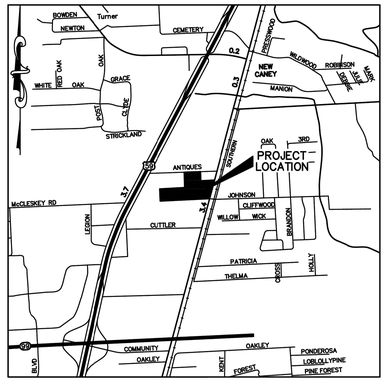
VICINITY MAP



KEY MAP 256Q
SCALE 1" = 3000'

100 0 50 100 200
SCALE: 1"=100'

JOHNSON COMMUNITY SUBDIVISION
VOL. 5, PG. 140, M.C.M.R.

LOT 5 | LOT 4 | LOT 3 | LOT 2

ANTIQUE LANE
(60' R.O.W.)
VOL. 5, PG. 140, M.C.M.R.

N85°38'W ±7271' (SCALED)

JAMES H. STEWART SURVEY, A-668
FINLEY MCNAUGHTON SURVEY, A-1591

N87°00'15"E 635.55'

1" I.P. FND.
X=3,912,596.67
Y=10,053,456.21

10' GULF STATES UTILITY EASEMENT
VOL. 412, PG. 585, M.C.D.R.

10' B.L.

POWER POLE ON LINE

1/2" I.R. FND.

TRACT I
CALLED
0.557 ACRES
IGLESIA CRISTIANA
VIDA NUEVA
M.C.C.F. No.
2012060105

S03°04'13"E 314.62'

LOT 11
JOHNSON COMMUNITY SUBDIVISION
VOL. 5, PG. 140, M.C.M.R.

TRACT II
CALLED
0.54 ACRES
IGLESIA CRISTIANA
VIDA NUEVA
M.C.C.F. No.
2012060105

CALLED 0.54 ACRE
KRISTI STALLINGS
M.C.C.F. No.
2006011204

CALLED 0.68 ACRE
ROBCO REAL
ESTATE, L.L.C.
M.C.C.F. No.
9619052

5/8" I.R. FND.
BRS. N70°10'E, 0.45'
X=3,913,686.55
Y=10,053,199.40

N86°51'52"E 438.59'

5/8" I.R. SET W/CAP
"WEST BELT SURVEYING INC."

LOT 8
JOHNSON COMMUNITY
SUBDIVISION
VOL. 5, PG. 140, M.C.M.R.

REMAINDER OF LOT 8
JAYCO STEEL SERVICES, INC.
M.C.C.F. No. 9236822

N03°03'46"W 548.93'

BLOCK
1

RESTRICTED RESERVE "A"
(RESTRICTED TO SCHOOL
AND RELATED USES)

22.102 ACRES
(962,763 SQ. FT.)

10' WATER LINE EASEMENT
M.C.C.F. NO. 2020022244

LOT 7
JOHNSON COMMUNITY SUBDIVISION
VOL. 5, PG. 140, M.C.M.R.

KEY LIFE FELLOWSHIP
M.C.C.F. No. 2009115833

N87°07'36"E 634.81'

5/8" I.R. SET W/CAP
"WEST BELT SURVEYING INC."

3/4" I.P. FND.

CALLED 4.00 ACRES
KEY LIFE FELLOWSHIP
M.C.C.F. No. 2022002456

N03°12'14"W 327.16'

25' B.L.

S14°08'03"W 590.66'

LOOP 494 (OLD U.S. HWY 59)
(100' R.O.W.)
VOL. 124, PG. 549, M.C.D.R.

10' WATER LINE EASEMENT
M.C.C.F. NO. 2020022243

5/8" I.R. SET W/CAP
"WEST BELT SURVEYING INC."
X=3,913,541.90
Y=10,052,626.48

30' ELECTRIC EASEMENT
M.C.C.F. NO. 2008015841

3/4" I.P FND.
X=3,912,010.27
Y=10,052,549.60

S87°07'36"W 1533.57'

TRACT 1
CALLED 1.000 ACRES
STEVEN CRAIG SPRINGER
AND
SUMMER LOVE SPRINGER
M.C.C.F. No. 2022003943

CALLED 4.91 ACRES
STEVEN CRAIG SPRINGER
AND
SUMMER LOVE SPRINGER
M.C.C.F. No. 2022003940

CALLED 5.00 ACRES
JOHNNY W. GREATHOUSE
M.C.C.F. No. 2003002858

CALLED 3.92 ACRES
MIGUEL A. BARRERA
AND WIFE,
MAGDALENA E. BARRERA
M.C.C.F. No. 2002101029

CALLED 3.80 ACRES
DONNA ELAINE COTTON
M.C.C.F. No. 2020117310

CALLED 0.95 ACRES
RIOS FUNERAL DIRECTOS @
GREENLAWN, LLC
M.C.C.F. No. 2016116773

CALLED 2.8236 ACRES
MICHAEL G. WISDOM
M.C.C.F. NO. 99008063

ABBREVIATIONS

BRS.–BEARS
ESMT.–EASEMENT
FND.–FOUND
I.R.–IRON ROD
M.C.C.F.–MONTGOMERY COUNTY CLERK'S FILE
M.C.D.R.–MONTGOMERY COUNTY DEED RECORDS
No.–NUMBER
PG.–PAGE
R.O.W.–RIGHT–OF–WAY
SQ. FT.–SQUARE FEET
VOL.–VOLUME

NOTES:

1. The coordinates shown hereon are Texas Central Zone No. 4203, State Plane Coordinates (NAD83) and may be brought to surface (Local Coordinates) by dividing the depicted coordinate by the following combined scale factor of 0.999992566410 (X÷S.F.=SURFACE VALUE).

2. Bearings depicted hereon are based on Texas State Plane Coordinate System, Central Zone (NAD83).

3. Unless otherwise indicated, the building lines [B.L.], whether one or more, shown on this subdivision plat are established to evidence compliance with applicable provisions of Chapter 42, Code of Ordinances, City of Houston, Texas, in effect at the time this plat was approved, which may be amended from time to time.

4. Absent written authorization by the affected utilities, all utility and aerial easements must be kept unobstructed from any non–utility improvements or obstructions by the property owner. Any unauthorized improvements or obstructions may be removed by any public utility at the property owner's expense. While wooden posts and paneled wooden fences along the perimeter and back to back easements and alongside rear lots lines are permitted, they too may be removed by public utilities at the property owner's expense should they be an obstruction. Public Utilities may put said wooden posts and paneled wooden fences back up, but generally will not replace with new fencing.

REFERENCE BENCHMARK:

BL2200 – NGS Monument BL2200 is a brass disk stamped "Keefer 1942" set on top of concrete monument located on the property of Southwestern Bell Telephone Company at 17521 Railroad Avenue ±74' southwest from the most southwest corner of building, ±106' southwest from the southeast corner of building and ±64' east of the centerline of Railroad Avenue.
Elevation = 112.53' (NAVD 88)

BENCHMARK:

3" Brass disk stamped "NCISD" in a 6" concrete column located on the northwesterly side of Loop 494 ±22' north and ±22' west of the southeast corner of the subject tract.
Elevation = 98.23'

NEW CANEY ISD OPERATIONS AND TRANSPORTATION

A SUBDIVISION OF
22.102 ACRES
BEING A REPLAT OF LOTS 9, 10, 12 AND 16 OF JOHNSON COMMUNITY SUBDIVISION
VOL. 5, PG. 14. M.C.M.R.
OUT OF THE
FINLEY MCNAUGHTON SURVEY,
ABSTRACT NO. 392
MONTGOMERY COUNTY, TEXAS

1 BLOCK 1 RESERVE

REASON FOR REPLAT:
TO CREATE ONE RESERVE RESTRICTED TO SCHOOL AND RELATED USES

JUNE 2025

WEST BELT
SURVEYING, INC.

21020 PARK ROW
KATY, TEXAS 77449

PHONE: (281) 599-8288
FAX: (281) 492-6026

CERTIFIED FIRM NO. 10073800

OWNER:
NEW CANEY INDEPENDENT SCHOOL DISTRICT
21580 LOOP 494
NEW CANEY, TEXAS 77357
281-577-8600

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

Huckabee
www.huckabee-inc.com
800.687.1229

DRAWING SCALE
HORIZ: N/A
VERT: N/A

AURIC PROJECT NUMBER
0131.0101

PLAT

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

Job No. 1971-05-01
Drawn By: Author
Date: 09/10/25
Sheet No. C1.01

ISSUED FOR BID

PLOTTED: 9/17/2025 4:15 PM
PLOT STYLE: AURIC2.0.STB
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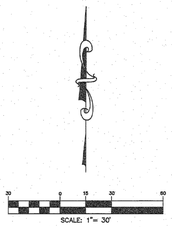
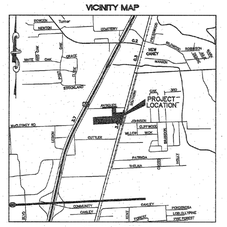
LEGEND

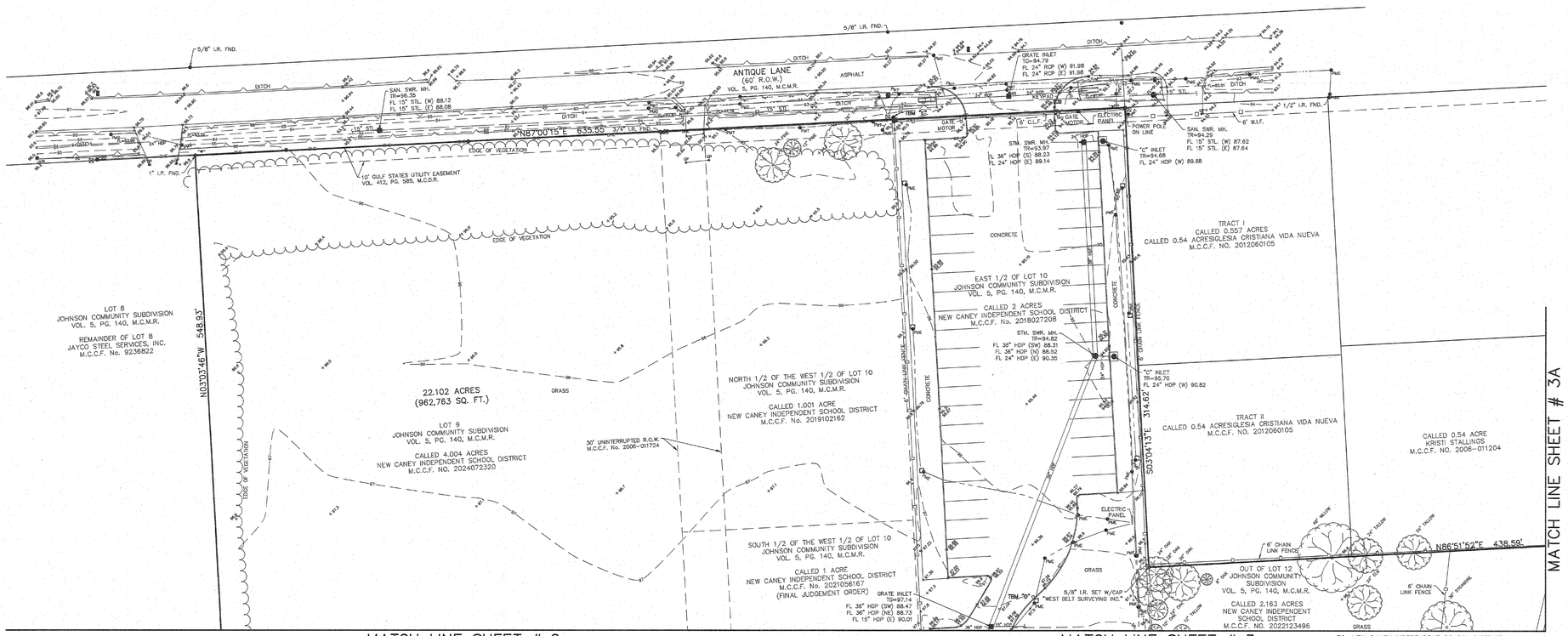
- AIR CONDITIONING UNIT
- BENCHMARK
- BOLLARD
- "C" INLET
- CLEANOUT
- DOWN SPOUT
- ELECTRIC JUNCTION BOX
- FIRE HYDRANT
- FLAG POLE
- GAS METER
- GATE POST
- GRATE TOP MANHOLE
- GUY WIRE
- HOSE BIB
- INLET
- IRRIGATION CONTROL VALVE
- LIGHT STANDARD
- MAILBOX
- MANHOLE
- PAINT MARKER (ELECTRIC)
- PAINT MARKER (GAS)
- PAINT MARKER (TELEPHONE)
- PEDESTAL
- POWER POLE
- SAMPLE WELL
- SIGN
- WATER METER
- WATER VALVE
- WELL
- WHEEL STOP
- YARD LIGHT

ABBREVIATIONS

B.L.–BUILDING LINE
C.L.F.–CHAIN LINK FENCE
FF–FINISH FLOOR
FL–FLOW LINE
FND.–FOUND
HDP–HIGH DENSITY POLYETHYLENE PIPE
I.P.–IRON 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
PG.–PAGE
PTG–PIPE TO GROUND
PVC–POLYVINYL CHLORIDE PIPE
RCP–REINFORCED CONCRETE PIPE
R.O.W.–RIGHT–OF–WAY
SAN.–SANITARY
STL–STEEL
STM.–STORM
SWR.–SEWER
TG–TOP OF GRATE
TR–TOP OF RIM
TYP.–TYPICAL
UGV–UNDERGROUND VAULT
VOL.–VOLUME
W.I.F.–WROUGHT IRON FENCE
W.F.–WOOD FENCE







SURVEYOR'S NOTES:

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

2. THE CAD FILE OF THE DRAWING SHOWN HEREIN IS BASED ON TEXAS SOUTH CENTRAL ZONE NO. 4204, STATE PLANE SURFACE VALUE (NAD83) AND MAY BE CONVERTED TO GRID BY SCALING THE DRAWING BY THE FOLLOWING COMBINED SCALE FACTOR OF 0.999992566410.

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. ALL UTILITIES SHOWN HEREON ARE LOCATED USING "APPARENT & VISIBLE" EVIDENCE BY ON–SITE OBSERVATION UNLESS OTHERWISE NOTED.

5. THE SUBJECT TRACT IS AFFECTED BY THE CITY OF HOUSTON ORDINANCE No. 85–1878, AMENDED BY ORDINANCE No. 1999–262.

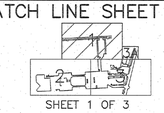
REFERENCE BENCHMARK:

NGS PID BL2200 – BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

TEMPORARY BENCHMARKS:

TBM "D" – BOX CUT ON CONCRETE LIGHT STANDARD BASE LOCATED ±360' SOUTH FROM THE INTERSECTION OF ANTIQUE LANE AND ENTRANCE TO SITE.
ELEVATION=99.78'

TBM "E" – COTTON SPINDLE IN POWER POLE LOCATED ON THE SOUTH SIDE OF ANTIQUE LANE ±80' WEST OF THE DRIVE TO SITE.
ELEVATION=96.57'



TO: NEW CANEY INDEPENDENT SCHOOL DISTRICT

THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS MANUAL OF PRACTICE REQUIREMENTS FOR A CATEGORY 1B, CONDITION 3 & CATEGORY 6, CONDITION 1 SURVEY AND THE CURRENT MINIMUM REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYING ACT.

5/22/25
DATE

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

NEW CANEY INDEPENDENT SCHOOL DISTRICT

BOUNDARY & TOPOGRAPHIC SURVEY

NEW OPERATIONS BUILDING
22.102 ACRE TRACT
OUT OF THE
FINLEY McNAUGHTON SURVEY
ABSTRACT NO. 392
MONTGOMERY COUNTY, TEXAS

WEST BELT
SURVEYING, INC.
21920 PARK ROW
KATY, TX. 77449
PHONE: (281) 599-8288
FAX: (281) 492-9020
CERTIFIED FIRM NO. 100738900

NO.	DATE	REVISIONS	BY

DRAWN BY: DB	CHECKED BY: MDL
SCALE: 1"=30'	APPROVED BY: JDW
PROJECT NO. S639–0012H	DATE: MAY 22, 2025

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Revision / Date

Project:

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

Huckabee
www.huckabee-inc.com
800.687.1229

DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	N/A	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

TOPOGRAPHIC SURVEY (SHT 1 OF 3)

Job No.	Sheet No.
1971-05-01	C1.02
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:16 PM
PLOT STYLE: AURIC2.0.STB
FILE PATH: C:_PROJECTS\AECOM\CS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C1.02 TOPOGRAPHIC SURVEY (SHT 1 OF 3).DWG

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LEGEND

- AIR CONDITIONING UNIT
- BENCHMARK
- BOLLARD
- "C" INLET
- CLEANOUT
- DOWN SPOUT
- ELECTRIC JUNCTION BOX
- FIRE HYDRANT
- FLAG POLE
- GAS METER
- GATE POST
- GRATE TOP MANHOLE
- GUY WIRE
- HOSE BIB
- INLET
- IRRIGATION CONTROL VALVE
- LIGHT STANDARD
- MAILBOX
- MANHOLE
- PAINT MARKER (ELECTRIC)
- PAINT MARKER (GAS)
- PAINT MARKER (TELEPHONE)
- PEDESTAL
- POWER POLE
- SAMPLE WELL
- SIGN
- WATER METER
- WATER VALVE
- WELL
- WHEEL STOP
- YARD LIGHT

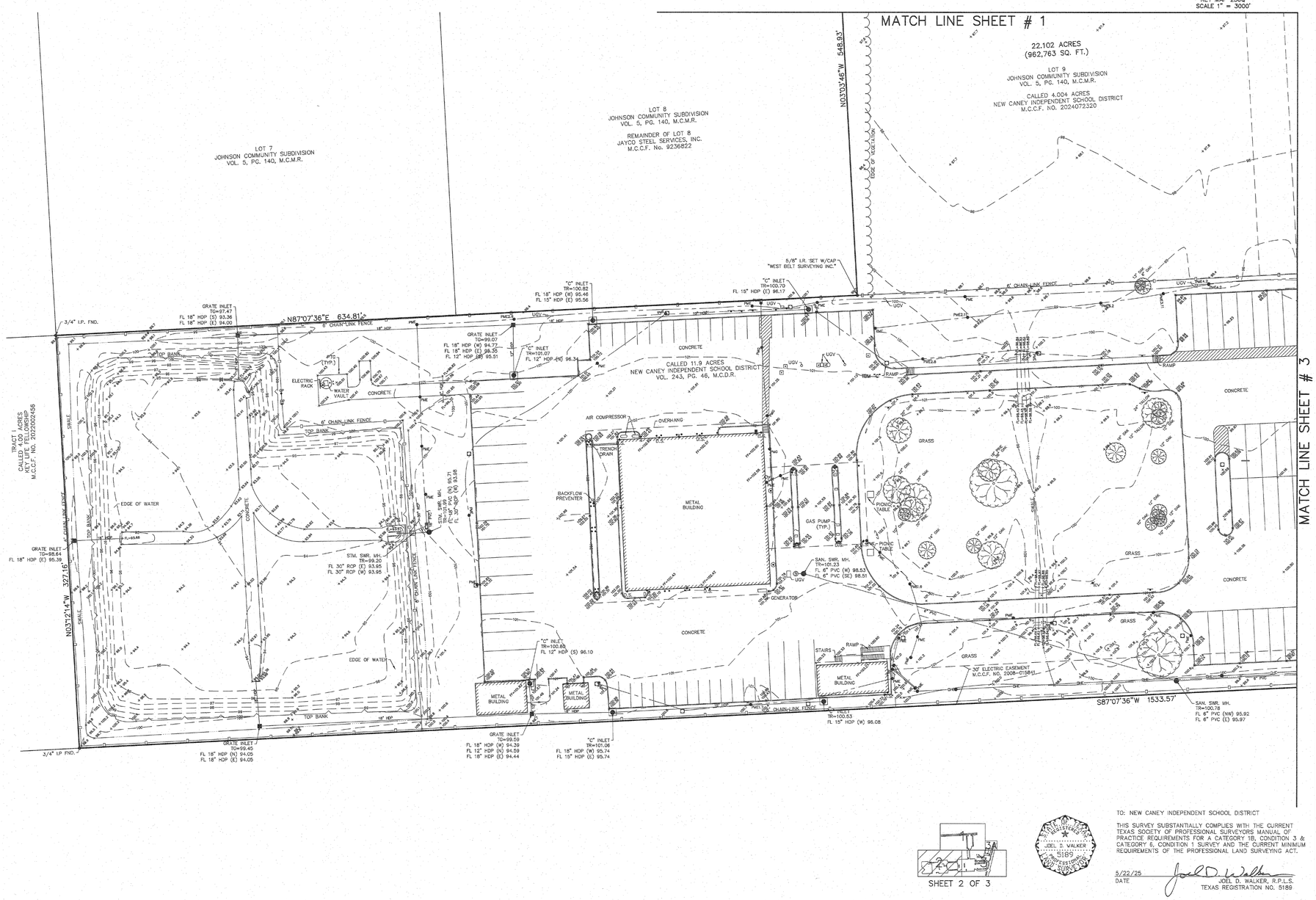
ABBREVIATIONS

B.L.–BUILDING LINE
C.L.F.–CHAIN LINK FENCE
FF–FINISH FLOOR
FL–FLOW LINE
FND.–FOUND
HDP–HIGH DENSITY POLYETHYLENE PIPE
I.P.–IRON 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
PG.–PAGE
PTG–PIPE TO GROUND
PVC–POLYVINYL CHLORIDE PIPE
RCP–REINFORCED CONCRETE PIPE
R.O.W.–RIGHT–OF–WAY
SAN.–SANITARY
STL.–STEEL
STM.–STORM
SWR.–SEWER
TG–TOP OF GRATE
TR–TOP OF RIM
TYP.–TYPICAL
UGV–UNDERGROUND VAULT
VOL.–VOLUME
W.I.F.–WROUGHT IRON FENCE
W.F.–WOOD FENCE

SCALE: 1" = 30'

VICINITY MAP

KEY MAP 256Q
SCALE 1" = 3000'



SHEET 2 OF 3

MATCH LINE SHEET # 3

SURVEYOR'S NOTES:

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

2. THE CAD FILE OF THE DRAWING SHOWN HEREIN IS BASED ON TEXAS SOUTH CENTRAL ZONE NO. 4204, STATE PLANE SURFACE VALUE (NAD83) AND MAY BE CONVERTED TO GRID BY SCALING THE DRAWING BY THE FOLLOWING COMBINED SCALE FACTOR OF 0.999992566410.

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. ALL UTILITIES SHOWN HEREON ARE LOCATED USING "APPARENT & VISIBLE" EVIDENCE BY ON–SITE OBSERVATION UNLESS OTHERWISE NOTED.

5. THE SUBJECT TRACT IS AFFECTED BY THE CITY OF HOUSTON ORDINANCE No. 85–1878, AMENDED BY ORDINANCE No. 1999–262.

REFERENCE BENCHMARK:

NGS PID BL2200 – BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±7.4' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

TEMPORARY BENCHMARKS:

TBM "C" – BOX CUT ON CONCRETE LIGHT STANDARD BASE LOCATED ±112' NORTHWEST FROM THE NORTHWEST CORNER OF MAINTENANCE BUILDING.
ELEVATION=103.69'

TO: NEW CANEY INDEPENDENT SCHOOL DISTRICT

THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS MANUAL OF PRACTICE REQUIREMENTS FOR A CATEGORY 1B, CONDITION 3 & CATEGORY 6, CONDITION 1 SURVEY AND THE CURRENT MINIMUM REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYING ACT.

5/22/25
DATE

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

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

NEW CANEY INDEPENDENT SCHOOL DISTRICT

BOUNDARY & TOPOGRAPHIC SURVEY

NEW OPERATIONS BUILDING
22.102 ACRE TRACT
OUT OF THE
FINLEY McNAUGHTON SURVEY
ABSTRACT NO. 392
MONTGOMERY COUNTY, TEXAS

WEST BELT
SURVEYING, INC.
21020 PARK ROW
KATY, TX. 77449
PHONE: (281) 599-9888
FAX: (281) 492-0029
CERTIFIED FIRM NO. 100728600

NO.	DATE	REVISIONS	BY

DRAWN BY: DB	CHECKED BY: MDL
SCALE: 1"=30'	APPROVED BY: JDW
PROJECT NO. S639–0012H	DATE: MAY 22, 2025

DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	N/A	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

Huckabee
www.huckabee-inc.com
800.687.1229

TOPOGRAPHIC SURVEY (SHT 2 OF 3)

Job No. 1971-05-01	Sheet No. C1.03
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:16 PM
PLOT STYLE: AURICO.CTB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\13-CIVIL\06-DRAWINGS\03-SHEETS\C1.03 TOPOGRAPHIC SURVEY (SHT 2 OF 3).DWG

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LEGEND

- AIR CONDITIONING UNIT
- BENCHMARK
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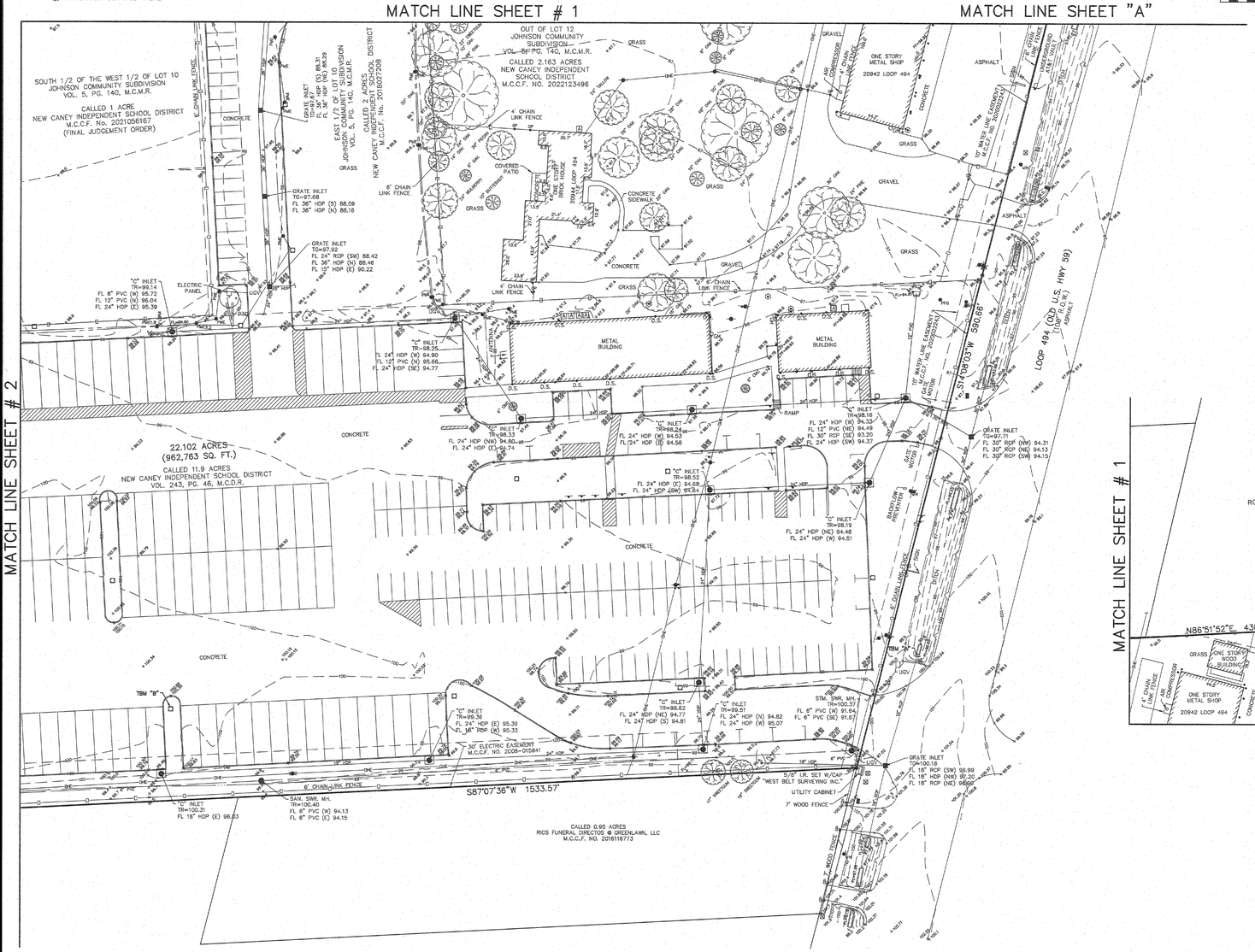
SCALE: 1"= 30'

VICINITY MAP

KEY MAP 256Q
SCALE 1" = 3000'

MATCH LINE SHEET # 1

MATCH LINE SHEET "A"



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ELEVATION = 112.53' (NAVD 88)

TEMPORARY BENCHMARKS:

TBM "A" – BOX CUT ON CONCRETE HEADWALL LOCATED ON THE NORTH SIDE OF THE MOST SOUTHERLY ENTRANCE TO SITE. ELEVATION=98.23'

TBM "B" –BOX CUT ON CONCRETE LIGHT STANDARD BASE LOCATED ±524' WEST FROM THE INTERSECTION OF LOOP 494 AND MOST SOUTHERLY ENTRANCE TO SITE. ELEVATION=103.15'

SHEET 3 OF 3

TO: NEW CANEY INDEPENDENT SCHOOL DISTRICT

THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS MANUAL OF PRACTICE REQUIREMENTS FOR A CATEGORY 1B, CONDITION 3 & CATEGORY 6, CONDITION 1 SURVEY AND THE CURRENT MINIMUM REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYING ACT.

5/22/25
DATE

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

JOEL D. WALKER
5189
REGISTERED PROFESSIONAL LAND SURVEYOR

NEW CANEY INDEPENDENT SCHOOL DISTRICT

BOUNDARY & TOPOGRAPHIC SURVEY

NEW OPERATIONS BUILDING
22.102 ACRE TRACT
OUT OF THE
FINLEY McNAUGHTON SURVEY
ABSTRACT NO. 392
MONTGOMERY COUNTY, TEXAS

WEST BELT SURVEYING, INC.
21400 PARK ROW, KATY, TX. 77449
PHONE: (281) 599-9288
FAX: (281) 492-9529
CERTIFIED FIRM NO. 100738900

NO.	DATE	REVISIONS	BY

DRAWN BY: DB	CHECKED BY: MDL
SCALE: 1"=30'	APPROVED BY: JDW
PROJECT NO. S639–0012H	DATE: MAY 22, 2025

DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	N/A	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED PROFESSIONAL ENGINEER
09/10/25

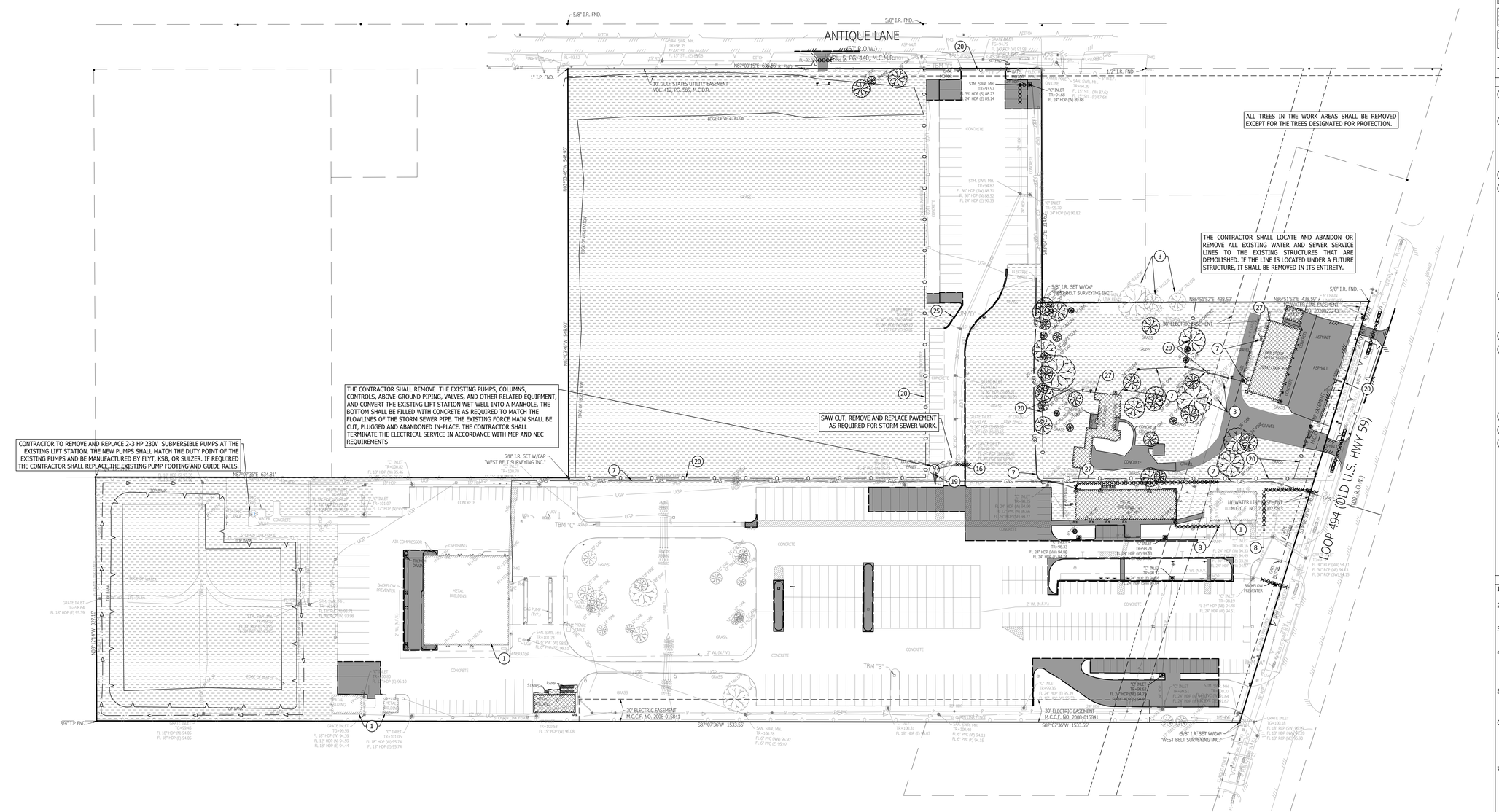
Huckabee
www.huckabee-inc.com
800.687.1229

TOPOGRAPHIC SURVEY (SHT 3 OF 3)

Job No.	Sheet No.
1971-05-01	C1.04
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:16 PM
PLOT STYLE: AURIC2.0.STB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\01-SHEETS\C1.04 TOPOGRAPHIC SURVEY (SHT 3 OF 3).DWG


ANTIQUE LANE
(60' R.O.W.)
VOL. 5, PG. 140, M.C.M.R.
5/8" I.R. FND.
1" I.P. FND.
1/2" I.R. FND.
N87°00'15"E 634.81' (M&B)
N87°00'15"E 634.81'
S87°07'36"W 1533.55'
S87°07'36"W 1533.55'
N87°01'53"E 438.59'
N87°01'53"E 438.59'
5/8" I.R. SET W/CAP "WEST BELT SURVEYING INC."
5/8" I.R. SET W/CAP "WEST BELT SURVEYING INC."
5/8" I.R. FND.
5/8" I.R. FND.
1/2" I.P. FND.
1/2" I.P. FND.
10' GULF STATES UTILITY EASEMENT VOL. 412, PG. 585, M.C.D.R.
30' ELECTRIC EASEMENT M.C.C.F. NO. 2008-015841
30' ELECTRIC EASEMENT M.C.C.F. NO. 2008-015841
30' ELECTRIC EASEMENT
10' WATER LINE EASEMENT M.C.C.F. NO. 2020022743
10' WATER LINE EASEMENT M.C.C.F. NO. 2020022743
EDGE OF VEGETATION
EDGE OF PAVEMENT
N00°03'40"W 458.63'
N00°03'40"W 458.63'
N00°03'40"W 372.18'
S.T.P.
TBM "A"
TBM "B"
TBM "C"
LOOP 494 (OLD U.S. HWY 59)
(160' R.O.W.)
ALL TREES IN THE WORK AREAS SHALL BE REMOVED EXCEPT FOR THE TREES DESIGNATED FOR PROTECTION.
THE CONTRACTOR SHALL LOCATE AND ABANDON OR REMOVE ALL EXISTING WATER AND SEWER SERVICE LINES TO THE EXISTING STRUCTURES THAT ARE DEMOLISHED. IF THE LINE IS LOCATED UNDER A FUTURE STRUCTURE, IT SHALL BE REMOVED IN ITS ENTIRETY.
THE CONTRACTOR SHALL REMOVE THE EXISTING PUMPS, COLUMNS, CONTROLS, ABOVE-GROUND PIPING, VALVES, AND OTHER RELATED EQUIPMENT, AND CONVERT THE EXISTING LIFT STATION WET WELL INTO A MANHOLE. THE BOTTOM SHALL BE FILLED WITH CONCRETE AS REQUIRED TO MATCH THE FLOWLINES OF THE STORM SEWER PIPE. THE EXISTING FORCE MAIN SHALL BE CUT, PLUGGED AND ABANDONED IN-PLACE. THE CONTRACTOR SHALL TERMINATE THE ELECTRICAL SERVICE IN ACCORDANCE WITH MEP AND NEC REQUIREMENTS
SAW CUT, REMOVE AND REPLACE PAVEMENT AS REQUIRED FOR STORM SEWER WORK.
CONTRACTOR TO REMOVE AND REPLACE 2-3 HP 230V SUBMERSIBLE PUMPS AT THE EXISTING LIFT STATION. THE NEW PUMPS SHALL MATCH THE DUTY POINT OF THE EXISTING PUMPS AND BE MANUFACTURED BY FLYT, KSB, OR SULZER. IF REQUIRED THE CONTRACTOR SHALL REPLACE THE EXISTING PUMP FOOTING AND GUIDE RAILS.
STM. SWR. MH TR=93.97 30" HDP (S) 88.23 24" HDP (E) 89.14
STM. SWR. MH TR=94.82 FL 36" HDP (W) 88.51 FL 36" HDP (N) 88.52 FL 24" HDP (E) 90.35
STM. SWR. MH TR=94.70 FL 24" HDP (W) 90.82
STM. SWR. MH TR=94.96 FL 18" STL. (W) 87.62 FL 18" STL. (E) 87.64
STM. SWR. MH TR=94.29 FL 30" HDP (W) 94.31 FL 30" HDP (N) 94.33 FL 30" HDP (NW) 94.15
"C" INLET TR=100.82 FL 18" HDP (W) 95.46
"C" INLET TR=101.07 FL 12" HDP (W) 96.96
"C" INLET TR=100.70 FL 15" HDP (W) 96.08
"C" INLET TR=101.06 FL 18" HDP (W) 94.95 FL 18" HDP (E) 94.95
"C" INLET TR=99.60 FL 18" HDP (W) 94.95 FL 18" HDP (E) 94.95
"C" INLET TR=99.59 FL 18" HDP (W) 94.39 FL 12" HDP (N) 94.59 FL 18" HDP (E) 94.44
"C" INLET TR=100.33 FL 18" HDP (S) 96.10
"C" INLET TR=98.33 FL 24" HDP (NW) 94.99 FL 24" HDP (E) 94.99
"C" INLET TR=98.34 24" HDP (W) 94.93
"C" INLET TR=98.19 FL 24" HDP (W) 94.58 FL 24" HDP (W) 94.51
"C" INLET TR=99.37 FL 24" HDP (W) 95.37
"C" INLET TR=99.51 FL 24" HDP (W) 95.64 FL 24" HDP (W) 95.64
"C" INLET TR=100.12 FL 18" HDP (W) 95.95 FL 18" HDP (NW) 95.95 FL 18" HDP (NW) 95.95
GRATE INLET TG=99.64 FL 18" HDP (S) 95.39
GRATE INLET TG=99.71 FL 18" HDP (W) 93.98
GRATE INLET TG=100.31 FL 18" HDP (W) 95.50 FL 18" HDP (NW) 95.50 FL 18" HDP (NW) 95.50
GRATE INLET TG=100.18 FL 18" HDP (W) 95.95 FL 18" HDP (NW) 95.95 FL 18" HDP (NW) 95.95
SAN. SWR. MH TR=103.23 FL 6" PVC (W) 98.53 FL 6" PVC (SE) 98.53
SAN. SWR. MH TR=100.78 FL 6" PVC (NW) 95.92 FL 6" PVC (E) 95.97
SAN. SWR. MH TR=100.40 FL 6" PVC (W) 94.13 FL 6" PVC (E) 94.15
SAN. SWR. MH TR=100.33 FL 15" HDP (W) 96.08
SAN. SWR. MH TR=100.33 FL 18" HDP (E) 95.03
METAL BUILDING
CONCRETE PAD
AIR COMPRESSOR
OVERHANG
BACKFLOW PREVENTER
PICNIC TABLE
TRASH CAN
GENERATOR
CONCRETE PAD
STAIRS
RAMP
GRASS
CONCRETE
ASPHALT
GRAVEL
CURB INLET
DROP INLET
WATER
SANITARY SEWER
STORM SEWER
UGP
OHP
GAS
FENCE
TREE
SHRUB
SIGN
MAILBOX
GUARDRAIL
CURB
SIDEWALK
DITCH
FLOWLINE
CENTERLINE
PROPERTY LINE
EASEMENT LINE
RIGHT-OF-WAY
BOLLARD
TRAFFIC SIGNAL
TRAFFIC SIGNAL POLE
TRAFFIC SIGNAL CONTROL BOX
TRAFFIC SIGNAL CONDUIT
TRAFFIC SIGNAL CONDUCTOR
TRAFFIC SIGNAL CONTROLLER
TRAFFIC SIGNAL DETECTOR
TRAFFIC SIGNAL PEDESTRIAN PUSH BUTTON
TRAFFIC SIGNAL PEDESTRIAN SIGNAL
TRAFFIC SIGNAL VEHICULAR SIGNAL
TRAFFIC SIGNAL WIRE
TRAFFIC SIGNAL WIRE SPLICE
TRAFFIC SIGNAL WIRE TERMINATION
TRAFFIC SIGNAL WIRE TERMINATION BOX
TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE
TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE AND CONDUIT
TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE AND CONDUIT AND CONDUCTOR
TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE AND CONDUIT AND CONDUCTOR AND CONTROLLER
TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE AND CONDUIT AND CONDUCTOR AND CONTROLLER AND DETECTOR
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TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE AND CONDUIT AND CONDUCTOR AND CONTROLLER AND DETECTOR AND PEDESTRIAN PUSH BUTTON AND PEDESTRIAN SIGNAL
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TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE AND CONDUIT AND CONDUCTOR AND CONTROLLER AND DETECTOR AND PEDESTRIAN PUSH BUTTON AND PEDESTRIAN SIGNAL AND VEHICULAR SIGNAL AND WIRE AND TERMINATION AND BOX
TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE AND CONDUIT AND CONDUCTOR AND CONTROLLER AND DETECTOR AND PEDESTRIAN PUSH BUTTON AND PEDESTRIAN SIGNAL AND VEHICULAR SIGNAL AND WIRE AND TERMINATION AND BOX AND CONDUIT
TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE AND CONDUIT AND CONDUCTOR AND CONTROLLER AND DETECTOR AND PEDESTRIAN PUSH BUTTON AND PEDESTRIAN SIGNAL AND VEHICULAR SIGNAL AND WIRE AND TERMINATION AND BOX AND CONDUIT AND CONDUCTOR
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TRAFFIC SIGNAL WIRE TERMINATION BOX W/ SPLICE AND CONDUIT AND CONDUCTOR AND CONTROLLER AND DETECTOR AND PEDESTRIAN PUSH BUTTON AND PEDESTRIAN SIGNAL AND VEHICULAR SIGNAL AND WIRE AND TERMINATION AND BOX

OFF-SITE AREA RUNOFF CALCULATIONS		
MONTGOMERY COUNTY DRAINAGE CRITERIA MANUAL		
MARCH 26, 2020		
SITE INFORMATION		
SOIL TYPE		C
SANDY CLAY LOAM		
EXISTING SITE RUNOFF CALCULATIONS		
EXISTING IMPERVIOUS AREA		
BUILDINGS	0 SF	0.00 AC
PAVEMENT	0 SF	0.00 AC
SIDEWALKS	0 SF	0.00 AC
PONDS	0 SF	0.00 AC
OTHER	0 SF	0.00 AC
TOTAL	0 SF	0.00 AC
EXISTING TIME OF CONCENTRATION		
SHEET FLOW		
SHEET FLOW DISTANCE		300.00 FT
LAND SLOPE		0.40 %
SURFACE TYPE N VALUE		0.40
WOODS (LIGHT UNDERBRUSH)		
2-YR(50%) 24-HR RAINFALL DEPTH		4.8 IN
SHEET FLOW Tc		80.38 MIN
SHALLOW CONCENTRATED FLOW		
GRASS FLOW DISTANCE		667.00 FT
GRASS SLOPE		0.40 %
GRASS VELOCITY		1.02 FT/S
GRASS Tc		10.89 MIN
PAVEMENT FLOW DISTANCE		0.00 FT
PAVEMENT SLOPE		0.00 %
PAVEMENT VELOCITY		0.00 FT/S
PAVEMENT Tc		0.00 MIN
SHALLOW CONCENTRATED FLOW Tc		10.89 MIN
TOTAL		91.27 MIN
EXISTING PEAK RUNOFF CALCULATIONS		
EXISTING DRAINAGE AREA		13.40 AC
EXISTING IMPERVIOUS AREA		0.00 AC
EXISTING IMPERVIOUS C		0.85
CONCRETE PAVEMENT, ROOFS AND PONDS (< 1% SLOPE)		
EXISTING IMPERVIOUS CN		98.00
PAVED PARKING LOTS, ROOFS, DRIVEWAYS, ETC (EXCLUDING RIGHT-OF-WAY)		
EXISTING PERVIOUS AREA		13.40 AC
EXISTING PERVIOUS C		0.15
WOODLANDS; SANDY SOIL (< 1% SLOPE)		
EXISTING PERVIOUS CN		82.00
WOODS + GRASS COMBINATION; POOR		
EXISTING PERCENT IMPERVIOUS		0.00 %
EXISTING COMBINED C VALUE		0.15
EXISTING COMBINED CURVE NUMBER (CN)		82.00
EXISTING TIME OF CONCENTRATION		91.27 MIN
EXISTING 25-YR(4%) EXISTING RUNOFF DEPTH		9.24 IN
EXISTING 25-YR(4%) RAINFALL INTENSITY		3.03 IN/HR
EXISTING 25-YR(4%) PEAKING FACTOR		1.10
EXISTING 25-YR(4%) EXISTING PEAK RUNOFF		6.70 CFS
EXISTING 100-YR(1%) EXISTING RUNOFF DEPTH		14.19 IN
EXISTING 100-YR(1%) RAINFALL INTENSITY		3.92 IN/HR
EXISTING 100-YR(1%) PEAKING FACTOR		1.25
EXISTING 100-YR(1%) EXISTING PEAK RUNOFF		9.85 CFS

Montgomery County

Engineering Department

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_____ _____

County Engineer Date

ANTIQUE LANE
(60' R.O.W.)
VOL. 5, PG. 140, M.C.M.R.

10' GULF STATES UTILITY EASEMENT
VOL. 412, PG. 505, M.C.D.R.

8.02 AC UNDEVELOPED AREA DRAINING TO ANTIQUE LANE

TC=86.30 MIN
C=0.15
Q25=4.15 CFS
Q100=6.08 CFS

2.00 AC PUMPED TO DETENTION POND AND THEN PUMPED TO TXDOT (AREA ORIGIONALLY DRAINED TO ANTIQUE LANE) AREA WILL BE ROUTED THROUGH THE NEW DETENTION POND

2.18 AC DRAINING DIRECTLY TO TXDOT

FLOW PATH FOR CALCULATING TIME OF CONCENTRATION

4.89 AC DRAINING TO DETENTION POND AND THEN PUMPED TO TXDOT

1.72 AC UNDEVELOPED AREA DRAINING TO ANTIQUE LANE NOT ROUTED THROUGH THE POND

TC=86.30 MIN
C=0.15
Q25=0.89 CFS
Q100=1.30 CFS

5.29 AC DRAINING DIRECTLY TO TXDOT

LOOP 494 (OLD U.S. HWY 59)
(100' R.O.W.)

8.30 AC OFFSITE AREA DRAINING THROUGH PROPERTY

REF: APPROVED PLANS FOR 22777 CUTTER ROAD
TC=15.5 MIN
C=0.15
Q25=9.3 (10.9) CFS
Q100=12.8 (15.3) CFS
(XX.X) FLOW ADJUSTED TO REFLECT ATLAS 14 RAINFALL

13.40 AC OFFSITE AREA DRAINING THROUGH PROPERTY

TC=91.27 MIN
C=0.15
Q25=6.70 CFS
Q100=9.85 CFS

8.69 AC OFFSITE AREA DRAINING TO TXDOT

N

0' 30' 60' 120'

SCALE: 1" = 60'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

EXISTING FLOW PATH
DRAINAGE DIVIDE
LONGEST FLOW PATH

KEY NOTES

NOTES

Texas 811
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DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 60'	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

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Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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EXISTING DRAINAGE PLAN AND CALCULATIONS

Job No. 1971-05-01	Sheet No. C1.06
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:17 PM
PLOT STYLE: AURIC2.0.STB
FILE PATH: C:_PROJECTS\AXCOOC\5\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C1.06 EXISTING DRAINAGE PLAN AND CALCULATIONS.DWG

DETENTION POND SERVICE AREA RUNOFF CALCULATIONS		
MONTGOMERY COUNTY DRAINAGE CRITERIA MANUAL		
MARCH 26, 2020		
SITE INFORMATION		
SOIL TYPE		C
SANDY CLAY LOAM		
PROPOSED SITE RUNOFF CALCULATIONS		
PROPOSED IMPERVIOUS AREA		
BUILDINGS	64,316 SF	1.48 AC
PAVEMENT	252,987 SF	5.81 AC
SIDEWALKS	0 SF	0.00 AC
PONDS	49,972 SF	1.15 AC
OTHER	0 SF	0.00 AC
TOTAL	367,275 SF	8.43 AC
PROPOSED TIME OF CONCENTRATION		
SHEET FLOW		
SHEET FLOW DISTANCE		120.00 FT
LAND SLOPE		0.36 %
SURFACE TYPE N VALUE		0.41
GRASS: BERMUDA		
2-YR(50%) 24-HR RAINFALL DEPTH		4.8 IN
SHEET FLOW Tc		41.08 MIN
SHALLOW CONCENTRATED FLOW		
GRASS FLOW DISTANCE		975.00 FT
GRASS SLOPE		0.63 %
GRASS VELOCITY		1.28 FT/S
GRASS Tc		12.69 MIN
PAVEMENT FLOW DISTANCE		0.00 FT
PAVEMENT SLOPE		0.00 %
PAVEMENT VELOCITY		0.00 FT/S
PAVEMENT Tc		0.00 MIN
SHALLOW CONCENTRATED FLOW Tc		12.69 MIN
TOTAL		53.77 MIN
PROPOSED PEAK RUNOFF CALCULATIONS		
PROPOSED DRAINAGE AREA		10.20 AC
PROPOSED IMPERVIOUS AREA		8.43 AC
PROPOSED IMPERVIOUS C		0.85
CONCRETE PAVEMENT, ROOFS AND PONDS (< 1% SLOPE)		
PROPOSED IMPERVIOUS CN		98.00
PAVED PARKING LOTS, ROOFS, DRIVEWAYS, ETC (EXCLUDING RIGHT-OF-WAY)		
PROPOSED PERVIOUS AREA		1.77 AC
PROPOSED PERVIOUS C		0.08
LAWN AREA; SANDY SOIL (1% - 3.5% SLOPE)		
PROPOSED PERVIOUS CN		79.00
OPEN SPACE (LAWNS, PARKS, ETC.); FAIR CONDITION (GRASS COVER 50% TO 75%)		
PROPOSED PERCENT IMPERVIOUS		82.66 %
PROPOSED COMBINED C VALUE		0.72
PROPOSED COMBINED CURVE NUMBER (CN)		94.71
PROPOSED TIME OF CONCENTRATION		53.77 MIN
PROPOSED 25-YR(4%) PROPOSED RUNOFF DEPTH		9.86 IN
PROPOSED 25-YR(4%) RAINFALL INTENSITY		4.14 IN/HR
PROPOSED 25-YR(4%) PEAKING FACTOR		1.10
PROPOSED 25-YR(4%) PROPOSED PEAK RUNOFF		33.26 CFS
PROPOSED 100-YR(1%) PROPOSED RUNOFF DEPTH		15.58 IN
PROPOSED 100-YR(1%) RAINFALL INTENSITY		5.24 IN/HR
PROPOSED 100-YR(1%) PEAKING FACTOR		1.25
PROPOSED 100-YR(1%) PROPOSED PEAK RUNOFF		47.89 CFS

Montgomery County

Engineering Department

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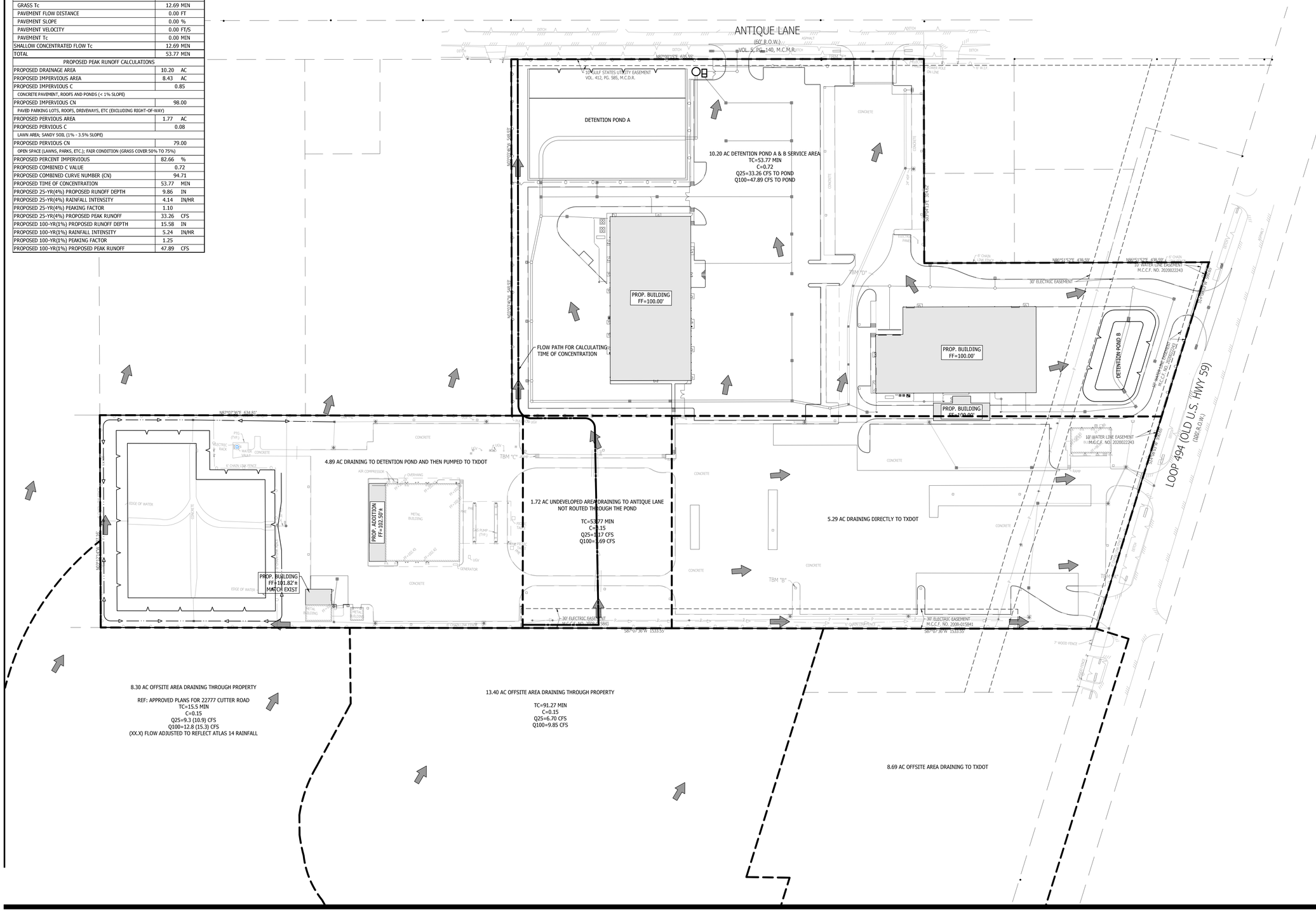
County Engineer _____ Date _____

RUNOFF FROM THE 1%(100-YR) EVENT IS CONVEYED TO THE DETENTION POND VIA THE STORM SEWER SYSTEM. REFERENCE STORM SEWER CALCULATIONS.



N

0' 30' 60' 120'

SCALE: 1" = 60'

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BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

- PROPOSED EXTREME EVENT FLOW PATH
- PROP. DRAINAGE DIVIDE
- A-XX / XX.XX AC — DRAINAGE AREA NAME / ACREAGE OF DRAINAGE AREA
- PROP. STORM SEWER LINE
- PROP. PERFORATED STORM SEWER LINE
- PROP. STORM SEWER MANHOLE
- PROP. GRATE INLET
- PROP. TYPE "C" CURB INLET
- PROP. TYPE "B-B" CURB INLET
- PROP. TYPE "H-2" CURB INLET
- PROP. TYPE "C-2" CURB INLET
- PROP. TYPE "E" INLET
- PROP. NYLOPLAST DRAIN
- PROP. CLEAN-OUT
- PROP. HEADWALL
- PROP. HEADWALL WITH FLARED WINGS
- PROP. DETENTION POND OUTFALL
- PROP. SAFETY END TREATMENT W/ PIPE RUNNERS
- PROP. SAFETY END TREATMENT

KEY NOTES

NOTES

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VERT:	N/A	

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HOUSTON, TEXAS 77027
AURICENGINEERS.COM

Revision / Date

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NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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PROPOSED DRAINAGE PLAN AND CALCULATIONS

Job No.	Sheet No.
1971-05-01	C2.01
Drawn By: Author	
Date: 09/10/25	

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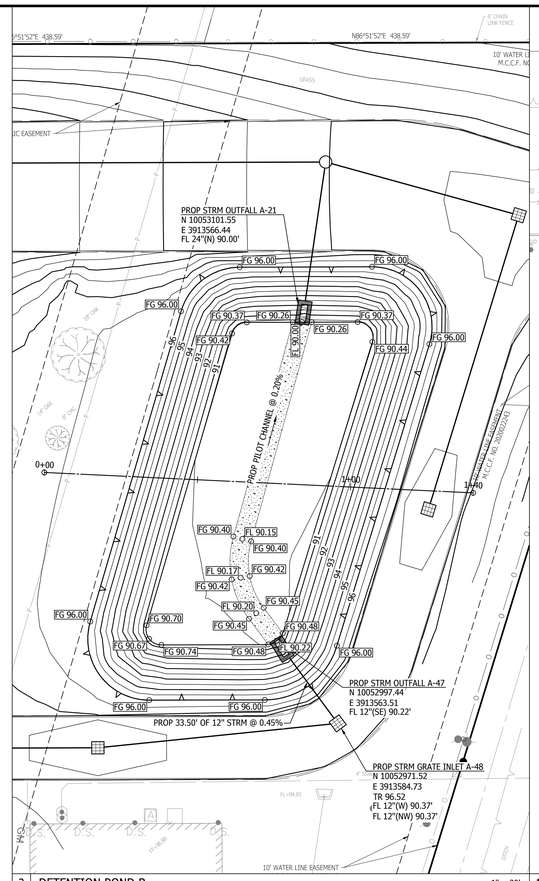
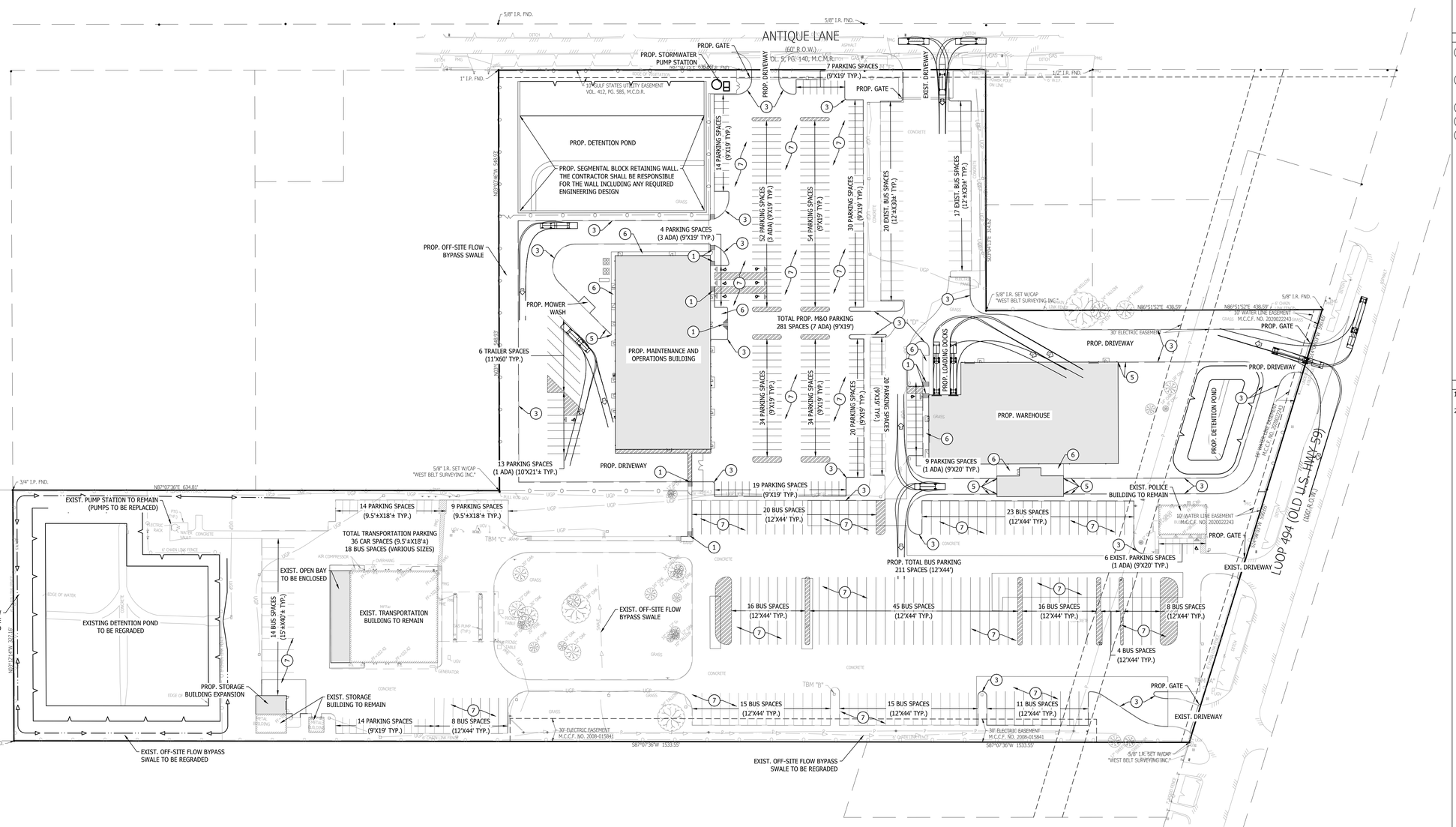
PLOTTED: 9/17/2025 4:17 PM
PLOT STYLE: AURIC2.0.STB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\00-DRAWINGS\03-SHEETS\C2.01 PROPOSED DRAINAGE PLAN AND CALCULATIONS.DWG

DETENTION AND RESTRICTOR CALCULATIONS		
MONTGOMERY COUNTY DRAINAGE CRITERIA MANUAL		
MARCH 26, 2020		
25-YR(4%) DETENTION CALCULATIONS		
PROPOSED SERVICE AREA	10.20	AC
TOTAL RUNOFF VOLUME (VR)	8.38	AC-FT
EXISTING PEAK RUNOFF	4.15	CFS
ALLOWABLE PEAK RUNOFF	3.87	CFS
PROPOSED PEAK RUNOFF	33.26	CFS
DURATION OF INFLOW (B)	21957.27	SEC
CALCULATED REQUIRED DETENTION VOLUME (S)	7.34	AC-FT
CALCULATED DETENTION STORAGE RATE	0.72	AC-FT/AC
DETENTION VOLUME PROVIDED	7.34	AC-FT
100-YR(1%) DETENTION CALCULATIONS		
PROPOSED SERVICE AREA	10.20	AC
TOTAL RUNOFF VOLUME (VR)	13.24	AC-FT
EXISTING PEAK RUNOFF	6.08	CFS
ALLOWABLE PEAK RUNOFF	5.69	CFS
PROPOSED PEAK RUNOFF	47.89	CFS
DURATION OF INFLOW (B)	24090.54	SEC
CALCULATED REQUIRED DETENTION VOLUME (S)	11.56	AC-FT
CALCULATED DETENTION STORAGE RATE	1.13	AC-FT/AC
DETENTION VOLUME PROVIDED	11.56	AC-FT

STAGE STORAGE TABLE

ELEV (FT)	AREA (SF)	AVG END INC. VOL. (CF)	AVG END TOTAL VOL. (CF)	AVG END TOTAL VOL. (AC-FT)	NOTES
80.50	0.00	0.00	0.00	0.00	
81.00	5,322.53	383.85	600.30	0.01	
81.50	28,186.96	2,682.10	9,390.55	0.22	
82.00	30,046.88	3,000.94	24,210.45	0.56	
82.50	30,421.98	3,038.45	39,327.67	0.90	
83.00	30,796.90	3,075.94	54,632.40	1.25	
83.50	31,171.63	3,113.42	70,124.54	1.61	
84.00	31,546.17	3,150.87	85,804.80	1.97	
84.50	31,920.53	3,188.31	101,670.68	2.33	
85.00	32,294.70	3,225.73	117,724.50	2.70	
85.50	32,668.68	3,263.13	133,965.35	3.08	
86.00	33,042.48	3,300.51	150,393.15	3.45	
86.50	33,416.09	3,337.87	167,007.80	3.83	
87.00	33,789.51	3,375.22	183,809.21	4.22	
87.50	34,162.75	3,412.54	200,797.28	4.61	
88.00	34,535.80	3,449.85	217,971.93	5.00	
88.50	34,908.66	3,487.14	235,333.05	5.40	
89.00	35,281.33	3,524.41	252,880.55	5.81	
89.50	35,653.82	3,561.66	270,614.35	6.21	
90.00	36,026.12	3,598.89	288,534.34	6.62	
90.50	40,369.30	3,930.91	307,117.74	7.05	
90.90	**41,900.66**	**4,181.28**	**323,671.09**	**7.43**	**4%(25-YR WSE)**
91.00	42,077.13	4,198.89	327,869.98	7.53	
91.50	42,970.52	4,288.04	349,131.16	8.01	
92.00	43,882.30	4,379.04	370,843.63	8.51	
92.50	44,812.45	4,471.87	393,016.58	9.02	
93.00	45,760.99	4,566.54	415,659.21	9.54	
93.50	46,727.90	4,663.05	438,780.70	10.07	
94.00	47,713.20	4,761.39	462,390.24	10.62	
94.50	48,716.87	4,861.58	486,497.02	11.17	
94.90	**49,533.05**	**4,943.04**	**506,146.64**	**11.62**	**1%(100-YR WSE)**
95.00	49,738.94	4,963.60	511,110.24	11.73	
95.50	50,779.37	5,067.46	536,239.08	12.31	
96.00	51,838.19	5,173.15	561,892.73	12.90	


PROP STRM OUTFALL A-21
N 10053101.55
E 3913566.44
FL 24"(N) 90.00'
PROP PILOT CHANNEL @ 0.20%
PROP STRM OUTFALL A-47
N 10052997.44
E 3913563.51
FL 12"(SE) 90.22'
PROP 33.50' OF 12" STRM @ 0.45%
PROP STRM GRATE INLET A-48
N 10052971.52
E 3913584.73
TR 96.52
FL 12"(W) 90.37'
FL 12"(NW) 90.37'
10' WATER LINE EASEMENT
EXIST. 48" CMP
EXIST. 24" CMP
EXIST. 18" CMP
EXIST. 30" OAK
EXIST. 8" OAK
EXIST. 8" OAK
EXIST. 8



0' 30' 60' 120'

SCALE: 1" = 60'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

DISTURBED AREA RESULTING IN IMPERVIOUS SURFACE.

KEY NOTES

1. PROP. CURB RAMP WITHOUT TRUNCATED DOMES
3. PROP. 6" CURB (TYP.)
5. PROP. CURB TRANSITION FROM 6" TO 0"
6. PROP. CONCRETE SIDEWALK
7. PROP. PARKING STRIPING (TYP.)

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. CONTRACTOR SHALL REFERENCE ARCHITECTURAL, STRUCTURAL, LANDSCAPE AND MEP DRAWINGS FOR ADDITIONAL REQUIREMENTS.

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Revision / Date

Project:

NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
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OVERALL CIVIL SITE PLAN

Job No.	Sheet No.
1971-05-01	C2.03
Drawn By: Author	
Date: 09/10/25	

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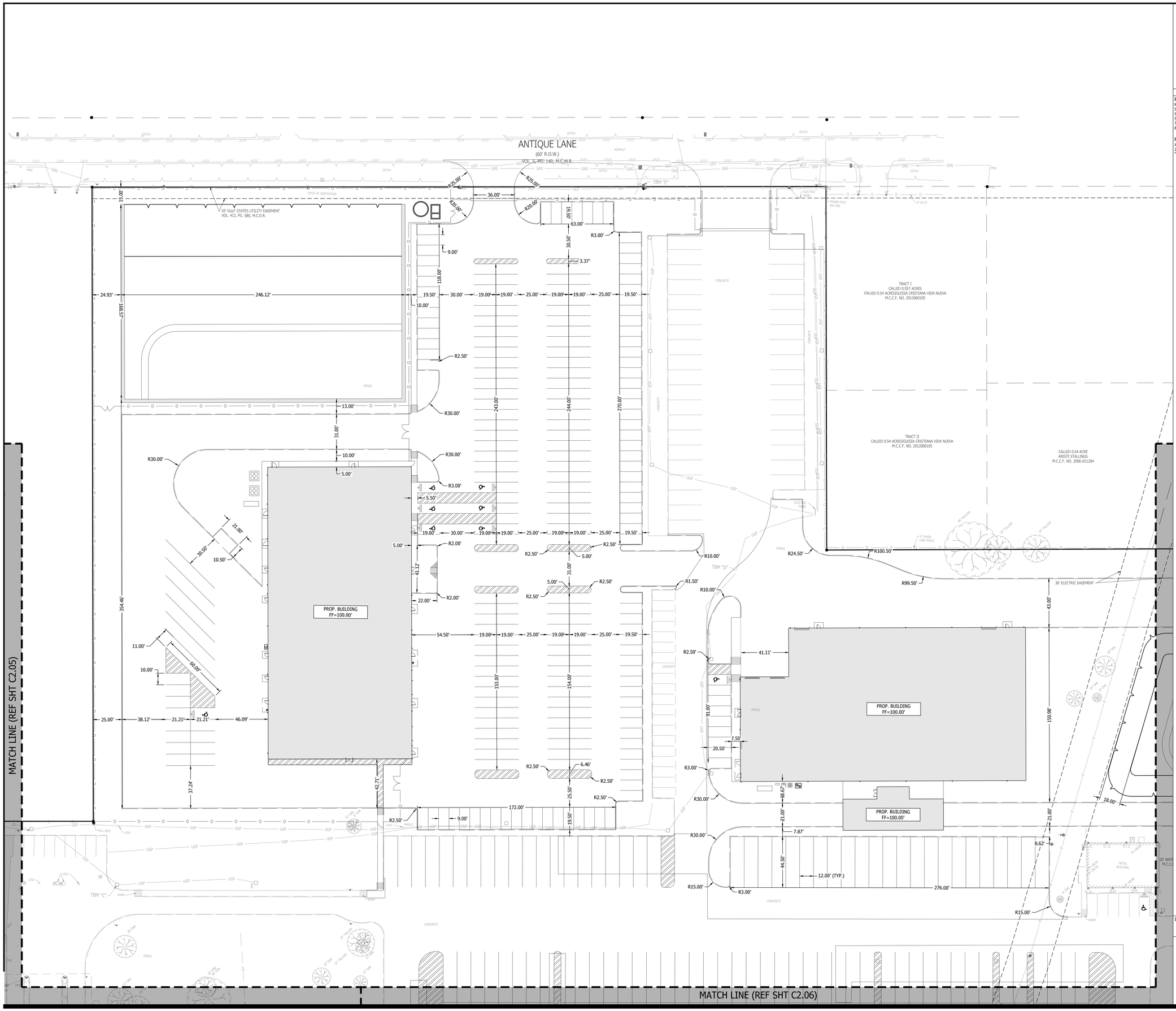

N

0' 15' 30' 60'

SCALE: 1" = 30'

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FLOODPLAIN INFORMATION:
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Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
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VERT:	N/A	

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ENLARGED CIVIL SITE DIMENSIONAL CONTROL PLAN (SHT 01 OF 03)

Job No. 1971-05-01	Sheet No. C2.04
Drawn By: Author	
Date: 09/10/25	

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PLOTTED: 9/17/2025 4:17 PM

FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131 0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C2.04 ENLARGED CIVIL SITE DIMENSIONAL CONTROL PLAN (SHT 01 OF 03).DWG,LOT STYLE: AURIC2.0.STB

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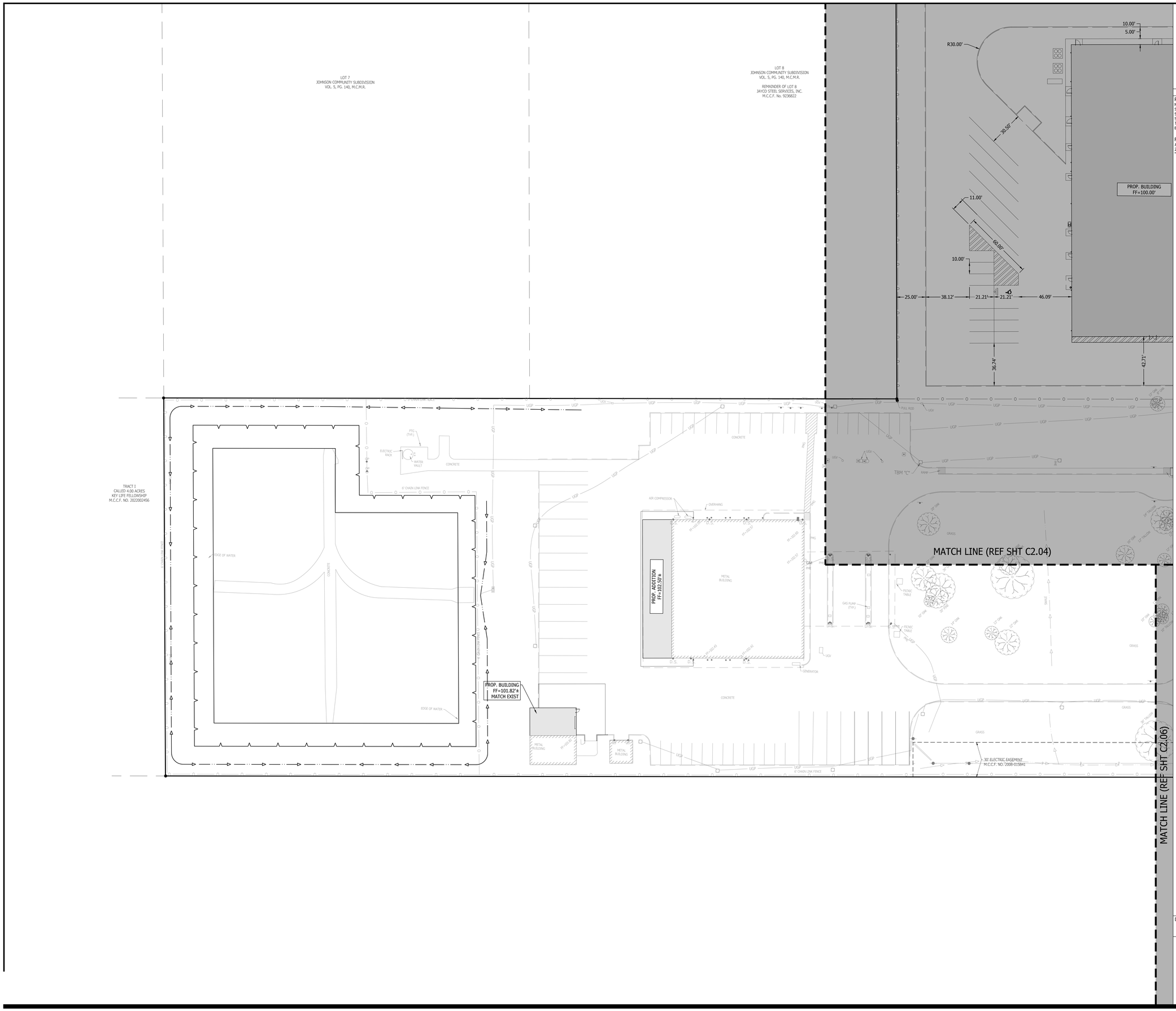

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0600G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

Revision / Date

Project:

NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D. NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. RODNEY
91977
LICENSED PROFESSIONAL ENGINEER
09/10/25

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VERT:	N/A	

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ENLARGED CIVIL SITE DIMENSIONAL CONTROL PLAN (SHT 02 OF 03)

Job No.	Sheet No.
1971-05-01	C2.05
Drawn By: Author	
Date: 09/10/25	

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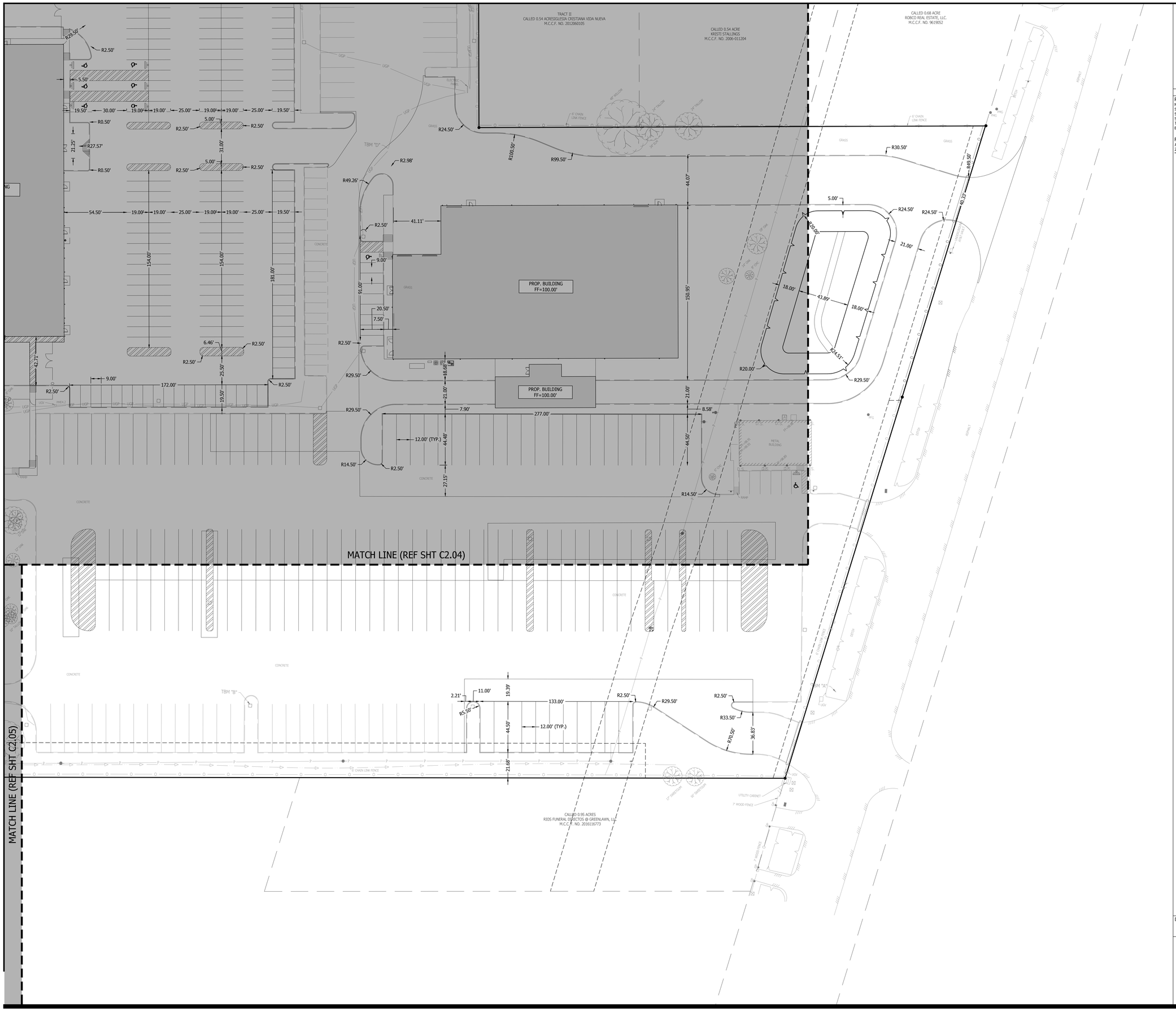
PLOTTED: 9/17/2025 4:18 PM

FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131 0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C2.05 ENLARGED CIVIL SITE DIMENSIONAL CONTROL PLAN (SHT 02 OF 03).DWG|OT STYLE: AURIC2.0.STB



N

0' 15' 30' 60'

SCALE: 1" = 30'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
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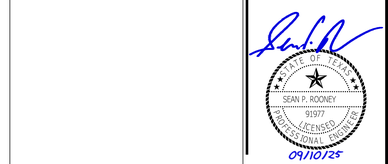
Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS



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ENLARGED CIVIL SITE DIMENSIONAL CONTROL PLAN (SHT 03 OF 03)

Job No.	Sheet No.
1971-05-01	C2.06
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:18 PM

FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C2.06 ENLARGED CIVIL SITE DIMENSIONAL CONTROL PLAN (SHT 03 OF 03).DWG
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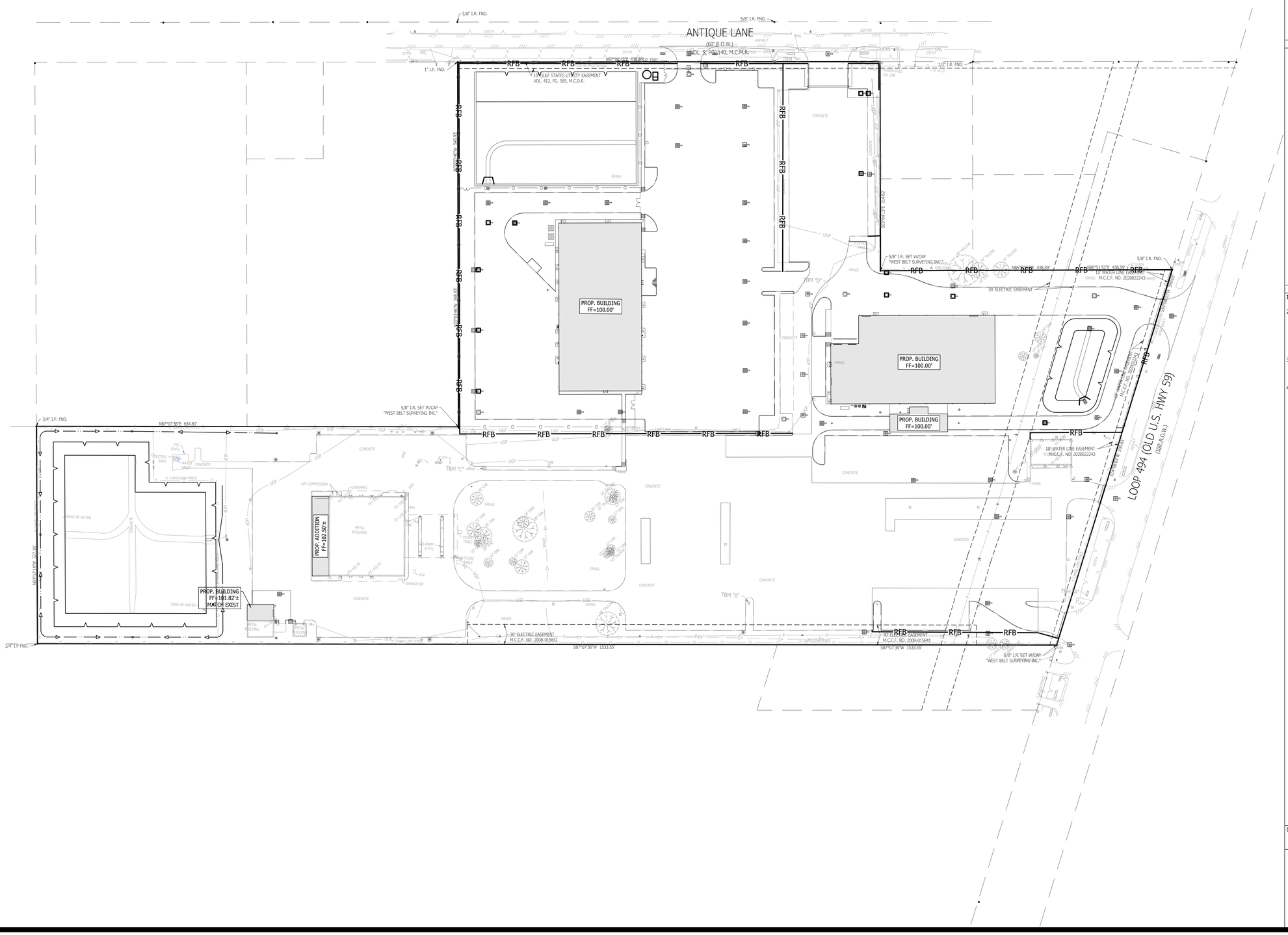

PLOTTED: 9/17/2025 4:18 PM

PLOT STYLE: AURIC2.0.STB

FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C2.07 SITE EROSION CONTROL PLANDWG

N

0' 30' 60' 120'

SCALE: 1" = 60'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

- RFB — PROP. REINFORCED SILT FENCE
- SC — PROP. STABILIZED CONSTRUCTION ENTRANCE
- CTW — PROP. CONCRETE WASHOUT
- IPB — PROP. INLET PROTECTION (STAGE I & II AS REQ.)

KEY NOTES

NOTES

1. CONTRACTOR SHALL REFERENCE CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPMENT, IMPLEMENTATION, INSPECTION, AND MAINTENANCE OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. ANY EROSION CONTROL SHOWN IN THESE DRAWINGS IS PROVIDED FOR PERMITTING/REFERENCE ONLY.
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 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.

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FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. RODNEY
91977
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09/10/25

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SITE EROSION CONTROL PLAN

Job No.	Sheet No.
1971-05-01	C2.07
Drawn By: Author	
Date: 09/10/25	

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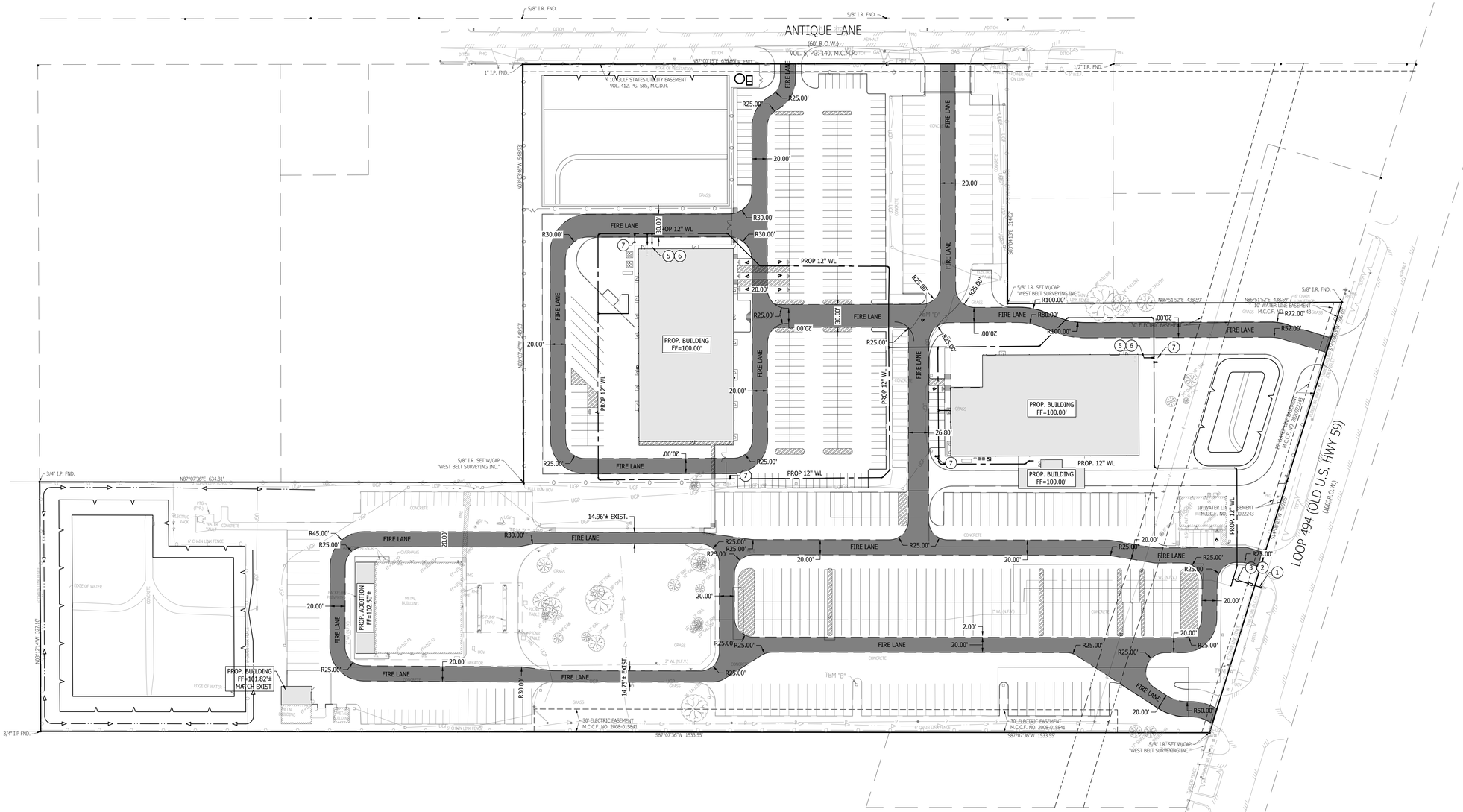

NOTES:

1. ALL FIRE LANES SHALL BE POSTED AND MARKED BY THE BUILDING OWNER OR TENANT. FIRE LANES MAY BE MARKED USING SIGNS, PAVEMENT MARKINGS, CURB MARKINGS OR A COMBINATION THEREOF WITH THE FOLLOWING SPECIFICATIONS:
2. SIGNS SHALL READ "FIRE LANE- NO PARKING" AND SHALL BE AT LEAST 12" WIDE AND 18" HIGH. SIGNS SHALL BE PAINTED ON A WHITE BACKGROUND WITH LETTERS AND BORDERS IN RED, USING NOT LESS THAN 2" LETTERING. SIGNS SHALL BE PERMANENTLY AFFIXED TO A STATIONARY POST, AND INSTALLED 6' 0" ABOVE THE FINISHED GRADE. SIGNS SHOULD BE SPACED NO MORE THAN 50' APART. SIGNS MAY BE INSTALLED ON PERMANENT BUILDINGS OR WALLS. 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.
3. PAVEMENT MARKINGS. ALL PAVEMENT MARKINGS SHALL BE INSTALLED USING RED AND WHITE TRAFFIC PAINT. THE BOUNDARIES OF THE FIRE LANE SHALL BE IDENTIFIED BY RED STRIPES AT LEAST 6" WIDE. THE WORDS "FIRE LANE- NO PARKING" SHALL APPEAR IN 4" WHITE LETTERS AT NO MORE THAN 25' ALTERNATING INTERVALS ON THE RED BORDER MARKINGS.
4. CURB MARKINGS. CURB MARKINGS SHALL BE PAINTED IN RED TRAFFIC PAINT FROM THE TOP SEAM OF THE CURB TO A POINT EVEN WITH THE DRIVING SURFACE. THE WORDS "FIRE LANE- NO PARKING" SHALL APPEAR IN 4" WHITE LETTERS AT NO MORE TAN 25' INTERVALS ALONG THE CURB.

1 FIRE LANE MARKINGS (MONTGOMERY COUNTY) N.T.S.

N

0' 30' 60' 120'

SCALE: 1" = 60'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

- PROP. WATER LINE
- PROP. TAPPING SLEEVE AND VALVE
- PROP. WATER METER
- PROP. BACKFLOW PREVENTER
- PROP. FIRE VAULT
- PROP. GATE VALVE
- PROP. FIRE HYDRANT WITH GATE VALVE
- PROP. REDUCER
- PROP. F.D.C.
- PROP. PLUG
- PROP. BLOW-OFF

KEY NOTES

1. CONTRACTOR SHALL LOCATE AND CONNECT TO THE EXISTING WATERLINE. CONNECTION SHALL BE MADE PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
2. 10" WATER METER FOR FIRE AND DOMESTIC SERVICE PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
3. 10" REDUCED PRESSURE ZONE BACKFLOW PREVENTER WITH ENCLOSURE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
4. DOUBLE DETECTOR CHECK BACKFLOW PREVENTER, MATCH SIZE OF WATERLINE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
5. POST INDICATOR VALVE (PIV), PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
6. FIRE DEPARTMENT CONNECTION (FDC), PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
7. PROPOSED FIRE HYDRANT
8. EXISTING FIRE HYDRANT
9. CONNECT TO BUILDING WATER ENTRY. (REF: M.E.P. PLANS FOR LINE SIZE AND CONNECTION LOCATION)

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. ANY DESIGN DOCUMENTS RELATED TO THE FIRE SPRINKLER SYSTEM INCLUDING BUT NOT LIMITED TO PRIVATE FIRE SERVICE MAINS AND ASSOCIATED APPURTENANCES ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL CODE RESEARCH, OBTAINING ALL FLOW TEST DATA AND DESIGNING A COMPLETE FIRE PROTECTION SYSTEM THAT MEETS THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
3. FIRE APPARATUS ACCESS ROADS AND/OR A WATER SUPPLY FOR FIRE PROTECTION SHALL BE INSTALLED AND MADE SERVICE-ABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION EXCEPT WHERE APPROVED ALTERNATIVE METHODS OF PROTECTION ARE PROVIDED.
4. AS REQUIRED BY THE FIRE CODE OFFICIAL, APPROVED SIGNS OR OTHER APPROVED NOTICES OR MARKINGS SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS OR PROHIBIT THE OBSTRUCTION THEREOF.

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Project:
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NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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SITE FIRE APPARATUS ACCESS PLAN

Job No.	Sheet No.
1971-05-01	C2.08
Drawn By: Author	
Date: 09/10/25	

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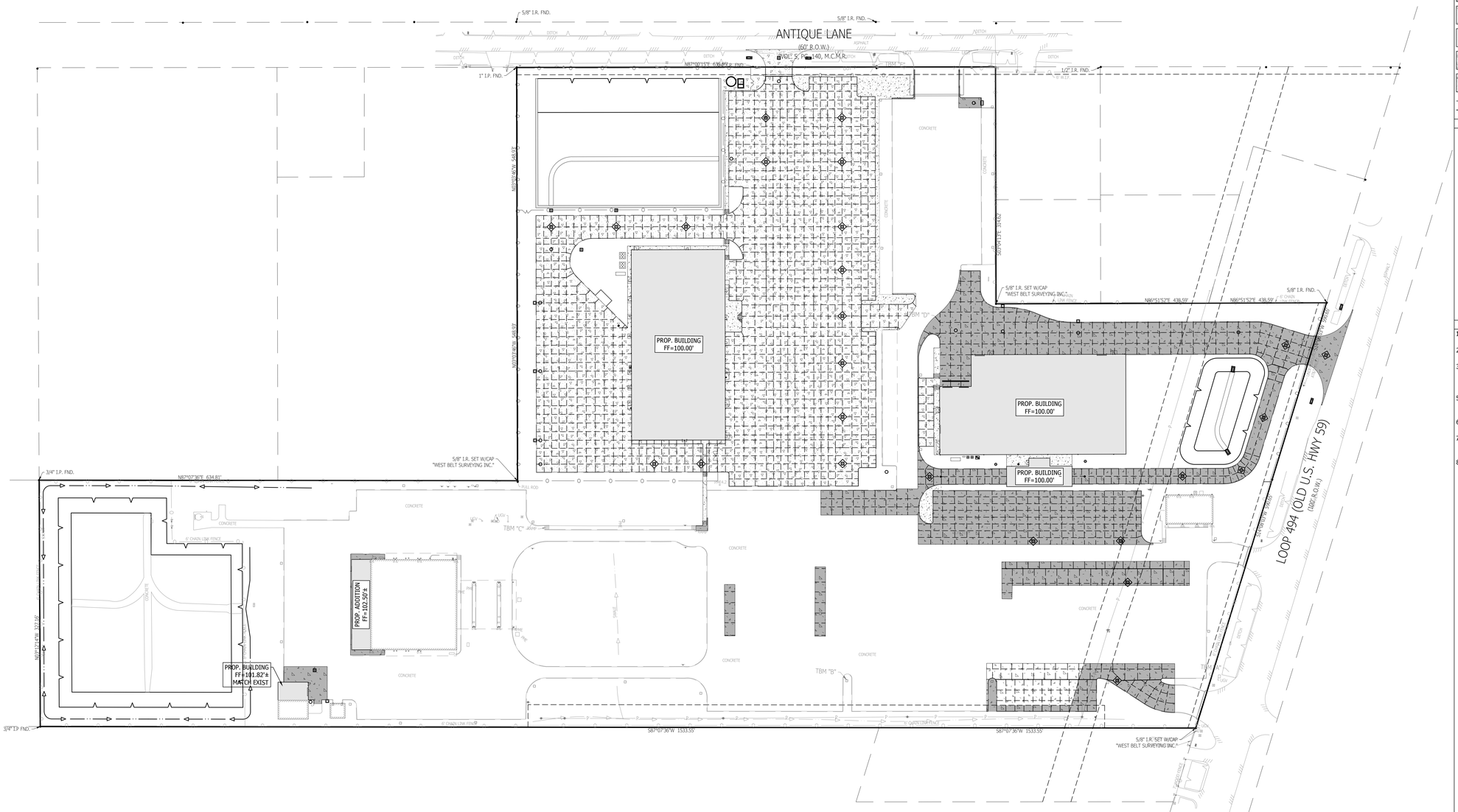
FILE PATH: C:_PROJECTS\ACCOOKS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\02-SHEETS\C2.08 SITE FIRE APPARATUS ACCESS PLAN.DWG
PLOT STYLE: AURIC2.0.STB
PLOTTED: 9/17/2025 4:18 PM



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N

0' 30' 60' 120'

SCALE: 1" = 60'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

- PROP. 7" REINFORCED CONCRETE PAVEMENT WITH 8" STABILIZED SUBGRADE
- PROP. 6" REINFORCED CONCRETE PAVEMENT WITH 6" STABILIZED SUBGRADE
- PROP. 5" REINFORCED CONCRETE PAVEMENT WITH 6" STABILIZED SUBGRADE
- PROP. 2" HMAC PAVEMENT WITH 8" BLACK BASE AND 6" STABILIZED SUBGRADE
- PROP. 4.5" REINFORCED CONCRETE WALK
- PROP. SAWED CONTRACTION JOINT
- PROP. ISOLATION JOINT

KEY NOTES

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. SUBGRADE SHALL BE STABILIZED BY THE ADDITION OF LIME 6% LIME BY DRY WEIGHT OF SOIL.
3. THE CONTRACTOR SHALL SUBMIT A DRAWING SHOWING THE PROPOSED POURING PLAN AND ANY MODIFICATIONS TO THE PROPOSED JOINT LAYOUT TO THE ENGINEER FOR REVIEW.
5. THE PAVEMENT JOINTING PLAN SHALL BE COORDINATED WITH THE LOCATION OF INLETS, MANHOLES LIGHT POLES, ETC. IN PAVED AREAS.
6. SAWED JOINTS ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS.
7. REFERENCE THE ARCHITECTURAL SITE PLAN FOR SIDEWALK JOINT PATTERN. SIDEWALK JOINTS SHALL ALIGN WITH PAVING JOINTS WHEN SIDEWALK IS ADJACENT TO PAVING.
8. WHERE NEW CONCRETE PAVING MEETS EXISTING CONCRETE PAVING, SAW CUT AND EXPOSE 15" OF EXISTING REINFORCING STEEL. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS (#6 BARS 24" LONG) 24" C-C DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL.

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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CIVIL SITE PAVING AND JOINTING PLAN

Job No. 1971-05-01	Sheet No. C2.09
Drawn By: Author	
Date: 09/10/25	

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PLOT STYLE: AURIC2.0.STB
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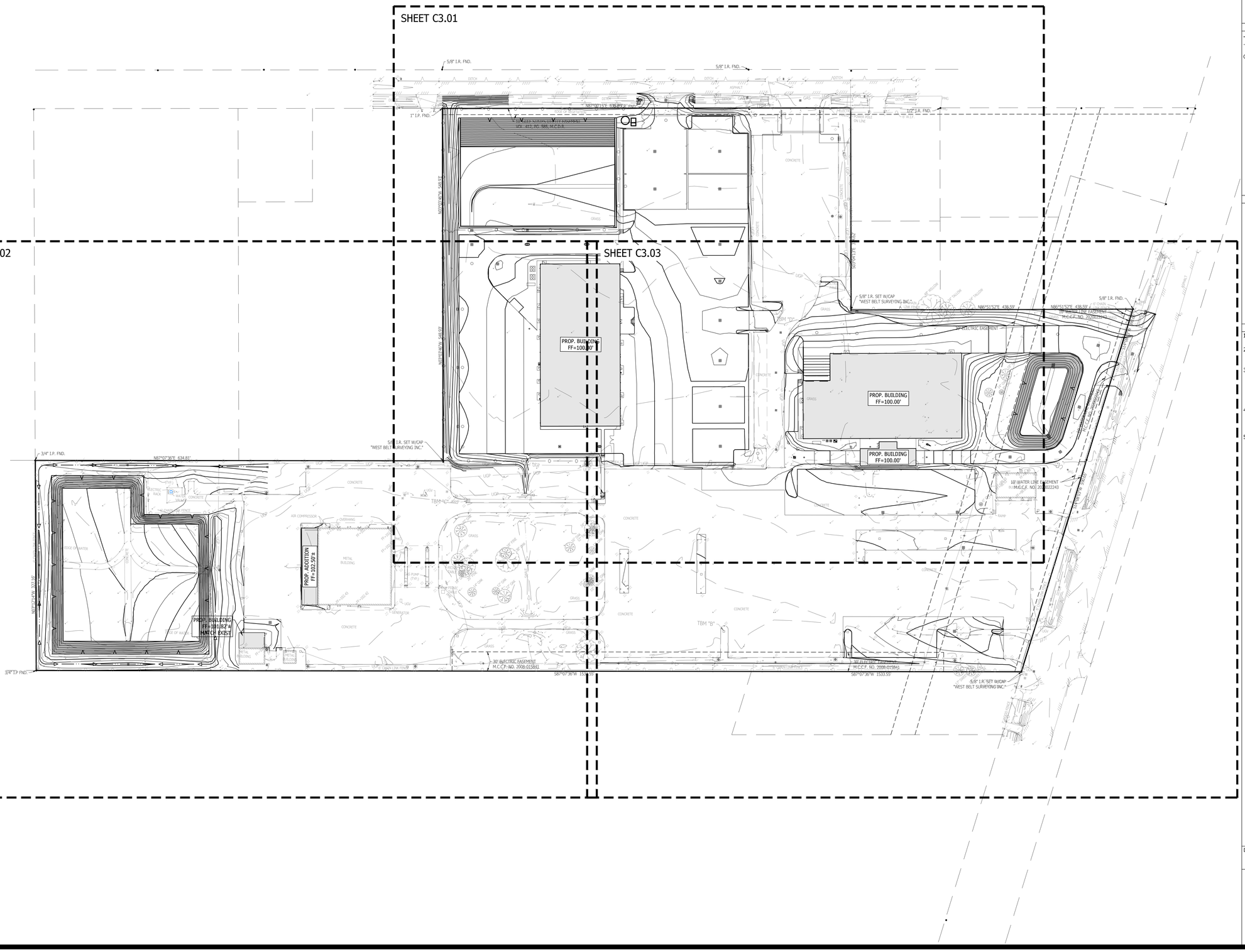
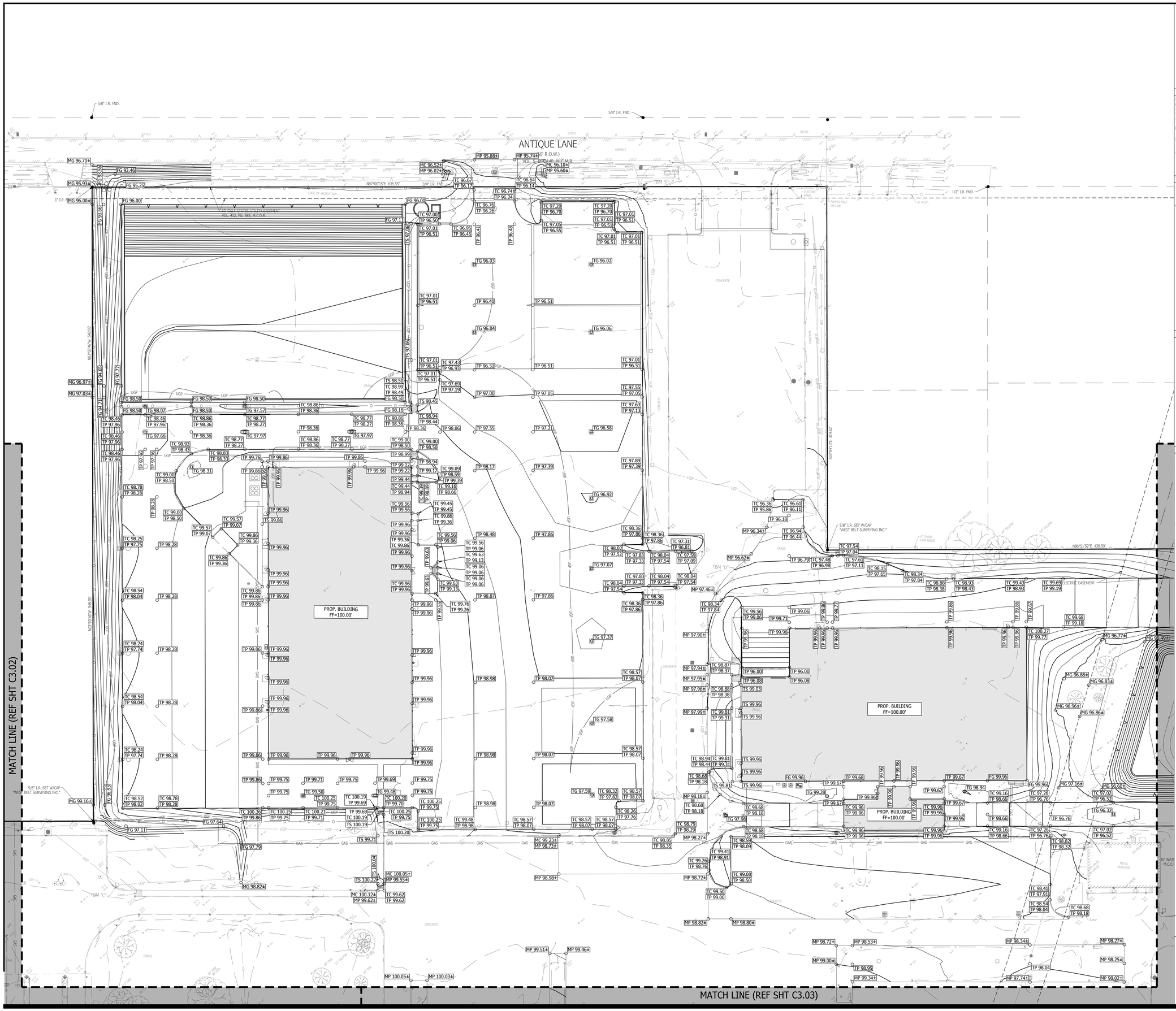

SHEET C3.01
SHEET C3.02
SHEET C3.03
5/8" I.R. FND.
1" I.P. FND.
1/2" I.R. FND.
N87°00'15"E 634.83'
N87°00'15"E 438.59'
N87°00'15"E 438.59'
N87°03'36"E 634.81'
S87°07'36"W 1533.55'
S87°07'36"W 1533.55'
N00°13'45"W 458.93'
N00°13'45"W 458.93'
N00°13'45"W 317.81'
TBM "DD"
TBM "A"
TBM "B"
PROP. BUILDING FF=100.00'
PROP. BUILDING FF=100.00'
PROP. BUILDING FF=100.00'
PROP. ADDITION FF=102.50'±
PROP. BUILDING FF=101.82'± MATCH EXIST.
5/8" I.R. SET W/CAP "WEST BELT SURVEYING INC."
3/4" I.P. FND.
3/4"ᵀᴾ FND.
30' ELECTRIC EASEMENT M.C.C.F. NO. 2008-015841
30' ELECTRIC EASEMENT M.C.C.F. NO. 2020002243
10' WATER LINE EASEMENT M.C.C.F. NO. 2020002243
UTILITY STATION (UTILITY ADDITION) VOL. 417, PG. 588, M.C.D.R.
DITCH
ASPHALT
CONCRETE
GRASS
GAS
WATER
UGP
OHP
FENCE
TREE
METAL BUILDING
AIR COMPRESSOR
OVERHANG
EDGE OF WATER
ELECTRIC RACK
WATER CONCRETE
CONCRETE WATER
GENERATOR
PLUMB (TYP.)
SIGN
LIGHT POLE
GUY WIRE
TRANSFORMER
CONCRETE CURB
ASPHALT CURB
ASPHALT PAVING
CONCRETE PAVING
CONCRETE CURB
CONCRETE SIDEWALK



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PLOT STYLE: AURIC2.0.STB

FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C3.01 ENLARGED SITE GRADING PLAN (SHT 01 OF 03).DWG

N

0' 15' 30' 60'

SCALE: 1" = 30'

BENCHMARK AND FLOODPLAIN INFORMATION

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NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE #74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, #106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND #64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
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LEGEND

100	PROP. MAJOR CONTOUR LINE
100.00	PROP. MAJOR CONTOUR LINE
FG 100.00	PROP. SPOT ELEVATION
FF	FINISH FLOOR
TP	TOP OF PAVEMENT
TC	TOP OF CURB
TS	TOP OF WALK
FG	FINISH GRADE
FL	FLOWLINE
TG	TOP OF GRATE
TR	TOP OF RIM
TH	INLET THROAT ELEVATION
MP	MATCH TOP OF EXIST. PAVEMENT
MC	MATCH TOP OF EXIST. CURB
MS	MATCH TOP OF EXIST. SIDEWALK
MG	MATCH TOP OF EXIST. GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
SB	TOP OF STONE BASE
SS	TOP OF STABILIZED SUBGRADE

KEY NOTES

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.
3. CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM ALL STRUCTURES AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.
4. CONTRACTOR SHALL ADJUST ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE TO FINISH GRADE.
5. THE CONTRACTOR SHALL GRADE THE SITE AS INDICATED BY THE SPOT ELEVATIONS, CONTOUR LINES AND SLOPE ARROWS. ALL GRADING SHALL VARY UNIFORMLY BETWEEN SPOT ELEVATIONS SHOWN. WHEN SPOT ELEVATIONS ARE SHOWN ALONG THE EDGE OF PAVEMENT, CURB, SIDEWALK, ETC., THE GRADING SHALL VARY UNIFORMLY ALONG THAT EDGE. THE CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE WITH NO STANDING WATER.

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Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 30'	0131.0101
VERT:	N/A	

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TEXAS ENGINEERING FIRM 20740
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HOUSTON, TEXAS 77027
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ENLARGED SITE GRADING PLAN (SHT 01 OF 03)

Job No. 1971-05-01	Sheet No. C3.01
Drawn By: Author	
Date: 09/10/25	

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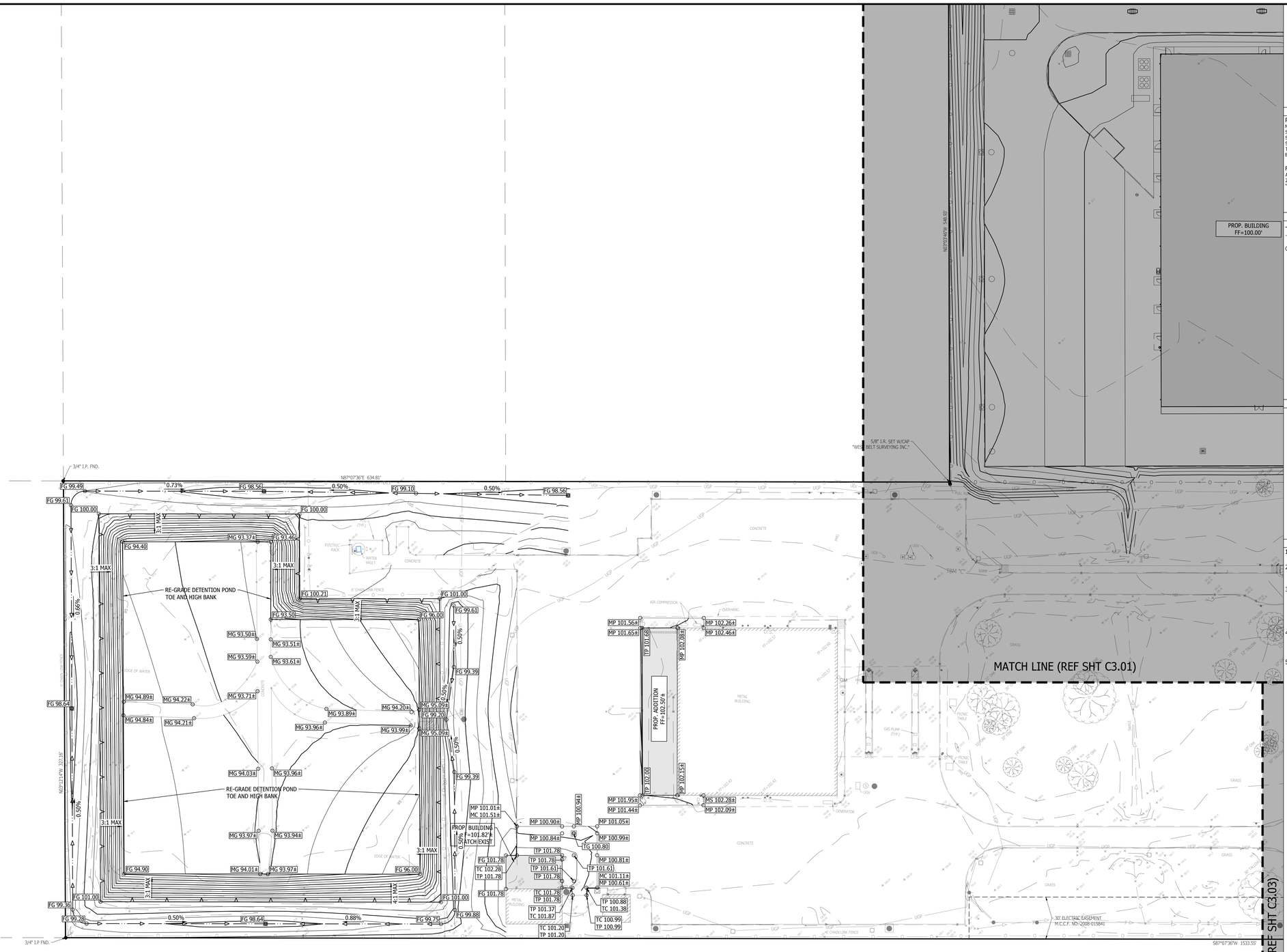

N

0' 15' 30' 60'

SCALE: 1" = 30'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

— 100 —	PROP. MAJOR CONTOUR LINE
—100.00—	PROP. MAJOR CONTOUR LINE
FG 100.00	PROP. SPOT ELEVATION

FF	FINISH FLOOR
TP	TOP OF PAVEMENT
TC	TOP OF CURB
TS	TOP OF WALK
FG	FINISH GRADE
FL	FLOWLINE
TG	TOP OF GRATE
TR	TOP OF RIM
TH	INLET THROAT ELEVATION
MP	MATCH TOP OF EXIST. PAVEMENT
MC	MATCH TOP OF EXIST. CURB
MS	MATCH TOP OF EXIST. SIDEWALK
MG	MATCH TOP OF EXIST. GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
SB	TOP OF STONE BASE
SS	TOP OF STABILIZED SUBGRADE

KEY NOTES

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.
3. CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM ALL STRUCTURES AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.
4. CONTRACTOR SHALL ADJUST ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE TO FINISH GRADE.
5. THE CONTRACTOR SHALL GRADE THE SITE AS INDICATED BY THE SPOT ELEVATIONS, CONTOUR LINES AND SLOPE ARROWS. ALL GRADING SHALL VARY UNIFORMLY BETWEEN SPOT ELEVATIONS SHOWN. WHEN SPOT ELEVATIONS ARE SHOWN ALONG THE EDGE OF PAVEMENT, CURB, SIDEWALK, ETC., THE GRADING SHALL VARY UNIFORMLY ALONG THAT EDGE. THE CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE WITH NO STANDING WATER.

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DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 30'	0131.0101
VERT:	N/A	

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NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. RODNEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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ENLARGED SITE GRADING PLAN (SHT 02 OF 03)

Job No.	Sheet No.
1971-05-01	C3.02
Drawn By: Author	
Date: 09/10/25	

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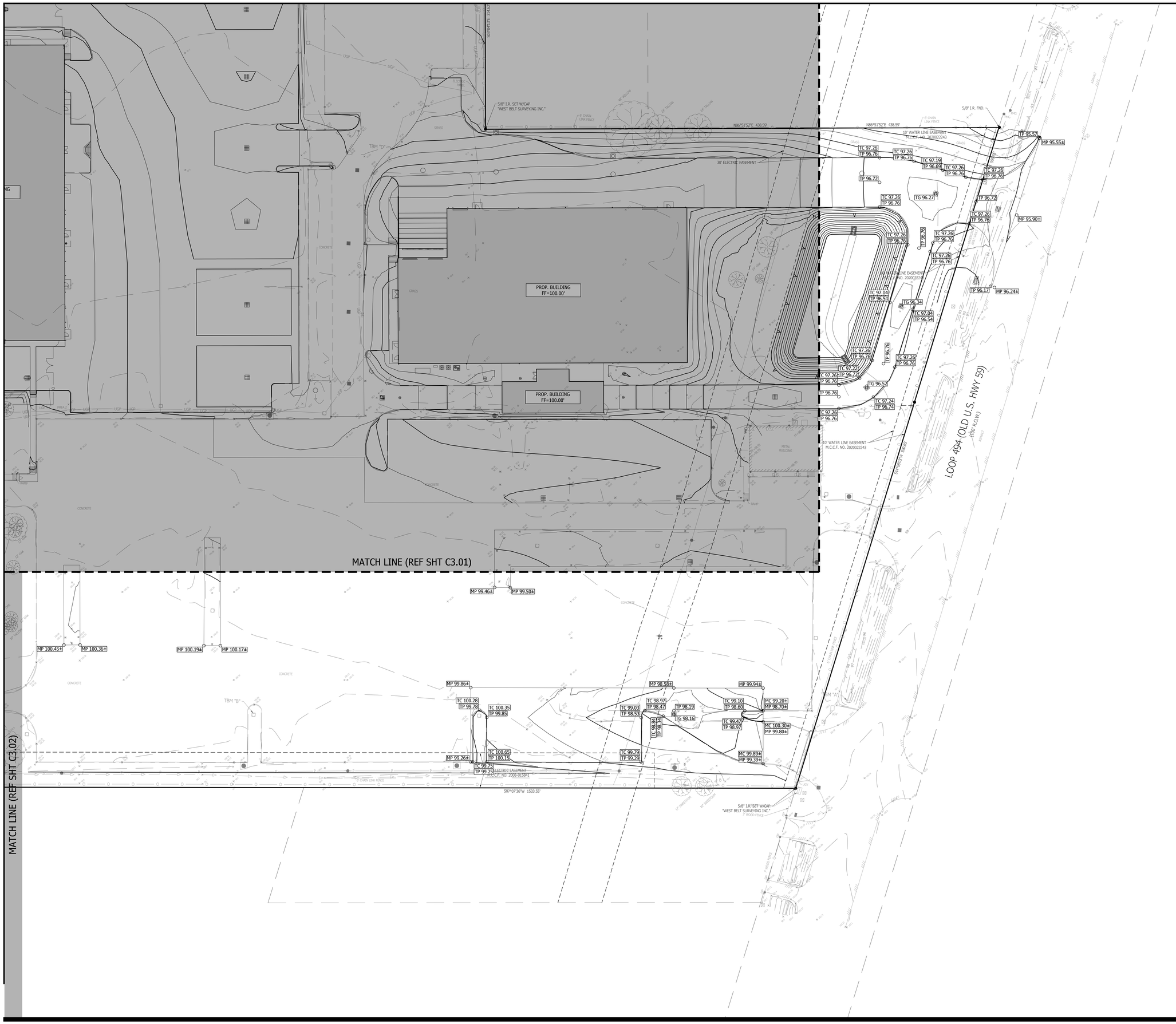

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PLOT STYLE: AURIC2.0.STB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C3.03 ENLARGED SITE GRADING PLAN (SHT 03 OF 03).DWG

N

0' 15' 30' 60'

SCALE: 1" = 30'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

100	PROP. MAJOR CONTOUR LINE
100.00	PROP. MAJOR CONTOUR LINE
FG 100.00	PROP. SPOT ELEVATION
FF	FINISH FLOOR
TP	TOP OF PAVEMENT
TC	TOP OF CURB
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MG	MATCH TOP OF EXIST. GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
SB	TOP OF STONE BASE
SS	TOP OF STABILIZED SUBGRADE

KEY NOTES

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.
3. CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM ALL STRUCTURES AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.
4. CONTRACTOR SHALL ADJUST ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE TO FINISH GRADE.
5. THE CONTRACTOR SHALL GRADE THE SITE AS INDICATED BY THE SPOT ELEVATIONS, CONTOUR LINES AND SLOPE ARROWS. ALL GRADING SHALL VARY UNIFORMLY BETWEEN SPOT ELEVATIONS SHOWN. WHEN SPOT ELEVATIONS ARE SHOWN ALONG THE EDGE OF PAVEMENT, CURB, SIDEWALK, ETC., THE GRADING SHALL VARY UNIFORMLY ALONG THAT EDGE. THE CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE WITH NO STANDING WATER.

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FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. RODNEY
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DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 30'	0131.0101
VERT:	N/A	

ENLARGED SITE GRADING PLAN (SHT 03 OF 03)

Job No. 1971-05-01	Sheet No. C3.03
Drawn By: Author	
Date: 09/10/25	

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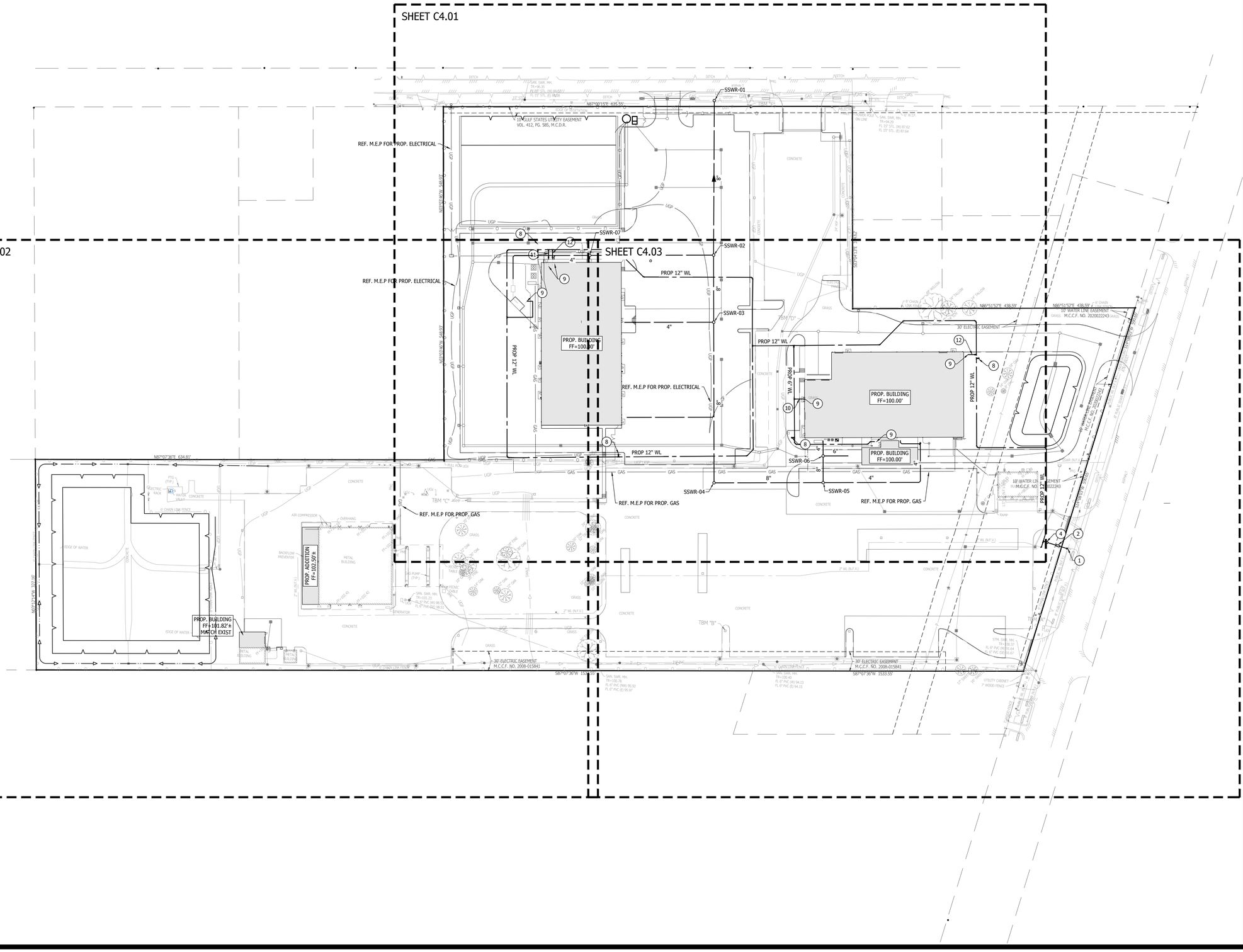

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N

0' 30' 60' 120'

SCALE: 1" = 60'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
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LEGEND

- PROP. WATER LINE
- PROP. TAPPING SLEEVE AND VALVE
- PROP. WATER METER
- PROP. BACKFLOW PREVENTER
- PROP. FIRE VAULT
- PROP. GATE VALVE
- PROP. FIRE HYDRANT WITH GATE VALVE
- PROP. REDUCER
- PROP. F.D.C.
- PROP. PLUG
- PROP. BLOW-OFF
- PROP. SANITARY SEWER LINE
- PROP. SANITARY SEWER MANHOLE
- PROP. SANITARY SEWER CLEAN-OUT
- PROP. WATER LINE AND SEWER LINE CROSSING

KEY NOTES

1. CONTRACTOR SHALL ASSIST THE MUD IN LOCATING AND AND CONNECTING TO THE EXISTING WATERLINE. ALL ASSOCIATED COSTS TO BE PAID BY THE CONTRACTOR.
2. 10" WATER METER FOR FIRE AND DOMESTIC SERVICE, TO BE INSTALLED BY THE MUD. ALL ASSOCIATED COSTS TO BE PAID BY THE CONTRACTOR.
3. WATER METER FOR IRRIGATION SERVICE, METER INSTALLED BY TBCD AT CONTRACTOR'S EXPENSE. (REF: LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION AND CONTINUATION)
4. 10" REDUCED PRESSURE ZONE BACKFLOW PREVENTER WITH ENCLOSURE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
5. DOUBLE DETECTOR CHECK BACKFLOW PREVENTER, MATCH SIZE OF WATERLINE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
6. POST INDICATOR VALVE (PIV), PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
7. FIRE DEPARTMENT CONNECTION (FDC), PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
8. PROPOSED FIRE HYDRANT
9. CONNECT TO BUILDING WATER ENTRY. (REF: M.E.P. PLANS FOR LINE SIZE AND CONNECTION LOCATION)
10. 2.5" WATER LINE
11. 4" WATER LINE
12. 8" WATER LINE
1. CONTRACTOR SHALL LOCATE AND CONNECT TO THE EXISTING SANITARY SEWER SYSTEM. CONNECTION SHALL BE MADE PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF. DETAILS)
2. 4" SSSWR @ 1.00% MIN.
3. 6" SSWR @ 1.00% MIN.
4. CONNECT TO BUILDING SEWER. (REF: M.E.P. PLANS FOR LINE SIZE, PIPE TYPE AND CONNECTION LOCATION)

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. LOCATION AND SIZES OF EXISTING LINES AND CONNECTIONS TO BUILDING STUBS ARE PROVIDED FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION AND SIZE OF ALL CONNECTIONS BEFORE BEGINNING CONSTRUCTION.
3. WATER LINES AND FITTINGS SMALLER THAN 2" SHALL CONFORM TO ASTM D-1784 SCH 40.
4. 2" THROUGH 3" WATER LINES SHALL BE ASTM D-2241 SDR 21 PVC PIPE.
5. 4" THROUGH 12" WATER LINES SHALL BE AWWA C-900 PVC DR-18 BLUE PRESSURE RATED WATER MAIN.
6. 2" AND LARGER WATER LINE FITTINGS SHALL BE MECHANICAL JOINT FITTINGS PER AWWA C-153.
7. WATER LINES TO HAVE 4' MINIMUM COVER TO FINISHED GRADE. WHERE WATER LINES AND SEWER LINES CROSS THEY MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) OR 30 TAC §290.44(E).
8. ALL MANHOLES SHALL BE PRECAST CONCRETE.
9. SANITARY SEWER PIPE AND FITTINGS SMALLER THAN 8" SHALL CONFORM TO TO ASTM D-1784 SCH 40.
10. SANITARY SEWER PIPE AND FITTINGS 8" AND LARGER SHALL CONFORM WITH ASTM D3034 SDR 26, ASTM D2241 SDR 26 OR AWWA C-900 DR-18 BASED ON CONSTRUCTION CONDITION REQUIREMENTS.

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DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 60'	0131.0101
VERT:	N/A	

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HOUSTON, TEXAS 77027
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Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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OVERALL UTILITY PLAN

Job No.	Sheet No.
1971-05-01	C4.00
Drawn By: Author	
Date: 09/10/25	

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PLOTTED: 9/17/2025 4:19 PM

PLOT STYLE: AURIC2.0.STB

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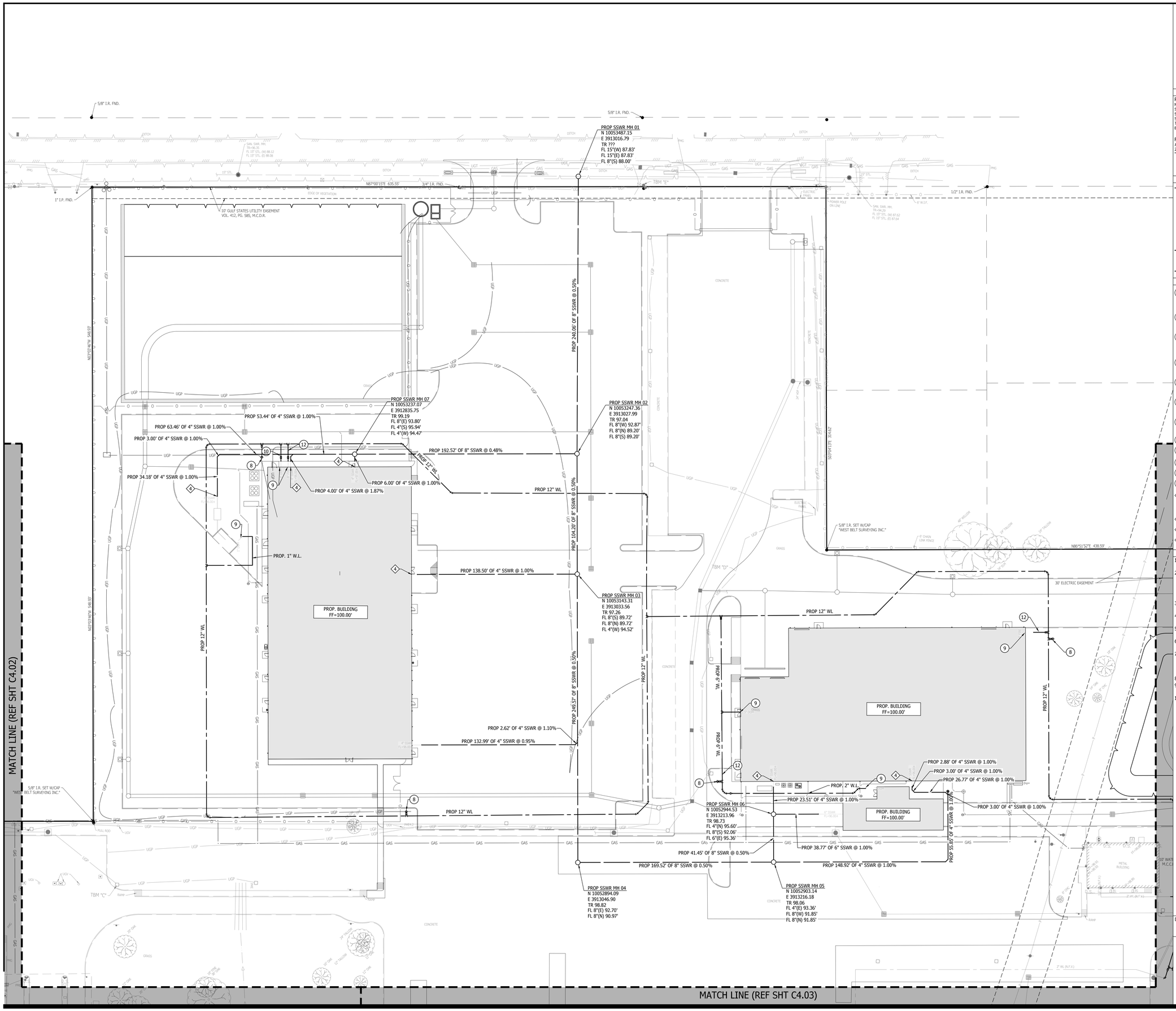

N

0' 15' 30' 60'

SCALE: 1" = 30'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
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LEGEND

- PROP. WATER LINE
- PROP. TAPPING SLEEVE AND VALVE
- PROP. WATER METER
- PROP. BACKFLOW PREVENTER
- PROP. FIRE VAULT
- PROP. GATE VALVE
- PROP. FIRE HYDRANT WITH GATE VALVE
- PROP. REDUCER
- PROP. F.D.C.
- PROP. PLUG
- PROP. BLOW-OFF
- PROP. SANITARY SEWER LINE
- PROP. SANITARY SEWER MANHOLE
- PROP. SANITARY SEWER CLEAN-OUT
- PROP. WATER LINE AND SEWER LINE CROSSING

KEY NOTES

1. CONTRACTOR SHALL ASSIST THE MUD IN LOCATING AND AND CONNECTING TO THE EXISTING WATERLINE. ALL ASSOCIATED COSTS TO BE PAID BY THE CONTRACTOR.
2. 10" WATER METER FOR FIRE AND DOMESTIC SERVICE, TO BE INSTALLED BY THE MUD. ALL ASSOCIATED COSTS TO BE PAID BY THE CONTRACTOR.
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Texas 811
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DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 30'	0131.0101
VERT:	N/A	

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FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
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09/10/25

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ENLARGED SITE UTILITY PLAN (SHT 01 OF 03)

Job No. 1971-05-01	Sheet No. C4.01
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:19 PM
PLOT STYLE: AURIC2.0.STB
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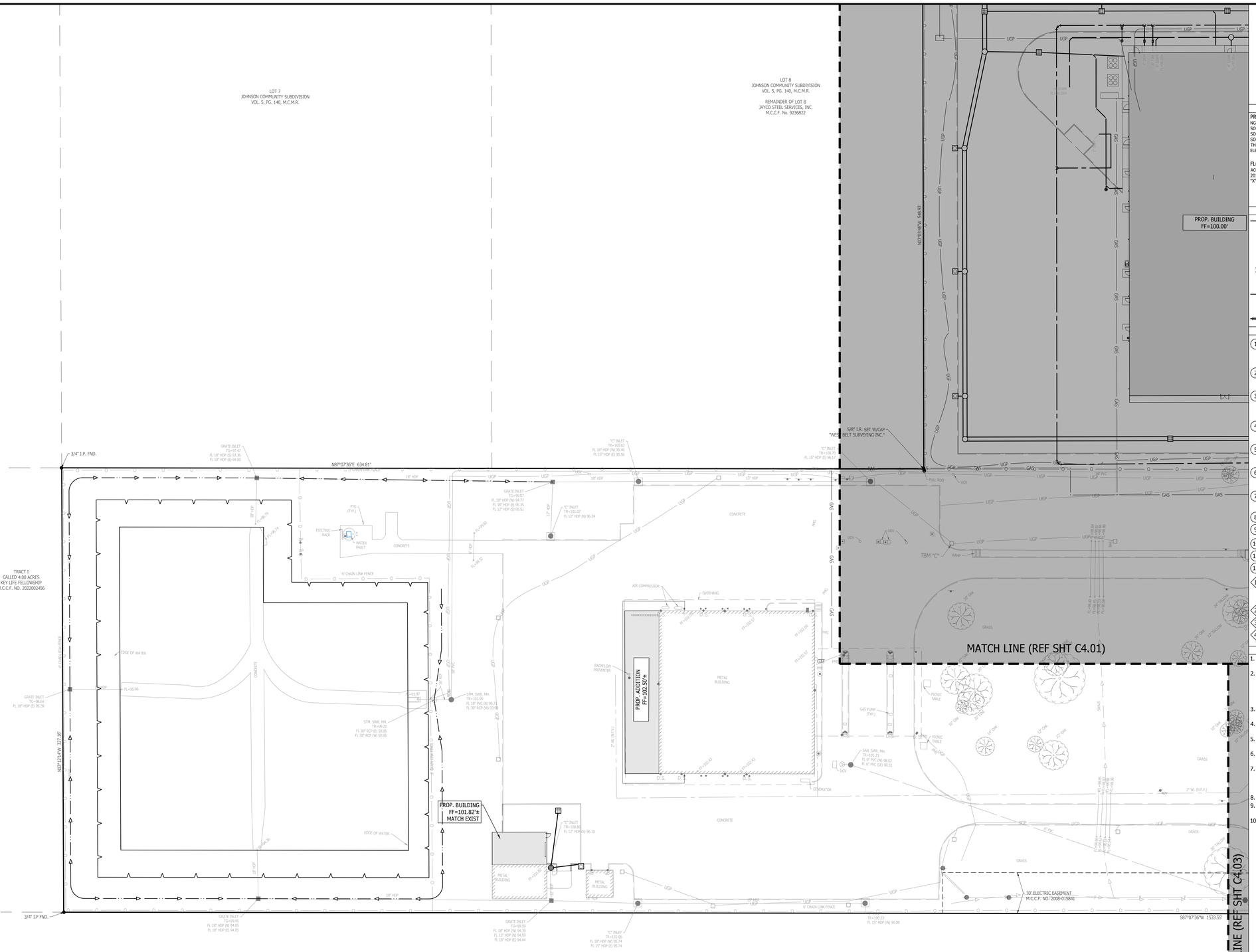
LOT 7
JOHNSON COMMUNITY SUBDIVISION
VOL. 5, PG. 140, M.C.M.R.
LOT 8
JOHNSON COMMUNITY SUBDIVISION
VOL. 5, PG. 140, M.C.M.R.
REMAINDER OF LOT 8
JAYCO STEEL SERVICES, INC.
M.C.C.F. No. 9236822
TRACT 1
CALLED 4.00 ACRES
KEY LIFE FELLOWSHIP
M.C.C.F. NO. 2022002456
3/4" I.P. FND.
N87°07'36"E 634.81'
S87°07'36"W 1533.55'
M/3°12'14"W 337.16'
5/8" I.R. SET W/CAP "WEST BELT SURVEYING INC."
PROP. BUILDING FF=100.00'
PROP. BUILDING FF=101.82'± MATCH EXIST
PROP. ADDITION FF= 102.50'±
MATCH LINE (REF SHT C4.01)
MATCH LINE (REF SHT C4.03)
30' ELECTRIC EASEMENT M.C.C.F. NO. 2008-015841
EDGE OF WATER
6' CHAIN LINK FENCE
CONCRETE
METAL BUILDING
GRASS
GAS PUMP (TYP.)
AIR COMPRESSOR
OVERHANG
BACKFLOW PREVENTER
GENERATOR
PICNIC TABLE
RAMP
TBM "C"
GRATE INLET TG=98.64 FL 18" HDP (S) 95.39
GRATE INLET TG=97.42 FL 18" HDP (S) 93.36 FL 18" HDP (E) 94.00
GRATE INLET TG=99.07 FL 18" HDP (W) 94.77 FL 18" HDP (E) 95.35 FL 12" HDP (S) 95.55
"C" INLET TR=100.82 FL 18" HDP (W) 95.46 FL 15" HDP (E) 95.56
"C" INLET TR=100.82 FL 12" HDP (S) 96.10
"C" INLET TR=101.07 FL 12" HDP (N) 96.34
"C" INLET TR=100.26 FL 15" HDP (E) 96.1
GRATE INLET TG=99.45 FL 18" HDP (W) 94.95 FL 18" HDP (E) 94.95
GRATE INLET TG=99.59 FL 18" HDP (W) 94.39 FL 12" HDP (N) 94.59 FL 18" HDP (E) 94.44
"C" INLET TR=100.06 FL 18" HDP (W) 95.74 FL 15" HDP (E) 95.74
STM. SWR. MH TR=101.09 FL 18" PVC (N) 95.71 FL 30" RCP (W) 93.98
STM. SWR. MH TR=99.20 FL 30" RCP (E) 93.95 FL 30" RCP (W) 93.95
SAN. SWR. MH TR=101.23 FL 6" PVC (W) 98.53 FL 6" PVC (SE) 98.53
TR=100.53 FL 15" HDP (W) 96.08
FL=95.66
FL=97.08
FL=98.46
FL=98.64
FL=98.82
FL=99.00
FL=99.18
FL=99.36
FL=99.54
FL=99.72
FL=99.90
FL=100.08
FL=100.26
FL=100.44
FL=100.62
FL=100.80
FL=100.98
FL=101.16
FL=101.34
FL=101.52
FL=101.70
FL=101.88
FL=102.06
FL=102.24
FL=102.42
FL=102.60
FL=102.78
FL=102.96
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FL=104.22
FL=104.40
FL=104.58
FL=104.76
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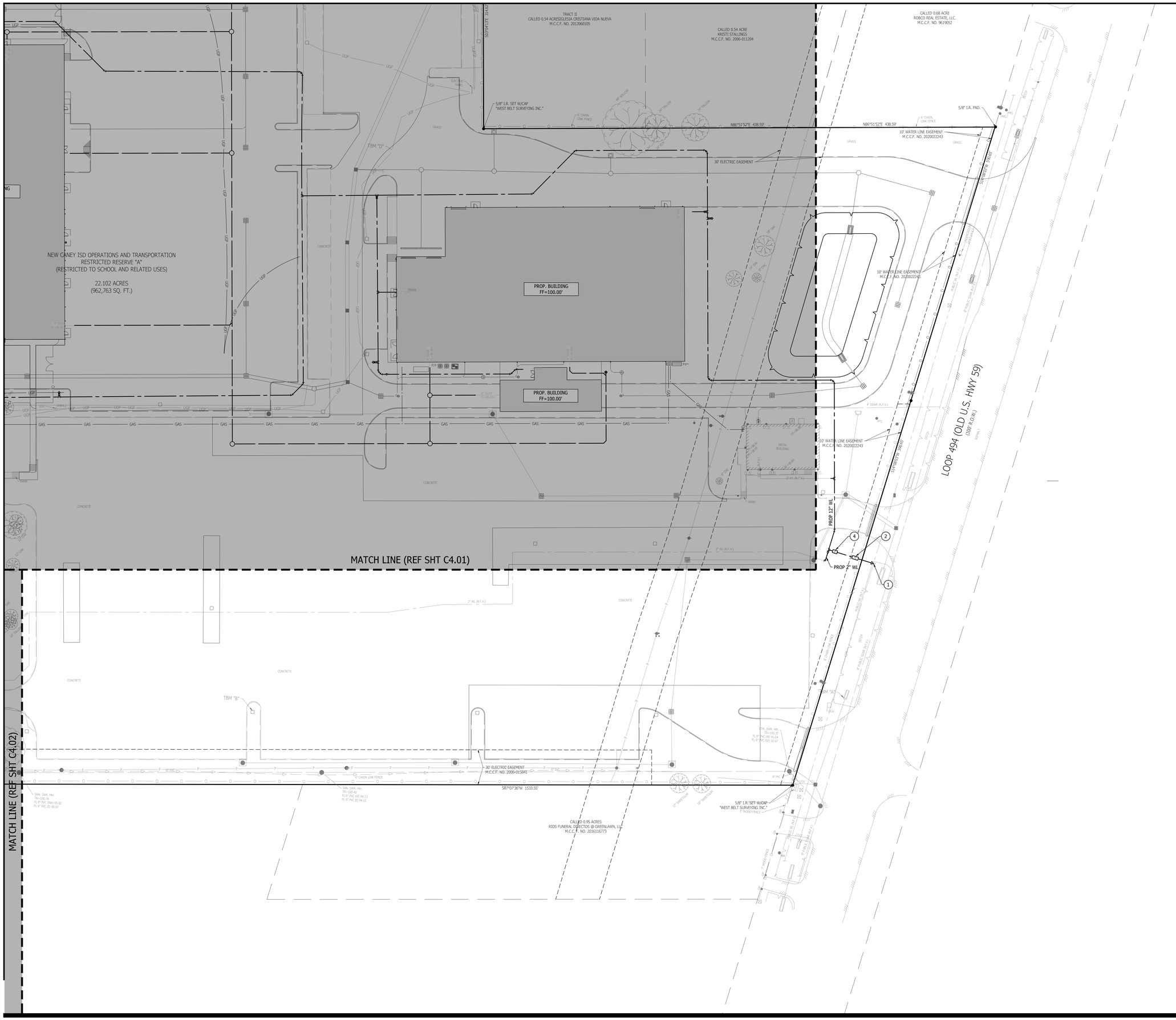

N

0' 15' 30' 60'

SCALE: 1" = 30'

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BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

- PROP. WATER LINE
- PROP. TAPPING SLEEVE AND VALVE
- PROP. WATER METER
- PROP. BACKFLOW PREVENTER
- PROP. FIRE VAULT
- PROP. GATE VALVE
- PROP. FIRE HYDRANT WITH GATE VALVE
- PROP. REDUCER
- PROP. F.D.C.
- PROP. PLUG
- PROP. BLOW-OFF
- PROP. SANITARY SEWER LINE
- PROP. SANITARY SEWER MANHOLE
- PROP. SANITARY SEWER CLEAN-OUT
- PROP. WATER LINE AND SEWER LINE CROSSING

KEY NOTES

1. CONTRACTOR SHALL ASSIST THE MUD IN LOCATING AND AND CONNECTING TO THE EXISTING WATERLINE. ALL ASSOCIATED COSTS TO BE PAID BY THE CONTRACTOR.
2. 10" WATER METER FOR FIRE AND DOMESTIC SERVICE, TO BE INSTALLED BY THE MUD. ALL ASSOCIATED COSTS TO BE PAID BY THE CONTRACTOR.
3. WATER METER FOR IRRIGATION SERVICE, METER INSTALLED BY TBCD AT CONTRACTOR'S EXPENSE. (REF: LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION AND CONTINUATION)
4. 10" REDUCED PRESSURE ZONE BACKFLOW PREVENTER WITH ENCLOSURE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
5. DOUBLE DETECTOR CHECK BACKFLOW PREVENTER, MATCH SIZE OF WATERLINE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
6. POST INDICATOR VALVE (PIV), PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
7. FIRE DEPARTMENT CONNECTION (FDC), PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
8. PROPOSED FIRE HYDRANT
9. CONNECT TO BUILDING WATER ENTRY. (REF: M.E.P. PLANS FOR LINE SIZE AND CONNECTION LOCATION)
10. 2.5" WATER LINE
11. 4" WATER LINE
12. 8" WATER LINE
1. CONTRACTOR SHALL LOCATE AND CONNECT TO THE EXISTING SANITARY SEWER SYSTEM. CONNECTION SHALL BE MADE PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF. DETAILS)
2. 4" SSSWR @ 1.00% MIN.
3. 6" SSWR @ 1.00% MIN.
4. CONNECT TO BUILDING SEWER. (REF: M.E.P. PLANS FOR LINE SIZE, PIPE TYPE AND CONNECTION LOCATION)

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. LOCATION AND SIZES OF EXISTING LINES AND CONNECTIONS TO BUILDING STUBS ARE PROVIDED FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION AND SIZE OF ALL CONNECTIONS BEFORE BEGINNING CONSTRUCTION.
3. WATER LINES AND FITTINGS SMALLER THAN 2" SHALL CONFORM TO ASTM D-1784 SCH 40.
4. 2" THROUGH 3" WATER LINES SHALL BE ASTM D-2241 SDR 21 PVC PIPE.
5. 4" THROUGH 12" WATER LINES SHALL BE AWWA C-900 PVC DR-18 BLUE PRESSURE RATED WATER MAIN.
6. 2" AND LARGER WATER LINE FITTINGS SHALL BE MECHANICAL JOINT FITTINGS PER AWWA C-153.
7. WATER LINES TO HAVE 4' MINIMUM COVER TO FINISHED GRADE. WHERE WATER LINES AND SEWER LINES CROSS THEY MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) OR 30 TAC §290.44(E).
8. ALL MANHOLES SHALL BE PRECAST CONCRETE.
9. SANITARY SEWER PIPE AND FITTINGS SMALLER THAN 8" SHALL CONFORM TO TO ASTM D-1784 SCH 40.
10. SANITARY SEWER PIPE AND FITTINGS 8" AND LARGER SHALL CONFORM WITH ASTM D3034 SDR 26, ASTM D2241 SDR 26 OR AWWA C-900 DR-18 BASED ON CONSTRUCTION CONDITION REQUIREMENTS.

Texas 811
Know what's **below.**
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DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 30'	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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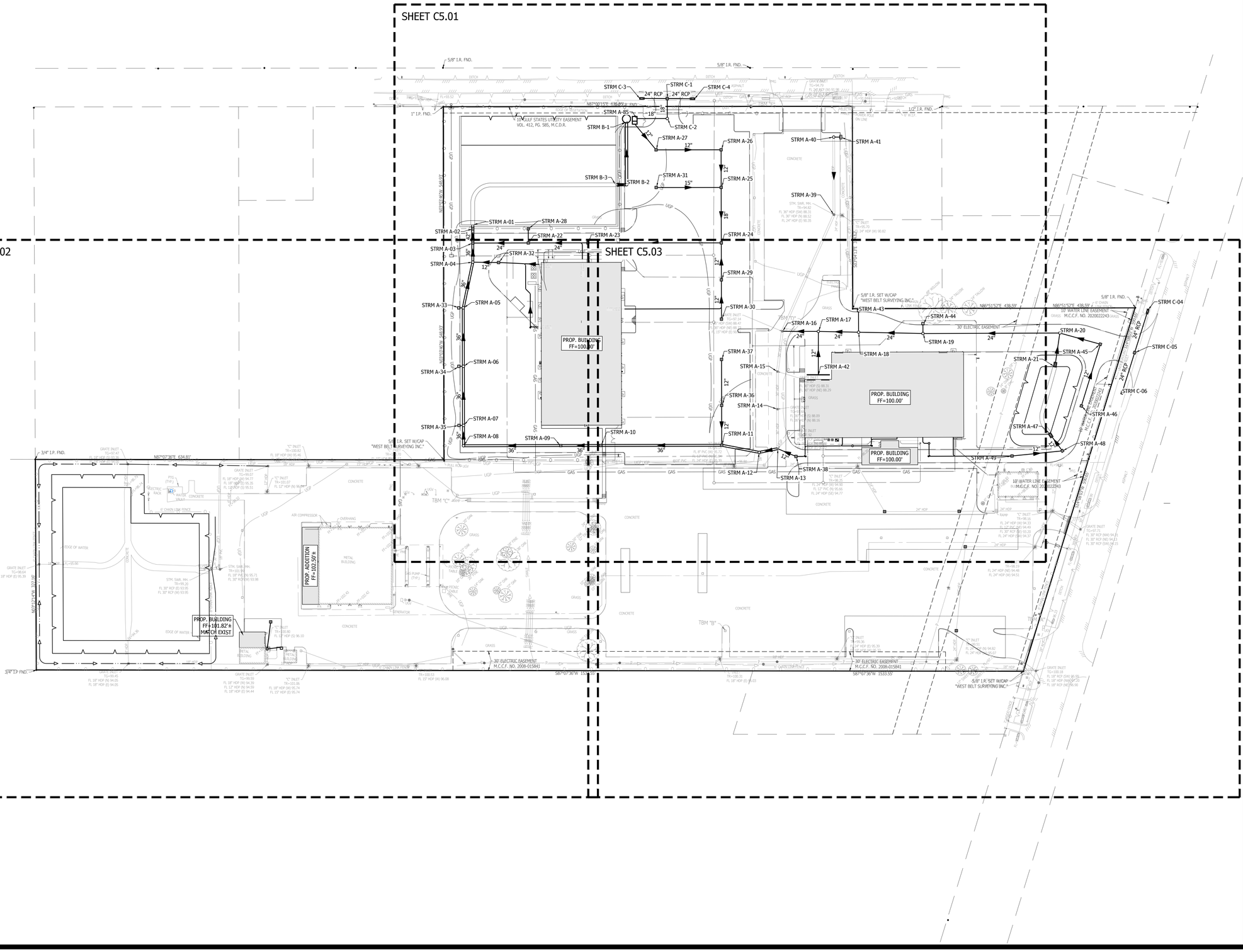
ENLARGED SITE UTILITY PLAN
(SHT 03 OF 03)

Job No.	Sheet No.
1971-05-01	C4.03
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:20 PM
PLOT STYLE: AURIC2.0.STB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\00-SHEETS\C4.03 ENLARGED SITE UTILITY PLAN (SHT 03 OF 03).DWG



Montgomery County

Engineering Department

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County Engineer

Date

N

0' 30' 60' 120'

SCALE: 1" = 60'

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Revision / Date

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

- PROP. STORM SEWER LINE
- PROP. PERFORATED STORM SEWER LINE
- PROP. STORM SEWER MANHOLE
- PROP. GRATE INLET
- PROP. TYPE "C" CURB INLET
- PROP. TYPE "B-B" CURB INLET
- PROP. TYPE "H-2" CURB INLET
- PROP. TYPE "C-2" CURB INLET
- PROP. TYPE "E" INLET
- PROP. NYLOPLAST DRAIN
- PROP. CLEAN-OUT
- PROP. HEADWALL
- PROP. HEADWALL WITH FLARED WINGS
- PROP. DETENTION POND OUTFALL
- PROP. SAFETY END TREATMENT W/ PIPE RUNNERS
- PROP. SAFETY END TREATMENT

KEY NOTES

1. CONTRACTOR SHALL LOCATE AND CONNECT TO THE EXISTING STORM SEWER SYSTEM. CONNECTION SHALL BE MADE PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF. DETAILS)
2. 4" STRM @ 1.00% MIN.
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5. 10" STRM @ 1.00% MIN.
6. 12" STRM @ 0.50% MIN.
7. 15" STRM @ 0.33% MIN.
8. CONNECT TO BUILDING STORM LINE, DOWNSPOUT OR CANOPY DRAIN. (REF: ARCHITECTURAL AND/OR M.E.P. PLANS FOR LINE SIZE, PIPE TYPE AND CONNECTION LOCATION)

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
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5. STORM SEWER SHALL BE HIGH DENSITY POLYETHYLENE CORRUGATED EXTERIOR/SMOOTH INTERIOR PIPE (ASTM F2306) WITH WATER TIGHT JOINTS (ASTM D3212) OR REINFORCED CONCRETE PIPE (C-76, CLASS III) WITH RUBBER GASKET JOINTS (ASTM C443), UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
6. ALL BUILDING AND CANOPY DOWNSPOUTS SHALL BE CONNECTED TO THE UNDERGROUND STORM SEWER SYSTEM WITH ASTM D3034 SDR 26 SEWER PIPE OR ASTM D-1784 SCH 40 PIPE, AT A MINIMUM GRADE OF 1.00% UNLESS NOTED OTHERWISE. LINES SHALL BE A 6 INCH MINIMUM FOR DOWNSPOUTS. ONCE TWO OR MORE DOWNSPOUTS ARE CONNECTED THE COLLECTOR LINE SHALL BE 12" UNLESS NOTED OTHERWISE. WHERE DOWNSPOUT COLLECTORS ARE LOCATED IN PAVED AREAS, PROVIDE A 24"X24" BLOCKOUT AROUND PIPE. REFER TO DETAILS.
7. ALL BENDS IN THE LINES SHALL BE MADE WITH EITHER "WYES" OR DOUBLE 45° BENDS, NO 90° BENDS SHALL BE USED.

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91577
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09/10/25

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DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 60'	0131.0101
VERT:	N/A	

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OVERALL SITE DRAINAGE PLAN

Job No.	Sheet No.
1971-05-01	C5.00
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:09 PM
PLOT STYLE: AURICC.STB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C5.00 OVERALL DRAINAGE PLAN.DWG

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Montgomery County

Engineering Department

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County Engineer _____ Date _____

N

0' 15' 30' 60'

SCALE: 1" = 30'

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Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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HORIZ:	1" = 30'	0131.0101
VERT:	N/A	

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HOUSTON, TEXAS 77027
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ENLARGED SITE DRAINAGE PLAN (SHT 01 OF 03)

Job No.	Sheet No.
1971-05-01	C5.01
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:20 PM
PLOT STYLE: AURIC2.0.STB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C5.01 ENLARGED SITE DRAINAGE PLAN (SHT 01 OF 03).DWG

MATCH LINE (REF SHT C5.02)

MATCH LINE (REF SHT C5.03)

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Montgomery County

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_ County Engineer Date

N

0' 9' 19' 38'

SCALE: Custom

BENCHMARK AND FLOODPLAIN INFORMATION

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TRACT I
CALLED 4.00 ACRES
LEY LIFE FELLOWSHIP
C.C.F. NO. 2022002456

3/4" I.P. FND.

N87°07'36"E 634.81'

3/4" I.P FND.

N03°12'14"W 327.16'

ADJUST TG ELEVATION REF. SHT C3.02

GRATE INLET
TG=97.47
FL 18" HDP (S) 93.36
FL 18" HDP (E) 94.00

GRATE INLET
TG=98.64
FL 18" HDP (E) 95.39

GRATE INLET
TG=99.45
FL 18" HDP (N) 94.05

GRATE INLET
TG=99.07
FL 18" HDP (W) 94.77
FL 18" HDP (E) 95.35
FL 12" HDP (S) 95.51

GRATE INLET
TG=99.59

"C" INLET
TR=101.07
FL 12" HDP (N) 96.34

"C" INLET
TR=100.82
FL 18" HDP (W) 95.46
FL 15" HDP (E) 95.56

"C" INLET
TR=100.70
FL 15" HDP (E) 96.17

"C" INLET
TR=100.80
FL 12" HDP (S) 96.10

STM. SWR. MH.
TR=101.99
FL 18" PVC (N) 95.71
FL 30" RCP (W) 93.98

STM. SWR. MH.
TR=99.20
FL 30" RCP (E) 93.95
FL 30" RCP (W) 93.95

PROP STRM GRATE INLET A-56
N 10052642.94
E 3912370.13
TR 100.80
FL 12"(S) 96.29'

PROP STRM MH A-54
N 10052600.70
E 3912366.92
TR ???
FL 12"(E) 96.10'
FL 12"(N) 96.10'

PROP STRM TYPE C INLET A-55
N 10052604.47
E 3912388.86
TR 101.17
FL 12"(W) 96.20'

PROP 42.36' OF 12" STRM @ 0.44%

PROP 22.26' OF 12" STRM @ 0.44%

PROP. BUILDING
FF=101.82'±
MATCH EXIST

PROP. ADDITION
FF=102.50'±

MATCH LINE (REF SHT C5.01)

MATCH LINE (REF SHT C5.03)

5/8" I.R.
"WEST BELT SURV

CONCRETE

METAL BUILDING

AIR COMPRESSOR

GENERATOR

ELECTRIC RACK

WATER VAULT

PTG (TYP.)

EDGE OF WATER

6' CHAIN LINK FENCE

18" HDP

15" HDP

12" HDP

30" RCP

18" PVC

UGP

UGV

OHP

PMG

GAS

PME

GM

D.S.

FF=102.55

FF=102.57

FF=102.60

FF=102.57

FF=102.43

FF=102.42

FF=101.82

FL=96.79

FL=96.74

FL=99.82

FL=99.32

FL=95.66

FL=93.97

FL=94.36

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Revision / Date

STATE OF TEXAS
SEAN P. RODNEY
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09/10/25

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HORIZ:	Custom	0131.0101
VERT:	N/A	

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TEXAS ENGINEERING FIRM 20740
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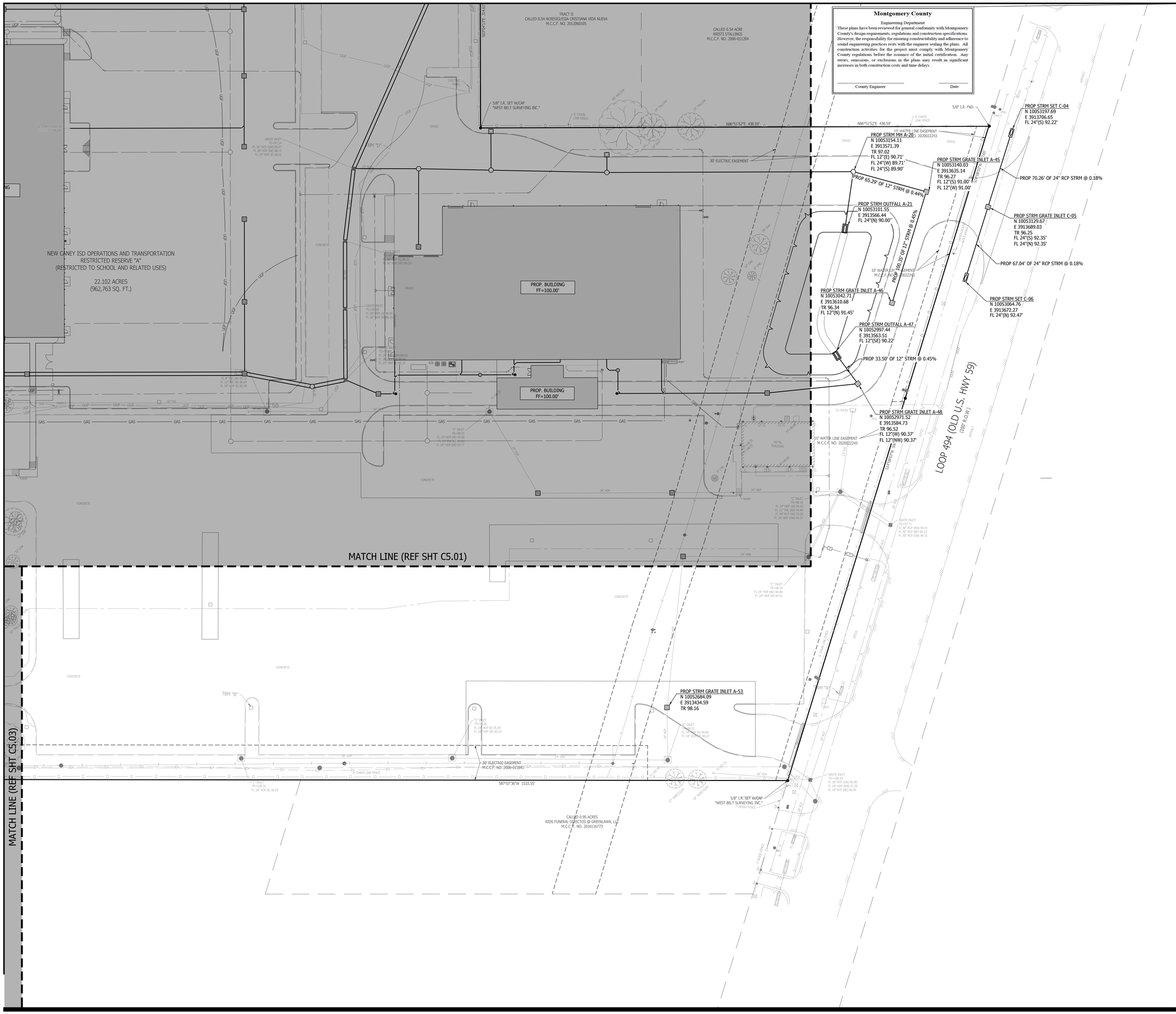
ENLARGED SITE DRAINAGE PLAN (SHT 02 OF 3)

Job No.	Sheet No.
1971-05-01	C5.02
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:03 PM
PLOT STYLE: AURIC2.A.STB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C5.02 ENLARGED SITE DRAINAGE PLAN (SHT 02 OF 3).DWG



N

0' 15' 30' 60'

SCALE: 1" = 30'

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Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

- PROP. STORM SEWER LINE
- PROP. PERFORATED STORM SEWER LINE
- PROP. STORM SEWER MANHOLE
- PROP. GRATE INLET
- PROP. TYPE "C" CURB INLET
- PROP. TYPE "B-B" CURB INLET
- PROP. TYPE "H-2" CURB INLET
- PROP. TYPE "C-2" CURB INLET
- PROP. TYPE "E" INLET
- PROP. NYLOPLAST DRAIN
- PROP. CLEAN-OUT
- PROP. HEADWALL
- PROP. HEADWALL WITH FLARED WINGS
- PROP. DETENTION POND OUTFALL
- PROP. SAFETY END TREATMENT W/ PIPE RUNNERS
- PROP. SAFETY END TREATMENT

KEY NOTES

1. CONTRACTOR SHALL LOCATE AND CONNECT TO THE EXISTING STORM SEWER SYSTEM. CONNECTION SHALL BE MADE PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF. DETAILS)
2. 4" STRM @ 1.00% MIN.
3. 6" STRM @ 1.00% MIN.
4. 8" STRM @ 1.00% MIN.
5. 10" STRM @ 1.00% MIN.
6. 12" STRM @ 0.50% MIN.
7. 15" STRM @ 0.33% MIN.
8. CONNECT TO BUILDING STORM LINE, DOWNSPOUT OR CANOPY DRAIN. (REF: ARCHITECTURAL AND/OR M.E.P. PLANS FOR LINE SIZE, PIPE TYPE AND CONNECTION LOCATION)

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. CONTRACTOR SHALL MATCH THE SIZE AND MATERIAL OF BUILDING PLUMBING TO FIRST STRUCTURE.
3. LOCATION AND SIZES OF EXISTING LINES, CONNECTIONS TO BUILDING STUBS, DOWNSPOUTS AND CANOPY DRAINS ARE PROVIDED FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION AND SIZE OF ALL CONNECTIONS BEFORE BEGINNING CONSTRUCTION.
4. ALL STRUCTURES TO BE PRECAST CONCRETE.
5. STORM SEWER SHALL BE HIGH DENSITY POLYETHYLENE CORRUGATED EXTERIOR/SMOOTH INTERIOR PIPE (ASTM F2306) WITH WATER TIGHT JOINTS (ASTM D3212) OR REINFORCED CONCRETE PIPE (C-76, CLASS III) WITH RUBBER GASKET JOINTS (ASTM C443), UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
6. ALL BUILDING AND CANOPY DOWNSPOUTS SHALL BE CONNECTED TO THE UNDERGROUND STORM SEWER SYSTEM WITH ASTM D3034 SDR 26 SEWER PIPE OR ASTM D-1784 SCH 40 PIPE, AT A MINIMUM GRADE OF 1.00% UNLESS NOTED OTHERWISE. LINES SHALL BE A 6 INCH MINIMUM FOR DOWNSPOUTS. ONCE TWO OR MORE DOWNSPOUTS ARE CONNECTED THE COLLECTOR LINE SHALL BE 12" UNLESS NOTED OTHERWISE. WHERE DOWNSPOUT COLLECTORS ARE LOCATED IN PAVED AREAS, PROVIDE A 24"X24" BLOCKOUT AROUND PIPE. REFER TO DETAILS.
7. ALL BENDS IN THE LINES SHALL BE MADE WITH EITHER "WYES" OR DOUBLE 45° BENDS, NO 90° BENDS SHALL BE USED.

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

Huckabee
www.huckabee-inc.com
800.687.1229

Texas 811
Know what's below.
Call before you dig.

DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 30'	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

ENLARGED SITE DRAINAGE PLAN (SHT 03 OF 03)

Job No.	Sheet No.
1971-05-01	C5.03
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

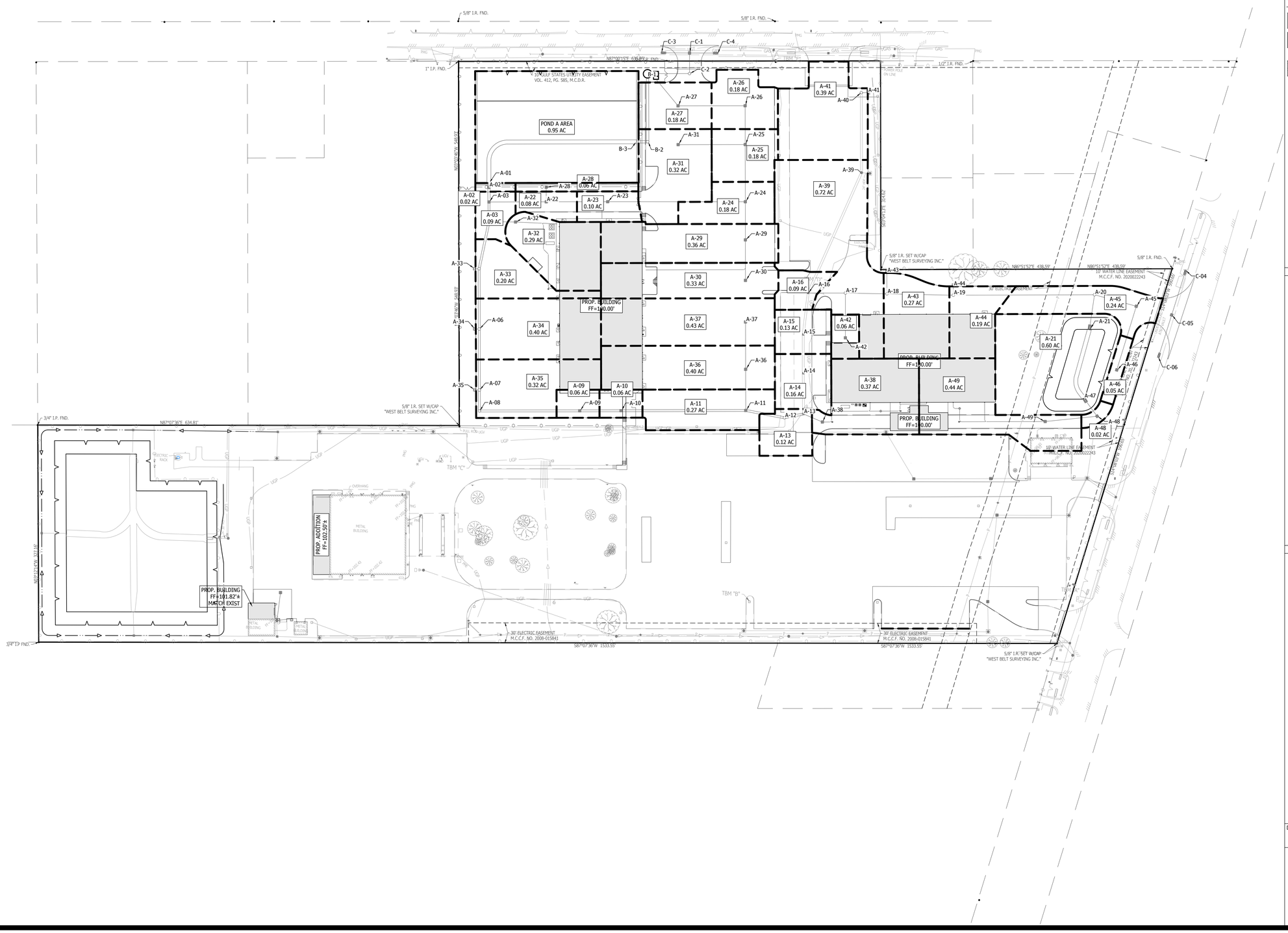
PLOTTED: 9/17/2025 4:21 PM
PLOT STYLE: AURIC2.0.STB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\02-SHEETS\C5.03 ENLARGED SITE DRAINAGE PLAN (SHT 03 OF 03).DWG

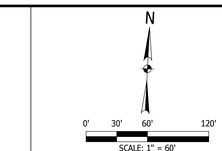
Montgomery County

Engineering Department

These plans have been reviewed for general conformity with Montgomery County's design requirements, regulations and construction specifications. However, the responsibility for ensuring constructability and adherence to sound engineering practices rests with the engineer sealing the plans. All construction activities for the project must comply with Montgomery County regulations before the issuance of the initial certification. Any errors, omissions, or exclusions in the plans may result in significant increases in both construction costs and time delays.

County Engineer _____ Date _____





SCALE: 1" = 60'

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:

NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE ±74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, ±106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND ±64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:

ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED AND NOT IN ANY SPECIAL FLOOD HAZARD AREA.

LEGEND

- PROPOSED EXTREME EVENT FLOW PATH
- DRAINAGE DIVIDE
- LONGEST FLOW PATH
- A-XX XX.XX AC — DRAINAGE AREA NAME / ACREAGE OF DRAINAGE AREA
- FLOOD HAZARD ZONE AE — 1%(100-YR) FLOODPLAIN — FEMA MAP PANEL XXXXXXXXXX DATED XX/XX/XXXX — BFE XX.XX
- FLOOD HAZARD ZONE X SHADED — 0.2% (500-YR) FLOODPLAIN — FEMA MAP PANEL XXXXXXXXXX DATED XX/XX/XXXX — BFE XX.XX

KEY NOTES

NOTES

Texas 811 — Know what's below. Call before you dig.

DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	1" = 60'	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

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Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. RODNEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

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SITE DRAINAGE AREA MAP

Job No. 1971-05-01	Sheet No. C5.04
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

PLOTTED: 9/17/2025 4:21 PM
PLOT STYLE: AURICC-0.STB
FILE PATH: C:_PROJECTS\ACCDOCS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\03-SHEETS\C5.04 - SITE DRAINAGE AREA MAP.DWG

JURISDICTION: MONTGOMERY
ZONE: HC-2
DESIGN STORM EVENT: 20% (5-YEAR)
EXTREME STORM EVENT: 1% (100-YEAR)

OUTFALL INFORMATION
FLOWLINE ELEVATION= 81.04
20% (5-YEAR) HGL ELEVATION= 84.54 * SET AT CROWN OF PIPE AS DEFAULT
1% (100-YEAR) HGL ELEVATION= 84.54 * SET AT CROWN OF PIPE AS DEFAULT

20% (5-YEAR) COEFFICIENTS

e	0.7051
b	54.09
d	8.34
Cf	1.00

1% (100-YEAR) COEFFICIENTS

e	0.5857
b	56.68
d	4.46
Cf	1.25

DRAINAGE AREA INFORMATION | **PIPE AND STRUCTURE PROPERTIES** | **20% (5-YEAR) DESIGN STORM CALCULATIONS** | **1% (100-YEAR) STORM CALCULATIONS** | TP 101 -METHOD 1

DRAINAGE AREA NUMBER	CONTRIBUTING AREA: STRUC (AC)	CONTRIBUTING AREA: ROOF (SF)	CONTRIBUTING AREA: BRANCH (AC)	CONTRIBUTING AREA: CUM. (AC)	RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (MIN)	DOWN-STREAM STRUCTURE: NO.	DOWN-STREAM STRUCTURE: TG (FT)	DOWN-STREAM STRUCTURE: FL (FT)	DOWN-STREAM STRUCTURE: CRWN (FT)	DOWN-STREAM STRUCTURE: COVER (FT)	UP-STREAM STRUCTURE: NO.	UP-STREAM STRUCTURE: TG (FT)	UP-STREAM STRUCTURE: FL (FT)	UP-STREAM STRUCTURE: CRWN (FT)	UP-STREAM STRUCTURE: COVER (FT)	MATCH FLOWLINE OR CROWN (C/F)	ADDITIONAL FLOWLINE RISE (FT)	PIPE LENGTH (FT)	ROUND OR BOX	PIPE DIAMETER OR BOX RISE (IN/FT)	BOX SPAN (FT)	NUMBER OF PIPES	SLOPE (%)	PIPE TYPE	MANNING'S NUMBER (n)	DESIGN CAPACITY (CFS)	DESIGN VELOCITY (FT/S)	20% (5-YEAR) INTENSITY	FLOW AT UP-STREAM STRUCTURE: STRUC (CFS)	FLOW AT UP-STREAM STRUCTURE: ROOF (CFS)	FLOW AT UP-STREAM STRUCTURE: BRANCH (CFS)	FLOW AT UP-STREAM STRUCTURE: CUM. (CFS)	UP-STREAM STRUCTURE TYPE	UP-STREAM STRUCTURE CAPACITY (CFS)	INLET CAPACITY CHECK	ACTUAL VELOCITY (FT/S)	HGL SLOPE (%)	CHANGE IN HGL (FT)	DOWN-STREAM HGL ELEVATION (FT)	UP-STREAM HGL ELEVATION (FT)	UP-STREAM HGL CHECK	1% (100-YEAR) INTENSITY	FLOW AT UP-STREAM STRUCTURE: STRUC (CFS)	FLOW AT UP-STREAM STRUCTURE: ROOF (CFS)	FLOW AT UP-STREAM STRUCTURE: BRANCH (CFS)	FLOW AT UP-STREAM STRUCTURE: CUM. (CFS)	ACTUAL VELOCITY (FT/S)	HGL SLOPE (%)	CHANGE IN HGL (FT)	DOWN-STREAM HGL ELEVATION (FT)	UP-STREAM HGL ELEVATION (FT)	UP-STREAM CRITICAL ELEVATION (DEFAULT T/G) (FT)	UP-STREAM HGL BELOW MAX PONDING ELEV. CHECK
A-02	0.00	0		8.34	0.8	30.92	A-01	84.92	81.04	84.54	0.38	A-02	98.07	81.05	84.55	13.52	C	N/A	6.50	ROUND	42	N/A	1	0.09	RCP	0.013	30.11	3.13	4.07	0.00	0.00		30.90	"A"	5.00	PASS	3.21	0.09	0.01	84.54	84.55	PASS	7.02	0.00	0.00		66.16	6.88	0.43	0.03	84.54	84.57	98.07	PASS
A-03	0.09	0	1.97	8.34	0.8	30.80	A-02	98.07	85.05	88.55	9.52	A-03	97.66	85.07	88.57	9.09	C	4.00	22.00	ROUND	42	N/A	1	0.09	RCP	0.013	30.11	3.13	4.08	0.29	0.00	7.36	30.90	"A"	5.00	PASS	3.21	0.09	0.02	88.55	88.57	PASS	7.03	0.63	0.00	15.74	66.16	6.88	0.43	0.09	88.55	88.64	97.66	PASS
A-04	0.00	0	0.29	6.28	0.8	30.64	A-03	97.66	85.57	88.57	9.09	A-04	98.07	85.61	88.61	9.46	C		29.67	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.09	0.00	0.00	1.1	23.25	"A"	5.00	PASS	3.29	0.12	0.04	88.57	88.61	PASS	7.05	0.00	0.00	2.36	49.79	7.04	0.55	0.16	88.64	88.80	98.07	PASS
A-05	0.00	0	0.20	5.99	0.8	30.25	A-04	98.07	85.61	88.61	9.46	A-05	97.84	85.69	88.69	9.15	C		72.55	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.12	0.00	0.00	0.77	22.15	"A"	5.00	PASS	3.13	0.11	0.08	88.61	88.69	PASS	7.10	0.00	0.00	1.65	47.43	6.71	0.5	0.36	88.80	89.16	97.84	PASS
A-06	0.00	0	0.40	5.79	0.8	29.77	A-05	97.84	85.69	88.69	9.15	A-06	97.83	85.79	88.79	9.04	C		90.79	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.15	0.00	0.00	1.51	21.38	"A"	5.00	PASS	3.02	0.1	0.09	88.69	88.78	PASS	7.16	0.00	0.00	3.22	45.78	6.48	0.47	0.43	89.16	89.59	97.83	PASS
A-07	0.00	0	0.32	5.39	0.8	29.28	A-06	97.83	85.79	88.79	9.04	A-07	97.83	85.90	88.90	8.93	C		91.81	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.19	0.00	0.00	1.22	19.87	"A"	5.00	PASS	2.81	0.09	0.08	88.79	88.87	PASS	7.22	0.00	0.00	2.6	42.56	6.02	0.4	0.37	89.59	89.96	97.83	PASS
A-08	0.00	0		5.07	0.8	29.11	A-07	97.83	85.90	88.90	8.93	A-08	98.02	85.94	88.94	9.08	C		31.66	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.20	0.00	0.00		18.65	"A"	5.00	PASS	2.64	0.08	0.03	88.90	88.93	PASS	7.24	0.00	0.00		39.96	5.65	0.36	0.11	89.96	90.07	98.02	PASS
A-09	0.06	0		5.07	0.8	28.31	A-08	98.02	85.94	88.94	9.08	A-09	99.50	86.11	89.11	10.39	C		150.99	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.27	0.20	0.00		18.65	"A"	5.00	PASS	2.64	0.08	0.12	88.94	89.06	PASS	7.34	0.44	0.00		39.96	5.65	0.36	0.54	90.07	90.61	99.50	PASS
A-10	0.06	0		5.01	0.8	28.28	A-09	99.50	86.11	89.11	10.39	A-10	99.48	86.18	89.18	10.30	C		62.21	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.27	0.20	0.00		18.45	"A"	5.00	PASS	2.61	0.08	0.05	89.11	89.16	PASS	7.35	0.44	0.00		39.52	5.59	0.35	0.22	90.61	90.83	99.48	PASS
A-11	0.27	0	0.83	4.95	0.8	28.25	A-10	99.48	86.18	89.18	10.30	A-11	97.59	86.39	89.39	8.20	C		187.85	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.27	0.92	0.00	3.09	18.25	"A"	5.00	PASS	2.58	0.07	0.13	89.18	89.31	PASS	7.35	1.98	0.00	6.6	39.08	5.53	0.34	0.64	90.83	91.47	97.59	PASS
A-12	0.00	0		3.85	0.8	27.84	A-11	97.59	86.39	89.39	8.20	A-12	99.03	86.46	89.46	9.57	C		59.40	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.31	0.00	0.00		14.24	"A"	5.00	PASS	2.01	0.05	0.03	89.39	89.42	PASS	7.40	0.00	0.00		30.50	4.31	0.21	0.12	91.47	91.59	99.03	PASS
A-13	0.12	0	0.37	3.85	0.8	27.68	A-12	99.03	88.37	91.37	7.66	A-13	97.92	88.40	91.40	6.52	C		29.84	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.32	0.41	0.00	1.4	14.24	"A"	5.00	PASS	2.01	0.05	0.01	91.37	91.38	PASS	7.43	0.89	0.00	2.99	30.50	4.31	0.21	0.06	91.59	91.65	97.92	PASS
A-14	0.16	0		3.36	0.8	27.38	A-13	97.92	88.46	91.46	6.46	A-14	97.68	88.09	91.09	6.59	C		61.35	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.35	0.56	0.00		12.43	"A"	5.00	PASS	1.76	0.03	0.02	91.46	91.48	PASS	7.47	1.20	0.00		26.62	3.77	0.16	0.10	91.65	91.75	97.68	PASS
A-15	0.13	0		3.20	0.8	27.27	A-14	97.68	88.16	91.16	6.52	A-15	97.67	88.31	91.31	6.36	C		58.50	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.36	0.45	0.00		11.87	"A"	5.00	PASS	1.68	0.03	0.02	91.48	91.50	PASS	7.48	0.97	0.00		25.42	3.6	0.14	0.08	91.75	91.83	97.67	PASS
A-16	0.09	0	1.11	3.07	0.8	27.18	A-15	97.67	88.29	91.29	6.38	A-16	97.14	88.36	91.36	5.78	C		62.89	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.36	0.31	0.00	4.09	11.42	"A"	5.00	PASS	1.62	0.03	0.02	91.50	91.52	PASS	7.49	0.67	0.00	8.75	24.45	3.46	0.13	0.08	91.83	91.91	97.14	PASS
A-17	0.00	0	0.06	1.87	0.8	26.17	A-16	97.14	88.90	90.90	6.24	A-17	98.22	89.01	91.01	7.21	C		56.15	ROUND	24	N/A	1	0.18	RCP	0.013	9.61	3.06	4.45	0.00	0.00	0.24	7.02	"A"	5.00	PASS	2.24	0.1	0.06	91.52	91.58	PASS	7.64	0.00	0.00	0.51	15.03	4.79	0.44	0.25	91.91	92.16	98.22	PASS
A-18	0.00	0	0.27	1.81	0.8	26.10	A-17	98.22	89.01	91.01	7.21	A-18	98.62	89.13	91.13	7.49	C		62.47	ROUND	24	N/A	1	0.18	RCP	0.013	9.61	3.06	4.46	0.00	0.00	1.03	6.78	"A"	5.00	PASS	2.16	0.09	0.06	91.58	91.64	PASS	7.65	0.00	0.00	2.2	14.52	4.62	0.41	0.26	92.16	92.42	98.62	PASS
A-19	0.00	0	0.19	1.54	0.8	25.79	A-18	98.62	89.13	91.13	7.49	A-19	98.63	89.32	91.32	7.31	C		100.01	ROUND	24	N/A	1	0.18	RCP	0.013	9.61	3.06	4.49	0.00	0.00	0.73	5.75	"A"	5.00	PASS	1.83	0.06	0.06	91.64	91.70	PASS	7.69	0.00	0.00	1.57	12.32	3.92	0.29	0.29	92.42	92.71	98.63	PASS
A-20	0.00	0	0.29	1.35	0.8	25.54	A-19	98.63	89.32	91.32	7.31	A-20	96.96	89.71	91.71	5.25	C		212.64	ROUND	24	N/A	1	0.18	RCP	0.013	9.61	3.06	4.51	0.00	0.00	1.11	5.02	"A"	5.00	PASS	1.6	0.05	0.11	91.70	91.81	PASS	7.73	0.00	0.00	2.38	10.75	3.42	0.22	0.47	92.71	93.18	96.96	PASS
A-21	0.60	0	0.46	1.06	0.8	25.10	A-20	96.96	89.90	91.90	5.06	A-21	96.00	90.00	92.00	4.00	C		52.79	ROUND	24	N/A	1	0.18	RCP	0.013	9.61	3.06	4.55	2.18	0.00	1.73	3.91	"A"	5.00	PASS	1.25	0.03	0.02	91.90	91.92	PASS	7.80	4.68	0.00	3.69	8.37	2.67	0.14	0.07	93.18	93.25	96.00	PASS
A-22	0.08	0	0.06	1.97	0.8	26.27	A-03	97.66	89.57	91.57	6.09	A-22	97.97	89.73	91.73	6.24	C	3.00	86.26	ROUND	24	N/A	1	0.18	RCP	0.013	9.61	3.06	4.44	0.28	0.00	0.24	7.36	"A"	5.00	PASS	2.34	0.11	0.09	91.57	91.66	PASS	7.62	0.61	0.00	0.51	15.74	5.01	0.48	0.41	91.57	91.98	97.97	PASS
A-23	0.10	0		1.83	0.8	26.12	A-22	97.97	89.73	91.73	6.24	A-23	97.97	89.90	91.90	6.07	C		92.53	ROUND	24	N/A	1	0.18	RCP	0.013	9.61	3.06	4.46	0.36	0.00		6.84	"A"	5.00	PASS	2.18	0.09	0.08	91.73	91.81	PASS	7.65	0.77	0.00		14.62	4.66	0.42	0.39	91.98	92.37	97.97	PASS
A-24	0.18	0	0.69	1.73	0.8	26.01	A-23	97.97	91.21	93.21	4.76	A-24	96.58	91.59	93.59	2.99	C	1.31	207.26	ROUND	24	N/A	1	0.18	RCP	0.013	9.61	3.06	4.47	0.64	0.00	2.58	6.48	"A"	5.00	PASS	2.06	0.08	0.17	93.21	93.38	PASS	7.66	1.38	0.00	5.52	13.85	4.41	0.37	0.77	93.21	93.98	96.58	PASS
A-25	0.18	0	0.32	0.86	0.8	24.74	A-24	96.58	91.59	93.09	3.49	A-25	96.06	91.82	93.32	2.74	F		86.18	ROUND	18	N/A	1	0.26	RCP	0.013	5.43	3.07	4.59	0.66	0.00	1.22	3.26	"A"	5.00	PASS	1.84	0.09	0.08	93.38	93.46	PASS	7.86	1.41	0.00	2.6	6.95	3.93	0.43	0.37	93.98	94.35	96.06	PASS
A-26	0.18	0		0.36	0.8	23.35	A-25	96.06	91.82	92.82	3.24	A-26	96.02	92.08	93.08	2.94	F		58.50	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.73	0.68	0.00		1.38	"A"	5.00	PASS	1.75	0.15	0.09	93.46	93.55	PASS	8.08	1.45	0.00		2.94	3.72	0.67	0.39	94.35	94.74	96.02	PASS
A-27	0.18	0		0.18	0.8	22.39	A-26	96.02	92.08	93.08	2.94	A-27	96.03	92.53	93.53	2.50	F		101.00	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.83	0.70	0.00		0.70	"A"	5.00	PASS	0.89	0.04	0.04	93.55	93.59	PASS	8.25	1.49	0.00		1.49	1.89	0.17	0.17	94.74	94.91	96.03	PASS
A-28	0.06	0		0.06	0.8	21.09	A-22	97.97	90.73	91.73	6.24	A-28	97.57	90.83	91.83	5.74	C		22.00	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.98	0.24	0.00		0.24	"A"	5.00	PASS	0.3	0	0.00	91.73	91.73	PASS	8.49	0.51	0.00		0.51	0.65	0.02	0.00	91.98	91.98	97.57	PASS
A-29	0.36	0		0.69	0.8	24.37	A-24	96.58	91.59	92.59	3.99	A-29	96.92	91.85	92.85	4.07	F		57.94	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.62	1.33	0.00		2.58	"A"	5.00	PASS	3.27	0.52	0.30	93.38	93.68	PASS	7.91	2.85	0.00		5.52	6.99	2.36	1.37	93.98	95.35	96.92	PASS
A-30	0.33	0		0.33	0.8	23.23	A-29	96.92	91.85	92.85	4.07	A-30	97.07	92.12	93.12	3.95	C		61.07	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.74	1.25	0.00		1.25	"A"	5.00	PASS	1.58	0.12	0.07	93.68	93.75	PASS	8.10	2.67	0.00		2.67	3.38	0.55	0.34	95.35	95.69	97.07	PASS
A-31	0.32	0		0.32	0.8	23.18	A-25	96.06	92.07	93.32	2.74	A-31	96.08	92.41	93.66	2.42	C		101.00	ROUND	15	N/A	1	0.33	RCP	0.013	3.71	3.02	4.75	1.22	0.00		1.22	"A"	5.00	PASS	0.99	0.04	0.04	93.46	93.50	PASS	8.11	2.60	0.00		2.60	2.11	0.16	0.16	94.35	94.51	96.08	PASS
A-32	0.29	0		0.29	0.8	23.04	A-04	98.07	91.61	92.61	5.46	A-32	98.31	91.79	92.79	5.52	C	4.00	40.01	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.76	1.10	0.00		1.10	"A"	5.00	PASS	1.39	0.09	0.04	92.61	92.65	PASS	8.14	2.36	0.00		2.36	2.99	0.43	0.17	92.61	92.78	98.31	PASS
A-33	0.20	0		0.20	0.8	22.53	A-05	97.84	91.69	92.69	5.15	A-33	98.25	91.72	92.72	5.53	C	4.00	5.50	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.82	0.77	0.00		0.77	"A"	5.00	PASS	0.97	0.05	0.00	92.69	92.69	PASS	8.23	1.65	0.00		1.65	2.09	0.21	0.01	92.69	92.70	98.25	PASS
A-34	0.40	0		0.40	0.8	23.51	A-06	97.83	91.79	92.79	5.04	A-34	98.24	91.82	92.82	5.42	C	4.00	5.50	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.71	1.51	0.00		1.51	"A"	5.00	PASS	1.91	0.18	0.01	92.79	92.80	PASS	8.06	3.22	0.00		3.22	4.08	0.8	0.04	92.79	92.83	98.24	PASS
A-35	0.32	0		0.32	0.8	23.18	A-07	97.83	91.90	92.90	4.93	A-35	98.24	91.93	92.93	5.31	C	4.00	5.50	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.75	1.22	0.00		1.22	"A"	5.00	PASS	1.54	0.11	0.01	92.90	92.91	PASS	8.11	2.60	0.00		2.60	3.29	0.52	0.03	92.90	92.93	98.24	PASS
A-36	0.40	0		0.83	0.8	24.68	A-11	97.59	92.39	93.39	4.20	A-36	97.58	92.67	93.67	3.91	C	4.00	62.01	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.59	1.47	0.00		3.09	"A"	5.00	PASS	3.91	0.74	0.46	93.39	93.85	PASS	7.86	3.14	0.00		6.60	8.35	3.37	2.09	93.39	95.48	97.58	PASS
A-37	0.43	0		0.43	0.8	23.62	A-36	97.58	92.67	93.67	3.91	A-37	97.37	92.99	93.99	3.38	C		71.34	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.70	1.62	0.00		1.62	"A"	5.00	PASS	2.05	0.2	0.14	93.85	93.99	PASS	8.04	3.46	0.00		3.46	4.38	0.93	0.66	95.48	96.14	97.37	PASS
A-38	0.37	0		0.37	0.8	23.39	A-13	97.92	90.40	91.40	6.52	A-38	97.98	90.54	91.54	6.44	C		30.85	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.73	1.40	0.00		1.40	"A"	5.00	PASS	1.77	0.15	0.05	91.40	91.45	PASS	8.08	2.99	0.00		2.99	3.78	0.69	0.21	91.65	91.86	97.98	PASS
A-39	0.72	0		1.11	0.8	25.19	A-16	97.14	88.73	91.73	5.41	A-39	94.82	88.31	91.31	3.51	C		198.25	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.54	2.62	0.00		4.09	"A"	5.00	PASS	0.58	0	0.00	91.73	91.73	PASS	7.79	5.61	0.00		8.75	1.24	0.02	0.04	91.91	91.95	94.82	PASS
A-40	0.00	0		0.39	0.8	23.47	A-39	94.82	88.52	91.52	3.30	A-40	94.32	88.66	91.66	2.66	C		120.54	ROUND	36	N/A	1	0.11	RCP	0.013	22.2	3.14	4.72	0.00	0.00		1.47	"A"	5.00	PASS	0.21	0	0.00	91.73	91.73	PASS	8.06	0.00	0.00		3.14	0.44	0	0.00	91.95	91.95	94.32	PASS
A-41	0.39	0		0.39	0.8	23.47	A-40	94.32	90.66	91.66	2.66	A-41	94.35	90.71	91.71	2.64	C		9.72	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.72	1.47	0.00		1.47	"A"	5.00	PASS	1.86	0.17	0.02	91.73	91.75	PASS	8.06	3.14	0.00		3.14	3.97	0.76	0.07	91.95	92.02	94.35	PASS
A-42	0.06	0		0.06	0.8	21.09	A-17	98.22	90.01	91.01	7.21	A-42	96.01	90.31	91.31	4.70	C		67.56	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.98	0.24	0.00		0.24	"A"	5.00	PASS	0.3	0	0.00	91.58	91.58	PASS	8.49	0.51	0.00		0.51	0.65	0.02	0.01	92.16	92.17	96.01	PASS
A-43	0.27	0		0.27	0.8	22.94	A-18	98.62	90.13	91.13	7.49	A-43	97.54	90.28	91.28	6.26	C		31.96	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.77	1.03	0.00		1.03	"A"	5.00	PASS	1.3	0.08	0.03	91.64	91.67	PASS	8.15	2.20	0.00		2.20	2.78	0.37	0.12	92.42	92.54	97.54	PASS
A-44	0.19	0		0.19	0.8	22.46	A-19	98.63	90.32	91.32	7.31	A-44	98.93	90.39	91.39	7.54	C		13.79	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.83	0.73	0.00		0.73	"A"	5.00	PASS	0.92	0.04	0.01	91.70	91.71	PASS	8.24	1.57	0.00		1.57	1.99	0.19	0.03	92.71	92.74	98.93	PASS
A-45	0.24	0		0.29	0.8	23.04	A-20	96.96	90.71	91.71	5.25	A-45	96.27	91.00	92.00	4.27	C		65.29	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.76	0.91	0.00		1.11	"A"	5.00	PASS	1.41	0.1	0.07	91.81	91.88	PASS	8.14	1.95	0.00		2.38	3.01	0.44	0.29	93.18	93.47	96.27	PASS
A-46	0.05	0		0.05	0.8	20.90	A-45	96.27	91.00	92.00	4.27	A-46	96.34	91.45	92.45	3.89	C		100.35	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	5.01	0.20	0.00		0.20	"A"	5.00	PASS	0.25	0	0.00	92.00	92.00	PASS	8.53	0.43	0.00		0.43	0.54	0.01	0.01	93.47	93.48	96.34	PASS
A-48	0.02	0		0.46	0.8	23.72	A-47	96.00	90.22	91.22	4.78	A-48	96.52	90.37	91.37	5.15	C		33.50	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.69	0.08	0.00		1.73	"A"	5.00	PASS	2.19	0.23	0.08	91.90	91.98	PASS	8.02	0.16	0.00		3.69	4.67	1.05	0.35	93.25	93.60	96.52	PASS
A-49	0.44	0		0.44	0.8	23.65	A-48	96.52	90.37	91.37	5.15	A-49	96.32	90.72	91.72	4.60	C		78.61	ROUND	12	N/A	1	0.44	RCP	0.013	2.39	3.02	4.70	1.65	0.00		1.65	"A"	5.00	PASS	2.09	0.21	0.17	91.98	92.15	PASS	8.03	3.53	0.00		3.53	4.47	0.97	0.76	93.60	94.36	96.32	PASS

Montgomery County
Engineering Department
These plans have been reviewed for general conformity with Montgomery County's design requirements, regulations and construction specifications. However, the responsibility for ensuring constructability and adherence to sound engineering practices rests with the engineer sealing the plans. All construction activities for the project must comply with Montgomery County regulations before the issuance of the initial certification. Any errors, omissions, or exclusions in the plans may result in significant increases in both construction costs and time delays.

County Engineer _____ Date _____

BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
NGS PID BL2200 - BRASS DISK LOCATED ON THE PROPERTY OF SOUTHWESTERN BELL TELEPHONE COMPANY AT 17521 RAILROAD AVENUE #74' SOUTHWEST FROM THE MOST SOUTHWEST CORNER OF BUILDING, #106' SOUTHWEST FROM THE SOUTHEAST CORNER OF BUILDING AND #64' EAST OF THE CENTERLINE OF RAILROAD AVENUE.
ELEVATION = 112.53' (NAVD 88)

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP PANEL NO. 48339C0500G DATED AUGUST 18, 2014, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZON

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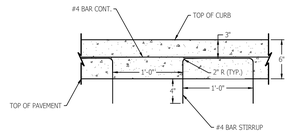
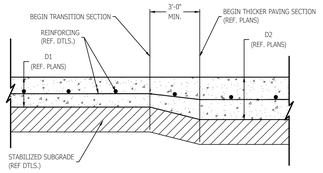
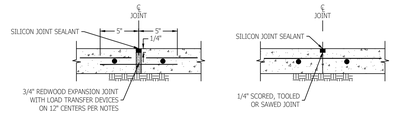


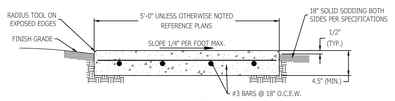
NOTES:
1. FOR NEW PAVEMENT STIRRUPS SHALL BE SET IN FRESH CONCRETE AND SECURED.
2. FOR NEW CURB ON EXISTING PAVEMENT STIRRUPS SHALL BE DRILLED AND EPOXIED INTO THE EXISTING PAVEMENT.
3. MIN COVER ON ALL REINFORCING STEEL SHALL BE 2".
4. PLACE ½" INCH PREFORMED EXPANSION JOINTS THROUGH CURB AND GUTTERS AT LOCATIONS OF EXPANSION JOINTS IN PAVEMENT, AT END OF RADIUS RETURNS AT STREET INTERSECTIONS AND DRIVEWAYS, AND AT CURB INLETS. MAXIMUM SPACING SHALL BE 60' CENTERS.
5. PLACE ½" TOOLED JOINTS THROUGH CURB AND GUTTERS AT LOCATIONS OF SAWED JOINTS IN PAVEMENT.

13 CONCRETE CURB N.T.S.



14 CONCRETE THICKNESS CHANGE N.T.S.

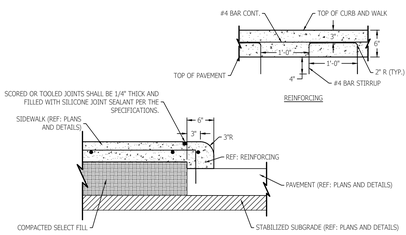




SIDEWALK SECTION

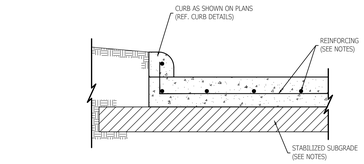
NOTES:
1. SLOPE TRANSVERSE SURFACE 2% (1:50) IN DIRECTION OF GENERAL SITE AREA DRAINAGE. RUNNING SLOPE IN THE DIRECTION OF TRAVEL SHALL NOT EXCEED 5% (1:20).
2. IF IT IS NECESSARY TO PLACE FILL IN ORDER TO BRING THE SIDEWALK SUBGRADE TO THE REQUIRED ELEVATION, SUITABLE EARTH FILL OR SELECT FILL SHALL BE UTILIZED. SUITABLE EARTH FILL AND SELECT FILL SHALL BE FREE OF ORGANICS, DELETERIOUS SUBSTANCES AND BE A CLAYEY SAND OR INACTIVE LEAN CLAY WITH A MAXIMUM LIQUID LIMIT OF 35 AND PLASTICITY INDEX RANGE OF 8 TO 20. FILL MATERIAL SHALL BE PLACED IN 8-INCH THICK LOOSE LIFTS AND COMPACTED TO AN IN-PLACE DENSITY EQUAL TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN +/-3% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698.
3. MIN COVER ON ALL REINFORCING STEEL SHALL BE 2".
4. USE REDWOOD BOARD EXPANSION JOINT w/ #4 SMOOTH BAR (18" LONG) AND LOAD KEY. CENTER DOWEL VERTICALLY IN CONCRETE AND THICKEN CONCRETE AS REQUIRED TO MAINTAIN 2" MIN COVER. REDWOOD BOARD EXPANSION JOINTS SHALL INCORPORATE A 1/4" REMOVAL STRIP AND BE SPACED ON 60 FOOT CENTERS MAXIMUM.
5. CONTROL JOINT SPACING NOT TO EXCEED FIVE (5) FEET. FLOAT EDGES 1/4" MAXIMUM AT CONTROL JOINTS.
6. SIDEWALK JOINTS SHALL ALIGN WITH PAVING JOINTS WHEN SIDEWALK IS ADJACENT TO PAVING.
7. JOINT SEALANT SHALL BE SELF-LEVELING, LOW MODULUS SILICONE OR POLYURETHANE SEALANT FOR ASPHALTIC CONCRETE AND PORTLAND CEMENT CONCRETE JOINTS CONFORMING TO THE REQUIREMENTS OF TXDOT DMS-6310 FOR CLASS 5 JOINT SEALANTS.

15 CONCRETE SIDEWALK N.T.S.



NOTES:
1. SLOPE TRANSVERSE SURFACE 2% (1:50) IN DIRECTION OF GENERAL SITE AREA DRAINAGE. RUNNING SLOPE IN THE DIRECTION OF TRAVEL SHALL NOT EXCEED 5% (1:20).
2. IF IT IS NECESSARY TO PLACE FILL IN ORDER TO BRING THE SIDEWALK SUBGRADE TO THE REQUIRED ELEVATION, SUITABLE EARTH FILL OR SELECT FILL SHALL BE UTILIZED. SUITABLE EARTH FILL AND SELECT FILL SHALL BE FREE OF ORGANICS, DELETERIOUS SUBSTANCES AND BE A CLAYEY SAND OR INACTIVE LEAN CLAY WITH A MAXIMUM LIQUID LIMIT OF 35 AND PLASTICITY INDEX RANGE OF 8 TO 20. FILL MATERIAL SHALL BE PLACED IN 8-INCH THICK LOOSE LIFTS AND COMPACTED TO AN IN-PLACE DENSITY EQUAL TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN +/-3% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698.
3. MIN COVER ON ALL REINFORCING STEEL SHALL BE 2".
4. FOR NEW CURB STIRRUPS DOWELS SHALL BE SET IN FRESH CONCRETE AND SECURED OR BE DRILLED AND EPOXIED INTO THE PAVEMENT AFTER IT HAS CURED.
5. USE REDWOOD BOARD EXPANSION JOINT w/ #4 SMOOTH BAR (18" LONG) AND LOAD KEY. CENTER DOWEL VERTICALLY IN CONCRETE AND THICKEN CONCRETE AS REQUIRED TO MAINTAIN 2" MIN COVER. REDWOOD BOARD EXPANSION JOINTS SHALL INCORPORATE A 1/4" REMOVAL STRIP AND BE SPACED ON 60 FOOT CENTERS MAXIMUM.
6. CONTROL JOINT SPACING NOT TO EXCEED FIVE (5) FEET. FLOAT EDGES 1/4" MAXIMUM AT CONTROL JOINTS.
7. SIDEWALK JOINTS SHALL ALIGN WITH PAVING JOINTS WHEN SIDEWALK IS ADJACENT TO PAVING.
8. JOINT SEALANT SHALL BE SELF-LEVELING, LOW MODULUS SILICONE OR POLYURETHANE SEALANT FOR ASPHALTIC CONCRETE AND PORTLAND CEMENT CONCRETE JOINTS CONFORMING TO THE REQUIREMENTS OF TXDOT DMS-6310 FOR CLASS 5 JOINT SEALANTS.

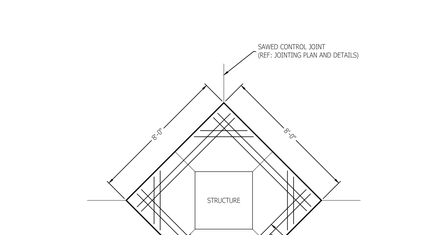
16 MONOLITHIC CONCRETE SIDEWALK AND CURB N.T.S.



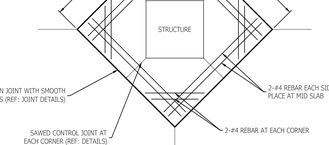
NOTES:
1. AREAS TO RECEIVE PAVING SHALL BE STRIPPED OF THE ORGANIC TOPSOIL TO A DEPTH OF AT LEAST 6-INCHES AND TO A DEPTH AS NECESSARY TO OBTAIN THE DESIRED FINISH GRADE. AFTER REMOVAL OF THE TOPSOIL THE EXPOSED SUBGRADE SHALL BE PROOFROLLED WITH A 15-TON ROLLER TO DETECT ANY WET, SOFT, OR UNSTABLE SOILS. WET, SOFT OR UNSTABLE SOILS SHALL BE TREATED WITH SUITABLE DRYING OR STABILIZING AGENTS OR REMOVED AND REPLACE WITH PROPERLY COMPACTED FILL AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
2. IF IT IS NECESSARY TO PLACE FILL IN ORDER TO BRING THE PAVEMENT SUBGRADE TO THE REQUIRED ELEVATION, SUITABLE EARTH FILL OR SELECT FILL SHALL BE UTILIZED. SUITABLE EARTH FILL AND SELECT FILL SHALL BE FREE OF ORGANICS, DELETERIOUS SUBSTANCES AND BE A CLAYEY SAND OR INACTIVE LEAN CLAY WITH A MAXIMUM LIQUID LIMIT OF 35 AND PLASTICITY INDEX RANGE OF 8 TO 20. FILL MATERIAL SHALL BE PLACED IN 8-INCH THICK LOOSE LIFTS AND COMPACTED TO AN IN-PLACE DENSITY EQUAL TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN +/-3% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698.
3. REFERENCE PAVING PLANS FOR SUBGRADE STABILIZATION REQUIREMENTS.
4. CONCRETE PAVEMENT SHALL OBTAIN A 28-DAY COMPRESSIVE STRENGTH OF AT LEAST 3,500 PSI. REFERENCE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
5. REINFORCING SHALL CONSIST OF THE THE FOLLOWING
   - 5-INCH THICK PAVING - #3 BARS AT 18" O.C.E.W.
   - 6-INCH THICK PAVING - #3 BARS AT 12" O.C.E.W. OR #4 BARS AT 24" O.C.E.W.
   - 7-INCH AND 8-INCH THICK PAVING - #4 BARS AT 18" O.C.E.W.
   - 10-INCH AND 12-INCH THICK PAVING - #5 BARS AT 18" O.C.E.W.

9 CONCRETE PAVEMENT SECTION N.T.S.

PAVEMENT THICKNESS (IN.)	DOWEL SIZE DIAMETER (IN.)	DOWEL SIZE BAR NUMBER
5"	3/4"	6
6"	3/4"	6
7"	1"	8
8"	1"	8
>8"	1.1/4"	10



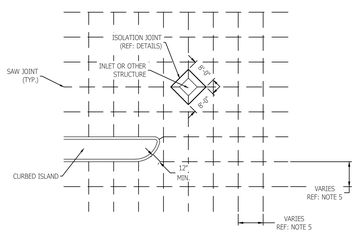
EXPANSION/ISOLATION JOINT



SAWED CONTRACTION JOINT

NOTES:
1. CENTER DOWEL VERTICALLY IN CONCRETE AND THICKEN CONCRETE AS REQUIRED TO MAINTAIN 3" MIN COVER.
2. PROPERLY ANCHOR BOARD JOINT TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.
3. STAKES TO SUPPORT FORMS SHALL BE DRIVEN A MINIMUM PF 2" BELOW THE TOP OF PAVEMENT.
4. COMMENCE SAWING AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PERMIT CUTTING WITHOUT CHIPPING, SPALLING OR TEARING AND PRIOR TO INITIATION OF CRACKS. ONCE SAWING HAS COMMENCED, CONTINUE UNTIL COMPLETED. ALL SWAING SHALL BE COMPLETED WITHIN 24 HOURS OF CONCRETE PLACEMENT.
5. MAKE SAW CUT WITH ONE PASS.
6. JOINT SEALANT SHALL BE SELF-LEVELING, LOW MODULUS SILICONE OR POLYURETHANE SEALANT FOR ASPHALTIC CONCRETE AND PORTLAND CEMENT CONCRETE JOINTS CONFORMING TO THE REQUIREMENTS OF TXDOT DMS-6310 FOR CLASS 5 JOINT SEALANTS.

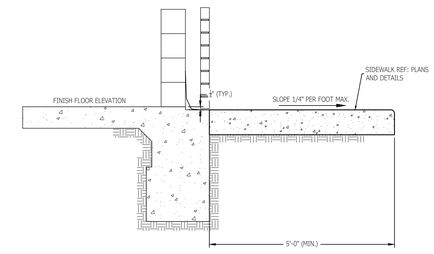
10 CONCRETE PAVEMENT JOINTS N.T.S.



NOTES:
1. AN EFFORT SHALL BE MADE TO UTILIZE JOINTS TO DELINEATE DRIVING LANES AND PARKING STALLS.
2. UTILIZE EXPANSION JOINTS TO SEPARATE CONCRETE POURS.
3. AVOID PLACING EXPANSION JOINTS WHERE RUNOFF WILL FLOW ALONG THE JOINT.
4. ALL JOINTS SHALL INTERSECT CURBS, INLETS AND OTHER STRUCTURES AT RIGHT ANGLES.
5. EVENLY SPACE SAWED JOINTS. THE MAXIMUM SPACING SHALL BE 12-FT FOR PAVEMENT LESS THAN OR EQUAL TO 6" AND 15-FT FOR PAVEMENT GREATER THAN 6" THICK.
6. JOINT PATTERN SHOULD DIVIDE THE PAVEMENT IN APPROXIMATELY SQUARE PANELS. THE LENGTH OF A PANEL SHOULD NOT BE MORE THAN 25% GREATER THAN ITS WIDTH. AVOID CREATING IRREGULAR SHAPED OR SMALL PANELS.

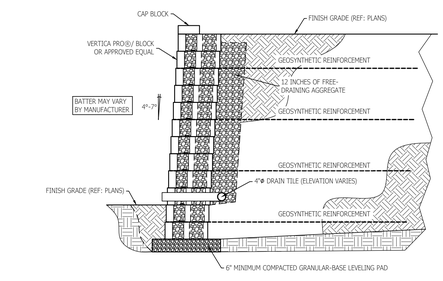
11 TYPICAL JOINT LAYOUT N.T.S.

12 ISOLATION JOINT AT SQUARE STRUCTURE N.T.S.



NOTES:
1. REFERENCE STRUCTURAL PLANS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS WHERE SIDEWALK IS ADJACENT TO THE BUILDING.

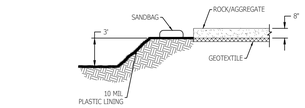
5 TYPICAL GRADING AT BUILDING N.T.S.



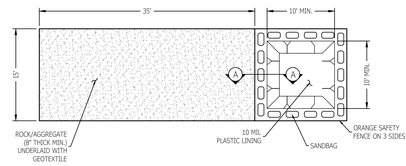
6 TYPICAL GRADING AT BUILDING N.T.S.

NOTES:
1. THE WALL MANUFACTURER SHALL PROVIDE ENGINEERED DRAWINGS FOR ALL ITEMS RELATING TO THE RETAINING WALL INCLUDING BUT NOT LIMITED TO THE FOUNDATION, GEOSYNTHETIC REINFORCEMENT, FREE-DRAINING AGGREGATE, AND BACKFILL. THESE DRAWINGS SHALL BE SEALED BY A TEXAS LICENSED PROFESSIONAL ENGINEER.
2. IF THE SPACE AVAILABLE ON THE SITE DOES ALLOW FOR GEOSYNTHETIC REINFORCEMENT, THE WALL MANUFACTURER SHALL SUBMIT AN ALTERNATIVE DESIGN INCORPORATING STRUCTURAL BACKFILL.
3. UNLESS OTHERWISE NOTED IN THE PLANS, THE BLOCK SHALL BE PROVIDED IN ANY STANDARD FINISH AND COLOR SELECTED BY THE OWNER.

8 SEGMENTAL BLOCK RETAINING WALL GREATER THAN 5-FT N.T.S.

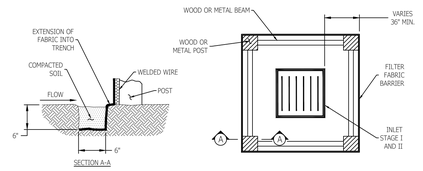


SECTION A-A



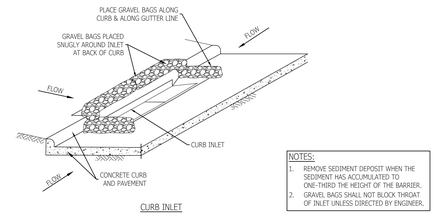
NOTES:
1. POST A SIGN READING "CONCRETE WASHOUT PIT" NEXT TO THE PIT.
2. VERBALLY INSTRUCT THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASHOUT THEIR TRUCKS IN THE PIT AND NOWHERE ELSE.
3. UPON THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR.
4. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASHOUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN-SITU CONDITIONS, OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.
5. CONCRETE WASHOUT 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.
6. CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.

1 CONCRETE TRUCK WASHOUT N.T.S.



SECTION A-A

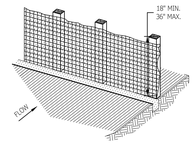
GRATE INLET

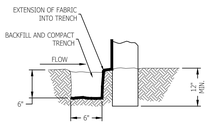


CURB INLET

NOTES:
1. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT WAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.
2. GRAVEL BAGS SHALL NOT BLOCK THROAT OF INLET UNLESS DIRECTED BY ENGINEER.

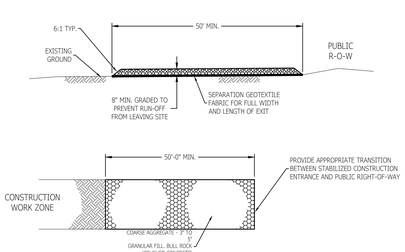
2 INLET PROTECTION BARRIER N.T.S.





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 6 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.

3 REINFORCED FILTER FABRIC FENCE N.T.S.



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. MINIMUM 14' WIDTH FOR ONE WAY TRAFFIC AND 20' WIDTH FOR TWO WAY TRAFFIC.

4 STABILIZED CONSTRUCTION ENTRANCE N.T.S.

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED
PROFESSIONAL ENGINEER
09/10/25

Huckabee
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800.687.1229

DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	N/A	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

CIVIL DETAILS
(SHT 01 OF 03)

Job No.	Sheet No.
1971-05-01	C7.01
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

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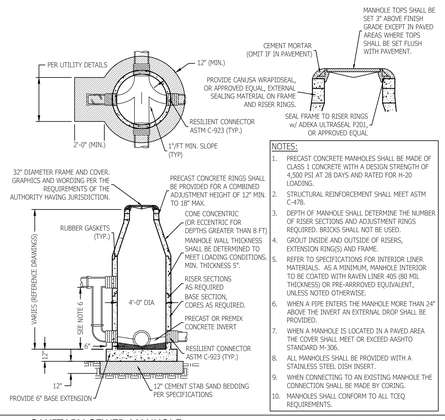
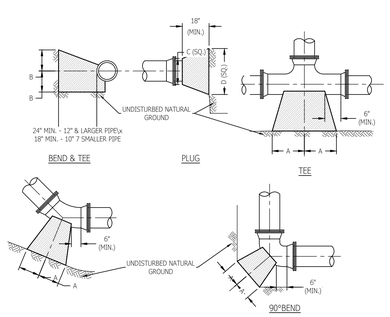


NOTES:
1. PRECAST CONCRETE MANHOLES SHALL BE MADE OF CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4,500 PSI AT 28 DAYS AND RATED FOR H-20 LOADING.
2. STRUCTURAL REINFORCEMENT SHALL MEET ASTM C-478.
3. DEPTH OF MANHOLE SHALL DETERMINE THE NUMBER OF RISER SECTIONS AND ADJUSTMENT RINGS REQUIRED. BRICKS SHALL NOT BE USED.
4. GROUT INSIDE AND OUTSIDE OF RISERS, EXTENSION RINGS(S) AND FRAME.
5. REFER TO SPECIFICATIONS FOR INTERIOR LINER MATERIALS. AS A MINIMUM, MANHOLE INTERIOR TO BE COATED WITH RAVEN LINER 405 (80 MIL THICKNESS) OR PRE-ARRROVED EQUIVALENT, UNLESS NOTED OTHERWISE.
6. WHEN A PIPE ENTERS THE MANHOLE MORE THAN 24" ABOVE THE INVERT AN EXTERNAL DROP SHALL BE PROVIDED.
7. WHEN A MANHOLE IS LOCATED IN A PAVED AREA THE COVER SHALL MEET OR EXCEED AASHTO STANDARD M-306.
8. ALL MANHOLES SHALL BE PROVIDED WITH A STAINLESS STEEL DISH INSERT.
9. WHEN CONNECTING TO AN EXISTING MANHOLE THE CONNECTION SHALL BE MADE BY CORING.
10. MANHOLES SHALL CONFORM TO ALL TCEQ REQUIREMENTS.

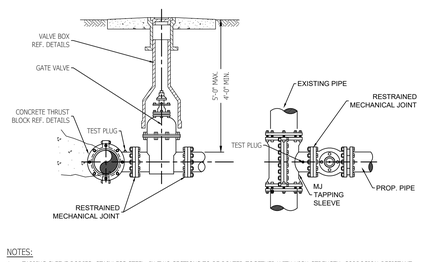
13 SANITARY SEWER MANHOLE N.T.S.



90° BEND		45° BEND		22½° BEND		TEES			PLUGS	
A	B	A	B	A	B	A	B	C	D	
12"	7"	6"	7"	6"	6"	7"	8"	8"	8"	14"
14"	8"	7"	9"	6"	6"	8"	11"	8"	8"	18"
16"	10"	9"	10"	6"	8"	10"	12"	10"	10"	21"
22"	13"	12"	13"	8"	10"	13"	16"	12"	12"	29"
29"	21"	16"	21"	11"	16"	18"	24"	16"	16"	41"
38"	27"	21"	27"	12"	24"	24"	30"	20"	20"	54"

NOTES:
1. THRUST BLOCKS AT TRENCH FACE MUST HAVE A MINIMUM BEARING SURFACE OF 1.0 SF AND THE LEAST DIMENSION SHALL BE NO SMALLER THAN 1.5 TIMES PIPE DIAMETER, BUT NOT LESS THAN 1.0 FT.
2. THRUST BLOCKS SHALL BE PACKED AT ALL FITTINGS.
3. ALL FITTINGS SHALL BE M.J. RESTRAINED JOINT (EBAA IRON, SERIES 2000PV, OR APPROVED EQUAL).

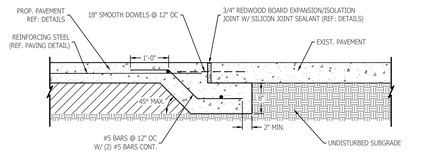
9 THRUST BLOCKING N.T.S.



NOTES:
1. TAPPING SLEEVE BODIES: STAINLESS STEEL; IN TWO SECTIONS TO BE BOLTED TOGETHER WITH HIGH-STRENGTH, CORROSION-RESISTANT, LOW-ALLOY, STEEL BOLTS; MECHANICAL JOINT ENDS.
   - 12 INCH AND SMALLER: STAINLESS STEEL; 3CM 432, ROMAC, OR APPROVED EQUAL.
   - 16 INCH AND LARGER: EPOXY COATED DUCTILE IRON; 3CM, OR APPROVED EQUAL.
2. AC PIPE REQUIRES SMITH BLAIR MODEL - 655 OR 3CM MODEL - 432 TAPPING SLEEVE.
3. BRANCH OUTLET OF TAPPING SLEEVE: FLANGED; MACHINED RECESS; AWWA C207, CLASS D, ANSI 150 LB DRILLING. GASKET: AFFIXED AROUND RECESS OF TAP OPENING TO PRECLUDE ROLLING OR BINDING DURING INSTALLATION.
4. PROVIDE MECHANICAL RESTRAINED JOINTS (EBBA IRON, SERIES 2000PV, OR APPROVED EQUAL).

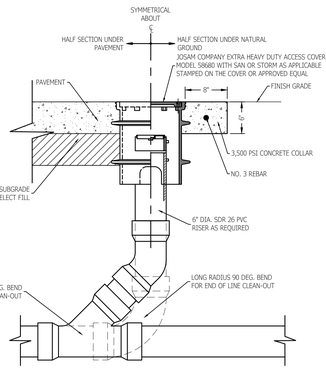
5 TAPPING SLEEVE AND VALVE N.T.S.

PAVEMENT THICKNESS (IN.)	DOWEL SIZE	
	DIAMETER (IN.)	BAR NUMBER
5"	3/4"	6
6"	3/4"	6
7"	1"	8
8"	1"	8
>8"	1 1/4"	10

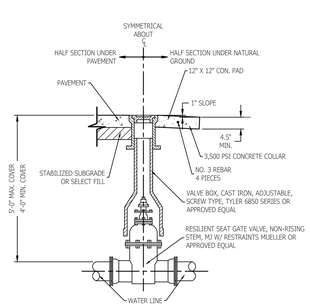


NOTES:
1. UNDERCUT HEADER SHALL BE CONTINUOUS ALONG PROPOSED PAVEMENT WHERE ADJACENT TO EXISTING PAVEMENT.
2. JOINT SEALANT SHALL BE SELF-LEVELING, LOW MODULUS SILICONE OR POLYURETHANE SEALANT FOR ASPHALTIC CONCRETE AND PORTLAND CEMENT CONCRETE JOINTS CONFORMING TO THE REQUIREMENTS OF TXDOT DMS-6310 FOR CLASS 5 JOINT SEALANTS.

1 CONCRETE PAVEMENT HEADER WITH UNDERCUT N.T.S.

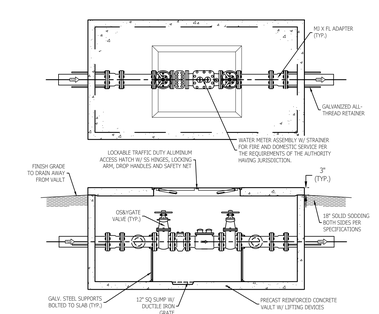


14 SANITARY SEWER CLEANOUT N.T.S.



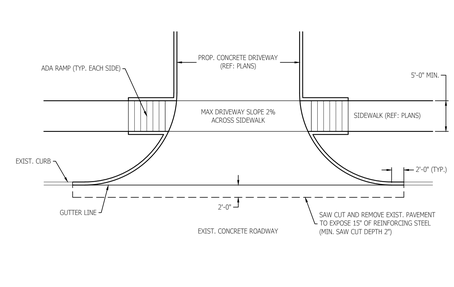
NOTES:
1. PROVIDE OPERATING NUT EXTENSION, AS NEEDED, TO APPROXIMATELY THREE (3) FEET BELOW FINISHED GRADE.
2. VALVE BOX SHALL NOT TRANSMIT ANY LOAD DIRECTLY TO THE VALVE OR PIPE.
3. GATE VALVES SHALL BE COUNTER-CLOCKWISE OPEN.
4. SECURE TRACER WIRE INSIDE OF VALVE BOX.

10 GATE VALVE N.T.S.



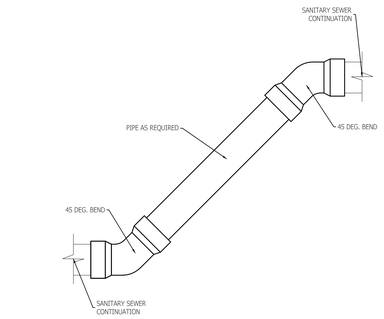
NOTES:
1. CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4,500 PSI AT 28 DAYS. REINFORCEMENT SHALL BE GRADE 60 STEEL CONFORMING TO ASTM A615 ON REQUIRED CENTERS.
2. HATCHWAY SHALL BE TRAFFIC RATED ALUMINUM OR STEEL SKID RESISTANT PLATE W/ FRAME. HATCH TO BE FURNISHED WITH 316 SS SNAP LOCK AND BRASS HINGES.
3. ALL PIPING IN THE VAULT SHALL BE DUCTILE IRON.

6 WATER METER FOR FIRE AND DOMESTIC SERVICE N.T.S.

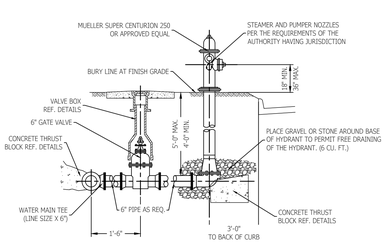


NOTES:
1. DRIVEWAYS SHALL COMPLY WITH ALL REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION ("AHJ").
2. RAMPS AND SIDEWALKS SHALL COMPLY WITH ALL REQUIREMENTS OF THE AHJ, TEXAS ACCESSIBILITY STANDARDS ("TAS") AND AMERICANS WITH DISABILITIES ACT ("ADA"). SHOULD THERE BE A CONFLICT BETWEEN THE REQUIREMENTS THE STRICTEST REQUIREMENTS SHALL GOVERN.

2 TYPICAL CONCRETE DRIVEWAY N.T.S.

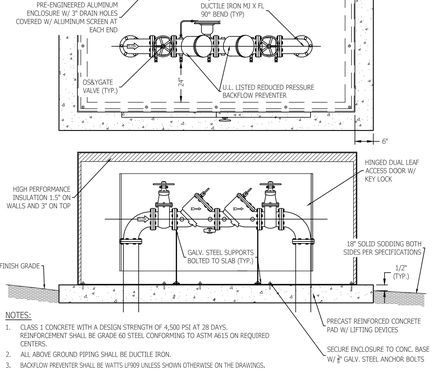


15 SANITARY SEWER DROP N.T.S.



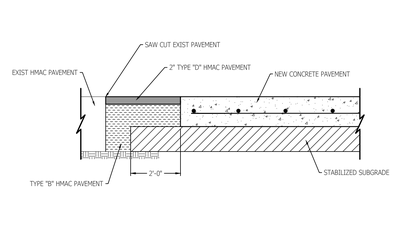
NOTES:
1. 5/8" ALL-THREAD IS TO BE USED TO TIE VALVE TO TEE AND VALVE TO HYDRANT.
2. PROVIDE MECHANICAL RESTRAINED JOINTS (EBBA IRON, SERIES 2000PV, OR APPROVED EQUAL).
3. PAINT ALL FIRE HYDRANTS PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

11 FIRE HYDRANT N.T.S.



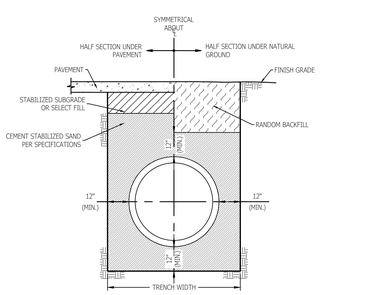
NOTES:
1. CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4,500 PSI AT 28 DAYS. REINFORCEMENT SHALL BE GRADE 60 STEEL CONFORMING TO ASTM A615 ON REQUIRED CENTERS.
2. ALL ABOVE GROUND PIPING SHALL BE DUCTILE IRON.
3. BACKFLOW PREVENTER SHALL BE WATTS LF909 UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

7 REDUCED PRESSURE BACKFLOW W/ ENCLOSURE N.T.S.



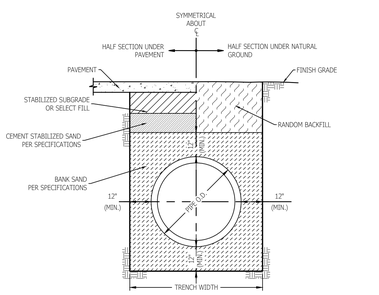
NOTES:
1. HMAC PAVEMENT SHALL CONFORM TO THE REQUIREMENTS OF TXDOT ITEM 340 HOT MIX ASPHALTIC CONCRETE PAVEMENT.

3 CONCRETE PAVEMENT AT EXISTING HMAC PAVEMENT N.T.S.



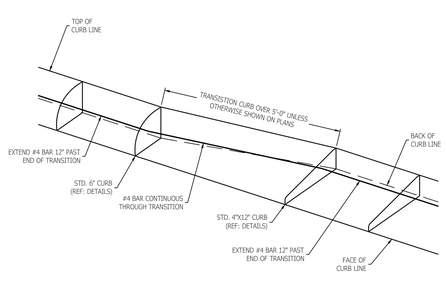
NOTES:
1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS. WHERE WET SAND CONDITIONS ARE ENCOUNTERED SEWERS SHALL BE BACKFILLED PER THE REQUIREMENTS OF THE WET CONDITION BEDDING AND BACKFILLING DETAIL.
2. ALL BACKFILL SHALL SHALL BE PLACED IN 8-INCH THICK LOOSE LIFTS AND COMPACTED AT A MOISTURE CONTENT WITHIN +/-3% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 TO AN IN-PLACE DENSITY EQUAL TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY UNDER PAVEMENT/WALKS AND 92% OF THE MAXIMUM DRY DENSITY IN ALL OTHER AREAS.
3. MIN. TRENCH WIDTH SHALL BE PIPE O.D. PLUS 24-INCHES FOR PIPES WITH A NOMINAL SIZE OF 30-INCHES OR LESS AND O.D. PLUS 36-INCHES FOR PIPES WITH A NOMINAL SIZE GREATER THAN 30-INCHES.

12 SANITARY SEWER BEDDING AND BACKFILL (DRY TRENCH) N.T.S.



NOTES:
1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS. WHERE WET SAND CONDITIONS ARE ENCOUNTERED SEWERS SHALL BE BACKFILLED PER THE REQUIREMENTS OF THE WET CONDITION BEDDING AND BACKFILLING DETAIL.
2. ALL BACKFILL SHALL SHALL BE PLACED IN 8-INCH THICK LOOSE LIFTS AND COMPACTED AT A MOISTURE CONTENT WITHIN +/-3% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 TO AN IN-PLACE DENSITY EQUAL TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY UNDER PAVEMENT/WALKS AND 92% OF THE MAXIMUM DRY DENSITY IN ALL OTHER AREAS.
3. MIN. TRENCH WIDTH SHALL BE PIPE O.D. PLUS 24-INCHES FOR PIPES WITH A NOMINAL SIZE OF 30-INCHES OR LESS AND O.D. PLUS 36-INCHES FOR PIPES WITH A NOMINAL SIZE GREATER THAN 30-INCHES.

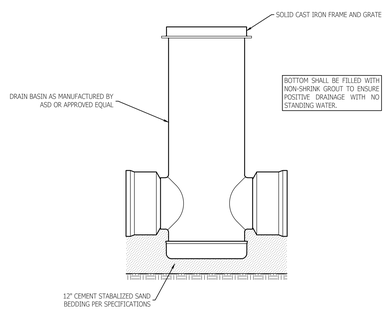
8 WATER LINE BEDDING AND BACKFILL (DRY TRENCH) N.T.S.



NOTES:
1. FOR NEW PAVEMENT STIRRUPS SHALL BE SET IN FRESH CONCRETE AND SECURED.
2. FOR NEW CURB ON EXISTING PAVEMENT STIRRUPS SHALL BE DRILLED AND EPOXIED INTO THE EXISTING PAVEMENT.
3. MIN COVER ON ALL REINFORCING STEEL SHALL BE 2".
4. PLACE 3/4" INCH PREFORMED EXPANSION JOINTS THROUGH CURB AND GUTTERS AT LOCATIONS OF EXPANSION JOINTS IN PAVEMENT, AT END OF RADIUS RETURNS AT STREET INTERSECTIONS AND DRIVEWAYS, AND AT CURB INLETS. MAXIMUM SPACING SHALL BE 60' CENTERS.
5. PLACE 1/4" TOOLED JOINTS THROUGH CURB AND GUTTERS AT LOCATIONS OF SAWED JOINTS IN PAVEMENT.

4 CURB TRANSITION N.T.S.

16 ADS DRAIN BASIN N.T.S.



DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	N/A	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
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CIVIL DETAILS
(SHT 02 OF 03)

Job No. 1971-05-01	Sheet No. C7.02
Drawn By: Author	
Date: 09/10/25	

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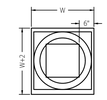
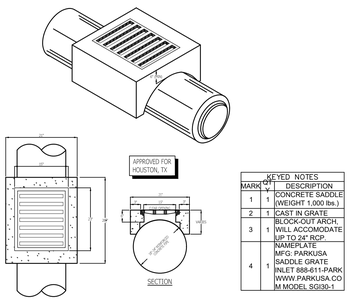
SPECIFICATIONS	
CONCRETE :	CLASS 1/II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. RATED FOR H-20 LOADING.
REINFORCEMENT:	GRADE 60 REINFORCED WITH STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

SLOPE	D	SLOPE	W	L	T	E	WEIGHT
SETH-12-3	12"	3:1	1'-10"	3'-3"	5"	12"	1680
SETH-12-4	12"	4:1	1'-10"	4'-4"	5"	12"	2040
SETH-12-6	12"	6:1	1'-10"	8'-0"	5"	12"	2760
SETH-15-3	15"	3:1	2'-1"	4'-0"	5"	12"	1680
SETH-15-4	15"	4:1	2'-1"	5'-4"	5"	12"	2040
SETH-15-6	15"	6:1	2'-1"	8'-0"	5"	12"	2760
SETH-18-3	18"	3:1	2'-5"	4'-9"	5"	12"	2120
SETH-18-4	18"	4:1	2'-5"	6'-4"	5"	12"	2600
SETH-18-6	18"	6:1	2'-5"	9'-6"	5"	12"	3560
SETH-24-3	24"	3:1	2'-11"	6'-3"	5"	12"	3120
SETH-24-4	24"	4:1	2'-11"	8'-4"	5"	12"	3880
SETH-24-6	24"	6:1	2'-11"	12'-6"	5"	12"	5400
SETH-30-3	30"	3:1	3'-5"	7'-9"	5"	12"	4280
SETH-30-4	30"	4:1	3'-5"	10'-4"	5"	12"	5400
SETH-30-6	30"	6:1	3'-5"	15'-6"	5"	12"	7600
SETH-36-3	36"	3:1	4'-3"	10'-0"	6"	12"	6200
SETH-36-4	36"	4:1	4'-3"	13'-0"	6"	12"	9040
SETH-36-6	36"	6:1	4'-3"	18'-3"	6"	12"	13,000



13

9 SAFETY END TREATMENT WITH BARS N.T.S.



KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	CONCRETE SADDLE (WEIGHT 1,000 lbs.)
2	1	CAST IN GRATE
3	1	BLOCK-OUT ARCH, WILL ACCOMODATE UP TO 24" RCP.
4	1	NAMEPLATE MFG: PARKUSA SADDLE GRATE INLET 888-611-PARK WWW.PARKUSA.COM MODEL SG30-1

SPECIFICATIONS	
CONCRETE :	CLASS 1/II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. RATED FOR H-20 LOADINGS.
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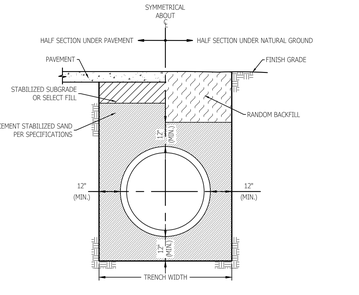
C.I. CASTINGS:	CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30.

5

5 SADDLE GRATE INLET N.T.S.



NOTES:

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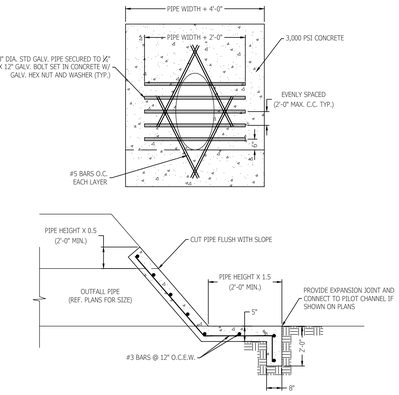
2. ALL BACKFILL SHALL SHALL BE PLACED IN 8-INCH THICK LOOSE LIFTS AND COMPACTED AT A MOISTURE CONTENT WITHIN +/-3% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 TO AN IN-PLACE DENSITY EQUAL TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY UNDER PAVEMENT/WALKS AND 92% OF THE MAXIMUM DRY DENSITY IN ALL OTHER AREAS.
3. FOR R.C.P. STORM SEWERS MIN. TRENCH WIDTH SHALL BE PIPE O.D. PLUS 24-INCHES FOR PIPES WITH A NOMINAL SIZE OF 30-INCHES OR LESS AND O.D. PLUS 36-INCHES FOR PIPES WITH A NOMINAL SIZE GREATER THAN 30-INCHES.
4. FOR H.D.P.E. STORM SEWERS MIN. TRENCH WIDTH SHALL BE PIPE O.D. PLUS 24-INCHES FOR PIPES WITH A NOMINAL SIZE OF 24-INCHES OR LESS AND O.D. PLUS 36-INCHES FOR PIPES WITH A NOMINAL SIZE GREATER THAN 24-INCHES.

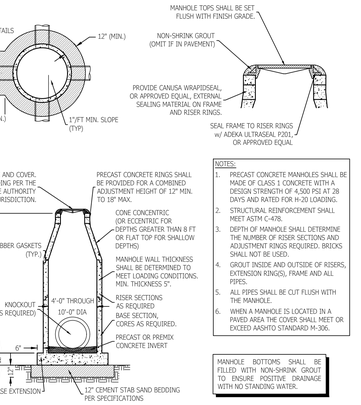
1

1 STORM SEWER BEDDING AND BACKFILL (DRY TRENCH) N.T.S.



14

10 DRY BOTTOM DETENTION POND OUTFALL WITH GUARDS N.T.S.



GRATE SEAT DETAIL

6

6 CAST-IN-PLACE TRENCH DRAIN N.T.S.

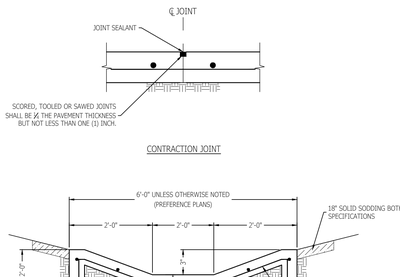
NOTES:

1. PRECAST CONCRETE MANHOLES SHALL BE MADE OF CLASS 1 CONCRETE WITH A DESIGN STRENGTH OF 4,500 PSI AT 28 DAYS AND RATED FOR H-20 LOADING.
2. STRUCTURAL REINFORCEMENT SHALL MEET ASTM C-478.
3. DEPTH OF MANHOLE SHALL DETERMINE THE NUMBER OF RISER SECTIONS AND ADJUSTMENT RINGS REQUIRED. BRICKS SHALL NOT BE USED.
4. GROUT INSIDE AND OUTSIDE OF RISERS, EXTENSION RINGS(S), FRAME AND ALL PIPES.
5. ALL PIPES SHALL BE CUT FLUSH WITH THE MANHOLE.
6. WHEN A MANHOLE IS LOCATED IN A PAVED AREA THE COVER SHALL MEET OR EXCEED AASHTO STANDARD M-306.

MANHOLE BOTTOMS SHALL BE FILLED WITH NON-SHRINK GROUT TO ENSURE POSITIVE DRAINAGE WITH NO STANDING WATER.

2

2 STORM SEWER MANHOLE N.T.S.

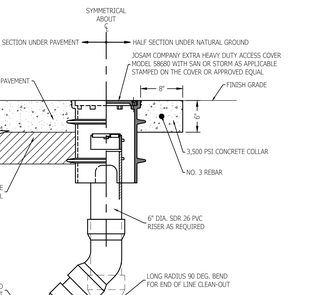


NOTES:

1. FINISH CONCRETE SURFACE WITH LIGHT BROOM FINISH.
2. FLOAT EDGES 1/4" MAXIMUM AT CONTROL JOINTS.
3. CONTROL JOINT SPACING NOT TO EXCEED TWELVE (12) FEET. SCORED, TOOLED OR SAWN JOINTS SHALL BE 1/4 THE PAVEMENT THICKNESS BUT NOT LESS THAN ONE (1) INCH.

11

11 CONCRETE PILOT CHANNEL N.T.S.



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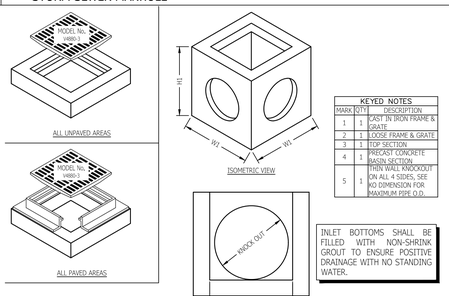
7 STORM SEWER CLEANOUT N.T.S.



KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	CAST IN IRON FRAME & GRATE
2	1	LOOSE FRAME & GRATE
3	1	TOP SECTION
4	1	PRECAST CONCRETE BASIN SECTION
5	1	THIN WALL KNOCKOUT ON ALL 4 SIDES, SEE KO DIMENSION FOR MAXIMUM PIPE O.D.

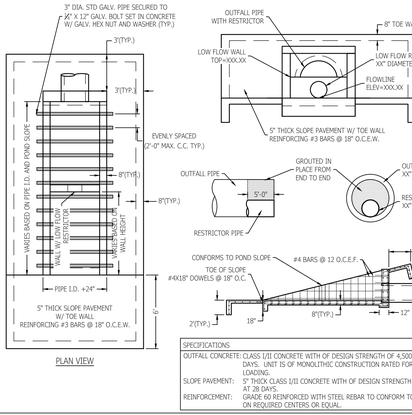
KO	W1	W2	H1	H2	T1	GRATE SIZE
10"	15"	10"	21"	18"	3"	12"x12"x1"
12"	20"	12"	28"	24"	4"	14"x14"x1½"
15"	24"	16"	34"	30"	4"	18"x18"x1½"
17"	26"	18"	34"	30"	4"	20"x20"x1½"
21"	32"	22"	41"	36"	5"	24"x24"x2"
24"	37"	25"	42"	36"	6"	27"x27"x2"
30"	42"	30"	42"	36"	6"	32"x32"x2"
33"	48"	35"	42"	36"	6"	38"x38"x2"
48"	60"	48"	54"	48"	6"	38"x38"x2"
60"	72"	60"	66"	60"	6"	38"x38"x2"
72"	84"	72"	78"	72"	6"	38"x38"x2"
72"	96"	84"	78"	72"	6"	38"x38"x2"

INLET BOTTOMS SHALL BE FILLED WITH NON-SHRINK GROUT TO ENSURE POSITIVE DRAINAGE WITH NO STANDING WATER.

SPECIFICATIONS	
CONCRETE :	CLASS 1/II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. RATED FOR H-20 LOADINGS.
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.

3

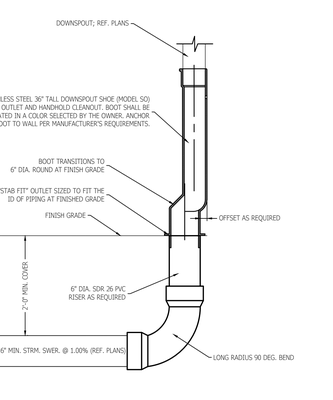
3 GRATE INLET N.T.S.



SPECIFICATIONS	
OUTFALL CONCRETE:	CLASS 1/II CONCRETE WITH OF DESIGN STRENGTH OF 4,500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION RATED FOR H-20 LOADING.
SLOPE PAVEMENT:	5" THICK CLASS 1/II CONCRETE WITH OF DESIGN STRENGTH OF 3,500 PSI AT 28 DAYS.
REINFORCEMENT:	GRADE 60 REINFORCED WITH STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

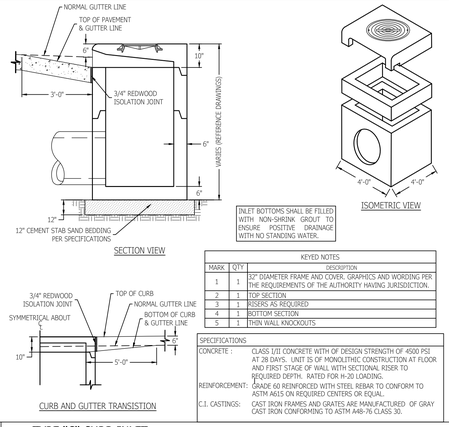
12

12 DETENTION POND OUTFALL WITH LOW FLOW WALL AND RESTRICTOR N.T.S.



8

8 DOWNSPOUT CONNECTION TO STORM SEWER N.T.S.



SECTION VIEW

INLET BOTTOMS SHALL BE FILLED WITH NON-SHRINK GROUT TO ENSURE POSITIVE DRAINAGE WITH NO STANDING WATER.

CURB AND GUTTER TRANSISTION

KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	32" DIAMETER FRAME AND COVER, GRAPHICS AND WORDING PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
2	1	TOP SECTION
3	1	RISERS AS REQUIRED
4	1	BOTTOM SECTION
5	1	THIN WALL KNOCKOUTS

SPECIFICATIONS	
CONCRETE :	CLASS 1/II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. RATED FOR H-20 LOADING.
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C.I. CASTINGS:	CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GRAY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30.

4

4 TYPE "C" CURB INLET N.T.S.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

SEAN P. ROONEY
91977
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
09/10/25

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DRAWING SCALE
HORIZ: N/A
VERT: N/A

AURIC PROJECT NUMBER
0131.0101

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TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

CIVIL DETAILS
(SHT 03 OF 03)

Job No. 1971-05-01
Drawn By: Author
Date: 09/10/25
Sheet No. C7.03

ISSUED FOR BID

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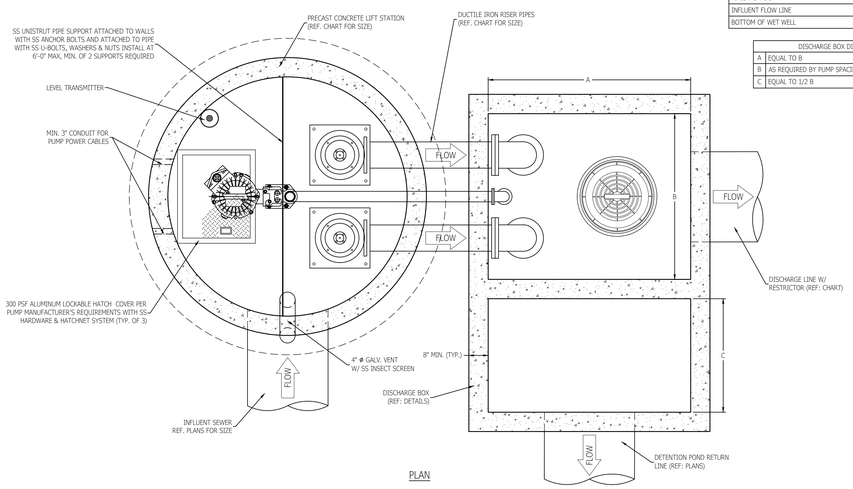
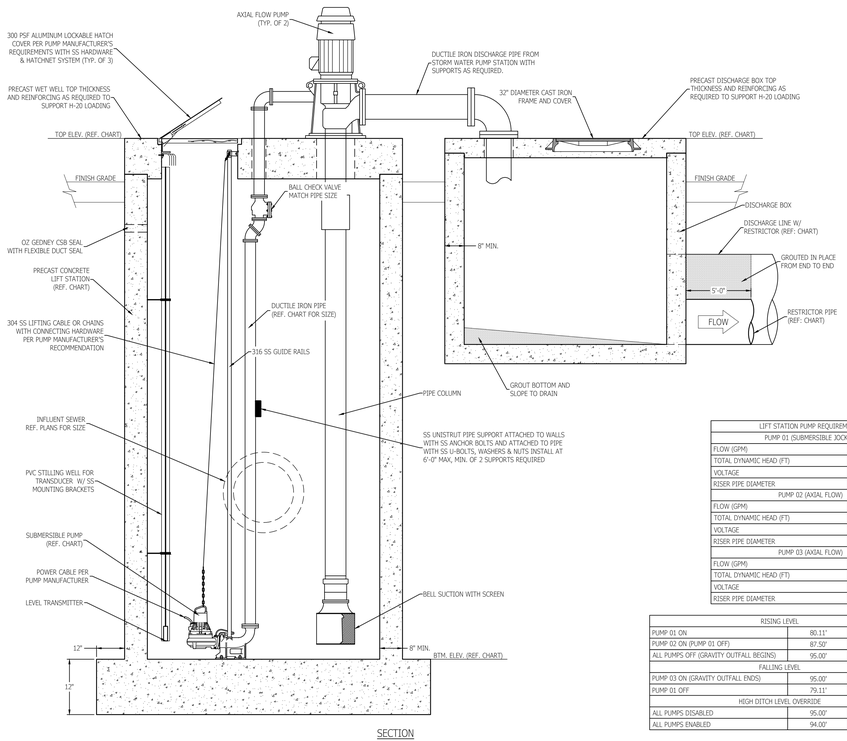
LOCATION OF LIFT STATION, DISCHARGE STRUCTURE, DISCHARGE STRUCTURE AND ALL RELATED APPURTENANCES SHALL BE AS DIRECTED BY THE OWNER IN THE FILED.

WET WELL INFORMATION	
WET WELL DIAMETER	12'-00"
TOP OF CONCRETE	97.00'
FINISH GRADE	96.50'
INFLUENT FLOW LINE	80.36'
BOTTOM OF WET WELL	75.11'

DISCHARGE BOX DIMENSIONS	
A	EQUAL TO B
B	AS REQUIRED BY PUMP SPACING (6'-0" MIN.)
C	EQUAL TO 1/2 B



PLAN

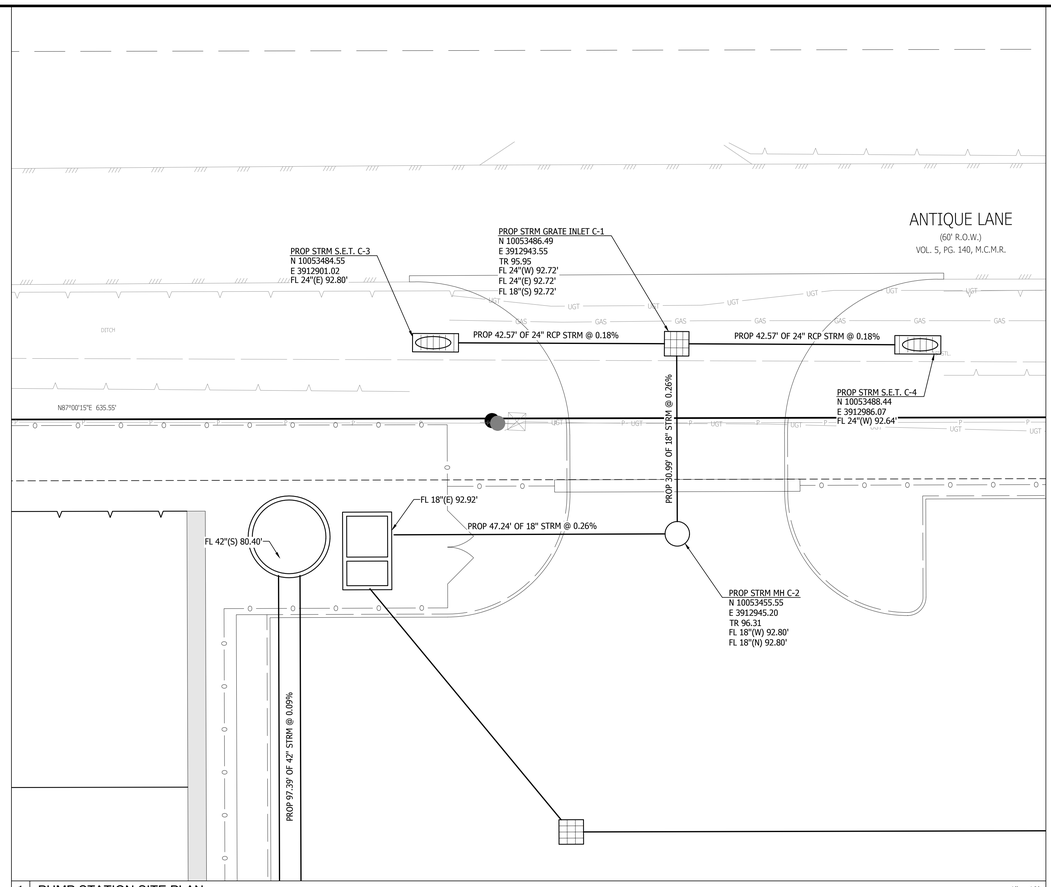


LIFT STATION PUMP REQUIREMENTS	
PUMP 01 (SUBMERSIBLE JOCKEY)	
FLOW (GPM)	550.00 GPM
TOTAL DYNAMIC HEAD (FT)	21.0'
VOLTAGE	480 V
RISER PIPE DIAMETER	8"
PUMP 02 (AXIAL FLOW)	
FLOW (GPM)	2,550 GPM
TOTAL DYNAMIC HEAD (FT)	4.9'
VOLTAGE	480 V
RISER PIPE DIAMETER	10"
PUMP 03 (AXIAL FLOW)	
FLOW (GPM)	2,550 GPM
TOTAL DYNAMIC HEAD (FT)	4.9'
VOLTAGE	480 V
RISER PIPE DIAMETER	10"

RISING LEVEL		
PUMP 01 ON	80.11'	PUMP 01
PUMP 02 ON (PUMP 01 OFF)	87.50'	PUMP 02
ALL PUMPS OFF (GRAVITY OUTFALL BEGINS)	95.00'	NONE
FALLING LEVEL		
PUMP 03 ON (GRAVITY OUTFALL ENDS)	95.00'	PUMP 03
PUMP 01 OFF	79.11'	NONE
HIGH DITCH LEVEL OVERRIDE		
ALL PUMPS DISABLED	95.00'	ALL DISABLED
ALL PUMPS ENABLED	94.00'	ALL ENABLED

SECTION

5 PACKAGED DUPLEX STORM WATER PUMP STATION



1 PUMP STATION SITE PLAN 1" = 10'

NOTES:

1. THE CONTRACTOR SHALL PROVIDE A STORM WATER PUMP STATION MEETING PUMP MANUFACTURER'S RECOMMENDATIONS FOR PUMPS, PUMP CONTROLS AND PANEL/CABINET, PUMP GUIDE SYSTEM, AND ALL RELATED EQUIPMENT NECESSARY FOR THE PROPER OPERATION OF THE PUMPING SYSTEM. ALL LIFT STATION COMPONENTS AND CONTROLS SHALL WORK PROPERLY AND HARMONIOUSLY WITH EACH OTHER TO PROVIDE A PROPERLY FUNCTIONING LIFT STATION AND NOT VOID THE PUMP MANUFACTURER'S WARRANTY. LIFT STATION EQUIPMENT SHALL BE SUPPLIED AS A PACKAGE (COMPLETE WITH PUMPS AND CONTROLS) BY PUMP SOLUTIONS, INC. OR HAHN EQUIPMENT.
2. PROVIDE VERTICAL, SUBMERSIBLE, VERTICAL DISCHARGE, CLOSE-COUPLED, EXPLOSION PROOF, CENTRIFUGAL TYPE PUMPS SUITABLE FOR CONTINUOUS OPERATION IN A WET PIT INSTALLATION. PROVIDE PUMP UNIT(S)WITH INTEGRAL CONTROL PANEL/SYSTEM, STARTERS, CONTROL POWER TRANSFORMER, ALARMS, DIALERS AND LED LIGHTS AND STROBES.
3. PROVIDE A JOCKEY PUMP MEETING THE FOLLOWING REQUIREMENTS. APPROVED PUMPS ARE XYLEM'S FLYGT, KSB, AND SULZER.
   - CASING: CAST IRON, ASTM A536 OR ASTM A-48 CLASS 35B
   - IMPELLER: SELF-CLEANING, CAST IRON CLASS 35B, CAPABLE OF SELF-CLEANING, CAPABLE OF PASSING A SPHERE OF 2.5 INCHES IN DIAMETER OR GREATER
   - SHAFT: 420 STAINLESS STEEL – SOLID SHAFT
   - BEARINGS: PERMANENTLY LUBRICATED, SINGLE UPPER ROW, DOUBLE LOWER ROW, ANGULAR CONTACT WEAR RINGS CAST IRON OR BRASS ON SPIRAL WEAR PLATE
   - SEALS: TUNGSTEN – CARBIDE LOWER AND UPPER
   - MOTOR: CLASS H SQUIRREL-CAGE INDUCTION MOTOR COOLED BY MEANS OF THE SURROUNDING WATER CAPABLE OF FULLY UTILIZING THE AVAILABLE POWER WHILE OPERATING ON A VARIABLE FREQUENCY DRIVE
   - SEAL LEAK DETECTION: PROVIDE A LEAKAGE SENSOR IN THE STATOR CHAMBER ALLOWING A CONTROL PANEL MOUNTED RELAY TO INDICATE LEAKAGE INTO THE MOTOR. WHEN ACTIVATED, THE LEAKAGE SENSOR SHALL STOP THE MOTOR AND TRIGGER AN ALARM.
   - TEMPERATURE PROTECTION: FURNISH TEMPERATURE MONITORING THERMISTORS OR BIMETALICS IN MOTOR WINDINGS FOR USE IN CONJUNCTION WITH AND SUPPLEMENTAL TO EXTERNAL MOTOR OVERLOAD PROTECTION. SET TEMPERATURE MONITORS AT LEVELS RECOMMENDED BY PUMP MANUFACTURER AND ARRANGE CONTROLS TO SHUT OFF PUMP SHOULD ANY MONITOR DETECT HIGH TEMPERATURES. PUMP SHALL RESET AUTOMATICALLY AFTER MOTOR RETURNS TO NORMAL OPERATING TEMPERATURE.
   - DISCHARGE CONNECTION ELBOW & GUIDE SYSTEM: PROVIDE DISCHARGE CONNECTION ELBOW PERMANENTLY INSTALLED IN THE BASIN WET WELL ALONG WITH THE DISCHARGE PIPING. PROVIDE PUMP AUTOMATICALLY CONNECTED TO THE DISCHARGE CONNECTION ELBOW WHEN LOWERED INTO PLACE FOR EASY REMOVAL FOR INSPECTION OR SERVICE. SEALING OF THE PUMPING UNIT TO THE DISCHARGE CONNECTION ELBOW SHALL USE A SIMPLE LINEAR DOWNWARD MOTION OF THE PUMP. USE A SLIDING GUIDE BRACKET AS AN INTEGRAL PART OF THE PUMP UNIT. THE ENTIRE WEIGHT OF THE PUMP UNIT SHALL BE GUIDED USING GUIDE BARS, PIPES OR CABLES, AND SHALL PRESS TIGHTLY AGAINST THE DISCHARGE CONNECTION ELBOW CREATING A ZERO LEAKAGE SEAL BETWEEN PUMP AND DISCHARGE CONNECTION FLANGE. SEAL DISCHARGE INTERFACE USING DIAPHRAGM, O-RING, OR METAL-TO-METAL CONTACT. PROVIDE LOWER GUIDE BAR, OR PIPE INTEGRAL WITH THE DISCHARGE CONNECTION. PROVIDE SCHEDULE 40 WEIGHT STAINLESS STEEL PIPE FOR GUIDE APPARATUS. THE GUIDE APPARATUS SHALL NOT PROVIDE SUPPORT TO ANY PORTION OF THE WEIGHT OF THE PUMP. NO PORTION OF THE PUMP SHALL BEAR DIRECTLY ON THE FLOOR OF THE WET WELL. PROVIDE STAINLESS STEEL PULL CHAINS AND GRIP-EYE (WITH NYLON TIE-OFF LINE) WITH EACH PUMP UNIT, WHICH ALLOW FOR REMOVAL AND REINSTALLATION WITHOUT THE NEED TO ENTER THE WET WELL, AND WITHOUT REMOVAL OF BOLTS, NUTS, OR OTHER FASTENERS.
4. PROVIDE TWO AXIAL FLOW PUMPS MEETING THE FOLLOWING REQUIREMENTS. APPROVED PUMPS ARE CARRY PUMPS.
5. THE LOCATION OF A WET WELL WATER LEVEL SENSING MECHANISM MUST ENSURE THAT THE MECHANISM IS UNAFFECTED BY CURRENTS, RAGS, GREASE, OR OTHER FLOATING MATERIALS. A WET WELL WATER LEVEL SENSING MECHANISM MUST BE ACCESSIBLE WITHOUT ENTERING THE WET WELL. ELECTRONIC WET WELL LEVEL CONTROL SYSTEMS MUST ALSO USE A FLOAT SWITCH OR SIMILAR MANUAL BACKUP.
6. PRECAST CONCRETE LIFT STATION SHALL BE MADE OF CLASS I/II CONCRETE WITH A DESIGN STRENGTH OF 4,500 PSI AT 28 DAYS AND RATED FOR H-20 LOADING UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR, FIRST STAGE OF WALL AND BAFFLE WITH SECTIONAL RISER TO REQUIRED DEPTH.
7. STRUCTURAL REINFORCEMENT SHALL BE GRADE 60 STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL AND SHALL MEET ASTM C-478.
8. GROUT INSIDE AND OUTSIDE OF SECTIONS.
9. THE BOTTOM OF WET WELL SHALL HAVE A MINIMUM SLOPE OF 10 PERCENT TOWARDS THE PUMP(S) INTAKE AND SHALL HAVE A SMOOTH FINISH.
10. ALL FABRICATED ITEMS SHALL HOT DIPPED GALVANIZED AFTER FABRICATION. ALL NUTS, WASHERS AND MISCELLANEOUS HARDWARE SHALL BE STAINLESS STEEL.
11. UNLESS OTHERWISE NOTED ALL WET WELL AND ABOVE GROUND PIPING SHALL BE PAINTED DUCTILE IRON PIPE. ALL BELOW GROUND PIPING SHALL BE PVC.
12. CHECK VALVES SHALL BE FULL-BODY FLANGED SWING TYPE VALVES SUITABLE FOR VERTICAL INSTALLATION.
13. DIMENSIONS PROVIDED ARE RELATIVE TO THE PUMP SIZE AND MANUFACTURER SELECTED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL MANUFACTURER CLEARANCES AND SEPARATION DISTANCES.
14. SITE FENCING SHALL BE AN 8-FOOT HIGH GREEN PVC-COATED, MINIMUM NO. 9 GAUGE GALVANIZED WOVEN WIRE, 2-INCH OPEN-DIAMOND MESH PATTERN, CYCLONE-TYPE FENCE WITH GREEN PVC SLATS. SITE ACCESS SHALL THROUGH ONE 16-FOOT WIDE, DOUBLE LEAF, INWARD-OPENING SWING GATE SECURED WITH A CHAIN AND PADLOCK.

2 STORM WATER PUMP STATION NOTES N.T.S.

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Project:

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DRAWING SCALE		AURIC PROJECT NUMBER
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STORMWATER PUMP STATIONS DETAILS (SHT 01 OF 03)

Job No. 1971-05-01	Sheet No. C7.04
Drawn By: Author	
Date: 09/10/25	

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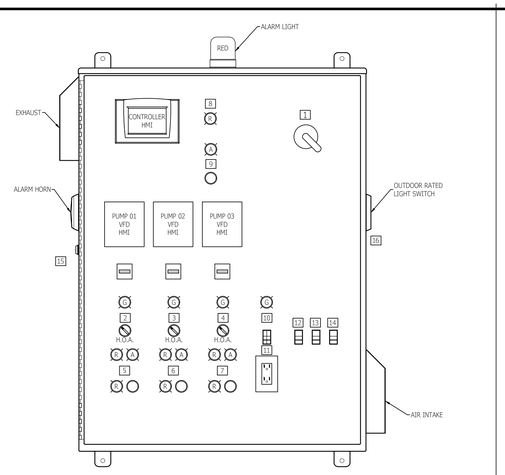
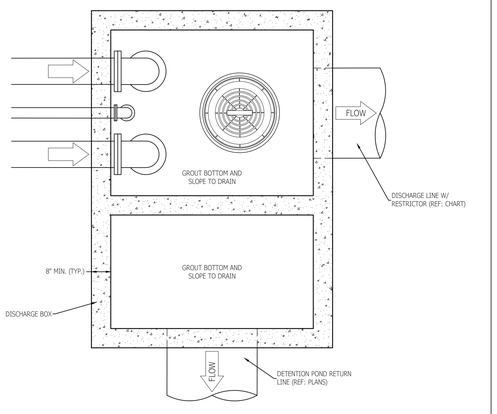
FILE PATH: C:_PROJECTS\ACCOCKS\AURIC ENGINEERS\0131.0101-NCISD TRANSPORTATION AND OPERATIONS\PROJECT FILES\01-CIVIL\06-DRAWINGS\01-SHEETS\C7.04 STORMWATER PUMP STATIONS DETAILS (SHT 01 OF 03).DWG



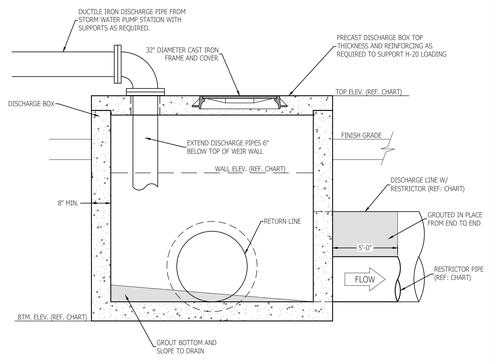
INNER DOOR VIEW
OUTER DOOR REMOVED

1	MAIN DISCONNECT	7	RUNNING PUMP NO. 03 HAND-OFF-AUTO	13	OVERTEMP / SEAL FAIL PUMP NO. 02 OVERLOAD / RESET
2	PUMP NO. 01	8	DITCH HIGH LEVEL	14	OVERTEMP / SEAL FAIL PUMP NO. 03 OVERLOAD / RESET
3	PUMP NO. 02	9	ACTIVE FLOAT BACKUP RESET	15	ALARM SILENCE
4	PUMP NO. 03	10	CONTROL POWER ON	16	WORK LIGHT
5	RUNNING PUMP NO. 01 HAND-OFF-AUTO	11	CONTROL POWER / CONV RECEPT		
6	RUNNING PUMP NO. 02 HAND-OFF-AUTO	12	OVERTEMP / SEAL FAIL PUMP NO. 01 OVERLOAD / RESET		

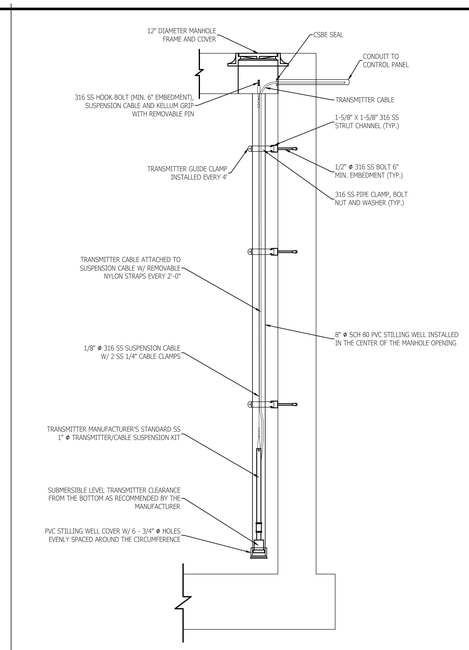
8 TYPICAL CONTROL PANEL N.T.S.



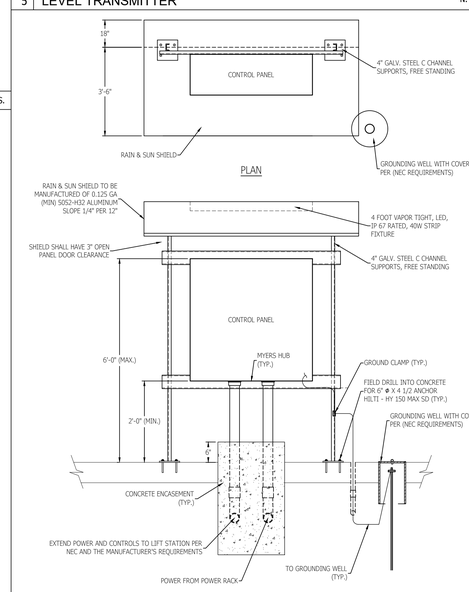
9 PUMP DISCHARGE BOX N.T.S.



DISCHARGE BOX INFORMATION	
TOP OF CONCRETE	97.00'
FINISH GRADE	96.5'
BOTTOM OF BOX	92.92'
TOP OF WALL	95.33'
DISCHARGE LINE FLOWLINE	92.92'
DISCHARGE LINE DIAMETER	18"
DISCHARGE LINE RESTRICTOR DIAMETER	10"
MAXIMUM FLOW THROUGH RESTRICTOR	5.44 CFS
POND RETURN LINE FLOWLINE	92.92'
POND RETURN LINE DIAMETER	18"



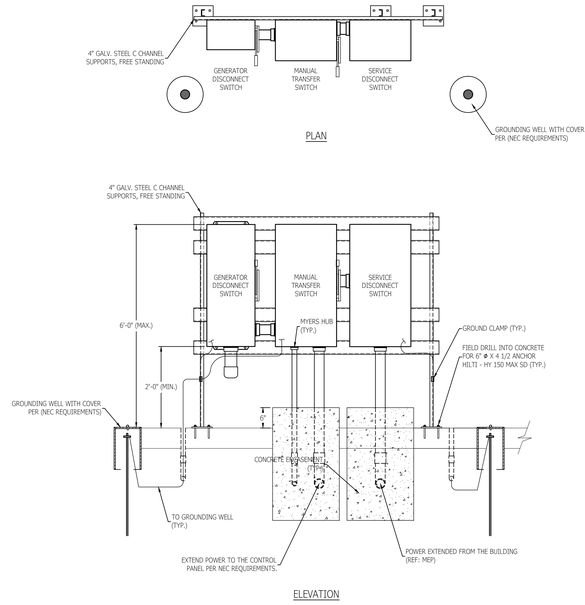
5 LEVEL TRANSMITTER N.T.S.



6 CONTROL RACK N.T.S.

1 CONTROL PANEL NOTES

1. LIFT STATION EQUIPMENT SHALL BE SUPPLIED AS A PACKAGE (COMPLETE WITH PUMPS AND CONTROLS) BY PUMP SOLUTIONS, INC. OR HAHN EQUIPMENT.
2. THE CONTRACTOR SHALL PROVIDE A COMPLETE LIFT STATION ELECTRICAL CONTROL SYSTEM AS HEREINAFTER DESCRIBED AND ALL NECESSARY APPURTENANCES WHICH MIGHT NORMALLY BE CONSIDERED A PART OF THE COMPLETE ELECTRICAL SYSTEM FOR THIS INSTALLATION. ALL OF THE AUTOMATIC CONTROL EQUIPMENT IS TO BE SUPPLIED BY ONE MANUFACTURER. IT SHALL BE FACTORY ASSEMBLED, WIRED AND TESTED AND COVERED BY COMPLETE ELECTRICAL DRAWINGS AND INSTRUCTIONS. THE CONTROL SYSTEM SHALL INCLUDE THE FOLLOWING COMPONENTS: NEMA RATED STARTERS, VFD DRIVES, HEAVY DUTY MAGNETIC BREAKERS, PHASE MONITOR, 2KVA TRANSFORMER WITH A GFCI CONVENIENCE RECEPTICAL, RUN LIGHTS (PUSH TO TEST), OVERLOAD LIGHTS (PUSH TO TEST) WITH RESETS, HOA SWITCHES, RUN TIMERS, RED ALARM BEACON, AUDIBLE HORN, 100 WATT STRIP HEATER WITH THERMOSTAT, TIME DELAY RELAYS TO PREVENT PUMPS FROM STARTING SIMULTANEOUSLY, COMBINATION LIGHTNING/TVSS SURGE ARRESTOR, QUALITY CONTROL & INTEGRATION 1500 CT PUMP CONTROLLER AND SENSAPHONE SENTINEL PRO MONITORING SYSTEM WITH CELLULAR MODEM.
3. SIGNAL CONDITIONING, SETPOINT, CONTROL, ALTERNATION, LOGIC FUNCTION, TRANSDUCER, ALARM AND ALL OTHER CONTROL FUNCTIONS SHALL BE PERFORMED BY SOLID-STATE MODULES WHICH SHALL BE STANDARD CATALOG ITEMS OF THE SYSTEM MANUFACTURER, WITH PROVEN FIELD PERFORMANCE.
4. THE CONTROL PANEL(S) SHALL BE CONSTRUCTED AT A U.L. RECOGNIZED MANUFACTURING FACILITY IN COMPLIANCE WITH UNDERWRITER'S LABORATORIES CATEGORY 698A - "ENCLOSED INDUSTRIAL CONTROL PANEL RELATING TO HAZARDOUS LOCATIONS WITH INTRINSICALLY SAFE CIRCUIT EXTENSIONS" LISTING AND FOLLOWING-UP SERVICE.THE CONTROL PANEL(S) SHALL BEAR THE UNDERWRITER'S LABORATORIES SERIALIZED LABEL FOR "ENCLOSED INDUSTRIAL CONTROL PANEL RELATING TO HAZARDOUS LOCATIONS WITH INTRINSICALLY SAFE CIRCUIT EXTENSIONS".
5. ALL WIRING SHALL BE MINIMUM 600-VOLT UL TYPE MTW OR AWM AND HAVE A CURRENT-CARRYING CAPACITY OF NOT LESS THAN 125% OF THE FULL LOAD CURRENT.THE CONDUCTORS SHALL BE IN COMPLETE CONFORMITY WITH THE NATIONAL ELECTRIC CODES, STATE, LOCAL AND NEMA ELECTRICAL STANDARDS.FOR EASE OF SERVICING AND MAINTENANCE, ALL WIRING SHALL BE COLOR CODED.THE WIRE COLOR CODE SHALL BE CLEARLY SHOWN ON THE DRAWINGS, WITH EACH WIRE'S COLOR INDICATED.
6. ALL CONTROL WIRING SHALL BE CONTAINED WITHIN PLASTIC/PVC WIRING DUCT WITH COVERS.WHERE DIMENSIONAL CONSTRAINTS PREVENT THE USE OF WIRING DUCT, WIRES SHALL BE TRAINED TO PANEL COMPONENTS IN GROUPINGS.THE WIRE GROUPINGS SHALL BE BUNDLED AND TIED NOT LESS THAN EVERY 3 INCHES WITH NYLON SELF-LOCKING CABLE TIES AS MANUFACTURED BY PANDUIT OR EQUAL.EVERY OTHER CABLE TIE SHALL BE FASTENED TO THE ENCLOSURE DOOR OR INNER DEVICE PANEL WITH A CABLE TIE MOUNTING PLATE WITH PRESSURE TAPE.WHERE WIRING CROSSES HINGED AREAS SUCH AS WHEN TRAINED FROM THE INNER DEVICE PANEL TO THE ENCLOSURE DOOR, SPIRAL WRAP SHALL BE USED.
7. THE LIFT STATION CONTROL PANEL SHALL BE SERVICE ENTRANCE RATED. CONDUIT AND WIRING BETWEEN THE POWER COMPANY TERMINATION AND THE LIFT STATION SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
8. THE CONTROL PANEL ENCLOSURE SHALL BE A NEMA 4X, 304 STAINLESS STEEL WEATHERPROOF, RAIN-TIGHT ENCLOSURE DESIGNED SPECIFICALLY FOR MOUNTING IN AN UNPROTECTED OUTDOOR LOCATION.IT SHALL HAVE A GASKETED, HINGED, FRONT WEATHER DOOR WITH A 3-POINT PADLOCK-ABLE LATCH, AND AN INTERNALLY MOUNTED ALUMINUM HINGED DEAD FRONT PANEL SO THAT ALL THE COMPONENTS NORMALLY ACTUATED BY OPERATING PERSONNEL ARE ACCESSIBLE WITHOUT OPENING THE DEAD FRONT AND YET ARE NOT EXPOSED TO THE ELEMENTS OR TO UNAUTHORIZED PERSONNEL.
9. THE CONTROL PANEL SHALL INCLUDE A PROPERLY SIZED THERMAL MAGNETIC MAIN CIRCUIT BREAKER TO PROVIDE AN INCOMING POWER DISCONNECT MEANS AND SHORT CIRCUIT/OVERCURRENT PROTECTION FOR THE CONTROL PANEL EQUIPMENT. THE CIRCUIT BREAKER SHALL BE OPERABLE THROUGH THE OPERATOR'S DOOR OF THE ENCLOSURE AND SHALL HAVE A TRIP RATING TO ALLOW FULL VOLTAGE STARTING AND CONTINUOUS OPERATION OF THE MOTORS. THE POWER INPUT TO THE CONTROL PANEL/MAIN BREAKER SHALL BE UL SERVICE ENTRANCE RATED AND LABELED.
10. THE CONTROL PANEL SHALL INCLUDE A CONTROL POWER TRANSFORMER FOR CONVERTING THE HIGH VOLTAGE INCOMING THREE PHASE SERVICE TO 120 VAC SINGLE PHASE POWER. THE 120 VAC POWER SHALL BE USED TO POWER INTERNAL CONTROL COMPONENTS AND THE 20-AMP RATED GFI DUPLEX RECEPTACLE. THE CONTROL POWER TRANSFORMER SHALL BE UL LISTED AND SUPPLIED WITH PRIMARY AND SECONDARY FUSING. THE CONTROL POWER TRANSFORMER SHALL BE OF SINGLE EPOXY RESIN IMPREGNATED CONSTRUCTION TO ELIMINATE THE POSSIBILITY OF MOISTURE, DUST, DIRT, AND INDUSTRIAL CONTAMINANTS FROM AFFECTING OPERATION AND SHORTENING TRANSFORMER LIFE. THE UNIT SHALL HAVE INTEGRALLY MOLDED BARRIERS BETWEEN TERMINALS AND TRANSFORMER.
11. A POWER MONITOR SHALL BE PROVIDED TO MONITOR INCOMING VOLTAGE AND PROVIDE PROTECTION TO THE MOTORS. THE POWER MONITOR SHALL DETECT INCOMING SERVICE ABNORMALITIES INCLUDING PHASE-LOSS, UNBALANCE, REVERSAL, OVER VOLTAGE, UNDER-VOLTAGE AND RAPID CYCLING PROTECTION AND PROVIDE AUTOMATIC CUTOUT OF PUMPS AND PROVIDE LOCAL ALARM. UPON VOLTAGE THAT INCOMING POWER HAS RETURNED TO NORMAL, THE UNIT WILL RESTORE PUMP OPERATION AND DISCONTINUE ALARM. THE POWER MONITOR SHALL BE PROTECTED AGAINST OVERCURRENT BY THE USE OF SEPARATELY MOUNTED EXTRACTOR-TYPE LINE VOLTAGE FUSES. THIS DEVICE SHALL HAVE A NOMINAL 2-4 SECOND DROPOUT DELAY AND (2-300 SECOND) ADJUSTABLE RESTORATION TIME DELAY. THE POWER MONITOR SHALL HAVE BUILT IN DUAL COLOR LED INDICATOR. THE INDICATOR SHALL BE GREEN WHEN SYSTEM IS NORMAL AND SHALL TURN RED UPON DETECTION OF IMPROPER THREE PHASE POWER. THE UNIT SHALL PROTECT ITSELF FROM VOLTAGE SPIKES AND TRANSIENTS WITH INTERNAL TRANSIENT PROTECTION MEETING IEEE 587 STANDARDS. THE POWER MONITOR SYSTEM SHALL ALSO INCLUDE A STAGGER TIME DELAY FUNCTION PROVIDING TIME DELAY BETWEEN LEAD AND LAG PUMP START TO ELIMINATE SIMULTANEOUS STARTING OF MOTORS UPON RETURN OF SYSTEM POWER. THIS FEATURE SHALL BE OPERATION IN ALL MODES OF PUMP OPERATION.
12. A THERMAL MAGNETIC CIRCUIT BREAKER SHALL BE SUPPLIED AS BRANCH CIRCUIT PROTECTION FOR EACH PUMP MOTOR.THE CIRCUIT BREAKER MUST HAVE THE SAME MINIMUM AMPERE INTERRUPTING CAPACITY AS THE MAIN BREAKER.THE CIRCUIT BREAKERS SHALL BE OPERABLE THROUGH THE OPERATOR'S DOOR OF THE ENCLOSURE AND SHALL HAVE A TRIP RATING TO ALLOW FULL VOLTAGE STARTING AND CONTINUOUS OPERATION OF THE MOTORS.
13. A NEMA RATED, FULL-VOLTAGE, ACROSS-THE-LINE MAGNETIC MOTOR STARTER WITH AMBIENT-COMPENSATED, QUICK-TRIP CLASS 10 OVERLOAD SENSING IN EACH PHASE TO PROVIDE OVER CURRENT AND RUNNING PROTECTION SHALL BE PROVIDED FOR EACH PUMP MOTOR.THE OVERLOAD TRIP SETTING SHALL BE OPERATOR ADJUSTABLE WITHIN NORMAL PUMP OPERATING RANGES. OPERATOR'S DOOR MOUNTED OVERLOAD RESET PUSHBUTTONS SHALL BE PROVIDED.
14. A CONTROL POWER CIRCUIT BREAKER SHALL BE PROVIDED AND OPERABLE THROUGH THE OPERATOR'S DOOR OF THE CONTROL PANEL TO PROVIDE A DISCONNECT MEANS AND SHORT CIRCUIT PROTECTION FOR ANY 120 VAC (OR LESS) DEVICES NOT POWERED FROM MOTOR STARTER CIRCUITS.
15. THE CONTROL PANEL SHALL HAVE THREE POSITION SELECTOR SWITCHES MOUNTED ON THE OPERATOR'S DOOR FOR HAND-OFF-AUTO OPERATION OF EACH PUMP. IN THE HAND POSITION THE MOTOR SHALL BE CALLED TO OPERATE. IN THE OFF MODE THE MOTOR SHALL NOT BE ALLOWED TO OPERATE. IN THE AUTO MODE, THE MOTOR SHALL OPERATE IN RESPONSE TO CONTROL SIGNALS FROM THE CONTROLLER.
16. SELECTOR SWITCH(S) SHALL BE INDUSTRIAL RATED HEAVY DUTY NEMA 4X WITH MODULAR CONTACT BLOCK ASSEMBLIES. CONTACT BLOCKS SHALL BE STACKING SNAP ON TYPE WITH PARALLEL DOUBLE BREAK CONTACTS WITH WIPING ACTION. CONTACT BLOCKS SHALL BE RATED NEMA A600, 600 VOLT, 10A CONTINUOUS DUTY, 7200VA MAKE, 720VA BREAK AC.CONTACTS SHALL HAVE COMPRESSION TYPE SCREW TERMINALS WITH SELF-LIFTING SPRING WASHERS TO ENSURE THAT THE WIRE REMAINS SECURE EVEN UNDER SEVER VIBRATION. EACH CONTACT BLOCK SHALL MEET "TOUCHSAFE" REQUIREMENTS OF IEC.
17. AN OPERATOR'S DOOR MOUNTED, 30.5 MM DIAMETER, NEMA TYPE 4X OIL TIGHT PILOT LIGHT WITH A "GREEN" LENS AND REPLACEABLE BULB SHALL BE PROVIDED FOR EACH PUMP TO INDICATE A "PUMP RUNNING" CONDITION.
18. ALL PILOT LIGHTS SHALL BE PUSH-TO-TEST TYPE TO PERMIT OPERATOR TESTING OF BULB CONDITION WITH LED LIGHT BULBS.
19. AN OPERATOR'S DOOR MOUNTED, 120 VAC POWERED RUNNING TIME METER MEASURING HOURS AND TENTHS OF HOURS OF OPERATION UP TO 99999.9 HOURS SHALL BE FURNISHED FOR EACH PUMP MOTOR INDICATED.
20. A SINGLE PUMP CONTROLLER / TELEMETRY UNIT SHALL BE FURNISHED FOR MONITORING AND AUTOMATICALLY CONTROLLING THE PUMPS IN A PUMP DOWN MODE OF OPERATION IN RESPONSE TO THE LEVEL PROCESS VARIABLE AS BASED ON PRECONFIGURED SETPOINTS. THE CONTROLLER SHALL BE SPECIFICALLY DESIGNED FOR WATER AND WASTEWATER PUMPING AUTOMATION UTILIZING BUILT-IN PRECONFIGURED CONTROL AND TELEMETRY STRATEGIES ALLOWING PUMP UP OR DOWN MODE CONTROL OF FROM 1 (ONE) TO 3 (THREE) PUMPS. THE CONTROLLER SHALL BE A ALLEN BRADLEY COMPACT LOGIX PLC WITH PANEL VIEW PLUS 6 HMI OR APPROVED EQUAL.
21. VARIABLE FREQUENCY DRIVES WITH REMOTE HMI MODULES SHALL BE PROVIDED FOR EACH MOTOR. THE VFDS SHALL CONTROL THE PUMPS TO ENSURE THE SPECIFIED FLOW RATE IN NOT EXCEEDED. THE VFDS SHALL BE A ALLEN BRADLEY POWERFLEX 753 SERIES OR APPROVED EQUAL.
22. THE LIQUID LEVEL OF THE WET WELL SHALL BE SENSED BY A SUBMERSIBLE SOLID-STATE HEAD-PRESSURE SENSING LEVEL TRANSDUCER.THE TRANSDUCER SHALL BE A 2-WIRE TYPE TO OPERATE FROM A REGULATED SUPPLY VOLTAGE AND PRODUCE AN INSTRUMENTATION SIGNAL IN DIRECT PROPORTION TO THE MEASURED LEVEL EXCURSION OVER A FACTORY-CALIBRATED RANGE OF ZERO TO TWENTY (20) FEET OF WATER.THE TRANSDUCER SHALL BE SUITABLE FOR CONTINUOUS SUBMERGENCE AND OPERATION AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.THE BOTTOM DIAPHRAGM FACE OF THE SENSOR SHALL BE INSTALLED APPROXIMATELY 6 INCHES ABOVE THE WET WELL FLOOR.THE SENSOR SHALL BE MOUNTED USING A STAINLESS STEEL CABLE HANGER SYSTEM. THE SENSOR SHALL BE EQUIPPED WITH A CUSTOM, VENTED CABLE.THE VENT PROVIDES AN ATMOSPHERIC REFERENCE FOR THE SENSOR, WHICH IS NECESSARY FOR ENSURING THE HIGHEST POSSIBLE ACCURACY WHEN MAKING A LEVEL MEASUREMENT.IN ORDER TO PREVENT THE ENTRY OF VAPOR (WHICH COULD CONDENSE INTO WATER AND PERMANENTLY DAMAGE THE UNIT) INTO THE LEVEL TRANSDUCER, A DESICCANT-FILLED VENT FILTER IS TO BE PROVIDED.THE VENT FILTER SHALL PREVENT MOISTURE FROM ENTERING THE VENT TUBE FOR AT LEAST ONE YEAR WITHOUT MAINTENANCE. THE CONTROL PANEL SHALL INCLUDE A UL LISTED INTRINSIC SAFETY BARRIER THAT HAS BEEN UL TESTED WITH THE SPECIFIC SUBMERSIBLE TRANSDUCER FURNISHED FOR THIS APPLICATION TO RENDER THE TRANSDUCER SUITABLE FOR USE IN CLASS 1, DIVISION 1 OR 2, GROUPS A, B, C AND D; CLASS II, DIVISION 1 OR 2, GROUPS E, F AND G; AND CLASS III, HAZARDOUS LOCATIONS.
22. A REDUNDANT CONTROLLER SHALL OPERATE IN CONJUNCTION WITH NECESSARY DIRECT-ACTING FLOAT SWITCHES TO PROVIDE BACK UP CONTROL OF LIFT PUMPS, DETECTION OF HIGH LEVEL AND TO PROTECT THE PUMPS FROM DAMAGE THAT MAY RESULT FROM LOW WET WELL LEVELS. THE SYSTEM SHALL MONITOR THE FLOAT SWITCH INPUTS AND PROVIDE LOCAL INDICATION OF SYSTEM OPERATION.RELAY CONTACTS SHALL BE INTERFACED TO ALARM CIRCUITRY AND PUMP MOTOR STARTER PILOT CIRCUITRY. THE BACK UP SYSTEM SHALL NOT INTERFERE WITH PRIMARY CONTROLLER OPERATION WHEN WET WELL LEVELS ARE WITHIN NORMAL OPERATING RANGE. THE BACK UP SYSTEM WILL ONLY BECOME ACTIVE, AND BYPASS THE PRIMARY CONTROL AND SENSOR SYSTEM AND ASSUME FULL CONTROL, IN THE EVENT WET WELL LEVELS GO OUTSIDE OF NORMAL OPERATING RANGE. BACK UP SENSORS SHALL BE MOUNTED AND CONFIGURED TO OPERATE OUTSIDE PRIMARY CONTROLLER SETPOINT SETTINGS. THE REDUNDANT CONTROL/ALARM CAPABILITY SHALL BE COMPLETELY INTEGRATED IN THE SPECIFIED CONTROL PANEL AND SYSTEM AS DESCRIBED AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND JOB REQUIREMENTS.
23. OVER-TEMPERATURE PROTECTION SHALL BE PROVIDED IN THE CONTROL PANEL TO OPERATE IN CONJUNCTION WITH THE OVER-TEMPERATURE SWITCH IN EACH PUMP MOTOR.THE CONTROL SHALL PROVIDE PUMP OPERATION LOCKOUT UPON THE OCCURRENCE OF HIGH TEMPERATURE. THE CIRCUITRY SHALL ALSO INCLUDE A 30.5 MM DIAMETER, NEMA TYPE 4X, RED "PUMP OVERTEMP" SHUTDOWN ALARM INDICATING LIGHT WITH FRONT REPLACEABLE BULB) AND A 30.5 MM DIAMETER, NEMA TYPE 4X MANUAL RESET PUSH-BUTTON ON THE OPERATOR'S DOOR FOR EACH PUMP MOTOR.
24. AN OPERATOR'S DOOR MOUNTED 30.5 MM DIAMETER, NEMA TYPE 4X AMBER SEAL FAIL ALARM LIGHT (WITH FRONT REPLACEABLE BULB) AND A PANEL MOUNTED SEAL LEAKAGE RELAY (TO OPERATE WITH THE PUMP SEAL LEAK SENSOR) SHALL BE PROVIDED TO INDICATE A PUMP SEAL FAILURE ALARM CONDITION FOR EACH SEWAGE PUMP. THE SEAL LEAKAGE RELAY SHALL BE OF SOLID STATE DESIGN INCORPORATING LED FOR VISUAL INDICATION OF SENSOR ACTIVATION. UNIT SHALL INCLUDE BUILT IN LOW VOLTAGE SENSOR AND ELECTRICAL SURGE PROTECTION. UNIT SHALL BE CSA APPROVED AND UL RECOGNIZED.
25. AN OPERATOR'S DOOR MOUNTED 120 VAC DUPLEX GROUND FAULT INTERRUPTER (GFI) TYPE, CONVENIENCE RECEPTACLE RATED AT 15 AMPERES SHALL BE SUPPLIED FOR THE OPERATION OF A TROUBLE LIGHT, DRILL, ETC.IT SHALL BE PROTECTED BY A SEPARATE 15 AMPERE TRIP RATED CIRCUIT BREAKER ACCESSIBLE FROM THE OPERATOR'S DOOR.
26. A TOP MOUNTED WEATHERPROOF, STROBE ALARM INDICATION LIGHT ASSEMBLY WITH SHATTER RESISTANT POLYCARBONATE RED LENS MOUNTED ON A POLYCARBONATE/ABS BLEND CASE SHALL BE PROVIDED.THE ALARM LIGHT SHALL BE NEMA 4X RATED, SUITABLE FOR INDOOR OR OUTDOOR MOUNTING AND OPERATE ON 120 VAC AND BE PLC RATED. THE STROBE TUBE SHALL PROVIDE A MINIMUM OF 300,000 PEAK CANDELA OUTPUT AND SHALL BE RATED FOR 3,000 HOUR LIFE. THE ALARM LIGHT SHALL FLASH UPON OCCURRENCE OF AN ALARM CONDITION.
27. THE CONTROL PANEL SHALL INCLUDE A SENSAPHONE SENTINEL PRO MONITORING SYSTEM WITH CELLULAR MODEM THAT WILL PROVIDE ALARM NOTIFICATIONS THROUGH A CELLULAR CONNECTION AND NOTIFIES AN UNLIMITED NUMBER OF PEOPLE BY E-MAIL, TEXT MESSAGE OR VOICE PHONE CALLS IN THE EVENT OF AN ALARM.
28. THE CONTROL PANEL SHALL INCORPORATE A DITCH HIGH LEVEL FLOAT SENSOR THAT PREVENTS ALL PUMPS FROM OPERATING WHEN TRIPPED. THE PLC SHALL BE PROGRAMMED WITH A TIME DELAY THAT PREVENTS ALL ALL PUMPS FROM OPERATING FOR A PERIOD OF 60 MINUTES AFTER THE SENSOR IS NO LONGER TRIPPED.
29. ALL MAJOR COMPONENTS AND SUB-ASSEMBLIES SHALL BE IDENTIFIED AS TO FUNCTION WITH LAMINATED, ENGRAVED BAKELITE NAMEPLATES.



NOTES:
1. SERVICE DISCONNECT SWITCH SHALL BE NEMA 4X SS RACK MOUNTED AND RATED AS SUITABLE FOR USE AS A SERVICE ENTRANCE.
2. GENERATOR DISCONNECT SHALL BE FUSED 3 POLE HEAVY DUTY RACK MOUNTED NEMA 4X SS WITH MAX GUARD INTERCONNECTION SYSTEM AS MANUFACTURED BY RUSSELLSTOLL FOR CONNECTION OF A PORTABLE GENERATOR.
3. MANUAL TRANSFER SWITCH SHALL BE 3 POLE DOUBLE THROW HEAVY DUTY RACK MOUNTED NEMA 4X SS.
4. ALL ELECTRICAL WORK SHALL CONFORM TO THE CURRENT EDITION OF THE NEC AND ANY APPLICABLE LOCAL CODES, SHOULD THERE BE A CONFLICT THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

2 POWER RACK

4

3

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Revision / Date

Project:

NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D. NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
91977
LICENSED PROFESSIONAL ENGINEER
09/10/25

Huckabee
www.huckabee-inc.com
800.687.1229

DRAWING SCALE		AURIC PROJECT NUMBER
HORIZ:	N/A	0131.0101
VERT:	N/A	

auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

STORMWATER PUMP STATIONS DETAILS (SHT 02 OF 03)

Job No. 1971-05-01	Sheet No. C7.05
Drawn By: Author	
Date: 09/10/25	

ISSUED FOR BID

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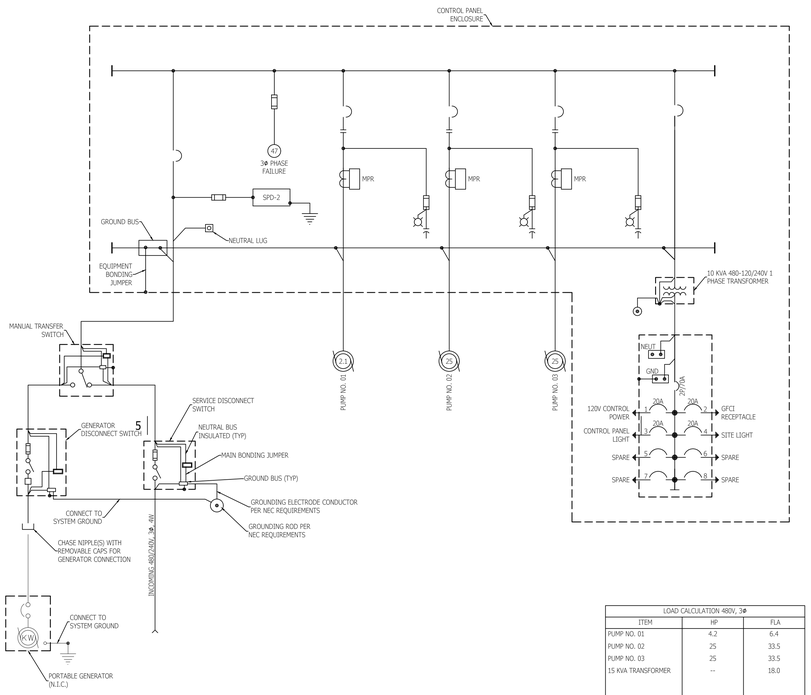

SYMBOL	DESCRIPTION
	SEPARABLE CONTACTS
	CIRCUIT BREAKER
	COMBINATION MOTOR STARTER
V	VOLTMETER
VS	VOLTMETER SWITCH
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	LIGHTING TRANSFORMER
	POWER FACTOR CORRECTION CAPACITOR
47	PHASE FAILURE/UNDERVOLTAGE MONITOR RELAY
	FUSE
	MOTOR OVERLOAD
	SOLID STATE OVERLOAD
	FUSED DISCONNECT SWITCH
	SURGE ARRESTOR
VFD	VARIABLE FREQUENCY DRIVE

LOAD CALCULATTION 480V, 3Ø		
ITEM	HP	FLA
PUMP NO. 01	4.2	6.4
PUMP NO. 02	25	33.5
PUMP NO. 03	25	33.5
15 KVA TRANSFORMER	--	18.0
SUBTOTAL		91.4
25% OF LARGEST MOTOR LOAD		8.4
MINIMUM AMPACITY		99.8

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THIS INFORMATION WITH THE PUMP MANUFACTURER.

NOTES:
1. CONTRACTOR SHALL COORDINATE POWER FACTOR CORRECTION CAPACITOR SIZE WITH PUMP MANUFACTURER. MINIMUM 95% POWER FACTOR CORRECTION AT FULL LOAD.
2. CONTRACTOR SHALL VERIFY ACTUAL AMPERAGES OF MOTORS AND SIZE, STARTERS, MOTOR CIRCUIT PROTECTORS, ETC. ACCORDINGLY.
3. CONTRACTOR SHALL PROVIDE FUSE SIZE PER MANUFACTURER'S REQUIREMENTS.

1 ELECTRICAL ONE-LINE DRAWING N.T.S.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
SEAN P. ROONEY
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HORIZ:	N/A	0131.0101
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auric ENGINEERS
TEXAS ENGINEERING FIRM 20740
520 POST OAK BLVD. SUITE 895
HOUSTON, TEXAS 77027
AURICENGINEERS.COM

STORMWATER PUMP STATIONS DETAILS (SHT 03 OF 03)

Job No.	Sheet No.
1971-05-01	C7.06
Drawn By: Author	
Date: 09/10/25	

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PLOT STYLE: AURIC2.0.STB

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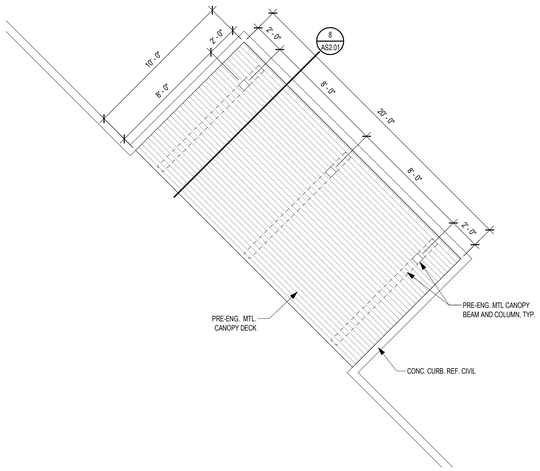
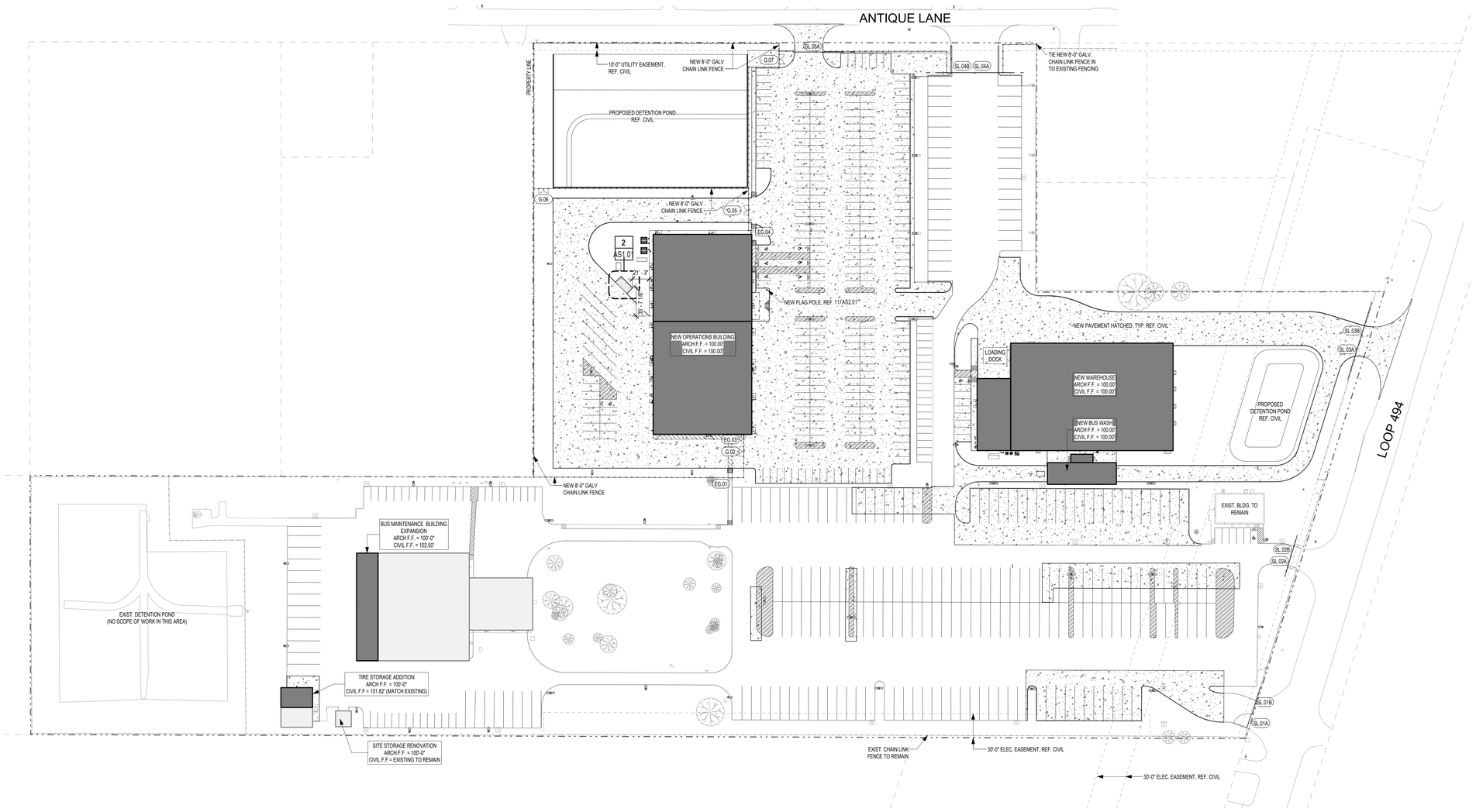
SITE GATE SCHEDULE

MARK	GATE HEIGHT	GATE WDTH	CLEAR OPENING	FRAME MATERIAL	GATE TYPE	OPERATION	PANIC HARDWARE	COMMENTS
EG.01	8' - 0"	3' - 0"	3' - 0"	CL	ACCESSIBLE EGRESS	MANUAL	Yes	
EG.03	8' - 0"	3' - 0"	3' - 0"	CL	ACCESSIBLE EGRESS	MANUAL	Yes	
EG.04	8' - 0"	3' - 0"	3' - 0"	CL	ACCESSIBLE EGRESS	MANUAL	Yes	
G.02	8' - 0"	12' - 0"	12' - 0"	CL	DBL SWING	MANUAL		
G.05	8' - 0"	12' - 0"	12' - 0"	CL	DBL SWING	MANUAL		
G.06	8' - 0"	12' - 0"	12' - 0"	CL	DBL SWING	MANUAL		
G.07	6' - 0"	12' - 0"	12' - 0"	CL	DBL SWING	MANUAL		
SL.01A	6' - 0"	18' - 0"	18' - 0"	CL	SWING	MANUAL		MATCH EXIST. HEIGHT
SL.01B	6' - 0"	27' - 0"	18' - 0"	CL	SLIDING	MANUAL		MATCH EXIST. HEIGHT
SL.02A	6' - 0"	19' - 6"	13' - 0"	CL	SLIDING	MOTORIZED		CARD ACCESS AND KEY PAD, REF. ELEC. MATCH EXIST. HEIGHT
SL.02B	6' - 0"	19' - 6"	13' - 0"	CL	SLIDING	MOTORIZED		CARD ACCESS AND KEY PAD, REF. ELEC. MATCH EXIST. HEIGHT
SL.03A	6' - 0"	37' - 6"	25' - 0"	CL	SLIDING	MOTORIZED		CARD ACCESS AND KEY PAD, REF. ELEC. MATCH EXIST. HEIGHT
SL.03B	6' - 0"	37' - 6"	25' - 0"	CL	SLIDING	MOTORIZED		CARD ACCESS AND KEY PAD, REF. ELEC. MATCH EXIST. HEIGHT
SL.04A	8' - 0"	45' - 0"	30' - 0"	CL	SLIDING	MOTORIZED		CARD ACCESS AND KEYPAD, REF. ELEC.
SL.04B	8' - 0"	45' - 0"	30' - 0"	CL	SLIDING	MOTORIZED		CARD ACCESS AND KEYPAD, REF. ELEC.
SL.05A	8' - 0"	57' - 0"	38' - 0"	CL	SLIDING	MOTORIZED		CARD ACCESS AND KEYPAD, REF. ELEC.



2 ENLARGED CANOPY PLAN
1/4" = 1'-0"

N
TRUE



1 MASTER SITE PLAN
1" = 60'-0"

N
TRUE

1. ALL SITE INFORMATION INCLUDING, BUT NOT LIMITED TO, PROPERTY LINES, METES & BOUNDS, CONTOURS, EXISTING BUILDINGS, EASEMENTS, TREES, WALKS, DRIVES, FENCES, ETC., TAKEN FROM SURVEY BY:

   WEST BELT SURVEYING, INC.
   21920 PARK ROW
   KATY, TX 77449
   PHONE (281) 599-8288

2. HUCKABEE AND ASSOCIATES, INC. ALONG WITH THEIR CONSULTANTS HAVE LOCATED, SHOWN , AND NOTED EXISTING SITE FEATURES INCLUDING BUT NOT LIMITED TO PROPERTY LINES, METES AND BOUNDS, GRADE CONTOURS, EXISTING STRUCTURES, EASEMENTS, TREES, FENCES, ROADWAYS, OVERHEAD AND UNDERGROUND UTILITIES, AND OTHER EXISTING FEATURES TO THE BEST OF OUR ABILITY BASED UPON OWNER PROVIDED SURVEYS, EXISTING CONSTRUCTION DOCUMENTS AND OTHER EXISTING DATA COLLECTION IN REGARDS TO THE SPECIFIED SITE. HUCKABEE AND ASSOCIATES, INC. NOR THEIR CONSULTANTS SHALL ASSUME ANY RESPONSIBILITY OR LIABILITIES IN REGARD TO THE ACCURACY OF THE ABOVE MENTIONED OWNER PROVIDED DATA.
3. IF THE CONTRACTOR FINDS ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND THOSE WHICH ARE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY CONTACT THE ARCHITECT.
4. THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH ALL UTILITY ENTITIES TO LOCATE AND MARK ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS.
6. REF. SHEET AS2.01 FOR DETAILS AND OTHER SITE IMPROVEMENT DETAILS.
7. FINISH GRADE AT PERIMETER OF THE BUILDING SHALL BE AS SHOWN ON SITE GRADING PLAN. REF. CIVIL DRAWINGS. SITE GRADES SHALL SLOPE UNIFORMLY AWAY FROM THE BUILDING AND INTERSECT WITH ELEVATIONS SHOWN.
8. REF. CIVIL DRAWINGS FOR ALL SITE DIMENSIONS
9. MAKE ALL SLOPES OF WALKS AND DRIVES COMPLY WITH FINISH ELEVATION SHOWN ON CIVIL DRAWINGS. THE LINE OF SLOPE SHALL FORM STRAIGHT LINES BETWEEN FINISH ELEVATIONS WHEN POSSIBLE AND GRADING CONTOURS WHEN STRAIGHT LINES ARE NOT POSSIBLE. VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECT ON JOB. REF. CIVIL.
10. ALL WALKS AND PLAZAS SHALL BE REINFORCED CONCRETE - REF. CIVIL FOR DETAILS. PROVIDE 1/2" EXPANSION JOINT AS SHOWN BY CIVIL OR AT 25'-0" O.C. MAX. AND AT ALL INSIDE CORNERS. PROVIDE TOOLED CONTROL JOINTS AT 5'-0" O.C.B.W. MAX OR AS SHOWN. SEE CIVIL FOR TYPICAL WALK AND JOINT DETAILS.
11. PROVIDE 1/2" EXPANSION JOINT ALONG BUILDING FOUNDATION OR BRICK WHERE CONCRETE WALK IS PRESENT. REF. CIVIL DRAWINGS FOR TYPICAL DETAIL.
12. PROVIDE 1/2" EXPANSION JOINT ALONG BACK OF CONCRETE CURB WHERE WALK IS PRESENT. REF. CIVIL DRAWINGS FOR CURB DETAILS
13. CONTRACTOR SHALL REMOVE ALL EXISTING OBSTRUCTIONS TO NEW CONSTRUCTION, PAVING, WALKS, AND ALL OTHER SITE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO EXISTING TREES, FENCES, CONCRETE, ROCKS, DEBRIS, POSTS, VEGETATION, UTILITIES (AS NOTED), AND OTHER ITEMS AS NOTED FOR CONSTRUCTION.
14. REF. ELECTRICAL DRAWINGS FOR OUTDOOR LIGHTING REQUIREMENTS.
15. REF. CIVIL DRAWINGS FOR SITE GRADING PLAN, SITE UTILITY PLAN (INCLUDING FIRE HYDRANT LOCATIONS), EROSION CONTROL PLANS, AND CURB AND PAVING REQUIREMENTS AND DETAILS.
16. REF. CIVIL SHEETS FOR SITE GRADING CONTOURS. CONTRACTOR SHALL MAKE ALL CUTS AND FILLS REQUIRED TO ACCOMPLISH ALL WORK SHOWN. GRADE SITE TO TOLERANCES SPECIFIED.
17. REF. CIVIL DRAWINGS FOR THICKNESS AND LOCATIONS OF ALL TYPES OF PAVING.
18. FIRE LANE STRIPING SHALL COMPLY WITH MONTGOMERY COUNTY REQUIREMENTS AND NFPA.
19. PROVIDE DEDICATED STRUCTURAL CONCRETE FOUNDATION PAD FOR ALL ON-SITE ELECTRICAL TRANSFORMERS PER THE ELECTRICAL SERVICE PROVIDER REQUIREMENTS AND/OR SPECIFICATIONS.
20. PROVIDE DEDICATED STRUCTURAL CONCRETE FOUNDATION PAD FOR ALL ON-SITE GENERATORS AND ANY ASSOCIATED GENERATOR ENCLOSURES.
21. EXTENTS OF NEW PAVEMENT SHOWN HATCHED, TYPICAL. REF. CIVIL FOR PAVEMENT THICKNESS AND ADDITIONAL DETAILS.

    NEW PAVEMENT
22. RE-STRIPE ENTIRE PARKING LOT. COORDINATE SPACE NUMBERS WITH OWNER. REF. CIVIL.
23. PROVIDE (4) 24" CAST ALUMINUM BUILDING LETTERS FOR SITE BUILDINGS A, B, C, & D. COLOR TO BE RED. CONFIRM FINAL LOCATION AND LETTER WITH OWNER.

GENERAL SITE NOTES

PROPERTY DESCRIPTION

1) OWNER INFORMATION

A. NAME : NEW CANEY INDEPENDENT SCHOOL DISTRICT
B. ADDRESS: 21580 LOOP 494, NEW CANEY TEXAS, 77357

2) PROPERTY INFORMATION

A. NAME: NEW CANEY ISD OPERATIONS
B. ADDRESS: 21026 LOOP 494, NEW CANEY, TX 77357

PARKING COUNTS

TOTAL CAR SPACES
344 CAR SPACES
9 ACCESSIBLE SPACES
353 TOTAL SPACES

TOTAL BUS & TRAILER SPACES
270 BUS SPACES
6 TRAILER SPACES

PROPERTY & PARKING NOTES

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRIAN N. BANNISTER
21160
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

ARCHITECTURAL SITE PLAN

Job No. 1971-05-01	Sheet No. AS1.01
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

9/19/2025 8:54:47 AM
Autodesk Docs://NEW CANEY ISD - NEW OPERATIONS BUILDING/1971-05-01_NCISD Trans. Ops Building_ARCH_v25.rvt

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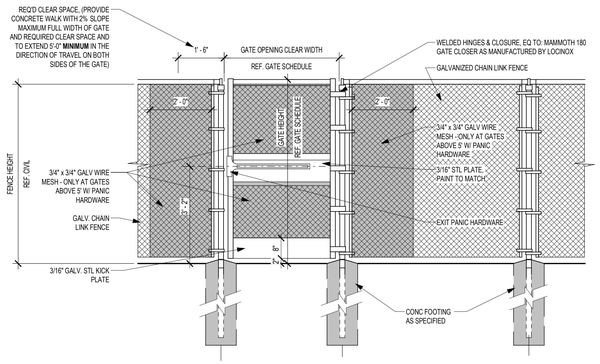
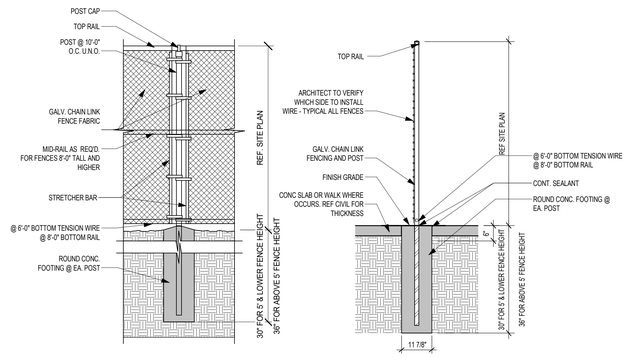
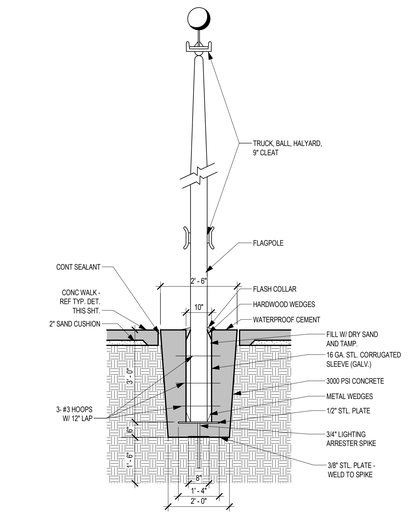


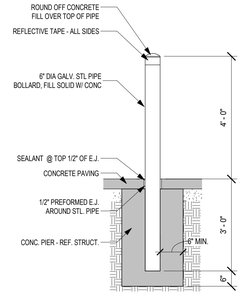
13 CHAIN LINK FENCE DETAIL - ACCESSIBLE EGRESS GATE
1/2" = 1'-0"



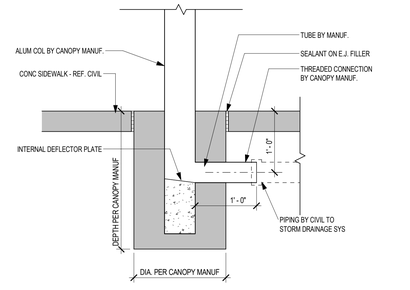
12 TYPICAL CHAIN LINK FENCE DETAILS
1/2" = 1'-0"



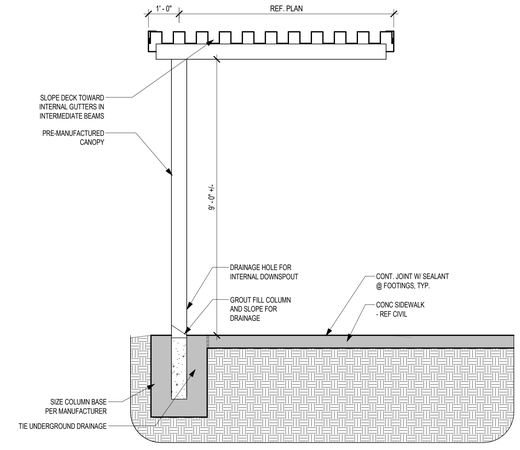
11 FLAGPOLE SECTION
1/2" = 1'-0"



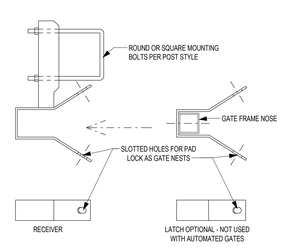
10 TYPICAL BOLLARD DETAIL
1/2" = 1'-0"



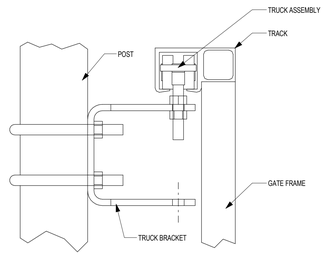
9 DETAIL - CANOPY DRAIN BELOW GRADE
1" = 1'-0"



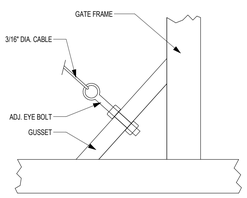
8 PRE-MANUFACTURED CANOPY SECTION
1/2" = 1'-0"



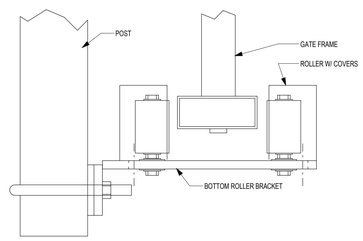
7 SLIDING CL GATE RECEIVER DETAIL
N.T.S.



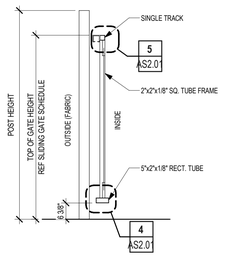
5 SLIDING CL GATE TOP
N.T.S.



6 AS_SLIDING CL GATE GUSSET DETAIL
N.T.S.



4 SLIDING CL GATE BOTTOM BRACKET DETAIL
N.T.S.



3 SLIDING CL GATE SECTION
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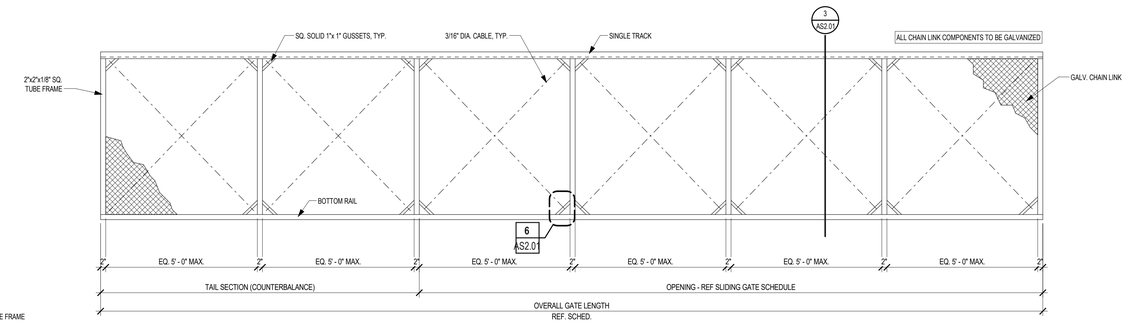
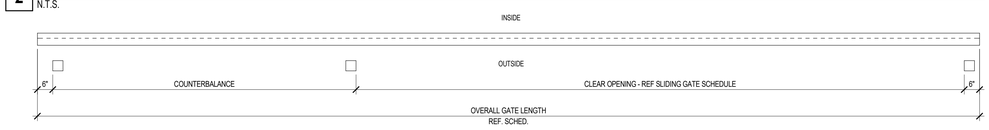


2 SLIDING CL GATE ELEVATION
N.T.S.



1 SLIDING CL GATE PLAN
N.T.S.

Date
Revision /

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
PATRICK K. BANNISTER
21169
STATE OF TEXAS
09-18-2025

Huckabee
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ARCHITECTURAL SITE DETAILS

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Drawn By: JT	
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GENERAL NOTES

A. THE NOTES AND SPECIFICATIONS PROVIDED ON THE STRUCTURAL DRAWINGS ARE EXCERPTS FROM THE RELATING PROJECT SPECIFICATIONS. THEY ARE NEITHER COMPLETE NOR DO THEY REPLACE THE CONTRACT SPECIFICATIONS.

B. MEANS AND METHODS: THE STRUCTURAL DRAWINGS DEPICT THE STRUCTURE IN ITS FINAL CONSTRUCTED CONFIGURATION UNLESS SO STATED OR NOTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE ALL TEMPORARY SUPPORTS REQUIRED FOR THE EXECUTION OF THE CONTRACT INCLUDING BUT NOT LIMITED TO: GUYS, BRACES, SHORES, RE-SHORES, FALSEWORK, ANY TEMPORARY SUPPORTS OR TEMPORARY ANCHORS. NEITHER CONSTRUCTION MEANS AND METHODS NOR CONSTRUCTION SAFETY ARE PART OF THE STRUCTURAL ENGINEER'S EXPERTISE OR SCOPE OF WORK. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS ARE FULLY RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE STRUCTURE AND FOR FULL COMPLIANCE WITH ALL JOB SAFETY RELATED REGULATIONS AND CONDITIONS AT THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS RELATING TO THE SPECIFIC STRUCTURAL ERECTION ITEMS ADDRESSED IN THE LATEST OSHA REGULATIONS.

C. LIMITED SITE VISITS IF ANY BY THE STRUCTURAL ENGINEER OF RECORD (SER) ARE SOLELY TO OBSERVE COMPLETED PARTS OF THE STRUCTURE. THE STRUCTURAL ENGINEER OF RECORD (SER) IS NEITHER QUALIFIED TO OBSERVE NOR COMMENT ON CONSTRUCTION MEANS AND METHODS AND JOB SITE SAFETY.

D. PRINCIPAL OPENINGS ARE SHOWN ON THE DRAWINGS. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, CURBS, INSERTS, DEPRESSIONS, ETC., NOT SHOWN.

E. TYPICAL DETAILS: GENERAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS. ALL WORK OR CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, REGULATION AND SAFETY REQUIREMENTS. ALL DETAILS ARE TYPICAL UNLESS NOTED OTHERWISE. DETAILS SHALL APPLY TO ALL SIMILAR AND LIKE CONDITIONS.

F. DISCREPANCIES: THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS. UPON RECEIPT OF SUCH INFORMATION, THE ENGINEER WILL SEND WRITTEN INSTRUCTIONS TO ALL CONCERNED. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND WORK SHALL BE PERFORMED IN A MANNER AS DIRECTED BY THE ENGINEER AT NO COST TO THE PROJECT.

G. EXCAVATION: THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT

H. COORDINATION AND OTHER TRADES: IT IS NOT THE INTENT THAT THE STRUCTURAL DRAWINGS BE VIEWED AS STAND ALONE DRAWINGS WITH RESPECT TO PROJECT DIMENSIONS OR ANY OTHER COMPONENT OF THE CONSTRUCTION THAT CAN AND MAY BE IDENTIFIED IN OTHER PARTS OF THE CONTRACT DOCUMENTS. IT REQUIRES THE ENTIRE SET OF CONTRACT DOCUMENTS TO PROPERLY CONSTRUCT THE STRUCTURE AS WELL AS OTHER COMPONENTS OF THE BUILDING. ANCHORS REQUIRED FOR ANCHORING MEP EQUIPMENT AND / OR PIPING ARE NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL DETERMINE AND COORDINATE REQUIREMENTS FROM OTHER DISCIPLINES AND SHALL PROVIDE APPROPRIATE ALLOWANCES INTO THE BID. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSEMBLE AND COORDINATE THE REQUIREMENTS OF ALL COMPONENTS OF THE CONTRACT DOCUMENTS IN ORDER TO PROPERLY IMPLEMENT THE REQUIREMENTS OF THE CONTRACT. SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF PIPES, VENTS, CHASES, DUCTS AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THESE STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED WITH THE ARCHITECTURAL DRAWINGS.

I. SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS NOT SHOWN. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL SECTIONS WITH THE ARCHITECTURAL SECTIONS AND REPORT ANY DISCREPANCY TO THE ARCHITECT PRIOR TO FABRICATING OR INSTALLING STRUCTURAL MEMBERS.

J. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE GRADES WITH THE CIVIL ENGINEER'S GRADING PLAN AND THE LANDSCAPE ARCHITECT'S PLAN.

K. THE DRAWINGS IN THE STRUCTURAL DOCUMENTS ARE NOT TO BE SCALED FOR ANY PURPOSE, INCLUDING THE DETERMINATION OF QUANTITIES AND THE FIT UP OF MATERIALS.

L. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO PROVIDE 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.

M. PRECONSTRUCTION MEETINGS: THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING PRECONSTRUCTION MEETINGS FOR THE FOUNDATION AND SUPERSTRUCTURE ELEMENTS OF THE PRIMARY FRAME WITH A MINIMUM OF TWO WEEKS OF NOTICE PRIOR TO START OF THE RELEVANT WORK. ATTENDEES SHALL INCLUDE THE CONTRACTORS, APPROPRIATE SUBCONTRACTORS, FABRICATORS, INSPECTORS, ARCHITECT/ENGINEERS. THE MEETING AGENDA SHALL INCLUDE THE FOLLOWING ITEMS: REVIEW OF WORK SCOPE, PROJECT SCHEDULE FOR THE ELEMENTS BEING DISCUSSED, CONTACT INFORMATION OF RESPONSIBLE PARTIES, INSPECTION POINTS FOR BOTH SER AND SPECIAL INSPECTOR, REVIEW OF MATERIALS AND ANY SPECIAL DESIGN ISSUES, CLARIFICATIONS, TESTING AND ACCEPTANCE, AND ANY OTHER TOPIC DEEMED APPROPRIATE BY THE CONTRACTOR, ARCHITECT OR STRUCTURAL ENGINEER.

N. COLD-FORMED WALL STUDS AND CONNECTIONS SHALL BE DESIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. THE CALCULATIONS AND DETAILED DRAWINGS SHALL BE SUBMITTED FOR APPROVAL SHOWING ALL CALCULATIONS, INCLUDING DESIGN LOADS, MEMBER SIZES AND CONNECTIONS.

O. SHOP DRAWINGS SHALL BE NEW DRAWINGS PRODUCED BY THE CONTRACTOR. ILLEGIBLE REPRODUCTIONS OF THE DESIGN DRAWINGS WILL BE REJECTED. THE USE OF REPRODUCTIONS OR ELECTRONIC FILES OF THE STRUCTURAL DRAWINGS FOR THE PREPARATION OF SHOP DRAWINGS IS NOT ACCEPTABLE WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER OF RECORD. IF SUCH AUTHORIZATION IS OBTAINED, DO NOT SUBMIT SHOP DRAWINGS WITH THE CONTRACT DOCUMENT TITLE BLOCK AND/OR THE SEAL OF THE REGISTERED ENGINEER OF RECORD AFFIXED. ALTERATION OF A SEALED DOCUMENTS WITHOUT PROPER NOTIFICATION OF THE RESPONSIBLE ENGINEER IS AN OFFENSE OF THE ENGINEERING PRACTICE ACT. THE USE OF REPRODUCTIONS OR ELECTRONIC FILES OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS OR OMISSIONS THAT MAY OCCUR HEREON. DRAWINGS REQUIRING A SPECIALTY STRUCTURAL ENGINEER (SSR) SHALL HAVE CALCULATIONS AND DRAWINGS SEALED BY A LICENSED ENGINEER IN THE STATE OF THE PROJECT.

P. SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT, AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT IS NOT THE INTENT THAT THE STRUCTURAL DRAWINGS BE VIEWED AS DETAILED SHOP OR ERECTION DRAWINGS. VARIOUS DIMENSIONS REQUIRED FOR PROPER FIT-UP OF THE COMPONENTS OF THE STRUCTURE MUST BE DETERMINED FROM THE INFORMATION THAT IS PROVIDED ELSEWHERE IN THE CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S AND THEIR DETAILER'S OR SUBCONTRACTOR'S RESPONSIBILITY TO ESTABLISH AND TO CALCULATE AND VERIFY THESE DIMENSIONS AS REQUIRED TO ACHIEVE PROPER FIT-UP OF MATERIALS AND TO ACHIEVE COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.

Q. OMISSION FROM THE SHOP DRAWINGS OF ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLYING WITH THE OMITTED REQUIREMENTS, EVEN IF THE SHOP DRAWINGS HAVE BEEN REVIEWED, APPROVED AND RETURNED.

R. SHOP DRAWING REVIEW PROCESS - ALL SHOP DRAWINGS WILL BE REVIEWED AND RETURNED IN THE ORDER RECEIVED UNLESS OTHER SPECIFIC INSTRUCTIONS ARE RECEIVED. FOR PROJECTS WITH MULTIPLE WORK AREAS, THE SHOP DRAWINGS MUST BE DIVIDE INTO THE SAME OR SIMILAR AREAS WITH EACH AREA SUBMITTED INDIVIDUALLY UNDER A SEPARATE TRANSMITTAL. IF THE SHOP DRAWINGS ARE NOT DIVIDED INTO AREAS PER THE CONTRACT DOCUMENTS, THAT SUBMITTAL WILL BE REJECTED. EACH SUBMITTAL WILL BE REVIEWED INDIVIDUALLY AND REQUIRE AN INDIVIDUAL TIME FRAME OF TEN (10) WORKING DAYS PER SUBMITTAL. IF MULTIPLE SUBMITTALS ARE RECEIVED WITHIN THE REVIEW TIME FRAME OF A PRIOR SUBMITTAL, THEY WILL BE REVIEWED CONSECUTIVELY EACH WITH ITS OWN INDIVIDUAL REVIEW TIME FRAME THAT BEGINS ONCE THE PRIOR SUBMITTAL IS RETURNED. THIS GIVES EACH SUBMITTAL A TEN (10) WORKING DAY REVIEW WINDOW.

S. RETURNED SHOP DRAWINGS STAMPED "NOTE MARKINGS" OR "APPROVED AS NOTED" ARE ASSUMED TO BE APPROVED ONCE ALL THE COMMENTS HAVE BEEN INCORPORATED. THE SER WILL ONLY REVIEW SUBMITTALS ONE ADDITIONAL TIME AND ONLY IF THEY ARE MARKED "REVISE AND RESUBMIT" OR "REJECTED". ANY FURTHER REVIEWS OF THE SAME OR SIMILAR SUBMITTALS WILL BE AT THE GENERAL CONTRACTORS EXPENSE WITH PAYMENT FOR SERVICES RENDERED PRIOR TO THE RETURN OF THE APPROVAL DRAWINGS.

T. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELAYS CAUSED BY REJECTION OF INADEQUATE, INCOMPLETE OR INCORRECT SHOP DRAWINGS.

U. SHOP DRAWINGS THAT ARE NOT SPECIFICALLY REQUIRED BY THE GENERAL NOTES OR SPECIFICATIONS WILL NOT BE REVIEWED OR RETURNED.

V. MINIMUM SHOP DRAWING SUBMITTAL REQUIREMENTS INCLUDE:

- CONCRETE MIX DESIGNS FOR EACH CLASS OF CONCRETE WITH TEST DATA
- CONCRETE ACCESSORIES (VAPOR RETARDER, REINFORCING SUPPORT CHAIRS, VOID FORMS, ETC.)
- CONCRETE REINFORCING SHOP DRAWINGS
- STRUCTURAL STEEL SHOP DRAWINGS
- STEEL STAIR, LADDER AND HANDRAIL SHOP DRAWINGS (SEALED BY A LICENSED ENGINEER)
- STEEL JOIST SHOP DRAWINGS
- STEEL DECK SHOP DRAWINGS
- CMU GROUT, CMU UNITS MORTAR AND ACCESSORIES SHOP DRAWINGS
- PRE-ENGINEERED METAL BUILDING SHOP DRAWINGS (SEALED BY A LICENSED ENGINEER)
- COLD-FORMED METAL STUDS AND CONNECTION SHOP DRAWINGS AND CALCULATIONS (SEALED BY LICENSED ENGINEER)
- GLAZED ALUMINUM FRAMING SYSTEMS SHOP DRAWINGS AND CALCULATIONS (SEALED BY LICENSED ENGINEER)
- PRE-FABRICATED CANOPY FRAMING SYSTEMS SHOP DRAWINGS AND CALCULATIONS (SEALED BY A LICENSED ENGINEER)

W. CRANES, CONCRETE TRUCKS AND ALL OTHER HEAVILY LOADED VEHICLES ARE NOT TO BE DRIVEN ACROSS GRADE BEAMS OR BUILDING SLABS.

X. ALL SHORING REQUIRED TO TEMPORARILY SUPPORT CONSTRUCTION LOADS DURING THE CONSTRUCTION OF THE PROJECT SHALL BE DESIGNED AND SEALED BY A LICENSED ENGINEER. ALL EXISTING STRUCTURES AND NEW STRUCTURES SUPPORTING SHORING LOADS SHALL ALSO BE ANALYZED TO DETERMINE IF THEY ARE CAPABLE OF SUPPORTING THE REQUIRED LOADS AND SHALL BE REVIEWED BY A LICENSED ENGINEER. SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.

Y. ERECTION OF STRUCTURAL STEEL MAY NOT BEGIN UNTIL CONCRETE FOUNDATION HAS CURED FOR A MINIMUM OF THREE DAYS. STRUCTURAL STEEL OR OTHER HEAVY LOADS SHALL NOT BE STOCKPILED ON ANY SLAB UNTIL IT HAS CURED FOR A MINIMUM OF THREE DAYS.

Z. NON-CONFORMING WORK, REMEDIAL REPAIRS, AND FIELD MODIFICATIONS — ALL NON CONFORMING WORK AND ASSOCIATED REMEDIAL REPAIRS OR FIELD MODIFICATIONS, INCLUDING ENGINEERING, QUALITY REVIEW AND DRAFTING OF ANY NEW DETAILS OR DOCUMENT REVISIONS, SUBMITTED AS A REQUEST FOR INFORMATION (RFI) AND DEEMED TO REQUIRE ADDITIONAL ENGINEERING OR DRAFTING SERVICES MAY BE BILLED AS AN ADDITIONAL SERVICE AT THE CONTRACTORS EXPENSE AT THE SOLE DISCRETION OF THE SER. THE SER MAY WITHHOLD FUTURE SERVICES UNTIL PAYMENT IS RECEIVED.

AA. NOTE THAT THE GROUND FLOOR SLAB IS A GROUND SUPPORTED SLAB AT GRADE AS PER THE DESIGN RECOMMENDED IN THE GEOTECHNICAL REPORT. IT IS NOT A STRUCTURAL SLAB AND AS SUCH IT IS NOT DESIGNED FOR ANY EXTERNAL UPWARD OR DOWNWARD LOADS, IT IS INTENDED TO BE ENTIRELY SUPPORTED BY THE PREPARED GROUND UNDER THE SLAB. THE CONTRACTOR SHOULD NOTE THAT THE PERFORMANCE OF THE SLAB AS DESIGNED AND INTENDED BY THE GEOTECHNICAL ENGINEER IS HIGHLY DEPENDENT ON HOW WELL THE CONTRACTOR FOLLOWS THE SITE PREPARATION INSTRUCTIONS IN THE GEOTECHNICAL REPORT. THE ARCHITECT SHALL ADVISE THE OWNER THAT THE PERFORMANCE OF THE SLAB INVOLVES SOME RISK, AND THAT SLAB ON GRADE MAY EXPERIENCE VERTICAL MOVEMENTS OF 1-1/2 INCHES OR MORE DEPENDING ON CLIMATIC FACTORS AND IS DEPENDENT ON ENVIRONMENTAL CONDITIONS OVER WHICH THE OWNER HAS CONTROL OF AFTER OCCUPANCY OF THE BUILDING. FURTHERMORE, A SLAB ON GRADE CAN EXPERIENCE VERTICAL MOVEMENT BASED ON CHANGES IN THE MOISTURE CONTENT OF THE UNDERLYING SOILS AND THAT STRUCTURAL SLABS WOULD LIMIT THIS RISK AT A GREATER UP-FRONT COST TO THE PROJECT. THE ARCHITECT, CONTRACTOR AND THE OWNER SHOULD CONSULT WITH THE GEOTECHNICAL ENGINEER IF THERE ARE ANY QUESTIONS CONCERNING CONSTRUCTION, PERFORMANCE AND RISKS INVOLVED WITH GROUND SUPPORTED SLAB AT GRADE CONSTRUCTION.

DESIGN CRITERIA:

BUILDING CODE: INTERNATIONAL BUILDING CODE, 2024 EDITION, ASCE 7-22

LIVE LOAD:

ROOF:	20 PSF
FLOORS:	
CLASSROOMS	40 PSF + 15 PSF PARTITION
CORRIDORS	100 PSF (80 PSF ABOVE THE FIRST LEVEL)
STORAGE	125 PSF (LIGHT)
STAGE	125 PSF
LABORATORY	60 PSF + 15 PSF PARTITION
OFFICE	50 PSF + 15 PSF PARTITION
MECHANICAL	150 PSF
BALCONIES	100 PSF
STAIRS AND EXITS	100 PSF + 300 LBS. CONCENTRATED LOAD AT TREAD MIDSPAN ON 2"x2" AREA
HANDRAILS & GUARDRAILS	200 LBS. ANY DIRECTION OR 50 PLF
FIXED LADDERS	300 LBS. CONCENTRATED LOAD ON RUNG EVERY 10'-0" OC
VEHICLE BARRIERS	6000 LBS. AT 18 INCHES ABOVE FLOOR OR RAMP (MIN.) IN ANY DIRECTION ON AN AREA NO MORE THAN ONE SQUARE FOOT NOTE: THIS CRITERIA APPLIES ONLY TO PASSENGER CAR RESTRAINT SYSTEMS AND BOLLARDS SHOWN ON THE STRUCTURAL DRAWINGS
ARCHITECTURAL BARRIER ACT	
GRAB BAR	250 LBS. ANY DIRECTION
TUB OR SHOWER SEAT	250 LBS. ANY DIRECTION
FASTENERS & MOUNTING DEVICES	250 LBS. ANY DIRECTION

WIND LOAD:

VELOCITY (BASIC)	132 MPH	THREE SECOND GUST (BASIC) ASCE 7-22
EXPOSURE	C	
RISK CATEGORY	III	
INTERNAL PRESSURE COEFFICIENT, G_{CPI}	+/- 0.18	

OPERATIONS BUILDING

MAIN WIND FORCE RESISTING SYSTEM (MWFRS):	
MAXIMUM HORIZONTAL INTERIOR PRESSURE	24 PSF
MAXIMUM HORIZONTAL EXTERIOR PRESSURE	30 PSF
MAXIMUM GROSS UPLIFT INTERIOR ZONE	35 PSF
MAXIMUM GROSS UPLIFT EXTERIOR ZONE	47 PSF
CORNER ZONE WIDTH	24'-0" FROM EACH CORNER

COMPONENTS AND CLADDING — GROSS ROOF UPLIFT IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 1'	41	35
INTERIOR ZONE/ZONE 1	60	51
EXTERIOR ZONE/ZONE 2	79	68
RIDGE CORNERS/ZONE 3	99	75
RELIABLE DEAD LOAD	5 PSF	
CORNER ZONE WIDTH	SEE UPLIFT KEY MAP	

COMPONENTS AND CLADDING — WALLS IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 4	40	37
EXTERIOR (CORNER) ZONE/ZONE 5	46	39
PARAPETS	136	108
CORNER ZONE WIDTH	12'-0" FROM EACH CORNER	

OPERATIONS BUILDING-GABLED PEMB

MAIN WIND FORCE RESISTING SYSTEM (MWFRS):	
MAXIMUM HORIZONTAL INTERIOR PRESSURE	24 PSF
MAXIMUM HORIZONTAL EXTERIOR PRESSURE	32 PSF
MAXIMUM GROSS UPLIFT INTERIOR ZONE	33 PSF
MAXIMUM GROSS UPLIFT EXTERIOR ZONE	47 PSF
CORNER ZONE WIDTH	24'-0" FROM EACH CORNER

COMPONENTS AND CLADDING — GROSS ROOF UPLIFT IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 1	55	32
EXTERIOR ZONE/ZONE 2	74	49
RIDGE CORNERS/ZONE 3	94	74
RELIABLE DEAD LOAD	5 PSF	
CORNER ZONE WIDTH	SEE UPLIFT KEY MAP	

COMPONENTS AND CLADDING — WALLS IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 4	40	36
EXTERIOR (CORNER) ZONE/ZONE 5	46	39
CORNER ZONE WIDTH	12'-0" FROM EACH CORNER	

WAREHOUSE BUILDING

MAIN WIND FORCE RESISTING SYSTEM (MWFRS):	
MAXIMUM HORIZONTAL INTERIOR PRESSURE	24 PSF
MAXIMUM HORIZONTAL EXTERIOR PRESSURE	32 PSF
MAXIMUM GROSS UPLIFT INTERIOR ZONE	33 PSF
MAXIMUM GROSS UPLIFT EXTERIOR ZONE	48 PSF
CORNER ZONE WIDTH	26'-0" FROM EACH CORNER

COMPONENTS AND CLADDING — GROSS ROOF UPLIFT IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 1	56	33
EXTERIOR ZONE/ZONE 2	75	45
CORNERS AND OVERHANGS/ZONE 3	95	75
OVERHANG EDGES/ZONE 2	98	63
OVERHANG CORNERS/ZONE 3	119	93
RELIABLE DEAD LOAD	5 PSF	
CORNER ZONE WIDTH	SEE UPLIFT KEY MAP	

COMPONENTS AND CLADDING — WALLS IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 4	40	36
EXTERIOR (CORNER) ZONE/ZONE 5	46	38
CORNER ZONE WIDTH	13'-0" FROM EACH CORNER	

BUS WASH BUILDING-GABLED PEMB

MAIN WIND FORCE RESISTING SYSTEM (MWFRS):	
MAXIMUM HORIZONTAL INTERIOR PRESSURE	23 PSF
MAXIMUM HORIZONTAL EXTERIOR PRESSURE	31 PSF
MAXIMUM GROSS UPLIFT INTERIOR ZONE	32 PSF
MAXIMUM GROSS UPLIFT EXTERIOR ZONE	46 PSF
CORNER ZONE WIDTH	6'-0" FROM EACH CORNER

COMPONENTS AND CLADDING — GROSS ROOF UPLIFT IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 1	54	32
EXTERIOR ZONE/ZONE 2	72	43
CORNERS AND OVERHANGS/ZONE 3	92	72
OVERHANG EDGES/ZONE 2	94	60
OVERHANG CORNERS/ZONE 3	114	89
RELIABLE DEAD LOAD	5 PSF	
CORNER ZONE WIDTH	SEE UPLIFT KEY MAP	

COMPONENTS AND CLADDING — WALLS IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 4	39	35
EXTERIOR (CORNER) ZONE/ZONE 5	44	38
CORNER ZONE WIDTH	3'-0" FROM EACH CORNER	

BUS WASH BUILDING-MONOSLOPE ROOF --

MAIN WIND FORCE RESISTING SYSTEM (MWFRS):	
MAXIMUM HORIZONTAL INTERIOR PRESSURE	21 PSF
MAXIMUM HORIZONTAL EXTERIOR PRESSURE	28 PSF
MAXIMUM GROSS UPLIFT INTERIOR ZONE	28 PSF
MAXIMUM GROSS UPLIFT EXTERIOR ZONE	41 PSF
CORNER ZONE WIDTH	6'-0" FROM EACH CORNER

COMPONENTS AND CLADDING — GROSS ROOF UPLIFT IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 1	42	42
EXTERIOR ZONE/ZONE 2	46	45
EXTERIOR ZONE/ZONE 2'	55	55
CORNERS AND OVERHANGS/ZONE 3	51	45
RELIABLE DEAD LOAD	5 PSF	
CORNER ZONE WIDTH	SEE UPLIFT KEY MAP	

COMPONENTS AND CLADDING — WALLS IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 4	35	32
EXTERIOR (CORNER) ZONE/ZONE 5	40	34
CORNER ZONE WIDTH	3'-0" FROM EACH CORNER	

STORAGE BUILDING

MAIN WIND FORCE RESISTING SYSTEM (MWFRS):	
MAXIMUM HORIZONTAL INTERIOR PRESSURE	21 PSF
MAXIMUM HORIZONTAL EXTERIOR PRESSURE	27 PSF
MAXIMUM GROSS UPLIFT INTERIOR ZONE	29 PSF
MAXIMUM GROSS UPLIFT EXTERIOR ZONE	42 PSF
CORNER ZONE WIDTH	8'-0" FROM EACH CORNER

COMPONENTS AND CLADDING — GROSS ROOF UPLIFT IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 1	53	45
EXTERIOR ZONE/ZONE 2	70	60
CORNERS AND OVERHANGS/ZONE 3	88	67
OVERHANG EDGES/ZONE 2	66	52
OVERHANG CORNERS/ZONE 3	84	59
RELIABLE DEAD LOAD	5 PSF	
CORNER ZONE WIDTH	SEE UPLIFT KEY MAP	

COMPONENTS AND CLADDING — WALLS IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 4	36	32
EXTERIOR (CORNER) ZONE/ZONE 5	41	34
CORNER ZONE WIDTH	4'-0" FROM EACH CORNER	

SNOW:

GROUND SNOW LOAD		9 PSF
RISK CATEGORY		III
SURFACE ROUGHNESS CATEGORY		C
EXPOSURE FACTOR	Ce	1.0
THERMAL FACTOR	Ct	1.2
WINTER WIND PARAMETER	W_2	0.45
FLAT ROOF SNOW LOAD		7.6 PSF

SEISMIC:

IMPORTANCE FACTOR,	Ie	1.25
RISK CATEGORY		III
0.2 SEC SPECTRAL ACCELERATION	Ss	8.7g
1.0 SEC SPECTRAL ACCELERATION	S1	4.7g
SITE CLASS		D
SPECTRAL RESPONSE COEFFICIENT	Sds	7.7g
SPECTRAL RESPONSE COEFFICIENT	Sd1	6.9g
SEISMIC DESIGN CATEGORY		B
DESIGN BASE SHEAR	V	40.9 KIPS
SEISMIC RESPONSE COEFFICIENT	Cs	0.026
RESPONSE MODIFICATION FACTOR	R	3.5

ALLOWABLE SOIL BEARING CAPACITY:

(AT 10'—0" BELOW EXISTING GRADE)

TOTAL LOAD	6300 PSF
DEAD LOAD	4200 PSF

ALLOWABLE SKIN FRICTION CAPACITY 1000 PSF (BEGINNING AT 4'-0" BELOW EXISTING GRADE)

EARTHWORK

1. SITE PREPARATION FOR THE BUILDING PAD SHALL CONSIST OF THE REMOVAL OF EXISTING PAVEMENT, VEGETATION, ORGANIC MATTER AND ANY ADDITIONAL MATERIAL AS NECESSARY TO PROVIDE THE REQUIRED AMOUNT OF FILL UNDER THE BUILDING.
2. THE SUBGRADE SHALL BE PROOFROLLED WITH A HEAVY, RUBBER-TIRED VEHICLE (STATIC WEIGHT OF AT LEAST 20 TONS AND WITH TIRE PRESSURES OF AT LEAST 90 PSI). THE CONTRACTOR SHALL MAKE AT LEAST TWO COMPLETE PASSES OVER THE AREA WITH THE SECOND PASS PERPENDICULAR TO THE FIRST PASS. AREAS OF THE SUBGRADE THAT ARE OBSERVED TO BE SOFT OR WEAK SHALL BE OVEREXCAVATED AND REPLACED WITH PROPERLY COMPACTED SELECT FILL.
3. SUBGRADE SHALL THEN BE SCARIFIED AND MOISTURE CONDITIONED TO MATCH THE BUILDING PAD PERIMETER TO A [SIX (6)] INCH DEPTH AND THEN RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON THE SUBGRADE OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.
4. SELECT FILL MATERIAL FOR THE BUILDING PAD SHALL BE AN INORGANIC SANDY CLAY WITH A LIQUID LIMIT BETWEEN 26 AND 40 AND PLASTICITY INDEX BETWEEN 10 AND 20. STRUCTURAL SELECT FILL PAD MATERIAL SHALL BE TESTED FOR ACCEPTABILITY AND A MOISTURE DENSITY CURVE SHALL BE ESTABLISHED.
5. SELECT FILL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +2 PERCENT OF THE OPTIMUM MOISTURE CONTENT FOR SELECT FILL. SELECT FILL MATERIAL SHALL EXTEND TO 5'-0" BEYOND THE BUILDING PERIMETER. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON EACH LIFT OF SELECT FILL OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.
6. SELECT FILL MATERIAL SHALL BE TESTED DURING PLACEMENT OF EACH LIFT FOR THE ATTERBERG LIMITS IN ACCORDANCE WITH ASTM D4318-98 METHOD B "STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS" TO VERIFY THAT THE SELECT FILL MATERIAL IS IN ACCORDANCE WITH THE ORIGINALLY APPROVED SELECT FILL MATERIAL. PROVIDE A MINIMUM OF ONE (1) TEST PER LIFT OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER WITH A MAXIMUM OF TEN (10) PER LIFT.
7. CONTRACTOR SHALL MAINTAIN A CLEAN EXCAVATION THAT IS FREE OF WATER 100% OF THE TIME. CONTRACTOR SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE ANY WATER AT ALL TIMES.
8. THE SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING PAD DURING BUILDING PAD INSTALLATION AND WHEN THE BUILDING PAD AND BUILDING ARE COMPLETED.
9. PLUMBING AND UTILITY TRENCHES WITHIN THE BUILDING PAD SHALL HAVE PIPING BEDDED ON 6" MINIMUM OF CEMENT STABILIZED SAND WITH 4" MINIMUM ALL AROUND. BACKFILL IN UTILITY TRENCHES SHALL CONSIST OF COMPACTED SELECT FILL. PROVIDE A 1'-0" WIDE BENTONITE CLAY PLUG OR FAT CLAY (PI>50) FOR THE FULL DEPTH AND WIDTH OF THE UTILITY TRENCH TO A MINIMUM OF 1'-0" ABOVE THE BOTTOM OF THE FOUNDATION AT THE EXTERIOR FACE OF BUILDING FOUNDATIONS WHERE UTILITY TRENCHES ENTER THE BUILDING.
10. PROVIDE A MINIMUM TWELVE (12) INCH FAT CLAY CAP (PI>50) FOR A MINIMUM OF 5'-0" AROUND THE PERIMETER OF THE BUILDING. THE CAP SHALL EXTEND AS REQUIRED TO COVER THE LIMITS OF THE BUILDING PAD EXCAVATION AND SELECT FILL BUILDING PAD MATERIALS.

SITE DRAINAGE

1. GRADE THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND SLABS. WATER SHALL NOT BE ALLOWED TO POND ADJACENT TO THE BUILDING FOUNDATIONS OR SLABS.
2. AS A MINIMUM REQUIREMENT, ALL DOWNSPOUTS FROM ROOF DRAINS AND GUTTERS SHALL BE COLLECTED AND PIPED AWAY FROM THE BUILDING. WHEN WATER IS NOT PIPED AWAY FROM THE BUILDING, DOWNSPOUTS SHALL DUMP ONTO A CAST IN PLACE 4" THICK X 3'-0" WIDE CONCRETE SWALE REINFORCED WITH #4 AT 12" ON CENTER EACH WAY AND EXTENDING 10'-0" OUT FROM THE BUILDING. REFER TO ARCHITECTURAL AND CIVIL FOR PAVING AND DRAINGAGE.
3. TREES AND VEGETATION SHALL NOT BE ALLOWED WITHIN A DISTANCE EQUAL TO THREE QUARTERS THEIR ULTIMATE HEIGHT AWAY FROM THE BUILDING.
4. IRRIGATE VEGETATION AND SOILS ADJACENT TO BUILDING (NO MORE THAN 15 MINUTES THREE TIMES A WEEK) ON AN AS NEEDED BASIS TO MAINTAIN UNIFORM SOIL MOISTURE CONDITIONS AROUND THE PERIMETER OF THE BUILDING FOLLOWING CONSTRUCTION.

FOUNDATIONS

1. PREPARED GRADE AREA UNDER ALL BUILDING SLABS AND GRADE BEAMS SHALL BE COVERED WITH A 15 MIL WATER VAPOR RETARDER MEETING THE REQUIREMENTS OF ASTM E 1745 (LATEST EDITION), CLASS A OR BETTER WITH MAXIMUM WATER PERMEANCE OF 0.01 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. THE WATER VAPOR RETARDER SHALL BE INSTALLED, LAPPED AND TAPED WITH MANUFACTURER'S APPROVED PRODUCT IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E 1643 (LATEST EDITION). PENETRATIONS SHALL SEALED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
2. FOUNDATION DETAILING SHOWN ON THE DRAWINGS IS BASED ON A FOUNDATION DESIGN SPECIFIED IN THE SOIL REPORT BY TERRACON CONSULTANTS, INC., REPORT NO. 97255039, DATED JULY 22, 2025. THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT SHALL NOT SUPERSEDE THE REQUIREMENTS SHOWN ON THE DESIGN DRAWINGS OR IN THE SPECIFICATIONS WHEN THE REQUIREMENTS SHOWN ON THE DRAWINGS ARE GREATER THAN THOSE SHOWN IN THE GEOTECHNICAL REPORT. THE CONTRACTOR IS REQUIRED TO SECURE A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND TO HAVE A COPY ON THE JOB SITE AT ALL TIMES FOR HIS USE AND REFERENCE.
3. FOUNDATION DETAILING SHOWN ON THE DRAWINGS IS BASED ON A MINIMUM OF 60 INCHES OF SELECT FILL MATERIAL BENEATH THE FLOOR SLAB AND SHALL EXTEND TO 5'-0" BEYOND THE BUILDING PERIMETER.
4. ALL BACKFILL FOR BURIED PIPES AND CONDUIT WITHIN THE BUILDING PAD AND EXTENDING OUT MINIMUM 5'-0" BEYOND THE BUILDING SHALL BE BACKFILLED WITH SELECT FILL BACKFILL. DO NOT USE SAND BACKFILL. A 2'-0" WIDE BENTONITE PLUG SHALL BE PROVIDED IN ALL UTILITY TRENCHES AT THE FACE OF THE BUILDING FOUNDATION. SEE TYPICAL DETAILS FOR DETAIL AT PIPE BUILDING ENTRY.
5. CONDUITS SHALL NOT BE PLACED IN THE CONCRETE SLAB. CONDUITS SHALL BE PLACED IN THE SELECT FILL MATERIAL BENEATH THE VAPOR RETARDER. ALL PENETRATIONS OF THE VAPOR RETARDER SHALL BE SEALED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS. CONDUIT TRENCHES WITHIN THE BUILDING PAD SHALL BE LIMITED TO A MAXIMUM WIDTH OF TWO FEET AND BE SPACED NO CLOSER THAN FOUR FEET CENTER TO CENTER. CONDUITS STACKED WITHIN A SINGLE TRENCH SHALL BE SEPARATED VERTICALLY BY TWO TIMES THE DIAMETER OF THE LARGEST CONDUIT OR 12 INCHES MINIMUM. COMPACTED SELECT FILL OR OTHER APPROPRIATE COMPACTED FILL MATERIAL SHALL BE USED BETWEEN STACKED CONDUITS.
6. THE FLOOR SLAB SUBGRADE SHALL BE PROPERLY COMPACTED, PROOF ROLLED AND SHALL BE FREE OF STANDING WATER, MUD AND FROZEN SOILS.
7. SLABS ON GROUND SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS (REFER TO TYPICAL DETAILS) AT EACH COLUMN LINE AND IN EACH DIRECTION. ADDITIONAL CRACK CONTROL JOINTS SHALL BE PROVIDED SUCH THAT NO AREA BOUNDED BY CONSTRUCTION AND/OR CRACK CONTROL JOINTS CONTAINS MORE THAN 250 SQUARE FEET AND THE RESULTING ASPECT RATIO OF LONG SIDE TO SHORT SIDE DIMENSIONS OF THE BOUNDED SLAB AREA DOES NOT EXCEED 1.5 TO 1. CRACK CONTROL JOINTS SHALL BE MADE USING A "SOFT-CUT" CONCRETE SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR WITHOUT DISTURBING THE FINAL FINISH. THIS SHOULD BE WITHIN THE FIRST SIX HOURS AFTER PLACEMENT. THE CRACK CONTROL JOINTS SHALL BE CUT A MAXIMUM WIDTH OF 1/8 INCH AND A MINIMUM DEPTH OF 1/3 THE SLAB THICKNESS. REFER TO THE TYPICAL DETAILS AND DRAWINGS FOR INFORMATION ON CONTROL JOINTS, CONSTRUCTION JOINTS, REINFORCING DETAILS, JOINT SEALANT, AND TYPICAL JOINT LAYOUT.
8. WHERE SLABS ARE TO RECEIVE SENSITIVE ARCHITECTURAL FLOOR FINISHES, ALL JOINTS IN THE SLAB CONSTRUCTION SHALL BE PLACED TO ALIGN WITH JOINTS IN THE FLOOR FINISHES.
9. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING OF WALLS WHICH ARE ULTIMATELY SUPPORTED TOP AND BOTTOM. SUCH SHORING SHALL NOT BE REMOVED UNTIL ALL SUPPORTING ELEMENTS ARE IN PLACE, THE COMPACTION OF ALL BACKFILL AGAINST THE WALL HAS BEEN COMPLETED, AND THE CONCRETE IN THE WALLS AND SUPPORTING ELEMENTS HAS ATTAINED THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH (Fc'),
10. EXCAVATIONS FOR SPREAD FOOTING, COMBINED FOOTING, CONTINUOUS FOOTINGS AND/OR MAT FOUNDATIONS SHALL BE CLEANED AND HAND TAMPED TO A UNIFORM SURFACE. FOOTING EXCAVATIONS SHALL HAVE THE SIDE AND BOTTOM TEMPORARILY LINED WITH 6 MIL VAPOR BARRIER IF CONCRETE PLACEMENT DOES NOT OCCUR WITHIN 24 HOURS OF FOOTING EXCAVATION. SEAL SLABS MAY BE REQUIRED BASED ON GROUND WATER CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, AND COST ASSOCIATED WITH ALL SEAL SLABS. REFER TO THE GEOTECHNICAL REPORT FOR GROUND WATER OR POTENTIAL PERCHED WATER CONDITIONS.
11. REINFORCEMENT PLACEMENT SEQUENCE FOR FOOTINGS AND MATS IS NOTED FOR MAJOR REINFORCEMENT BAR LAYERS ONLY. IN SPREAD FOOTINGS OR MATS, THE CONTRACTOR SHALL COORDINATE AND SEQUENCE ALL OTHER BAR PLACEMENTS AS REQUIRED TO CONFORM TO THE CONTRACT DOCUMENTS.
12. FOUNDATION CONDITIONS THAT DIFFER FROM THOSE NOTED IN THE CONTRACT DOCUMENTS OR AS DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT, GEOTECHNICAL ENGINEER AND SER BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
13. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND SER AT LEAST 48 HOURS PRIOR TO PLACEMENT OF CONCRETE IN FOOTINGS.
14. CONTRACTOR SHALL PROVIDE A UNIT COST FOR REPLACING DRILLED FOOTINGS SHOWN WITH STRAIGHT SHAFT DRILL FOOTINGS IN THE EVENT FOOTING BELLS CAVE BEFORE CONCRETE CAN BE PLACED. UNIT COST SHALL INCLUDE EXCAVATION AND CONCRETE PLACEMENT. STRAIGHT SHAFTS SHALL HAVE THE SAME DIAMETER AS BELL SIZE SHOWN ON THE PLANS. VERTICAL REINFORCING SHALL BE THE SAME AS SCHEDULED FOR THE BELLED FOOTING.
15. CONTRACTOR SHALL BE PREPARED TO USE TEMPORARY CASING AS REQUIRED TO FINISH THE DRILLED FOOTINGS. CASING SIZE SHALL HAVE AN INTERIOR DIAMETER EQUAL TO THE SPECIFIED SHAFT SIZE SHOWN ON THE PLANS. CONTRACTOR SHALL PROVIDE A UNIT PRICE FOR A DRY DRILLED SHAFT AND FOR A CASED DRILLED SHAFT.
16. CONTRACTOR SHALL INSTALL THREE TEST FOOTINGS PRIOR TO INSTALLING THE REQUIRED FOOTINGS FOR THE PURPOSE OF DETERMINING IF A STABLE BELL CAN BE FORMED OR WHETHER STRAIGHT SIDED FOOTINGS WILL BE REQUIRED. TEST FOOTINGS SHALL BE LOCATED AS INDICATED ON THE KEY PLAN ON THIS SHEET OR AS DIRECTED BY THE ARCHITECT. TEST FOOTING SHALL NOT BE INSTALLED AT A REQUIRED FOOTING LOCATION. TEST FOOTINGS SHALL EQUAL THE LARGEST SIZE OF THE REQUIRED FOOTINGS. THE TEST FOOTINGS SHALL BE BACKFILLED AFTER COMPLETION WITH EITHER CEMENT-STABILIZED SAND, FLOWABLE FILL, OR LEAN CONCRETE.
17. THE BUILDING SITE MAY HAVE SOME BURIED EXISTING FOUNDATIONS AND UTILITIES. IF THESE FOUNDATIONS OR UTILITIES ARE ENCOUNTERED DURING DRILLING OPERATIONS, THE SINGLE DRILLED FOOTING SHALL BE REPLACED WITH TWO SYMMETRICALLY PLACED FOOTINGS AND A STRAP BEAM AS SHOWN IN TYPICAL DETAILS. THE CONTRACTOR SHALL PROVIDE A UNIT COST FOR EACH OCCURRENCE. SEAL ANY UTILITY LINES DISCOVERED WITH CONCRETE.
18. ALL FOOTINGS SHALL BE CONSOLIDATED WITH A CONCRETE VIBRATOR AS PER THE REQUIREMENTS OF ACI 318 AND ACI 308R, LATEST EDITION.
19. DRILLED FOOTINGS SHALL BE POURED IMMEDIATELY UPON COMPLETION OF EXCAVATION AND CLEANING OF FOOTING BEARING SURFACE. UNDER NO CIRCUMSTANCES SHOULD DRILLED FOOTINGS/PIERS SHOULD NOT REMAIN OPEN OVER NIGHT. ALL SPOILS FROM THE DRILLED FOOTING EXCAVATIONS SHALL BE REMOVED FROM THE BUILDING PAD.
20. IF DRILLED AND UNDERREAMED FOOTINGS CANNOT BE FORMED DUE TO CAVING SOILS, THE ARCHITECT, GEOTECHNICAL ENGINEER AND SER SHALL BE NOTIFIED IMMEDIATELY BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
21. WHERE A DRILLED FOOTING IS SHOWN ON THE PLAN CLOSER THAN 6'-0 FROM ANOTHER FOOTING, DRILL ONE FOOTING, FILL WITH CONCRETE AND LET CURE 24 HOURS PRIOR TO DRILLING THE ADJACENT FOOTING. (6'-0" DIMENSION IS MEASURED BETWEEN EDGE OF BELL NOT CENTER TO CENTER.)
22. TOPS OF DRILLED FOOTINGS SHALL NOT HAVE "MUSHROOMED" OR FLARED TOPS. CONTRACTOR SHALL USE SONUTUBE, SURETOP OR APPROVED EQUAL TO FORM TOP OF PIERS TERMINATED AT GRADE LEVEL. CONCRETE OF FLARED TOP FOOTINGS SHALL BE REMOVED PRIOR TO FORMING AND PLACING OF THE CONCRETE IN PIER CAPS OR GRADE BEAMS. TOPS OF ALL PIERS SHALL BE CLEANED PRIOR TO THE PLACEMENT OF CONCRETE.
23. PROVIDE A TREMIE TO PLACE CONCRETE IN DRILLED FOOTINGS SO THAT CONCRETE DOES NOT FREE FALL OVER 10'-0".
24. PROVIDE PIER SLEDS TO MAINTAIN 3" MINIMUM CLEAR COVER ON FOOTING SHAFT REINFORCING, PIERS SLEDS SHALL BE STAGGERED ALONG THE VERTICAL REINFORCING. DO NOT PLACE SLEDS AT THE SAME LOCATION.

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

ASCE Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-22	**Latitude:**	30.143836
Risk Category:	III	**Longitude:**	-95.218305
Soil Class:	CD	**Elevation:**	97.2545397099142 ft (NAVD 88)

Wind

Results:

Wind Speed	132 Vmph
10-year MRI	75 Vmph
25-year MRI	87 Vmph
50-year MRI	98 Vmph
100-year MRI	106 Vmph
300-year MRI	118 Vmph
700-year MRI	126 Vmph
1,700-year MRI	132 Vmph
3,000-year MRI	137 Vmph
10,000-year MRI	145 Vmph
100,000-year MRI	157 Vmph
1,000,000-year MRI	170 Vmph

Data Source:	ASCE/SEI 7-22, Fig. 26.5-1C and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Wed May 28 2025

https://ascehazardtool.org/ Page 1 of 3 Wed May 28 2025

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Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

HUNTER KORNEGAY
91030

SEPTEMBER 18, 2025

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GENERAL NOTES

PACKAGE VOLUME

Job No. 1971-05-01	Sheet No. S&S SET S0.00
Drawn By: JG	
Date: 09/18/25	

ISSUED FOR BID

CONCRETE

1. ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT WHERE NOTED. NO. 10 THROUGH NO. 18 BARS SHALL CONFORM TO ASTM A615, GRADE 75. DEFORMED BAR ANCHORS SHALL CONFORM TO ASTM A496, GR 70. ALL BARS SHALL BE NEW OR RECYCLED DOMESTIC BILLET STEEL OF A DOMESTIC MANUFACTURER.

2. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE SAND AND CRUSHED CARBONATE AGGREGATE CONFORMING TO ASTM C33 FOR NORMAL WEIGHT CONCRETE AND LIGHT WEIGHT AGGREGATES CONFORMING TO ASTM C330, TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150, AND THE FOLLOWING DESIGNATED COMPRESSIVE STRENGTH (f'c) IN 28 DAYS:

CONCRETE USE OR CLASS	MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c)	MAXIMUM WATER CEMENT RATIO	SLUMP (INCHES)
FOOTINGS	3000 PSI	0.50	5 TO 8
SLABS ON GROUND SEE NOTE 4	3500 PSI	0.45	4 TO 6
ALL OTHER CONCRETE	3000 PSI	0.50	4 TO 6
ELEVATED SLABS ON METAL DECK (3/4" MAX. AGGREGATE SIZE)	3500 PSI	0.45	3 TO 5

SLUMP SHALL BE MEASURED FROM SAMPLES TAKEN AT THE POINT OF DISCHARGE UNLESS AGREED TO IN WRITING PRIOR TO CONCRETE PLACEMENT

NOTE: CONCRETE SUPPLIER SHALL BE AWARE OF CEMENTS THAT CAN CAUSE LATE ETTRINGITE FORMATION IN THE CEMENT PASTE AND BE PREPARED TO SHOW THAT THE CEMENTS USED WILL NOT CAUSE THIS PROBLEM.

3. FLY ASH MAY BE USED AS A POZZOLAN TO REPLACE A PORTION OF THE PORTLAND CEMENT IN A CONCRETE MIXTURE, SUBJECT TO THE APPROVAL OF THE ARCHITECT AND SER. FLY ASH, WHEN USED, SHALL CONFORM TO ASTM C618 TYPE 'C'. CONCRETE MIXTURES CONTAINING FLY ASH SHALL BE PROPORTIONED TO ACCOUNT FOR THE PROPERTIES OF THE SPECIFIC FLY ASH AND TO ACCOUNT FOR THE SPECIFIC PROPERTIES OF THE FLY ASH CONCRETE THUS RESULTING, INCLUDING BUT NOT LIMITED TO WATER CEMENT RATION AND MINIMUM 28 DAY COMPRESSIVE STRENGTH. THE RATIO OF THE AMOUNT BY VOLUME OF FLY ASH TO THE TOTAL AMOUNT BY VOLUME OF CEMENTITIOUS MATERIAL (INCLUDING THE FLY ASH) SHALL NOT EXCEED 25 PERCENT.

4. FLY ASH IS NOT PERMITTED IN SLABS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND SER.

5. AIR ENTRAINMENT IS REQUIRED ONLY IN HARD ROCK CONCRETE PERMANENTLY EXPOSED TO WEATHER CONDITIONS. WHERE LIGHTWEIGHT CONCRETE IS SPECIFIED, AIR ENTRAINMENT IS REQUIRED FOR ALL EXPOSURE CONDITIONS. PERCENT AIR ENTRAINMENT LIMITS IS PLUS/MINUS 1.5%. DO NOT AIR-ENTRAIN INTERIOR FLOOR SLABS THAT RECEIVE HARD TROWEL FINISH.

6. ALL WELDED WIRE FABRIC SHALL BE SMOOTH ROUND WIRE IN FLAT SHEETS AND SHALL CONFORM TO ASTM A185.

7. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS; SEE SEC. 7.7 ACI 318, LATEST EDITION FOR CONDITIONS NOT NOTED. PROVIDE CHAIR SUPPORTS (AZTEC CASTLE CHAIR, WHC SERIES 'E' OR EQUAL) TO ADEQUATELY SUPPORT BARS FOR PROPER CLEARANCE AS RECOMMENDED BY THE AMERICAN CONCRETE INSTITUTE AND THE CONCRETE REINFORCING STEEL INSTITUTE. SLAB ON GRADE REINFORCEMENT SHALL BE SUPPORTED AT 45-INCH MAXIMUM INTERVALS OR EVERY THIRD BAR. UTILITY OR CONCRETE BRICKS ARE NOT ALLOWED AS REINFORCING SUPPORTS.

MINIMUM CONCRETE COVER REQUIREMENTS	
LOCATION	MINIMUM COVER
FOOTINGS	3 INCHES
GRADE BEAMS	3 INCHES BOTTOM 2 INCHES SIDES — FORMED SURFACE 3 INCHES SIDES — EARTH FORMED 1 — 1/2 INCHES TOP
SLAB ON GROUND	1 INCH TOP

8. NO HORIZONTAL JOINTS WILL BE PERMITTED IN CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE NOTED. NO JOINTS BETWEEN PILASTERS AND GRADE BEAM THAT ARE MEANT TO BE MONOLITHIC. VERTICAL JOINTS SHALL OCCUR AT CENTER SPANS OR AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.

9. CONSTRUCTION JOINTS BETWEEN PIERS AND PIER CAPS OR GRADE BEAMS, FOOTINGS AND WALLS OR COLUMNS, OR WALLS, COLUMNS, BEAMS AND THE FLOOR SYSTEM THEY SHALL SUPPORT SHALL BE PREPARED BY ROUGHENING THE SURFACE CONTACT SURFACE TO A FULL AMPLITUDE ON 1/4" LEAVING THE CONTACT SURFACE CLEAN AND FREE OF ALL LAITANCE.

10. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI PUBLICATION 315, LATEST EDITION "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP -66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" AND CRSI "RECOMMENDED STANDARD PRACTICE". ALL HOOKED BARS SHOWN IN THE DETAILS SHALL HAVE STANDARD HOOKS UNLESS NOTED OTHERWISE.

11. REINFORCING BARS SHALL NOT BE WELDED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER. REINFORCING STEEL THAT REQUIRES WELDING SHALL CONFORM TO ASTM A706, WITH GRADES AS SHOWN IN THE DETAILS.

12. UNLESS BARS ARE SPECIFICALLY SHOWN IN THE BAR BENDING DIAGRAMS ON THE SCHEDULES, PROVIDE BARS AS FOLLOWS:

    A) PROVIDE STANDARD 90 DEGREE HOOK ON TOP BARS AT CANTILEVER ENDS.

    B) SPLICE BOTTOM BARS DIRECTLY OVER MEMBER SUPPORTS, UNLESS NOTED OTHERWISE.

    C) SPLICE TOP AND INTERMEDIATE BARS AT THE CENTER LINE BETWEEN MEMBER SUPPORTS, UNLESS NOTED OTHERWISE.

    D) SPLICE VERTICAL BARS IN WALLS ONLY AT FLOOR LINES, UNLESS NOTED OTHERWISE. HORIZONTAL BARS SHALL BE SPLICED AS SPECIFIED FOR TOP, BOTTOM, AND INTERMEDIATE BARS OF BEAMS.

    E) CENTER BARS NOTED AS "AT SUPT'S." OVER MEMBER SUPPORTS, AND CENTER BARS NOTED AS "BTWN. SUPT'S," BETWEEN SUPPORTS.

    F) PLACE BARS NOTED AS "2ND LAYER" BELOW THE PRIMARY TOP BARS (OR ABOVE THE PRIMARY BOTTOM BARS) AND PROVIDE #11 SPACER BARS PLACED AT INTERVALS OF 4'-0" BETWEEN THE TWO LAYERS OF BARS.

    G) SPLICE VERTICAL BARS IN COLUMNS ONLY AT FLOOR LINES, UNLESS NOTED OTHERWISE. COLUMN BAR SPLICES SHALL BE AS SHOWN IN THE COLUMN SCHEDULE.

    H) PROVIDE CORNER BARS FOR EACH HORIZONTAL BAR AT THE INSIDE AND OUTSIDE FACES OF INTERSECTING BEAMS OR WALLS. REFER TO CORNER BAR DETAILS IN THE TYPICAL DETAILS.

    I) REFER TO THE COLUMN REINFORCING DIAGRAMS FOR ADDITIONAL TIES ABOVE AND BELOW THE FLOOR FRAMING MEMBERS.

13. BARS SHOWN IN THE SCHEDULE TO HOOK AT DISCONTINUOUS ENDS SHALL HAVE THE HOOK PLACED HORIZONTALLY AT EXTERIOR CORNERS.

14. PROVIDE NO. 3 DOWELS X 2'-0" AT 1'-6" ON CENTER, WITH A 90 DEGREE HOOK AT ALL EDGES OF CONCRETE SLABS, UNLESS DETAILED OTHERWISE.

15. PROVIDE FOUNDATION DOWELS TO MATCH MASONRY WALL REINFORCEMENT. DOWELS SHALL EXTEND INTO THE CONCRETE AND CMU PER THE LAP SCHEDULES.

16. ALL CONTINUOUS REINFORCEMENT SHALL LAP 40 BAR DIAMETERS AT SPLICES. PROVIDE (1) NO. 6 x 6'-0" TOP AND BOTTOM (TWO 36" LEGS WITH 90 DEGREE BEND) AT EACH FACE OF GRADE BEAMS AT CORNERS AND INTERSECTIONS, AND AT 18" ON CENTER VERTICALLY AT WALLS.

17. PROVIDE (1) NO. 4 BAR x 4'-0" FOR ELEVATED SLABS AND (2) NO. 5 BARS x 4'-0" FOR SLAB ON GROUND AT ALL RE-ENTRANT CORNERS. PROVIDE (1) NO. 4 BAR x 4'-0" AROUND ALL RECTANGULAR OPENINGS OR COLUMN BLOCK OUTS UNLESS NOTED OTHERWISE. FOR ELEVATED SLABS, PLACE THE DIAGONAL BARS WITH 1 INCH OF CLEARANCE FROM TOP AND THE SIDES OF THE OPENING CORNERS. FOR SLAB ON GRADE, PLACE THE BARS AT MID DEPTH OR BELOW THE REINFORCING MAT AND 3 INCHES CLEAR FROM THE CORNER.

18. CONDUITS ARE NOT ALLOWED IN SLABS, BEAMS, WALLS OR COLUMNS. ALL CONDUITS SHALL BE SUSPENDED FROM OR ATTACHED TO THE CONCRETE STRUCTURE.

19. PROVIDE SLEEVES, MECHANICAL OPENINGS, CONDUITS, PIPES, RECESSES, DEPRESSIONS, CURBS AND ALL EMBEDDED ITEMS AS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS OR AS REQUIRED BY EQUIPMENT MANUFACTURERS. MINIMUM CONCRETE BETWEEN SLEEVES SHALL BE 6". SHOP DRAWINGS SHALL CLEARLY INDICATE THE INSTALLATION OF THESE ITEMS. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED TO 3/4"x3/4" MINIMUM UNLESS NOTED OTHERWISE. DO NOT PROVIDE CHAMFERS AT INSIDE FACE OF OVERHEAD DOORS OR AT STOREFRONT OPENINGS.

20. BESIDES FOLLOWING ARTICLE 6.3 OF ACI 318 FOR EMBEDDED ITEMS FOLLOWING REQUIREMENTS SHALL BE MET:

    A) THE MINIMUM CLEAR DISTANCE BETWEEN CONDUITS AND PIPES SHALL BE 6".

    B) NONE PERMITTED IN COLUMNS WITHOUT PRIOR APPROVAL

21. ALL CONSTRUCTION JOINTS IN BEAMS AND WALLS SHALL BE PROVIDED WITH SHEAR KEYS AS SHOWN IN THE DETAILS.

22. SLEEVES PASSING HORIZONTALLY THROUGH GRADE BEAMS:

    A) LOCATE AT MIDDLE THIRD OF BEAM SPAN - MINIMUM 6" AWAY FROM AN INTERIOR MEMBER.

    B) LOCATE AT MIDDLE THIRD OF BEAM DEPTH.

    C) MAXIMUM DIAMETER OF SLEEVE TO BE ONE THIRD OF BEAM DEPTH OR 8" (WHICHEVER IS LESS).

    D) SPACING TO BE AT LEAST THREE SLEEVE DIAMETERS OR 6" (WHICHEVER IS GREATER).

    E) ADD ONE ADDITIONAL SCHEDULED STIRRUP ON EITHER SIDE OF THE SLEEVE. ADD (2) #5 x 5'-0" TOP AND BOTTOM CENTERED AT SLEEVE.

    F) NO SLEEVES LONGITUDINALLY IN BEAMS. PASS SLEEVES ONLY AT RIGHT ANGLES TO BEAMS.

23. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE, ACI 301, LATEST EDITION.

24. ALL CONCRETE SHALL BE CONSOLIDATED WITH A CONCRETE VIBRATOR AS PER THE REQUIREMENTS OF ACI 318 AND ACI 308R, LATEST EDITION.

25. HOT WEATHER CONCRETING SHALL CONFORM TO ACI305 AND COLD WEATHER CONCRETING SHALL CONFORM TO ACI 306.

26. ALL BASE PLATES AND ANCHOR RODS SHALL BE PROTECTED WITH 3" (MIN.) OF CONCRETE. ANCHOR RODS SHALL BE FABRICATED FROM FULL BODIED STEEL RODS CONFORMING TO ASTM F1554 (SPECIFY GRADE IF GREATER THAN GR 36 IS REQUIRED), WASHERS CONFORMING TO ASTM F884 AND NUTS CONFORMING TO ASTM A194 OR A563 AND HAVING THE SAME DIAMETER AS THE BOLT DIAMETER. BOLTS SHALL BE SET USING RIGID TEMPLATES.

27. HIGH DENSITY STYROFOAM SHALL BE PANELIZED POLYSTYRENE RIGID FORM INSULATION WITH MINIMUM COMPRESSIVE STRENGTH OF 40 PSI (EPS19) PER ASTM D6817. THICKNESS SHALL BE AS INDICATED IN DETAILS AND DRAWINGS. AVAILABLE MANUFACTURERS INCLUDE: U.C. INDUSTRIES, INC, DOW CHEMICAL COMPANY, AND AMOCO PRODUCTS COMPANY.

POST INSTALLED ANCHORS

ANCHOR MATERIALS

1. MECHANICAL ANCHORS SHALL BE TESTED AND ASSESSED IN ACCORDANCE WITH THE MOST RECENT EDITION OF ACI 355.2 QUALIFICATION OF POST-INSTALLED MECHANICAL ANCHORS IN CONCRETE AND COMMENTARY. ACCEPTABLE MECHANICAL ANCHORS ARE AS FOLLOWS:

EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT TZ

ANCHOR DIAMETER	MINIMUM EMBEDMENT
1/2 INCH	3-1/4"
5/8 INCH	4"
3/4 INCH	4-3/4"

2. ADHESIVE ANCHOR SYSTEMS SHALL BE TESTED AND ASSESSED IN ACCORDANCE WITH THE MOST RECENT EDITION OF ACI 355.4 QUALIFICATION OF POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE (355.4) AND COMMENTARY. ACCEPTABLE ADHESIVE ANCHORS ARE AS FOLLOWS:

CHEMICAL ADHESIVE ANCHORS FOR CONCRETE SHALL BE HILTI HIT-HY 100 SYSTEM

ANCHOR DIAMETER OR BAR SIZE	MINIMUM EMBEDMENT
NO. 3 BAR	4"
1/2 INCH OR NO. 4 BAR	4-1/2"
5/8 INCH OR NO. 5 BAR	6"
3/4 INCH OR NO. 6 BAR	7"
7/8 INCH OR NO. 7 BAR	8"

CHEMICAL ADHESIVE ANCHORS FOR MASONRY SHALL BE HILTI HIT-HY 100 SYSTEM

ANCHOR DIAMETER OR BAR SIZE	MINIMUM EMBEDMENT
NO. 3 BAR	4"
1/2 INCH OR NO. 4 BAR	4-1/2"
5/8 INCH OR NO. 5 BAR	5-3/4"
3/4 INCH OR NO. 6 BAR	6-3/4"

3. AN APPROVED EQUAL TESTED AND ASSESSED IN ACCORDANCE WITH ACI 355.4 AND PROVIDING THE MINIMUM BOND STRESS VALUES BELOW FOR THE SPECIFIED CONDITIONS. BULK-MIXED (E.G., BUCKET-MIXED) ADHESIVES ARE NOT PERMITTED.

4. ADHESIVE ANCHORS SELECTED FROM PARAGRAPH ABOVE SHALL BE SUPPLIED AS AN ENTIRE SYSTEM. THE SYSTEM SHALL INCLUDE, BUT IS NOT LIMITED TO, MANUFACTURERS PRINTED INSTALLATION INSTRUCTIONS (MPII) AS SUPPLIED WITH THE ADHESIVE, ADHESIVE CARTRIDGE, MIXING NOZZLE, EXTENSION TUBE, DISPENSER, AND ALL REQUIRED EQUIPMENT FOR PROPERLY CLEANING THE DRILLED HOLE.

5. ALL-THREADED ROD (EYEBOLTS, THREADED STUDS, INTERNAL THREADED PARTS) TO BE USED IN ADHESIVE ANCHOR ASSEMBLIES SHALL CONFORM TO ASTM A36, A193 (GRADE B7), A307, B348 (BD), F1554 OR OTHER APPROVED ANCHOR ASSEMBLY TYPES. (STAINLESS STEEL ANCHOR RODS SHALL BE AISI TYPE 304 OR TYPE 316.) THREADS SHALL BE UNC COARSE THREADS, UNLESS NOTED OTHERWISE.

6. COMPATIBLE NUTS AND WASHERS SHALL BE FURNISHED WITH THE ALL-THREAD ROD AND CONSIDERED PART OF THE ASSEMBLY. THE COST OF THE HARDWARE SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLED ADHESIVE ANCHOR ASSEMBLY.

7. NUTS, WASHERS, AND OTHER HARDWARE USED WITH AN ALL-THREADED BAR ADHESIVE ANCHOR SYSTEM OR WITH A MECHANICAL EXPANSION ANCHOR SHALL HAVE A MATERIAL OR AN ALLOY DESIGNATION THAT IS COMPATIBLE WITH THE ANCHOR ROD/ALLOY. GALVANIZED ASSEMBLIES SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. ELECTROPLATE GALVANIZING IS NOT ACCEPTABLE. DISSIMILAR METAL ASSEMBLIES SHALL BE SEPARATED BY NYLON, EPDM OR OTHER APPROVED NON-METALLIC WASHERS.

8. REINFORCING BARS TO BE USED IN ADHESIVE ANCHOR ASSEMBLIES (E.G., AS ANCHOR REINFORCEMENT) OR AS POST-INSTALLED REINFORCING SHALL CONFORM TO ASTM A615, A706, A995, OR AI035.

GENERAL INSTALLATION GUIDELINES

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 2,500 PSI AT THE TIME OF ADHESIVE ANCHOR INSTALLATION.

2. CONCRETE AT TIME OF ADHESIVE ANCHOR INSTALLATION SHALL HAVE A MINIMUM AGE OF 21 DAYS. FOR INSTALLATION OF ADHESIVE ANCHORS IN CONCRETE HAVING AN AGE LESS THAN 21 DAYS, TESTS SHALL BE CONDUCTED TO VERIFY THE PERFORMANCE OF THE PRODUCT IN ACCORDANCE WITH ACI 355.4.

3. THE CONCRETE TEMPERATURE AT THE TIME OF ADHESIVE ANCHOR INSTALLATION SHALL BE AT LEAST 50°F UNLESS TESTING HAS BEEN CONDUCTED IN ACCORDANCE WITH RECOGNIZED CRITERIA TO VERIFY PERFORMANCE IN CONCRETE AT LOWER TEMPERATURES.

4. EMBEDMENT DEPTH AND MINIMUM ANCHOR PROJECTION OF THE ANCHOR ELEMENT FROM THE CONCRETE SURFACE SHALL BE AS SHOWN ON THE DRAWING OR DETAIL FOR THE PARTICULAR ANCHOR OR GROUP OF ANCHORS BEING INSTALLED.

5. ADHESIVE CARTRIDGES SHALL BE STORED UNDER CONDITIONS IN COMPLIANCE WITH MANUFACTURER RECOMMENDATIONS REGARDING TEMPERATURE, EXPOSURE TO SUNLIGHT, ETC. AND EVIDENCE OF COMPLIANCE SHALL BE MADE AVAILABLE UPON REQUEST. THE USE OF EXPIRED ADHESIVE, AS INDICATED BY THE EXPIRATION DATE ON THE CARTRIDGE, IS PROHIBITED.

INSTALLATION

1. ADHESIVE ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL TRAINED TO INSTALL ADHESIVE ANCHORS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. BOTH POST-INSTALLED EXPANSION AND ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII). ADHESIVE ANCHORS WITH DIAMETER GREATER THAN 3/8-INCH INSTALLED IN ORIENTATIONS FROM HORIZONTAL TO VERTICAL SHALL EMPLOY A PISTON PLUG FOR THE ADHESIVE INJECTION.

2. INSTALLATION OF ADHESIVE ANCHORS IN ORIENTATIONS FROM HORIZONTAL TO VERTICAL TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY THE ACI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR EQUIVALENT. THESE ANCHORS ARE DESIGNATED WITH A (CERT) AFTER THE ANCHOR CALLOUT. NOTE: SOME DOWN-HOLE INSTALLATIONS SHOWN ON DRAWINGS SUPPORT SUSTAINED TENSION LOADS AND ARE SO DESIGNATED WITH A (CERT) AFTER THE ANCHOR CALLOUT.

3. THE INSTALLER'S QUALIFICATIONS SHALL BE SUBMITTED AND APPROVED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

4. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT REQUIRED TO INSTALL THE EXPANSION AND/OR ADHESIVE ANCHOR INCLUDING, BUT NOT LIMITED TO, DRILLS, SETTING TOOLS, CLEAN OUT BRUSHES, BLOWOUT BULBS, OIL FREE COMPRESSED AIR, VACUUMS, WRENCHES, ETC.

5. UNLESS OTHERWISE SPECIFIED, ANCHORS SHALL BE INSTALLED IN HOLES DRILLED WITH A ROTARY IMPACT HAMMER DRILL OR, WHERE NOT OTHERWISE PRESCRIBED, A ROCK DRILL. WHERE SPECIFIED AND WHERE PERMITTED BY THE MPII, HOLES MAY BE DRILLED WITH A DIAMOND CORE DRILL. IN ALL CASES, THE BIT DIAMETER SHALL BE IN ACCORDANCE WITH THE MPII.

6. ANCHOR HOLES SHALL BE THOROUGHLY CLEANED IN ACCORDANCE WITH THE PROCEDURES SPECIFIED IN THE MPII PRIOR TO ADHESIVE INJECTION.

7. DRILLED AND CLEANED ANCHOR HOLES SHALL BE PROTECTED FROM CONTAMINATION AND WATER (E.G. RAIN) UNTIL THE ADHESIVE IS INSTALLED.

8. A DRILLED ANCHOR HOLE SHALL BE RE-CLEANED JUST PRIOR TO ADHESIVE INJECTION IF, IN THE OPINION OF THE ENGINEER, INSPECTOR, OR ARCHITECT'S REPRESENTATIVE, THE HOLE HAS BECOME CONTAMINATED AFTER INITIAL CLEANING.

9. ADHESIVE SHALL BE INJECTED IN ACCORDANCE WITH THE MPII USING EQUIPMENT AND PROCEDURES AS SPECIFIED THEREIN FOR THE SPECIFIC CONDITIONS ASSOCIATED WITH THE INJECTION. THIS SHOULD BE CLEARLY SPECIFIED IN THE MPII, IF NOT, ANOTHER PRODUCT SHOULD BE SPECIFIED.

10. ANCHOR ELEMENTS TO BE INSTALLED IN THE ADHESIVE SHALL BE CLEAN, OIL FREE, AND FREE OF LOOSE RUST, PAINT, OR OTHER COATINGS. THREADS ON THE PROJECTING PORTION OF THE ANCHOR ELEMENT SHALL BE PROTECTED FROM ADHESIVE CONTAMINATION.

11. INSTALLED ADHESIVE ANCHORS SHALL BE SECURELY FIXED IN-PLACE TO PREVENT DISPLACEMENT WHILE THE ADHESIVE CURES. UNLESS SHOWN OTHERWISE ON THE DRAWINGS, ANCHORS SHALL BE INSTALLED PERPENDICULAR TO THE CONCRETE SURFACE. ANCHORS DISPLACED BEFORE FULL ADHESIVE CURE SHALL BE CONSIDERED DAMAGED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

POST-INSTALLED REINFORCING BARS OR ALL-THREADED BARS SHALL NOT BE BENT AFTER BEING INSTALLED UNLESS PERMITTED BY THE SER

STRUCTURAL STEEL

1. ALL GROUT USED UNDER STEEL COLUMN BASE PLATES SHALL BE OF NON-SHRINKABLE TYPE CONFORMING TO ASTM C1090 AND THE CORPS OF ENGINEERS SPECIFICATION CRD-C-621 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI, 100 PERCENT OF VOID UNDER ALL BASE PLATES IS TO BE GROUTED. ALL BASE PLATES WITH A DIMENSION GREATER THAN 24" SHALL HAVE TWO 1" DIAMETER GROUT HOLES. IF THE SPACE UNDER A COLUMN BASE PLATE IS LESS THAN 1/4", A PRESSURE INJECTION SYSTEM SHALL BE USED. PRE-GROUTING OF THE BASE PLATES IS NOT PERMITTED

2. ALL STRUCTURAL STEEL DESIGN, DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO LOAD AND RESISTANCE FACTOR DESIGN (LRFD) OR ALLOWABLE STRENGTH DESIGN (ASD) ACCORDING TO THE 2005 AISC SPECIFICATION.

3. ALL WELDING SHALL CONFORM TO THE STANDARDS OF THE THIRTEENTH EDITION OF THE MANUAL STEEL CONSTRUCTION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AND THE AMERICAN WELDING SOCIETY ANSI/AWS D1.1 STRUCTURAL WELDING CODE-STEEL. WELDING OF REINFORCING BARS SHALL COMPLY TO THE AMERICAN WELDING SOCIETY AWS D1.4. SHORT CIRCUIT TRANSFER FOR THE GAS METAL ARC WELDING PROCESS IS NOT PERMITTED.

4. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL BE CLASS E70XX LOW HYDROGEN. [ELECTRODES FOR MOMENT CONNECTIONS SHALL BE CLASS E70I8 WITH A CHARPY TOUGHNESS OF AT LEAST 20 FT-LBS AT —20 DEGREES FAHRENHEIT.]

5. ALL STRUCTURAL STEEL ROLLED SHAPES SHALL CONFORM TO ASTM A992, AND ALL ANGLES, BARS, CHANNELS AND PLATES SHALL CONFORM TO ASTM A36. ALL SQUARE AND RECTANGULAR TUBES (Fy 50 KSI) SHALL CONFORM TO ASTM A500 GRADE C AND ROUND PIPES (Fy 50 KSI) SHALL CONFORM TO ASTM A500 GR C. ALL COLD-FORMED GIRTS AND PURLINS SHALL CONFORM TO ASTM A570M GR. 55.

6. ALL STRUCTURAL STEEL DETAILS AND CONNECTIONS SHALL CONFORM TO STANDARDS OF THE AISC. DETAILING CONNECTIONS THROUGH COLUMN WEBS SHALL BE AVOIDED WHERE POSSIBLE. CONNECTIONS OF BEAM TO BEAM CONNECTIONS SHALL HAVE A BEAM ERECTION SEAT OR A STAGGERED CONNECTION WITH AT LEAST ONE INSTALLED BOLT REMAINING IN PLACE TO SUPPORT THE BEAM WHILE THE SECOND BEAM WEB IS BEING ERECTED.

7. CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE SELECTED FROM THE TABLES IN PART 10 OF THE THIRTEENTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. TABLE IO-1 MAY BE USED FOR ALL-BOLTED DOUBLE ANGLE CONNECTIONS. TABLE IO-2 MAY BE USED FOR ALL-WELDED DOUBLE ANGLE CONNECTIONS. TABLE IO-3 MAY BE USED FOR ALL-WELDED DOUBLE ANGLE CONNECTIONS. BEAM REACTIONS USED SHALL BE ONE-HALF THE TOTAL ALLOWABLE UNIFORM LOAD GIVEN IN TABLE 3-6 THROUGH 3-9 IN PART 3 OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. CONNECTIONS FOR COMPOSITE BEAMS SHALL HAVE THE STANDARD AISC CAPACITY INCREASED BY 35 PERCENT.

8. ALL MISCELLANEOUS WELDS (FIELD OR SHOP) SHALL BE MINIMUM SIZE FILLET ALL AROUND IN ACCORDANCE WITH AISC. IT IS ASSUMED TO BE THE PLATE THICKNESS OF THE THINNEST PIECE JOINED. WELDING OF CONTINUOUS MEMBERS SHALL BE A MINIMUM OF 2 INCHES OF 3/16 INCH FILLET STITCH WELDS AT 12 INCHES O.C., STAGGERED EACH SIDE, UNLESS OTHERWISE NOTED. COLUMN BASE PLATES, CAP PLATES AND STIFFENER PLATES SHALL BE WELDED ALL AROUND.

9. PROVIDE COLUMN CAP PLATES AS FOLLOWS UNLESS NOTED OR DETAILED OTHERWISE:

    A) FOR DECK BEARING — 1/4 INCH THICK FOR ALL HSS SECTIONS AND WIDE FLANGE SECTIONS WHERE BEAMS DO NOT FRAME INTO BOTH SIDES OF THE WEB

    B) FOR JOIST BEARING
        1) K-SERIES JOISTS — 1/2 INCH THICK
        2) LH AND DLH — 3/4 INCH THICK
        3) JOIST GIRDERS — 1 INCH THICK

    C) FOR BEAM BEARING — SEE TYPICAL DETAILS OF 3/4 INCH MINIMUM UNLESS NOTED OTHERWISE

    D) FOR MOMENT CONNECTS — REFER TO TYPICAL MOMENT CONNECTION DETAILS

    E) ALWAYS PROVIDE CAP PLATES FOR SQUARE, RECTANGULAR, AND ROUND HSS COLUMNS

10. WEB STIFFENERS SHALL BE PROVIDED IN WIDE FLANGE SHAPES AS FOLLOWS:

    A) COLUMN WEBS AT FULLY DEVELOPED MOMENT CONNECTIONS — STIFFENERS SHALL BE CONCRETE PENETRATION GROOVE WELDED WITH SAME THICKNESS AND GRADE AS THE BEAM FLANGES. WHERE MOMENT CONNECTIONS OCCUR ON COLUMN FLANGES AND COLUMN WEBS, STIFFENER THICKNESS SHALL BE EQUAL THE VECTOR SUMMATION OF THE RESPECTIVE BEAM FLANGE THICKNESSES.

    B) BEAM WEBS WHERE BEAMS BEAR ON A COLUMN — SAME THICKNESS AND STRENGTH AS COLUMN FLANGES.

    C) BEAM WEBS WHERE COLUMN BEARS ON A BEAM (POST UP OR STUB COLUMN) — SAME THICKNESS AND STRENGTH AS COLUMN FLANGES.

11. PROVIDE ALL NECESSARY HOLES IN MISCELLANEOUS STRUCTURAL STEEL MEMBERS FOR ATTACHMENT OF NON-STRUCTURAL ITEMS (SEE ALSO NOTES FOR WINDOW HEAD ANCHORS), SEE ARCHITECTURAL DRAWINGS FOR REQUIREMENTS.

12. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

13. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS): WHERE NOTED ON PLANS OR BY THE ARCHITECT SHALL CONFORM TO AISC 303 SECTION 10

14. ALL CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL CONFORM TO ASTM A325 EXCEPT WHERE NOTED OTHERWISE. MINIMUM SIZE SHALL BE 3/4 INCH DIAMETER UNLESS NOTED OTHERWISE. BOLTS SHALL BE DIRECT TENSION INDICATING BOLTS CONFORMING TO ASTM F1852 WITH HARDENED WASHERS UNDER THE NUT AND SACRIFICIAL SPLINES. NUTS SHALL CONFORM TO ASTM A563 AND WASHERS SHALL CONFORM TO ASTM F436.

15. SHOP BOLTED CONNECTIONS ARE PERMISSIBLE IF SUFFICIENT BOLT CLEARANCE IS AVAILABLE FOR TIGHTENING OF HIGH STRENGTH BOLTS. CLEARANCES SHALL BE IN ACCORDANCE WITH TABLE 7-16 AND 7-17 OF THE THIRTEENTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. ALL STEEL MEMBERS AND ASSEMBLIES SHALL BE SHOP FABRICATED TO THE GREATEST EXTENT POSSIBLE. TRUSSES SHALL BE FULLY SHOP ASSEMBLED. FIELD SPLICES FOR SHIPPING SHALL ONLY BE AS APPROVED BY THE ENGINEER OF RECORD. THE STEEL FABRICATOR AND THE STEEL ERECTOR SHALL COORDINATE THE SHOP FABRICATION, SHIPPING AND ERECTION OF ALL STRUCTURAL MEMBERS AND ASSEMBLIES.

16. ALL OPEN-WEB STEEL JOISTS AND BRIDGING SHALL CONFORM TO THE STEEL JOIST INSTITUTE SPECIFICATIONS FOR THE JOIST TYPES INDICATED. JOISTS SHALL BE CAMBERED. AMOUNT OF CAMBER SHALL BE IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE SPECIFICATIONS. JOIST SUPPLIER SHALL ADJUST CAMBERS AT JOISTS ADJACENT TO EACH OTHER WITH VARYING LENGTHS AND AT JOISTS ADJACENT TO STEEL BEAM LINES OF SET ELEVATION SO THAT ELEVATIONS PRIOR TO ERECTION OF DECK DO NOT VARY BY MORE THAN 1" FOR ADJACENT MEMBERS. JOISTS ENDS SHALL BE STAGGERED AT WINDOW BEAMS TO ACHIEVE 2 1/2 INCH MINIMUM BEARING. STEEL FABRICATOR SHALL PROVIDE JUMPER PLATE AND STIFFENER PLATE TO MATCH BEAM FLANGE THICKNESS OFF BEAM FLANGE AS REQUIRED AT SKEWED JOIST LOCATIONS TO PROVIDE 2 1/2 INCH MINIMUM BEARING REQUIREMENTS. JOISTS REQUIRING REPAIR OR MODIFICATION DUE TO FABRICATION ERROR OR DAMAGE DURING SHIPPING SHALL BE REPLACED WITH NEW JOISTS.

17. JOIST BRIDGING SHALL BE WELDED TO ST

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METAL BUILDING NOTES

1. THE METAL BUILDING FRAME AND COMPONENTS SHALL BE DESIGNED BY A METAL BUILDING MANUFACTURER EXPERIENCED IN METAL BUILDING SYSTEM DESIGN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE "RECOMMENDED DESIGN PRACTICE MANUAL" OF THE METAL BUILDING MANUFACTURER'S ASSOCIATION, THE AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STRUCTURAL MEMBERS", AND THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. METAL BUILDING FRAMES AND COMPONENTS SHALL BE DESIGNED TO COMPLY WITH THE CURRENT BUILDING CODE AND ANY OTHER GOVERNING CODES.
3. AT A MINIMUM OF THREE WEEKS BEFORE SCHEDULED FOUNDATION CONSTRUCTION, THE METAL BUILDING MANUFACTURER SHALL SUBMIT ANCHOR BOLT LAYOUT AND METAL BUILDING FOUNDATION REACTIONS FOR VERIFICATION OF FOUNDATION DESIGN. THE METAL BUILDING MANUFACTURER SHALL CAREFULLY EXAMINE THE FOUNDATION DRAWINGS TO VERIFY THAT SUFFICIENT CONCRETE EXISTS IN ALL CASES TO EMBED HIS ANCHOR BOLTS.
4. THE METAL BUILDING MANUFACTURER SHALL SUBMIT FOR REVIEW AND PERMIT APPLICATION, THE STRUCTURAL DESIGN CALCULATIONS AND DRAWINGS STAMPED BY A LICENSED ENGINEER IN THE DISCIPLINE OF STRUCTURAL ENGINEERING, LICENSED IN THE STATE OF TEXAS. THIS ENGINEER SHALL BE THE ENGINEER OF RECORD FOR THE METAL BUILDING SYSTEM
5. ITEMS TO BE DESIGNED, DETAILED AND SUPPLIED BY THE METAL BUILDING MANUFACTURER INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING ITEMS:
   A. WIND FRAMES - TO BE RIGID FRAMES DESIGNED WITH PINNED COLUMN BASES
   B. ROOF PURLINS AND WALL GIRTS
   C. ROOF AND WALL PANELS
   D. OTHER ESSENTIAL STRUCTURAL ITEMS SUCH AS ROOF X-BRACING, FLANGE BRACES, ANCHOR BOLTS, ALL CONNECTIONS, ETC.
   E. HORIZONTAL WIND MEMBERS TO SUPPORT THE TOP OF TILT WALL PANELS OR MASONRY WALLS AS DETAILED
   F. ROOF OPENING FRAMING FOR MECHANICAL UNITS AND ROOF PENETRATIONS
   G. THE METAL BUILDING MANUFACTURER SHALL REVIEW THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND DESIGN HIS STRUCTURE TO SUPPORT ALL HANGING LOADS FROM THE STRUCTURE INCLUDING BUT NOT LIMITED TO, MECHANICAL UNITS, FOLDING PARTITIONS AND BASKETBALL GOALS.
6. ANY SIZE SHOWN ON THE DRAWINGS IS A MINIMUM SIZE. THE METAL BUILDING SUPPLIER MAY INCREASE SIZE, IF REQUIRED, FOR THE METAL BUILDING DESIGN.
7. X-BRACING SHALL BE ROD BRACING WITH TURNBUCKLES ----- NOT CABLE.
8. SEE PLAN FOR REACTIONS IN KIPS FOR OTHER ITEMS CONNECTING TO THE METAL BUILDING COMPONENTS FOR WHICH THE METAL BUILDING STRUCTURE IS TO BE DESIGNED TO SUPPORT. THE METAL BUILDING MANUFACTURER IS TO MAKE PROVISIONS FOR THIS CONNECTION AND COORDINATE AS REQUIRED.
9. THE METAL BUILDING MANUFACTURER IS TO PROVIDE THE DESIGN AND DETAILING FOR OTHER MATERIALS WHICH CONNECT THE METAL BUILDING COMPONENTS AND COORDINATE AS REQUIRED.
10. THE MAXIMUM ALLOWED HORIZONTAL MOVEMENT PARALLEL OR PERPENDICULAR TO THE RIGID FRAME AT THE FRAME EAVE UNDER MAXIMUM WIND LOADS SHALL BE THE EAVE HEIGHT DIVIDED BY 180 FOR NON-MASONRY CLAD BUILDINGS.
11. THE MAXIMUM ALLOWED HORIZONTAL MOVEMENT PARALLEL OR PERPENDICULAR TO THE RIGID FRAME AT THE FRAME EAVE UNDER MAXIMUM WIND LOADS SHALL BE THE EAVE HEIGHT DIVIDED BY 400 AT MASONRY CLAD BUILDINGS.
12. THE MAXIMUM ALLOWED VERTICAL MOVEMENT AT THE CENTER OF THE RIGID FRAME UNDER FULL LIVE LOAD SHALL BE THE SPAN OF THE FRAME DIVIDED BY 180. IF THE ROOF SUPPORTS PLASTER OR SHEETROCK CEILINGS, LIMIT THE LIVE LOAD DEFLECTION TO THE SPAN OF THE FRAME DIVIDED BY 360.
13. THE BUILDING SHALL BE DESIGNED FOR A MINIMUM COLLATERAL LOAD OF 3 PSF. THE BUILDING SHALL BE DESIGNED FOR A MINIMUM 10 PSF COLLATERAL LOAD FOR CEILINGS AND MECHANICAL AND ELECTRICAL SYSTEMS WHEN THE BUILDING HAS CONDITIONED SPACE WITH CEILINGS AND LIGHTING.
14. THE METAL BUILDING ENGINEER IS TO PROVIDE TO THE OWNER, A STATE BOARD OF INSURANCE FORM WPI-2.
15. THE METAL BUILDING ENGINEER IS TO PROVIDE SPECIAL INSPECTION WORK AND THE FINAL LETTER OF COMPLIANCE FOR THEIR PORTION OF THE WORK IN COMPLIANCE WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE SECTION 1705.2.
16. THE CONTRACT OR PURCHASE ORDER BETWEEN THE METAL BUILDING SUPPLIER AND THE CONTRACTOR OR OWNER SHALL BE REVIEWED BY OUR OFFICE PRIOR TO SIGNING, TO ASSURE THAT ALL ITEMS REQUIRED IN THE NOTES AND ON THE DRAWINGS, ARE PROVIDED BY THE METAL BUILDING MANUFACTURER. IF OUR OFFICE DOES NOT REVIEW THE PURCHASE ORDER PRIOR TO SIGNING, WE WILL NOT BE RESPONSIBLE FOR ITEMS REQUIRED IN THE NOTES AND ON THE DRAWINGS THAT ARE EXCLUDED BY THE METAL BUILDING SUPPLIER.

STRUCTURAL TESTING AND INSPECTIONS

EARTHWORK TESTING

1. DURING EARTHWORK OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. SERVICES PROVIDED SHALL INCLUDE:
   A) OBSERVE STRIPPING OPERATIONS AND EVALUATE THE REQUIRED STRIPPING DEPTH DURING THESE OPERATIONS.
   B) OBSERVE PROOFROLLING OPERATIONS AFTER SITE STRIPPING. DETERMINE IF ANY SOFT SPOTS NEED TO BE UNDERCUT TO FIRM SOILS, REPLACED WITH SELECT FILL AND RECOMPACTED.
   C) VERIFY THAT THE SUBGRADE SHALL THEN BE SCARIFIED AND MOISTURE CONDITIONED TO A SIX (6) INCH DEPTH AND THEN RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON THE SUBGRADE OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.
   D) STRUCTURAL SELECT FILL PAD MATERIAL SHALL BE TESTED FOR ACCEPTABILITY AND A MOISTURE DENSITY CURVE SHALL BE ESTABLISHED. SELECT FILL MATERIAL SHALL BE AN INORGANIC SANDY CLAY WITH LIQUID LIMIT BETWEEN 26 AND 40 AND PLASTICITY INDEX BETWEEN 10 AND 20.
   E) SELECT FILL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +2 PERCENT OF THE OPTIMUM MOISTURE CONTENT FOR SELECT FILL.
   F) SELECT FILL MATERIAL SHALL BE TESTED DURING PLACEMENT OF EACH LIFT FOR THE ATTERBERG LIMITS IN ACCORDANCE WITH ASTM D4318-98 METHOD B "STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS" TO VERIFY THAT THE SELECT FILL MATERIAL IS IN ACCORDANCE WITH THE ORIGINALLY APPROVED SELECT FILL MATERIAL. PROVIDE A MINIMUM OF ONE (1) TEST PER LIFT OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER WITH A MAXIMUM OF TEN (10) PER LIFT.
   G) OBSERVE THE EXCAVATION DAILY AND ENSURE THAT THE CONTRACTOR MAINTAINS A CLEAN EXCAVATION THAT IS FREE OF WATER 100% OF THE TIME. CONTRACTOR SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE WATER AT ALL TIMES.
   H) OBSERVE GRADING OPERATIONS TO ENSURE THAT PROPER DRAINAGE AWAY FROM THE BUILDING PAD IS PROVIDED.

DRILLED FOOTINGS TESTING

1. DURING DRILLED FOOTING OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. SERVICES PROVIDED SHALL INCLUDE:
   A) OBSERVING THE BOTTOM OF SHAFT FOR CLEANLINESS.
   B) CHECKING SHAFT FOR CONFORMANCE TO REQUIRED TOLERANCES. FOOTINGS SHALL BE WITHIN 3" OF THEIR REQUIRED LOCATIONS AND SHAFTS SHALL NOT BE OUT OF PLUMB BY MORE THAN 2 PERCENT OF THE SHAFT LENGTH.
   C) CHECKING SHAFT BOTTOM FOR PROPER BEARING MATERIAL.
   D) NOTING DEPTH AND DIAMETER OF ALL FOOTINGS.
   E) VERIFY QUANTITY, SIZE AND LOCATION OF REINFORCEMENT.
   F) CHECK FOR CAVING OF SHAFT OR BELL WALLS.
   G) CHECKING THAT THE BELL IS CONCENTRIC WITH THE SHAFT.
2. ENSURE THAT THE SPOILS FROM THE DRILLED FOOTING EXCAVATIONS ARE REMOVED FROM THE BUILDING PAD AND THAT THE PAD IS MOISTURE CONDITIONED AND RECOMPACTED AS SPECIFIED.

CONCRETE TESTING

1. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR REVIEW INDICATING CONFORMANCE WITH ACI 318, LATEST EDITION, CHAPTER 5, SECTION 5.3.
2. SLUMP TESTS, CONFORMING TO ASTM C143, SHALL BE TAKEN AT THE POINT OF DISCHARGE AT THE SAME RATE AS NOTED BELOW IN NOTE NUMBER 5.
3. AIR CONTENT TESTS CONFORMING TO ASTM C173, VOLUMETRIC METHOD FOR LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE; ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE; SHALL BE TAKEN FOR EACH DAY'S POUR OF EACH TYPE OF AIR-ENTRAINED CONCRETE.
4. CONCRETE TEMPERATURE SHALL BE TESTED HOURLY WHEN AIR TEMPERATURE IS 40 DEG F (4 DEG C) AND BELOW, WHEN 80 DEG F (27 DEG C) AND ABOVE, AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS IS MADE.
5. ONE SET OF FOUR COMPRESSION TEST SPECIMENS CONFORMING TO ASTM C31 SHALL BE MOLDED AND STORED FOR LABORATORY-CURED SPECIMENS. COMPRESSIVE STRENGTH TESTS SHALL CONFORM TO ASTM C39 AND SHALL CONSIST OF ONE SET FOR EACH DAY'S POUR EXCEEDING 5 CU. YDS, PLUS ADDITIONAL SETS FOR EACH 50 CU. YDS. MORE THAN THE FIRST 25 CU. YDS OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY. ONE SPECIMEN SHALL BE TESTED AT 7 DAYS, TWO SPECIMENS SHALL BE TESTED AT 28 DAYS, AND ONE SPECIMEN SHALL BE RETAINED FOR LATER TESTING AS REQUIRED.
6. VERIFY CONCRETE IS BEING CONSOLIDATED IN ACCORDANCE WITH THE RECOMMENDATIONS OF ACI 318 AND ACI 308R, LATEST EDITION.
7. VERIFY THAT POST INSTALLED ANCHORS ARE AS SPECIFIED AND THAT THE ANCHORS ARE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

REINFORCING STEEL INSTALLATION

1. DURING CAST-IN-PLACE CONCRETE STRUCTURAL MEMBER REINFORCING PLACEMENT OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. INSPECT REINFORCING UTILIZING ACI 311.4R "GUIDE FOR CONCRETE INSPECTION" AS A GUIDE. SERVICES PROVIDED SHALL INCLUDE:
   A) VERIFY TYPE AND GRADE OF ALL REINFORCING STEEL.
   B) VERIFY REBAR IS FREE OF OIL, DIRT, EXCESSIVE RUST AND FROM DAMAGE IN SHIPMENT TO SITE.
   C) VERIFY REINFORCING IS ADEQUATELY TIED, CHAIRED AND SUPPORTED TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.
   D) VERIFY MINIMUM AND MAXIMUM CLEAR DISTANCES BETWEEN BARS AND MINIMUM STRUCTURAL DISTANCE TO OUTSIDE OF CONCRETE.
   E) VERIFY QUANTITY, SIZE AND LOCATION OF REINFORCEMENT.
   F) VERIFY MINIMUM CONCRETE COVER IS MAINTAINED BETWEEN REBAR AND SURFACE OF CONCRETE.
   G) VERIFY SIZE AND PLACEMENT OF REBAR. VERIFY LAP LENGTHS, LOCATIONS AND STAGGERS AND VERIFY BENDS FOR MINIMUM DIAMETER, SLOPE AND LENGTH. VERIFY HOOKED BAR LENGTHS AND LOCATIONS.

POST INSTALLED ANCHORS — FIELD QUALITY CONTROL

1. THE INTERNATIONAL BUILDING CODE (IBC 2018) REQUIRES SPECIAL INSPECTION OF ALL POST-INSTALLED ANCHORS. ACI 318-19 SECTIONS 26.13.1.5 AND 26.13.1.6 REQUIRE THAT ALL INSPECTIONS OF MECHANICAL AND ADHESIVE ANCHORS, RESPECTIVELY, ARE PERFORMED BY A CERTIFIED FIELD INSPECTOR SPECIFICALLY APPROVED FOR THAT PURPOSE BY THE SER AND THE BUILDING OFFICIAL. CERTIFICATION IS ESTABLISHED THROUGH AN INDEPENDENT ASSESSMENT SUCH AS THE ACI POST-INSTALLED CONCRETE ANCHOR INSTALLATION INSPECTOR PROGRAM OR SIMILAR PROGRAM WITH EQUIVALENT REQUIREMENTS. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY A CERTIFIED INSPECTOR.
2. POST-INSTALLED EXPANSION AND ADHESIVE ANCHORS SHALL BE PROOF LOADED AS REQUIRED IN THE CONTRACT DOCUMENTS. A PERCENTAGE OF EACH TYPE AND SIZE OF EACH TYPE OF SIZE OF ANCHOR ASSEMBLY SHALL BE PROOF LOADED IN TENSION BY AN INDEPENDENT TESTING LABORATORY UNLESS OTHERWISE SHOWN ON THE CONTRACT DOCUMENTS.
   A) PROOF LOADING SHALL BE CONDUCTED AS CONFINED TENSION TESTING FOR ADHESIVE ANCHORS USING A CENTER-HOLE CYLINDER.
   B) THE INDEPENDENT TESTING LABORATORY SHALL SUBMIT AN ANCHORAGE TESTING PLAN TO THE SER TO ENSURE THE TESTING REQUIREMENTS ARE FULFILLED.
   C) PROOF LOAD RANDOM SAMPLE RATES AS FOLLOWS:

TYPE OF ANCHOR	SAMPLE RATE (PERCENT)
REINFORCING FOR SLAB ON GROUND	5
REINFORCING — GRADE BEAMS	30
REINFORCING — CONCRETE BEAMS	50
REINFORCING — CONCRETE COLUMNS	50
ANCHOR BOLTS NEW OR REPLACEMENT — SHEAR ONLY	25
ANCHOR BOLTS NEW OR REPLACEMENT — MOMENT FRAMES	50
ANCHORS FOR SHEAR TABS/PLATES OR ANGLES	30
ANCHORS IN TENSION — STRUCTURAL MEMBERS	50
ANCHORS IN TENSION — NON-STRUCTURAL MEMBERS	25
ANCHORS SUPPORTING LIFE SAFETY DEVICES	100

3. POST-INSTALLED EXPANSION AND ADHESIVE ANCHORS SHALL BE PROOF LOADED TO LOAD LEVELS AS SHOWN ON THE CONTRACT DOCUMENTS, OR AS INDICATED ON THE STRUCTURAL DRAWINGS FOR THE SPECIFIC ANCHOR TYPES ABOVE. PROOF LOADING OF ADHESIVE ANCHORS SHALL BE PERFORMED AFTER A MINIMUM CURING PERIOD SPECIFIED BY THE MANUFACTURER.
4. ANCHORS SHALL HAVE NO VISIBLE INDICATIONS OF DISPLACEMENT OR DAMAGE DURING OR AFTER PROOF LOAD APPLICATION. CONCRETE CRACKING IN THE VICINITY OF THE ANCHOR AFTER LOADING SHALL BE CONSIDERED A FAILURE.
5. IF AN ANCHOR FAILS, MODIFY ALL INSTALLATIONS OF THE SAME TYPE AND RETEST UNTIL SATISFACTORY RESULTS ARE ACHIEVED
6. IF MORE THAN 5 PERCENT OF THE TESTED ANCHORS FAIL TO ACHIEVE THE SPECIFIED PROOF LOAD WITHIN THE LIMITS DEFINED ON THESE DRAWINGS, THEN 100 PERCENT OF THE ANCHORS OF THE SAME DIAMETER AND TYPE AS THE FAILED ANCHOR SHALL BE PROOF TESTED, UNLESS OTHERWISE DIRECTED BY THE SER.
7. PROVIDE WRITTEN FASTENER LOAD TEST REPORTS AND INTERMITTENT SPECIAL INSPECTION REPORTS OF POST INSTALLED FASTENERS AS THE WORK PROGRESSES.

STRUCTURAL STEEL TESTING

1. CERTIFY WELDERS FOR THE WELD TYPES IN THE PROJECT AND CONDUCT INSPECTIONS AND TESTS AS REQUIRED, AS A MINIMUM, WELDERS SHALL BE AISC CERTIFIED. RECORD TYPES AND LOCATIONS OF DEFECTS FOUND IN WORK. RECORD WORK REQUIRED AND PERFORMED TO CORRECT DEFICIENCIES.
2. VISUALLY INSPECT 100% OF ALL FILLET WELDS.
3. VISUALLY INSPECT 100% OF ALL FULL PENETRATION WELDS, TEST 20% OF ALL FULL PENETRATION WELDS BY ONE OF THE FOLLOWING METHODS: LIQUID PENETRANT INSPECTION (ASTM E165), MAGNETIC PARTICLE INSPECTION (ASTM E709; PERFORMED ON THE ROOT PASS AND ON THE FINISHED WELD; CRACKS AND ZONES OF INCOMPLETE FUSION OR PENETRATION IS NOT ACCEPTABLE), RADIOGRAPHIC INSPECTION (ASTM E94 AND ASTM E1032; MINIMUM QUALITY LEVEL OF "2-2T"), OR ULTRASONIC INSPECTION (ASTM E164). IF FAILURE RATE IS 20% OR GREATER, TEST 100% OF WELDS AT CONTRACTOR'S EXPENSE UNTIL FAILURE RATE FALLS BELOW 20%.
4. ALL WELDS THAT FAIL SHALL BE REWELDED AND RETESTED UNTIL THEY PASS THE TEST. TEST TWO ADDITIONAL WELDS AT THE CONTRACTOR'S EXPENSE FOR EVERY WELD FAILURE.
5. VISUALLY INSPECT WELDS ON 100% OF ALL STUDS AND TEST 10% BY THE METHOD DESCRIBED BELOW IN COMPLIANCE WITH AWS D1.1. HEADED STUD SHALL BE TESTED BY ALTERNATELY BENDING 30 DEG. IN OPPOSITE DIRECTIONS FROM ITS ORIGINAL AXIS BY EITHER STRIKING THE STUDS WITH A HAMMER ON THE UNWELDED END OR PLACING A PIPE OR OTHER SUITABLE HOLLOW DEVICE OVER THE STUD AND MANUALLY OR MECHANICALLY BENDING THE STUD. IF FAILURE RATE IS 10% OR GREATER, TEST 100% OF STUDS AT CONTRACTOR'S EXPENSE UNTIL FAILURE RATE FALLS BELOW 10%. IF A VISUAL INSPECTION REVEALS ANY STUD THAT DOES NOT SHOW A FULL 360 DEG. FLASH (AS DEFINED IN AWS D1.1) OR ANY STUD THAT HAS BEEN REPAIRED BY WELDING, SUCH STUD SHALL BE BENT TO AN ANGLE OF APPROXIMATELY 15 DEGREES FROM ITS ORIGINAL AXIS. THE DIRECTION OF BENDING FOR STUDS WITH LESS THAN 360 DEGREES FLASH SHALL BE OPPOSITE TO THE MISSING PORTION OF FLASH.
6. BOLTS SHALL BE VISUALLY INSPECTED WHEN TWIST-OFF SPLINES ARE USED, OTHERWISE BOLTS SHALL BE SNUG TIGHT.
7. ALL FULL PENETRATION WELDS AT MOMENT CONNECTIONS REQUIRING TESTING SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY USING NON-DESTRUCTIVE TESTING METHODS. FOR SHOP WELDS, CERTIFICATES SHALL BE SUBMITTED PRIOR TO SHIPPING TO THE JOB SITE. FOR FIELD WELDS, CERTIFICATION SHALL BE SUBMITTED PRIOR FLOOR DECK INSTALLATION AND CONCRETE PLACEMENT AND PRIOR TO COVERING CONNECTIONS WITH FIREPROOFING OR ARCHITECTURAL FINISHES.

MASONRY TESTING

1. MASONRY TESTING SHALL CONSIST OF A QUALIFIED TESTING LABORATORY PROVIDING THE FOLLOWING SERVICES:
   A) VERIFY QUANTITY, SIZE AND SPACING OF REQUIRED REINFORCING SHOWN ON THE DRAWINGS.
   B) OBSERVE THE INSTALLATION OF MASONRY UNITS.
   C) INSPECTION OF GROUT SPACE, IMMEDIATELY PRIOR TO CLOSING OF CLEANOUTS AND PRIOR TO ALL GROUTING OPERATIONS. VERIFY THAT THE SPECIFIED CELLS HAVE BEEN FULLY GROUTED.
   D) MONITOR THE PROPORTIONING, MIXING AND CONSISTENCY OF MORTAR AND GROUT. PROVIDE 28 DAY COMPRESSIVE STRENGTH TESTS ON EACH GROUT MIX IN ACCORDANCE WITH ASTM C1019. COMPRESSION TEST MASONRY PRISMS FOR EACH TYPE OF WALL CONSTRUCTION IN ACCORDANCE WITH ASTM C1314. CONTRACTOR SHALL PREPARE ONE SET OF PRISMS FOR TESTING AT 28 DAYS. TESTS ARE TO BE CONDUCTED FOR EACH 2000 SQUARE FEET OF WALL INSTALLED, BUT NOT LESS THAN TWO TESTS.

SPECIAL INSPECTIONS AND STRUCTURAL TESTING

SPECIAL INSPECTION WORK AND THE FINAL LETTER OF COMPLIANCE HAVE NOT BEEN INCLUDED IN THE STRUCTURAL ENGINEER OF RECORD'S SCOPE OF SERVICES. THE OWNER IS RESPONSIBLE FOR OBTAINING THE SERVICES OF THE SPECIAL INSPECTOR AND THE TESTING LABORATORY. SPECIAL INSPECTIONS CAN BE PROVIDED BY AN INDEPENDENT SPECIAL INSPECTOR APPROVED BY THE BUILDING AUTHORITY. THE SPECIAL INSPECTION WORK DOES NOT INCLUDE THE TESTING LABORATORY SERVICES AS CALLED FOR ON THE DRAWINGS. ARRANGEMENTS FOR SPECIAL INSPECTIONS SHOULD BE MADE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE TESTING LABORATORY AND SPECIAL INSPECTOR IN A TIMELY MANNER PRIOR TO PROCEEDING WITH CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK REQUIRING INSPECTIONS WITHOUT THE TESTING LABORATORY'S OR SPECIAL INSPECTOR'S PRESENCE.

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS

THE STRUCTURAL SPECIAL INSPECTOR SHALL KEEP RECORDS OF ALL STRUCTURAL INSPECTIONS AND SHALL FURNISH INSPECTION REPORTS TO THE OWNER AND THE STRUCTURAL REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (SRDP). DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE SRDP. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES.

A FINAL REPORT OF SPECIAL INSPECTION DOCUMENTING COMPLETION OF ALL SPECIAL INSPECTIONS, TESTING AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE OWNER AND THE SRDP PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND USE.

STRUCTURAL SCHEDULE OF SPECIAL INSPECTIONS

QUALIFICATIONS OF INSPECTORS AND TESTING TECHNICIANS

THE QUALIFICATIONS OF ALL PERSONNEL PERFORMING SPECIAL INSPECTION AND TESTING ACTIVITIES ARE SUBJECT TO THE APPROVAL OF THE OWNER. THE CREDENTIALS OF ALL INSPECTORS AND TESTING TECHNICIANS SHALL BE PROVIDED TO THE SPECIAL INSPECTOR FOR THEIR RECORDS.

KEY FOR MINIMUM QUALIFICATION OF INSPECTION AGENTS

WHEN THE REGISTERED DESIGN PROFESSION IN RESPONSIBLE CHARGE OR SPECIAL INSPECTOR OF RECORD DEEMS APPROPRIATE THAT THE INDIVIDUAL PERFORMING THE STIPULATED TEST OR INSPECTION HAVE A SPECIFIC CERTIFICATION, LICENSE OR EXPERIENCE AS INDICATED BELOW. SUCH REQUIREMENT SHALL BE LISTED BELOW AND SHALL BE CLEARLY IDENTIFIED WITHIN THE SCHEDULE UNDER THE AGENT QUALIFICATION DESIGNATION.

PE/SE STRUCTURAL ENGINEER
A LICENSED SE OR PE SPECIALIZING IN THE DESIGN OF BUILDING STRUCTURES

PE/GE GEOTECHNCIAL ENGINEER
A LICENSED PE SPECIALIZING IN SOIL MECHANICS AND FOUNDATIONS

EIT OR ENGINEER IN TRAINING
A GRADUATE ENGINEER WHO HAS PASSED THE FUNDAMENTALS OF ENGINEERING EXAM

EXPERIENCED TESTING TECHNICIAN

ETT OR EXPERIENCED TESTING TECHNICIAN
AN EXPERIENCED TESTING TECHNICIAN WITH A MINIMUM OF 5 YEARS EXPERIENCE WITH THE STIPULATED TEST OR INSPECTION

AMERICAN CONCRETE INSTITUTE (ACI) CERTIFICATION

ACI-CFTT	CONCRETE FIELD-TESTING TECHNICIAN - GRADE I
ACI-CCI	CONCRETE CONSTRUCTION INSPECTOR
ACI-LTT	LABORATORY TESTING TECHNICIAN - GRADE II&2
ACI-STT	STRENGTH TESTING TECHNICIAN

AMERICAN WELDING SOCIETY (AWS) CERTIFICATION

AWS-CWI	CERTIFIED WELDING INSPECTOR
AWS/AISC-SSI	CERTIFIED STRUCTURAL STEEL INSPECTOR

CHAPTER 17 OF THE 2024 INTERNATIONAL BUILDING CODE IS INTERPRETED TO REQUIRE SPECIAL INSPECTION FOR THE FOLLOWING ITEMS IN THE FOLLOWING TABLES:

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION/INSPECTION	SOIL/FOUNDATION INSPECTION		
IBC SECTION 1705.6, TABLE 1705.6	EXTENT CONTINUOUS, PERIODIC	COMMENTS	AGENT PE/GE, ETT OR ETT
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	PERIODIC		ETT
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	PERIODIC		ETT
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	PERIODIC		ETT
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	CONTINUOUS		ETT
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	PERIODIC		ETT

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION/INSPECTION	CAST-IN-PLACE DEEP FOUNDATIONS INSPECTION		
IBC SECTION 1705.8, TABLE 1705.8	EXTENT CONTINUOS, PERIODIC	COMMENTS	AGENT PE/GE, ETT OR ETT
1. INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	CONTINUOUS	IBC 1705.8	ETT
2. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), HEIGHTS, EMBEDMENTS INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES	CONTINUOUS	IBC 1705.8	ETT
3. FOR CONCRETE ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3			ETT

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION/INSPECTION	CONCRETE INSPECTION		
IBC SECTION 1705.3, TABLE 1705.3	EXTENT CONTINUOUS, PERIODIC	COMMENTS	AGENT PE/GE, ETT OR ETT
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	PERIODIC	ACI 318: Ch. 20, 26.6, 26.13, 26.6.1-26.6.3 IBC 1908.4	ETT
2. REINFORCING BAR WELDING:			AWS-CWI
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	PERIODIC	AWS D1.4 ACI 318: 26.6.4	
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	PERIODIC		
C. INSPECT ALL OTHER WELDS	CONTINUOUS		
3. INSPECT ANCHORS CAST IN CONCRETE	PERIODIC	ACI 318: 17.8.2	ETT
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:			
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATION TO RESIST SUSTAINED TENSION LOADS	CONTINUOUS	ACI 318: 17.8.2.4	ETT
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A	PERIODIC	ACI 318: 17.8.2	
5. VERIFY USE OF REQUIRED MIX DESIGN	PERIODIC	ACI 318: Ch. 19, 26.4.3, 26.4.4 IBC 1904.1, 1904.2, 1908.2, 1908.3	ETT
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	CONTINUOUS	ASTM C 172 ASTM C 31 ACI 318: 26.4, 26.12 IBC 1908.2	ACI-CFTT OR ACI-STT
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	CONTINUOUS	ACI 318: 26.5 IBC 1908.6, 1908.7, 1908.8	ETT
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUE	PERIODIC	ACI 318: 26.5.3-26.5.5 IBC 1908.9	ETT
9. INSPECT PRESTRESSED CONCRETE FOR:			
A. APPLICATION OF PRESTRESSING FORCES	CONTINUOUS	ACI 318: 26.10	ETT
B. GROUTING OF BONDED PRESTRESSING TENDONS	CONTINUOUS		
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	PERIODIC	ACI 318: Ch. 26.8	ETT
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	PERIODIC	ACI 318: 26.11.2	ETT
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	PERIODIC	ACI 318: 26.11.1.2(b)	ETT

SCHEDULE OF SPECIAL INSPECTIONS

| VERIFICATION/INSPECTION | MAS

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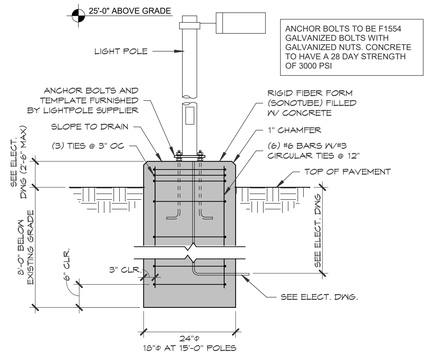
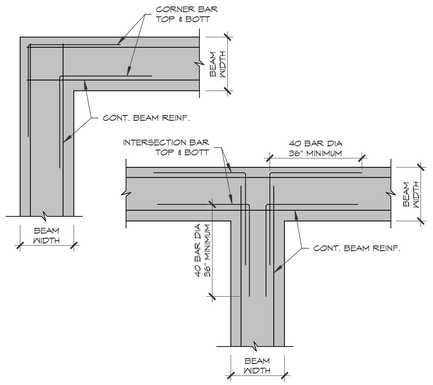
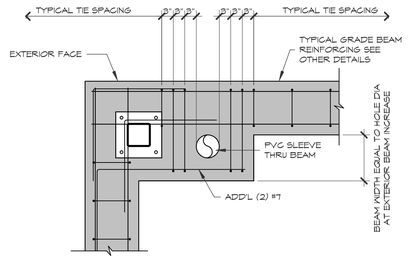


20 LIGHTPOLE FOUNDATION DETAIL
SCALE: 3/4" = 1'-0"

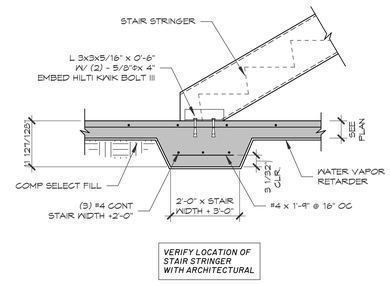


12 TYPICAL CORNER BAR DETAIL
SCALE: 3/4" = 1'-0"



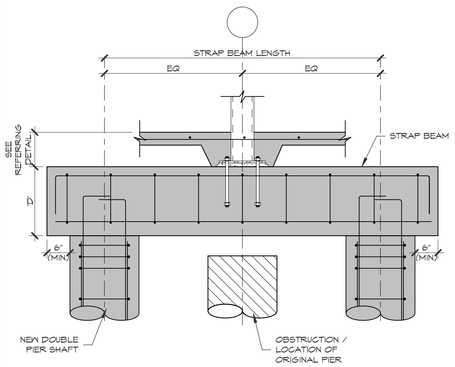
PLAN VIEW
TYPICAL VERTICAL HOLE THROUGH GRADE BEAM LARGER THAN 4" DIA.

8 GRADE BEAM PENETRATION DETAIL
SCALE: 3/4" = 1'-0"



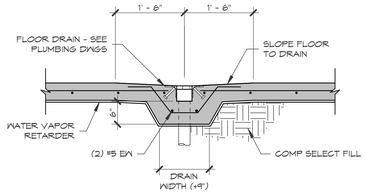
VERIFY LOCATION OF STAIR STRINGER WITH ARCHITECTURAL

SHOVEL BEAM
AT STAIR STRINGER DETAIL
4 SCALE: 3/4" = 1'-0"



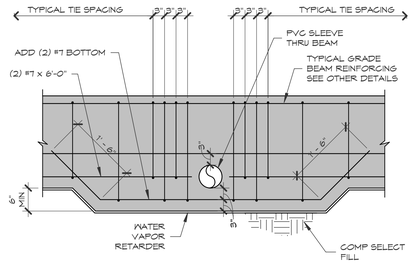
STRAP BEAM SCHEDULE				
ORIG SINGLE SHAFT DIAM	DBL PIER SHAFT SIZE	STRAP BEAM LENGTH (ℓ)	STRAP BEAM (WxD)	STRAP BEAM REINFORCING
24", 36"	30"	5'-0"	30"x24"	(5) #7 T&B #4 @ 9" OC
42", 48"	36"	6'-0"	30"x24"	(5) #7 T&B #4 @ 9" OC
54", 60"	48"	8'-0"	30"x24"	(6) #7 T&B #4 @ 9" OC
66", 72"	54"	9'-0"	30"x24"	(6) #7 T&B #4 @ 9" OC
72", 80"	60"	10'-0"	30"x24"	(6) #7 T&B #4 @ 9" OC

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



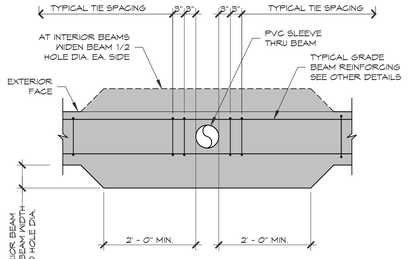
VERIFY LOCATION WITH PLUMBING DRAWINGS

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



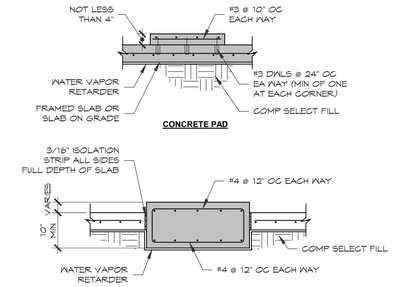
ELEVATION VIEW
TYPICAL HORIZONTAL HOLE THROUGH GRADE BEAM LARGER THAN 4" DIA.

GRADE BEAM PENETRATION
(MAIN REINF INTERRUPTED)
11 SCALE: 3/4" = 1'-0"



PLAN VIEW
TYPICAL VERTICAL HOLE THROUGH GRADE BEAM LARGER THAN 4" DIA.

7 GRADE BEAM PENETRATION DETAIL
SCALE: 3/4" = 1'-0"

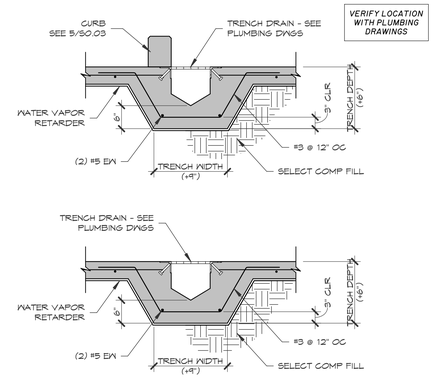


NOTES:

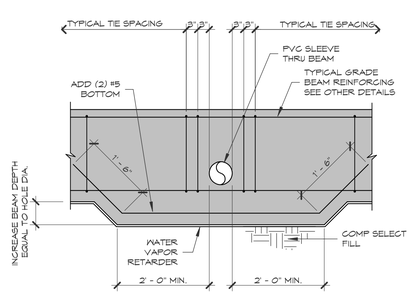
VERIFY ALL PAD AND BASE LOCATIONS, DIMENSIONS, AND ADEQUACY WITH THE MECHANICAL ENGINEER AND THE INDIVIDUAL EQUIPMENT REQUIREMENTS.

MECHANICAL ENGINEER TO SPECIFY ISOLATION DATA.

3 PAD AND BASE DETAIL
SCALE: 3/4" = 1'-0"

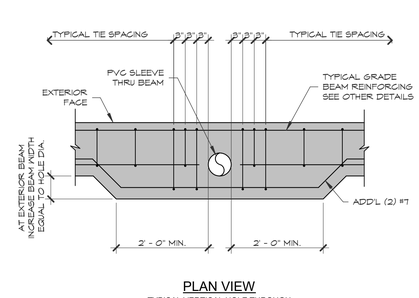


14 TRENCH DRAIN DETAIL
SCALE: 3/4" = 1'-0"



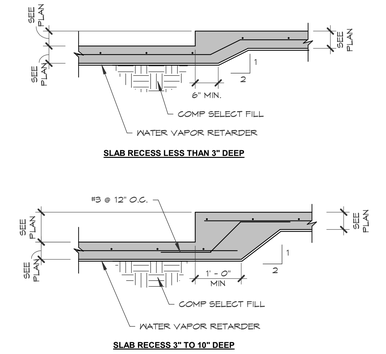
ELEVATION VIEW
TYPICAL HORIZONTAL HOLE THROUGH GRADE BEAM LARGER THAN 4" DIA.

10 GRADE BEAM PENETRATION DETAIL
SCALE: 3/4" = 1'-0"

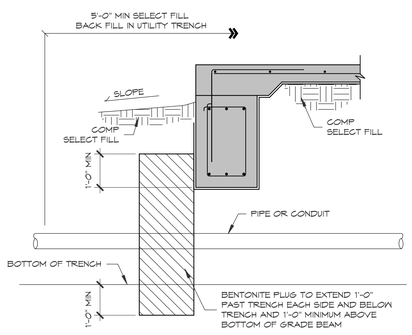


PLAN VIEW
TYPICAL VERTICAL HOLE THROUGH GRADE BEAM LARGER THAN 4" DIA.

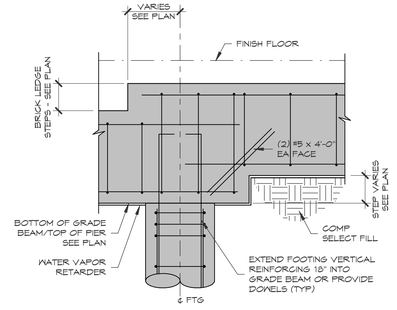
6 GRADE BEAM PENETRATION DETAIL
SCALE: 3/4" = 1'-0"



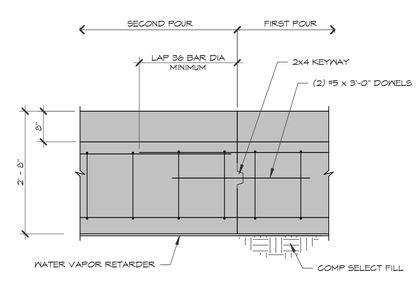
2 SLAB RECESS
SCALE: 3/4" = 1'-0"



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

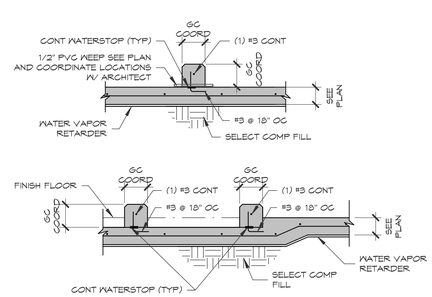


13 TYPICAL STEP IN GRADE BEAM
SCALE: 3/4" = 1'-0"

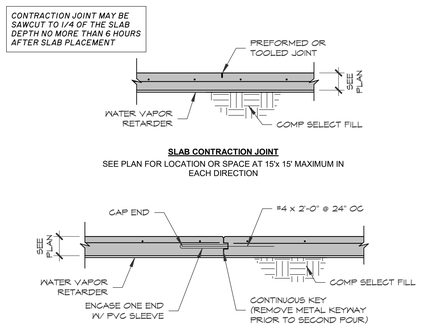


ELEVATION VIEW
LOCATE JOINTS IN MIDDLE THIRD OF BEAM SPAN BETWEEN SUPPORTS

9 GRADE BEAM CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"



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



NOTE: AT CONTRACTOR'S OPTION, CONSTRUCTION JOINT MAY BE USED IN LIEU OF CONTRACTION JOINT.

1 SLAB JOINT DETAIL
SCALE: 3/4" = 1'-0"

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER

SEPTEMBER 18, 2025

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6031 North Course Drive Suite 375
Houston, Texas 77072
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TYPICAL FOUNDATION DETAILS

PACKAGE VOLUME

Job No. 1971-05-01
Sheet No. S&S SET
Drawn By: JG
Date: 09/18/25
S0.03

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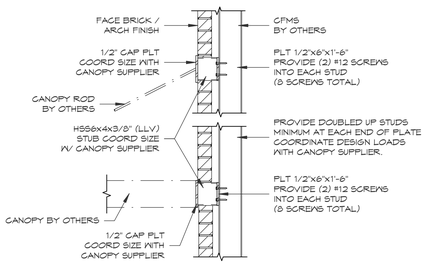
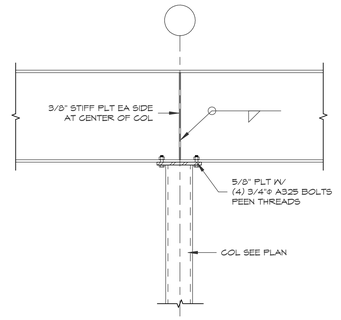
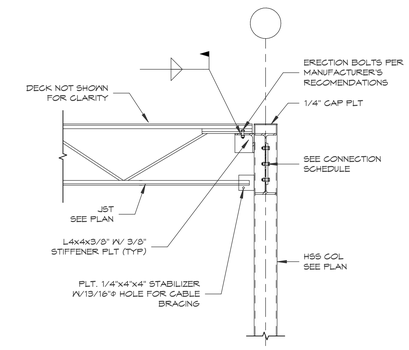


12 CANOPY CONNECTION DETAIL
SCALE: 3/4" = 1'-0"

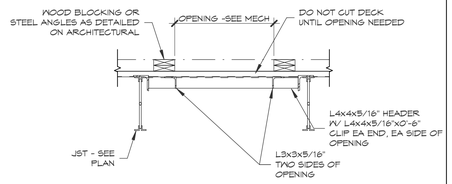


8 CANTILEVER DETAIL
SCALE: 3/4" = 1'-0"



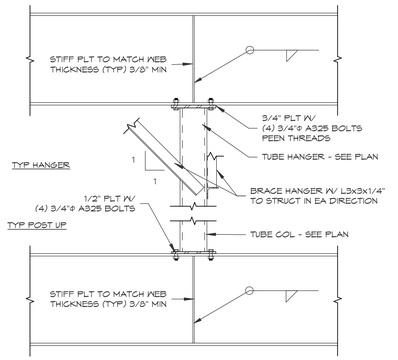
4 TYPICAL JOIST TO COLUMN CONNECTION DETAIL
SCALE: 3/4" = 1'-0"

THIS DETAIL APPLIES FOR OPENINGS GREATER THAN 1'-0" IN ANY DIRECTION. FOR OPENINGS GREATER THAN 6" AND LESS THAN 1'-0" IN ANY DIRECTION, USE A 16 GAGE DOUBLER PLATE WITH A PLAN DIMENSION 3 TIMES THE OPENING SIZE. SCREW PLATE TO DECK WITH #12 SCREWS @ 6" O.C

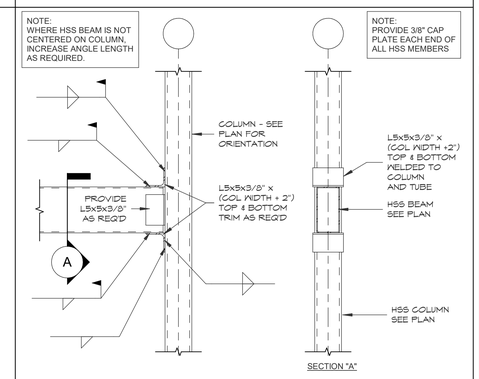


NOTE:
PROVIDE L3x3x1/4" FRAME FOR ROOF DRAIN SUPPORT (MIN) UNLESS NOTED OTHERWISE IN ARCHITECTURAL DRAWINGS

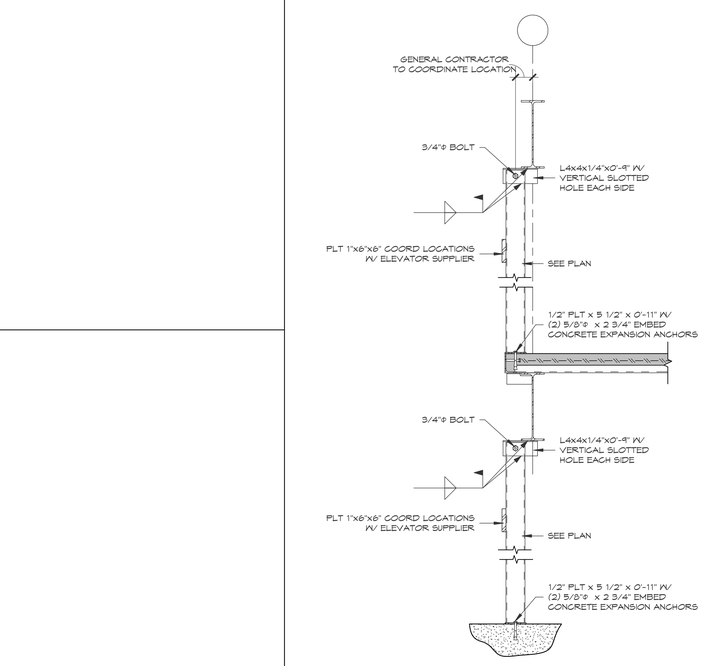
11 TYPICAL ROOF OPENING DETAIL
SCALE: 3/4" = 1'-0"



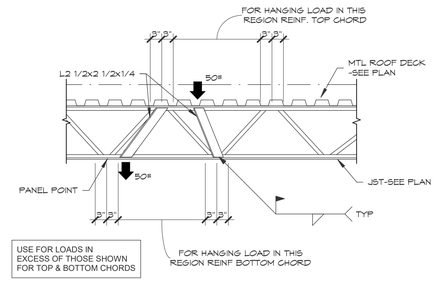
7 TYPICAL HANGER AND POST UP DETAIL
SCALE: 3/4" = 1'-0"



3 TYPICAL TUBE TO TUBE COLUMN CONNECTION DETAIL
SCALE: 3/4" = 1'-0"

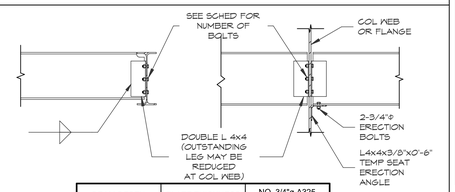


9 ELEVATOR RAIL BRACE DETAIL
SCALE: 3/4" = 1'-0"



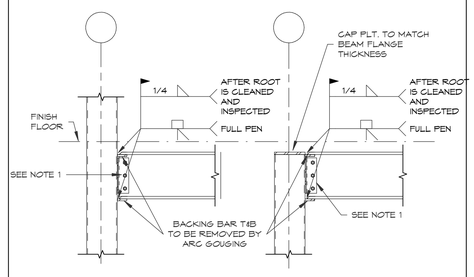
USE FOR LOADS IN EXCESS OF THOSE SHOWN FOR TOP & BOTTOM CHORDS

6 TYPICAL HANGING LOADS DETAIL
SCALE: 3/4" = 1'-0"



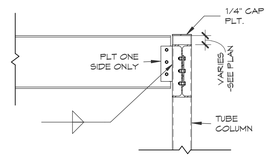
BEAM DEPTH	PLATE THICKNESS	NO. 3/4"ø A325 BOLTS
8"	1/4"	2
10"	5/16"	2
12"	5/16"	3
14"	5/16"	3
16"	5/16"	4
18"	5/16"	5
21"	5/16"	6
24"	3/8"	6
27"	3/8"	7
30"	3/8"	8

2 BEAM TO BEAM/ COLUMN CONNECTION TABLE
SCALE: 3/4" = 1'-0"



NOTES:
1.) SEE CONNECTION SCHEDULE
2.) SEE PLANS FOR LOCATIONS AND BEAM COLUMN SIZES.
3.) PROVIDE COMPLETE PENETRATION GROOVE WELDS UNLESS OTHERWISE SHOWN.
4.) AT TOP LEVELS PROVIDE COLUMN CAP PLATE.

5 MOMENT CONNECTION DETAIL AT TUBE COLUMN
SCALE: 3/4" = 1'-0"



BEAM DEPTH	PLATE THICKNESS	NO. 3/4"ø A325 BOLTS
8"	1/4"	2
10"	5/16"	2
12"	5/16"	3
14"	5/16"	3
16"	5/16"	4
18"	5/16"	5
21"	5/16"	6
24"	3/8"	6
27"	3/8"	7
30"	3/8"	8

1 BEAM TO COLUMN SIMPLE SHEAR CONNECTION TABLE
SCALE: 3/4" = 1'-0"

Date
Revision /

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
SEPTEMBER 18, 2025

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Texas Engineering Firm Reg. No. F-170
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713.780.3345

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TYPICAL STEEL DETAILS

PACKAGE VOLUME

Job No. 1971-05-01
Sheet No. S&S SET
Drawn By: JG
Date: 09/18/25
S0.04

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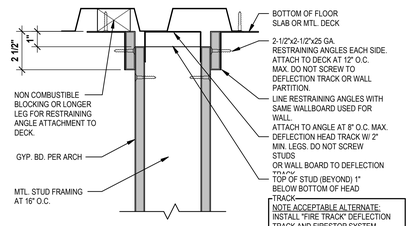
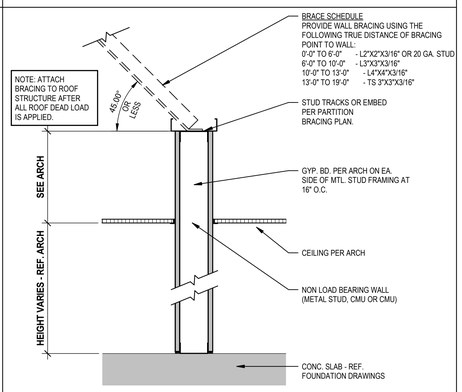
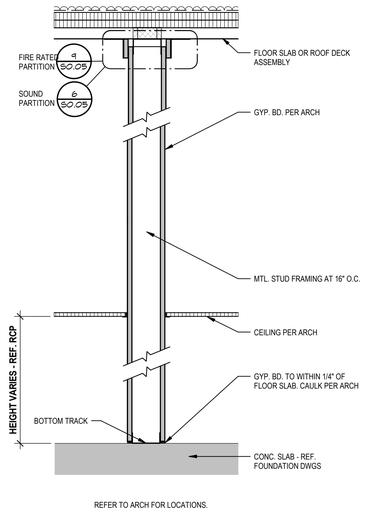


1 HR: UL# HW-D-0001; 2 HR: UL# HW-D-0002

12 TYPICAL FIRE RATED CONNECTION OF WALL PARALLEL TO DECK
SCALE: 3" = 1'-0"

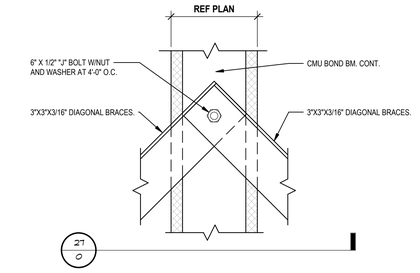


11 TYP. NON-LOAD BEARING WALL BRACE SCHED
SCALE: 1 1/2" = 1'-0"

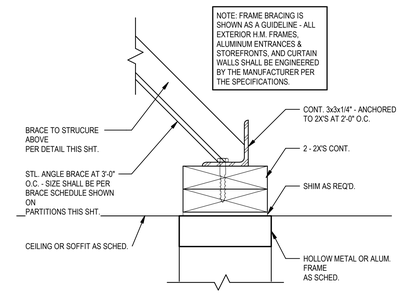


REFER TO ARCH FOR LOCATIONS.

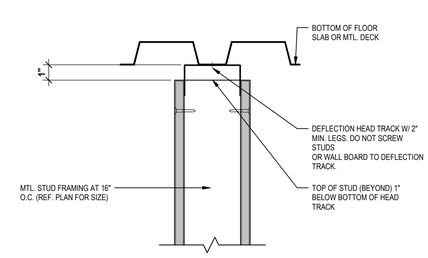
7 TYP. SECTION AT INTERIOR DRYWALL FIRE RATED OR SOUND PARTITION
SCALE: 1 1/2" = 1'-0"



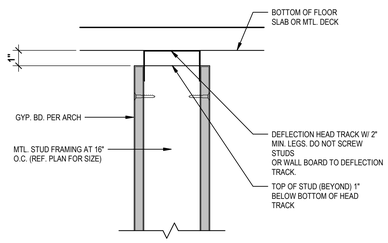
4 TYPICAL DETAIL CONNECTION ANGLE BRACES TO CMU
SCALE: 3" = 1'-0"



3 TYPICAL DOOR FRAME BRACING DETAIL
SCALE: 3" = 1'-0"

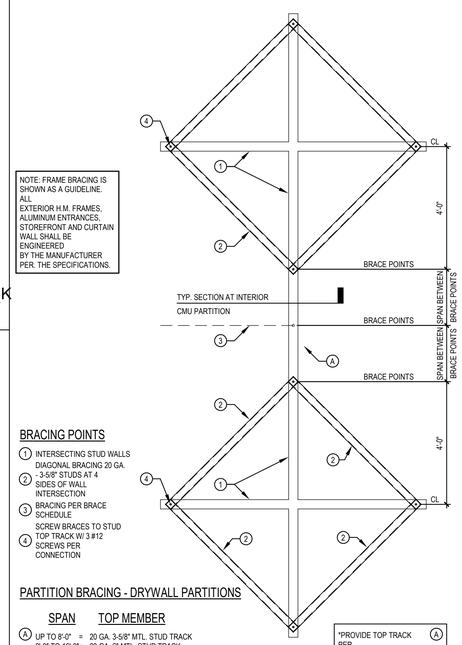


10 TYPICAL SOUND PARTITION CONNECTION OF WALL PARALLEL TO DECK
SCALE: 3" = 1'-0"



6 TYPICAL SOUND PARTITION CONNECTION OF WALL PERPENDICULAR TO DECK
SCALE: 3" = 1'-0"

NOTE: THE INTENT OF THE DETAILS ON THIS SHEET IS TO SHOW HOW NON-LOAD BEARING WALLS ARE TO BE BRACED TO THE BUILDING STRUCTURE. REFER TO THE ARCHITECTURAL DRAWINGS FOR REQUIRED SHEATHING, INSULATION, CAULKING, AND OTHER SPECIAL DETAILING REQUIREMENTS FOR SOUND AND FIRE RATED PARTITIONS. IF THERE ARE ANY CONFLICTS PERTAINING TO FIRE RATING OR SOUND RATING DETAILS BETWEEN THE DETAILS SHOWN ON THIS SHEET AND THE DETAILS SHOWN ON THE ARCHITECTURAL DRAWINGS, THE DETAILS ON THE ARCHITECTURAL SHEETS SHALL GOVERN FOR THESE ITEMS.



BRACING POINTS

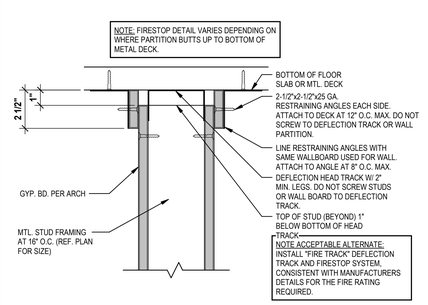
1. INTERSECTING STUD WALLS DIAGONAL BRACING 20 GA. 3-5/8" STUDS AT 4
2. SIDES OF WALL INTERSECTION
3. BRACING PER BRACE SCHEDULE SCREW BRACES TO STUD TOP TRACK W/ 3 #12
4. SCREWS PER CONNECTION

PARTITION BRACING - DRYWALL PARTITIONS

	SPAN	TOP MEMBER
A	UP TO 8'-0" = 8'-0" TO 16'-0"=	20 GA. 3-5/8" MTL. STUD TRACK 20 GA. 6" MTL. STUD TRACK SCREWED TO TOP OF 20 GA. 3-5/8" MTL. STUD TRACK
	16'-0" AND UP=	20 GA. 6" MTL. STUD TRACK SCREWED TO TOP OF 20 GA. 3-5/8" MTL. STUD TRACK PLUS BRACING TO STRUCTURE ABOVE PER SCHEDULE

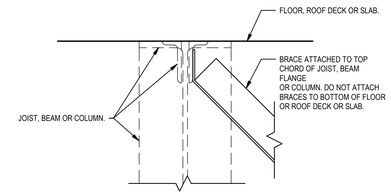
*PROVIDE TOP TRACK PER AS DETERMINED BY SPAN LENGTH (A)

1 TYPICAL BRACING PLAN - DRYWALL PARTITIONS
SCALE: 1/2" = 1'-0"



1 HR: UL# HW-D-0001; 2 HR: UL# HW-D-0002

9 TYPICAL FIRE RATED CONNECTION OF WALL PERPENDICULAR TO DECK
SCALE: 3" = 1'-0"



5 BRACE CONNECTION TO STRUCTURE
SCALE: 3" = 1'-0"

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Project:
NEW OPERATIONS BUILDING
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NEW CANEY, TEXAS

SEPTEMBER 18, 2025

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TYPICAL NON-LOAD BEARING WALL BRACING DETAILS

PACKAGE VOLUME

Job No. 1971-05-01
Sheet No. S&S SET
Drawn By: JG
Date: 09/18/25
S0.05

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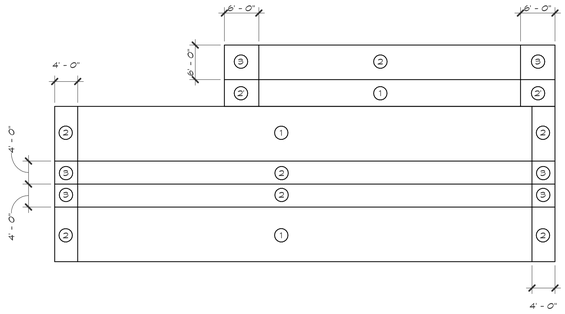
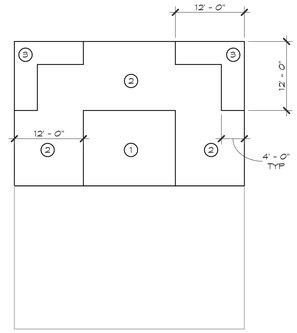
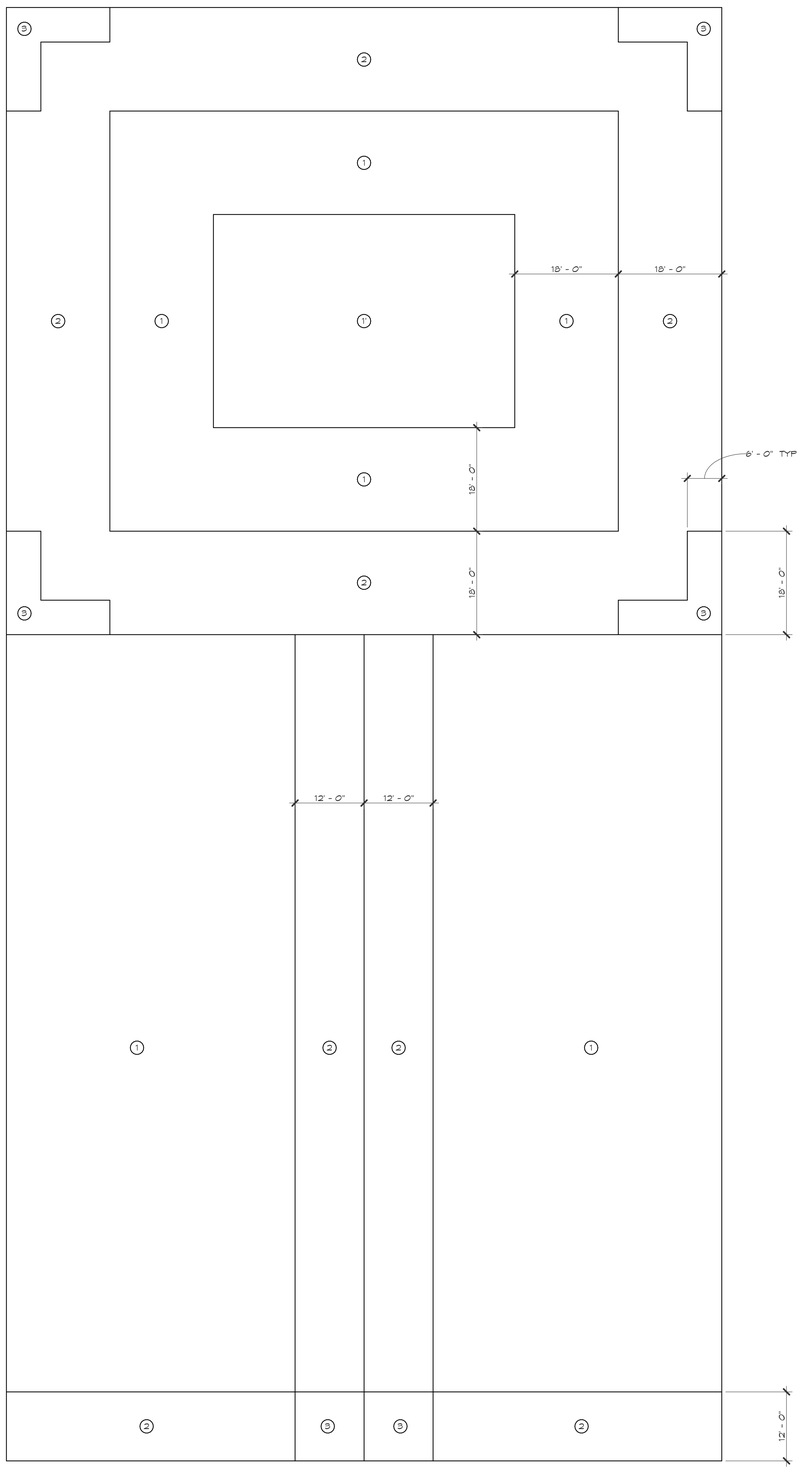


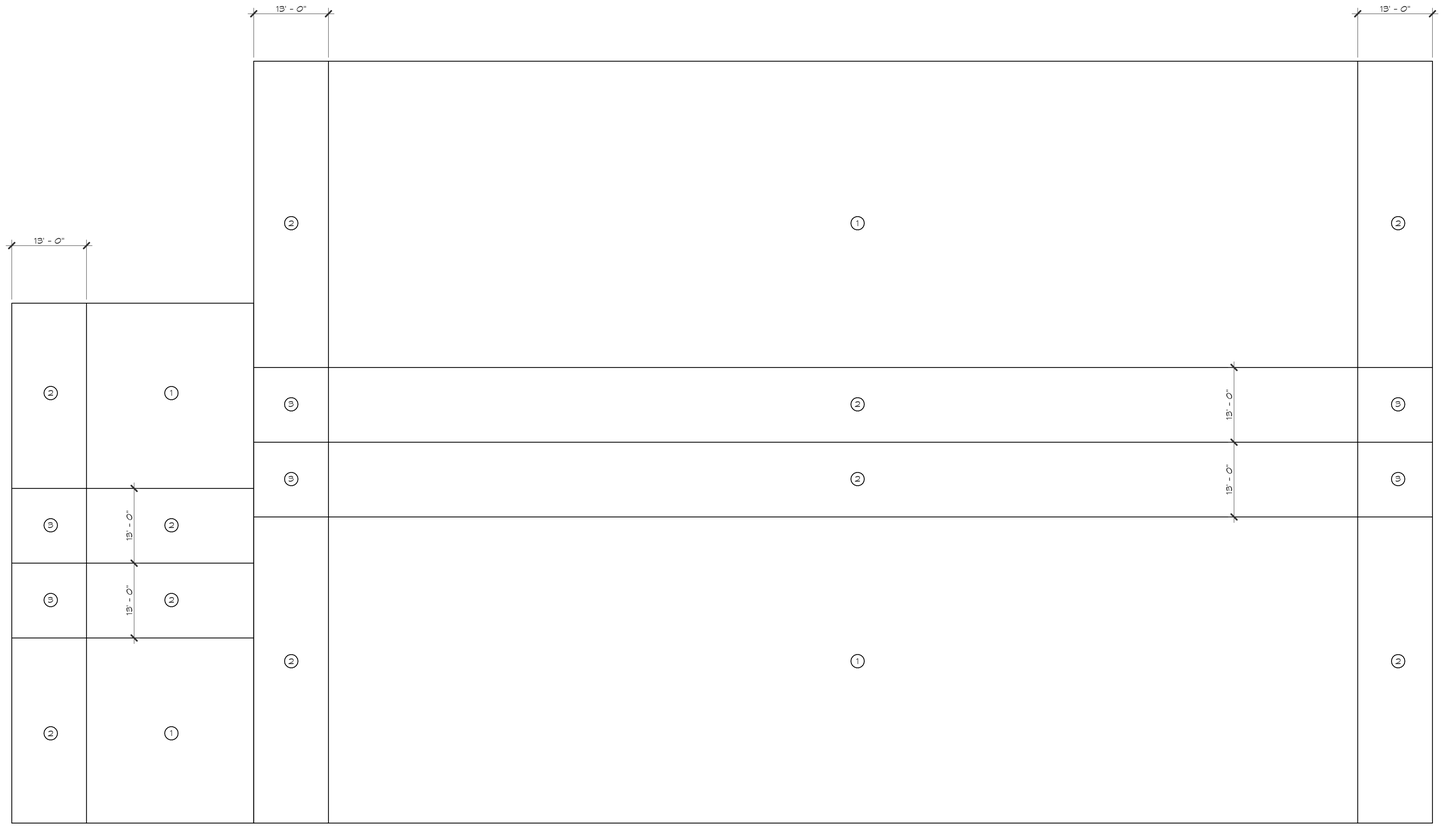
3 BUS WASH UPLIFT KEY PLAN
SCALE: 3/32" = 1'-0"



TRANSPORTATION BUILDING UPLIFT KEY PLAN
4 SCALE: 3/32" = 1'-0"



2 OPERATIONS BUILDING UPLIFT KEY PLAN
SCALE: 3/32" = 1'-0"



1 WAREHOUSE UPLIFT KEY PLAN
SCALE: 3/32" = 1'-0"

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER

SEPTEMBER 18, 2025

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UPLIFT KEY PLAN

PACKAGE VOLUME

Job No. 1971-05-01	Sheet No. S&S SET S0.07
Drawn By: JG	
Date: 09/18/25	

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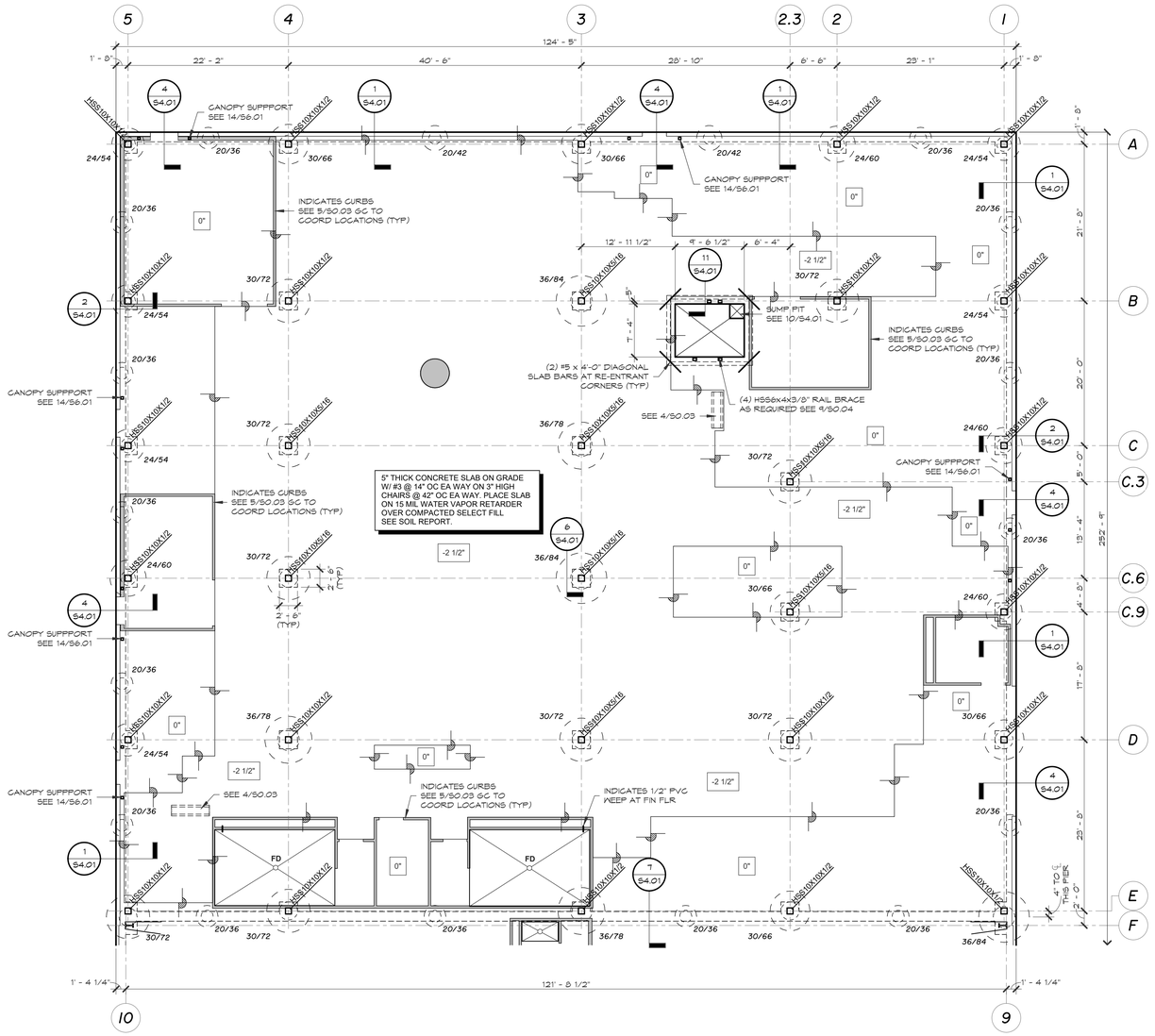

NORTH

FOUNDATION PLAN - AREA A - OPERATIONS BUILDING

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

SEE 3/S0.03 FOR HOUSEKEEPING PAD DETAIL GC COORD W/ MEP FOR ANY REQUIRED LOCATIONS

THE GENERAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE ARCHITECTURAL AND STRUCTURAL DRAWINGS WITH THE PRE-ENGINEERED BUILDING SUPPLIER. CHANGES IN THE COLUMN LAYOUT SHOWN WILL REQUIRE APPROVAL BY THE ARCHITECT AND REVISIONS TO THE STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION

INDICATES TEST FOOTING LOCATION

FD — INDICATES FLOOR DRAIN SEE 15/S0.03

HSS6x6x1/4" — INDICATES SHAFT DIA. SEE 17/S4.01 FOR REINF.; 14/42; INDICATES BELL DIA. SEE 17/S4.01; INDICATES COLUMN SIZE SEE 16/S4.01 FOR BASE PLATES & ANCHOR BOLT

LEGEND

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER

SEPTEMBER 18, 2025

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FOUNDATION PLAN - AREA A - OPERATIONS BUILDING

PACKAGE | VOLUME

Job No. 1971-05-01
Drawn By: JG
Date: 09/18/25
Sheet No. S&S SET
S1.01

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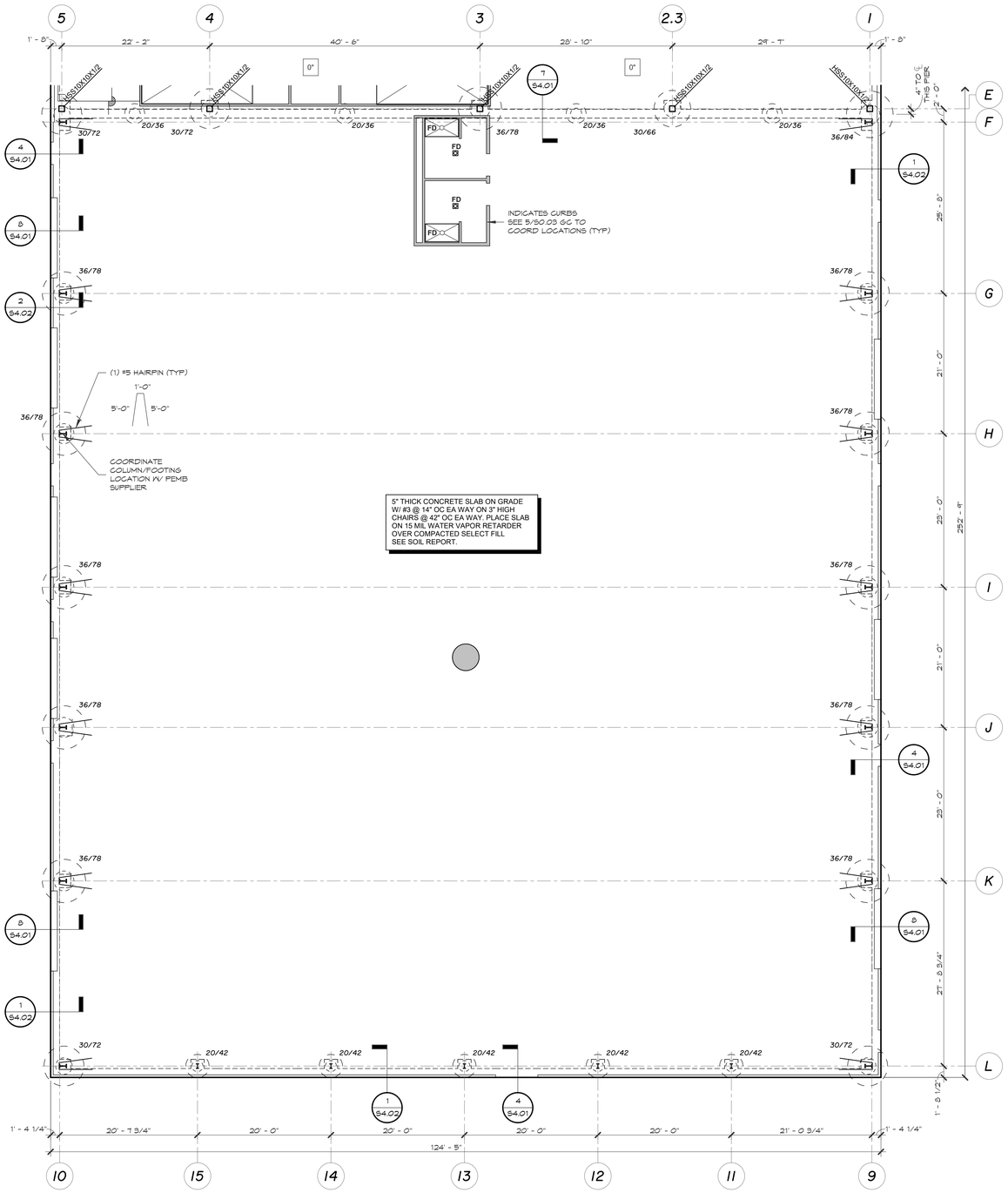


NORTH

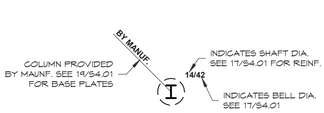
FOUNDATION PLAN - AREA B - OPERATIONS BUILDING

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

THE GENERAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE ARCHITECTURAL AND STRUCTURAL DRAWINGS WITH THE PRE-ENGINEERED BUILDING SUPPLIER. CHANGES IN THE COLUMN LAYOUT SHOWN WILL REQUIRE APPROVAL BY THE ARCHITECT AND REVISIONS TO THE STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION

INDICATES TEST FOOTING LOCATION

FD INDICATES FLOOR DRAIN SEE 15/S0.03



LEGEND

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER

SEPTEMBER 18, 2025

CJG Engineers
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FOUNDATION PLAN - AREA B - OPERATIONS BUILDING

PACKAGE VOLUME

Job No. 1971-05-01

Sheet No. S&S SET S1.02

Drawn By: JG

Date: 09/18/25

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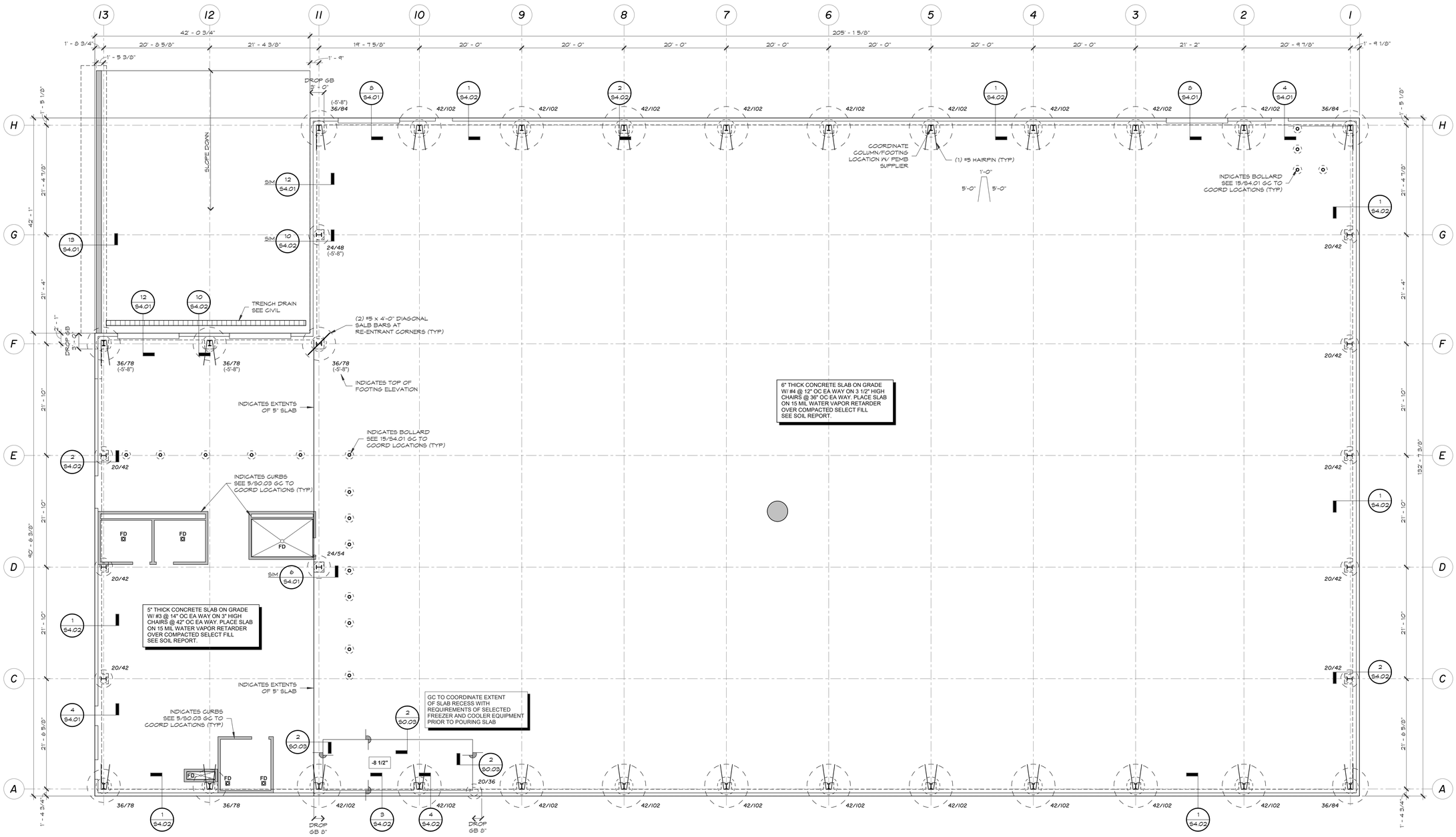


NORTH

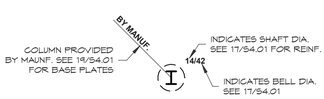
FOUNDATION PLAN - AREA D - WAREHOUSE

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

THE GENERAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE ARCHITECTURAL AND STRUCTURAL DRAWINGS WITH THE PRE-ENGINEERED BUILDING SUPPLIER. CHANGES IN THE COLUMN LAYOUT SHOWN WILL REQUIRE APPROVAL BY THE ARCHITECT AND REVISIONS TO THE STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION

INDICATES TEST FOOTING LOCATION

FD — INDICATES FLOOR DRAIN SEE 15/50.03



LEGEND

Revision / Date

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NEW OPERATIONS BUILDING
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NEW CANEY, TEXAS

SEPTEMBER 18, 2025

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FOUNDATION PLAN - AREA D - WAREHOUSE

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. S&S SET S1.03
Drawn By: JG	
Date: 09/18/25	

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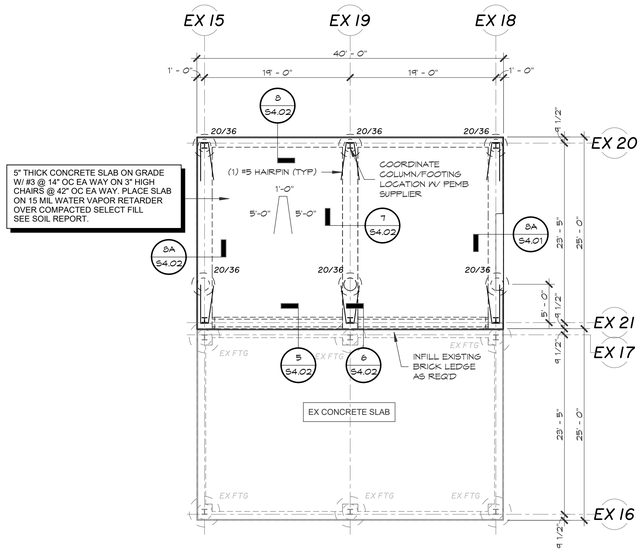
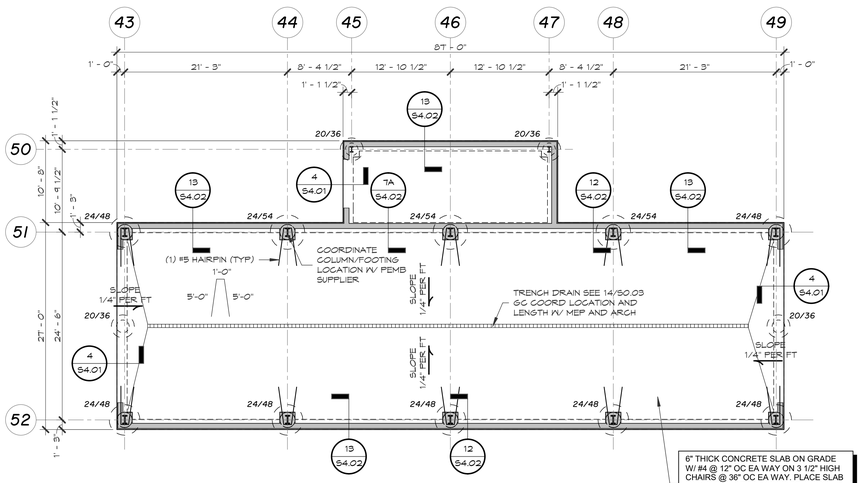


NORTH

FOUNDATION PLAN TRANSPORTATION BUILDING ADDITION

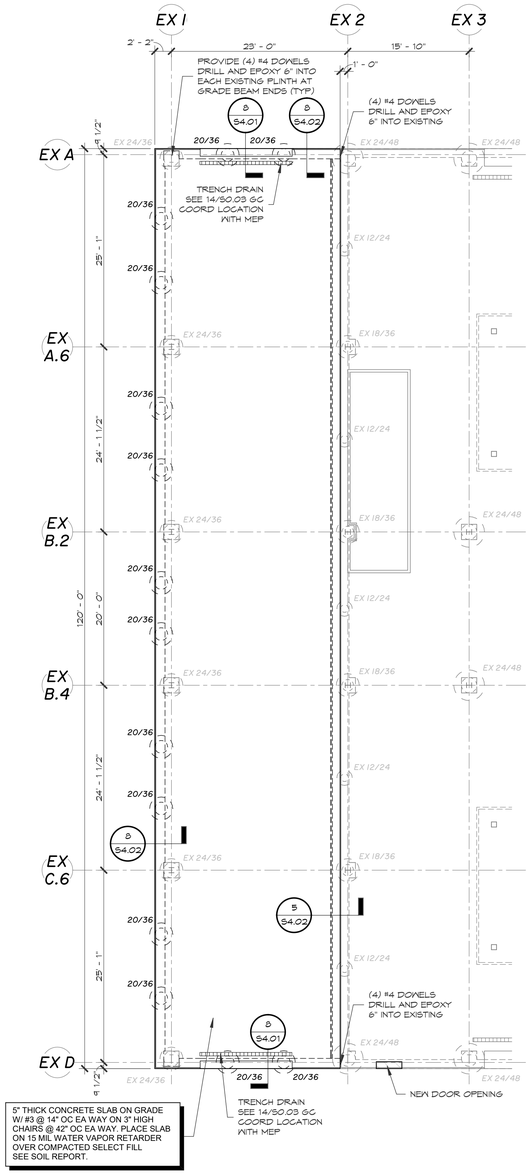
SCALE: 1/8" = 1'-0"



NORTH

FOUNDATION PLAN BUS WASH BUILDING

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

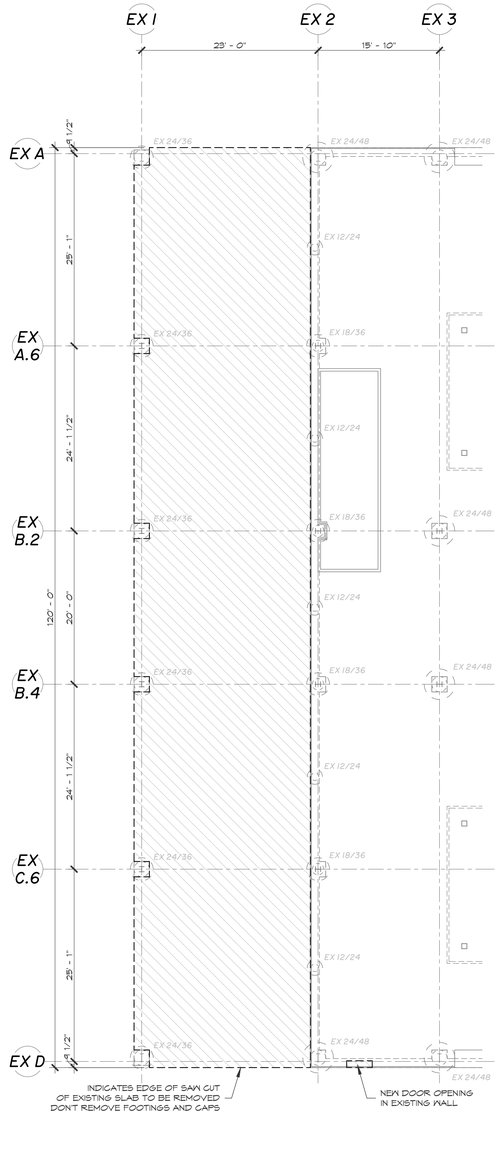


5" THICK CONCRETE SLAB ON GRADE W/ #3 @ 14" OC EA WAY ON 3" HIGH CHAIRS @ 42" OC EA WAY. PLACE SLAB ON 15 MIL WATER VAPOR RETARDER OVER COMPACTED SELECT FILL SEE SOIL REPORT.

NORTH

FOUNDATION PLAN MAINTENANCE BUILDING

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



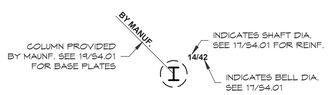
NORTH

DEMOLITION FOUNDATION PLAN MAINTENANCE BUILDING

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

THE GENERAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE ARCHITECTURAL AND STRUCTURAL DRAWINGS WITH THE PRE-ENGINEERED BUILDING SUPPLIER. CHANGES IN THE COLUMN LAYOUT SHOWN WILL REQUIRE APPROVAL BY THE ARCHITECT AND REVISIONS TO THE STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION

FD — INDICATES FLOOR DRAIN SEE 15/S0.03



LEGEND

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER

SEPTEMBER 18, 2025

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FOUNDATION PLANS TRANSPORTATION BLDG, BUS WASH & MAINTENANCE BLDG
PACKAGE VOLUME

Job No.	Sheet No.
1971-05-01	S&S SET
Drawn By: JG	S1.04
Date: 09/18/25	

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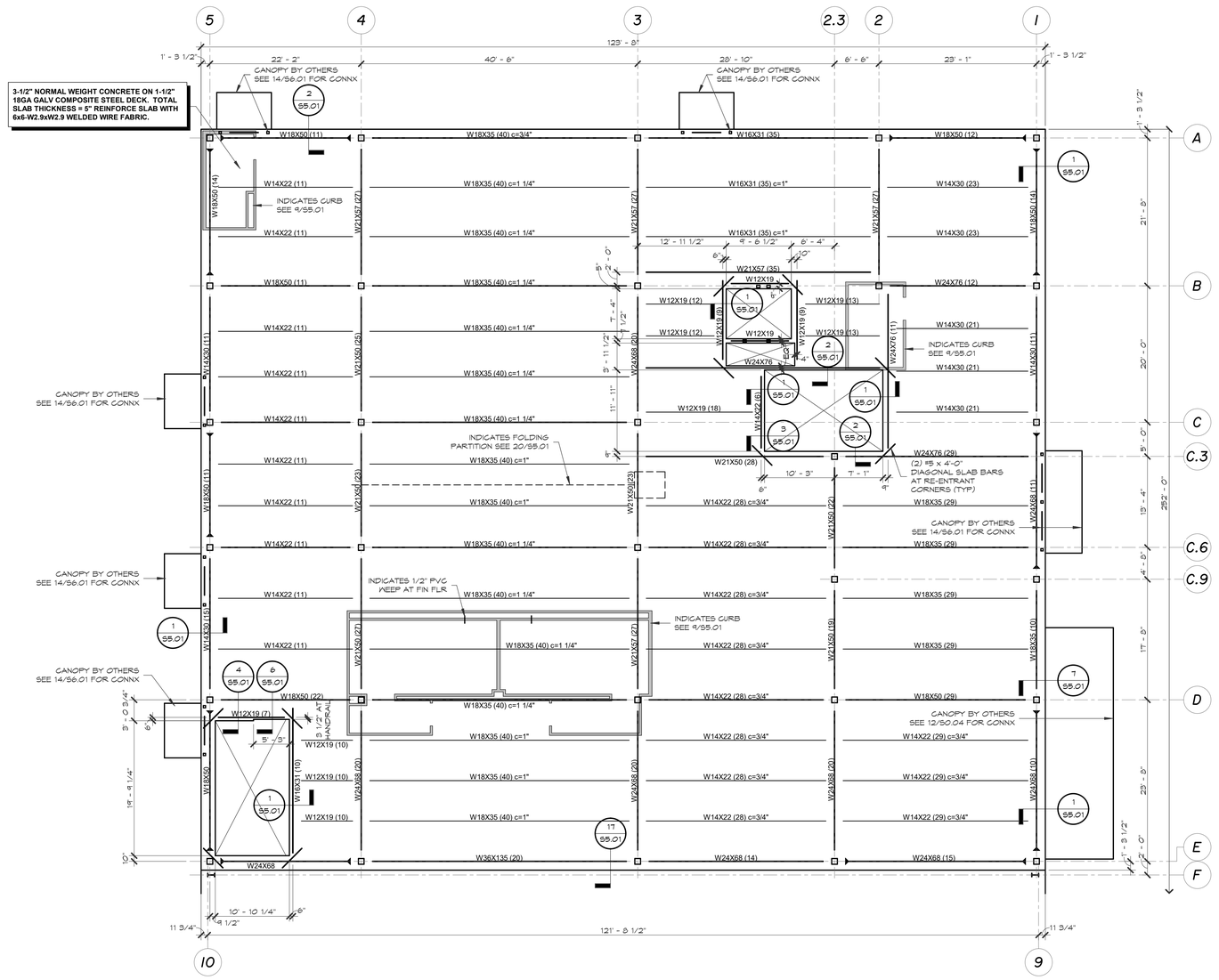
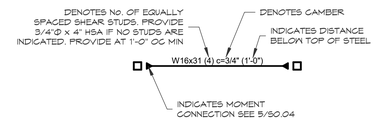


NORTH

SECOND FLOOR FRAMING PLAN - AREA A - OPERATIONS BUILDING

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

NOTE:
TOP OF STEEL ELEVATION (BOTTOM OF DECK) = 14'-3" ABOVE FINISH FLOOR ELEVATION = 0'-0", UNLESS NOTED OTHERWISE THUS (+/-), DETAILER TO COORDINATE STEEL JOIST SEAT DEPTH REQUIREMENTS WITH JOIST SUPPLIER. ALL ROOF SLOPES INDICATED THUS (↙—↘) TO BE UNIFORM BETWEEN HIGH / LOW ELEVATIONS GIVEN IN PLAN.



BEAM LEGEND

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
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NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
91030
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SEPTEMBER 18, 2025

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SECOND FLOOR FRAMING PLAN - AREA A - OPERATIONS BUILDING

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. S&S SET S2.01
Drawn By: JG	
Date: 09/18/25	

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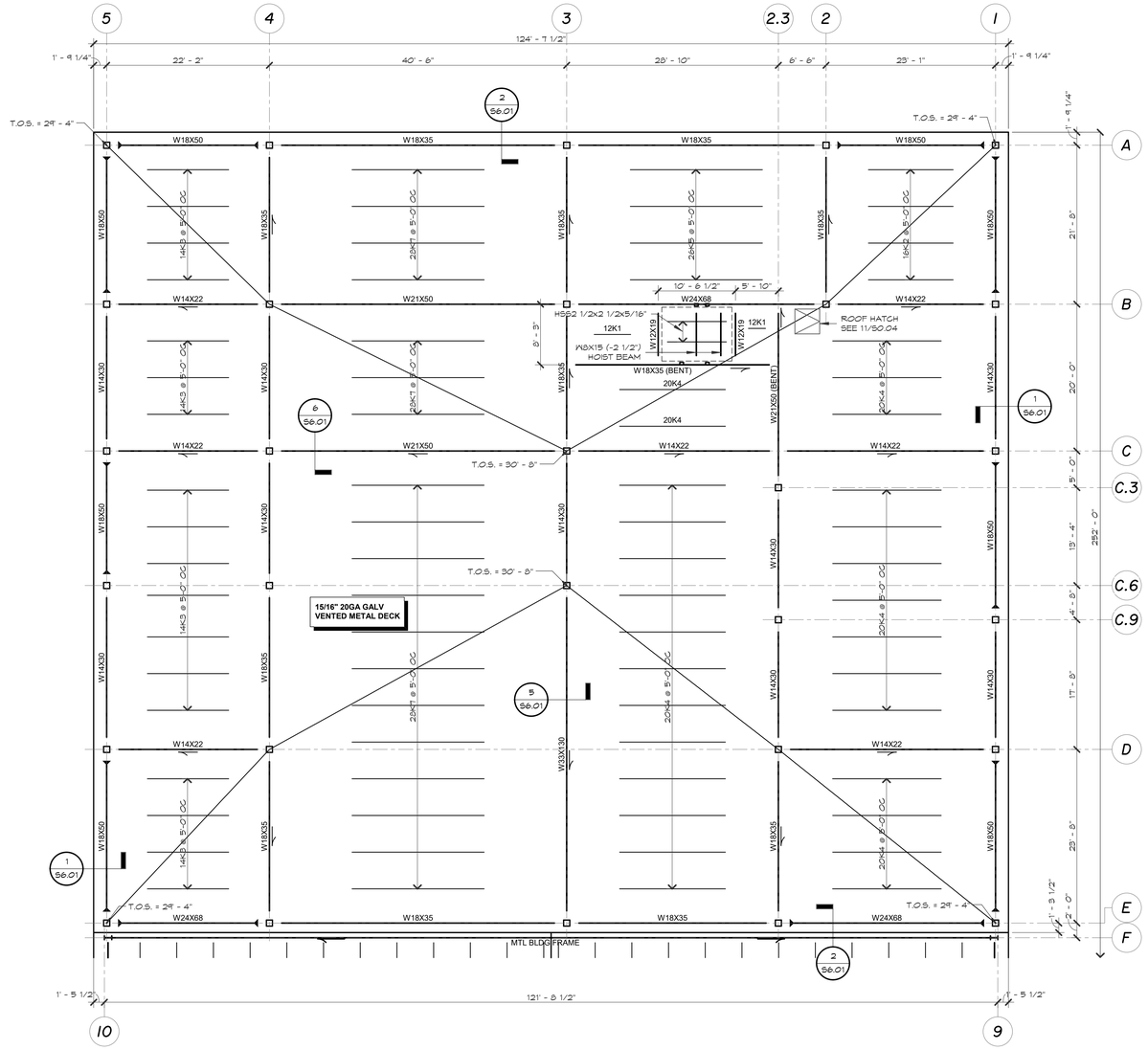
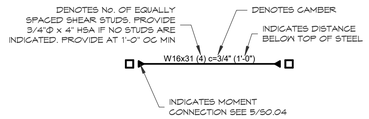


NORTH

ROOF FRAMING PLAN - AREA A - OPERATIONS BUILDING

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

NOTE:
TOP OF STEEL ELEVATION (BOTTOM OF DECK) = AS NOTED ABOVE FINISH FLOOR ELEVATION = 0'-0", UNLESS NOTED OTHERWISE THUS (+/-). DETAILER TO COORDINATE STEEL JOIST SEAT DEPTH REQUIREMENTS WITH JOIST SUPPLIER. ALL ROOF SLOPES INDICATED THUS (↙—) TO BE UNIFORM BETWEEN HIGH / LOW ELEVATIONS GIVEN IN PLAN.



BEAM LEGEND

Revision / Date

Project:

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FOR
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NEW CANEY, TEXAS

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ROOF FRAMING PLAN - AREA A - OPERATIONS BUILDING

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. S&S SET S3.01
Drawn By: JG	
Date: 09/18/25	

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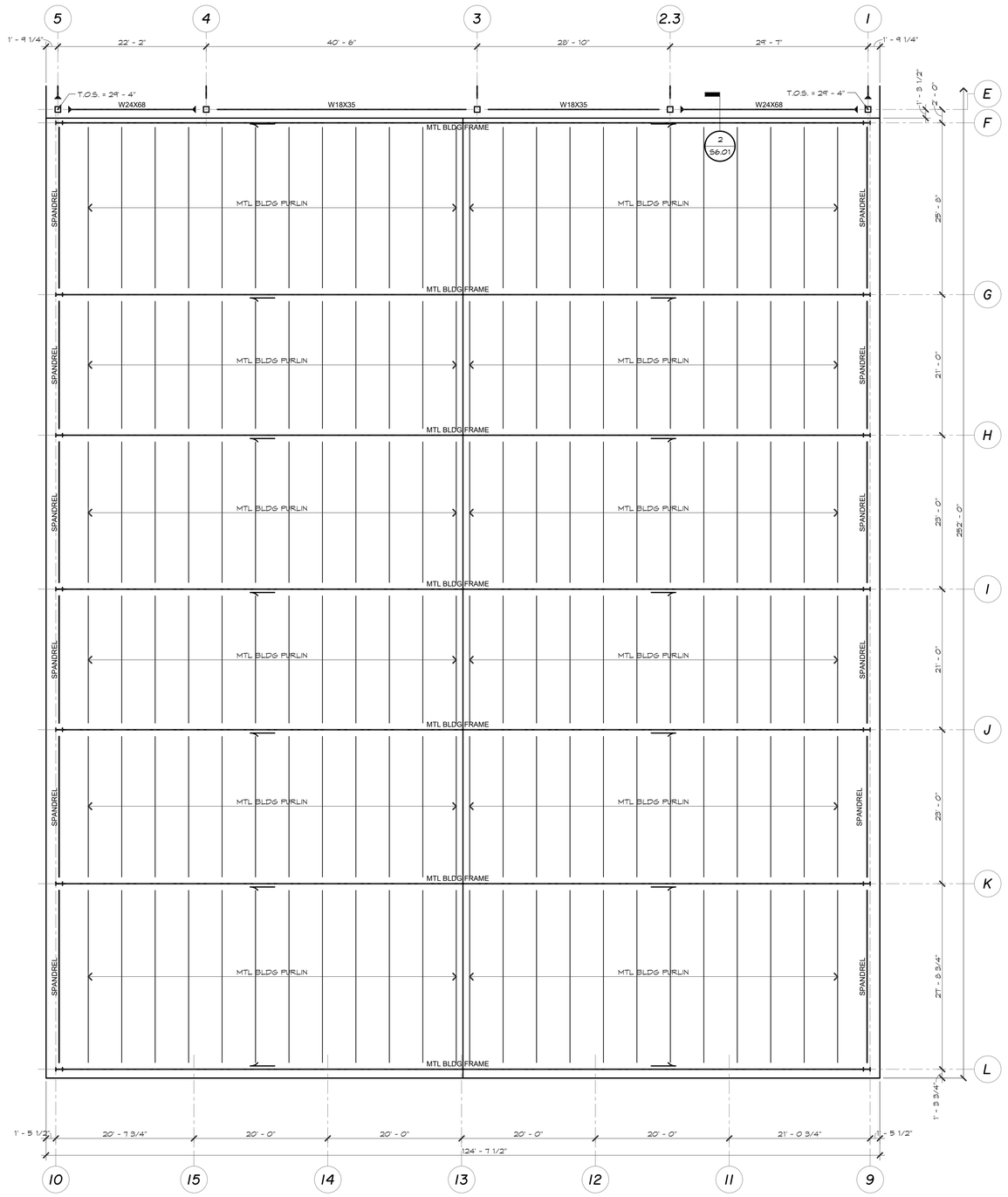

NORTH

SCHEMATIC ROOF FRAMING PLAN - AREA B - OPERATIONS BUILDING

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

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
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SCHEMATIC ROOF FRAMING PLAN - AREA B - OPERATIONS BUILDING

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. S&S SET S3.02
Drawn By: JG	
Date: 09/18/25	

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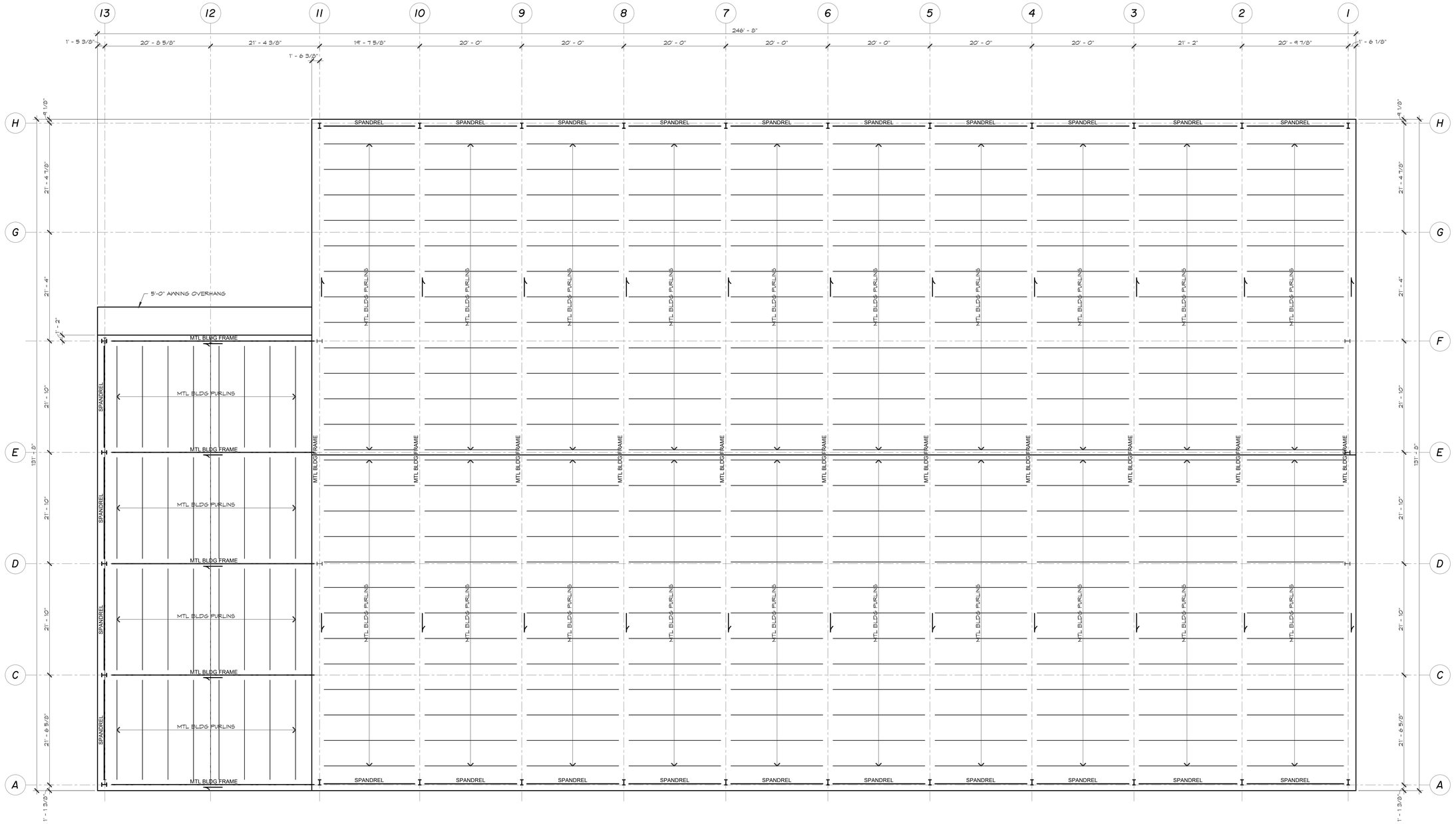

NORTH

SCHEMATIC ROOF FRAMING PLAN - AREA D - WAREHOUSE

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

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER

SEPTEMBER 18, 2025

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SCHEMATIC ROOF FRAMING PLAN - AREA D - WAREHOUSE

PACKAGE VOLUME

Job No. 1971-05-01

Drawn By: JG

Date: 09/18/25

Sheet No. S&S SET S3.03

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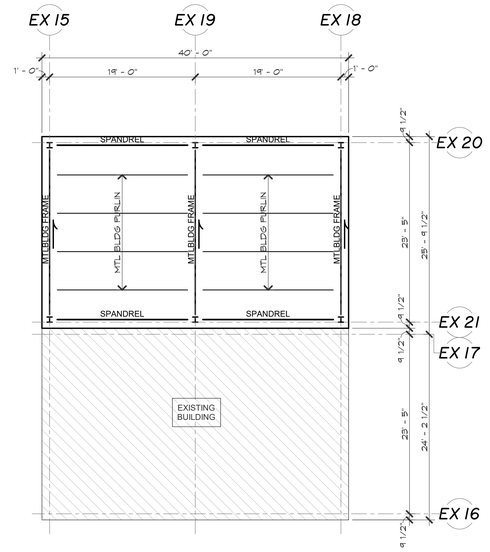
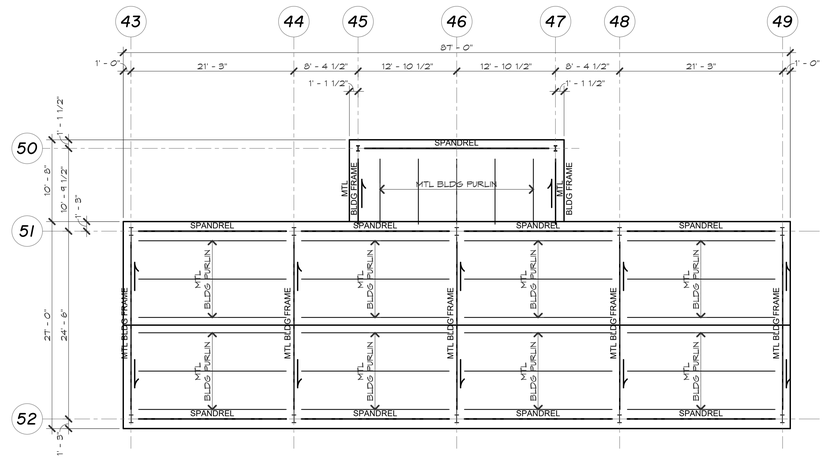


NORTH

SCHEMATIC ROOF FRAMING PLAN - TRANSPORTATION BUILDING ADDITION

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



NORTH

SCHEMATIC ROOF FRAMING PLAN - BUS WASH BUILDING

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

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
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SCHEMATIC ROOF FRAMING PLAN - TRANSPORTATION BLDG & BUS WASH

PACKAGE VOLUME

Job No. 1971-05-01
Drawn By: JG
Date: 09/18/25
Sheet No. S&S SET S3.04

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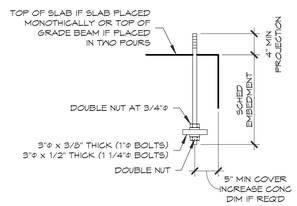
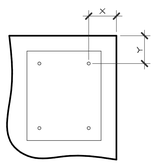
PEMB ANCHOR BOLT SCHEDULE									
BOLT DIAMETER (IN)	ALLOWABLE BOLT SPACING (IN)	REQUIRED EMBED (IN)	MINIMUM NUMBERS OF BOLTS	ALLOWABLE SHEAR ONLY LOAD (KIP)	ALLOWABLE SHEAR ONLY LOAD (KIP)		ALLOWABLE TENSION ONLY LOAD (KIP)	TENSION CONTROLLING EDGE DISTANCE	
					X (IN)	Y (IN)		X (IN)	Y (IN)
1/2"	4"	18"	4	12.5	12	12	22	12	3.5
				4	12	3.5	22	12	3.5
5/8"	4"	18"	4	20	13	13	35	12	4.5
				4.75	12	3.5	34	12	3.5
3/4"	4"	18"	4	30	17	17	51	14	14
				5	12	3.5	34	12	3.5
7/8"	4"	24"	4	41	21	21	68	15	15
				5	12	3.5	46	12	3.5
1"	4"	24"	4	54	25	25	90	21	21
				5	12	3.5	46	12	3.5
1 1/4"	5"	30"	4	87	42	42	140	32	32
				5.25	12	3.5	48	12	3.5

INTERACTION EQUATION FOR SHEAR AND TENSION COMBINED LOADS:
B (SHEAR)$^{5/3}$ + B (TENSION)$^{5/3}$ <=1.0 WHERE$^{5/3}$ =(5/3) AND B IS THE UTILIZATION RATIO



TYPICAL DETAIL

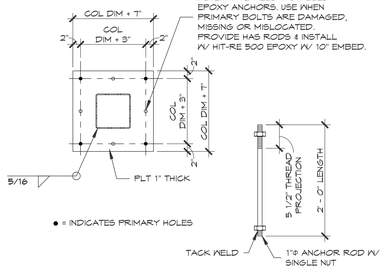


PLAN VIEW

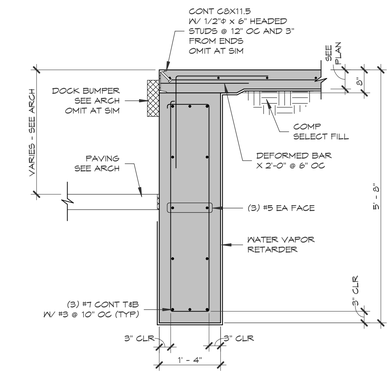
LOADS ARE LRFD:

F' C=3.5 KSI
CRACKED CONCRETE
NO GROUT REQUIRED
CAST IN PLACE HEX HEAD F1554 GRADE 36
MIN 3.5 EDGE DISTANCE IN "Y" DIRECTION
AND 12" IN "X" DIRECTION PER ACI 318.
PLATE WASHER AT BOTTOM OF BOLT 3" DIAMEETER x 3/8" THICK FOR BOLTS TO 1" DIAMETER. PLATE WASHER FOR 1.25" BOLT IS 3" DIAMETER x 1/2" THICK.

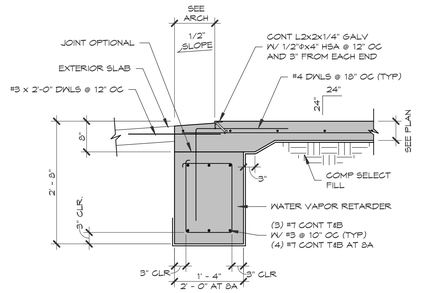
19 METAL BUILDING ANCHOR ROD SCHEDULE
SCALE: 3/4" = 1'-0"



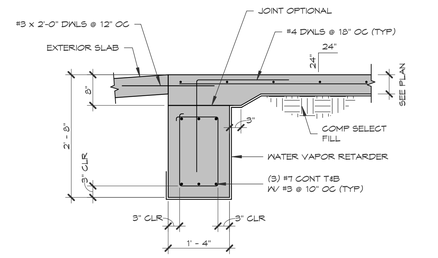
16 TYPICAL TUBE COLUMN BASE PLATE DETAIL
SCALE: 3/4" = 1'-0"



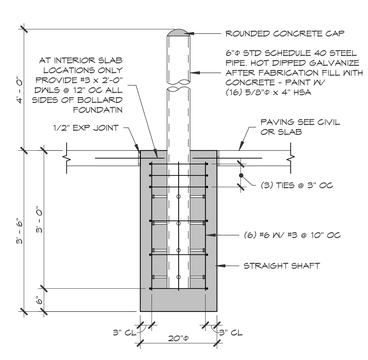
12 LOADING DOCK DETAIL
SCALE: 3/4" = 1'-0"



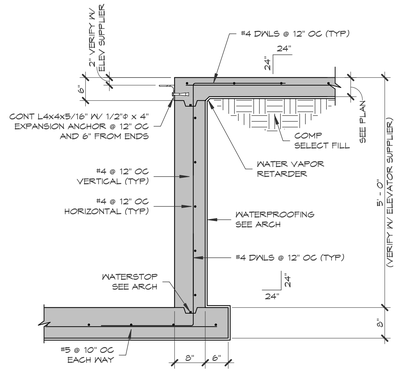
8 TYPICAL DETAIL AT OVERHEAD DOOR
SCALE: 3/4" = 1'-0"



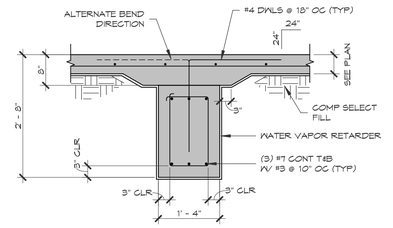
4 EXTERIOR GRADE BEAM
SCALE: 3/4" = 1'-0"



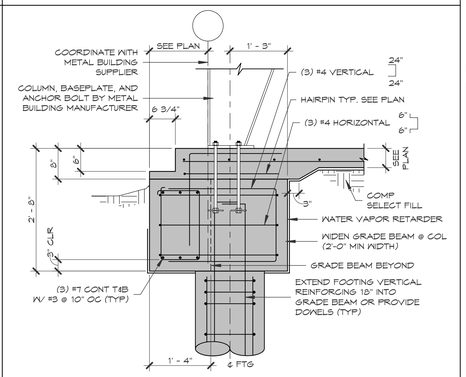
15 BOLLARD DETAIL
SCALE: 3/4" = 1'-0"



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

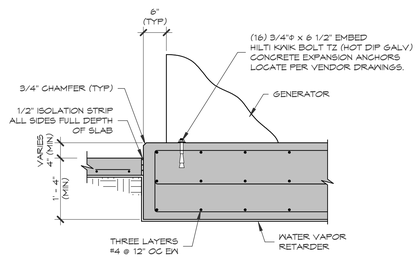


7 INTERIOR GRADE BEAM
SCALE: 3/4" = 1'-0"

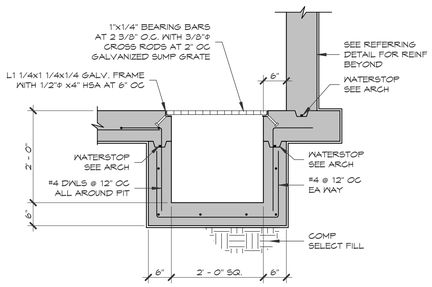


3 EXTERIOR GRADE BEAM AT COLUMN W/ BRICK LEDGE
SCALE: 3/4" = 1'-0"

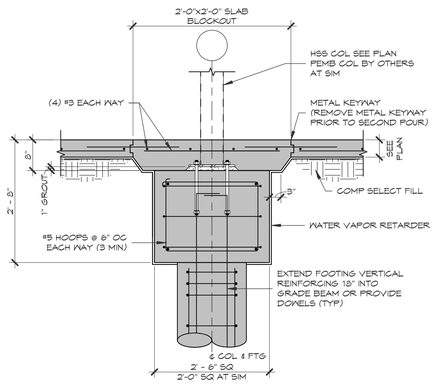
FOOTING SCHEDULE		
SHAFT DIA.	VERT. BARS	TIES
12"	(4) #5	#3 @ 10"
14"	(4) #5	#3 @ 10"
16"	(4) #5	#3 @ 10"
18"	(4) #6	#3 @ 12"
20"	(4) #6	#3 @ 12"
22"	(6) #6	#3 @ 14"
24"	(6) #6	#3 @ 14"
26"	(6) #7	#3 @ 16"
28"	(6) #7	#3 @ 16"
30"	(6) #8	#3 @ 18"
32"	(6) #8	#3 @ 18"
34"	(8) #8	#3 @ 18"
36"	(8) #8	#3 @ 18"
42"	(8) #9	#3 @ 18"
48"	(8) #10	#3 @ 18"



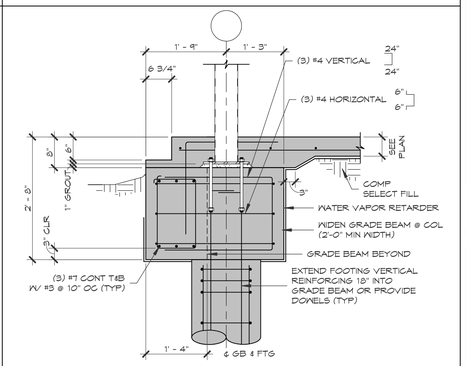
14 GENERATOR PAD ANCHORAGE DETAIL
SCALE: 3/4" = 1'-0"



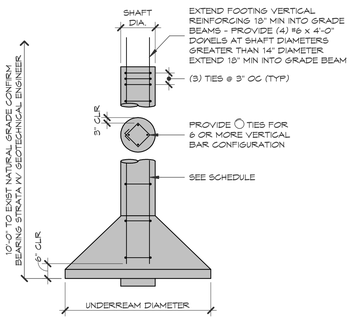
10 SUMP PIT DETAIL
SCALE: 3/4" = 1'-0"



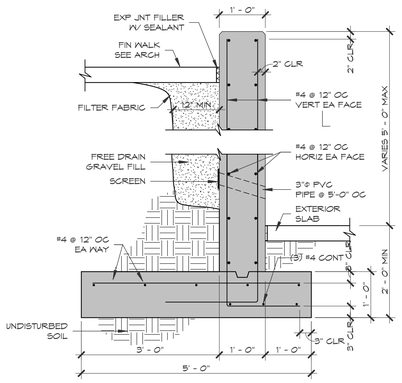
6 COLUMN CAP DETAIL
SCALE: 3/4" = 1'-0"



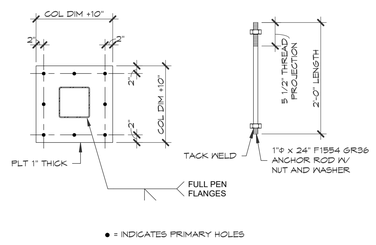
2 EXTERIOR GRADE BEAM AT COLUMN W/ BRICK LEDGE
SCALE: 3/4" = 1'-0"



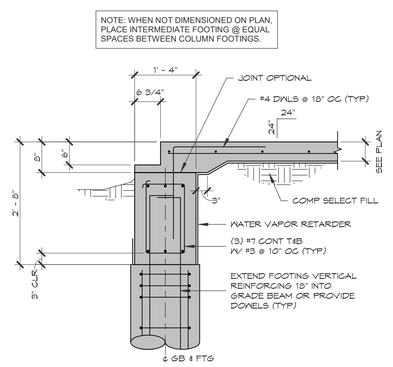
17 DRILLED FOOTING DETAIL
SCALE: 3/4" = 1'-0"



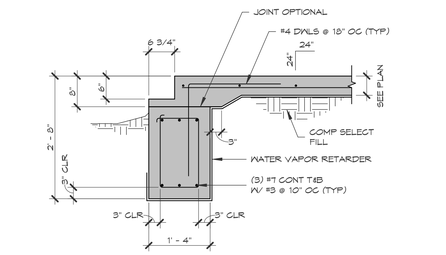
13 RETAINING WALL DETAIL
SCALE: 3/4" = 1'-0"



9 MOMENT FRAME BASE PLATE DETAIL
SCALE: 3/4" = 1'-0"



5 EXTERIOR GRADE BEAM AT BRICK LEDGE
SCALE: 3/4" = 1'-0"



1 EXTERIOR GRADE BEAM AT BRICK LEDGE
SCALE: 3/4" = 1'-0"

Date
Revision /

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
SEPTEMBER 18, 2025

CJG Engineers
Texas Engineering Firm Reg. No. F-170
6051 North Course Drive, Suite 375
Houston, Texas 77072
713.780.3345

Huckabee
www.huckabee-inc.com
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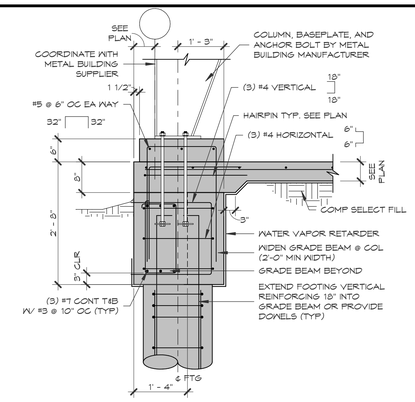
FOUNDATION DETAILS

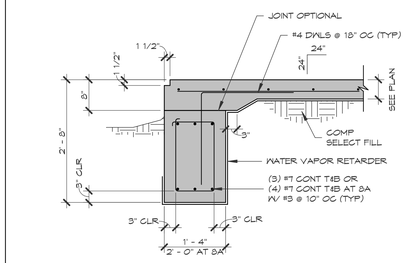
PACKAGE VOLUME

Job No. 1971-05-01
Sheet No. S&S SET
Drawn By: JG
Date: 09/18/25
S4.01

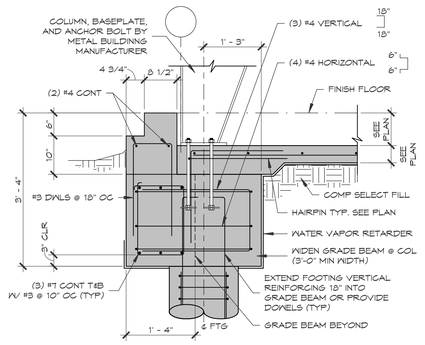
ISSUED FOR BID



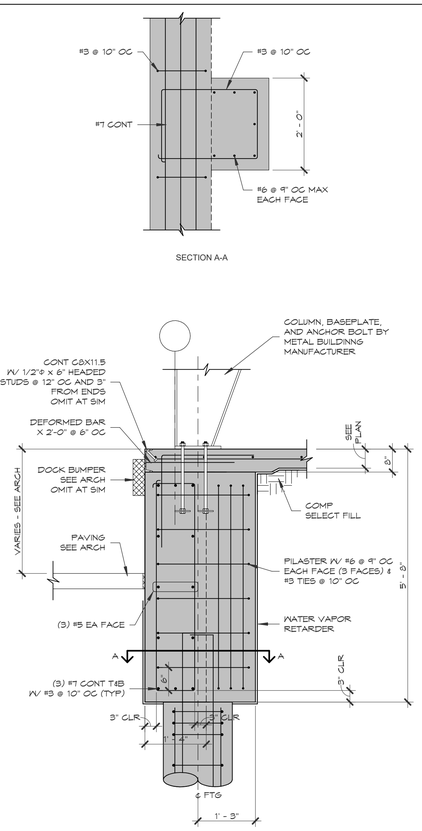
12 METAL BUILDING COLUMN DETAIL AT CURB
SCALE: 3/4" = 1'-0"



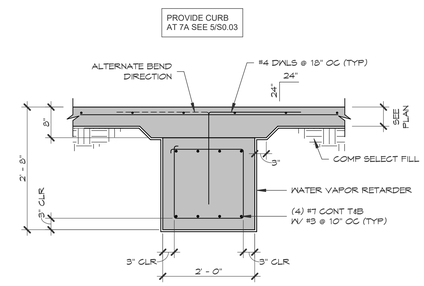
8 EXTERIOR GRADE BEAM AT METAL PANEL
SCALE: 3/4" = 1'-0"



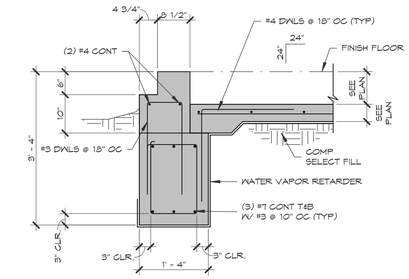
4 DROPPED GRADE BEAM & COLUMN AT FREEZER DETAIL
SCALE: 3/4" = 1'-0"



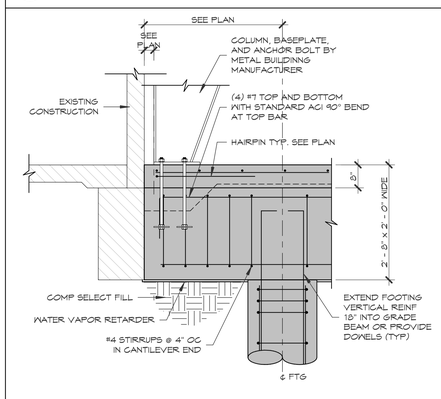
10 LOADING DOCK DETAIL
SCALE: 3/4" = 1'-0"



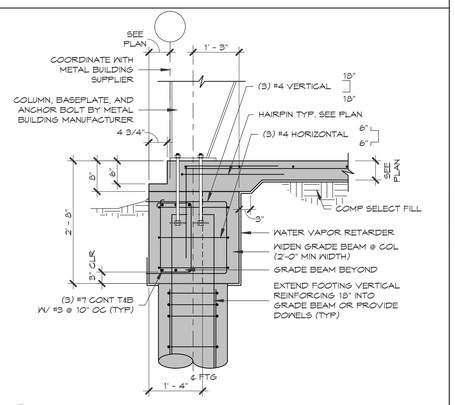
7 TYPICAL INTERIOR GRADE BEAM
SCALE: 3/4" = 1'-0"



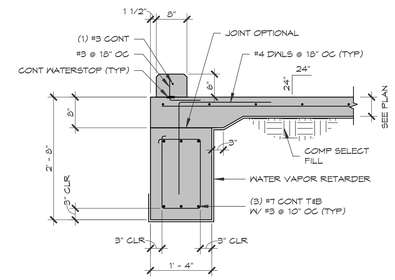
3 SLAB RECESS AT EXTERIOR DROPPED GRADE BEAM
SCALE: 3/4" = 1'-0"



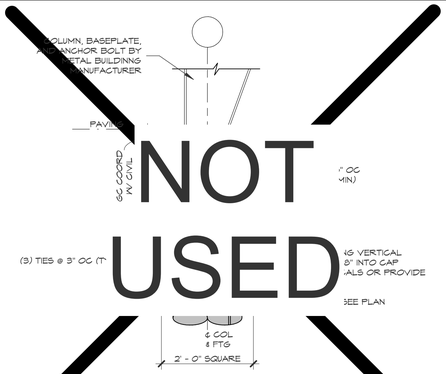
6 CANTILEVER GRADE BEAM AT COLUMN
SCALE: 3/4" = 1'-0"



2 METAL BUILDING COLUMN DETAIL
SCALE: 3/4" = 1'-0"

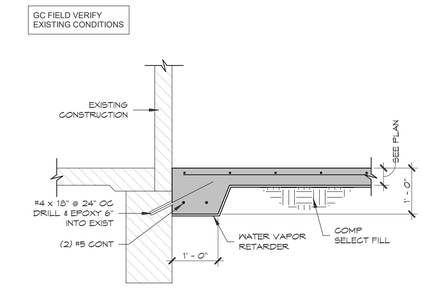


13 EXTERIOR GRADE BEAM
SCALE: 3/4" = 1'-0"



NOT USED

9 ISOLATED PIER CAP DETAIL @ EXTERIOR COLUMN
SCALE: 3/4" = 1'-0"



5 TYPICAL TURNDOWN AT EXISTING
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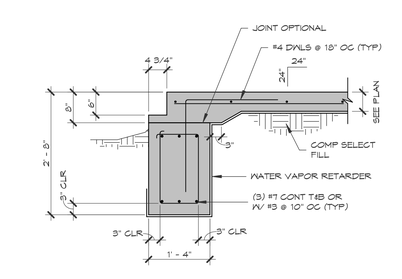

1 EXTERIOR GRADE BEAM AT BRICK LEDGE
SCALE: 3/4" = 1'-0"

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Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER

SEPTEMBER 18, 2025

CJG Engineers
Texas Engineering Firm Reg. No. F-170
6051 North Course Drive Suite 375
Houston, Texas 77072
713.780.3345

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FOUNDATION DETAILS

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. S&S SET S4.02
Drawn By: JG	
Date: 09/18/25	

ISSUED FOR BID

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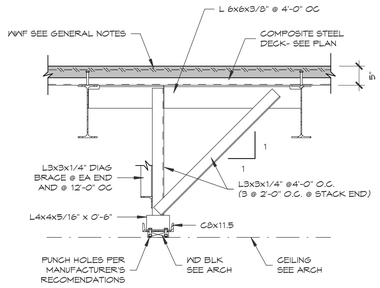
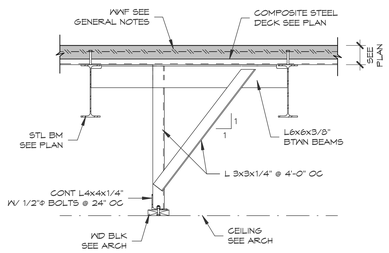
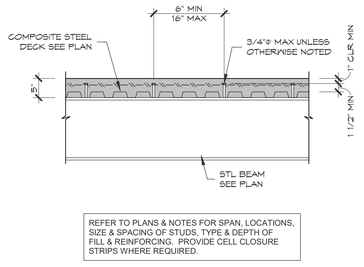


20 TYPICAL FOLDING PARTITION DETAIL
SCALE: 3/4" = 1'-0"



16 TYPICAL INTERIOR HEAD BRACE DETAIL
SCALE: 3/4" = 1'-0"



12 TYPICAL STUD PLACEMENT DETAIL
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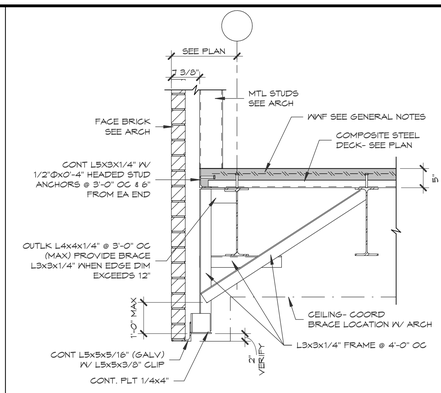

8 TYPICAL HANGING BRICK DETAIL
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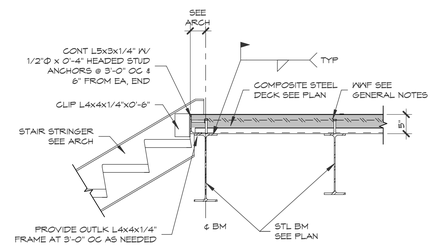

4 TYPICAL DETAIL AT STAIR
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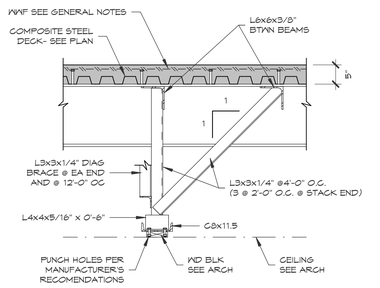
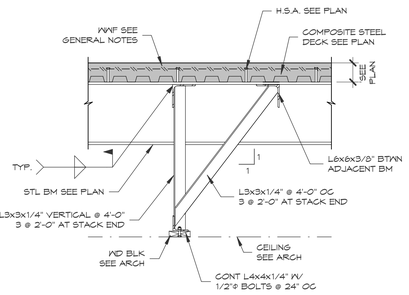
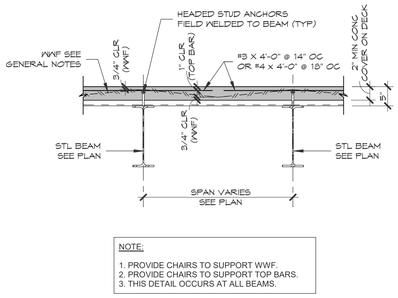


19 TYPICAL FOLDING PARTITION DETAIL
SCALE: 3/4" = 1'-0"



15 TYPICAL INTERIOR HEAD BRACE DETAIL
SCALE: 3/4" = 1'-0"



11 TYPICAL REINFORCING AT COMPOSITE FLOOR BEAMS
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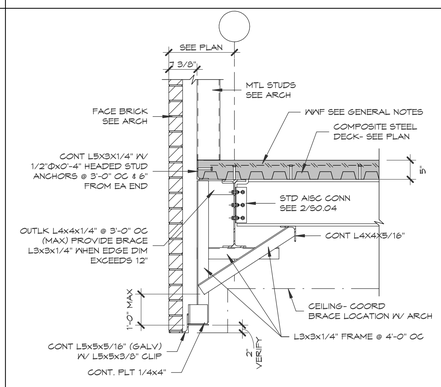

7 TYPICAL HANGING BRICK DETAIL
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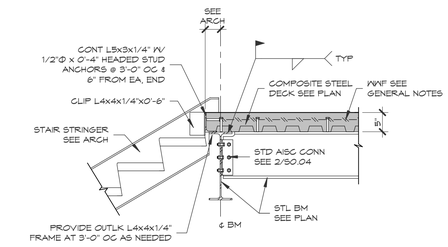

3 TYPICAL DETAIL AT STAIR
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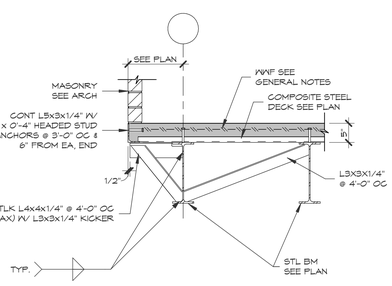
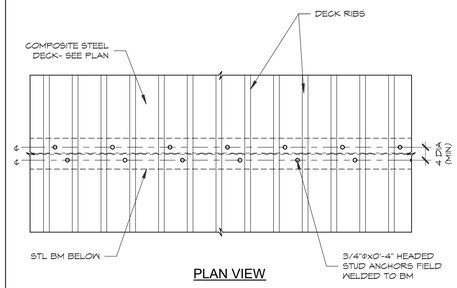
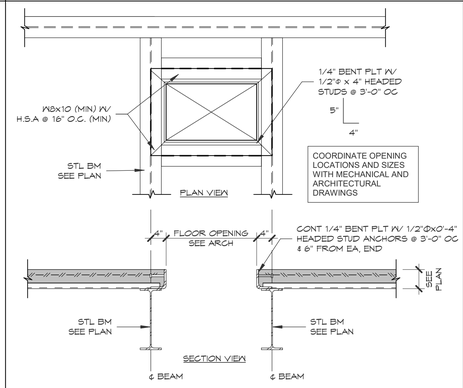


17 FLOOR EDGE DETAIL
SCALE: 3/4" = 1'-0"



13 TYPICAL STUD PLACEMENT PLAN
SCALE: 3/4" = 1'-0"



14 TYPICAL FLOOR OPENING DETAIL
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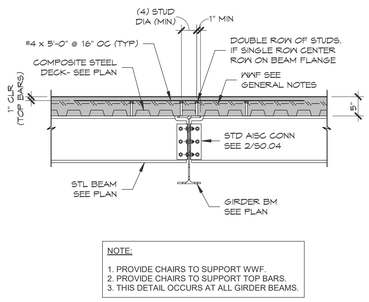
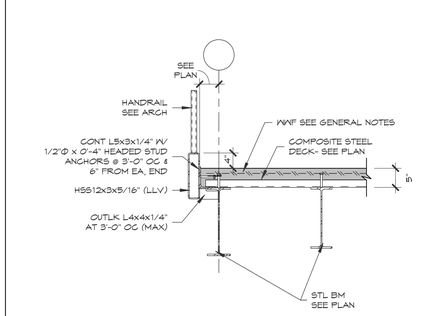
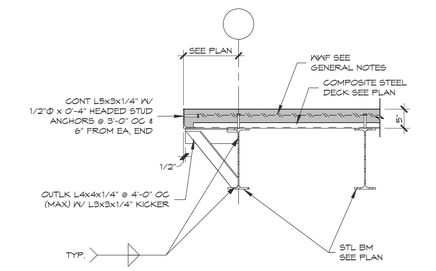


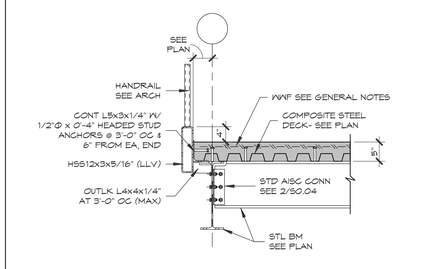
10 TYPICAL INTERIOR GIRDER BEAM DETAIL
SCALE: 3/4" = 1'-0"



6 FLOOR EDGE DETAIL AT HAND RAIL
SCALE: 3/4" = 1'-0"

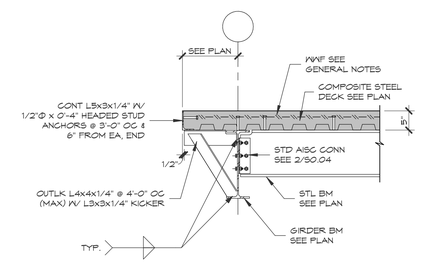


2 TYPICAL FLOOR EDGE DETAIL
SCALE: 3/4" = 1'-0"



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

5 FLOOR EDGE DETAIL AT HAND RAIL
SCALE: 3/4" = 1'-0"



1 TYPICAL FLOOR EDGE DETAIL
SCALE: 3/4" = 1'-0"

Date
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NEW OPERATIONS BUILDING
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NEW CANEY I.S.D.
NEW CANEY, TEXAS

HUNTER KORNEGAY 91030 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
SEPTEMBER 18, 2025
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Texas Engineering Firm Reg. No. F-170
6031 North Course Drive Suite 375
Houston, Texas 77072
713.780.3345

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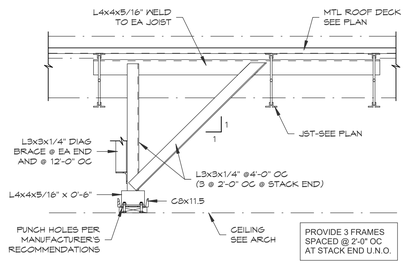
FLOOR FRAMING DETAILS

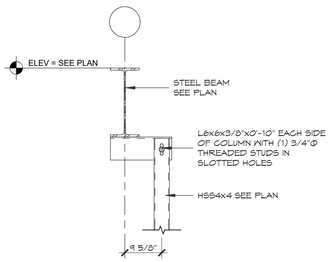
PACKAGE | VOLUME

Job No. 1971-05-01
Sheet No. S&S SET
Drawn By: JG
Date: 09/18/25
S5.01

ISSUED FOR BID



20 TYPICAL HANGING PARTITION BRACE DETAIL
SCALE: 3/4" = 1'-0"



16 SLIP CONNECTION DETAIL
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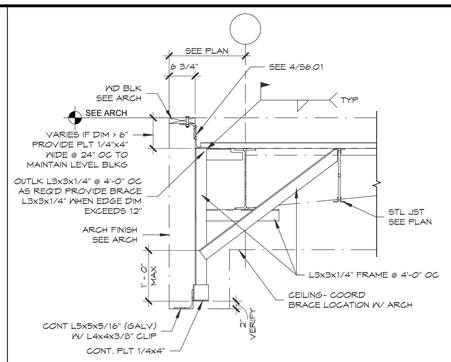
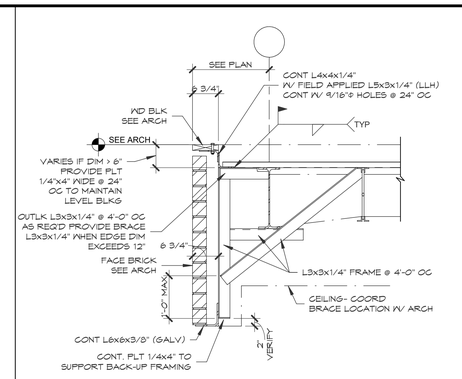
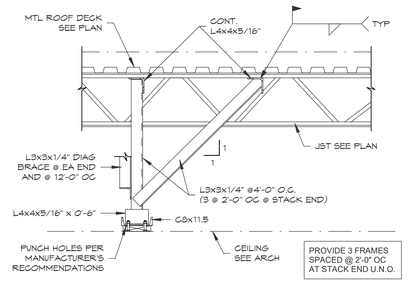


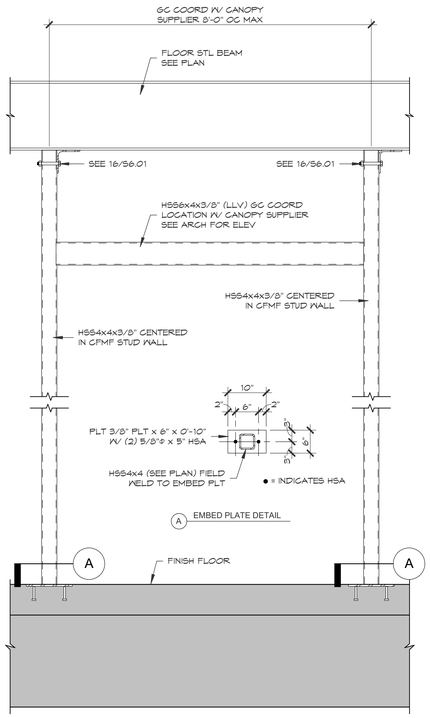
8 TYPICAL HANGING METAL PANEL DETAIL
SCALE: 3/4" = 1'-0"



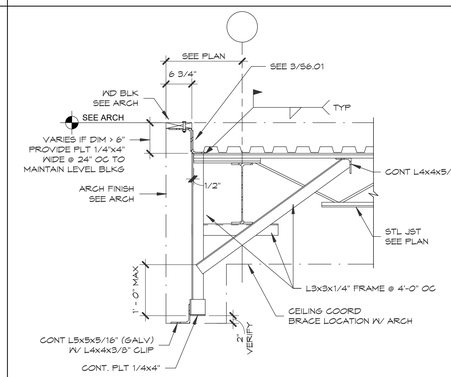
4 TYPICAL HANGING BRICK DETAIL
SCALE: 3/4" = 1'-0"



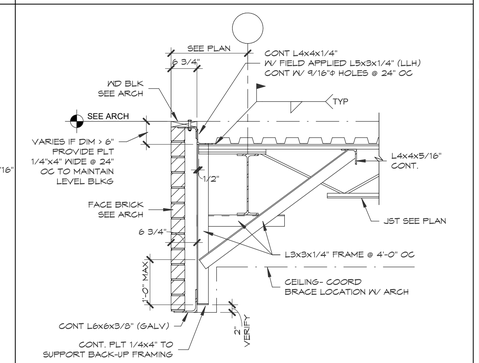
19 TYPICAL HANGING PARTITION BRACE DETAIL
SCALE: 3/4" = 1'-0"



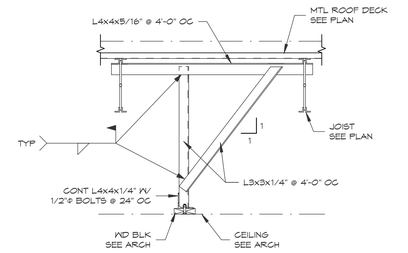
14 CANOPY SUPPORT DETAIL
SCALE: 3/4" = 1'-0"



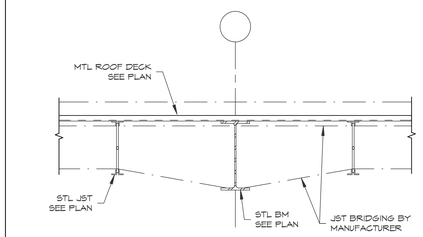
7 TYPICAL HANGING METAL PANEL DETAIL
SCALE: 3/4" = 1'-0"



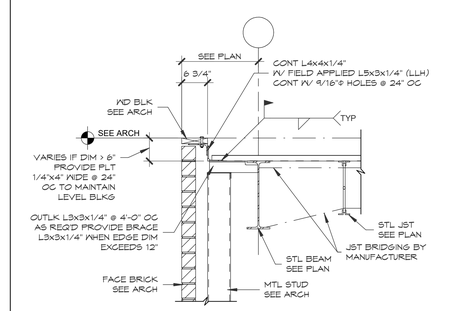
3 TYPICAL HANGING BRICK DETAIL
SCALE: 3/4" = 1'-0"



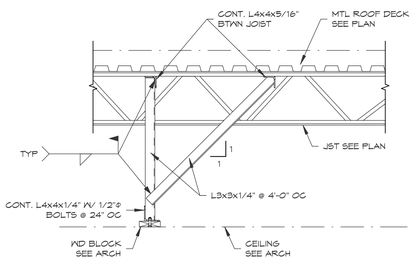
18 TYPICAL HEADER BRACE DETAIL
SCALE: 3/4" = 1'-0"



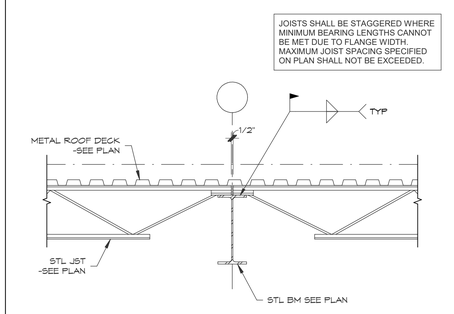
6 TYPICAL INTERIOR DETAIL
SCALE: 3/4" = 1'-0"



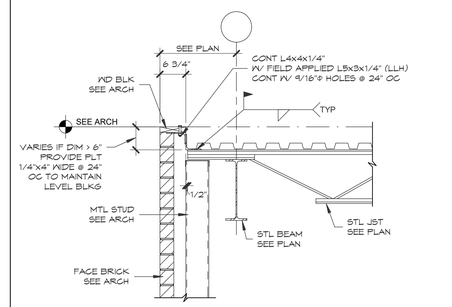
2 TYPICAL EXTERIOR DETAIL WITH METAL STUD
SCALE: 3/4" = 1'-0"



17 TYPICAL HEADER BRACE DETAIL
SCALE: 3/4" = 1'-0"



5 TYPICAL INTERIOR DETAIL AT K JOIST BEARING
SCALE: 3/4" = 1'-0"



1 TYPICAL EXTERIOR DETAIL WITH METAL STUD
SCALE: 3/4" = 1'-0"

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Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
HUNTER KORNEGAY
91030
LICENSED PROFESSIONAL ENGINEER

SEPTEMBER 18, 2025

CJG Engineers
Texas Engineering Firm Reg. No. F-170
6051 North Course Drive Suite 375
Houston, Texas 77072
713.780.3345

Huckabee
www.huckabee-inc.com
800.687.1229

ROOF FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1071-05-01	Sheet No. S&S SET S6.01
Drawn By: JG	
Date: 09/18/25	

ISSUED FOR BID

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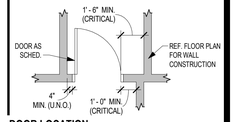
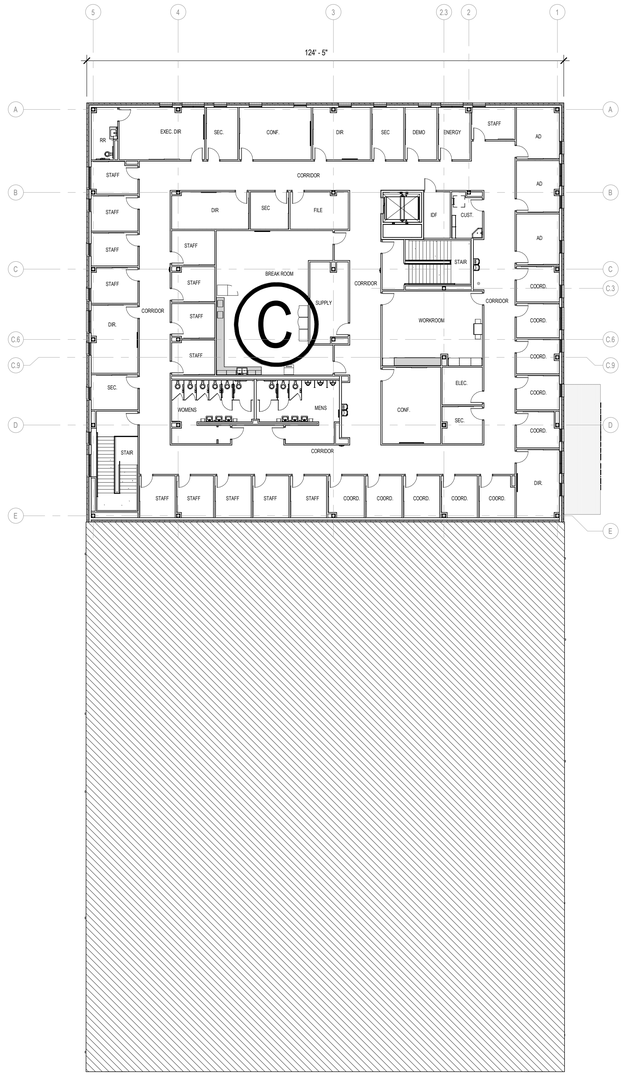


DOOR LOCATION

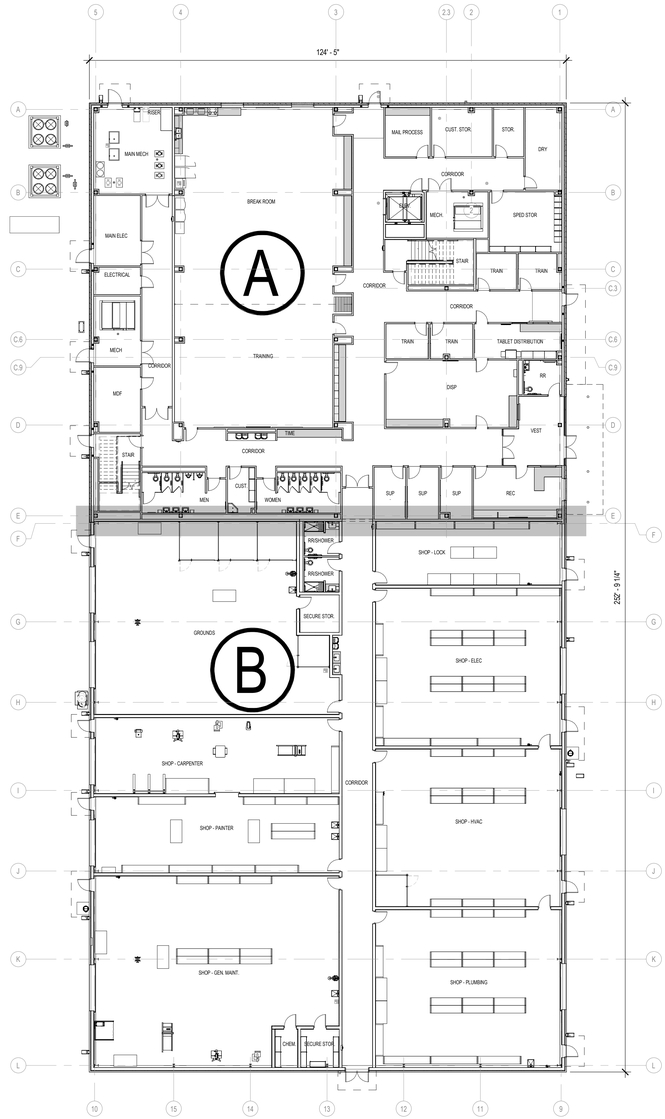
THE MASTER FLOOR PLAN SHOWS THE OVERALL BUILDING CONFIGURATION AND THE RELATIONSHIP OF THE PLAN AREAS WHICH FOLLOW. REFER TO LARGER SCALE FLOOR PLANS AND PLAN DETAILS FOR ADDITIONAL INFORMATION AND CONSTRUCTION REQUIREMENTS. MASTER PLAN LEGENDS ALSO APPLY TO 1/8" SCALE FLOOR PLAN AREAS.

MASTER FLOOR PLAN



2 MASTER PLAN - LEVEL 2 - OPERATIONS BUILDING
1/16" = 1'-0"

N TRUE



1 MASTER PLAN - LEVEL 1 - OPERATIONS BUILDING
1/16" = 1'-0"

N TRUE

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
JAMES TURNER HUCKABEE
31169
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

MASTER FLOOR PLANS - OPERATIONS BUILDING

Job No.	Sheet No.
1971-05-01	A1.01
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

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NOTES:

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4. SEE SPECIFICATIONS AND G3 SHEETS FOR ADDITIONAL MASONRY AND CFMF PARTITION REQUIREMENTS.
5. SEE PLUMBING PLANS AND ENLARGED FLOOR PLANS FOR LOCATIONS OF FIXTURES.
6. REF. DOOR SCHEDULES AND DETAILS FOR MASONRY ROUGH OPENING SIZES.
7. VERIFY ALL MASONRY OPENINGS WITH MANUFACTURERS' PRODUCTS (E.G. FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS, ETC.).
8. PROVIDE WD. BLOCKING IN ALL GYP. BD. WALLS AS REQ'D. AT LOCATIONS INCLUDING, BUT NOT LIMITED TO: HANDRAILS, TOILET ACCESSORIES, PROJECTORS, CASEWORK, TACK BD.'S, MARKER BD.'S, WALL STOPS & DOOR HOLDERS.
9. REFERENCE A8 SHEETS FOR ALL EQUIPMENT

GENERAL FLOOR PLAN NOTES

APPLIES TO AREA PLANS

F.E. **FIRE EXTINGUISHER (WALL MOUNTED)** - REF. SPEC. SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

F.E.C. **FIRE EXTINGUISHER CABINET** - REF. SPEC. SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

X' M.B. **MARKERBOARD** REF. TYP. DET. ON A4 SHEETS

X' T.B. **TACKBOARD** REF. TYP. DET. ON A4 SHEETS

ELECTRIC WATER COOLER - REF PLUMBING PLAN.

1.01 **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

SF-A **WINDOWSTOREFRONT/CURTAIN WALL ASSEMBLY TYPE** - REF. A3 SHTS.

RD-1 **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 **CALLOUT REFERENCE**

1 / A6.1 SIM **WALL SECTION REFERENCE** XX / A101

XXX' - X" FIN FLOOR **ELEVATION REFERENCE**

1-01 ROOM **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

REF. G3 SHEETS FOR EXTERIOR WALL TYPES AND INTERIOR PARTITION TYPE ASSEMBLIES.

REF. TYP. CONST. DTLS. FOR ADDITIONAL INFO.

MASONRY VENEER

CFMF PARTITION

EXISTING CFMF PARTITION

PARTITION TYPE TAGS

A3 | D

WALL ASSEMBLY 'A' IN PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
AD	ACOUSTICAL WALL TO DECK
AC	ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
AR	ACOUSTICAL RATED WALL TO DECK
GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION TO DECK / STRUCTURE

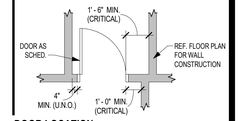
PARTITION LEGEND

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

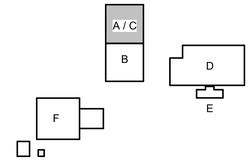
- 1 - 7/8" HAT CHANNEL
- 2 - 1 5/8" CFMF
- 3 - 2 1/2" CFMF
- 4 - 3 5/8" CFMF
- 5 - 6" CFMF
- 8 - 8" CFMF

PARTITION NOTES:

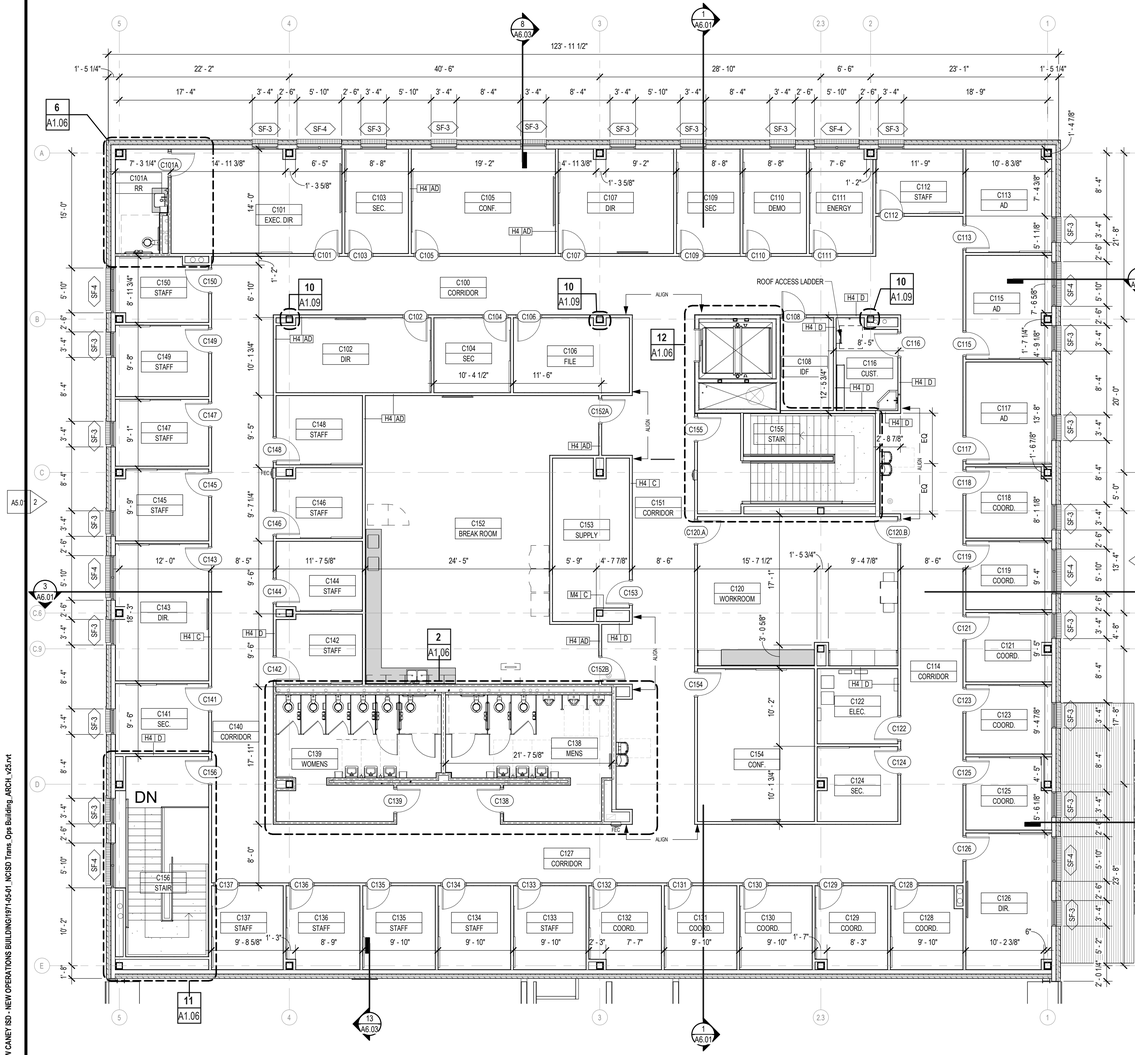
1. ALL INTERIOR WALL/PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.
2. **UNTAGGED WALL/PARTITIONS AND COLUMN FURRINGS** SHALL BE ASSUMED TO BE **"TYPICAL"**, AS FOLLOWS, FOR BIDDING PURPOSES:
   GYP BOARD
   WALLS/PARTITIONS - TYPE **H4**, ACOUSTICAL TO DECK (AD)
   COLUMN FURRING - **M4**, NON-ACOUSTICAL TO CEILING (C)
   ANY UNTAGGED PARTITIONS WHICH APPEAR INCONSISTENT WITH THE DESCRIPTIONS ABOVE SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO BIDDING.



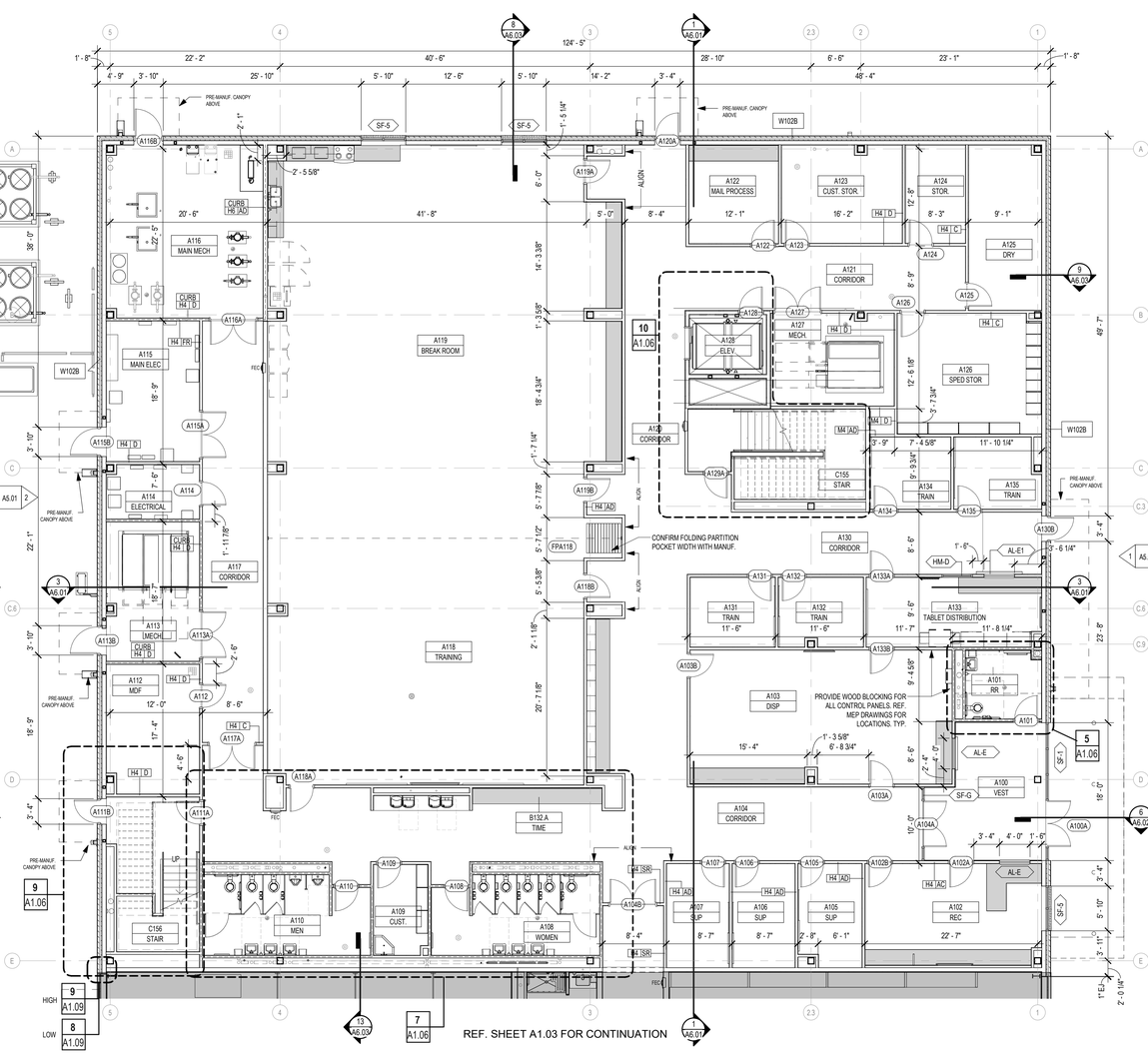
DOOR LOCATION



KEY PLAN
N.T.S.



2 FLOOR PLAN - LEVEL 2 - AREA C - OPERATIONS BUILDING
1/8" = 1'-0"



REF. SHEET A1.03 FOR CONTINUATION

1 FLOOR PLAN - LEVEL 1 - AREA A - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
ROBIN R. BANKS
31109
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

FLOOR PLAN - LEVEL 1 & 2 - AREA A & C - OPERATIONS BUILDING

Job No. 1971-05-01	Sheet No. A1.02
Drawn By: JT	
Date: 09/18/2025	

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5. SEE PLUMBING PLANS AND ENLARGED FLOOR PLANS FOR LOCATIONS OF FIXTURES.
6. REF. DOOR SCHEDULES AND DETAILS FOR MASONRY ROUGH OPENING SIZES.
7. VERIFY ALL MASONRY OPENINGS WITH MANUFACTURERS' PRODUCTS (E.G. FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS, ETC.).
8. PROVIDE WD. BLOCKING IN ALL GYP. BD. WALLS AS REQ'D. AT LOCATIONS INCLUDING, BUT NOT LIMITED TO: HANDRAILS, TOILET ACCESSORIES, PROJECTORS, CASEWORK, TACK BD.'S, MARKER BD.'S, WALL STOPS & DOOR HOLDERS.
9. REFERENCE A8 SHEETS FOR ALL EQUIPMENT

GENERAL FLOOR PLAN NOTES

APPLIES TO AREA PLANS

F.E. — **FIRE EXTINGUISHER (WALL MOUNTED)** - REF. SPEC. SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

F.E.C. — **FIRE EXTINGUISHER CABINET** - REF. SPEC. SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

X' M.B. — **MARKERBOARD** REF. TYP. DET. ON A4 SHEETS

X' T.B. — **TACKBOARD** REF. TYP. DET. ON A4 SHEETS

ELECTRIC WATER COOLER - REF. PLUMBING PLAN.

1.01 — **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

SF-A — **WINDOW/STOREFRONT/CURTAIN WALL ASSEMBLY TYPE** - REF. A3 SHTS.

RD-1 — **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 — **CALLOUT REFERENCE**

1 / A6.1 SIM — **WALL SECTION REFERENCE** XX / A101

XXX'-X" FIN FLOOR — **ELEVATION REFERENCE**

1-01 ROOM — **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

REF. G3 SHEETS FOR EXTERIOR WALL TYPES AND INTERIOR PARTITION TYPE ASSEMBLIES.

REF. TYP. CONST. DTLS. FOR ADDITIONAL INFO.

- **MASONRY VENEER**
- **CFMF PARTITION**
- **EXISTING CFMF PARTITION**

PARTITION TYPE TAGS

A3 / D — WALL ASSEMBLY 'A' IN PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
AD	ACOUSTICAL WALL TO DECK
AC	ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
AR	ACOUSTICAL RATED WALL TO DECK
GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION TO DECK / STRUCTURE

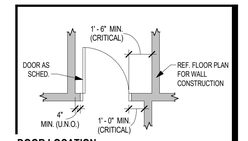
LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

- 1 - 7/8" HAT CHANNEL
- 2 - 1 5/8" CFMF
- 3 - 2 1/2" CFMF
- 4 - 3 5/8" CFMF
- 5 - 6" CFMF
- 8 - 8" CFMF

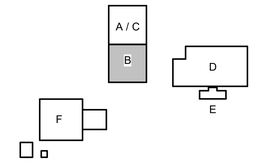
PARTITION NOTES:

1. ALL INTERIOR WALL/PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.
2. **UNTAGGED WALL/PARTITIONS AND COLUMN FURRINGS** SHALL BE ASSUMED TO BE **"TYPICAL"**, AS FOLLOWS, FOR BIDDING PURPOSES:
   GYP BOARD
   WALLS/PARTITIONS - TYPE **H4**, ACOUSTICAL TO DECK (AD)
   COLUMN FURRING - **M4**, NON-ACOUSTICAL TO CEILING (C)
   ANY UNTAGGED PARTITIONS WHICH APPEAR INCONSISTENT WITH THE DESCRIPTIONS ABOVE SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO BIDDING.

PARTITION LEGEND

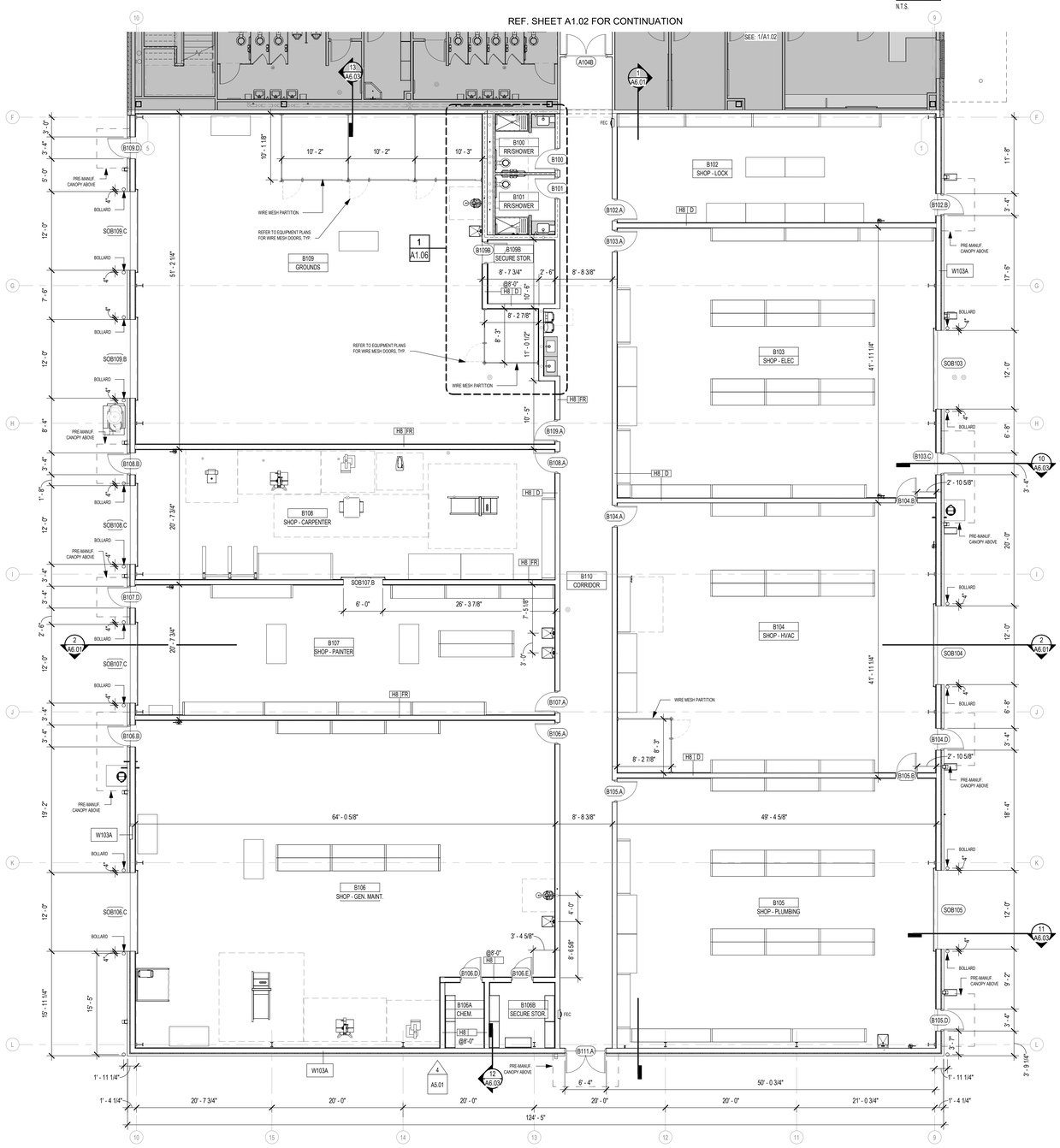


DOOR LOCATION



KEY PLAN
N.T.S.

REF. SHEET A1.02 FOR CONTINUATION



1 FLOOR PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT — DEREK R. BANKSTON — 31169 — STATE OF TEXAS
09-18-2025

Huckabee
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FLOOR PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

Job No. 1971-05-01	Sheet No. A1.03
Drawn By: JT	
Date: 09/18/2025	

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APPLIES TO AREA PLANS

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F.E.C. — **FIRE EXTINGUISHER CABINET** - REF. SPEC. SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

X' M.B. — **MARKERBOARD** REF. TYP. DET. ON A4 SHEETS

X' T.B. — **TACKBOARD** REF. TYP. DET. ON A4 SHEETS

ELECTRIC WATER COOLER - REF PLUMBING PLAN.

1.01 — **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

SF-A — **WINDOW/STOREFRONT/CURTAIN WALL ASSEMBLY TYPE** - REF. A3 SHTS.

RD-1 — **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 — **CALLOUT REFERENCE**

1 / A6.1 SIM — **WALL SECTION REFERENCE** XX / A101

XXX' - X" FIN FLOOR — **ELEVATION REFERENCE**

1-01 ROOM — **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

REF. G3 SHEETS FOR EXTERIOR WALL TYPES AND INTERIOR PARTITION TYPE ASSEMBLIES.

REF. TYP. CONST. DT'LS. FOR ADDITIONAL INFO.

- MASONRY VENEER
- CFMF PARTITION
- EXISTING CFMF PARTITION

PARTITION TYPE TAGS

A3 | D

WALL ASSEMBLY'N PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
AD	ACOUSTICAL WALL TO DECK
AC	ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
AR	ACOUSTICAL RATED WALL TO DECK
GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION TO DECK / STRUCTURE

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

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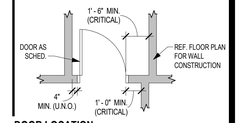
- 2 - 1 5/8" CFMF
- 3 - 2 1/2" CFMF
- 4 - 3 5/8" CFMF
- 5 - 6" CFMF
- 8 - 8" CFMF

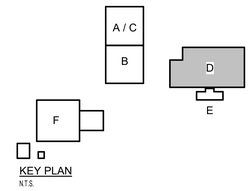
PARTITION NOTES:

1. ALL INTERIOR WALL/PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.
2. **UNTAGGED WALL/PARTITIONS AND COLUMN FURRINGS** SHALL BE ASSUMED TO BE **"TYPICAL"**, AS FOLLOWS, FOR BIDDING PURPOSES:
   GYP BOARD
   WALLS/PARTITIONS - TYPE **H4**, ACOUSTICAL TO DECK (AD)
   COLUMN FURRING - **M4**, NON-ACOUSTICAL TO CEILING (C)
   ANY UNTAGGED PARTITIONS WHICH APPEAR INCONSISTENT WITH THE DESCRIPTIONS ABOVE SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO BIDDING.

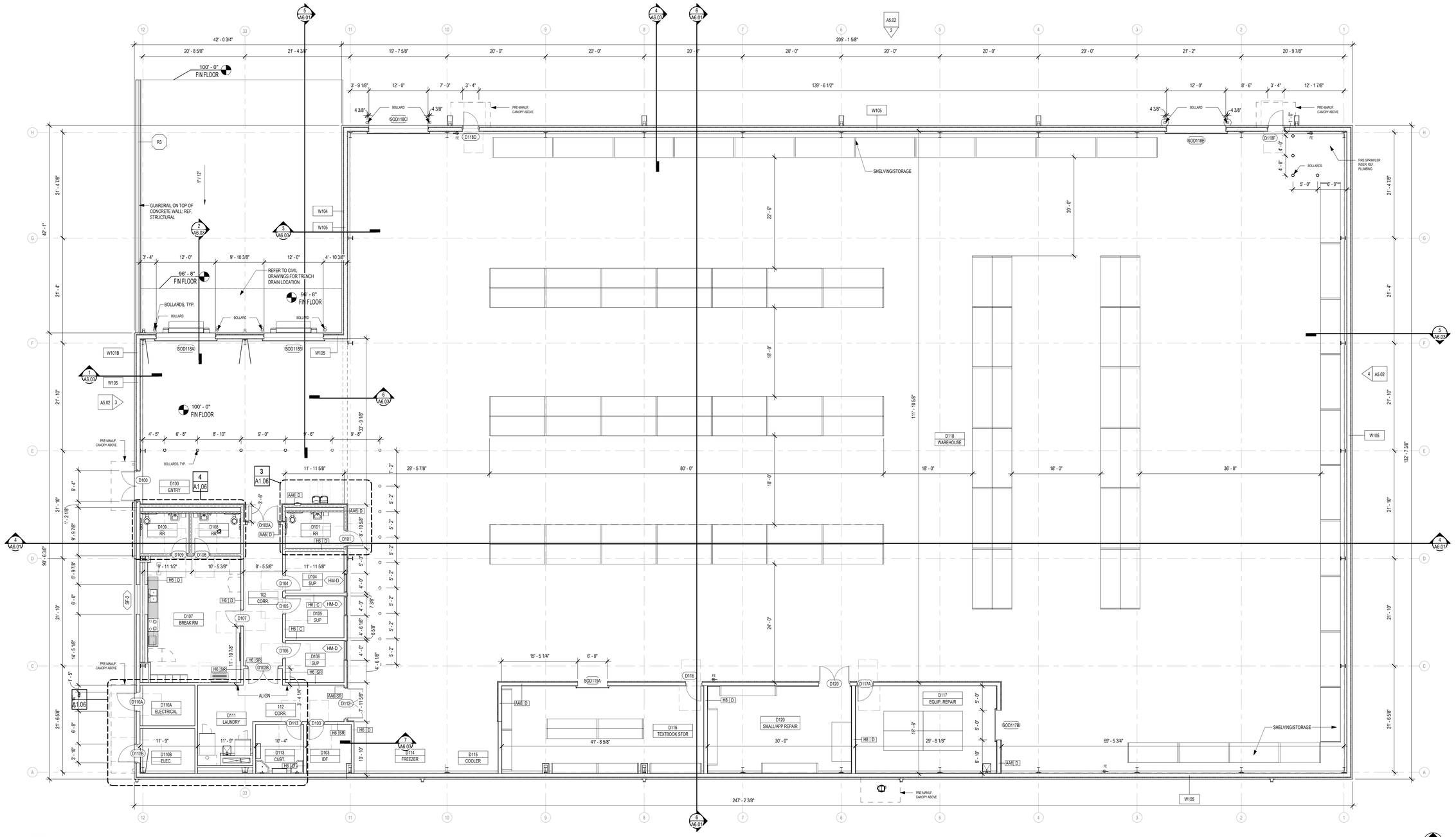
PARTITION LEGEND



DOOR LOCATION



KEY PLAN
N.T.S.



1 FLOOR PLAN - LEVEL 1 - AREA D - WAREHOUSE
1/8" = 1'-0"

TRUE

Date

Revision /

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT — TREVOR R. BANKSTON — 31159 — STATE OF TEXAS
09-18-2025

Huckabee
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FLOOR PLAN - LEVEL 1 - AREA D - WAREHOUSE

Job No.	Sheet No.
1971-05-01	A1.04
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

9/17/2025 10:52:15 PM
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NOTES:

1. THE CONTRACT DOCUMENTS INCLUDE BOTH THE DRAWINGS AND THE SPECIFICATIONS.
2. ALL ARCHITECTURAL FLOOR PLAN DIMENSIONS SHOWN ARE TO FACE OF C.F.M.F, MASONRY OR CONCRETE, U.N.O.
3. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.
4. SEE SPECIFICATIONS AND G3 SHEETS FOR ADDITIONAL MASONRY AND CFMF PARTITION REQUIREMENTS.
5. SEE PLUMBING PLANS AND ENLARGED FLOOR PLANS FOR LOCATIONS OF FIXTURES.
6. REF. DOOR SCHEDULES AND DETAILS FOR MASONRY ROUGH OPENING SIZES.
7. VERIFY ALL MASONRY OPENINGS WITH MANUFACTURERS' PRODUCTS (E.G. FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS, ETC.).
8. PROVIDE WD. BLOCKING IN ALL GYP. BD. WALLS AS REQ'D. AT LOCATIONS INCLUDING, BUT NOT LIMITED TO: HANDRAILS, TOILET ACCESSORIES, PROJECTORS, CASEWORK, TACK BD.'S, MARKER BD.'S, WALL STOPS & DOOR HOLDERS.
9. REFERENCE A8 SHEETS FOR ALL EQUIPMENT

GENERAL FLOOR PLAN NOTES

APPLIES TO AREA PLANS

FIRE EXTINGUISHER (WALL MOUNTED) - REF. SPEC. SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

F.E.

FIRE EXTINGUISHER CABINET - REF. SPEC. SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

F.E.C.

MARKERBOARD REF. TYP. DET. ON A4 SHEETS

X' M.B.

TACKBOARD REF. TYP. DET. ON A4 SHEETS

X' T.B.

ELECTRIC WATER COOLER - REF PLUMBING PLAN.

1.01 **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

SF-A **WINDOW/STOREFRONT/CURTAIN WALL ASSEMBLY TYPE** - REF. A3 SHTS.

RD-1 **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 **CALLOUT REFERENCE**

1 / A6.1 SIM **WALL SECTION REFERENCE** XX / A101

XXX'-X" FIN FLOOR **ELEVATION REFERENCE**

1-01 ROOM **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

REF. G3 SHEETS FOR EXTERIOR WALL TYPES AND INTERIOR PARTITION TYPE ASSEMBLIES.

REF. TYP. CONST. DT'LS. FOR ADDITIONAL INFO.

MASONRY VENEER

CFMF PARTITION

EXISTING CFMF PARTITION

PARTITION TYPE TAGS

A3 / D — WALL ASSEMBLY'N PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
AD	ACOUSTICAL WALL TO DECK
AC	ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
AR	ACOUSTICAL RATED WALL TO DECK
GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION TO DECK / STRUCTURE

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

- 1 - 7/8" HAT CHANNEL
- 2 - 1 5/8" CFMF
- 3 - 2 1/2" CFMF
- 4 - 3 5/8" CFMF
- 5 - 6" CFMF
- 8 - 8" CFMF

PARTITION NOTES:

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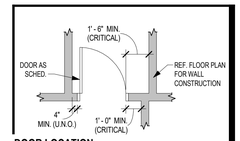
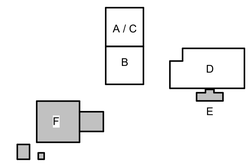
   WALLS/PARTITIONS - TYPE **H4**, ACOUSTICAL TO DECK (AD)
   COLUMN FURRING - **M4**, NON-ACOUSTICAL TO CEILING (C)
   ANY UNTAGGED PARTITIONS WHICH APPEAR INCONSISTENT WITH THE DESCRIPTIONS ABOVE SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO BIDDING.

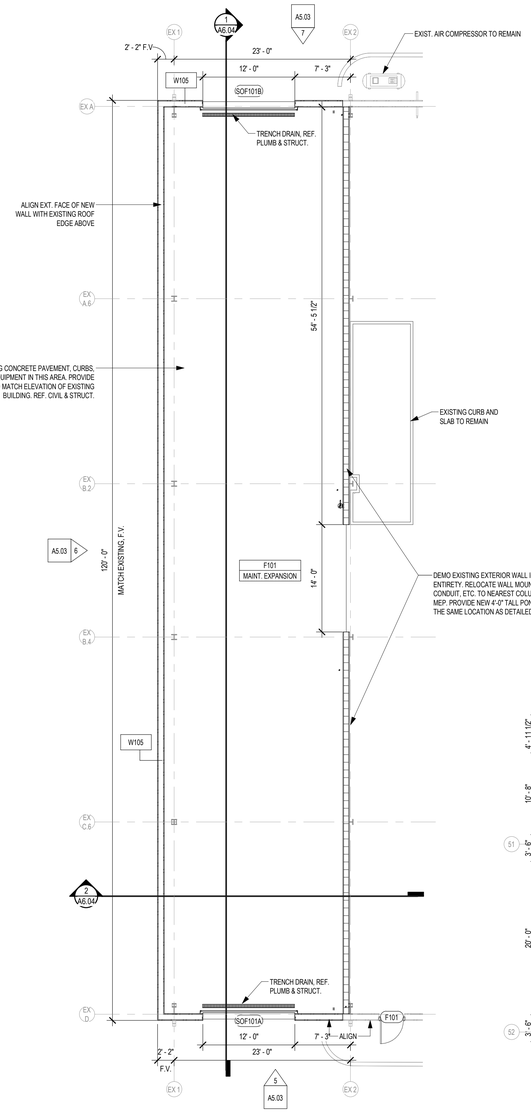
PARTITION LEGEND



DOOR LOCATION

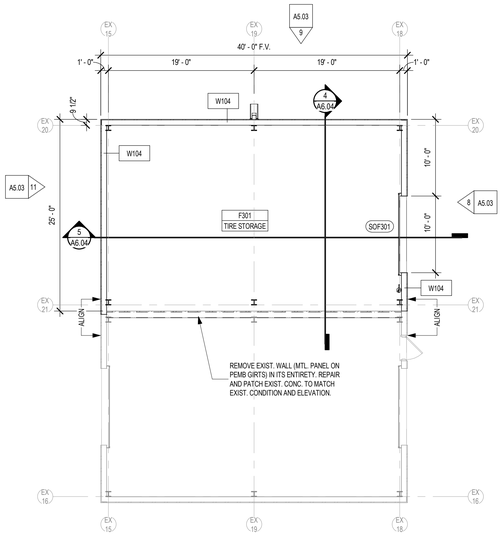


KEY PLAN
N.T.S.



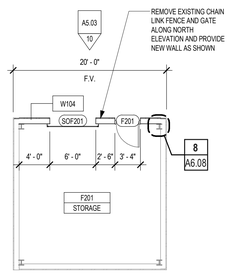
3 FLOOR PLAN - STORAGE ADDITION
1/8" = 1'-0"

N TRUE



2 FLOOR PLAN - MAINTENANCE EXPANSION
1/8" = 1'-0"

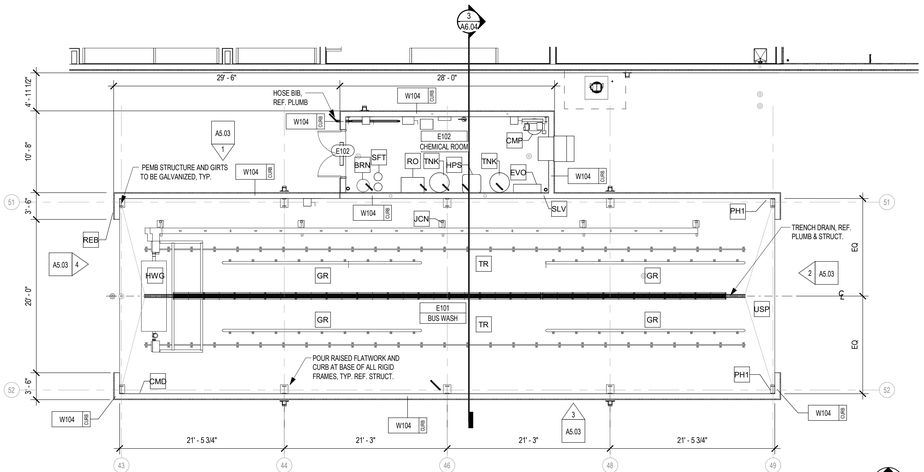
N TRUE



BUS WASH EQUIPMENT SCHEDULE

MARK	QUANTITY	DESCRIPTION	RESPONSIBILITY
BRN	1	BRINE SYSTEM	
CMD	1	COMMAND POST	
CMP	1	AIR COMPRESSOR	
EVO	1	EVO CHEMICAL DELIVERY	
GR	4	4" GUIDE RAILS	
HPS	1	HIGH PRESSURE PUMP STAND	
HWG	1	HEAVY WASH GANTRY	
JCN	1	GANTRY JUNCTION BOX	
PH1	2	UNDERSPRAY PHOTO EYES	
REB	1	REMOTE EMERGENCY BUTTON	
RO	1	RO SPOT FREE SYSTEM	
SFT	1	WATER SOFTENER	
SLV	1	ACCESS SLEEVE IN WALL	
TNK	2	300 GALL. STORAGE TANK	
TR	2	TRAVEL RAILS	
USP	1	UNDERCARRIAGE SPRAY	

PROVIDE VEHICLE WASHING EQUIPMENT AS SPECIFIED IN SECTION 11 1126



1 FLOOR PLAN - BUS WASH
1/8" = 1'-0"

N TRUE

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT — JUSTIN TAYLOR — 31165 — STATE OF TEXAS
09-18-2025

Huckabee
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800.687.1229

FLOOR PLANS - BUS WASH, MAINTENANCE & STORAGE BUILDINGS

Job No. 1971-05-01	Sheet No. A1.05
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

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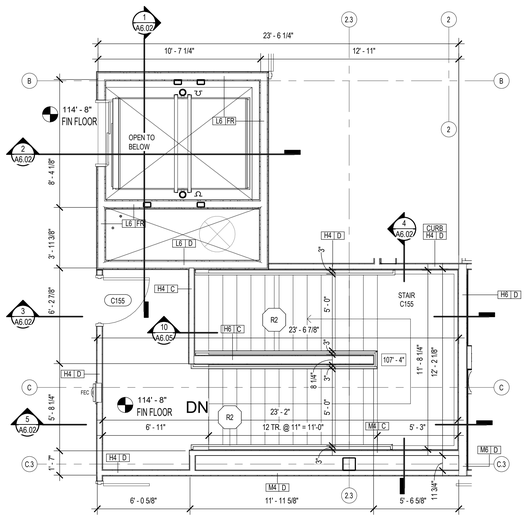
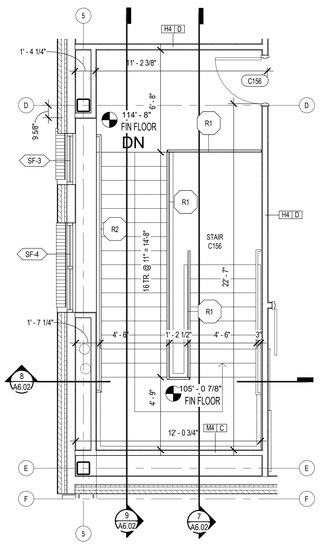
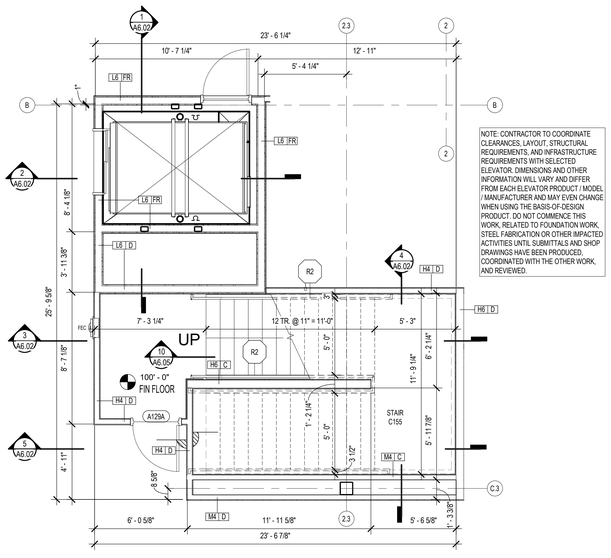


12 ENLARGED PLAN - STAIR A129 / ELEV. A128 - LEVEL 2
1/4" = 1'-0"

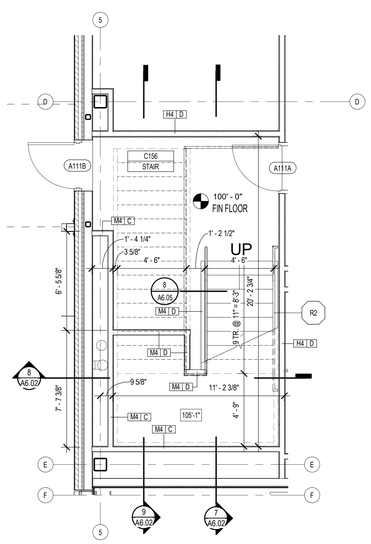


11 ENLARGED PLAN - STAIR A111 - LEVEL 2
1/4" = 1'-0"

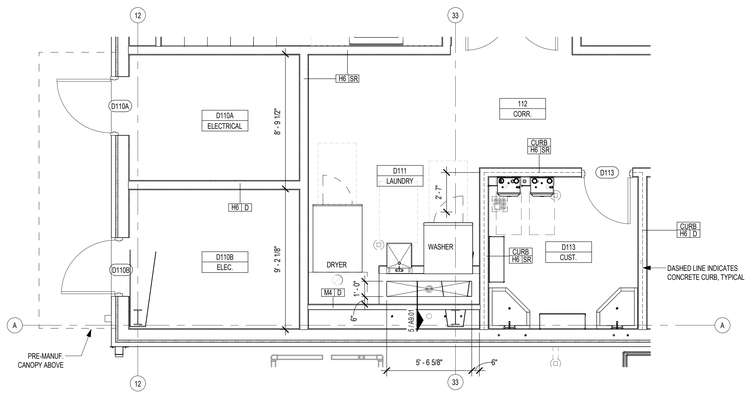


10 ENLARGED PLAN - STAIR A129 / ELEV. A128 - LEVEL 1
1/4" = 1'-0"

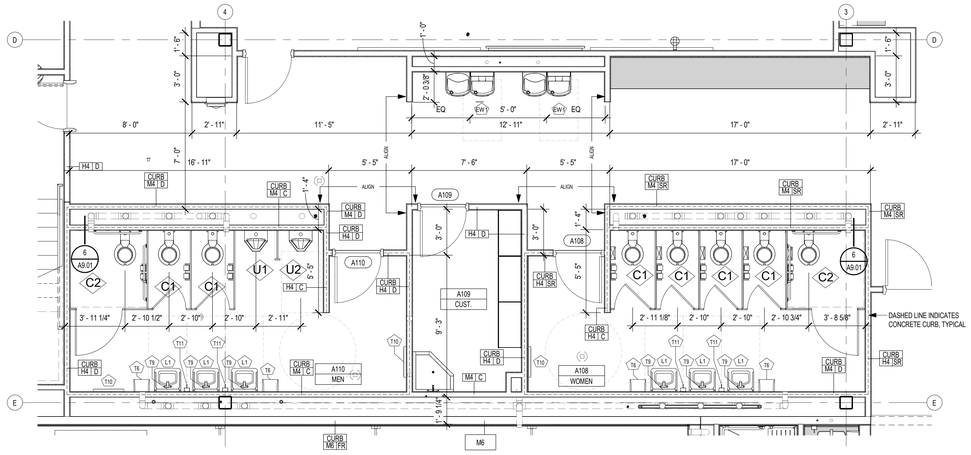
NOTE: CONTRACTOR TO COORDINATE CLEARANCES, LAYOUT, STRUCTURAL REQUIREMENTS, AND INFRASTRUCTURE REQUIREMENTS WITH SELECTED ELEVATOR. DIMENSIONS AND OTHER INFORMATION WILL VARY AND DIFFER FROM EACH ELEVATOR PRODUCT / MODEL / MANUFACTURER AND MAY EVEN CHANGE WHEN USING THE BASIS-OF-DESIGN PRODUCT. DO NOT COMMENCE THIS WORK, RELATED TO FOUNDATION WORK, STEEL FABRICATION OR OTHER IMPACTED ACTIVITIES UNTIL SUBMITTALS AND SHOP DRAWINGS HAVE BEEN PRODUCED, COORDINATED WITH THE OTHER WORK, AND REVIEWED.



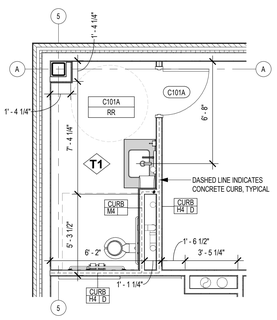
9 ENLARGED PLAN - STAIR A111 - LEVEL 1
1/4" = 1'-0"



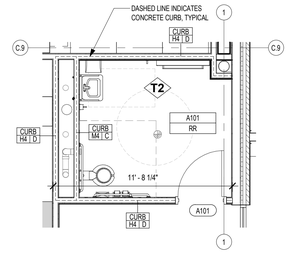
8 ENLARGED PLAN - D111 - LEVEL 1 - WAREHOUSE
1/4" = 1'-0"



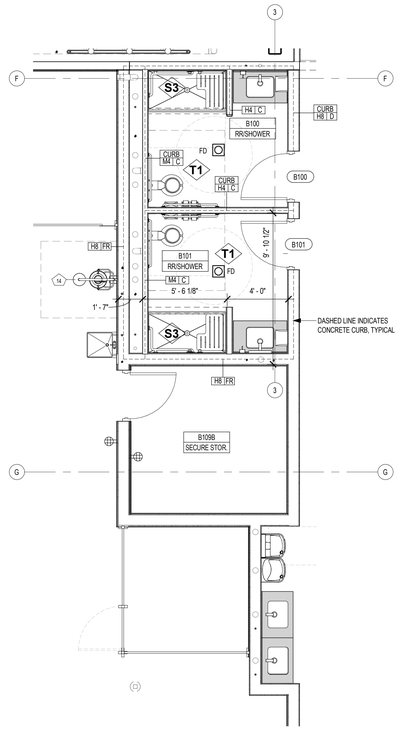
7 ENLARGED PLAN - WOMENS RR 108 / MENS RR 110
1/4" = 1'-0"



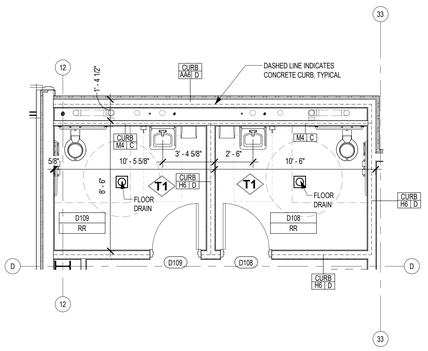
6 ENLARGED PLAN - SINGLE USER RR - C101.A
1/4" = 1'-0"



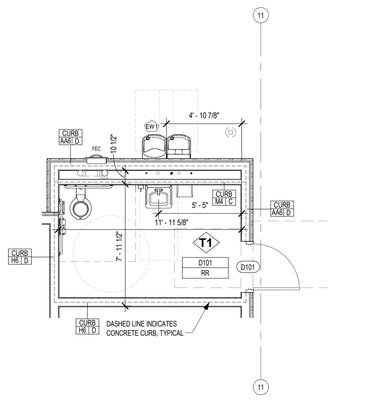
5 ENLARGED PLAN - SINGLE USER RR - A101
1/4" = 1'-0"



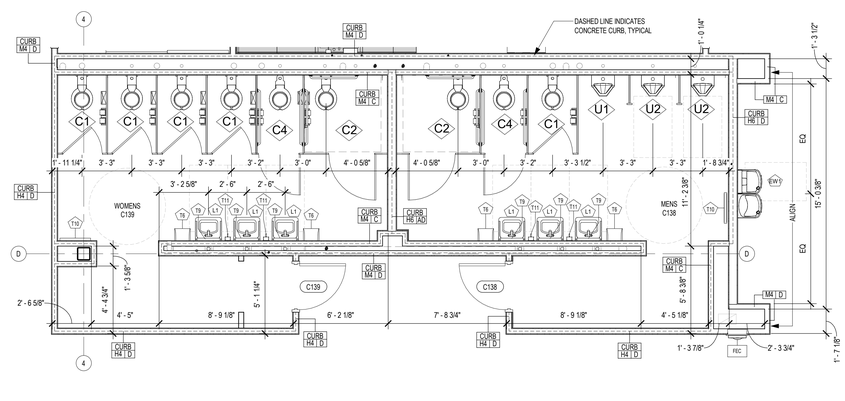
1 ENLARGED PLAN - RR/SHOWER - B100/B101
1/4" = 1'-0"



4 ENLARGED PLAN - D108 / D109 - LEVEL 1 - WAREHOUSE
1/4" = 1'-0"



3 ENLARGED PLAN - D101 - LEVEL 1 - WAREHOUSE
1/4" = 1'-0"



2 ENLARGED PLAN - WOMENS RR C139 / MENS C138
1/4" = 1'-0"

GENERAL NOTES

1. FOR ACCESSIBLE FIXTURES & ACCESSORIES REFER TO SHEET A1.06 "TOILET ACCESSORIES AND PLUMBING FIXTURES" FOR MOUNTING HEIGHTS & ACCESSIBILITY REQUIREMENTS. THE ACCESSORIES ARE CALLED OUT IN THE INDIVIDUAL STALL / ROOM TYPES / SHOWER TYPES.
2. FIXTURES THAT STAND ALONE WILL BE TAGGED W/ A SYMBOL; LAVS, URINAL'S & EWC'S
3. PROVIDE PIPE INSULATION AS SPECIFIED AT ALL EXPOSED PIPING AND DRAIN AT ACCESSIBLE LAVATORIES.

PLAN LEGEND

30" x 48" CLEAR FLOOR SPACE PER ACCESSIBILITY REQUIREMENTS

5'-0" DIAMETER TURNING SPACE PER ACCESSIBILITY REQUIREMENTS

C1 T1 S1

L1 L2

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
DEREK C. BARRINGTON
21169
STATE OF TEXAS
09-18-2025

Huckabee
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ENLARGED PLANS

Job No.	Sheet No.
1971-05-01	A1.06
Drawn By: JT	
Date: 09/18/2025	

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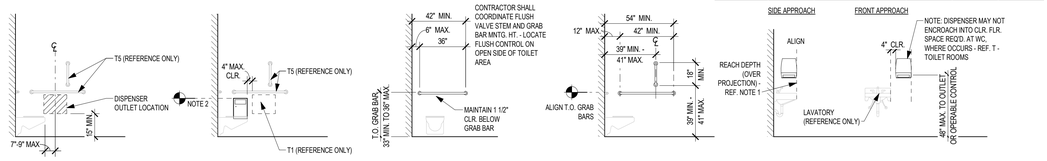


T1 TOILET TISSUE (ROLL) DISPENSER
2012 TAS 604.7 & 609.3

NOTES:
1. MAINTAIN 1-1/2" CLEARANCE BELOW GRAB BAR.

T2 SANITARY NAPKIN DISPOSAL

NOTES:
1. MAINTAIN 1-1/2" CLEARANCE BELOW GRAB BAR.
2. ALIGN T.O. DISPOSAL WITH T.O. TOILET TISSUE DISPENSER.

T3 REAR WALL GRAB BAR
2017 ICC A117.1 604.5.2

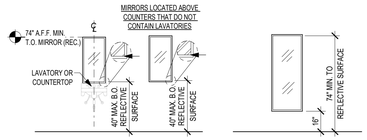
NOTES:
1. REAR GRAB BAR SHALL BE PERMITTED TO BE 24" MIN. IN LENGTH, CENTERED ON THE W.C. WHERE WALL SPACE DOES NOT PERMIT A 36" GRAB BAR DUE TO THE LOCATION OF A RECESSED FIXTURE ADJ. TO THE W.C.
2. WHERE THE A.H.J. REQUIRES FLUSH CONTROLS FOR FLUSH VALVES TO BE LOCATED IN A POSITION THAT CONFLICTS WITH THE REAR GRAB BAR, THE GRAB BAR SHALL BE PERMITTED TO BE SPLIT OR SHIFTED TO THE OPEN SIDE OF THE TOILET AREA.

T4 SIDE WALL GRAB BAR
2017 ICC A117.1 604.5.1

2017 ICC A117.1 TABLE 603.6 MAXIMUM REACH DEPTH AND HEIGHT (FOR TOWEL DISPENSERS AND HAND DRYERS)						
REACH DEPTH	0.5 INCH	2 INCHES	5 INCHES	6 INCHES	9 INCHES	11 INCHES
REACH HEIGHT	48 INCHES	46 INCHES	42 INCHES	40 INCHES	36 INCHES	34 INCHES

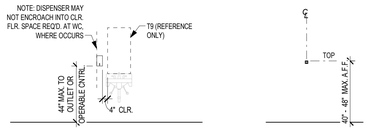
T5 PAPER TOWEL DISPENSER
2017 ICC A117.1 603.6

NOTE:
1. REFER TO TABLE 603.6 MAXIMUM REACH DEPTH AND HEIGHT WHERE DISPENSER CANNOT BE ALIGNED WITH FRONT OF LAVATORY.



T6 MIRROR
2017 ICC A117.1 603.3

T6.1 MIRROR (FULL-LENGTH)



T13 SOAP DISPENSER
2017 ICC A117.1 308

T12 COAT/CLOTHES HOOK
2017 ICC A117.1 603.4 & 604.8

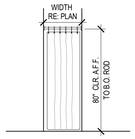
REF. S - SHOWER COMPARTMENTS FOR MOUNTING LOCATIONS AND HEIGHTS

T16 18" VERTICAL GRAB BAR

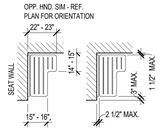
T14 24" GRAB BAR

T15 L-SHAPED 18" X 30" GRAB BAR

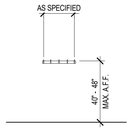
T18 30" GRAB BAR



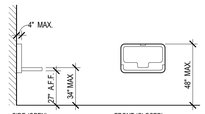
T17 SHOWER CURTAIN & ROD W/ CURTAIN HOOKS



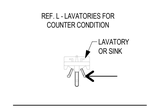
T18 FOLDING L-SHAPED SHOWER SEAT
2017 ICC A117.1 610.3.2



T19 TOWEL BAR
2017 ICC A117.1 308



T20 DIAPER CHANGING STATION
2017 ICC A117.1 603.5



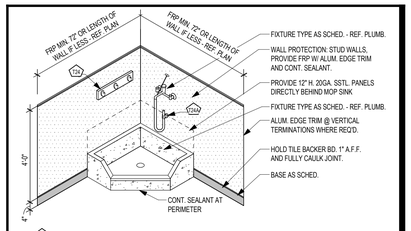
T22 UNDER-SINK PIPING COVERS
2017 ICC A117.1 606.6

T20 MOP AND BROOM HOLDER

T20A HOSE AND HOSE HOLDER

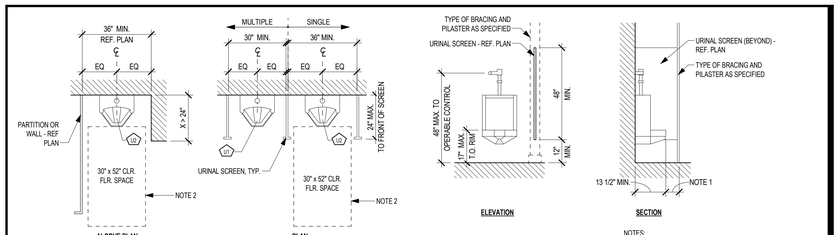
T# PLAN DESIGNATION

T - TOILET ACCESSORIES



MS PLAN DESIGNATION

MS - MOP SINK

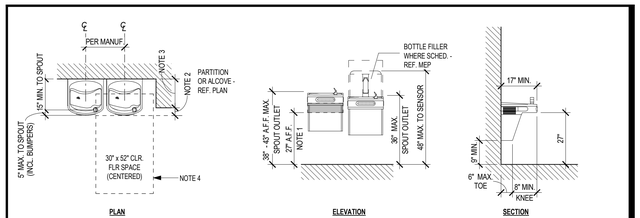


U1 URINAL (NON-ACCESSIBLE)
U2 ACCESSIBLE URINAL
2017 ICC A117.1 605

U# PLAN DESIGNATION

NOTES:
1. PARTITION SHALL EXTEND MINIMUM 18 INCHES OR TO A POINT NOT LESS THAN 6 INCHES BEYOND THE OUTERMOST FRONT LIP OF THE URINAL MEASURED FROM THE FINISHED BACK WALL SURFACE, WHICHEVER IS GREATER (2018 IPC 405.3.5 URINAL PARTITIONS).
2. IN EXISTING CONSTRUCTION, CLEAR FLOOR SPACE MAY BE REDUCED TO 30" x 48".

U - URINALS



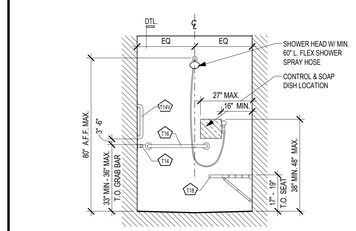
EW1 ACCESSIBLE BI-LEVEL WATER COOLER W/ BOTTLE FILLER

EW# PLAN DESIGNATION

2017 ICC A117.1 602

NOTES:
1. PROVIDE CANE DETECTION APRON. MUST NOT IMPEDE CLEAR FLOOR SPACE REQUIREMENT FOR ADJACENT UNIT.
2. WHERE L-LOCATED IN ALCOVES, CANE DETECTION APRON NOT REQUIRED WHEN PROTRUSION IS 4" OR LESS.
3. WHERE A CLEAR FLOOR SPACE IS POSITIONED FOR A FORWARD APPROACH, THE ALCOVE SHALL BE 36 INCHES MINIMUM IN WIDTH WHERE THE DEPTH EXCEEDS 24 INCHES.
4. IN EXISTING CONSTRUCTION, CLEAR FLOOR SPACE MAY BE REDUCED TO 30" x 48".

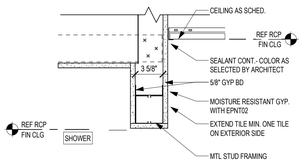
EW - ELECTRIC WATER COOLERS



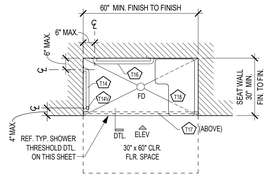
T17 SHOWER CURTAIN & ROD (NOT SHOWN)

T22 SOAP DISH (NOT SHOWN)

CONTROL WALL ELEVATION

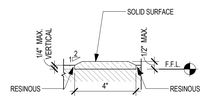


SHOWER BULKHEAD DETAIL



PLAN

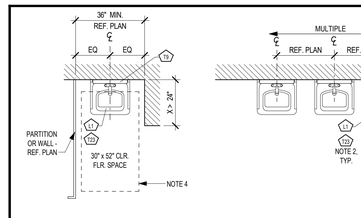
S3 STANDARD ROLL-IN TYPE SHOWER COMPARTMENT W/ SEAT
2017 ICC A117.1 608.2.2



SHOWER THRESHOLD DETAIL (DTL)

S# PLAN DESIGNATION

S - SHOWERS



L1 WALL-MOUNTED LAVATORY
L2 COUNTER-MOUNTED SINK

L# PLAN DESIGNATION

2017 ICC A117.1 606

NOTES:
1. THE FRONT OF THE LAVATORIES AND SINKS SHALL BE 34 INCHES MAXIMUM ABOVE THE FLOOR MEASURED TO THE HIGHER OF THE RIM OR COUNTER SURFACE.
2. PROVIDE AT EACH LAVATORY.
3. TOILET ACCESSORY MOUNTING HEIGHTS TO OPERABLE CONTROLS SHALL BE 44" A.F.F. MAX. WHERE THE FORWARD REACH DEPTH OVER THE COUNTER IS >20" AND NOT MORE THAN 25" MAX.
4. IN EXISTING CONSTRUCTION, CLEAR FLOOR SPACE MAY BE REDUCED TO 30" x 48".

ALCOVE PLAN
PLAN
COUNTER PLAN
COUNTER SECTION

L - LAVATORIES & SINKS

1. THIS SHEET PROVIDES GUIDANCE FOR MOUNTING LOCATIONS AND HEIGHTS DERIVED FROM ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES. NOT ALL TYPES SCHEDULED MAY BE USED. REFER TO ENLARGED FLOOR PLANS FOR QUANTITIES AND LOCATIONS.
2. CONFIGURATIONS ON THIS SHEET ARE DIAGRAMMATIC. IN THE EVENT A PROJECT-SPECIFIC CONDITION DOES NOT COMPLY WITH CLEARANCES INDICATED, NOTIFY THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
3. TOILET ACCESSORIES: REFER TO SPECIFICATION SECTION 10 2800 TOILET, BATH AND LAUNDRY ACCESSORIES FOR ADDITIONAL INFORMATION.
4. FIXTURES: REFER TO PLUMBING PLANS FOR SCHEDULED TYPE AND DIVISION 22 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. AT METAL STUD PARTITIONS, PROVIDE FIRE-RETARDANT TREATED WOOD BLOCKING FOR ANCHORAGE OF GRAB BARS, WALL-MOUNTED SEATS AND BENCHES, DIAPER CHANGING STATIONS, AND OTHER SUCH WALL-MOUNTED ACCESSORIES WHERE ADDITIONAL LOADS ARE ANTICIPATED.

GENERAL NOTES

NOTE:
1. WHERE MULTIPLE GRAB BARS ARE USED, REQUIRED HORIZONTAL GRAB BARS SHALL BE INSTALLED AT THE SAME HEIGHT ABOVE FINISH FLOOR.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
JOSEPH R. BARNHOUSE
31109
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

TOILET ACCESSORIES AND PLUMBING FIXTURES

Job No.	Sheet No.
1971-05-01	A1.07
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

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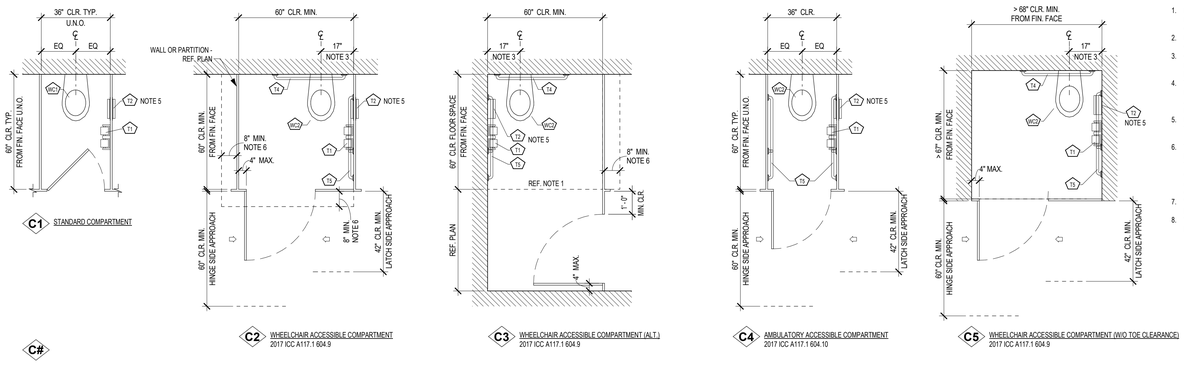
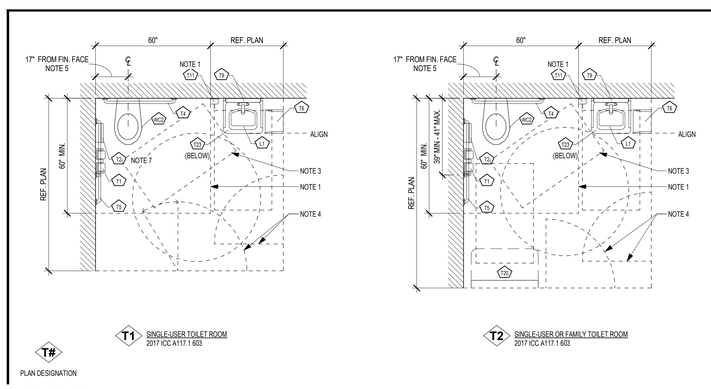


NOTES:

1. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.
2. LOCATE FLUSH CONTROLS ON THE OPEN SIDE OF THE TOILET AREA.
3. CENTERLINE OF WATER CLOSET SHALL BE 16" MIN. TO 18" MAX. AS MEASURED FROM FACE OF FINISHED WALL OR PARTITION.
4. TOILET PARTITION DIMENSIONS SHOWN REPRESENT MINIMUM REQUIRED CLEARANCES AND SHALL GOVERN U.N.O. ON ENLARGED PLANS.
5. PROVIDE AT FEMALE RESTROOMS ONLY. REFER TO SPEC SECTION 10 2800 FOR ADDITIONAL INFORMATION ON TYPE.
6. THE FRONT AND SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF 12" MIN. ABOVE THE FINISH FLOOR AND 8" BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION (EITHER SIDE OF COMPARTMENT), EXCLUSIVE OF PARTITION SUPPORT MEMBERS.
7. WC1 TOP OF SEAT HEIGHT ABOVE FINISH FLOOR: 15" - 16".
8. WC2 TOP OF SEAT HEIGHT ABOVE FINISH FLOOR: 17" - 19".

C - TOILET COMPARTMENTS



T1 SINGLE-USER TOILET ROOM
2017 ICC A117.1 603

T2 SINGLE-USER OR FAMILY TOILET ROOM
2017 ICC A117.1 603

T# PLAN DESIGNATION

NOTES:

1. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.
2. LOCATE FLUSH CONTROLS ON THE OPEN SIDE OF THE TOILET AREA.
3. WHERE A 30" x 52" CLEAR FLOOR SPACE IS PROVIDED BEYOND THE ARC OF THE DOOR SWING, DOORS SHALL BE PERMITTED TO SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE. (2017 ICC A117.1 603.2.2 EXCEPTION 2).
4. DOOR LOCATION/POSITION SHOWN DIAGRAMMATICALLY. REF. PLAN FOR DIMENSIONS AND REQUIRED CLEARANCES.
5. CENTERLINE OF WATER CLOSET SHALL BE 16" MIN. TO 18" MAX. AS MEASURED FROM FACE OF FINISHED WALL OR PARTITION.
6. WC2 TOP OF SEAT HEIGHT ABOVE FINISH FLOOR: 17" - 19".
7. AT TOILET ROOM "T1", PROVIDE TOILET ACCESSORY "T2" AT FEMALE AND UNISEX RESTROOMS ONLY.
8. REFER TO TOILET ACCESSORY SHEET FOR MOUNTING HEIGHTS AND ADDITIONAL INFORMATION.
9. CIRCULAR SPACE: THE TURNING SPACE SHALL BE A SPACE OF 67 INCHES DIAMETER MINIMUM. THE SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE COMPLYING WITH 2017 ICC A117.1.

T - TOILET ROOMS

TOILET ACCESSORY LEGEND

ITEM	DESCRIPTION	RESPONSIBILITY
T1	TOILET TISSUE DISPENSER	OFCI
T2	SANITARY NAPKIN DISPOSAL	CFCI
T4	REAR WALL GRAB BAR	CFCI
T5	SIDE WALL GRAB BARS	CFCI
T6	PAPER TOWEL DISPENSER	OFCI
T7	NOT USED	
T8	NOT USED	
T9	MIRROR	CFCI
T10	MIRROR, FULL-LENGTH	CFCI
T11	SOAP DISPENSER	OFCI
T13	COAT/CLOTHES HOOK	CFCI
T14	24" GRAB BAR	CFCI
T14V	18" VERTICAL GRAB BAR	CFCI
T15	L-SHAPED 18" X 30" GRAB BAR	CFCI
T16	30" GRAB BAR	CFCI
T17	SHOWER CURTAIN & ROD W/ CURTAIN HOOKS	CFCI
T18	FOLDING L-SHAPED SHOWER SEAT	CFCI
T19	TOWEL BAR	CFCI
T20	DIAPER CHANGING STATION	CFCI
T21	NOT USED	
T22	NOT USED	
T23	UNDERSINK PIPING COVERS	CFCI
T24	MOP AND BROOM HOLDER	CFCI
T24A	MOP BASIN HOSE AND BRACKET	CFCI

PLUMBING FIXTURE LEGEND

ITEM	DESCRIPTION
EW1	ELECTRIC WATER COOLER, WALL-MOUNTED, ACCESSIBLE
EW1B	ELECTRIC WATER COOLER, WALL-MOUNTED, ACCESSIBLE, WITH BOTTLE FILLER
EW2	ELECTRIC WATER COOLER, WALL-MOUNTED
L1	LAVATORY, WALL-MOUNTED, ACCESSIBLE
L2	LAVATORY, COUNTER-MOUNTED, ACCESSIBLE
MS	MOP SINK
U1	URINAL
U2	URINAL, ACCESSIBLE
WC1	WATER CLOSET
WC2	WATER CLOSET, ACCESSIBLE
WF	WASH FOUNTAIN

1. NOT ALL TYPES MAY BE USED IN THE PROJECT.
2. REFER TO 'TOILET ACCESSORIES AND PLUMBING FIXTURES' SHEET FOR ADDITIONAL INFORMATION.

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Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

09-18-2025

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TOILET ROOMS AND COMPARTMENTS

Job No. 1971-05-01	Sheet No. A1.08
Drawn By: JT	
Date: 09/18/2025	

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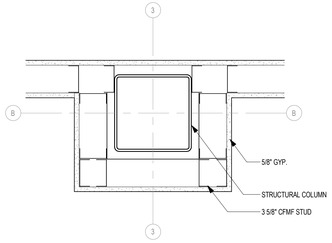
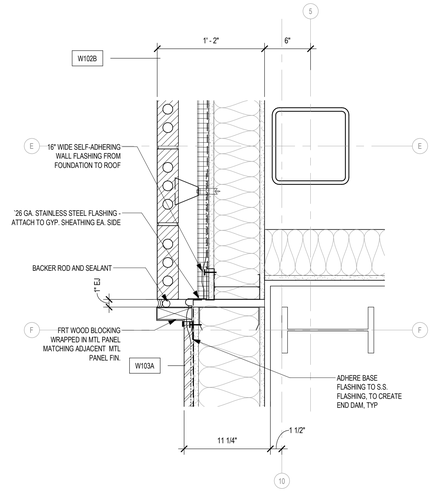
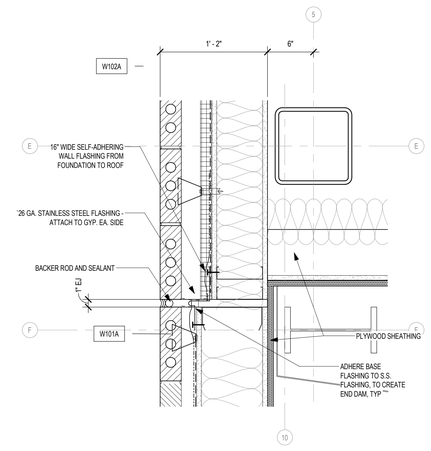


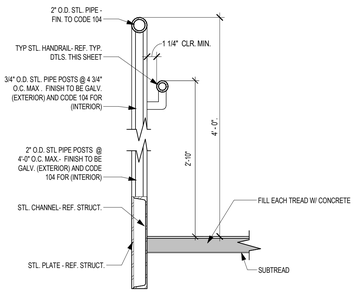
10 PD - COLUMN BEHIND GYP @ BREAK IN CFMF
1 1/2" = 1'-0"



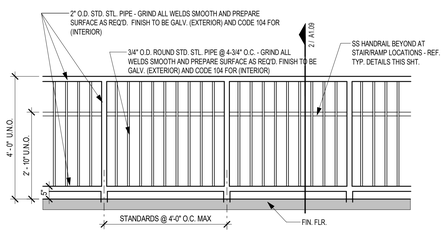
9 PD - BRICK @ R-PANEL TRANSITION - HIGH
1 1/2" = 1'-0"



8 PD - BRICK @ R-PANEL BRICK TRANSITION - LOW
1 1/2" = 1'-0"

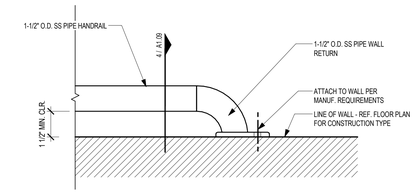


7 RAIL SECTION
1 1/2" = 1'-0"

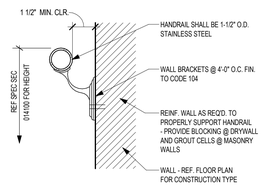


6 RAIL ELEVATION
1/2" = 1'-0"

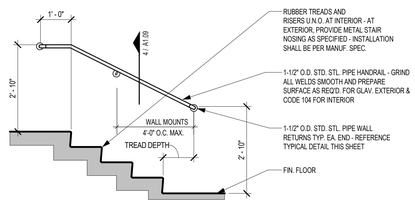
RAIL TYPE 'R3'



5 RAIL WALL RETURN DETAIL
3" = 1'-0"

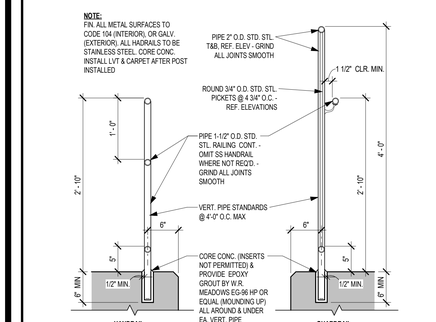


4 RAIL SECTION
3" = 1'-0"

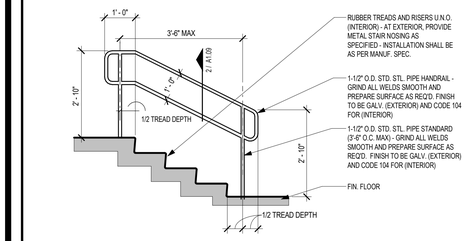


3 RAIL ELEVATION
1/2" = 1'-0"

RAIL TYPE 'R2'



2 RAIL SECTION
1" = 1'-0"



1 RAIL ELEVATION
1/2" = 1'-0"

RAIL TYPE 'R1'

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
JEFFREY R. BANNISTER
23169
STATE OF TEXAS
09-18-2025

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RAILING TYPES AND PLAN DETAILS

Job No.	Sheet No.
1071-05-01	A1.09
Drawn By: JT	
Date: 09/18/2025	

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1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL, ELECTRICAL AND AV/TECHNOLOGY PLANS. NOTIFY ARCHITECT OF CONFLICTS PRIOR TO PROCEEDING WITH THE WORK.
2. DIMENSIONS ARE FROM FACE OF FINISH, U.N.O.
3. MOUNT LIGHT FIXTURES IN SPACES EXPOSED TO STRUCTURE AT 9' - 0" A.F.F. TO B.O. FIXTURE, U.N.O.
4. HARD-CEILING PLENUM ACCESS:
   A. MECHANICAL: PROVIDE 24" x 24" MIN. ACCESS PANELS LOCATED IN HARD CEILINGS.
   B. ELECTRICAL: MINIMIZE SIZE AND QUANTITY TO THE EXTENT FEASIBLE. LOCATING CONCEALED BOXES ABOVE READILY-ACCESSIBLE CEILINGS WHERE PRACTICAL.
   C. INDICATE ACCESS PANEL LOCATIONS ON SHOP DRAWING SUBMITTAL
5. MDF/IDF ROOMS: TERMINATE CEILING TO WITHIN 6 INCHES OF NETWORK DISTRIBUTION WALL FOR CABLING PROVISIONS.
6. EXPOSED CEILING, STRUCTURE, MECHANICAL EQUIPMENT, AND SPRINKLERS TO BE PAINTED PNT01

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 1' - 0"

CEILING

ACB - ACOUSTICAL CEILING BAFFLE
ACC - ACOUSTICAL CEILING CLOUD
ES - EXPOSED DECK AND STRUCTURE
ESF - EXPOSED DECK AND STRUCTURE (FINISHED)

CEILING

GYP - 5/8" GYPSUM BOARD
GYP1 - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL 601)
L1 - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
L2 - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
L3 - TYPE III 24" x 24" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)
L4 - TYPE IV 24" x 24" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED) (FOODSERVICE)

CEILING

L5 - TYPE V 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL REFLECTIVE)
L6 - TYPE VI 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'ABSORPTIVE) (GLASS FIBER)
L7 - TYPE VII 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'ABSORPTIVE - GEN. USE)
L8 - TYPE VIII 24" x 24" LAY-IN SUSPENDED CEILING TILE (UL FIRE RESISTANT)
L9 - TYPE IX LARGE FORMAT LAY-IN SUSPENDED CEILING TILE (GLASS FIBER)
LCS - LINEAR CEILING SYSTEM

CEILING

MCS - METAL CEILING SYSTEM
MS - METAL SOFFIT PANEL (EXTERIOR)
PCP - PORTLAND CEMENT PLASTER
SAC - SEAMLESS ACOUSTICAL CEILING SYSTEM

DEFAULT FINISHES

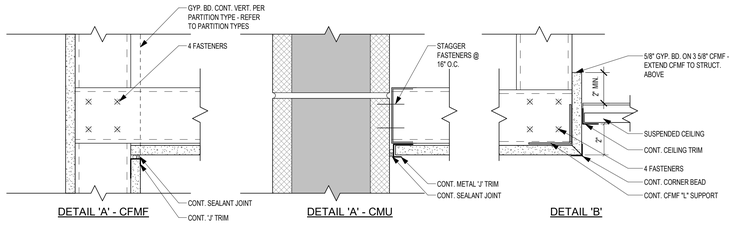
IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

CEILING - L1
CEILING HEIGHT - 9' - 0" A.F.F.

CEILING FINISH LEGEND

LAY-IN CEILING
GYPSUM BOARD CEILING WITH CONTROL JOINTS , FINISH AS INDICATED
METAL SOFFIT PANELS
LIGHT FIXTURES - REF. ELECTRICAL
PROJECTION SCREENS - REF. A4 SHEETS
HVAC GRILLE, DIFFUSER - REF. MECHANICAL DRAWINGS.

REFLECTED CEILING LEGEND

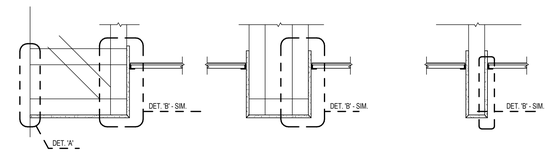


DETAIL 'A' - CFMF | DETAIL 'A' - CMU | DETAIL 'B'

TYPICAL BULKHEAD DETAILS

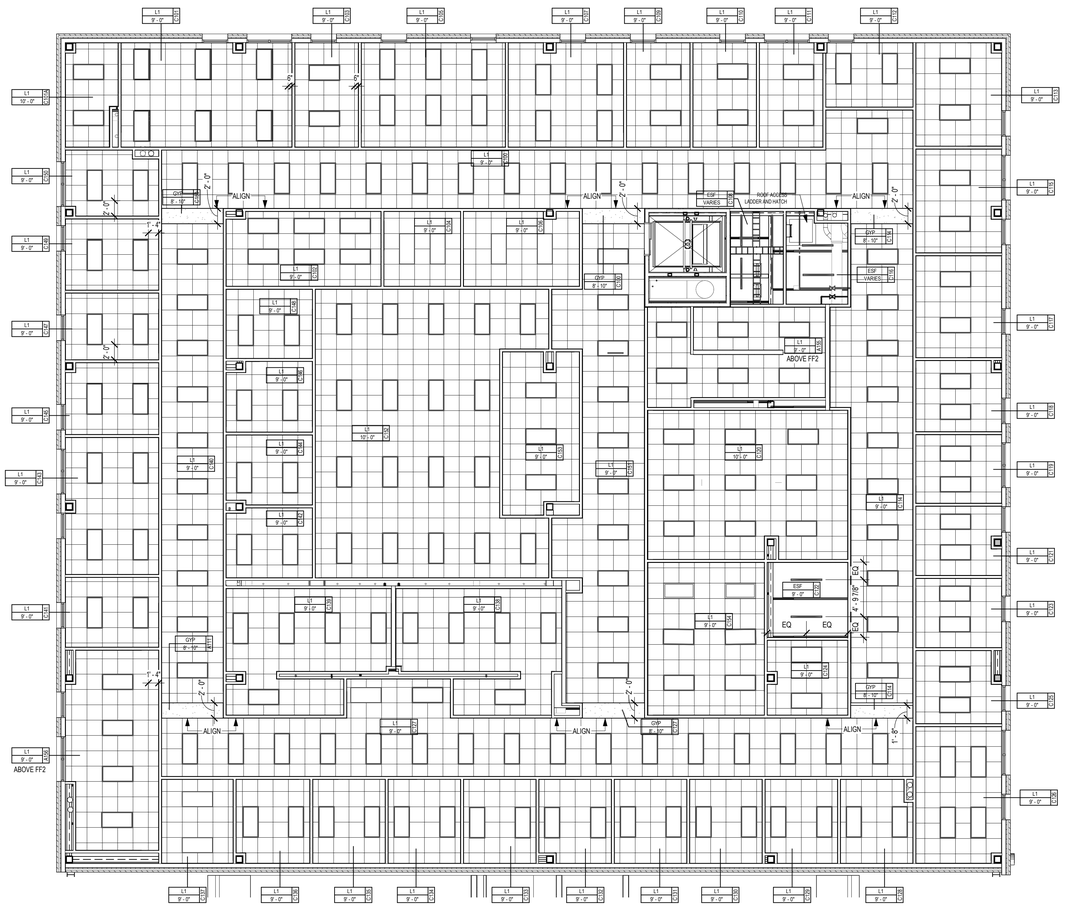
GENERAL NOTES - ALL BULKHEADS, PLASTER AND GYP. CEILINGS

1. ALL BULKHEADS SHALL BE CONSTRUCTED OF 5/8" GYP. BD. ON 3-5/8" MTL. STUDS AT 16" O.C. U.N.O. TO DECK.
2. FINISH ALL BULKHEADS TO CODE 115, U.N.O.
3. PROVIDE CONTROL JOINTS (CJ) IN BULKHEADS AT 15'-0" O.C. OR AS SHOWN ON PLAN AND AS SPEC.
4. ALL SECTION PROFILES SHOWN IN THIS SCHEDULE SHALL BE DETAILED AS SHOWN UNDER TYPICAL DETAILS.
5. PROVIDE BRACING IN ALL BULKHEADS AT 48" O.C.
6. PROVIDE CONTROL JOINTS (CJ) IN ALL PLASTER CLGS., SOFFITS AT MAX. 18'-0" OR AS SHOWN ON PLAN.
7. PROVIDE STOP CONT. WHERE PLASTER SOFFIT MEETS VERTICAL SURFACE AND CAULK CONT.

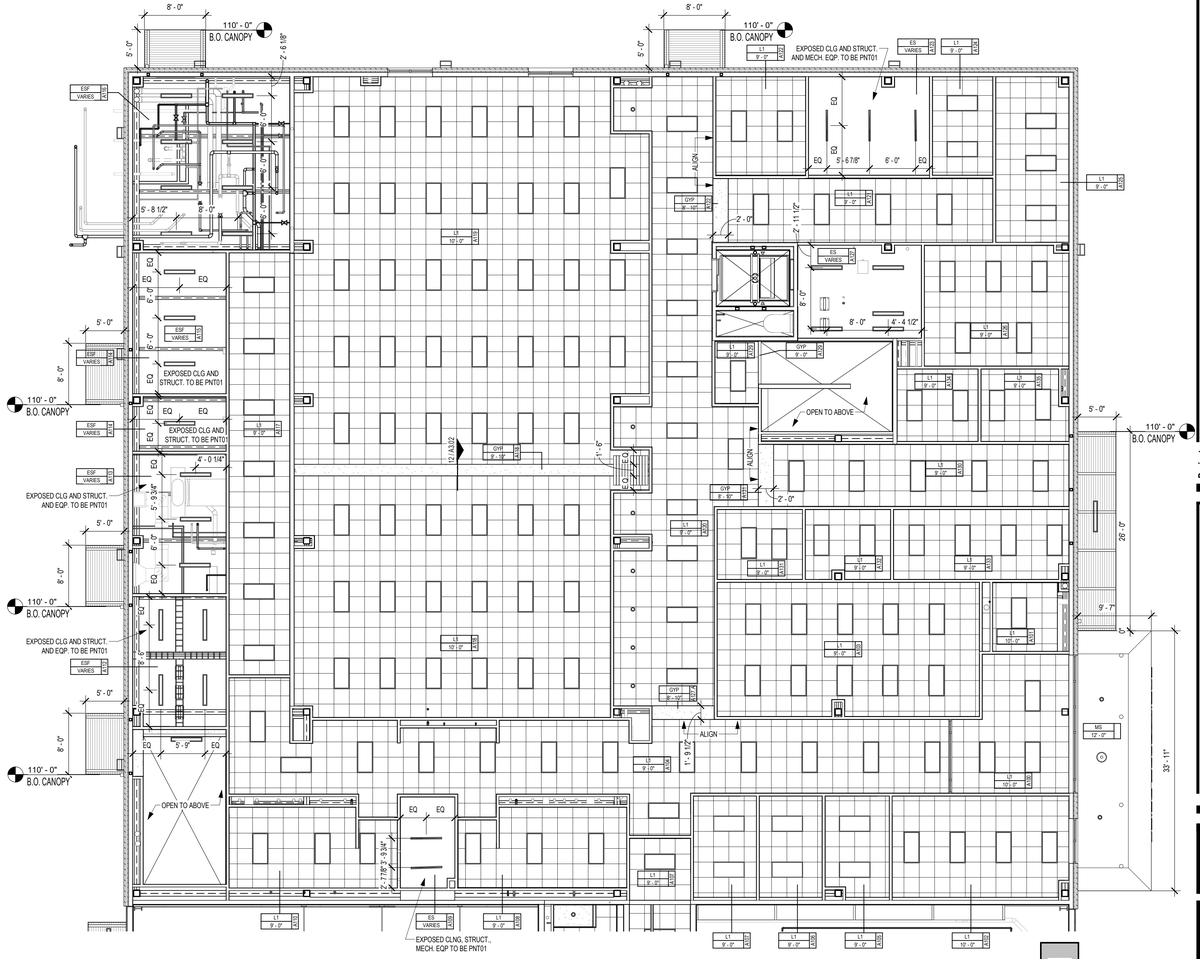


TYPICAL BULKHEAD PROFILES

N.T.S.

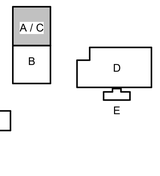


2 REFLECTED CEILING PLAN - LEVEL 2 - AREA C - OPERATIONS BUILDING
1/8" = 1'-0"



1 REFLECTED CEILING PLAN - LEVEL 1 - AREA A - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE



KEY PLAN
N.T.S.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
PATRICK K. BANNISTER
21169
STATE OF TEXAS
09-18-2025

Huckabee
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800.687.1229

REFLECTED CEILING PLAN - LEVEL 1 & 2 - AREA A & C - OPERATIONS BUILDING

Job No.	Sheet No.
1971-05-01	A2.01
Drawn By: JT	
Date: 09/18/2025	

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9/17/2025 10:52:45 PM
Autodesk Docs://NEW CANEY ISD - NEW OPERATIONS BUILDING/19711-05-01_NCISD Trans. Ops Building_ARCH_v25.rvt

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1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL, ELECTRICAL AND AV/TECHNOLOGY PLANS. NOTIFY ARCHITECT OF CONFLICTS PRIOR TO PROCEEDING WITH THE WORK.
2. DIMENSIONS ARE FROM FACE OF FINISH, U.N.O.
3. MOUNT LIGHT FIXTURES IN SPACES EXPOSED TO STRUCTURE AT 9' - 0" A.F.F. TO B.O. FIXTURE, U.N.O.
4. HARD-CEILING PLENUM ACCESS:
   A. MECHANICAL: PROVIDE 24" x 24" MIN. ACCESS PANELS LOCATED IN HARD CEILINGS.
   B. ELECTRICAL: MINIMIZE SIZE AND QUANTITY TO THE EXTENT FEASIBLE. LOCATING CONCEALED BOXES ABOVE READILY-ACCESSIBLE CEILINGS WHERE PRACTICAL.
   C. INDICATE ACCESS PANEL LOCATIONS ON SHOP DRAWING SUBMITTAL.
5. MDF/IDF ROOMS: TERMINATE CEILING TO WITHIN 6 INCHES OF NETWORK DISTRIBUTION WALL FOR CABLING PROVISIONS.
6. EXPOSED CEILING, STRUCTURE, MECHANICAL EQUIPMENT, AND SPRINKLERS TO BE PAINTED PNT01

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX
CEILING HEIGHT — 1' - 0" — ROOM NUMBER

CEILING

ACB - ACOUSTICAL CEILING BAFFLE
ACC - ACOUSTICAL CEILING CLOUD
ES - EXPOSED DECK AND STRUCTURE
ESF - EXPOSED DECK AND STRUCTURE (FINISHED)

CEILING

GYP - 5/8" GYPSUM BOARD
GYP1 - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL 601)
L1 - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
L2 - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
L3 - TYPE III 24" x 24" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)
L4 - TYPE IV 24" x 24" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED) (FOODSERVICE)

CEILING

L5 - TYPE V 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL REFLECTIVE)
L6 - TYPE VI 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'ABSORPTIVE') (GLASS FIBER)
L7 - TYPE VII 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'ABSORPTIVE' - GEN. USE)
L8 - TYPE VIII 24" x 24" LAY-IN SUSPENDED CEILING TILE (UL FIRE RESISTANT)
L9 - TYPE IX LARGE FORMAT LAY-IN SUSPENDED CEILING TILE (GLASS FIBER)
LCS - LINEAR CEILING SYSTEM

CEILING

MCS - METAL CEILING SYSTEM
MS - METAL SOFFIT PANEL (EXTERIOR)
PCP - PORTLAND CEMENT PLASTER
SAC - SEAMLESS ACOUSTICAL CEILING SYSTEM

DEFAULT FINISHES

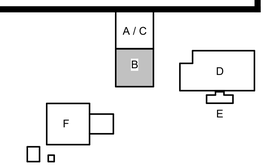
IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

CEILING - L1
CEILING HEIGHT - 9' - 0" A.F.F.

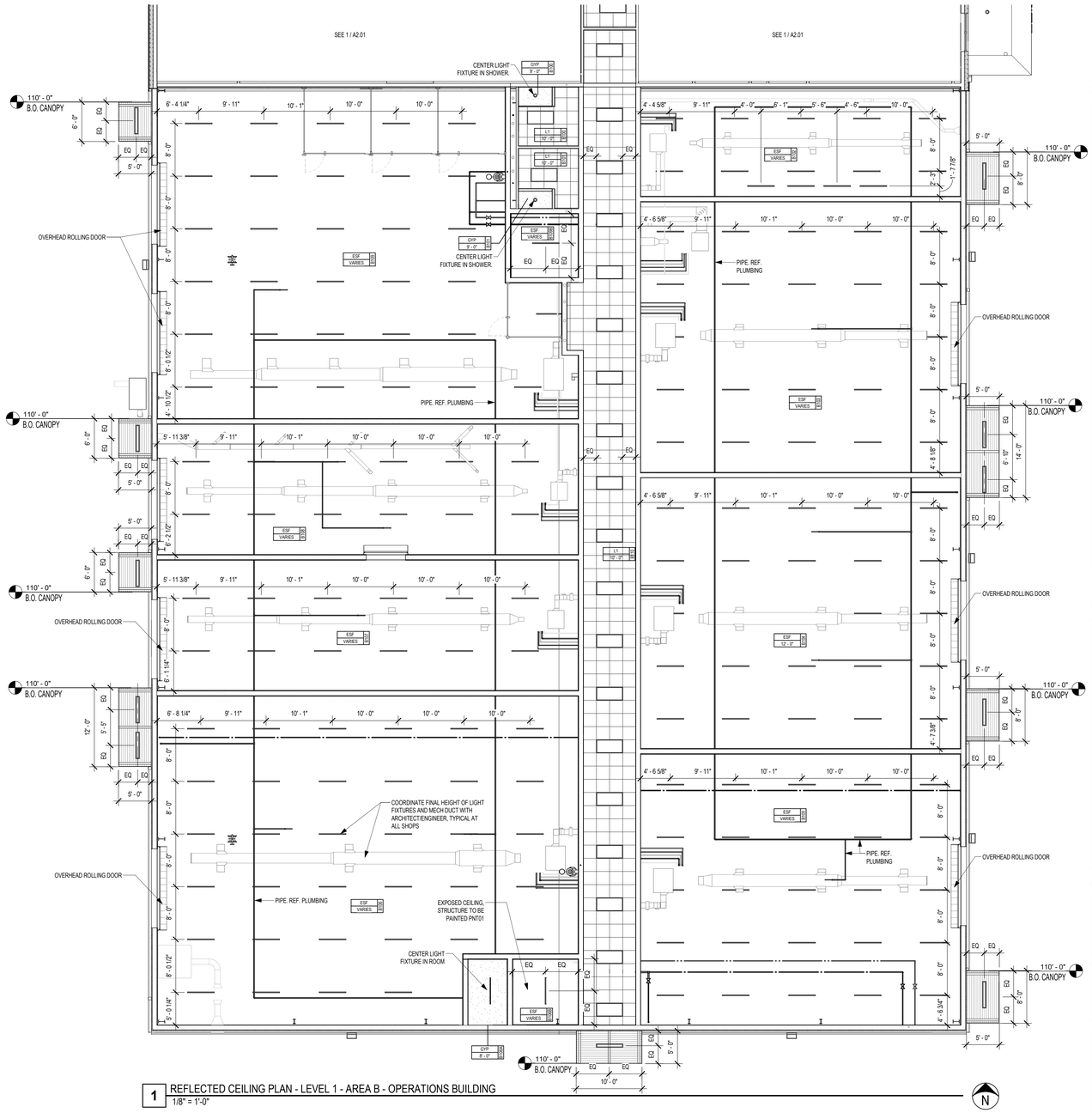
CEILING FINISH LEGEND

LAY-IN CEILING
GYPSUM BOARD CEILING WITH CONTROL JOINTS , FINISH AS INDICATED
METAL SOFFIT PANELS
LIGHT FIXTURES - REF. ELECTRICAL
P.S. P.S. **PROJECTION SCREENS** - REF. A4 SHEETS
HVAC GRILLE, DIFFUSER - REF. MECHANICAL DRAWINGS.

REFLECTED CEILING LEGEND



KEY PLAN
N.T.S.



1 REFLECTED CEILING PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

09-18-2025

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REFLECTED CEILING PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

Job No. 1971-05-01	Sheet No. A2.02
Drawn By: JT	
Date: 09/18/2025	

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REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX
CEILING HEIGHT — 1' - 0" — ROOM NUMBER

CEILING

ACB - ACOUSTICAL CEILING BAFFLE
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ES - EXPOSED DECK AND STRUCTURE
ESF - EXPOSED DECK AND STRUCTURE (FINISHED)

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CEILING

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CEILING

MCS - METAL CEILING SYSTEM
MS - METAL SOFFIT PANEL (EXTERIOR)
PCP - PORTLAND CEMENT PLASTER
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CEILING - L1
CEILING HEIGHT - 9' - 0" A.F.F.

CEILING FINISH LEGEND

LAY-IN CEILING
GYPSUM BOARD CEILING WITH CONTROL JOINTS , FINISH AS INDICATED
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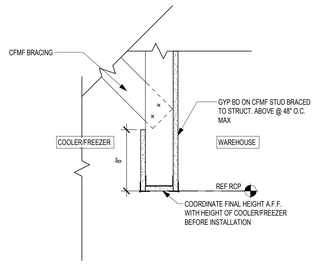
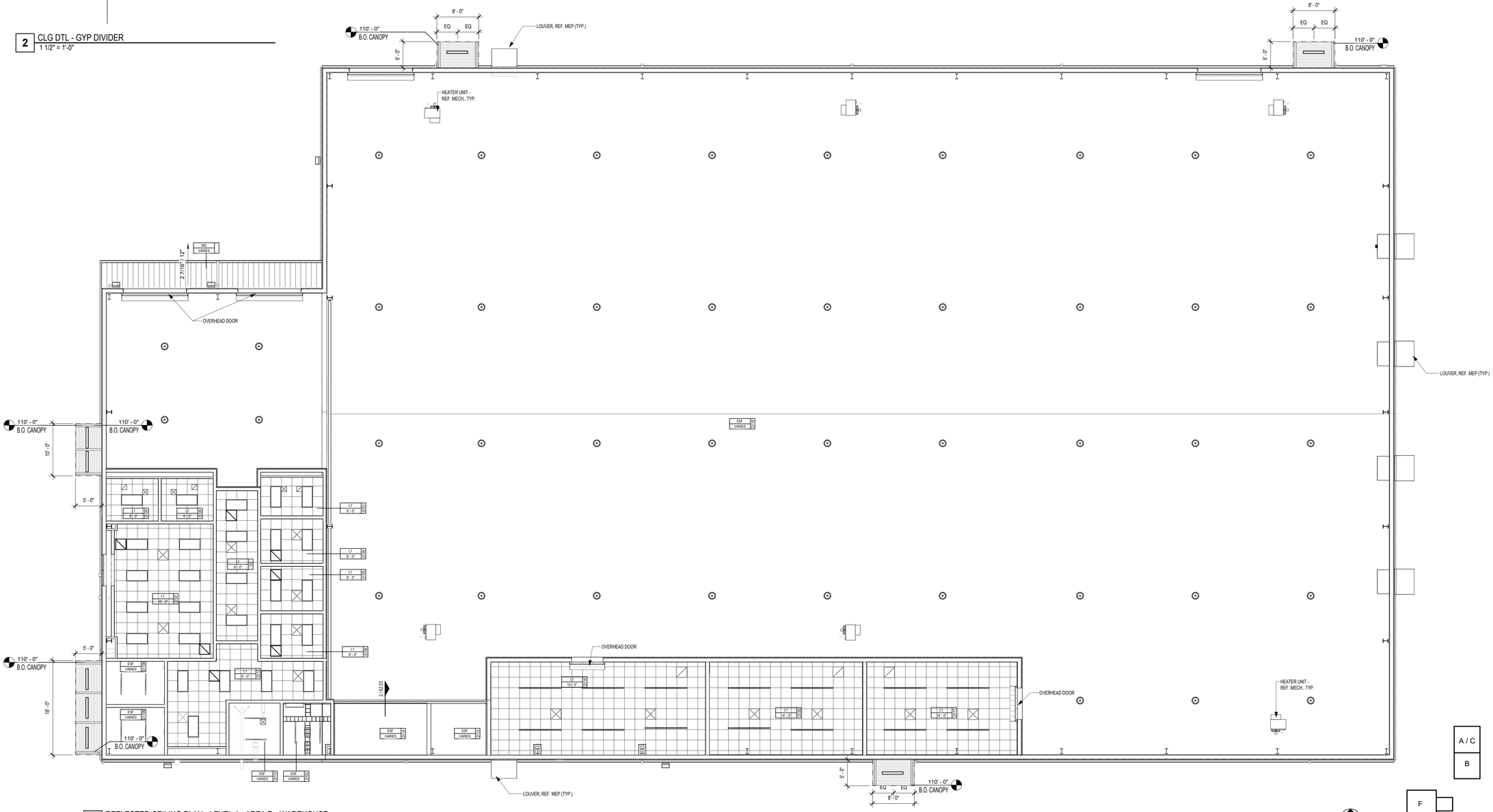
LIGHT FIXTURES - REF. ELECTRICAL
PROJECTION SCREENS - REF. A4 SHEETS
HVAC GRILLE, DIFFUSER - REF. MECHANICAL DRAWINGS.

REFLECTED CEILING LEGEND



2 CLG DTL - GYP DIVIDER
1 1/2" = 1'-0"



1 REFLECTED CEILING PLAN - LEVEL 1 - AREA D - WAREHOUSE
1/8" = 1'-0"

KEY PLAN
N.T.S.

Date
Revision /

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

REGISTERED ARCHITECT
BRIAN K. BANNISTER
71169
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

REFLECTED CEILING PLAN - LEVEL 1 - AREA D - WAREHOUSE

Job No.	Sheet No.
1971-05-01	A2.03
Drawn By: JT	
Date: 09/18/2025	

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REFLECTED CEILING PLAN GENERAL NOTES

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CEILING HEIGHT — 1' - 0" — ROOM NUMBER

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ACC - ACOUSTICAL CEILING CLOUD

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LCS - LINEAR CEILING SYSTEM

CEILING

MCS - METAL CEILING SYSTEM

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PCP - PORTLAND CEMENT PLASTER

SAC - SEAMLESS ACOUSTICAL CEILING SYSTEM

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CEILING - L1
CEILING HEIGHT - 9' - 0" A.F.F.

CEILING FINISH LEGEND

LAY-IN CEILING

GYPSUM BOARD CEILING WITH CONTROL JOINTS , FINISH AS INDICATED

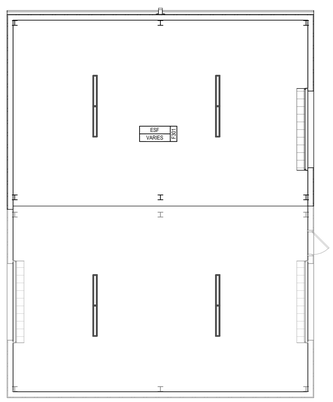
METAL SOFFIT PANELS

LIGHT FIXTURES - REF. ELECTRICAL

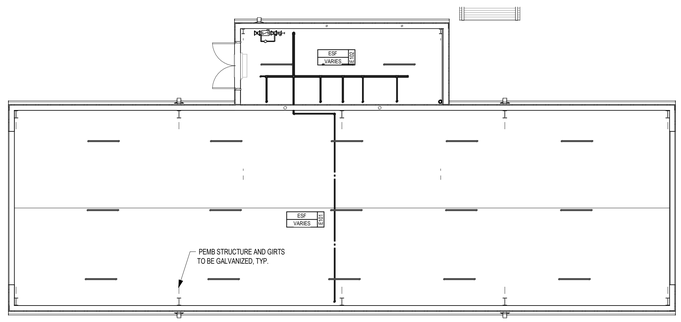
P.S. P.S. **PROJECTION SCREENS** - REF. A4 SHEETS

HVAC GRILLE, DIFFUSER - REF. MECHANICAL DRAWINGS.

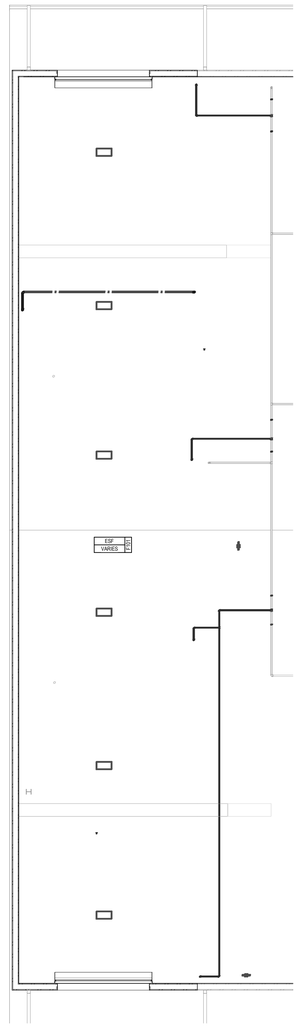
REFLECTED CEILING LEGEND



3 REFLECTED CEILING PLAN - STORAGE ADDITION
1/8" = 1'-0"



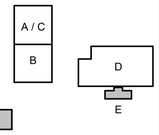
2 REFLECTED CEILING PLAN - BUS WASH
1/8" = 1'-0"



1 REFLECTED CEILING PLAN - MAINTENANCE EXPANSION
1/8" = 1'-0"

N
TRUE

KEY PLAN
N.T.S.



Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

09-18-2025

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REFLECTED CEILING PLAN - BUS WASH, MAINTENANCE & STORAGE

Job No. 1971-05-01	Sheet No. A2.04
Drawn By: JT	
Date: 09/18/2025	

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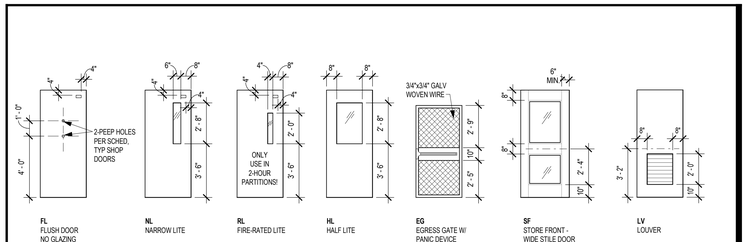


FL FLUSH DOOR NO GLAZING

NL NARROW LITE

RL FIRE-RATED LITE

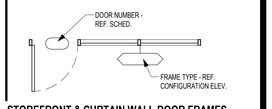
HL HALF LITE

EG EGRESS GATE W/ PANIC DEVICE

SF STORE FRONT - WIDE STILE DOOR

LV LOUVER

DOOR CONFIGURATIONS



STOREFRONT & CURTAIN WALL DOOR FRAMES

A3 - DOOR SCHEDULE

OPENING NUMBER	OPENING HARDWARE	OPENING FIRE RATING	OPENING EXTERIOR	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR DR GLAZING	DOOR PANIC HARDWARE	FRAME MATERIAL	FRAME TYPE	FRAME SPECIAL NOTES	OPENING NUMBER
AREA A												
A100A	1.0		Yes	3' - 0"	7' - 0"	AL-SF (PR)	IGSE	Yes	AL	SF-1		A100A
A101	60.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		A101
A102A	35.0		No	3' - 0"	7' - 0"	SC-HL	GLSE		HM	C1		A102A
A102B	35.0		No	3' - 0"	7' - 0"	SC-HL	GLSE		HM	C1		A102B
A103A	31.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A103A
A103B	31.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A103B
A104A	14.1		No	3' - 0"	7' - 0"	AL-SF (PR)	GLSE	Yes	AL	SF-G		A104A
A104B	15.0	SMOKE	No	3' - 0"	7' - 0"	SC-HL (PR)	GTC	Yes	HM	B1	7	A104B
A105	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A105
A106	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A106
A107	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A107
A108	47.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		A108
A109	41.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		A109
A110	47.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		A110
A111A	29.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A111A
A111B	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--	Yes	HM	A		A111B
A112	37.0		No	3' - 0"	7' - 0"	HM-FL	--		HM	C1		A112
A113A	19.0		No	3' - 0"	7' - 0"	HM-FL (PR)	--		HM	B1		A113A
A113B	6.0		Yes	3' - 6"	7' - 0"	HM-FL	--		HM	A		A113B
A114	39.0		No	3' - 0"	7' - 0"	HM-FL	--		HM	C1		A114
A115A	20.0	45 MIN.	No	3' - 0"	7' - 0"	HM-FL (PR)	--	Yes	HM	B1		A115A
A115B	6.0		Yes	3' - 6"	7' - 0"	HM-FL	--		HM	A		A115B
A116A	20.0	45 MIN.	No	3' - 0"	7' - 0"	HM-FL (PR)	--		HM	B1		A116A
A116B	6.0		Yes	3' - 6"	7' - 0"	HM-LV	--		HM	A		A116B
A117A	20.0		No	3' - 0"	7' - 0"	SC-FL (PR)	--		HM	B1		A117A
A118A	24.0		No	3' - 0"	7' - 0"	SC-HL	GTC	Yes	HM	C1		A118A
A118B	24.0		No	3' - 0"	7' - 0"	SC-HL	GTC	Yes	HM	C1		A118B
A119A	24.0		No	3' - 0"	7' - 0"	SC-HL	GTC	Yes	HM	C1		A119A
A119B	24.0		No	3' - 0"	7' - 0"	SC-HL	GTC	Yes	HM	C1		A119B
A120A	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--	Yes	HM	A		A120A
A122	31.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A122
A123	41.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		A123
A124	39.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		A124
A125	39.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		A125
A126	39.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		A126
A127	19.0		No	3' - 0"	7' - 0"	SC-FL (PR)	--		HM	B1		A127
A128	39.0		No	3' - 0"	7' - 0"	SC-FL	GTC		HM	C1		A128
A129A	29.0		No	3' - 0"	7' - 0"	SC-NL	GTC	Yes	HM	C1		A129A
A130B	6.0		Yes	3' - 0"	7' - 0"	HM-NL	IGU	Yes	HM	A		A130B
A131	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A131
A132	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A132
A133A	31.0		No	3' - 0"	7' - 0"	SC-HL	GTC		HM	C1		A133A
A133B	31.0		No	3' - 0"	7' - 0"	SC-HL	GTC		HM	C1		A133B
A134	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A134
A135	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		A135
AREA B												
B100	61.1		No	3' - 0"	7' - 0"	HM-FL	--		HM	C1		B100
B101	61.1		No	3' - 0"	7' - 0"	HM-FL	--		HM	C1		B101
B102.A	31.0		No	3' - 0"	7' - 0"	HM-NL	GTC		HM	C1		B102.A
B102.B	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--		HM	A	6	B102.B
B103.A	31.0		No	3' - 0"	7' - 0"	HM-NL	GTC		HM	C1		B103.A
B103.C	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--		HM	A	6	B103.C
B104.A	31.0		No	3' - 0"	7' - 0"	HM-NL	GTC		HM	C1		B104.A
B104.B	31.0		No	3' - 0"	7' - 0"	HM-NL	--		HM	C1		B104.B
B104.D	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--		HM	A	6	B104.D
B105.A	31.0		No	3' - 0"	7' - 0"	HM-NL	GTC		HM	C1		B105.A
B105.B	31.0		No	3' - 0"	7' - 0"	HM-NL	GTC		HM	C1		B105.B
B105.D	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--		HM	A	6	B105.D
B106.A	38.0		No	3' - 0"	7' - 0"	HM-NL	GTC	No	HM	C1		B106.A
B106.B	38.0		Yes	3' - 0"	7' - 0"	HM-FL	--	Yes	HM	A	6	B106.B
B106.D	38.0		Yes	3' - 0"	7' - 0"	HM-FL	--		HM	C1		B106.D
B106.E	38.0		Yes	3' - 0"	7' - 0"	HM-FL	--		HM	C1		B106.E
B107.A	31.0	45 MIN.	No	3' - 0"	7' - 0"	HM-NL	GTC		HM	C1		B107.A
B107.D	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--		HM	A	6	B107.D
B108.A	31.0		No	3' - 0"	7' - 0"	HM-NL	GTC		HM	C1		B108.A
B108.B	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--		HM	A	6	B108.B
B109.A	31.0	45 MIN.	No	3' - 0"	7' - 0"	HM-NL	GFPR	No	HM	C1		B109.A
B109.D	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--	Yes	HM	A	6	B109.D
B109B	38.0	45 MIN.	No	3' - 0"	7' - 0"	HM-FL	--		HM	C1		B109B
B111.A	5.0		Yes	3' - 0"	7' - 0"	HM-NL (PR)	IGSE	Yes	HM	B		B111.A
AREA C												
C101	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C101
C101A	60.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		C101A
C102	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C102
C103	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C103
C104	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C104
C105	31.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C105
C106	38.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C106
C107	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C107
C108	38.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		C108
C109	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C109
C110	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C110
C111	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C111
C112	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C112
C113	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C113
C115	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C115
C116	41.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		C116
C117	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C117
C118	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C118
C119	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C119
C120.A	31.0		No	3' - 0"	7' - 0"	SC-HL	GTC		HM	C1		C120.A
C120.B	31.0		No	3' - 0"	7' - 0"	SC-HL	GTC		HM	C1		C120.B
C121	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C121
C122	38.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		C122
C123	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C123
C124	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C124

A3 - DOOR SCHEDULE

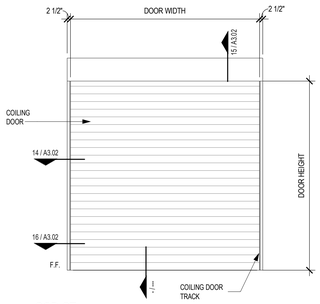
OPENING NUMBER	OPENING HARDWARE	OPENING FIRE RATING	OPENING EXTERIOR	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR DR GLAZING	DOOR PANIC HARDWARE	FRAME MATERIAL	FRAME TYPE	FRAME SPECIAL NOTES	OPENING NUMBER
C125	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C125
C126	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C126
C128	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C128
C129	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C129
C130	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C130
C131	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C131
C132	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C132
C133	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C133
C134	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C134
C135	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C135
C136	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C136
C137	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C137
C138	48.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		C138
C139	48.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		C139
C141	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C141
C142	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C142
C143	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C143
C144	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C144
C145	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C145
C146	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C146
C147	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C147
C148	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C148
C149	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C149
C150	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C150
C152A	24.0		No	3' - 0"	7' - 0"	SC-HL	GTC	Yes	HM	C1		C152A
C152B	24.0		No	3' - 0"	7' - 0"	SC-HL	GTC	Yes	HM	C1		C152B
C153	38.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		C153
C154	31.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		C154
C155	29.0		No	3' - 0"	7' - 0"	SC-NL	GTC	Yes	HM	C1		C155
C156	29.0		No	3' - 0"	7' - 0"	SC-NL	GTC	Yes	HM	C1		C156
AREA D												
D100	2.0		Yes	3' - 0"	7' - 0"	HM-NL (PR)	IGSE	Yes	HM	B1		D100
D101	1000.0		No	3' - 0"	7' - 0"	HM-FL	--		HM	C1		D101
D102A	15.0		No	3' - 0"	7' - 0"	HM-NL (PR)	GTC		HM	B1		D102A
D102B	15.0		No	3' - 0"	7' - 0"	SC-NL (PR)	GTC		HM	B1	7	D102B
D103	38.0		No	3' - 0"	7' - 0"	HM-FL	--		HM	C1	7	D103
D104	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		D104
D105	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		D105
D106	52.0		No	3' - 0"	7' - 0"	SC-NL	GTC		HM	C1		D106
D107	32.0		No	3' - 0"	7' - 0"	SC-HL	GTC		HM	C1		D107
D108	61.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		D108
D109	61.0		No	3' - 0"	7' - 0"	SC-FL	--		HM	C1		D109
D110A	19.0		Yes	3' - 6"	7' - 0"	HM-FL	--		HM	A		D110A
D110B	38.0		Yes	3' - 6"	7' - 0"	HM-FL	--		HM	A		D110B
D112	15.0		No	3' - 0"	7' - 0"	HM-NL (PR)	GTC		HM	B1	7	D112
D113	41.0		No	3' - 0"	7' - 0"	HM-FL	--		HM	C1	7	D113
D116			No	3' - 0"	7' - 0"	HM-FL	GTC		HM	C1		D116
D117A	32.0		No	3' - 0"	7' - 0"	HM-NL	GTC		HM	C1		D117A
D118D	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--	Yes	HM	A	6	D118D
D118F	6.0		Yes	3' - 0"	7' - 0"	HM-FL	--	Yes	HM	A	6	D118F
D120	16.1		No	3' - 0"	7' - 0"	HM-NL (PR)	GTC		HM	B1		D120
AREA E												
E102			Yes	3' - 0"	7' - 0"	HM-FL (PR)	--		HM	B	AT BUS WASH	E102
AREA F												
F101			Yes	3' - 0"	7' - 0"	HM-FL	--		HM	A	AT MAINTENANCE ADDITION	F101
F201			No	3' - 0"	7' - 0"	HM-FL	--		HM	B	AT STORAGE ADDITION	F201

A3 - DOOR SCHEDULE - OVERHEAD DOORS

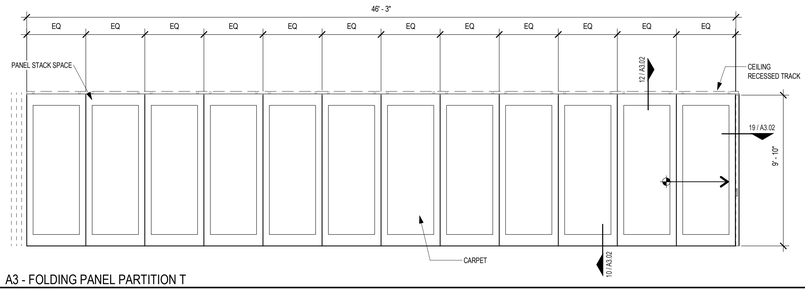
OPENING NUMBER	OPENING HARDWARE SET	OPENING FIRE RATING	OPENING EXTERIOR	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR DR GLAZING	DOOR PANIC HARDWARE	FRAME MATERIAL	FRAME TYPE	FRAME SPECIAL NOTES	OPENING NUMBER
AREA B												
SOB103			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOB103
SOB104			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOB104
SOB105			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOB105
SOB106.C			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOB106.C
SOB107.B			No	6' - 0"	12' - 0"	OCD-ST			ST		MANUAL	SOB107.B
SOB107.C			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOB107.C
SOB108.C			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOB108.C
SOB109.B			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOB109.B
SOB109.C			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOB109.C
AREA D												
SOD117B			No	6' - 0"	10' - 0"	OCD-ST			ST		MANUAL	SOD117B
SOD118A			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MOTORIZED	SOD118A
SOD118B			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MOTORIZED	SOD118B
SOD118C			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOD118C
SOD118E			Yes	12' - 0"	12' - 0"	OCD-ST1			ST		MANUAL	SOD118E
SOD119A			No	6' - 0"	10' - 0"	OCD-ST1			ST		MANUAL	SOD119A
AREA F												
SOF101A			Yes	12' - 0"	14' - 0"	OCD-ST1			ST		MANUAL	SOF101A
SOF101B			Yes	12' - 0"	14' - 0"	OCD-ST1			ST		MANUAL	SOF101B
SOF201			Yes	6' - 0"	8' - 0"	OCD-ST1			ST		MANUAL AT STORAGE ADDITION	SOF201
SOF301			Yes	10' - 0"	10' - 0"	OCD-EXIST			ST		MATCH EXIST. SIZE	SOF301

A3 - FOLDING PARTITION SCHEDULE

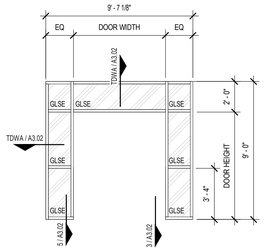
NUMBER	DOOR TYPE	DOOR DESCRIPTION DR HT	DOOR DESCRIPTION DR WIDTH	DOOR MATERIAL	PANEL WIDTH	PANEL QUANTITY	PASS DOOR QUANTITY	SPECIAL NOTES
FPA118	FP-T	10' - 0"	46' - 3"	CARPET	3' - 10 1/4"	12	13	



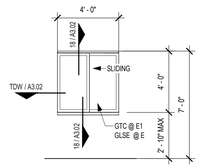
OCD-ST
1/4" = 1'-0"



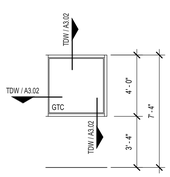
A3 - FOLDING PANEL PARTITION T
1/4" = 1'-0"



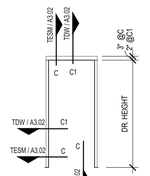
FRAME TYPE SF-G
1/4" = 1'-0"



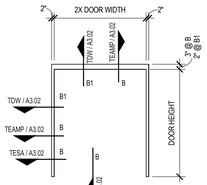
AL-E ,E1
1/4" = 1'-0"



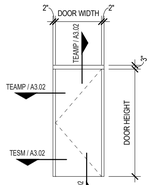
HM-D
1/4" = 1'-0"



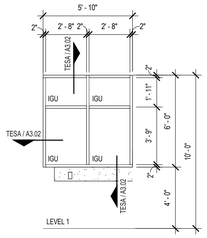
FRAME TYPE C, C1
1/4" = 1'-0"



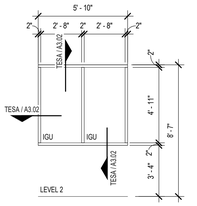
FRAME TYPE B, B1
1/4" = 1'-0"



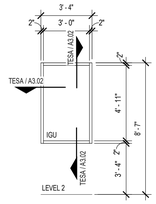
FRAME TYPE A
1/4" = 1'-0"



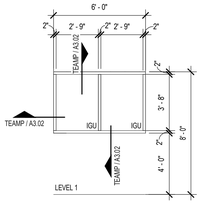
SF-5
1/4" = 1'-0"



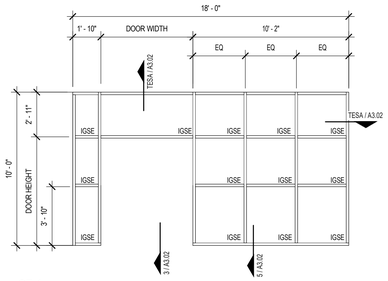
SF-4
1/4" = 1'-0"



SF-3
1/4" = 1'-0"



SF-2
1/4" = 1'-0"



SF-1
1/4" = 1'-0"

DOOR ASSEMBLY NOTES

DEFAULT DOORS

IF A DOOR ASSEMBLY APPEARS ON THE FLOOR PLANS BUT IS NOT IDENTIFIED BY A SCHEDULE NUMBER, THE DOOR SHALL BE INCLUDED IN THE BID AS LISTED BELOW. THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE ARCHITECT TO DETERMINE WHAT THE ACTUAL DOOR AND FRAME TYPE AND HARDWARE REQUIREMENTS WILL BE. ADJUSTMENTS IN CONTRACT PRICE WILL BE BASED ON THE DIFFERENCE BETWEEN ACTUAL REQUIREMENTS AND THE DEFAULT DOOR VALUE.

THE DEFAULT EXTERIOR DOOR SHALL BE A TYPE "HM-FL" (SINGLE OR PAIR PER PLAN) IN A TYPE "B" (TB1" AT EXTERIOR MASONRY WALL) FRAME WITH DEFAULT HARDWARE PER SPECIFICATIONS AND FRAME DETAILING PER TYPICAL DETAILS FOR EXTERIOR DOORS.

THE DEFAULT INTERIOR DOOR SHALL BE A TYPE "SC-FL" (SINGLE OR PAIR PER PLAN) IN A TYPE "B" FRAME WITH DEFAULT HARDWARE PER SPECIFICATIONS AND FRAME DETAILING PER TYPICAL DETAILS FOR INTERIOR DOORS.

TYPICAL NOTES

A. DOOR TYPES ARE INDICATED AS A MATERIAL-CONFIGURATION CODE. THE MATERIAL CODE DESIGNATES MATERIALS AND FINISHES AS SPECIFIED. REFER TO SPECIAL NOTES FOR NON-TYPICAL FINISHES. THE CONFIGURATION CODE REFERS TO TYPICAL OR SPECIAL CONFIGURATIONS AS DRAWN.

B. DOOR ASSEMBLIES ARE NUMBERED BY ASSEMBLY. MULTIPLE SETS OF DOORS MAY OCCUR IN THE SAME FRAME ASSEMBLY (REFER TO SCHEDULE AND PLAN FOR QUANTITY). DOORS MAY OCCUR IN PAIRS (REFER TO SCHEDULE AND PLAN FOR INCIDENCE).

C. FRAME CONFIGURATION IS DIAGRAMMATIC AND NOMINAL. DIMENSIONS SHALL BE ADJUSTED TO ACCOMMODATE DOOR SIZES AS SCHEDULED. WITHIN ANY HOLLOW METAL ASSEMBLY, THE WIDTH OF SIDELITES SHALL BE EQUAL AND SHALL NOT EXCEED 3'-0" U.N.O.

D. ALTERNATE FINISHES CAN SOMETIMES HAVE AN IMPACT ON DETAILING (E.G. HALF OR OFFSET SADDLES EMPLOYED IN LIEU OF STANDARD SADDLES WHEN ADJACENT TO THICKER FLOOR FINISHES SUCH AS TERRAZZO OR QUARRY TILE). COORDINATE DETAILS WITH FINAL FINISH SELECTIONS.

E. GLAZED FRAMES ASSOCIATED WITH 20-MINUTE, 45-MINUTE, AND/OR 60-MINUTE FIRE-RATED DOORS SHALL BE FIRE-RATED 1-HOUR. GLAZED FRAMES ASSOCIATED WITH 90-MINUTE FIRE-RATED DOORS SHALL BE FIRE-RATED 2-HOUR. GLAZING MUST MEET CODE REQUIREMENTS, INCLUDING SIZE LIMITATIONS, IN FIRE-RATED FRAMES. REF. IBC TABLE 716.1 (2).

F. PROVIDE 2x WOOD BLOCKING @ CFMF STUD WALLS FOR WALL MOUNTED ITEMS LIKE WALL STOPS, HOLD OPENS, ETC.

G. REFER TO FLOOR PLANS AND EXTERIOR ELEVATIONS FOR ALUMINUM FRAME LOCATIONS.

H. OVERHEAD COILING DOORS ARE MOTORIZED UNLESS NOTED OTHERWISE.

I. REFER TO SECURITY DRAWINGS FOR DOORS TO RECEIVE CARD READERS AND DOOR CONTACTS.

SPECIAL NOTES:

1. MAGNETIC HOLD OPEN - REF. FIRE ALARM SHEETS.
2. MANUAL HOLD OPEN.
3. SOUND CONTROL DOOR ASSEMBLY STC 50 (DOOR ASSEMBLY INCLUDES DOOR, DOOR FRAME, DOOR HARDWARE, AND ANY SCHEDULED DOOR / DOOR FRAME GLAZING).
4. SOUND SEAL W/ DOOR BOTTOM STC 40-42.
5. DOOR & FRAME PROVIDED AS PART OF SOUND-ISOLATION ROOM.
6. PROVIDE (2) PEEPHOLES IN DOOR PANEL. (1) LOCATED AT STANDARD HEIGHT AND (1) AT 42" AFF.
7. PROVIDE SMOKE SEALS.
8. NO LATCH, PUSH OPEN.
9. NO CLOSER.
10. PANIC BUTTON EMERGENCY OPEN.
11. FAIL SAFE IN OPEN POSITION.
12. FAIL SAFE IN CLOSED POSITION.
13. MANUAL OPERATION.

DOOR/FRAME MATERIALS

AL - ALUMINUM

HM - HOLLOW METAL

SC - SOLID CORE (PLAM FACED)

CL - CHAIN LINK (GALVANIZED)

DMF - DECORATIVE METAL FENCING

ST - STEEL

STI - STEEL INSULATED

GLAZING LEGEND

IGLSA - INSULATED GLASS LAMINATED SAFETY

IGS - INSULATED GLASS SPANDREL

IGSE - INSULATED GLASS SECURITY

IGU - INSULATED GLASS UNIT

GFRR - GLASS FIRE-RESISTANCE-RATED

GFPR - GLASS FIRE-PROTECTION-RATED

GIBJ - GLASS INTERIOR BUTT JOINT

GLSA - GLASS LAMINATED SAFETY

GLSE - GLASS LAMINATED SECURITY

GTC - GLASS TEMPERED CLEAR

1. ALL GLAZING IS 1/4" THICK (U.N.O.). INSULATED GLASS SHALL CONSIST OF AN EXTERIOR LAYER OF GLASS, TINTED AS SPECIFIED, AN INTERIOR LAYER OF CLEAR GLASS, FACTORY SEALED WITH A 1/2" AIR SPACE. WHERE TEMPERED GLASS IS SPECIFIED, BOTH LAYERS OF INSULATED GLASS SHALL BE TEMPERED.
2. ANY WINDOW OR GLAZING PANELS LOCATED AT A INTERSTITIAL SPACE OR NOT READILY VISIBLE SHALL HAVE SPANDREL GLASS INSTALLED, REGARDLESS OF ANY NOTATION ELSEWHERE.
3. ALL EXTERIOR GLASS SHOULD HAVE "OPTIC GRAY" TINT COLOR.

SCHEDULE ABBREVIATIONS

TEM - TYP EXT MASONRY DETAIL - HM

TEMA - TYP EXT MASONRY DETAIL - ALUM

TIM - TYP INTERIOR MASONRY DETAIL - HM

TIMA - TYP INTERIOR MASONRY DETAIL - ALUM

TDW - TYP DRYWALL PARTITION DETAIL - HM

TDWA - TYP DRYWALL PARTITION DETAIL - ALUM

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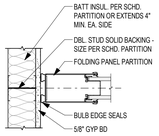
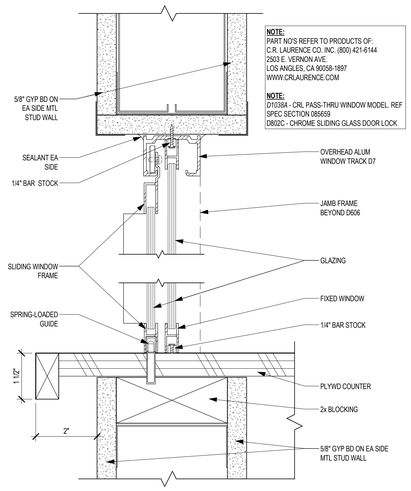


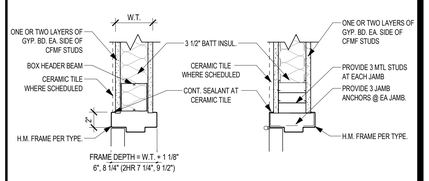
19 FOLDING PANEL PARTITION JAMB
1 1/2" = 1'-0"



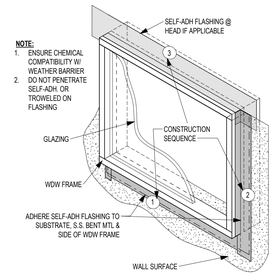
18 HEAD / SILL DETAIL - INT SLIDING WINDOW
6" = 1'-0"

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN DRYWALL SHALL CONFORM TO THESE DETAILS

VERIFY PARTITION THICKNESS TO DETERMINE FRAME SIZES.

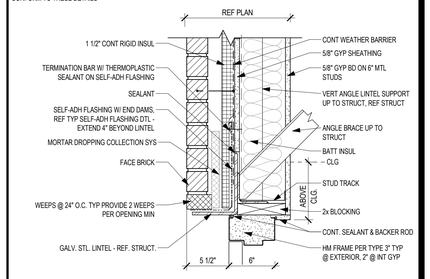


TYPICAL DRYWALL DETAILS (T.D.W.)
SCALE 1-1/2" = 1'-0



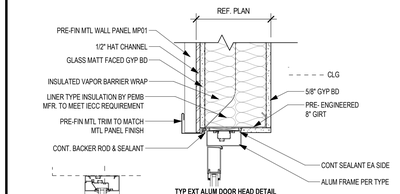
17 TYP SELF-ADH FLASHING (AT WALL OPENINGS)
N.T.S.

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS



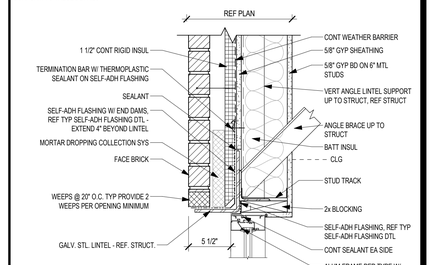
TYP EXTERIOR STUD H.M. DETAILS (T.E.S.M.)
SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL ALUM FRAMES IN EXTERIOR METAL PANELS SHALL CONFORM TO THESE DETAILS



TYP EXTERIOR STUD ALUM DETAILS (T.E.A.M.P.) - METAL PANEL
SCALE 1-1/2" = 1'-0

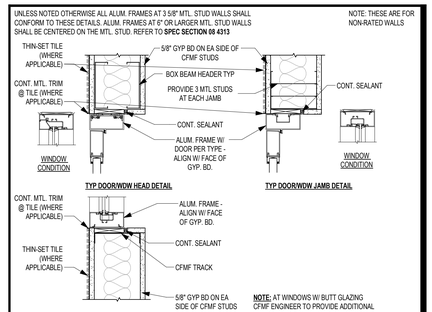
UNLESS NOTED OTHERWISE ALL ALUM FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS



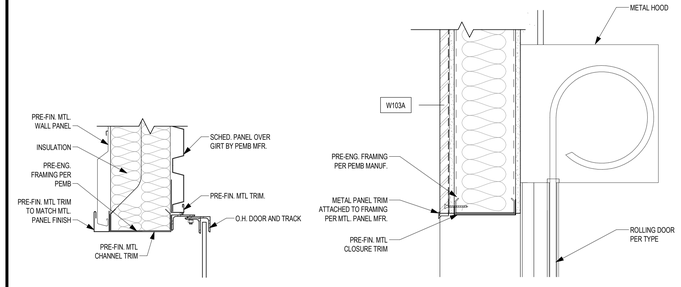
TYP EXTERIOR STUD ALUM DETAILS (T.E.S.A.)
SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL ALUM. FRAMES AT 3 5/8" MTL. STUD WALLS SHALL CONFORM TO THESE DETAILS. ALUM. FRAMES AT 6" OR LARGER MTL. STUD WALLS SHALL BE CENTERED ON THE MTL. STUD. REFER TO **SPEC SECTION 08 4313**

NOTE: THESE ARE FOR NON-RATED WALLS

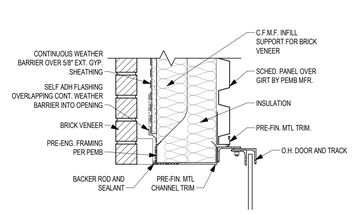


TYPICAL DRYWALL ALUM DETAILS (T.D.W.A.)
SCALE 1-1/2" = 1'-0

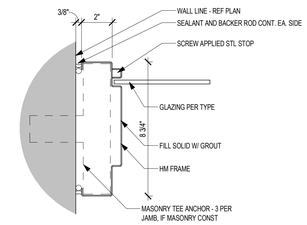


16 OH DR-METAL WALL PANEL - JAMB
1 1/2" = 1'-0"

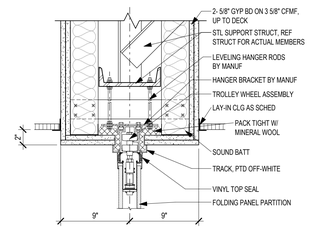
15 DH - OH DOOR - HEAD DETAIL
1 1/2" = 1'-0"



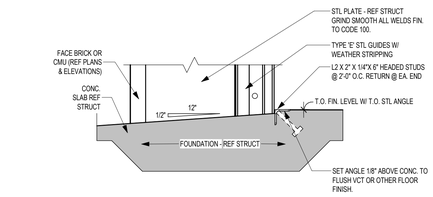
14 OH DR-MASONRY - JAMB
1 1/2" = 1'-0"



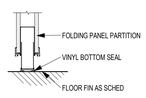
13 DOOR & WINDOW DETAIL - JAMB (INT ONLY)
3" = 1'-0"



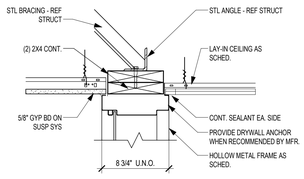
12 HEAD DETAIL - FOLDING PANEL PART. (ACOUSTIC)
1 1/2" = 1'-0"



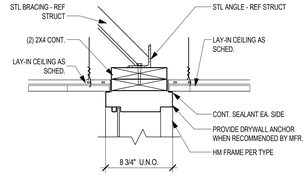
11 TYP. OCD RECESSED SILL
1 1/2" = 1'-0"



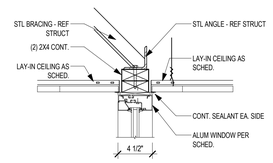
10 FOLDING PANEL PARTITION SILL
1 1/2" = 1'-0"



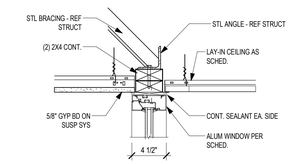
9 HEAD DETAIL - GYP BD / LAY-IN
1 1/2" = 1'-0"



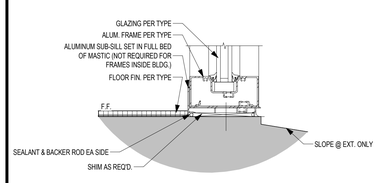
8 HEAD DETAIL - LAY-IN / LAY-IN
1 1/2" = 1'-0"



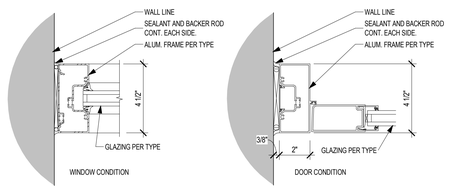
7 HEAD DLT ALUM - LAY-IN / LAY-IN
1 1/2" = 1'-0"



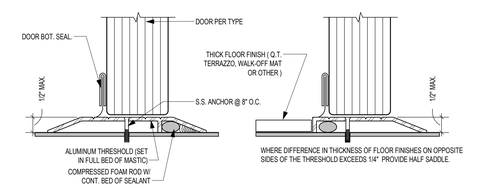
6 HEAD DLT ALUM - GYP BD / LAY-IN
1 1/2" = 1'-0"



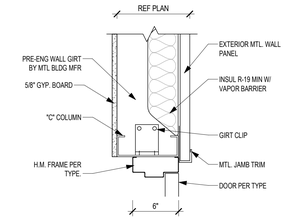
5 DOOR AND WINDOW DETAIL - SILL
3" = 1'-0"



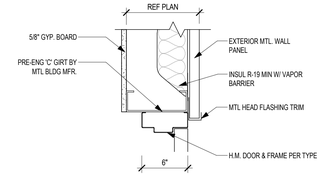
4 DOOR AND WINDOW DETAIL - JAMB (INT USE ONLY)
3" = 1'-0"



3 TYP THRESHOLDS
6" = 1'-0"



2 JAMB DTL - HM DOOR AT MTL BLDG
1 1/2" = 1'-0"



1 HEAD DTL - HM DOOR AT MTL BLDG
1 1/2" = 1'-0"

Project: NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D. NEW CANEY, TEXAS

Revision / Date

09-18-2025

Huckabee
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DOOR AND WINDOW OPENING DETAILS

Job No.	Sheet No.
1971-05-01	A3.02
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

9/17/2025 10:53:04 PM
Autodesk Docs://NEW CANEY ISD - NEW OPERATIONS BUILDING/19714-05-01_NCISD Trans. Ops Building_ARCH_v25.rvt

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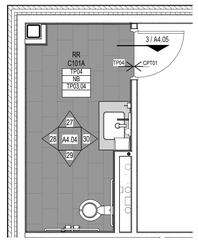


5 ENLARGED FINISH FLOOR PLAN - LEVEL 2 @ SINGLE RR
1/4" = 1'-0"

FINISH PLAN LEGEND

APPLIES TO SECTION PLANS

- A1.1 / 1 — ELEVATION REFERENCE
- 1 / A1.1 — CALLOUT REFERENCE
- SIM / 1 / A6.1 — WALL SECTION REFERENCE
- B — B - HORIZONTAL BLINDS; S - WINDOW SHADES; SB - WINDOW SHADES - BLACKOUT; SM - MOTORIZED SHADES; SMB - MOTORIZED SHADES - BLACKOUT
- FLOOR INSTALLATION DIRECTION
- FLOOR TRANSITION
- FINISH — WALL FINISH TAG
- 8' MB — EQUIPMENT TAG

FINISH REMARKS

NOTES APPLY TO ROOMS AS NOTED IN THE ROOM FINISH TAGS. SEE TAG LAYOUT ABOVE.

1. PROVIDE CUT TILE 4" IN HEIGHT, TP01, AND CONTINUE WITH WAINSCOT OF (5) FULL TILES, TP01, ABOVE.
2. PROVIDE MEDIUM BROOM FINISH AT SEALED CONCRETE.
3. PROVIDE 3/4" PLYWOOD OVER 5/8" GYP. BD. TO 8'-0" A.F.F. PAINT AS SCHEDULED
4. SEE **MS- MOP SINK** NOTE ON A1.07 FOR EXTENT OF FRP ON WALLS BEHIND MOP SINKS.
5. PROVIDE TC01 BACKSPLASH ABOVE PL01 BACKSPLASH AND ABUT TO THE UNDERSIDE OF THE UPPER CABINETS AND RANGE EXHAUST HOOD WHERE APPLICABLE. WHERE THERE ARE NO UPPER CABINETS OR RANGE EXHAUST HOOD ALIGN TO THE HEIGHT OF THE ADJACENT WALL TILE.

FINISH PLAN GENERAL NOTES

1. ALL DIMENSIONS SHOW ON FINISH FLOOR PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.
2. PROVIDE **PNT** AND **TC** (WAINSCOT) WALL FINISHES AS DEFINED ABOVE AND DETAILED ON INTERIOR ELEVATIONS.
3. PROVIDE 3/8" MIN SEALANT JOINT WHERE FULL HT TILE MEETS GYP. CLG (MATCH CLG COLOR) OR LAY-IN GRID (WHITE)
4. PROVIDE SEALANT JTS @ INSIDE CORNERS OF TILED WALLS & AROUND DOOR FRAMES
5. VERIFY EXACT FLOOR TILE PATTERN FOR ALL TOILET ROOMS. COORDINATE WITH ARCHITECT.
6. ALL SCHEDULED WALL FINISH DIRECTIONS ARE DIRECTIONS PER PLAN NORTH OF THE FINISH PLANS, NOT TRUE NORTH OF THE PROJECT SITE

FINISH KEY

REFER TO GS.01 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CLASSROOM 025 — ROOM NAME / ROOM NUMBER

- TYP FLOOR FINISH → LVT01
- WALL BASE FINISH → BR01
- TYP WALL FINISH → PNT01
- REMARKS → 1

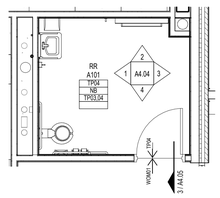
*REMARKS NUMBERS COORDINATED WITH FINISH REMARKS LEGEND LOCATED ON ALL FINISH FLOOR PLAN SHEETS

REFER TO PROJECT SPECIFICATIONS SECTION 01 6210 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

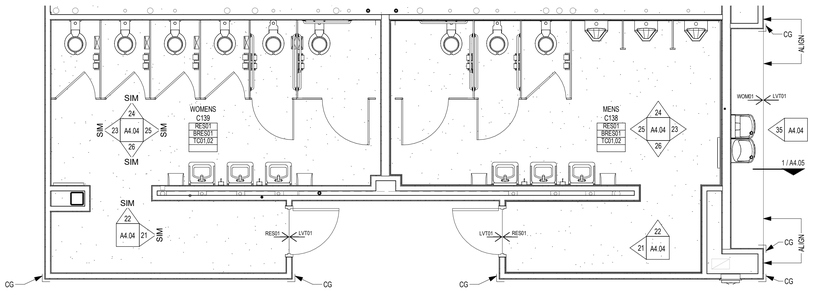
XY (MATERIAL TYPE) ## (FINISH, COLOR AND MATERIAL SIZE AS NOTED IN SPEC. SECTION 01 6210)

AL - ALUMINUM
BP - BASE, PORCELAIN TILE
BRES - BASE, RESINOUS INTEGRAL
BRK - BRICK
BR - BASE, RUBBER
BTC - BASE, TILE, CERAMIC
COP - CONCRETE POLISHED
COS - CONCRETE SEALED
CPT - CARPET, SHEET
EPNT - EPOXY PAINT
FRP - FIBERGLASS REINFORCED PLASTIC PANEL SYSTEM
LVT - LUXURY VINYL TILE
MB - MARKER BOARD
MP - METAL WALL PANEL
MS - METAL SOFFIT
NB - NO BASE
PL - PLASTIC LAMINATE
PNT - PAINT
RES - RESINOUS FLOORING
RT - RUBBER TILE
RTR - RUBBER TREADS AND RISERS
SPEC - SPECIAL FINISHES, REF. ROOM FINISH SCHEDULE & INTERIOR ELEVATIONS
SSM - SOLID SURFACE MATERIAL
TB - TACK BOARD
TC - TILE, CERAMIC
TP - TILE, PORCELAIN
WOM - WALK-OFF MAT

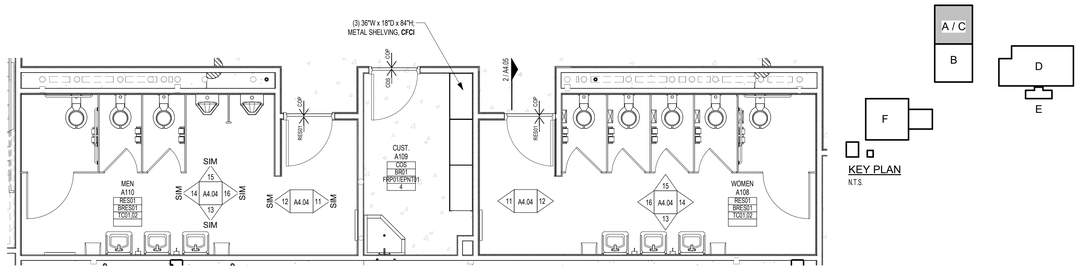
NOT ALL ABBREVIATIONS MAY BE USED



3 ENLARGED FINISH FLOOR PLAN - LEVEL 1 @ SINGLE RR
1/4" = 1'-0"

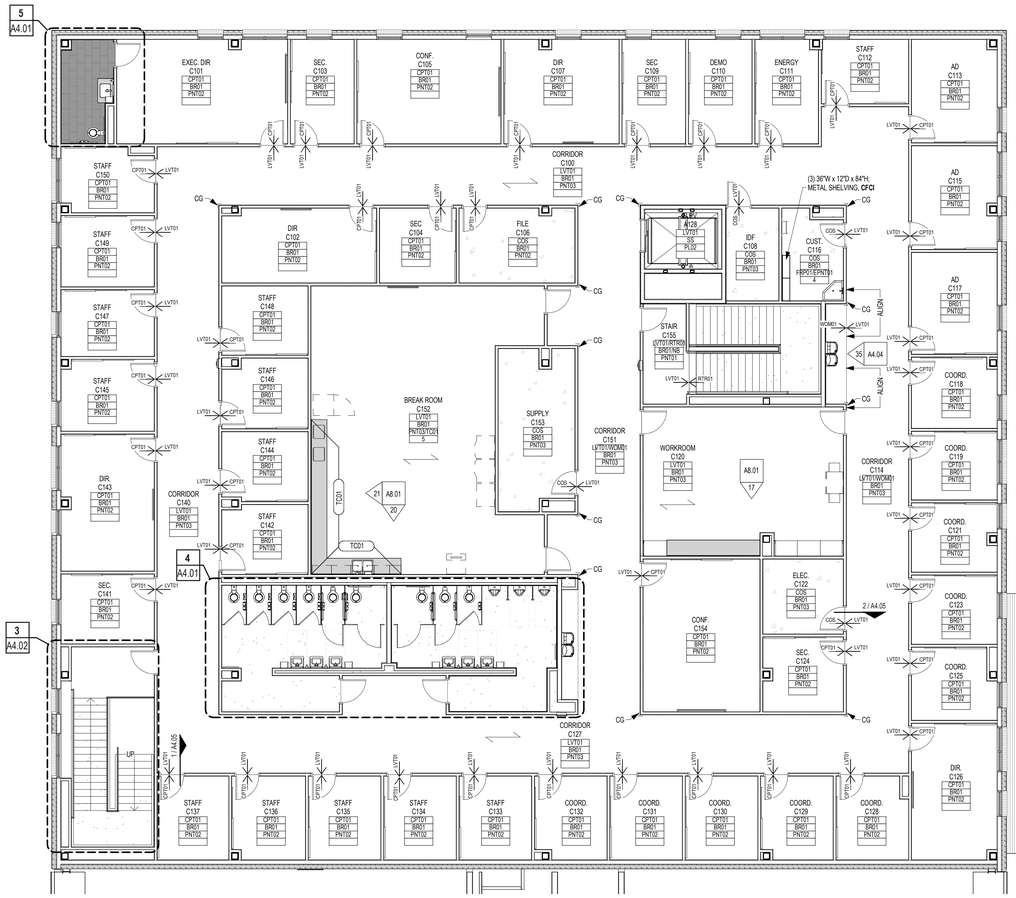


4 ENLARGED FINISH FLOOR PLAN - LEVEL 2 @ MULTI-USER RESTROOM
1/4" = 1'-0"



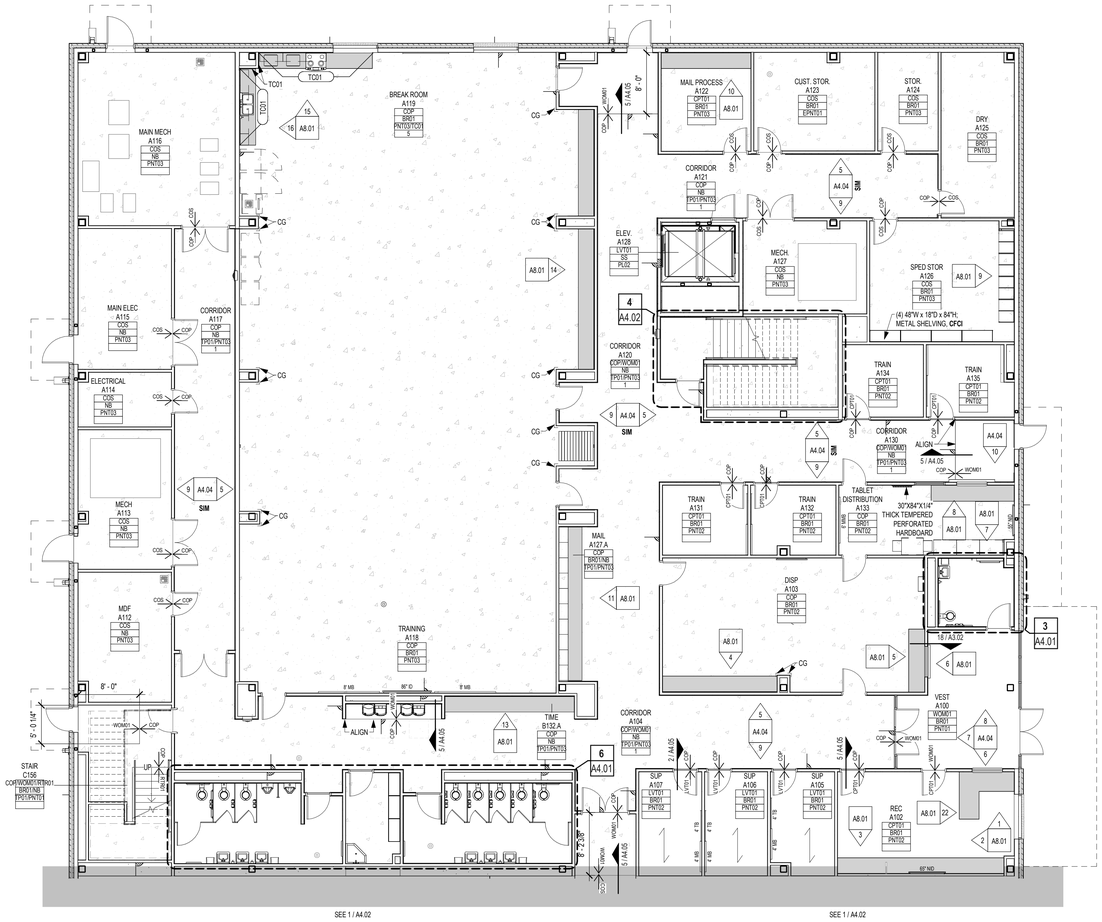
6 ENLARGED FINISH FLOOR PLAN - LEVEL 1 @ MULTI-USER RESTROOM
1/4" = 1'-0"

KEY PLAN
N.T.S.



2 FINISH FLOOR PLAN - LEVEL 2 - AREA C - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE



1 FINISH FLOOR PLAN - LEVEL 1 - AREA A - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

Revision / Date

REGISTERED ARCHITECT
PATRICK K. BANNISTER
21169
STATE OF TEXAS
09-18-2025

Huckabee
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FINISH PLAN - LEVEL 1 & 2 - AREA A & C - OPERATIONS BUILDING

Job No. 1971-05-01	Sheet No. A4.01
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

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Autodesk Docs://NEW CANEY ISD - NEW OPERATIONS BUILDING/19711-05-01_NCISD Trans. Ops Building_ARCH_v25.rvt

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FINISH PLAN LEGEND

APPLIES TO SECTION PLANS

- A1.1 / 1 — ELEVATION REFERENCE
- 1 / A1.1 — CALLOUT REFERENCE
- SIM / 1 / A6.1 — WALL SECTION REFERENCE
- B — B - HORIZONTAL BLINDS; S - WINDOW SHADES; SB - WINDOW SHADES - BLACKOUT; SM - MOTORIZED SHADES; SMB - MOTORIZED SHADES - BLACKOUT
- FLOOR INSTALLATION DIRECTION
- FLOOR TRANSITION
- FINISH — WALL FINISH TAG
- 8' MB — EQUIPMENT TAG

FINISH REMARKS

NOTES APPLY TO ROOMS AS NOTED IN THE ROOM FINISH TAGS. SEE TAG LAYOUT ABOVE.

1. PROVIDE CUT TILE 4" IN HEIGHT, TP01, AND CONTINUE WITH WAINSCOT OF (5) FULL TILES, TP01, ABOVE.
2. PROVIDE MEDIUM BROOM FINISH AT SEALED CONCRETE.
3. PROVIDE 3/4" PLYWOOD OVER 5/8" GYP. BD. TO 8'-0" A.F.F. PAINT AS SCHEDULED
4. SEE **MS- MOP SINK** NOTE ON A1.07 FOR EXTENT OF FRP ON WALLS BEHIND MOP SINKS.
5. PROVIDE TC01 BACKSPLASH ABOVE PL01 BACKSPLASH AND ABUT TO THE UNDERSIDE OF THE UPPER CABINETS AND RANGE EXHAUST HOOD WHERE APPLICABLE. WHERE THERE ARE NO UPPER CABINETS OR RANGE EXHAUST HOOD ALIGN TO THE HEIGHT OF THE ADJACENT WALL TILE.

FINISH PLAN GENERAL NOTES

1. ALL DIMENSIONS SHOW ON FINISH FLOOR PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.
2. PROVIDE **PNT** AND **TC** (WAINSCOT) WALL FINISHES AS DEFINED ABOVE AND DETAILED ON INTERIOR ELEVATIONS.
3. PROVIDE 3/8" MIN SEALANT JOINT WHERE FULL HT TILE MEETS GYP CLG (MATCH CLG COLOR) OR LAY-IN GRID (WHITE)
4. PROVIDE SEALANT JTS @ INSIDE CORNERS OF TILED WALLS & AROUND DOOR FRAMES
5. VERIFY EXACT FLOOR TILE PATTERN FOR ALL TOILET ROOMS. COORDINATE WITH ARCHITECT.
6. ALL SCHEDULED WALL FINISH DIRECTIONS ARE DIRECTIONS PER PLAN NORTH OF THE FINISH PLANS, NOT TRUE NORTH OF THE PROJECT SITE

FINISH KEY

REFER TO G5.01 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CLASSROOM 025 ← ROOM NAME / ROOM NUMBER

TYP FLOOR FINISH	LVT01
WALL BASE FINISH	BR01
TYP WALL FINISH	PNT01
REMARKS	1

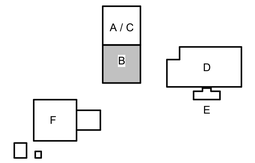
*REMARKS NUMBERS COORDINATED WITH FINISH REMARKS LEGEND LOCATED ON ALL FINISH FLOOR PLAN SHEETS

REFER TO PROJECT SPECIFICATIONS SECTION 01 6210 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

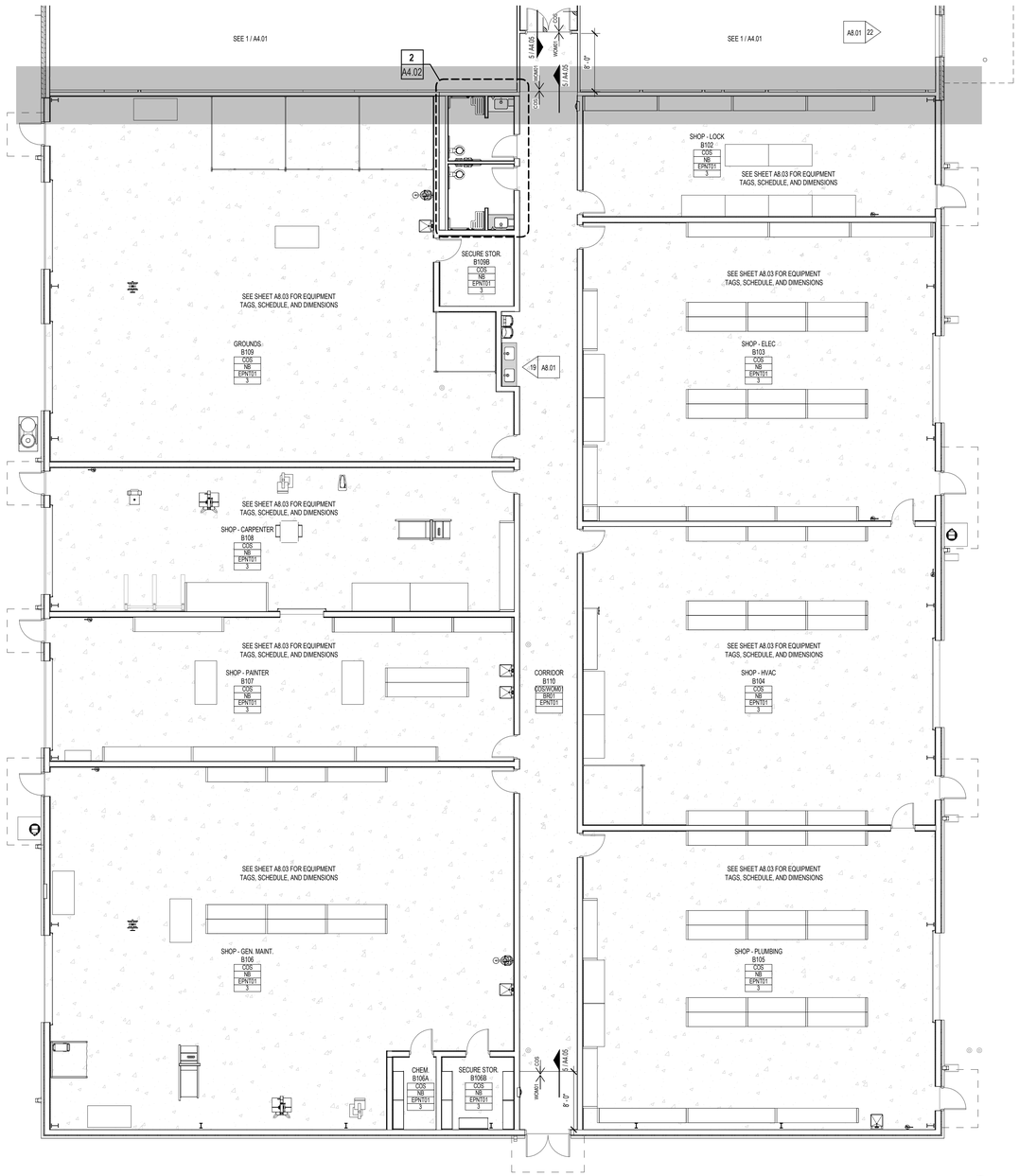
XY (MATERIAL TYPE) ## (FINISH, COLOR AND MATERIAL SIZE AS NOTED IN SPEC. SECTION 01 6210)

AL - ALUMINUM
BP - BASE, P**O**RCELAIN TILE
BRES - BASE, **RES**INOUS INTEGRAL
BRK - BRICK
BR - BASE, R**U**BBER
BTC - BASE, TILE, C**E**RAMIC
COP - CONCRETE P**O**LISHED
COS - CONCRETE **S**EALED
CPT - CAR**PET**, SHEET
EPNT - EPOXY **PAINT**
FRP - FIBERGLASS R**E**INFORCED PLASTIC PANEL SYSTEM
LVT - LUXURY VINYL TILE
MB - MARKER B**O**ARD
MP - METAL WALL P**A**NEL
MS - METAL **S**OFFIT
NB - NO BASE
PL - PLASTIC LAMINATE
PNT - PAINT
RES - RESINOUS FLOORING
RT - RUBBER TILE
RTR - RUBBER TREADS AND R**I**SERS
SPEC - SPECIAL FINISHES, REF. ROOM FINISH SCHEDULE & INTERIOR ELEVATIONS
SSM - SOLID **S**URFACE **M**ATERIAL
TB - TACK B**O**ARD
TC - TILE, C**E**RAMIC
TP - TILE, P**O**RCELAIN
WOM - WALK-**O**FF **M**AT

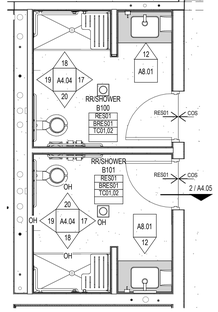
NOT ALL ABBREVIATIONS MAY BE USED



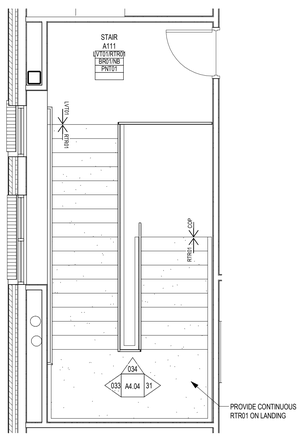
KEY PLAN
N.T.S.



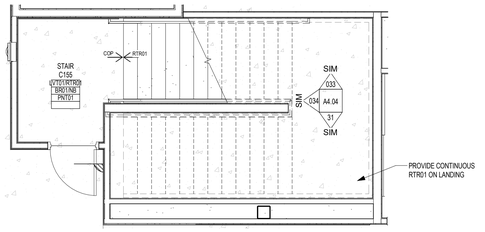
1 FINISH FLOOR PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING
1/8" = 1'-0"



2 ENLARGED FINISH PLAN - LEVEL 1 - AREA B
1/4" = 1'-0"



3 ENLARGED FINISH FLOOR PLAN @ STAIR
1/4" = 1'-0"



4 ENLARGED FINISH FLOOR PLAN @ STAIR
1/4" = 1'-0"

Revision / Date

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

REGISTERED ARCHITECT — DEREK R. BARRINGTON — 21169 — STATE OF TEXAS
09-18-2025

Huckabee
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FINISH PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

Job No. 1971-05-01	Sheet No. A4.02
Drawn By: JT	
Date: 09/18/2025	

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N TRUE

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FINISH PLAN LEGEND

APPLIES TO SECTION PLANS

- A1.1 / 1 — **ELEVATION REFERENCE**
- 1 / A1.1 — **CALLOUT REFERENCE**
- SIM / 1 / A6.1 — **WALL SECTION REFERENCE**
- B — **B - HORIZONTAL BLINDS**
  S - WINDOW SHADES
  SB - WINDOW SHADES - BLACKOUT
  SM - MOTORIZED SHADES
  SMB - MOTORIZED SHADES - BLACKOUT
- **FLOOR INSTALLATION DIRECTION**
- **FLOOR TRANSITION**
- FINISH — **WALL FINISH TAG**
- 8' MB — **EQUIPMENT TAG**

FINISH REMARKS

NOTES APPLY TO ROOMS AS NOTED IN THE ROOM FINISH TAGS. SEE TAG LAYOUT ABOVE.

1. PROVIDE CUT TILE 4" IN HEIGHT, TP01, AND CONTINUE WITH WAINSCOT OF (5) FULL TILES, TP01, ABOVE.
2. PROVIDE MEDIUM BROOM FINISH AT SEALED CONCRETE.
3. PROVIDE 3/4" PLYWOOD OVER 5/8" GYP. BD. TO 8'-0" A.F.F. PAINT AS SCHEDULED
4. SEE **MS- M**OP **S**INK NOTE ON A1.07 FOR EXTENT OF FRP ON WALLS BEHIND MOP SINKS.
5. PROVIDE TC01 BACKSPLASH ABOVE PL01 BACKSPLASH AND ABUT TO THE UNDERSIDE OF THE UPPER CABINETS AND RANGE EXHAUST HOOD WHERE APPLICABLE. WHERE THERE ARE NO UPPER CABINETS OR RANGE EXHAUST HOOD ALIGN TO THE HEIGHT OF THE ADJACENT WALL TILE.

FINISH PLAN GENERAL NOTES

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2. PROVIDE **PNT** AND **TC** (WAINSCOT) WALL FINISHES AS DEFINED ABOVE AND DETAILED ON INTERIOR ELEVATIONS.
3. PROVIDE 3/8" MIN SEALANT JOINT WHERE FULL HT. TILE MEETS GYP. CLG (MATCH CLG COLOR) OR LAY-IN GRID (WHITE)
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5. VERIFY EXACT FLOOR TILE PATTERN FOR ALL TOILET ROOMS. COORDINATE WITH ARCHITECT.
6. ALL SCHEDULED WALL FINISH DIRECTIONS ARE DIRECTIONS PER PLAN NORTH OF THE FINISH PLANS, NOT TRUE NORTH OF THE PROJECT SITE

FINISH KEY

REFER TO GS.01 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CLASSROOM 025 ← ROOM NAME / ROOM NUMBER

TYP FLOOR FINISH	LVT01
WALL BASE FINISH	BR01
TYP WALL FINISH	PNT01
REMARKS	1

*REMARKS NUMBERS COORDINATED WITH FINISH REMARKS LEGEND LOCATED ON ALL FINISH FLOOR PLAN SHEETS

REFER TO PROJECT SPECIFICATIONS SECTION 01 6210 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

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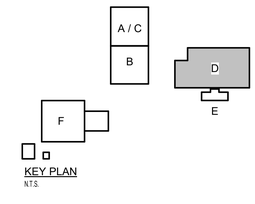
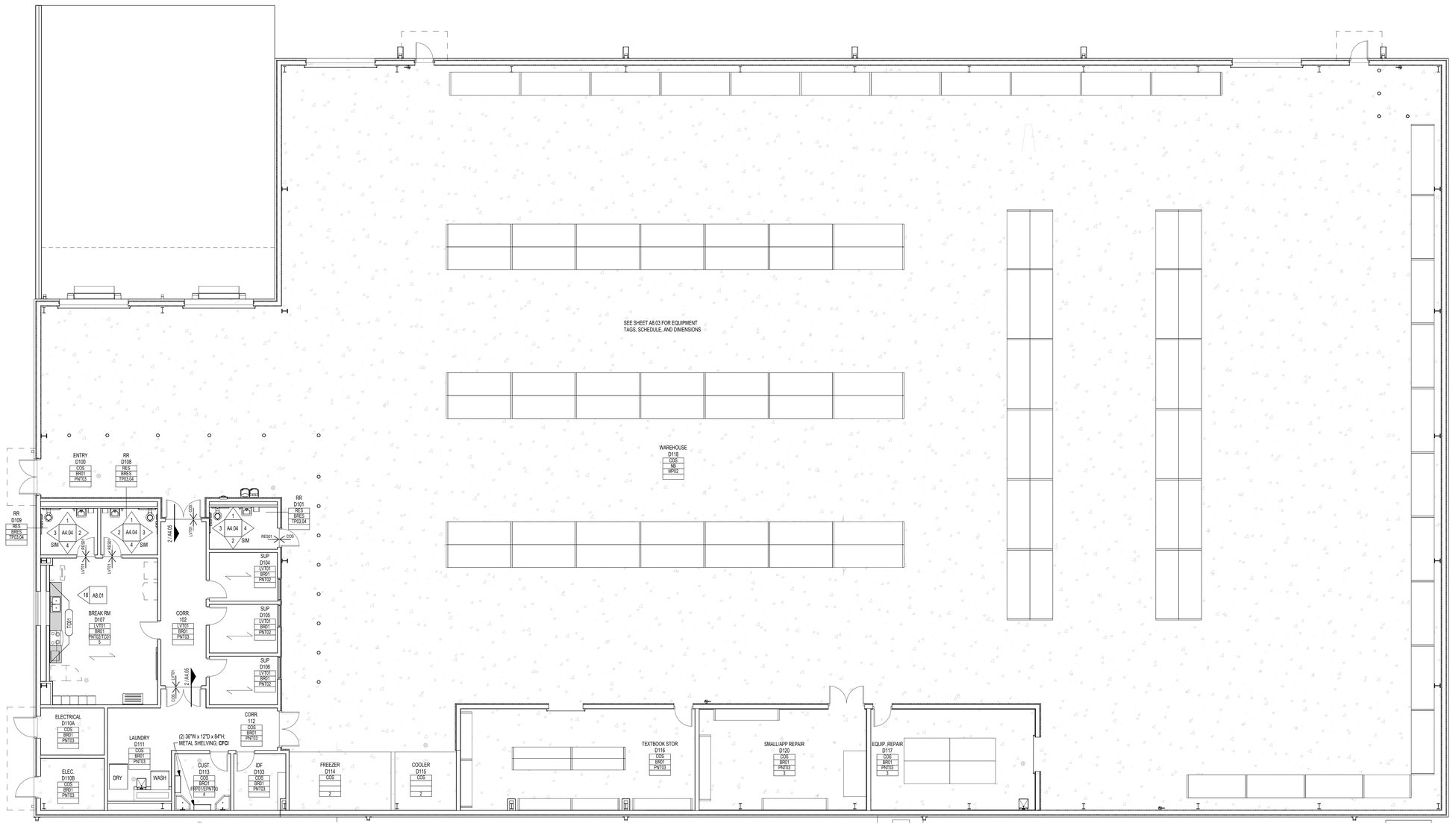
BRK - BRICK
BR - BASE, **R**UBBER
BTC - BASE, TILE, **C**ERAMIC
COP - CONCRETE **P**OLISHED
COS - CONCRETE **S**EALED
CPT - CAR**PET**, SHEET
EPNT - EPOXY **PAINT**
FRP - FIBERGLASS **R**EINFORCED **P**LASTIC PANEL SYSTEM
LVT - LUXURY VINYL TILE
MB - MARKER **B**OARD
MP - METAL WALL **P**ANEL
MS - METAL **S**OFFIT
NB - NO BASE
PL - PLASTIC LAMINATE
PNT - PAINT
RES - RESINOUS FLOORING
RT - RUBBER TILE
RTR - RUBBER TREADS AND **R**ISERS
SPEC - SPECIAL FINISHES, REF. ROOM FINISH SCHEDULE & INTERIOR ELEVATIONS
SSM - SOLID **S**URFACE **M**ATERIAL
TB - TACK **B**OARD
TC - TILE, **C**ERAMIC
TP - TILE, **P**ORCELAIN
WOM - WALK-**O**FF **M**AT

NOT ALL ABBREVIATIONS MAY BE USED



KEY PLAN
N.T.S.



1 FINISH FLOOR PLAN - LEVEL 1 - WAREHOUSE
1/8" = 1'-0"

N TRUE

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT — JOSHUA R. BANKHEAD — 31109 — STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

FINISH PLAN - LEVEL 1 - AREA D - WAREHOUSE

Job No. 1971-05-01	Sheet No. A4.03
Drawn By: JT	
Date: 09/18/2025	

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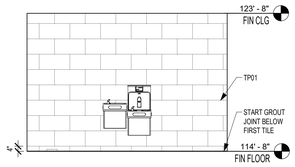
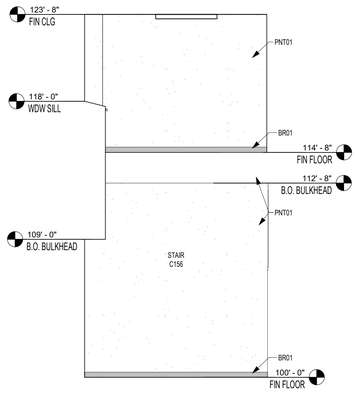
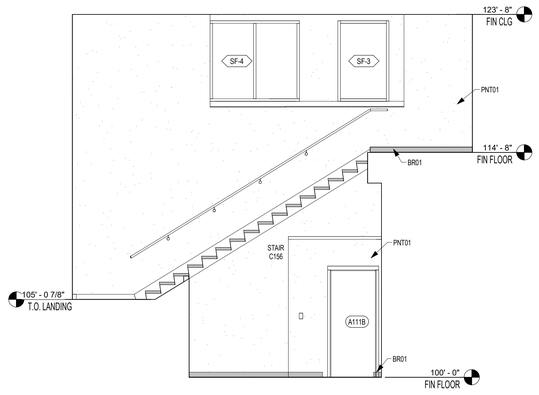


35 INTERIOR ELEVATION - TYPICAL DRINKING FOUNTAIN
1/4" = 1'-0"



034 TYPICAL STAIR TILE
1/4" = 1'-0"



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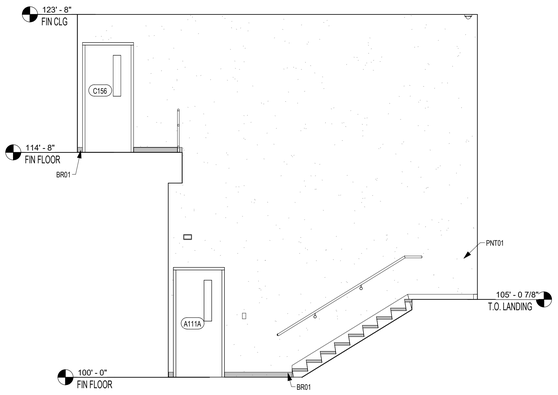
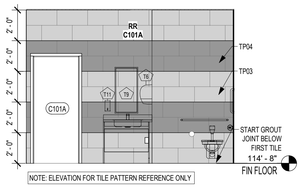
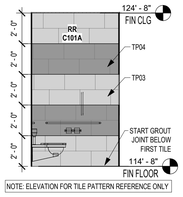
1/4" = 1'-0"



31 TYPICAL STAIR TILE
1/4" = 1'-0"



30 EXEC. DIRECTOR RESTROOM
1/4" = 1'-0"



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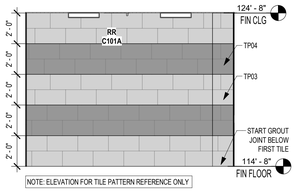
1/4" = 1'-0"



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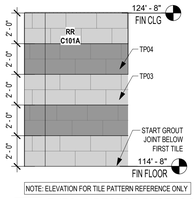

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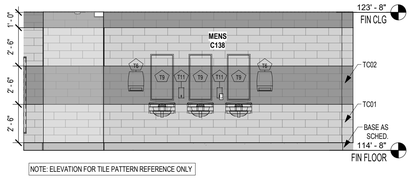
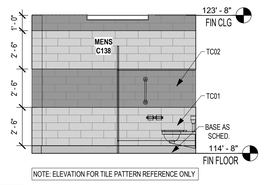
1/4" = 1'-0"



26 TYP. 2ND FLOOR RESTROOM
1/4" = 1'-0"



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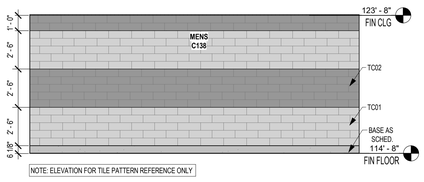

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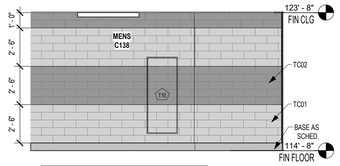

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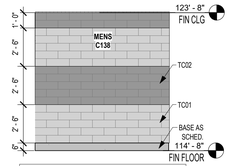

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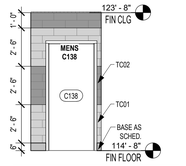
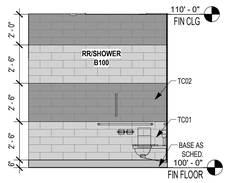
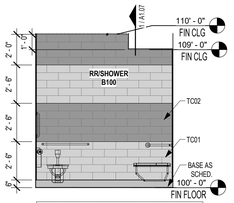


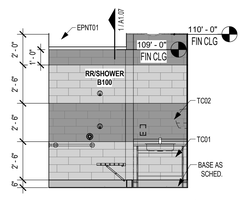
21 TYP. 2ND FLOOR RESTROOM
1/4" = 1'-0"



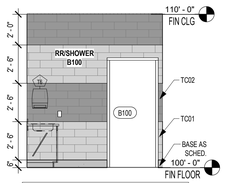
20 TYP RR/SHOWER ELEVATION
1/4" = 1'-0"



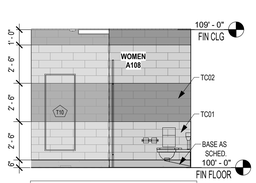
19 TYP RR/SHOWER ELEVATION
1/4" = 1'-0"



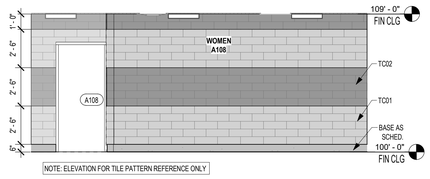
18 TYP RR/SHOWER ELEVATION
1/4" = 1'-0"



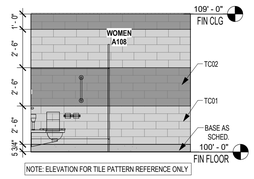
17 TYP RR/SHOWER ELEVATION
1/4" = 1'-0"



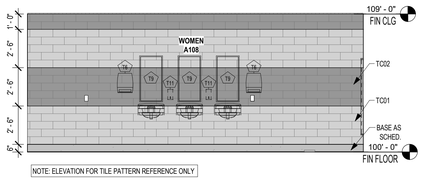
16 TYP MULTI-USER RESTROOM
1/4" = 1'-0"



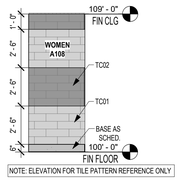
15 TYP MULTI-USER RESTROOM
1/4" = 1'-0"



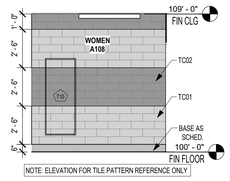
14 TYP MULTI-USER RESTROOM
1/4" = 1'-0"



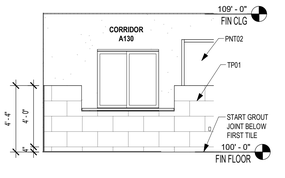
13 TYP MULTI-USER RESTROOM
1/4" = 1'-0"



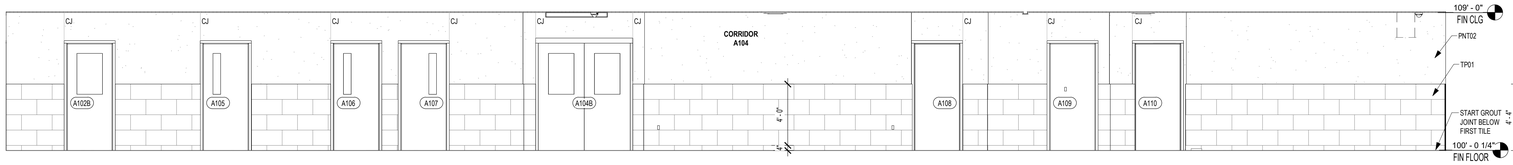
12 TYP MULTI-USER RESTROOM
1/4" = 1'-0"



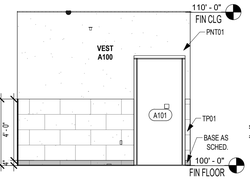
11 TYP MULTI-USER RESTROOM
1/4" = 1'-0"



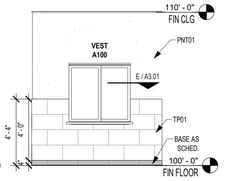
10 TILE AT TRANSACTION WINDOW
1/4" = 1'-0"



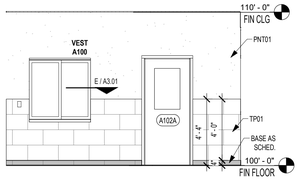
9 TYPICAL COORIDOR TILE
1/4" = 1'-0"



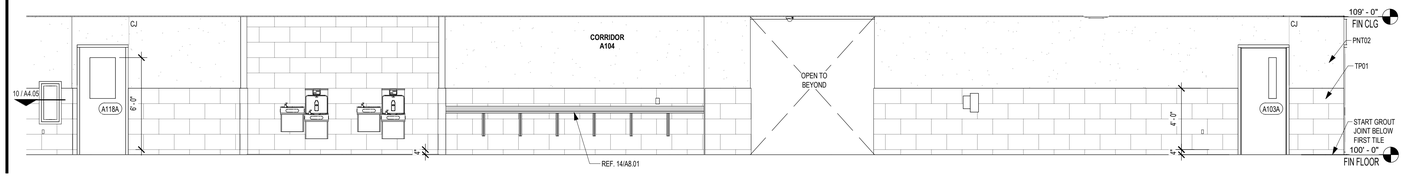
8 INTERIOR ELEVATION
1/4" = 1'-0"



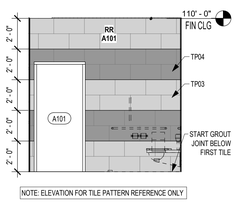
7 INTERIOR ELEVATION
1/4" = 1'-0"



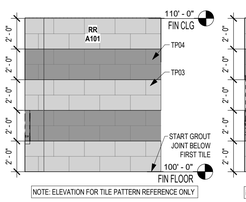
6 INTERIOR ELEVATION
1/4" = 1'-0"



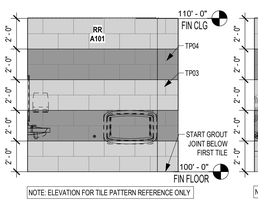
5 TYPICAL COORIDOR TILE
1/4" = 1'-0"



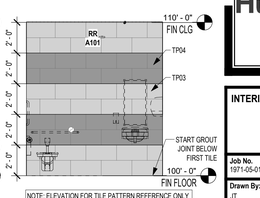
4 TYP SINGLE-USER RESTROOM
1/4" = 1'-0"



3 TYP SINGLE-USER RESTROOM
1/4" = 1'-0"



2 TYP SINGLE-USER RESTROOM
1/4" = 1'-0"



1 TYP SINGLE-USER RESTROOM
1/4" = 1'-0"

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

09-18-2025

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INTERIOR ELEVATIONS

Job No.	Sheet No.
1971-05-01	A4.04
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

9/17/2025 10:53:39 PM
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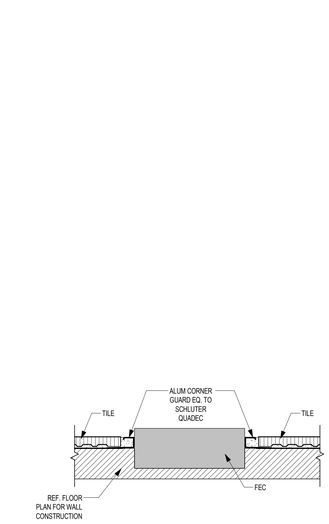
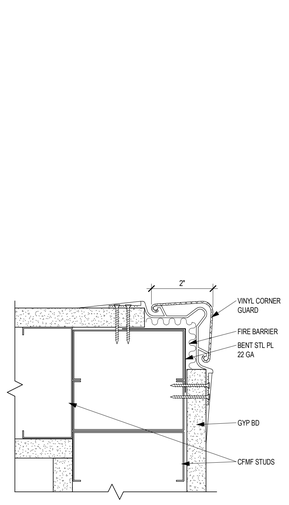
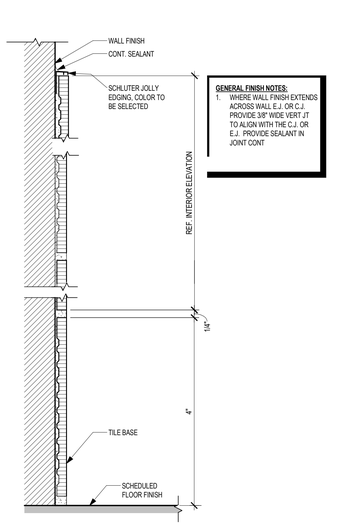


10 TYP TILE DETAIL @ FEC
6" = 1'-0"

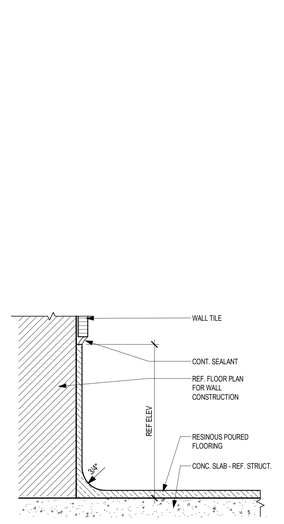


9 VINYL CORNER GUARD - FLUSH
6" = 1'-0"

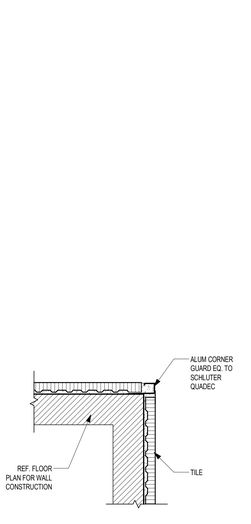


GENERAL FINISH NOTES:
1. WHERE WALL FINISH EXTENDS ACROSS WALL E.J. OR C.J. PROVIDE 3/8" WIDE VERT JT TO ALIGN WITH THE C.J. OR E.J. PROVIDE SEALANT IN JOINT CONT

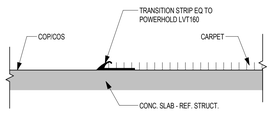
8 TYP TILE BASE W/ TILE WAINSCOT
6" = 1'-0"



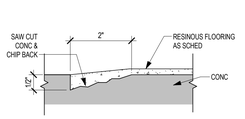
7 TYP RESINOUS COVE BASE W/ TILE
6" = 1'-0"



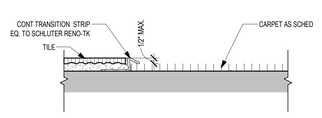
6 TYP TILE CORNER DETAIL
6" = 1'-0"



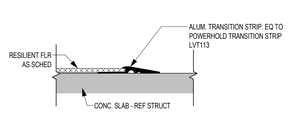
5 TRANSITION - CARPET TO CONCRETE
6" = 1'-0"



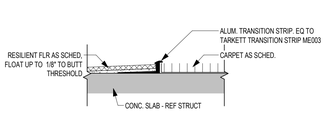
4 TRANSITION RESINOUS FLUSH TO CONC
6" = 1'-0"



3 TRANSITION - CARPET TO TILE
6" = 1'-0"



2 ALUMINUM TRANSITION - RESILIENT TO COP
6" = 1'-0"



1 ALUMINUM TRANSITION - CARPET TO RESILIENT
6" = 1'-0"

Project: NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Revision / Date

09-18-2025

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TYP INTERIOR FINISH DETAILS

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. A4.05
Drawn By:	
Date: 09/18/2025	

ISSUED FOR BID

9/17/2025 10:53:41 PM
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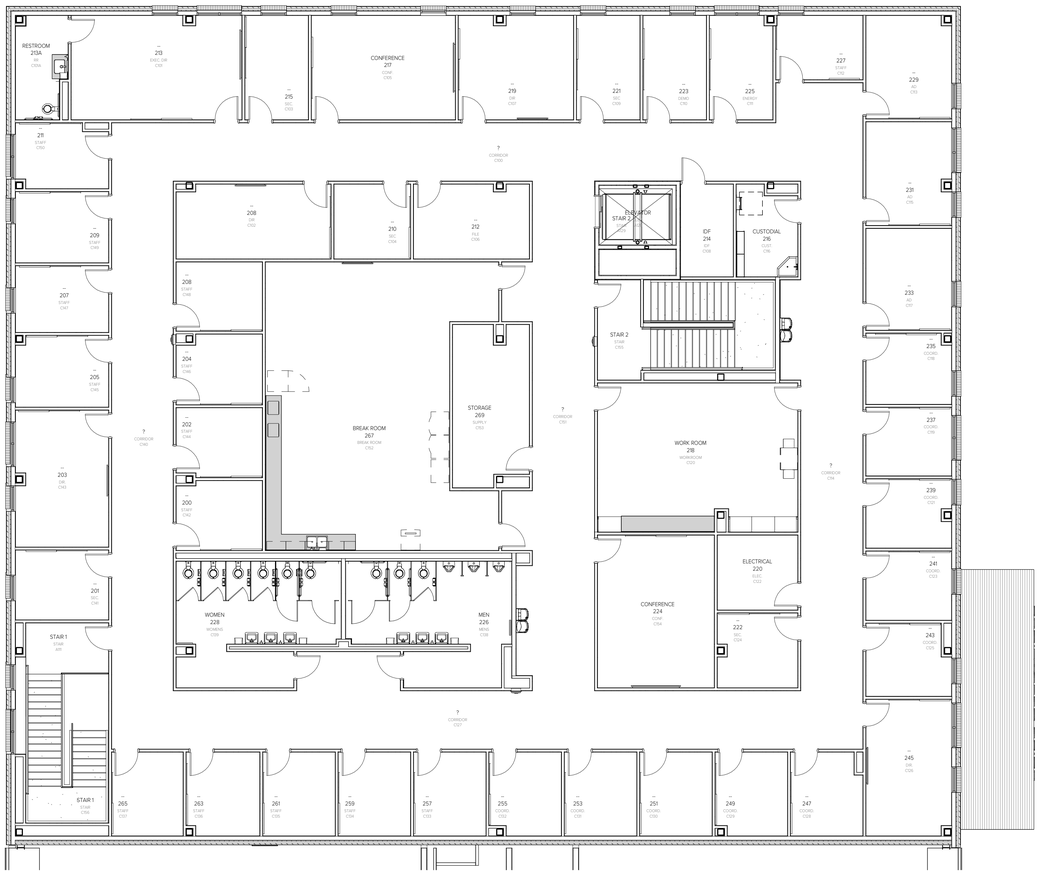
ROOM SIGNAGE SCHEDULE - AREAS A & C

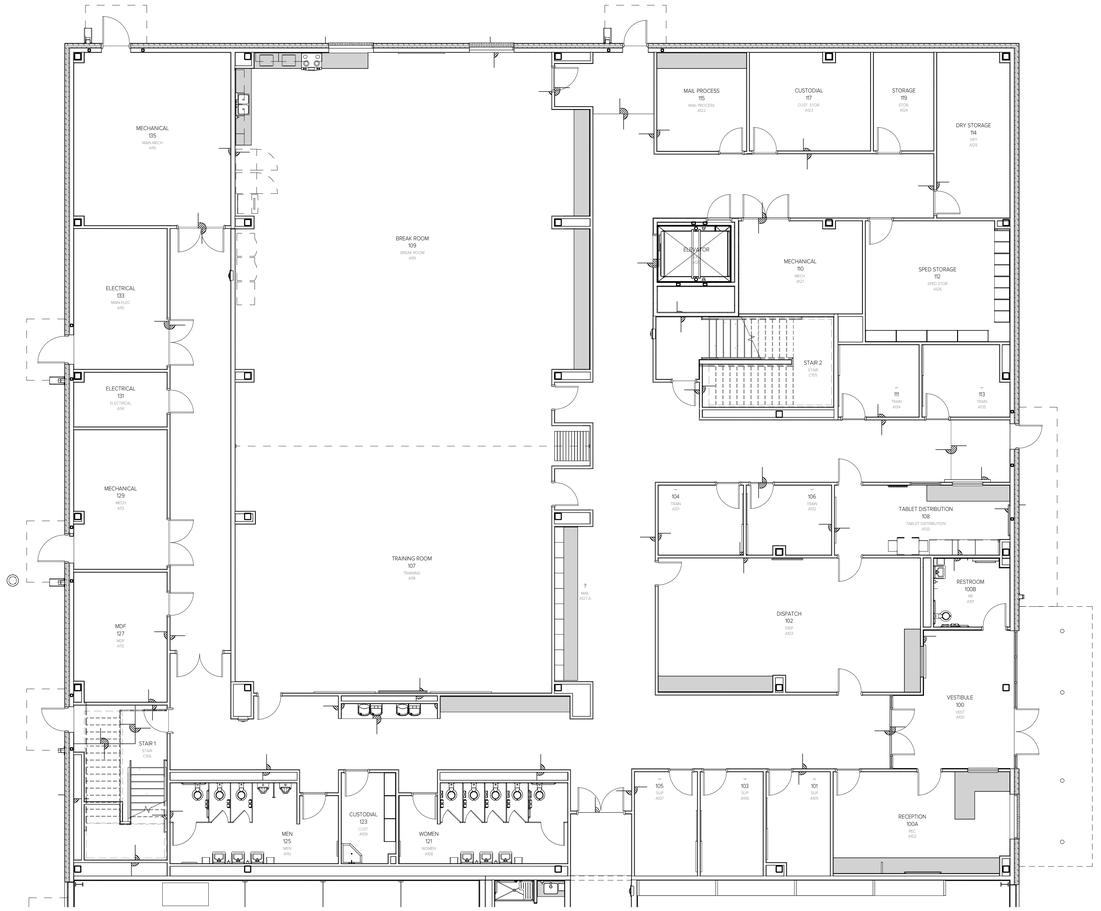
CONSTRUCTION DOCUMENTS		NCISD SIGNAGE		SIGNAGE TYPE	SIGNAGE QUANTITY	BACKER PLATE	COMMENTS
NUMBER	NAME	NUMBER	NAME				
A100	VEST	100	VESTIBULE				
A101	RR	100B	RESTROOM	C3	1		
A102	REC	100A	RECEPTION	B1	4		
A103	DISP	102	DISPATCH	B1, D3	2		
A105	SUP	101	--	A	1		
A106	SUP	103	--	A	1		
A107	SUP	105	--	A	1		
A108	WOMEN	121	WOMEN	C1	1		
A109	CUST.	123	CUSTODIAL	B1	1		
A110	MEN	125	MEN	C2	1		
A111	STAIR		STAIR 1	N	1		
A112	MDF	127	MDF	B1	1		
A113	MECH	129	MECHANICAL	B1	2		
A114	ELECTRICAL	131	ELECTRICAL	B1	1		
A115	MAIN ELEC	133	ELECTRICAL	B1	2		
A116	MAIN MECH	135	MECHANICAL	B1 / D2	2 EA		
A118	TRAINING	107	TRAINING ROOM	B1	2		
A119	BREAK ROOM	109	BREAK ROOM	B1	2		
A122	MAIL PROCESS	115	MAIL PROCESS	B1	1		
A123	CUST. STOR.	117	CUSTODIAL	B1	1		
A124	STOR.	119	STORAGE	B1	1		
A125	DRY	114	DRY STORAGE	B1	1		
A126	SPED STOR	112	SPED STORAGE	B1	1		
A127	MECH.	110	MECHANICAL	B1	1		
A128	ELEV.		ELEVATOR	G	1		
A129	STAIR		STAIR 2	N	1		
A131	TRAIN	104	--	A1	1		
A132	TRAIN	106	--	A1	1		
A133	TABLET DISTRIBUTION	108	TABLET DISTRIBUTION	B1	1		
A134	TRAIN	111	--	A	1		
A135	TRAIN	113	--	A	1		
C101	EXEC. DIR	213	--	A	1		
C101A	RR	213A	RESTROOM	C3	1		
C102	DIR	208	--	A	1		
C103	SEC.	215	--	A	1		
C104	SEC	210	--	A	1		
C105	CONF.	217	CONFERENCE	B1	1		
C106	FILE	212	--	A	1		
C107	DIR	219	--	A	1		
C108	IDF	214	IDF	B1	1		
C109	SEC	221	--	A	1		
C110	DEMO	223	--	A	1		

ROOM SIGNAGE SCHEDULE - AREAS A & C

CONSTRUCTION DOCUMENTS		NCISD SIGNAGE		SIGNAGE TYPE	SIGNAGE QUANTITY	BACKER PLATE	COMMENTS
NUMBER	NAME	NUMBER	NAME				
C111	ENERGY	225	--	A	1		
C112	STAFF	227	--	A	1		
C113	AD	229	--	A	1		
C115	AD	231	--	A	1		
C116	CUST.	216	CUSTODIAL	B1	1		
C117	AD	233	--	A	1		
C118	COORD.	235	--	A	1		
C119	COORD.	237	--	A	1		
C120	WORKROOM	218	WORK ROOM	B1	2		
C121	COORD.	239	--	A	1		
C122	ELEC.	220	ELECTRICAL	B1	1		
C123	COORD.	241	--	A	1		
C124	SEC.	222	--	A	1		
C125	COORD.	243	--	A	1		
C126	DIR.	245	--	A	1		
C128	COORD.	247	--	A	1		
C129	COORD.	249	--	A	1		
C130	COORD.	251	--	A	1		
C131	COORD.	253	--	A	1		
C132	COORD.	255	--	A	1		
C133	STAFF	257	--	A	1		
C134	STAFF	259	--	A	1		
C135	STAFF	261	--	A	1		
C136	STAFF	263	--	A	1		
C137	STAFF	265	--	A	1		
C138	MENS	226	MEN	C2	1		
C139	WOMENS	228	WOMEN	C1	1		
C141	SEC.	201	--	A	1		
C142	STAFF	200	--	A	1		
C143	DIR.	203	--	A	1		
C144	STAFF	202	--	A	1		
C145	STAFF	205	--	A	1		
C146	STAFF	204	--	A	1		
C147	STAFF	207	--	A	1		
C148	STAFF	208	--	A	1		
C149	STAFF	209	--	A	1		
C150	STAFF	211	--	A	1		
C152	BREAK ROOM	267	BREAK ROOM	B1	2		
C153	SUPPLY	269	STORAGE	B1	1		
C154	CONF.	224	CONFERENCE	B1	1		
C155	STAIR		STAIR 2	N	1		
C156	STAIR		STAIR 1	N	1		
C157	Room				1		



2 SIGNAGE PLAN - LEVEL 2 - AREA C - OPERATIONS BUILDING
1/8" = 1'-0"



1 SIGNAGE PLAN - LEVEL 1 - AREA A - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE

N TRUE

A / C
B
D
E
F

KEY PLAN
N.T.S.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
JOSHUA R. BANNISTER
31109
STATE OF TEXAS
09-18-2025

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SIGNAGE PLAN - LEVEL 1 & 2 - AREA A & C - OPERATIONS BUILDING

Job No.	Sheet No.
1971-05-01	A4.06
Drawn By: JT	
Date: 09/18/2025	

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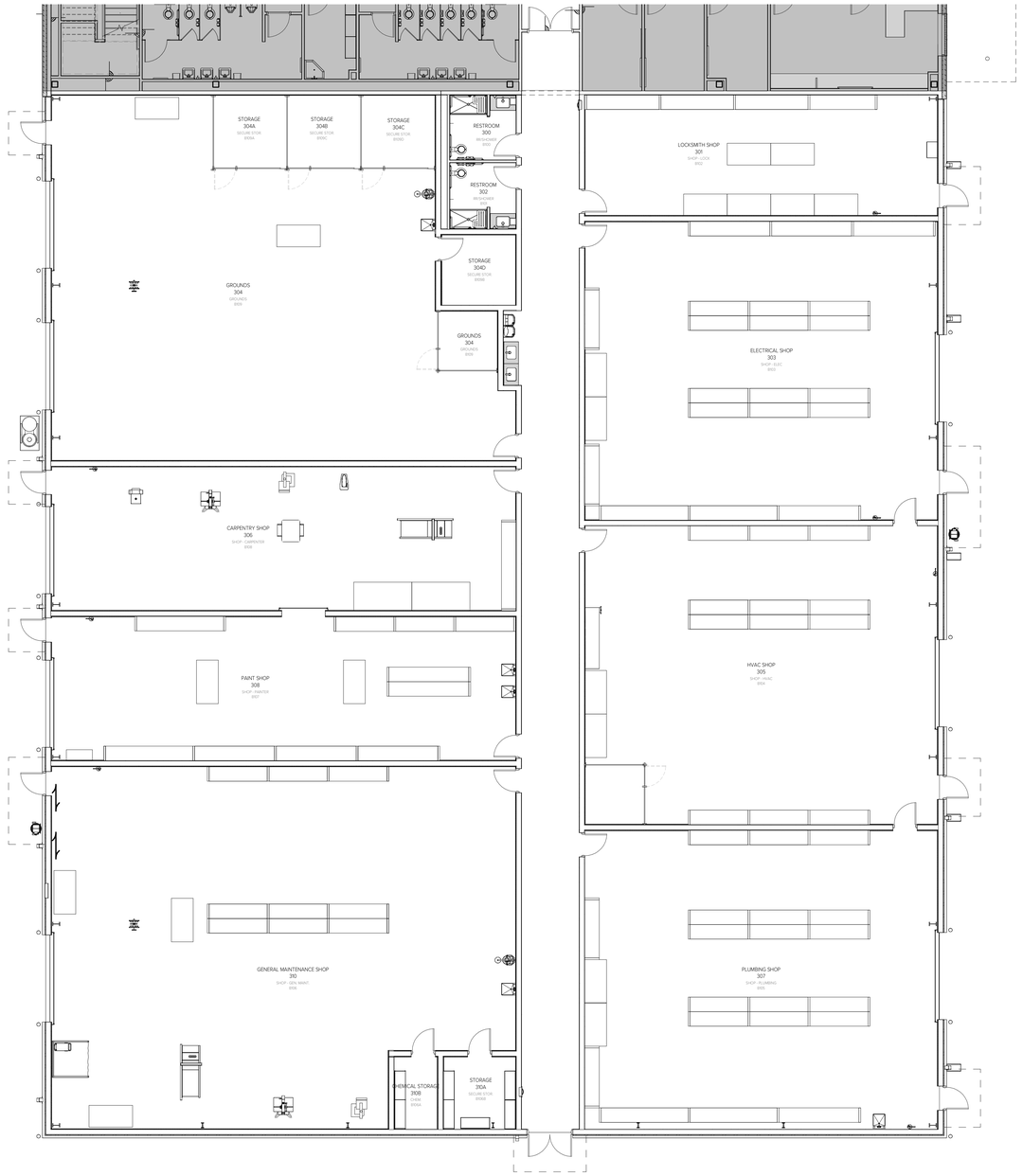
ROOM SIGNAGE SCHEDULE - AREA B

CONSTRUCTION DOCUMENTS		NCISD SIGNAGE		SIGNAGE TYPE	SIGNAGE QUANTITY	BACKER PLATE	COMMENTS
NUMBER	NAME	NUMBER	NAME				
B100	RR/SHOWER	300	RESTROOM	C3	1		
B101	RR/SHOWER	302	RESTROOM	C3	1		
B102	SHOP - LOCK	301	LOCKSMITH SHOP	B1	2		EXTERIOR SIGNS
B103	SHOP - ELEC.	303	ELECTRICAL SHOP	B1	2		
B104	SHOP - HVAC	305	HVAC SHOP	B1	2		
B104A	SECURE STOR.	305A	STORAGE	B1	1	Yes	
B105	SHOP - PLUMBING	307	PLUMBING SHOP	B1	2		
B106	SHOP - GEN. MAINT.	310	GENERAL MAINTENANCE SHOP	B1	2		
B106A	CHEM.	310B	CHEMICAL STORAGE	B1	1		
B106B	SECURE STOR.	310A	STORAGE	B1	1		
B107	SHOP - PAINTER	308	PAINT SHOP	B1	2		
B108	SHOP - CARPENTER	306	CARPENTRY SHOP	B1	2		
B109	GROUNDS	304	GROUNDS	B1	2		
B109A	SECURE STOR.	304A	STORAGE	B1	1	Yes	
B109B	SECURE STOR.	304D	STORAGE	B1	1		
B109C	SECURE STOR.	304B	STORAGE	B1	1	Yes	
B109D	SECURE STOR.	304C	STORAGE	B1	1	Yes	
B109E	SECURE STOR.	304E	STORAGE	B1	1	Yes	

REF. SHEET A1.02 FOR CONTINUATION



1 SIGNAGE PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE

A / C | B | D | F | E

KEY PLAN
N.T.S.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
JAMES TUCKER HUCKABEE
37169
STATE OF TEXAS
09-18-2025

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SIGNAGE PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

Job No.	Sheet No.
1971-05-01	A4.07
Drawn By: JT	
Date: 09/18/2025	

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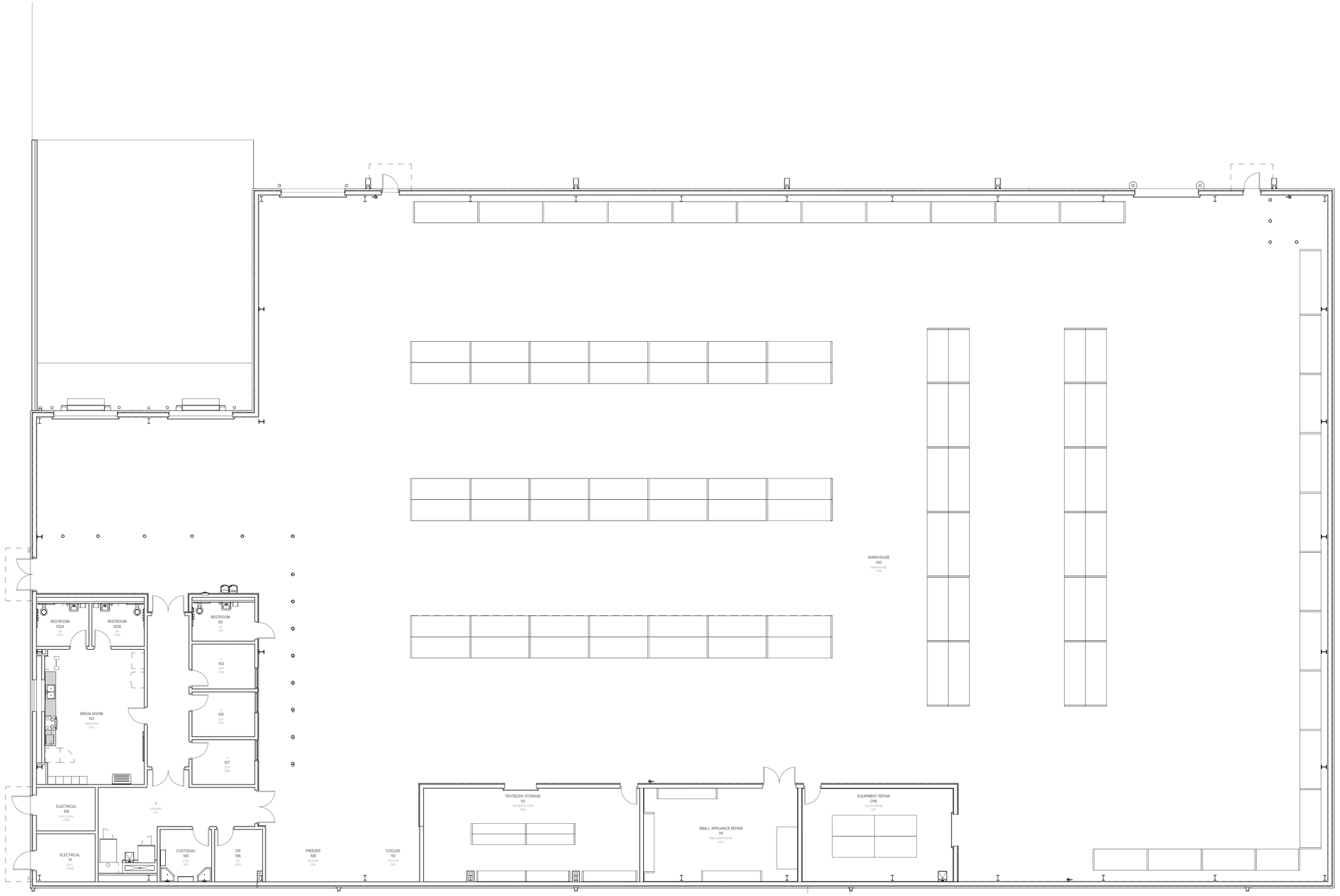
ROOM SIGNAGE SCHEDULE - AREA D

CONSTRUCTION DOCUMENTS		NCISD SIGNAGE		SIGNAGE TYPE	SIGNAGE QUANTITY	BACKER PLATE	COMMENTS
NUMBER	NAME	NUMBER	NAME				
D100	ENTRY	100	WAREHOUSE MAIN ENTRY	B1	1		
D101	RR	101	RESTROOM	C3	1		
D103	IDF	106	IDF	B1	1		
D104	SUP	103	--	A	1		
D105	SUP	105	--	A	1		
D106	SUP	107	--	A	1		
D107	BREAK RM	102	BREAK ROOM	B1	1		
D108	RR	102B	RESTROOM	C3	1		
D109	RR	102A	RESTROOM	C3	1		
D110A	ELECTRICAL	109	ELECTRICAL	B1	1		
D110B	ELEC.	111	ELECTRICAL	B1	1		
D111	LAUNDRY						
D113	CUST.	104	CUSTODIAL	B1	1		
D114	FREEZER	108	FREEZER	B1	1		
D115	COOLER	110	COOLER	B1	1		
D116	TEXTBOOK STOR	112	TEXTBOOK STORAGE	B1	1		
D117	EQUIP. REPAIR	D116	EQUIPMENT REPAIR	B1	1		
D118	WAREHOUSE	100	WAREHOUSE	B1	2		
D120	SMALL/APP REPAIR	114	SMALL APPLIANCE REPAIR	B1	1		



KEY PLAN
N.T.S.

1 EQUIPMENT PLAN - LEVEL 1 - AREA D - WAREHOUSE Copy 1
1/8" = 1'-0"

9/18/2025 9:43:39 AM

Autodesk Docs://NEW CANEY ISD - NEW OPERATIONS BUILDING/1971-05-01_NCISD Trans. Ops Building_ARCH_v25.rvt

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
JAMES R. BATTEN
37163
STATE OF TEXAS
09-18-2025

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SIGNAGE PLAN - LEVEL 1 - AREA D - WAREHOUSE

Job No.	Sheet No.
1971-05-01	A4.08
Drawn By: JT	
Date: 09/18/2025	

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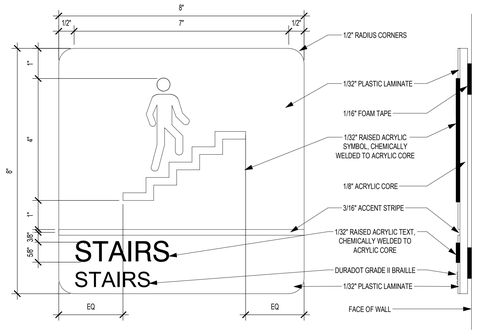
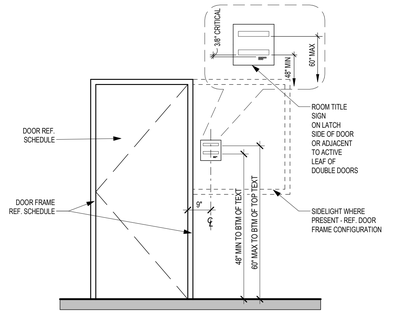
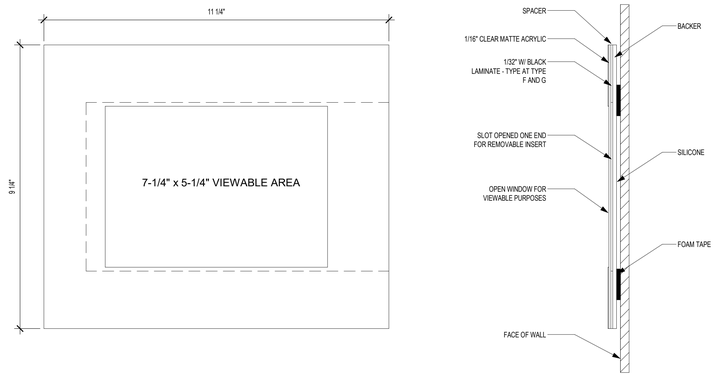
NOTES:
1. OWNER TO APPROVE AND COORDINATE SIGN TYPES, QUANTITY, AND FINAL LOCATION.
2. ROOM NUMBERS AND ROOM NAMES TO BE COORDINATED WITH OWNER.
3. ALL SIGNS ON GLASS TO RECEIVE BACKER PLATE



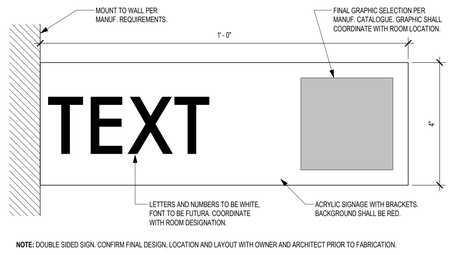
N PLAQUE TYPE N
6" = 1'-0"



12 TYP SIGNAGE LOCATION
1/2" = 1'-0"

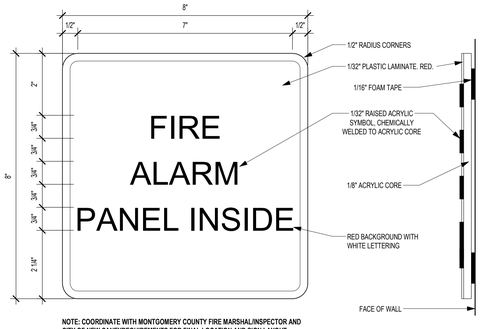


1 PLAQUE TYPE G - ELEVATOR CERTIFICATE (1ST FLOOR ONLY)
6" = 1'-0"



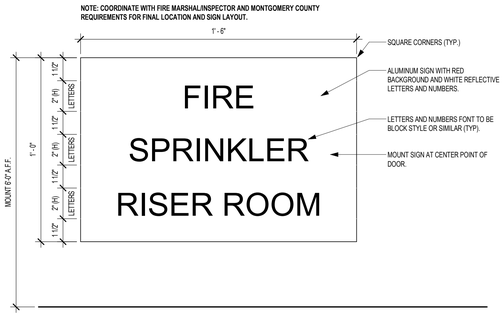
NOTE: DOUBLE SIDED SIGN. CONFIRM FINAL DESIGN, LOCATION AND LAYOUT WITH OWNER AND ARCHITECT PRIOR TO FABRICATION.

11 WAYFINDING SIGNAGE - PLAQUE TYPE E1
6" = 1'-0"



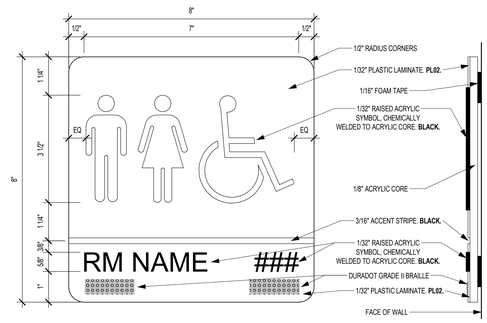
NOTE: COORDINATE WITH MONTGOMERY COUNTY FIRE MARSHAL/INSPECTOR AND CITY OF NEW CANEYREQUIREMENTS FOR FINAL LOCATION AND SIGN LAYOUT.

D3 PLAQUE TYPE D3 - FIRE ALARM PANEL
6" = 1'-0"

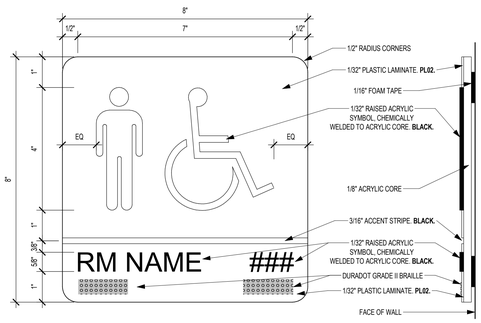


D2 PLAQUE TYPE D2 - FIRE SPRINKLER RISER ROOM
3" = 1'-0"

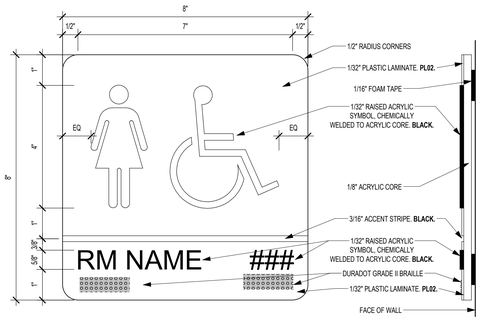
D1 PLAQUE TYPE D1 - MAX OCCUPANCY
6" = 1'-0"



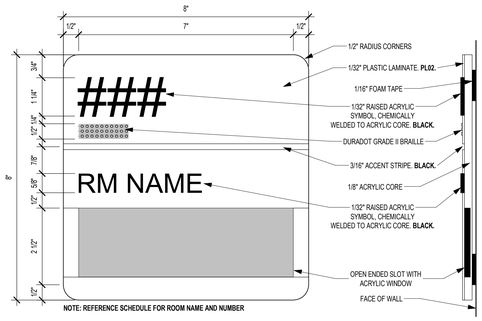
C3 PLAQUE TYPE C3
6" = 1'-0"



C2 PLAQUE TYPE C2
6" = 1'-0"

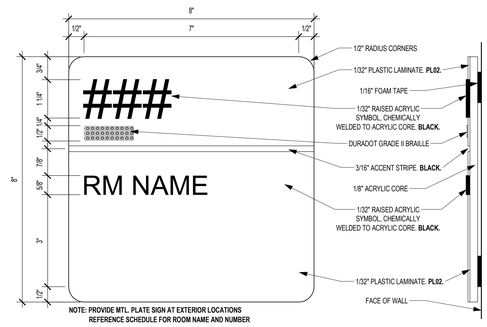


C1 PLAQUE TYPE C1
6" = 1'-0"



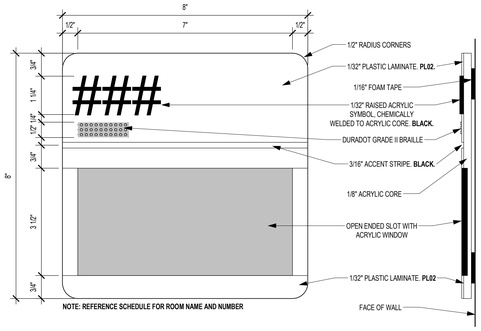
NOTE: REFERENCE SCHEDULE FOR ROOM NAME AND NUMBER

B2 PLAQUE TYPE B2
6" = 1'-0"



NOTE: PROVIDE MTL. PLATE SIGN AT EXTERIOR LOCATIONS REFERENCE SCHEDULE FOR ROOM NAME AND NUMBER

B1 PLAQUE TYPE B1
6" = 1'-0"



NOTE: REFERENCE SCHEDULE FOR ROOM NAME AND NUMBER

A PLAQUE TYPE A
6" = 1'-0"

Revision / Date

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

REGISTERED ARCHITECT
DEREK R. BAMBERGER
31169
STATE OF TEXAS
09-18-2025

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SIGNAGE DETAILS

Job No. 1971-05-01	Sheet No. A4.09
Drawn By: JT	
Date: 09/18/2025	

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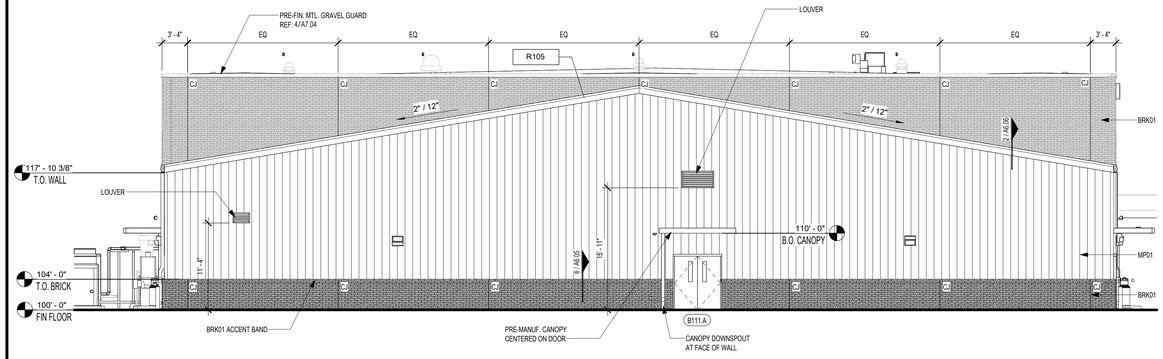
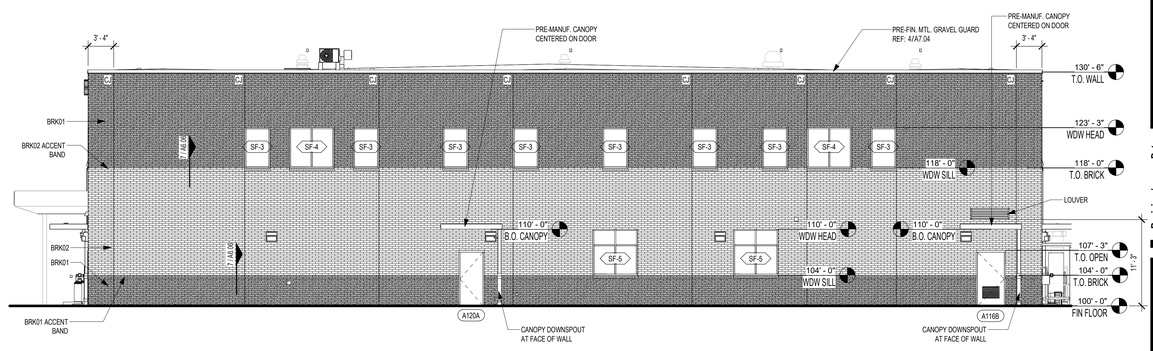
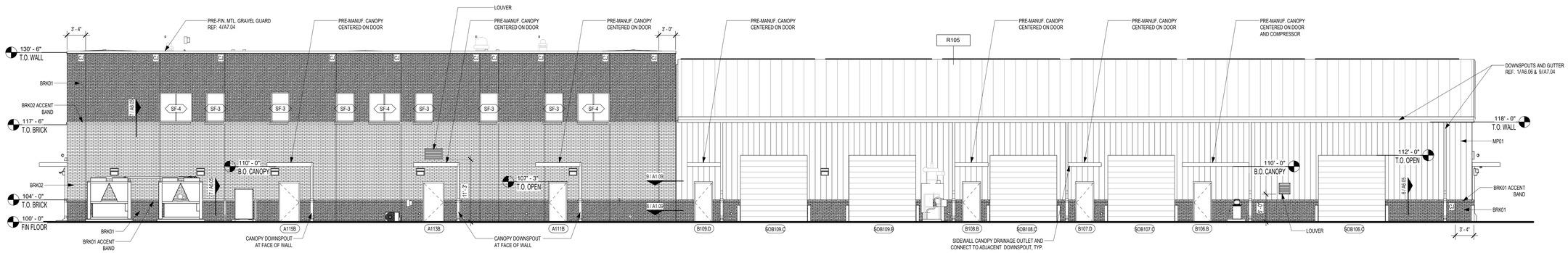


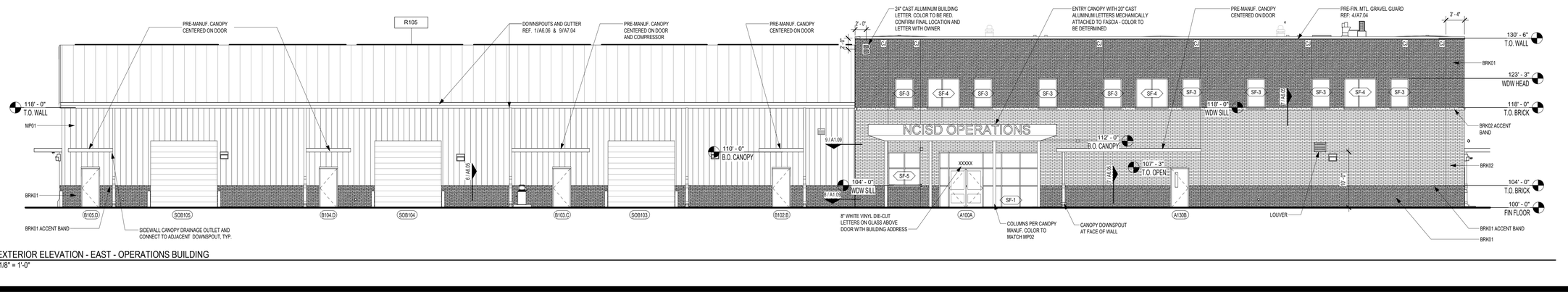
4 EXTERIOR ELEVATION - SOUTH - OPERATIONS BUILDING
1/8" = 1'-0"



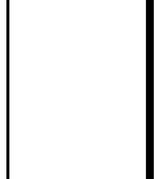
3 EXTERIOR ELEVATION - NORTH - OPERATIONS BUILDING
1/8" = 1'-0"



2 EXTERIOR ELEVATION - WEST - OPERATIONS BUILDING
1/8" = 1'-0"



1 EXTERIOR ELEVATION - EAST - OPERATIONS BUILDING
1/8" = 1'-0"



KEY PLAN
N.T.S.

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Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

09-18-2025

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EXTERIOR ELEVATIONS - OPERATIONS BUILDING

Job No.	Sheet No.
1971-05-01	A5.01
Drawn By: JT	
Date: 09/18/2025	

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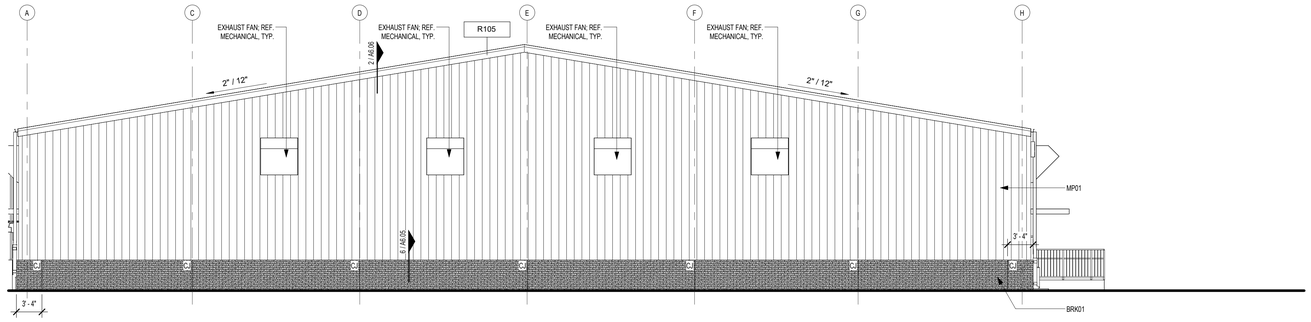
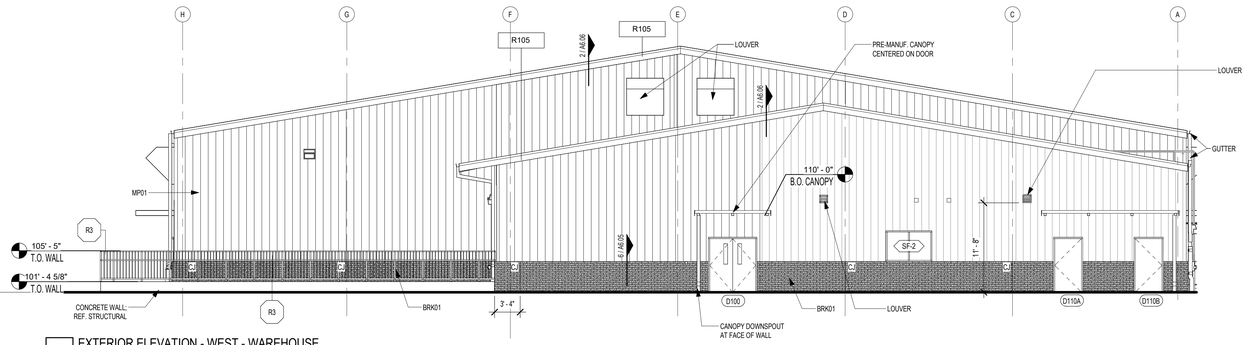
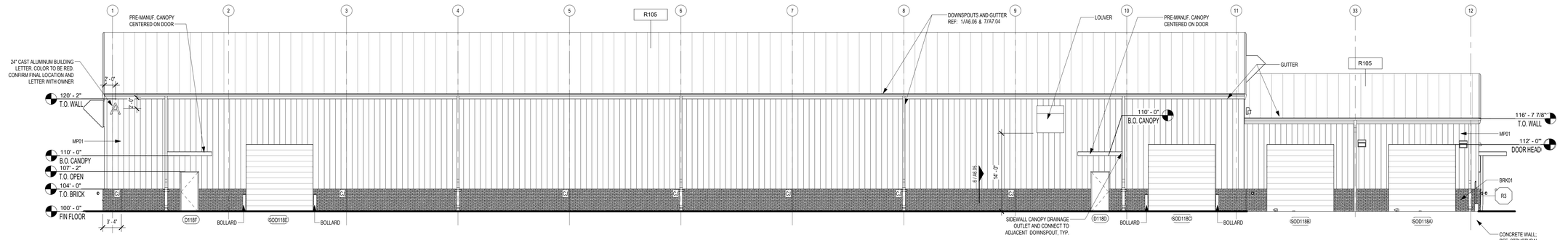


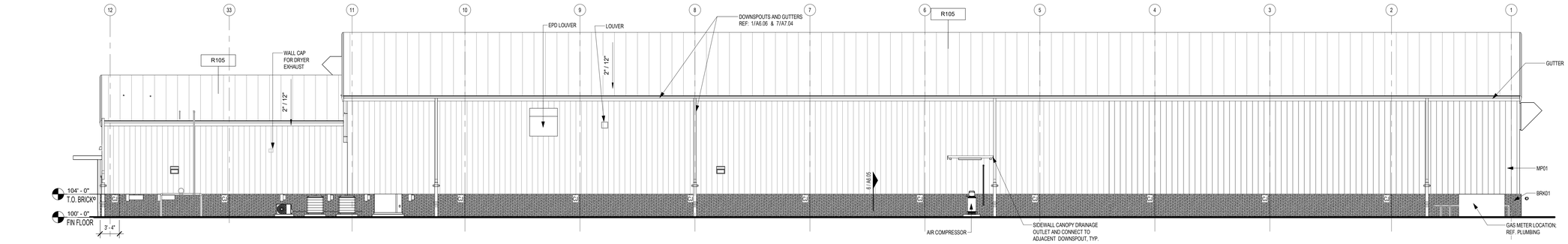
4 EXTERIOR ELEVATION - EAST - WAREHOUSE
1/8" = 1'-0"



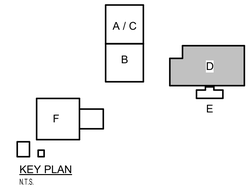
3 EXTERIOR ELEVATION - WEST - WAREHOUSE
1/8" = 1'-0"



2 EXTERIOR ELEVATION - NORTH - WAREHOUSE
1/8" = 1'-0"



1 EXTERIOR ELEVATION - SOUTH - WAREHOUSE
1/8" = 1'-0"



KEY PLAN
N.T.S.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
DEREK R. BANNISTER
STATE OF TEXAS
09-18-2025

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EXTERIOR ELEVATIONS - WAREHOUSE

Job No.	Sheet No.
1971-05-01	A5.02
Drawn By: JT	
Date: 09/18/2025	

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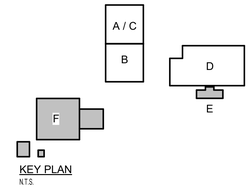
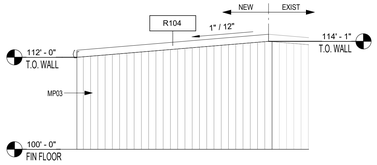
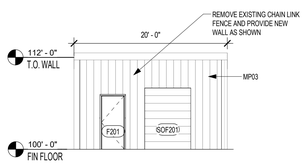


KEY PLAN
N.T.S.



11 EXTERIOR ELEVATION - WEST - STORAGE ADDITION
1/8" = 1'-0"



10 EXTERIOR ELEVATION - NORTH - STORAGE WALL REPLACEMENT
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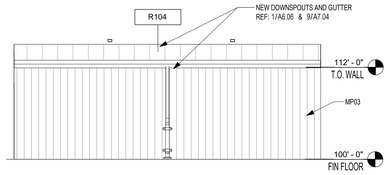
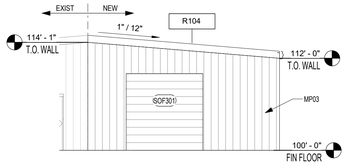
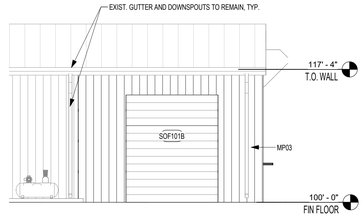


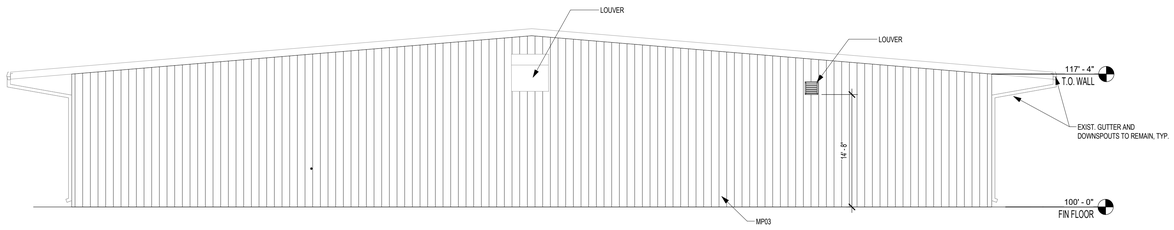
9 EXTERIOR ELEVATION - NORTH - STORAGE ADDITION
1/8" = 1'-0"



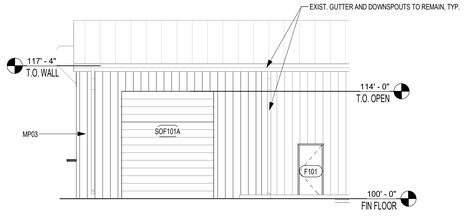
8 EXTERIOR ELEVATION - EAST - STORAGE ADDITION
1/8" = 1'-0"



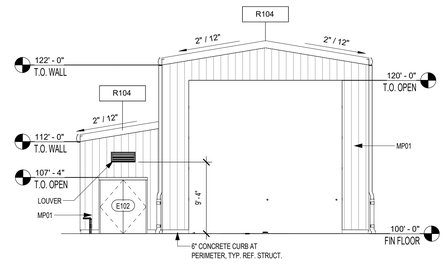
7 EXTERIOR ELEVATION - NORTH - MAINTENANCE ADDITION
1/8" = 1'-0"



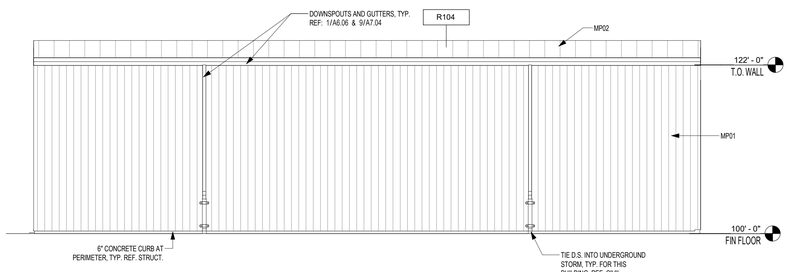
6 EXTERIOR ELEVATION - WEST - MAINTENANCE ADDITION
1/8" = 1'-0"



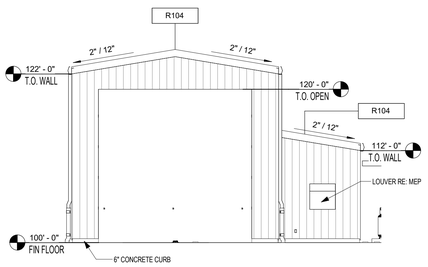
5 EXTERIOR ELEVATION - SOUTH - MAINTENANCE ADDITION
1/8" = 1'-0"



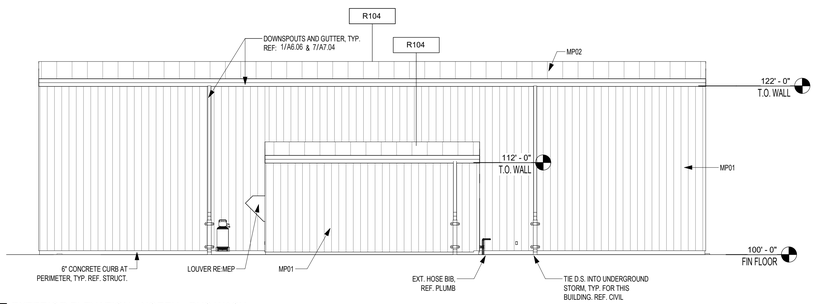
4 EXTERIOR ELEVATION - WEST - BUS WASH
1/8" = 1'-0"



3 EXTERIOR ELEVATION - SOUTH - BUS WASH
1/8" = 1'-0"



2 EXTERIOR ELEVATION - EAST - BUS WASH
1/8" = 1'-0"



1 EXTERIOR ELEVATION - NORTH - BUS WASH
1/8" = 1'-0"

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
JAMES R. BANNISTER
31169
STATE OF TEXAS
09-18-2025

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EXTERIOR ELEVATIONS - BUS WASH, MAINTENANCE & STORAGE

Job No. 1071-05-01	Sheet No. A5.03
Drawn By: JT	
Date: 09/18/2025	

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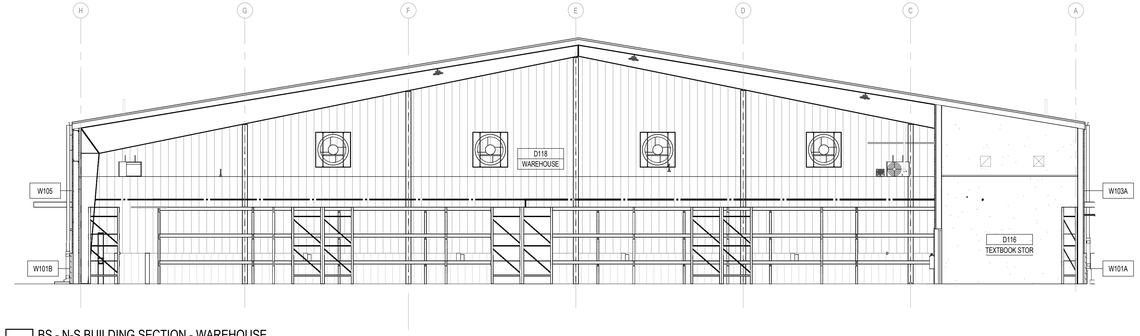
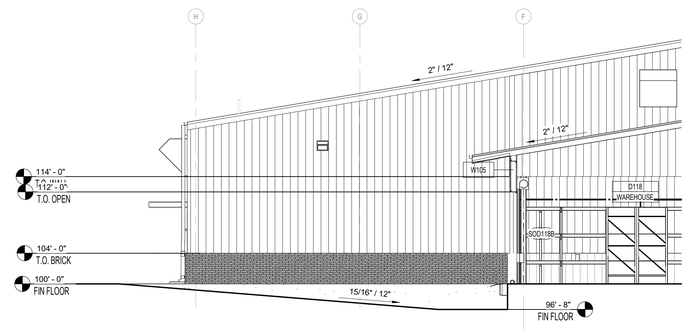
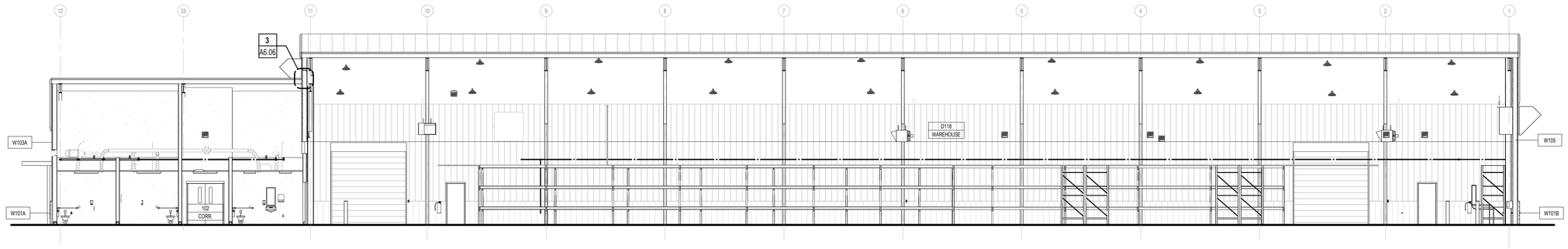


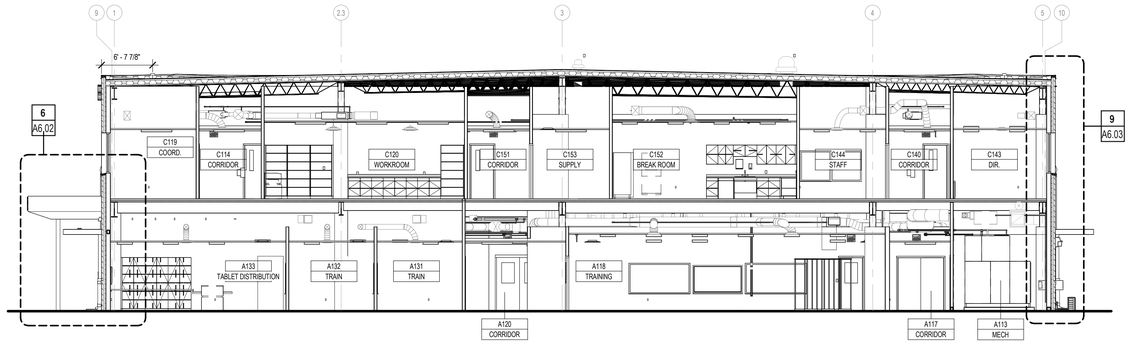
6 BS - N-S BUILDING SECTION - WAREHOUSE
1/8" = 1'-0"



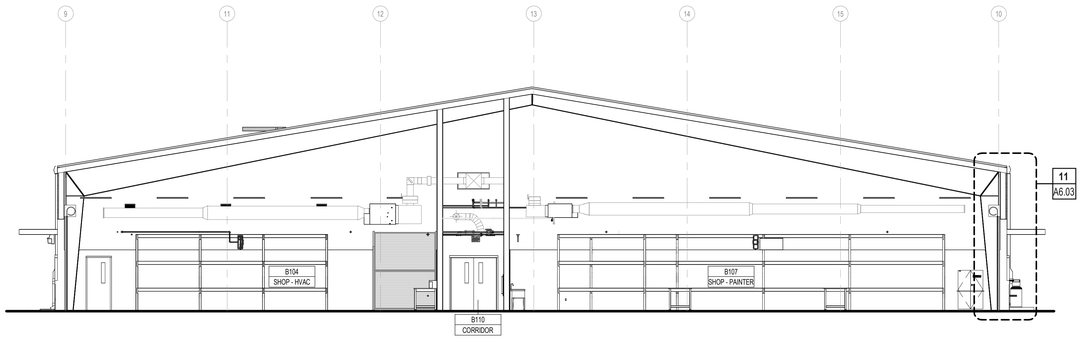
5 BS - NS - STORAGE BUILDING LOADING DOCK
1/8" = 1'-0"



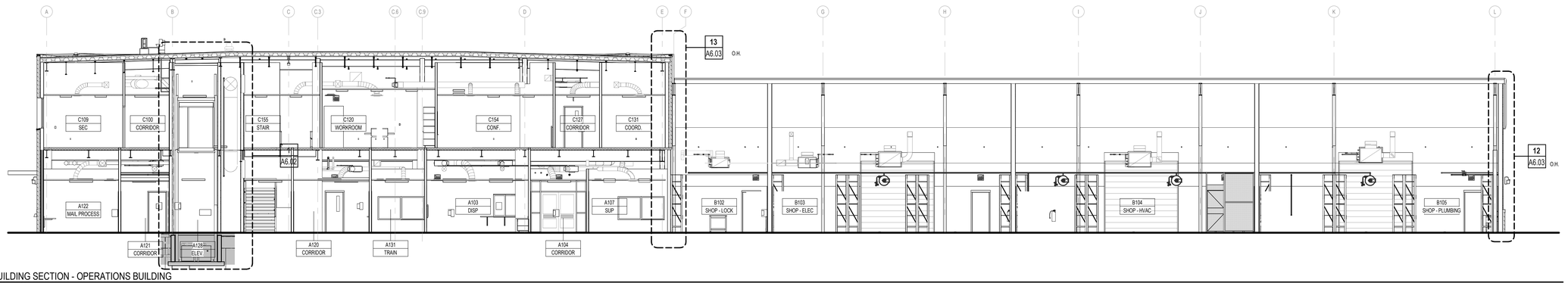
4 BS - E-W BUILDING SECTION - WAREHOUSE
1/8" = 1'-0"



3 BUILDING SECTION - OPERATIONS BUILDING
1/8" = 1'-0"



2 BUILDING SECTION - OPERATIONS BUILDING
1/8" = 1'-0"



1 BUILDING SECTION - OPERATIONS BUILDING
1/8" = 1'-0"

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- PROVIDE THERMAL BATT INSULATION AT ALL EXTERIOR STUD WALLS & ACOUSTICAL BATT INSULATION AT INTERIOR STUD WALLS AS DESCRIBED IN SECTION 07 2100 OF THE SPECIFICATIONS.
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TYPICAL WALL SECTION NOTES APPLICABLE TO ALL A6 SHEETS

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRENT N. BANNISTER
27160
STATE OF TEXAS
09-18-2025

Huckabee
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800.687.1229

BUILDING SECTIONS

Job No. 1971-05-01	Sheet No. A6.01
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

9/17/2025 10:54:37 PM
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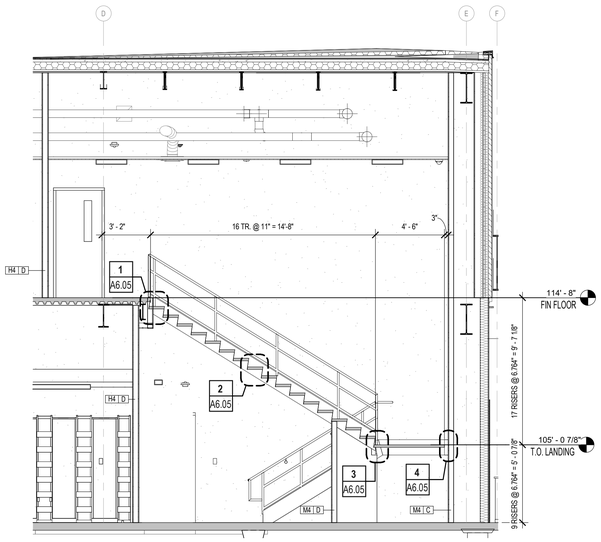
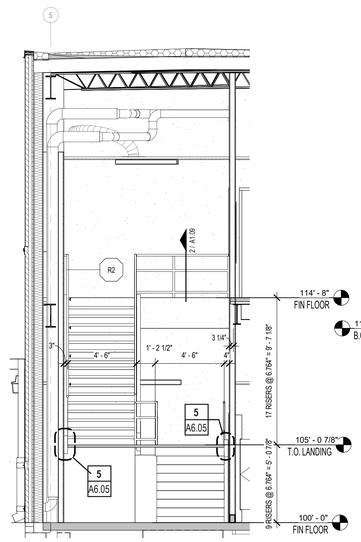
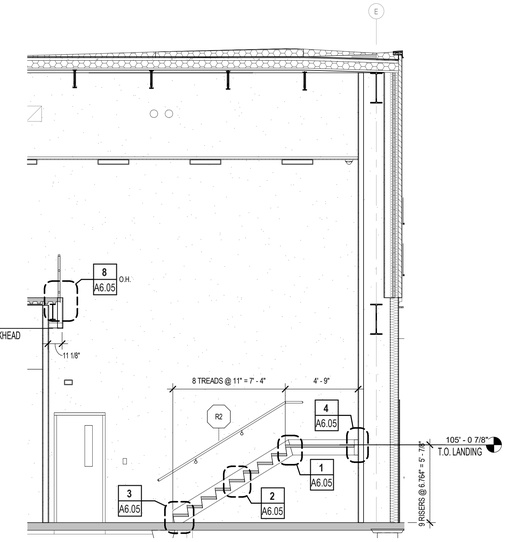


9 BS - N-S STAIR SECTION - A111 - OPERATIONS BUILDING
1/4" = 1'-0"



8 BS - E-W STAIR SECTION - A111 - OPERATIONS BUILDING
1/4" = 1'-0"



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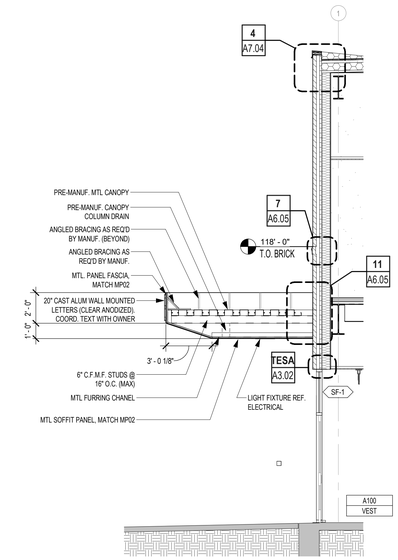
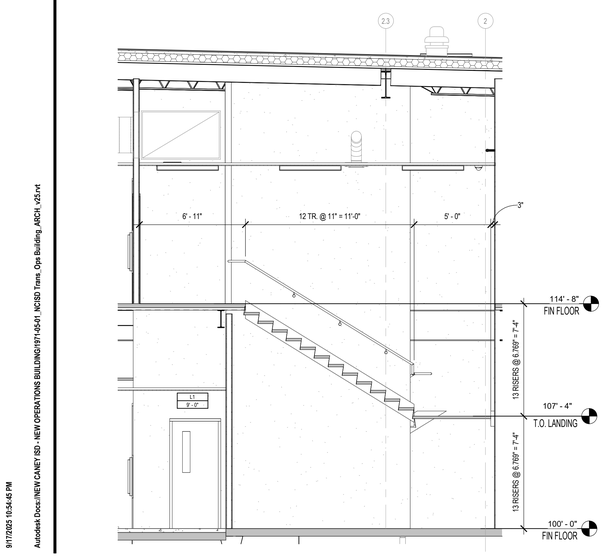


6 WALL SECTION
1/4" = 1'-0"



5 BS - STAIR SECTION - A129 - OPERATIONS BUILDING
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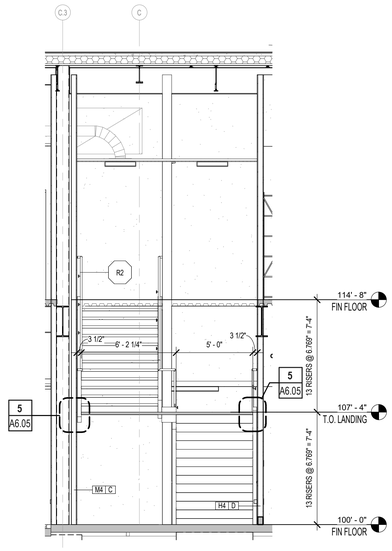
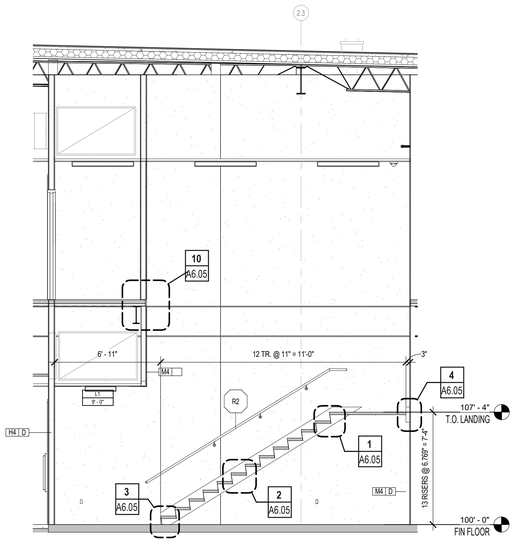
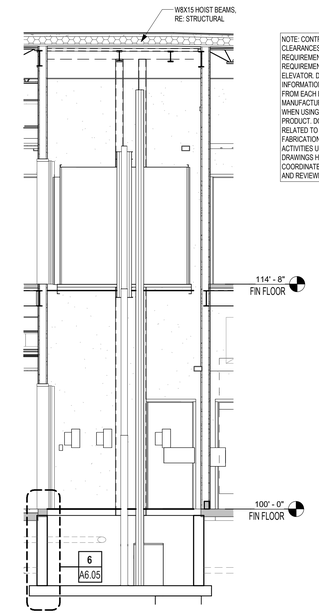


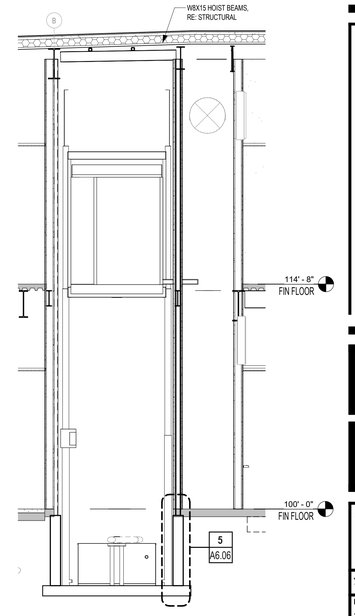
4 BS - N-S STAIR SECTION - A129 - OPERATIONS BUILDING
1/4" = 1'-0"



3 BS - STAIR SECTION - A129 - OPERATIONS BUILDING
1/4" = 1'-0"



2 BS - E-W ELEVATION SECTION - A128 - OPERATIONS BUILDING
1/4" = 1'-0"



1 BS - N-S ELEVATOR SECTION - A128 - OPERATIONS BUILDING
1/4" = 1'-0"

TYPICAL WALL SECTION NOTES

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Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
TREVOR R. BANNISTER
71159
STATE OF TEXAS
09-18-2025

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WALL SECTIONS

Job No.	Sheet No.
1971-05-01	A6.02
Drawn By: JT	
Date: 09/18/2025	

ISSUED FOR BID

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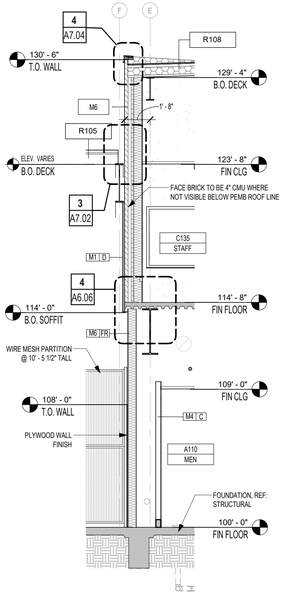
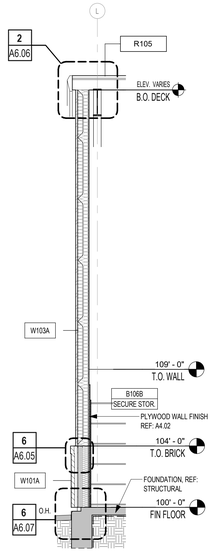
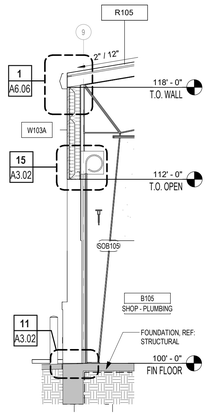


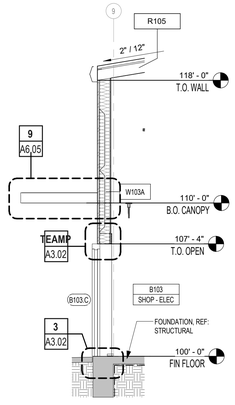
13 WALL SECTION
1/4" = 1'-0"



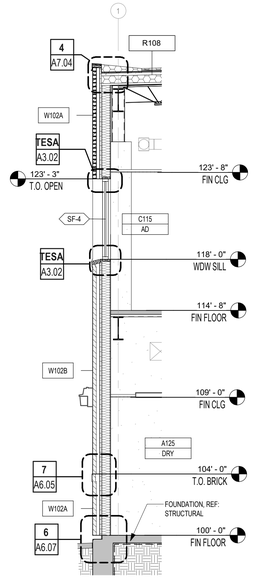
12 WALL SECTION
1/4" = 1'-0"



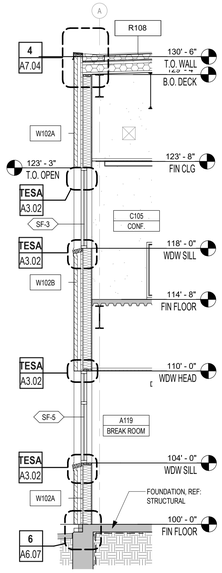
11 WALL SECTION
1/4" = 1'-0"



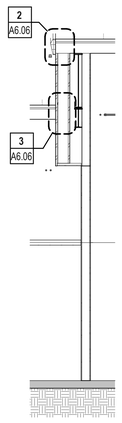
10 WALL SECTION
1/4" = 1'-0"



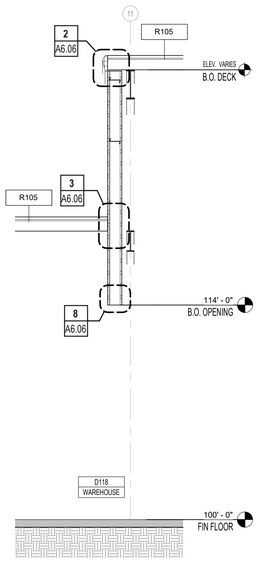
9 WALL SECTION
1/4" = 1'-0"



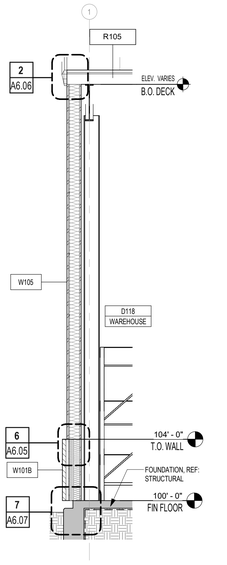
8 WALL SECTION
1/4" = 1'-0"



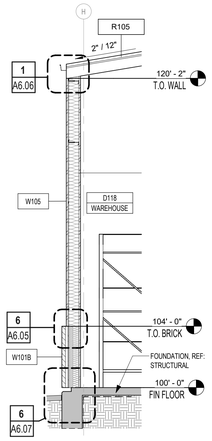
7 WALL SECTION
1/4" = 1'-0"



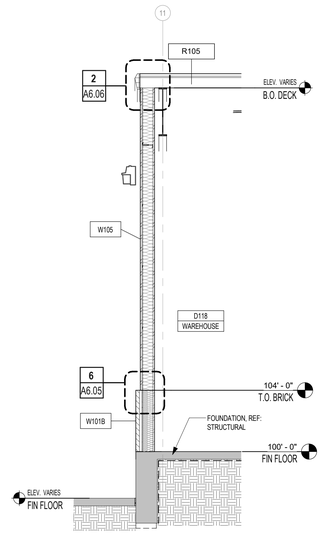
6 WALL SECTION
1/4" = 1'-0"



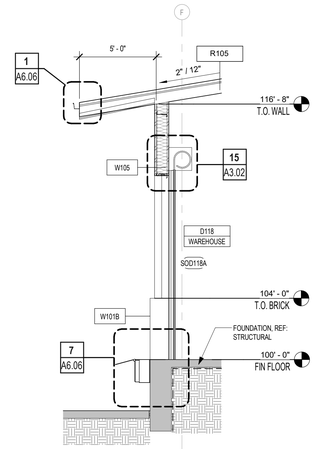
5 WALL SECTION
1/4" = 1'-0"



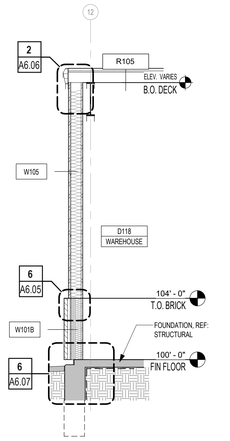
4 WALL SECTION
1/4" = 1'-0"



3 WALL SECTION
1/4" = 1'-0"



2 WALL SECTION
1/4" = 1'-0"



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TYPICAL WALL SECTION NOTES APPLICABLE TO ALL A6 SHEETS

Revision / Date

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

09-18-2025

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WALL SECTIONS

Job No. 1971-05-01	Sheet No. A6.03
Drawn By: JT	
Date: 09/18/2025	

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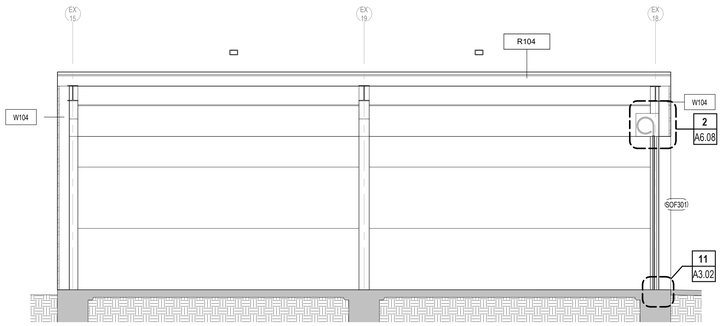
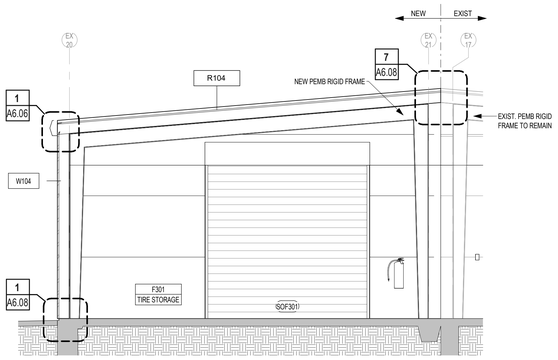
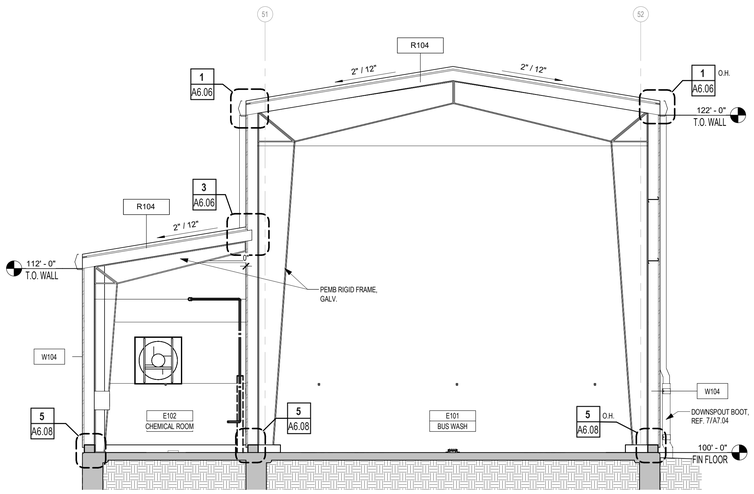


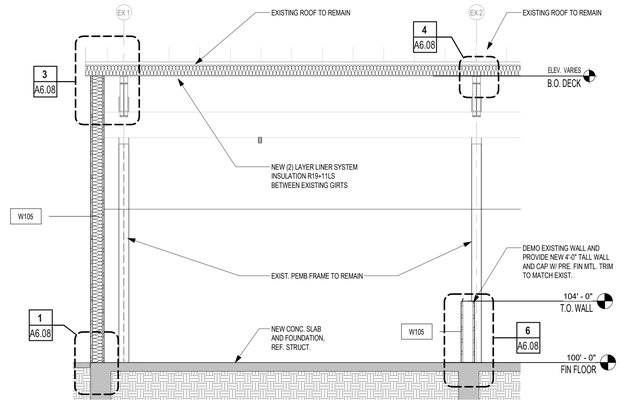
5 BUILDING SECTION - STORAGE ADDITION
1/4" = 1'-0"



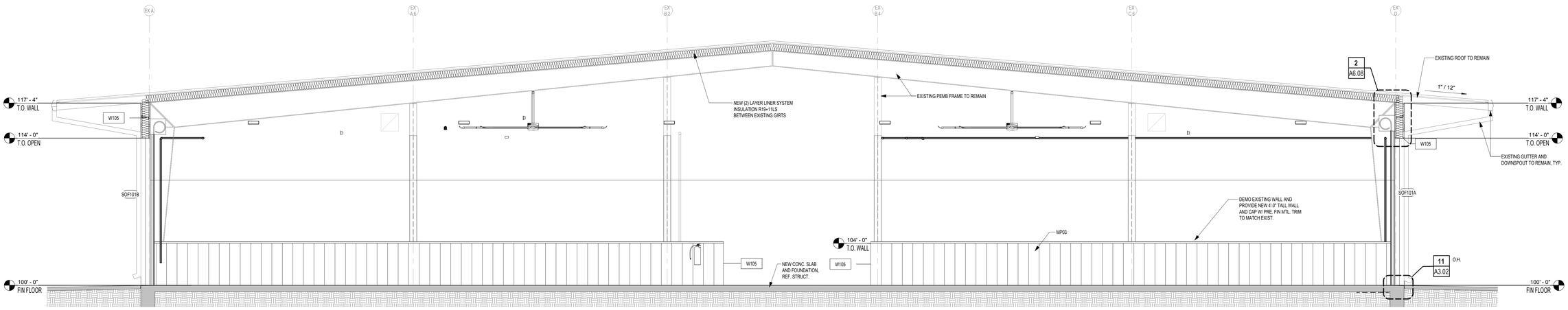
4 BUILDING SECTION - STORAGE ADDITION
1/4" = 1'-0"



3 BUILDING SECTION - BUS WASH
1/4" = 1'-0"



2 BUILDING SECTION - MAINTENANCE EXPANSION
1/4" = 1'-0"



1 BUILDING SECTION - MAINTENANCE ADDITION
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6. PROVIDE A WEATHERED MORTAR JOINT AT ALL EXTERIOR CONDITIONS WHERE THE MASONRY COURSE BELOW THE JOINT PROJECTS BEYOND THE COURSE ABOVE.
7. WHERE CMU IS SHOWN SHADED, FILL CELL SOLID WITH GROUT UNLESS NOTED IN DETAILS AS MORTAR. COORDINATE ALL LOCATIONS WITH STRUCTURAL DRAWINGS. IN CASES OF APPARENT CONFLICT, STRUCTURAL DRAWINGS SHALL GOVERN DESIGN. GROUT
8. FILL ALL OPEN CELLS OF CMU SOLID WITH FOAM INSULATION AT ALL EXTERIOR CONDITIONS WHERE RIGID INSULATION IS NOT APPLIED IN THE CAVITY WALL.
9. PROVIDE THERMAL BATT INSULATION AT ALL EXTERIOR STUD WALLS & ACOUSTICAL BATT INSULATION AT INTERIOR STUD WALLS AS DESCRIBED IN SECTION 07 2100 OF THE SPECIFICATIONS.
10. REFER TO STRUCTURAL DRAWINGS FOR VERTICAL WALL REINFORCING.
11. ALL MASONRY WALLS SHALL BE REINFORCED WITH CONTINUOUS HORIZONTAL BED JOINT REINFORCING AS SPECIFIED, AT 16" VERTICAL SPACING. AT VENEER CONDITIONS PROVIDE TIES AS SPECIFIED AT 16" O.C.E.W.
12. INFORMATION SHOWN BEYOND IN WALL SECTIONS IS PROVIDED FOR INFORMATION ONLY & SHALL NOT LIMIT THE SCOPE OF WORK REQUIRED IN THIS PROJECT.
13. SMALLER SCALE DRAWINGS MAY NOT SHOW ALL CONNECTIONS & FINISHES. ALWAYS REFER TO ENLARGED DETAILS, WHERE PROVIDED, FOR ADDITIONAL INFORMATION. IN CASES OF APPARENT CONFLICT, THE LARGER SCALED DETAIL SHALL APPLY.
14. INTERIOR WALL FINISHES ARE NOT SHOWN ON WALL SECTIONS TO AVOID VISUAL CLUTTER. REFER TO A4 SHEETS FINISH SCHED & INTERIOR ELEVATIONS FOR REQUIRED MATERIALS & MATERIAL PATTERNS.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRIAN K. BRANNON
27160
STATE OF TEXAS
09-18-2025

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800.687.1229

WALL SECTIONS

Job No.	Sheet No.
1971-05-01	A6.04
Drawn By: JT	
Date: 09/18/2025	

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9/17/2025 10:55:04 PM
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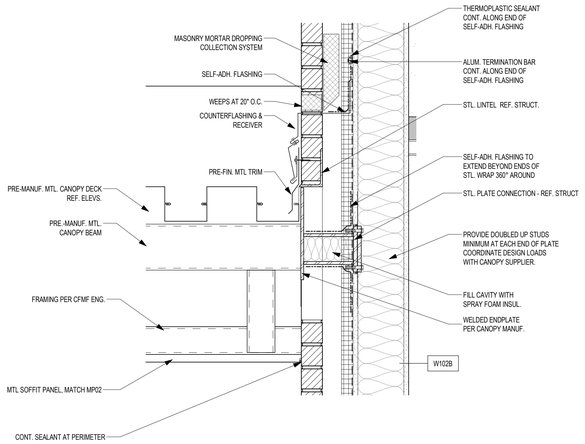
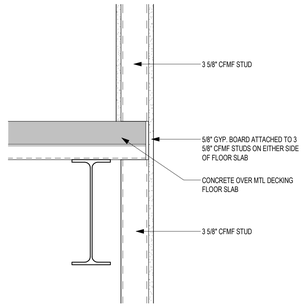
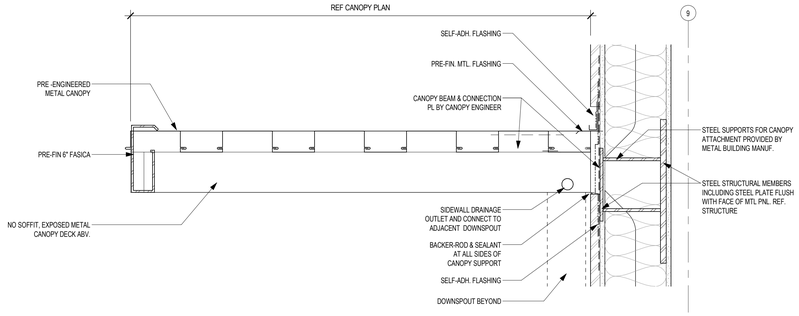


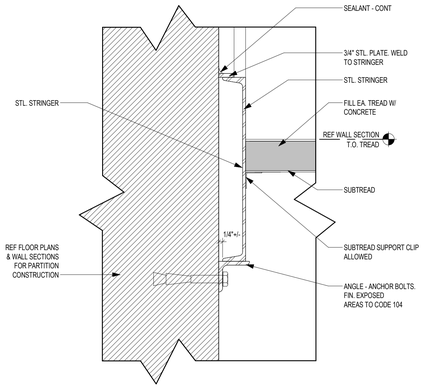
11 WALL SECTION DETAIL
1 1/2" = 1'-0" BACK REF: A6.02



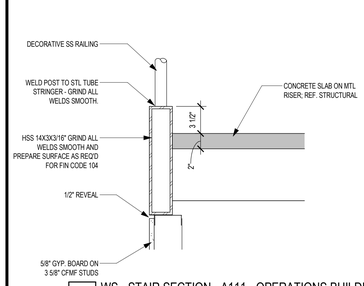
10 WALL SECTION DETAIL
1 1/2" = 1'-0"



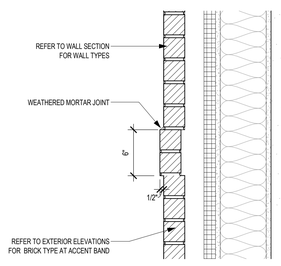
9 WALL SECTION DETAIL @ CANOPY
1 1/2" = 1'-0"



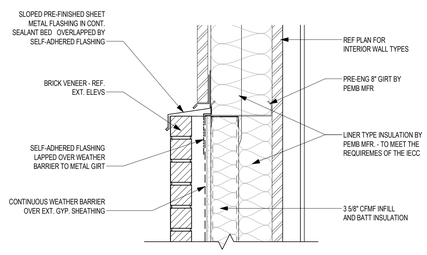
5 TYPICAL STAIR STRINGER DETAIL
3" = 1'-0"



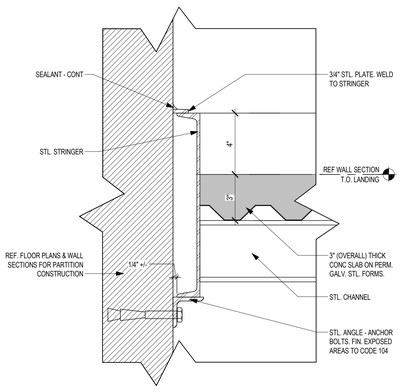
8 WS - STAIR SECTION - A111 - OPERATIONS BUILDING
1 1/2" = 1'-0"



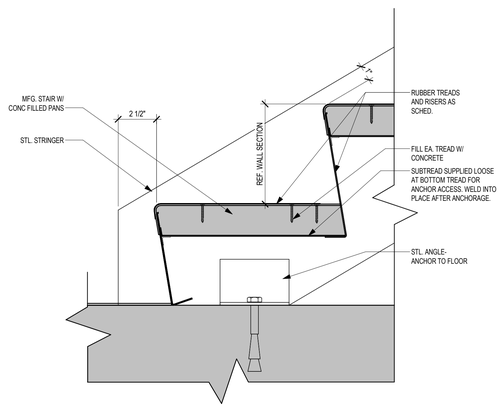
7 WALL DETAIL @ BRICK TO BRICK TRANSITION
1 1/2" = 1'-0"



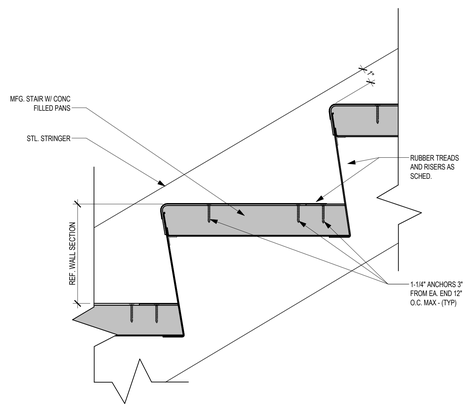
6 WALL SECTION DETAIL
1 1/2" = 1'-0"



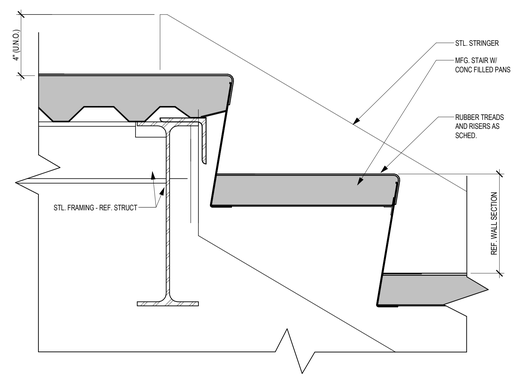
4 TYPICAL STAIR LANDING DETAIL @ CFMF
3" = 1'-0"



3 TYPICAL EGRESS STAIR BOTTOM RISER & TREAD DETAIL
3" = 1'-0"



2 TYPICAL EGRESS STAIR RISER AND TREAD DETAIL
3" = 1'-0"



1 TYPICAL RISER DOWN @ LANDING
3" = 1'-0"

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
DEREK N. BANNISTER
STATE OF TEXAS
09-18-2025

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WALL SECTION DETAILS

Job No.	Sheet No.
1971-05-01	A6.05
Drawn By: JT	
Date: 09/18/2025	

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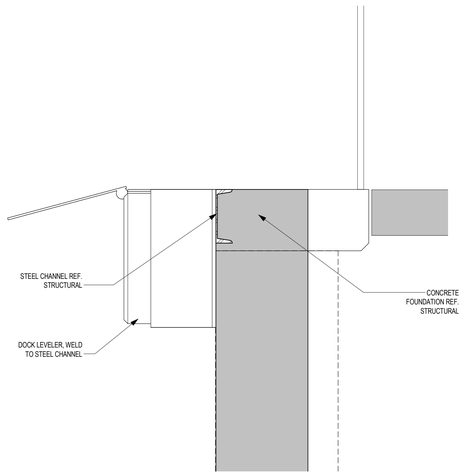
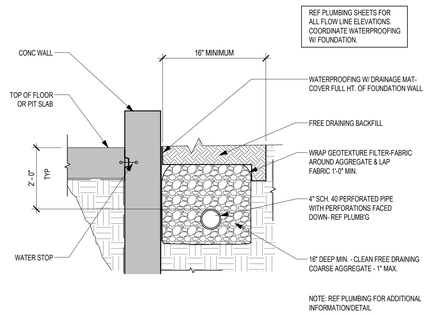
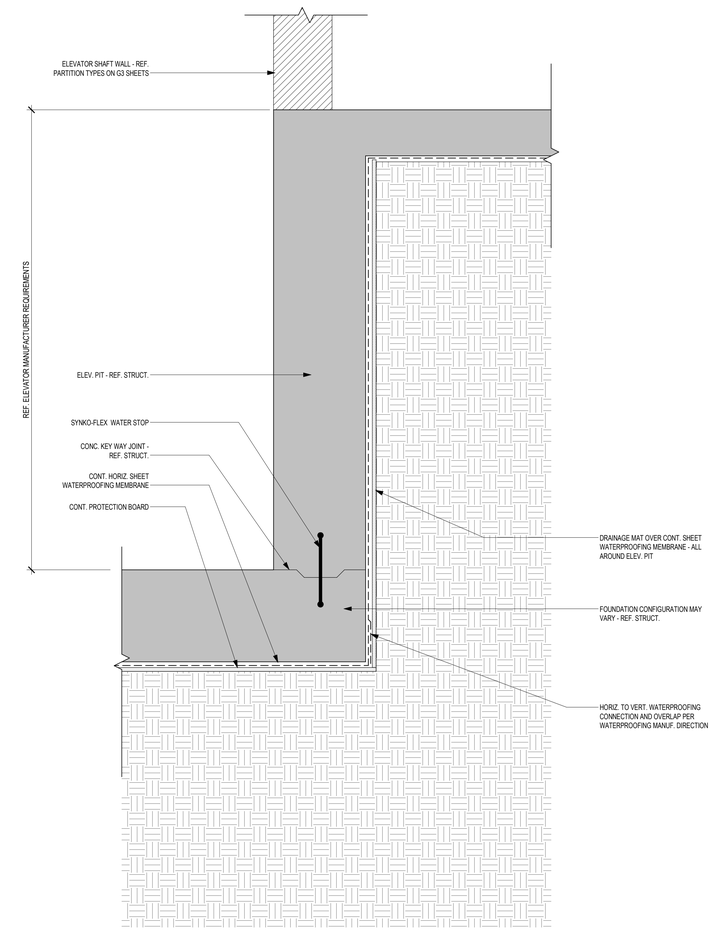


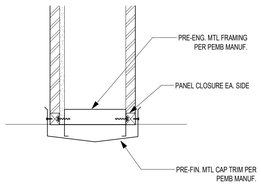
7 WALL SECTION DETAIL
1 1/2" = 1'-0"



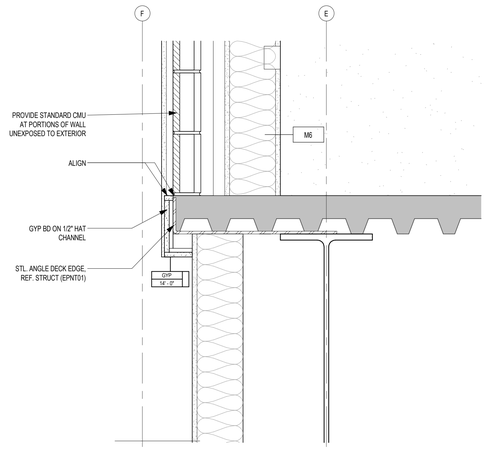
6 SUB SOIL DRAIN DETAIL AT BELOW-GRADE FLOOR
1/2" = 1'-0"



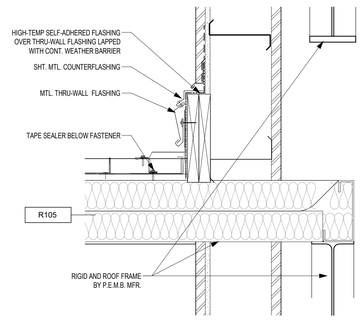
5 ELEVATOR PIT DETAIL
1 1/2" = 1'-0"



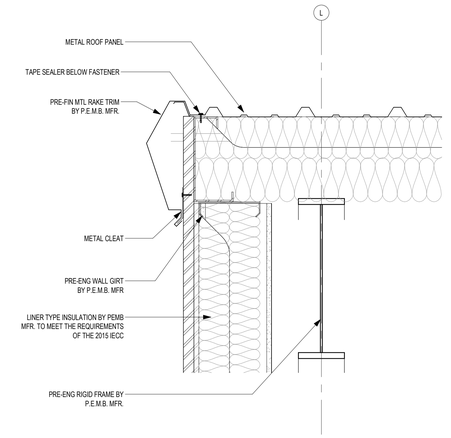
8 WALL SECTION DETIAL
1 1/2" = 1'-0"



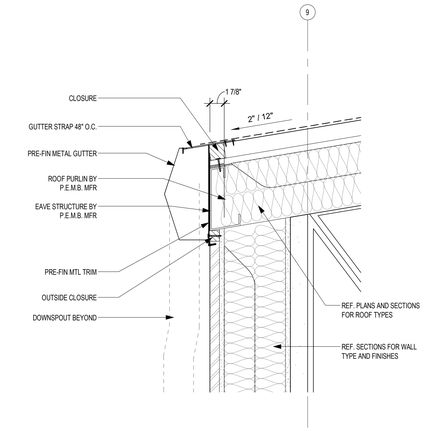
4 WALL SECTION DETAIL
1 1/2" = 1'-0"



3 WALL SECTION DETAIL
1 1/2" = 1'-0"



2 WS - DETAIL - MTL PANEL AT MTL PITCHED ROOF
1 1/2" = 1'-0"



1 WALL SECTION EAVE DETAIL
1 1/2" = 1'-0"

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
DEREK R. BANNISTER
31169
STATE OF TEXAS
09-18-2025

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WALL SECTION DETAILS

Job No.	Sheet No.
1971-05-01	A6.06
Drawn By: JT	
Date: 09/18/2025	

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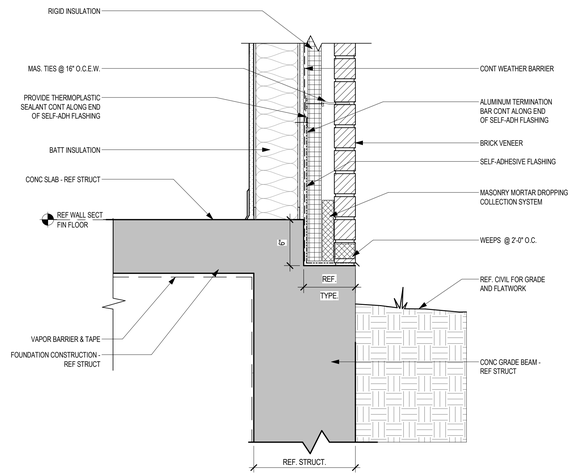
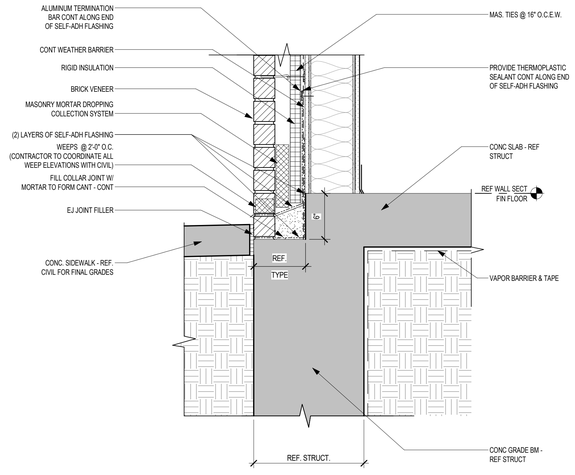
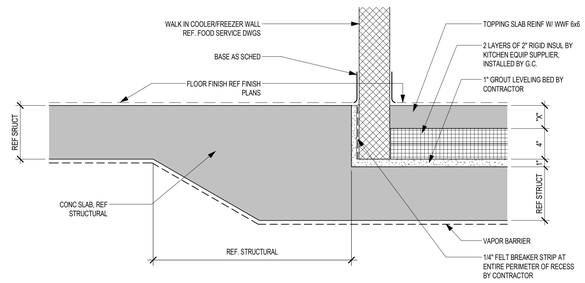


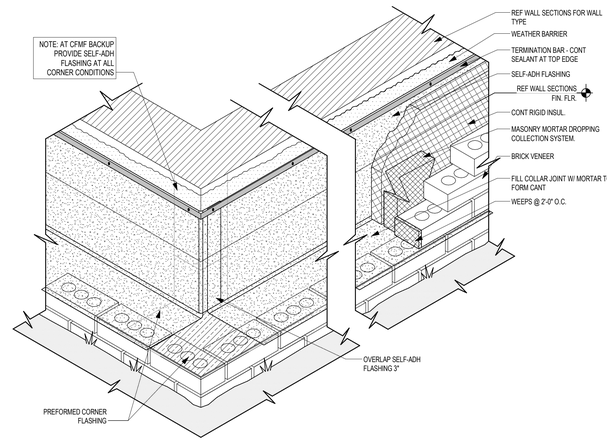
7 FOUNDATION DETAIL @ BRICK VENEER LEDGE & METAL STUD WALL
1 1/2" = 1'-0"



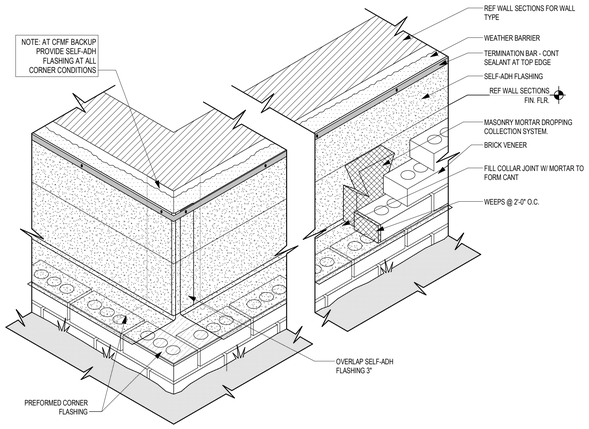
6 FOUNDATION DETAIL @ BRICK LEDGE & CFMF WALL
1 1/2" = 1'-0"



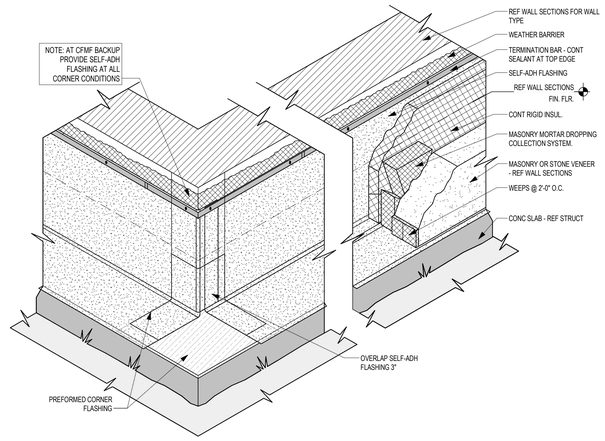
5 DETAIL - COOLER / FREEZER SLAB
1 1/2" = 1'-0"



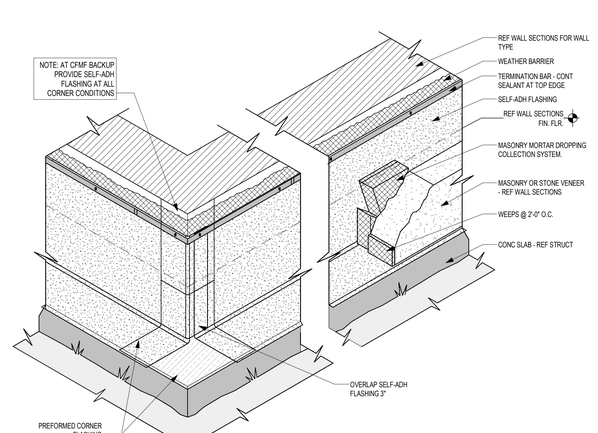
4 TYP BASE FLASHING GENERIC WALL - INSUL
1 1/2" = 1'-0"



3 TYP BASE FLASHING GENERIC WALL - NO INSUL
1 1/2" = 1'-0"



2 TYPICAL BASE FLASHING - INSUL. @ EXTERIOR WALL
1 1/2" = 1'-0"



1 TYPICAL BASE FLASHING - NO INSUL @ EXTERIOR WALL
1 1/2" = 1'-0"

Date
Revision /

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
JOSHUA R. BANKSTON
31109
STATE OF TEXAS
09-18-2025

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FOUNDATION DETAILS

PACKAGE VOLUME 2

Job No. 1971-05-01	Sheet No. A6.07
Drawn By: AC	
Date: 09/18/2025	

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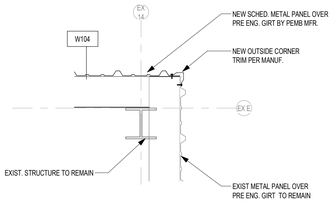
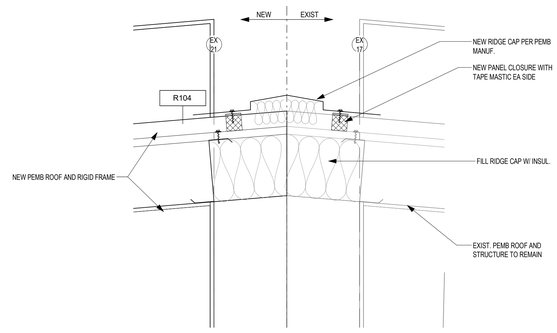
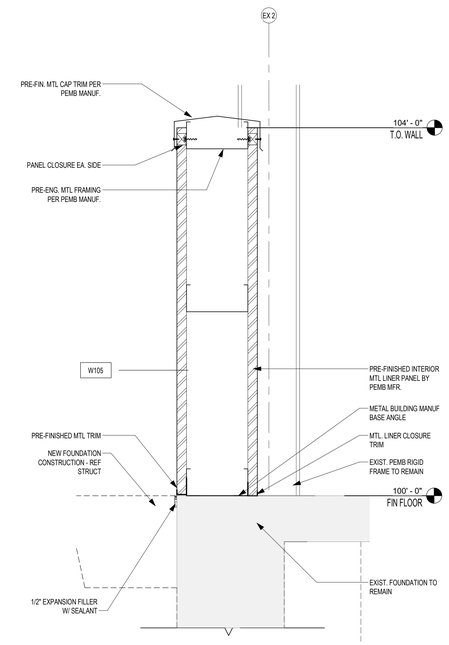


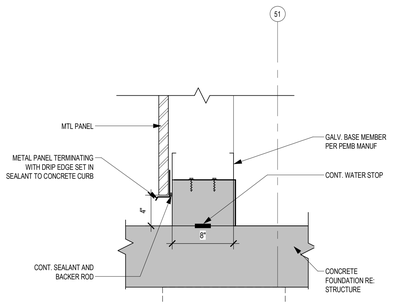
8 PLAN DETAIL - STORAGE WALL REPLACMENT
3/4" = 1'-0"



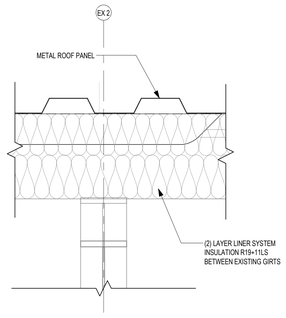
7 BS - NS - STORAGE BUILDING ADDITION
1 1/2" = 1'-0"



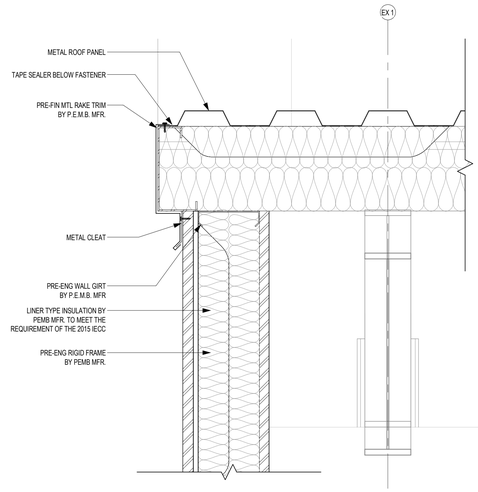
6 FOUNDATION DETAIL
1 1/2" = 1'-0"



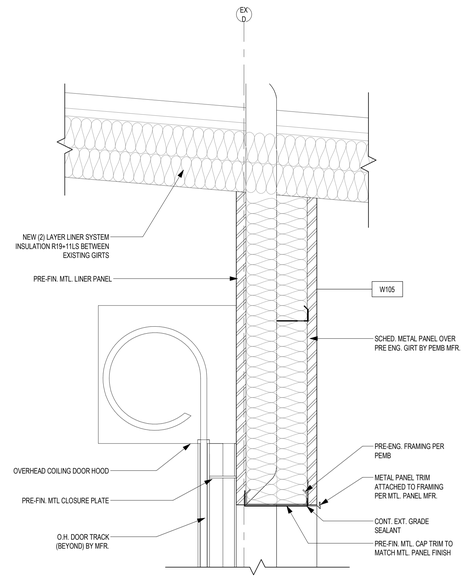
5 FOUNDATION DETAIL AT BUS WASH
1 1/2" = 1'-0"



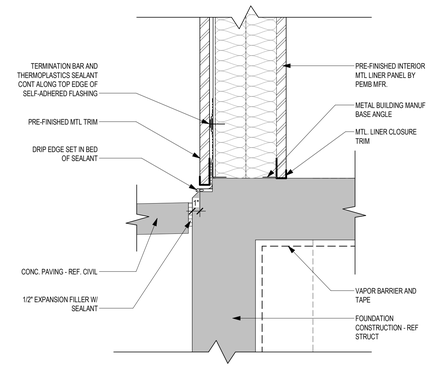
4 WALL SECTION DETAIL
1 1/2" = 1'-0"



3 WALL SECTION DETAIL
1 1/2" = 1'-0"



2 WALL SECTION DETAIL
1 1/2" = 1'-0"



1 WALL SECTION DETAILS
1 1/2" = 1'-0"

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRENT N. BARNHOUSE
27160
STATE OF TEXAS
09-18-2025

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WALL SECTION DETAILS

Job No. 1971-05-01
Drawn By: JT
Date: 09/18/2025
Sheet No. A6.08

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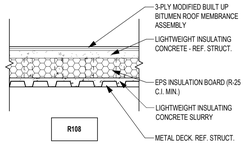
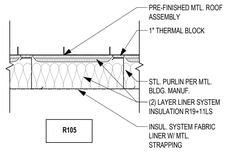
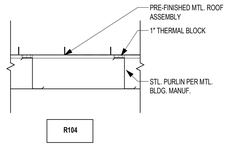






ROOF TYPE TAGS

LETTER INDICATES TYPE

NUMBER INDICATES CONSTRUCTION AS FOLLOWS:

R104 - MTL. ROOFING, PEMB GIRT
R105 - MTL. ROOFING, INSUL., PEMB GIRT
R108 - MOD. BIT., LIGHTWEIGHT CONC., INSUL., MTL. DECK

R100
ROOF ASSEMBLY IN SECTION VIEW

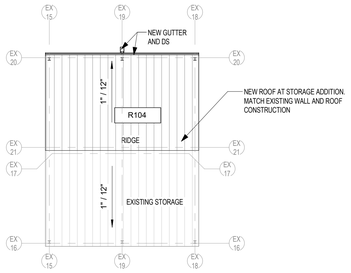
CRICKETS

5'-0" WIDE WALK PADS

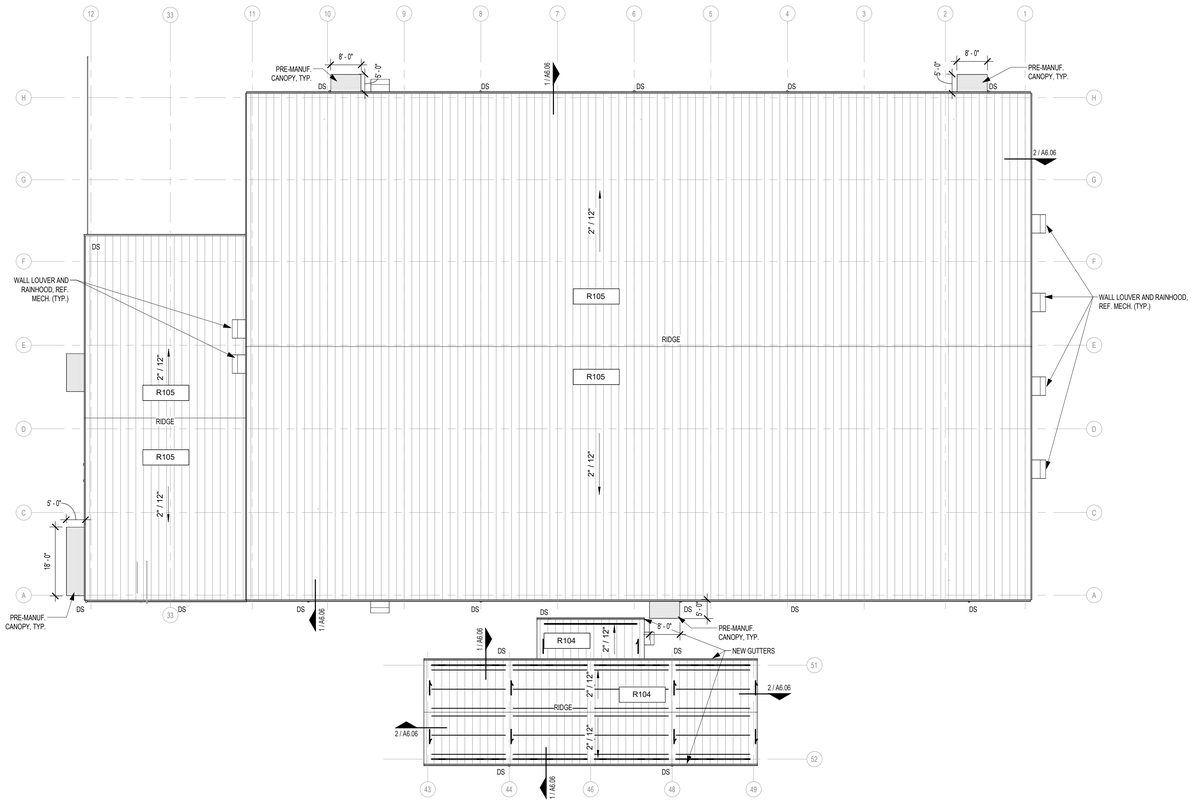
ROOF TYPE LEGEND

1. PROVIDE AND INSTALL 3-PLY MODIFIED BUILT-UP BITUMEN ROOF OVER LIGHTWEIGHT INSULATING CONCRETE AS SPECIFIED. REFER TO SPECIFICATIONS FOR ATTACHMENT REQUIREMENTS FOR ROOF INSULATION BOARD. REFER TO SPECIFICATIONS AND STRUCTURAL DRAWINGS FOR DESCRIPTION OF UNDERLYING STEEL DECK.
2. WHERE SHADED, PROVIDE LIGHTWEIGHT INSULATING CONCRETE CRICKETS AS SHOWN ON THE DRAWINGS. PROVIDE 1/2" PER FOOT MIN SLOPE IN ANY ROOF PLANE & 1/4" PER FOOT MIN SLOPE DOWN VALLEYS TOWARD ROOF DRAINS.
3. EXPANSION JOINT COVERS SHALL BE AS SHOWN ON TYPICAL ROOF DETAILS. EXPANSION JOINT COVERS SHALL BE INSTALLED WHERE INDICATED ON PLANS AND IN FULL ACCORDANCE WITH CONVENTIONAL ROOFING AND SHEET METAL PRACTICES. ALL EXPANSION JOINT COVERS AND END CLOSURES AT **BUILT-UP** ROOF SHALL BE 24 GA. G.I. (REFER TO EXPANSION JOINT DETAILS AND ROOFING PLAN FOR LOCATION).
4. REF. TO PLUMBING DRAWINGS FOR ROOF DRAIN SIZING & LEADER INFORMATION. INSULATE THE EXPOSED ROOF DRAIN PIPING AND ROOF DRAIN BODY IN THE PLENUM. EXTEND DOWNSPOUTS THROUGH CHASES INTO UNDERGROUND COLLECTION SYSTEM. REFER TO MECH AND CIVIL DRAWINGS FOR EXTENSION. IF ROOF DRAINS CONFLICT WITH STRUCTURAL, MOVE AS DIRECTED, BUT MAKE ALL WALL PENETRATIONS AS SHOWN. REFER TO PLUMBING SHTS. FOR UNDERGROUND PIPING.
5. ROOFING CONTRACTOR SHALL PROVIDE & INSTALL ALL FLASHINGS, COUNTERFLASHINGS, EXPANSION JOINT COVERS, & GUTTERS. ROOFING CONTRACTOR SHALL INSTALL ROOF DRAINS AND FLASHINGS & COUNTER FLASHING CALLED FOR ON ALL MECHANICAL EQUIPMENT. ALL ROOF FLASHINGS AND COUNTERFLASHINGS SHALL BE MIN. 24 GA. G.I. WHEN CONCEALED FROM VIEW AND MIN. 24 GA. PRE-FINISHED GALV. METAL WHEN EXPOSED TO VIEW. SCUPPERS SHALL BE PRE-FINISHED GALV. METAL.
6. SEE MECHANICAL AND ELECTRICAL SHEETS FOR VENTS, GAS LINES, A/C UNITS, EXHAUST FANS, ETC.
7. REFER TO STRUCTURAL DRAWINGS FOR ROOF MOUNTING FRAME SUPPORT DETAILS.
8. GENERAL CONTRACTOR SHALL COORDINATE ROOFING, PLUMBING, AND MECHANICAL CONTRACTOR ON ALL WORK.
9. COUNTERFLASHINGS SHALL BE MIN. 24 GA. G.I. WHERE **BUILT-UP** ROOF SLOPES AT WALL LINE. UNIFORMLY STEP FLASHINGS AS DIRECTED BY ARCHITECT AND LAP JOINTS 3" MINIMUM IN A WATERTIGHT CONDITION.
10. ALL WOOD MATERIALS INCLUDED IN THE ROOF OR PARAPET ASSEMBLY, INCLUDING, BUT NOT LIMITED TO, CURBS, BLOCKING, AND NAILERS SHALL BE FIRE-RETARDANT-TREATED AS SPECIFIED.
11. WOOD NAILER FASTENING: FASTENER PER FACTORY MUTUAL SYSTEM, LOSS PREVENTION DATA 1-49.
12. WOOD BLOCKING TO METAL DECK: ATTACH NAILER TO THE METAL DECK WITH TWO ROWS OF NO. 10 GALVANIZED STEEL METAL SCREWS AT 24" O.C. PROVIDE A GALVANIZED STEEL WASHER (5/8" O.D.) AT EACH SCREW. TOP NAILER PLATE SHALL BE FASTENED TO BOTTOM NAILER PLATE WITH NAILS LONG ENOUGH TO PENETRATE 1 1/4" INTO BOTTOM NAILER AND SPACED 24" STAGGERED IN TWO ROWS. SPACING SHALL NOT EXCEED 12" FOR A MINIMUM OF 8' - 0" EACH WAY FROM AN OUTSIDE CORNER. WITHDRAWAL RESISTANCE SHALL BE 100 LBS. PER NAIL MINIMUM.
13. ALL CURBS (FOR MECHANICAL EQUIPMENT, EXPANSION JOINTS, ETC.) SHALL PROVIDE A MINIMUM OF 8" FLASHING HEIGHT ABOVE FINISH ROOF LEVEL AT ALL CONDITIONS, INCLUDING ABOVE CRICKETS.
14. ALL WORK SHALL BE COMPLETED SO AS TO PRODUCE A 100 PERCENT WATERTIGHT CONDITION FOR THE LIFE OF THE ROOF WARRANTY.
15. DOWNSPOUT LOCATIONS WITH SPLASH BACKS REFERENCE DETAIL: 9/A7.04

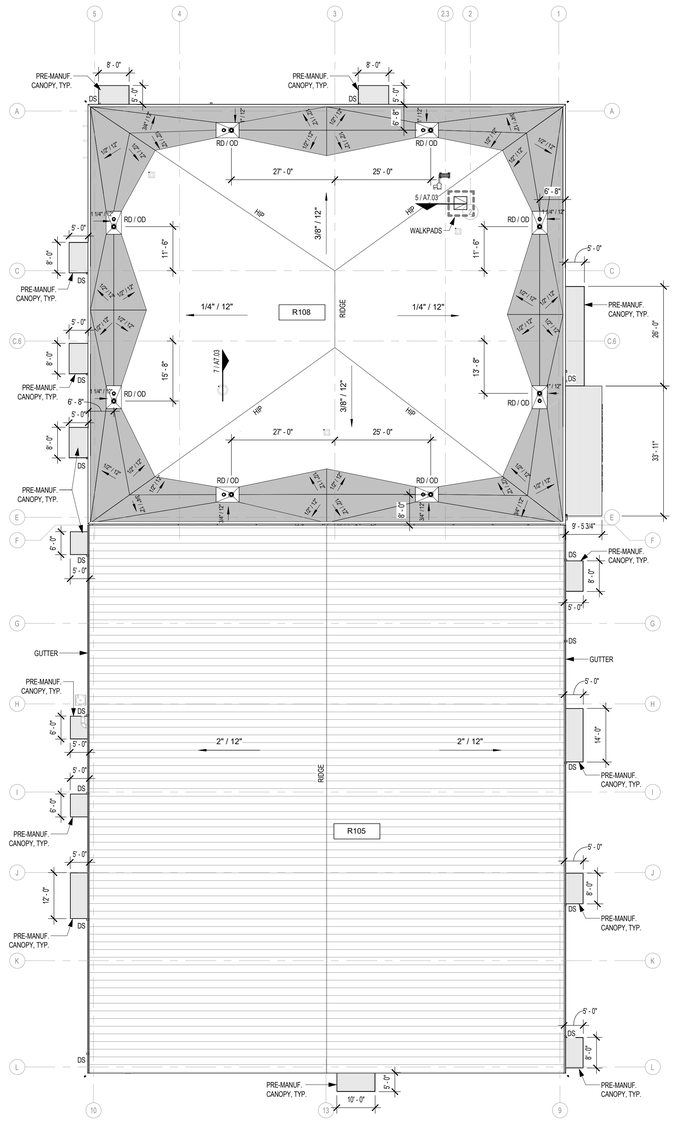
TYPICAL ROOF NOTES



3 ROOF PLAN - STORAGE ADDITION
1/16" = 1'-0"



2 ROOF PLAN - WAREHOUSE & BUS WASH
1/16" = 1'-0"



1 ROOF PLAN - OPERATIONS BUILDING
1/16" = 1'-0"

N
TRUE

Date
Revision /

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
BRIAN K. BANISTER
71169
STATE OF TEXAS
09-18-2025

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ROOF PLANS

Job No.	Sheet No.
1971-05-01	A7.01
Drawn By: JT	
Date: 09/18/2025	

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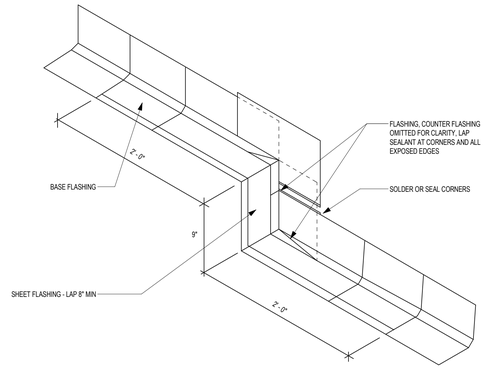
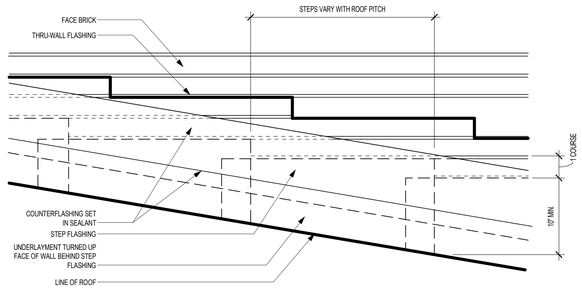
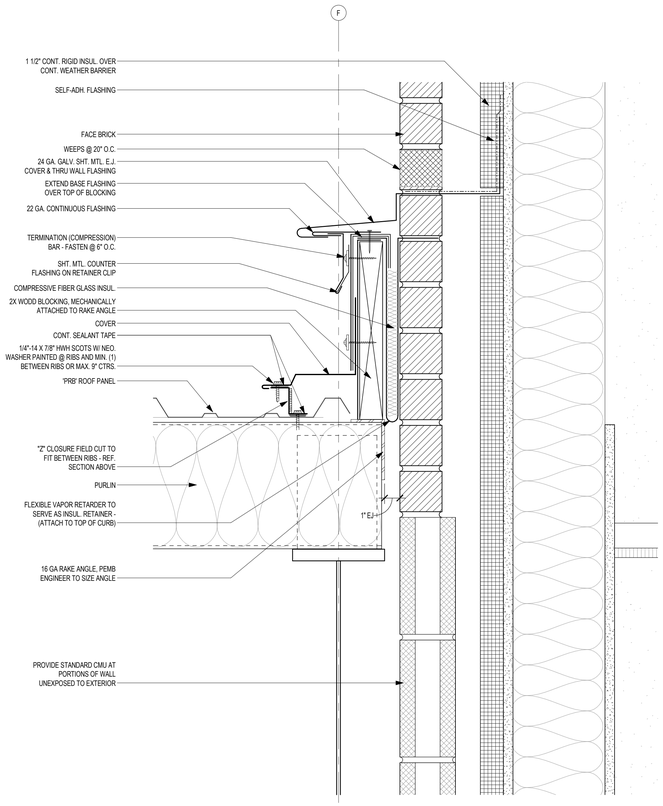
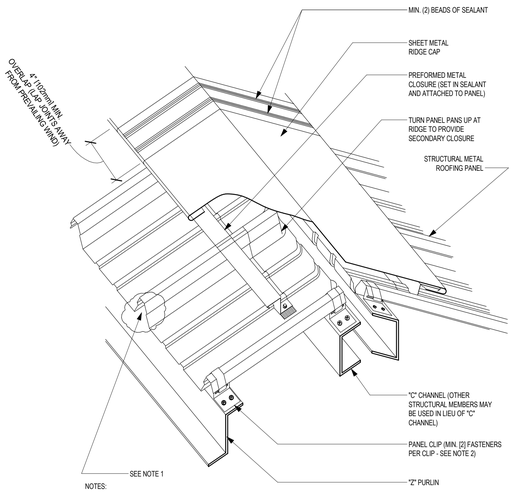




4 TYPICAL STEP FLASHING AND ELEVATION
1 1/2" = 1'-0"

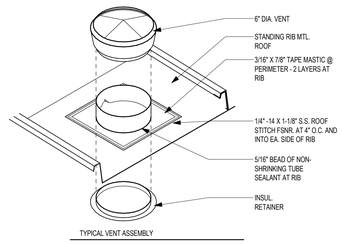


3 WALL SECTION DETAIL - EXPANSION JOINT AT ROOF
3" = 1'-0"



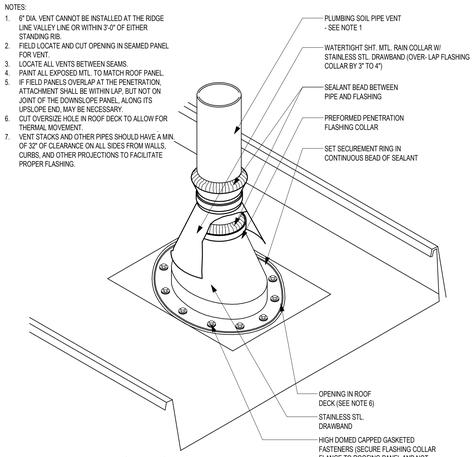
NOTES:
1. SEAM AND PANEL PROFILES VARY, SEE TABLE.
2. SPECIFIC FASTENING REQUIREMENTS ARE NOT INDICATED, AS THEY VARY FROM SYS. TO SYS. DEPENDING UPON PANEL MANUFACTURER'S REQUIREMENTS, WIND ZONE AND LOCAL CODE
3. THIS METHOD OF FLASHING FIXES THE PANELS ALONG THE RIDGE IF THE METAL CLOSURE IS FASTENED THROUGH TO THE ROOF DECK OR STRUCTURAL FRAMING.
4. INSULATION AND VAPOR RETARDER NOT SHOWN FOR CLARITY.

2 TYP RIDGE @ MTL ROOF
N.T.S.



TYPICAL VENT ASSEMBLY

NOTES:
1. 6" DIA. VENT CANNOT BE INSTALLED AT THE RIDGE LINE VALLEY LINE OR WITHIN 3'-0" OF EITHER STANDING RIB.
2. FIELD LOCATE AND CUT OPENING IN SEAMED PANEL FOR VENT.
3. LOCATE ALL VENTS BETWEEN SEAMS.
4. PAINT ALL EXPOSED MTL. TO MATCH ROOF PANEL.
5. IF FIELD PANELS OVERLAP AT THE PENETRATION, ATTACHMENT SHALL BE WITHIN LAP, BUT NOT ON JOINT OF THE DOWNSLOPE PANEL, ALONG ITS UPSLOPE END, MAY BE NECESSARY.
6. CUT OVERSIZE HOLE IN ROOF DECK TO ALLOW FOR THERMAL MOVEMENT.
7. VENT STACKS AND OTHER PIPES SHOULD HAVE A MIN. OF 30" CF CLEARANCE ON ALL SIDES FROM WALLS, CURBS, AND OTHER PROJECTIONS TO FACILITATE PROPER FLASHING.



TYPICAL PLUMBING VENT DETAIL

1 ROOF PENETRATION @ MTL ROOF
N.T.S.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
ANDREW R. BARRINGTON
21169
STATE OF TEXAS
09-18-2025

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TYPICAL ROOFING DETAILS METAL BUILDING ROOFING

Job No.	Sheet No.
1971-05-01	A7.02
Drawn By: JT	
Date: 09/18/2025	

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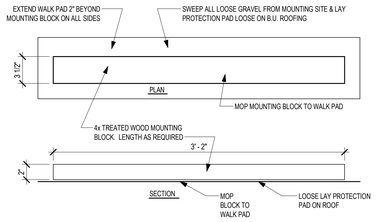
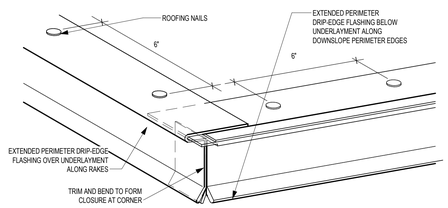
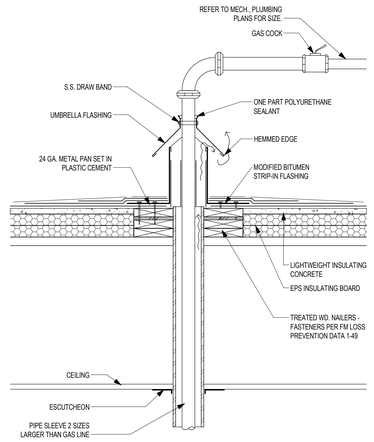


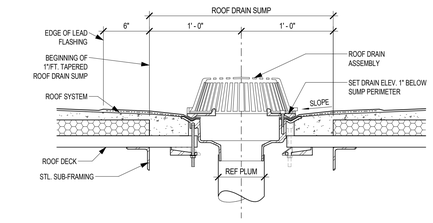
18 TYP EQUIPMENT SUPPORTS
1 1/2" = 1'-0"



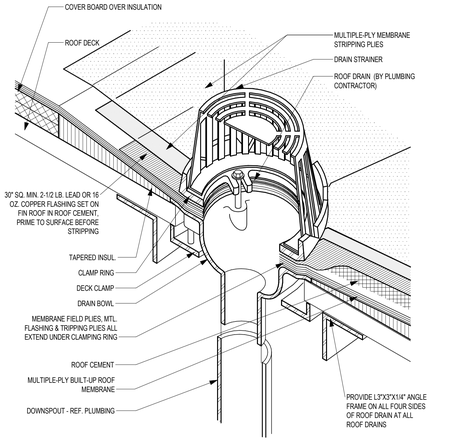
17 TYP MTL DRIP @ EAVE & RAKES
3" = 1'-0"



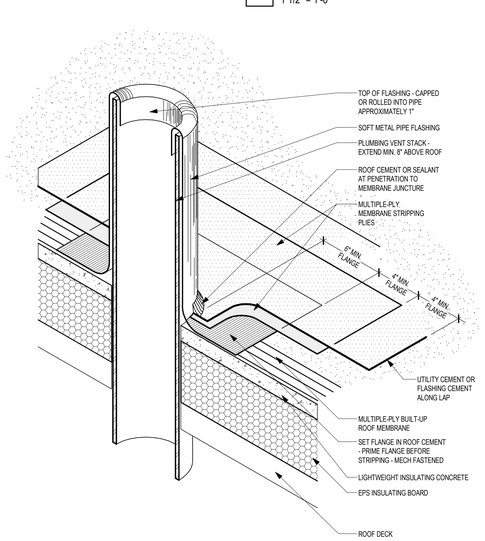
16 TYP VENTED GAS PIPE SLEEVE THRU ROOF
3" = 1'-0"



15 ROOF DRAIN
1 1/2" = 1'-0"



11 ROOF DRAIN
N.T.S.



14 PLUMBING VENT
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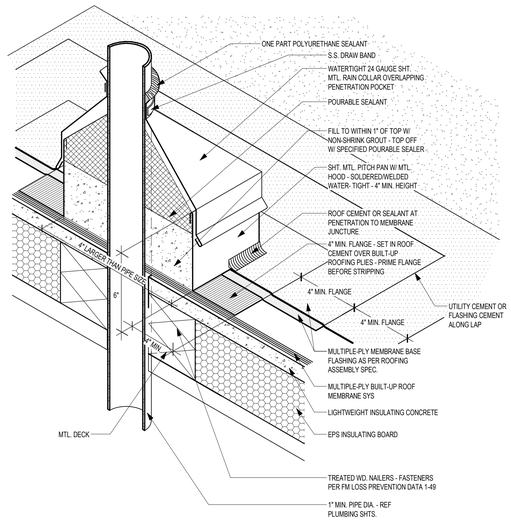
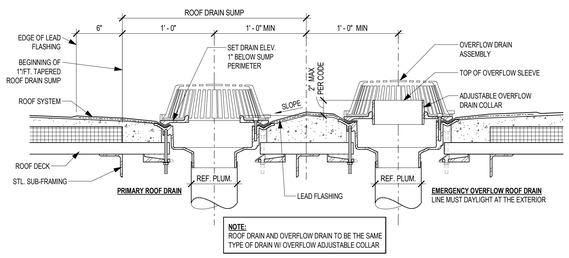
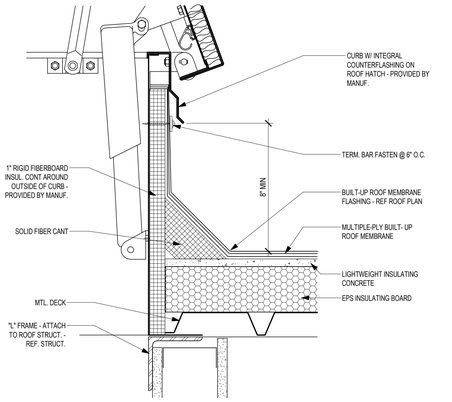


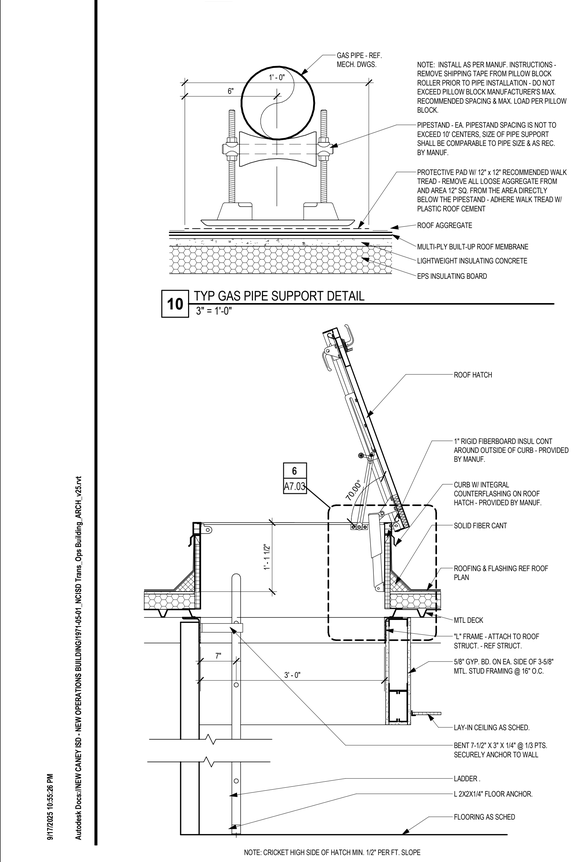
13 TYP PITCH PAN FOR CONDUIT DETAIL
N.T.S.



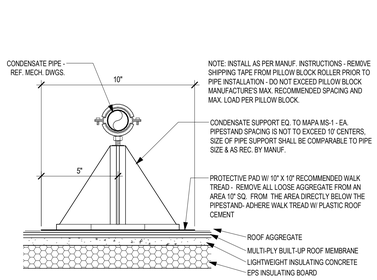
12 ROOF DRAIN & OVERFLOW DRAIN
1 1/2" = 1'-0"



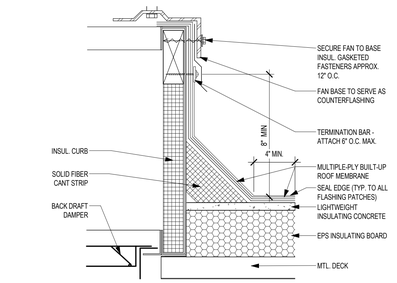
6 SECTION A - TYP ROOF HATCH
3" = 1'-0"



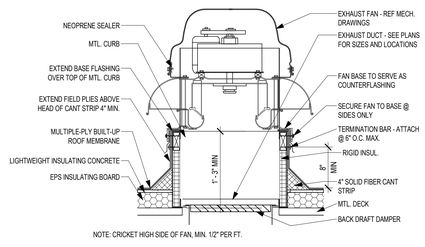
10 TYP GAS PIPE SUPPORT DETAIL
3" = 1'-0"



9 TYP CONDENSATE SUPPORT DETAIL
3" = 1'-0"

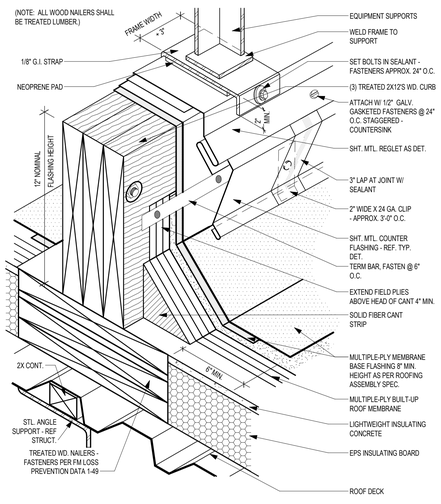


8 SECTION B - TYP EXHAUST FAN MOUNTING CURB DET
3" = 1'-0"

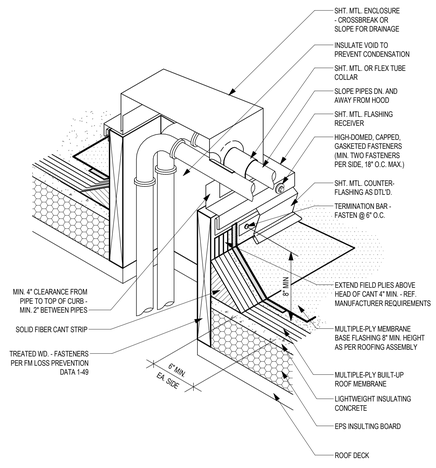


7 TYP EXHAUST FAN INSTALLATION DETAIL
1" = 1'-0"

5 TYP ROOF HATCH
1" = 1'-0"



4 EQUIPMENT MOUNTING SUPPORT DETAIL
N.T.S.



3 ROOF PENETRATION
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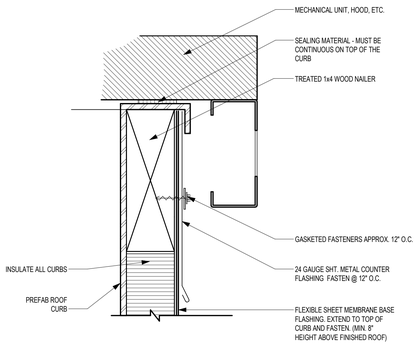

2 COUNTER FLASHING DETAIL FOR CURB
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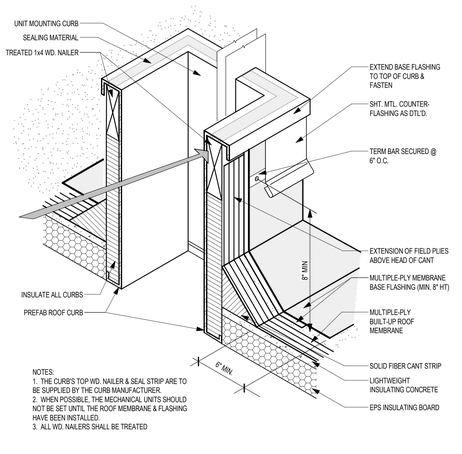

1 RAISED CURB DETAIL ROOF TOP UNITS
N.T.S.

Date
Revision /

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

REGISTERED ARCHITECT
BRIAN N. BANNISTER
STATE OF TEXAS
09-18-2025

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TYPICAL ROOFING DETAILS

PACKAGE VOLUME 2

Job No. 1971-05-01
Sheet No. A7.03
Drawn By:
Date: 09/18/2025

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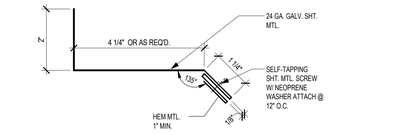
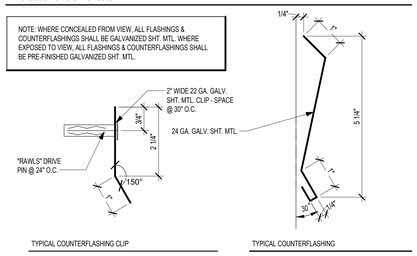
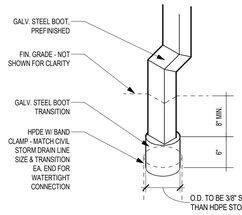


TYPICAL COUNTERFLASHING REGLET

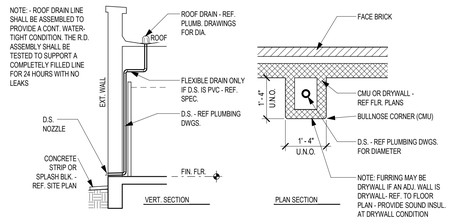
NOTE: WHERE CONCEALED FROM VIEW, ALL FLASHINGS & COUNTERFLASHINGS SHALL BE GALVANIZED SHT. MTL. WHERE EXPOSED TO VIEW, ALL FLASHINGS & COUNTERFLASHINGS SHALL BE PRE-FINISHED GALVANIZED SHT. MTL.



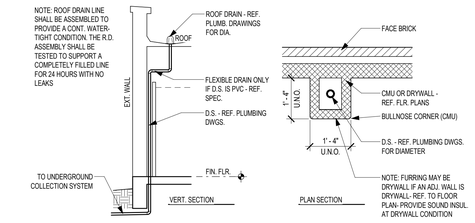
8 TYP COUNTERFLASHING COMPONENTS
6" = 1'-0"



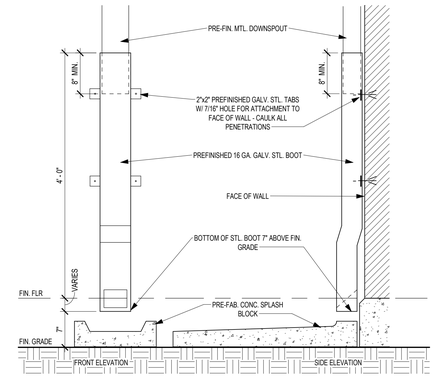
7 DOWNSPOUT CONNECTION FOR SUB-GRADE DRAINAGE
1" = 1'-0"



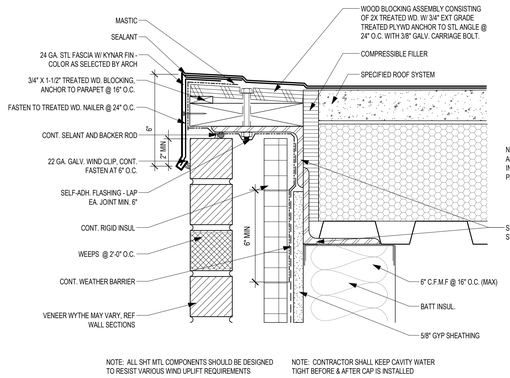
6 TYP CONCEALED D.S. & ROOF DRAIN
1/2" = 1'-0"



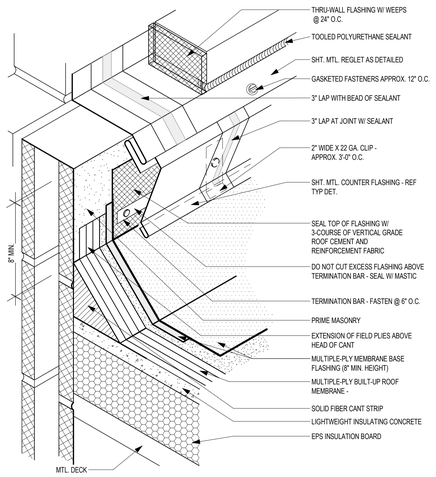
5 TYP CONCEALED D.S. & ROOF DRAIN
1/2" = 1'-0"



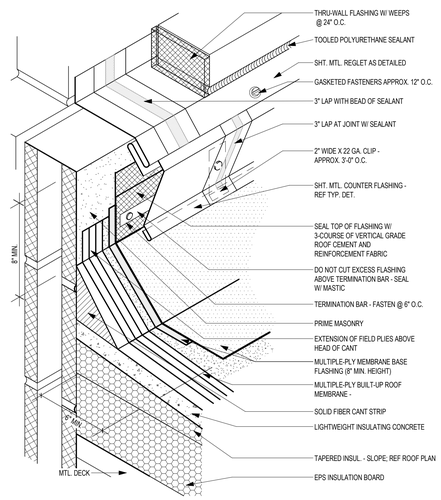
9 MTL DOWNSPOUT BOOT ELEV'S @ GRADE
1" = 1'-0"



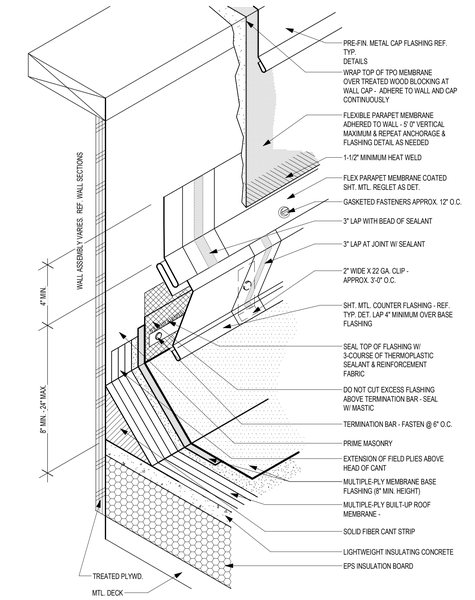
4 TYP PERIMETER EDGE DETAIL - BRICK/ INSUL./ MTL STUD
3" = 1'-0"



3 TYP BASE FLASHING FOR BRICK WALL
3" = 1'-0"



2 TYP BASE FLASHING FOR BRICK WALL W/ TAPERED INSUL
3" = 1'-0"



1 TYP BASE FLASHING @ PARAPET
3" = 1'-0"

Revision / Date

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

REGISTERED ARCHITECT
PATRICK K. BANNISTER
21169
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

TYPICAL ROOFING DETAILS

PACKAGE VOLUME 2

Job No.	Sheet No.
1971-05-01	A7.04
Drawn By:	
Date: 09/18/2025	

ISSUED FOR BID

9/17/2025 10:55:28 PM
Autodesk Docs://NEW CANEY ISD - NEW OPERATIONS BUILDING/19171-05-01_NCISD Trans. Ops Building_ARCH_v25.rvt

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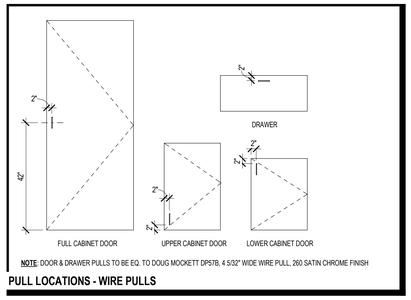
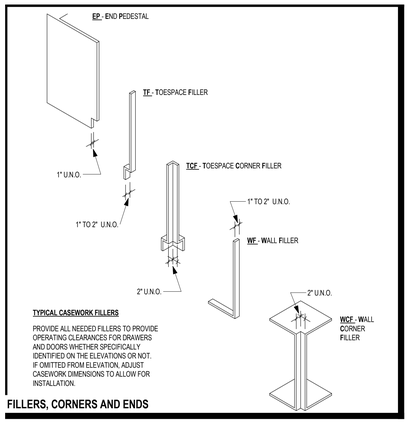


NOTE: DOOR & DRAWER PULLS TO BE EQ. TO DOUG MOCKETT DPS7B, 4 5/32" WIDE WIRE PULL, 260 SATIN CHROME FINISH

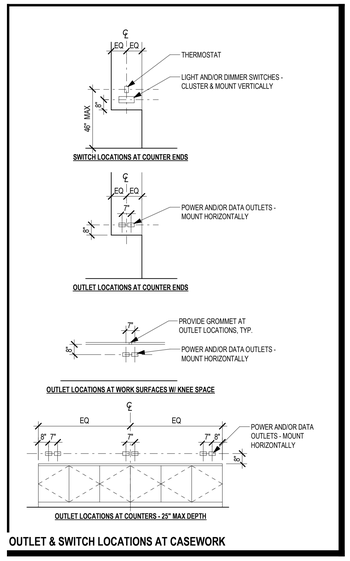
PULL LOCATIONS - WIRE PULLS



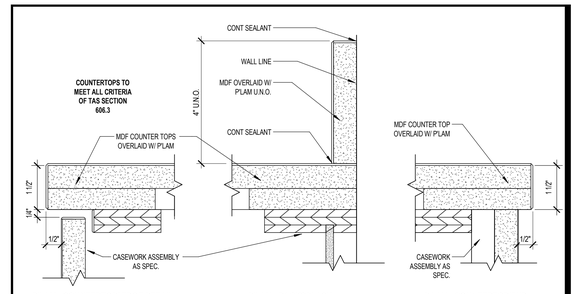
TYPICAL CASEWORK FILLERS

PROVIDE ALL NEEDED FILLERS TO PROVIDE OPERATING CLEARANCES FOR DRAWERS AND DOORS WHETHER SPECIFICALLY IDENTIFIED ON THE ELEVATIONS OR NOT. IF OMITTED FROM ELEVATION, ADJUST CASEWORK DIMENSIONS TO ALLOW FOR INSTALLATION.

FILLERS, CORNERS AND ENDS

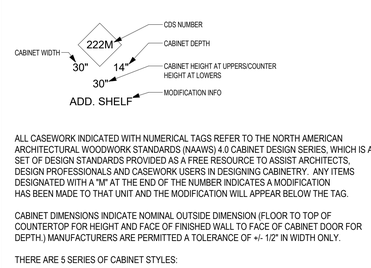


OUTLET & SWITCH LOCATIONS AT CASEWORK



P'LAM - COUNTERTOP/ EDGE DETAIL (SELF EDGE W/ WIDE BUILD UP) | **P'LAM - BACKSPLASH** | **P'LAM - COUNTERTOP/END (SELF EDGE W/ WIDE BUILD UP)**

COUNTERTOP DETAILS (6" = 1' - 0")



ALL CASEWORK INDICATED WITH NUMERICAL TAGS REFER TO THE NORTH AMERICAN ARCHITECTURAL WOODWORK STANDARDS (NAAWS) 4.0 CABINET DESIGN SERIES, WHICH IS A SET OF DESIGN STANDARDS PROVIDED AS A FREE RESOURCE TO ASSIST ARCHITECTS, DESIGN PROFESSIONALS AND CASEWORK USERS IN DESIGNING CABINETRY. ANY ITEMS DESIGNATED WITH A "M" AT THE END OF THE NUMBER INDICATES A MODIFICATION HAS BEEN MADE TO THAT UNIT AND THE MODIFICATION WILL APPEAR BELOW THE TAG.

CABINET DIMENSIONS INDICATE NOMINAL OUTSIDE DIMENSION (FLOOR TO TOP OF COUNTERTOP FOR HEIGHT AND FACE OF FINISHED WALL TO FACE OF CABINET DOOR FOR DEPTH.) MANUFACTURERS ARE PERMITTED A TOLERANCE OF +/- 1/2" IN WIDTH ONLY.

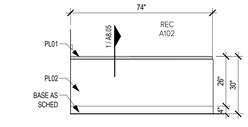
THERE ARE 5 SERIES OF CABINET STYLES:

100 SERIES = BASE CABINETS W/OUT DRAWERS
200 SERIES = BASE CABINETS W/ DRAWERS
300 SERIES = WALL HUNG CABINETS
400 SERIES = TALL STORAGE CABINETS
500 SERIES = TALL WARDROBE CABINETS

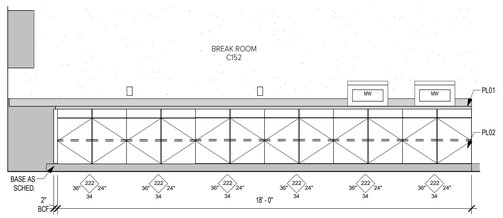
CASEWORK TYPE TAGS

1. COORDINATE DIMENSIONS AND CLEARANCE REQUIREMENTS FOR ALL FILE CABINETS, APPLIANCES AND EQUIPMENT PROVIDED BY CONTRACTOR AND/OR OWNER.
2. COORDINATE PLUMBING AND/OR ELECTRICAL REQUIREMENTS FOR APPLIANCES AND EQUIPMENT WITH CASEWORK.
3. PROVIDE TRIM AND FILLER PANELS WHERE EQUIPMENT IS LOCATED WITHIN CABINET UNITS.
4. COUNTERTOPS TO MEET THE CRITERIA PER TAS SECTION 606.3. LAVATORIES AND SINKS SHALL BE INSTALLED WITH THE HIGHER OF THE RIM OR COUNTER SURFACE 34 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
5. CONTINUE COUNTERTOP BACKSPLASH TO SIDEWALLS WHERE SUCH CONDITIONS OCCUR, UNLESS NOTED OTHERWISE.
6. ALL DOORS AND DRAWERS TO BE LOCKING U.N.O., KEY ALIKE INSIDE ROOM OR AT EACH KNEESPACE AND DIFFERENT BETWEEN ROOMS OR MULTIPLE KNEESPACES.
7. PROVIDE STAMPED NUMBER ON CYLINDER LOCK FACE. COORDINATE NUMBERING REQUIREMENT WITH ARCHITECT.
8. PROVIDE COUNTERTOP SUPPORT BRACKETS AT 36" O.C. MAX. AT KNEE SPACES AND LAVATORY COUNTERS, UNLESS NOTED OTHERWISE.
9. PROVIDE 2" DIA. GROMMETS AT ALL WORKSTATIONS WITH KNEE SPACES AND WHERE ACCESS TO POWER AND/OR LOW VOLTAGE IS NEEDED. COORDINATE FINAL LOCATIONS WITH OWNER PRIOR TO INSTALLATION.
10. PROVIDE BOTTOM CLOSURE FOR FILLER PANELS AT TOE SPACE AND TOP AND BOTTOM OF UPPER WALL CABINETS TO FINISH COMPLETELY.
11. EXPOSED CORNERS AT PLASTIC LAMINATE COUNTERTOPS TO HAVE 1" RADIUS CORNERS. EXPOSED CORNERS AT QUARTZ/SOLID SURFACE COUNTERTOPS TO HAVE 1/2" RADIUS CORNERS. EXCLUDES WATERFALL COUNTERTOP CONDITIONS.
12. PROVIDE WALL BASE FOR RECESSED TOE-KICKS AND BACK OF KNEE SPACE(S) UNLESS NOTED OTHERWISE.
13. MILLWORK SHALL BE CAULKED TO WALLS W/ COLOR MATCHING SEALANT
14. CLOSE TOP AND BOTTOM VOIDS BETWEEN CORNER CABINETS AND FILLER PANELS WHERE BLIND CORNERS ARE NOT USED.
15. SPLICES ARE NOT PERMITTED ON COUNTERTOP LAMINATE MATERIAL LESS THAN 144" LONG.
16. ENSURE FILE DRAWERS ACCOMMODATE 8 1/2"x11" PENDAFLEX HANGING FILES WITH TABS FRONT TO REAR, TYP.

GENERAL CASEWORK NOTES



22 CASEWORK ELEVATION
3/8" = 1'-0"



21 CASEWORK ELEVATION
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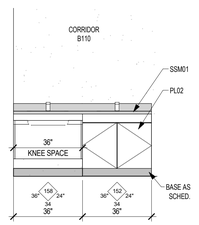
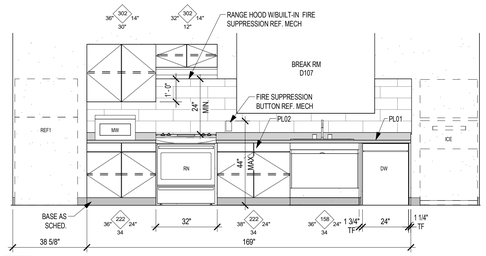
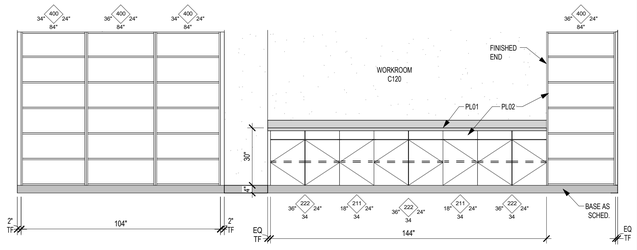


19 CASEWORK ELEVATION
3/8" = 1'-0"

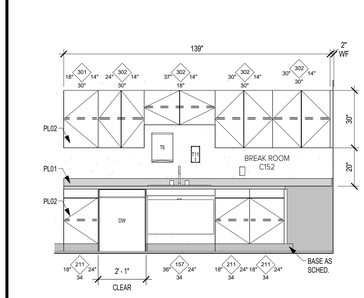


18 CASEWORK ELEVATION
3/8" = 1'-0"

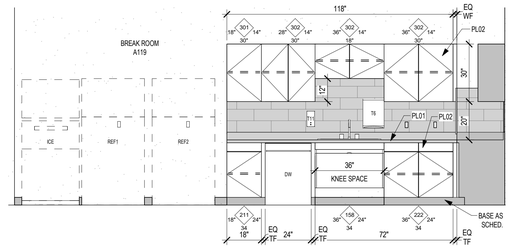
NOTE: LOCKS NOT NEEDED ON BREAK ROOM CASEWORK



17 CASEWORK ELEVATION
3/8" = 1'-0"

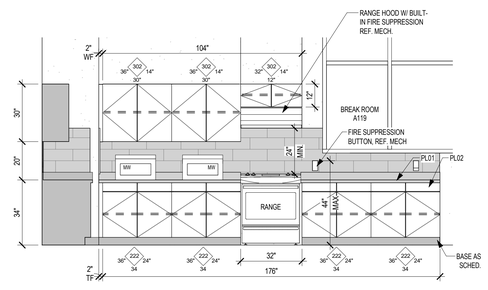


20 CASEWORK ELEVATION
3/8" = 1'-0"



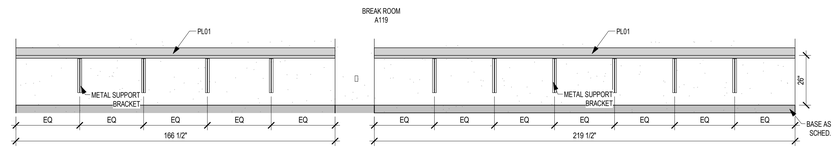
16 CASEWORK ELEVATION
3/8" = 1'-0"

NOTE: LOCKS NOT NEEDED ON BREAK ROOM CASEWORK

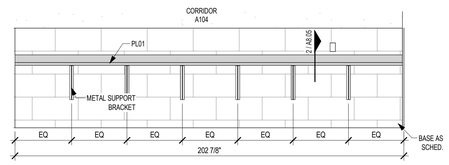


15 CASEWORK ELEVATION
3/8" = 1'-0"

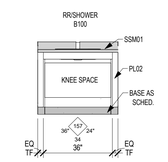
NOTE: LOCKS NOT NEEDED ON BREAK ROOM CASEWORK



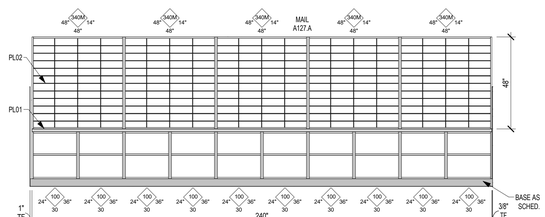
14 CASEWORK ELEVATION
3/8" = 1'-0"



13 CASEWORK ELEVATION
3/8" = 1'-0"

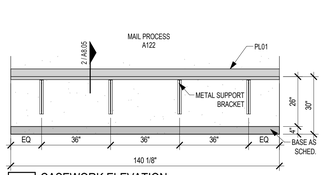


12 CASEWORK ELEVATION
3/8" = 1'-0"

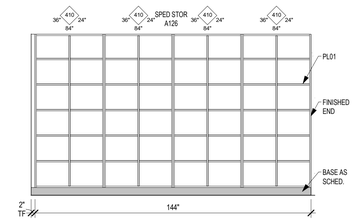


11 CASEWORK ELEVATION
3/8" = 1'-0"

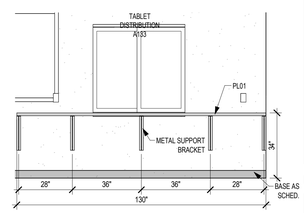
ALL MAIL SLOTS SHALL BE PROVIDED WITH SLIDE-IN NAME PLATE AND ADJUSTABLE SHELVES. 240 MAILBOX SLOTS, INSIDE CLEAR DIM TO BE VERIFIED IN FIELD



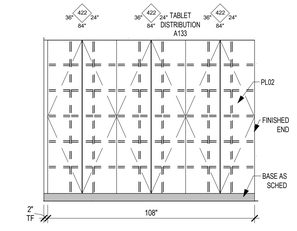
10 CASEWORK ELEVATION
3/8" = 1'-0"



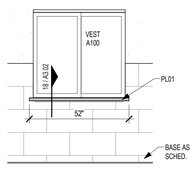
9 CASEWORK ELEVATION
3/8" = 1'-0"



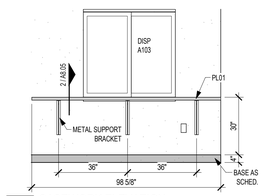
8 CASEWORK ELEVATION
3/8" = 1'-0"



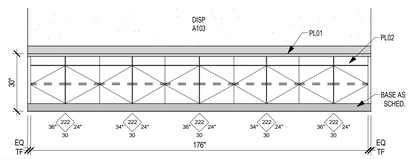
7 CASEWORK ELEVATION
3/8" = 1'-0"



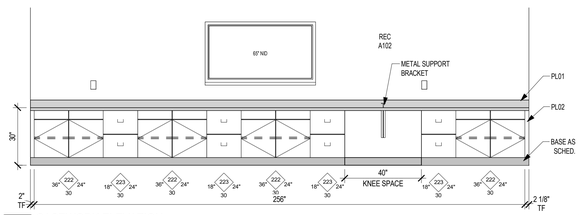
6 CASEWORK ELEVATION
3/8" = 1'-0"



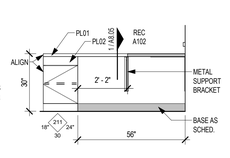
5 CASEWORK ELEVATION
3/8" = 1'-0"



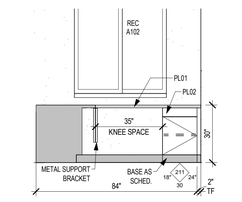
4 CASEWORK ELEVATION
3/8" = 1'-0"



3 CASEWORK ELEVATION
3/8" = 1'-0"



2 CASEWORK ELEVATION
3/8" = 1'-0"



1 CASEWORK ELEVATION
3/8" = 1'-0"

CASEWORK LEGENDS AND ELEVATIONS

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Revision / Date

Project:

REGISTERED ARCHITECT
DEREK N. BANNISTER
21160
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

Job No. 1971-05-01
Drawn By: JT
Date: 09/18/2025
Sheet No. A8.01

ISSUED FOR BID

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Autodesk Docs://NEW CANEY ISD - NEW OPERATIONS BUILDING/19714501_NCISD Trans. Ops Building_ARCH_v25.rvt

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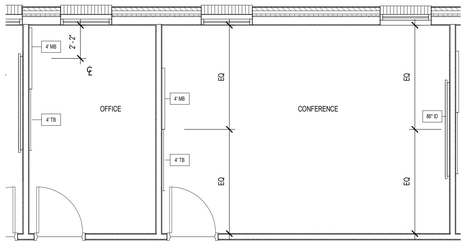
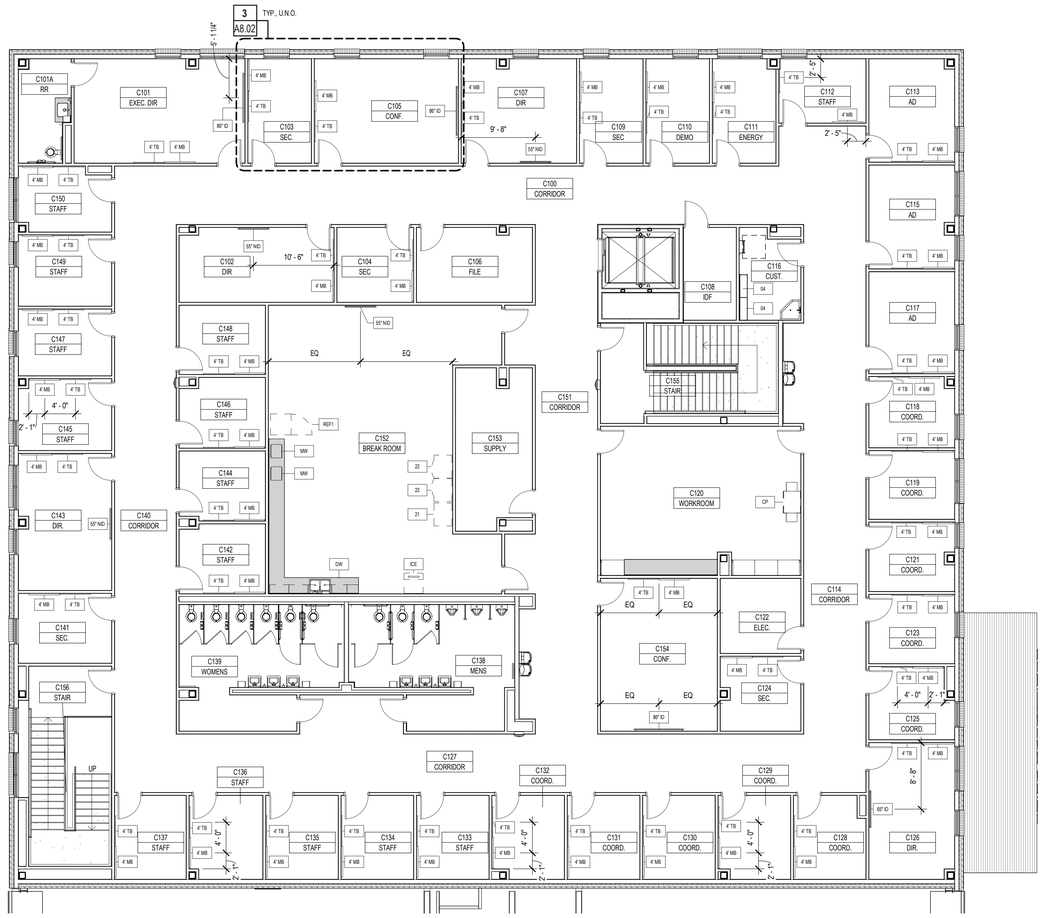
A8 - EQUIPMENT SCHEDULE

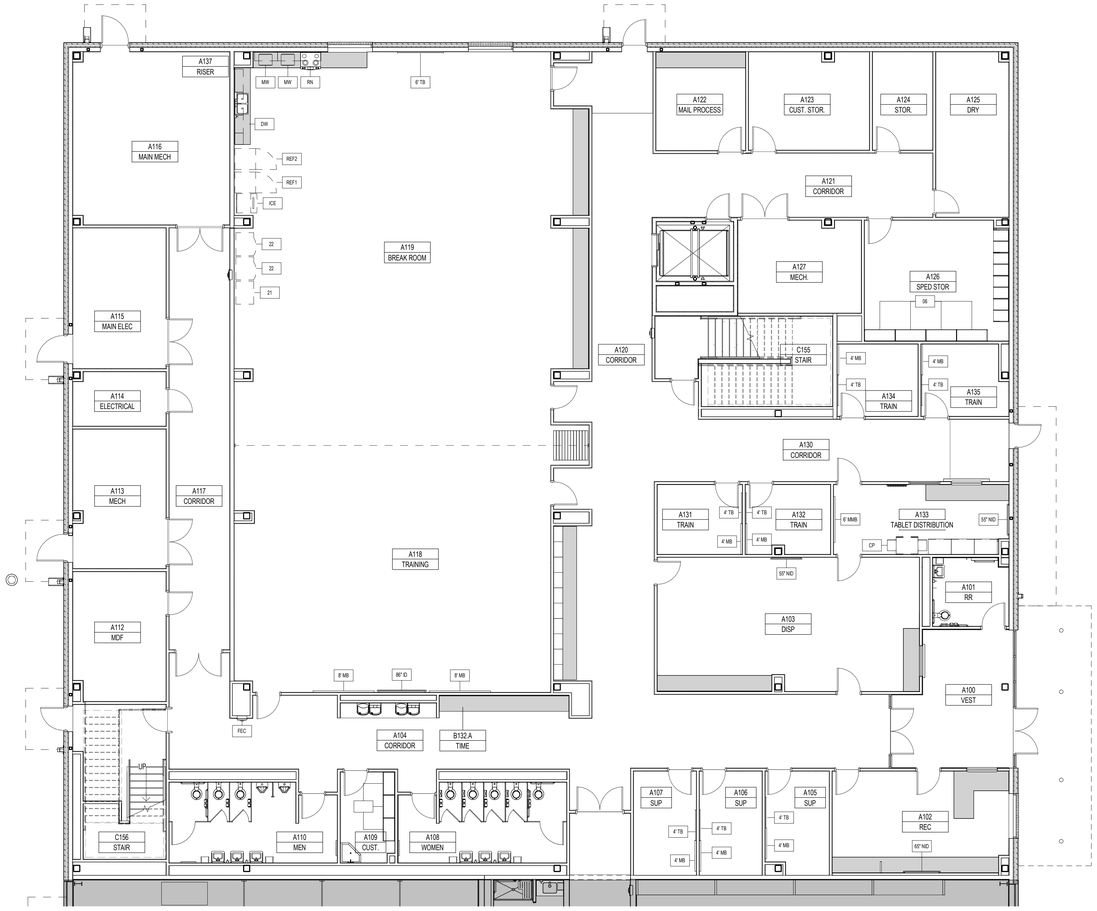
MARK	QTY	SPEC. SECTION	DESCRIPTION	RESPONSIBILITY	COMMENTS
CFCI					
01	10	10 2213	10' TALL WIRE MESH PARTITIONS	CFCI	LENGTH PER PLANS
02	6	10 2213	3'-0" W X 7'-0" TALL SWING DOOR	CFCI	
03	5	10 5100	METAL LOCKERS - 18X18X36 (DOUBLE TIER)	CFCI	
04	4	10 5613	METAL SHELVING 36"W x 12"D x 84"H	CFCI	
4' MB	48	10 1100	4' MARKER BOARD	CFCI	
4' TB	48	10 1100	4' TACK BOARD	CFCI	
05	38	10 5613	2'W X 10'H METAL SHELVING, LENGTH PER PLAN	CFCI	
06	11	10 5613	METAL SHELVING 48"W x 18"D x 84"H	CFCI	
6' MMB	1	10 5613	6' MAGNETIC MARKER BOARD	CFCI	
6' TB	1	10 5613	6' TACK BOARD	CFCI	
07	1	10 5613	4' x 12' FLOORING RACK	CFCI	
08	13	10 5613	4'W X 10'H PALLET RACK, LENGTH PER PLANS	CFCI	
8' MB	2	10 5613	8' MARKER BOARD	CFCI	
09	3	REF. PLUMB.	AIR COMPRESSOR	CFCI	
10	1	11 2336	COMMERCIAL DRYER/EXTRACTOR	CFCI	
11	1	11 2336	COMMERCIAL WASHER	CFCI	
12	1	23 3513	DUST COLLECTION SYSTEM	CFCI	
13	1	10 0100	60 GAL., 2 DOOR FLAMMABLE STORAGE CABINET (18" x 43" x 65")	CFCI	
14	2	22 4200	BARRIER-FREE EMERGENCY SHOWER & EYEWASH	CFCI	
15	2	EQ. TO NTH010-10 BY HARRINGTON	CHAIN HOIST - BEAM MOUNTED - MANUAL	CFCI	COORDINATE W/ PEMB MANUF.
16	2	11 1600	MECHANICAL EDGE OF DOCK LEVELER W/ BUMPERS	CFCI	
55" NID	6	27 4166	55" DIGITAL DISPLAY - CLEAR TOUCH NIO	CFCI	CDS-3055S-NIDS-S15
65" ID	1	27 4166	65" INTERACTIVE DISPLAY - CLEAR TOUCH 6000A+ SERIES	CFCI	CTI-6065A+UH40
65" NID	3	27 4166	65" DIGITAL DISPLAY - CLEAR TOUCH NIO	CFCI	CDS-NIO65-NIDS-S15
86" ID	4	27 4166	86" INTERACTIVE DISPLAY - CLEAR TOUCH 6000A+ SERIES	CFCI	CTI-6086A+UH40
DW	3	11 3013	DISHWASHER	CFCI	
FE	15	10 4400	WALL HUNG FIRE EXTINGUISHER	CFCI	
FEC	9	10 4400	FIRE EXTINGUISHER CABINET	CFCI	
ICE	3	11 2336	COMMERCIAL ICE MACHINE	CFCI	
MW	5	11 3013	MICROWAVE	CFCI	
REF1	3	11 3013	REFRIGERATOR & FREEZER	CFCI	
REF2	1	11 3013	FULL HEIGHT REFRIGERATR ONLY	CFCI	
RN	2	11 3013	ELECTRIC RANGE W/ FIRE SUPPRESSION HOOD	CFCI	
NIC					
21	3		VENDING MACHINE - SNACKS	NIC	
22	5		VENDING MACHINE - DRINKS	NIC	
23	19		72" X 36" WORK BENCH ON CASTERS	NIC	
24	7		4' X 8' UTILITY TABLE	NIC	
25	2		TABLE SAW	NIC	
26	2		RADIAL ARM SAW	NIC	
27	2		BAND SAW (VERTICAL)	NIC	
29	1		DRILL PRESS	NIC	
30	1		WELDING BOOTH	NIC	
31	1		WORK BENCH W / VISE & TOOL STORAGE	NIC	
32	1		DRUM SANDER	NIC	
33	1		WOOD PLANER	NIC	
CP	2		COPIER	NIC	



3 ENLARGED EQUIPMENT PLAN - TYPICAL DIMENSIONS FOR OFFICES & CONF RMS
1/4" = 1'-0"



2 ENLARGED EQUIPMENT PLAN - TYPICAL DIMENSIONS FOR OFFICES & CONF RMS
1/8" = 1'-0"



1 EQUIPMENT PLAN - LEVEL 1 - AREA A - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE

A / C
B
D
E
F

KEY PLAN
N.T.S.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
PATRICK K. BANKSTON
21169
STATE OF TEXAS
09-18-2025

Huckabee
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EQUIPMENT PLAN - LEVEL 1 & 2 - AREA A & C - OPERATIONS BUILDING

Job No. 1971-05-01	Sheet No. A8.02
Drawn By: JT	
Date: 09/18/2025	

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9/17/2025 10:55:47 PM
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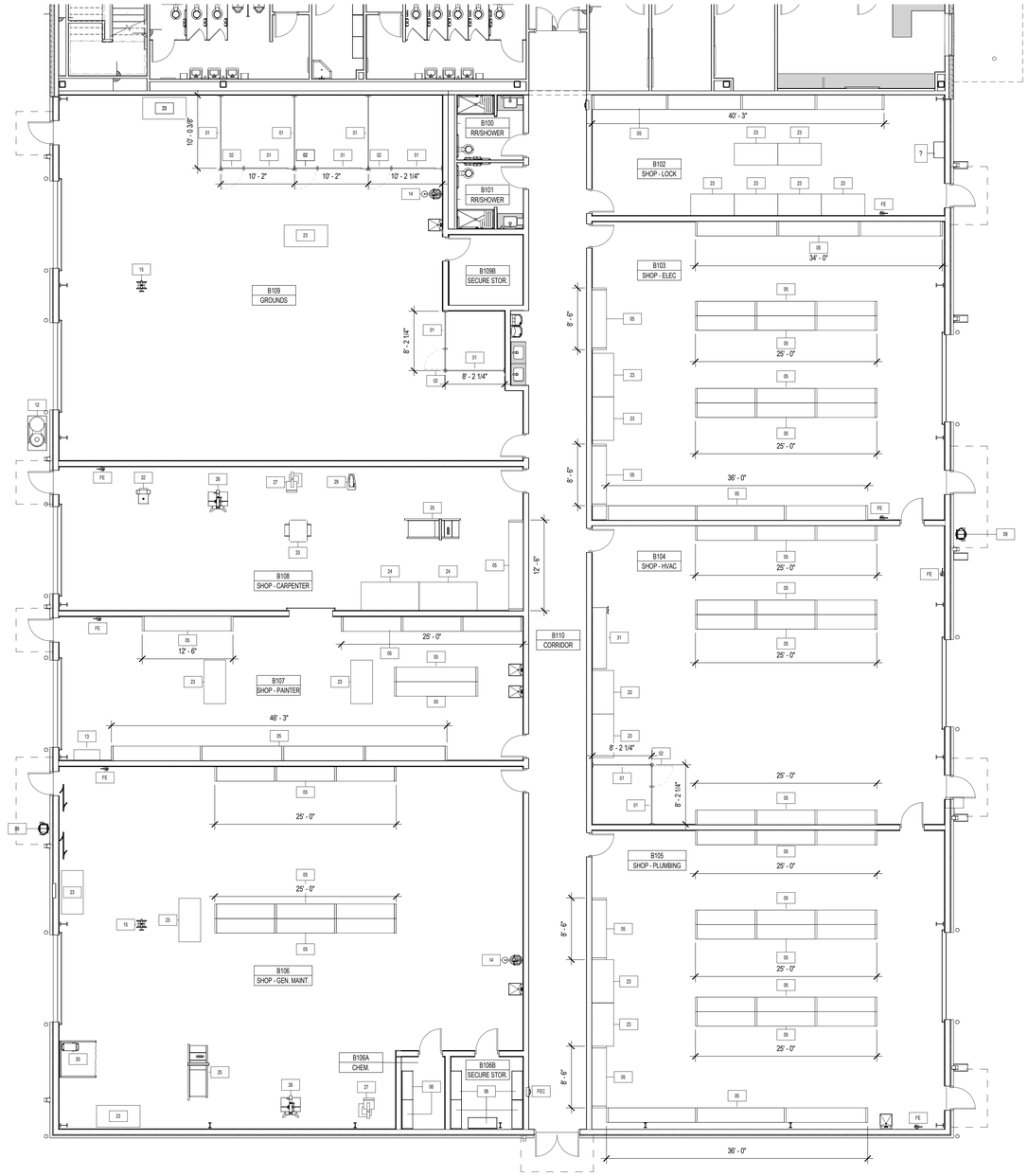
A8 - EQUIPMENT SCHEDULE

MARK	QTY	SPEC. SECTION	DESCRIPTION	RESPONSIBILITY	COMMENTS
CFCI					
01	10	10 2213	10' TALL WIRE MESH PARTITIONS	CFCI	LENGTH PER PLANS
02	6	10 2213	3'-0" W X 7'-0" TALL SWING DOOR	CFCI	
03	5	10 5100	METAL LOCKERS - 18X18X36 (DOUBLE TIER)	CFCI	
04	4	10 5813	METAL SHELVING 36"W x 12"D x 84"H	CFCI	
4' MB	48	10 1100	4' MARKER BOARD	CFCI	
4' TB	48	10 1100	4' TACK BOARD	CFCI	
05	38	10 5613	2'W X 10'H METAL SHELVING, LENGTH PER PLAN	CFCI	
06	11	10 5813	METAL SHELVING 48"W x 18"D x 84"H	CFCI	
6' MMB	1	10 5613	6' MAGNETIC MARKER BOARD	CFCI	
6' TB	1	10 5613	6' TACK BOARD	CFCI	
07	1	10 5613	4' x 12' FLOORING RACK	CFCI	
08	13	10 5813	4'W X 10'H PALLET RACK, LENGTH PER PLANS	CFCI	
8' MB	2	10 5613	8' MARKER BOARD	CFCI	
09	3	REF. PLUMB.	AIR COMPRESSOR	CFCI	
10	1	11 2336	COMMERCIAL DRYER/EXTRACTOR	CFCI	
11	1	11 2336	COMMERCIAL WASHER	CFCI	
12	1	23 3513	DUST COLLECTION SYSTEM	CFCI	
13	1	10 0100	60 GAL., 2 DOOR FLAMMABLE STORAGE CABINET (18" x 43" x 65")	CFCI	
14	2	22 4200	BARRIER-FREE EMERGENCY SHOWER & EYEWASH	CFCI	
15	2	EQ. TO WTH010-10 BY HARRINGTON	CHAIN HOIST - BEAM MOUNTED - MANUAL	CFCI	COORDINATE W/ PEMB MANUF.
16	2	11 1600	MECHANICAL EDGE OF DOCK LEVELER W/ BUMPERS	CFCI	
55" NID	6	27 4166	55" DIGITAL DISPLAY - CLEAR TOUCH NIO	CFCI	CDS-3055S-NIDS-S15
65" ID	1	27 4166	65" INTERACTIVE DISPLAY - CLEAR TOUCH 6000A+ SERIES	CFCI	CTI-6065A+UH40
65" NID	3	27 4166	65" DIGITAL DISPLAY - CLEAR TOUCH NIO	CFCI	CDS-NIO65-NIDS-S15
86" ID	4	27 4166	86" INTERACTIVE DISPLAY - CLEAR TOUCH 6000A+ SERIES	CFCI	CTI-6086A+UH40
DW	3	11 3013	DISHWASHER	CFCI	
FE	15	10 4400	WALL HUNG FIRE EXTINGUISHER	CFCI	
FEC	9	10 4400	FIRE EXTINGUISHER CABINET	CFCI	
ICE	3	11 2336	COMMERCIAL ICE MACHINE	CFCI	
MW	5	11 3013	MICROWAVE	CFCI	
REF1	3	11 3013	REFRIGERATOR & FREEZER	CFCI	
REF2	1	11 3013	FULL HEIGHT REFRIGERATR ONLY	CFCI	
RN	2	11 3013	ELECTRIC RANGE W/ FIRE SUPPRESSION HOOD	CFCI	
NIC					
21	3		VENDING MACHINE - SNACKS	NIC	
22	5		VENDING MACHINE - DRINKS	NIC	
23	19		72" X 36" WORK BENCH ON CASTERS	NIC	
24	7		4' X 8' UTILITY TABLE	NIC	
25	2		TABLE SAW	NIC	
26	2		RADIAL ARM SAW	NIC	
27	2		BAND SAW (VERTICAL)	NIC	
29	1		DRILL PRESS	NIC	
30	1		WELDING BOOTH	NIC	
31	1		WORK BENCH W / VISE & TOOL STORAGE	NIC	
32	1		DRUM SANDER	NIC	
33	1		WOOD PLANER	NIC	
CP	2		COPIER	NIC	



1 EQUIPMENT PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING
1/8" = 1'-0"

N TRUE

KEY PLAN
N.T.S.

A / C
B
D
E
F

Project: NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D. NEW CANEY, TEXAS

Revision / Date

REGISTERED ARCHITECT DEREK B. BANNISTER 31169 STATE OF TEXAS
09-18-2025

Huckabee
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800.687.1229

EQUIPMENT PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

Job No. 1071-05-01
Drawn By: JT
Date: 09/18/2025
Sheet No. A8.03

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A8 - EQUIPMENT SCHEDULE

MARK	QTY	SPEC. SECTION	DESCRIPTION	RESPONSIBILITY	COMMENTS
CFCI					
01	10	10 2213	10' TALL WIRE MESH PARTITIONS	CFCI	LENGTH PER PLANS
02	6	10 2213	3'-0" W X 7'-0" TALL, SWING DOOR	CFCI	
03	5	10 5100	METAL LOCKERS - 15'X18'X36 (DOUBLE TIER)	CFCI	
04	4	10 5613	METAL SHELVING 36"W x 12"D x 84"H	CFCI	
4' MB	48	10 1100	4' MARKER BOARD	CFCI	
4' TB	48	10 1100	4' TACK BOARD	CFCI	
05	38	10 5613	2'W X 10'H METAL SHELVING, LENGTH PER PLAN	CFCI	
06	11	10 5613	METAL SHELVING 48"W x 18"D x 84"H	CFCI	
6' MMB	1	10 5613	6' MAGNETIC MARKER BOARD	CFCI	
6' TB	1	10 5613	6' TACK BOARD	CFCI	
07	1	10 5613	4' x 12' FLOORING RACK	CFCI	
08	13	10 5613	4'W X 10'H PALLET RACK, LENGTH PER PLANS	CFCI	
8' MB	2	10 5613	8' MARKER BOARD	CFCI	
09	3	REF. PLUMB.	AIR COMPRESSOR	CFCI	
10	1	11 2336	COMMERCIAL DRYER/EXTRACTOR	CFCI	
11	1	11 2336	COMMERCIAL WASHER	CFCI	
12	1	23 3513	DUST COLLECTION SYSTEM	CFCI	
13	1	10 0100	60 GAL., 2 DOOR FLAMMABLE STORAGE CABINET (18" x 43" x 65")	CFCI	
14	2	22 4200	BARRIER-FREE EMERGENCY SHOWER & EYEWASH	CFCI	
15	2	EQ. TO NTH010-10 BY HARRINGTON	CHAIN HOIST - BEAM MOUNTED - MANUAL	CFCI	COORDINATE W/ PEMB MANUF.
16	2	11 1600	MECHANICAL EDGE OF DOCK LEVELER W/ BUMPERS	CFCI	
55" NID	6	27 4166	55" DIGITAL DISPLAY - CLEAR TOUCH NIO	CFCI	CDS-3055S-NIDS-S15
65" ID	1	27 4166	65" INTERACTIVE DISPLAY - CLEAR TOUCH 6000A+ SERIES	CFCI	CTI-6065A+UH40
65" NID	3	27 4166	65" DIGITAL DISPLAY - CLEAR TOUCH NIO	CFCI	CDS-NIO65-NIDS-S15
86" ID	4	27 4166	86" INTERACTIVE DISPLAY - CLEAR TOUCH 6000A+ SERIES	CFCI	CTI-6086A+UH40
DW	3	11 3013	DISHWASHER	CFCI	
FE	15	10 4400	WALL HUNG FIRE EXTINGUISHER	CFCI	
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REF1	3	11 3013	REFRIGERATOR & FREEZER	CFCI	
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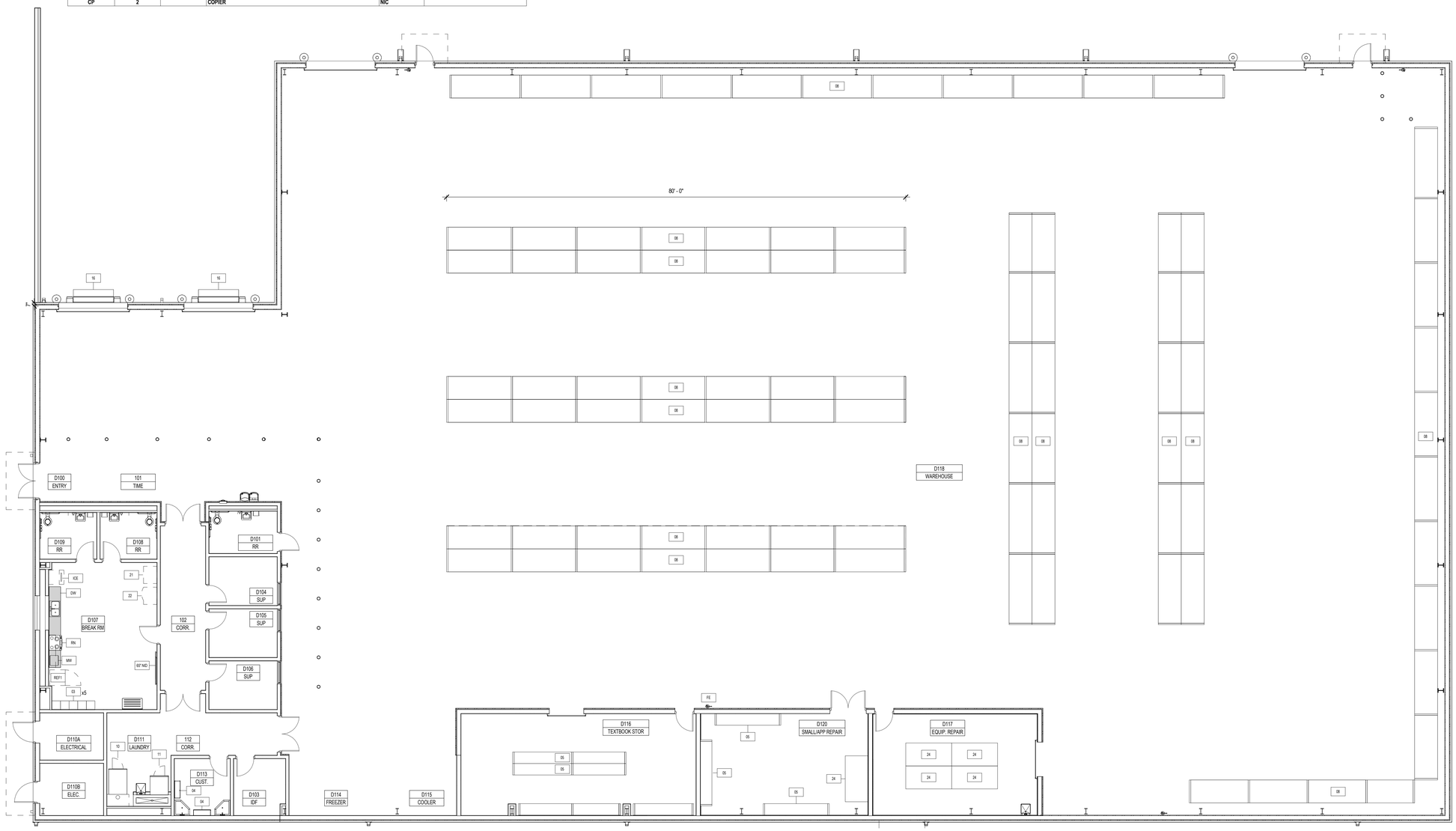
RN	2	11 3013	ELECTRIC RANGE W/ FIRE SUPPRESSION HOOD	CFCI	
NIC					
21	3		VENDING MACHINE - SNACKS	NIC	
22	5		VENDING MACHINE - DRINKS	NIC	
23	19		72" X 36" WORK BENCH ON CASTERS	NIC	
24	7		4' X 8' UTILITY TABLE	NIC	
25	2		TABLE SAW	NIC	
26	2		RADIAL ARM SAW	NIC	
27	2		BAND SAW (VERTICAL)	NIC	
29	1		DRILL PRESS	NIC	
30	1		WELDING BOOTH	NIC	
31	1		WORK BENCH W / VISE & TOOL STORAGE	NIC	
32	1		DRUM SANDER	NIC	
33	1		WOOD PLANER	NIC	
CP	2		COPIER	NIC	



1 EQUIPMENT PLAN - LEVEL 1 - AREA D - WAREHOUSE
1/8" = 1'-0"

N TRUE

KEY PLAN
N.T.S.

A / C
B
D
E
F

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
DEREK R. HARRINGTON
21169
STATE OF TEXAS
09-18-2025

Huckabee
www.huckabee-inc.com
800.687.1229

EQUIPMENT PLAN - LEVEL 1 - AREA D - WAREHOUSE

Job No.	Sheet No.
1971-05-01	A8.04
Drawn By: JT	
Date: 09/18/2025	

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9/17/2025 10:55:54 PM
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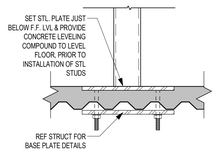
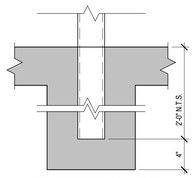
Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

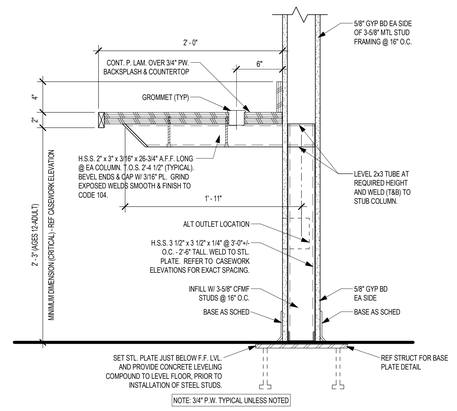


NOTE: ANCHOR PLATE FOR ELEVATED FLOOR ASSEMBLY. - REF STRUCT

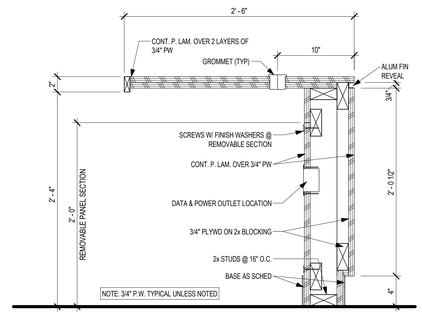


NOTE: ALTERNATE FOR SLAB ON GRADE, SET COLUMN IN 12" DIA. PIER

15 COMPUTER FRAME INSTALLATION DTL'S
1 1/2" = 1'-0"



2 COMPUTER COUNTER @ GYP WALL
1 1/2" = 1'-0"



1 RECEPTION / CIRCULATION COUNTER - LOW
1 1/2" = 1'-0"

REGISTERED ARCHITECT
MARK R. BANNISTER
21163
STATE OF TEXAS
09-18-2025

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RECEPTION / COMPUTER & SPECIALTY MILLWORK DETAILS

PACKAGE VOLUME

Job No. 1971-05-01
Sheet No. A8.05
Drawn By: MA
Date: 09/18/2025

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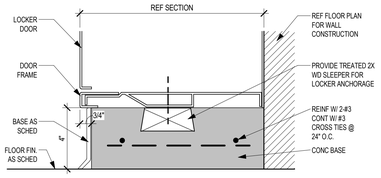
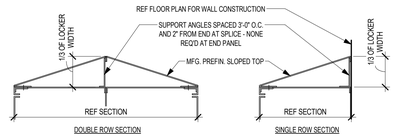
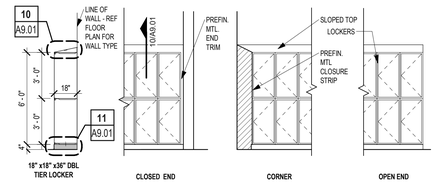


11 TYP 4" LOCKER BASE
3" = 1'-0"

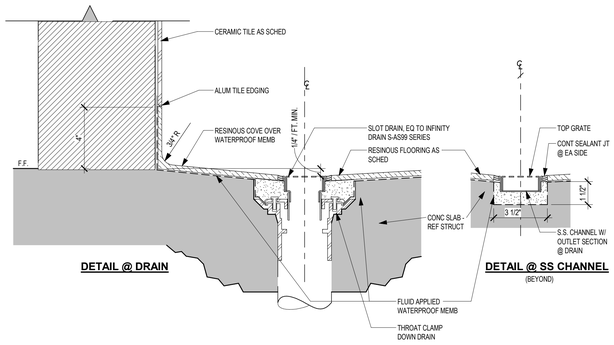


10 SLOPED TOP DETAILS
1 1/2" = 1'-0"

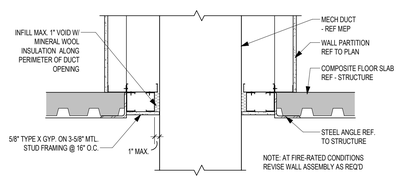


REFER TO FLOOR PLANS FOR OCCURRENCE & QUANTITIES OF TYPICAL CONDITIONS

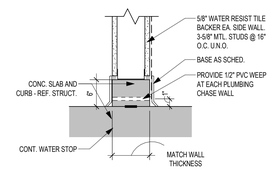
9 TYP LOCKER SECT & ELEVS - DBL TIER (18x18x36)
1/4" = 1'-0"



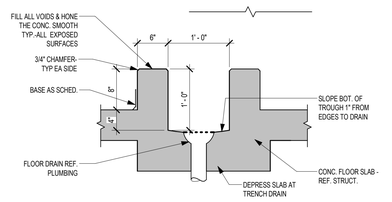
8 SLOT DRAIN DETAIL @ RESINOUS FLOORING
3" = 1'-0"



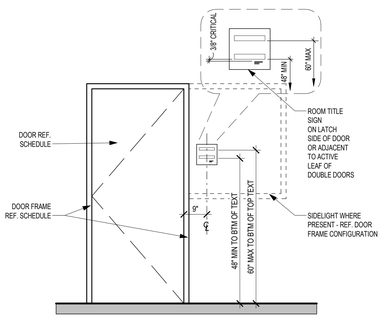
7 TYP DUCT DRAFT STOPPING DETAIL
1" = 1'-0"



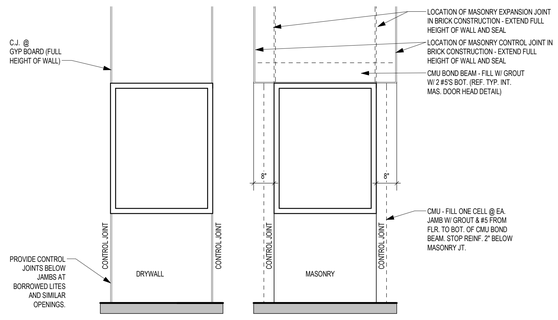
6 TYPICAL CONCRETE CURB DETAIL
1 1/2" = 1'-0"



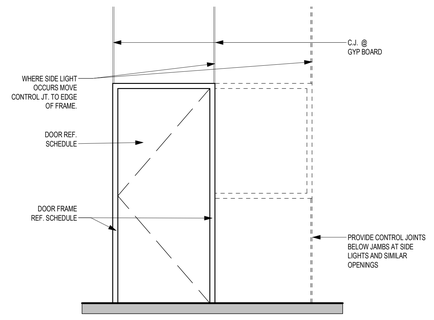
5 TYP. LAUNDRY TRENCH SECTION
1" = 1'-0"



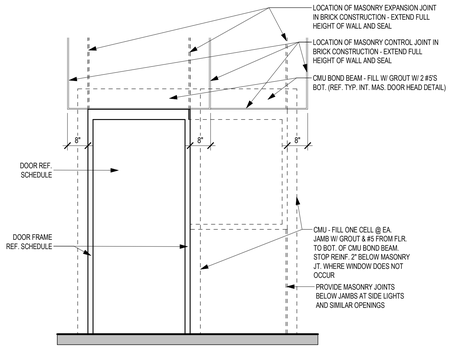
4 TYP SIGNAGE LOCATION
1/2" = 1'-0"



3 TYP CONTROL JOINT @ WINDOW FRAME - MASONRY, DRYWALL
1/2" = 1'-0"



2 TYP CONTROL JOINT @ DOOR FRAME - DRY WALL
1/2" = 1'-0"



1 TYP CONTROL JOINT @ DOOR FRAME- MASONRY
1/2" = 1'-0"

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

REGISTERED ARCHITECT
JOSEPH R. BANKSTON
31109
STATE OF TEXAS
09-18-2025

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TYPICAL DETAILS

Job No.	Sheet No.
1971-05-01	A9.01
Drawn By: JT	
Date: 09/18/2025	

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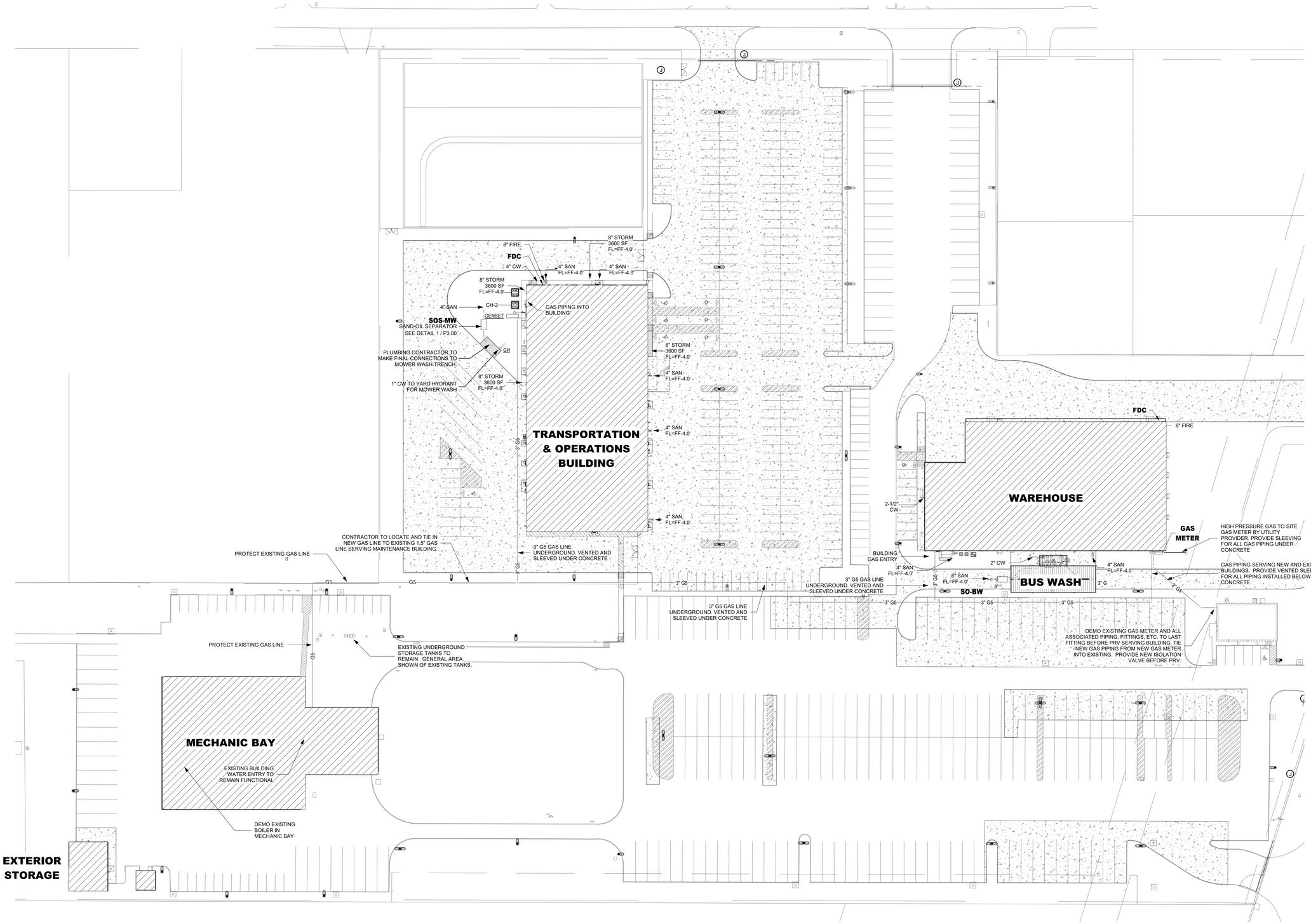

N
TRUE

1 PLUMBING SITE PLAN

SCALE= 1" = 40'-0"

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/18/2025

Huckabee
www.huckabee-inc.com
800.687.1229

LTY ENGINEERS

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SUITE 325
HOUSTON, TX 77024
(281) 945-8888

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PLUMBING SITE PLAN

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. P1.00
Drawn By: SCM/ZS	ISSUED FOR BID
Date: 09/18/2025	

ISSUED FOR BID

9/17/2025 9:00:11 AM

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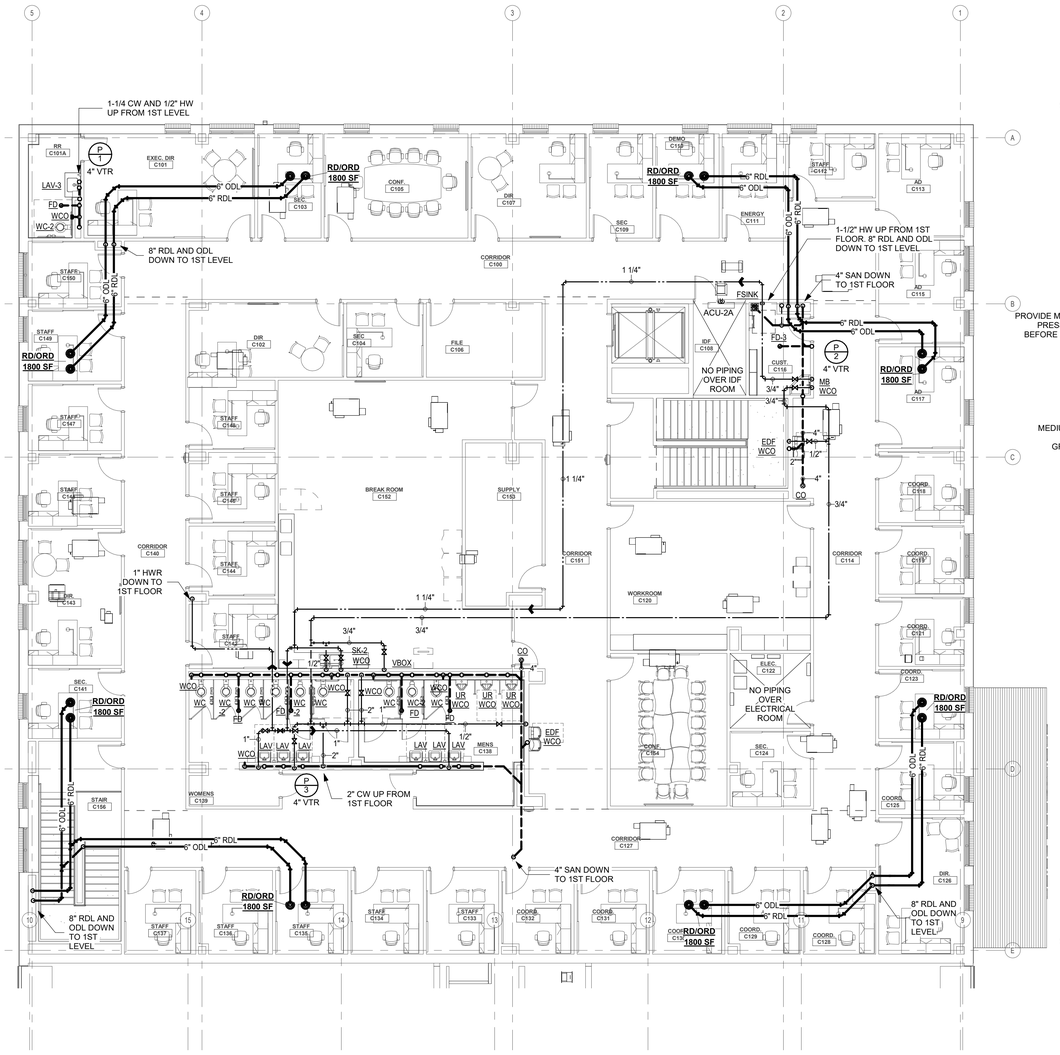
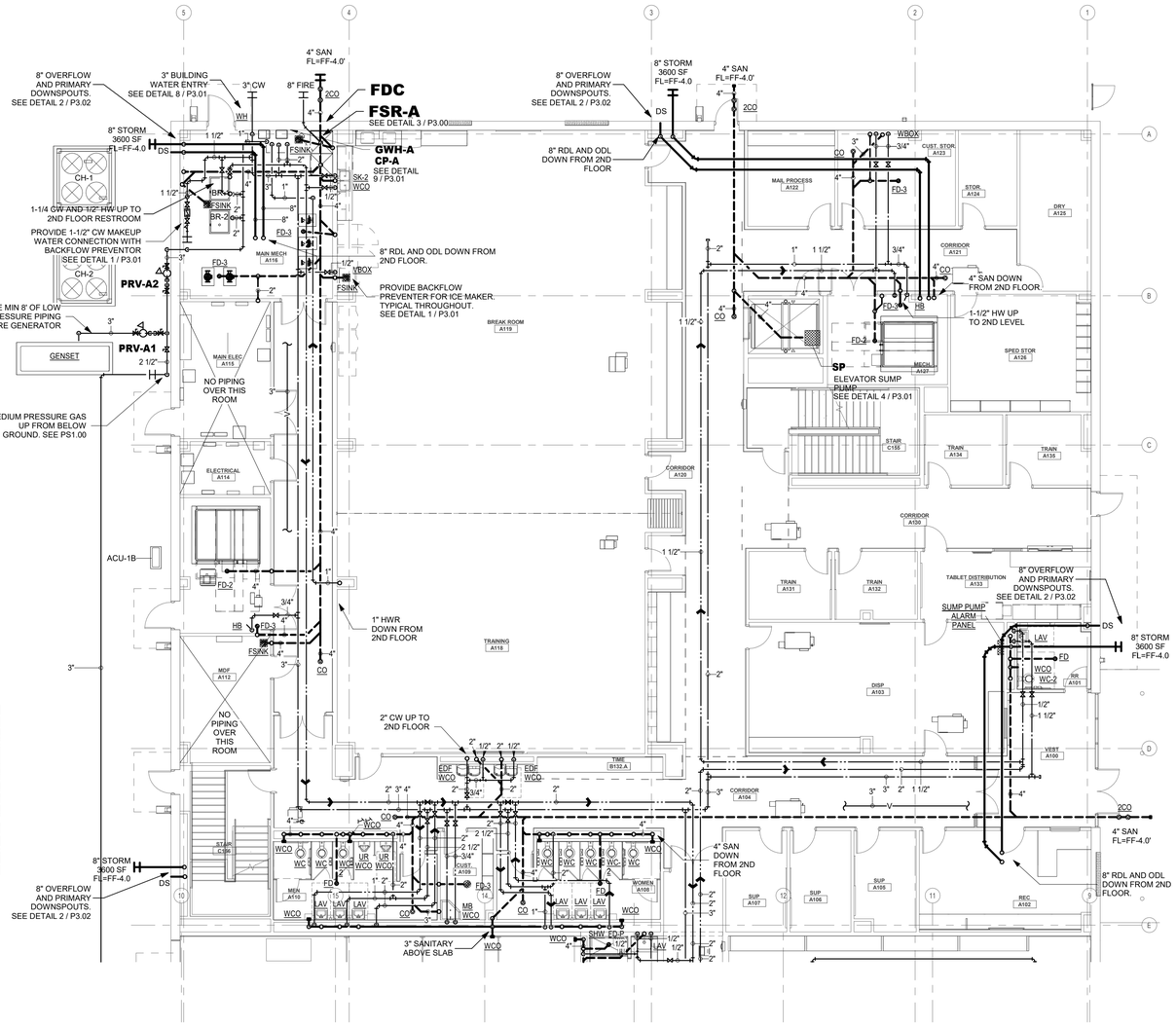


N TRUE 2 PLUMBING FLOOR PLAN - LEVEL 2 - AREA C - OPERATIONS BUILDING

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



N TRUE 1 PLUMBING FLOOR PLAN - LEVEL 1 - AREA A - OPERATIONS BUILDING

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

A / C
B

KEY PLAN
N.T.S.

D

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/10/2025

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PLUMBING FLOOR PLAN - LEVEL 1 / 2 - AREA A / C - OPERATIONS BUILDING

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. P1.02
Drawn By: SCM/ZS	ISSUED FOR BID
Date: 09/18/2025	

ISSUED FOR BID

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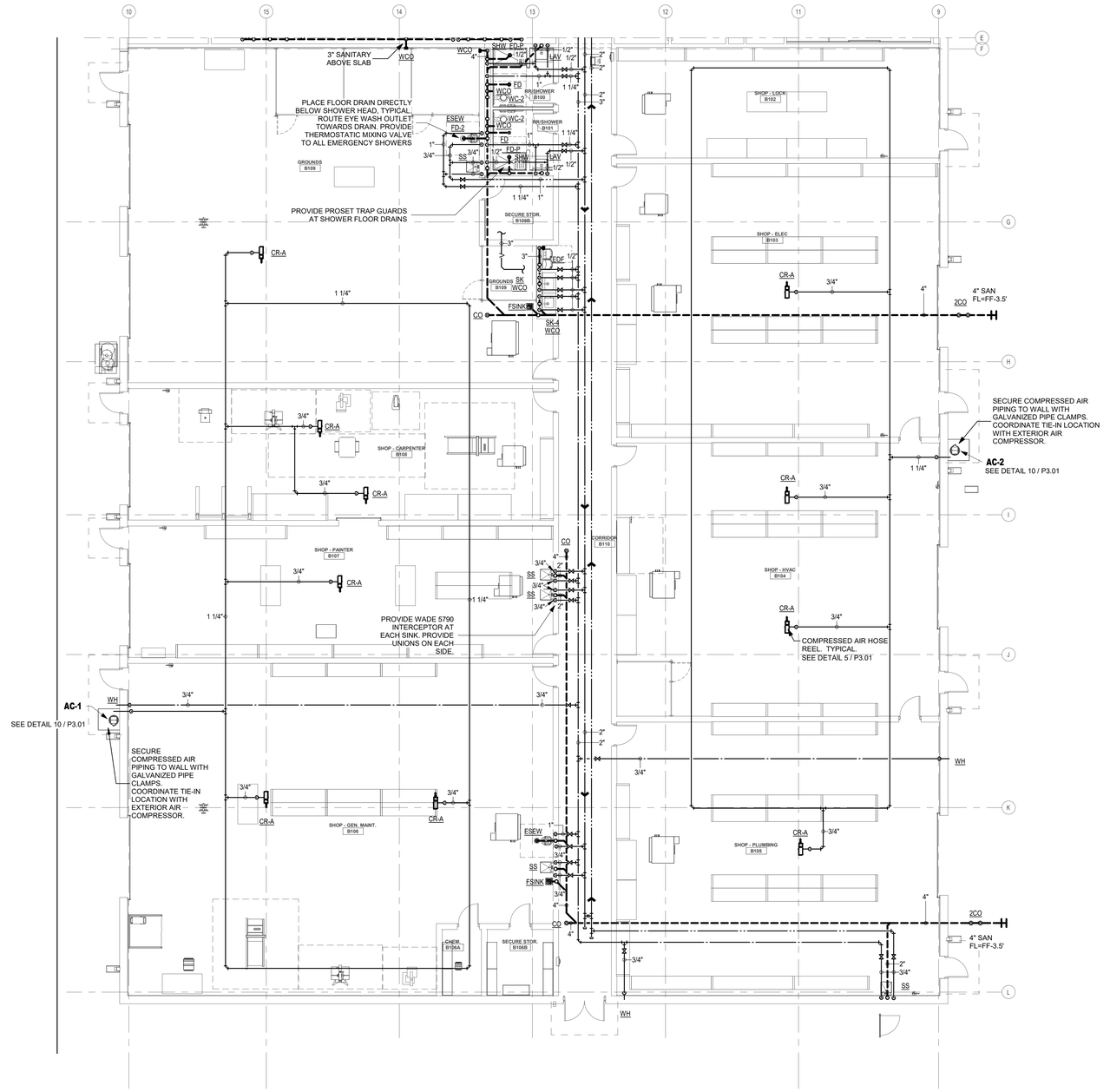

N TRUE

1 PLUMBING FLOOR PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

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

A / C

B

D

KEY PLAN
N.T.S.

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/18/2025

Huckabee
www.huckabee-inc.com
800.687.1229

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PLUMBING FLOOR PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. P1.03
Drawn By: SCM/ZS	ISSUED FOR BID
Date: 09/18/2025	

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PROVIDE SHUT OFF VALVE ~5' AFF TO WALL HYDRANT OUTSIDE, TYPICAL

WH

GUH-6

TYPICAL GAS CONNECTION DETAIL FOR ALL GAS CONNECTIONS SEE DETAIL 10 / P3.00

1" G

1 1/2" G

GUH-5

PROVIDE FLUE VENT FOR ALL GUHs

1 1/4" G

GUH-4

PROVIDE SHUT OFF VALVE ~5' AFF TO WALL HYDRANT OUTSIDE, TYPICAL

FDC

FSR

SEE DETAIL 3 / P3.00

6" FIRE SPRINKLER

8"

LOADING
XT.46

STORAGE LIMITED TO ORDINARY HAZARD CLASSIFICATION

RUN GAS PIPE TIGHT TO STRUCTURE

2" G

WAREHOUSE
D118

1"

WH

PROVIDE SHUT OFF VALVE ~5' AFF TO WALL HYDRANT OUTSIDE, TYPICAL

1 1/2"

2-1/2" BUILDING WATER ENTRY SEE DETAIL 8 / P3.01

ENTRY D100 · TIME 101 · IRR D105 · IRR D108 · IRR D101 · SUP D104 · SUP D105 · SUP D106 · CORR 102 · BREAK RM D107 · LAUNDRY D111 · ELEC. D116B · CORR 112 · JANITOR D113 · CORR 115 · FREEZER D114 · COOLER D115 · TEXTBOOK STOR D116 · SMALL APP REPAIR D120 · EQUIP. REPAIR D117

ROUTE WATER AND SANITARY VENT SERVING SK UNDER WINDOW

P D1 4" VTR

GAS PIPING TO UNIT HEATERS

GUH-1

GUH-2

PROVIDE FLUE VENT FOR ALL GUHs

GWH-D

CP-D

SEE DETAIL 9 / P3.01

NO WATER PIPING OVER ATS/ELEC ROOM

NO PIPING OVER IDF/ELEC ROOM

PROVIDE HOSE END CONNECTIONS FOR WASHER CONNECTION.

PRV-D1

SEE DETAIL 9 / P3.00

MEDIUM PRESSURE GAS UP FROM BELOW GROUND. PROVIDE PRV MOUNTED TO THE WALL. PROVIDE ELBOW POINTED TO GROUND ON PRV VENT.

5 PSI GAS CONNECT TO SITE GAS SYSTEM.

GENSET

ACU-WA

ACU-W1

ACU-W2

4" SAN FL=FF-4.0'

HB

CR-A

P D2 4" VTR

4" SAN FL=FF-4.0'

AC-3

SEE DETAIL 10 / P3.01

PROVIDE SHUT OFF VALVE ~5 AFF WITH HOSE BIB ON INSIDE AND WALL HYDRANT OUTSIDE AT 2' AFF, TYPICAL

GUH-3

NEW GAS FROM UTILITY PROVIDER

GAS METER

NEW GAS PIPING SERVING EXISTING AND NEW BUILDINGS ON SITE. SEE PLUMBING SITE PLAN FOR CONTINUATION. PROVIDE SEPARATE ISOLATION VALVES FOR EACH LINE ABOVE GRADE.

N TRUE

1 PLUMBING FLOOR PLAN - LEVEL 1 - AREA D - WAREHOUSE

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

A / C

B

D

KEY PLAN
N.T.S.

Revision / Date

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/18/2025

Huckabee
www.huckabee-inc.com
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PLUMBING FLOOR PLAN - LEVEL 1 - AREA D - WAREHOUSE

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. P1.04
Drawn By: SCM/ZS	ISSUED FOR BID
Date: 09/18/2025	

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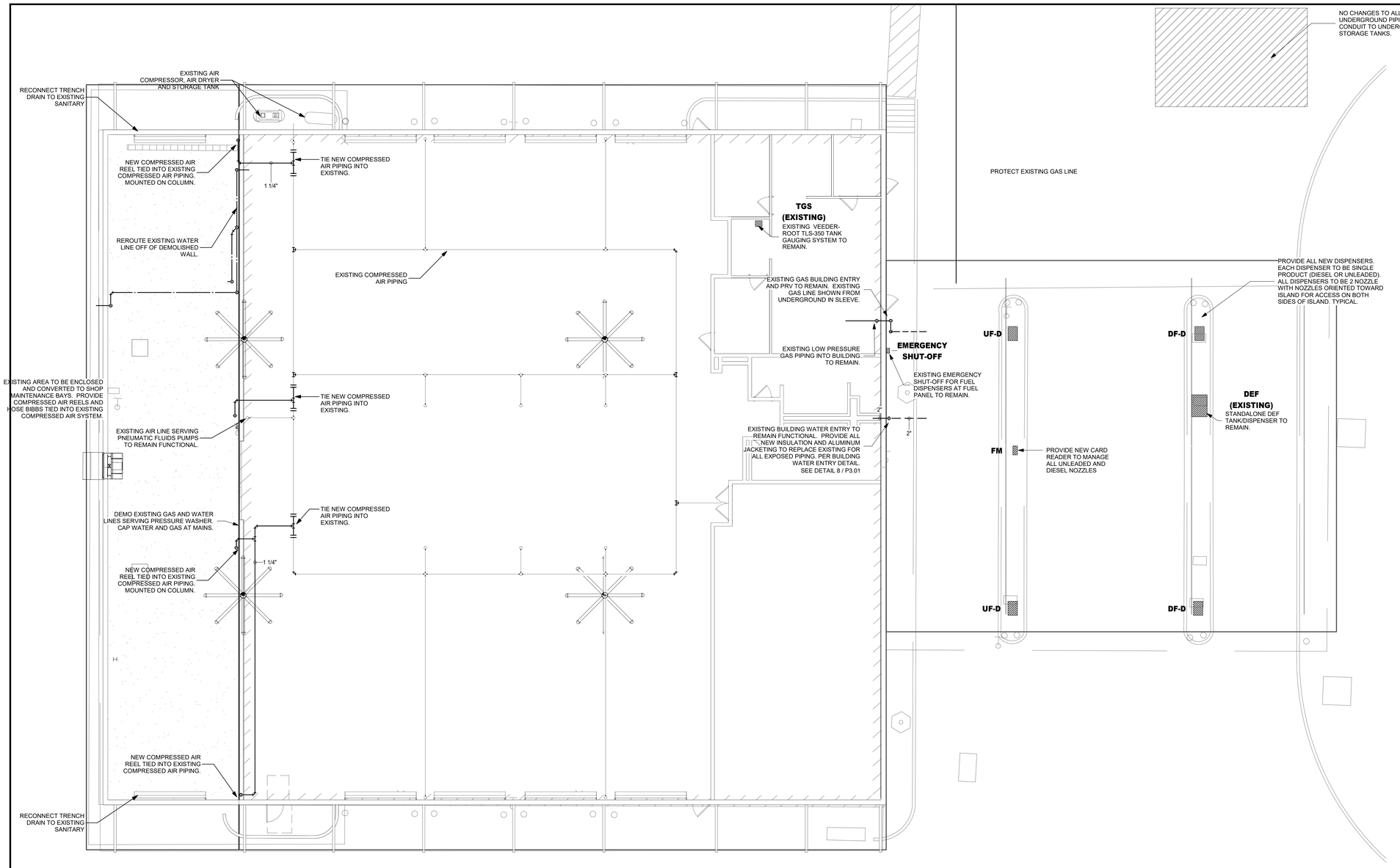
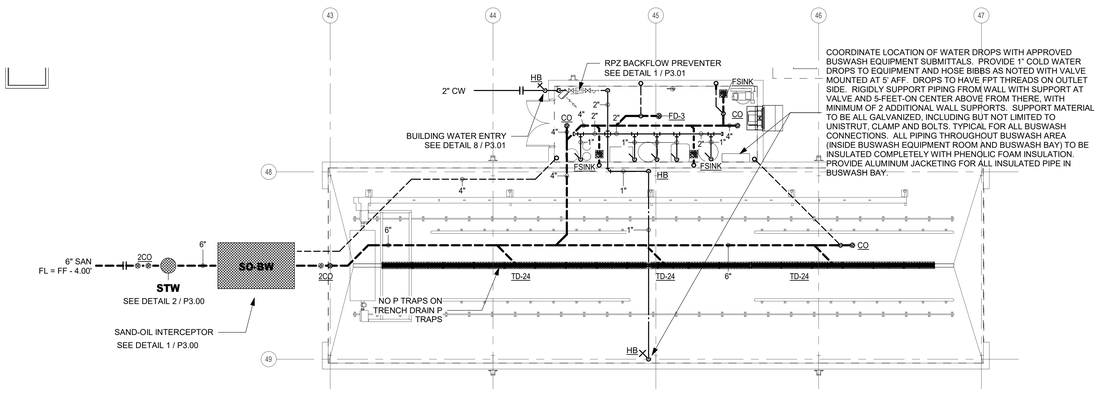


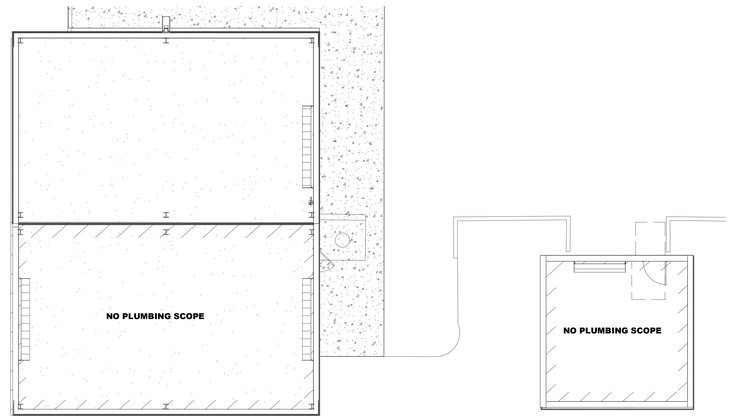
2 PLUMBING FLOOR PLAN- MECHANIC BAY

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



1 PLUMBING FLOOR PLAN- BUS WASH

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



3 PLUMBING FLOOR PLAN - TRANSPORTATION BUILDING ADDITION

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

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Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
REGISTERED
ENGINEER
09/10/2025

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PLUMBING FLOOR PLANS - BUS WASH, MECHANIC BAY, & STORAGE

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. P1.05
Drawn By: SCM/ZS	ISSUED FOR BID
Date: 09/18/2025	

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9/17/2025 9:00:47 AM
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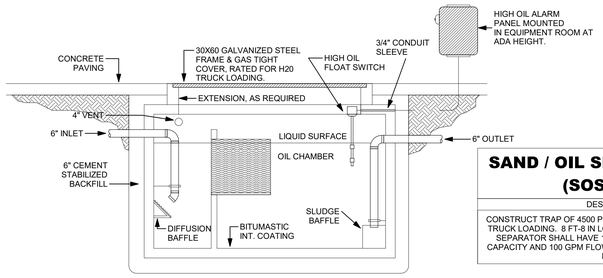


SAND / OIL SEPARATOR SCHEDULE (SOS-BW, SOS-MW)

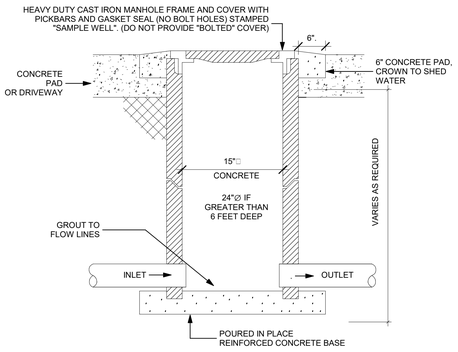
DESCRIPTION/SPECIFICATION
CONSTRUCT TRAP OF 4500 PSI REINFORCED CONCRETE AND DESIGN FOR H-20 TRUCK LOADING. 8 FT-9 IN LONG X 5 FT WIDE X MINIMUM 6 FT DEEP. SAND OIL SEPARATOR SHALL HAVE 1000 GALLON LIQUID CAPACITY. 500 GALLON OIL CAPACITY AND 100 GPM FLOW RATE. PARK EQUIPMENT CO. SOCMP-1000 WITH H-20 TRUCK LOADING.

NOTE:

PLUMBING CONTRACTOR SHALL CLEAN AND PUMP OUT ALL SAND AND DEBRIS INSIDE SAND/OIL SEPARATOR AT SUBSTANTIAL COMPLETION OF PROJECT.

1 SAND-OIL SEPERATOR DETAIL (SOS)

NO SCALE

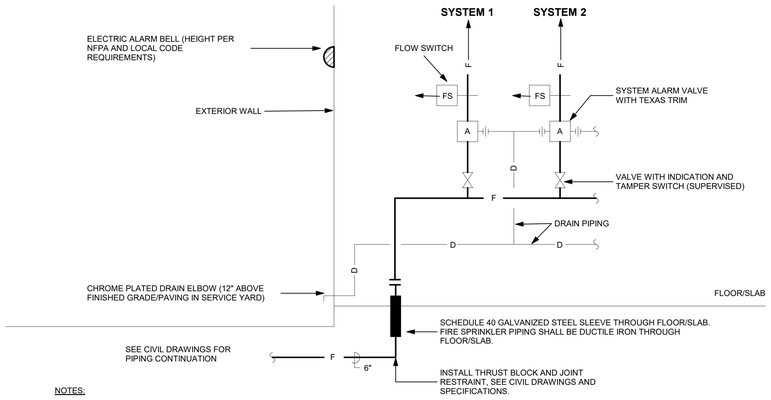


NOTES:

1. PRECAST UNIT APPROVED BY THE AHJ SHALL BE ACCEPTABLE.
2. SAMPLING WELL SHALL BE DESIGNED FOR H-20 TRAFFIC LOADING.
3. PROVIDE PLASTIC/RUBBER INSERT/GASKET BENEATH MANHOLE COVER TO PREVENT SEWER GAS FROM SEEPING OUT OF SAMPLE WELL COVER TO THE SURFACE.

2 SAMPLE TEST WELL DETAIL (STW)

NO SCALE

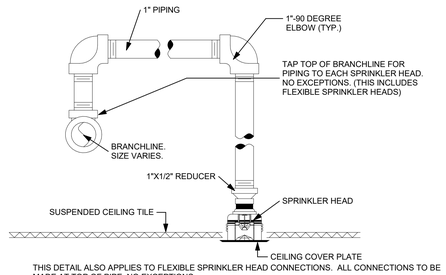


NOTES:

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 FOR NEW BUILDINGS IN PROJECT.
3. SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. DOUBLE CHECK, FIRE DEPARTMENT CONNECTION AND POST INDICATOR VALVE WITH SUPERVISORY SWITCH PROVIDED WITH BACKFLOW PREVENTER VAULT THAT IS INCLUDED UNDER THE CIVIL CONTRACT. SEE CIVIL DRAWINGS.
5. TEST VALVES SHALL NOT BE LOCATED EXPOSED IN FINISHED ROOMS AND SHALL NOT DISCHARGE TO EXTERIOR OF BUILDING WHERE CONCRETE IS LOCATED (I.E. SIDEWALK OR DRIVE). INSTALL DISCHARGE IN GRASSY AREAS OR TO DRAINS VARIOUS MECHANICAL ROOMS THROUGHOUT BUILDING (REFERENCE PLUMBING FLOOR PLANS).
6. ALL SPRINKLER HEADS IN AREAS WITH CEILING GRID SHALL BE CONCEALED TYPE AND SHALL BE CENTERED IN CEILING TILES.

3 FIRE SPRINKLER SYSTEM RISER SCHEMATIC (FSR)

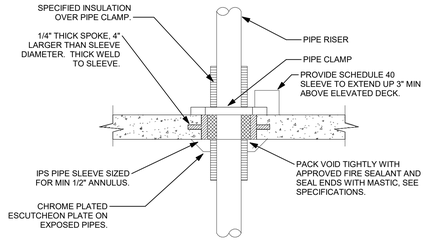
NO SCALE



THIS DETAIL ALSO APPLIES TO FLEXIBLE SPRINKLER HEAD CONNECTIONS. ALL CONNECTIONS TO BE MADE AT TOP OF PIPE, NO EXCEPTIONS.

4 FIRE SPRINKLERHEAD INSTALLATION DETAIL

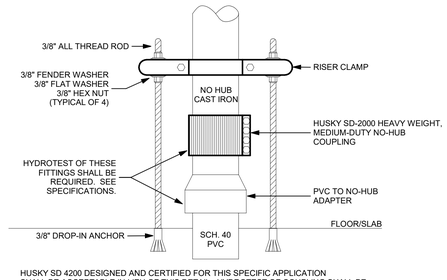
NO SCALE



THIS DETAIL APPLIES TO ALL PIPING THROUGH FLOORS, INCLUDING FIRE SPRINKLER PIPING.

5 PIPE THROUGH FLOOR SLAB DETAIL

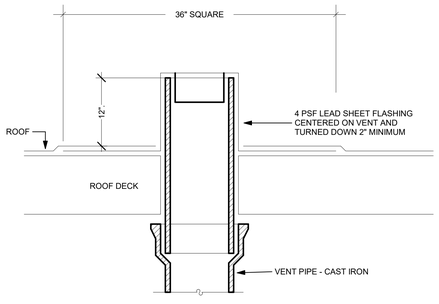
NO SCALE



HUSKY SD 4200 DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF THIS DETAIL. HYDROTEST OF COUPLING SHALL BE REQUIRED. ALSO, ALL-THREAD RODS AND RISER CLAMP INSTALLATION REQUIRED AS SHOWN ABOVE.

6 PVC-TO-CAST IRON INSTALLATION DETAIL

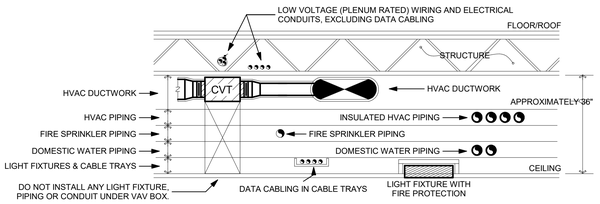
NO SCALE



SHOWN FOR MEP COMPONENTS ONLY. COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

7 ROOF VENT DETAIL

NO SCALE



PLENUM PRIORITY NOTES

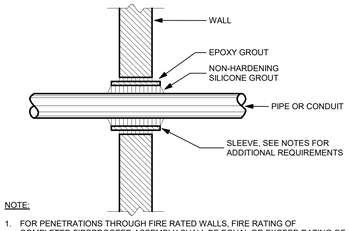
ELECTRICAL CONDUIT	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING. IF FRAMING IS USED FOR SUPPORT OF CONDUIT, A SADDLE SHALL BE REQUIRED FOR ISOLATION AT EACH SUPPORT POINT.
LOW VOLTAGE WIRING (EXCEPT DATA CABLING)	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING AND RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS. ALL INDIVIDUAL WIRES SHALL BE BUNDLED TOGETHER WITH PLASTIC TIE STRAPS AT 6 FOOT MAXIMUM INTERVALS AND EACH WIRE SHALL BE IDENTIFICATION TAGGED AT 25 FOOT MAXIMUM INTERVALS.
HVAC DUCTWORK	INSTALLED AS SNUG TO BOTTOM OF STRUCTURE AS POSSIBLE, ALLOWING ONLY ENOUGH SPACE FOR INSULATION WRAP. OFFSET HOT AND COLD MEDIUM PRESSURE DUCTS FOR TAKE-OFFS FOR DOUBLE DUCT VAV BOXES.
HVAC PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC DUCTWORK. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW.
FIRESPRINKLER PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC PIPING.
DOMESTIC WATER PIPING	INSTALLED IN PLANE DIRECTLY ABOVE LIGHT FIXTURES. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW. BALL VALVES INSTALLED WITH STEM HORIZONTAL SHALL BE USED IN LIEU OF WHEEL HANDLE VALVES OR OTHER TYPES EXCEPT IN SITUATIONS WHERE BALL VALVES ARE NOT APPROPRIATE.
LIGHT FIXTURES	TAKE PRIORITY IN SPECIAL LAYOUT. ALL OTHER SYSTEMS (DOUBLE DUCT UNITS, DUCTWORK, PIPING, CONDUITS, ETC.) SHALL BE ROUTED IN PLENUM SPACE TO AVOID PASSING DIRECTLY (LOW) OVER LIGHTING FIXTURES PREVENTING THEIR INSTALLATION, SERVICING AND/OR REMOVAL.
GRAVITY FED PLUMBING	THIS INCLUDES PLUMBING WASTE/VENT AND ROOF DRAIN SYSTEMS. THESE SYSTEMS TAKE PRIORITY OVER ALL OTHER SYSTEMS BUT MUST BE INSTALLED TAKING OTHER SYSTEMS INTO CONSIDERATION. IN GENERAL, ROOF DRAIN PIPING SHALL START AS HIGH AS POSSIBLE. WASTE/VENT PIPING SHALL BE INSTALLED IN VAC PIPING SPACE (IF AVAILABLE) IN AREAS WHERE CROSSING DUCTWORK. DO NOT INSTALL WASTE/VENT OR ROOF DRAIN PIPING UNDER DOUBLE DUCT VAV BOXES IF AVOIDABLE.

NOTES:

1. PIPING, CONDUIT AND DUCTWORK SUPPORTS ARE NOT SHOWN ON THIS DETAIL. SUPPORT ALL ENTITIES AS REQUIRED BY THE WRITTEN SPECIFICATIONS.
2. DO NOT INSTALL ANY PIPE OVER TOP OF ANY ELECTRICAL EQUIPMENT. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.
3. DO NOT INSTALL ANY PIPE OVER TOP OF ANY IDF/MDF/SERVER/NETWORK EQUIPMENT. THIS INCLUDES EQUIPMENT PROVIDED BY OWNER. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.

11 PLENUM SPACE PRIORITY DETAIL

NO SCALE



NOTE:

1. FOR PENETRATIONS THROUGH FIRE RATED WALLS, FIRE RATING OF COMPLETED FIREPROOFED ASSEMBLY SHALL BE EQUAL OR EXCEED RATING OF WALL.
2. PROVIDE SCHEDULE 40 GALVANIZED SLEEVE THROUGH ALL CMU, FIRE RATED, AND/OR EXTERIOR WALLS.
3. PROVIDE 16G SLIP-LOCK SLEEVES THROUGH INTERIOR SHEET ROCK WALLS.
4. SIZE SLEEVES TO ALLOW 1/2" SPACE BETWEEN PIPE AND SLEEVE OR SEALANT.
5. PROVIDE FIRE CAULK WHERE REQUIRED.

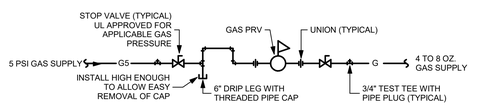
THIS DETAIL APPLIES TO ALL PIPING THROUGH WALLS OR FLOORS, INCLUDING FIRE SPRINKLER PIPING.

8 WALL PENETRATION DETAIL

NO SCALE

GAS PRV SCHEDULE

MARK	PRV-A1	PRV-A2	PRV-D1
LOCATION	AREA A EXTERIOR	AREA A EXTERIOR	AREA D EXTERIOR
SERVES	GENERATOR A	BUILDING A	WAREHOUSE
GAS LOAD	1500 CFH	1598 CFH	3058 CFH
DISTANCE FROM METER	1000 FEET	1000 FEET	250 FEET
DISTANCE TO LAST OUTLET	10 FEET	40 FEET	375 FEET
INLET (SIZE/PRESSURE)	2-1/2" / 5 PSIG	1.25" / 5 PSIG	2" / 5 PSIG
OUTLET (SIZE/PRESSURE)	3" / 7-11 OZ.	3" / 4-8 OZ.	3" / 7-11 OZ.

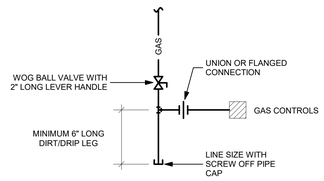


NOTES:

1. VENT ALL REGULATORS TO OUTDOORS. THIS INCLUDES PRVs PROVIDED WITH BOILERS AND GWHs.
2. FOR REGULATORS INSTALLED OUTDOORS, PROVIDE VENT PIPE ORIENTED DOWNWARD.

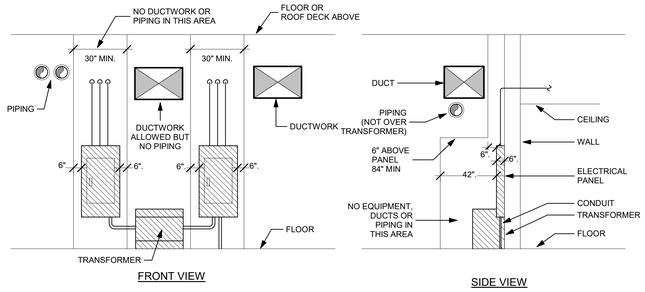
9 GAS PRESSURE REGULATOR DETAIL

NO SCALE



10 TYPICAL GAS CONNECTION

NO SCALE



12 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/18/2025

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PLUMBING DETAILS AND SCHEDULES

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. ISSUED FOR BID P3.00
Drawn By: SCM/ZS	
Date: 09/18/2025	

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9/17/2025 9:00:51 AM
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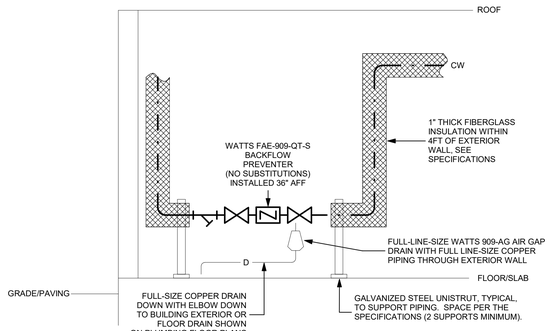
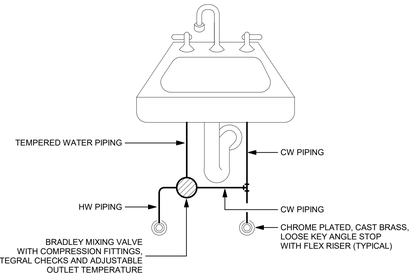


NOTES:

1. ALL BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED NO HIGHER THAN 36" ABOVE FINISHED FLOOR AND SHALL BE READILY ACCESSIBLE FOR TESTING AND REPAIR.
2. ALL BACKFLOW PREVENTERS TO BE FULL LINE SIZE, IE 4" BACKFLOW PREVENTER ON 4" WATER LINE. SEE FLOOR PLAN FOR SIZES.

1 BACKFLOW PREVENTER INSTALLATION DETAIL

NO SCALE

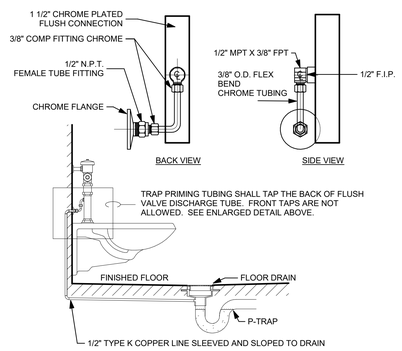


NOTES:

1. THIS DETAIL ONLY APPLIES TO ALL LAVATORIES AND SINKS THAT HAVE HOT WATER. BRADLEY S59-4000A LEAD-FREE ASSE 1070 CERTIFIED TMV WITH MOUNTING BRACKET.
2. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
3. TMV SHALL BE INSTALLED IN A EASILY/READILY ACCESSIBLE LOCATION.
4. DELIVERY TEMPERATURES SHALL NOT EXCEED 110°F. VARIANCE OF TEMPERATURE RANGE OF MIXING VALVE SHALL BE CONSIDERED. REFER TO MANUFACTURERS TEMPERATURE PERFORMANCE OF VALVE AT HIGHEST FLOW RATE OF FAUCET.

2 KNEESPACE TMV DETAIL

NO SCALE



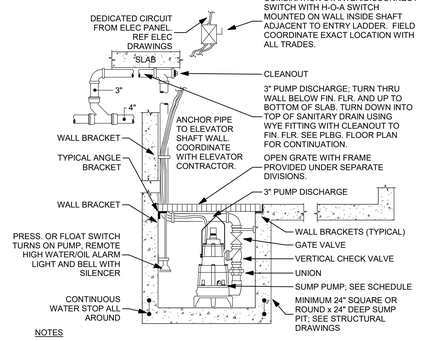
SLOAN ROYAL OR PPP FLUSH VALVE TRAP PRIMER MODELS ONLY.

3 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

ELEVATOR PUMP SPECIFICATION

MYERS MODEL ME50S-11 PUMP - HEAVY DUTY CAST IRON CONSTRUCTION, 50 GPM AT 40 FT. HEAD, INTERNAL OVERLOAD, 1/2 HP, 115 V, SUMP PUMP SHALL HAVE CONTROLS TO TURN PUMP ON AUTOMATICALLY WHEN WATER REACHES THE "ON" LEVEL AND TURN PUMP OFF AUTOMATICALLY WHEN OIL OR AIR REACHES THE "OFF" LEVEL. PUMPS MANUFACTURED BY AURORA OR WEIL ALSO ACCEPTABLE.

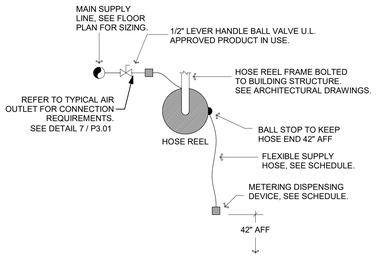


NOTES

PROVIDE PENTEK ODS OIL DETECTION SYSTEM AND REMOTE ALARM MOUNTED ON WALL IN DISPATCH ROOM. SEE PLUM/ELEC DRAWINGS FOR EXACT LOCATION.

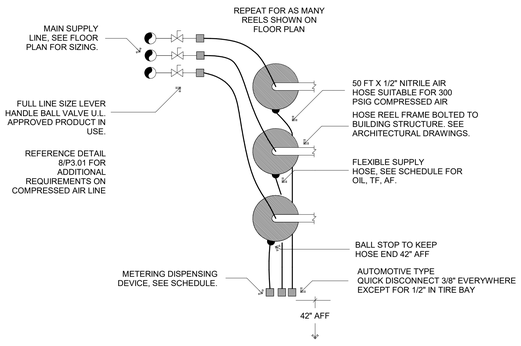
4 ELEVATOR SUMP PUMP DETAIL (SP)

NO SCALE



5 CEILING MOUNTED AIR HOSE REEL DETAIL

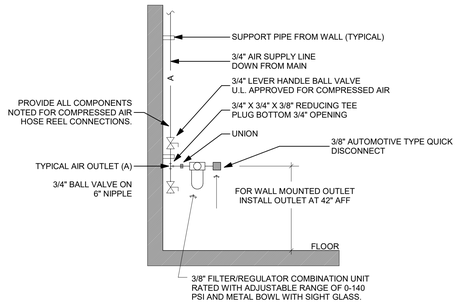
NO SCALE



HEAVY DUTY AIR HOSE REEL - 50' X 1/2" NITRILE HOSE RATED FOR 300 PSI, DUAL AXLE SUPPORT POINTS, 1" SOLID STEEL AXLE WITH 1" LUBRICATED BEARINGS, HEAVY DUTY STEEL CONSTRUCTION, 2 YEAR WARRANTY, 3/8" QUICK COUPLING, EZ-COIL CONTROLLED RETRACTION; COX REELS MODEL EZ-SH-450.

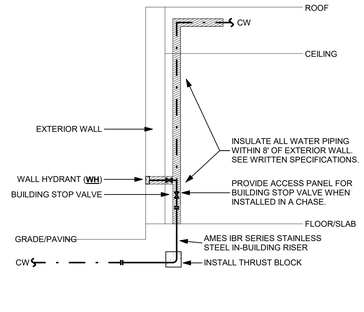
6 COLUMN SUPPORTED HOSE REELS

NO SCALE



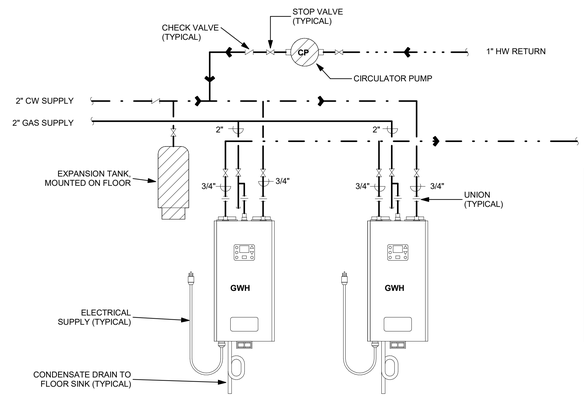
7 AIR OUTLET DETAIL

NO SCALE



8 BUILDING WATER ENTRY/EXIT DETAIL

NO SCALE



GAS WATER HEATER SYSTEM

NAVIEN ONLY. NATURAL GAS, TANKLESS, 398 KBTUH INPUT, 378 KBTUH OUTPUT, 94% EFFICIENCY CAPABILITY, 4" DIAMETER FLUE SIZES, 120V/1Ø CONTROLS VOLTAGE. SYSTEM TO INCLUDE TWO (2) NSE-A 240 UNITS PACKAGED TOGETHER. FLUE SHALL BE CPVC POSITIVE PRESSURE EXHAUST VENT. VENT PROVIDED BY PLUMBING CONTRACTOR AND INSTALLED THROUGH ROOF BY MECHANICAL CONTRACTOR.

CIRCULATOR PUMP SHALL BE GRUNDFOS MODEL UPS-1555SF. ALL BRONZE CONSTRUCTION, 3/4" FLANGED CONNECTIONS, IMMERSION TYPE AQUASTAT, 120V/1Ø, 5 GPM @ 16 FEET HEAD CAPACITY. TACO CARTRIDGE PUMP AND B&G PL-B SERIES ALL BRONZE CIRCULATOR PUMP ALSO ACCEPTABLE.

PROVIDE ELBI DTS-19 ASME EXPANSION TANK.

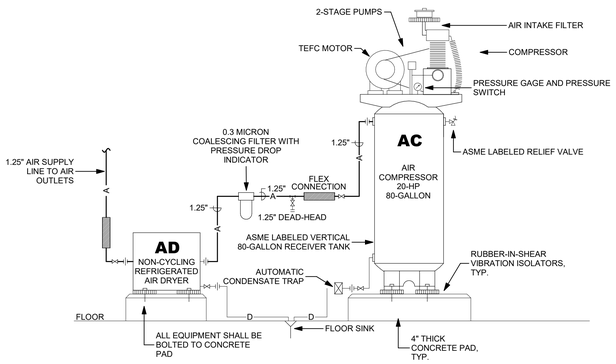
PROVIDE ONE SYSTEM AT OPS BUILDING MECH ROOM A116 (GWH-A) AND ONE SYSTEM AT THE WAREHOUSE CUST D113 (GWH-D). BOTH SYSTEMS CONSIST OF 2 BANKED 199 KBTU WATER HEATERS

9 GAS WATER HEATER SYSTEM (GWH & CP)

NO SCALE

AIR COMPRESSOR AND AIR DRYER

AIR COMPRESSOR MARK	AC-1 & AC-2
LOCATION	OPERATIONS EXTERIOR
SERVES	OPERATIONS BUILDING
MINIMUM CFM SYSTEM DELIVERY @ 175 PSIG	66.8 ACFM
RECEIVER TANK CAPACITY AND TYPE	500 GALLON VERTICAL
GARDNER-DENVER MODEL	XGTK500-VB165
TANK DIMENSIONS	117" X 36" O.D.
MAWP	165 PSI AT 400°F
MDMT	-20°F AT 165 PSI
AIR COMPRESSOR HORSEPOWER	20 HP
AIR COMPRESSOR VOLTAGE	460V/3PH
AIR COMPRESSOR DIMENSIONS	31" X 27.5" X 47.3"
GARDNER-DENVER MODEL	L15
AIR DRYER MARK	AD
AIR DRYER VOLTAGE (20 AMPS MAX)	115V
GARDNER-DENVER MODEL	RGD-100



NOTES:

1. ACCEPTABLE MANUFACTURERS SHALL INCLUDE GARDNER-DENVER OR INGERSOLL-RAND.
2. PROVIDE SCREW AIR COMPRESSOR WITH INTERCOOLER, AFTERCOOLER WITH SEPARATOR, NOISE CONTROL FILTERS/SILENCERS, OIL LEVEL SIGHT GLASS GAUGE, LOW OIL SWITCH, INTERSTAGE PRESSURE RELIEF VALVE, TEFC MOTOR, NEMA 1 STARTER, ALTERNATOR AND MOUNTING, V-BELT DRIVE IN A TOTALLY ENCLOSED OSHA-TYPE BELT GUARD, AUTOMATIC CONDENSATE TRAP, AUTO START/STOP, 0.3 MICRON COALESCING FILTER WITH PRESSURE DROP INDICATOR AND AIR DRYER. AIR DRYER SHALL BE NON-CYCLING REFRIGERATED TYPE SIZED BY MANUFACTURER BASED ON COMPRESSOR BEING OUTDOORS INDOORS AN UNCONDITIONED SPACE.
3. COMPRESSOR SHALL HAVE FACTORY WARRANTY OF 5 YEARS OR MORE.
4. FOR RECEIVER TANK, PROVIDE DRAIN KIT FITTING TO INCLUDE PRESSURE RELIEF VALVE, PRESSURE GAUGE AND MANUAL DRAIN VALVE. TANK TO BE BUILT TO ASME CODE WITH NATIONAL BOARD REGISTRATION. TANK FINISH TO BE INDUSTRIAL PRIMER.
5. FOR EXTERIOR INSTALLATIONS, DISCHARGE TO GROUND.

10 RECIPROCATING AIR COMPRESSOR AND STORAGE TANK DETAIL

NO SCALE

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/18/2025

Huckabee
www.huckabee-inc.com
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PLUMBING DETAILS AND SCHEDULES

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. ISSUED FOR BID P3.01
Drawn By: SCM/ZS	
Date: 09/18/2025	

ISSUED FOR BID

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PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	CONNECTION SIZE				SPECIFICATION
		SS	SV	CW	HW	
WC	WATER CLOSET	4"	2"	1"	-	WATER CLOSET - CARRIER MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, ELONGATED BOWL, TOP SPUD, ADA/TAS COMPLIANT TOTO MODEL CT708E; SLOAN ROYAL 111-1.28 FLUSH VALVE WITH VANDAL-PROOF FREE-SPINNING TOP CAP, 1.28 GPF, VANDAL-PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "HANDICAP", INSTALL LEVER ON "WIDE-SIDE" OF TOILET STALL); BEMIS 1655-SS/C EXTRA HEAVY DUTY, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING, STAINLESS STEEL CHECK HINGE; AND, FLOOR MOUNTED CARRIER.
WC-2	WATER CLOSET WITH FLUSH VALVE TRAP PRIMER	4"	2"	1"	-	SAME AS TYPE "WC" EXCEPT WITH FLUSH VALVE TRAP PRIMER
UR	URINAL	2"	2"	3/4"	-	WALL MOUNTED, WHITE VITREOUS CHINA, WASHOUT ACTION, 0.5 GPF, WATERSENSE LABELED, MINIMUM 14" ELONGATED RIM, EXTENDED PRIVACY SHIELDS, 3/4" TOP SPUD, ADA/TAS COMPLIANT AMERICAN STANDARD WASHBROOK MODEL 6590.001EC; SLOAN ROYAL 186-0.5 FLUSH VALVE WITH VANDAL-PROOF TOP CAP, VANDAL-PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR, WITH LEVER INSTALLED ON LEFT SIDE; AND, FLOOR MOUNTED CARRIER; STAINLESS STEEL VANDAL-PROOF BEEHIVE STRAINER OVER DRAIN. SEE DETAIL 6/P-501
LAV	WALL HUNG RESTROOM LAVATORY	2"	2"	1/2"	1/2"	WALL HUNG, WHITE VITREOUS CHINA, CENTERSHANK DRILLING, OVERFLOW HOLE, SELF-DRAINING DECK AREA, 20" X 18", 4" MAXIMUM FRONT LIP DEPTH, 1/2" MAXIMUM INTEGRAL BACKSPLASH HEIGHT, ADA/TAS COMPLIANT AMERICAN STANDARD STUDIO MODEL 0614000; MANUAL NON-METERING, DECK MOUNTED, 4" FIXED CENTERS, 4" WRISTBLADE HANDLES, CERAMIC CARTRIDGES, 2.2 GPM AERATOR, FULLY VANDALPROOF, CHICAGO MODEL 802-V317XKABCP ONLY; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE, 1-1/4" CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOPS WITH FLEXIBLE SUPPLIES; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. P-TRAP PRIMER. INSTALL UNDER LAV MIXING VALVE ON HW SUPPLY SIDE OF FAUCET.
LAV-2	UNDERMOUNT RESTROOM LAVATORY	2"	2"	1/2"	1/2"	UNDERMOUNT TYPE, WHITE VITREOUS CHINA ADA/TAS COMPLIANT 19" X 13" AMERICAN STANDARD DECORUM MODEL 9024.004EC; MANUAL NON-METERING, DECK MOUNTED, 4" FIXED CENTERS, 4" WRISTBLADE HANDLES, CERAMIC CARTRIDGES, 2.2 GPM AERATOR, FULLY VANDALPROOF, CHICAGO MODEL 802-V317XKABCP ONLY; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE, 1-1/4" CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOPS WITH FLEXIBLE SUPPLIES; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. P-TRAP PRIMER. INSTALL UNDER LAV MIXING VALVE ON HW SUPPLY SIDE OF FAUCET.
SH	SHOWER VALVE ASSEMBLY	-	-	1/2"	1/2"	HANDICAP SAFETY MIX SHOWER - TILE ENCLOSURE, FOLD-DOWN SEAT, SHOWER CURTAIN AND ROD, GRAB BARS AND SOAP DISH BY OTHERS. SHOWER VALVE ASSEMBLY SHALL BE SYMMONS SAFETYMIX PRESSURE BALANCING MIXING VALVE WITH SINGLE BLADE BRASS LEVER HANDLE AND ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN (SET AT 110 F MAX); LEVERTROL BRASS DIVERTER WITH INTEGRAL VOLUMVE CONTROL; SYMMONS 295VP FRE-FLO ALL BRASS, VANDAL-PROOF, FIXED SHOWER HEAD WITH ADJUSTABLE METAL HOSE, IN-LINE VACUUM BREAKER, QUICK DISCONNECT, WALL CONNECTION AND FLANGE AND 30" METAL SLIDE BAR FOR HAND SHOWER MOUNTING; INTEGRAL SERVICE STOPS; AND, ALL MOUNTING FASTENERS FOR VALVE AND SHOWER HEAD SHALL BE VANDAL-PROOF. 1.5 GPM FLOW RESTRICTOR. SYMMONS SAFETYMIX 1-117-FS-B30-X-QD1.5. ENTIRE INSTALLATION SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS.
SK	ADA WORK SINK	2"	2"	1/2"	1/2"	SINGLE COMPARTMENT, 18-GAUGE STAINLESS STEEL WITH STAINLESS STEEL CHANNELS, DRAINS IN REAR-CENTER OF BOWLS, FULLY UNDERCOATED AND SOUND DEADENED, THREE (3) FAUCET HOLES, ADA/TAS COMPLIANT, 22" X 19" X 5-1/2" ELKAY MODEL ELRAD221955; FAUCET SHALL HAVE DUAL 2-3/8" LEVER HANDLES, BRASS CONSTRUCTION, 1.5 GPM, DECK MOUNT, COLD AND TEMPERED SUPPLIES, INTEGRAL 8" FIXED CENTERS, ANTI-SCALD ASSE1070 CERTIFIED THERMOSTATIC MIXING VALVE, VANDAL-PROOF, CHROME PLATED, 8" HIGH ARC SPOUT, CHICAGO MODEL 201-AHA8-317ABCP; ELKAY LK-99 DRAIN OUTLET WITH HEAVY-GAUGE STAINLESS STEEL BODY, REMOVABLE STAINLESS STEEL BASKET WITH LOCKING SHELL AND RUBBER STOPPER ON BOTTOM; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOPS WITH FLEXIBLE SUPPLIES; AND, TRUEBRO HANDI LAV-GUARD, VANDAL-PROOF, WHITE INSULATION KITS WHERE KNEESPACE MILLWORK SCREEN IS NOT PROVIDED. INSTALL UNDER LAV MIXING VALVE ON HW SUPPLY SIDE OF FAUCET PER DETAIL 2/P4.02.
SK-2	DOUBLE COMPARTMENT SINK	2"	2"	1/2"	1/2"	DOUBLE COMPARTMENT, 18-GAUGE STAINLESS STEEL WITH STAINLESS STEEL CHANNELS, ADA/TAS COMPLIANT, DRAINS IN REAR-CENTER OF BOWLS, FULLY UNDERCOATED AND SOUND DEADENED, FOUR (4) FAUCET HOLES,31-3/4" X 16-1/2" X 5-3/8" DEEP ELKAY MODEL ELUHAD321655; FAUCET SHALL HAVE DUAL 2-3/8" LEVER HANDLES, BRASS CONSTRUCTION, 1.5 GPM, DECK MOUNT, COLD AND TEMPERED SUPPLIES, INTEGRAL 8" FIXED CENTERS, ANTI-SCALD ASSE1070 CERTIFIED THERMOSTATIC MIXING VALVE, VANDAL-PROOF, CHROME PLATED, 8" HIGH ARC SPOUT, CHICAGO MODEL 201-AHA8-317ABCP; ELKAY LK-99 DRAIN OUTLET WITH HEAVY-GAUGE STAINLESS STEEL BODY, REMOVABLE STAINLESS STEEL BASKET WITH LOCKING SHELL AND RUBBER STOPPER ON BOTTOM; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS; INSTALL DISPOSER ON DRAIN OUTLET PER ARCHITECTURAL DRAWINGS - SEE ARCHITECTURAL FOR DISPOSER SPECIFICATIONS; INSTALL SEPARATE/DEDICATED WATER STOPS FOR DISHWASHER AND DISPOSER CONNECTIONS.
SK-3	BAR SINK	2"	2"	1/2"	1/2"	SAME AS TYPE "SK" EXCEPT WITH LRAD151740 SINK, 12"X12" DROP IN BOWL.
SS	SERVICE SINK	2"	2"	1/2"	1/2"	SCULLERY TYPE SINK, 14-GAUGE TYPE 304 STAINLESS STEEL, 2 STATION, SEAMLESS WELDED CONSTRUCTION, 48" X 20" X 8" DEEP, 10" BACKSPLASH DRILLED FOR 2 FAUCETS, STAINLESS STEEL WALL BRACKETS, 3-1/2" DRAIN OUTLET ELKAY EWMA4820; ELKAY LK18B STAINLESS STEEL PERFORATED STRAINER GRID; PROVIDE WADE SOLIDS INTERCEPTOR WITH UNIONS ON EITHER SIDE FOR REMOVAL; FAUCETS SHALL BE CHROME PLATED, 3-1/2" RIGID GOOSENECK SPOUT, LEVER HANDLES (CERAMIC CARTRIDGE), INTEGRAL SUPPLY STOPS, CHICAGO MODEL 640-GN1AE35-369YAB; AND, FLOOR MOUNTED, CHAIR CARRIER FOR WALL BRACKETS. INSTALL ASSE 1070 TMV ON HW SUPPLY SIDE OF FAUCETS PER DETAIL 8/P4.03.
MB	MOP BASIN	3"	2"	3/4"	3/4"	24" X 24" X 10" DEEP MOLDED TERRAZZO WITH DROP FRONT, SQUARE, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, REMOVABLE STAINLESS STEEL STRAINER MUSTEE MODEL ONLY; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE ZURN MODEL Z843M1-CS ONLY (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
EDF	DRINKING FOUNTAIN WITH BOTTLE FILLER	1-1/2"	1-1/2"	1/2"	-	DUAL STATION, MOUNTED ON WALL WITH CARRIER, ALL STAINLESS STEEL, DESIGNED FOR INDOOR INSTALLATION, 0.7 GPM MAX, ADA/TAS COMPLIANT, BARRIER FREE, MANUAL PUSH BUTTON ACTIVATED, 8 GPH AT ARI STANDARDS, 2-STREAM METAL BUBBLER, VANDAL-PROOF KITS, LEAD-FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC-134a, MECHANICAL ACTUATION VALVE (NO ELECTRONIC SOLENOID VALVE), NON-FILTERED, ADA HEIGHT UNIT ON LEFT SIDE, BOTTLE FILLER ON LOWER SIDE. HALSEY TAYLOR MODEL HTHBHVR8BL-NF; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; CHAIR CARRIERS; AND, STAINLESS STEEL ADA APRON WHERE REQUIRED BY ADA/TAS.

DRAINS, CLEANOUTS AND HYDRANTS

MARK	DESCRIPTION	CONNECTION SIZE				SPECIFICATION
		SS	SV	CW	HW	
FD	TOILET FLOOR DRAIN	4"	2"	-	-	TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" ROUND HEAVY-DUTY SOLID STAINLESS STEEL STRAINER AND SECURITY SCREWS. ZURN MODEL ZS415BS-P-VP
FD-P	TOILET FLOOR DRAIN	4"	2"	-	-	SAME AS "FD" BUT WITH PROSET TRAP GUARD IN LIEU OF TRAP PRIMER.
FD-2	EQUIPMENT FLOOR DRAIN	4"	2"	-	-	CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE-FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE, PROSET TRAP GUARD. ZURN MODEL Z505-P. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD-3	GRATED MECHANICAL ROOM FLOOR DRAIN	4"	2"	-	-	CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY-DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, VANDALPROOF SCREWS, CLAMPING DEVICE AND PROSET TRAP GUARD. ZURN MODEL ZS520-P-VP.
FS	FLOOR SINK	4"	2"	-	-	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 STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE AND PROSET TRAP GUARD. ZURN ZS1901-HD-KC-3-32.
TD-24'	24' MODULAR TRENCH DRAIN	4"	2"			12" WIDE FABRICATED MODULAR TRENCH DRAIN, CARBON STEEL MODULAT TRENCH WITH 10" WIDE THROAT, FLAT BOTTOM, FLANGED ENDS, REBAR SADDLES, DUCTILE IRON SLOTTED GRATES WITH CORROSION RESISTANT ARMORCOAT COATING, 4" BOTTOM OUTLET SANITARY CONNECTION, AVERAGE 4" DEEP. H-20 TRAFFIC RATED. 2940CS-FB-HDP-NH4
ESEW	EMERGENCY SHOWER AND EYEWASH	-	-	1-1/4"	-	COMBINATION DRENCH SPINTECH SHOWER AND HALO EYE/FACE WASH UNIT FULLY ACCESSIBLE TO PEOPLE WITH PHYSICAL DISABILITIES; GALVANIZED STEEL PROTECTED WITH BRADTECT SAFETY YELLOW COATING; MEETING ALL APPLICABLE CODES; INSTALL ELBOW DOWN AT DRAIN OUTLET BRADLEY MODEL S19-314BF.
CO	FLOOR CLEANOUT	VARIES	-	-	-	ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL-LINE-SIZE ABS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES). ZURN MODEL ZS1400-VP(-CF). 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. ZURN MODEL ZN1400-VP-HD. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	WALL CLEANOUT	VARIES	-	-	-	CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL-LINE-SIZE ABS PLUG UP TO 4") ZURN MODEL Z1440. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, NICKEL BRONZE WITH POLISHED TOP ACCESS DOOR WITH BEVELED EDGE AND SCREW DRIVER ACCESS ZURN MODEL ZANB1462-8. WALL CLEANOUT ACCESS SHALL BE INSTALLED CENTERED ON AND WITHIN 2" OF ACCESS PANEL. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH SCREWDRIVER ACCESS ZURN MODEL ZS1469-VP.
2CO	DOUBLE CLEANOUTS	4"	-	-	-	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.
GH	EXTERIOR GROUND HYDRANT	-	-	3/4"	-	EXPOSED, NON-FREEZE POST HYDRANT. GALVANIZED STEEL CASING AND CAST ALUMINUM CASING GUARD, ALL BRONZE INTERIOR PARTS, BRONZE SEAT AND REPLACEABLE SEAT WASHER., 3/4" HOSE CONNECTION, BOX WITH HINGED COVER. 2 FOOT DEPTH OF BURY. WADE 8900-L2
HB	HOSE BIBB	-	-	3/4"	-	3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	WALL HYDRANT	-	-	3/4"	-	MILD CLIMATE WALL HYDRANT - FULLY INSULATE PIPING LINE TO WALL HYDRANT BOX. PROVIDE INTERIOR SHUT-OFF ABOVE CEILING FOR HYDRANT.
VBOX	CW VALVE BOX	-	-	1/2"	-	RECESSED WITH ANGLE VALVE FOR CONNECTION TO VENDING MACHINE OR REFRIGERATOR ICE MAKER GUY GRAY MODEL BIM-875.
WBOX	CLOTHES WASHER DRAIN/VALVE BOX	4"	2"	1/2"	1/2"	HEAVY-GAUGE GALVANIZED STEEL CONSTRUCTION, RECESSED IN WALL, VALVE AND DRAIN CONNECTIONS, WATTS DUO-CLOZ VALVE GUY GRAY MODEL WB-200.

PLUMBING SYMBOLS LEGEND

- SANITARY WASTE BELOW SLAB
- SANITARY WASTE ABOVE SLAB
- V — VENT PIPING ABOVE SLAB
- VENT PIPING
- DOMESTIC COLD WATER PIPING
- DOMESTIC HOT WATER PIPING
- DOMESTIC HOT WATER RETURN PIPING
- G50 — GAS SERVICE (BY UTILITY PROVIDER)
- G5 — INTERMEDIATE PRESSURE GAS PIPING (5 PSIG)
- G — LOW PRESSURE GAS PIPING (4-8 OZ.)
- D — DRAIN/RELIEF VENT PIPING
- STOP VALVE
- BACKFLOW PREVENTER (WATTS 909 ONLY)
- P-1 / 2" VTR — RISER P-1, 2" VENT THROUGH ROOF
- GAS PRESSURE REDUCING/REGULATING VALVE

EXIST.	EXISTING
SAN.	SANITARY
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
WC	WATER CLOSET
LAV	LAVATORY
UR	URINAL
SK	SINK
MB	MOP BASIN
EDF	ELECTRIC DRINKING FOUNTAIN
WH	WALL HYDRANT
HB	HOSEBIBB
WBOX	CLOTHES WASHER DRAIN/VALVE BOX
VBOX	RECESSED WATER VALVE BOX
VB	VACUUM BREAKER
A	AIR OUTLET - SEE DETAIL 8/P3.01

SO	SAND OIL INTERCEPTOR
STW	SAMPLING TEST WELL
MH	SANITARY MANHOLE
GM	GAS METER
GWH	GAS WATER HEATER
CP	HOT WATER CIRCULATOR PUMP
FD	FLOOR DRAIN
FSINK	FLOOR SINK
2CO	DOUBLE SAN. CLEANOUT (2-WAY)
CO	SANITARY SEWER CLEANOUT
WCO	WALL CLEANOUT

FUELING EQUIPMENT SCHEDULE

DISPENSERS	
UF-D (2)	UNLEADED FUEL DISPENSER - DUAL NOZZLE, TWO HOSE, BACKLIT ELECTRONIC DIGITAL METER AND TOTALIZER DISPLAYING GALLONS, SHEAR VALVE AT CONNECTION TO FUEL SUPPLY PIPING, AUTOMATIC NOZZLE FOR DIESEL FUEL WITH BREAK-AWAY FITTING AND SWIVEL MEETING THE REQUIREMENTS OF A BALANCED STAGE II VAPOR RECOVERY SYSTEM, HIGH POST MOUNTED HOSE RETRACTOR WITH COUNTER WEIGHT. ISLAND OUTLET GASBOY ATLAS 9853 DUAL HOSE
DF-D (2)	DIESEL FUEL DISPENSER - DUAL NOZZLE, TWO HOSE, BACKLIT ELECTRONIC DIGITAL METER AND TOTALIZER DISPLAYING GALLONS, SHEAR VALVE AT CONNECTION TO FUEL SUPPLY PIPING, AUTOMATIC NOZZLE FOR DIESEL FUEL WITH BREAK-AWAY FITTING AND SWIVEL MEETING THE REQUIREMENTS OF A BALANCED STAGE II VAPOR RECOVERY SYSTEM, HIGH POST MOUNTED HOSE RETRACTOR WITH COUNTER WEIGHT. ISLAND OUTLET GASBOY ATLAS 9853 DUAL HOSE
FUEL MANAGEMENT SYSTEM	
FM	FUEL MANAGEMENT PEDESTAL

NOTE: REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P3.02) FOR PLUMBING SYMBOLS LEGEND. PLUMBING CONTRACTOR SHALL PROVIDE DEMOLITION WORK AS REQUIRED FOR PLUMBING WORK.
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 FIELD VERIFY LOCATIONS OF ALL SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC.
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL OR COMPUTER EQUIPMENT. REF. ELECTRICAL DRAWINGS FOR LOCATIONS OF EQUIPMENT AND COORDINATE WITH ELECTRICAL AND TECHNOLOGY SUBS ACCORDINGLY. SEE DETAILS 9 & 10/P3.00. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 12/P3.00. FIRE CAULK WHERE REQUIRED. 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 8/P3.00.
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 AN ISOLATING VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVES SHALL BE BALL VALVE ONLY. GATE VALVES AND BUTTERFLY VALVES WILL NOT BE ACCEPTED FOR THIS PROJECT. SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE: PROVIDE 18" X 18", FIRE-RATED, STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES. BALL VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON TOP OF PIPE AND LOCATED SUCH THAT LEVER OPERATION IS NOT OBSTRUCTED IN ANY WAY. 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 WITH NOTHING OBSTRUCTING A PERSON FROM EASILY OPERATING VALVE.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ADDITION TO AIR CHAMBERS PER THE RISER DIAGRAMS. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE OR HYDROFLUSH TO PROVE FREE FLOWING, SEE SPECIFICATIONS. NEW AND EXISTING PIPE INCLUDED.
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, 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 11/P3.00 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 7/P3.00 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, 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. ALL COMMERCIAL ICE MAKERS SHALL HAVE ANGLE STOP AND WATER FILTER FOR ICE MAKER CONNECTION; INSTALL TYCON TUBING WITH STAINLESS STEEL FITTINGS BETWEEN WATER FILTER AND ICE MAKER WATER CONNECTION; ALSO, INSTALL WATTS 98D DUAL CHECK WITH ATMOSPHERIC VENT IN WATER CONNECTION.
19. 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 ELECTRONIC TRAP PRIMING MANIFOLD ASSEMBLIES OR WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES AS SHOWN ON DRAWINGS, REFERENCE DETAILS 3/P3.01 AND 5/P3.01. REFERENCE PLUMBING FLOOR PLANS AND RISER DIAGRAMS FOR EACH INDIVIDUAL DRAIN. DO NOT INSTALL FLUSH VALVE TRAP PRIMER DEVICES ON HANDICAP WATER CLOSETS - USE LAVATORY P-TRAP TRAP PRIMER DEVICES IN ONE-PERSON STAFF RESTROOMS WHERE SHOWN ON PLUMBING DRAWINGS.
20. 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.
21. REFEERENCE STRUCTURAL DETAIL 17/S0.03 FOR GRADE BEAM PENETRATION REQUIREMENT.

PLUMBING PIPING MATERIALS

SANITARY WASTE AND VENT PIPING:
BELOW SLAB: SCHEDULE 40, DWV PVC. BEYOND 5 FEET FROM BUILDING, SEE CIVIL DRAWINGS AND SPECIFICATIONS.

ABOVE SLAB: STANDARD HUBLESS CAST IRON WITH HEAVY DUTY NO-HUB CLAMPS.

STORM PIPING:
BELOW SLAB: SCHEDULE 40, DWV PVC. BEYOND 5 FEET FROM BUILDING, SEE CIVIL DRAWINGS AND SPECIFICATIONS.

ABOVE SLAB: STANDARD HUBLESS CAST IRON WITH HEAVY DUTY NO-HUB CLAMPS.

DOMESTIC WATER PIPING:
INTERIOR: MAINS: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD-FREE SOLDER. CHROME PLATED WHERE EXPOSED.

TRAP PRIMERS: SOFT ROLLED COPPER IN SLEEVE

COMPRESSED AIR:
SCHEDULE 40 GALVANIZED STEEL WITH SCREWED JOINTS.

NATURAL GAS:
ABOVE GROUND: SCHEDULE 40 BLACK STEEL WITH WELDED JOINTS.

EXTERIOR BELOW GRADE: POLYETHYLENE GAS PIPING WITH SOCKET FUSED JOINTS.

SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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09/10/2025

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PLUMBING DETAILS AND SCHEDULES

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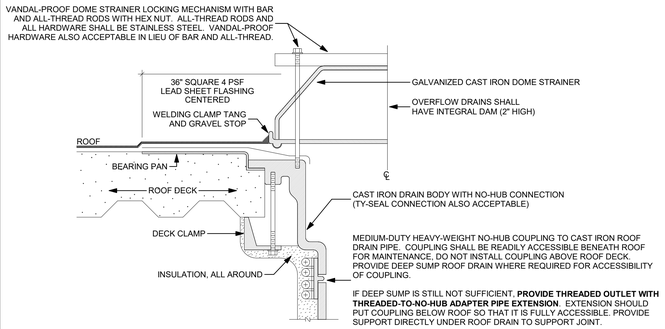


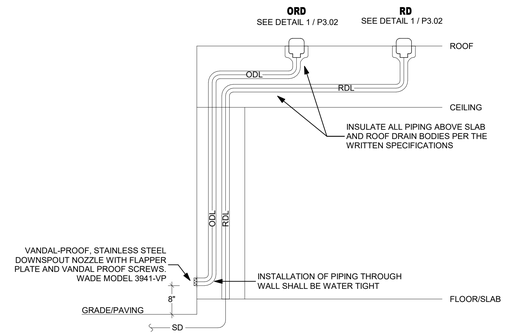
NOTES:

THIS DETAIL APPLIES TO STORM PIPING ONLY. ALL REFERENCES TO ROOFING FOR REFERENCE ONLY. SEE ARCHITECTURAL DETAILS ON ALL OTHER REQUIREMENTS.

ALL ROOF DRAINS SHALL NOT REQUIRE THE USE OF AN O-RING, GASKET OR ANY OTHER TYPES OF WATER SEALING COMPONENTS BELOW THE ROOF FLASHING LINE. ROOF DRAINS THAT REQUIRE EXTENSION TO ACCOMMODATE ROOF INSULATION SHALL HAVE ADJUSTABLE EXTENSION. WADE 3000-42-189-40 OR EQUAL BY J.R. SMITH OR ZURN.

1 ROOF DRAIN DETAIL

NO SCALE



2 ROOF DRAIN PIPING DETAIL

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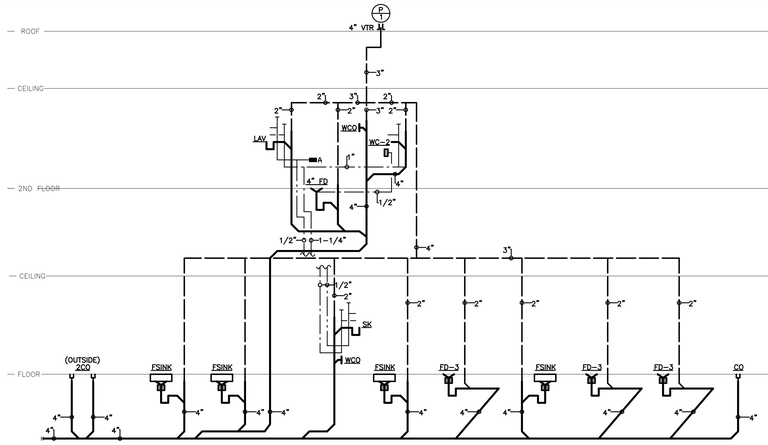

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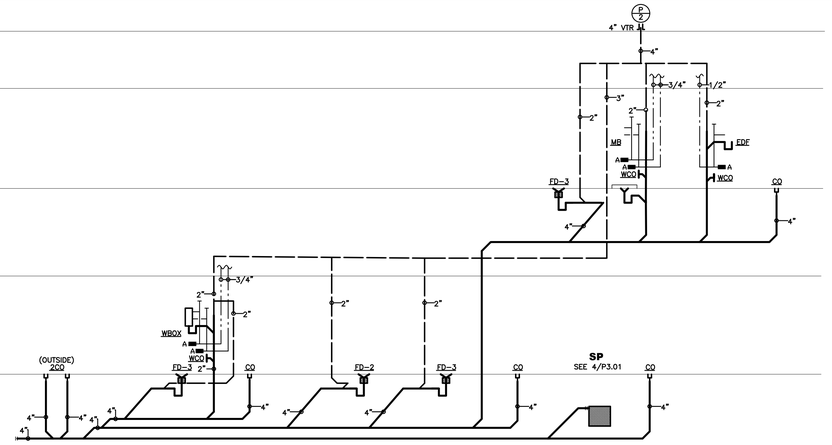

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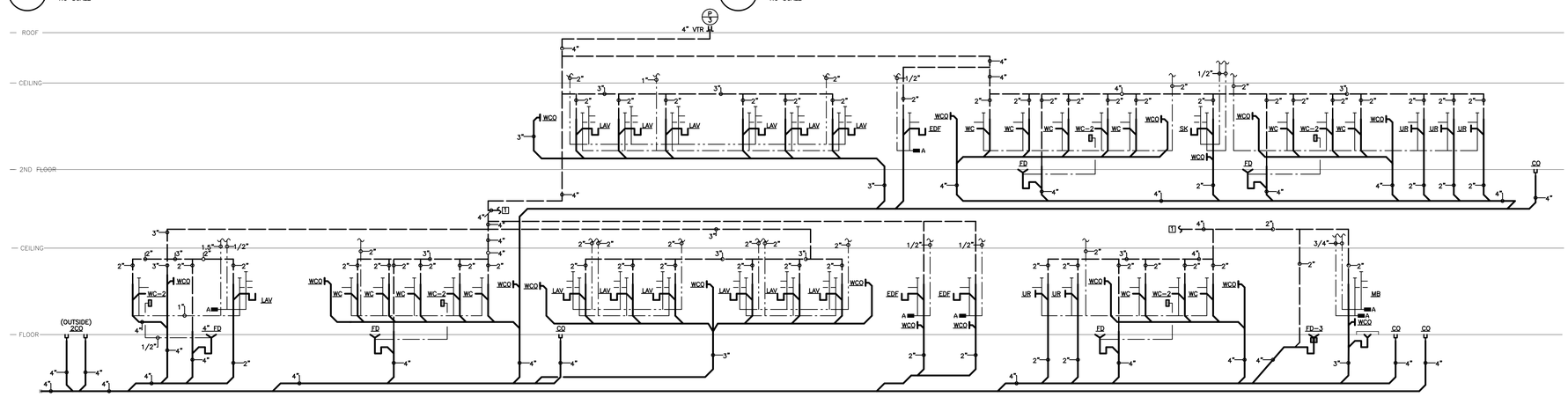

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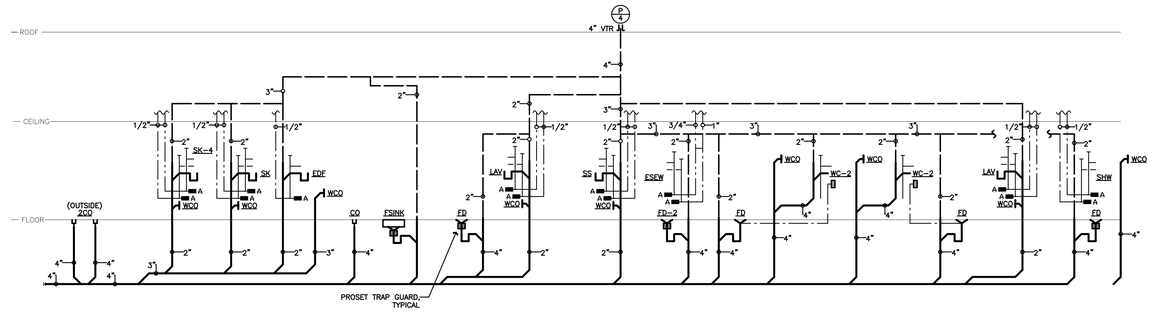

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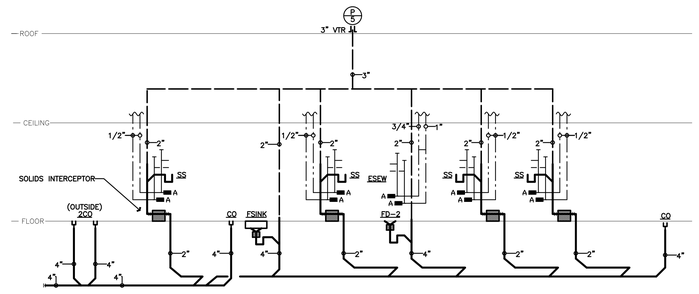

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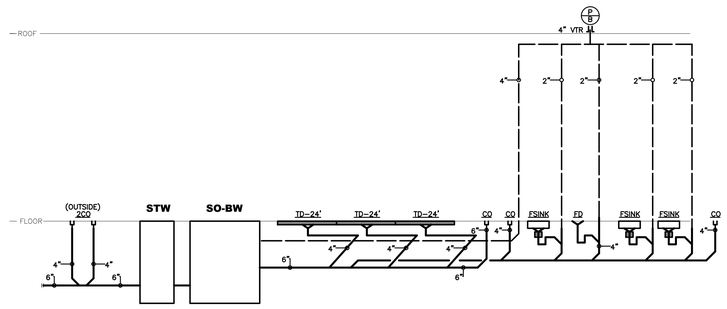

5 OPERATIONS BUILDING PLUMBING RISER DIAGRAM
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PLUMBING RISER DIAGRAMS

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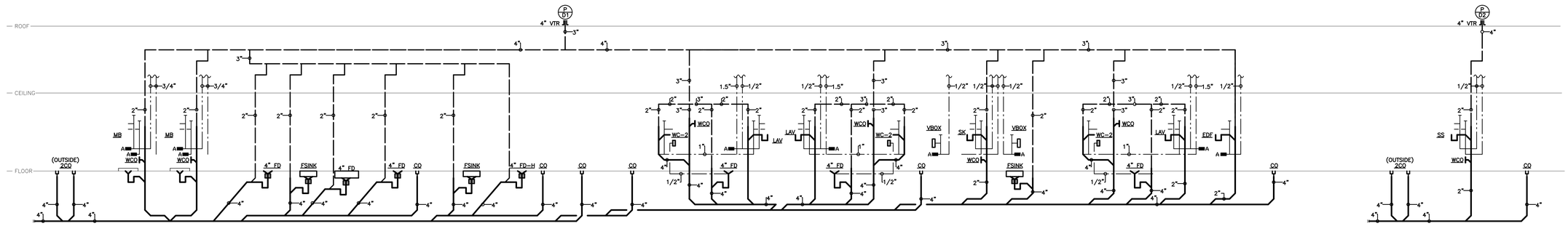

1 WAREHOUSE PLUMBING RISER DIAGRAM

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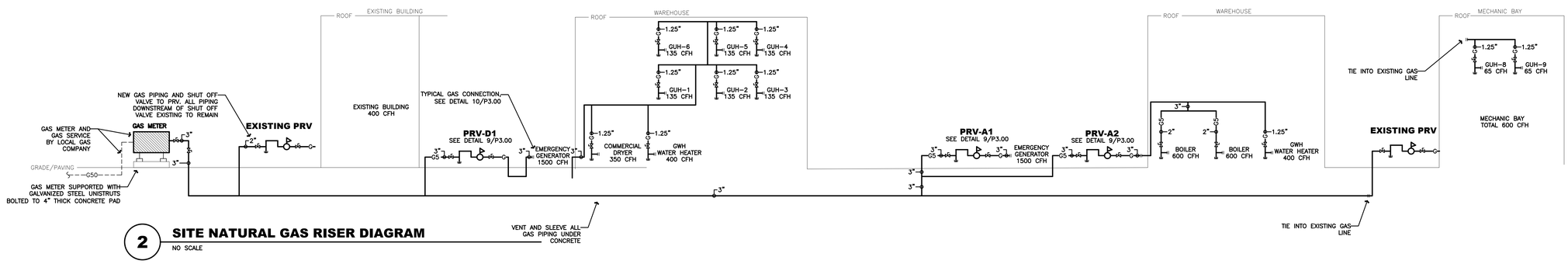

2 SITE NATURAL GAS RISER DIAGRAM

NO SCALE

OPERATIONS BUILDING NATURAL GAS LOAD			
GENERATOR	1	1500	1500
DOMESTIC WATER HEATER	2	199	398
HYDRONIC BOILER	2	600	1200
TOTAL BUILDING A GAS LOAD (CFH)			3098
WAREHOUSE NATURAL GAS LOAD			
GENERATOR	1	1500	1500
DOMESTIC WATER HEATER	2	199	398
GAS UNIT HEATERS (GUH 1-6)	6	135	810
COMMERCIAL DRYER	1	350	350
TOTAL BUILDING D GAS LOAD (CFH)			3058
EXISTING NATURAL GAS LOAD			
MECHANIC BAY	1	600	600
EXISTING BUILDING	1	400	400
TOTAL MAINTENANCE GAS LOAD (CFH)			1000
TOTAL SITE NATURAL GAS LOAD (CFH)			**7156**

METER OUTLET PRESSURE SHALL BE 5 PSI.
FURTHEST PIPING RUN FROM METER IS 1100 FEET.

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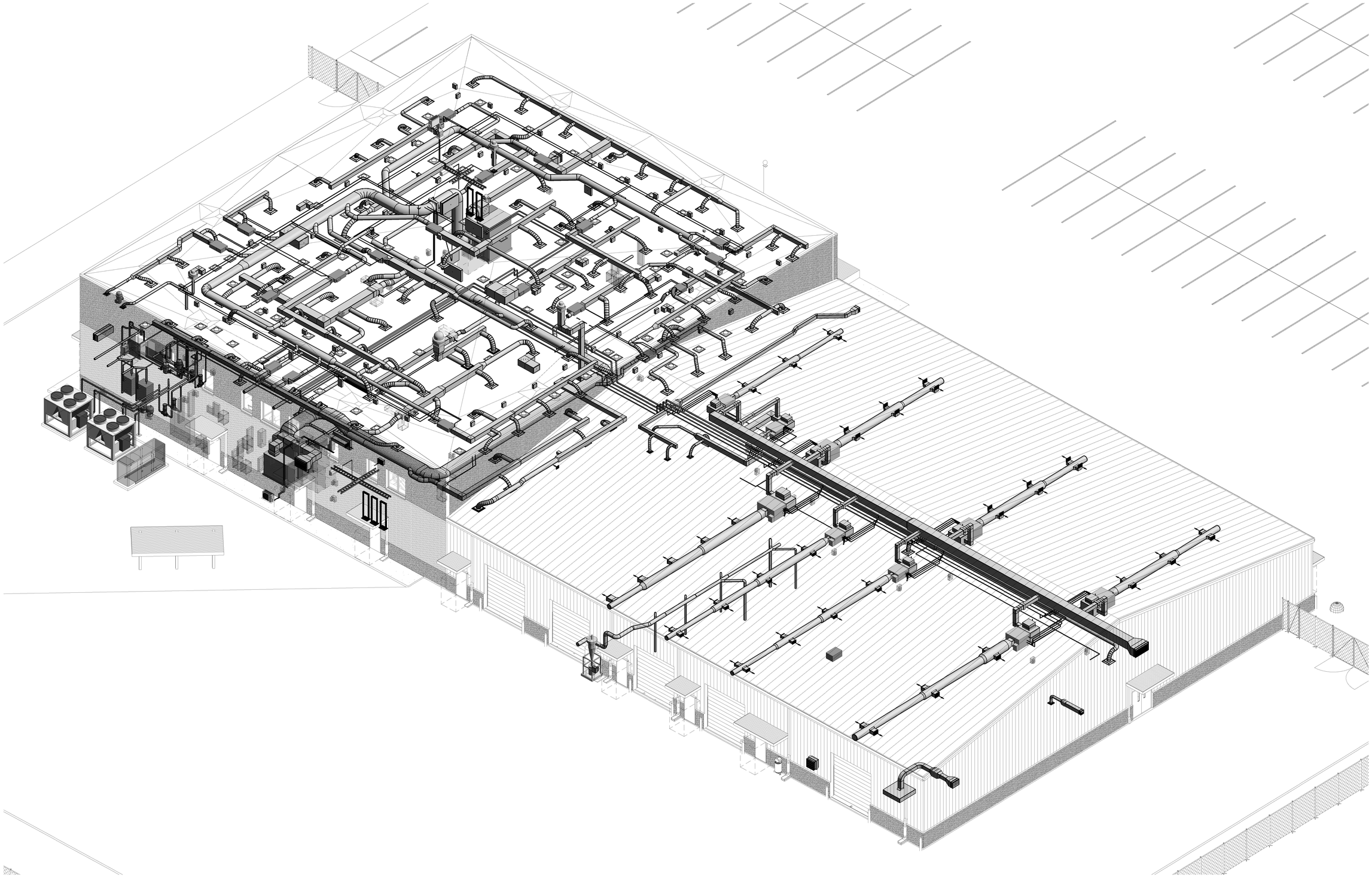

1 **MECHANICAL ISOMETRIC VIEW - OPERATION BUILDING**
NO SCALE

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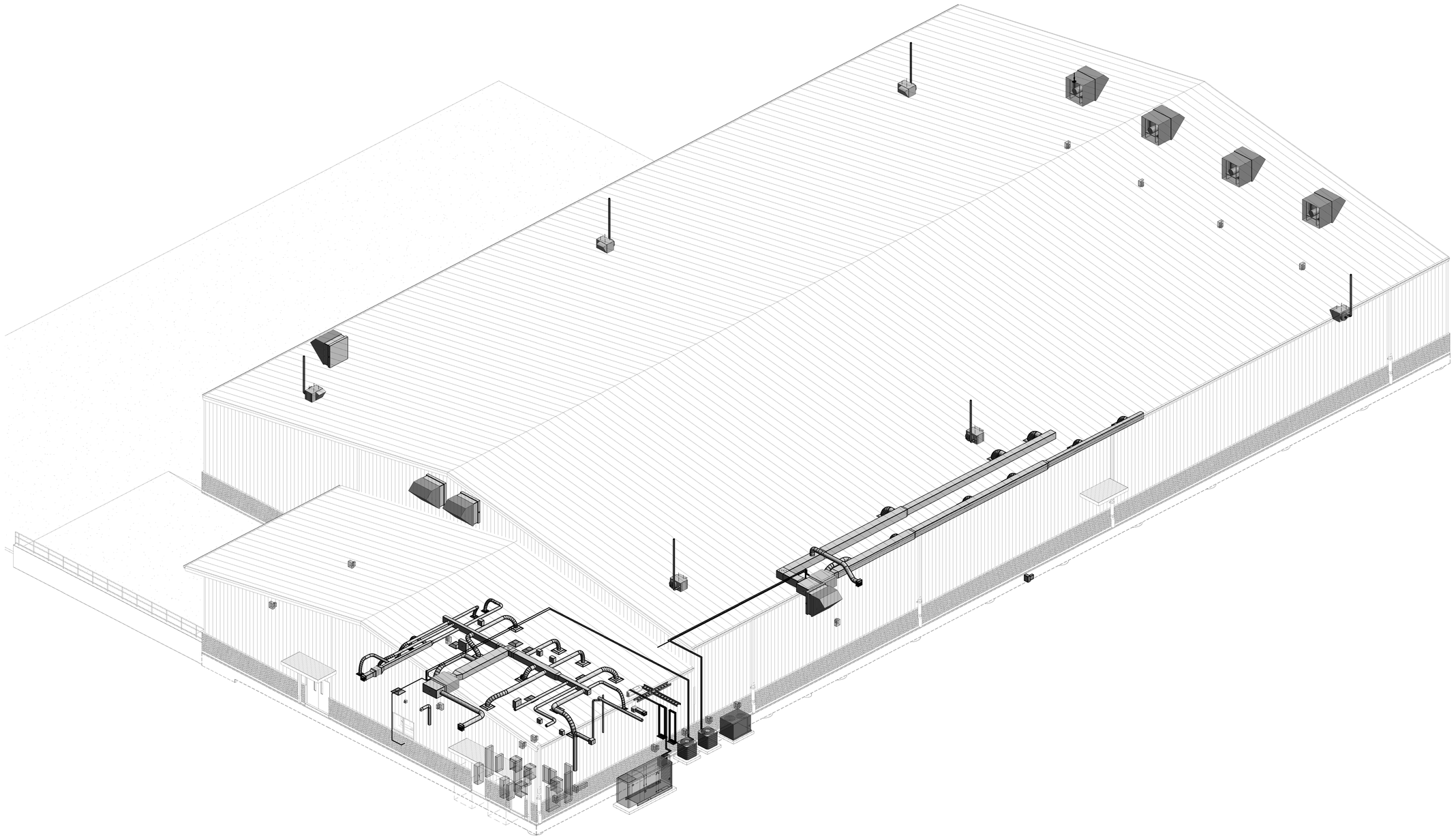

1 **MECHANICAL ISOMETRIC VIEW - WAREHOUSE**
NO SCALE

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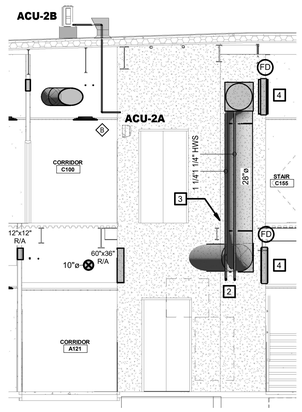
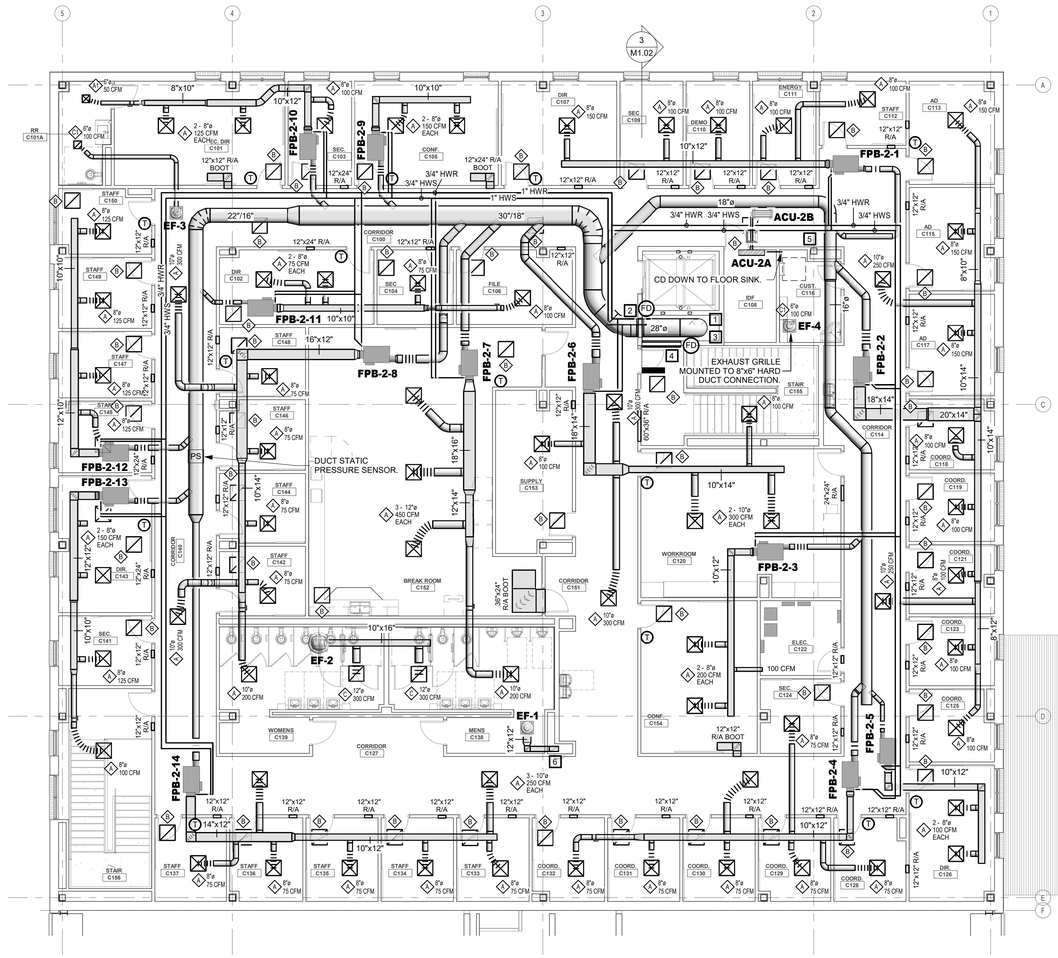
MECHANICAL KEY NOTES

1. 28" SUPPLY DUCT TO SECOND FLOOR / FROM FIRST FLOOR.
2. 1-1/4" HWS/R PIPING TO SECOND FLOOR / FROM FIRST FLOOR.
3. PROVIDE FLOOR OPENING THE ENTIRE WIDTH AND LENGTH OF CHASE TO ALLOW DUCTWORK, PIPING AND RETURN AIR TO TRAVEL BETWEEN FLOORS UNOBSTRUCTED.
4. 60"X36" R/A OPENING IN CHASE WALL WITH FIRE DAMPER.
5. CONDENSING UNIT ACU-B ON ROOF, SEE DETAIL 14/IM5.02.
6. 14"x8" E/A DUCT UP TO SECOND FLOOR / FROM FIRST FLOOR INSIDE CHASE.



3 MECHANICAL SECTION - CHASE
SCALE= 3/16" = 1'-0"



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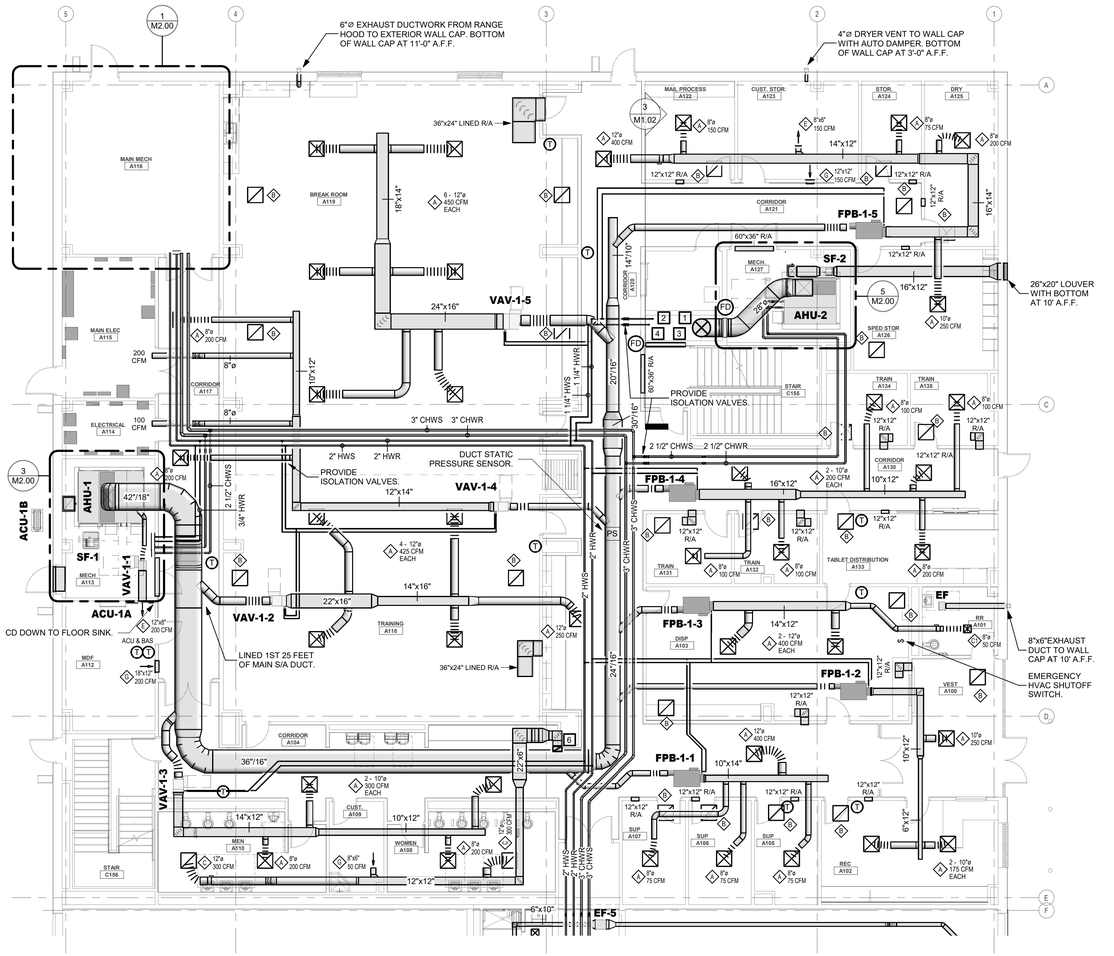
2 MECHANICAL FLOOR PLAN - LEVEL 2 - AREA C - OPERATIONS BUILDING
SCALE= 1/8" = 1'-0"



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1 MECHANICAL FLOOR PLAN - LEVEL 1 - AREA A - OPERATIONS BUILDING
SCALE= 1/8" = 1'-0"

A / C
B

KEY PLAN
N.T.S.

D

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MECHANICAL FLOOR PLAN - LEVEL 1 / 2 - AREA A / C - OPERATIONS BUILDING

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. M1.02
Drawn By: DB	ISSUED FOR BID
Date: 09/18/2025	

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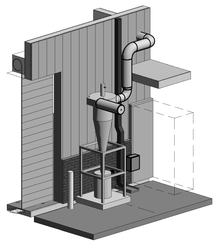
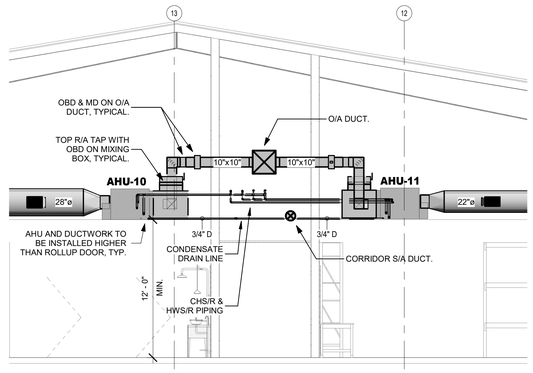


4 DUST COLLECTOR ISO VIEW

NO SCALE



3 MECHANICAL SECTION - CORRIDOR

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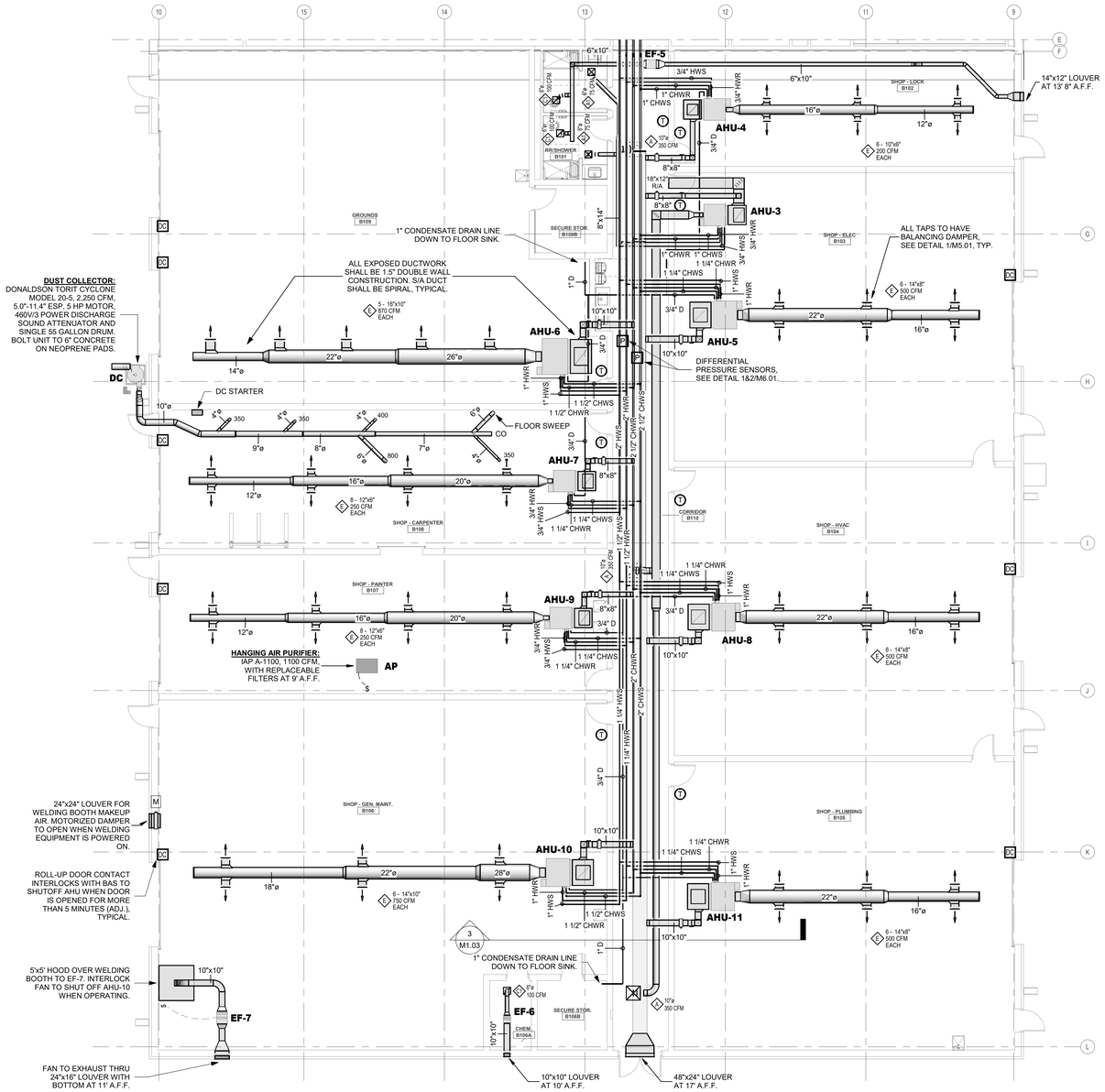
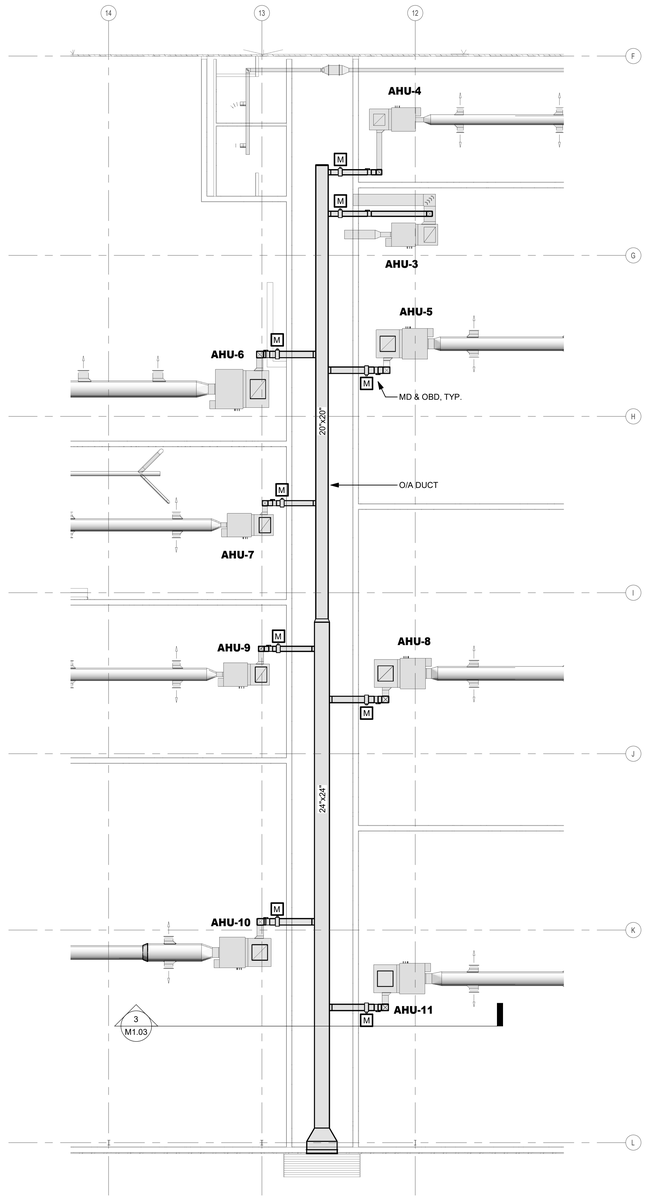


1 MECHANICAL FLOOR PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

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

TRUE



2 MECHANICAL FLOOR PLAN - LEVEL 2 - AREA B - OPERATIONS BUILDING

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

TRUE

KEY PLAN
N.T.S.

A / C
B
D

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NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

STATE OF TEXAS
CHI K. TRUONG
90332
REGISTERED
PROFESSIONAL
ENGINEER
09/18/2025

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MECHANICAL FLOOR PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. M1.03
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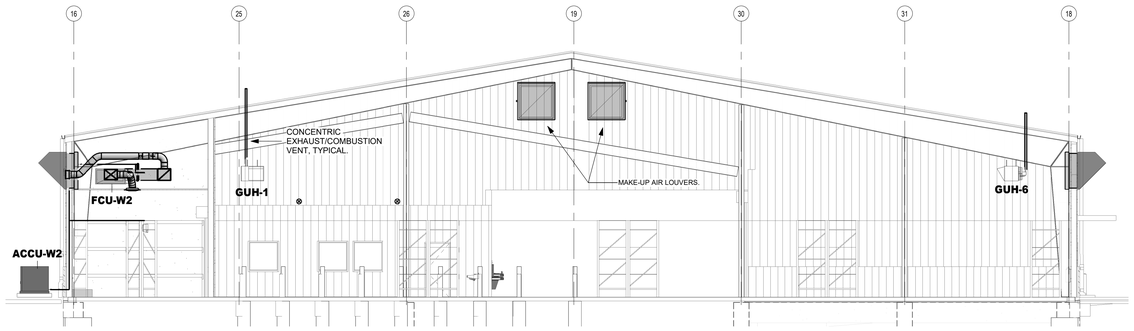

2 MECHANICAL SECTION - WAREHOUSE

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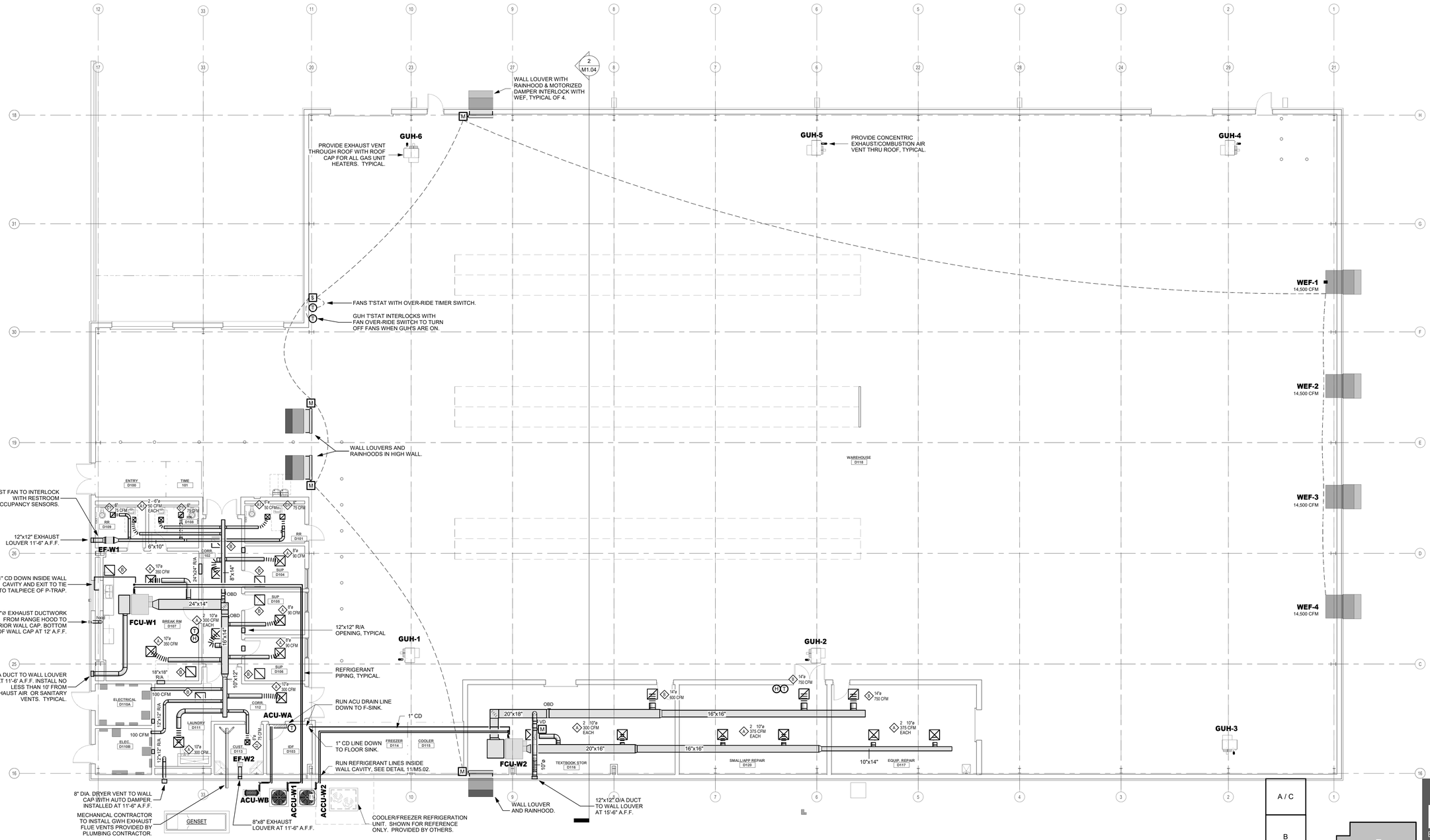

1 MECHANICAL FLOOR PLAN - LEVEL 1 - AREA D - WAREHOUSE

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

N TRUE

KEY PLAN N.T.S.

A / C
B
D

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NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
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MECHANICAL FLOOR PLAN - LEVEL 1 - AREA D - WAREHOUSE

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. M1.04
Drawn By: DB	ISSUED FOR BID
Date: 09/18/2025	

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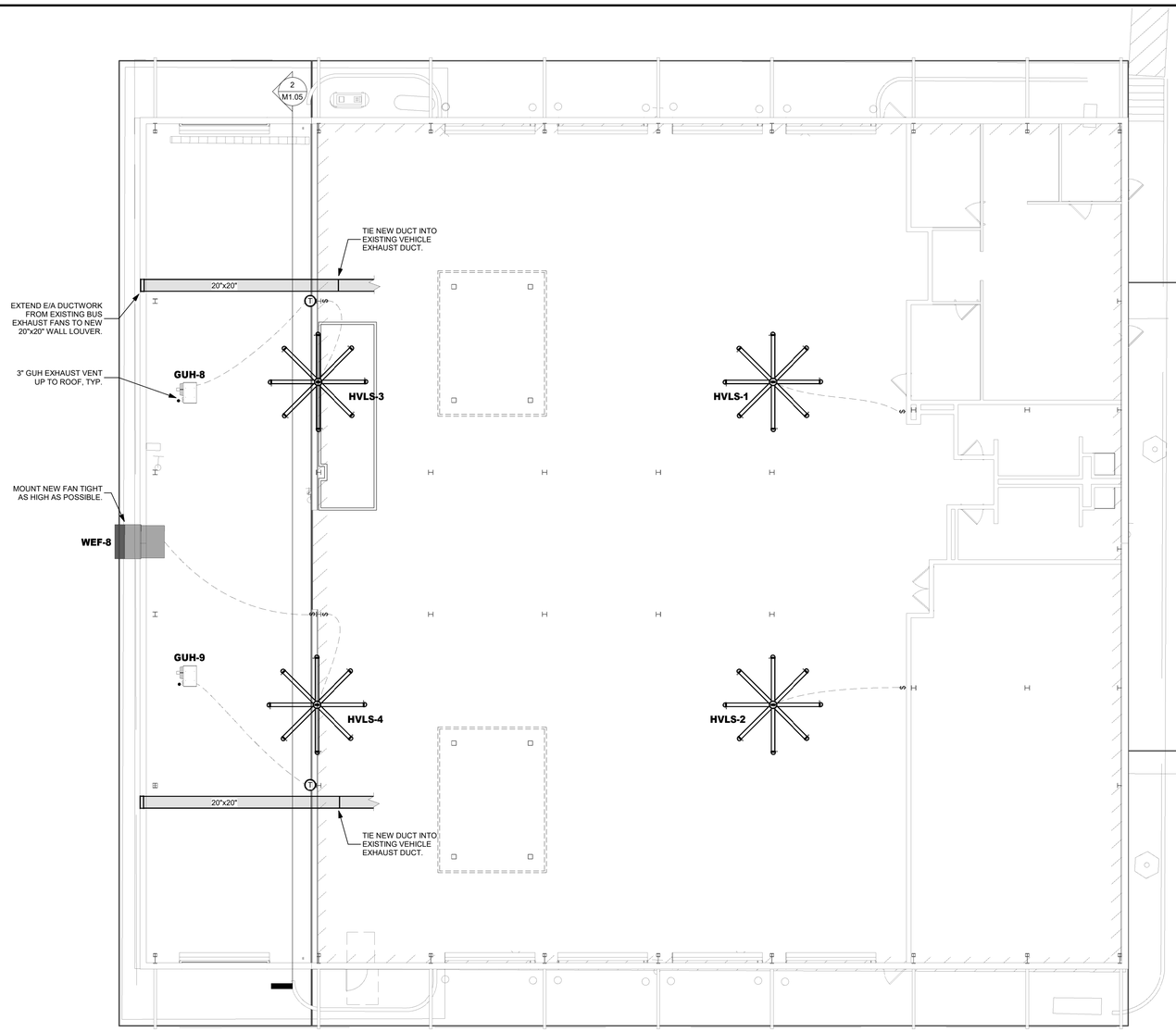
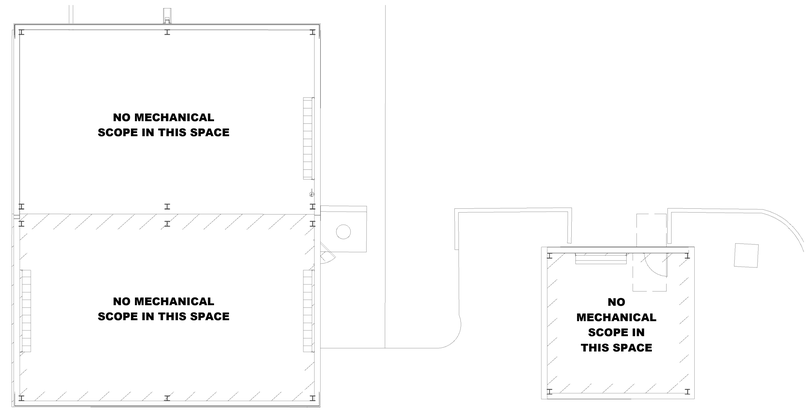


N TRUE

3 MECHANICAL FLOOR PLANS- MECHANIC BAY

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



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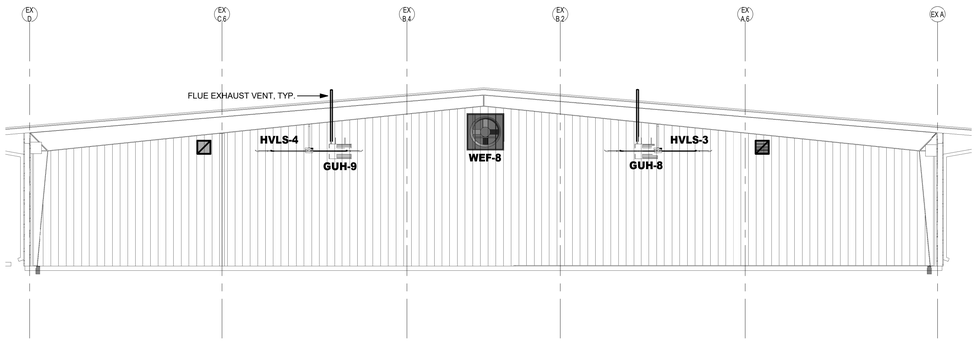
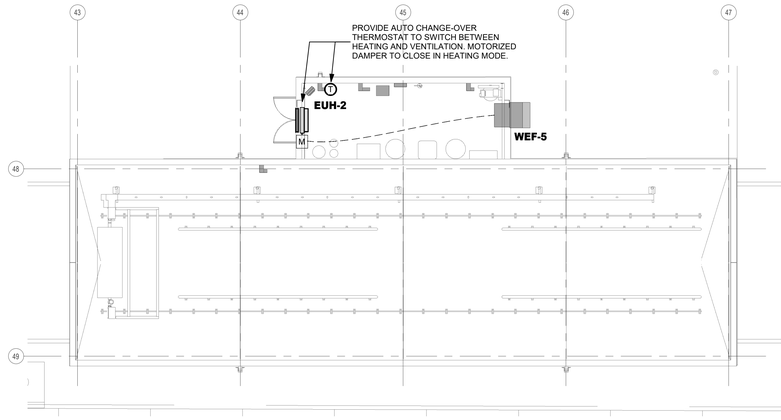
4 MECHANICAL FLOOR PLANS - TRANSPORTATION BUILDING ADDITION

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



2 MECHANICAL SECTION - MECHANIC BAY

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



N TRUE

1 MECHANICAL FLOOR PLANS- BUS WASH

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

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MECHANICAL FLOOR PLANS - BUS WASH, MECHANIC BAY, & STORAGE

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. M1.05
Drawn By: DB	ISSUED FOR BID
Date: 09/18/2025	

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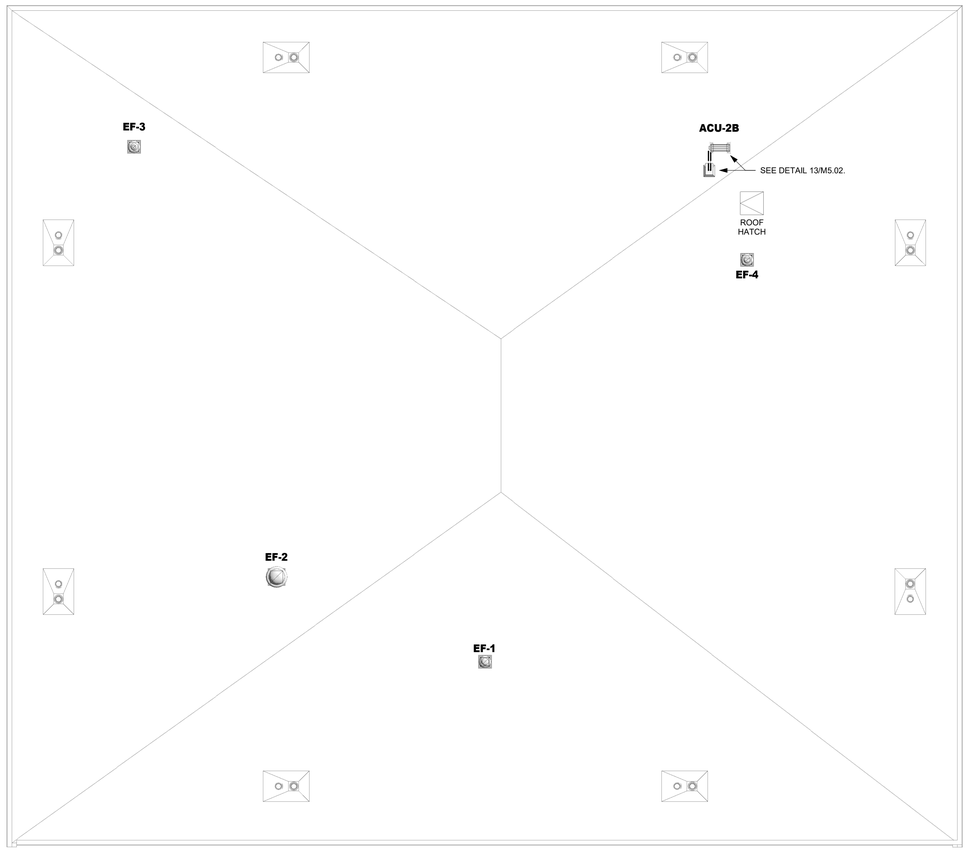

N
TRUE

1 **MECHANICAL ROOF PLAN**

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

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MECHANICAL ROOF PLAN

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. ISSUED FOR BID M1.06
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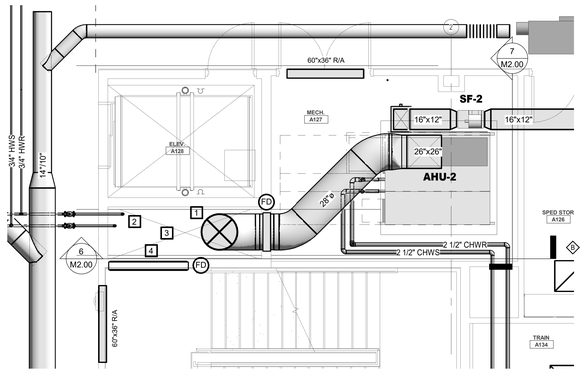
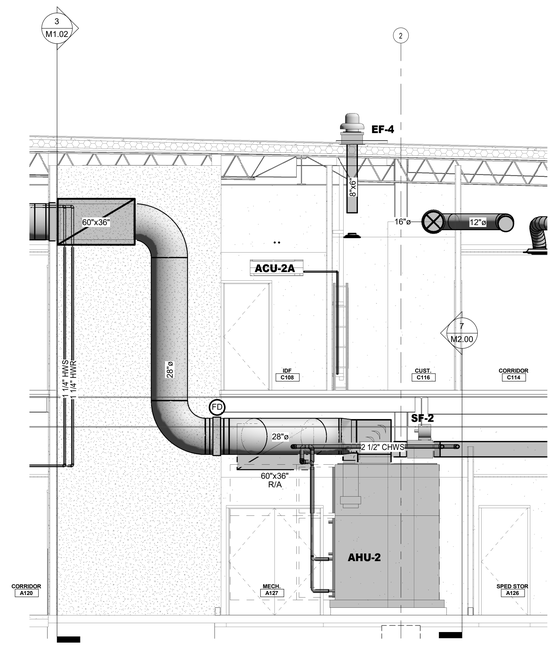
MECHANICAL KEY NOTES

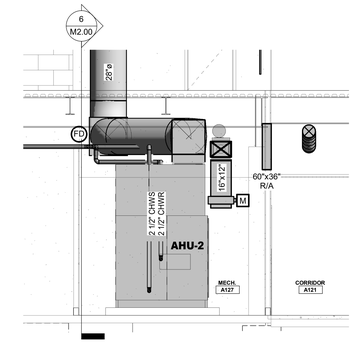
1. 28" SUPPLY DUCT TO SECOND FLOOR / FROM FIRST FLOOR.
2. 1-1/4" HWS/R PIPING TO SECOND FLOOR / FROM FIRST FLOOR.
3. PROVIDE FLOOR OPENING THE ENTIRE WIDTH AND LENGTH OF CHASE TO ALLOW DUCTWORK, PIPING AND RETURN AIR TO TRAVEL BETWEEN FLOORS UNOBSTRUCTED.
4. 60"X36" R/A OPENING IN CHASE WALL WITH FIRE DAMPER.
5. CONDENSING UNIT ACU-B ON ROOF, SEE DETAIL 14/M5.02.
6. 14"x8" E/A DUCT UP TO SECOND FLOOR / FROM FIRST FLOOR INSIDE CHASE.



5 MECHANICAL ENGLARGED PLAN - MECH ROOM A127
SCALE= 1/4" = 1'-0"



6 AHU-2 SECTION #1
SCALE= 1/4" = 1'-0"



7 AHU-2 SECTION #2
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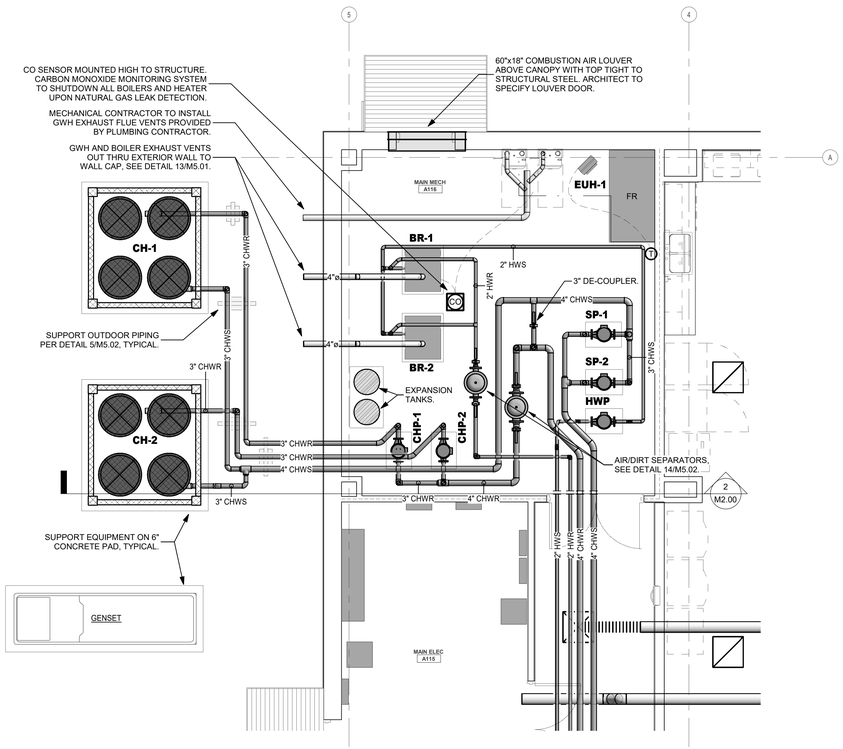
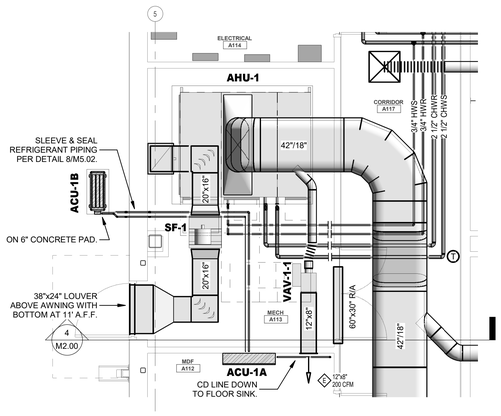
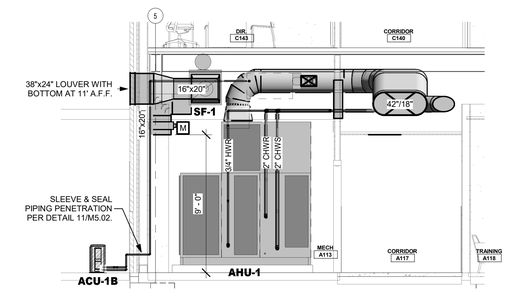


1 MECHANICAL CENTRAL PLANT DETAIL PLAN
SCALE= 1/4" = 1'-0"



3 MECHANICAL ENLARGED PLAN - MECH ROOM A113
SCALE= 1/4" = 1'-0"



4 AHU-1 SECTION
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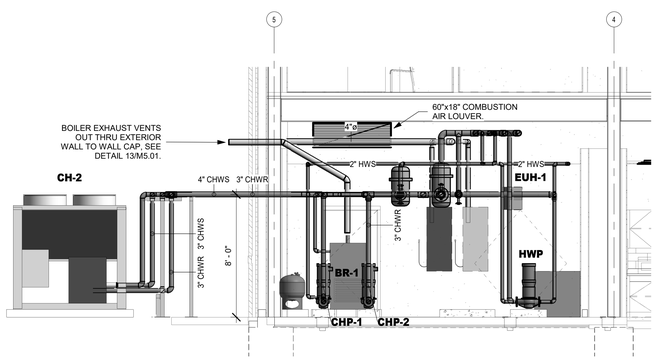

2 MECHANICAL SECTION - CENTRAL PLANT
SCALE= 1/4" = 1'-0"

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NEW CANEY, TEXAS

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CHI K. TRUONG
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09/10/2025

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MECHANICAL DETAIL PLANS & SECTIONS

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. M2.00
Drawn By: DB	ISSUED FOR BID
Date: 09/18/2025	

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AIR HANDLING UNIT SCHEDULE

	MARK	AHU-1	AHU-2	AHU-3	AHU-4	AHU-5	AHU-6	AHU-7	AHU-8	AHU-9	AHU-10	AHU-11
CABINET	SERVES	OPERATIONS 1ST FLOOR	OPERATIONS 2ND FLOOR	SHOP-CORR & RR	SHOP-LOCK	SHOP-ELEC	SHOP-GROUNDS	SHOP-CARPENTER	SHOP-HVAC	SHOP-PAINTER	SHOP-GEN MAINT	SHOP-PLUMBING
	INSTALLATION	HOUSEKEEPING PAD	HOUSEKEEPING PAD	HANGING HORIZONTAL	HANGING HORIZONTAL	HANGING HORIZONTAL	HANGING HORIZONTAL	HANGING HORIZONTAL	HANGING HORIZONTAL	HANGING HORIZONTAL	HANGING HORIZONTAL	HANGING HORIZONTAL
	TYPE	SZ-VDT	SZ-VDT	SZ-HDT	SZ-HDT	SZ-HDT	SZ-HDT	SZ-HDT	SZ-HDT	SZ-HDT	SZ-HDT	SZ-HDT
	TOTAL CFM	8,600 CFM	10,000 CFM	1,200 CFM	1,200 CFM	3,000 CFM	4,350 CFM	2,000 CFM	3,000 CFM	2,000 CFM	4,500 CFM	3,000 CFM
	O/A CFM	2,250 CFM	1,200 CFM	100 CFM	100 CFM	150 CFM	225 CFM	100 CFM	150 CFM	100 CFM	250 CFM	150 CFM
	EXT. STATIC WG	3.0"	3.0"	0.75"	1.0"	0.75"	0.75"	0.75"	0.75"	0.75"	0.75"	0.75"
	MOTOR HP / BHP / KW	15 HP	15 HP	1 HP	1 HP	3 HP	3 HP	2 HP	3 HP	2 HP	3 HP	3 HP
	VOLTAGE	480V / 3 PH	480V / 3 PH	480V / 3 PH	480V / 3 PH	480V / 3 PH	480V / 3 PH	480V / 3 PH	480V / 3 PH	480V / 3 PH	480V / 3 PH	480V / 3 PH
COOLING	COIL POSITION	MAIN	MAIN	MAIN	MAIN	MAIN	MAIN	MAIN	MAIN	MAIN	MAIN	MAIN
	COIL CFM	8,600 CFM	10,000 CFM	1,200 CFM	1,200 CFM	3,000 CFM	4,350 CFM	2,000 CFM	3,000 CFM	2,000 CFM	4,500 CFM	3,000 CFM
	MIN. ROWS	6	6	6	6	6	6	6	6	6	6	6
	MAX. FINS / INCH	12	12	12	12	12	12	12	12	12	12	12
	MAX. FACE VELOCITY	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM
	EAT db/wb, °F	78.5°F/ 67.3°F	79.7°F/ 67.7°F	76°F/ 64.5°F	76°F/ 64.5°F	75.1°F/ 63.4°F	75.2°F/ 63.4°F	75.7°F/ 63.9°F	75.1°F/ 63.4°F	75.7°F/ 63.9°F	75.3°F/ 63.5°F	75.1°F/ 63.4°F
	LAT db/wb, °F	52.8°F/ 52.4°F	52.5°F/ 52.3°F	54.0°F/ 53.5°F	54.0°F/ 53.5°F	54.0°F/ 53.5°F	53.5°F/ 53.0°F	54.0°F/ 53.5°F	54.0°F/ 53.5°F	54.0°F/ 53.5°F	53.5°F/ 53.0°F	54.0°F/ 53.5°F
	GSH MBH	240	296	29	29	69	102	47	69	47	106	69
	GTH MBH	391	474	40	40	88	134	62	88	62	140	88
	GPM/SIZE	49 / 2.0"	68 / 2.5"	6 / 1.0"	6 / 1.0"	13 / 1.25"	19 / 1.5"	9 / 1.25"	13 / 1.25"	9 / 1.25"	20 / 1.5"	13 / 1.25"
	EWT/LWT, °F	42°F/ 58°F	42°F/ 58°F	44°F/ 58°F	42°F/ 58°F	44°F/ 58°F	44°F/ 58°F	42°F/ 58°F	44°F/ 58°F	42°F/ 58°F	44°F/ 58°F	44°F/ 58°F
	MAX. PD. FEET	12 FT	12 FT	12 FT	12 FT	12 FT	12 FT	12 FT	12 FT	12 FT	12 FT	12 FT
	COND. DRAIN SIZE	1.0"	1.0"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
HEATING	COIL POSITION	PRE - HEAT	-	RE-HEAT	RE-HEAT	RE-HEAT	RE-HEAT	RE-HEAT	RE-HEAT	RE-HEAT	RE-HEAT	RE-HEAT
	COIL CFM, MAX/MIN	8,600 CFM / 2250 CFM*	-	1,200 CFM	1,200 CFM	3,000 CFM	4,350 CFM	2,000 CFM	3,000 CFM	2,000 CFM	4,500 CFM	3,000 CFM
	MIN. ROWS	1	-	1	1	1	1	1	1	1	1	1
	MAX. FINS/INCH	12	-	12	12	12	12	12	12	12	12	12
	MAX. FACE VELOCITY	500 FPM	-	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM	500 FPM
	EAT, °F (AT MIN. CFM)	27°F	-	64.5°F	64.5°F	65.9°F	65.8°F	64.8°F	65.9°F	64.8°F	65.6°F	65.9°F
	LAT, °F	55°F	-	95°F	95°F	95°F	95°F	95°F	95°F	95°F	95°F	95°F
	GTH MBH	68	-	40	33	95	138	66	95	66	144	95
	EWT/LWT, °F	160°F/ 120°F	-	160°F/ 120°F	160°F/ 120°F	160°F/ 120°F	160°F/ 120°F	160°F/ 120°F	160°F/ 120°F	160°F/ 120°F	160°F/ 120°F	160°F/ 120°F
	GPM/SIZE	3 / 0.75"	-	2 / 0.75"	2 / 0.75"	5 / 1.0"	7 / 1.0"	3 / 0.75"	5 / 1.0"	3 / 0.75"	7 / 1.0"	5 / 1.0"
	MAX. P.D. FEET	6 FT	-	6 FT	6 FT	6 FT	6 FT	6 FT	6 FT	6 FT	6 FT	6 FT

NOTES:
1. EXT. SP DOES NOT INCLUDE FILTERS, COILS, CASING, CONVERSIONS OR MIXING DAMPER LOSSES.
2. MOTORS SHALL BE COPPER WOUND, PREMIUM EFFICIENCY TYPE (+90% MINIMUM).
3. DESIGN FAN HP IS MOTOR SIZE WIRED BY ELECTRICAL. MANUFACTURERS REQUIRING LARGER MOTORS MUST PAY FOR INCREASED CIRCUIT COSTS. SMALLER MOTORS MAY BE PROVIDED IF BHP IS LESS THAN SCHEDULED AND A 1/4" WG PRESSURE DROP DOES NOT OVERLOAD MOTOR.
4. PROVIDE MERV 13 FILTERS WITH MAXIMUM FILTER VELOCITY AT 350 FT / MIN.
5. PROVIDE S.S. SLOPING DRAIN PAN WITH CONDENSATE OVERFLOW SENSOR FOR ALL HANGING AHUs.
6. ALL UNITS SHALL BE INTERNALLY ISOLATED.
7. PROVIDE RETURN AIR FILTER MIXING BOX FOR HORIZONTAL UNITS.
8. (*) DESIGNATE PRETREATED OUTSIDE AIR AND HEATING LOAD BASED ON WORST CASE SCENARIO.

FAN POWERED TERMINAL UNITS SCHEDULE

MARK	COOLING MAX	COOLING MIN	REHEAT	DIAMETER	E.S.P (W.G)	VELOCITY	HP	MCA	MOCP	VOLTS	HEATING MBH	HEATING GPM	PIPE SIZE & CONN. SIDE	PRICE MODEL #
FPB-1-1	625	188	313	8	0.3"	1790	0.25 HP	0.64	15	277V	11.8	0.6	3/4", RH	FDC
FPB-1-2	600	180	300	8	0.3"	1719	0.25 HP	0.64	15	277V	11.3	0.6	3/4", RH	FDC
FPB-1-3	850	255	425	10	0.3"	1558	0.25 HP	0.64	15	277V	16.1	0.8	3/4", RH	FDC
FPB-1-4	1000	300	500	10	0.3"	1833	0.5 HP	1.27	15	277V	18.9	0.9	3/4", LH	FDC
FPB-1-5	1450	435	725	12	0.3"	1846	0.75 HP	1.91	15	277V	27.4	1.4	3/4", RH	FDC
FPB-2-1	550	165	275	8	0.3"	1576	0.25 HP	0.64	15	277V	10.4	0.5	3/4", RH	FDC
FPB-2-2	1450	435	725	12	0.3"	1846	0.75 HP	1.91	15	277V	27.4	1.4	3/4", LH	FDC
FPB-2-3	700	210	350	10	0.3"	1283	0.25 HP	0.64	15	277V	13.2	0.7	3/4", LH	FDC
FPB-2-4	1400	420	700	12	0.3"	1783	0.75 HP	1.91	15	277V	26.5	1.3	3/4", RH	FDC
FPB-2-5	1550	465	775	12	0.3"	1974	0.75 HP	1.91	15	277V	29.3	1.5	3/4", RH	FDC
FPB-2-6	1100	330	550	12	0.3"	1401	0.5 HP	1.27	15	277V	20.8	1.0	3/4", LH	FDC
FPB-2-7	300	90	150	6	0.3"	1528	0.25 HP	0.64	15	277V	5.7	0.3	3/4", RH	FDC
FPB-2-8	400	120	200	8	0.3"	1146	0.25 HP	0.64	15	277V	7.6	0.4	3/4", RH	FDC
FPB-2-9	500	150	250	8	0.3"	1432	0.25 HP	0.64	15	277V	9.5	0.5	3/4", LH	FDC
FPB-2-10	525	158	263	8	0.3"	1504	0.25 HP	0.64	15	277V	9.9	0.5	3/4", RH	FDC
FPB-2-11	875	263	438	10	0.3"	1604	0.25 HP	0.64	15	277V	16.5	0.8	3/4", LH	FDC

NOTES:
1. FAN POWERED BOXES SHALL HAVE ECM MOTOR WITH 277V/1PH POWER.
2. ALL UNITS REQUIRING HEAT SHALL BE EQUIPPED WITH HOT WATER HEATING COIL.
3. STATIC PRESSURES SHOWN ARE EXTERNAL TO UNITS. MANUFACTURER SHALL ADD DAMPER, HEATING COIL, CASING, FILTER, AND OTHER UNIT LOSSES BEFORE SELECTING FAN.
4. HEATING CAPACITY IS BASED ON COLD AIR AT 55ºF AND VALVE AT 50% OPENED MIXING WITH PLENUM AIR AT 75ºF.
5. REFERENCE 16/M5.01 FOR DETAIL AND WRITTEN SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
6. TERMINAL UNIT MANUFACTURER MUST FACTORY MOUNT, WIRE, AND PROGRAM DDC CONTROLLER AND CONTROL DEVICES

VARIABLE AIR VOLUME BOX SCHEDULE

MARK	COOLING MAX	COOLING MIN	REHEAT	DIAMETER	E.S.P (W.G)	VELOCITY	VOLTS	HEATING MBH	HEATING GPM	PIPE SIZE & HAND SIDE	PRICE MODEL #
VAV-1-1	200	60	N/A	6	0.3"	1019	277V	NO HEAT		3/4", LH	SDV
VAV-1-2	1950	585	975	14	0.3"	1824	277V	36.9	1.8	3/4", LH	SDV
VAV-1-3	1000	300	500	10	0.3"	1833	277V	18.9	0.9	3/4", LH	SDV
VAV-1-4	700	210	350	10	0.3"	1283	277V	13.2	0.7	3/4", LH	SDV
VAV-1-5	2700	810	1350	16	0.3"	1934	277V	51.0	2.6	3/4", LH	SDV
VAV-2-1	500	150	250	8	0.3"	1432	277V	9.5	0.5	3/4", LH	SDV
VAV-2-2	200	60	100	6	0.3"	1019	277V	3.8	0.2	3/4", LH	SDV
VAV-2-3	325	97.5	162.5	6	0.3"	1655	277V	6.1	0.3	3/4", LH	SDV

NOTES:
1. PROVIDE 277V TO VAV BOXES. BUILT IN TRANSFORMER TO STEP DOWN TO 24V FOR DAMPER CONTROL.
2. ALL UNITS REQUIRING HEAT SHALL BE EQUIPPED WITH HOT WATER HEATING COIL.
3. STATIC PRESSURES SHOWN ARE EXTERNAL TO UNITS. MANUFACTURER SHALL ADD DAMPER, HEATING COIL, CASING, FILTER, AND OTHER UNIT LOSSES BEFORE SELECTING UNIT.
4. HEATING CAPACITY IS BASED ON COLD AIR AT 55°F AND AIR VALVE AT 50% OPENED FOR VAV.
5. REFERENCE 9/M5.01 FOR DETAIL AND WRITTEN SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
6. TERMINAL UNIT MANUFACTURER MUST FACTORY MOUNT, WIRE, AND PROGRAM DDC CONTROLLER AND CONTROL DEVICES

EXHAUST FAN SCHEDULE

MARK	EF-1	EF-2	EF-3	EF-4	EF-5	EF-6	EF-7	WEF-1	WEF-2	WEF-3	WEF-4	WEF-5	WEF-6	EF-W1	EF-W2
SERVES	RR	RR	RR	CUSTODIAL	RR	CHEM STOR.	WELD. HOOD	WAREHOUSE	WAREHOUSE	WAREHOUSE	WAREHOUSE	BUSWASH	MECHANIC BAY	RR	CUSTODIAL
TYPE	ROOF	ROOF	ROOF	ROOF	INLINE	INLINE	INLINE	WALL	WALL	WALL	WALL	WALL	WALL	INLINE	CABINET
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
CFM	600	600	100	100	200	100	1,000	14,500	14,500	14,500	14,500	2,000	14,500	225	75
STATIC PRESSURE	0.5"	0.5"	0.35"	0.35"	0.675"	0.35"	0.5"	0.5	0.5	0.5	0.5	0.5"	0.5	0.675"	0.25"
IMPELLER SIZE	10	10	7	7	9	7	12	42	42	42	42	24	42	9	8
DESIGN H.P.	1/8 HP	1/8 HP	1/20 HP	1/20 HP	1/6 HP	1/20 HP	1/4 HP	3 HP	3 HP	3 HP	3 HP	1/2 HP	3 HP	1/6 HP	1/20 HP
VOLTAGE	120 V	120 V	120 V	120 V	120 V	120 V	120V	480V / 3 PH	480V / 3 PH	480V / 3 PH	480V / 3 PH	120 V	480V / 3 PH	120 V	120 V
MANUFACTURER	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK	LOREN COOK
MODEL #	100 ACED	100 ACED	70 ACED	70 ACED	90 SQND	70 SQND	120 SQND	42 EWD	42 EWD	42 EWD	42 EWD	24 EWD	42 EWD	90 SQND	GC-128
SONES	8.9	8.9	4.2	4.2	6.9	2.7	9.7	27.0	27.0	27.0	27.0	18.0	27.0	6.9	0.8
NOTES	1,2,6	1,2,6	1,2,6	1,2,6	1,5,6	1,5	1,5	3,7	3,7	3,7	3,7	3,7	3,7	1,5,6	1,4

NOTES:
1. STATIC PRESSURE SHOWN IS EXTERNAL TO UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN.
2. INSULATED ROOF CURB, BACKDRAFT DAMPER, BIRDSCREEN, SPEED CONTROLLER, AND DISCONNECT SWITCH.
3. INTERLOCK FAN WITH LOCAL TSTAT.
4. DISCONNECT SWITCH, CEILING GRILLE, AND WALL CAP. INTERLOCK WITH ROOM LIGHT SWITCH.
5. DISCONNECT SWITCH, BACKDRAFT DAMPER, AND SPEED CONTROLLER.
6. EXHAUST FAN TO BE INTERLOCKED WITH ASSOCIATED AHU.
7. EXHAUST FAN TO HAVE RAINHOOD, MOTOR GUARD, AND BE INTERLOCKED WITH ASSOCIATED MAKE-UP AIR DAMPER.

MOTOR STARTER REQUIREMENTS

EQUIPMENT	STARTER TYPE	PROVIDED UNDER
SP-1,2	VARIABLE FREQUENCY	MECHANICAL
HWP-1,2	VARIABLE FREQUENCY	MECHANICAL
ALL AHUs	VARIABLE FREQUENCY	MECHANICAL
ALL 480V/3PH SFs	VARIABLE FREQUENCY	MECHANICAL
CHP-1,2	VARIABLE FREQUENCY	MECHANICAL
ALL OTHER MOTORS	STANDARD	MECHANICAL

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING SUPPLY DIFFUSER - 24" X 24" FACE, ARCHITECTURAL PLAQUE, STEEL CONSTRUCTION, WHITE FINISH PRICE SPD A1 = 12" X 12" FACE
B	CEILING RETURN GRILLE - 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH PRICE PDDR B1 = 12" X 12" FACE
C	CEILING EXHAUST GRILLE - 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH PRICE PDDR C1 = 12" X 12" FACE
D	FLOWBAR DIFFUSER - 48" LONG, 1.0" WIDE 2-SLOT INSULATED PLENUM, NECK SIZE SHOWN ON DRAWINGS PRICE SDS D1 = 24" LONG
E	SIDEWALL REGISTER - DOUBLE DEFLECTION, ALUMINUM CONSTRUCTION, AIRFOIL BLADES, 2" O.C. SPACING, WHITE FINISH. PRICE 620
F	SPIRAL DUCT MOUNTED REGISTER - DOUBLE DEFLECTION, ALUMINUM CONSTRUCTION, AIRFOIL BLADES, 3/4" O.C. SPACING, EXTRACTOR, WHITE FINISH. PRICE SDG
G	HEAVY DUTY RETURN GRILLE- 14 GAUGE BLADES, 16 GAUGE BORDER, STEEL CONSTRUCTION, WHITE FINISH, 1/2" BLADE SPACING, 38° FIXED DEFLECTION. PRICE 535

NOTE:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPE FOR EACH AIR DEVICE.
2. INTERIOR DIFFUSERS TO BE ENVIRO-THERM. COORDINATE COLOR WITH ARCHITECT.
3. INCLUDE INTEGRAL PATTERN CONTROLLERS FOR ALL FLOWBAR LINEAR DIFFUSERS.

AIR-COOLED CHILLER SCHEDULE

	MARK	CH-1	CH-2
CHILLER	CAPACITY TONS	60	60
	COOLER FLOW RATE, GPM	90 GPM	90 GPM
	EWT, ° F	58°F	58°F
	LWT, ° F	42 °F	42 °F
	MAX. P.D.	12 FT	12 FT
	FOUL'G FACTOR	0.0001	0.0001
MISC	COMPRESSOR TYPE	SCROLL	SCROLL
	REFRIGERANT	R-32	R-32
	ARHI EER/IPLV	10.84 / 19.15	10.84 / 19.15
	VOLTAGE	460V / 3 PH	460V / 3 PH
	MCA / MOCP / FUSE SIZE, AMPS	143 / 175 / 175	143 / 175 / 175
	DAIKIN MODEL #	AGZ	AGZ

NOTES:
1. PROVIDE POWERED CONVENIENCE OUTLET AND SEPARATE ELECTRICAL CONNECTION FOR BARREL HEATER.
2. PROVIDE E-COATED CONDENSER COILS.
3. AMBIENT AIR = 100°F.
4. PROVIDE EXTRA HIGH EFFICIENCY/PERFORMANCE & HIGH AMBIENT OPTIONS.
5. PROVIDE HEAD PRESSURE CONTROLS FOR OPERATION DOWN TO 20°F AMBIENT
6. PROVIDE LOUVERED CONDENSER COIL GUARDS AND COMPRESSOR ACCESS WIRE GUARDS.
7. PROVIDE LOW NOISE CONDENSER FANS AND COMPRESSORS SOUND TREATMENT.
8. SEE SPECIFICATIONS FOR ADDITIONAL DETAILS AND REQUIREMENTS.

AIR HANDLING UNIT SCHEDULE - DX

	MARK	FCU-W1	FCU-W2
CABINET	SERVES	WAREHOUSE	WAREHOUSE
	TOTAL CFM	2400	2100
	O/A CFM	200	180
	EXT. STATIC WG	1.0"	1.0"
	DESIGN HP	1 HP	1 HP
	VOLTAGE	480V / 3 PH	480V / 3 PH
	WEIGHT		
	INSTALL ORIENTATION	HANGING HORIZONTAL	HANGING HORIZONTAL
	MANUFACTURER	DAIKIN	DAIKIN
	MODEL NUMBER	BCHD0301	BCHD0301
COOLING	COIL CFM	1500	1300
	MIN. COIL ROWS	6	6
	EAT db/wb, °F	77.8°F/ 65.5°F	76.8°F/ 64.6°F
	LAT db/wb, °F	53.3°F/ 53.0°F	53.0°F/ 52.7°F
	GSH MBH	40	34
	GTH MBH	56	46
	COND. DRAIN SIZE	3/4"	3/4"
HEATING	ELECTRIC HEAT	14 kW	11 KW
	STAGE	2 STAGE	2 STAGE
	HEATING EAT/LAT, °F	60.6°F/ 90.0°F	62.5°F/ 90.0°F
	VOLTAGE	120V	120V
	MCA/MOCP		
	HEATING ELEMENT	ELECTRIC	ELECTRIC

NOTES:
1. EXT. SP DOES NOT INCLUDE FILTERS, COILS, CASING, CONVERSIONS OR MIXING DAMPER...
2. MOTORS SHALL BE COPPER WOUND, PREMIUM EFFICIENCY TYPE (+90% MINIMUM).
3. PROVIDE MERV 13 FILTERS WITH MAXIMUM FILTER VELOCITY AT 350 FT / MIN.
4. ALL UNITS SHALL BE INTERNALLY ISOLATED.
5. DESIGN FAN HP IS MOTOR SIZE WIRED BY ELECTRICAL. MANUFACTURERS REQUIRING LARGER MOTORS MUST PAY FOR INCREASED CIRCUIT COSTS. SMALLER MOTORS MAY BE PROVIDED IF BHP IS LESS THAN SCHEDULED AND A 1/4" WG PRESSURE DROP DOES NOT OVERLOAD MOTOR.

ACCU SCHEDULE

MARK	ACCU-W1	ACCU-W2
SERVES	FCU-W1	FCU-W2
CAPACITY, NOMINAL TONS	5	5
NO. OF COMP. & TYPE	2 / SCROLL	2 / SCROLL
NO. OF STAGES	2	2
NO. OF REFRIG. CIRCUIT	2	2
REFRIG. LIQUID LINE SIZE	1/2"	1/2"
REFRIG. SUCTION LINE SIZE	1-3/8"	1-3/8"
EER / SEER @ AHRI	13.4 / 14.5	13.4 / 14.5
VOLTAGE	460V / 3PH	460V / 3PH
MCA / MOCP (AMPS)	32.1 / 40	32.1 / 40
DAIKIN MODEL	DC6TE09040	DC6TE09040

NOTES:
1. PROVIDE E-COATED CONDENSER COIL AND HAIL-GUARD
2. PROVIDE 5-YEARS COMPRESSOR AND COND. FANS PART/LABOR AND REFRIGERANT WARRANTY
3. PROVIDE TIME GUARD CIRCUIT, LOW AMBIENT OPERATION DOWN TO 25°F.

PUMP SCHEDULE

MARK	CHP- 1 & 2	SP-1 & 2	HWP-1
SERVES	CH- 1 & 2	CHILLED WTR	HOT WATER
TYPE	VERTICAL	VERTICAL	VERTICAL
GPM	90 GPM	90 GPM	48 GPM
HEAD FT.	35 FT	70 FT	70 FT
MIN. EFF. %	75 %	67 %	54 %
MAX. RPM	1760 RPM	1760 RPM	1760 RPM
DESIGN H.P.	1.5 HP	3.0 HP	2.0 HP
VOLTAGE	460V / 3 PH	460V / 3 PH	460V / 3 PH
S/D SIZE	2" X 2"	2" X 2"	2" X 2"
TACO MODEL	KV2006D	KV2009D	KV2009D

NOTE: SEE DETAIL 3/M5.02 AND SPECS. FOR ADDITIONAL REQUIREMENTS.

HIGH VOLUME LOW SPEED (HVLS) FAN

HIGH VOLUME LOW SPEED FAN , GEARLESS DIRECT MOTOR, 14FT FAN DIAMETER, 10 AMPS @ 208/1/60, 120 RPM, AIRFOIL BLADES WITH WINGLETS, WALL CONTROLLER, 235 LBS FAN WEIGHT. BIG ASS FANS POWERFOIL SERIES. INSTALL AND ATTACH TO STRUCTURE PER MANUFACTURER RECOMMENDATIONS.

SUPPLY FAN SCHEDULE

MARK	SF-1	SF-2
SERVES	AHU-1	AHU-2
TYPE	INLINE	INLINE
DRIVE	BELT VFD	DIRECT
CFM	2,250	1,200
STATIC PRESSURE	0.35"	0.35"
IMPLR SIZE	15	12
DESIGN H.P.	1 HP	1 HP
VOLTAGE	480V / 3PH	120V
MANUFACTURER	LOREN COOK	LOREN COOK
MODEL #	150 SQNB	120 SQND
SONES	10.2	8.9
NOTES	1,2,3	1,3

NOTES:
1. STATIC PRESSURE SHOWN IS EXTERNAL TO UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN.
2. DISCONNECT SWITCH & BELT-GUARD
3. SPEED CONTROLLER.

IDF A/C UNITS (ACU)

ACU-2A & ACU-WA (INDOOR UNIT): DAIKIN FTK24BXVJU, 24.0 MBH COOLING CAPACITY, 21.4 SEER, WIRELESS REMOTE CONTROLLER. UNIT TO BE COOLING ONLY.

ACU-2B & ACU-WB (OUTDOOR UNIT): DAIKIN RK24BXVJU 24.0 MBH COOLING CAPACITY, E-COATED COIL.

POWER SUPPLY: 208V / 1PH / 60HZ, 25A MCA / 35A MOCP.

ACCESSORIES: LOW AMBIENT KIT & CRANKCASE HEATER, WALL-MOUNT BRACKET.

REFRIGERANT PIPING SIZE SHALL BE AS REQUIRED BY THE MANUFACTURER

MDF A/C UNITS (ACU)

ACU-1A (INDOOR UNIT): DAIKIN FTK36BXVJU, 36.0 MBH COOLING CAPACITY, 21.4 SEER, WIRELESS REMOTE CONTROLLER. UNIT TO BE COOLING ONLY.

ACU-1B (OUTDOOR UNIT): DAIKIN RK36BXVJU 36.0 MBH COOLING CAPACITY, E-COATED COIL.

POWER SUPPLY: 208V / 1PH / 60HZ, 25A MCA / 31A MOCP.

ACCESSORIES: LOW AMBIENT KIT & CRANKCASE HEATER, WALL-MOUNT BRACKET.

REFRIGERANT PIPING SIZE SHALL BE AS REQUIRED BY THE MANUFACTURER

ELECTRIC UNIT HEATER SCHEDULE

MARK	EUH-1	EUH-2
SERVES	BLDG A RISER	BUSWASH
HEATING CAPACITY, KW	5.0 KW	5.0 KW
AIR FLOW RATE	400 CFM	400 CFM
AIR TEMP. RISE	40 F	40 F
MAX. MOUNTING HEIGHT	9 FT	9 FT
VOLTAGE	208V / 3 PH	208V / 3 PH
AMPS	6.1 A	6.1 A
MARKEL MODEL #	P3P5105CA1N	P3P5105CA1N

NOTE: PROVIDE WALL MOUNTING ACCESSORIES AND THERMOSTAT

GAS UNIT HEATER SCHEDULE

MARK	GUH-1 THRU 6	GUH-8, GUH-9
SERVES	WAREHOUSE	WAREHOUSE
INPUT/OUTPUT (Btu/Hr)	135,000/125,500	65,000/60,000
OUTLET VELOCITY (FPM)	719	650
GAS SUPPLY PRESSURE	5" - 14" WC	5" - 14" WC
VOLTAGE	115V / 1PH	115V / 1PH
MOTOR HP	1/3 HP	1/8 HP
MANUFACTURER	MODINE	MODINE
MODEL	PTC-135	PTC-65
CONDENSATE DRAIN (IN)	1"	1"
UNIT WEIGHT (LBS)	80	80

NOTES:
PROVIDE THERMOSTAT, FLEXIBLE GAS CONNECTOR, EXHAUST FLUE INSTALLED PER MANUFACTURER'S REQUIREMENTS AND VIBRATION ISOLATION HANGER KIT

CONDENSING BOILER SCHEDULE

MARK	BR-1 & BR-2
INPUT MBH	600 MBH
OUTPUT MBH	540 MBH
MIN. EFFICIENCY	90%
OPERATING PRESSURE	80 PSI
GAS PRESSURE	4" - 14" WC
SYSTEM GPM	29 GPM
EWT / LWT, °F	120°F / 160°F
MAX. PD, FT	12 FT.
BOILER ELECTRICAL	120V / 1 PH / 60 HZ @ 15.8 AMP
MANUFACTURER / SERIES	HYDROTHERM
MODEL #	KN-6

NOTES:
1. BOILER MANUFACTURER TO PROVIDE CATEGORY IV FLUE VENT, ACID NEUTRALIZING KIT, CO MONITOR, AND VENTED GAS PRESSURE REDUCING VALVE FOR EACH BOILER. VENT ALL REGULATORS TO OUTSIDE OF BUILDING, VENTLESS REGULATORS NOT ALLOWED.
2. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE BOILER MANUFACTURER PRIOR TO COMMENCING INSTALLATION OF PIPING AND FLUE.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
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MECHANICAL SCHEDULES

PACKAGE 2 VOLUME

Job No. 1971-05-01
Sheet No. M4.01
Drawn By: DB
Date: 09/18/2025
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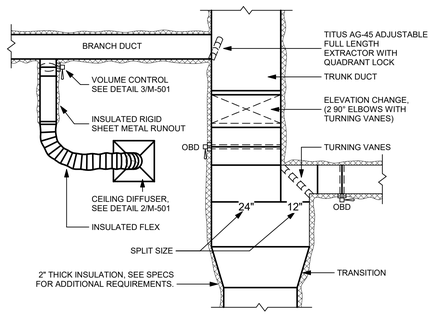
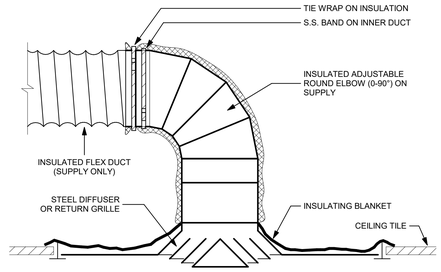
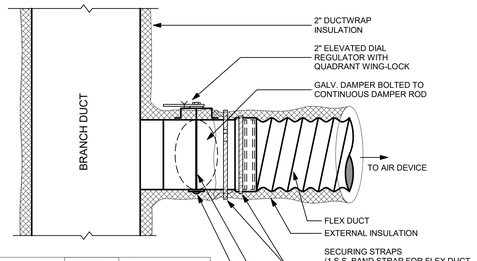


1 DUCTWORK DETAILS
NO SCALE



2 CEILING AIR DEVICE DETAIL
NO SCALE

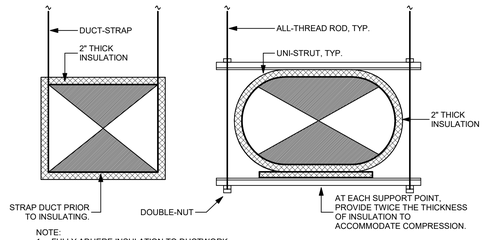


TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

HARDWARE MANUFACTURERS SHALL BE DURO-DYNE UESO.

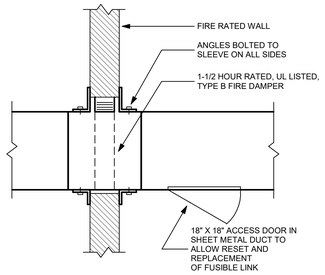
NOTE: DELETE CONICAL SECTION IF TOO LARGE FOR DUCT.

3 DUCT TAP CONNECTION DETAIL
NO SCALE

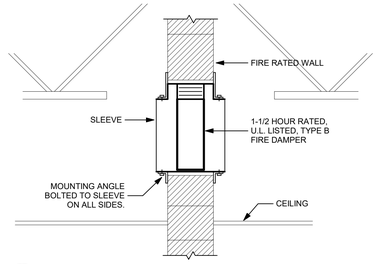


NOTE:
1. FULLY ADHERE INSULATION TO DUCTWORK.
2. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT-STRAPS.

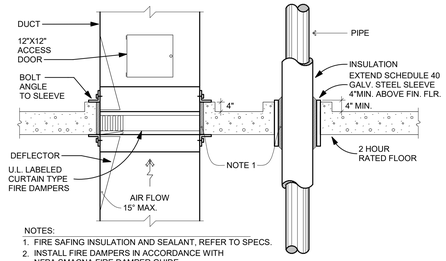
5 EXTERNALLY INSULATED DUCT SUPPORT DETAIL
NO SCALE



6 DUCT FIRE DAMPER DETAIL
NO SCALE

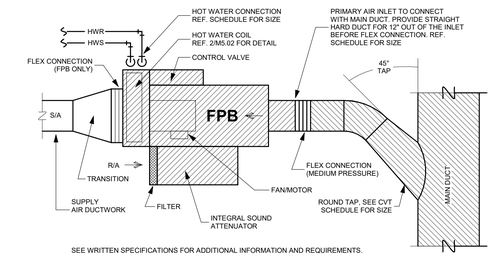


7 NON-DUCTED FIRE DAMPER DETAIL
NO SCALE



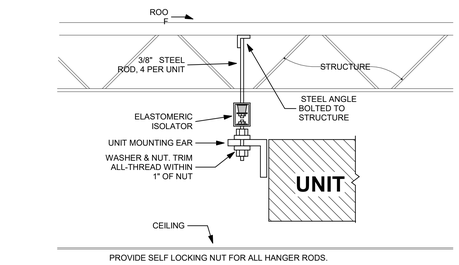
NOTES:
1. FIRE SAFING INSULATION AND SEALANT, REFER TO SPECS.
2. INSTALL FIRE DAMPERS IN ACCORDANCE WITH NFPA SMACNA FIRE DAMPER GUIDE.
2. PROVIDE AT ALL FLOOR PENETRATIONS, REGARDLESS OF FIRE RATING.

8 FLOOR PENETRATION FIRE BARRIER DETAIL
NO SCALE



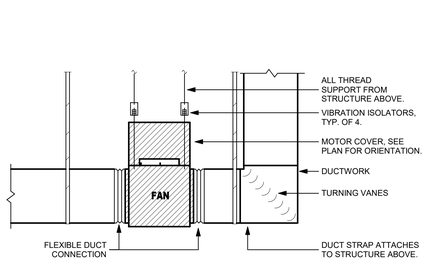
SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

9 AIR TERMINAL UNIT DETAIL
NO SCALE

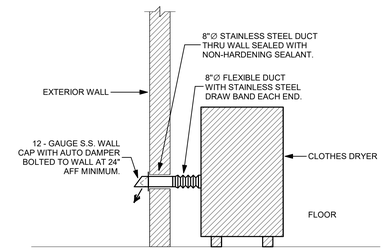


PROVIDE SELF LOCKING NUT FOR ALL HANGER RODS.

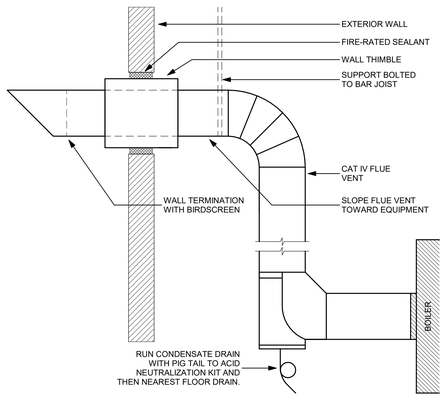
10 CVT & INLINE FAN HANGER DETAIL
NO SCALE



11 INLINE FAN INSTALLATION DETAIL
NO SCALE

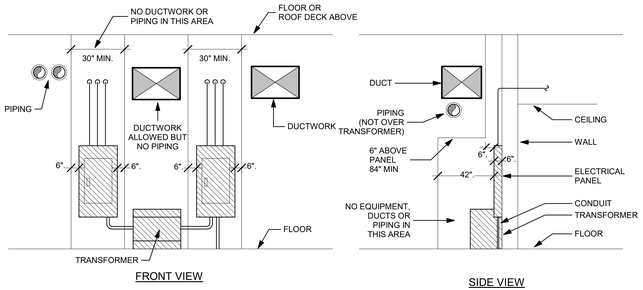


12 CLOTHES DRYER WALL VENT DETAIL
NO SCALE

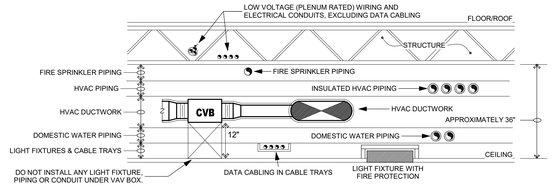


NOTE: PROVIDE OFFSETS AS REQUIRED. VENT SHALL BE PROVIDED BY BOILER SUPPLIER.

13 BOILER FLUE VENT DETAIL - WALL
NO SCALE



14 MECHANICAL - ELECTRICAL COORDINATION DETAIL
NO SCALE



PLENUM PRIORITY NOTES

ELECTRICAL CONDUIT	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING. IF FRAMING IS USED FOR SUPPORT OF CONDUIT, A SADDLE SHALL BE REQUIRED FOR ISOLATION AT EACH SUPPORT POINT.
LOW VOLTAGE WIRING (EXCEPT DATA CABLING)	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING AND RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS. ALL INDIVIDUAL WIRES SHALL BE BUNDLED TOGETHER WITH VELCRO TIE STRAPS AT 6 FOOT MAXIMUM INTERVALS AND EACH WIRE SHALL BE IDENTIFICATION TAGGED AT 25 FOOT MAXIMUM INTERVALS.
HVAC DUCTWORK	INSTALLED AS SNUG TO BOTTOM OF STRUCTURE AS POSSIBLE, ALLOWING ONLY ENOUGH SPACE FOR INSULATION WRAP. OFFSET HOT AND COLD MEDIUM PRESSURE DUCTS FOR TAKE-OFFS FOR DOUBLE DUCT VAV BOXES.
HVAC PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC DUCTWORK. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW.
FIRE SPRINKLER PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC PIPING.
DOMESTIC WATER PIPING	INSTALLED IN PLANE DIRECTLY ABOVE LIGHT FIXTURES. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW. BALL VALVES INSTALLED WITH STEM HORIZONTAL SHALL BE USED IN LIEU OF WHEEL HANDLE VALVES OR OTHER TYPES EXCEPT IN SITUATIONS WHERE BALL VALVES ARE NOT APPROPRIATE.
LIGHT FIXTURES	TAKE PRIORITY IN SPECIAL LAYOUT. ALL OTHER SYSTEMS (DOUBLE DUCT UNITS, DUCTWORK, PIPING, CONDUITS, ETC.) SHALL BE ROUTED IN PLENUM SPACE TO AVOID PASSING DIRECTLY (LOW) OVER LIGHTING FIXTURES PREVENTING THEIR INSTALLATION, SERVICING AND/OR REMOVAL.
GRAVITY FED PLUMBING	THIS INCLUDES PLUMBING WASTE/VENT AND ROOF DRAIN SYSTEMS. THESE SYSTEMS TAKE PRIORITY OVER ALL OTHER SYSTEMS BUT MUST BE INSTALLED TAKING OTHER SYSTEMS INTO CONSIDERATION. IN GENERAL, ROOF DRAIN PIPING SHALL START AS HIGH AS POSSIBLE. WASTE/VENT PIPING SHALL BE INSTALLED IN HVAC PIPING SPACE (IF AVAILABLE) IN AREAS WHERE CROSSING DUCTWORK. DO NOT INSTALL WASTE/VENT OR ROOF DRAIN PIPING UNDER DOUBLE DUCT VAV BOXES IF AVOIDABLE.

PIPING, CONDUIT AND DUCTWORK SUPPORTS ARE NOT SHOWN ON THIS DETAIL. SUPPORT ALL ENTITIES AS REQUIRED BY THE WRITTEN SPECIFICATIONS.

15 PLENUM SPACE PRIORITY DETAIL
NO SCALE

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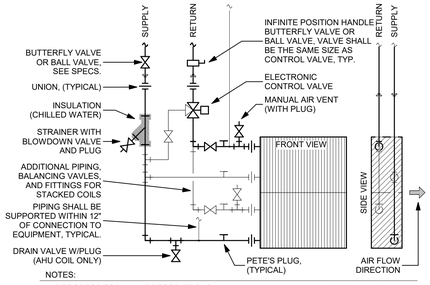
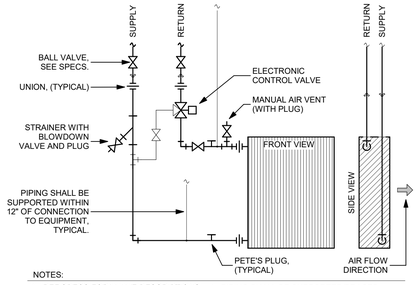


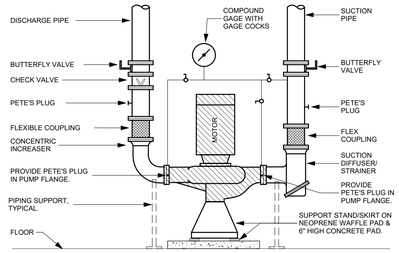
NOTES:
1. REF SPECS FOR VALVE DESCRIPTIONS
2. PROVIDE VICTAULIC JOINTS PER SPECS
3. P&T PORTS, BLOWDOWN VALVE, ETC. SHALL EXTEND THRU INSULATION.
4. PIPING SHALL BE SUPPORTED/BRACED WITHIN 12" OF CONNECTION TO EQUIPMENT.
5. 3-WAY CHILLED WATER VALVES: AHU-1, 2

1 AHU COIL PIPING DETAIL
NO SCALE

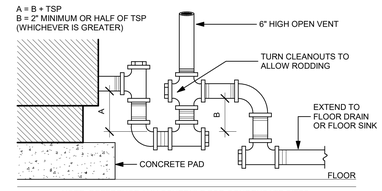


NOTES:
1. REF SPECS FOR VALVE DESCRIPTIONS
2. PROVIDE VICTAULIC JOINTS PER SPECS
3. P&T PORTS, BLOWDOWN VALVE, ETC. SHALL EXTEND THRU INSULATION.
4. PIPING SHALL BE SUPPORTED/BRACED WITHIN 12" OF CONNECTION TO EQUIPMENT.
5. 3-WAY HOT WATER VALVES: ALL CVB AND VAV BOXES ON AHU-1 & 2 SYSTEMS

2 CVB/VAV COIL PIPING DETAIL
NO SCALE

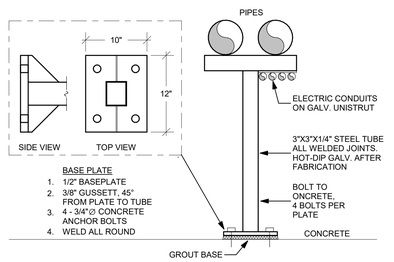


3 VERTICAL INLINE PUMP DETAIL
NO SCALE

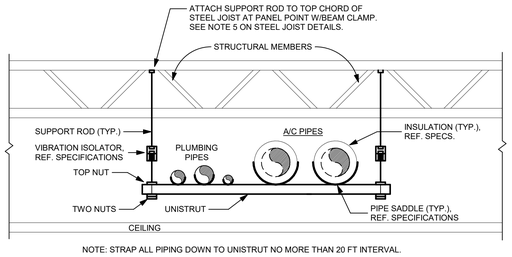


NOTE: REFERENCE AHU SCHEDULE FOR CONDENSATE SIZES

4 CONDENSATE DRAIN DETAIL
NO SCALE

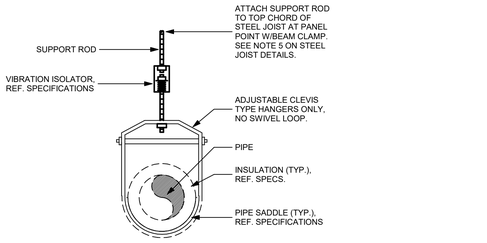


5 OUTDOOR PIPING SUPPORT DETAIL
NO SCALE

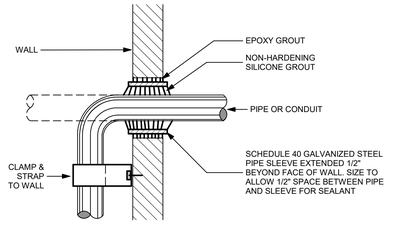


NOTE: STRAP ALL PIPING DOWN TO UNISTRUT NO MORE THAN 20 FT INTERVAL.

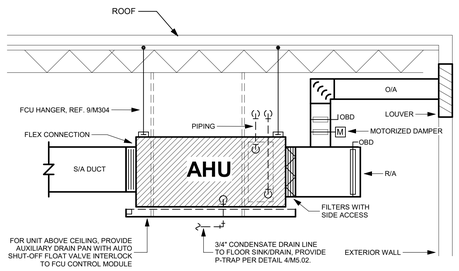
6 MULTIPLE PIPE HANGER DETAIL
NO SCALE



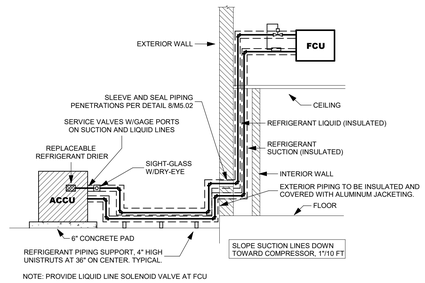
7 SINGLE PIPE HANGER DETAIL
NO SCALE



8 WALL PENETRATION DETAIL
NO SCALE

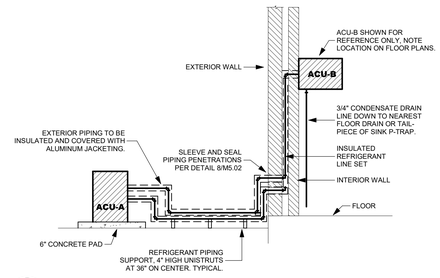


9 HANGING AHU DETAIL
NO SCALE

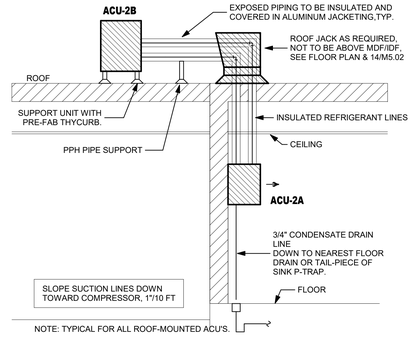


NOTE: PROVIDE LIQUID LINE SOLENOID VALVE AT FCU

10 REFRIGERANT PIPING SCHEMATIC FOR DX COIL
NO SCALE

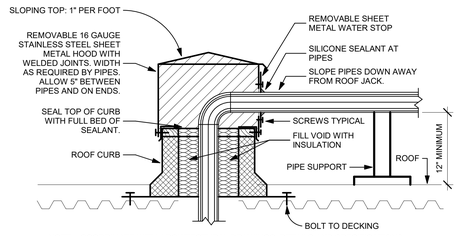


11 REFRIGERANT PIPING SCHEMATIC FOR ACU
NO SCALE



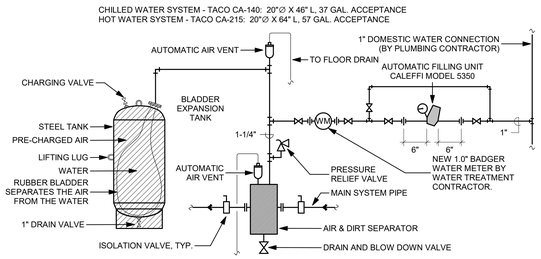
NOTE: TYPICAL FOR ALL ROOF-MOUNTED ACU'S.

12 REFRIGERANT PIPING SCHEMATIC FOR ACU
NO SCALE

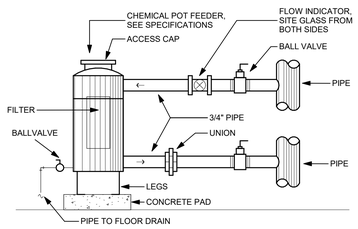


NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.

13 ROOF PIPE JACK DETAIL
NO SCALE



14 AIR SEPARATOR AND EXPANSION TANK DETAIL
NO SCALE



15 CHEMICAL POT FEEDER / FILTER
NO SCALE

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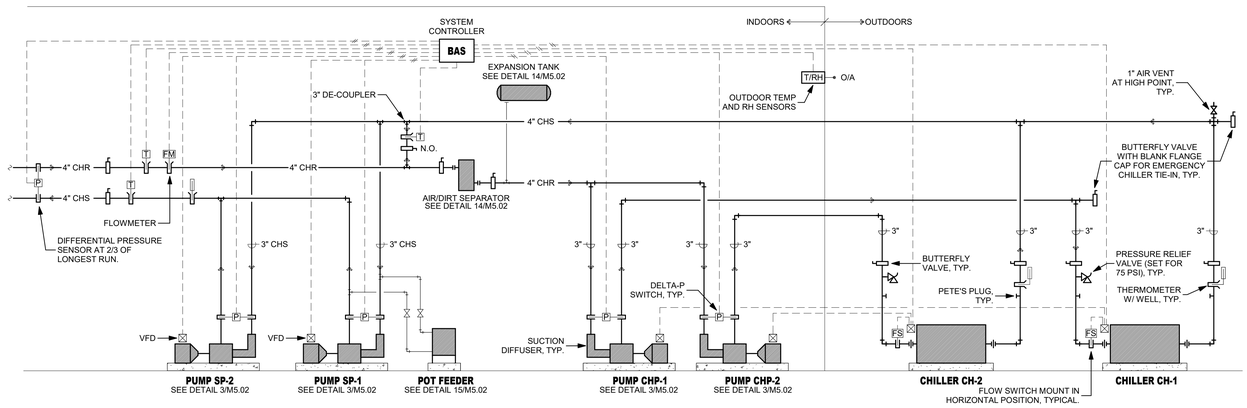
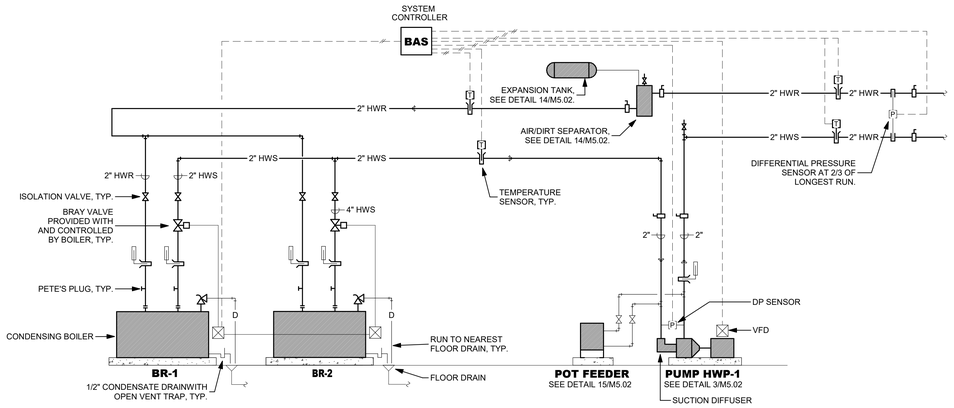


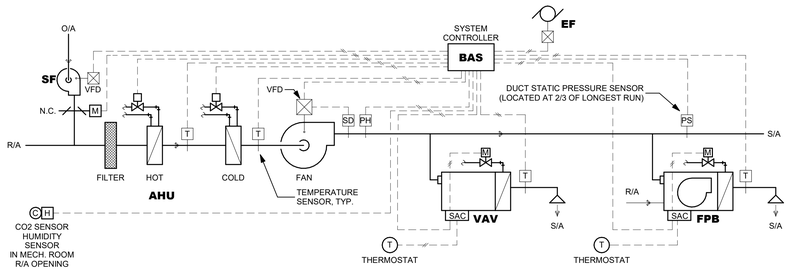
1 CHILLED WATER SYSTEM PIPING AND CONTROLS SCHEMATIC

NO SCALE



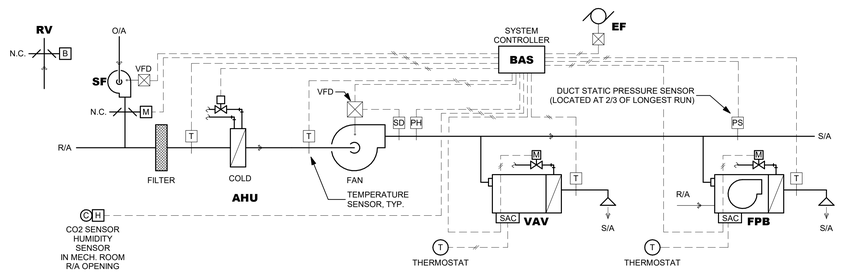
2 HOT WATER SYSTEM PIPING AND CONTROLS SCHEMATIC

NO SCALE



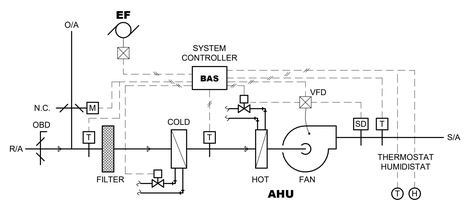
3 AHU-1 CONTROLS SCHEMATIC

NO SCALE



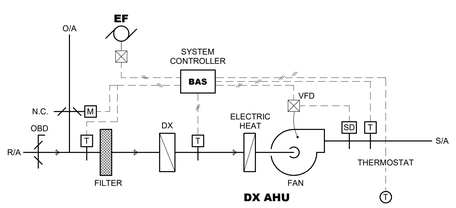
4 AHU-2 CONTROLS SCHEMATIC

NO SCALE



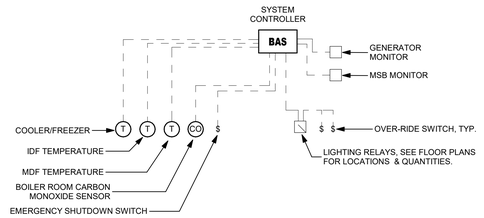
5 SZ AHU CONTROLS SCHEMATIC

NO SCALE



6 DX AHU CONTROLS SCHEMATIC

NO SCALE



7 MISCELLANEOUS BAS CONTROL

NO SCALE

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MECHANICAL SCHEMATICS

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RISER DIAGRAM LEGEND

SYMBOLS	DESCRIPTION
PANEL XX	ELECTRICAL PANELBOARD
XFMR XX — Y X	DRYTYPE TRANSFORMER "X" DENOTES VOLTAGE "Y" DENOTES TRANSFORMER SIZE (KVA)
X Y	CIRCUIT BREAKER "X" DENOTES SIZE OF CIRCUIT BREAKER (AMPS) "Y" DENOTES # OF POLES
X Y	FUSE "X" DENOTES SIZE OF FUSE (AMPS) "Y" DENOTES QTY OF FUSES
X Y	ENCLOSED CIRCUIT BREAKER "X" DENOTES SIZE OF CIRCUIT BREAKER (AMPS) "Y" DENOTES # OF POLES
X	NON-FUSED DISCONNECT SWITCH "X" DENOTES FRAME SIZE OF SWITCH (AMPS)
X Y Z	FUSED DISCONNECT SWITCH "X" DENOTES FRAME SIZE OF SWITCH (AMPS) "Y" DENOTES SIZE OF FUSE (AMPS) "Z" DENOTES QTY OF FUSES
	CURRENT TRANSFORMER (CT)
M	ELECTRICAL METER
N E L — X Y	TRANSFER SWITCH "X" TYPE OF SWITCH ATS: AUTOMATIC TRANSFER SWITCH MTS: MANUAL TRANSFER SWITCH "Y" DENOTES SWITCH SIZE (AMPS)
N E L — X Y	TRANSFER SWITCH WITH BYPASS ISOLATION "X" TYPE OF SWITCH ATS: AUTOMATIC TRANSFER SWITCH MTS: MANUAL TRANSFER SWITCH "Y" DENOTES SWITCH SIZE (AMPS)
G	EMERGENCY / STANDBY GENERATOR WITH (1) OUTPUT CIRCUIT BREAKER "X" DENOTES SIZE OF CIRCUIT BREAKER (AMPS) "Y" DENOTES # OF POLES
G — X Y X Y	EMERGENCY / STANDBY GENERATOR WITH (2) OUTPUT CIRCUIT BREAKER "X" DENOTES SIZE OF CIRCUIT BREAKER (AMPS) "Y" DENOTES # OF POLES
X Y FIRE PUMP SPD	FIRE PUMP CONTROLLER "X" DENOTES VOLTAGE/PHASE "Y" DENOTES HORSE POWER
X Y FIRE PUMP SPD	FIRE PUMP CONTROLLER "X" DENOTES VOLTAGE/PHASE "Y" DENOTES HORSE POWER
MAIN SWITCHBOARD 'Z' XXXA, YYY/YYYV, 3PH, 4W	SWITCHBOARD "X" DENOTES AMPERAGE "Y" DENOTES VOLTAGE "Z" DENOTES SWITCHBOARD DESIGNATION
X Y	UPS "X" DENOTES SIZE OF THE UPS (KVA) AND VOLTAGE "Y" DENOTES INPUT / OUTPUT AMPS
	AC / DC INVERTER
X X XX	FEEDER LABEL - REFER TO FEEDER SCHEDULE FOR ADDITIONAL INFORMATION
GF	GROUND FAULT PROTECTION

FIRE ALARM LEGEND

SYMBOLS	DESCRIPTION
HV / SV	FIRE ALARM HORN/STROBE AND SPEAKER/STROBE, WALL MOUNTED
V	FIRE ALARM STROBE, WALL MOUNTED
H / S	FIRE ALARM HORN AND SPEAKER, WALL MOUNTED
HCM / SCM	FIRE ALARM HORN/STROBE AND SPEAKER/STROBE, CEILING MOUNTED
CT	FIRE ALARM STROBE, CEILING MOUNTED
HC / SC	FIRE ALARM HORN AND SPEAKER, CEILING MOUNTED
F	FIRE ALARM MANUAL PULL STATION
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR PANEL
D	DUCT SMOKE DETECTOR
PS	CEILING MOUNTED SMOKE DETECTOR.
H	CEILING MOUNTED HEAT DETECTOR, 135° UON.
H 195	CEILING MOUNTED HEAT DETECTOR, 195° UON.
CO	CARBON MONOXIDE DETECTOR
SC	COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
BD	BEAM DETECTOR
DH	DOOR HOLDER
TS	SPRINKLER SYSTEM TAMPER SWITCH
FS	SPRINKLER SYSTEM FLOW SWITCH
AM	ADDRESSABLE MODULE
S KL	REMOTE TEST KEY SWITCH AND INDICATING LIGHT FOR SMOKE DUCT DETECTOR.
BS / DB	TWO-WAY COMMUNICATION BASE STATION/CALL BOX

NOTES:

1. ALL FIRE ALARM DEVICES LOCATED OUTDOOR OR AT AREA WITHOUT AIR CONDITIONING SHALL BE RATED FOR WET LOCATION.
2. PROVIDE PROTECTIVE GUARD TO PROTECT ALL FIRE ALARM DEVICES AT AREAS WHERE DEVICES MAY BE DAMAGED (E.G., SHOP ROOMS, GYMS, ETC...)
3. SEE ARCHITECTURAL PLAN FOR CEILING HEIGHT. PROVIDE SMOKE SAMPLING TUBE AND PIPE SYSTEM FOR AREA WITH 30FT CEILING IN LIEU OF CEILING SMOKE DETECTOR.
4. STROBE LIGHT OUTPUT MUST COMPLY WITH NFPA 72 AND ADA REQUIREMENTS.
5. COORDINATE DEVICE MOUNTING HEIGHT IN THE FIELD WHERE SHELVING IS PRESENT.

MOUNTING HEIGHTS

HEIGHT	DESCRIPTION
10'-0"	EMERGENCY BATTERY UNITS (OR 1'-0" BELOW CEILING)
90° TO 6" BELOW CLG	FIRE ALARM AUDIBLE ALARM SIGNALS
7'-6" TO 8'-0"	FIRE ALARM COMBINATION ALARM SIGNALS
7'-0" TO 8'-0"	FIRE ALARM VISUAL SIGNALS
6'-6"	TOP OF ELECTRICAL PANEL BOARDS
6'-0"	TOP OF HIGHEST ELECTRICAL DISCONNECT SWITCH OR STARTER
4'-0"	TOP OF WALL MOUNTED DEVICES SUCH AS LIGHT SWITCHES, MANUAL MOTOR STARTERS, THERMOSTATS, TELEPHONE/INTERCOM HANDSETS, FIRE ALARM PULLSTATIONS, ETC.
4'-0"	TOP OF WALL MOUNTED WIREMOLD (U.N.O.)
2'-0"	BOTTOM OF RECEPTACLES IN MECHANICAL ROOMS AND EXTERIOR OF BUILDING.
1'-6"	BOTTOM OF RECEPTACLES, TELEPHONE/TELEDATA OUTLETS, TELEVISION JACKS, ETC
0'-0"	FINISHED FLOOR ELEVATION.

POWER LEGEND

SYMBOLS	DESCRIPTION
	SURFACE MOUNTED PANELBOARD
	RECESSED PANELBOARD
	HOMERUN TO PANELBOARD
	MOTOR
X/Y/Z	FUSED DISCONNECT SWITCH. "X" INDICATES SWITCH SIZE, "Y" INDICATES FUSE SIZE, "Z" INDICATES NUMBER OF POLES
X/Y	DISCONNECT SWITCH. "X" INDICATES SWITCH SIZE, "Y" INDICATES NUMBER OF POLES
	COMBINATION STARTER WITH INTEGRAL DISCONNECT SWITCH
VFD	VFD STARTER WITH INTEGRAL DISCONNECT SWITCH
	SIMPLEX RECEPTACLE. SYMBOL WITH LINE THRU IT DENOTES MOUNTED ABOVE COUNTER.
	DUPLEX RECEPTACLE. SYMBOL WITH LINE THRU IT DENOTES MOUNTED ABOVE COUNTER.
AC	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE. "AC" DENOTES ABOVE COUNTER.
	PLUG LOAD CONTROLLED DUPLEX RECEPTACLE. SYMBOL WITH LINE THRU IT DENOTES MOUNTED ABOVE COUNTER.
	DUPLEX RECEPTACLE WITH TWO INTEGRAL USB CHARGING PORTS. SYMBOL WITH LINE THRU IT DENOTES MOUNTED ABOVE COUNTER.
IG AC	ISOLATED GROUND DUPLEX RECEPTACLE. "AC" DENOTES ABOVE COUNTER.
IG	ISOLATED GROUND TWISTLOCK RECEPTACLE. NEMA CONFIGURATION TO MATCH PLUG.
	SPECIAL RECEPTACLE. NEMA CONFIGURATION TO MATCH PLUG.
	QUAD RECEPTACLE. SYMBOL WITH LINES THRU IT DENOTES MOUNTED ABOVE COUNTER.
WP WP	DUPLEX / QUAD RECEPTACLE. WP INDICATES WEATHERPROOF COVER WITH WEATHER-RESISTANT GFCI TYPE
GFCI AC	GROUND FAULT CIRCUIT INTERRUPTER QUAD RECEPTACLE. "AC" DENOTES ABOVE COUNTER.
IG AC	ISOLATED GROUND QUAD RECEPTACLE. "AC" DENOTES ABOVE COUNTER.
	MULTI OUTLET SURFACE RACEWAY, SIMILAR TO WIREMOLD #4000. REFER TO THE DETAILS SHEET FOR ADDITIONAL INFORMATION.
	FLOOR BOX AND/OR POKE THRU DEVICE. SEE SCHEDULE FOR DETAILS. "X" INDICATES CIRCUIT NUMBER.
CR CLD GFI	PROVIDE POWER CORD REEL MANUFACTURED BY HUBBELL, PROVIDE INTEGRAL GFCI PROTECTION DEVICE. STOP BALL AND KELLEMS STRAIN RELIEF CORD GRIP AT DROP CORD 120V 20A RECEPTACLE.
DROP CORD GFI	PROVIDE POWER DROP CORD RECEPTACLE MANUFACTURED BY HUBBELL, PROVIDE KELLEMS STRAIN RELIEF CORD GRIP AT BOTH CEILING J-BOX AND DROP CORD RECEPTACLE. PROVIDE GFCI PROTECTION DEVICE AND 20A, 120V HEAVY DUTY POWER CORD.
J	JUNCTION BOX - WALL MOUNTED
J	JUNCTION BOX - CEILING MOUNTED
J	JUNCTION BOX - FLOOR MOUNTED
P	POWER FEED TO SYSTEM FURNITURE, WALL MOUNTED. PROVIDE FLEXIBLE WHIP CONNECTION TO THE FURNITURE AS REQUIRED.
	PUSH BUTTON
E	EMERGENCY PUSH BUTTON
—E—	ELECTRICAL FEEDER
—D—	DATA CONDUIT, MINIMUM 1"C
—AV—	VIDEO/AUDIO CONDUIT, MINIMUM 1.25"C
	UNDERGROUND CONDUIT
	GROUNDING CONNECTION (SYSTEM AND/OR EQUIPMENT)
$M	MOTOR RATED TOGGLE SWITCH RATED FOR MOTOR AMP & HP
$MP	MOTOR RATED TOGGLE SWITCH WITH RED PILOT ON LIGHT

NOTES:

1. REF. SPECIFICATIONS FOR ADA MOUNTING HEIGHT DEVICES.
2. ALL ELECTRICAL WIRING DEVICE ON EMERGENCY CIRCUIT SHALL BE RED COLOR.
3. PROVIDE NEMA 3R DISCONNECT SWITCH IN ELECT / MECH ROOM AND OUTDOORS. REFER TO PANEL SCHEDULE FOR DISCONNECT SIZE IF NOT INDICATED.
4. PROVIDE NEMA 4X DISCONNECT SWITCH IN KITCHEN AREA. REFER TO PANEL SCHEDULE FOR DISCONNECT SIZE IF NOT INDICATED.
5. SWITCH PLATE NOTE:
   ALL SWITCHES OPERATING LOADS OTHER THAN ROOM LIGHTING SHALL BE ENGRAVED WITH BLACK LETTERS EXPLAINING SWITCH FUNCTIONS I.E. EXHAUST FAN. WORDING SHALL BE DETERMINED BY NCISD ELECTRICAL DEPARTMENT.
6. PROVIDE ENGRAVED NAMEPLATE FOR ALL SAFETY SWITCHES AND STARTERS.
7. RECEPTACLES AND TOGGLE SWITCHES CONNECTED TO EMERGENCY CIRCUIT SHALL BE RED COLOR, TYPICAL OF ALL.

LIGHTING LEGEND

SYMBOLS	DESCRIPTION
SK	LOW VOLTAGE DIGITAL KEY OPERATED LIGHT SWITCH
S3K	LOW VOLTAGE DIGITAL KEY OPERATED 3-WAY LIGHT SWITCH
S4K	LOW VOLTAGE DIGITAL KEY OPERATED 4-WAY LIGHT SWITCH
SD	DIGITAL DIMMER LIGHT WITH UP/DOWN & ON/OFF BUTTON
S1B	LOW VOLTAGE SINGLE-BUTTON LIGHT SWITCH
S2B	LOW VOLTAGE TWO-BUTTON LIGHT SWITCH
S3B	LOW VOLTAGE THREE-BUTTON LIGHT SWITCH
S4B	LOW VOLTAGE FOUR-BUTTON LIGHT SWITCH
HB	DIGITAL HIGH BAY INFRARED OCCUPANCY SENSOR
US	DIGITAL CEILING MOUNTED ULTRASONIC TECHNOLOGY OCCUPANCY SENSOR
DT US	DIGITAL CEILING MOUNTED INFRARED TECHNOLOGY OCCUPANCY SENSOR
OS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR
OS	CORNER MOUNT LIGHTING OCCUPANCY SENSOR AT +12FT
PC	PHOTO CELL FOR DAYLIGHT CONTROL
$VS	DUAL TECHNOLOGY WALL OCCUPANCY SENSOR WALL SWITCH
$IR	INFRARED WALL OCCUPANCY SESNOR WALL SWITCH, LUTRON MS-Z101
$OS	WALL OCCUPANCY SESNOR WALL SWITCH
RC#	ROOM CONTROLLER
PL	PLUG LOAD CONTROLLER
EL	REMERGENCY LIGHTING CONTROL UNIT
GTD	GENERATOR TRANSFER DEVICE FOR LIGHT FIXTURES
A a	LIGHT FIXTURE. CAPITAL LETTER INDICATES FIXTURE TYPE. LOWERCASE LETTER INDICATES ZONE CONTROLLED.
	CEILING MOUNTED EXIT SIGN. SHADED AREAS INDICATE LIGHTED SIDES.
	WALL MOUNTED EXIT SIGN. SHADED AREAS INDICATE LIGHTED SIDES.
$	20A, 125V/277V LIGHT SWITCH
$3	20A, 125V/277V 3-WAY LIGHT SWITCH
$4	20A, 125V/277V 4-WAY LIGHT SWITCH
$K	20A, 125V/277V KEY OPERATED LIGHT SWITCH
$3K	20A, 125V/277V KEY OPERATED 3-WAY LIGHT SWITCH
$4K	20A, 125V/277V KEY OPERATED 4-WAY LIGHT SWITCH
$T	TIMER SWITCH
TC	TIME CLOCK
LC	LIGHTING CONTACTOR

NOTES:

1. ALL KEY SWITCHES MUST HAVE KEY TYPE APPROVED BY OWNER.
2. MOUNTING HEIGHT FOR LIGHT SWITCHES SHALL BE AT +46" AFF. SEE SPECIFICATIONS FOR MOUNTING HEIGHT OF OTHER DEVICES.
3. FIXTURES WITH 'NL' DESIGNATE NIGHT LIGHT FIXTURES (ALWAYS ON).
4. IF ZONE NOT INDICATED. LIGHT FIXTURES SHALL BE CONTROLLED BY SWITCH IN THAT ASSOCIATED SPACE.
5. LOWERCASE LETTER AT SWITCH INDICATES ZONE CONTROLLED.
6. FOR ADJUSTABLE SENSORS, SET TIME DELAY TO 30 MINUTES AND SENSITIVITY TO 100%.
7. ALL CEILING MOUNT SENSORS SHOULD BE LOCATED A MINIMUM OF SIX FEET FROM HVAC SUPPLY/RETURN VENTS.
8. CONTRACTOR SHALL PROVIDE THE APPROPRIATE NUMBER OF ROOM CONTROLLERS FOR THE PROJECT. COORDINATE WITH THE MANUFACTURER FOR THE CORRECT QUANTITY.
9. CONTRACTOR SHALL PROVIDE 4"X4" JUNCTION BOX AS REQUIRED.

GENERAL ELECTRICAL NOTES

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. INSTALL SYSTEMS IN ACCORDANCE WITH THE 2023 NATIONAL ELECTRIC CODE.
3. ALL UNDERGROUND FEEDERS SHALL BE RED CONCRETE ENCASED.
4. PROVIDE LIGHT FIXTURE FIRE PROTECTION AND CONDUIT FIRE SEALING TO MAINTAIN FIRE RATING OF WALLS AND CEILINGS PER ARCHITECT'S SCHEDULE. REFER TO SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
5. DRAWINGS ARE DIAGRAMMATIC AND DEFINE THE INTENT OF THE WORK. LOCATIONS OF EQUIPMENT, FIXTURES, DEVICES, PANELBOARDS, DUCTS, PIPING, DIFFUSERS, PARTITIONS, OPENINGS, ETC. ARE APPROXIMATE AND ARE SUBJECT TO MODIFICATIONS CAUSED BY STRUCTURAL CONDITIONS AND EQUIPMENT PROVIDED BY OTHER CONTRACTORS, SUBCONTRACTORS OR THE OWNER. COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES. 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. MINOR MODIFICATIONS OF LOCATIONS REQUIRED TO EFFECT SUCH COORDINATION SHALL BE MADE AT NO COST TO THE OWNER.
   SPECIFICATIONS MAY REQUIRE WORK, EQUIPMENT, SYSTEMS, METHODS, ETC. THAT IS NOT INDICATED ON THE DRAWINGS.
6. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLEMENTARY TO EACH OTHER. WHERE DISCREPANCIES OR CONFLICTS OCCUR, THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY METHOD IN HIS PROPOSAL UNLESS CLARIFIED BY BULLETIN OR ADDENDUM ACKNOWLEDGED PRIOR TO RECEIPT OF BIDS.
7. DRAWINGS SHALL NOT BE SCALED. DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND REQUIREMENTS OF THE WORK. ALTHOUGH SIZE AND LOCATION OF EQUIPMENT IS DRAWN TO SCALE WHEREVER POSSIBLE, CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY INFORMATION AT THE PROJECT SITE.
8. THE TERM "OTHERS" SHALL BE UNDERSTOOD TO MEAN CONTRACTORS, SUBCONTRACTORS OR TRADESMEN ON THE PROJECT PERFORMING WORK ON THIS PROJECT UNDER SECTIONS OR DIVISIONS OTHER THAN DIVISION 16 - ELECTRICAL WORK.
9. VERIFY THAT FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS INDICATED.
10. PRIOR TO BIDDING VISIT THE PROJECT SITE TO DETERMINE THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. SCHEDULE SITE VISIT WITH OWNER.
11. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR THE INSTALLATION, RELOCATION AND CONNECTION OF THE ELECTRICAL WORK.
12. ALL MATERIAL SHALL BE UNDERWRITERS' LABORATORIES LISTED FOR ITS APPLICATION WHERE SUCH LISTING IS APPLICABLE.
13. ALL EQUIPMENT SHALL BE AS INDICATED OR AS APPROVED BY THE ENGINEER.
14. SUBMIT SHOP DRAWINGS, PRODUCT DATA SHEETS AND WIRING DIAGRAMS FOR ALL ELECTRICAL CONSTRUCTION MATERIALS, DEVICES, EQUIPMENT, APPLIANCES AND SYSTEMS.
15. REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER TRADES FOR EQUIPMENT LOCATIONS AND CONTROLS.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF DEBRIS GENERATED BY HIS WORK AND WORKERS AT THE END OF EACH WORKING DAY AND FOR GENERAL GOOD HOUSEKEEPING BY HIS WORKERS. CONTRACTOR SHALL PROVIDE REQUIRED REFUSE CONTAINERS.
17. WIRING RUNS INDICATED ON THE DRAWINGS EXPRESS THE INTENT OF CIRCUIT ASSIGNMENT AND SWITCH CONTROL. ACTUAL WIRING METHODS USED SHALL BE SUITED FOR THE CONSTRUCTION OF THE BUILDING. REFER TO DRAWINGS OF OTHER TRADES AND EXISTING CONDITIONS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS. NUMBER OF CONDUCTORS IS NOT ALWAYS INDICATED.
18. PERFORM MANUFACTURER'S RECOMMENDED TESTS AND SUBMIT RESULTS.
19. VERIFY PROPER ROTATION OF ALL ROTATING ELECTRICAL MACHINERY.
20. TEST SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, CABLES, BUS DUCTS, SWITCHES, CIRCUIT BREAKERS, GROUNDING SYSTEM, GROUND FAULT PROTECTION SYSTEM, SURGE ARRESTORS AND TVSS DEVICES, GENERATORS, AND TRANSFER SWITCHES IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CURRENT EDITION OF THE INTERNATIONAL ELECTRICAL TESTING ASSOCIATION ACCEPTANCE TESTING SPECIFICATIONS FOR ELECTRIC POWER DISTRIBUTION EQUIPMENT AND SYSTEMS (NETA ATS). PERFORM EACH VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST LISTED.
21. CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY CONFLICT DISCOVERED BEFORE PERFORMING ANY WORK RELATED TO SUCH CONFLICT.
22. DO NOT INSTALL ELECTRICAL PANELS, SWITCHBOARDS AND TRANSFORMERS BELOW DUCT WORK AND WATER PIPING. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT ELECTRICAL REQUIREMENT OF HVAC EQUIPMENT PRIOR TO ORDERING CIRCUIT BREAKERS AND WIRE.
23. COORDINATE ELECTRICAL EQUIPMENT WITH PIPING AND DUCTWORK. PROVIDE ADEQUATE WORKING CLEARANCE PER NEC PRIOR TO ROUGH-IN.
24. EXACT LOCATION OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD.
25. PERFORM ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE WORK. CUT NO STRUCTURAL MEMBER WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. FINISH AND PAINT ALL PATCHED SURFACES WITH TWO COATS OF PAINT TO MATCH EXISTING SURFACES AS CLOSELY AS POSSIBLE. SEAL OPENINGS VERMIN AND WATER PROOF AND MAINTAIN FIRE RATING. USE SPECIFIED TECHNOLOGIES, INC. "SPECSEAL" SERIES LCI FOR PENETRATIONS
26. ALL PENETRATIONS IN FOUNDATION WALLS AND FLOORS INCLUDING SLAB PENETRATIONS SHALL BE SUBSTANTIALLY SEALED BY UTILIZING A NON-CRACKING POLYURETHANE OR SIMILAR CAULK OR EQUIVALENT TO CLOSE OFF THE SOIL GAS ENTRY ROUTES. ALL CONDUITS IN THE SPACE BELOW THE FOUNDATION FLOOR WHICH PENETRATE THESE BARRIERS SHALL HAVE THREADED OR SOLVENTED FITTINGS.
27. ALL NEW RACEWAY, WIRING AND CABLE IN NEW AND EXISTING FINISHED SPACES SHALL BE RUN CONCEALED IN NEW AND EXISTING CONSTRUCTION UNLESS OTHERWISE INDICATED; CUT AND PATCH AS REQUIRED. PROVIDE PULLBOXES, SIZE AND TYPE AS REQUIRED.
28. ALL NEW WIRING IS TO BE RUN CONCEALED WHERE POSSIBLE. PROVIDE PULLBOXES, SIZE AND LOCATION AS REQUIRED.
29. EXPOSED RACEWAY, IF PERMITTED, SHALL BE RUN TRUE, PLUMB AND PARALLEL OR PERPENDICULAR TO BUILDING LINES. [RIGID METAL CONDUIT,] [EMT WITH RAINTIGHT STEEL FITTINGS,] 3/4 INCH MINIMUM, SHALL BE USED OUTDOORS; ELECTRICAL METALLIC TUBING, 3/4 INCH MINIMUM, SHALL BE USED IN INDOOR UNFINISHED SPACES.
30. ALL WIRING SHALL BE COPPER CONDUCTOR WITH 600 VOLTS INSULATION IN METAL RACEWAY WITH APPROVED FITTINGS UNLESS OTHERWISE INDICATED.
31. SERVICE ENTRANCE CONDUCTORS UNDERGROUND IN RACEWAY: TYPE THHN-THWN 90 DEGREE C. WHERE EXPOSED WITHIN THE BUILDING OR STRUCTURE, ENCASE RACEWAY IN CONCRETE, MINIMUM 2-INCHES THICK.
32. FEEDERS AND BRANCH CIRCUITS UNDERGROUND IN RACEWAY: TYPE THHN-THWN 90 DEGREE C
33. INTERIOR FEEDERS AND BRANCH CIRCUITS IN RACEWAY: TYPE THHN 90 DEGREE C.
34. ELEVATOR FEEDER: TYPE THHN, 90 DEGREE C.
35. FEEDERS SHALL BE MINIMUM #8 AWG; BRANCH CIRCUIT WIRING MINIMUM #12 AWG; CONTROL WIRING MINIMUM #14 AWG; UNLESS OTHERWISE INDICATED. FEEDER AND BRANCH CIRCUIT WIRING LARGER THAN #10 AWG SHALL BE STRANDED CONDUCTOR; #10 AWG AND SMALLER, STRANDED CONDUCTOR OR SOLID CONDUCTOR; CONTROL WIRING, STRANDED CONDUCTOR.
36. DO NOT INSTALL CONDUCTORS, WIRES OR CABLES OF ANY OTHER SYSTEM IN THE SAME RACEWAY OR CABLE WITH FIRE ALARM POWER SUPPLY CIRCUITS, NON-POWER LIMITED FIRE ALARM CIRCUITS OR POWER LIMITED FIRE ALARM CIRCUITS.
37. MAKE FLEXIBLE CONNECTIONS TO MOTORS AND OTHER ROTATING / VIBRATING EQUIPMENT.
38. WIRE EXIT LIGHTS AND EMERGENCY FIXTURES (BUGEYES) SHALL BE CIRCUITED TO THE UNSWITCHED SIDE OF THE LIGHTING CIRCUITED FEEDING THE ASSOCIATED AREA.
39. PROVIDE DISCONNECTS FOR ALL APPLIANCES, EQUIPMENT, MOTORS AND CONTROLLERS.
40. INSTALL MOTOR STARTERS, CONTROLLERS OR COMBINATION STARTERS FURNISHED FOR EACH MOTOR. LOCATE AS DIRECTED IN THE FIELD.
41. PROVIDE UNSWITCHED 125 VOLT, 20 AMP RECEPTACLE OUTLETS LOCATED ON THE SAME LEVEL AND WITHIN 25 FEET OF ALL HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT UNLESS OTHERWISE NOTED.
42. PROVIDE PERMANENTLY INSTALLED LIGHTING OUTLETS TO ILLUMINATE THE AREAS IN ATTICS OR CRAWL SPACES IN WHICH EACH PIECE OF HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT IS LOCATED. PROVIDE LUMINAIRE, LAMP AND LIGHT SWITCH APPROPRIATE FOR THE LOCATION. INSTALL LIGHT SWITCH NEAR THE ACCESS TO THE AREA UNLESS OTHERWISE NOTED.
43. ROUTE RACEWAYS THROUGH ROOF USING DEDICATED ROOF JACKS OR PITCH POCKETS. RUN RACEWAY ON ROOF ON DEDICATED ROOF SUPPORTS EIGHT INCHES HIGH MINIMUM.
44. ALL 125 VOLT, SINGLE PHASE, 15- AND 20-AMPERE SINGLE AND DUPLEX RECEPTACLES WHICH DO NOT SERVE A DEDICATED APPLIANCE AND ARE WITHIN A 6 FOOT RADIUS OF A SINK, ARE INSTALLED IN WET LOCATIONS, ARE INSTALLED IN BATHROOMS, ON ROOFS, OR OUTDOORS WITH DIRECT GRADE ACCESS, SHALL BE GROUND FAULT CIRCUIT INTERRUPTING TYPE WHERE AVAILABLE OR SHALL BE PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTING CIRCUIT BREAKERS.
45. THE EMERGENCY SYSTEM CONSISTS OF ALL FEEDERS AND BRANCH CIRCUITS INDICATED AS THE LIFE SAFETY AND CRITICAL BRANCHES. THE WIRING OF THE EMERGENCY SYSTEM SHALL BE IN RUN IN ELECTRICAL METALLIC TUBING IN ACCORDANCE WITH NEC 517-30(C)(3).
46. CONTRACTOR SHALL PROVIDE FIELD MARKINGS ON ELECTRICAL SERVICE EQUIPMENT TO INCLUDE THE AVAILABLE SHORT CIRCUIT RATING FROM THE UTILITY PER NEC 110.24.
47. CONTRACTOR SHALL PROVIDE AND INSTALL A LOCAL LOCKABLE DISCONNECT SWITCH BY EACH PIECE OF MOTORIZED OR PACKAGED EQUIPMENT. DISCONNECT AMPACITY RATING SHALL AT LEAST MATCH THAT OF THE UPSTREAM CIRCUIT BREAKER PROTECTING THE EQUIPMENT. INDOOR DISCONNECTS SHALL BE NEMA 1 TYPE AND OUTDOOR DISCONNECTS SHALL BE NEMA 3R TYPE. DISCONNECTS IN KITCHEN AREAS SHALL BE NEMA 4X TYPE.
48. 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.
49. 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.
50. MINIMUM SIZE CONDUIT FOR POWER SHALL BE 3/4". FLEX METAL CONDUIT IN WET AND DAMP LOCATION SHALL HAVE LIQUID TIGHT CONSTRUCTION. MINIMUM SIZE CONDUIT FOR DATA SHALL BE 1"C. DO NOT COMBINE CONDUIT FOR DATA.
51. MAX. LENGTH FOR FLEX CONDUIT SHALL BE 6 FT. ALL FLEX CONDUIT SHALL BE UL LISTED AND NEC APPROVED FOR GROUNDING.
52. 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. INSTALL ANTI-SHORT BUSHINGS IN EACH END OF FLEX CONDUIT. DO NOT LOOP FLEXIBLE CONDUIT BETWEEN LIGHT FIXTURES.
53. ALL WIRING SHALL BE 90°C RATED STRANDED COPPER INSTALLED IN CONDUIT. MINIMUM CIRCUIT SIZE SHALL BE #12.
54. PROVIDE J-BOXES, CONDUIT & SLEEVES THRU FIRE WALLS AND FLOORS FOR DATA, TEL., SECURITY, TV, FIRE ALARM & SOUND SYSTEMS WIRINGS, ETC. SEE SPECIFICATIONS.
55. ALL CONDUIT AND SUPPORTS TO BE PERPENDICULAR OR PARALLEL TO THE BUILDING STRUCTURE; NO ODD ANGLES UNLESS OTHERWISE APPROVED BY OWNER.
56. 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.
57. PROVIDE SEALING FITTINGS FOR CONDUIT SERVING NATURAL GAS SOLENOID VALVES, PURGE FANS AND FUME HOODS IN SCIENCE LABS AND PREP. ROOM PER NEC ARTICLE 500.
58. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT ELECTRICAL REQUIREMENT OF CHILLERS, PUMPS, AUH(S) AND OTHER HVAC EQUIPMENT PRIOR TO ORDERING CIRCUIT BREAKERS, DISCONNECT SWITCHES, AND STARTERS.
59. DO NOT INSTALL ELECTRICAL PANELS, SWITCHBOARDS AND TRANSFORMERS BELOW DUCT WORK AND WATER PIPING. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT ELECTRICAL REQUIREMENT OF HVAC EQUIPMENT PRIOR TO ORDERING CIRCUIT BREAKERS AND WIRE.
60. COORDINATE ELECTRICAL EQUIPMENT WITH PIPING AND DUCTWORK. PROVIDE ADEQUATE WORKING CLEARANCE PER NEC PRIOR TO ROUGH-IN.
61. EXACT LOCATION OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD.
62. GROUNDING AND BONDING SHALL MEET NEC AND EQUIPMENT / SYSTEM MANUFACTURER'S REQUIREMENTS.
63. 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.

ELECTRICAL ABBREVIATIONS

A	AMPERE	MCB	MAIN CIRCUIT BREAKER
AC	ALTERNATING CURRENT	MCC	MOTOR CONTROL CENTER
AFCI	ARC FAULT CIRCUIT INTERRUPTER	MF	MAIN FUSE
AFF	ABOVE FINISHED FLOOR	MH	MOUNTING HEIGHT
AIC	AMPERE INTERRUPTING CAPACITY	MLO	MAIN LUGS ONLY
AL	ALUMINUM	MT	MOUNT
ATS	AUTOMATIC TRANSFER SWITCH	MTG	MOUNTING
AWG	AMERICAN WIRE GAUGE	NC	NORMALLY CLOSED
BKR	BREAKER	NEC	NATIONAL ELECTRICAL CODE
CB	CIRCUIT BREAKER	NF	NON FUSED
CATV	COMMUNITY ANTENNA TELEVISION	N

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FLOOR BOX/POKE THRU SCHEDULE

SYMBOLS	DESCRIPTION
F1	8-GANG FLOOR BOX: LEGRAND WIREMOLD EVOLUTION SERIES WITH FLUSH FLANGE AND THE FOLLOWING DEVICE(S): (4) 120V, 1Ø, 20A DUPLEX RECEPTACLE, 4 DATA, 1 HDMI (HDBASE-T,LEGRAND), VERIFY FINAL FINISH OF FLOOR BOX COVER WITH ARCHITECT. HD-BASE T FROM FLOOR BOX TO WALL DISPLAY.
F2	8-GANG FLOOR BOX: LEGRAND WIREMOLD EVOLUTION SERIES EFB8S-FC WITH FLUSH FLANGE AND THE FOLLOWING DEVICE(S): (4) 120V, 1Ø, 20A DUPLEX RECEPTACLES, (4) COMMUNICATIONS PORTS, 1 HDMI (HDBASE-T, LEGRAND), VERIFY FINAL FINISH OF FLOOR BOX COVER WITH ARCHITECT. HD-BASE T FROM FLOOR BOX TO WALL DISPLAY.
F3	WIREMOLD 6" BRASS POKE THRU #RC4ATCBS WITH (4) COMMUNICATIONS PORTS AND THE FOLLOWING DEVICE(S): (2) 120V, 1Ø, 20A DUPLEX RECEPTACLES.

AUDIO/VIDEO LEGEND

SYMBOLS	DESCRIPTION
TV IN	AUDIO & VIDEO STATION FOR TV INPUT (HDMI VIA HD BASET, LEGRAND)
TV O	AUDIO & VIDEO STATION FOR TV OUTPUT (HDMI VIA HD BASET, LEGRAND)
AUD IN	AUDIO INPUT STATION FROM LOCAL SOUND SYSTEM TO DISPLAY
AUD OUT	AUDIO OUTPUT STATION FROM LOCAL SOUND SYSTEM TO DISPLAY
USB IN	USB INPUT STATION
USB OUT	USB OUTPUT STATION
S A	AUX. SPEAKER
VCS	VOLUME CONTROL STATION
TV	CEILING AUDIO & VIDEO INPUT STATION (HDMI, VGA & 3.5MM AUDIO) FOR TV

SECURITY SYSTEM LEGEND

SYMBOLS	DESCRIPTION
GB	CEILING MOUNTED GLASS BREAK SENSOR
MS	CEILING MOUNTED MOTION SENSOR
MS	WALL MOUNTED MOTION SENSOR
ML	CEILING MOUNTED LONG RANGE MOTION SENSOR
ML	WALL MOUNTED LONG RANGE MOTION SENSOR
DC	DOOR CONTACT WITH TWO CONTACTS ONE FOR SECURITY ANOTHER FOR ACCESS CONTROL
SR	30W SIREN FOR SECURITY SYSTEM, INSTALLED ABOVE RETURN AIR SUPPLY.
SKP	SECURITY KEYPAD
PB	SECURITY PUSH BUTTON BELOW RECEPTION DESK TO CONTROL ENTRY DOORS
+60" 2T 1D SCP	SECURITY CONTROL PANEL PROVIDE TWO PHONE LINES AND ONE DATA DROP
CR	CARD READER
REX	REQUEST FOR EXIT
EPT	ELECTRIC POWER TRANSFER
EL	ELECTRIC LOCK
DR	DOOR RELEASE
LD	LOCK DOWN BUTTON
MAP	MASTER AIPHONE AND CONTROL STATION W/ BUILT-IN MONITOR
MG	MAG LOCK
AP	WEATHERPROOF OUTDOOR AIPHONE STATION

CAMERA SYSTEM LEGEND

SYMBOLS	DESCRIPTION
C-X	CEILING MOUNTED SECURITY CAMERA
C-X	WALL OR CORNER MOUNTED SECURITY CAMERA
C-X WP	OUTDOOR CEILING MOUNTED SECURITY CAMERA
C-X WP	OUTDOOR WALL OR CORNER MOUNTED SECURITY CAMERA
+60" 1D CCTV	CCTV HEADEND EQUIPMENT

"C-X" INDICATES CAMERA TYPE

C-1: 4MP (DWC-V5DG04Bi) (FIXED SENSOR)
C-2: 4K (i-PRO WV-S8570Z-F3L) (PANORAMIC 180)
C-3: 4K (Hanwha QNV-C9011R) (FIXED SENSOR)
C-4: 4K (i-PRO WV-S8573LG)(MULTI-SENSOR 270)

NOTE:

ALL DATA DROP & DATA CABLING FOR CAMERAS SHALL BE PROVIDED BY DATA CABLING SUBCONTRACTOR. GENERAL CONTRACTOR SHALL COORDINATE WITH DATA CABLING SUBCONTRACTOR TO PROVIDE (1) DATA DROP FOR EACH CAMERA INCLUDED IN BASE PROPOSAL.

DATA DEVICE LEGEND

SYMBOLS	DESCRIPTION
1D	DATA OUTLET WITH ONE DATA DROP WITH 1" CONDUIT.
2D	DATA OUTLET WITH TWO DATA DROPS WITH 1" CONDUIT.
3D	DATA OUTLET WITH THREE DATA DROP WITH 1" CONDUIT.
4D	DATA OUTLET WITH FOUR DATA DROP WITH 1" CONDUIT.
1T	VOICE OUTLET WITH ONE VOICE DROP WITH 1" CONDUIT.
2T	VOICE OUTLET WITH TWO VOICE DROPS WITH 1" CONDUIT.
3T	VOICE OUTLET WITH THREE VOICE DROPS WITH 1" CONDUIT.
4T	VOICE OUTLET WITH FOUR VOICE DROPS WITH 1" CONDUIT.
WAP	WI-FI DATA OUTLET WITH ONE DATA DROP WITH 1" CONDUIT. CEILING MOUNTED.
WAP	WI-FI DATA OUTLET WITH TWO DATA DROPS WITH 1" CONDUIT. CEILING MOUNTED.
1D 1T	OUTLET WITH ONE DATA DROP & ONE VOICE DROP WITH 1" CONDUIT.
1D 2T	OUTLET WITH ONE DATA DROP & TWO VOICE DROPS WITH 1" CONDUIT.
2D 1T	OUTLET WITH TWO DATA DROPS & ONE VOICE DROP WITH 1" CONDUIT.
2D 2T	OUTLET WITH TWO DATA DROP & TWO VOICE DROP WITH 1" CONDUIT.
1D 2D	CEILING DATA DROPS: 1D = 1 DATA DROP; 2D = 2 DATA DROPS, ETC. ABOVE CEILING W/ DATA IN BISCUIT BOX.
D	DATA FEED TO SYSTEM FURNITURE, WALL MOUNTED. PROVIDE FLEXIBLE WHIP CONNECTION TO THE FURNITURE AS REQUIRED.

NOTE:

1. ALL DATA DROP(S) & DATA CABLING SHALL BE PROVIDED BY DATA CABLING SUBCONTRACTOR. GENERAL CONTRACTOR SHALL COORDINATE WITH DATA CABLING SUBCONTRACTOR TO PROVIDE CABLE AS NECESSARY.

INTEGRATED AUDIO/ PHONE LEGEND

SYMBOLS	DESCRIPTION
S	SPEAKER, CEILING MOUNTED
S	SPEAKER, WALL MOUNTED
	LAY-IN SPEAKER
	PENDANT SPEAKER, CEILING MOUNTED
V	VOLUME CONTROL SWITCH, WALL-MOUNTED
	WALL-MOUNTED PHONE HANDSET (1D DROP)
	DESK-MOUNTED PHONE HANDSET (1D DROP)
AH	DESK-MOUNTED ADMINISTRATIVE HANDSET
M	MICROPHONE OUTLET
I	REMOTE IPOD PORT
	CALL SWITCH
X	CEILING MOUNTED BOX WITH 80 WATT AMPLIFIER AND 120 VOLT RECEPTACLE.

Date

Revision /

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/18/2025

Huckabee
www.huckabee-inc.com
800.687.1229

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LEGEND, NOTES, AND ABBREVIATIONS

PACKAGE	VOLUME
Job No.: 1971-05-01	Sheet No.: ISSUED FOR BID E0.01
Drawn By: HB/BRH	
Date: 09/18/2025	

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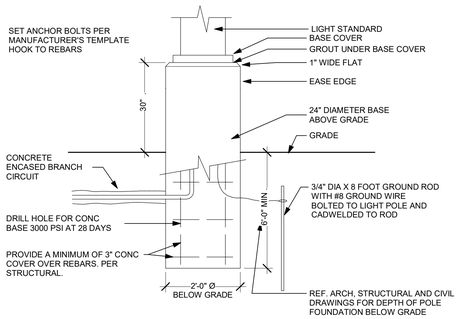
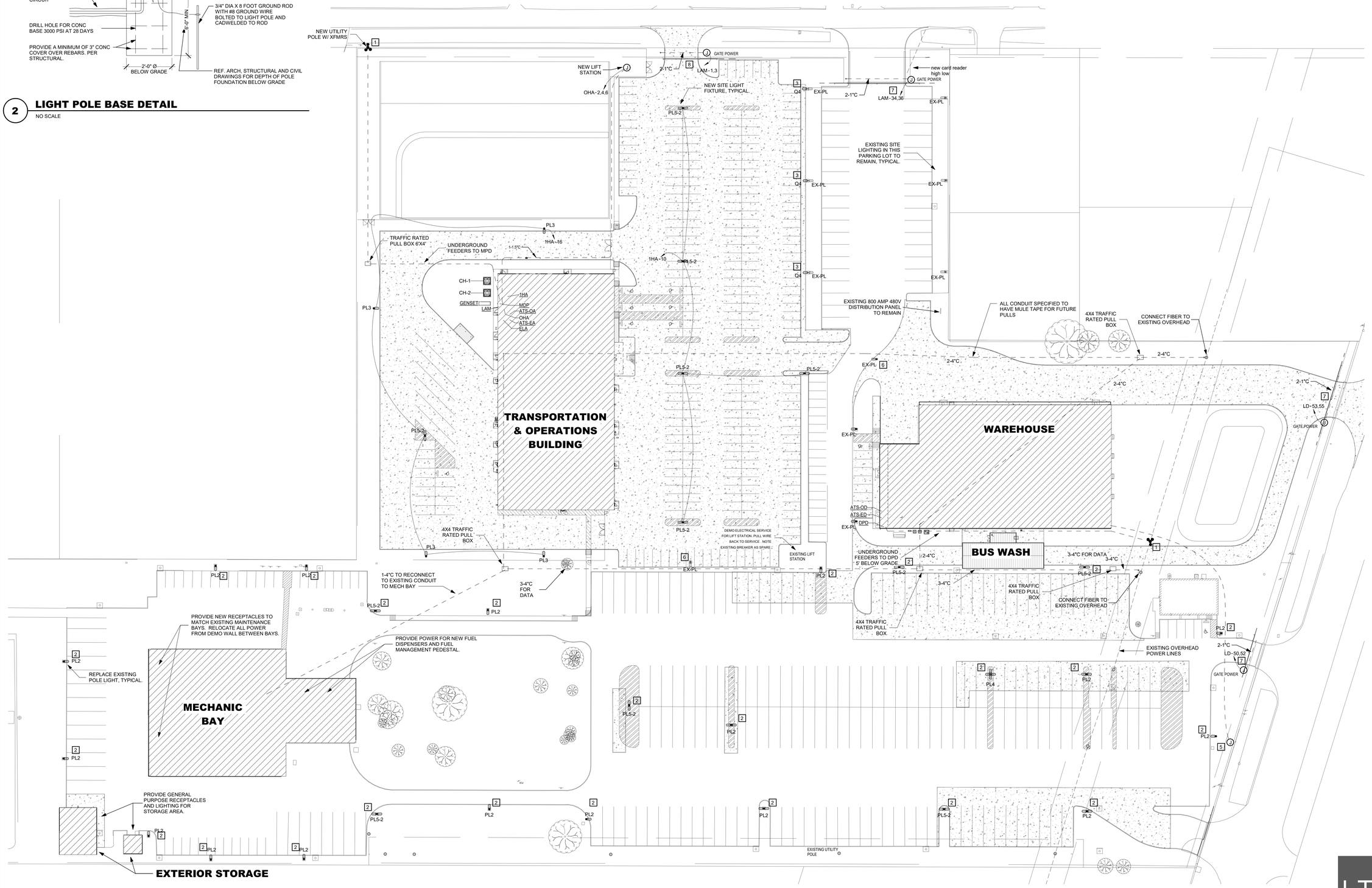


2 LIGHT POLE BASE DETAIL

NO SCALE

SITE KEY NOTES

1. PROPOSED LOCATION OF POLE MOUNTED UTILITY TRANSFORMER AND RISER.
2. EXISTING FIXTURE TO BE REPLACED. POLE BASE TO REMAIN. ENSURE WIRE SIZE IS MAINTAINED AND PROTECTED.
3. EXISTING LIGHT POLE, POLE TO REMAIN AND CONTRACTOR TO ADD FIXTURE HEAD.
4. NOT USED
5. REMOVE EXISTING FLOOD LIGHTS CIRCUITRY AND PROVIDE NEW AS SHOWN.
6. DEMO EXISTING POLE, RECONNECT EXISTING CONDUIT AND REPLACE WIRE WITH NEW FROM PANEL TO NEXT EXISTING LIGHT POLE TO REMAIN.
7. PROVIDE KEYPAD ON BOTH SIDES OF GATE. INTERCONNECT TO ACCESS CONTROL SYSTEM. PEDESTAL TO BE HIGH LOW WITH CARD READERS AT BOTH LEVELS. PROVIDE WITH KEYPAD AND CARD READER.
8. PROVIDE KEYPAD ON BOTH SIDES OF GATE. INTERCONNECT TO ACCESS CONTROL SYSTEM. PEDESTAL TO BE CAR HEIGHT. PROVIDE WITH KEYPAD AND CARD READER.



1 ELECTRICAL SITE PLAN

SCALE= 1" = 40'-0"

N TRUE

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Revision / Date

Project: NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D. NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/10/2025

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ELECTRICAL SITE PLAN

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. ISSUED FOR BID
Drawn By: HB/BRH	E1.00
Date: 09/18/2025	

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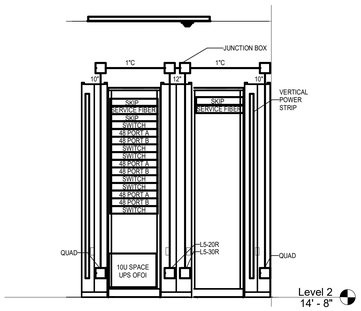

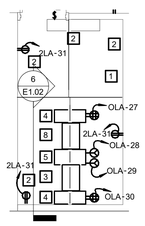

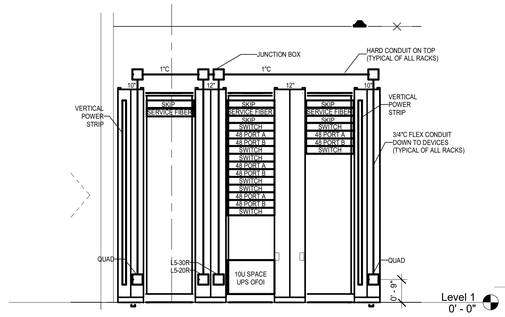

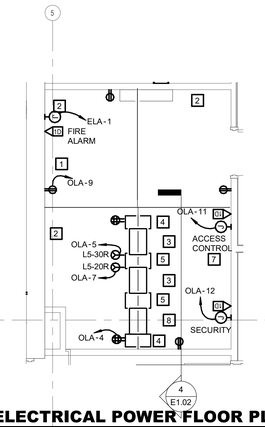

6 IDF ELEVATION - OPERATIONS
SCALE= 1/2" = 1'-0"

5 ELECTRICAL POWER FLOOR PLAN - IDF
SCALE= 1/4" = 1'-0"

4 MDF ELEVATION - OPERATIONS
SCALE= 1/2" = 1'-0"

3 ELECTRICAL POWER FLOOR PLAN - MDF
SCALE= 1/4" = 1'-0"

ELECTRICAL TECHNOLOGY KEY NOTES

1. INDICATES THE LOCATION OF A NEW WALL MOUNTED TELECOMMUNICATION GROUND BUS BAR (TGBB). CABLING CONTRACTOR TO PROVIDE BUS BAR AND ALL REQUIRED MATERIAL TO MOUNT AT THE LOCATION SHOWN. TGBB TO BE MOUNTED AT +18" AFF. RE: SHEET 12.40.
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3. PROVIDE AND INSTALL (1) RACK PER SPECIFICATIONS. PROVIDE BONDING WASHERS, BOLTS, AND NUTS AT ALL MECHANICALLY CONNECTED LOCATIONS OF THE RACK TO INSURE THAT ALL PIECES OF THE RACK ARE COMPLETELY BONDED. SCRAPING PAINT FROM RACKS TO MAKE A BOND WILL NOT BE ACCEPTED. ALL RACK MOUNTED COMPONENTS SHALL BE MOUNTED WITH BONDING SCREWS AND THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (50) ADDITIONAL BONDING SCREWS FOR THE INSTALLATION OF OWNER EQUIPMENT. NO DAISY CHAINING GROUNDS FROM RACK TO CABLE TRAY OR TO OTHER RACKS WILL BE ACCEPTED. ALL GROUNDS SHALL BE HOME RUN TO THE TELECOMMUNICATIONS GROUND BUS BAR (TGBB). TYPICAL FOR ALL SHOWN ON THE ENTIRE PROJECT.
4. PROVIDE AND INSTALL ONE (1) 7"X10", FRONT AND REAR MANAGED, VERTICAL CABLE MANAGER. CABLE MANAGERS SHALL BE INSTALLED ON EACH END OF THE RACK SYSTEMS. CABLE MANAGERS SHALL HAVE A SINGLE, SOLID, FULL HEIGHT HINGED DOOR IN THE FRONT AND WIDE SPACES CABLE RINGS WITH SPIN-OPEN LATCHES IN THE REAR. RE: SPECIFICATIONS.
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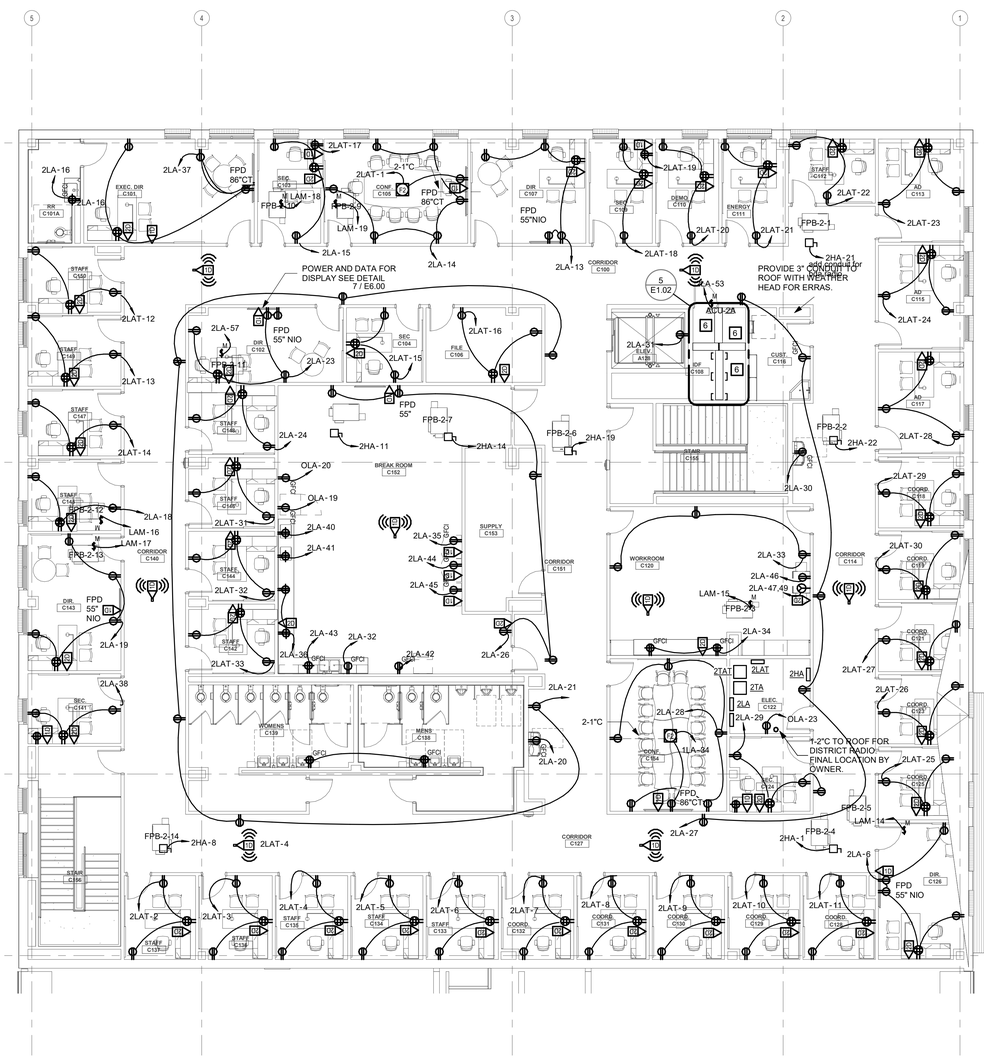
6. PROVIDE AND INSTALL A UNIVERSAL LADDER TRAY PER SPECIFICATIONS AND ALL REQUIRED MOUNTING HARDWARE.
7. INDICATES THE LOCATION THAT IS TO BE RESERVED FOR THE ACCESS CONTROL SYSTEM MAIN CONTROL PANEL.
8. PROVIDE AND INSTALL (1) RACK PER SPECIFICATIONS, DEDICATED FOR ATT FIBER PROVIDER. PROVIDE BONDING WASHERS, BOLTS, AND NUTS AT ALL MECHANICALLY CONNECTED LOCATIONS OF THE RACK TO INSURE THAT ALL PIECES OF THE RACK ARE COMPLETELY BONDED. SCRAPING PAINT FROM RACKS TO MAKE A BOND WILL NOT BE ACCEPTED. ALL RACK MOUNTED COMPONENTS SHALL BE MOUNTED WITH BONDING SCREWS AND THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (50) ADDITIONAL BONDING SCREWS FOR THE INSTALLATION OF OWNER EQUIPMENT. NO DAISY CHAINING GROUNDS FROM RACK TO CABLE TRAY OR TO OTHER RACKS WILL BE ACCEPTED. ALL GROUNDS SHALL BE HOME RUN TO THE TELECOMMUNICATIONS GROUND BUS BAR (TGBB).


POWER AND DATA FOR DISPLAY SEE DETAIL 7 / E6.00
PROVIDE 3" SLEEVE 4'-0" ABOVE ROOF WITH WEATHER HEAD FOR ERRAS.
1-2°C TO ROOF FOR DISTRICT RADIO. FINAL LOCATION BY OWNER.
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ACU-2B
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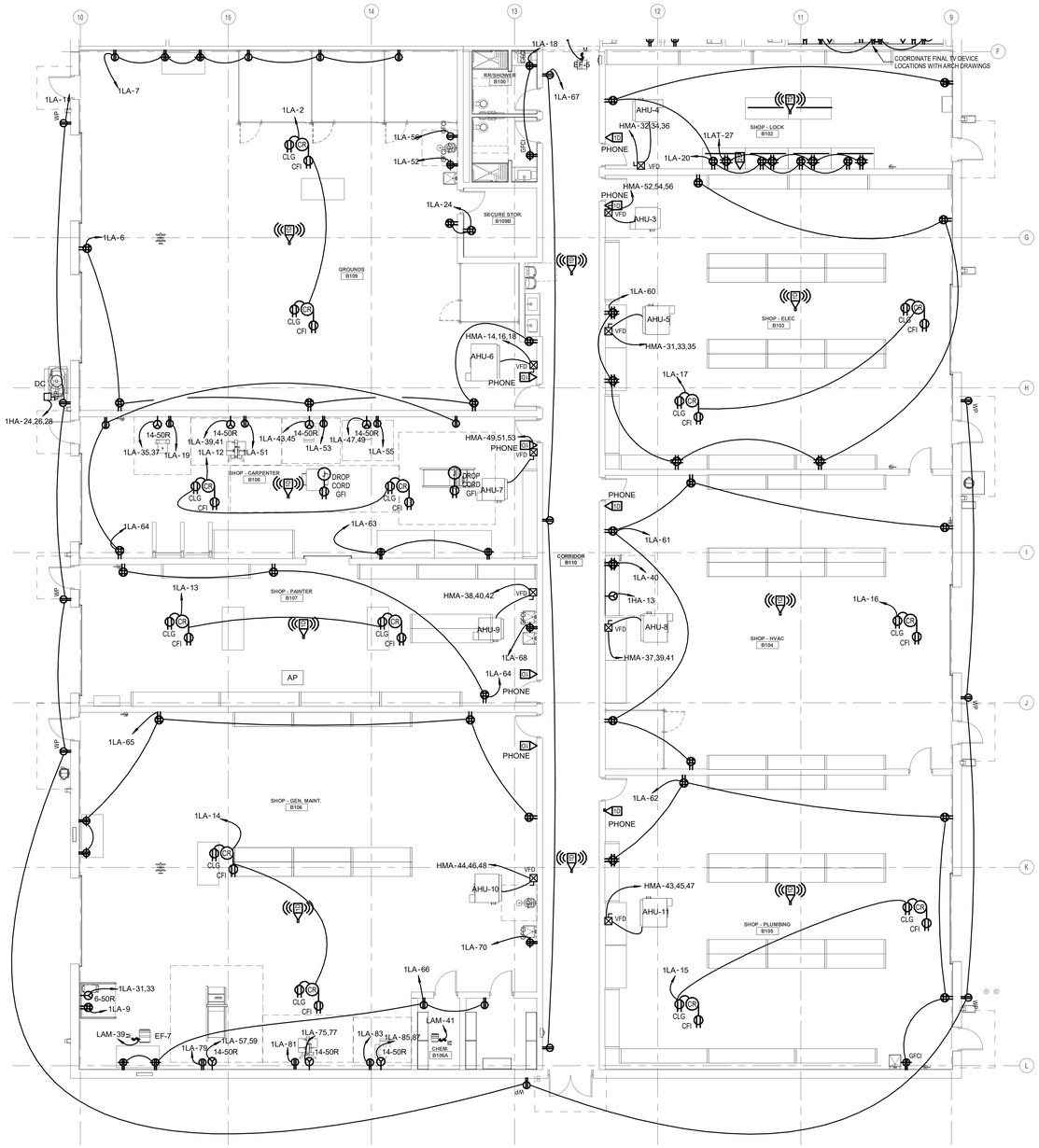

GENERAL POWER NOTES:

1. CONTRACTOR SHALL VERIFY DEVICE LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL CASEWORK AND MILLWORK ELEVATIONS.
2. FINAL LOCATION OF RECEPTACLES TO BE COORDINATED WITH THE FF&E LAYOUT.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL EXHAUST AND SUPPLY FAN CONTROLS. PROVIDE A FAN SWITCH IF INDICATED BY MECHANICAL. ALL EXHAUST FANS SHALL BE PROVIDED WITH BUILT-IN DISCONNECT SWITCH.
4. CONTRACTOR SHALL INDICATE CIRCUIT SERVING EACH RECEPTACLE BY PROVIDING TYPE WRITTEN LABEL LOCATED ON INSIDE FACE OF EACH RECEPTACLE COVER PLATE.
5. CONTRACTOR SHALL ARRANGE PANEL BOARD IN ELECTRICAL ROOM TO PROVIDE CLEARANCE PER NEC 110.26.
6. ENSURE ALL ELECTRICAL AND MECHANICAL EQUIPMENT HAVE PROPER WORKING CLEARANCE PER NEC REQUIREMENTS.
7. ALL RECEPTACLES LOCATED IN RESTROOMS, JANITOR CLOSETS, MECHANICAL ROOMS, ELEVATOR PITS OR SHAFTS, SERVING ELECTRIC DRINKING FOUNTAINS OR VENDING MACHINES, LOCATED WITHIN 6' OF A SINK, LOCATED ABOVE A WET COUNTERTOP SHALL BE GFCI. EACH GFCI PROTECTED RECEPTACLE SHARING THE SAME CIRCUIT SHALL HAVE ITS OWN RESET AND TEST BUTTON.
8. PROVIDE REMOTE GFCI PUSH-BUTTON IN READILY ACCESSIBLE LOCATION FOR ALL VENDING MACHINES, REFRIGERATORS, ICE MACHINES, DISHWASHERS AND GLASSWARE WASHERS.
9. REFER TO TECHNOLOGY DRAWINGS FOR EXACT MOUNTING HEIGHTS AND LOCATIONS OF ALL POWER OUTLETS.
10. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND BACKBOX FOR ALL THERMOSTAT (T-STAT) LOCATIONS. COORDINATE WITH LIGHT SWITCH LOCATION. REFER TO MECHANICAL DRAWINGS FOR T-STAT LOCATIONS.
11. ALL INDOOR DISCONNECTS SHALL BE NEMA 1 ENCLOSURE. ALL OUTDOOR DISCONNECTS SHALL BE NEMA 3R ENCLOSURE. REFER TO PANEL SCHEDULES FOR DISCONNECT SIZE.
12. FOR ALL NEMA RECEPTACLES, CONTRACTOR TO FIELD VERIFY CORRECT NEMA CONFIGURATION WITH MANUFACTURER PRIOR TO INSTALL.

N TRUE

1 ELECTRICAL POWER FLOOR PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

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

A / C
B
D

KEY PLAN
N.T.S.

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
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POWER FLOOR PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. ISSUED FOR BID E1.03
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Date: 09/18/2025	

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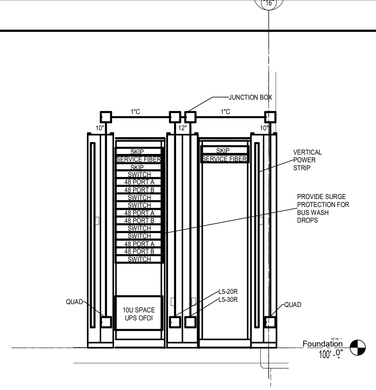
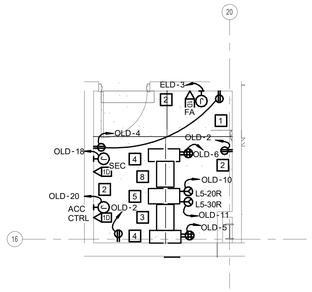


3 IDF ELEVATION - WAREHOUSE

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



2 ELECTRICAL POWER FLOOR PLAN - WAREHOUSE - IDF

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

POWER KEY NOTES

1. ACU POWERED FROM OUTSIDE UNIT. PROVIDE CONDUIT PATHWAYS BACK TO EXTERIOR UNIT FOR POWER AND COMMUNICATION.
2. 2 SETS OF 4-4" CONDUIT. ONE SET FROM MDF ROOM TO UTILITY POLE. SECOND SET FROM MDF TO MDF LOCATED IN OPERATIONS BUILDING.

GENERAL POWER NOTES:

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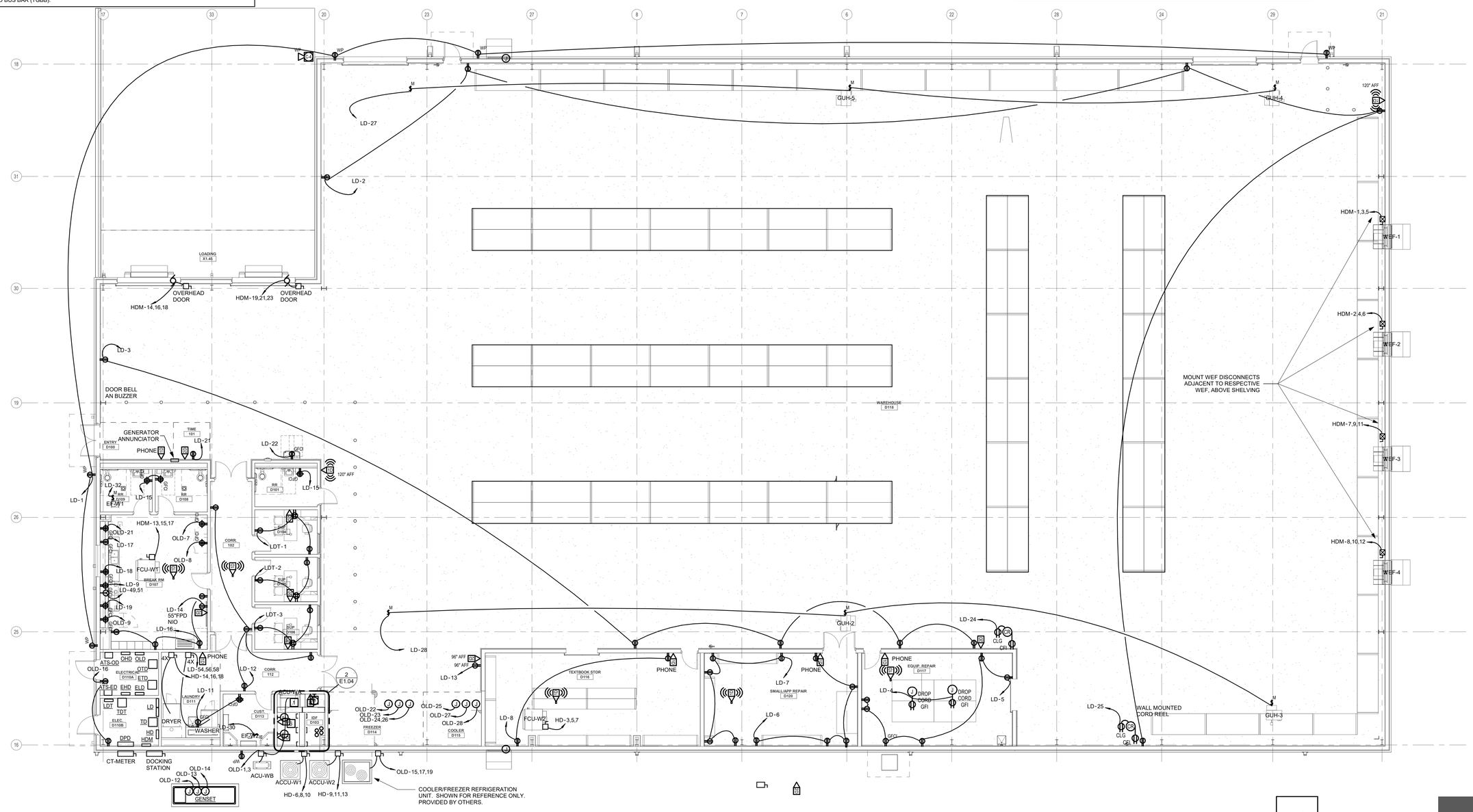
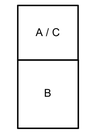
6. ENSURE ALL ELECTRICAL AND MECHANICAL EQUIPMENT HAVE PROPER WORKING CLEARANCE PER NEC REQUIREMENTS.
7. ALL RECEPTACLES LOCATED IN RESTROOMS, JANITOR CLOSETS, MECHANICAL ROOMS, ELEVATOR PITS OR SHAFTS, SERVING ELECTRIC DRINKING FOUNTAINS OR VENDING MACHINES, LOCATED WITHIN 6' OF A SINK, LOCATED ABOVE A WET COUNTERTOP SHALL BE GFCI. EACH GFCI PROTECTED RECEPTACLE SHARING THE SAME CIRCUIT SHALL HAVE ITS OWN RESET AND TEST BUTTON.
8. PROVIDE REMOTE GFCI PUSH-BUTTON IN READILY ACCESSIBLE LOCATION FOR ALL VENDING MACHINES, REFRIGERATORS, ICE MACHINES, DISHWASHERS AND GLASSWARE WASHERS.
9. REFER TO TECHNOLOGY DRAWINGS FOR EXACT MOUNTING HEIGHTS AND LOCATIONS OF ALL POWER OUTLETS.
10. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND BACKBOX FOR ALL THERMOSTAT (T-STAT) LOCATIONS. COORDINATE WITH LIGHT SWITCH LOCATION. REFER TO MECHANICAL DRAWINGS FOR T-STAT LOCATIONS.
11. ALL INDOOR DISCONNECTS SHALL BE NEMA 1 ENCLOSURE. ALL OUTDOOR DISCONNECTS SHALL BE NEMA 3R ENCLOSURE. REFER TO PANEL SCHEDULES FOR DISCONNECT SIZE.
12. FOR ALL NEMA RECEPTACLES, CONTRACTOR TO FIELD VERIFY CORRECT NEMA CONFIGURATION WITH MANUFACTURER PRIOR TO INSTALL.



1 ELECTRICAL POWER FLOOR PLAN - LEVEL 1 - AREA D - WAREHOUSE

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

N TRUE



KEY PLAN
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NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/18/2025

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POWER FLOOR PLAN - LEVEL 1 - AREA D - WAREHOUSE

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. E1.04
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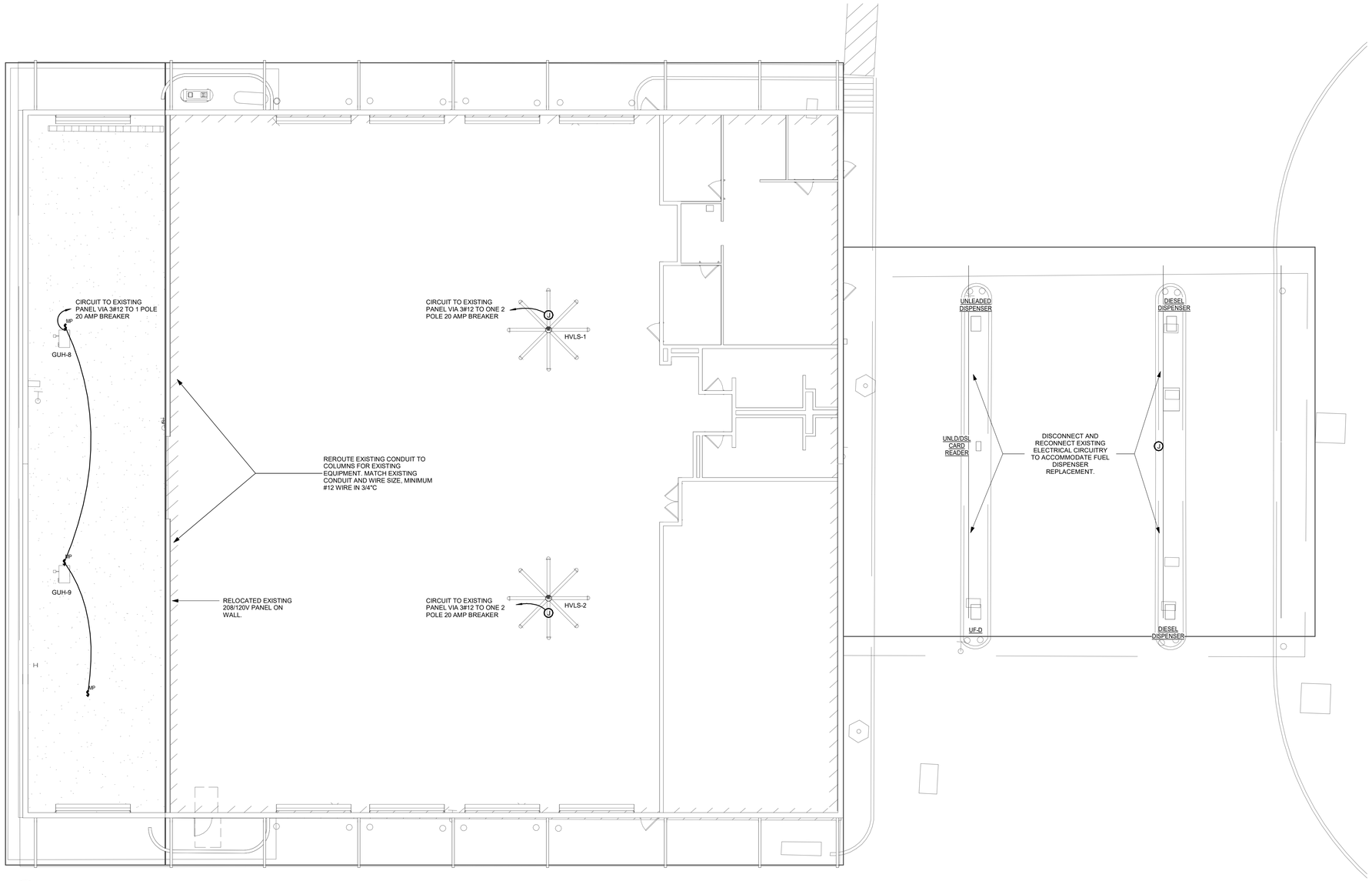
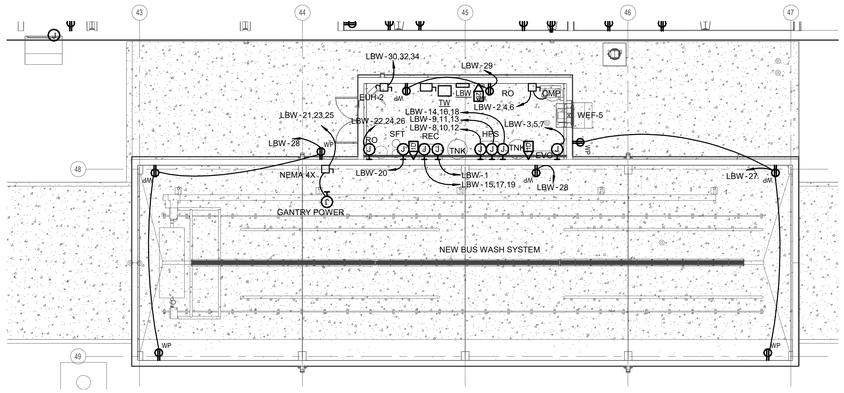


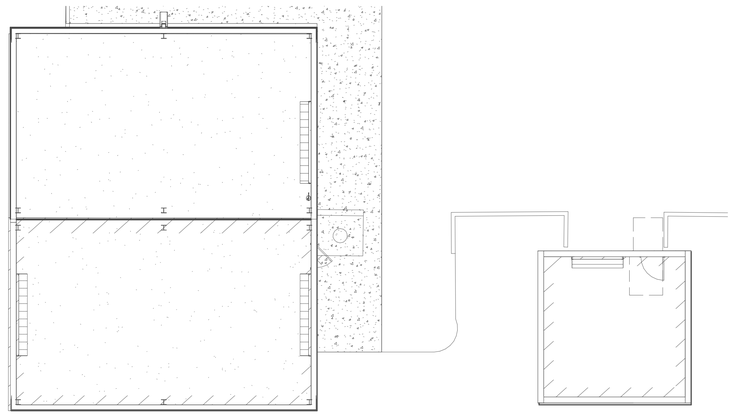
2 ELECTRICAL POWER FLOOR PLAN- MECHANIC BAY

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



1 ELECTRICAL POWER FLOOR PLAN- BUS WASH

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



3 ELECTRICAL POWER FLOOR PLAN- TRANSPORTATION BUILDING ADDITION

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

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NEW OPERATIONS BUILDING
FOR
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NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
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ELECTRICAL FLOOR PLANS - BUS WASH, MECHANIC BAY, & STORAGE

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. E1.05
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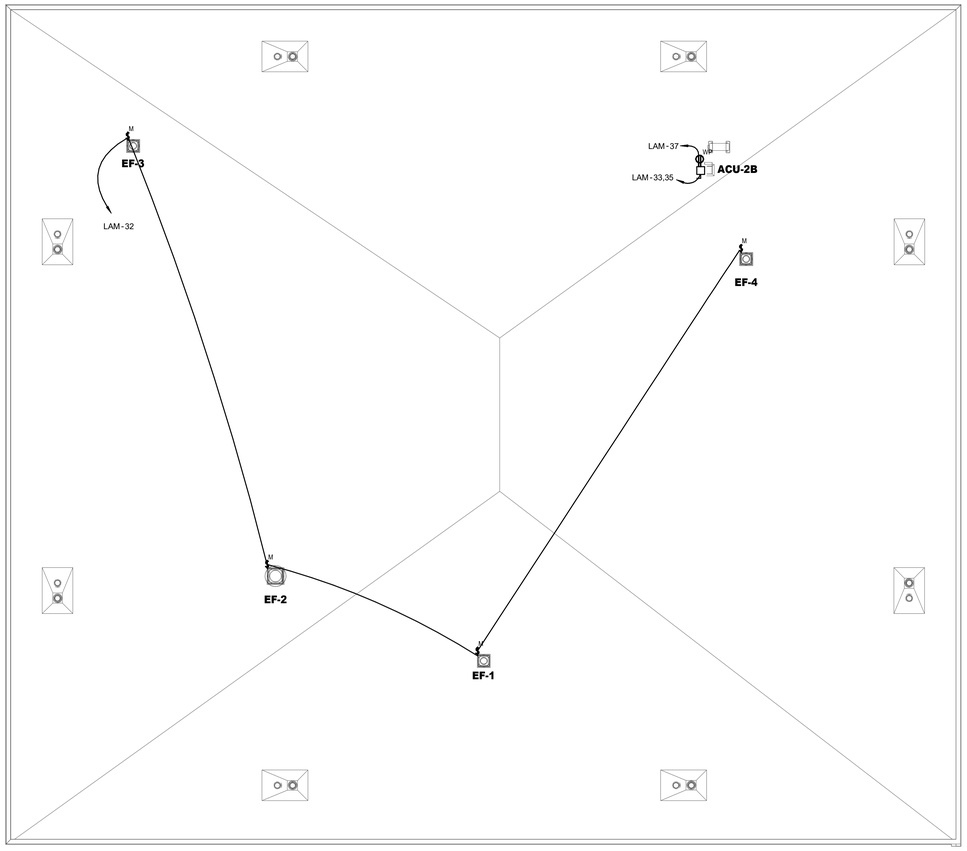

N
TRUE

1 **ELECTRICAL ROOF PLAN**

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

Revision / Date

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

STATE OF TEXAS
CHI K. TRUONG
90332
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PROFESSIONAL
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ELECTRICAL ROOF PLAN

PACKAGE VOLUME

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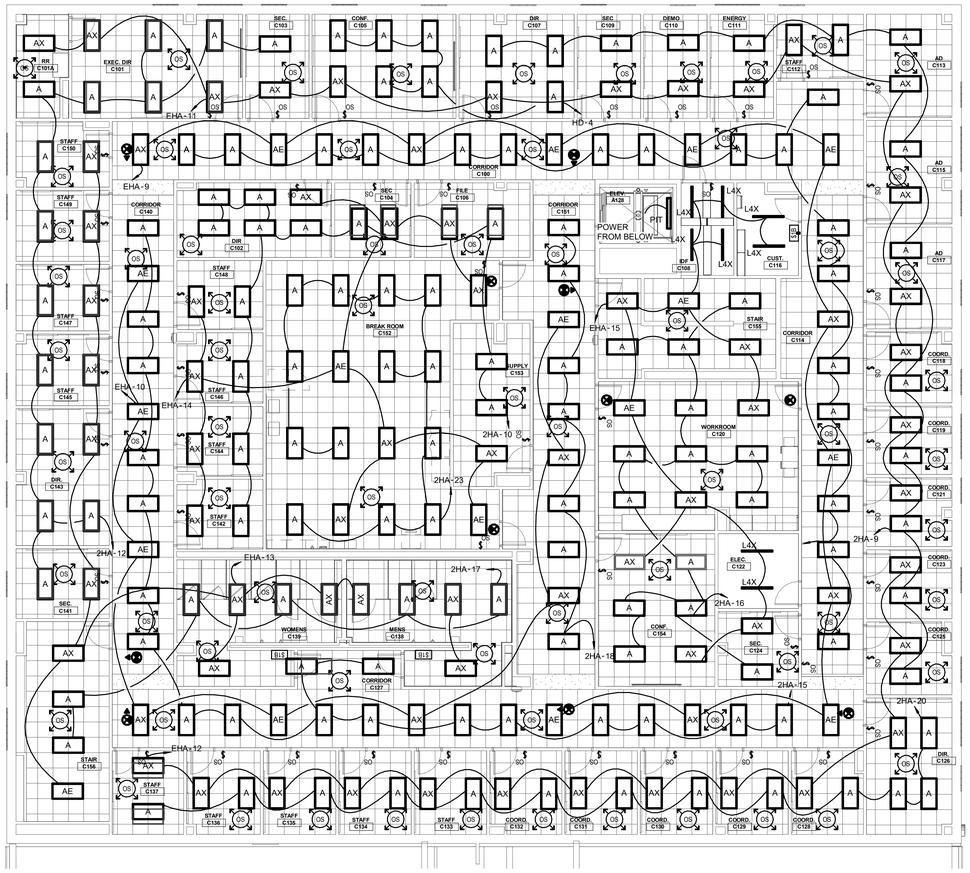
GENERAL LIGHTING NOTES

1. ALL ROOM LIGHTING ROOM CONTROLLERS TO BE LOCATED ABOVE CEILING ABOVE THE DOOR JUST OUTSIDE OF THE ROOM.
2. ALL LIGHTING CONTROLLERS THAT CONTROL FIXTURES LOCATED IN A HIGH CEILING SHALL BE MOUNTED IN AN ADJACENT LOWER CEILING TO ALLOW FOR EASY ACCESS.
3. ALL EMERGENCY FIXTURES TO BE CIRCUITED TO NEAREST EMERGENCY UN SWITCHED CIRCUIT OR EMERGENCY PANEL.
4. ALL EXIT SIGNS TO BE CONNECTED WITH 2#12 +12G IN 3/4" CONDUIT TO NEAREST UNSWITCHED EMERGENCY LIGHTING CIRCUIT. FINAL LAYOUT OF EMERGENCY EXIT SIGN TO BE CONFIRMED WITH THE EGRESS PLAN
5. PROVIDE REMOTE DRIVERS FOR FIXTURES IN DOUBLE VOLUME SPACES AND ARE INACCESSIBLE. REMOTE DRIVERS SHALL BE MOUNTED IN AN ACCESSIBLE SPACE WITHIN MANUFACTURE'S LIMIT OF DISTANCES.
6. REFER TO LIGHTING SCHEDULE DRAWING FOR THE LUMINARIES SPECIFICATION.
7. FINAL FINISH OF ALL LIGHTING FIXTURES ARE TO BE FINALIZED BY ARCHITECT.
8. EXTERIOR FIXTURES TO BE ON BAS CONTROLLED RELAY SCHEDULE



N TRUE

2 LIGHTING REFLECTED CEILING PLAN - LEVEL 2 - AREA C - OPERATIONS BUILDING

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

N TRUE

1 LIGHTING REFLECTED CEILING PLAN - LEVEL 1 - AREA A - OPERATIONS BUILDING

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

A / C
B

KEY PLAN
N.T.S.

D

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LIGHTING REFLECTED CEILING PLAN - LEVEL 1 / 2 - AREA A / C - OPERATIONS BUILDING
PACKAGE **VOLUME**

Job No.	Sheet No.
1971-05-01	ISSUED FOR BID
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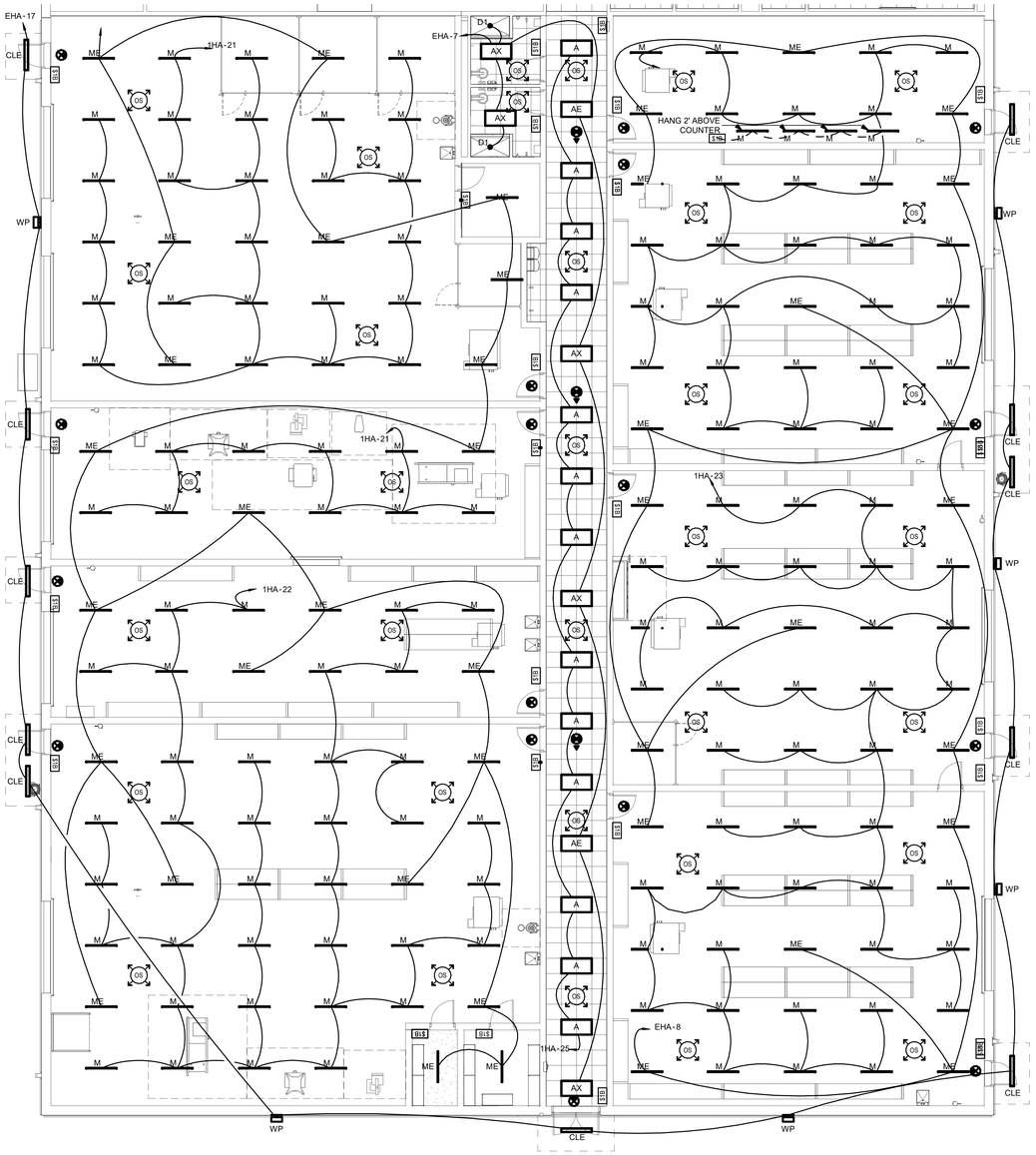

N TRUE

1 **LIGHTING REFLECTED CEILING PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING**

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

A / C
B
D

KEY PLAN
N.T.S.

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
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LIGHTING REFLECTED CEILING PLAN - LEVEL 1 - AREA B - OPERATIONS BUILDING
PACKAGE VOLUME

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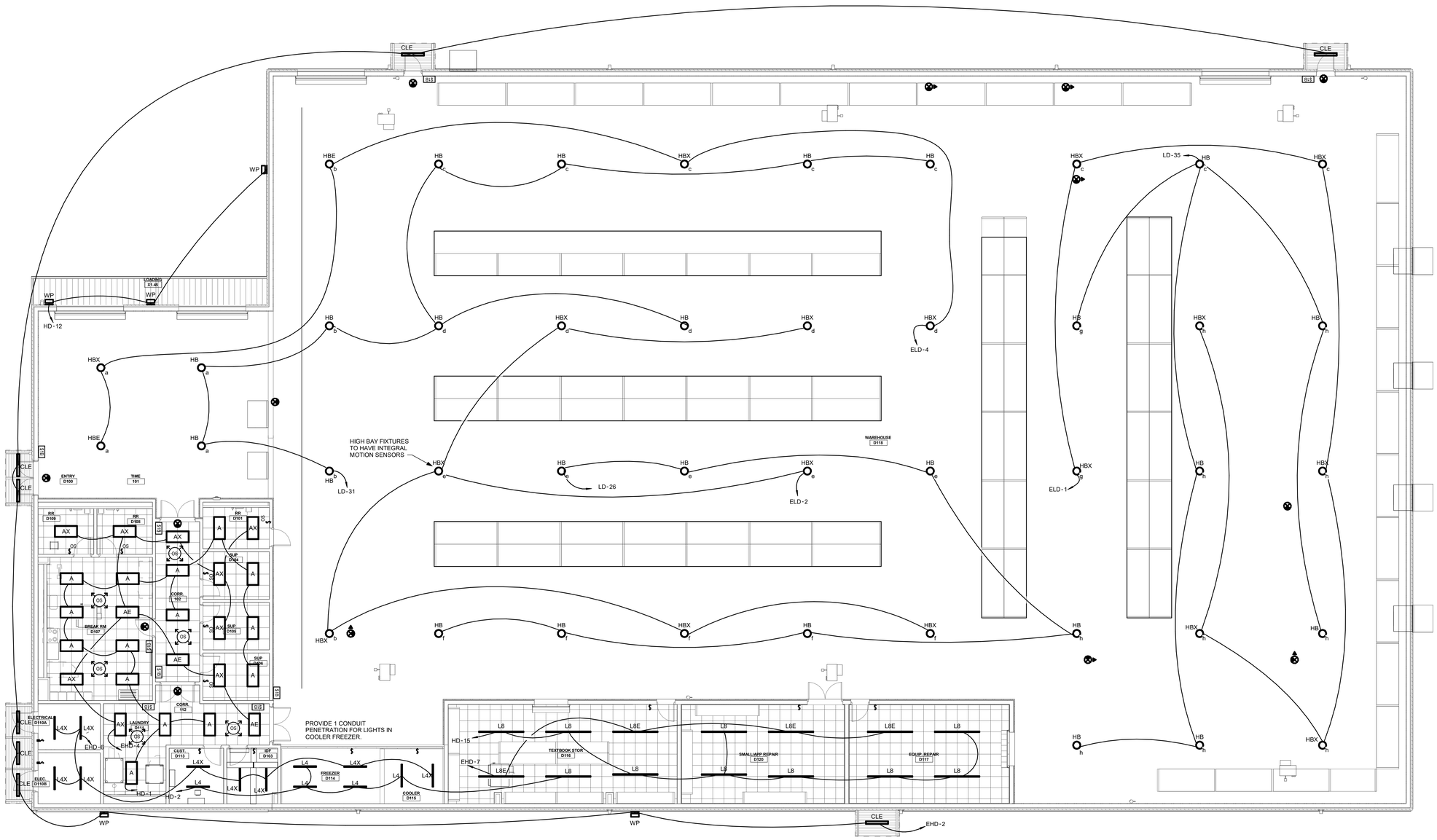

N
TRUE

1 LIGHTING REFLECTED CEILING PLAN - LEVEL 1 - AREA D - WAREHOUSE

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

A / C
B
D

KEY PLAN
N.T.S.

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
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NEW CANEY, TEXAS

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LIGHTING REFLECTED CEILING PLAN - LEVEL 1 - AREA D - WAREHOUSE

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. E2.04
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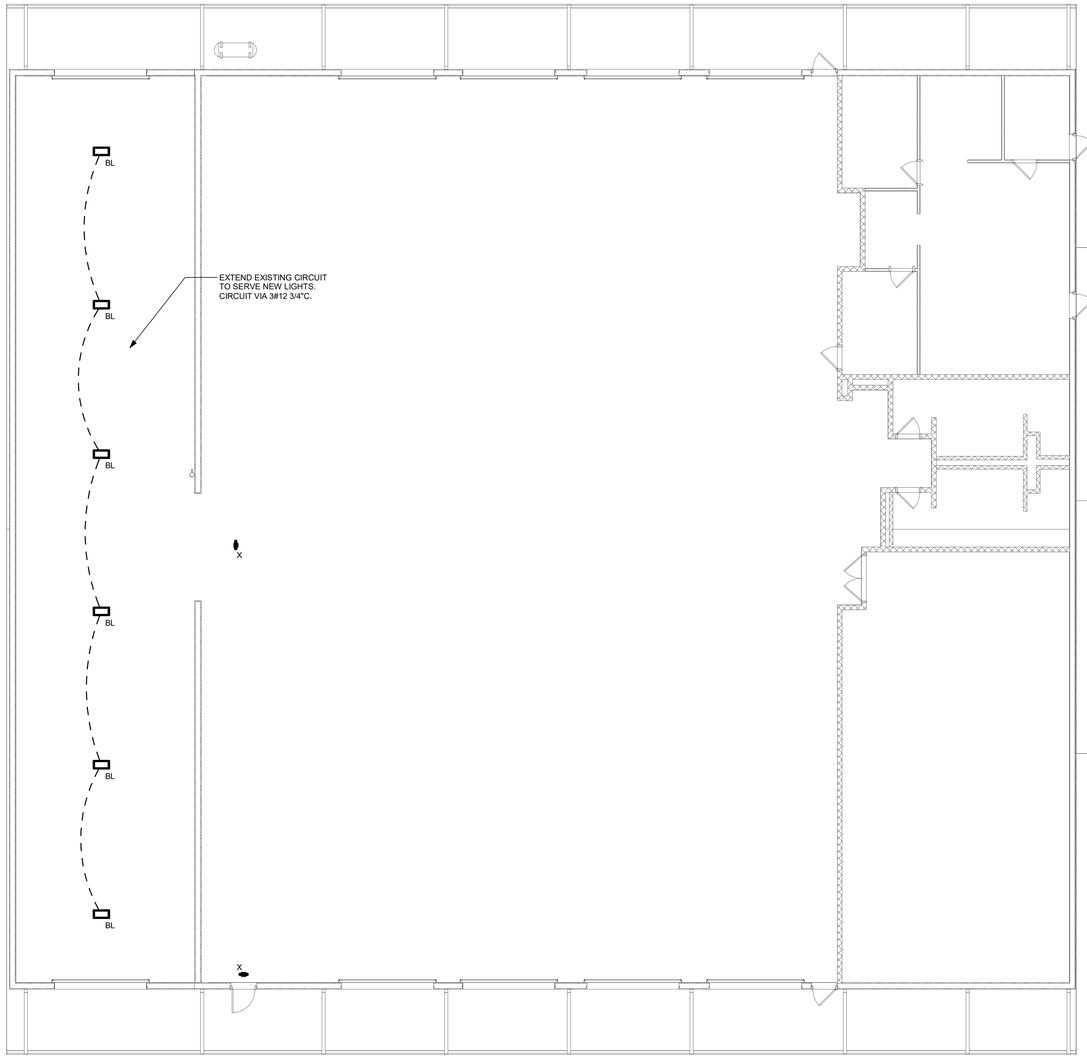
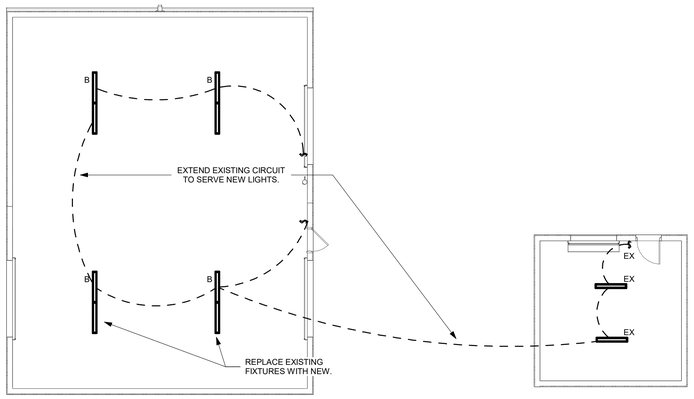


1 LIGHTING REFLECTED CEILING PLAN - SHOP MECHANIC BAY

N TRUE

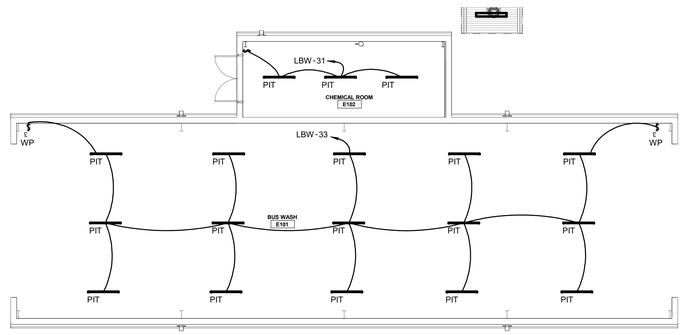
SCALE= 1/8" = 1'-0"



2 LIGHTING REFLECTED CEILING PLAN - EXTERIOR STORAGE BUILDINGS

N TRUE

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



3 LIGHTING REFLECTED CEILING PLAN - BUS WASH

N TRUE

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

Revision / Date

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FOR
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LIGHTING REFLECTED CEILING PLAN - MECHANIC BAY

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. E2.05
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NEW CANEY TRANSPORTATION & OPERATION LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	MOUNTING	LAMPS	VOLTS	WATTS	KELVIN	DESCRIPTION	LOCATION / NOTES
A	METALUX	24CGT5540C	RECESSED	LED 0-10V	120-277	47W	4000K	2X4 LED FLAT PANEL	
D1	HALO COMMERCIAL	HC610D010-HM60525840-61PSMDW	RECESSED	LED 0-10V	120-277	11W	4000K	6" RECESSED ROUND DOWNLIGHT, NON CONDUCTIVE SHOWER TRIM, 1000 LUMENS	
D2	HALO COMMERCIAL	HC620D010-HM60525840-61MDH	RECESSED	LED 0-10V	120-277	21W	4000K	6" RECESSED ROUND DOWNLIGHT, SEMI SPEC FINISH & FLANGE, MEDIUM BEAM, 2000 LUMENS	
G4	NEORAY	S124DIP-C1195D365U840-Cxx-JB-HW-4F0-1-U-DD-F-4-FINISH	SUSPENDED	LED 0-10V	120-277	12.8W / FT	4000K	4FT DIRECT & INDIRECT LUMINAIRE	
HB-LOW	METALUX	VHB-1824-W-UNV-L840-CD-WLS4-U-Y-TOGGLE-10-2PK	SUSPENDED	LED 0-10V	120-277	125W / 147W	4000K	LED SELECTABLE HIGH BAY, INTEGRAL OCC DIMMING SENSOR	LOW OUTPUT TO BE SELECTED
HB-HIGH	METALUX	VHB-1824-W-UNV-L840-CD-WLS4-U-Y-TOGGLE-10-2PK	SUSPENDED	LED 0-10V	120-277	125W / 147W	4000K	LED SELECTABLE HIGH BAY, INTEGRAL OCC DIMMING SENSOR	HIGH OUTPUT TO BE SELECTED
K4	STARTEK	HYDROD-4-1000-SD-40K-80-FINISH-SM(x)-U-1C	SURFACE	LED 0-10V	120-277	36W	4000K	4FT LED WET LOCATION SURFACE MOUNT LINEAR	
K4E	STARTEK	HYDROD-4-1000-SD-40K-80-FINISH-SM(x)-U-1C-EMB10	SURFACE	LED 0-10V	120-277	36W	4000K	SAME AS K4, BUT WITH INTEGRAL BATTERY BACK UP	
L4	METALUX	4SNLED-LD5-50SL-LW-UNV-L840-CD1-U+	SUSPENDED	LED 0-10V	120-277	46W	4000K	4FT STANDARD STRIPLIGHT, FULL FROSTED LENS,	
L4E	METALUX	4SNLED-LD5-50SL-LW-UNV-L840-CD1-U+	SUSPENDED	LED 0-10V	120-277	46W	4000K	SAME AS L4, BUT WITH INTEGRAL 14W BATTERY	
M3	LUMARK	PRV-XL-PA3B-740-U-T3-FINISH-WLS4xx	POLE	LED 0-10V	120-277	234W	4000K	(1) AREA SITE LUMINAIRE, TYPE III, INTEGRAL OCC & DIMMING SENSOR	TO BE MOUNTED ON EXISTING POLE
M4	LUMARK	PRV-XL-PA3B-740-U-T4W-FINISH-WLS4xx	POLE	LED 0-10V	120-277	234W	4000K	(1) AREA SITE LUMINAIRE, TYPE IV, INTEGRAL OCC & DIMMING SENSOR	TO BE MOUNTED ON EXISTING POLE
M4-2	LUMARK	PRV-XL-PA3B-740-U-T4W-FINISH-WLS4xx	POLE	LED 0-10V	120-277	234W EA	4000K	(2) AREA SITE LUMINAIRES, TYPE IV, INTEGRAL OCC & DIMMING SENSOR	TO BE MOUNTED ON EXISTING POLE
M5	LUMARK	PRV-XL-PA3B-740-U-5WQ-FINISH-WLS4xx	POLE	LED 0-10V	120-277	234W	4000K	(1) AREA SITE LUMINAIRE, TYPE V, INTEGRAL OCC & DIMMING SENSOR	TO BE MOUNTED ON EXISTING POLE
M5-2	LUMARK	PRV-XL-PA3B-740-U-5WQ-FINISH-WLS4xx	POLE	LED 0-10V	120-277	234W EA	4000K	(2) AREA SITE LUMINAIRES, TYPE V, INTEGRAL OCC & DIMMING SENSOR	TO BE MOUNTED ON EXISTING POLE
NL2	LUMARK	PRV-XL-PA3A-740-U-T2R-FINISH-WLS4xx	POLE	LED 0-10V	120-277	172W	4000K	(1) AREA SITE LUMINAIRE, TYPE II, INTEGRAL OCC & DIMMING SENSOR	TO BE PROVIDED WITH 25FT KW POLE RATED AT 130MPH : RTSP25-6.1.11.F.DM10-BC(SLOTTED), INSTALLED AT EXISTING CONCRETE BASE
NL3	LUMARK	PRV-XL-PA3A-740-U-T3-FINISH-WLS4xx	POLE	LED 0-10V	120-277	172W	4000K	(1) AREA SITE LUMINAIRE, TYPE III, INTEGRAL OCC & DIMMING SENSOR	TO BE PROVIDED WITH 25FT KW POLE RATED AT 130MPH : RTSP25-6.1.11.F.DM10-BC(SLOTTED), INSTALLED AT EXISTING CONCRETE BASE
NL4	LUMARK	PRV-XL-PA3A-740-U-T4W-FINISH-WLS4xx	POLE	LED 0-10V	120-277	172W	4000K	(1) AREA SITE LUMINAIRE, TYPE IV, INTEGRAL OCC & DIMMING SENSOR	TO BE PROVIDED WITH 25FT KW POLE RATED AT 130MPH : RTSP25-6.1.11.F.DM10-BC(SLOTTED), INSTALLED AT EXISTING CONCRETE BASE
PIT	METALUX	4VT2-LD5-6-DR-UNV-L840-CD1-WL-U	SURFACE	LED 0-10V	120-277	51W	4000K	4FT LED VAPORTITE	ELEVATOR PIT LIGHT
PL2	LUMARK	PRV-XL-PA3A-740-U-T2R-FINISH-WLS4xx	POLE	LED 0-10V	120-277	172W	4000K	(1) AREA SITE LUMINAIRE, TYPE II, INTEGRAL OCC & DIMMING SENSOR	TO BE PROVIDED WITH 25FT KW POLE RATED AT 130MPH : RTSP25-6.1.11.F.DM10-BC
PL3	LUMARK	PRV-XL-PA3A-740-U-T3-FINISH-WLS4xx	POLE	LED 0-10V	120-277	172W	4000K	(1) AREA SITE LUMINAIRE, TYPE III, INTEGRAL OCC & DIMMING SENSOR	TO BE PROVIDED WITH 25FT KW POLE RATED AT 130MPH : RTSP25-6.1.11.F.DM10-BC
PL4	LUMARK	PRV-XL-PA3A-740-U-T4W-FINISH-WLS4xx	POLE	LED 0-10V	120-277	172W	4000K	(1) AREA SITE LUMINAIRE, TYPE IV, INTEGRAL OCC & DIMMING SENSOR	TO BE PROVIDED WITH 25FT KW POLE RATED AT 130MPH : RTSP25-6.1.11.F.DM10-BC
PL5-2	LUMARK	PRV-XL-PA3A-740-U-5WQ-FINISH-WLS4xx	POLE	LED 0-10V	120-277	172W EA	4000K	(2) AREA SITE LUMINAIRES, TYPE V, INTEGRAL OCC & DIMMING SENSOR	TO BE PROVIDED WITH 25FT KW POLE RATED AT 130MPH : RTSP25-6.1.11.F.DM10-BC
Q4	LUMARK	PRV-XL-PA3A-740-U-T4W-FINISH-WLS4xx	POLE	LED 0-10V	120-277	172W	4000K	(1) AREA SITE LUMINAIRE, TYPE IV, INTEGRAL OCC & DIMMING SENSOR	TO BE MOUNTED ON EXISTING 25FT POLE & AIMED AT OPERATIONS BUIDLING
S4	METALUX	4SWLED-56HL-LW-UNV-L840-CD1-WLS-U	SURFACE	LED 0-10V	120-277	53W	4000K	4FT STAIRWAY LUMINAIRE WITH INTEGRAL OCC & DIMMING SENSOR	STAIRWAY
S4E	METALUX	4SWLED-56HL-LW-UNV-EL14W-L840-CD1-WLS-U	SURFACE	LED 0-10V	120-277	53W	4000K	SAME AS S4, BUT WITH INTEGRAL BATTERY BACK UP	
VT4	METALUX	4VT2-LD5-4-DR-UNV-L840-CD1-WL-U	SURFACE	LED 0-10V	120-277	30W	4000K	4FT LED VAPORTITE	COOLER, FREEZER
WP	MCGRAW EDISON	GKO-PB2C-740-U-T4W-FINISH	SURFACE WALL	LED	120-277	57W	4000K	LED WALL PACK, TYPE IV	
X	EVENLITE		UNIVERSAL SURFACE	LED	120-277		N/A		

NOTES :
1. LUMINAIRE LABELS WITH "E" SUFFIX SHALL BE PROVIDED WITH INTEGRAL OR REMOTE BATTERY.
2. LUMINAIRE LABELS WITH "X" SUFFIX ARE CONNECTED TO GENERATOR POWER AND PROVIDED WITH ESRN PER EMERGENCY ZONE.
3. ARCHITECT TO VERFIY ALL FINISHES & CCT PRIOR TO ORDER
4. FOR RETROFIT / REMODEL APPLICATIONS, EC TO VERIFY ALL MOUNTING CONDITIONS PRIOR ORDER
5. FOR RETROFIT / REMODEL APPLICATIONS, EC TO VERFY VOLTAGE PRIOR TO ORDER

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/10/2025

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LIGHTING FIXTURE SCHEDULE

PACKAGE VOLUME

Job No. 1971-05-01
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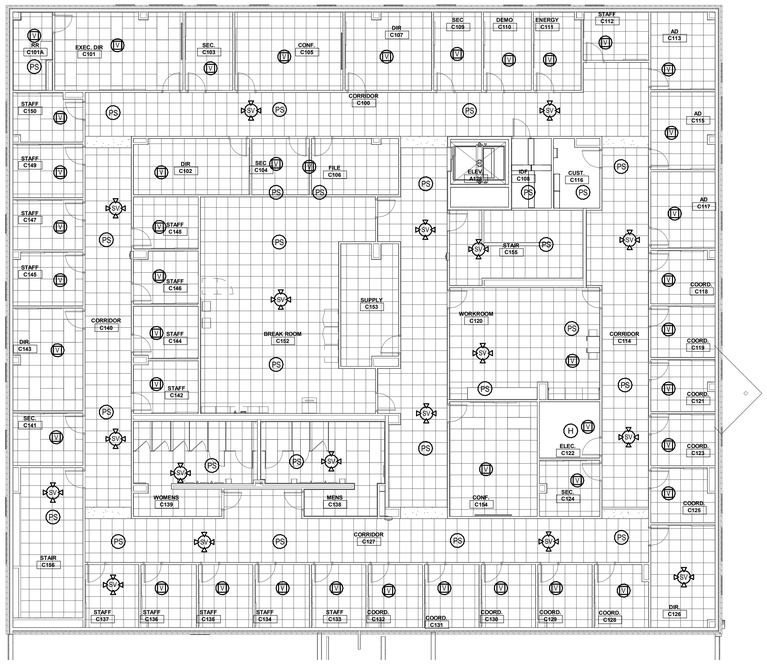
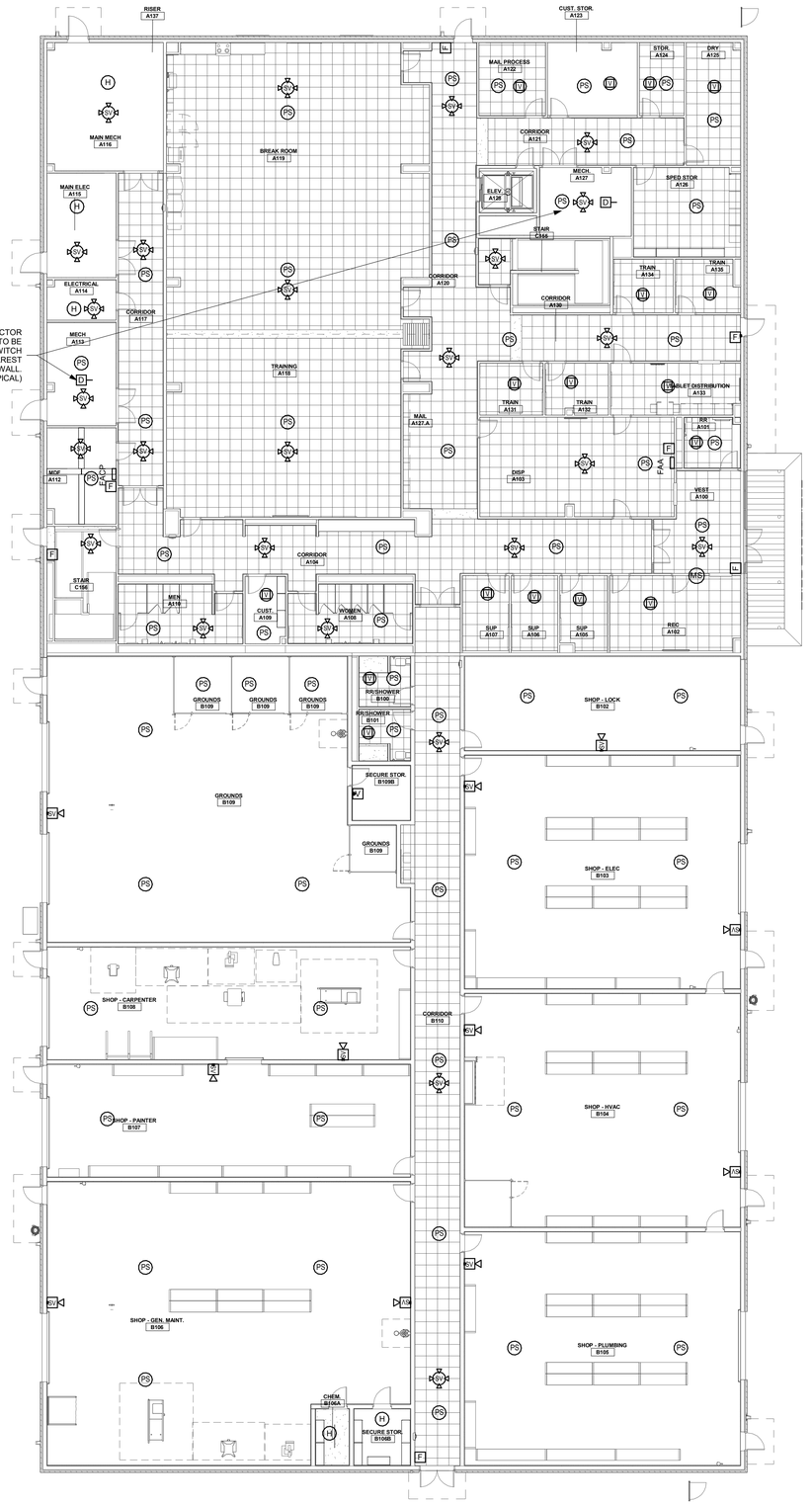


N TRUE

2 FIRE ALARM MASTER REFLECTED CEILING PLAN - LEVEL 2 - OPERATIONS BUILDING

SCALE= 3/32" = 1'-0"

DUCT DETECTOR RESET TO BE MOUNTED AT SWITCH HEIGHT ON NEAREST ACCESSIBLE WALL. (TYPICAL)



N TRUE

1 FIRE ALARM MASTER REFLECTED CEILING PLAN - LEVEL 1 - OPERATIONS BUILDING

SCALE= 3/32" = 1'-0"

A / C
B
D

KEY PLAN
N.T.S.

Revision / Date

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FIRE ALARM FLOOR PLANS - OPERATIONS BUILDING

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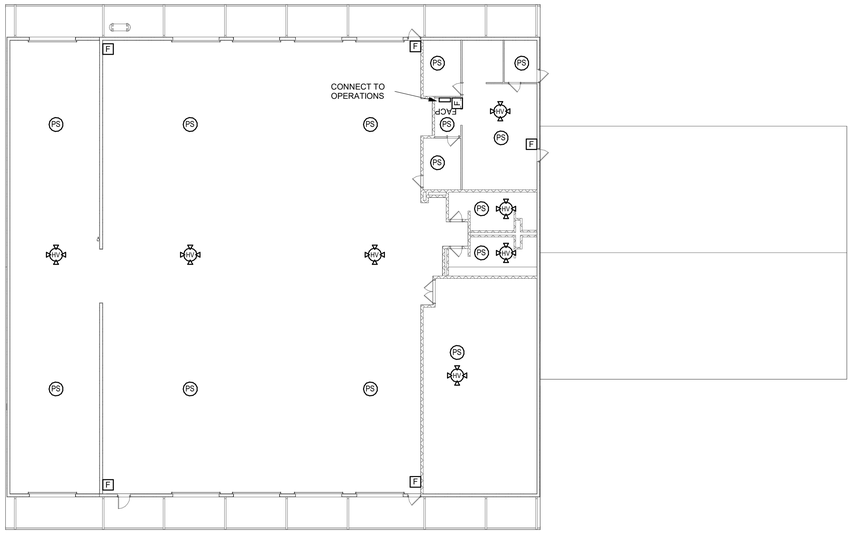

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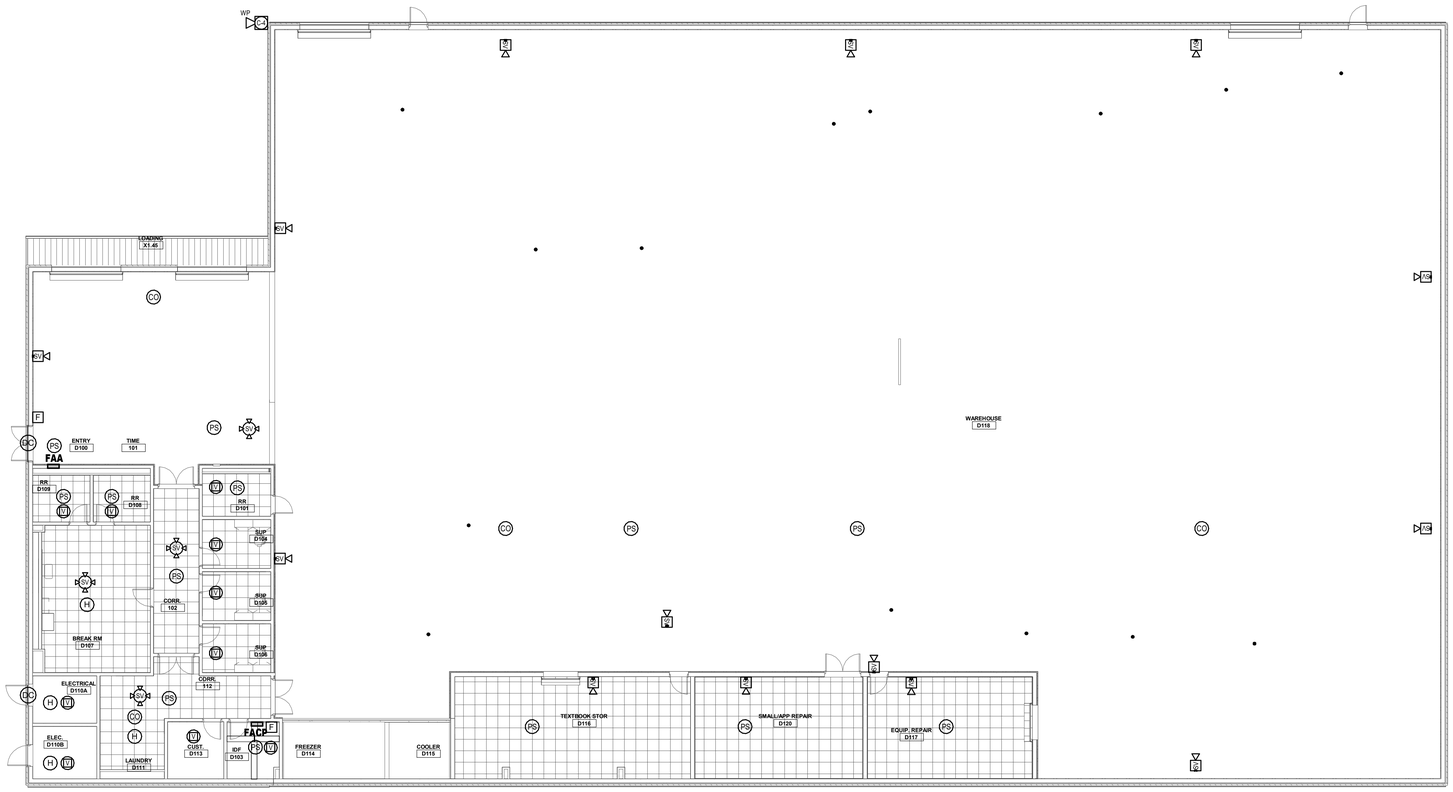
TRUE

2

FIRE ALARM REFLECTED CEILING PLAN - MECHANIC BAY

SCALE= 1/16" = 1'-0"



N
TRUE

1

FIRE ALARM REFLECTED CEILING PLAN - LEVEL 1 - AREA D - WAREHOUSE

SCALE= 3/32" = 1'-0"

A / C
B
D

KEY PLAN
N.T.S.

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FIRE ALARM FLOOR PLANS - WAREHOUSE & MECHANIC BUILDINGS

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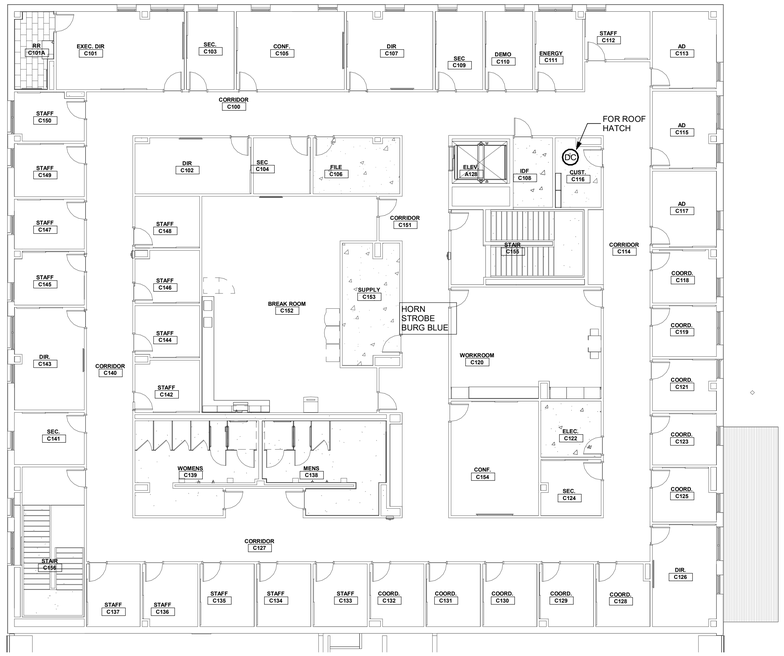

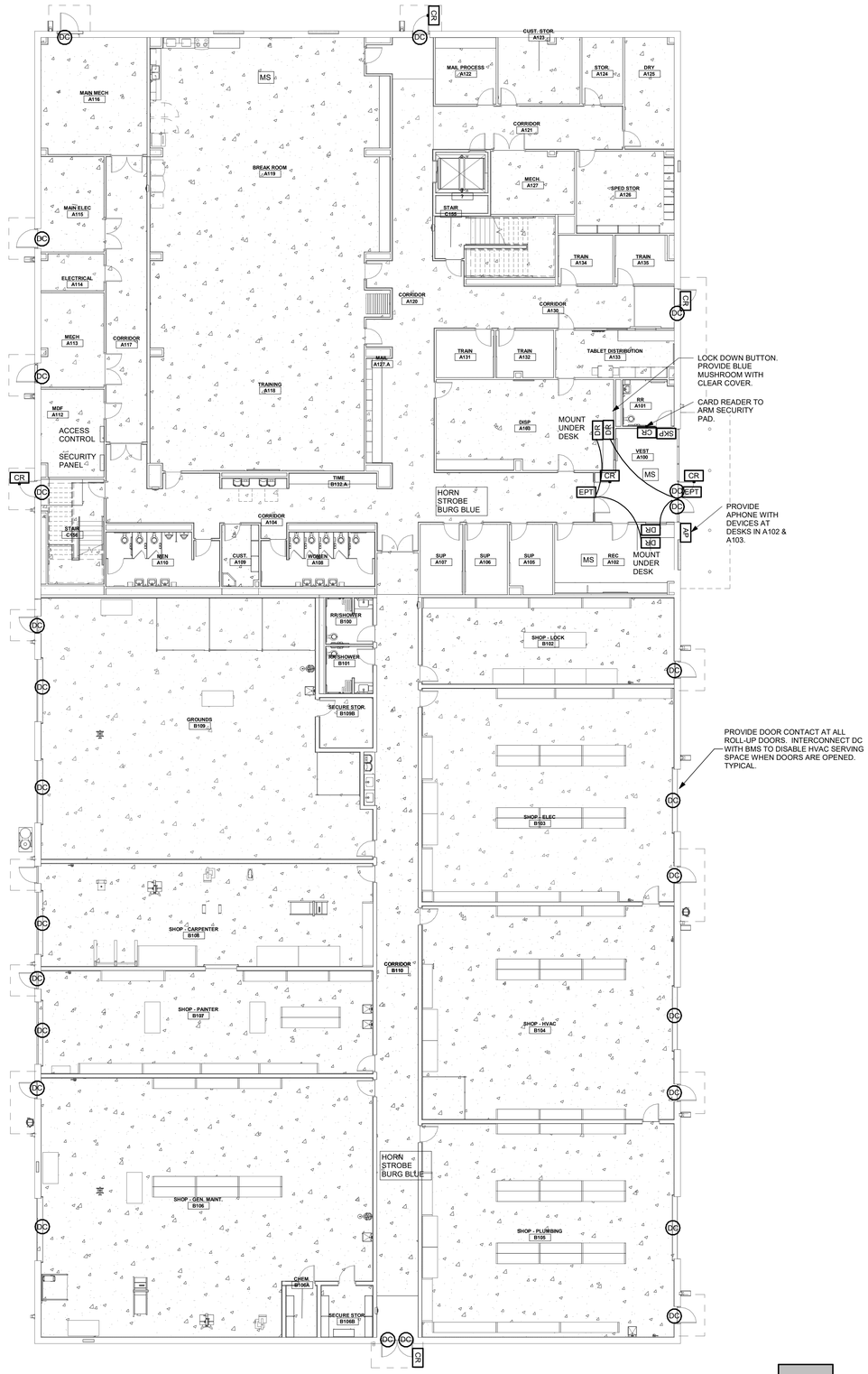

2 SECURITY SYSTEMS 2ND FLOOR PLAN - OPERATIONS BUILDING

SCALE= 3/32" = 1'-0"

N TRUE

1 SECURITY SYSTEMS 1ST FLOOR PLAN - OPERATION BUILDING

SCALE= 3/32" = 1'-0"

N TRUE

KEY PLAN
N.T.S.

A / C
B
D

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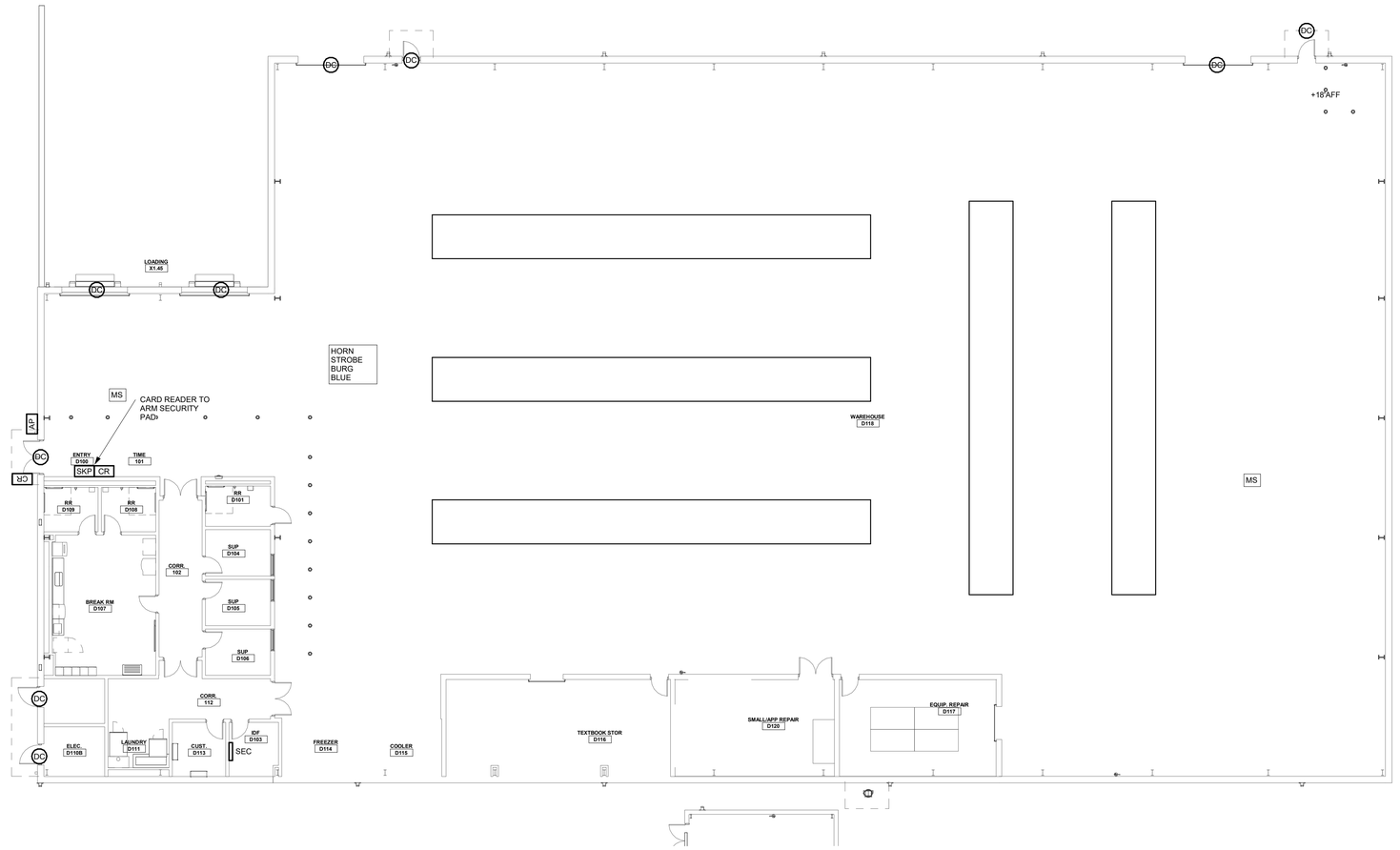

N
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1 **SECURITY SYSTEMS - WAREHOUSE**

SCALE= 3/32" = 1'-0"

A / C

B

D

KEY PLAN
N.T.S.

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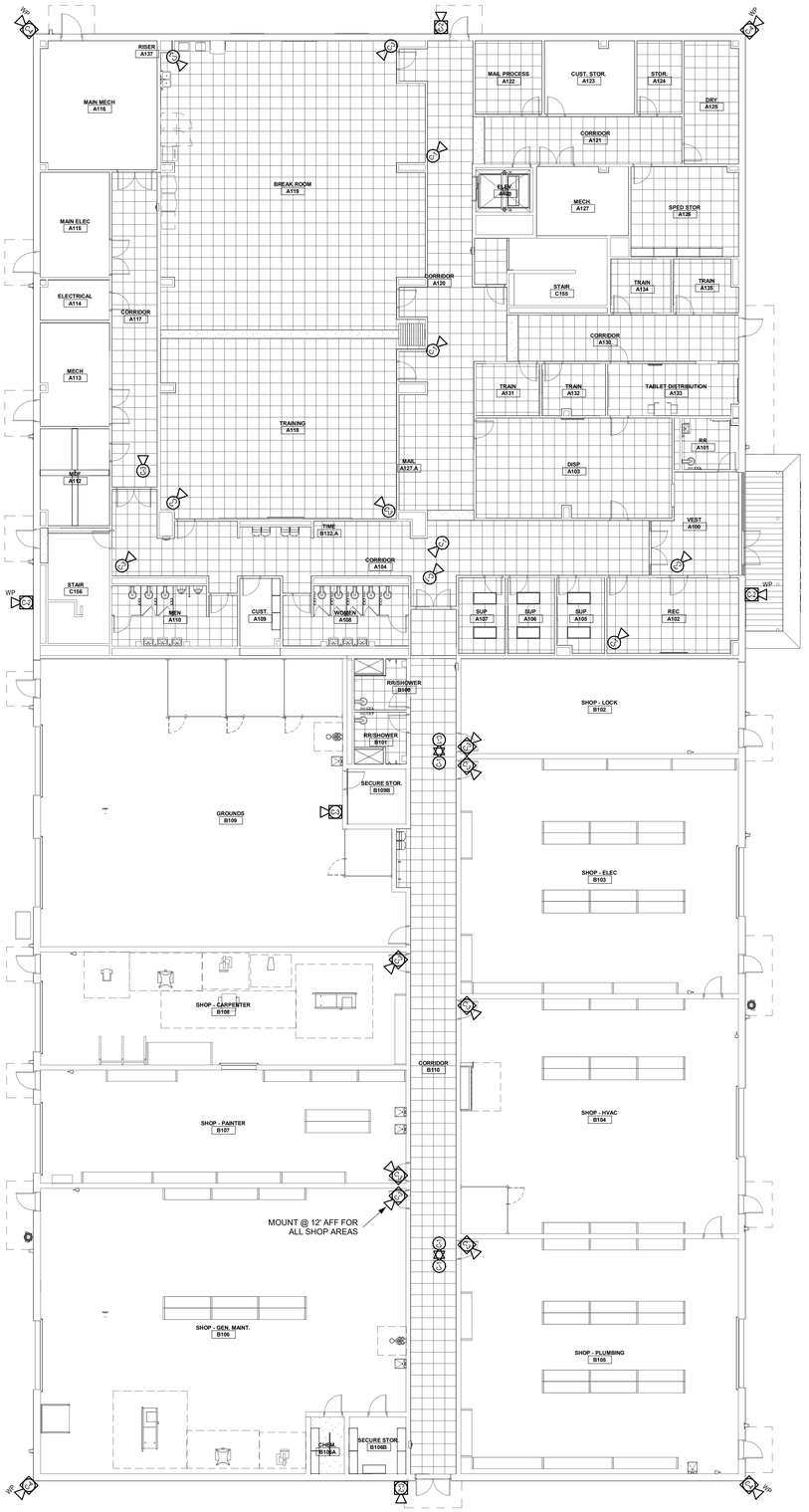

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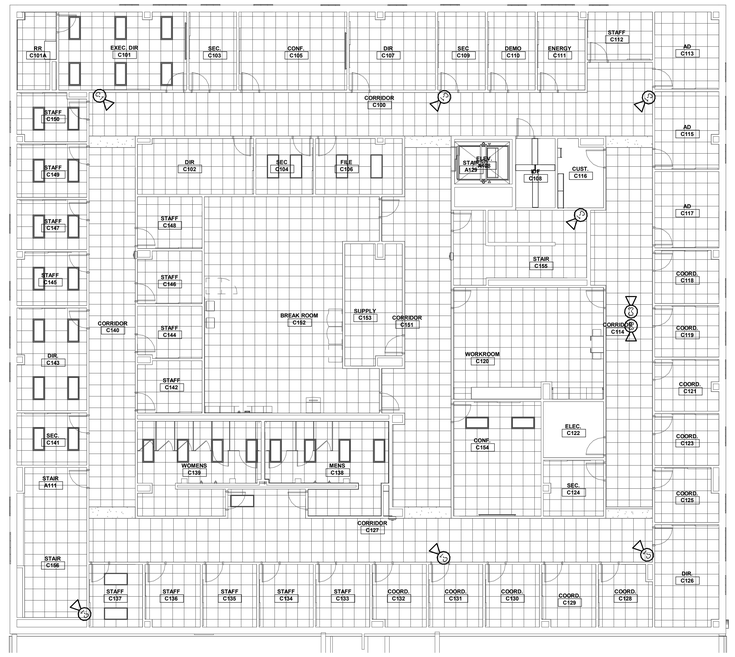
1 SECURITY SYSTEMS CEILING PLAN - LEVEL 1 - OPERATION BUILDING

SCALE= 3/32" = 1'-0"



N TRUE

2 SECURITY SYSTEMS CEILING PLAN - LEVEL 2 - OPERATION BUILDING

SCALE= 3/32" = 1'-0"

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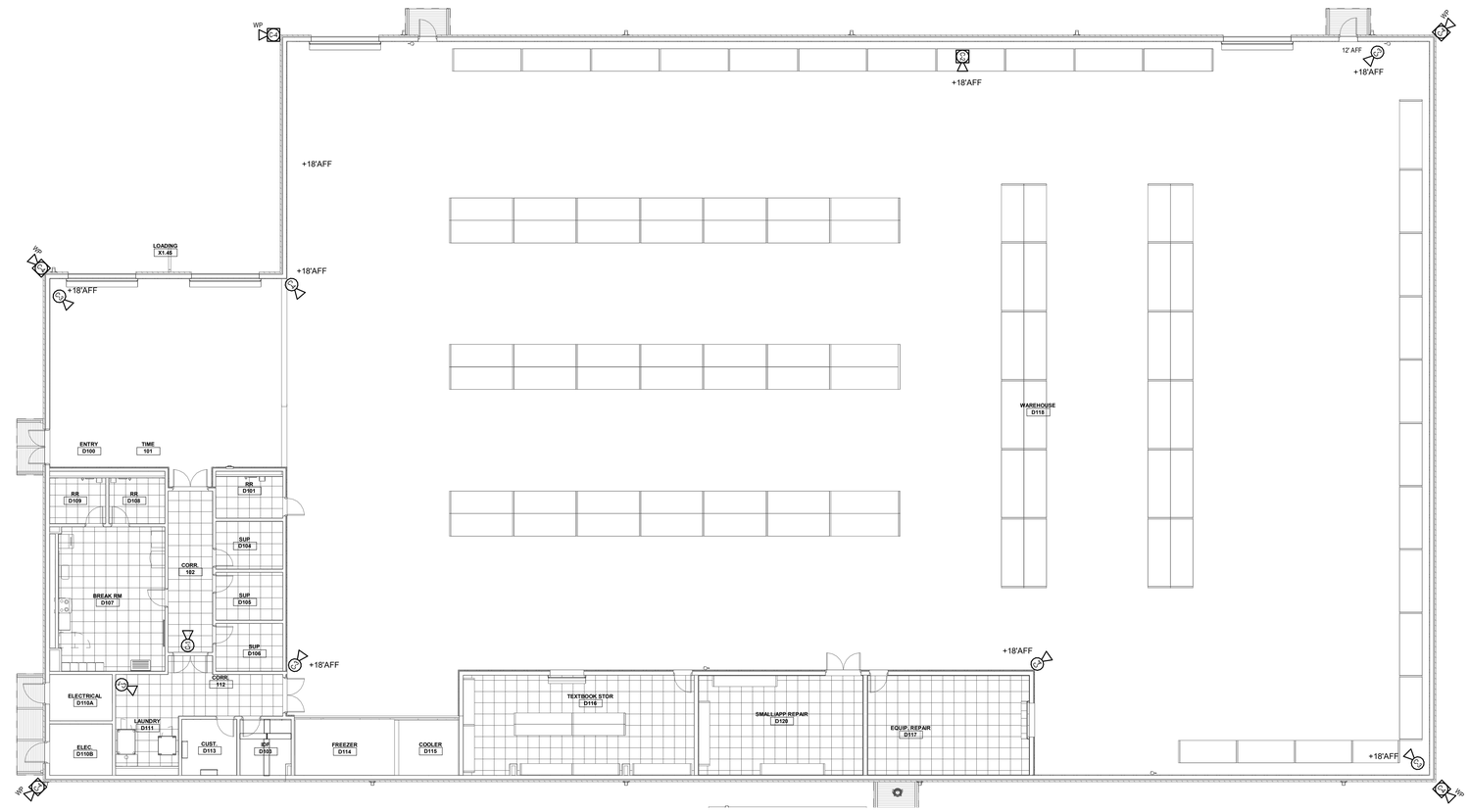

N
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1 **SECURITY SYSTEMS CEILING PLAN - LEVEL 1 - WAREHOUSE**

SCALE= 3/32" = 1'-0"

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SECURITY SYSTEMS CEILING PLANS - WAREHOUSE BUILDING

PACKAGE | VOLUME

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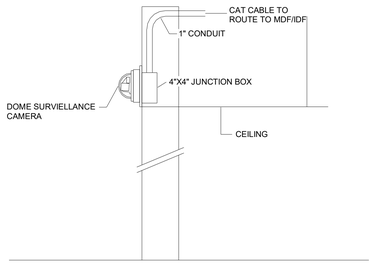
GENERAL NOTES:

A. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUITS AND BACK BOXES. CONDUIT SHALL ROUTE TO THE NEAREST, ACCESSIBLE PLENUM SPACE.

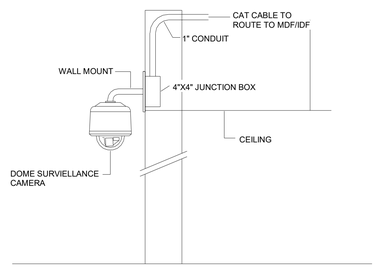
B. ALL WALL, CORNER, PENDANT, AND UNDER CANOPY MOUNTING HEIGHTS SHALL BE COORDINATED WITH THE OWNER AND SECURITY CONSULTANT PRIOR TO ROUGH-IN.

C. DIVISION 27 CONTRACTORS ARE TO PROVIDE AND INSTALL ON CAT 6 CABLE TO EACH CAMERA LOCATION. SHALL PROVIDE A 20' SERVICE LOOP.

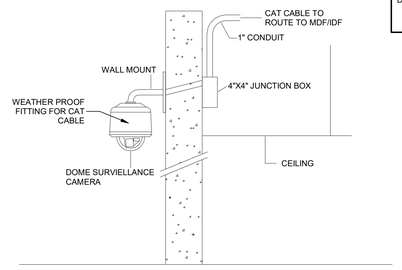
D. CABLE FEED-THROUGH MOUNT FOR CAMERA. NO EXPOSED CABLE WILL BE ALLOWED. SECURITY CONTRACTOR TO COORDINATE MOUNTING HEIGHT WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.



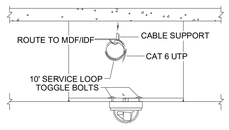
1 INTERIOR WALL MOUNTED DOME CAMERA - VERTICAL
NO SCALE



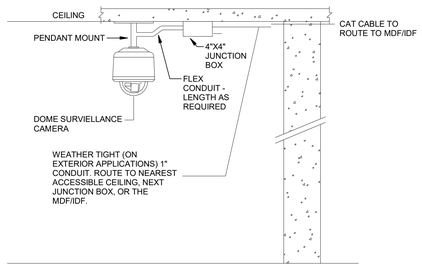
2 INTERIOR WALL MOUNTED DOME CAMERA
NO SCALE



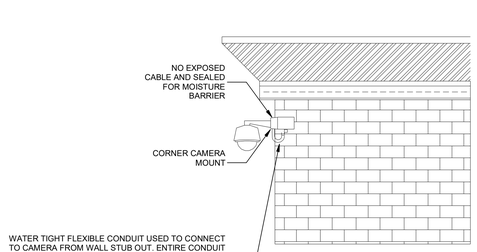
7 EXTERIOR WALL MOUNTED DOME CAMERA
NO SCALE



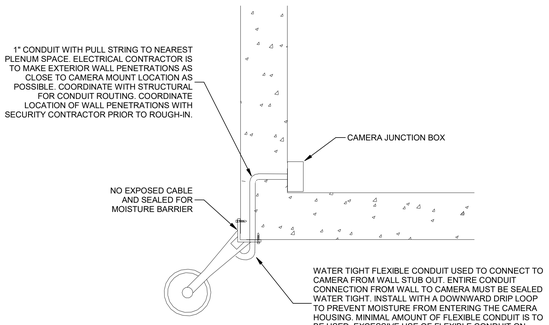
3 INTERIOR LAY-IN CEILING MOUNTED CAMERA
NO SCALE



4 EXTERIOR/INTERIOR PENDANT MOUNTED DOME CAMERA
NO SCALE



ELEVATION VIEW



5 CORNER MOUNTING DETAIL
NO SCALE

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TECHNOLOGY DETAILS

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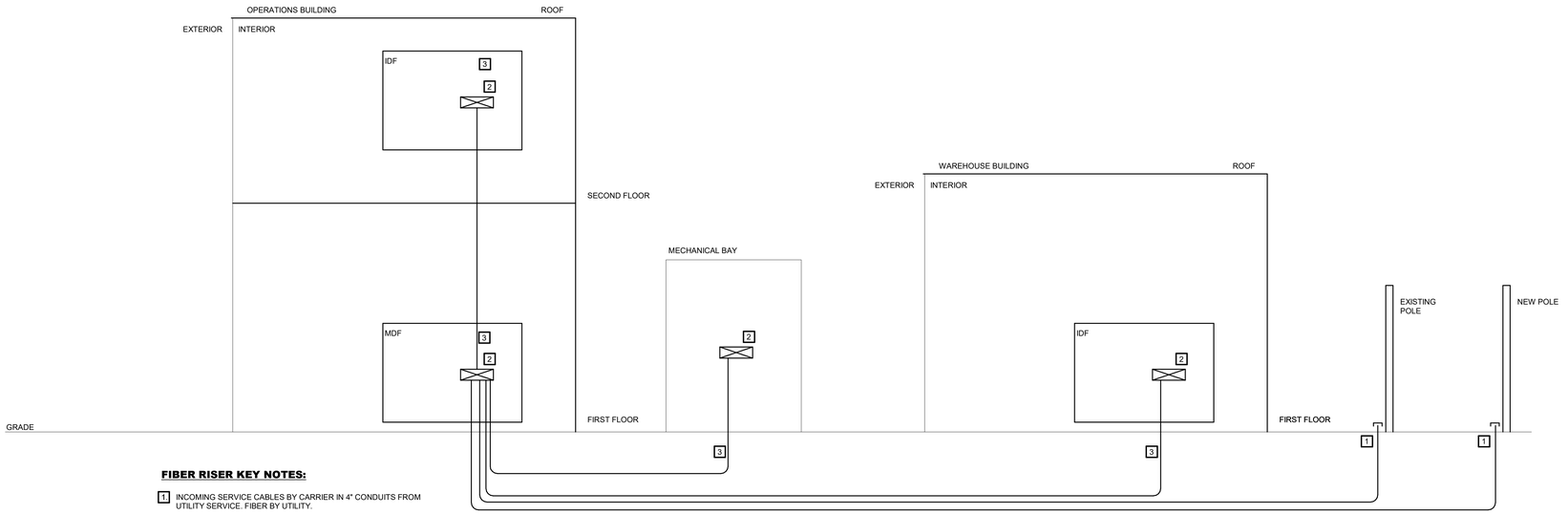
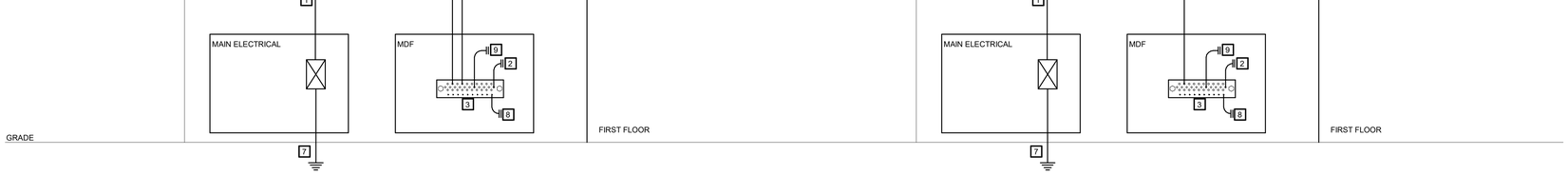


FIBER RISER KEY NOTES:

1. INCOMING SERVICE CABLES BY CARRIER IN 4" CONDUITS FROM UTILITY SERVICE. FIBER BY UTILITY.
2. FIBER AND TERMINATION FIELD.
3. ONE 12 STRAND SINGLE MODE FIBER, ONE 25 PAIR CAT3 VOICE FROM MDF TO EACH IDF ROOM.

1 FIBER RISER DIAGRAM1

NO SCALE



GROUNDING RISER KEY NOTES:

1. STRANDED COPPER INSULATED CONDUCTOR, MINIMUM #4/0 TO BUILDING'S ELECTRICAL SERVICE MAIN GROUNDING ELECTRODE SYSTEM SIZED TO TEST TO EQUAL TO OR LESS THAN 0.1 OHMS. ROUTE CONDUCTOR TO ELECTRICAL SERVICE WITH FEWEST BENDS AS PRACTICAL. LABEL EACH END OF CONDUCTOR WITH ROOM NUMBER TO WHICH CABLE IS ROUTED. (BY DIV. 26)
2. BONDING COPPER CONDUCTOR (SIZE #2/0 AWG) FROM BUSBAR TO EACH ROW OF EQUIPMENT RACKS, ALONG ENTIRE LENGTH OF ROW. BOND EACH RACK TO BONDING CONDUCTOR WITH A #6 AWG STRANDED BONDING COPPER CONDUCTOR. (TYP)
3. NEMA RATED TMGB 1/4" X 4" X 20" WITH STAND OF INSULATORS. BOND GROUND CONDUCTOR TO TMGB WITH TWO HOLE / TWO SCREW LUG, OR EXOTHERMIC WELD. (BY DIV. 26)
4. NEMA RATED TGB 1/4" X 4" X 10" WITH STAND OF INSULATORS. BOND GROUND CONDUCTOR TO TMGB WITH TWO HOLE / TWO SCREW LUG, OR EXOTHERMIC WELD. NOTE: QUANTITIES AND CONNECTIONS ARE CONCEPTUAL. PLACE QUANTITY OF BUS BARS IN MC/TR ROOMS IN LOCATIONS AS SHOWN ON ROOM DETAIL DRAWINGS. (BY DIV. 26)
5. TELECOMMUNICATION BONDING BACKBONE, MINIMUM #3/0 INSULATED/STRANDED COPPER. TEST TO 0.1 OHMS. (BY DIV. 26)
6.
7. MAIN BUILDING GROUNDING ELECTRODE.
8. TO BUILDING STEEL, MINIMUM #6 AWG.
9. TO NEAREST ELEC PANEL, MINIMUM #6 AWG.

2 TECHNOLOGY GROUNDING RISER DIAGRAM

NO SCALE

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TECHNOLOGY FIBER & GROUNDING RISER DIAGRAMS

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Autodesk Docs://NEW CANEY ISD - NEW OPERATIONS BUILDING/19191-05-01_NCISD Trans & Ops_MEP_R25.rvt

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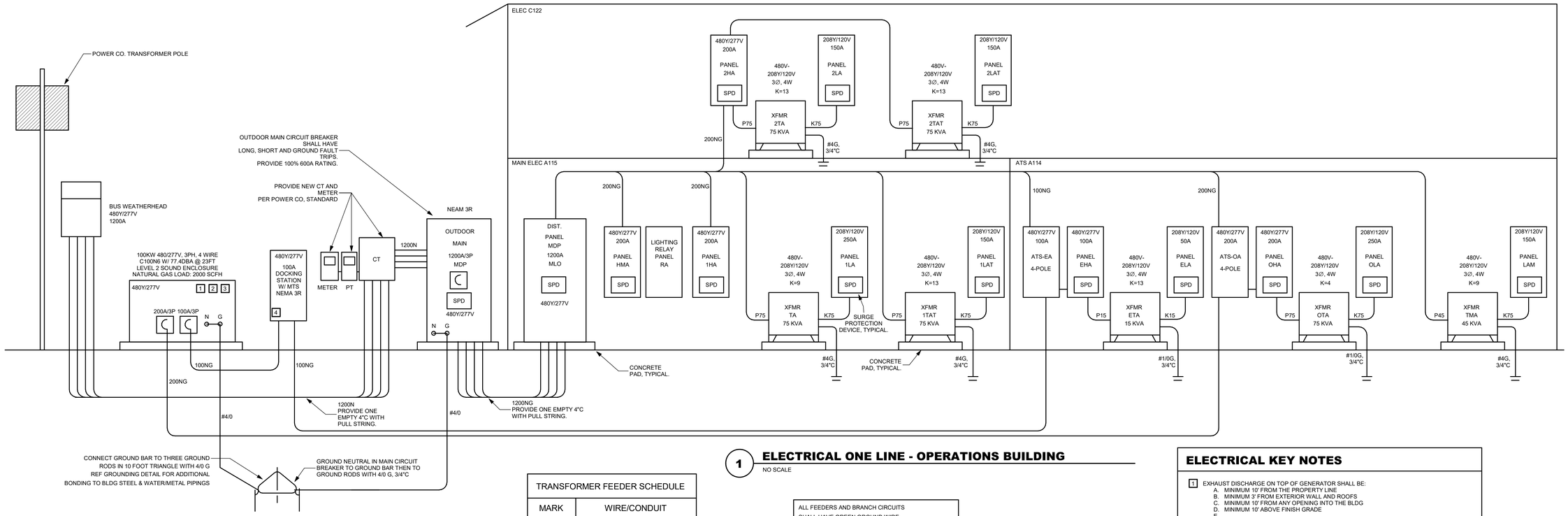

1 ELECTRICAL ONE LINE - OPERATIONS BUILDING

NO SCALE

ALL FEEDERS AND BRANCH CIRCUITS SHALL HAVE GREEN GROUND WIRE SIZED PER NATIONAL ELECTRICAL CODE

SEE SHORT CIRCUIT ANALYSIS FOR EQUIPMENT AIC RATING.

SHORT CIRCUIT ANALYSIS

480Y/277 VOLTS

LOCATION	SHORT CIRCUIT AVAILABLE	EQUIPMENT AIC FULLY RATING
OUTDOOR MAIN CIRCUIT BREAKER	100,000A	100,000A
DIST. PANEL DM	100,000A	100,000A
PANEL HK	65,000A	65,000A
PANEL HA	65,000A	65,000A
PANEL HB	65,000A	65,000A
* 208Y/120V OR 120/240V PANELS	<10,000A	10,000A

TVSS TVSS SHALL HAVE SAME AIC RATING AS SWITCHGEAR TO BE PROTECTED.

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.

1. WHERE CIRCUIT BREAKERS ARE APPLIED IN COMPLIANCE WITH THE SERIES COMBINATION RATINGS MARKED ON THE EQUIPMENT BY THE MANUFACTURER, THE ENCLOSURE(S) SHALL BE LEGIBLE MARKED IN THE FIELD TO INDICATE THE EQUIPMENT HAS BEEN APPLIED WITH A SERIES COMBINATION RATING. ELECTRICAL EQUIPMENT SUPPLIER SHALL PROVIDE READILY VISIBLE ENGRAVED NAMEPLATE READING:

CAUTION __ SERIES COMBINATION SYSTEM
RATED __ AMPERES. IDENTIFIED
REPLACEMENT COMPONENTS REQUIRED.

ELECTRICAL LOAD ANALYSIS

SERVICE VOLTAGE IS 480Y/277 VOLTS, 3 PHASE, 4 WIRE

LOAD DESCRIPTION	AMPS
LIGHTS	
ACCU(S)	
RTU(S)	
CCU & FCU	
MISC. ELECTRICAL	
KITCHEN	
TOTAL LOAD	
25% LIGHTS	
25% LARGEST MOTOR	
TOTAL LOAD	
EXISTING ELECTRICAL SERVICE CAPACITY	
SPARE CAPACITY	

1. ALL LOADS ARE 100% CONNECTED LOADS, NO DEMAND FACTOR USED.
2. SERVICE IS ADEQUATE TO HANDLE 100% CONNECTED LOADS.

TRANSFORMER FEEDER SCHEDULE	
MARK	WIRE/CONDUIT
P15	3#10, 1#10G IN 1"C
K15	3#8,1#8N, 1#8G IN 1"C
P30	3#6, 1#10G IN 1"C
K30	3#1/0,1#2/0N, 1#6G IN 2"C
P45	3#4, 1#8G IN 1"C
K45	3#2/0, 1#250N, 1#4G IN 2"C
P75	3#1, 1#6G IN 1.5"C
K75	3#250, 1#250N, 1#2G IN 2.5"C
P112.5	3#2/0, 1#6G IN 2"C
K112.5	(2) SETS: 3#3/0, 1#3/0N, 1#1/0G IN 2"C
P150	3#250, 1#4G IN 2"C
K150	(2) SETS: 3#250, 1#250N, 1#1/0G IN 2.5"C

COPPER FEEDER SCHEDULE

FEEDER DESIGNATION	NO. OF SETS	PHASE CONDUCTORS (PER SET)	N NEUTRAL CONDUCTOR (PER SET)	G GROUND CONDUCTOR (PER SET)	SG SYSTEM BONDING JUMPER (PER SET)	P PARTIAL NEUTRAL SERVICE CONDUCTOR (PER SET)	I ISOLATE GROUND CONDUCTOR (PER SET)	CONDUIT SIZE – CONDUIT TYPES EMT, FCM, IMC, RMC, SCH 40 PVS: 3 PHASE NEUTRAL & GROUND 'NG','NSG','PG','PSG' (PER SET)	3 PHASE & GROUND 'G' (PER SET)	3 PHASE NEUTRAL GROUND & ISOLATE GROUND 'NGI','NSGI' (PER SET)	CONDUIT SIZE – CONDUIT TYPES SCH 80 PVC: 3 PHASE NEUTRAL & GROUND 'NG','NSG','PG','PSG' (PER SET)	3 PHASE & GROUND 'G' (PER SET)	3 PHASE NEUTRAL GROUND & ISOLATE GROUND 'NGI','NSGI' (PER SET)
15	1	3 # 12	1 # 12	1 # 12	1 # 8	"	1 # 12	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
20	1	3 # 12	1 # 12	1 # 12	1 # 8	"	2 # 12	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
30	1	3 # 10	1 # 10	1 # 10	1 # 8	"	1 # 10	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
40/50	1	3 # 8	1 # 8	1 # 10	1 # 8	"	1 # 10	3/4"	3/4"	1"	1"	3/4"	1"
60	1	3 # 6	1 # 6	1 # 10	1 # 8	"	1 # 10	1"	3/4"	1"	1"	1"	1 1/4"
70/80	1	3 # 4	1 # 4	1 # 8	1 # 8	"	1 # 8	1 1/4"	1"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
100	1	3 # 2	1 # 2	1 # 6	1 # 6	1 # 8	1 # 8	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/4"	1 1/2"
115	1	3 # 2	1 # 2	1 # 6	1 # 8	1 # 8	1 # 6	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/4"	1 1/2"
130	1	3 # 1	1 # 1	1 # 6	1 # 8	1 # 6	1 # 6	1 1/2"	1 1/2"	1 1/2"	2"	1 1/2"	2"
150	1	3 # 1/0	1 # 1/0	1 # 6	1 # 6	1 # 6	1 # 6	2"	1 1/2"	2"	2"	1 1/2"	2"
175	1	3 # 2/0	1 # 2/0	1 # 6	1 # 4	1 # 4	1 # 6	2"	1 1/2"	2"	2"	2"	2"
200	1	3 # 3/0	1 # 3/0	1 # 6	1 # 4	1 # 4	1 # 6	2"	2"	2"	2 1/2"	2"	2 1/2"
225	1	3 # 4/0	1 # 4/0	1 # 4	1 # 2	1 # 2	1 # 4	2 1/2"	2"	2 1/2"	2 1/2"	2"	2 1/2"
250	1	3 # 250	1 # 250	1 # 4	1 # 2	1 # 2	1 # 4	2 1/2"	2"	2 1/2"	3"	2 1/2"	3"
300	1	3 # 350	1 # 350	1 # 4	1 # 2	1 # 2	1 # 4	3"	2 1/2"	3"	3"	3"	3"
350	1	3 # 500	1 # 500	1 # 3	1 # 1/0	1 # 1/0	1 # 3	4"	3"	4"	4"	3"	4"
400	2	3 # 3/0	1 # 3/0	1 # 3	1 # 1/0	1 # 1/0	1 # 3	2"	2"	2 1/2"	2 1/2"	2"	2 1/2"
460	2	3 # 4/0	1 # 4/0	1 # 2	1 # 1/0	1 # 1/0	1 # 2	2 1/2"	2"	2 1/2"	2 1/2"	2"	2 1/2"
500	2	3 # 250	1 # 250	1 # 2	1 # 1/0	1 # 1/0	1 # 2	2 1/2"	2 1/2"	3"	3"	2 1/2"	3"
600	2	3 # 350	1 # 350	1 # 1	1 # 2/0	1 # 2/0	"	3"	2 1/2"	"	3"	3"	"
700	2	3 # 500	1 # 500	1 # 1/0	1 # 2/0	1 # 2/0	"	4"	3"	"	4"	3"	"
800	3	3 # 300	1 # 300	1 # 1/0	1 # 2/0	1 # 2/0	"	3"	2 1/2"	"	3"	2 1/2"	"
1000	3	3 # 400	1 # 400	1 # 2/0	1 # 3/0	1 # 3/0	"	3"	3"	"	4"	3"	"
1200	4	3 # 350	1 # 350	1 # 3/0	1 # 4/0	1 # 4/0	"	3"	2 1/2"	"	3"	3"	"
1600	5	3 # 400	1 # 400	1 # 4/0	1 # 250	1 # 250	"	3"	3"	"	4"	3"	"
2000	6	3 # 400	1 # 400	1 # 250	1 # 300	1 # 300	"	3"	3"	"	4"	3"	"
2500	7	3 # 500	1 # 500	1 # 350	1 # 500	1 # 500	"	4"	3"	"	4"	4"	"
3000	8	3 # 500	1 # 500	1 # 400	1 # 500	1 # 500	"	4"	3"	"	4"	4"	"
4000	11	3 # 500	1 # 500	1 # 500	2 # 350	1 # 500	"	4"	4"	"	4"	4"	"

EXAMPLES:
1. 150NG = INDICATES 1 SET OF 4# 1/0 + 1#6 GROUND CONDUCTOR PER SET.
2. 500P = INDICATES 2 SET OF 3#250 KCMIL AND 1#1/0 PARTIAL NEUTRAL CONDUCTOR PER SET.
3. 3000NNG = INDICATES 5#350 KCMIL AND 1#4 GROUND CONDUCTOR.

ELECTRICAL KEY NOTES

1. EXHAUST DISCHARGE ON TOP OF GENERATOR SHALL BE:
   A. MINIMUM 10' FROM THE PROPERTY LINE
   B. MINIMUM 3' FROM EXTERIOR WALL AND ROOFS
   C. MINIMUM 10' FROM ANY OPENING INTO THE BLDG
   D. MINIMUM 10' ABOVE FINISH GRADE
   E.
2. BRANCH CIRCUITS FOR BATTERY CHARGER, ALTERNATOR HEATER, COOLANT HEATER, AND (2)-1"C FOR CONTROLS TO EACH ATS. SEE PANEL SCHEDULE FOR CIRCUITING
3. PROVIDE EMERGENCY STOP MUSHROOM BUTTON ON GENERATOR.
4. PROVIDE TWIST LOCKS FOR DOCKING STATION AS WELL AS MANUAL TRANSFER SWITCH TO SWITCH FROM PERMANENT GENERATOR TO TEMPORARY GENERATOR. PROVIDE 2 BANANA PLUG CLIPS FOR TEMPORARY GENERATOR START SIGNAL, 2#12 IN 1"C BACK TO ATS-E.

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, DATA OUTLETS, 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 LISED FOR GROUNDING.
11. LIGHT FIXTURE WHIPS MAY BE MIN. 3/8" FLEX CONDUIT WITH MIN. #12 WIRE. MC CABLE IS ACCEPTABLE FOR LIGHT FIXTURE WHIPS, MAXIMUM 6 FT LONG FROM J-BOX AND EMT CONDUIT SYSTEM. NO SNAP-IN CONNECTORS ARE ALLOWED.
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.
19. ALL MATERIAL MUST BE NEW AND OF GOOD QUALITY AND SHALL BEAR THE STAMP OF APPROVAL OF THE UNDERWRITERS' LABORATORIES, INC. (U.L.).

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/18/2025

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ELECTRICAL ONE LINE - OPERATIONS BUILDING

PACKAGE VOLUME

Job No. 1971-05-01
Drawn By: Author
Date: 09/18/2025
Sheet No. E5.00
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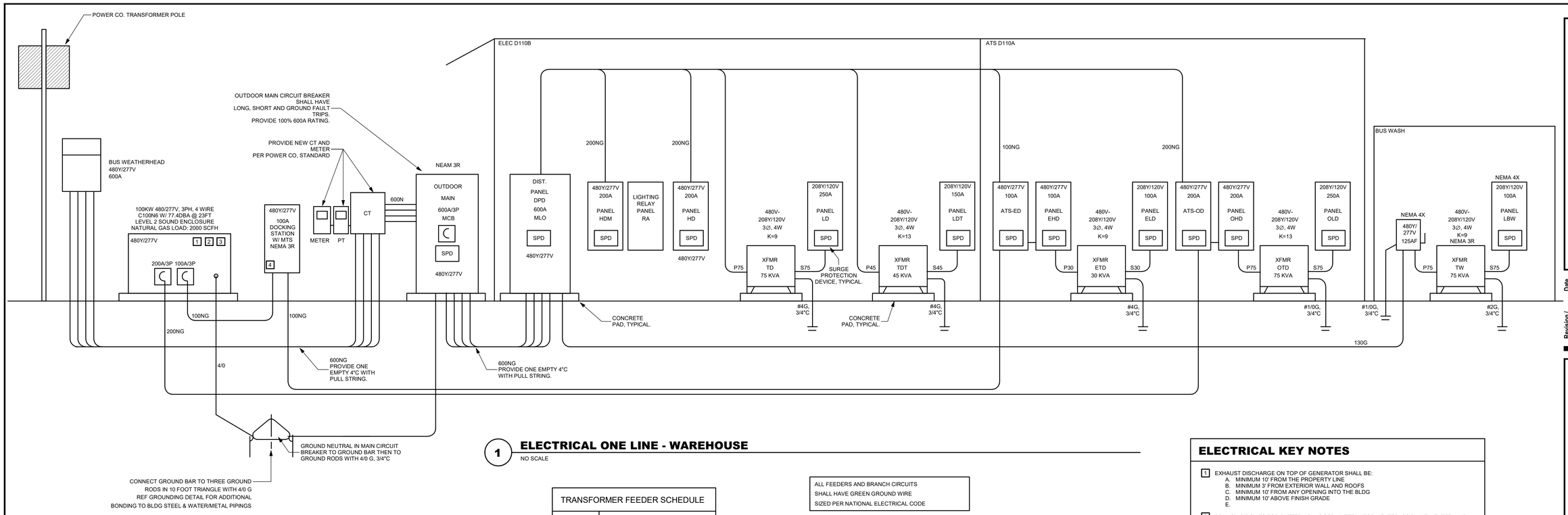

1 ELECTRICAL ONE LINE - WAREHOUSE

NO SCALE

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SEE SHORT CIRCUIT ANALYSIS FOR EQUIPMENT AIC RATING.

SHORT CIRCUIT ANALYSIS

480Y/277 VOLTS

LOCATION	SHORT CIRCUIT AVAILABLE	EQUIPMENT AIC FULLY RATING
OUTDOOR MAIN CIRCUIT BREAKER	100,000A	100,000A
DIST. PANEL DM	100,000A	100,000A
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PANEL HA	65,000A	65,000A
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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.

1. WHERE CIRCUIT BREAKERS ARE APPLIED IN COMPLIANCE WITH THE SERIES COMBINATION RATINGS MARKED ON THE EQUIPMENT BY THE MANUFACTURER, THE ENCLOSURE(S) SHALL BE LEGIBLE MARKED IN THE FIELD TO INDICATE THE EQUIPMENT HAS BEEN APPLIED WITH A SERIES COMBINATION RATING. ELECTRICAL EQUIPMENT SUPPLIER SHALL PROVIDE READILY VISIBLE ENGRAVED NAMEPLATE READING:

CAUTION __ SERIES COMBINATION SYSTEM
RATED __ AMPERES. IDENTIFIED
REPLACEMENT COMPONENTS REQUIRED.

ELECTRICAL LOAD ANALYSIS

SERVICE VOLTAGE IS 480Y/277 VOLTS, 3 PHASE, 4 WIRE

LOAD DESCRIPTION	AMPS
LIGHTS	
ACCU(S)	
RTU(S)	
CCU & FCU	
MISC. ELECTRICAL	
KITCHEN	
TOTAL LOAD	
25% LIGHTS	
25% LARGEST MOTOR	
TOTAL LOAD	
EXISTING ELECTRICAL SERVICE CAPACITY	
SPARE CAPACITY	

1. ALL LOADS ARE 100% CONNECTED LOADS, NO DEMAND FACTOR USED.
2. SERVICE IS ADEQUATE TO HANDLE 100% CONNECTED LOADS.

TRANSFORMER FEEDER SCHEDULE	
MARK	WIRE/CONDUIT
P15	3#10, 1#10G IN 1"C
K15	3#8,1#8N, 1#8G IN 1"C
P30	3#6, 1#10G IN 1"C
K30	3#1/0,1#2/0N, 1#6G IN 2"C
P45	3#4, 1#8G IN 1"C
K45	3#2/0, 1#250N, 1#4G IN 2"C
P75	3#1, 1#6G IN 1.5"C
K75	3#250, 1#250N, 1#2G IN 2.5"C
P112.5	3#2/0, 1#6G IN 2"C
K112.5	(2) SETS: 3#3/0, 1#3/0N, 1#1/0G IN 2"C
P150	3#250, 1#4G IN 2"C
K150	(2) SETS: 3#250, 1#250N, 1#1/0G IN 2.5"C

COPPER FEEDER SCHEDULE

FEEDER DESIGNATION	NO. OF SETS	PHASE CONDUCTORS (PER SET)	N NEUTRAL CONDUCTOR (PER SET)	G GROUND CONDUCTOR (PER SET)	SG SYSTEM BONDING JUMPER (PER SET)	P PARTIAL NEUTRAL SERVICE CONDUCTOR (PER SET)	I ISOLATE GROUND CONDUCTOR (PER SET)	CONDUIT SIZE – CONDUIT TYPES EMT, FCM, IMC, RMC, SCH 40 PVS: 3 PHASE NEUTRAL & GROUND 'NG','NSG','PG','PSG' (PER SET)	3 PHASE & GROUND 'G' (PER SET)	3 PHASE NEUTRAL GROUND & ISOLATE GROUND 'NGI','NSGI' (PER SET)	CONDUIT SIZE – CONDUIT TYPES SCH 80 PVC: 3 PHASE NEUTRAL & GROUND 'NG','NSG','PG','PSG' (PER SET)	3 PHASE & GROUND 'G' (PER SET)	3 PHASE NEUTRAL GROUND & ISOLATE GROUND 'NGI','NSGI' (PER SET)
15	1	3 # 12	1 # 12	1 # 12	1 # 8	*	1 # 12	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
20	1	3 # 12	1 # 12	1 # 12	1 # 8	*	2 # 12	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
30	1	3 # 10	1 # 10	1 # 10	1 # 8	*	1 # 10	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
40/50	1	3 # 8	1 # 8	1 # 10	1 # 8	*	1 # 10	3/4"	3/4"	1"	1"	3/4"	1"
60	1	3 # 6	1 # 6	1 # 10	1 # 8	*	1 # 10	1"	3/4"	1"	1"	1"	1 1/4"
70/80	1	3 # 4	1 # 4	1 # 8	1 # 8	*	1 # 8	1 1/4"	1"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
100	1	3 # 2	1 # 2	1 # 6	1 # 6	1 # 8	1 # 8	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/4"	1 1/2"
115	1	3 # 2	1 # 2	1 # 6	1 # 8	1 # 8	1 # 6	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/4"	1 1/2"
130	1	3 # 1	1 # 1	1 # 6	1 # 6	1 # 6	1 # 6	1 1/2"	1 1/2"	1 1/2"	2"	1 1/2"	2"
150	1	3 # 1/0	1 # 1/0	1 # 6	1 # 6	1 # 6	1 # 6	2"	1 1/2"	2"	2"	1 1/2"	2"
175	1	3 # 2/0	1 # 2/0	1 # 6	1 # 4	1 # 4	1 # 6	2"	1 1/2"	2"	2"	2"	2"
200	1	3 # 3/0	1 # 3/0	1 # 6	1 # 4	1 # 4	1 # 6	2"	2"	2"	2 1/2"	2"	2 1/2"
225	1	3 # 4/0	1 # 4/0	1 # 4	1 # 2	1 # 2	1 # 4	2 1/2"	2"	2 1/2"	2 1/2"	2"	2 1/2"
250	1	3 # 250	1 # 250	1 # 4	1 # 2	1 # 2	1 # 4	2 1/2"	2"	2 1/2"	3"	2 1/2"	3"
300	1	3 # 350	1 # 350	1 # 4	1 # 2	1 # 2	1 # 4	3"	2 1/2"	3"	3"	3"	3"
350	1	3 # 500	1 # 500	1 # 3	1 # 1/0	1 # 1/0	1 # 3	4"	3"	4"	4"	3"	4"
400	2	3 # 3/0	1 # 3/0	1 # 3	1 # 1/0	1 # 1/0	1 # 3	2"	2"	2 1/2"	2 1/2"	2"	2 1/2"
460	2	3 # 4/0	1 # 4/0	1 # 2	1 # 1/0	1 # 1/0	1 # 2	2 1/2"	2"	2 1/2"	2 1/2"	2"	2 1/2"
500	2	3 # 250	1 # 250	1 # 2	1 # 1/0	1 # 1/0	1 # 2	2 1/2"	2 1/2"	3"	3"	2 1/2"	3"
600	2	3 # 350	1 # 350	1 # 1	1 # 2/0	1 # 2/0	*	3"	2 1/2"	*	3"	3"	*
700	2	3 # 500	1 # 500	1 # 1/0	1 # 2/0	1 # 2/0	*	4"	3"	*	4"	3"	*
800	3	3 # 300	1 # 300	1 # 1/0	1 # 2/0	1 # 2/0	*	3"	2 1/2"	*	3"	2 1/2"	*
1000	3	3 # 400	1 # 400	1 # 2/0	1 # 3/0	1 # 3/0	*	3"	3"	*	4"	3"	*
1200	4	3 # 350	1 # 350	1 # 3/0	1 # 4/0	1 # 4/0	*	3"	2 1/2"	*	3"	3"	*
1600	5	3 # 400	1 # 400	1 # 4/0	1 # 250	1 # 250	*	3"	3"	*	4"	3"	*
2000	6	3 # 400	1 # 400	1 # 250	1 # 300	1 # 300	*	3"	3"	*	4"	3"	*
2500	7	3 # 500	1 # 500	1 # 350	1 # 500	1 # 500	*	4"	3"	*	4"	4"	*
3000	8	3 # 500	1 # 500	1 # 400	1 # 500	1 # 500	*	4"	3"	*	4"	4"	*
4000	11	3 # 500	1 # 500	1 # 500	2 # 350	1 # 500	*	4"	4"	*	4"	4"	*

EXAMPLES:
1. 150NG = INDICATES 1 SET OF 4# 1/0 + 1#6 GROUND CONDUCTOR PER SET.
2. 500P = INDICATES 2 SET OF 3#250 KCMIL AND 1#1/0 PARTIAL NEUTRAL CONDUCTOR PER SET.
3. 3000NNG = INDICATES 5#350 KCMIL AND 1#4 GROUND CONDUCTOR.

ELECTRICAL KEY NOTES

1. EXHAUST DISCHARGE ON TOP OF GENERATOR SHALL BE:
   A. MINIMUM 10' FROM THE PROPERTY LINE
   B. MINIMUM 3' FROM EXTERIOR WALL AND ROOFS
   C. MINIMUM 10' FROM ANY OPENING INTO THE BLDG
   D. MINIMUM 10' ABOVE FINISH GRADE
   E.
2. BRANCH CIRCUITS FOR BATTERY CHARGER, ALTERNATOR HEATER, COOLANT HEATER, AND (2)-1"C FOR CONTROLS TO EACH ATS. SEE PANEL SCHEDULE FOR CIRCUITING
3. PROVIDE EMERGENCY STOP MUSHROOM BUTTON ON GENERATOR.
4. PROVIDE TWIST LOCKS FOR DOCKING STATION AS WELL AS MANUAL TRANSFER SWITCH TO SWITCH FROM PERMANENT GENERATOR TO TEMPORARY GENERATOR. PROVIDE 2 BANANA PLUG CLIPS FOR TEMPORARY GENERATOR START SIGNAL, 2#12 IN 1"C BACK TO ATS-E.

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, DATA OUTLETS, 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 LISED FOR GROUNDING.
11. LIGHT FIXTURE WHIPS MAY BE MIN. 3/8" FLEX CONDUIT WITH MIN. #12 WIRE. MC CABLE IS ACCEPTABLE FOR LIGHT FIXTURE WHIPS, MAXIMUM 6 FT LONG FROM J-BOX AND EMT CONDUIT SYSTEM. NO SNAP-IN CONNECTORS ARE ALLOWED.
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.
19. ALL MATERIAL MUST BE NEW AND OF GOOD QUALITY AND SHALL BEAR THE STAMP OF APPROVAL OF THE UNDERWRITERS' LABORATORIES, INC. (U.L.).

Revision / Date

Project: NEW OPERATIONS BUILDING FOR NEW CANEY I.S.D. NEW CANEY, TEXAS

STATE OF TEXAS — CHI K. TRUONG — 90332 — LICENSED PROFESSIONAL ENGINEER — 09/18/2025

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ELECTRICAL ONE LINE - WAREHOUSE

PACKAGE VOLUME

Job No. 1971-05-01
Sheet No. E5.01
Drawn By: Author
Date: 09/18/2025
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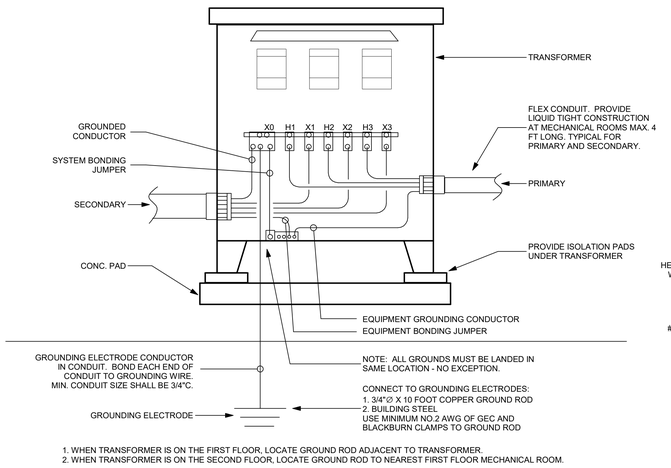
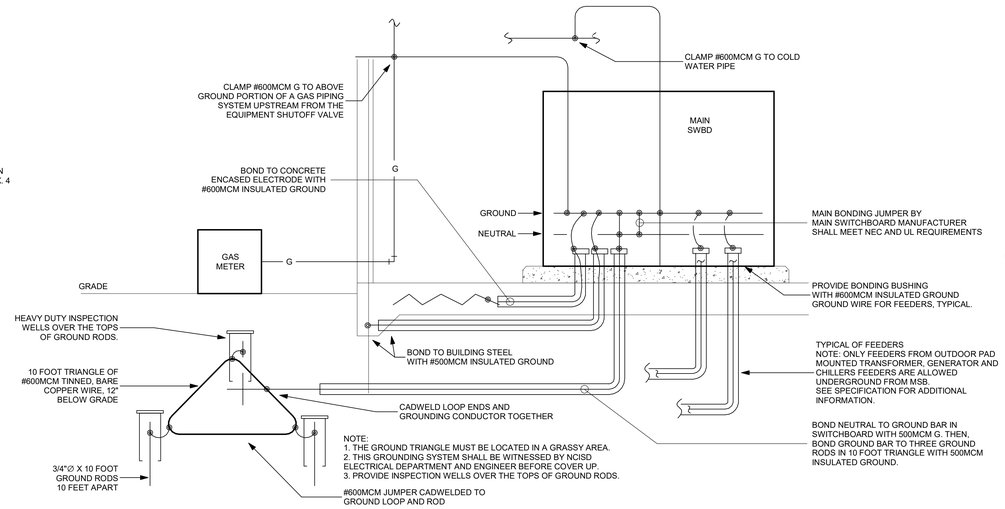


1. WHEN TRANSFORMER IS ON THE FIRST FLOOR, LOCATE GROUND ROD ADJACENT TO TRANSFORMER.
2. WHEN TRANSFORMER IS ON THE SECOND FLOOR, LOCATE GROUND ROD TO NEAREST FIRST FLOOR MECHANICAL ROOM.

1 TRANSFORMER CONNECTION AND GROUNDING DETAIL

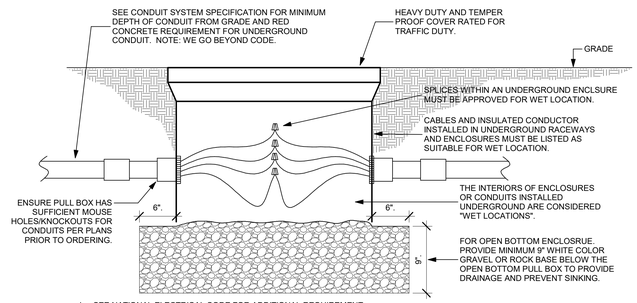
NO SCALE



INSTALL BONDING AND GROUNDING SYSTEMS PER NATIONAL ELECTRICAL CODE.

2 ELECTRICAL SERVICE GROUNDING DETAIL

NO SCALE



1. SEE NATIONAL ELECTRICAL CODE FOR ADDITIONAL REQUIREMENT.
2. COORDINATE PULL BOX LOCATION WITH OWNER AND UTILITY COMPANY PRIOR TO INSTALLATION.
3. THE UNDERGROUND PULL BOX IS FOR "TECHNOLOGY" CABLING APPLICATION ONLY. DO NOT INSTALL IN-GROUND BOXES FOR ELECTRICAL WIRING UNLESS APPROVED BY NCISD FACILITIES IN WRITING.

UNDERGROUND ENCLOSURE SPECIFICATION

UNDERGROUND ENCLOSURE SHALL BE HUBBELL QUAZITE SERIES UNDERGROUND ENCLOSURE, UL LISTED AND MANUFACTURED BY LENOIR CITY, INC. EQUAL UNDERGROUND ENCLOSURE MANUFACTURED BY CDR WITH 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 22 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.

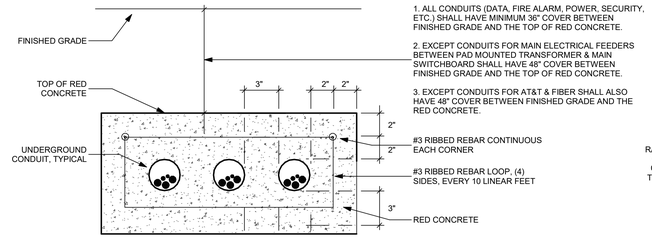
3 UNDERGROUND PULL BOX DETAIL

NO SCALE

NOTE:
1. PROVIDE AND INSTALL GROUNDING BUSHING FOR DISCONNECT SWITCHES, PANELS AND TRANSFORMERS.

4 GROUNDING BUSHING WIRING DETAIL

NO SCALE

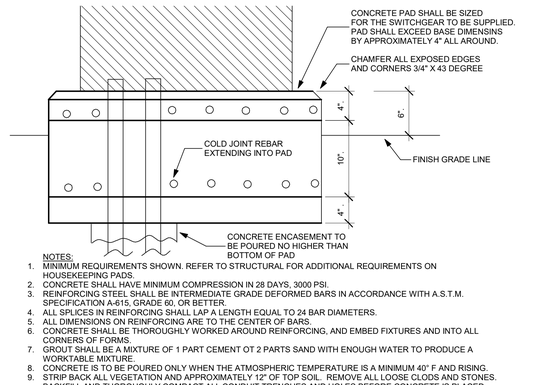


1. ALL CONDUITS (DATA, FIRE ALARM, POWER, SECURITY, ETC.) SHALL HAVE MINIMUM 36" COVER BETWEEN FINISHED GRADE AND THE TOP OF RED CONCRETE.
2. EXCEPT CONDUITS FOR MAIN ELECTRICAL FEEDERS BETWEEN PAD MOUNTED TRANSFORMER & MAIN SWITCHBOARD SHALL HAVE 48" COVER BETWEEN FINISHED GRADE AND THE TOP OF RED CONCRETE.
3. EXCEPT CONDUITS FOR AT&T & FIBER SHALL ALSO HAVE 48" COVER BETWEEN FINISHED GRADE AND THE RED CONCRETE.

1. REFER TO DRAWINGS FOR EXACT QUANTITY OF CONDUIT. PROVIDE ADDITIONAL ROWS AS REQUIRED. CONDUIT SHALL BE PLACED WITH SPACERS EVERY 4 FT CENTER TO CENTER TO ENSURE THE CORRECT SEPARATION BETWEEN CONDUITS.
2. INSTALL PVC COATED, RIGID GALVANIZED STEEL, LONG RADIUS ELBOWS WHERE CONDUIT TURNS UP ABOVE GRADE. PVC COATED, RIGID GALVANIZED STEEL ELBOW AND CONDUIT MUST BE EXTENDED TO 18" ABOVE GRADE.
3. ENCASE UNDERGROUND CONDUIT NOT UNDER BUILDING SLAB IN 3" RED CONCRETE ENVELOPE.
4. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENT SUCH LIKE WARNING TAPS, MAGNETIC MARKING TAPE, ETC.

5 DUCT BANK DETAIL-SECTION

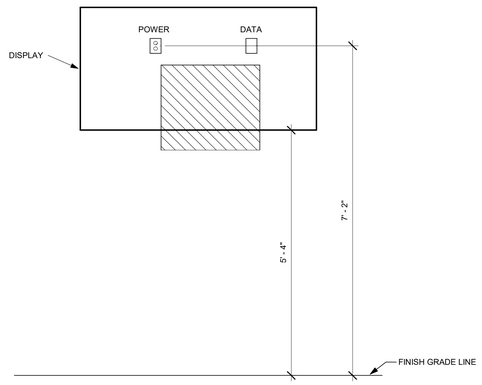
NO SCALE



NOTES:
1. MINIMUM REQUIREMENTS SHOWN. REFER TO STRUCTURAL FOR ADDITIONAL REQUIREMENTS ON HOUSEKEEPING PADS.
2. CONCRETE SHALL HAVE MINIMUM COMPRESSION IN 28 DAYS, 3000 PSI.
3. REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS IN ACCORDANCE WITH A.S.T.M. SPECIFICATION A-615, GRADE 60, OR BETTER.
4. ALL SPLICES IN REINFORCING SHALL LAP A LENGTH EQUAL TO 24 BAR DIAMETERS.
5. ALL DIMENSIONS ON REINFORCING ARE TO THE CENTER OF BARS.
6. CONCRETE SHALL BE THOROUGHLY WORKED AROUND REINFORCING, AND EMBED FIXTURES AND INTO ALL CORNERS OF FORMS.
7. GROUT SHALL BE A MIXTURE OF 1 PART CEMENT OT 2 PARTS SAND WITH ENOUGH WATER TO PRODUCE A WORKTABLE MIXTURE.
8. CONCRETE IS TO BE POURED ONLY WHEN THE ATMOSPHERIC TEMPERATURE IS A MINIMUM 40° F AND RISING.
9. STRIP BACK ALL VEGETATION AND APPROXIMATELY 12" OF TOP SOIL. REMOVE ALL LOOSE CLODS AND STONES. BACKFILL AND THOROUGHLY COMPACT ALL CONDUIT TRENCHES AND HOLES BEFORE CONCRETE IS PLACED.
10. REINFORCING SHALL HAVE A MINIMUM OF 2.5" CONCRETE COVER.
11. SLOPE PAD 1" FRONT TO BACK.

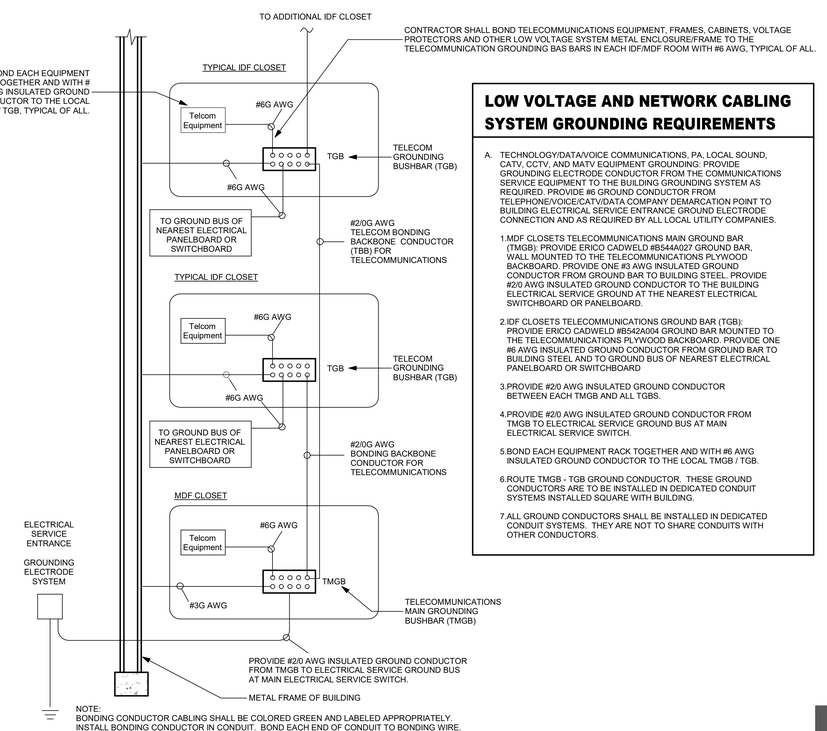
6 CONCRETE EQUIPMENT PAD ELEVATION

NO SCALE



7 TYPICAL OFFICE DISPLAY ELEVATION

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



NOTE:
BONDING CONDUCTOR CABLING SHALL BE COLORED GREEN AND LABELED APPROPRIATELY. INSTALL BONDING CONDUCTOR IN CONDUIT. BOND EACH END OF CONDUIT TO BONDING WIRE. MIN. CONDUIT SIZE SHALL BE 3/4"C.

8 NETWORK SYSTEM GROUNDING/BONDING SCHEMATIC

NO SCALE

LOW VOLTAGE AND NETWORK CABLING SYSTEM GROUNDING REQUIREMENTS

A. TECHNOLOGY/DATA/VOICE COMMUNICATIONS, PA, LOCAL SOUND, CATV, CCTV, AND MATV EQUIPMENT GROUNDING: PROVIDE GROUNDING ELECTRODE CONDUCTOR FROM THE COMMUNICATIONS SERVICE EQUIPMENT TO THE BUILDING GROUNDING SYSTEM AS REQUIRED. PROVIDE #6 GROUND CONDUCTOR FROM TELEPHONE/VOICE/CATV/DATA COMPANY DEMARCATION POINT TO BUILDING ELECTRICAL SERVICE ENTRANCE GROUND ELECTRODE CONNECTION AND AS REQUIRED BY ALL LOCAL UTILITY COMPANIES.

1. MDF CLOSETS TELECOMMUNICATIONS MAIN GROUND BAR (TMGB): PROVIDE ERICO CADWELD #8544A027 GROUND BAR, WALL MOUNTED TO THE TELECOMMUNICATIONS PLYWOOD BACKBOARD. PROVIDE ONE #3 AWG INSULATED GROUND CONDUCTOR FROM GROUND BAR TO BUILDING STEEL. PROVIDE #2/0 AWG INSULATED GROUND CONDUCTOR TO THE BUILDING ELECTRICAL SERVICE GROUND AT THE NEAREST ELECTRICAL SWITCHBOARD OR PANELBOARD.
2. IDF CLOSETS TELECOMMUNICATIONS GROUND BAR (TGB): PROVIDE ERICO CADWELD #8542A004 GROUND BAR MOUNTED TO THE TELECOMMUNICATIONS PLYWOOD BACKBOARD. PROVIDE ONE #6 AWG INSULATED GROUND CONDUCTOR FROM GROUND BAR TO BUILDING STEEL AND TO GROUND BUS OF NEAREST ELECTRICAL PANELBOARD OR SWITCHBOARD
3. PROVIDE #2/0 AWG INSULATED GROUND CONDUCTOR BETWEEN EACH TMGB AND ALL TGBS.
4. PROVIDE #2/0 AWG INSULATED GROUND CONDUCTOR FROM TMGB TO ELECTRICAL SERVICE GROUND BUS AT MAIN ELECTRICAL SERVICE SWITCH.
5. BOND EACH EQUIPMENT RACK TOGETHER AND WITH #6 AWG INSULATED GROUND CONDUCTOR TO THE LOCAL TMGB / TGB.
6. ROUTE TMGB - TGB GROUND CONDUCTOR. THESE GROUND CONDUCTORS ARE TO BE INSTALLED IN DEDICATED CONDUIT SYSTEMS INSTALLED SQUARE WITH BUILDING.
7. ALL GROUND CONDUCTORS SHALL BE INSTALLED IN DEDICATED CONDUIT SYSTEMS. THEY ARE NOT TO SHARE CONDUITS WITH OTHER CONDUCTORS.

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/10/2025

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ELECTRICAL DETAILS

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. E6.00
Drawn By: Author	ISSUED FOR BID
Date: 09/18/2025	

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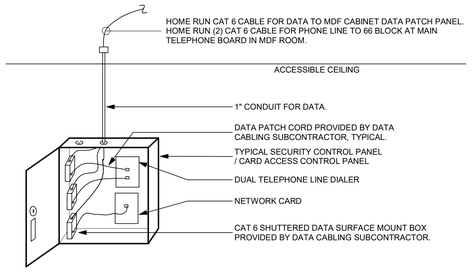
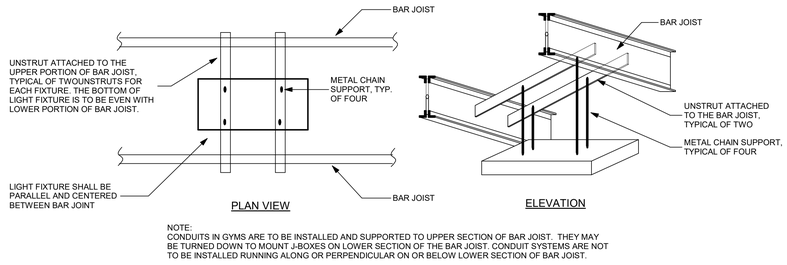


1 DATA AND PHONE CABLING FOR SECURITY PANEL

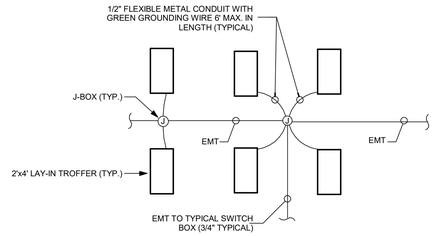
NO SCALE



NOTE:
CONDUITS IN GYMS ARE TO BE INSTALLED AND SUPPORTED TO UPPER SECTION OF BAR JOIST. THEY MAY BE TURNED DOWN TO MOUNT J-BOXES ON LOWER SECTION OF THE BAR JOIST. CONDUIT SYSTEMS ARE NOT TO BE INSTALLED RUNNING ALONG OR PERPENDICULAR ON OR BELOW LOWER SECTION OF BAR JOIST.

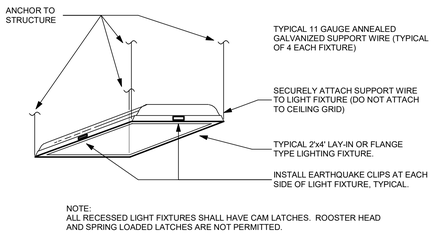
2 WAREHOUSE LIGHT FIXTURE INSTALLATION DETAIL

NO SCALE



3 CONDUIT/J-BOX DETAIL

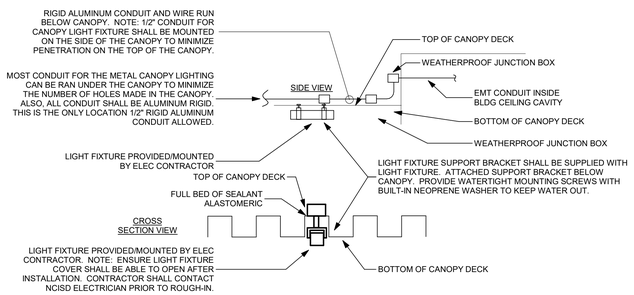
NO SCALE



NOTE:
ALL RECESSED LIGHT FIXTURES SHALL HAVE CAM LATCHES. ROOSTER HEAD AND SPRING LOADED LATCHES ARE NOT PERMITTED.

4 FIXTURE SUPPORT DETAIL

NO SCALE

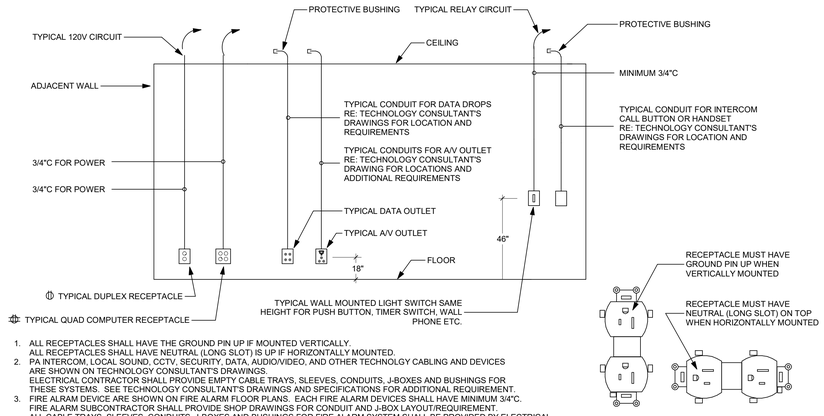


NOTES:
1. MOUNTING PLATES SHALL BE PROVIDED WITH CANOPY TO MOUNT LIGHT FIXTURES.
2. ALL CANOPY PENETRATIONS SHALL BE MADE OFF CENTER FROM THE FIXTURE WIRING ENTRY POINT AND SHALL HAVE WEATHERTIGHT SEALING.
3. CONDUIT SHALL BE SEALED TO PREVENT WATER FROM ENTERING THE LIGHTING FIXTURE.

NOTE: 1/2 INCH ALUMINUM CONDUIT IS ALLOWED FOR USE IN THIS CASE ONLY. COORDINATE THE CONDUIT ROUTING WITH NCISD PRIOR TO ROUGH-IN TO MINIMIZE HOLES ON TOP PARTITION OF CANOPY. NO EXCEPTION.

5 UNDER METAL CANOPY LIGHT FIXTURE MOUNTING DETAIL

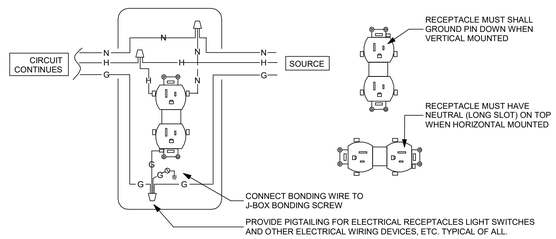
NO SCALE



1. ALL RECEPTACLES SHALL HAVE THE GROUND PIN UP IF MOUNTED VERTICALLY. ALL RECEPTACLES SHALL HAVE NEUTRAL (LONG SLOT) IS UP IF HORIZONTALLY MOUNTED.
2. PA INTERCOM, LOCAL SOUND, CCTV, SECURITY, DATA, AUDIO/VIDEO, AND OTHER TECHNOLOGY CABLING AND DEVICES ARE SHOWN ON TECHNOLOGY CONSULTANT'S DRAWINGS. ELECTRICAL CONTRACTOR SHALL PROVIDE EMPTY CABLE TRAYS, SLEEVES, CONDUITS, J-BOXES AND BUSHINGS FOR THESE SYSTEMS. SEE TECHNOLOGY CONSULTANTS DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENT.
3. FIRE ALRAM DEVICE ARE SHOWN ON FIRE ALARM FLOOR PLANS. EACH FIRE ALARM DEVICES SHALL HAVE MINIMUM 3/4"C. FIRE ALARM SUBCONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR CONDUIT AND J-BOX LAYOUT/REQUIREMENT. ALL CABLE TRAYS, SLEEVES, CONDUITS, J-BOXES AND BUSHINGS FOR FIRE ALARM SYSTEM SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.

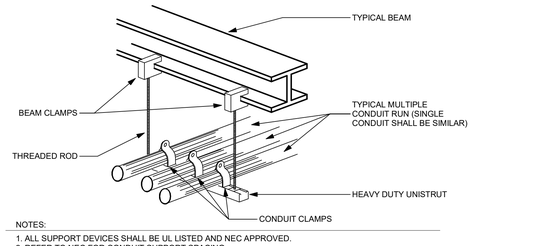
6 CONDUIT SIZE FOR ELECTRICAL DEVICES

NO SCALE



7 PIGTAIL WIRING DETAIL

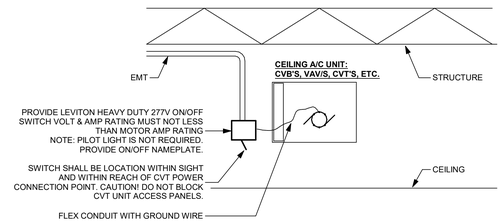
NO SCALE



NOTES:
1. ALL SUPPORT DEVICES SHALL BE UL LISTED AND NEC APPROVED.
2. REFER TO NEC FOR CONDUIT SUPPORT SPACING.

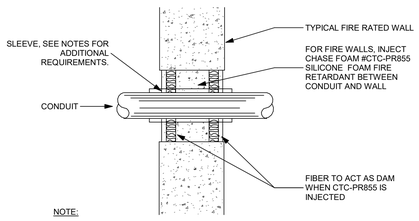
8 TRAPEZE MOUNTED CONDUIT DETAIL

NO SCALE



9 CEILING A/C UNIT WIRING DETAIL

NO SCALE

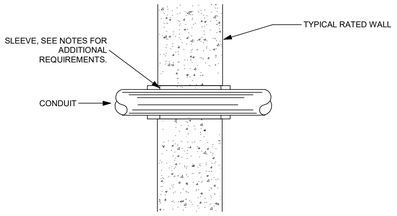


NOTE:

1. FOR PENETRATIONS THROUGH FIRE RATED WALLS, FIRE RATING OF COMPLETED FIREPROOFED ASSEMBLY SHALL BE EQUAL OR EXCEED RATING OF WALL.
2. PROVIDE SCHEDULE 40 GALVANIZED SLEEVE THROUGH ALL CMU, FIRE RATED, AND/OR EXTERIOR WALLS.
3. PROVIDE 16G SLIP-LOCK SLEEVES THROUGH INTERIOR SHEET ROCK WALLS.
4. REFER TO DETAIL 17/S0.03 FOR GRADE BEAM CONDUIT PENETRATIONS.

10 FIRE WALL PENETRATION DETAIL

NO SCALE



NOTE:

1. PROVIDE SCHEDULE 40 GALVANIZED SLEEVE THROUGH ALL CMU, FIRE RATED, AND/OR EXTERIOR WALLS.
2. PROVIDE 16G SLIP-LOCK SLEEVES THROUGH INTERIOR SHEET ROCK WALLS.
3. REFER TO DETAIL 17/S0.03 FOR GRADE BEAM CONDUIT PENETRATIONS.

11 WALL PENETRATION DETAIL

NO SCALE

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NEW CANEY, TEXAS

STATE OF TEXAS
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ELECTRICAL DETAILS

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Drawn By: Author	
Date: 09/18/2025	

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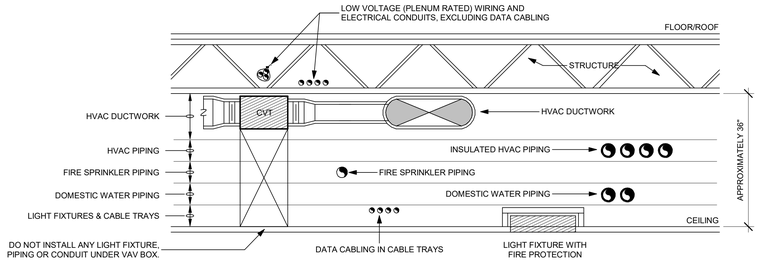


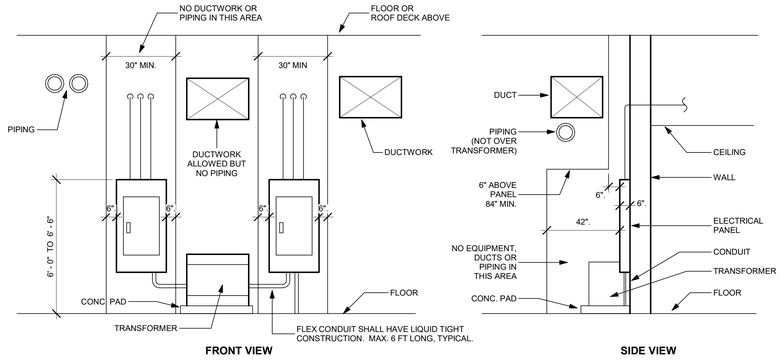
PLENUM PRIORITY NOTES

ELECTRICAL CONDUIT	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING. IF FRAMING IS USED FOR SUPPORT OF CONDUIT, A SADDLE SHALL BE REQUIRED FOR ISOLATION AT EACH SUPPORT POINT.
LOW VOLTAGE WIRING (EXCEPT DATA CABLING)	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING AND RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS. ALL INDIVIDUAL WIRES SHALL BE BUNDLED TOGETHER WITH PLASTIC TIE STRAPS AT 6 FOOT MAXIMUM INTERVALS AND EACH WIRE SHALL BE IDENTIFICATION TAGGED AT 25 FOOT MAXIMUM INTERVALS.
HVAC DUCTWORK	INSTALLED AS SNUG TO BOTTOM OF STRUCTURE AS POSSIBLE, ALLOWING ONLY ENOUGH SPACE FOR INSULATION WRAP. OFFSET HOT AND COLD MEDIUM PRESSURE DUCTS FOR TAKE-OFFS FOR DOUBLE DUCT VAV BOXES.
HVAC PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC DUCTWORK. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW.
FIRE SPRINKLER PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC PIPING.
DOMESTIC WATER PIPING	INSTALLED IN PLANE DIRECTLY ABOVE LIGHT FIXTURES. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW. BALL VALVES INSTALLED WITH STEM HORIZONTAL SHALL BE USED IN LIEU OF WHEEL HANDLE VALVES OR OTHER TYPES EXCEPT IN SITUATIONS WHERE BALL VALVES ARE NOT APPROPRIATE.
LIGHT FIXTURES	TAKE PRIORITY IN SPECIAL LAYOUT. ALL OTHER SYSTEMS (DOUBLE DUCT UNITS, DUCTWORK, PIPING, CONDUITS, ETC.) SHALL BE ROUTED IN PLENUM SPACE TO AVOID PASSING DIRECTLY (LOW) OVER LIGHTING FIXTURES PREVENTING THEIR INSTALLATION, SERVICING AND/OR REMOVAL.
GRAVITY FED PLUMBING	THIS INCLUDES PLUMBING WASTE/VENT AND ROOF DRAIN SYSTEMS. THESE SYSTEMS TAKE PRIORITY OVER ALL OTHER SYSTEMS BUT MUST BE INSTALLED TAKING OTHER SYSTEMS INTO CONSIDERATION. IN GENERAL, ROOF DRAIN PIPING SHALL START AS HIGH AS POSSIBLE. WASTE/VENT PIPING SHALL BE INSTALLED IN HVAC PIPING SPACE (IF AVAILABLE) IN AREAS WHERE CROSSING DUCTWORK. DO NOT INSTALL WASTE/VENT OR ROOF DRAIN PIPING UNDER DOUBLE DUCT VAV BOXES IF AVOIDABLE.

PIPING, CONDUIT AND DUCTWORK SUPPORTS ARE NOT SHOWN ON THIS DETAIL. SUPPORT ALL ENTITIES AS REQUIRED BY THE WRITTEN SPECIFICATIONS.

1 PLENUM PRIORITY NOTES

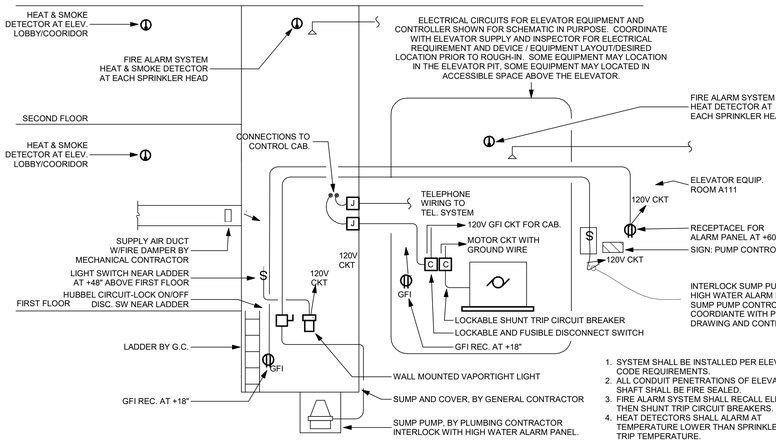
NO SCALE



COORDINATE WITH OTHER TRADES TO ENSURE NO PIPING AND DUCTWORK ABOVE ELECTRICAL EQUIPMENT AS SHOWN.

2 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE



1. SYSTEM SHALL BE INSTALLED PER ELEVATOR CODE REQUIREMENTS.
2. ALL CONDUIT PENETRATIONS OF ELEVATOR SHAFT SHALL BE FIRE SEALED.
3. FIRE ALARM SYSTEM SHALL RECALL ELEVATORS THEN SHUNT TRIP CIRCUIT BREAKERS.
4. HEAT DETECTORS SHALL ALARM AT TEMPERATURE LOWER THAN SPRINKLER HEAD TRIP TEMPERATURE.

3 MEP SYSTEMS FOR ELEVATOR

NO SCALE

GC AND ELECTRICAL CONTRACTOR SHALL COORDINATE WITH LOW VOLTAGE SUBCONTRACTORS TO PROVIDE SUPPORTS FOR LOW VOLTAGE CABLES PER THIS DETAIL. SUBMIT SUPPORT LAYOUT DRAWINGS FOR APPROVAL DURING CONSTRUCTION PHASE AND COORDINATE WITH HVAC DUCT WORK AND PIPING AND PLUMBING PIPING.

4 LOW VOLTAGE CABLE SUPPORTING DETAIL

NO SCALE

Revision / Date

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

Project:

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/18/2025

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ELECTRICAL DETAILS

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. E6.02
Drawn By: Author	ISSUED FOR BID
Date: 09/18/2025	

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Branch Panel: HMA

Location: Space 23
Supply From: MDP
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A	B	C	P	Trip	Comments	Circuit Description	CKT
1	CHP-1 (5HP)	15G	15 A	3	2105 VA 2105 VA			3	15 A	15G	CHP-2 (5HP)	2
3	--	--	--	--		2105 VA 2105 VA		--	--	--	--	4
5	--	--	--	--			2105 VA 2105 VA	--	--	--	--	6
7	SP-2 (15HP)	50G	40 A	3	5818 VA 5818 VA			3	40 A	50G	SP-1 (15HP)	8
9	--	--	--	--		5818 VA 5818 VA		--	--	--	--	10
11	--	--	--	--			5818 VA 5818 VA	--	--	--	--	12
13	HWP (5HP)	15G	15 A	3	2105 VA 0 VA			3	20 A		AHU-6	14
15	--	--	--	--		2105 VA 0 VA		--	--	--	--	16
17	--	--	--	--			2105 VA 0 VA	--	--	--	--	18
19	SF-1		20 A	3	582 VA 3047 VA			3	20 A	15G	AHU-1	20
21	--	--	--	--		582 VA 3047 VA		--	--	--	--	22
23	--	--	--	--			582 VA 3047 VA	--	--	--	--	24
25	AHU-2	15G	20 A	3	3047 VA 550 VA			3	20 A		SF-2	26
27	--	--	--	--		3047 VA 550 VA		--	--	--	--	28
29	--	--	--	--			3047 VA 550 VA	--	--	--	--	30
31	AHU-5		20 A	3	0 VA 0 VA			3	20 A		AHU-4	32
33	--	--	--	--		0 VA 0 VA		--	--	--	--	34
35	--	--	--	--			0 VA 0 VA	--	--	--	--	36
37	AHU-8		20 A	3	0 VA 0 VA			3	20 A		AHU-9	38
39	--	--	--	--		0 VA 0 VA		--	--	--	--	40
41	--	--	--	--			0 VA 0 VA	--	--	--	--	42
43	AHU-11		20 A	3	0 VA 0 VA			3	20 A		AHU-10	44
45	--	--	--	--		0 VA 0 VA		--	--	--	--	46
47	--	--	--	--			0 VA 0 VA	--	--	--	--	48
49	AHU-7		20 A	3	0 VA 0 VA			1	20 A		FPB-1-7	50
51	--	--	--	--		0 VA 443 VA		3	20 A		AHU-3	52
53	--	--	--	--			0 VA 443 VA	--	--	--	--	54
55					443 VA			--	--	--	--	56
57												58
59												60
61												62
63												64
65												66
67												68
69												70
71												72
73	Space		--	1	-- 0 VA			1	20 A		Spare	74
75	Space		--	1		-- 0 VA		1	20 A		Spare	76
77	Space		--	1			-- 0 VA	1	20 A		Spare	78
79	Space		--	1	-- 0 VA			3	30 A		SPD	80
81	Space		--	1		-- 0 VA		--	--	--	--	82
83	Space		--	1			-- 0 VA	--	--	--	--	84
			Total Load:		25620 VA	25620 VA	25620 VA					
			Total...		92 A	92 A	92 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	76860 VA	100.00%	76860 VA		
				Total Conn. Load:	76860 VA
				Total Est. Demand:	76860 VA
				Total Conn.:	92 A
				Total Est. Demand:	92 A

Notes:

Branch Panel: 1HA

Location: Space 23
Supply From: MDP
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A	B	C	P	Trip	Comments	Circuit Description	CKT
1	Storage Lighting	3-12	20 A	1	1109 VA 1040 VA			1	20 A	3-12	Train Lighting	2
3	Lighting - Breakroom	3-12	20 A	1		1520 VA 1120 VA		1	20 A	3-12	Lighting - TRAINING	4
5				1			886 VA	1	20 A	3-12	Elec Shop Lighting	6
7	FPB-1-3		15 A	1	0 VA 0 VA			1	15 A		FPB-1-4	8
9	FPB-1-5		15 A	1		0 VA 1720 VA		1	20 A	3-9	External Lighting	10
11	FPB-1-9		15 A	1			0 VA 953 VA	1	20 A	3-12	RR lighting	12
13	Receptacle Space 8		20 A	1	180 VA 0 VA			1	15 A		FPB-1-10	14
15				1		1032 VA		1	20 A	3-9	External Lighting	16
17				1			1440 VA	1	20 A	3-12	Corridor Lighting	18
19	Corridor Lighting	3-12	20 A	1	960 VA 640 VA			1	20 A	3-12	Break Room Lighting	20
21	Grounds Lighting	3-12	20 A	1		1115 VA 1181 VA		1	20 A	3-12	Shop Lighting	22
23	Plumb Shop Lighting	3-10	20 A	1			1312 VA 2100 VA	3	20 A		Power	24
25	Corridor Lighting	3-12	20 A	1	1120 VA 2100 VA			--	--	--	--	26
27						2100 VA		--	--	--	--	28
29												30
31												32
33												34
35												36
37												38
39												40
41												42
43												44
45												46
47	Space		--	1			-- 0 VA	1	20 A		Spare	48
49	Space		--	1	-- 0 VA			1	20 A		Spare	50
51	Space		--	1		-- 0 VA		1	20 A		Spare	52
53	Space		--	1			-- 0 VA	1	20 A		Spare	54
55	Space		--	1	-- 0 VA			3	30 A		SPD	56
57	Space		--	1		-- 0 VA		--	--	--	--	58
59	Space		--	1			-- 0 VA	--	--	--	--	60
			Total Load:		7077 VA	9665 VA	6622 VA					
			Total...		26 A	35 A	24 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	9440 VA	55.66%	5254 VA		
Receptacle	180 VA	100.00%	180 VA	**Total Conn. Load:**	23358 VA
Power	6300 VA	100.00%	6300 VA	**Total Est. Demand:**	20325 VA
Lighting - Non-Dwelling Unit	4494 VA	125.00%	5617 VA	**Total Conn.:**	28 A
				Total Est. Demand:	24 A

Notes:

Branch Panel: 2HA

Location: ELEC. C122
Supply From: MDP
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A	B	C	P	Trip	Comments	Circuit Description	CKT
1	FPB-2-3		15 A	1	0 VA 7380 VA			3	45 A		2TA	2
3	2TAT		75 A	3		7740 VA 5720 VA		--	--	--	--	4
5	--	--	--	--			7920 VA 5400 VA	--	--	--	--	6
7	--	--	--	--	6660 VA 0 VA			1	15 A		FPB-2-5	8
9	Lighting - Ad/Coord. Rooms	3-12	20 A	1		1120 VA 1040 VA		1	20 A	3-12	Lighting - Staff/Offices	10
11	FPB-2-6		15 A	1			0 VA 1120 VA	1	20 A	3-12	Lighting - Staff, Offices, RR	12
13	Lighting - Corridor	3-12	20 A	1	1360 VA 0 VA			1	15 A		FPB-2-5	14
15	Lighting - Corridor	3-12	20 A	1		1360 VA 1120 VA		1	20 A	3-12	Lighting - Coference/Workroom	16
17	Lighting - RR/Stairs	3-12	20 A	1			480 VA 400 VA	1	20 A	3-12	Lighting -Corridor	18
19	FPB-2-4		15 A	1	0 VA 1040 VA			1	20 A	3-12	Lighting - Staff/Coord./DR.Rooms	20
21	FPB-2-1		15 A	1		0 VA 0 VA		1	15 A		FPB-2-2	22
23	Lighting - Break Room	3-12	20 A	1			1040 VA					24
25												26
27												28
29												30
31												32
33	Space		--	1		-- 0 VA		1	20 A		Spare	34
35	Space		--	1			-- 0 VA	1	20 A		Spare	36
37	Space		--	1	-- 0 VA			3	30 A		SPD	38
39	Space		--	1		-- 0 VA		--	--	--	--	40
41	Space		--	1			-- 0 VA	--	--	--	--	42
			Total Load:		16337 VA	17927 VA	16236 VA					
			Total...		59 A	65 A	59 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	10860 VA	54.35%	5478 VA		
Other	0 VA	0.00%	0 VA	**Total Conn. Load:**	50494 VA
Receptacle	40820 VA	74.50%	30410 VA	**Total Est. Demand:**	35655 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	61 A
				Total Est. Demand:	43 A

Notes:

Branch Panel: 1LA

Location: Space 23
Supply From: TA
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 18,000
Mains Type: MCB
Mains Rating: 250 A
MCB Rating: 250 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A	B	C	P	Trip	Comments	Circuit Description	CKT
1	Grounds Receptacle	3-12	20 A	1	900 VA 0 VA			1	20 A	3-12	GROUNDS Cord Reel Receptacle	2
3	Grounds Receptacle	3-12	20 A	1		180 VA 1080 VA		1	20 A	3-12	RR Receptacle	4
5	A118 Workstation	3-12	20 A	1			360 VA 1800 VA	1	20 A	3-12	Grounds Receptical	6
7	Grounds Receptical	3-12	20 A	1	1080 VA 180 VA			1	20 A	3-12	Receptacle Space 1	8
9	Receptacle Space 6	3-12	20 A	1		360 VA 880 VA		1	20 A	3-12	Mechanical / Electrical Lighting	10
11	Receptacle	3-10	20 A	1			1440 VA 0 VA	1	20 A	3-12	SHOP - CARPENTER Cord Reel Receptacle	12
13	SHOP - PAINTER Cord Reel Receptacle	3-12	20 A	1	0 VA 0 VA			1	20 A	3-12	SHOP - GEN MAINT Cord Reel Receptacle	14
15	SHOP - PLUMBING Cord Reel Receptacle	3-10	20 A	1		0 VA 0 VA		1	20 A	3-12	SHOP - HVAC Cord Reel Receptacle	16
17	SHOP - ELEC Cord Reel Receptacle	3-12	20 A	1			0 VA 360 VA	1	20 A	3-12	RR/SHOWER Receptacle	18
19	Receptacle Space 4	3-12	20 A	1	180 VA 2160 VA			1	20 A	3-12	SHOP-LOCK Receptacle	20
21	Break Room Receptacle	3-12	20 A	1		180 VA 180 VA		1	20 A	3-12	break room Fridge	22
23	Dishwasher Breakroom	3-12	20 A	1			180 VA 360 VA	1	20 A	3-12	Grounds Receptacle	24
25	Vest Receptacle	3-12	20 A	1	540 VA 1080 VA			1	20 A	3-12	Corridor Receptical	26
27	Corridor Receptical	3-12	20 A	1		1080 VA 360 VA		1	20 A	3-12	Main Elect Receptical	28
29	Cust Receptical	3-12	20 A	1			180 VA 180 VA	1	20 A	3-12	Break Room Receptical	30
31	Receptacle Space 6	486,1#10G	50 A	2	180 VA 180 VA			1	20 A	3-12	Break Room Receptacle	32
33	--	--	--	--		0 VA 180 VA		1	20 A	3-12	Disp Receptacle	34
35	Receptacle	486,1#10G	50 A	2			180 VA 720 VA	1	20 A	3-12	Storage Receptacle	36
37	--	--	--	--	0 VA 360 VA			1	20 A	3-12	MECH Receptacle	38
39	Receptacle	486,1#10G	50 A	2		180 VA 360 VA		1	20 A	3-12	Receptacle Space 8	40
41	--	--	--	--			0 VA 240 VA	1	20 A	3-12	Mechanical Lighting	42
43	Receptacle	486,1#10G	50 A	2	180 VA 360 VA			1	20 A	3-12	Receptacle	44
45	--	--	--	--		0 VA 360 VA		1	20 A	3-12	Time Receptacle	46
47	Receptacle	486,1#10G	50 A	2			180 VA 180 VA	1	20 A	3-12	Break Room Fridge	48
49	--	--	--	--	0 VA 360 VA			1	20 A	3-12	Time Receptacle	50
51	Receptacle Space 4	3-12	20 A	1		180 VA 180 VA		1	20 A	3-12	Grounds Receptacle	52
53	Receptacle Space 4	3-12	20 A	1			180 VA 360 VA	1	20 A	3-12	External Lighting	54
55	Receptacle Space 4	3-12	20 A	1	180 VA 180 VA			1	20 A	3-12	Grounds Receptical	56
57	Receptacle Space 6	486,1#10G	50 A	2		180 VA 180 VA		1	20 A	3-12	EWC Receptical	58
59	--	--	--	--			0 VA 2160 VA	1	20 A	3-12	Elec Shop	60
61	HVAC Shop Receptical	3-12	20 A	1	1800 VA 1440 VA			1	20 A	3-10	Plumbing Receptical	62
63	Carpenter Receptical	3-12	20 A	1		360 VA 1440 VA		1	20 A	3-12	Shop Receptical	64
65	Gen Maintence Receptical	3-12	20 A	1			1440 VA 720 VA	1	20 A	3-12	Gen Maintence Receptical	66
67	Corridor Receptical	3-12	20 A	1	540 VA 180 VA			1	20 A	3-12	Painter Receptacle	68
69	Washer	3-12	20 A	1		180 VA 180 VA		1	20 A	3-12	Gen Maintence Receptical	70
71	Dryer	3-10 +10G	30 A	2			180 VA 360 VA	1	20 A	3-12	Elevator Rcpt	72
73	--	--	--	--	0 VA 180 VA			1	20 A	3-12	Breakroom Microwave	74
75	Receptacle Space 6	486,1#10G	50 A	2		180 VA 0 VA		1	20 A		Spare	76
77	--	--	--	--			0 VA 0 VA	1	20 A		Spare	78
79	Receptacle	3-12	20 A	1	180 VA 0 VA			1	20 A		Spare	80
81	Receptacle	3-12	20 A	1		180 VA 0 VA		1	20 A		Spare	82
83	Receptacle	3-12	20 A	1			180 VA 0 VA	1	20 A		Spare	84
85	Receptacle Space 6	486,1#10G	50 A	2	180 VA 0 VA			1	20 A		Spare	86
87	--	--	--	--		0 VA 0 VA		1	20 A		Spare	88
89	Spare		20 A	1			0 VA 0 VA	1	20 A		Spare	90
91	Spare		20 A	1	0 VA 0 VA			1	20 A		Spare	92
93	Spare		20 A	1		0 VA 0 VA		1	20 A		Spare	94
95	Spare		20 A	1			0 VA 0 VA	1	20 A		Spare	96
97	Spare		20 A	1	0 VA 0 VA			1	20 A		Spare	98
99	Space		--	1		-- --		1	--		Space	100
101	Space		--	1			-- --	1	--		Space	102
103	Space		--	1	-- --			1	--		Space	104
105	Space		--	1		-- --		1	--		Space	106
107	Space		--	1			-- --	1	--		Space	108
109	Space		--	1	-- --			1	--		Space	110
111	Space		--	1		-- --		1	--		Space	112
113	Space		--	1			-- --	1	--		Space	114
115	Space		--	1	-- --			1	--		Space	116
117	Space		--	1		-- --		1	--		Space	118
119	Space		--	1			-- --	1	--		Space	120
121	Space		--	1	-- 0 VA			3	30 A		SPD	122
123	Space		--	1		-- 0 VA		--	--	--	--	124
125	Space		--	1			-- 0 VA	--	--	--	--	126
			Total Load:		12600 VA	8580 VA	11902 VA					
			Total...		109 A	72 A	103 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	1120 VA	100.00%	1120 VA		
Lighting - Exterior	350 VA	125.00%	438 VA	**Total Conn. Load:**	33080 VA
Receptacle	31680 VA	81.57%	25840 VA	**Total Est. Demand:**	27324 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	92 A
				Total Est. Demand:	76 A

Notes:

Branch Panel: 1LAT

Location: Space 23
Supply From: 1TAT
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A	B	C	P	Trip	Comments	Circuit Description	CKT
1	SUP A107		20 A	1	720 VA 720 VA			1	20 A		SUP A106	2
3	SUP A105		20 A	1		720 VA 900 VA		1	20 A		Train A131	4
5	Train A132		20 A	1			900 VA 900 VA	1	20 A		Train A134	6
7	Train A135		20 A	1	900 VA 1000 VA			2	30 A		A133 Copier	8
9	A133 Copier		20 A	1		180 VA 0 VA		--	--	--	--	10
11	A133 Tablets	3-12	20 A	1			180 VA 180 VA	1	20 A		A133 Tablets	12
13	A133 Tablets	3-12	20 A	1	180 VA 180 VA			1	20 A		Disp A103 TV	14
15	Break Room Receptacle	3-12	20 A	1		1080 VA 360 VA		1	20 A	3-12	Break Room Receptacle	16
17	Break Room Receptacle	3-12	20 A	1			720 VA 1080 VA	1	20 A	3-12	Break Room Receptacle	18
19	Receptacle	3-12	20 A	1	540 VA 500 VA			1	20 A		A103 Furn Feed	20
21	A103 Furn Feed		20 A	1		500 VA 500 VA		1	20 A		A103 Furn Feed	22
23	A103 Furn Feed		20 A	1			500 VA 1080 VA	1	20 A	3-12	Rec Receptacle	24
25	Rec Receptacle	3-12	20 A	1	720 VA 720 VA			1	20 A	3-12	Rec Receptacle	26
27	SHOP-LOCK Receptacle	3-12	20 A	1		1440 VA						28
29												30
31												32
33												34
35												36
37					0 VA			3	30 A		SPD	38
39						0 VA		--	--	--	--	40
41							0 VA	--	--	--	--	42
			Total Load:		6180 VA	5680 VA	5540 VA					
			Total...		52 A	48 A	46 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	2000 VA	100.00%	2000 VA		
Receptacle	15400 VA	100.00%	15400 VA	**Total Conn. Load:**	17400 VA
				Total Est. Demand:	17400 VA
				Total Conn.:	48 A
				Total Est. Demand:	48 A

Notes:

Branch Panel: MDP

Location: Space 23
Supply From:
Mounting: FLOOR
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 65,000
Mains Type: MCB
Mains Rating: 1200 A
MCB Rating: 1200 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A	B	C	P	Trip	Comments	Circuit Description	CKT
1	TAM	P45	45 A	3	1952 VA 6180 VA			3	75 A	P	1TAT	2
3	--	--	--	--		3812 VA 5680 VA		--	--	--	--	4
5	--	--	--	--			3672 VA 5540 VA	--	--	--	--	6
7	TA	P45	45 A	3	12690 VA							8
9	--	--	--	--		8580 VA						10
11	--	--	--	--			11902 VA					12
13	CH-1	200G	175 A	3	39611 VA 25620 VA			3	200 A		HMA	14
15	--	--	--	--		39611 VA 25620 VA		--	--	--	--	16
17	--	--	--	--			39611 VA 25620 VA	--	--	--	--	18
19	1HA	--	200 A	3	7077 VA 16337 VA			3	200 A		2HA	20
21	--	--	--	--		9665 VA 17927 VA		--	--	--	--	22
23	--	--	--	--			6622 VA 16236 VA	--	--	--	--	24
25	ATS-OD	200NG	200 A	3	27994 VA 5704 VA			3	100 A	100NG	ATS-EA	26
27	--	--	--	--		21513 VA 5836 VA		--	--	--	--	28
29	--	--	--	--			19653 VA 5292 VA	--	--	--	--	30
31	CH-2	200G	175 A	3	39611 VA 3047 VA			3	75 A		ELEVATOR	32
33	--	--	--	--		39611 VA 3047 VA		--	--	--	--	34
35	--	--	--	--			39611 VA 3047 VA	--	--	--	--	36
37												38
39												40
41												42
			Total Load:		185372 VA	180608 VA	176430 VA					
			Total...		672 A	654 A	637 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	33280 VA	40.86%	13598 VA		
Lighting - Exterior	1120 VA	125.00%	1400 VA	**Total Conn. Load:**	542408 VA
Other	2000 VA	100.00%	2000 VA	**Total Est. Demand:**	487357 VA
Receptacle	95820 VA	60.44%	57910 VA	**Total Conn.:**	652 A
Power	399324 VA	100.00%	399324 VA	**Total Est. Demand:**	586 A
Kitchen	2000 VA	100.00%	2000 VA		
Lighting - Non-Dwelling Unit	5838 VA	125.00%	7298 VA		

Notes:

Revision / Date

Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
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ELECTRICAL PANEL SCHEDULES

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. E7.01
Drawn By: Author	ISSUED FOR BID
Date: 09/18/2025	

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Branch Panel: OLA

Location: ELECTRICAL A114
Supply From: OTA
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 250 A
MCB Rating: 250 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	ACU-1B		30 A	2	0 VA	360 VA					1	20 A		Receptacle Space 21	2
3	--	--	--	--			0 VA	360 VA			1	20 A		Receptacle	4
5	Receptacle Space 21		30 A	1					180 VA	360 VA	1	20 A		Receptacle	6
7	Receptacle Space 21		20 A	1	180 VA	500 VA					1	20 A		Power	8
9	Receptacle		20 A	1			360 VA	500 VA			1	20 A		Power	10
11	Other Space 21		20 A	1					0 VA	0 VA	1	20 A		Other Space 21	12
13	Other Space 20		20 A	1	0 VA	9141 VA					1	20 A		SUMP PUMP	14
15	Disp Receptacle	3-12	20 A	1			720 VA	1080 VA			1	20 A	3-12	Disp Space 26	16
17	Disp Receptacle	3-12	20 A	1					720 VA	0 VA	1	20 A		Other Space 36	18
19	BREAK ROOM Fridge Receptacle	3-12	20 A	1	180 VA	180 VA					1	20 A	3-12	BREAK ROOM Fridge Receptacle	20
21	CH-1 REC		20 A	1			500 VA	500 VA			1	20 A		CH-2 REC	22
23	Receptacle		20 A	1					180 VA	720 VA	1	20 A	3-12	Tab Receptacle	24
25	Other		20 A	1	0 VA	500 VA					1	30 A		Power	26
27	Receptacle		20 A	1			360 VA	180 VA			1	30 A		Receptacle	28
29	Receptacle		20 A	1					180 VA	360 VA	1	20 A		Receptacle	30
31															32
33															34
35															36
37															38
39															40
41															42
			Total Load:		11041 VA		4560 VA		2700 VA						
			Total...		94 A		40 A		23 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Receptacle	6660 VA	100.00%	6660 VA	**Total Conn. Load:**	18301 VA
Power	11641 VA	100.00%	11641 VA	**Total Est. Demand:**	18301 VA
				Total Conn.:	51 A
				Total Est. Demand:	51 A

Notes:

Branch Panel: 2LAT

Location: ELEC. C122
Supply From: 2TAT
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	Receptacle		20 A	1	360 VA	720 VA					1	20 A		Staff C137	2
3	Staff C136		20 A	1			720 VA	720 VA			1	20 A		Staff C135	4
5	Staff C134		20 A	1					720 VA	720 VA	1	20 A		Staff C133	6
7	Coord C132		20 A	1	720 VA	720 VA					1	20 A		Coord C131	8
9	Coord 130		20 A	1			720 VA	720 VA			1	20 A		Coord 129	10
11	Coord C128		20 A	1					720 VA	720 VA	1	20 A		Staff C150	12
13	Staff C149		20 A	1	720 VA	720 VA					1	20 A		Staff C147	14
15	SEC C104		20 A	1			720 VA	720 VA			1	20 A		File C106	16
17	SEC C103 Copier		20 A	1					180 VA	720 VA	1	20 A		SEC C109	18
19	SEC C109 COPIER		20 A	1	180 VA	720 VA					1	20 A		DEMO C110	20
21	Energy C111		20 A	1			720 VA	720 VA			1	20 A		Staff C112	22
23	AD 113		20 A	1					720 VA	720 VA	1	20 A		AD C115	24
25	Coord C125		20 A	1	720 VA	720 VA					1	20 A		Coord C123	26
27	Coord C121		20 A	1			720 VA	720 VA			1	20 A		AD C117	28
29	Coord C118		20 A	1					720 VA	720 VA	1	20 A		Coord C119	30
31	Staff C146		20 A	1	720 VA	720 VA					1	20 A		Staff C144	32
33	Staff C142		20 A	1			720 VA	0 VA			1	20 A		Spare	34
35										0 VA	1	20 A		Spare	36
37						0 VA					3	30 A		SPD	38
39								0 VA			--	--	--	--	40
41										0 VA	--	--	--	--	42
			Total Load:		7740 VA		7920 VA		6660 VA						
			Total...		66 A		67 A		56 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	22320 VA	94.80%	21160 VA		
				Total Conn. Load:	22320 VA
				Total Est. Demand:	21160 VA
				Total Conn.:	62 A
				Total Est. Demand:	59 A

Notes:

Branch Panel: EHA

Location: ELECTRICAL A114
Supply From: ATS-EA
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	ETA		20 A	3	500 VA	1120 VA					1	20 A	3-12	Lighting - Cooridor	2
3	--	--	--	--			1070 VA	1113 VA			1	20 A	3-12	Lighting - RR	4
5	--	--	--	--					240 VA	1433 VA	1	20 A	3-12	Lighting -Break/Train Room	6
7	lighting	3-12	20 A	1	602 VA	1345 VA					1	20 A	3-12	Lighting - Opperations Building	8
9	Emergency Lighting - Corridor	3-12	20 A	1			960 VA	640 VA			1	20 A	3-12	Emergency Lighting - Corridor	10
11	Emergency Lighting - Conference/StaffAD	3-12	20 A	1					1280 VA	1040 VA	1	20 A	3-12	Emergency Lighting - Staff/Coord.	12
13	Emergency Lighting - RR/Stairs/Staff	3-12	20 A	1	1120 VA	1040 VA					1	20 A	3-12	Emergency Lighting - Staff/Break Room	14
15	Emergency Lighting - Workroom/ELEC	3-12	20 A	1			1977 VA	101 VA			1	20 A		Ext Canopy Lighting	16
17			20 A	1					1300 VA						18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33								0 VA			1	20 A		Spare	34
35	Space		--	1					--	0 VA	1	20 A		Spare	36
37	Space		--	1	--	0 VA					3	30 A		SPD	38
39	Space		--	1			--	0 VA			--	--	--	--	40
41	Space		--	1					--	0 VA	--	--	--	--	42
			Total Load:		5704 VA		5836 VA		5292 VA						
			Total...		21 A		21 A		19 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	12540 VA	50.43%	6374 VA		
Lighting - Exterior	770 VA	125.00%	963 VA	**Total Conn. Load:**	16826 VA
Other	0 VA	0.00%	0 VA	**Total Est. Demand:**	11095 VA
Power	500 VA	100.00%	500 VA	**Total Conn.:**	20 A
Lighting - Non-Dwelling Unit	1345 VA	125.00%	1681 VA	**Total Est. Demand:**	13 A

Notes:

Branch Panel: ELA

Location: ELECTRICAL A114
Supply From: ETA
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 50 A
MCB Rating: 50 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	Other Space 21		20 A	1	0 VA	500 VA					1	20 A		ELEVATOR CAB LIGHTS	2
3	Mechanical -Lighting		20 A	1			720 VA	350 VA			1	20 A		Ext Wall Packs (near doors)	4
5	Elevator Shaft Lighting		20 A	1					240 VA						6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33	Space	--	1				--	0 VA			1	20 A		Spare	34
35	Space	--	1						--	0 VA	1	20 A		Spare	36
37	Space	--	1	--	0 VA						3	30 A		SPD	38
39	Space	--	1				--	0 VA			--	--	--	--	40
41	Space	--	1						--	0 VA	--	--	--	--	42
			Total Load:		500 VA		1070 VA		240 VA						
			Total...		5 A		9 A		2 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	960 VA	100.00%	960 VA		
Lighting - Exterior	350 VA	125.00%	438 VA	**Total Conn. Load:**	1792 VA
Other	0 VA	0.00%	0 VA	**Total Est. Demand:**	1879 VA
Power	500 VA	100.00%	500 VA	**Total Conn.:**	5 A
				Total Est. Demand:	5 A

Notes:

Branch Panel: OHA

Location: ELECTRICAL A114
Supply From: ATS-OA
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	OTA		75 A	3	11041 VA	16620 VA					3	100 A	125NG	LIFT STATION	2
3	--	--	--	--			4560 VA	16620 VA			--	--	--	--	4
5	--	--	--	--					2700 VA	16620 VA	--	--	--	--	6
7	CH-1 HEATER		20 A	3	167 VA	167 VA					3	20 A		CH-2 HEATER	8
9	--	--	--	--			167 VA	167 VA			--	--	--	--	10
11	--	--	--	--					167 VA	167 VA	--	--	--	--	12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
			Total Load:		27994 VA		21513 VA		19653 VA						
			Total...		102 A		79 A		71 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Receptacle	6660 VA	100.00%	6660 VA	**Total Conn. Load:**	69161 VA
Power	62501 VA	100.00%	62501 VA	**Total Est. Demand:**	69161 VA
				Total Conn.:	83 A
				Total Est. Demand:	83 A

Notes:

Branch Panel: 2LA

Location: ELEC. C122
Supply From: 2TA
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1															2
3															4
5										1080 VA	1	20 A	3-12	DIR. Receptacle	6
7															8
9															10
11															12
13	DIR Receptacle	3-12	20 A	1	1080 VA	900 VA					1	20 A	3-12	CONF Receptacle	14
15	SEC Receptacle	3-12	20 A	1			720 VA	180 VA			1	20 A	3-12	RR Receptacle	16
17										360 VA	1	20 A	3-12	STAFF Receptacle	18
19	DIR Receptacle	3-12	20 A	1	1080 VA	180 VA					1	20 A	3-12	DRINKING FOUNTAIN Receptacle	20
21	CORRIDOR Receptacle	3-12	20 A	1			1080 VA								22
23	DIR Receptacle	3-12	20 A	1					1080 VA	720 VA	1	20 A	3-12	STAFF Receptacle	24
25						900 VA					1	20 A	3-12	BREAK ROOM Receptacle	26
27	CORRIDOR Receptacle	3-12	20 A	1			900 VA	900 VA			1	20 A	3-12	CONF Receptacle	28
29	SEC/ELEC Receptacle	3-12	20 A	1					900 VA	180 VA	1	20 A	3-12	WATER FOUNTAIN/CUST. Receptacle	30
31	BREAK ROOM Receptacle	3-12	20 A	1	720 VA	180 VA					1	20 A		Dishwasher	32
33	WORKROOM Receptacle	3-12	20 A	1			540 VA	360 VA			1	20 A	3-12	WORKROOM Receptacle	34
35	BREAK ROOM Vending Machine Receptacle	3-12	20 A	1					180 VA	360 VA	1	20 A	3-12	BREAK ROOM Receptacle	36
37	EXEC DIR. Receptacle	3-12	20 A	1	1080 VA	720 VA					1	20 A	3-12	SEC. Receptacle	38
39	Range hood		20 A	1			500 VA	180 VA			1	20 A	3-12	BREAK ROOM Microwave Receptacle	40
41	BREAK ROOM Microwave Receptacle	3-12	20 A	1					180 VA	180 VA	1	20 A	3-12	BREAK ROOM Icemaker Receptacle	42
43	BREAK ROOM Receptacle	3-12	20 A	1	180 VA	180 VA					1	20 A	3-12	BREAK ROOM Vending Machine Receptacle	44
45	BREAK ROOM Vending Machine Receptacle	3-12	20 A	1			180 VA	180 VA			1	20 A	3-12	Copier Receptacle	46
47	NEMA Copier Receptacle		30 A	2					180 VA						48
49	--	--	--	--	0 VA										50
51															52
53	ACU-2A		35 A	1					0 VA						54
55						180 VA					2	40 A		Oven Range	56
57	VAV-2-5		20 A	1			0 VA	0 VA			--	--	--	--	58
59															60
61															62
63	Spare		20 A	1			0 VA	--			1	--		Space	64
65	Spare		20 A	1					0 VA	--	1	--		Space	66
67	Spare		20 A	1	0 VA	--					1	--		Space	68
69	Spare		20 A	1			0 VA	0 VA			3	30 A		SPD	70
71										0 VA	--	--	--	--	72
73					0 VA						--	--	--	--	74
75															76
77															78
79															80
81															82
83															84
			Total Load:		7380 VA		5720 VA		5400 VA						
			Total...		62 A		48 A		45 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Receptacle	18500 VA	100.00%	18500 VA	**Total Conn. Load:**	18500 VA
				Total Est. Demand:	18500 VA
				Total Conn.:	51 A
				Total Est. Demand:	51 A

Notes:

Branch Panel: LAM

Location: Space 23
Supply From: TAM
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	Exterior Gate		20 A	2	1040 VA	0 VA					1	20 A		BR-1 BR-2	2
3	--	--	--	--			1040 VA	0 VA			1	20 A		Other	4
5	MECH Receptacle	3-12	20 A	1					540 VA	360 VA	1	20 A		GWH A116	6
7	Other Space 20		20 A	1	0 VA	0 VA					1	20 A		Other Space 18	8
9	Other Space 67		20 A	1			0 VA	0 VA			1	20 A		Other	10
11	Other Space 1		20 A	1					0 VA	0 VA	1	20 A		Other Space 1	12
13	Other Space 2		20 A	1	0 VA	0 VA					1	20 A		VAV-2-2	14
15	VAV-2-1		20 A	1			0 VA	0 VA			1	20 A		VAV-2-6	16
17	VAV-2-7		20 A	1					0 VA	0 VA	1	20 A		VAV-2-4	18
19	VAV-2-3		20 A	1	0 VA	732 VA					3	20 A		EUH-1	20
21								732 VA			--	--	--	--	22
23										732 VA	--	--	--	--	24
25															26
27															28
29															30
31						0 VA					1	20 A		EF-1,2,3,4	32
33	ACU-2B		35 A	2			1000 VA	1040 VA			2	20 A		Exterior Gate	34
35	--	--	--	--					1000 VA	1040 VA	--	--	--	--	36
37	Receptacle		20 A	1	180 VA	0 VA					3	30 A		SPD	38
39	Other Space 6		20 A	1	--		0 VA	0 VA			--	--	--	--	40
41	Other		20 A	1					0 VA	0 VA	--	--	--	--	42
			Total Load:		1952 VA		3812 VA		3672 VA						
			Total...		16 A		34 A		33 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Receptacle	1080 VA	100.00%	1080 VA	**Total Conn. Load:**	9436 VA
Power	6356 VA	100.00%	6356 VA	**Total Est. Demand:**	9436 VA
Kitchen	2000 VA	100.00%	2000 VA	**Total Conn.:**	26 A
				Total Est. Demand:	26 A

Notes:

Date
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Project:

NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
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ELECTRICAL PANEL SCHEDULES

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. E7.02
Drawn By: Author	ISSUED FOR BID
Date: 09/18/2025	

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Branch Panel: DPD

Location: ELEC. D110B
Supply From:
Mounting: Floor
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 65,000
Mains Type: MCB
Mains Rating: 600 A
MCB Rating: 600 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	HDM		150 A	3	52400 VA	2133 VA					3	150 A		HD	2
3	--	--	--	--			52400 VA	1902 VA			--	--	--	--	4
5	--	--	--	--					52400 VA	210 VA	--	--	--	--	6
7	TA		45 A	3	8879 VA	1440 VA					3	45 A		TDT	8
9	--	--	--	--			3740 VA	720 VA			--	--	--	--	10
11	--	--	--	--					5866 VA	0 VA	--	--	--	--	12
13	EHD		100 A	3	4027 VA	2470 VA					3	100 A		OHD	14
15	--	--	--	--			1906 VA	2760 VA			--	--	--	--	16
17	--	--	--	--					1440 VA	2150 VA	--	--	--	--	18
19	TW		125 A	3	25409 VA										20
21	--	--	--	--			26117 VA								22
23	--	--	--	--					24612 VA						24
25															26
27															28
29															30
			Total Load:		96415 VA		89406 VA		86641 VA						
			Total...		350 A		324 A		313 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	3280 VA	94.45%	3098 VA		
Lighting - Exterior	350 VA	125.00%	438 VA	**Total Conn. Load:**	272444 VA
Motor	132000 VA	112.50%	148500 VA	**Total Est. Demand:**	289087 VA
Other	49960 VA	100.00%	49960 VA	**Total Conn.:**	328 A
Receptacle	16560 VA	100.00%	16560 VA	**Total Est. Demand:**	348 A
Power	57656 VA	100.00%	57656 VA		
Lighting - Non-Dwelling Unit	990 VA	125.00%	1238 VA		

Notes:

Branch Panel: HDM

Location: ELEC. D110B
Supply From: DPD
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	WEF-1		20 A	3	2100 VA	2100 VA					3	20 A		WEF-2	2
3	--	--	--	--			2100 VA	2100 VA			--	--	--	--	4
5	--	--	--	--					2100 VA	2100 VA	--	--	--	--	6
7	WEF-3		20 A	3	2100 VA	2100 VA					3	20 A		WEF-4	8
9	--	--	--	--			2100 VA	2100 VA			--	--	--	--	10
11	--	--	--	--					2100 VA	2100 VA	--	--	--	--	12
13	AHU-W-1		20 A	3	0 VA	22000 VA					3	20 A		Overhead Door Motor	14
15	--	--	--	--			0 VA	22000 VA			--	--	--	--	16
17	--	--	--	--					0 VA	22000 VA	--	--	--	--	18
19	Overhead Door Motor		20 A	3	22000 VA										20
21	--	--	--	--			22000 VA								22
23	--	--	--	--					22000 VA						24
25															26
27															28
29															30
31	Space		--	1	--	0 VA					1	20 A		Spare	32
33	Space		--	1			--	0 VA			1	20 A		Spare	34
35	Space		--	1					--	0 VA	1	20 A		Spare	36
37	Space		--	1	--	0 VA					3	30 A		SPD	38
39	Space		--	1			--	0 VA			--	--	--	--	40
41	Space		--	1					--	0 VA	--	--	--	--	42
			Total Load:		52400 VA		52400 VA		52400 VA						
			Total...		189 A		189 A		189 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	132000 VA	112.50%	148500 VA		
Power	25200 VA	100.00%	25200 VA	**Total Conn. Load:**	157200 VA
				Total Est. Demand:	173700 VA
				Total Conn.:	189 A
				Total Est. Demand:	209 A

Notes:

Branch Panel: HD

Location: ELEC. D110B
Supply From: DPD
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	Lighting - Corridor, Offices, Break Room	3-12	20 A	1	1200 VA	960 VA					1	20 A		Lighting - IDF, CUST., Freezer, Cooler	2
3	AHU-W-2		20 A	3			0 VA	480 VA			1	20 A		Lighting - Dwelling Unit	4
5	--	--	--	--					0 VA	0 VA	3	40 A		ACCU-W1	6
7	--	--	--	--	0 VA	0 VA					--	--	--	--	8
9	ACCU-W2		40 A	3			0 VA	0 VA			--	--	--	--	10
11	--	--	--	--					0 VA	210 VA	1	20 A		Lighting - Exterior	12
13	--	--	--	--	0 VA	0 VA					3	20 A		Power Space 65	14
15	Lighting - Textbook Storage/Repair	3-12	20 A	1			1440 VA	0 VA			--	--	--	--	16
17									0 VA		--	--	--	--	18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33							0 VA				1	20 A		Spare	34
35	Space		--	1					--	0 VA	1	20 A		Spare	36
37	Space		--	1	--	0 VA					3	30 A		SPD	38
39	Space		--	1			--	0 VA			--	--	--	--	40
41	Space		--	1					--	0 VA	--	--	--	--	42
			Total Load:		2133 VA		1902 VA		210 VA						
			Total...		9 A		8 A		1 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	1680 VA	100.00%	1680 VA		
Lighting - Exterior	210 VA	125.00%	263 VA	**Total Conn. Load:**	4237 VA
Power	0 VA	0.00%	0 VA	**Total Est. Demand:**	4288 VA
				Total Conn.:	5 A
				Total Est. Demand:	5 A

Notes:

Branch Panel: LD

Location: ELEC. D110B
Supply From: TD
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 250 A
MCB Rating: 250 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	External Receptacle	3-10	20 A	1	900 VA	900 VA					1	20 A	3-10	Warehouse Receptacle	2
3	Warehouse Receptacle	3-12	20 A	1			900 VA	0 VA			1	20 A	3-12	Equip. Repair Drop COrd	4
5	Equip Repair Receptacle	3-12	20 A	1					1080 VA	900 VA	1	20 A	3-12	Small/App Repair Receptacle	6
7	Small/App Repair Receptacle	3-12	20 A	1	900 VA	360 VA					1	20 A		Textbook Stor Receptical	8
9	Range hood		20 A	1			180 VA								10
11	Cust. & LaundryReceptacle	3-12	20 A	1					540 VA	720 VA	1	20 A		Corridor Receptacle	12
13	TV Monitor		20 A	1	180 VA	180 VA					1	20 A		Receptacle Space 57	14
15	RR Receptacle	3-12	20 A	1			540 VA	720 VA			1	20 A		Break Rm Receptacle	16
17	D107 Dishwasher	3-12	20 A	1					180 VA	180 VA	1	20 A		Break Rm microwave	18
19	Break Rm microwave	3-12	20 A	1	180 VA										20
21	Time Clock Receptacle	3-12	20 A	1			180 VA	180 VA			1	20 A		EWC Receptacle	22
23										0 VA	1	20 A		Power	24
25	Power Space 53		20 A	1	0 VA	1330 VA					1	20 A		Lighting	26
27	GUH-4, GUH-5, GUH-6		20 A	1			0 VA	0 VA			1	20 A		GUH-1, GUH-2, GUH-3	28
29										0 VA	1	20 A		EF	30
31	Lighting		20 A	1	1900 VA	0 VA					1	20 A		EF	32
33															34
35	Lighting Space 53	3-9	20 A	1					1330 VA						36
37	Spare		20 A	1	0 VA	0 VA					1	20 A		Spare	38
39	Spare		20 A	1			0 VA	0 VA			1	20 A		Spare	40
41	Space		--	1					--	0 VA	1	20 A		Spare	42
43	Space		--	1	--	0 VA					3	30 A		SPD	44
45	Space		--	1			--	0 VA			--	--	--	--	46
47	Space		--	1					--	0 VA	--	--	--	--	48
49	Receptacle Space 57		40 A	2	180 VA	1040 VA					2	20 A		Exterior Gate	50
51	--	--	--	--			0 VA	1040 VA			--	--	--	--	52
53	Exterior Gate		20 A	2					1040 VA	0 VA	3	20 A		Power Space 65	54
55	--	--	--	--	1040 VA	0 VA					--	--	--	--	56
57								0 VA			--	--	--	--	58
59															60
61															62
63															64
65															66
67															68
69															70
71															72
73															74
75															76
77															78
79															80
81															82
83															84
			Total Load:		8879 VA		3740 VA		5866 VA						
			Total...		77 A		31 A		52 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Receptacle	10080 VA	100.00%	10080 VA	**Total Conn. Load:**	18451 VA
Power	4160 VA	100.00%	4160 VA	**Total Est. Demand:**	18451 VA
				Total Conn.:	51 A
				Total Est. Demand:	51 A

Notes:

Branch Panel: LDT

Location: ELEC. D110B
Supply From: TDT
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 150 A
MCB Rating: 150 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	SUP D104		20 A	1	720 VA	720 VA					1	20 A		SUP D105	2
3	SUP D106		20 A	1			720 VA								4
5															6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
			Total Load:		1440 VA		720 VA		0 VA						
			Total...		13 A		7 A		0 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	2160 VA	100.00%	2160 VA		
				Total Conn. Load:	2160 VA
				Total Est. Demand:	2160 VA
				Total Conn.:	6 A
				Total Est. Demand:	6 A

Notes:

Revision / Date

Project:
NEW OPERATIONS BUILDING
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ELECTRICAL PANEL SCHEDULES

PACKAGE	VOLUME
Job No. 1971-05-01	Sheet No. E7.03
Drawn By: Author	ISSUED FOR BID
Date: 09/18/2025	

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Branch Panel: EHD

Location: ELECTRICAL D110A
Supply From: DPD
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	ETD		20 A	3	2660 VA	780 VA					1	20 A			2
3	--	--	--	--			950 VA	960 VA			1	20 A		Emergency Lighting - Corridor, Offices, Break	4
5	--	--	--	--					0 VA	1440 VA	1	20 A		Emergency Lighting - ELEC, ATS, IDF	6
7	Emergency Lighting - Textbook...		20 A	1	640 VA										8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33	Space		--	1			--	0 VA			1	20 A		Spare	34
35	Space		--	1					--	0 VA	1	20 A		Spare	36
37	Space		--	1	--	0 VA					3	30 A		SPD	38
39	Space		--	1			--	0 VA			--	--	--	--	40
41	Space		--	1					--	0 VA	--	--	--	--	42
		Total Load:			4027 VA		1906 VA		1440 VA						
		Total...			15 A		7 A		5 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Dwelling Unit	1600 VA	100.00%	1600 VA		
Lighting - Exterior	140 VA	125.00%	175 VA	**Total Conn. Load:**	7296 VA
Other	0 VA	0.00%	0 VA	**Total Est. Demand:**	7331 VA
				Total Conn.:	9 A
				Total Est. Demand:	9 A

Notes:

Branch Panel: ELD

Location: ELECTRICAL D110A
Supply From: ETD
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	Warehouse Lighting	3-10	20 A	1	1330 VA	1330 VA					1	20 A	3-12	Warehouse Lighting	2
3	Other		20 A	1			0 VA	950 VA			1	20 A	3-12	Warehouse Lighting	4
5															6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35	Space		--	1					--	0 VA	3	30 A		SPD	36
37	Space		--	1	--	0 VA					--	--	--	--	38
39	Space		--	1			--	0 VA			--	--	--	--	40
41	Space		--	1					--	0 VA	1	20 A		Spare	42
		Total Load:			2660 VA		950 VA		0 VA						
		Total...			23 A		9 A		0 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
				Total Conn. Load:	3610 VA
				Total Est. Demand:	3610 VA
				Total Conn.:	10 A
				Total Est. Demand:	10 A

Notes:

Branch Panel: LBW

Location: Space 68
Supply From: TW
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 250 A
MCB Rating: 250 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	REC CTRL Voltage		20 A	1	500 VA	2400 VA					3	30 A		Air Compressor	2
3	4HWP Chemical Pumps & Controls		30 A	3			2880 VA	2400 VA			--	--	--	--	4
5	--	--	--	--					2880 VA	2400 VA	--	--	--	--	6
7	--	--	--	--	2880 VA	2880 VA					3	30 A		HPS - PUMP A	8
9	HPS - PUMP B		30 A	3			2880 VA	2880 VA			--	--	--	--	10
11	--	--	--	--					2880 VA	2880 VA	--	--	--	--	12
13	--	--	--	--	2880 VA	2880 VA					3	30 A		HPS - PUMP C	14
15	REC Pump & VFD		30 A	3			2880 VA	2880 VA			--	--	--	--	16
17	--	--	--	--					2880 VA	2880 VA	--	--	--	--	18
19	--	--	--	--	2880 VA	500 VA					1	20 A		Water Softner	20
21	Washer Gantry Power		50 A	3			4800 VA	1920 VA			3	20 A		Spot Free RO Unit	22
23	--	--	--	--					4800 VA	1920 VA	--	--	--	--	24
25	--	--	--	--	4800 VA	1920 VA					--	--	--	--	26
27	Receptacle		20 A	1			360 VA	720 VA			1	20 A		Receptacle	28
29	Receptacle		20 A	1					360 VA	732 VA	3	20 A		EUH-2	30
31	Space 68		20 A	1	165 VA	732 VA					--	--	--	--	32
33	Lighting - Non-Dwelling Unit		20 A	1			825 VA	732 VA			--	--	--	--	34
35	Spare		20 A	1					0 VA	0 VA	1	20 A		Spare	36
37	Spare		20 A	1	0 VA	0 VA					3	30 A		SPD	38
39	Spare		20 A	1			0 VA	0 VA			--	--	--	--	40
41	Spare		20 A	1					0 VA	0 VA	--	--	--	--	42
		Total Load:			25409 VA		26117 VA		24612 VA						
		Total...			213 A		219 A		205 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	49960 VA	100.00%	49960 VA		
Receptacle	1440 VA	100.00%	1440 VA	**Total Conn. Load:**	76137 VA
Power	23796 VA	100.00%	23796 VA	**Total Est. Demand:**	76373 VA
Lighting - Non-Dwelling Unit	990 VA	125.00%	1238 VA	**Total Conn.:**	211 A
				Total Est. Demand:	212 A

Notes:

Branch Panel: OHD

Location: ELECTRICAL D110A
Supply From: DPD
Mounting: Recessed
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	OTD		20 A	3	2470 VA										2
3	--	--	--	--			2760 VA								4
5	--	--	--	--					2150 VA						6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
		Total Load:			2470 VA		2760 VA		2150 VA						
		Total...			9 A		10 A		8 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Receptacle	2880 VA	100.00%	2880 VA	**Total Conn. Load:**	7380 VA
Power	4500 VA	100.00%	4500 VA	**Total Est. Demand:**	7380 VA
				Total Conn.:	9 A
				Total Est. Demand:	9 A

Notes:

Branch Panel: OLD

Location: ELECTRICAL D110A
Supply From: OTD
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 250 A
MCB Rating: 250 A

Notes:

CKT	Circuit Description	Comments	Trip	P	A		B		C		P	Trip	Comments	Circuit Description	CKT
1	Power		20 A	2	0 VA	360 VA					1	20 A		Receptacle	2
3	--	--	--	--			0 VA	360 VA			1	20 A		IDF Receptacle	4
5	Receptacle		20 A	1					360 VA	360 VA	1	20 A		Receptacle	6
7	Receptacle	3-12	20 A	1	180 VA	180 VA					1	20 A		Receptacle	8
9	Break Rm Fridge		20 A	1			180 VA	180 VA			1	20 A		Receptacle	10
11	Receptacle		20 A	1					180 VA	500 VA	1	20 A		Power	12
13	Power		20 A	1	500 VA	500 VA					1	30 A		Power	14
15	Power		20 A	3			0 VA	360 VA			1	20 A		Receptacle	16
17	--	--	--	--					0 VA	0 VA	1	20 A		Other	18
19	--	--	--	--	0 VA	0 VA					1	20 A		Other	20
21	D107 Microwave	3-12	20 A	1			180 VA	500 VA			1	20 A		Power	22
23	Power		20 A	1					500 VA	250 VA	2	20 A		Power	24
25	Power		20 A	1	500 VA	250 VA					--	--	--	--	26
27	Power		20 A	1			500 VA	500 VA			1	20 A		Power	28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
		Total Load:			2470 VA		2760 VA		2150 VA						
		Total...			21 A		23 A		18 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Receptacle	2880 VA	100.00%	2880 VA	**Total Conn. Load:**	7380 VA
Power	4500 VA	100.00%	4500 VA	**Total Est. Demand:**	7380 VA
				Total Conn.:	20 A
				Total Est. Demand:	20 A

Notes:

Revision / Date

Project:
NEW OPERATIONS BUILDING
FOR
NEW CANEY I.S.D.
NEW CANEY, TEXAS

STATE OF TEXAS
CHI K. TRUONG
90332
LICENSED PROFESSIONAL ENGINEER
09/10/2025

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ELECTRICAL PANEL SCHEDULES

PACKAGE | **VOLUME**

Job No. 1971-05-01
Drawn By: Author
Date: 09/18/2025
Sheet No. ISSUED FOR BID E7.04

ISSUED FOR BID

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