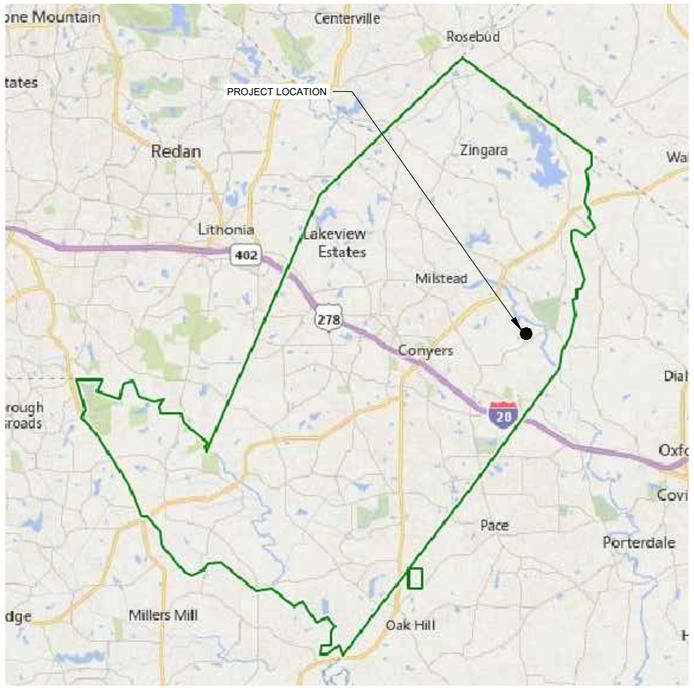
CONSTRUCTION PLANS FOR:

ROCKDALE WATER RESOURCES

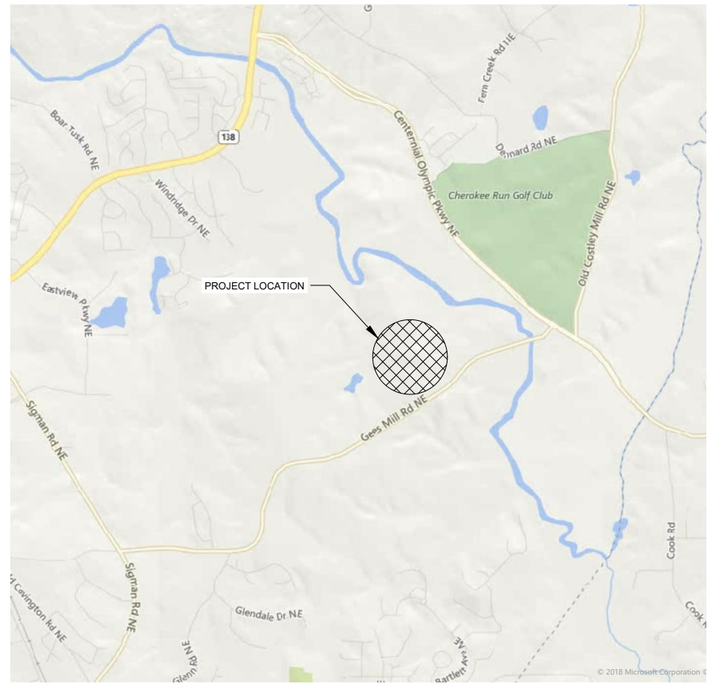


PROJECT VICINITY MAP

ROCKDALE WATER RESOURCES

SHEET INDEX	
SHEET	TITLE
-	COVER
C-1	EXISTING CONDITIONS
C-2	SITE GRADING AND EROSION CONTROL PLAN
C-3	SITE UTILITY PLAN
C-4	STORM SEWER PROFILE
S-1	STRUCTURAL GENERAL NOTES AND FOUNDATION PLAN
S-2	FOUNDATION DETAILS
A-1.0	LIFE SAFETY PLAN AND NOTES
A-2.0	FLOOR PLANS
A-4.0	EXTERIOR ELEVATIONS
A-5.0	BUILDING SECTIONS
A-8.0	SCHEDULES AND DETAILS
M-0.1	MECHANICAL SPECIFICATIONS
M-0.2	MECHANICAL SCHEDULES
M-0.3	MECHANICAL DETAILS
M-1.1	MECHANICAL PLANS

P-0.1	PLUMBING SPECIFICATIONS & SCHEDULES
P-0.2	FIRE PROTECTION SPECIFICATIONS
P-0.3	FIRE PROTECTION SPECIFICATIONS
P-0.4	PLUMBING DETAILS
P-1.1	PLUMBING PLANS - WATER & SEWER
E-0.1	ELECTRICAL LEGEND AND GENERAL NOTES
E-1.1	ELECTRICAL RISER DIAGRAM AND PANELBOARD SCHEDULE
E-3.0	POWER AND GROUNDING ELECTRICAL SITE PLAN
E-3.1	ELECTRICAL POWER FIRST AND SECOND FLOOR PLANS
E-3.2	FIRE ALARM AND COMMUNICATIONS FIRST AND SECOND FLOOR PLANS
E-4.1	ELECTRICAL LIGHTING FIRST AND SECOND FLOOR PLANS
E-4.2	ELECTRICAL EMERGENCY LIGHTING FIRST AND SECOND FLOOR PLANS
E-9.1	ELECTRICAL INSTALLATION DETAILS
E-9.2	ELECTRICAL INSTALLATION DETAILS
D-1	CIVIL DETAILS
D-2	EROSION CONTROL DETAILS
D-3	EROSION CONTROL DETAILS



PROJECT LOCATION MAP

PROJECT:

GEES MILL WATER TREATMENT PLANT MAINTENANCE BUILDING

CONSULTING ENGINEER:

ESI

ENGINEERING STRATEGIES, INC.

3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

GEORGIA REGISTERED No. 017126 PROFESSIONAL ENGINEER PEDRO M. ROSSELLO

Phone: (770) 429-0001

MARCH 2020

GRATE
TOP = 763.71
INV. OUT = 760.51

15" RCP

GRATE
TOP = 757.19
INV. IN= 754.10
INV. OUT = 754.09

15" RCP

6" PLANT WATER

CONCRETE BOLLARDS (TYPICAL)

ACCESS DRIVE
INSIDE PLANT

ELECTRICAL DUCT BANK

84" MANHOLE
TOP EL. 776.30

TRANSFORMER PAD

GENSET
CONCRETE PAD

POWER / SWITCHGEAR AREA

GRAVEL PARKING AREA

EXISTING DETENTION POND

OCS
10" ORIFICE
EL. 745.5

18" DRAIN

TBM
IPF W/CAP
EL.= 791.58

N

0 20' 40'

GEORGIA REGISTERED PROFESSIONAL ENGINEER
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PEDRO M. ROSSELLO

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L:\Rockdale County\WTP Maintenance Bldg\Dwg\Sheets\C-Existing Conditions.dwg - 7/16/2020

DATE: MARCH 2020

PROJECT NUMBER: 18-11011

	REVISION	DATE
1	ISSUED FOR BID	10/29/2019

DSGN: JBH
DRWN: JBH
CHCK: PMR

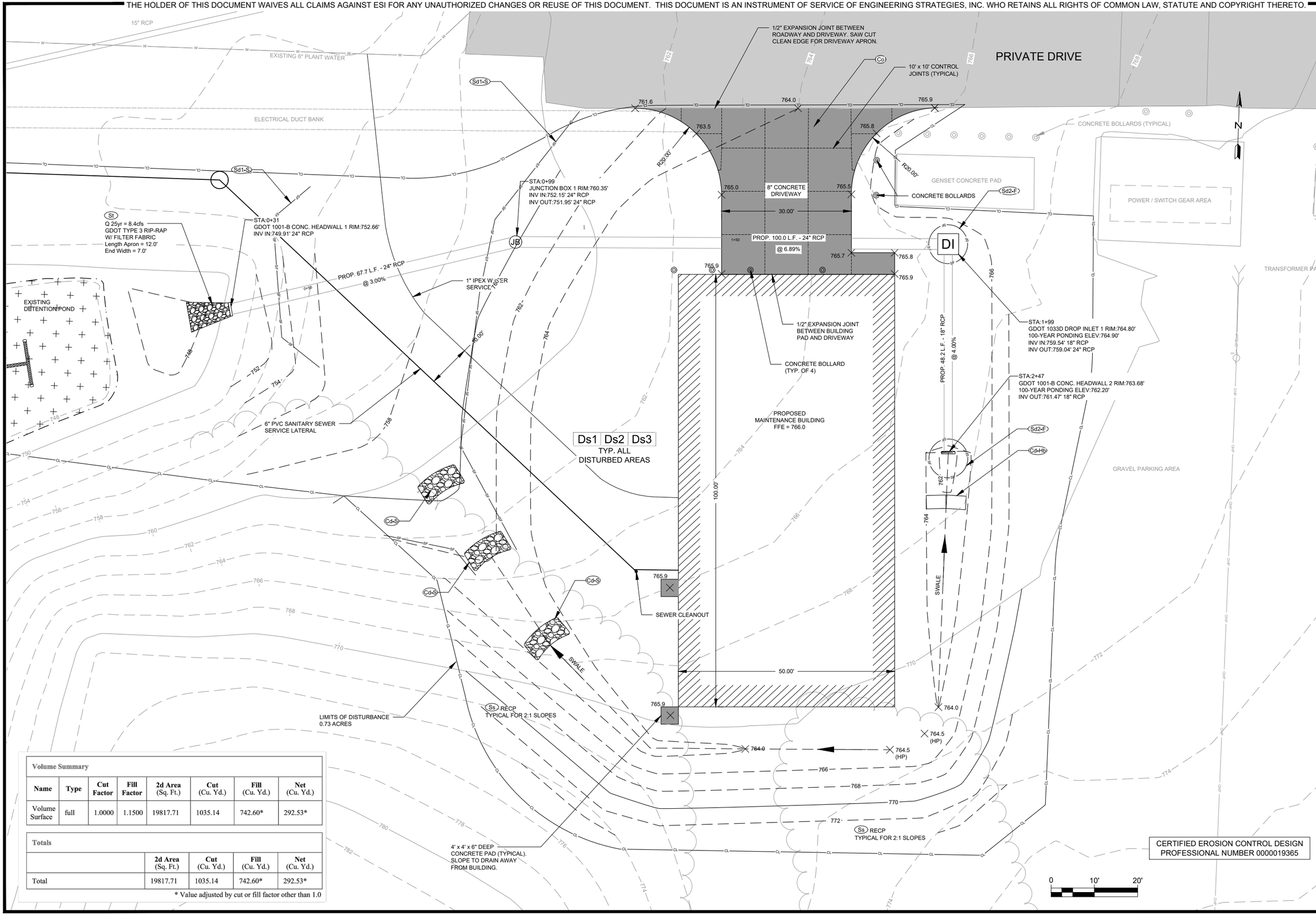
BAR BELOW IS 1" LONG FOR SCALES ENSURE THIS BAR IS 1" LONG ON THIS SHEET. ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

EXISTING CONDITONS

SHEET NO.

C-1



Volume Summary

Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Volume Surface	full	1.0000	1.1500	19817.71	1035.14	742.60*	292.53*

Totals

	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total	19817.71	1035.14	742.60*	292.53*

* Value adjusted by cut or fill factor other than 1.0

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(770) 429-0001

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PROJECT NUMBER: 18-11011
DATE: MARCH 2020

	REVISION	DATE
1	ISSUED FOR BID	10/29/2019

DSGN: JBH
DRWN: JBH
CHCK: PMR

BAR BELOW IS 1" LONG FOR SCALES BASED ON THIS SHEET. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

SITE GRADING
AND EROSION CONTROL PLAN

CERTIFIED EROSION CONTROL DESIGN PROFESSIONAL NUMBER 0000019365

SHEET NO.
C-2

GRATE
TOP = 763.71
INV. OUT = 760.51

WET TAP CONNECTION TO
EXISTING 6" PLANT WATER

15" RCP

GRATE
TOP = 757.19
INV. IN= 754.10
INV. OUT = 754.09

EXISTING FIRE HYDRANT

6" PLANT WATER

CONCRETE BOLLARDS (TYPICAL)

PRIVATE DRIVE

15" RCP

8" PVC SANITARY SEWER

ELECTRICAL DUCT BANK

4' DIAMETER SSMH

1" IPEX WATER
SERVICE

84" MANHOLE
TOP EL. 776.30

EXISTING DETENTION
POND W/ PROP.
BIORETENTION AREA

EXISTING
DETENTION POND

OCS
10" ORIFICE
EL. 745.5

18" DRAIN

10.00'

GENSET
CONCRETE PAD

TRANSFORMER PAD

POWER / SWITCH GEAR AREA

PROPOSED
MAINTENANCE
BUILDING

GRAVEL PARKING AREA

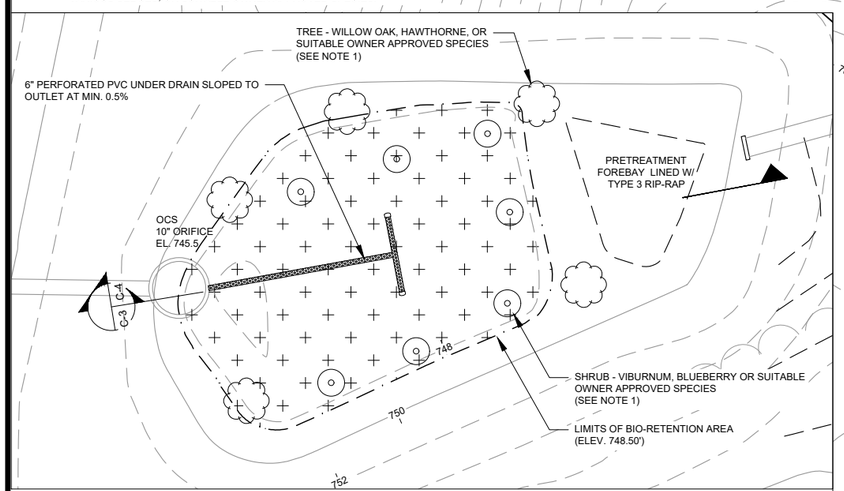
6" PVC SANITARY SEWER
SERVICE LATERAL

6" PVC CLEANOUT

TBM
IPF W/CAP
EL=791.58

NOTES:

1. THE VEGETATION PLAN SHOWN IS A GENERAL SCHEMATIC. ALL TREES AND SHRUBS SHALL BE PLACED AS SHOWN AND SPACED SUFFICIENTLY TO ALLOW GROWTH TO MATURITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THE NEWLY PLANTED VEGETATION FOR A PERIOD OF 6-MONTHS AFTER INSTALLATION OR UNTIL OWNER ASSUMES RESPONSIBILITY.
2. THE BIORETENTION AREA SHALL BE PLANTED WITH A MIX OF AT LEAST THREE (3) SPECIES OF GRASSES SELECTED FROM THE FOLLOWING: BROOM GRASS, SOUTHERN BLUE FLAG IRIS, SOFTSTEM BULRUSH, VARIOUS SEDGES, OR SUITABLE OWNER APPROVED SPECIES.



STORMWATER POND ENLARGEMENT

SCALE: 1" = 10'

0 20' 40'

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 017126 PEDRO M. ROSSELLO

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L:\Rockdale County\WTP Maintenance Bldg\Dwg\Sheets\C-Site Utilities.dwg - 7/16/2020

DATE	REVISION
10/29/2019	ISSUED FOR BID
	1

DATE: MARCH 2020

PROJECT NUMBER: 18-11011

DSGN: JBH
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CHCK: PMR

BAR BELOW IS 1" LONG FOR SCALES SHOWN ON SHEET. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

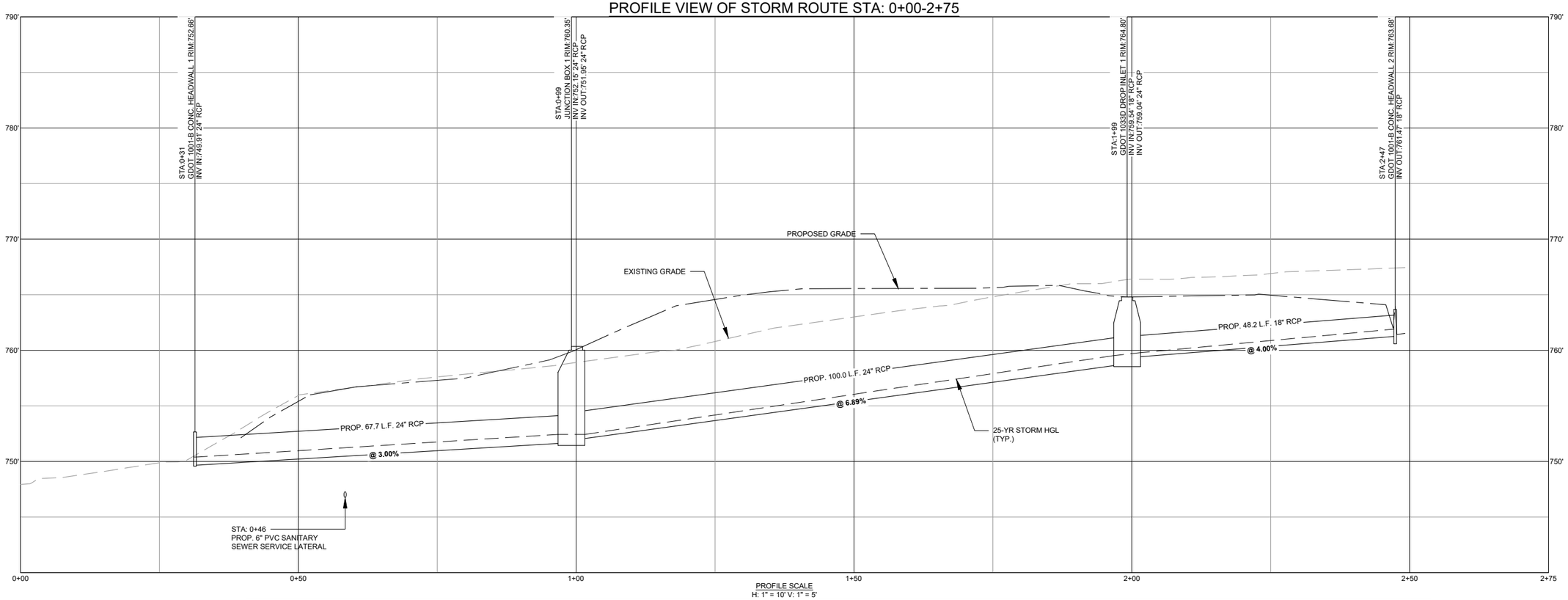
ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

SITE UTILITY PLAN

SHEET NO.

C-3

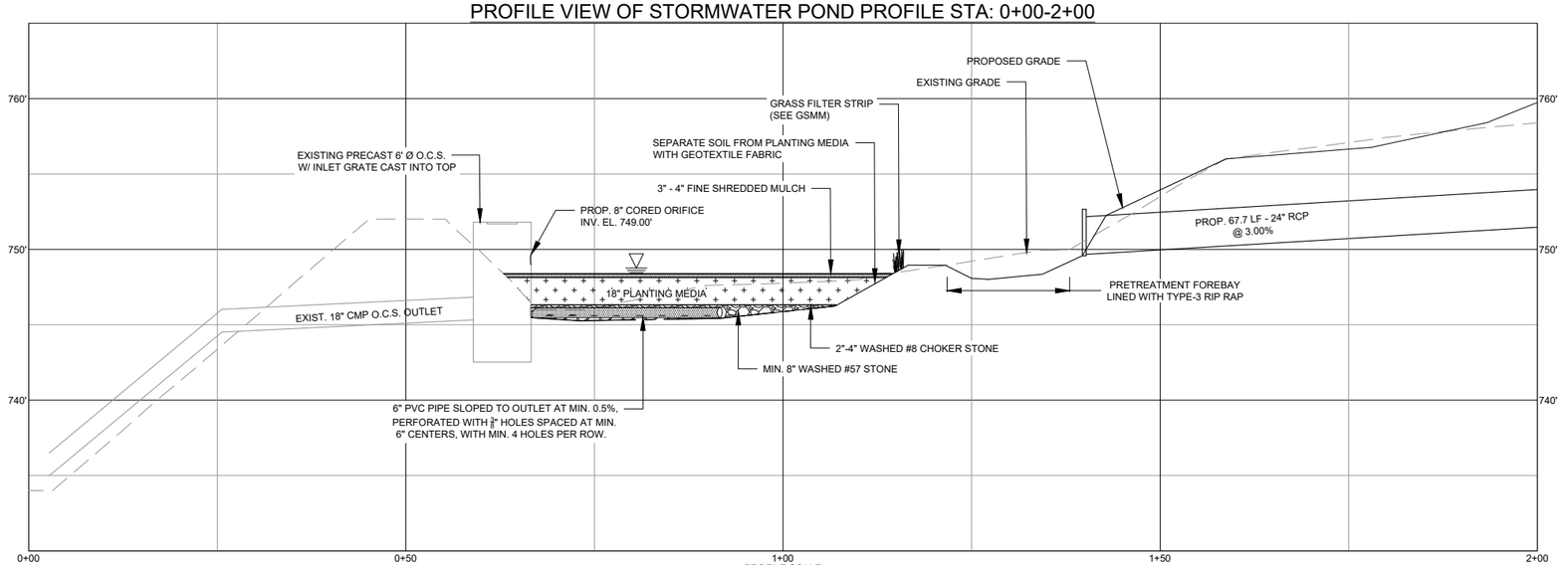
PROFILE VIEW OF STORM ROUTE STA: 0+00-2+75



PROFILE SCALE
H: 1" = 10' V: 1" = 5'

Name	Description	Shape	Inner Diameter	Slope	Start Structure	Start Invert Elevation	End Structure	End Invert Elevation	Length	HGL Up	HGL Down
P-(3)	Concrete Pipe	Circular	18.000"	4.00%	GDOT 1001-B Conc. Headwall 2	761.47'	GDOT 1033D Drop Inlet 1	759.54'	48.24'	761.91'	759.79'
P-(2)	Concrete Pipe	Circular	24.000"	6.89%	GDOT 1033D Drop Inlet 1	759.04'	MH-(4)	752.15'	100.01'	759.53'	752.44'
P-(1)	Concrete Pipe	Circular	24.000"	3.00%	MH-(4)	751.95'	GDOT 1001-B Conc. Headwall 1	749.91'	67.74'	752.44'	750.40'

PROFILE VIEW OF STORMWATER POND PROFILE STA: 0+00-2+00



PROFILE SCALE
H: 1" = 10' V: 1" = 5'

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(770) 429-0001

L:\Rockdale County\WTP Maintenance Bldg\Dwg\Sheets\C-Storm Profiles.dwg - 7/16/2020

DATE: MARCH 2020

PROJECT NUMBER: 18-11011

△	REVISION	DATE
1	ISSUED FOR BID	10/29/2019

DSGN. JBH
DRWN. JBH
CHCK PMR

BAR BELOW IS 1" LONG FOR SCALES AS SHOWN ON THIS SHEET. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

STORM SEWER PROFILE

SHEET NO.
C-4

GENERAL STRUCTURAL NOTES

GENERAL CONDITIONS

1. ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE MECHANICAL, CIVIL, ARCHITECTURAL, ELECTRICAL, HVAC, PLUMBING AND SHOP DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE WORK DEPICTED ON THE DRAWINGS. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.
3. FOR ALL ITEMS EMBEDDED IN OR PASSING THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL, HVAC, AND PLUMBING DRAWINGS FOR TYPE, SIZE, LOCATION, AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATIONS, AND OTHERS.
5. SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
6. ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURE.
7. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

DESIGN CRITERIA

BUILDING CODES AND REFERENCES:

1. 2012 INTERNATIONAL BUILDING CODE (IBC)
2. REINFORCED CONCRETE: ACI 318-11 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
3. LIVE LOADS:

ROOF	20 PSF
STORAGE AREAS (HEAVY), ELECTRICAL ROOMS	300 PSF
STORAGE AREAS (LIGHT)	150 PSF
UPPER FLOOR	125 PSF

4. WIND DESIGN CRITERIA:

RISK CATEGORY	III
ULTIMATE DESIGN WIND SPEED, V_{ULT}	120 MPH
NOMINAL DESIGN WIND SPEED, V_{ASD}	90 MPH
EXPOSURE CATEGORY	C

5. SNOW LOAD:

BASIC GROUND SNOW LOAD	5 PSF

6. SEISMIC DESIGN CRITERIA:

SITE CLASS	C
SEISMIC IMPORTANCE FACTOR, I_e	1.15
SHORT PERIOD MCE SPECTRAL RESPONSE ACCELERATION, S_S	0.179
1-SECOND PERIOD MCE SPECTRAL RESPONSE ACCELERATIONS, S_1	0.088
SEISMIC DESIGN CATEGORY	D
DESIGN SHORT PERIOD MCE SPECTRAL RESPONSE ACCELERATION, S_{DS}	0.191
DESIGN 1-SECOND PERIOD MCE SPECTRAL RESPONSE ACCELERATION, S_{D1}	0.141

FOUNDATIONS

GEOTECHNICAL REPORT:

1. GEOTECHNICAL REPORT "GEOTECHNICAL EXPLORATION NEW MAINTENANCE BUILDING ROCKDALE COUNTY WATER TREATMENT PLANT" PREPARED BY UNITED CONSULTING, DATED NOVEMBER 5, 2018. ANY INTERPRETATION OF THE CONTENTS OF THE GEOTECHNICAL REPORT IS THE RESPONSIBILITY OF THE CONTRACTOR.

FOUNDATION DESIGN:

1. ALLOWABLE BEARING PRESSURE FOR GRADE BEAMS: 3,000 PSF

CONCRETE (CAST-IN-PLACE)

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS.
2. ALL CONCRETE SHALL BE AIR-ENTRANED WITH A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS OTHERWISE NOTED.
3. WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.
4. ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS FINISHING IS COMPLETED OR FORMS ARE REMOVED.
5. ALL EXPOSED CORNERS SHALL HAVE A MINIMUM CHAMFER OF 3/4" UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATIONS OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWINGS.

REINFORCING STEEL

1. REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064 REQUIREMENTS. ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS.
2. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:
   a. CONCRETE CAST AGAINST EARTH — 3"
   b. FORMED SURFACE IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER — 2"
3. LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL.
4. THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

PRE-ENGINEERED METAL BUILDING

1. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO DESIGN, FABRICATE, DELIVER TO JOB SITE AND ERECT THE PRE-ENGINEERED METAL BUILDING AS SHOWN ON THE CONTRACT DOCUMENTS.
2. SUBMIT TO THE ENGINEER AS PROVIDED COMPLETE PLANS SHOWING SUPERSTRUCTURE COLUMN LINES SET TO COORDINATE WITH CONCRETE DIMENSIONS SHOWN. INDICATE ANCHOR BOLT SIZE AND LOCATIONS AND FOUNDATION REACTIONS IN KIPS AT ALL COLUMNS. FOUNDATION SIZE AND REINFORCEMENT FOR PRE-ENGINEERED METAL BUILDING ARE PRELIMINARY AND ARE SUBJECT TO CHANGE UNTIL FINAL REACTIONS ARE PROVIDED BY BUILDING MANUFACTURER AND APPROVED BY THE ENGINEER OF RECORD.
3. SUBMIT LETTER AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA CERTIFYING THAT THE STRUCTURAL FRAMING AND COVERING PANELS PROPOSED MEET THE DESIGN CRITERIA.
4. PRIOR TO FOUNDATION CONSTRUCTION, PRE-ENGINEERED METAL BUILDING SUBMITTAL MUST BE APPROVED. CONSTRUCTION DETAILS MAY BE VARIED TO SUIT MANUFACTURER'S STANDARD DESIGN.
5. ALL BUILDING COLUMNS SHALL BE DESIGNED AS "PIN" CONNECTED. COLUMN ENDS SHALL NOT TRANSFER MOMENTS TO FOUNDATION. ANCHOR BOLTS SHALL BE DESIGNED BY THE BUILDING MANUFACTURER AND FURNISHED BY THE CONTRACTOR.
6. UPPER MEZZANINE FRAMING SHALL BE DESIGNED ACCORDING TO LOADS INDICATED. COORDINATE FRAMING REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.
7. SEE SPECIFICATION 12121 FOR ADDITIONAL REQUIREMENTS.

STRUCTURAL ABBREVIATIONS

&	AND	EW	EACH WAY	PROJ	PROJECTION
@	AT	EXIST	EXISTING	PSF	POUNDS PER SQUARE FOOT
#	NUMBER	EXP	EXPANSION	PSI	POUNDS PER SQUARE INCH
ADDTL	ADDITIONAL	FT	FOOT	R	RADIUS
ALUM	ALUMINUM	FTG	FOOTING	REINF	REINFORCING
APROX	APPROXIMATE(LY)	FV	FIELD VERIFY	REQD	REQUIRED
BLD	BUILDING	GALV	GALVANIZED	SIM	SIMILAR
BM	BEAM	HORIZ	HORIZONTAL	SJ	SAWCUT JOINT
BOT	BOTTOM	JT	JOINT	SPECS	SPECIFICATIONS
CL	CENTER LINE	LB(S)	POUND(S)	SS	STAINLESS STEEL
CLR	CLEAR	MANUF	MANUFACTURER	STD	STANDARD
CONC	CONCRETE	MATL	MATERIAL	STL	STEEL
CONST JT	CONSTRUCTION JOINT	MAX	MAXIMUM	T/	TOP OF
CONT	CONTINUOUS	MFR	MANUFACTURER	TB	TIE BEAM
DIA	DIAMETER	MIN	MINIMUM	T&B	TOP AND BOTTOM
DIM	DIMENSION	MISC	MISCELLANEOUS	THK	THICK
DEG	DEGREE(S)	MO	MASONRY OPENING	TOC	TOP OF CONCRETE
DO	DITTO	MTL	METAL	TOS	TOP OF STEEL
DWG	DRAWING	NO	NUMBER	TYP	TYPICAL
DWL	DOWEL(S)	NTS	NOT TO SCALE	UNO	UNLESS NOTED OTHERWISE
(E)	EXISTING	OC	ON CENTER	VERT	VERTICAL
EA	EACH	PEMB	PRE-ENGINEERED METAL BUILDING	WT	WEIGHT
EF	EACH FACE	PERP	PERPENDICULAR	WWF	WELDED WIRE FABRIC
EJ	EXPANSION JOINT	PL	PLATE		
EL	ELEVATION	PLF	POUND PER LINEAR FOOT		
EMBED	EMBEDMENT				
EQ	EQUAL				

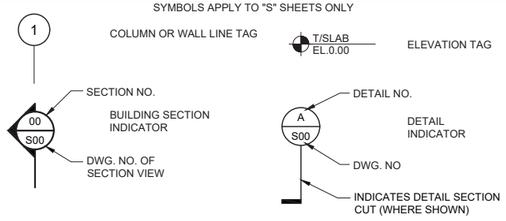
LEGEND

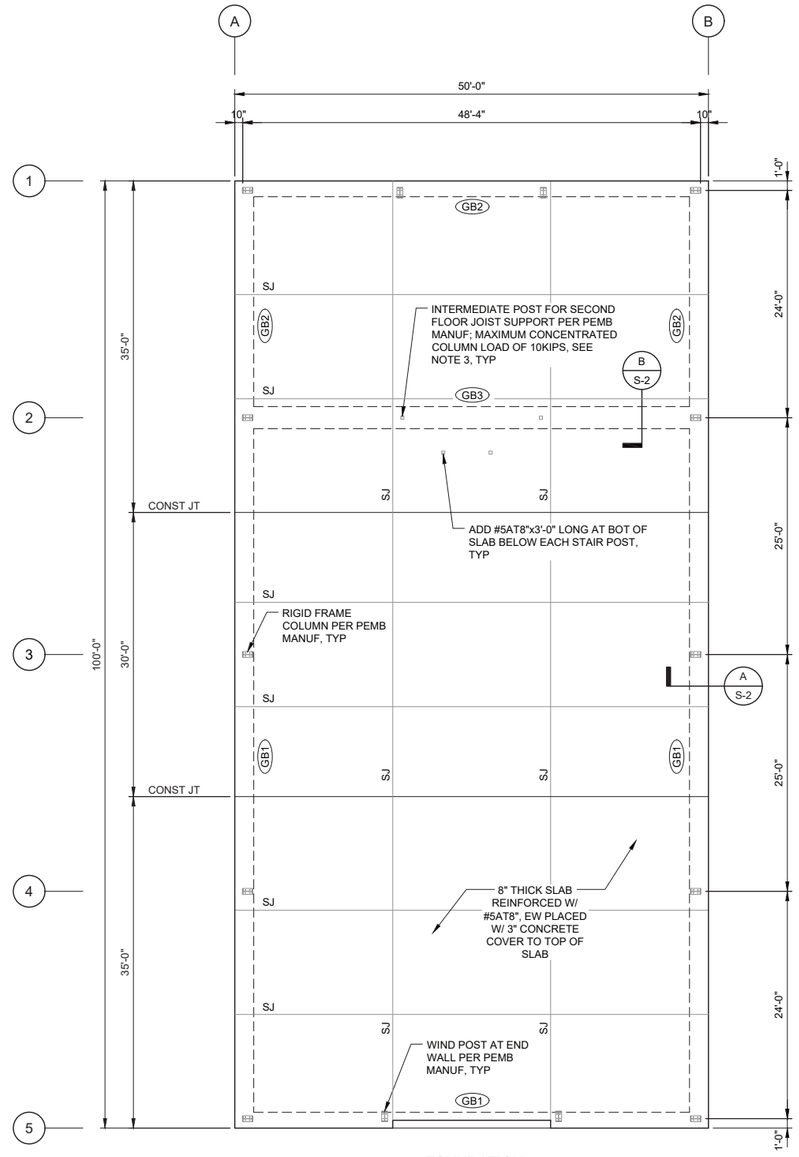
STRUCTURAL LEGEND APPLIES TO "S" SHEETS ONLY

COMPACTED FILL	CONCRETE
UNDISTURBED EARTH	EXISTING CONCRETE
COMPACTED GRANULAR FILL	DEMOLITION
GROUT OR SAND (AS NOTED)	STEEL

SYMBOLS

SYMBOLS APPLY TO "S" SHEETS ONLY





FOUNDATION PLAN
1/8"=1'-0"

LEGEND

GB1 REPRESENTS GRADE BEAM TAG; SEE DETAILS ON S-2

SAWCUT NOTE:

1. SAWCUT 2" DEEP JOINTS AS SHOWN ON PLAN.
2. SAWCUTTING TO BE PERFORMED IMMEDIATELY AFTER PLACEMENT, AS SOON AS THE CONCRETE IS FIRM ENOUGH TO SUPPORT THE SAW AND TO NOT BE TORN OR DAMAGED BY THE BLADE.

NOTES:

1. THE CONTRACTOR SHALL SUBMIT PRE-ENGINEERED METAL BUILDING SHOP DRAWINGS FOR REVIEW PRIOR TO SUBMITTING THE CONCRETE REINFORCEMENT SHOP DRAWING TO ENSURE THAT ANTICIPATED UPPER FLOOR FRAMING REACTIONS ARE WITHIN THE DESIGN ASSUMPTIONS.
2. CONTRACTOR SHALL OVER EXCAVATE ALL PARTIALLY WEATHERED ROCK A MINIMUM OF 12" BELOW THE BOTTOM OF PROPOSED SLAB AND GRADE BEAMS AND BACKFILL WITH COMPACTED ENGINEERED FILL. COORDINATE WITH THE GEOTECHNICAL REPORT FOR ANY ADDITIONAL REQUIREMENTS. COMPACT ALL FILL AND NATIVE SUBGRADE TO 98 PERCENT OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY.
3. CONTRACTOR SHALL COORDINATE FOOTING/GRADE BEAM DESIGN W/ PEMB MANUFACTURER TO LIMIT ALL COLUMN LOADS SUPPORTING THE MEZZANINE TO THE VALUE SHOWN. WHERE ADDITIONAL COLUMNS ARE NEEDED WITHIN THE FOOTPRINT OF THE MEZZANINE OR WHERE THE FIRST FLOOR WALLS ARE USED FOR BEARING THEN THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL GRADE BEAM MATCH DETAIL B/S-2 TO SUPPORT THESE LOADS.

WEKIVA ENGINEERING
711 N. ORANGE AVE, SUITE A
WINTER PARK, FL 32789
PH: 407.430.9799 | WEKIVA PROJ. NO. 18-121
www.wekivaengineering.com

GEORGIA REGISTERED No. 41721 PROFESSIONAL ENGINEER JOHN SOBCZAK 7-21-20

ESI ENGINEERING STRATEGIES, INC.
3855S SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

V:\ESI\18-121 Rockdale County WTP Maintenance Building\Drawings\Structural\S-1.dwg - 7/22/2020

PROJECT NUMBER: 18-11101
DATE: JULY 2020

		REVISION	DATE
△	#	#	#
△	#	#	#
△	#	#	#

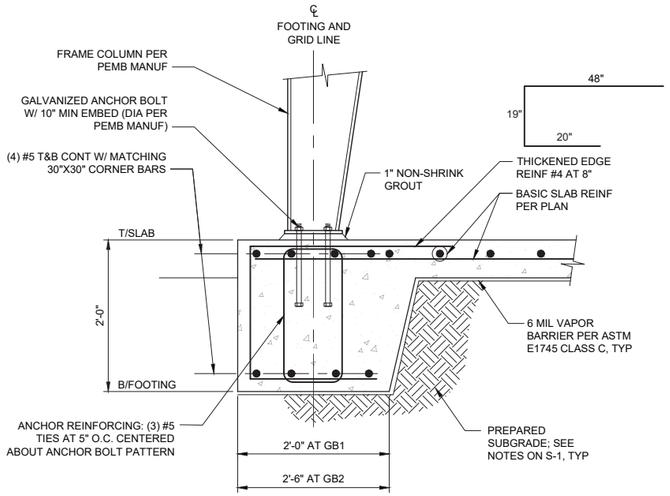
DSGN: JVS
DRWN: JVS
CHCK: DSM

BAR BELOW IS 1" LONG FOR SCALES SHOWN ON THIS SHEET. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

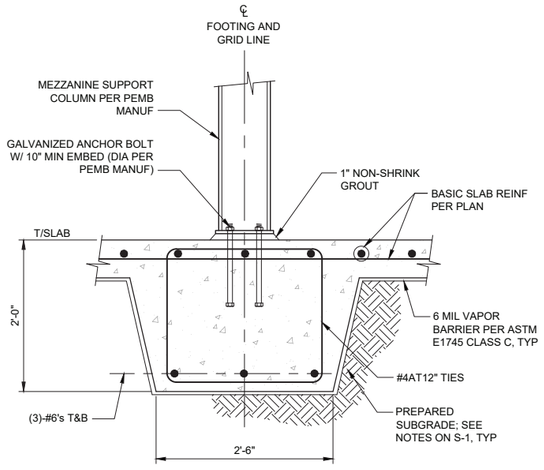
STRUCTURAL GENERAL NOTES AND FOUNDATION PLAN

SHEET NO.
S-1



GRADE BEAM GB1 & GB2

DETAIL A
1"=1'-0"



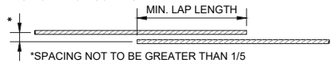
GRADE BEAM GB3

DETAIL B
1"=1'-0"

REBAR MINIMUM TENSION DEVELOPMENT & LAP LENGTHS					
CONCRETE STRENGTH f'c= 4,000 PSI OR GREATER					
BAR SIZE	DEVELOPMENT LENGTH, ld		LAP LENGTH (CLASS B SPLICE)		BAR SIZE
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	
#3	1'-7"	1'-3"	2'-0"	1'-7"	#3
#4	2'-1"	1'-7"	2'-8"	2'-0"	#4
#5	2'-7"	2'-0"	3'-4"	2'-7"	#5
#6	3'-1"	2'-4"	4'-0"	3'-1"	#6
#7	4'-6"	3'-6"	5'-10"	4'-6"	#7
#8	5'-2"	3'-11"	6'-8"	5'-2"	#8
#9	5'-10"	4'-6"	7'-6"	5'-10"	#9
#10	6'-6"	5'-0"	8'-6"	6'-6"	#10
#11	7'-3"	5'-7"	9'-6"	7'-3"	#11

NOTES:
1. GRADE 60 UNCOATED REINFORCEMENT
2. SPLICE LENGTHS GIVEN ABOVE ARE TO BE USED UNLESS NOTED OTHERWISE ON DESIGN DRAWINGS.

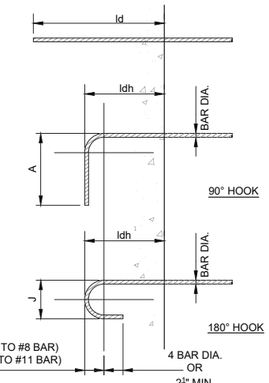
MAXIMUM BAR SPACING AT NON-CONTACT LAPS:



*SPACING NOT TO BE GREATER THAN 1/5 LAP LENGTH OR 6IN. WHICH EVER IS LESS

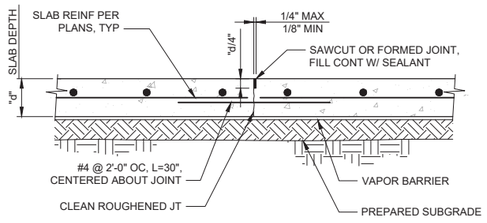
STANDARD HOOK DEVELOPMENT LENGTH			
BAR SIZE	90° STD HOOK "A"	180° STD HOOK "J"	DEVELOPMENT LENGTH, ldh
#3	6"	3"	6"
#4	8"	4"	7"
#5	10"	5"	9"
#6	1'-0"	6"	10"
#7	1'-2"	7"	1'-0"
#8	1'-4"	8"	1'-2"
#9	1'-7"	11½"	1'-3"
#10	1'-10"	1'-1¼"	1'-5"
#11	2'-0"	1'-2¾"	1'-7"

*FOR STD HOOK BAR GEOMETRY NOT SHOWN REFER TO MINIMUM ACI REQUIREMENTS



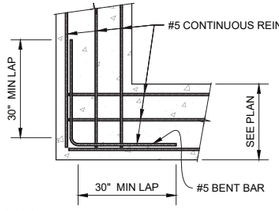
STANDARD REINFORCEMENT DETAILS

DETAIL E
NTS



CONSTRUCTION JOINT "CONST JT"

DETAIL C
1"=1'-0"



NOTE:
FOOTING CONTINUOUS REINFORCEMENT LAPS TO BE MIN 30"

FOOTING DETAIL AT BUILDING CORNERS

DETAIL D
NTS

WEKIVA ENGINEERING
711 N. ORANGE AVE, SUITE A
WINTER PARK, FL 32789
PH: 407.430.9799 | WEKIVA PROJ. NO. 18-121
www.wekivaengineering.com

GEORGIA REGISTERED No. 41721 PROFESSIONAL ENGINEER JOHN SOBCZAK 7-21-20

ESI ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

V:\ESI\18-121 Rockdale County WTP Maintenance Building\Drawings\Structural\S-1.dwg - 7/22/2020

DATE: JULY 2020
PROJECT NUMBER: 18-11011

△	REVISION	DATE
#		#
#		#
#		#
#		#

DSGN: JVS
DRWN: JVS
CHCK: DSM

BAR BELOW IS 1" LONG FOR SCALES SHOWN. IF BAR IS NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

FOUNDATION DETAILS

SHEET NO.
S-2

APPLICABLE CODES:

INTERNATIONAL BUILDING CODE (IBC)
2012 EDITION WITH 2014, 2015 AND 2017 GEORGIA AMENDMENTS

INTERNATIONAL MECHANICAL CODE (IMC)
2012 EDITION WITH 2014 AND 2015 GEORGIA AMENDMENTS

INTERNATIONAL PLUMBING CODE (IPC)
2012 EDITION WITH 2014 & 2015 GEORGIA AMENDMENTS

INTERNATIONAL FUEL-GAS CODE (IFGC)
2012 EDITION WITH 2014 AND 2015 GEORGIA AMENDMENTS

INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
2009 EDITION WITH GEORGIA SUPLEMENTS AND 2011/2012 GEORGIA AMENDMENTS

NATIONAL ELECTRIC CODE (NEC)
2014 EDITION

THE ACCESSIBILITY CODE FOR BUILDINGS & FACILITIES
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

LIFE SAFETY CODE
2012 EDITION WITH 2014 GEORGIA AMENDMENTS

OCCUPANT LOAD / EGRESS WIDTH

2000 NFPA 101 LIFE SAFETY CODE - TABLE 7.3.1.2

ROOM # and NAME	OCCUPANCY CLASSIFICATION	AREA	SQUARE FEET PER PERSON	NUMBER OF PERSONS	FACTOR	MINIMUM EGRESS WIDTH REQUIRED
#100 SHOP	BUISNESS	1,800	100	18	.2	3.6"
#101 OFFICE-1	BUISNESS	72	100	1	.2	.2"
#102 OFFICE-2	BUISNESS	72	100	1	.2	.2"
#103 OPEN OFFICE	BUISNESS	292	100	3	.2	.6"
#104 OFFICE-3	BUISNESS	72	100	1	.2	.2"
#200 RECORDS	STORAGE	442	100	5	.2	1"
#201 OFFICE-4	BUISNESS	72	100	1	.2	.2"
#202 OFFICE-5	BUISNESS	72	100	1	.2	.2"
	TOTAL EGRESS REQUIRED			31	.2	6.2
	TOTAL EGRESS PROVIDED					108"

GENERAL NOTES:

-THE SITE INSPECTION SHALL BE MADE PRIOR TO SUBMITTING BID FOR THE PROPOSED PROJECT. NO COMPENSATION WILL BE ALLOWED FOR FAILURE TO INSPECT THE SITE. CONTRACTOR SHALL INFORM THE ARCHITECT, PRIOR TO BIDDING, OF ANY DISCREPANCIES WHICH EXIST BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS.

-IF AT ANY TIME AN ERROR IS FOUND WITHIN THESE DOCUMENTS PRIOR TO OR DURING CONSTRUCTION THAT MAY BE CRITICAL TO THE INTEGRITY OF THIS PROJECT, THE CONTRACTOR SHALL CONTACT THE ARCHITECT IMMEDIATELY TO RESOLVE THE ERROR PRIOR TO PROCEEDING WITH THE AFFECTED WORK.

-WHERE ONE DETAIL IS SHOWN FOR ONE CONDITION IT SHALL APPLY TO ALL LIKE OR SIMILAR CONDITIONS THOUGH NOT SPECIFICALLY MARKED.

-CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING ALL WORK DURING CONSTRUCTION AND IMPLEMENTATION OF ALL SAFETY PROCEDURES IN ACCORDANCE WITH APPLICABLE CODES.

-WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS.

-LARGER SCALE DRAWINGS HAVE PRECEDENCE OVER SMALLER SCALED DRAWINGS.

-ALL DOOR HARDWARE SHALL BE LEVER OPERATED TYPE IN ACCORDANCE WITH ANSI A117.1-1986.

-ALL FIRE AND/OR SMOKE BARRIERS OR WALLS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING ABOVE ANY DECORATIVE CEILING AND/OR IN CONCEALED SPACE WITH LETTERS A MINIMUM OF TWO (2) INCHES HIGH ON A CONTRASTING BACKGROUND SPACED A MAXIMUM OF TWELVE (12) FEET ON CENTER WITH A MINIMUM OF ONE PER WALL OR BARRIER. THE HOURLY FIRE RATING SHALL BE INCLUDED ON ALL RATED BARRIERS OR WALLS. SUGGESTED WORDING "(_) - HOUR FIRE WALL AND SMOKE BARRIER PROTECT ALL OPENINGS".

-THE EARTH UNDER AND AROUND BUILDING SLABS SHALL BE TREATED FOR TERMITES IN ACCORDANCE WITH GEORGIA DEPARTMENT OF AGRICULTURE REGULATIONS.

-WHERE "BUILDING WRAP" IS INDICATED ON DRAWINGS, IT SHALL BE DuPONT TYVEK BUILDING WRAP - TAPE SEAMS WITH DuPONT CONTRACTOR TAPE. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

-CONTRACTOR SHALL PROVIDE A GENTLE SLOPE (1/4" PER FOOT MIN. 1" PER FOOT MAX.) AT ALL GRADE ENTRANCES/EXITS TO AVOID AN ABRUPT CHANGE IN ELEVATIONS.

-REMOVE MANUFACTURER'S NAMES, LABELS, AND DESIGNATIONS FROM ALL EXPOSED FACES ON ALL ACCESSORIES, GLASS, FIXTURES, ETC. EXCEPT WHERE TO REMAIN PER CODE REQUIREMENTS.

-THE JOB SITE SHALL BE KEPT "BROOM CLEAN" AND FREE OF EXCESSIVE DEBRIS. ALL REFUSE CREATED IN THE EXECUTION OF THE CONTRACT FOR CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN AN APPROVED OFFSITE LOCATION.

-OPENINGS THROUGH RATED WALLS, FLOORS, FLOOR/CEILING AND ROOF/CEILINGS SHALL BE PROTECTED AS APPROPRIATE FOR THE FIRE RESISTANCE RATING OF THE RATING OF THE BARRIER. TO ENSURE THAT A FIRE BARRIER IS CONTINUOUS, IT IS NECESSARY TO SEAL COMPLETELY ALL OPENINGS WHERE THE FIRE BARRIER ABUTS OTHER FIRE BARRIERS, EXTERIOR WALLS, THE FLOOR BELOW AND THE FLOOR OR CEILING ABOVE. PENETRATIONS THROUGH RATED WALLS AND FLOORS SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES, AND SHALL MEET THE TEST STANDARD FOR FIRE STOP ASTM - E814 OR NFPA 251.

-THE CONTRACTOR SHALL VISIT THE SITE AND BE KNOWLEDGEABLE OF ALL CONDITIONS THEREOF. HE SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE WORK.

-THE CONTRACTOR SHALL COORDINATE ALL LIGHTING LOCATIONS WITH DUCTWORK LAYOUT. ANY VARIATIONS WITH LAYOUT OR CEILING HEIGHT SHALL BE REVIEWED WITH THE ARCHITECT PRIOR TO INSTALLATION.

-AN 80% AND 100% INSPECTION MUST BE CONDUCTED BY THE FIRE DEPARTMENT BEFORE A CERTIFICATE OF OCCUPANCY IS ISSUED. A 24-HOUR NOTICE IS REQUIRED. CALL APPROPRIATE AUTHORITY HAVING JURISDICTION TO SCHEDULE THE INSPECTION.

-WHERE NEW WORK IS LOCATED SUCH THAT DEMOLITION OF EXISTING CONSTRUCTION IS REQUIRED, THE REMAINING EXISTING CONSTRUCTION SHALL BE REPAIRED, PATCHED AND FINISHED TO MATCH THE MATERIALS AND FINISH OF THE ORIGINAL ADJACENT WORK UNLESS NOTED OTHERWISE.

INDEX OF SHEETS

CONSTRUCTION DATA

CONSTRUCTION TYPE

2006 INTERNATIONAL BUILDING CODE - CHAPTER 6/TABLE 601 : II B
2000 NFPA 101 LIFE SAFETY CODE - CHAPTER 8.2.1/TABLE A.8.2.1: II-000

OCCUPANCY CLASSIFICATION

2006 INTERNATIONAL BUILDING CODE - CHAPTER 3: BUISNESS-B
2000 NFPA 101 LIFE SAFETY CODE - 6.1: BUISNESS

BUILDING AREA

MAIN FLOOR	5,000 SQ. FT.
UPPER FLOOR	1,267 SQ. FT.
TOTAL	6,267 SQ. FT.

EXIT REQUIREMENTS:

-THE TRAVEL DISTANCE BETWEEN ANY POINT IN A ROOM AND AN EXIT SHALL NOT EXCEED 200 FEET.

-DEADEND CORRIDORS SHALL NOT EXCEED 20 FEET.

-THE COMMON PATH OF TRAVEL SHALL NOT EXCEED 75 FEET.

-THE ELEVATION OF THE FLOOR SURFACES ON BOTH SIDES OF A DOOR SHALL NOT VARY BY MORE THAN 1/2". THE ELEVATION SHALL BE MAINTAINED ON BOTH SIDES OF THE DOORWAY FOR A DISTANCE EQUAL TO THE WIDTH OF THE WIDEST LEAF. THE THRESHOLD AT DOORWAYS SHALL NOT BE MORE THAN 1/2" IN HEIGHT. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES MORE THAN 1/4" AT DOORWAYS SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1 IN 12.

-EXITS AT GRADE SHALL BE H/C ACCESSIBLE TO THE PUBLIC WAY.

GENERAL NOTES:

-ALL RATED PARTITIONS ARE TO SEAL AGAINST THE FLOOR STRUCTURE, THE STRUCTURE ABOVE, AND THE ADJACENT STRUCTURE WITH UNINTERRUPTED RATING INDICATED. SEAL ALL GAPS AND/OR PENETRATIONS WITH FIRESTOPPING.

LEGEND:

1 HR RATED SMOKE PARTITION

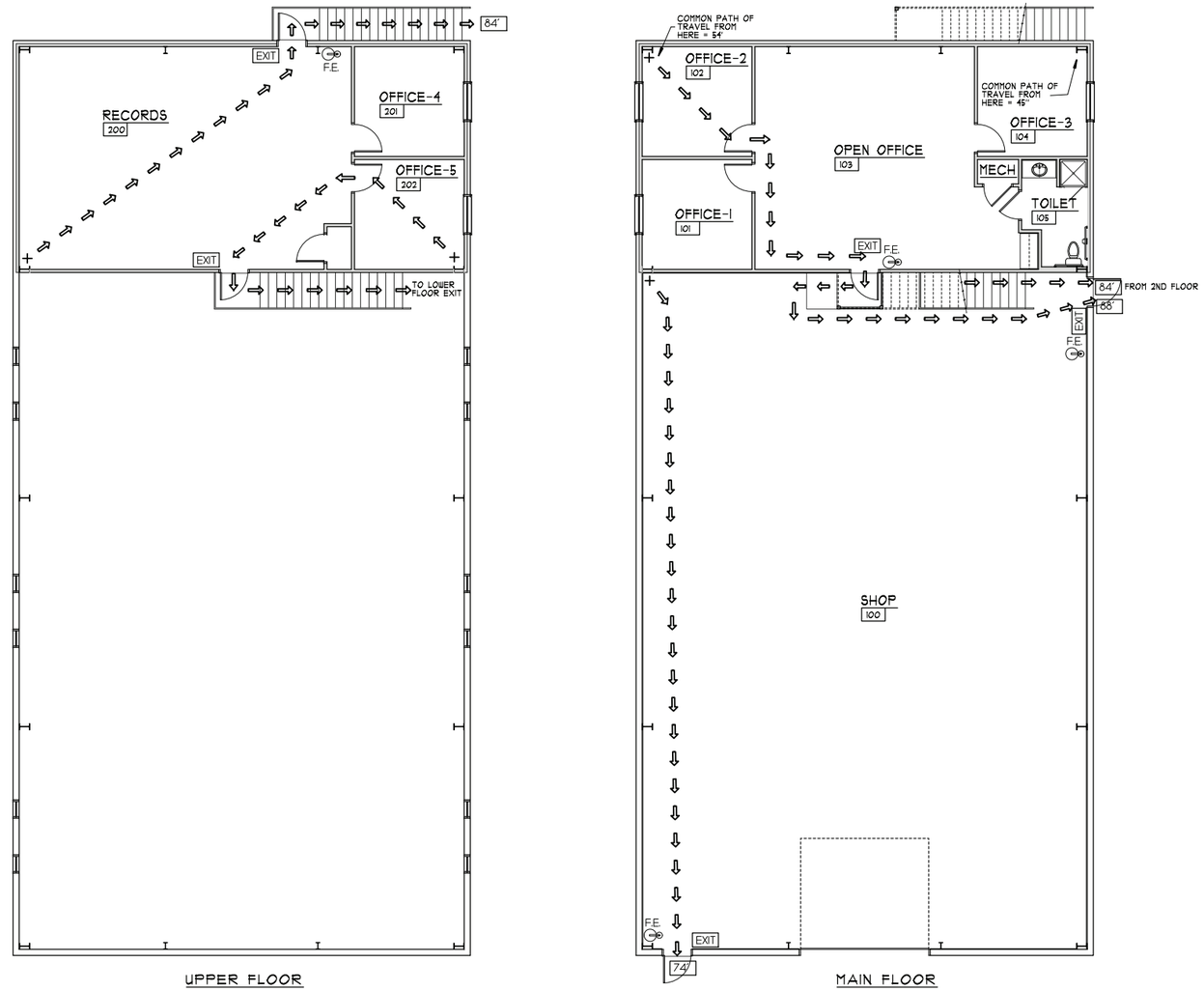
F.E. OR F.E. — FIRE EXTINGUISHER (10# ABC)

EXIT — EXIT SIGN (SEE ELEC.)

50' — EGRESS PATH AND TRAVEL DISTANCE

SPRINKLER NOTES

-BUILDING IS NOT SPRINKLED.



LIFE SAFETY PLANS (1)
SCALE: 1/8" = 1'-0"

Homer Lewis & Associates, Inc.
230 River Cove Meadows
Social Circle, Ga. 30025
(678) 210-1007

STATE OF GEORGIA — H. HOMER LEWIS — 09/23/2019 — CERTIFICATE NO. 20684 — REGISTERED ARCHITECT

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

DATE: 23 SEPTEMBER 2019
PROJECT NUMBER: 1719

REVISION	DATE
△	

DSGN:
DRWN: BTL
CHCK: HRL

BAR BELOW IS 1" LONG FOR SCALES SHOWN ON SHEET. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

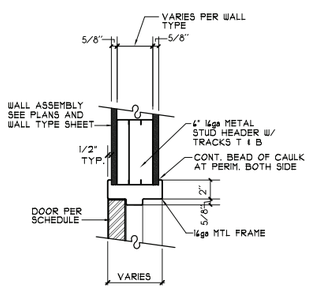
ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

LIFE SAFETY PLAN AND NOTES

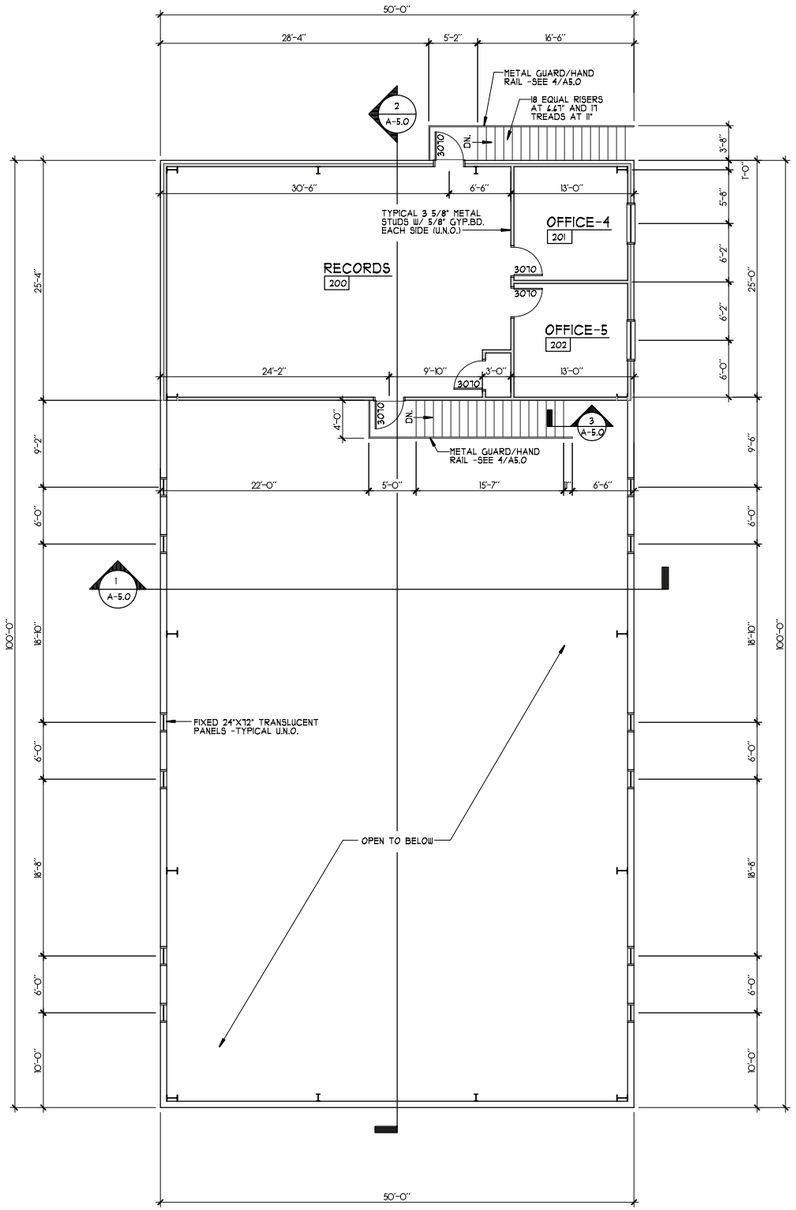
SHEET NO.
A-1.0

Homer Lewis & Associates, Inc.
230 River Cove Meadows
Social Circle, Ga. 30025
(678) 210-7007

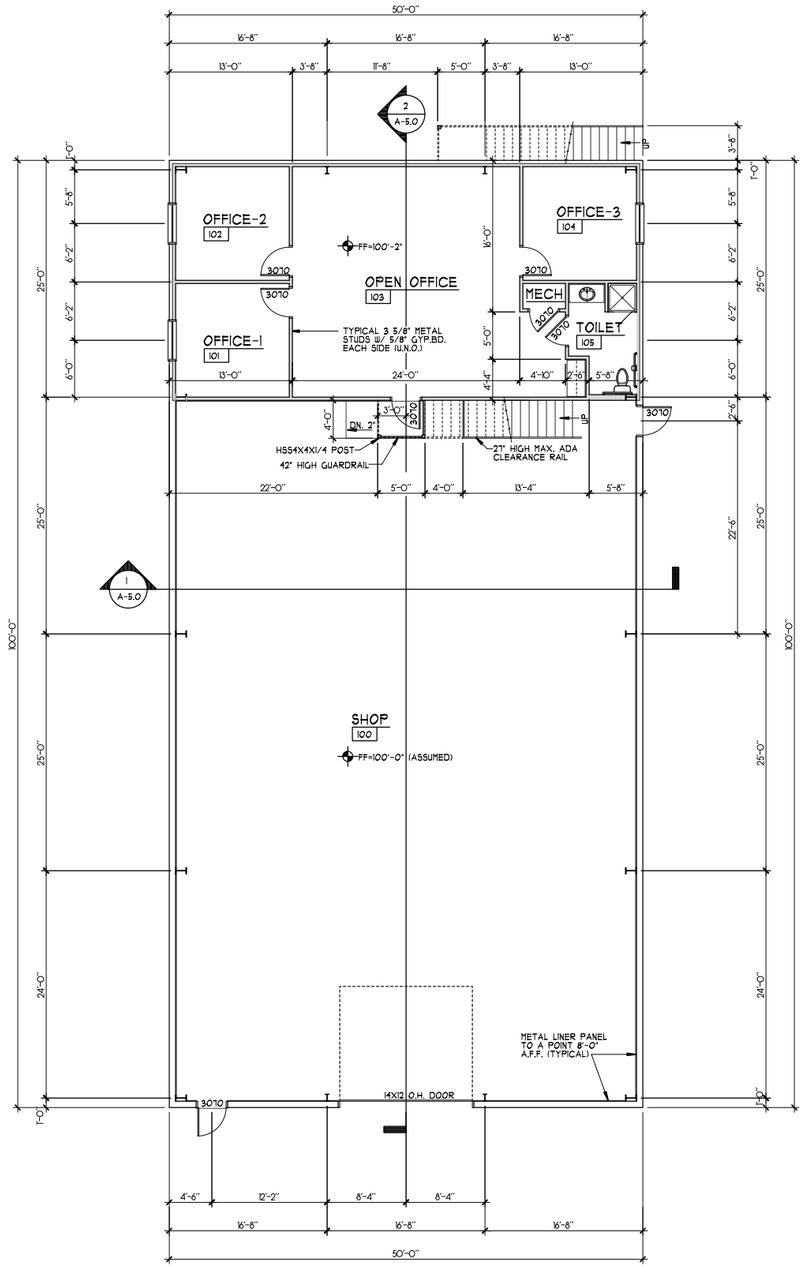
H.M. JAMB DETAIL 4
SCALE: 1 1/2"= 1'-0"



H.M. HEADER DETAIL 3
SCALE: 1 1/2"= 1'-0"



UPPER FLOOR PLAN 2
SCALE: 1/8" = 1'-0"



MAIN FLOOR PLAN 1
SCALE: 1/8" = 1'-0"

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

PROJECT NUMBER: 1719
DATE: 23 SEPTEMBER 2019

△	REVISION	DATE

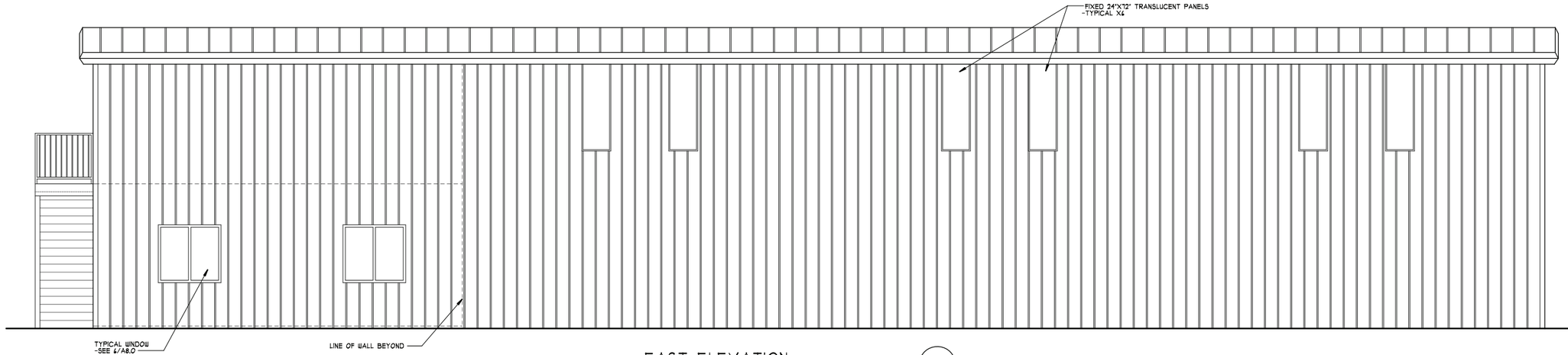
DSGN: BTL
DRWN: BTL
CHCK: HRL

BAR BELOW IS 1" LONG FOR SCALES AND ADJUSTMENTS. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

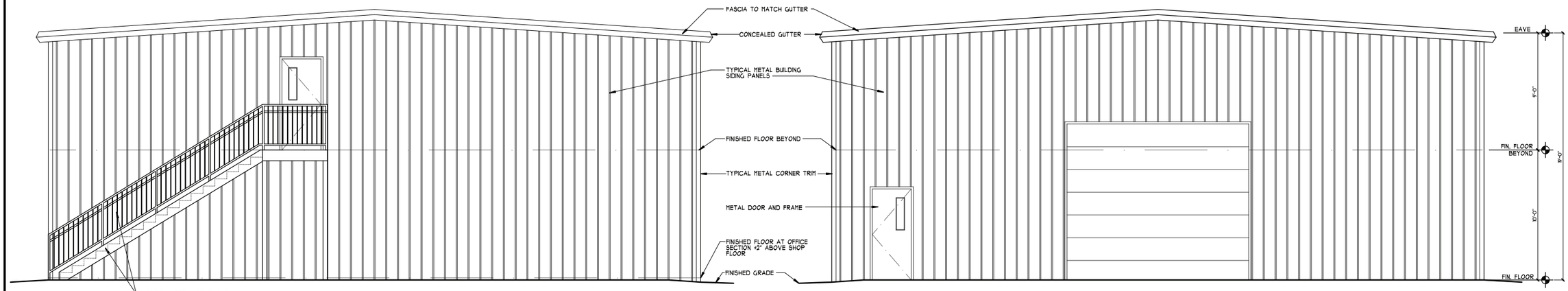
ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

FLOOR PLANS

SHEET NO.
A-2.0
2 OF 5

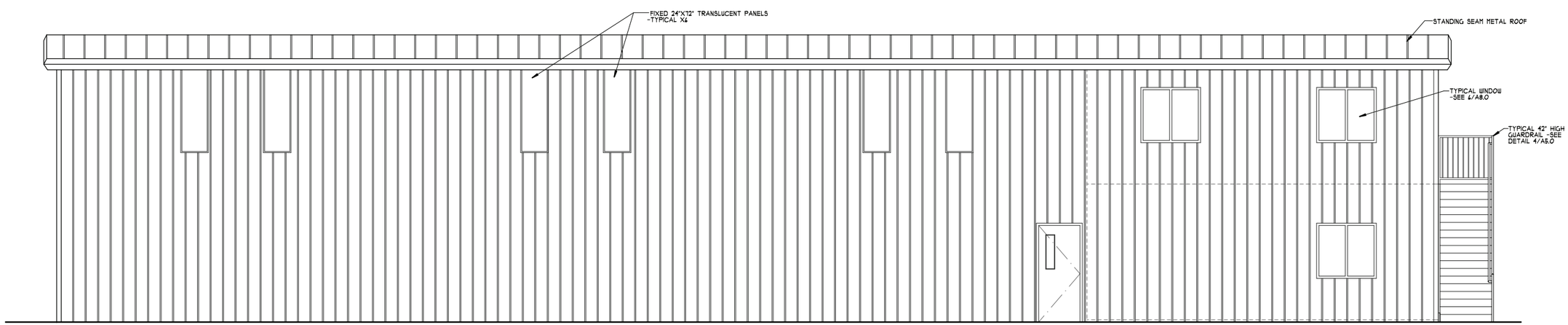


EAST ELEVATION
SCALE: 1/4" = 1'-0"
4



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

NORTH ELEVATION
SCALE: 1/4" = 1'-0"
2



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

Homer Lewis & Associates, Inc.
230 River Cove Maddox
Social Circle, Ga. 30025
(678) 212-0071

STATE OF GEORGIA
HOMER R. LEWIS
09/23/2019
REGISTERED NO. 5068
REGISTERED ARCHITECT

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

PROJECT NUMBER: 1719
DATE: 23 SEPTEMBER 2019

△	REVISION	DATE

DSGN: BTL
DRWN:
CHCK: HRL

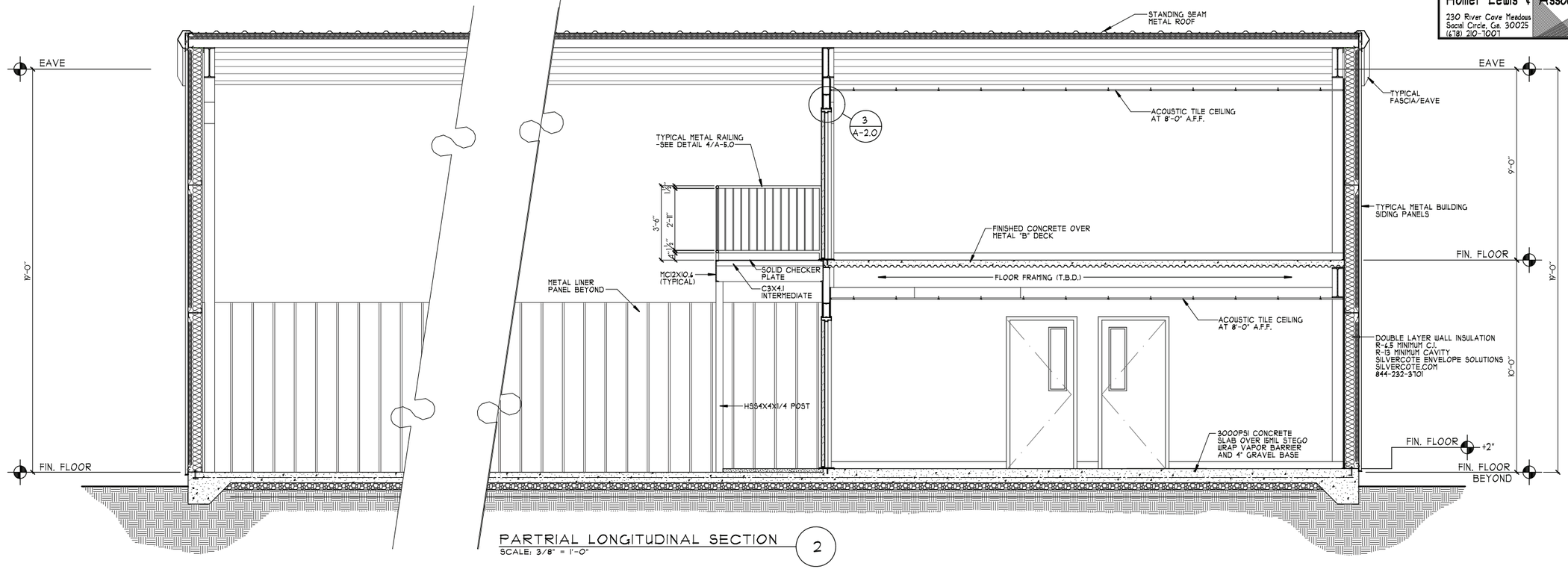
BAR BELOW IS 1" LONG FOR SCALES SHOWN ON THIS SHEET. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

EXTERIOR ELEVATIONS

SHEET NO.
A-4.0
9 OF 9

Homer Lewis & Associates, Inc.
230 River Cove Meadows
Social Circle, Ga. 30025
(678) 210-7007



PARTRIAL LONGITUDINAL SECTION
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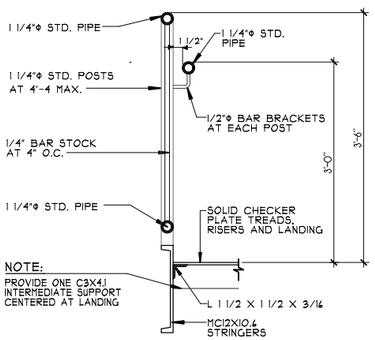

RAILING DETAIL
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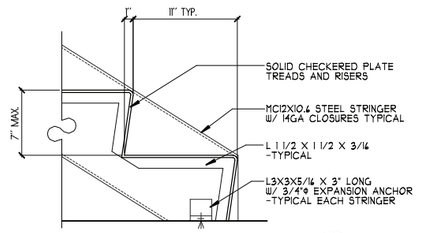

STAIR DETAIL
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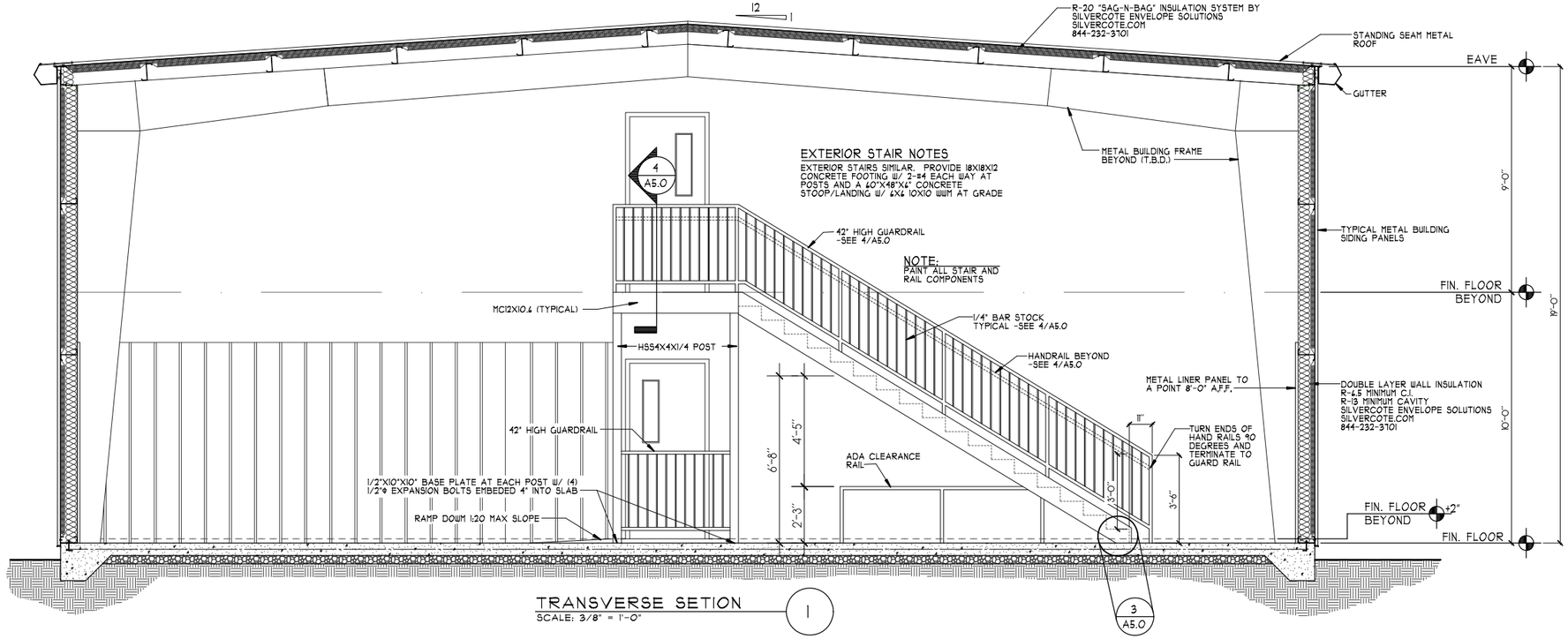


TRANSVERSE SETION
SCALE: 3/8" = 1'-0" 1

STATE OF GEORGIA
HOMER LEWIS
09/23/2019
CERTIFICATE NO. 5048
REGISTERED ARCHITECT

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

DATE: 23 SEPTEMBER 2019
PROJECT NUMBER: 1719

△	REVISION	DATE

DSGN:
DRWN: BTL
CHCK: HRL

BAR BELOW IS 1" LONG FOR SCALES ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

BUILDING SECTIONS

SHEET NO.
A-5.0
4 OF 8

MATERIAL / FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR			BASE		WALLS			WINDOW FRAMES		CEILING		REMARKS
		MATERIAL/FINISH	FIELD COLOR ITEM NO.	ACCENT COLOR ITEM NO.	MATERIAL/FINISH	Σ ITEM NO.	MATERIAL/FINISH	Σ ITEM NO.	ACCENT NO.	MATERIAL/FINISH	Σ ITEM NO.	MATERIAL/FINISH	Σ ITEM NO.	
100	SHOP	CONCRETE/SEAL	-	-	NONE	NONE	METAL LINER PANEL	WC-1	-	HOLLOW METAL/PAINT	PT-3	EXPOSED STRUCTURE/PAINT	PT-1	R1, R2
101	OFFICE-1	VCT/CLEAN	VCT-1	-	VINYL/CLEAN	B-1	GYP.BD./PAINT	PT-2	-	HOLLOW METAL/PAINT	PT-3	ACOUSTICT TILE/FACTORY	ACT-1	-
102	OFFICE-2	VCT/CLEAN	VCT-1	-	VINYL/CLEAN	B-1	GYP.BD./PAINT	PT-2	-	HOLLOW METAL/PAINT	PT-3	ACOUSTICT TILE/FACTORY	ACT-1	-
103	OPEN OFFICE	VCT/CLEAN	VCT-1	-	VINYL/CLEAN	B-1	GYP.BD./PAINT	PT-2	-	HOLLOW METAL/PAINT	PT-3	ACOUSTICT TILE/FACTORY	ACT-1	-
104	OFFICE-3	VCT/CLEAN	VCT-1	-	VINYL/CLEAN	B-1	GYP.BD./PAINT	PT-2	-	HOLLOW METAL/PAINT	PT-3	ACOUSTICT TILE/FACTORY	ACT-1	R2
105	TOILET	VCT/CLEAN	VCT-1	-	VINYL/CLEAN	B-1	GYP.BD./PAINT	PT-2	-	HOLLOW METAL/PAINT	PT-3	ACOUSTICT TILE/FACTORY	ACT-1	-
200	RECORDS	CARPET/CLEAN	CP-1	-	VINYL/CLEAN	B-1	GYP.BD./PAINT	PT-2	-	HOLLOW METAL/PAINT	PT-3	ACOUSTICT TILE/FACTORY	ACT-1	R2
201	OFFICE-4	CARPET/CLEAN	CP-1	-	VINYL/CLEAN	B-1	GYP.BD./PAINT	PT-2	-	HOLLOW METAL/PAINT	PT-3	ACOUSTICT TILE/FACTORY	ACT-1	R2
202	OFFICE-5	CARPET/CLEAN	CP-1	-	VINYL/CLEAN	B-1	GYP.BD./PAINT	PT-2	-	HOLLOW METAL/PAINT	PT-3	ACOUSTICT TILE/FACTORY	ACT-1	-

DOORS MATERIAL / FINISH SCHEDULE

DOOR LOCATION	FRAMES			DOORS			TRIM		REMARKS
	MATERIAL & FINISH	Σ ITEM NO.	SIDE/FACE	MATERIAL & FINISH	Σ ITEM NO.	SIDE/FACE	MATERIAL & FINISH	Σ ITEM NO.	
TYPICAL DOORS/FRAMES (U.N.O. BELOW)	METAL/PAINT	PT-3	ALL (U.N.O.)	WOOD/PAINT	PT-3	ALL (U.N.O.)	NONE	-	-
EXTERIOR (EXIT) DOOR ROOMS 100 AND 200	METAL/PAINT	PT-4	EXTERIOR	INSULATED METAL/PAINT	PT-4	EXTERIOR	NONE	-	-
		PT-3	INTERIOR		PT-3	INTERIOR	NONE	-	
OVERHEAD GARAGE DOOR ROOM 100	METAL/PAINT	PT-4	EXTERIOR	INSULATED METAL/FACTORY	-	-	NONE	-	-
		PT-3	INTERIOR		-	-	NONE	-	

REMARKS

R1 PROVIDE LINER PANEL ON ALL 4 WALLS
R2 PROVIDE GYP.BD. WALL FINISH AT COMMON WALL TO OFFICE AREA INSIDE SHOP AND PAINT ABOVE LINER PANEL
R3 -
R4 -
R5 -

ITEM SCHEDULE

VINYL COMPOSITE TILE (VCT)
VCT-1 MANUFACTURER: JOHNSONITE
STYLE: AZROCK
NUMBER: T.B.D.
COLOR: BY OWNER
SIZE: 12X12

CARPET
CP-1 MANUFACTURER: FORBO FLOORING SYSTEMS
STYLE: FLOTEX
NUMBER: T.B.D.
COLOR: BY OWNER

BASE
B-1 MANUFACTURER: ROPPE
MATERIAL: RUBBER & VINYL
STYLE: 700 SERIES
COLOR: BY OWNER

ACOUSTIC CEILING TILE
ACT-1 ARMSTRONG #2824 'CALLA' SQUARE TEGULAR 24"X24"X5/8"X1/4" CEILING TILE W/ PRELUDE XL 15/16" SUSPENSION SYSTEM IN BLIZZARD WHITE

PLASTIC LAMINATE
PL-1 MANUFACTURER: WILSONART
STYLE: SOLID SURFACE
NUMBER: 9146S
COLOR: SOOTHING GREY

PAINT/STAIN
PT-1 MANUFACTURER: DURON
NUMBER/STYLE: -
COLOR: CEILING WHITE
TYPE: FLAT LATEX (OIL)

PT-2 MANUFACTURER: DURON
NUMBER/STYLE: T.B.D.
COLOR: BY OWNER
SATIN LATEX

PT-3 MANUFACTURER: DURON
NUMBER/STYLE: T.B.D.
COLOR: BY OWNER
TYPE: SEMI-GLOSS LATEX (OIL)

PT-4 MANUFACTURER: DURON
NUMBER/STYLE: T.B.D.
COLOR: MATCH BUILDING PANELS
TYPE: SEMI-GLOSS LATEX (OIL)

PAINT NOTES:
-ALL PAINTED SURFACES TO RECEIVE PRIMER AND TWO COATS OF PAINT.

-APPLY PAINT MATERIALS NO THINNER THAN MANUFACTURER'S RECOMMENDED SPREADING RATE. PROVIDE THE TOTAL DRY FILM THICKNESS OF THE ENTIRE SYSTEM AS RECOMMENDED BY THE MANUFACTURER.

-THE NUMBER OF COATS AND THE FILM THICKNESS REQUIRED ARE THE SAME REGARDLESS OF APPLICATION METHOD.

Homer Lewis & Associates, Inc.
230 River Cove Meadows
Social Circle, Ga. 30025
(678) 210-7001

FINISH NOTES:

CLASS A INTERIOR WALL & CEILING FINISH - FLAME SPREAD 0-25, SMOKE DEVELOPED 0-450

CLASS B INTERIOR WALL & CEILING FINISH - FLAME SPREAD 26-75, SMOKE DEVELOPED 0-450

CLASS C INTERIOR WALL & CEILING FINISH - FLAME SPREAD 76-200, SMOKE DEVELOPED 0-450

CLASS I INTERIOR FLOOR FINISH - MINIMUM 0.45 WATTS PER SQ. CM

CLASS II INTERIOR FLOOR FINISH - MINIMUM 0.22 WATTS PER SQ. CM

SURFACES ARE TO BE FREE OF IMPERFECTIONS & MARKINGS SUBJECT TO BLEED-THROUGH.

G.C. TO DELIVER VCT FLOORS TO OWNER CLEAN AND FREE OF ANY SCRATCHES OR OTHER VISIBLE BLEMISHES.

VERIFY FINISH WITH OWNERS REPRESENTATIVE PRIOR TO MATERIAL APPLICATION.

PAINT DIFFUSERS & RETURN AIR GRILLES AT CEILING TO MATCH ADJACENT CEILING WHERE APPLICABLE, UNLESS OTHERWISE NOTED. VERIFY IN FIELD.

INSTALL FLOORING PURSUANT TO MANUFACTURER'S INSTRUCTIONS, UNLESS OTHERWISE NOTED. MOST STRINGENT REQUIREMENTS PREVAIL.

CARPET OF SAME SPECIFICATION SHALL COME FROM SAME DYE LOT & MUST MEET INDUSTRY STANDARDS FOR SIDE TO SIDE MATCH. THE CONTRACTOR SHALL USE LOW V.O.C. ADHESIVE AS RECOMMENDED BY MANUFACTURER.

PROVIDE RUBBER TRANSITION STRIP (JOHNSONITE OR APPROVED EQUAL) AT ALL FLOORING MATERIAL TRANSITIONS UNLESS NOTED OTHERWISE (U.N.O.)

RUN FLOORING CONTINUOUS UNDER ALL MILLWORK.

ALL FINISHES SHALL HAVE A COMPLETE INSTALLATION FOLLOWING MANUFACTURERS RECOMMENDED INSTALLATION INSTRUCTIONS AND INCLUDE ALL REQUIRED ACCESSORIES AND PREPARATIONS.

DOOR SCHEDULE

LOCATION		TYPE	SIZE	PAIR	SINGLE	GLASS	DETAILS			FIRE RATING	ANSI FUNCTION #	REMARKS
ROOM #	ROOM NAME						HEAD	JAMB	SILL			
100	SHOP (EXIT DOOR)	A/D	S1		X	G1	3/A8.0	4/A8.0	5/A8.0	-	F82	H1, H2, H3, T1
100	SHOP (EXIT DOOR)	A/D	S1		X	G1	3/A8.0	4/A8.0	5/A8.0	-	F82	H1, H2, H3, T1
100	SHOP (OVERHEAD DOOR)	E	S2		X	-	-	-	-	-	-	H2, H4
101	OFFICE-1	A/C	S1		X	G2	3/A2.0	4/A2.0	-	-	F82	H5
102	OFFICE-2	A/C	S1		X	G2	3/A2.0	4/A2.0	-	-	F82	H5
103	OPEN OFFICE	A/C	S1		X	G2	3/A2.0	4/A2.0	-	-	F82	H1, H2
104	OFFICE-3	A/C	S1		X	G2	3/A2.0	4/A2.0	-	-	F82	H5
105	TOILET	A/B	S1		X	-	3/A2.0	4/A2.0	-	-	F74	-
-	MECHANICAL	A/B	S1		X	-	3/A2.0	4/A2.0	-	-	F84	-
200	RECORDS	A/C	S1		X	G2	3/A2.0	4/A2.0	-	-	F82	H1, H2
200	RECORDS (EXIT)	A/D	S1		X	G1	3/A8.0	4/A8.0	5/A8.0 SIM.	-	F82	H1, H2, H3, T1
200	RECORDS CLOSET	A/B	S1		X	-	3/A8.0	4/A8.0	-	-	F75	H5
201	OFFICE-4	A/C	S1		X	G2	3/A2.0	4/A2.0	-	-	F82	H5
202	OFFICE-5	A/C	S1		X	G2	3/A2.0	4/A2.0	-	-	F82	H5
-	-	-	-	-	-	-	-	-	-	-	-	-

SIZE
S1 3'-0" X 7'-0" X 1 3/4"
S2 PER DOOR TYPES

RATING
FR1 20 MINUTE
FR2 45 MINUTE
FR3 1 HOUR
FR4 1 1/2 HOUR
FR5 3 HOUR

THRESHOLD
T1 ADA COMPLIANT ALUMINUM

GLASS
G1 LOW E INSULATED TEMPERED
G2 1/4" CLEAR TEMPERED
G3 1/4" FIRE RATED GLASS

HARDWARE
H1 LCN4040 CLOSER OR EQUAL
H2 WEATHERSTRIPPING
H3 KEYED DEADBOLT
H4 POWER OPENER
H5 WALL STOP
H6 FLOOR STOP
H7 8" TALL KICK PLATE
H8 FLOOR STOP W/ HOOK
H9 GRADE 1, ADA COMPLIANT RIM PANIC DEVICE

REMARKS
DOOR HARDWARE (LOCKSETS, LATCHES, ETC..) TO BE BY BEST ACCESS AND PROVIDED BY OWNER

GENERAL NOTES:

SILENCERS SHALL BE PROVIDED AT ALL HOLLOW METAL FRAMES.

REFER TO DOOR CLEARANCE DETAIL PRIOR TO INSTALLATION OF ANY DOOR FRAME, VERIFY ALL DIMENSIONS ON JOB SITE.

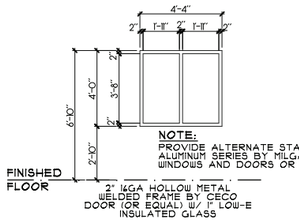
DUE TO MULTIPLE USE, SOME OF THE DETAILS REFERRED TO ON THE DOOR SCHEDULE ARE REVERSED AND/OR TURNED FROM THE DIRECTION SHOWN ON THE FLOOR PLAN. THE GENERAL INTENT OF THE DETAILS SHALL IN ALL CASES BE FOLLOWED AND THE ARCHITECT CONSULTED SHOULD QUESTIONS ARISE. CUT DOORS IN ALL CARPETED AREAS. CUT DOORS IN ALL CARPETED AREAS (UNDERCUT) 1/2" ABOVE TOP OF CARPET.

ALL DOOR HARDWARE TO BE US15 (619) CLEAR SATIN NICKEL AND SHALL COMPLY WITH ANSI 117.1 – 1986 SECTION 4.13 AND ADAAG – GEORGIA 120-3-20-.24 SECTIONS 8 THRU 12.

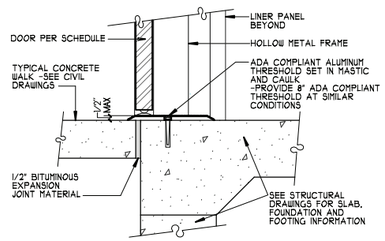
CONTRACTOR SHALL COORDINATE DOOR FRAME DIMENSIONS WITH ALL WALL TYPES.

CARD READERS AND ELECTRONIC LOCKING DEVICES (IF PROVIDED) TO BE INTERCONNECTED TO FIRE ALARM.

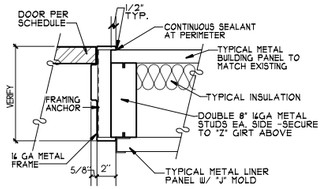
UNLESS NOTED OTHERWISE, ALL DOORS TO HAVE 1 1/2 PAIR BALL BEARING HINGES.



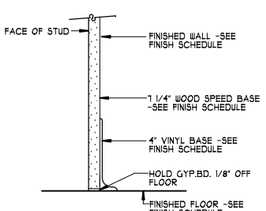
TYPICAL WINDOW UNIT 6
SCALE: 1/4"=1'-0"



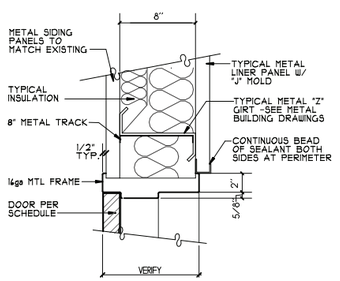
THRESHOLD DETAIL 5
SCALE: 1 1/2"= 1'-0"



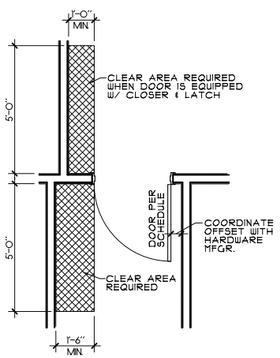
H.M. JAMB DETAIL 4
SCALE: 1 1/2"= 1'-0"



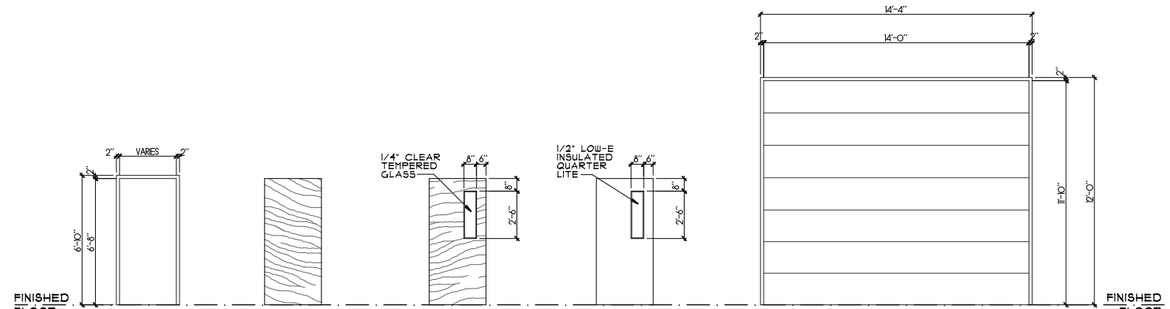
BASE DETIAL 7
SCALE: 3"=1'-0"



H.M. HEADER DETAIL 3
SCALE: 1 1/2"= 1'-0"



DOOR CLEARANCE DIAGRAM- TYP. 2
SCALE: N.T.S.



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

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

STATE OF GEORGIA
CHARLES H. LEWIS
REGISTERED ARCHITECT
CERTIFICATE NO. 5068
09/23/2019

DATE: 23 SEPTEMBER 2019
PROJECT NUMBER: 1719

△	REVISION	DATE

DSGN:
DRWN: BTL
CHCK: HRL

BAR BELOW IS 1" LONG FOR SCALES WHEN SHEET IS PLOTTED LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

SCHEDULES AND DETAILS

SHEET NO.
A-8.0
1 OF 5

MECHANICAL SPECIFICATIONS

1) Provide all heating, ventilation and air conditioning items indicated on the drawings, described in this specification or required for a complete and proper installation.

2) Comply with all pertinent codes, ordinances and regulations. Refer to website for Dept. of community Affairs at http://www.dca.state.ga.us/development/constructioncodes/programs/codes2.asp for current Codes Editions.

3) The contractor shall not attempt to precisely scale dimensions from these drawings to obtain construction dimensions and clearances. The contractor shall verify all actual dimensions and clearances. Although these plans are diagrammatic in nature, they shall be followed as closely as site conditions, new construction, and work by other trades shall permit. Deviations from these drawings, which are required to conform to the available space or the actual building construction, shall be made at no additional cost to the owner.

4) Furnish without extra charge, any additional material and labor required to comply with the above codes and standards, even though the work may not be described in the contract documents. Where the requirements of the contract documents exceed the requirements of the above codes and standards, the contract documents shall take precedence.

5) All equipment and material shall be new and of first quality. Equipment and material shall be the same or equal to the basis of design listed on these drawings and shall be UL listed.

6) Cooperate and coordinate with other trades in order that all systems in the work may be installed in the best arrangement.

7) Examine the areas and conditions under which work of this section will be installed. Correct conditions detrimental to the proper and timely completion of the work. Notify Architect of any discrepancies. Do not proceed until unsatisfactory conditions have been corrected.

8) Avoid interference with structure, and with work of other trades. Install all equipment per manufacturer's instructions. Install accessible parts, including equipment, coils, valves, dampers, controls, and filters with adequate clearance for inspection, adjustments, repair and replacement.

9) All other materials not specifically described but required for a complete and proper installation shall be as selected by the contractor subject to acceptance by the Engineer.

10) All ductwork shall be fabricated from galvanized sheet metal duct and conform to SMACNA "HVAC Duct Construction Standards–Metal and Flexible. Seal all joints in ductwork with mastic sealant.

11) Flexible duct: Flexmaster; Atco UPC#30(R–4.2); Atco UPC#31 (R–8) or Thermaflex, Type 3, insulated. 5'–0" Maximum length unless noted otherwise. Class 1 rating with R–value of 4.2 when located inside building insulation envelope and R–8 when located outside building insulation envelope. Install with no more than 1.35 degrees maximum of total bends per run. Maximum individual bend shall not exceed 45 degrees each. Support at five feet on centers with hangers having at least 2–inches of width at duct contact points.

12) Duct Liner: Owens Corning Aeroflex Plus, or equivalent. Incombustible glass fiber complying with ASTM C 1071; flexible blanket; impregnated surface and edges coated with acrylic polymer shown to be fungus and bacteria resistant by testing to ASTM G 21. Apparent Thermal Conductivity: Maximum of 0.31 at 75 degrees F. Service Temperature: 250 degrees F. Density: 1.5 pounds/cubic foot. Install using adhesive (50% coverage) and galvanized steel fasteners with welded press–on head Thickness: 1–inch.

13) Condensate drain piping shall be ASTM D2665 PVC with solvent welded fittings. Drain piping shall be no smaller than the drain connection size on equipment. Slope at 1/8 inch per foot continuously toward drains. All indoor condensate drain piping shall be insulated with preformed flexible plastic cellular foam. All outdoor condensate drain piping shall be primed and painted with a coating system recommended by the piping manufacturer for protection against deterioration from weather and UV–light exposure. All piping shall be adequately supported to maintain proper slope and avoid sagging.

14) Refrigerant piping shall conform to manufacturer's recommendations and installation instructions. Refrigerant piping shall be ASTM B280 Type ACR or ASTM B88 Type L drawn copper tubing with wrought copper fittings. Insulate suction line with ½" thick flexible foamed plastic cellular foam (Armaflex or equivalent). All piping shall be adequately supported. Insulation installed outdoors shall be painted with two coats of Armacell WB coating or equivalent.

15) Thermostats: Provide 24 volt, programmable 24 hour, 7 day thermostat to control heating stages in sequence with delay between stages and supply fan to maintain temperature setting. For Heat Pumps include system selection switch heat–off–cool and fan control switch (auto–on), emergency heat switch (auxiliary/emergency heat indicator lights).

16) Provide fire and smoke rated flexible connections between fans and ducts. Material shall comply with NFPA 90A requirements for material in supply air stream.

17) Install all equipment in accordance with manufacturer's instructions and recommendations including clearances recommended for proper operation or service. All filters and serviceable parts shall be readily available.

18) Indoor duct insulation: Foil–faced fiberglass, Owens Corning type 75 or equal, 2" thick, unless the insulated duct is outside building insulation envelope (attic, crawlspace or unconditioned space) in which case the duct insulation thickness shall be 3" thick. Duct shall have a flame spread rating of not more than 25 and smoke developed rating of not more than 50. Glass–Fiber Insulation: All service duct wrap with foil scrim and having backing and a k–value of 0.30 at 75° F mean temperature and an average maximum density of 0.75 lb/cu. ft.

19) All supply, return and outside air ducts shall be insulated. Install acoustical duct liner on the interior surface of the first five (5) linear feet of supply duct downstream and the last five (5) linear feet of return duct upstream of all air handlers and rooftop units. Insulate the concealed tops of all ceiling mounted supply air diffusers with foil–faced fiberglass, 1.5#/cubic foot density, 2" thick. Seal edges to ceiling grid with foil faced tape to provide vapor tight seal.

20) All low pressure duct branches shall contain manual balancing dampers. Manual balancing dampers shall also be installed in the continuation of the main, if the main duct is smaller or the same size as the branch duct, or if the continuation of the main serves only one device.

21) Make all duct elbows right angle type with single –thickness turning vanes or construct with centerline radius 1–1/2 times the duct width.

22) Duct sizes shown on plans are clear, interior dimensions. Duct sizes shown has been enlarge to allow for liner at locations of interior liner.

23) Do not cut into or reduce the size of any structural member without the permission of the Architect.

24) Provide weather–proof flashing at all duct and pipe penetrations through the building walls and roof. As a minimum, flashings shall be designed and installed in accordance with SMACNA standards. Flashings shall be guaranteed weatherproof for the duration of the guarantee.

25) Support all HVAC units, ductwork, piping and other appurtenances from structure, provide vibration isolation at all fans which are not internally isolated. Provide hanger rod with built in rubber–in–shear isolator. Between drain pan and unit provide 4 each rubber–in–shear isolator. Do not attach vibration isolator to drain pan. Do not screw or drive fasteners into non–structural components such as roof decks or non–load bearing walls.

26) Thoroughly clean all components and remove all dirt, scale, oil, and other foreign substances. Provide clean air filters for all equipment.

27) Perform all tests necessary to demonstrate the integrity of the complete installation to the approval of the Engineer and all other authorities having jurisdiction. Make all adjustments necessary and balance the completed system in accordance with the data shown. Balance the systems in accordance with NEBB or AABC standards. Acceptable tolerances shall be minus ten percent to plus five percent of all measurements. Balancing shall be done by an independent licensed (by NEBB or AABC) TAB contractor. Make the following tests and submit reports to the Architect:
   a) Airflow rate at each supply, return and exhaust outlet or inlet.
   b) Total airflow rate and total static pressure for each supply and exhaust fan. Test exhaust fans with room doors closed.
   c) Motor speed, for multiple speed fans (e.g. high, medium, low).
   d) For direct drive fans, provide speed settings and actual rpm, including ECM motor driven fans
   e) Provide fan and motor rpm for belt driven fans. Provide sheave sizes.
   f) Outside airflow rate to each HVAC unit and supply fan.
   g) Motor current (and compare with nameplate data) at all motors.
   h) Entering and leaving air dry–bulb and wet–bulb conditions at all cooling coils.
   i) Heat output capacity for unit heaters, heating devices and coils (kW or MBH).
   j) Manufacturer, model and serial number for each piece of HVAC equipment scheduled on drawings.
   k) Calibrate thermostats to be within one degree of actual temperature at thermostat.
   l) Verify that all HVAC devices operate as scheduled or indicated (i.e. ON–OFF, 2–stage, variable output (SCR heaters), etc.

28) The entire system shall be warranted for a period of one (1) year beginning with Owner's acceptance of the work. Compressors shall include a minimum of five (5) year parts only warranty from the manufacturer. All labor and materials necessary to repair or replace the system or portions thereof, during that time shall be warranted for a period of one (1) year from the repair of replacement.SUBMITTALS AND SUBMITTAL PROCEDURES:
   a. Contractor shall review the submittal data and check for the purpose of compliance with safety requirements, verification of dimensions, contract documents and methods and means prior to submitting to design professional. Contractor shall indicate approval by indicating such on the submittal.
   b. Transmit each submittal electronically in PDF format.
   c. Sequentially number submittal files and transmittal form. Revise submittals with original number and a sequential alphabetic suffix. File names shall describe item included in file.
   d. Identify Project, the Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy. Each file shall include an index of items included in file.
   e. Apply the Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
   f. Submittal data for all items in project shall be submitted at one time. Submittal shall be divided into groups with file sizes not exceeding 6 MB. If there is unavailable data such as control submittal, etc., these may be submitted later if not doing so would delay project progress. Data shall include capacities, complete installation instructions, dimensional data and electrical data, BHP, motor HP, operating weights and load distribution at mounting points.
   g. Deliver submittals electronically to the Design Professional.
   h. Schedule submittals to expedite the Project, and coordinate submission of related items.
   i. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
   j. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
   k. Provide space for the Contractor and the Architect/ review stamps.
   l. When revised for resubmission, identify all changes made since previous submission.
   m. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
   n. Submittals not requested will not be recognized or processed.
   o. Provide files containing only related items (such as piping, equipment, air distribution, etc.)

30) Instruct Owner's representative in the operation of the systems, using the operation and maintenance manual as a teaching aid.

31) Provide an operation and maintenance manual. As a minimum, the manual shall contain:
   a. A complete list of all equipment and appurtenances with equipment designations (per Drawings), manufacturers, and catalog numbers.
   b. Copies of manufacturers' brochures and instructions for operation and maintenance of all mechanical equipment, including replacement parts lists.
   c. Typed system operation and maintenance instructions, including inspection, lubrication, and service instructions and schedules.
   d. List of names, addresses and phone numbers of distributors of all equipment and appurtenances.
   e. Manufacturers' warranties.

32) Verticle Air Handler unit(AH–1,2): Indoor fan–coil unit shall be direct–expansion verticle heat pump air handler with electric strip heat mounted on plenum with auxiliary drip pan and condensate drain. Provide float switch in drip pan to shut down unit if pan begins to fill. Unit shall be complete with cooling coil, fan, fan motor, piping connectors, electrical controls, microprocessor control system, and integral temperature sensing. Cabinet shall be fully insulated for improved thermal and acoustic performance. Condensate pan shall have internal trap and auxiliary drip pan under coil header. Provide condensate trap recommended by manufacturer. Air filters shall be 1 inch thick glass fiber, disposable type arranged for easy replacement. Provide number of stages as scheduled. Provide condensate overflow switch (Rectorseal Safe–T–Switch Model SS1 or equivalent) wired to shut unit down in case of condensate overflow.

33) Air Source Heat Pumps (HP–1, 2): outdoor–mounted, air–cooled split system outdoor section suitable for rooftop installation, consisting of a hermetic compressor, an air–cooled coil, propeller–type blow–thru outdoor fans, accumulator, full refrigerant charge (R–410A), and control box. Unit shall function as the outdoor component of an air–to air cooling system and used in a refrigeration circuit matched to the indoor unit. Unit construction shall comply with ANSI/ASHRAE 15, latest revision, the NEC, and UL standards. Provide rail support system compatible with roofing system. Refer to Schedule on Drawings for additional specifications.

34) Wall fans shall be direct– or belt–driven propeller fans, as scheduled, consisting of wall housing, wheel, fan shaft, bearings, motor and disconnect switch, drive assembly, and accessories including but not limited to ½" mesh bird screen, flanged wall discharge shutter, and OSHA guard. Housing shall be heavy–gage, galvanized steel or painted aluminum, with a venturi inlet cone.

35) Grilles, Registers and Diffusers: Grilles, registers, and diffusers as indicated on the drawings have been selected from the catalog of the manufacturer noted as the basis of design. Sizes, types, and performance of the devices to be provided must be coordinated to insure conformity with design basis. Sidewall supply grilles and registers shall have vertical front blades; sidewall return grilles shall have horizontal blades. Grilles and registers with borders shall have felt or rubber gaskets cemented to the back face and holding screws not over 18 inches on centers around the perimeter. Holding screws shall be counter–sunk to fit flush with face of grille or register. Grilles passing thru partitions shall be as described for wall return grilles, one for each side of partition. Register dampers shall be of the gang–operated, opposed blade type, operated through the face of the register. Operating mechanism shall not project through the register face. Mounting frame shall be coordinated with architectural reflected ceiling plans. Construction shall be of steel or aluminum as scheduled, with frame type to match ceiling construction. Sidewall supply grilles and registers shall be double–deflection type, with vertical front vanes. Construction shall be of steel, with 3/4 inch blade spacing. Return air grilles, return air registers, exhaust grilles, exhaust registers and transfer air grilles located in ceilings shall be constructed of aluminum with "egg–crate" design, with 1/2 inch x 1/2 inch x 1/2 inch grids. Frame style shall be compatible with ceiling construction. Install wall grilles and registers with horizontal edges parallel to ceiling. Concentric diffuser assemblies at roof top units shall have paint–ready exterior finish and 1–inch lined supply and return ducts that transition to diffuser size within 24 inches vertically of the bottom of roof top unit curb.

36) Basic motor requirements: basic requirements apply to mechanical equipment motors, unless otherwise indicated. Motors 1/2 hp and larger: Polyphase, unless otherwise scheduled. Motors smaller than 1/2 hp: single phase. Frequency rating: 60 Hz. Service factor: according to NEMA MG 1, general purpose continuous duty, design type "B." Enclosure: open drip–proof, unless otherwise indicated. Efficiency: motors shall have a higher efficiency rating than industry standard average motor as delineated in IEEE Standard 112, test method 13. Thermal protection: where indicated or required, internal protection automatically opens power supply circuit to motor when winding temperature exceeds a safe value calibrated to temperature rating of motor insulation. Thermal protection device automatically resets when motor temperature returns to normal range, unless otherwise indicated.

37) Hangers and supports: Building attachments: concrete inserts or structural–steel fasteners appropriate for building materials, and beam clamps. Hanger materials: galvanized, sheet steel or round, threaded steel rod. Hangers installed in corrosive atmospheres: electrogalvanized, all–thread rod or galvanized rods with threads painted after installation. Straps and rod sizes: comply with SMACNA's "HVAC Duct Construction Standards––Metal and Flexible" for sheet steel width and thickness and for steel rod diameters. Duct attachments: sheet metal screws, blind rivets, or self–tapping metal screws; compatible with duct materials. Trapeze and riser supports galvanized steel shapes and plates: steel shapes complying with ASTM A 36/A 36M.

38) Sealant materials: joint and seam sealants, general: the term "sealant" is not limited to materials of adhesive or mastic nature but includes tapes and combinations of open–weave fabric strips and mastics. Joint and seam tape: 2 inches wide; glass–fiber fabric reinforced. Joint and seam sealant: one–part, nonsag, solvent–release–curing, polymerized butyl sealant, formulated with a minimum of 75 percent solids. Flanged joint mastics: one–part, acid–curing, silicone, elastomeric joint sealants, complying with ASTM C 920, type S, grade NS, class 25, use O.

39) Unit Heaters–Electric: Cabinet shall be steel with baked–enamel finish with manufacturer's custom paint for harsh moist environment, in color selected by Architect. Provide vertical unit, with minimum 0.0677–inch–thick, galvanized, sheet steel, removable panels with channel–formed edges secured with tamperproof cam fasteners. Electric–resistance heating coil shall be nickel–chromium heating wire, free from expansion noise and hum, mounted in ceramic inserts in a galvanized–steel housing; with fuses in terminal box for overcurrent protection and limit controls for high–temperature protection. Terminate elements in stainless–steel machine–staked terminals secured with stainless–steel hardware. Propeller fan, directly connected to motor, galvanized–steel.

40) All HVAC equipment such as AH, CU, EF, AC, HP, and RTU shall have visible nameplates with their associated marks on them.

41) Louvers:6" deep, 12 gauge (0.081) etched and 30 minute clear anodized extruded aluminum, drainable blades and frame; back mounted 1/2" mesh 19 gauge screen; flange frame. Louver shall be rated for no water carry–through at 900 face velocity, 0.15" maximum pressure drop for 4–foot square sample tested according to AMCA Standard 500, 1973. American Warming LE–33 (alum.); Ruskin [ELF–6375D;Louvers & Dampers IEL–6; Industrial Louvers 653 alum.; Vent Products #4650; Shipman LE–33 (alum.); Arrow United EA615–D (alum.); Greenheck ESD–603. Provide adapter to match corrugations in metal panel.

42) Combination Starters with Circuit Breakers: Three Phase Single: Provide NEMA type combination starters (IEC type are not acceptable) with circuit breakers for all 3–phase motors in HVAC equipment. Circuit breaker shall be adjustable magnetic trip type with 10,000 amp minimum symmetrical amps interrupting capacity. Breaker operating mechanism shall be lock–out type. Contactor shall be magnetic across–the–line type. Provide ON–OFF pushbutton switches in cover. Enclosure shall be NEMA 3R. Manufacturers: Square D class 8539; Cutler–Hammer type AN40 or A41;Furnas Class 18; Allen Bradley 513 or 522; Joslyn–Clark Bulletin 6020; Siemens SCB. Provide auxiliary contacts (2 minimum).

43) Ceiling Ventilator shall have corrosion resistant galvanized steel housing with four–point mounting capability. It shall be ducted to a cap on wall using 6" round ductwork. Blower assembly shall be removable, have a centrifugal–type blower wheel and a permanently lubricated motor designed for continuous operation. Non–metallic damper/duct connector shall be included. Air delivery shall be no less than scheduled and sound level no greater than 0.3 sones. All air and sound ratings shall be certified by HVI. Ceiling ventilator shall be Energy Star® qualified and have an energy efficient permanent split capacitor motor.
Acceptable Manufacturers are:

Air Handlers & Heat Pumps, Packaged Units: Carrier, Trane, York, Lennox.
Grilles, Registers & Diffusers: Titus, Nailor, Price, Tuttle & Bailey (Color selection submitted to Architect)
Fans: Twin–City, Cook, Greenheck, PennBarry, Acme, American CoolAir
Electric Heaters: Markel, O–Mark, Raywall
Louvers/Dampers/Fire Dampers: United Enertech, Greenheck, Ruskin, Arrow United, Lloyd Industries (Color selection submitted to Architect)
Controls–provided with unit: Provide thermostats by same manufacturer as equipment

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ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

MECHANICAL SPECIFICATIONS

SHEET NO.
M-0.1

EDEC

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
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TEL. (770) 493-8685

MECHANICAL SYMBOLS & ABBREVIATIONS LEGEND

	NEW PIPE, DUCTWORK OR EQUIPMENT
24x12 24x12	DUCT SIZE: FIRST DIMENSION IS SIDE DRAWN
	FLEXIBLE ROUND DUCTWORK
F, SCD, SD	FIRE DAMPER, SMOKE DAMPER, SMOKE DETECTOR
	CEILING SUPPLY DIFFUSER
	CEILING RETURN OR EXHAUST AIR
	S.A DUCT OUT OF TU BOX WITH DUCT LINER FOR THR FIRST FIVE FEET OF DUCT OUT OF TU BOX
	SIDEWALL REGISTER OR GRILLE
	CHANGE IN PIPE OR DUCT SIZE OR SHAPE
R	REFRIGERANT PIPING
D	CONDENSATE OR OTHER DRAIN PIPING
	ELBOW TURNED DOWN OR TURNED UP IN PIPING
T	THERMOSTAT, ARROW SHOWS CONTROL WIRING PATH
TC	TIME CLOCK
ø	DIAMETER
U.C.	UNDER-CUT DOOR 3/4", UNLESS OTHER SIZE NOTED
ZD / T6	INDICATES EQUIPMENT ON PLANS; TOP ITEM SHOWS TYPE OF EQUIPMENT AND BOTTOM ITEM SHOWS SPECIFIC MARK NUMBER
4 S1 8"ø / 300	ITEM IN HEXAGON SHOWS AIR DEVICE MARK NUMBER, ITEM ABOVE LINE SHOWS NECK SIZE, ITEM BELOW LINE SHOWS AIR FLOW THROUGH DEVICE, AND NUMBER IN FRONT SHOWS QUANTITY IF MORE THAN ONE
AFF	ABOVE FINISHED FLOOR
AH	AIR HANDLING UNIT
BD	BYPASS DAMPER
BTUH, MBH	BRITISH THERMAL UNITS, THOUSAND BRITISH THERMAL UNITS
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CU	CONDENSING UNIT
DB, WB	DRY BULB TEMPERATURE, WET BULB TEMPERATURE
EA, EG	EXHAUST AIR, EXHAUST GRILLE
EF	EXHAUST FAN
EXT SP	EXTERNAL STATIC PRESSURE (USUALLY EXPRESSED IN INCHES OF WATER IN GAGE)
HP	HEAT PUMP UNIT
MVD, VD	MANUAL VOLUME DAMPER
OA	OUTSIDE AIR
RA, RG	RETURN AIR, RETURN GRILLE
RTU	PACKAGED ROOFTOP UNIT
SA	SUPPLY AIR
SF	SUPPLY FAN FOR SHOP VENTILATION
VAC, PH	VOLTS ALTERNATING CURRENT, NUMBER OF PHASES
W, KW	WATTS, KILOWATTS
UH	UNIT HEATER
A	AUDIBLE/VISUAL ALARM DEVICE CONNECTED TO DUCT SMOKE DETECTOR
AD / AD	ACCESS DOOR
	CONTROL DAMPER-OPPOSED BLADE
	CONTROL DAMPER-PARALLEL BLADE
	BACKDRAFT DAMPER
	RADIUS ELBOW (R=1.5)
	VANED ELBOW
MOD	MANUAL VOLUME DAMPER (MVD), MOTOR OPERATED DAMPER (MOD)
X / XX	X INDICATES SECTION NUMBER/XX INDICATES ON WHICH DRAWING SECTION APPEARS
	CONNECT NEW TO EXISTING
	TERMINATION POINT OF DEMOLITION
OS	OCCUPANCY SENSOR. ENERGIZE UPON OCCUPANCY AND PROVIDE 15 MIN. DELAY TO "OFF" AFTER NO OCCUPANCY IS SENSED

HEAT PUMP AIR HANDLING UNIT SCHEDULE

MARK	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. SP. IN. W.G.	EVAP. FAN HP	EVAP. COIL ENTERING AIR DESIGN CONDITIONS DB °F	EVAP. COIL ENTERING AIR DESIGN CONDITIONS WB °F	EVAP. COIL LEAVING AIR DESIGN CONDITIONS DB °F	EVAP. COIL LEAVING AIR DESIGN CONDITIONS WB °F	SYSTEM COOLING MAX. REQUIREMENTS (MBH) TOTAL	SYSTEM COOLING MAX. REQUIREMENTS (MBH) SENSIBLE	SUPPL. HEAT KW	WEIGHT (LBS)	POWER VAC/PH	BASIS OF DESIGN CARRIER	NOTES
AH-1	700	110	0.60	1/2	77.8	64.9	55.0	54.0	23.0	18.0	6.8	250	208/230/3ø	FV4CNB003L00	1:2:3:4:5:6:7:8
AH-2	700	110	0.60	1/2	77.8	64.9	55.0	54.0	23.0	18.0	6.8	250	208/230/3ø	FV4CNB003L00	1:2:3:4:5:6:7:8

1. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
2. PROVIDE AIR FILTERS, FLEXIBLE DUCT CONNECTIONS AND VIBRATION ISOLATION. PROVIDE PROGRAMMABLE THERMOSTAT AND SUPP. ELEC. HEAT MODULE CONNECTED TO UNIT FOR SINGLE POINT OF CONNECTION.
3. PROVIDE CONDENSATE TRAP(S) AS RECOMMENDED BY MANUFACTURER AND ROUTE CONDENSATE PIPING TO HUB DRAIN AS SHOWN ON PLANS. HUB DRAIN SHALL BE PROVIDED BY PLUMBING.
4. PROVIDE AUXILIARY DRAIN PAN UNDER THE AIR HANDLERS WITH FLOAT ACTIVATED SWITCH TO SHUT THE UNIT DOWN INCASE OF CONDENSATE OVERFLOW. REFER TO DETAIL PROVIDED.
5. FLOAT ACTIVATED CONDENSATE SWITCH AND COIL OUTLET SWITCH SHALL BE PROVIDED AND INSTALLED BY HVAC CONTRACTOR.
6. REFER TO PLUMBING PLANS FOR HUB DRAIN LOCATION.
7. AIR HANDLING UNIT WITH ECM MOTOR. PROVIDE COIL OUTLET SWITCH. COIL OUTLET SWITCH SHALL BE WIRE IN SERIES WITH FLOAT ACTIVATED SWITCH LOCATED AT DRAIN PAN. REFER TO CONDENSATE DETAIL PROVIDED.
8. UNIT SHALL HAVE SINGLE POINT CONNECTION.

AIR COOLED HEATPUMP UNIT SCHEDULE

MARK	AHU SERVED	HEAT PUMP HEATING CAP (MBH)	NOM. CAP. (TONS)	REFRIG	OA TEMP SUMMER (DB)	OA TEMP WINTER (DB)	WEIGHT (LBS)	POWER VAC/PH	BASIS OF DESIGN CARRIER	NOTES
HP-1	AH-1	20.0	2.0	R410A	93	17	350	208/230/1ø	25HCB624A003	1:2:3:4:5
HP-2	AH-2	20.0	2.0	R410A	93	17	350	208/230/1ø	25HCB624A003	1:2:3:4:5

1. PROVIDE WITH DEFROST CONTROLS, LOW AMBIENT HEAD PRESSURE CONTROLS, AND ANTI-SHORT CYCLE TIMER. PROVIDE COIL GUARD.
2. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
3. PROVIDE LIQUID LINE SOLENOID, CRANKCASE HEATER, TXV, START CAPACITOR AND RELAY AS RECOMMENDED BY MANUFACTURER FOR LONG LINE APPLICATIONS.
4. FOR GROUND MOUNT UNITS PROVIDE MOUNTING PAD AS PER DETAIL PROVIDED.
5. 2-STAGE COMPRESSOR UNIT.

FAN SCHEDULE

MARK	CFM	EXT. SP IN W.G.	DRIVE TYPE	MOTOR WATTS/HP	MAX FAN (RPM)	MAX TIP SPEED FPM	POWER/ PHASE	BASIS OF DESIGN	NOTES
EF-1	70	0.25	DIRECT	20 W	–	–	115/1	GREENHECK SP-B90	1:2:3
EF-2	6,500	0.25	DIRECT	1 HP	1215	9587	208/1	GREENHECK AER-E30C-310-VG	1:5:6:7:8

1. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
2. FAN TO BE INTERLOCK WITH LIGHT SUCH THAT FAN COMES ON WHEN LIGHTS ARE ON. PROVIDE 15 MINUTE TIME DELAY.
3. CENTRIFUGAL CEILING MOUNTED FAN. PROVIDE MANUFACTURER'S GRILL, ROUND DUCT CONNECTION, SOLID STATE SPEED CONTROL AND MOTOR WITH THERMAL OVERLOAD.
4. DIRECT DRIVE PROPELLER WALL FAN. PROVIDE WALL SLEEVE, FAN SPEED CONTROLLER, AND GRAVITY SHUTTER AT THE DISCHARGE.
5. PROVIDE FACTORY SOLID STATE FAN SPEED CONTROLLER. FAN MOTOR ACCESS SHALL BE FROM INTERIOR OF BUILDING.
6. PROVIDE LONG WALL HOUSING FLUSH WITH EXTERIOR. PROVIDE WEATHER HOOD.
7. FAN SHALL BE CONTROLLED BY A STARTER WITH PUSH BUTTONS PROVIDED AT THE FACE OF STARTER. REFER TO PLAN FOR STARTER LOCATION.
8. FAN STARTER SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.

LOUVER SCHEDULE

MARK	CFM	SERVICE	SIZE W X H (INCHES)	MIN. FREE AREA (SQ. FT.)	MAXIMUM PRESS. DROP (IN. W.G.)	FINISH (COLOR BY ARCHITECT)	MOTOR OPERATOR	INTERLOCK WITH	POWER VAC/PH	BASIS OF DESIGN	NOTES
L-1	6,500	OUTSIDE AIR	60"X60"	11.95	0.08	ENAMEL	YES	EF-2	115/1	GREENHECK ECD 401	1:2:3

1. OPERABLE EXTRUDED ALUMINUM DRAINABLE BLADE LOUVER. PROVIDE WITH BIRDSCREEN AND FACTORY BAKED ENAMEL FINISH. COORDINATE COLOR WITH ARCHITECT.
2. COMBINATION LOUVER/DAMPER. PROVIDE MANUFACTURER'S ELECTRIC MOTOR ACTUATORS BELIMO, SEIMANS GDD WITH 6" PROJECTION.
3. REFER TO ARCHITECTURAL FOR LOUVER ELEVATION.

AIR DEVICE SCHEDULE

MARK	SERVICE	SIZE	FACE SIZE	MATERIAL	TYPE	PATTERN	MOUNTING TYPE	LAYOUT BASIS TITUS	NOTES
S1	SUPPLY	SEE PLANS	24" X 24"	STEEL	SQUARE CONC	4-WAY	LAY-IN	TMS	1:2:3
S2	SUPPLY	SEE PLANS	12" X 12"	STEEL	SQUARE CONC	4-WAY	LAY-IN	TMS	1:2:3
R1	RETURN	SEE PLANS	12"X24"	ALUMINUM	EGGCRATE	---	LAY-IN	50F	1:4
R2	RETURN	SEE PLANS	24"X24"	ALUMINUM	EGGCRATE	---	LAY-IN	50F	1:4

1. PROVIDE STANDARD WHITE FINISH.
2. INSULATE BACK OF DEVICE.
3. BALANCE AIRFLOW TO QUANTITY SHOWN.
4. PROVIDE FULL SIZE SHEET METAL PLENUM ON TO OF GRILL FOR CONNECTION.

ELECTRIC UNIT HEATER SCHEDULE

MARK	HEATER KW	CFM	STEPS	VOLTS/PH	BASIS OF DESIGN	NOTES
UH-1	15.0	910	1	480/3ø	Q-MARK MUH-15-4	1:2
UH-2	15.0	910	1	480/3ø	Q-MARK MUH-15-4	1:2
UH-3	15.0	910	1	480/3ø	Q-MARK MUH-15-4	1:2
UH-4	15.0	910	1	480/3ø	Q-MARK MUH-15-4	1:2
UH-5	15.0	910	1	480/3ø	Q-MARK MUH-15-4	1:2

1. MOUNT UNIT HEATERS AT 10'-0" AFF.
2. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.

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(770) 429-0001

DATE:

△	REVISION	DATE

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GEES MILL WTP MAINTENANCE BUILDING

MECHANICAL SCHEDULES

SHEET NO.
M-0.2

EDEC, INC.
3069 PEACHTREE IND. BLVD.
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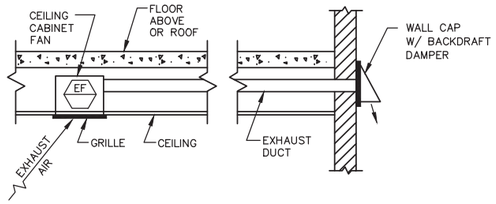
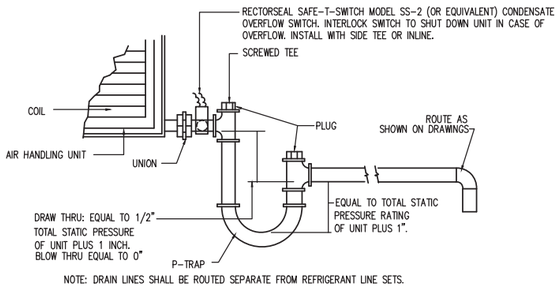
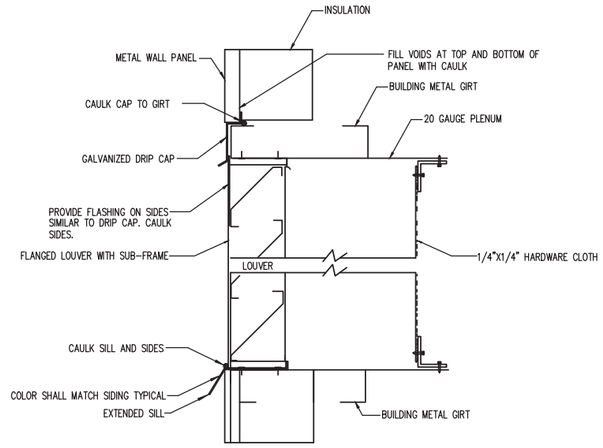


1 CEILING EXHAUST FAN W/SIDEWALL DISCHARGE-DETAIL
SCALE: N.T.S.



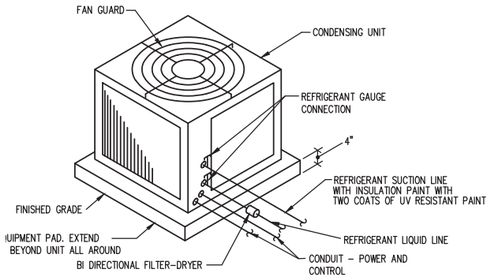
NOTE: DRAIN LINES SHALL BE ROUTED SEPARATE FROM REFRIGERANT LINE SETS.

2 CONDENSATE DRAIN DETAIL
SCALE: N.T.S.



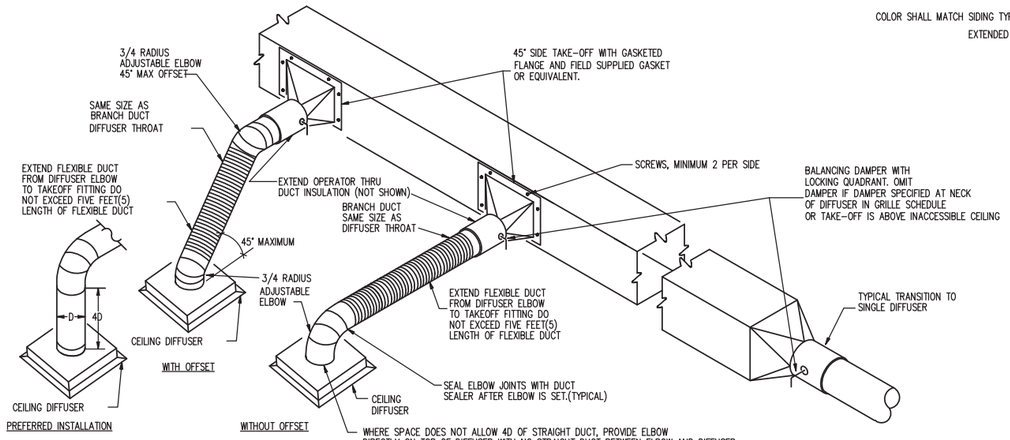
3 LOUVER IN METAL PANEL WALL DETAIL
SCALE: N.T.S.

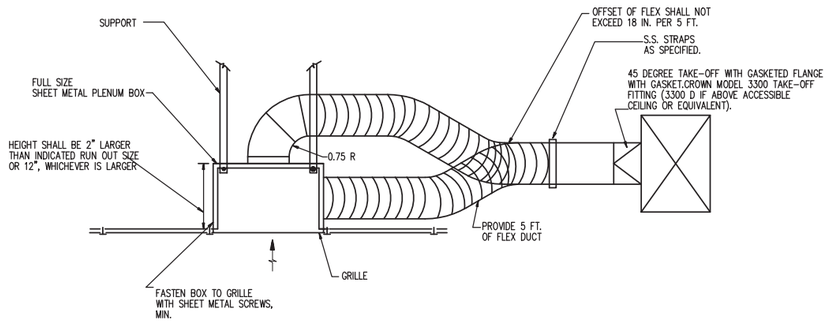
INSTALL LOUVER SUCH THAT SIDES ARE ON FLAT PART OF METAL SIDING
PROVIDE MOTORIZED DAMPER WHERE INDICATED ON DRAWINGS



NOTE: 1) THIS DETAIL IS FOR HEAT PUMP UNIT 5 TONS AND UNDER
2) PROVIDE 4"X4"WELDED WIRE MESH REINFORCING AT CENTER LINE FOR THE CONCRETE PAD.
3) PAD MAY BE PREFABRICATED DIVERSITECH ULTRALITE EQUIPMENT PAD OR EQUIVALENT.

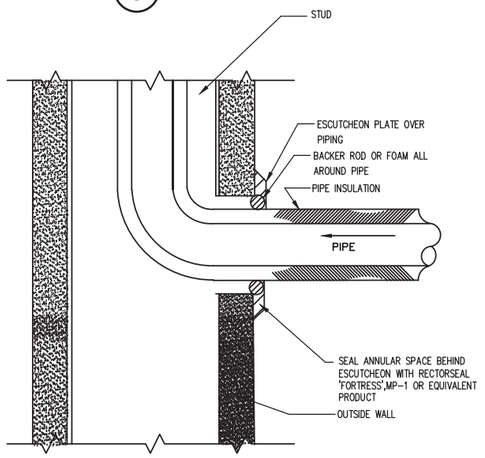
4 AIRCOOLED CONDENSING UNIT SLAB MOUNTED
SCALE: N.T.S.



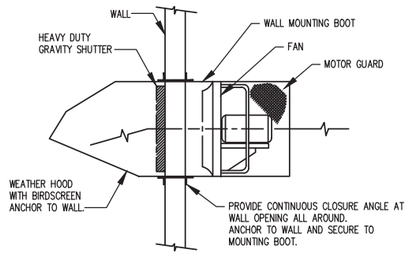


6 TYPICAL GRILLE WITH PLENUM DETAIL
SCALE: N.T.S.

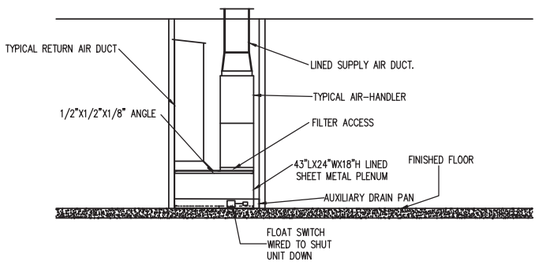
5 DIFFUSER RUN OUT DETAIL
SCALE: N.T.S.



7 REFRIGERANT PIPE SLEEVE THROUGH WALL DETAIL
SCALE: N.T.S.



8 WALL FAN MOUNTING
SCALE: N.T.S.



9 TYPICAL AIR HANDLING UNIT
SCALE: N.T.S.

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ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

MECHANICAL DETAILS

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M-0.3

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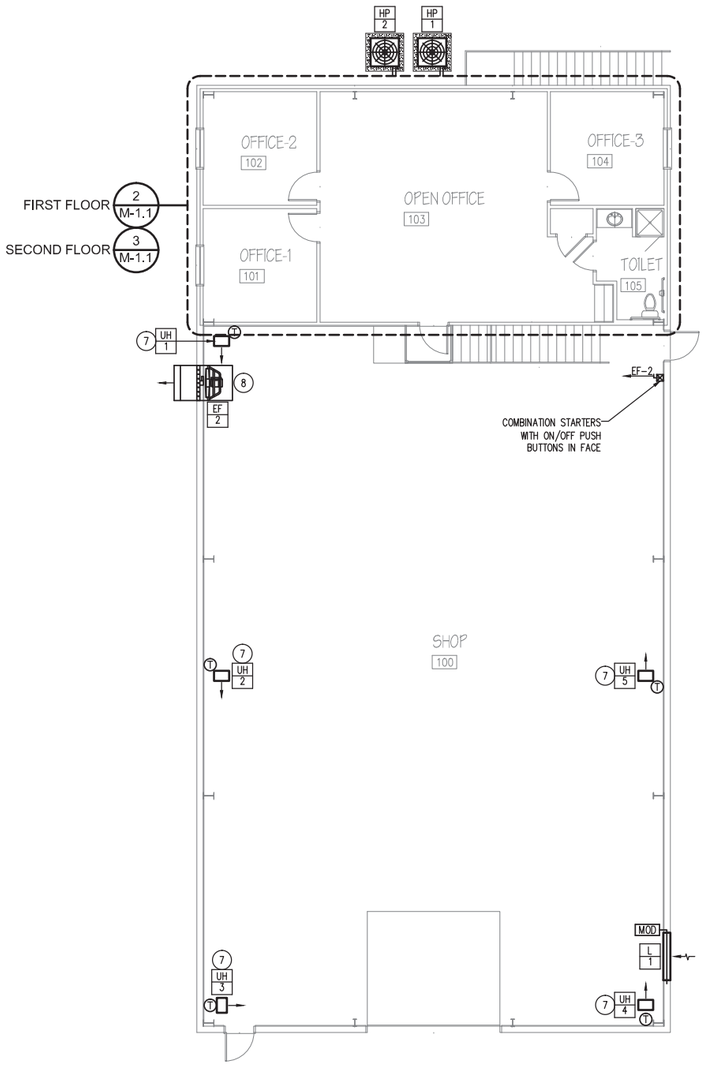
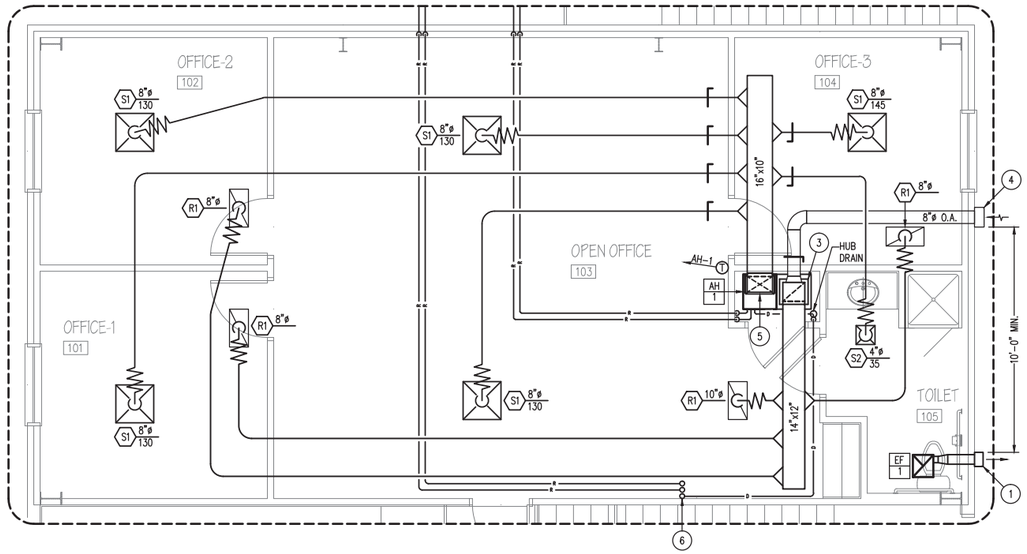


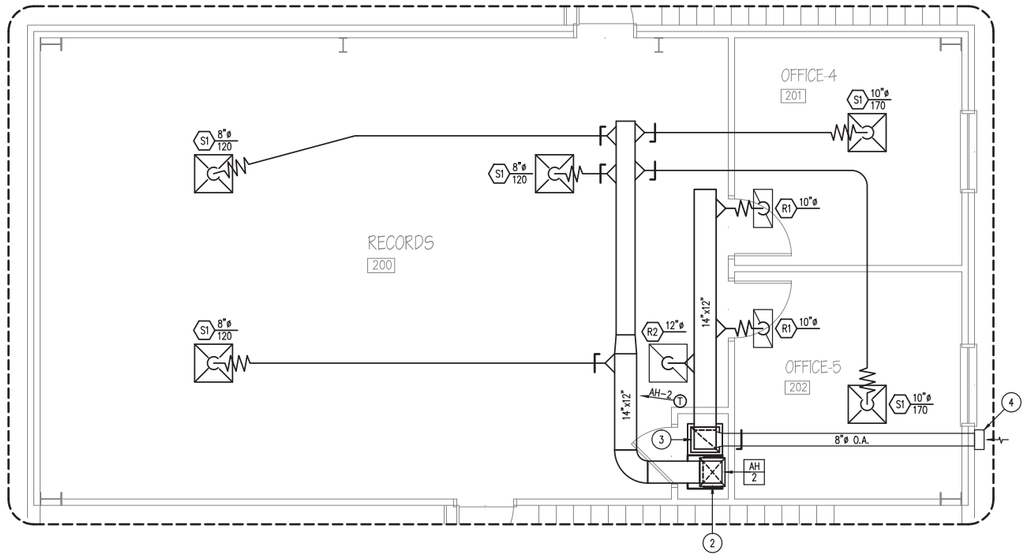
1 FIRST FLOOR MECHANICAL PLAN
SCALE: 1/8"=1'-0"

KEYED NOTES: (THIS SHEET ONLY)

1. 6"ø EXHAUST WALL CAP. PAINT WALL CAP TO MATCH BUILDING WALL.
2. 16"X14" LINED SUPPLY AIR DUCT. PROVIDE LINER FOR FIRST FIVE FEET OF DUCT OUT OF AIR HANDLER. TRANSITION TO 14"X12" AFTER 5'-0" OF LINED DUCTWORK. DUCT HAS BEEN SIZED LARGER TO INCORPORATE LINER.
3. 16"X14" LINED RETURN AIR DUCT. PROVIDE LINER FOR FIRST FIVE FEET OF DUCT OUT OF PLENUM. TRANSITION TO 14"X12" AFTER 5'-0" OF LINED DUCTWORK. DUCT HAS BEEN SIZED LARGER TO INCORPORATE LINER.
4. 8"ø OUTSIDE AIR INTAKE WALL CAP. PAINT WALL CAP TO MATCH BUILDING WALL.
5. 18"X12" LINED SUPPLY AIR DUCT. PROVIDE LINER FOR FIRST FIVE FEET OF DUCT OUT OF AIR HANDLER. TRANSITION TO 16"X10" AFTER 5'-0" OF LINED DUCTWORK. DUCT HAS BEEN SIZED LARGER TO INCORPORATE LINER.
6. REFRIGERANT AND CONDENSATE DRAIN FROM AH-2 ON SECOND FLOOR.
7. MOUNT BOTTOM OF UNIT HEATER AT 10'-0" A.F.F.
8. TOP OF FAN AT BOTTOM OF STRUCTURE.



2 FIRST FLOOR MECHANICAL PLAN
SCALE: 1/4"=1'-0"



3 SECOND FLOOR MECHANICAL PLAN
SCALE: 1/4"=1'-0"

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ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

MECHANICAL PLANS

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PLUMBING SPECIFICATIONS

Provide all plumbing items indicated on the drawings, described herein or otherwise required for a complete and proper installation, including:
A. Plumbing fixtures, fittings and equipment.
B. Hot and cold water systems.
C. Drain waste and vent piping systems.
D. Indirect waste piping, including all valves, traps, piping and accessories for all equipment. Size per equipment requirements.

Comply with all applicable codes, standards and ordinances, including requirements of the Georgia State Minimum Standard Plumbing Code (2012 International Plumbing Code with all Georgia State Amendments) and the DOJ 2010 ADA Standards for Accessible Design.

The contractor should not attempt to precisely scale dimensions from these drawings to obtain construction dimensions and clearance. The contractor shall verify all actual dimensions and clearances. Although these plans are diagrammatic in nature, they shall be followed as closely as site conditions, new construction, and work by other trades shall permit. Deviations from these drawings, which are required to conform to the available space or to actual building construction, shall be made at no additional cost to the owner.

The submission of a bid or proposal will be construed a evidence that the contractor has familiarized himself with the plans and building site. Claims made subsequent to the proposal for materials and/or labor due to difficulties encountered will not be recognized unless these difficulties could not have been foreseen, even though proper examination had been made.

Fabrication or ordering of any material or equipment prior to verification of site conditions shall be done at the contractor's risk.

All equipment and material shall be new and of first quality. Equipment and material shall be the same or equal to the basis of design listed on these drawings.

Coordinate with all trades and verify all equipment rough–in items and locations with the equipment supplier or contractor. All re–work and corrections required due to lack of coordination shall be the contractor's responsibility, and done at no cost to the owner.

Submit shop drawings and material data submittals to the engineer for approval before installation. No substitutions shall be allowed without prior approval by the engineer. Product data for piping, insulation, valves, specialties and all fixtures and equipment scheduled and specified here.

All equipment and flue materials shall be U.L. listed.

Installation shall comply with manufacturer requirements including all clearances recommended for proper operation of service. All serviceable parts shall be readily accessible.

Below ground sanitary drain and vent piping shall be solid–wall ASTM D2665 schedule 40 PVC. Install underground, PVC plastic drainage piping according to ASTM D2321. Above ground sanitary drain, roof drainage, overflow roof drainage, and vent piping shall be cellular–core ASTM F891 schedule 40 PVC. Install aboveground PVC piping according to ASTM D 2665. All aboveground piping shall be adequately supported. Sanitary drain, roof drainage, overflow roof drainage, and vent piping shall have PVC Socket Fittings (ASTM D 2665, made to ASTM D 3311, drain, waste, and vent patterns and to fit Schedule 40 pipe). Slope at 1/8 inch per foot continuously toward public sewer.

All above ground domestic water distribution piping shall be ASTM D 2846, SDR11, schedule 40 CPVC with socket fittings. All piping shall be adequately supported. Disinfect all domestic water piping after installation. All underground domestic water distribution piping shall be ASTM D 1785 schedule 40 PVC with ASTM D 2466 PVC socket fittings. Wrap piping larger than 2" in return air plenums with fire barrier plenum rated wrap.

Insulate all above ceiling domestic water piping with 3/4" flexible elastomeric. Flexible Elastomeric Insulation shall be closed–cell, sponge– or expanded–rubber materials. Comply with ASTM C 534, Type I for tubular materials.

HW & CW Valves: Use pipe size valves, as shown below:
A. Ball: Watts #B–6000 or B–6001.
B. Check: Watts #600 or #601S.

Fixture tailpieces, wall escutcheon, and traps for lavatories and sinks shall be brass tubing, semi–cast, or cast iron: All brass tubing shall be 17 gage, chrome plated. Excemption: If the fixture tailpieces and traps are located in cabinets, the tailpiece & trap shall be schedule 40 PVC. Grid drains for public lavatories. Basket strainers for break room sinks.

Thermometers shall comply with standard ASME B40.200.

Lavatory/ Sink supply fittings: NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components – Health Effects," for supply–fitting materials that will be in contact with potable water. Standard: ASME A112.18.1/CSA B125.1. Supply Stops: Chrome–plated–brass, one–quarter–turn, ball–type valve with inlet connection matching supply piping. Wheel handle operation. Risers: Chrome–plated, soft–copper flexible tube for exposed applications and ASME A112.18.6, braided– or corrugated–stainless–steel, flexible hose for conceal behind cabinet applications.

Provide ADA Supply and Drain Protective Shielding Guards on ADA fixtures that piping is exposed. Supply and Drain Protective Shielding Guards shall comply with ICC A117.1 and Americans with Disabilities Act (ADA) requirements. Manufactured plastic wraps shall cover hot and cold water supplies, trap, and drain piping.

All pipe hangers, clamps and channels shall be adequately sized to carry pipe loads and prevent sagging.

All other materials not specifically described but required for a complete and proper installation of work of this section, shall be new, first quality of their respective kinds, and as selected by the contractor subject to acceptance by the engineer.

Lay out the plumbing system in careful coordination with the drawings, determining proper elevations for all components of the system and using only the minimum number of bends to produce a satisfactorily functioning system. Follow the general layout shown on the drawings in all cases except where other work may interfere. Unless shown otherwise, lay out all pipes to fall within partition, wall floor, or roof cavities, and to not require furring other than as shown on the drawings.

Do not cut into or reduce the size of any load–carrying member without the prior approval of the architect. Install all pipes to clear all beams and obstructions.

Permanently close and make weatherproof any openings or penetrations of the building envelope made for plumbing systems. All wall and floor penetrations shall be sleeved. All exterior wall or foundation wall penetrations shall use a mechanical seal.

Coordinate all roof penetrations with architectural plans and building and roofing trades.

Provide shut–off balls valves and unions at all water connections to equipment and appliances. Provide chrome plate brass stops and rigid chrome plated brass supplies at all fixtures.

PLUMBING SPECIFICATIONS(continued)

Isolate all dissimilar metals with "EPCO" dielectric unions, except for brass or bronze valves with steel pipe.

Protect the potable water supply against backflow and siphonage from equipment, fixtures, etc., using approved backflow and anti–siphon devices.

Thoroughly clean all piping and equipment. Removing all dirt, rust, oil, and plaster.

Test Sanitary drainage piping by plugging all openings and filling with water to a height equal to a 10 foot head. Allow to stand one hour or longer as required. Repair leaking joints and then re–test.

No work shall be covered until it has been inspected and accepted by the local authority and the engineer.

Test water lines at 100 PSIG. Retain for 24 hours, repair all leaks and retest.

The entire system shall be warranted for a period of one (1) year beginning with Owner's acceptance of the work. All labor and materials necessary to repair or replace the system, or portions thereof, during that time shall be warranted for a period of one (1) year from the repair or replacement.

Install piping in concealed locations, unless otherwise indicated and except in equipment rooms, and service areas. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal. Install piping to permit valve servicing. Install piping at indicated slopes. Install piping free of sags and bends. Install fittings for changes in direction and branch connections. Install piping to allow application of insulation. Select system components with pressure rating equal to or greater than system operating pressure. Install escutcheons for penetrations of walls, ceilings, and floors. Verify final equipment locations for roughing–in.

Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

Seal fixtures to wall and floor surfaces with sealant, color to match fixture.

Approved manufactures: (Items submitted shall be approved by architect and engineer. Architect and engineer reserve the right to reject any item substituted for basis of design item for any reason.)

China Fixtures: American Standard, Kohler, Toto, Zurn, Sloan
Faucets: Delta, T&S Brass, Chicago Faucets, Zurn, Kohler, Grohe, Moen, Speakman, Symmons
Supplies & Traps: Engineered Brass CO., Mcguire, Charlotte Pipe, Brasscraft, IPS, Watts, Zurn
Floor Drains & Cleanouts: Zurn, Jay R Smith, Proset, Watts, Mifab, Wade, Josam, Sioux Chief, Oatey
Water Heaters: A.O. Smith, Lochinar, Bradford White, State, Vaughn
Toilet Seats: Bemis, Centoco, Church Seats, Olsonite, Beneke, Zurn, Mainline
ADA Protective Shielding Pipe Covers: Engineered Brass, McGuire, Plumberex, TRUEBRO, Zurn, Oatey
Fixture Supports: MIFAB, Jay R. Smith, Wade, Watts, Zurn
Mixing Valves: Armstrong, Leonard, Powers, Symmons, Lawler
Wall Hydrants/ Hose Bibbs: MIFAB, Jay R. Smith, Wade, Watts, Woodford, Zurn
Expansion Tanks: AMTROL, State, Watts, Wilkins
Water Hammer Arresters: AMTROL, Josam, MIFAB, PPP, Sioux Chief, Jay R. Smith, Wade, Watts, Zurn
Brass Valves: American, Crane, Watts, Apollo
Showers: Aqua Bath, Aquarius, Clarion, Best Bath, Aqua Glass, Aquatic

FIXTURE AND EQUIPMENT SCHEDULE

#	FIXTURE TYPE	WASTE		WATER SUPPLY		WATER FIX. CONN.		MODEL NUMBER
		BELOW FLOOR	FIXTURE CONN.	COLD	HOT	COLD	HOT	
WC	TANK TYPE ADA WATER CLOSET RIGHT–HAND TRIP LEAVER	3"	3"	1/2"		3/8"		KOHLER K–3999 WATER CLOSET. BEMIS 1655SSCT SEAT
LAV	ADA DROP–IN LAVATORY	2"	1–1/4"	1/2"	1/2"	1/2"	1/2"	KOHLER K–2196–4 LAVATORY. MOEN 84948 FAUCET.
SHR	ADA TRANSFER SHOWER	2"	2"	1/2"	1/2"	1/2"	1/2"	AQUATIC BATH 1363BFS SHOWER WITH STAINLESS STEEL L–SHAPED GRAB BAR, L–SHAPED FOLD–UP SEAT, DRAIN & SOAP DISH. MOEN 8342 FAUCET.
HD	HUB DRAIN	3"	3"					PROSET TG34HD WITH WATERLESS TRAP PRIMER.
GCO	GRADE CLEANOUT	3"	3"					ZURN Z1400
SWVT	SIDE WALL VENT TERMINAL	3"	3"					ZURN Z1471
HB	EXTERIOR HOSE BIBB			3/4"		3/4"		ZURN Z1346
MV	MIXING VALVE			1/2"	1/2"	1/2"	1/2"	LEONARD 270–LF.
FD	FLOOR DRAIN	3"	3"					SIOUX CHIEF 842–3–P–NR FLOOR DRAIN. RECTORSEAL "SURESEAL PLUS" WATERLESS TRAP PRIMER.

SHOWER DIMENSIONS SHALL BE COORDINATED WITH ARCHITECT BEFORE INSTALLATION.

WATER HEATER & TANK SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	TYPE	GPH @100° RISE	GALLON	KW	VOLT/ PHASE
WH	BRADFORD WHITE	LE240S3–3	ELECTRIC	19	40	4.5	480/3
ET	ZURN/WILKINS	XT–8	EXPANSION TANK		2.1		

CONTRACTOR SHALL CONSULT THE ELECTRICAL DOCUMENTS FOR VOLTAGE AND PHASE

LEGEND

	BALL VALVE		COLD WATER
	CHECK VALVE		HOT WATER
	PIPE UP		VENT
	PIPE DOWN		SEWER
PDI–B WH	PDI UNIT WATER HAMMER ARRESTOR	CW	COLD WATER
U.G.	UNDER GROUND	HW	HOT WATER
(TYP)	TYPICAL		
N.T.S.	NOT TO SCALE		
VTR	VENT THRU ROOF		

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

GEORGIA REGISTERED PROFESSIONAL ENGINEER KRUNAL M. PATEL NO. 036864

ESI ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

DATE:
PROJECT NUMBER:

DATE	REVISION

DSGN: KMP/JWK
DRWN: KMP/JWK
CHCK: KMP

BAR BELOW IS 1" LONG FOR SCALES SHOWN ON THIS SHEET. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

PLUMBING SPECIFICATIONS & SCHEDULES

SHEET NO.
P-0.1

FIRE PROTECTION BASIC MATERIALS AND METHODS (FIRE PROTECTION SECTION 1 OF 2)

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Pipe, fittings, valves, and connections for combination sprinkler and standpipe systems.

1.2 REFERENCES

A. ASME B16.1 – Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250; The American Society of Mechanical Engineers.

B. ASME B16.3 – Malleable Iron Threaded Fittings; The American Society of Mechanical Engineers.

C. ASME B16.4 – Gray Iron Threaded Fittings; The American Society of Mechanical Engineers.

D. ASME B16.5 – Pipe Flanges and Flanged Fittings; The American Society of Mechanical Engineers; (ANSI/ASME B16.5).

E. ASTM A 47/A 47M – Standard Specification for Ferritic Malleable Iron Castings.

F. ASTM A 53/A 53M – Standard Specification for Pipe, Steel, Black and Hot–Dipped, Zinc–Coated, Welded and Seamless.

G. ASTM A 795/A 795M – Standard Specification for Black and Hot–Dipped Zinc–Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use.

H. NFPA 13 – Standard for the Installation of Sprinkler Systems; National Fire Protection Association.

I. NFPA 24 – Standard for the Installation of Private Fire Service Mains and Their Appurtenances; National Fire Protection Association.

J. NFPA 72 – National Fire Alarm Code.

K. NFPA 101 – Code for Safety to Life from Fire in Buildings and Structures.

L. Georgia State Minimum Standard Fire Prevention Code (International Fire Code), 2012 Edition, with Georgia State Amendments.

M. UL (FPED) – Fire Protection Equipment Directory; Underwriters Laboratories Inc.; current edition.

N. UL 262 – Gate Valves for Fire–Protection Service; Underwriters Laboratories Inc..

O. Chapter 120–3–3 of the Rules of the Safety Fire Commissioner.

P. Georgia State Minimum Standard Building Code (International Building Code), 2012 Edition, with Georgia State Amendments. NFPA Code, where more stringent, shall take precedence.

1.3 SUBMITTALS

A. Product Data: Provide manufacturers catalogue information. Indicate valve data and ratings.

B. Shop Drawings: Indicate pipe materials used, jointing methods, supports, floor and wall penetration seals. Indicate installation, layout, weights, mounting and support details, and piping connections.

C. Project As–Built Documents: Record actual locations of components and tag numbering.

D. Operation and Maintenance Data: Include installation instructions and spare parts lists.

1.4 QUALITY ASSURANCE

A. Fire Protection

1. The Contractor expressly warrants that the company performing the installation of the fire protection systems has demonstrated proficiency in the installation, start–up and adjustment of such systems by the successful performance of work of the nature specified herein on at least 5 commercial or institutional buildings, each containing minimum of 10,000 ft2 of protected area or greater.
2. The Contractor further warrants that the aforesaid subcontractor has trained personnel, instruments, tools, and equipment to perform the installation specified.
3. The Contractor also warrants that the aforesaid installer has been in business performing services of the nature specified herein for at least five–years.
4. Provide a certificate of competency as issued by the Georgia State Fire Marshal's Office.

B. Conform to UL and FM requirements.

C. Valves: Bear UL and FM label or marking. Provide manufacturer's name and pressure rating marked on valve body.

D. Products Requiring Electrical Connection: Listed and classified as suitable for the purpose specified and indicated.

1.5 DELIVERY, STORAGE, AND PROTECTION

A. Deliver and store valves in shipping containers, with labeling in place.

B. Provide temporary protective coating on cast iron and steel valves.

C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

1.6 EXTRA MATERIALS

A. Provide additional materials as provided in these specifications and by NFPA.

PART 2 PRODUCTS

2.1 GENERAL SYSTEM AND PRODUCT REQUIREMENTS

A. Sprinkler Systems: Conform work to NFPA 13.

B. Standpipe and Hose Systems: Conform to NFPA 14.

C. Welding Materials and Procedures: Conform to ASME Code.

D. Building is light hazard, ordinary hazard group, and extra hazard group. Pipe sizes shall be hydraulically calculated based upon flow test to be conducted by contractor.

E. Provide hydraulic calculations over the most remote 1500 square feet providing density required for hazard as indicated in NFPA 13. Minimum discharge pressure shall be 7.0 PSI. Minimum residual pressure at city water main in the street shall be 20.0 PSI. Provide 10.0 PSI minimum safety margin in hydraulic calculations at design point. Design area reduction per NFPA 13 is not allowed.

F. Basis of design: Contractor shall perform, or have performed, at the same time, a Fire Flow and Twenty Four Hour Static Test to assure flow equals or exceeds specified basis of design flow rate prior to preparing shop drawings, installing system or performing calculations. Prepare calculations based on confirmed flow data or basis of design flow data, whichever is lowest. Flow test shall be performed in accordance with NFPA 13 and Rules and Regulations of Safety Fire Commissioner, O.C.G.A. Chapter 120–3–3. Modify flow test pressures (static and residual), if pressure recorded in 24 hour test is lower than flow test pressures for one hour duration, to lowest hour test pressure.

G. No pipe shall be routed above electrical panels and equipment as required by National Electrical Code, on control side or beneath suspended mechanical equipment except where specifically required by Code, in which case, provisions shall be made for service access.

H. Inspectors test connection(s) shall discharge to the outside of the building in location(s) acceptable to the Architect.

I. Inside auxiliary drains, if needed, shall discharge in location(s) acceptable to the Architect.Drain and test connection piping, if in finished space, shall be installed concealed.

2.2 BURIED PIPING

A. Refer to Civil plans and specifications for piping type.

2.3 ABOVE GROUND WET SYSTEM PIPING

A. Steel Pipe: ASTM A 795 Schedule 10 or ASTM A 53 Schedule 40, black. Piping 2" and smaller shall be threaded. Piping 2 1/2" and larger shall be grooved with rigid couplings.

1. Cast Iron Fittings: ASME B16.1, flanges and flanged fittings and ASME B16.4, threaded fittings.
2. Malleable Iron Fittings: ASME B16.3, threaded fittings and ASTM A 47/A 47M.
3. Mechanical Grooved Couplings: Rigid malleable iron housing clamps to engage and lock, "C" shaped elastomeric sealing gasket, steel bolts, nuts, and washers; galvanized for galvanized pipe. Reducing couplings are NOT allowed.

2.4 PIPE HANGERS AND SUPPORTS

A. Hangers for Pipe Sizes 1/2 to 1–1/2 inch: Malleable iron, adjustable swivel, split ring.

B. Hangers for Pipe Sizes 2–inches and Over: Carbon steel, adjustable, clevis.

C. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.

D. Vertical Support: Steel riser clamp.

E. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.

F. Provide support for any vertical pipe 36" in length or greater except armovers. Provide supports 12'–0" O.C. maximum or at floor levels.

G. Threaded rods shall NOT be bent. Bending is permitted only in unthreaded sections of hanger rods. Bending shall occur as close to the hanger as possible. Provide a swivel assembly if required.

2.5 GATE VALVES

A. Up to and including 2 inches:

1. Manufacturers:
   a. Nibco Scott; Product T–104–O
   b. Jenkins; Product 275U
   c. Hammond; Product 1B681
   d. Stockham; Product B–133
   e. Kennedy; Product Fig. 66
2. Bronze body, bronze trim, rising stem, handwheel, solid wedge or disc, threaded ends.

B. Over 2 inches:

1. Manufacturers:
   a. Nibco Scott; Product F–607–OTS
   b. Crane; Product 467
   c. Jenkins; Product 825–A
   d. Hammond; Product 1R1154
   e. Stockham; Product G–634
   f. Kennedy; Product Fig. 68
2. Iron body, bronze trim, rising stem pre–grooved for mounting tamper switch, handwheel, OS&Y, solid rubber covered bronze or cast iron wedge, flanged ends.

2.6 GLOBE VALVES

A. Bronze body, rubber disc, union bonnet, 174 W.W.P., threaded ends.

B. Up to and including 2 inches:

1. Manufacturers:
   a. Nibco–Scott; Product KT–65.
   b. Kennedy; Product 97SD.
   c. United; Product 125S.
   d. Fairbanks; Product 4691–3.

2.7 ANGLE VALVES

A. Bronze body, rubber disc, union bonnet, 174 non–shock cold water, threaded ends.

B. Up to and including 2 inches:

1. Manufacturers:
   a. Nibco–Scott; Product T–301–W.
   b. Kennedy; Product 985D.
   c. United; Product 126S.
   d. Fairbanks; Product 4691–3.

2.8 BUTTERFLY VALVES: Not allowed.

2.9 CHECK VALVES

A. Iron body, U.L. Listed– F.M. Approved, swing type, bronze trimmed, bronze seat and disc, flanged ends.

B. Manufacturers:

1. Jenkins; Product 629
2. Crane; Product 375
3. Stockham; Product G–939
4. Mueller; Product A–2120–6
5. Kennedy; Product #126

2.10 INDICATOR POSTS

A. Cast iron base, top section, & cap; malleable iron wrench and locking device; steel stem; cast iron coupling; bronze target holder with aluminum "shut" and "open" targets; Underwriters Laboratories listed, and Factory Mutual approved; available for varying trench depth; and with adjustable depth features.

B. Manufacturers:

1. Kennedy Fig. Series 741.
2. Nibco NIP–1.
3. Stockham G–951.
4. Mueller A–20804.

2.11UNDERGROUND GATE VALVES

A. 2 1/2–inch and larger, iron body, non–rising stem, bronze stem, iron mounted disc with bronze rings, cast iron 2–inch square operating nut, flange, ends, AWWA spec. C–500.

B. Manufacturers:

1. Kennedy Fig. 701X.
2. Nibco F–609.
3. Stockham G–635.
4. Mueller A–2075–20.
5. M & H Fig. 3067.

PART 3 EXECUTION

3.1 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.

B. Remove scale and foreign material, from inside and outside, before assembly.

C. Prepare piping connections to equipment with flanges or unions.

D. Storage: All piping shall be stored above ground and protected to prevent dirt and debris from entering pipe.

3.2 INSTALLATION

A. Install sprinkler system and service main piping, hangers, and supports in accordance with NFPA 13 and these specifications.

B. Install standpipe piping, hangers, and supports in accordance with NFPA 14.

C. Install post indicator valve (PIV) upstream of backflow device.

D. Route piping in orderly manner, plumb and parallel to building structure. Maintain gradient.

E. Install piping to conserve building space, to not interfere with use of space and other work.

F. Group piping whenever practical at common elevations.

G. All piping shall be installed above ceilings in a concealed manner except where no ceilings are present

H. Sleeve pipes passing through partitions, walls, and floors.

I. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.

J. Reducing Tees: Weld–on threaded outlet tees and Coupolet–300 by Bonney Forge Division of Energy Products Group, Central Sprink 701, "TEE–LET" 300 by Merit Manufacturing Corp., NAP300 by North Alabama Pipe Corp., F400 by Grinnell Corp. may be used for side outlet reducing tees more than two pipe sizes smaller than main. Discs shall be retrieved and connected to pipe at point of cutting. Cutting shall comply with NFPA 13, Chapter 6.5.2.9.

K. Couplings may be used on gridded systems at only one end of each gridded branch line or on 2 1/2" or larger riser nipple to 2" or smaller branch line to facilitate connection provided that the coupling is connected to piping by a cut groove. Rolled grooves are not acceptable.

L. Pipe Hangers and Supports:

1. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
2. Place hangers within 12 inches of each horizontal elbow.
3. Use hangers with 1–1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
4. Support vertical piping at every floor. Support riser piping independently of connected horizontal piping.
5. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.

M. Slope piping and arrange systems to drain at low points. Use eccentric reducers to maintain top of pipe level.

N. Prepare pipe, fittings, supports, and accessories for finish painting. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.

O. Do not penetrate building structural members unless indicated.

P. Provide sleeves when penetrating floors and walls. Seal pipe and sleeve penetrations to achieve fire resistance equivalent to fire separation required.

Q. When installing more than one piping system material, ensure system components are compatible and joined to ensure the integrity of the system. Provide necessary joining fittings. Ensure flanges, union, and couplings for servicing are consistently provided.

R. Die cut threaded joints with full cut standard taper pipe threads with red lead and linseed oil or other non–toxic joint compound applied to male threads only.

S. Install valves with stems upright or horizontal, not inverted. Remove protective coatings prior to installation.

T. Provide gate valves for shut–off or isolating service. No valve shall be installed with the centerline, if horizontal, or wheel, if vertical, more than 9'–0" AFF.

U. Provide drain valves at main shut–off valves, low points of piping and apparatus.

3.3 CLEANING AND PROTECTION

A. All materials, equipment and mechanical rooms shall be cleaned prior to the Final Inspection.

B. Wash down and scrub clean all mechanical room floors, walls, equipment bases and equipment.

C. Paint equipment where finish has been damaged requiring retouching of finish to match factory finish.

D. Chipped or scraped paint shall be retouched to match original finish.

E. All dents and sags in equipment casing shall be straightened.

F. All equipment, pipe, pipe fittings and appurtenances shall be free of rust and stains prior to substantial completion.

3.4 FINISHING EQUIPMENT AND MATERIAL

A. Use paint systems specified in Division 9 for the substrates to be finished.

B. Paint shop–primed equipment.

C. Re–install electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

D. Paint all exposed pipes, unless otherwise indicated.

E. All ferrous fasteners and hanger supports not having a corrosion resistant plated finish shall be painted to prevent rust.

F. Paint all equipment, including that which is factory–finished, exposed to weather or to view on the roof and outdoors.

G. Paint all exposed un–insulated ferrous materials.

END OF SECTION

GEORGIA REGISTERED NO. 036884 PROFESSIONAL ENGINEER KRUNAL M. PATEL

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

PROJECT NUMBER:
DATE:

	DATE	REVISION
1		
2		
3		
4		
5		

DSGN: KMP/JWK
DRWN: KMP/JWK
CHK: KMP

BAR BELOW IS 1" LONG FOR SCALES SHOWN ON THIS SHEET. IF NOT 1" LONG, THEN SHEET IS NOT AT SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

FIRE PROTECTION SPECIFICATIONS

SHEET NO.
P-0.2

EDEC
EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

FIRE SUPPRESSION SPRINKLERS
(FIRE PROTECTION SECTION 2 OF 2)

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Wet Type Sprinkler System

B. Dry–pipe sprinkler system.

C. System design, installation, and certification.

D. Fire department connections.

1.2 REFERENCES

A. NFPA 13 – Standard for the Installation of Sprinkler Systems; National Fire Protection Association.

B. NFPA 14 – Standard for the Installation of Standpipe and Hose Systems; National Fire Protection Association.

1.3 SUBMITTALS

A. Product Data: Provide data on sprinklers, valves, and specialties, including manufacturers catalog information. Submit performance ratings, rough–in details, weights, support requirements, and piping connections.

B. Shop Drawings:

1. Indicate hydraulic calculations, detailed pipe layout, hangers and supports, sprinklers, components and accessories. Indicate system controls.
2. Submit shop drawings, product data, and hydraulic calculations to Fire Marshall for approval and to Architect for review. Submit to Architect prior to submitting to Fire Marshal. Submit proof of approval to the Architect.

C. Project As–Built Documents: Record actual locations of sprinklers and deviations of piping from drawings. Indicate drain and test locations. Provide two (2) CD and three (3) paper copies of as–built drawings.

D. Manufacturer's Certificate: Certify that system has been tested and meets or exceeds specified requirements and code requirements. All certificates shall be signed by certificate holder.

E. Operation and Maintenance Data: Include components of system, servicing requirements, record drawings, inspection data, replacement part numbers and availability, and location and numbers of service depot.

1.4 QUALITY ASSURANCE

A. Maintain one copy of referenced design and installation standard on site.

B. Conform to UL requirements.

C. Equipment and Components: Provide products that bear UL label or marking.

D. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

1.5 DELIVERY, STORAGE, AND PROTECTION

A. Store products in shipping containers and maintain in place until installation. Provide temporary inlet and outlet caps. Maintain caps in place until installation.

B. Store piping off floor and out of elements. Provide cover for piping to prevent dirt and debris from entering piping. Piping and fittings shall be rust free when installed.

1.6 EXTRA MATERIALS

A. Provide extra sprinklers of type and size matching those installed, in quantity required by referenced NFPA design and installation standard.

B. Provide suitable wrenches for each sprinkler type.

C. Provide metal storage cabinet located at piping entrance to building.

PART 2 PRODUCTS

2.1 SPRINKLER SYSTEM REQUIREMENTS

A. Sprinkler System: Provide coverage for entire building.

B. Occupancy: comply with NFPA 13.

C. Water Supply: Contractor shall perform or have performed an NFPA–13 water flow test data and a 24 hour static pressure test. Adjust flow test to lowest pressure recorded by 24 hour test of one hour duration.

D. Interface system with building fire alarm system.

E. Provide fire department connections where indicated on FP and civil drawings.

2.2 SPRINKLERS

A. Tyco and affiliates, Automatic Sprinkler, Reliable, Viking.

B. All sprinklers installed shall be by the same manufacturer.

C. Contractor shall select temperature ratings in accordance with NFPA 13, paragraph 8.3.2.

D. Suspended Ceiling Type: Recessed pendant type with matching flush push on escutcheon plate.

1. Finish: Chrome plated.
2. Escutcheon Plate Finish: Chrome plated.
3. Quick response Glass bulb type temperature rated for specific area hazard.

E. Gypsum Board Ceiling Type: Concealed pendant type with matching push on escutcheon plate.

1. Finish: Brass.
2. Escutcheon Plate Finish: Enamel, Verify color with architect.

F. Exposed Area Type: Standard upright type.

1. Finish: Brass.
2. Fusible Link: Quick Response Fusible solder link type temperature rated for specific area hazard.

G. Sidewall Type: Standard horizontal sidewall type with matching flush push on two piece escutcheon plate.

1. Finish: Chrome plated.
2. Escutcheon Plate Finish: Chrome plated.
3. Quick Response Fusible solder link type temperature rated for specific area hazard.

H. Guards: Finish to match sprinkler finish.

2.3 PIPING SPECIALTIES

A. Dry Pipe Sprinkler Alarm Valve: Check type valve with divided seat ring, rubber faced clapper to automatically actuate water motor alarm and electric alarm, with accelerator; with test and drain valve.

B. Water Motor Alarm: Hydraulically operated impeller type alarm with aluminum alloy chrome plated gong and motor housing, nylon bearings, and inlet strainer. By same manufacturer as Alarm Valve.

C. Electric Alarm: Electrically operated chrome plated gong with pressure alarm switch.

D. Water Flow Switch: Vane type switch for mounting horizontal or vertical, with two contacts; rated 10 amp at 125 volt AC and 2.5 amp at 24 volt DC. Notifier, Simplex, Potter, Grinnell.

E. Tamper Switch: Switch designed for installation on indicator valves with cased aluminum housing with red finish. Notifier, Simplex, Potter, Grinnell.

F. Fire Department Connections: Elkhart, Croker Standard, Potter Roemer.

1. Type: Free standing type with ductile iron pedestal chrome plated finish.
2. Outlets: Two way with thread size to suit fire department hardware; threaded dust cap and chain of matching material and finish.
3. Drain: 3/4 inch automatic drip, outside.
4. Label: "Sprinkler – Fire Department Connection".

PART 3 EXECUTION

3.1 INSTALLATION

A. Install in accordance with referenced NFPA design and installation standard and these specifications.

B. Sprinklers shall be in line with and centered between down lights unless shown otherwise.

C. Install equipment in accordance with manufacturer's instructions.

D. Each floor of multi story buildings shall be zoned.

E. All dry system piping shall be galvanized down stream of dry valve.

F. Install buried shut–off valves in valve box. Provide post indicator.

G. Provide approved double detector check assembly at sprinkler system water source connection.

H. Locate fire department connection within forty (40'–0") feet of nearest fire hydrant and with sufficient clearance from walls, obstructions, or adjacent siamese connectors to allow full swing of fire department wrench handle.

I. Locate outside alarm gong on building wall at piping entrance to building.

J. Place pipe runs to minimize obstruction to other work.

K. Place piping in concealed spaces above finished ceilings.

L. Center sprinklers in two directions in ceiling tile and provide piping offsets as required.

M. Apply masking tape or paper cover to ensure concealed sprinklers, cover plates, and sprinkler escutcheons do not receive field paint finish. Remove after painting. Replace painted sprinklers.

N. Where sprinklers are required under rectangular duct, the centerline of the sprinkler shall be minimum 6" under duct

O. Install air compressor on vibration isolators.

P. Flush entire piping system of foreign matter.

Q. Hydrostatically test entire system.

R. Require test be witnessed by Fire Marshall.

S. All drain piping shall discharge to the outside 6" maximum above grade unless noted otherwise.

T. Where sprinklers are required under oval or round duct, the centerline of the sprinkler shall be under the centerline of the duct.

3.2 INTERFACE WITH OTHER PRODUCTS

A. Ensure required tamper and flow devices are installed and connected as required to fire alarm system including but not limited to Floor control valves, alarm check valve, elevator shaft isolation valve, Post Indicator Valve (PIV) and backflow device valves.

3.3 SCHEDULES

A. System Hazard Areas:

1. Libraries except Stack Areas, Office & Public Areas, Residential Living Areas, and similar occupancies – Light Hazard Design; 0.10 GPM/sq. ft. over the most remote 1500 square foot.
2. Automobile Parking Areas, Building Service Areas, Electrical Equipment Rooms, General Storage Areas, Laundries, Mechanical Equipment Rooms, Restaurant Service Areas, and similar occupancies – Ordinary Hazard Group 1 Design; 0.15 GPM/sq.ft. over the most remote 1500 square foot.
3. Dry Cleaners, Library Stack Areas, Machine Shops, Repair Garages, and similar occupancies – Ordinary Hazard Group 2 Design;0.20 GPM/sq.ft. over the most remote 1500 square foot.

END OF SECTION

EDEC, INC.
3069 PEACHTREE IND. BLVD.
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TEL. (770) 493-8685

GEORGIA REGISTERED NO. 035854 PROFESSIONAL ENGINEER KRUNAL M. PATEL

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

DATE:

△	REVISION	DATE

PROJECT NUMBER:

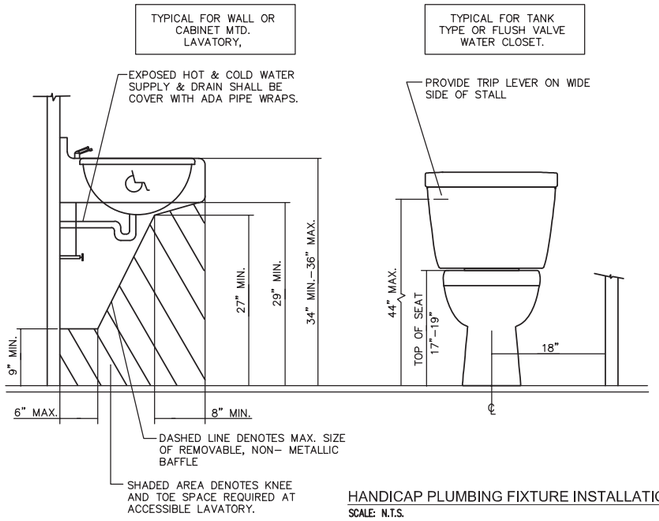
DSGN: KMP/JWK
DRWN: KMP/JWK
CHCK: KMP

BAR BELOW IS 1" LONG FOR SCALES SHOWN ON THIS SHEET. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

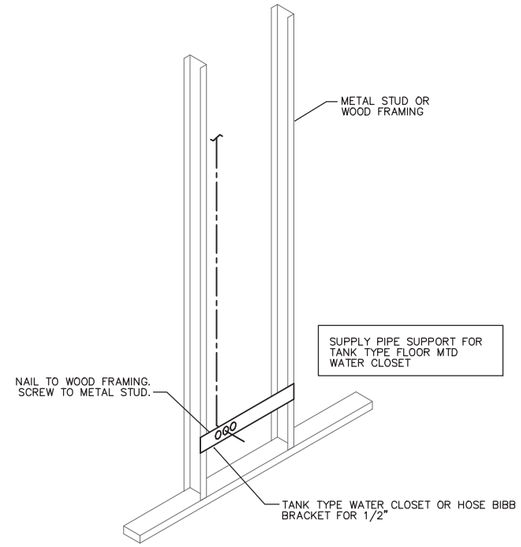
ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

FIRE PROTECTION SPECIFICATIONS

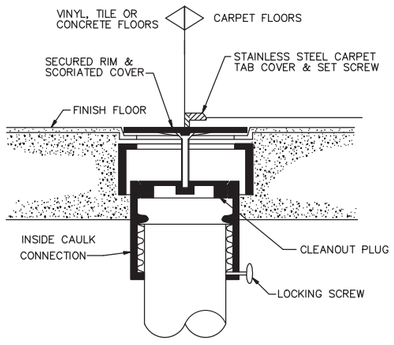
SHEET NO.
P-0.3



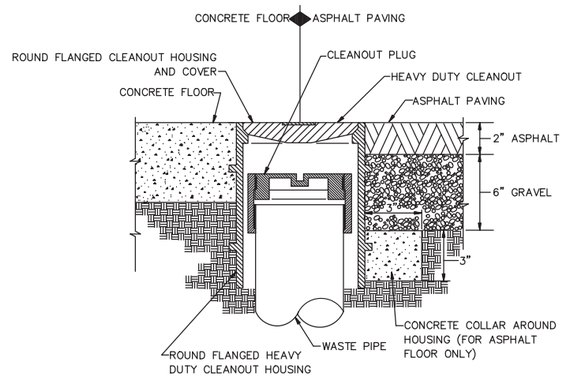
HANDICAP PLUMBING FIXTURE INSTALLATION
SCALE: N.T.S.



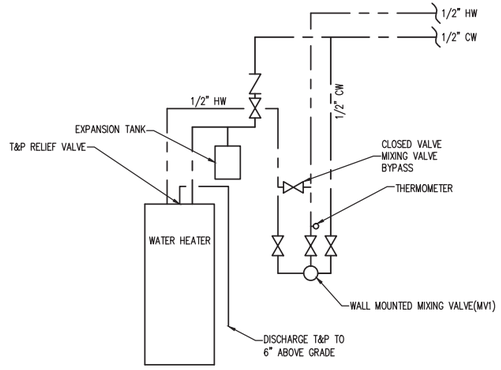
WATER CLOSET PIPE SUPPORT DETAIL
SCALE: N.T.S.



FINISH FLOOR CLEANOUT (FCO)
SCALE: N.T.S.



CLEANOUT (GCO)
SCALE: N.T.S.



(WH) WATER HEATER PIPING SCHEMATIC
SCALE: N.T.S.

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GEORGIA REGISTERED NO. 036864 PROFESSIONAL ENGINEER KRUNAL M. PATEL

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3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

DATE:
PROJECT NUMBER:

	DATE
REVISION	
△	

DSGN: KMP/JWK
DRWN: KMP/JWK
CHCK: KMP

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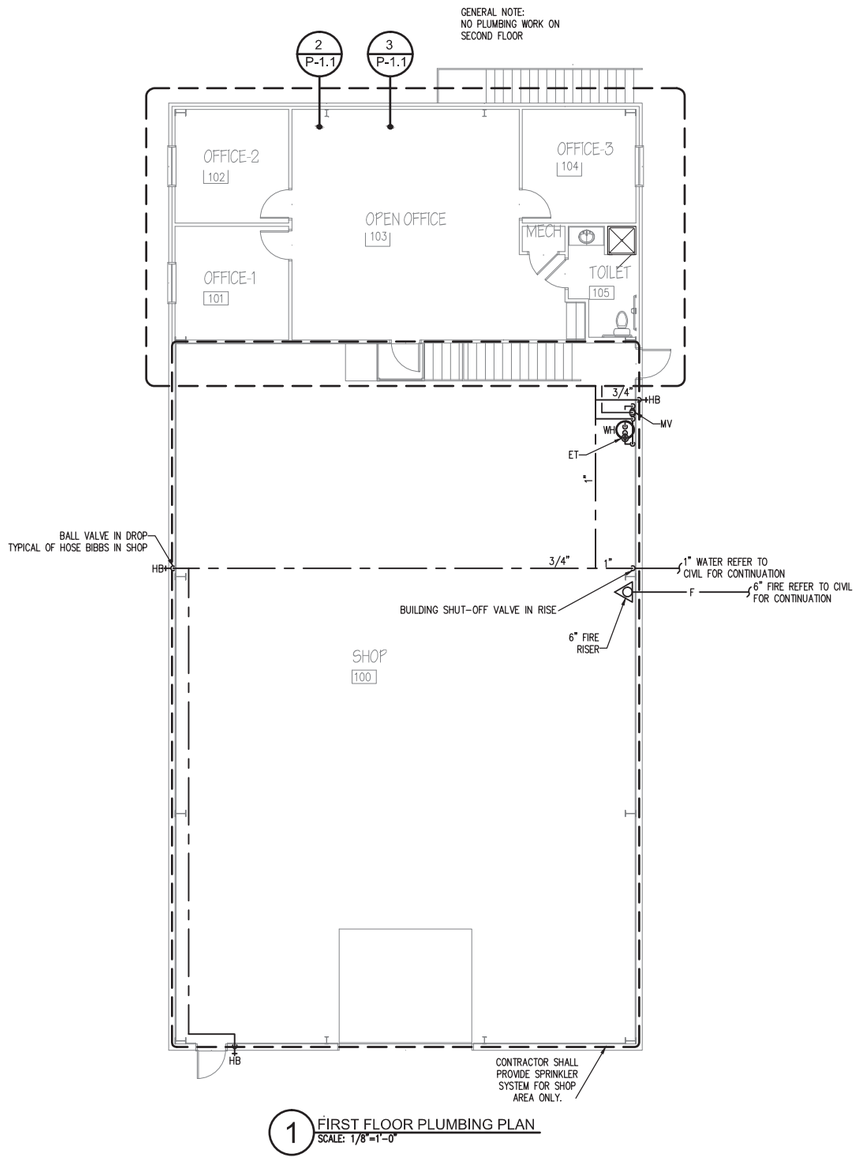
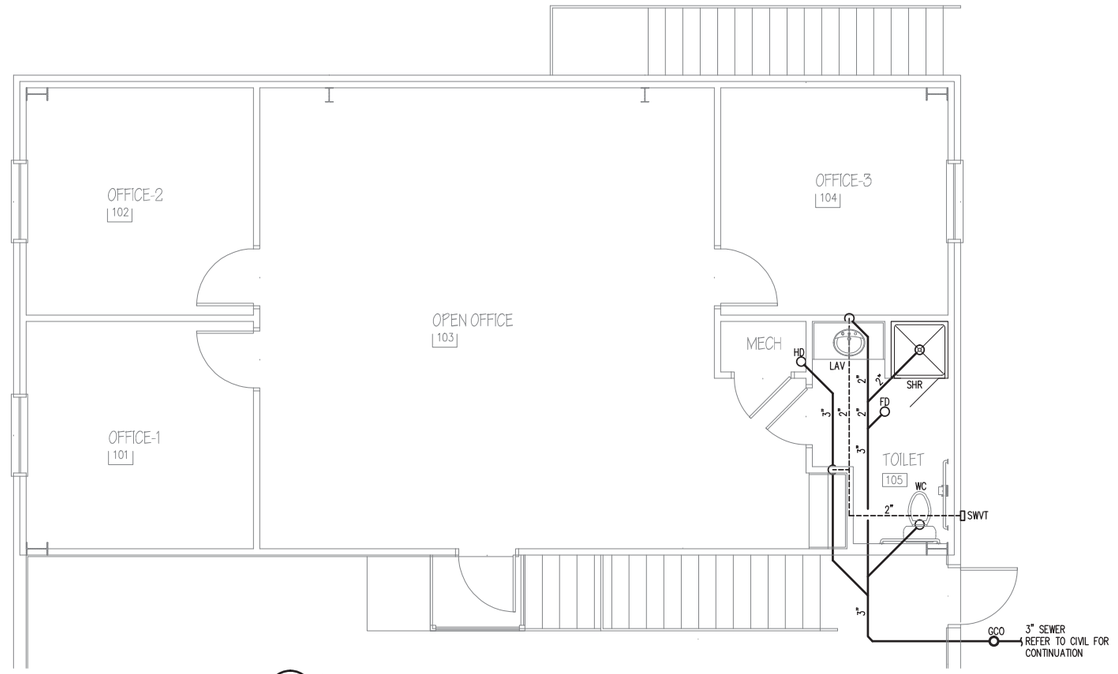
ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

PLUMBING DETAILS

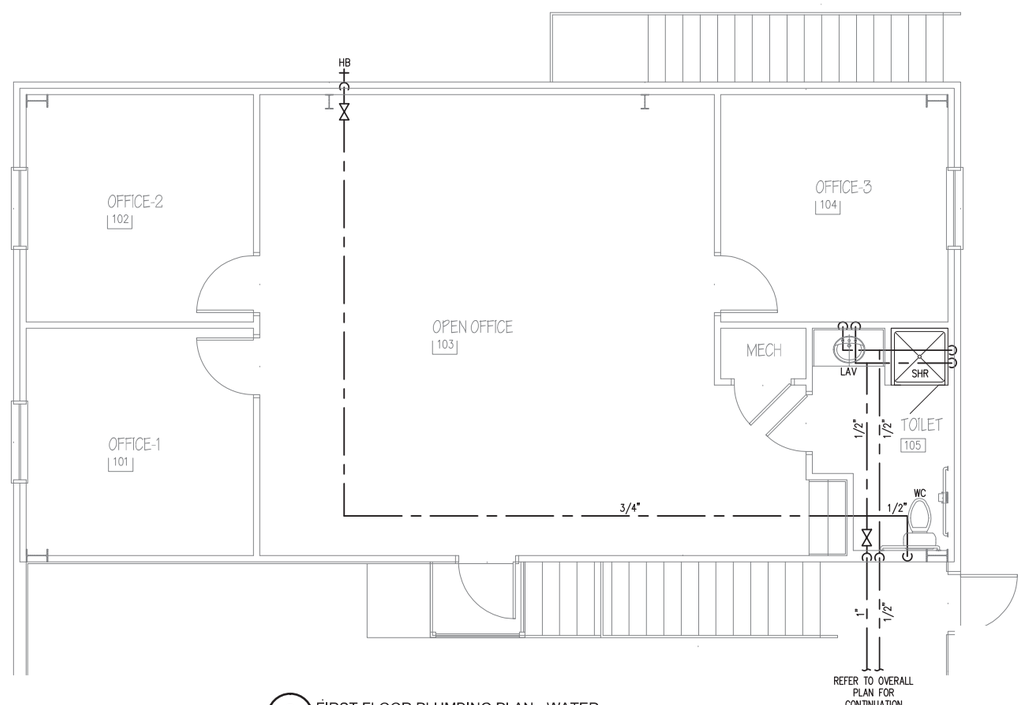
SHEET NO.
P-0.4



1 FIRST FLOOR PLUMBING PLAN
SCALE: 1/8"=1'-0"



2 FIRST FLOOR PLUMBING PLAN - SEWER
SCALE: 1/4"=1'-0"



3 FIRST FLOOR PLUMBING PLAN - WATER
SCALE: 1/4"=1'-0"

GEORGIA
REGISTERED
NO. 036854
PROFESSIONAL
ENGINEER
KRUNAL M. PATEL

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MARIETTA, GA 30062
(770) 429-0001

DATE:
PROJECT NUMBER:

	DATE
△	REVISION

DSGN: KMP/JWK
DRWN: KMP/JWK
CHCK: KMP

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ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

PLUMBING PLANS-
WATER & SEWER

SHEET NO.
P-1.1

EDEC
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TEL. (770) 493-8685

SCHEMATIC DIAGRAM SYMBOLS

- CONDUCTORS CONNECTED
- CONDUCTORS NOT CONNECTED
- CONNECTION POINT
- xx — TERMINAL POINT FOR OUTGOING CONDUCTORS, WITH IDENTIFICATION "xx" DENOTES CONTRACTOR ASSIGNED.
- MCP–xxx, xxA — MAGNETIC–ONLY CIRCUIT BREAKER (MCP), WITH CURRENT RATING
- CB–xxx, xxA — CIRCUIT BREAKER, THERMAL–MAGNETIC UNLESS OTHERWISE NOTED, WITH FRAME SIZE AND TRIP RATING
- FU–xxx, xxA — FUSE WITH SIZE AND OPTIONAL IDENTIFICATION.
- DS–xxx, xxA — DISCONNECT SWITCH. RATING OPTIONAL. 30 AMP, 600V RATED MINIMUM UNLESS OTHERWISE NOTED.
- FD–xxx, xxA — FUSE DISCONNECT SWITCH. RATING OPTIONAL. 30 AMP, 600V MINIMUM UNLESS OTHERWISE NOTED.
- M–xxx, xx HP — MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
- M — MOTOR STARTER COIL
- OL — THERMAL MOTOR OVERLOAD
- M — MOTOR CONTACT
- LS–XXX / LS–XXX — LIMIT SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- PS–XXX / PS–XXX — PRESSURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- TS–XXX / TS–XXX — TEMPERATURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- FS–XXX / FS–XXX — FLOW SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- FLT–XXX / FLT–XXX — LEVEL SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- PRS–XXX / PRS–XXX — PROXIMITY SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- PCS–XXX / PCS–XXX — PULLCORD SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- PB–XXX / PB–XXX — MOMENTARY PUSHBUTTON NORMALLY CLOSED AND NORMALLY OPEN
- SS–XXX / SS–XXX
- 0X / 0X — SELECTOR SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- TDS–XXX, 0–30 SEC / TROOX–XX, 0–30 SEC — TIME DELAY SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- CR–XXX / CR–XXX — CONTROL RELAY CONTACT NORMALLY CLOSED AND NORMALLY OPEN
- SV–XXX — SOLENOID VALVE
- CR–XXX — CONTROL RELAY
- LT–XXX — PILOT LIGHT X = LENS COLOR (A = AMBER, B = BLUE, G = GREEN, R = RED, W = WHITE)
- AL–XXX — ALARM LIGHT
- AH–XXX — ALARM HORN
- H1, H2, CPT, xxV–PRI, xxV–SEC, xxKVA, X1, X2 — CONTROL POWER TRANSFORMER, PRIMARY AND SECONDARY VOLTAGE SHOWN. SIZE AS SHOWN OR SPECIFIED.
- CT–xxx, xS — CURRENT TRANSFORMER. PRIMARY/SECONDARY. TURNS RATIO AS SHOWN.
- XZ–XXX — MOTOR SPACE HEATER

GROUNDING SYMBOLS

- GROUND ROD, 3/4" x 10'–0", COPPERCLAD (UNLESS OTHERWISE NOTED)
- GROUND ROD AND WELL
- COMPRESSION TYPE GROUNDING BOND TO MOTOR CASING OR EQUIPMENT
- EXOTHERMIC TYPE GROUNDING BOND TO MOTOR CASING OR EQUIPMENT

ONE LINE DIAGRAM SYMBOLS

- CB–xxx, xxA–T, xxA–F — LOW VOLTAGE POWER CIRCUIT BREAKER, DRAW–OUT TYPE, FRAME AND TRIP ID SHOWN
- CB–xxx, xxA–T, xxA–F — MOLDED CASE CIRCUIT BREAKER, FRAME AND TRIP ID SHOWN
- LIGHTNING ARRESTER AND GROUND
- DS–xxx — DISCONNECT OR ISOLATING SWITCH: CONTINUOUS RATING SHOWN
- MCP–xxx, xxA–T, xxA–F — MAGNETIC–ONLY CIRCUIT BREAKER (MCP), DRAW–OUT TYPE, FRAME AND TRIP ID SHOWN
- FD–xxx, xxA–T, xxA–F — FUSED DISCONNECT SWITCH, FUSE AND SWITCH CONTINUOUS RATINGS SHOWN
- TFR–xxx, xxV–PRI, xxV–SEC, x%Z, xxKVA — POWER TRANSFORMER: PRIMARY & SECONDARY VOLTAGES, %Z, SIZE SHOWN
- CT–xxx, xS — CURRENT TRANSFORMER: RATIO SHOWN (3 INDICATES NO. OF CT'S) METER SWITCH, xS: AS – AMMETER SWITCH; VS – VOLTMETER SWITCH; FS – FREQUENCY SWITCH
- PT–xxx — POTENTIAL TRANSFORMER, PRIMARY & SECONDARY VOLTAGES & WINDINGS SHOWN. (x) UNITS
- METER — METER: A – AMMETER; W – WATTMETER; KWH – WATT–HOUR METER; F – FREQUENCY METER; VAR – VAR METER; V – VOLTMETER
- FVNR, SIZE x, OL — FULL VOLTAGE, NON–REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
- FVR, SIZE x, OL — FULL VOLTAGE, REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
- VFD–xxx, xxHP — VARIABLE FREQUENCY DRIVE, NEMA SIZE INDICATED
- RVSS–xxx, xxHP — REDUCED VOLTAGE SOLID STATE DRIVE (SOFT START), NEMA SIZE INDICATED
- xx HP, M–xxx — MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
- GENERATOR RECEPTACLE
- MTS–xxx, N, E, L — MANUAL TRANSFER SWITCH
- xx, P–xxx, x/c #xx, 1/c #xx GND IN x" C. — CABLE TAG: P – POWER CABLE; C – CONTROL CABLE; S – SHIELDED SIGNAL CABLE

CIRCUIT AND RACEWAY SYMBOLS

- RACEWAY OR WIRING SYSTEM ABOVE FLOOR LEVEL BELOW CEILING, EXPOSED. (UNLESS OTHERWISE NOTED)
- RACEWAY OR WIRING SYSTEM BELOW FLOOR LEVEL, ABOVE CEILING, HIDDEN, OR EXISTING CABLE/CONDUIT. (UNLESS OTHERWISE NOTED)
- SCHEMATIC DIAGRAM FIELD WIRING. (UNLESS OTHERWISE NOTED)
- ONE LINE DIAGRAM EQUIPMENT ENCLOSURE. (UNLESS OTHERWISE NOTED)
- G — GROUNDING CONDUCTOR (CONCEALED), #4/0 AWG BARE COPPER
- GG GG — GROUNDING CONDUCTOR (EXPOSED), #4/0 AWG INSULATED COPPER
- PBD A–1,3,5 — HOME RUN – SEE PANELBOARD SCHEDULE FOR CIRCUIT INFORMATION. EXAMPLE: HOME TO PANELBOARD PBD A, CIRCUITS 1, 3, AND 5

GENERAL ABBREVIATIONS

AR	ALARM RELAY	MCB	MAIN CIRCUIT BREAKER
AS	AMMETER SELECTOR SWITCH	MCC	MOTOR CONTROL CENTER
A, AMP	AMP(S), AMPERE(S)	MCP	MOTOR CONTROL PANEL/MOTOR CIRCUIT PROTECTOR
AC	ALTERNATING CURRENT		
AFF	ABOVE FINISHED FLOOR	MECH	MECHANICAL
AHAP	AS HIGH AS POSSIBLE	MFR	MANUFACTURE(R)
AIC	AMPS INTERRUPTING CAPACITY, SYMM.	MH	MANHOLE
AL	ALUMINUM	MIC	MICROPHONE
AT	AMPERE TRIP	MIN	MINIMUM
AF	AMPERE FRAME	MISC	MISCELLANEOUS
AUTO	AUTOMATIC	mM	MILLIMETER
AUX	AUXILIARY	mV	MILLIVOLT
AWG	AMERICAN WIRE GAUGE	MCM	MILLI CIRCULAR MILLS
		MOP	MOTOR OPERATOR PANEL
BC	BARE COPPER CONDUCTOR	MPR	MOTOR PROTECTION RELAY
BKR	BREAKER	MS	MOTOR STARTER
		MTR	MOTOR
C	CONDUCTOR/CONTACTOR	MVS	MEDIUM VOLTAGE STARTER
CB	CIRCUIT BREAKER		
CJB	CIRCUIT JUNCTION BOX	N/A	NOT APPLICABLE
CKT	CIRCUIT	NC	NORMALLY CLOSED
CLG	CEILING	NEUT,N	NEUTRAL
CR	CONTROL RELAY	NIC	NOT IN CONTRACT
CND	CONDUIT	NO	NORMALLY OPEN
CONC	CONCRETE	NOM	NOMINAL
CS	CONTROL SWITCH	NP	NAMEPLATE
CONT	CONTROL	NTS	NOT TO SCALE
CPT	CONTROL POWER TRANSFORMER		
CT	CURRENT TRANSFORMER	OC	ON CENTER
CU	COPPER	OD	OUTSIDE DIAMETER
CWP	COLD WATER PIPE	OH	OVERHEAD
		OL's	OVERLOADS
D	DIAMETER	OT	OIL TIGHT
DB	DUCT BANK		
DC	DIRECT CURRENT	P	POLE
DET	DETAIL	PA	PUBLIC ADDRESS
DIAG	DIAGRAM	PB	PUSHBUTTON, PULLBOX
DPSH	DIFFERENTIAL PRESSURE SWITCH	PE	PHOTO ELECTRIC CELL
DS	DISCONNECT SWITCH	PF	POWER FACTOR
DWG	DRAWING	PH	PHASE
		PJB	POWER JUNCTION BOX
EA	EACH	PLC	PROGRAMMABLE LOGIC CONTROLLER
EC	ELECTRICAL CONTRACTOR	PNL	PANEL
EF	EXHAUST FAN	PP	POWER PANEL
EL	ELEVATION	PR	PAIR
ELEC	ELECTRIC(AL)	PRI	PRIMARY
EMER	EMERGENCY	PS	PRESSURE SWITCH
ENCL	ENCLOSURE/ENCLOSED	PT	POTENTIAL TRANSFORMER
EP	EXPLOSION PROOF EQUIP.	PVC	POLYVINYL CHLORIDE
EX, E	EXISTING	PWR	POWER
FCP	FURNISHED WITH EQUIPMENT PANEL	QSH	SHEAR PIN LIMIT SWITCH
FDR	FEEDER		
FLA	FULL LOAD AMPS	RCPT	RECEPTACLE
FPP	FIBER OPTIC DISTRIBUTION PANEL	RCT	REACTOR
FS	FLOW SWITCH	REF	REFERENCE REQ'D REQUIRED
FU	FUSE	RMS	ROOT MEAN SQUARE
FUT	FUTURE	RTD	RESISTANCE TEMPERATURE DETECTOR
FVNR	FULL VOLTAGE NON–REVERSING		
FVR	FULL VOLTAGE REVERSING	SCH	SCHEDULE
		SE	SPEED SENSOR
GALV	GALVANIZED	SEC	SECONDARY
GEN	GENERATOR	SEL	SELECTOR
GFR	GROUND FAULT RELAY	SER	SERVICE ENTRANCE RATED
GRD	GROUND	SPDT	SINGLE POLE DOUBLE THROW
GRS	GALVANIZED RIGID STEEL	SPEC	SPECIFICATION
		SPHTR	MOTOR SPACE HEATER
H	HIGH	SPKR	SPEAKER
HGT	HEIGHT	SS	STAINLESS STEEL
HH	HANDHOLE	SSL	SPEED SWITCH
HID	HIGH INTENSITY DISCHARGE	STP	SHIELDED TWISTED PAIR
HP	HORSEPOWER	SUB	SUBSTATION
HS	HAND STATION (SWITCH)	SW	SWITCH
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	SYMM	SYMMETRICAL
		SYS	SYSTEM
HZ	HERTZ (CYCLES PER SECOND)	SV	SOLENOID OPERATED VALVE
HOA	HAND/OFF/AUTO	SPB	SIGNAL PULL BOX
HOR	HAND/OFF/REVERSE		
HMH	HIGH VOLTAGE MANHOLE	TB	TERMINAL BOX
		TEL	TELEPHONE
ID	INSIDE DIAMETER	TEMP	TEMPERATURE
IMC	INDIVIDUAL MOTOR CONTROLLER	TFR	TRANSFORMER
INTLK	INTERLOCK	TH	THERMOSTAT
INST	INSTANTANEOUS	TJB	TERMINAL JUNCTION BOX
INSTR	INSTRUMENT	TSH	TEMPERATURE SWITCH HIGH
I/O	INPUT–OUTPUT	TV	TELEVISION
		TYP	TYPICAL
JB	JUNCTION BOX	TR	TIMING RELAY
		TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
KV	KILOVOLT		
KVA	KILOVOLT–AMPERE		
KVAR	KILOVOLT–AMPERE REACTIVE	UG	UNDERGROUND
KW	KILOWATT	UH	UNIT HEATER
KWH	KILOWATT–HOUR	UON	UNLESS OTHERWISE NOTED
KAIC	KILO AMPERE INTERRUPTING CURRENT		
		V	VOLT
L–O–R	LOCAL–OFF–REMOTE	VA	VOLT AMPERE
L	LONG	VAR	VOLT AMPERE REACTIVE
LC	LIGHTING CONTACTOR	VFD	VARIABLE FREQUENCY DRIVE
LCP	LOCAL CONTROL PANEL	VSH	VIBRATION SWITCH
LP	LIGHTING PANEL		
LOS	LOCK–OUT STOP	W	WATT, WIRE, WIDE
LSIG	LONG, SHORT, INSTANTANEOUS TRIP SETTING AND GROUND FAULT PROTECTION	W/	WITH
		W/O	WITHOUT
LSL	LEVEL SWITCH LOW	WE	WEIGHT LOAD CELL
LSO	LIMIT SWITCH OPEN	WIT	WEIGHT INDICATING TRANSMITTER
LSC	LIMIT SWITCH CLOSED	WP	WEATHERPROOF
LTG	LIGHTING		
LV	LOW VOLTAGE	XL	WARNING HORN/LIGHT
LSH	LEVEL SWITCH HIGH	XT	ANEMOMETER
M	MOTOR CONTACTOR	ZS	POSITION (LIMIT) SWITCH
mA	MILLIAMPERE	ZSO	POSITION (LIMIT) SWITCH OPEN
MAX	MAXIMUM	ZSC	POSITION (LIMIT) SWITCH CLOSED
		ZT	POSITION TRANSMITTER

GENERAL NOTES:

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DULUTH, GEORGIA 30097
TEL. (770) 493-8685

1. SCOPE:
   A. FURNISH ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS REQUIRED TO COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM INCLUDING BUT NOT LIMITED TO WIRING, BOXES, LIGHT FIXTURES, PANELS, SWITCHES, RECEPTACLES, DISCONNECTS, STARTERS, AND ALL OTHER WORK INDICATED ON THE DRAWINGS OR AS SPECIFIED HEREIN.
   B. OBTAIN ALL PERMITS, INSPECTIONS, AND APPROVALS AS REQUIRED BY THE LOCAL AUTHORITIES HAVING JURISDICTION AND DELIVER CERTIFICATE OF APPROVAL TO THE GENERAL CONTRACTOR. ALL ASSOCIATED FEES SHALL BE PAID BY THE CONTRACTOR.
   C. ALL MATERIALS AND EQUIPMENT OF THE ELECTRICAL SYSTEM NECESSARY FOR ITS PROPER AND SAFE OPERATION OR OTHERWISE REQUIRED BY CODE, BUT NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, SHALL BE FURNISHED AND INSTALLED WITHOUT ADDITIONAL CHARGE.
   D. WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE, THE LATEST STANDARD BUILDING CODE, NFPA 820, ANY OTHER LOCALLY ADOPTED CODES AND LOCAL AUTHORITIES HAVING JURISDICTION.
2. ALL SUBSTITUTIONS FOR EQUIPMENT AND MATERIAL SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER TRADES. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY THE ACTUAL LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. AND COORDINATED THE INSTALLATION ACCORDINGLY. THE EQUIPMENT WIRING SHALL INCLUDE ALL NECESSARY CABLES AND CONDUIT REQUIRED FOR THE PROPER AND SAFE EQUIPMENT OPERATION.
4. ALL CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM CONDUCTOR SIZE FOR POWER AND LIGHTING WIRING. USE #14 AWG MINIMUM CONDUCTOR FOR SIGNAL WIRING. THE INSULATION FOR ALL CONDUCTORS SHALL BE THWN–2. SERVICE ENTRANCE CONDUCTORS SHALL BE XHHW. ALL CABLE INSTALLED IN CABLE TRAYS SHALL BE TC RATED.
5. POWER WIRES SIZES #12 AWG AND #10 AWG SHALL BE SOLID TYPE. ALL OTHER SIZES SHALL BE STRANDED. CABLES BETWEEN THE VFD AND ASSOCIATED MOTOR SHALL BE SHIELDED POWER VFD RATED CABLES.
6. ALL EXPOSED CONDUITS SHALL BE ALUMINUM, UNLESS NOTED OTHERWISE ON THE DRAWINGS, MINIMUM OF 3/4". ALL BURIED CONDUIT SHALL BE PVC–40, MINIMUM OF 1". ALL UNDERGROUND CONDUITS SHALL HAVE RIGID STEEL ELBOWS.
7. ALL FITTINGS SHALL BE CAST WITH THREADED HUBS. ALL CONNECTIONS SHALL BE COMPRESSION TYPE.
8. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CABLES AND EQUIPMENT LUG SIZES. IN CASE THE CABLE IS OF A LARGER SIZE THAN THE EQUIPMENT LUG, CONTRACTOR SHALL PROVIDE THE REQUIRED CONNECTOR AT NO ADDITIONAL CHARGE TO OWNER.
9. CONTRACTOR SHALL PROVIDE PULL STRING AND IDENTIFICATION LABELS AT EACH CONDUIT END FOR ALL SPARE CONDUITS.
10. CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND DISTANCES IN THE FIELD. IN CASE OF DISCREPANCY, CONTRACTOR SHALL INCLUDE A MORE EXPENSIVE OPTION.
11. CONTRACTOR SHALL ADJUST CIRCUIT BREAKER SIZES, CABLES, AND CONDUITS FOR VENDOR SUPPLIED EQUIPMENT AT NO ADDITIONAL COST BASED ON THE ACTUAL APPROVED SHOP DRAWINGS.
12. ALL SCHEMATIC WIRING DIAGRAMS ARE GENERAL IN NATURE. CONTRACTOR SHALL ADJUST NUMBER AND SIZE OF CABLES/CONDUITS BASED ON THE APPROVED VENDOR DRAWINGS.
13. WHEN THE CABLES ARE LARGER THAN THE TERMINATING LUGS OR TERMINALS (DUE TO VOLTAGE DROP), THE CONTRACTOR SHALL PROVIDE A TERMINAL JUNCTION BOX FOR CABLE SIZE REDUCTION.
14. ALL PHONE AND COMPUTER WIRING TO BE EMT CONDUIT.
15. CONTRACTOR SHALL INSTALL ALL WIRING BETWEEN TELEPHONE BACKBOARD AND DATA/PHONE BOXES. COORDINATE WITH TELEPHONE COMPANY FOR EXACT TYPE AND REQUIREMENTS.
16. CONTRACTOR SHALL ADJUST CIRCUIT BREAKER SIZES, CABLES, AND CONDUITS FOR VENDOR SUPPLIED EQUIPMENT AT NO ADDITIONAL COST BASED ON THE ACTUAL APPROVED SHOP DRAWINGS.
17. CONTRACTOR SHALL PROVIDE ALL REQUIRED PULLBOXES AND/OR CONDULETS TO MEET NEC ARTICLE 314 FOR CABLE PULLS.

PLAN DRAWING SYMBOLS

- (M) — MOTOR CONNECTION
- ☒ — MOTOR STARTER, INDIVIDUAL –– NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY IN NEMA 4X ENCLOSURE UNLESS OTHER WISE NOTED. MOUNT AT 4'–8" TO CENTER OF STARTER.
- ☒ — COMBINATION MOTOR STARTER/DISCONNECT, INDIVIDUAL –– NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY IN NEMA 4X ENCLOSURE UNLESS OTHERWISE NOTED. MOUNT AT 4'–8" TO CENTER OF STARTER/DISCONNECT.
- ☐ — DISCONNECT SWITCH. DISCONNECT SWITCHES ARE HEAVY DUTY, SINGLE THROW, WITH NEMA 4X ENCLOSURE UNLESS OTHERWISE NOTED. MOUNT AT 4'–8" TO CENTER OF DISCONNECT.
- ☒ — FUSED DISCONNECT, NON–FUSED. PROVISION FOR CLASS R FUSES.
- ⊗ — FIELD INSTRUMENT CONNECTION
- ▫ — START/STOP HAND STATION MOUNTED TO HANDRAIL (NEMA 4X UNLESS OTHERWISE NOTED)
- $_x — 120V, 20A, 1P TOGGLE SWITCH [BLANK] = 1P TOGGLE SWITCH; 2 = 2P TOGGLE SWITCH; 3 = 3P TOGGLE SWITCH; D = SLIDE DIMMER; M = MOTOR RATED; S = TOGGLE WITH OCCUPANCY SENSOR
- DUPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 18" ABOVE FINISHED FLOOR (A.F.F) OR 6" ABOVE COUNTER, DESK, OR CABINET.
- GFCI DUPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 18" ABOVE FINISHED FLOOR (A.F.F.) OR 6" ABOVE COUNTER, DESK, OR CABINET.
- QUADRAPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 18" ABOVE FINISHED FLOOR (A.F.F.) OR 6" ABOVE COUNTER, DESK, OR CABINET.
- JB — JUNCTION BOX
- 60A, 480V, 3PH WELDING RECEPTACLE
- EXHAUST FAN

BID SET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 29513 ALEC ZAYCHIK

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

PROJECT NUMBER: 18–11011
DATE: SEPTEMBER 2018

Δ	REVISION	DATE
A	ISSUED FOR REVIEW	11/27/18

DSGN: JB
DRWN: JB
CHCK: AZ

BAR BELOW IS 1" LONG FOR SCALES SHOWN. IF SHEET IS NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

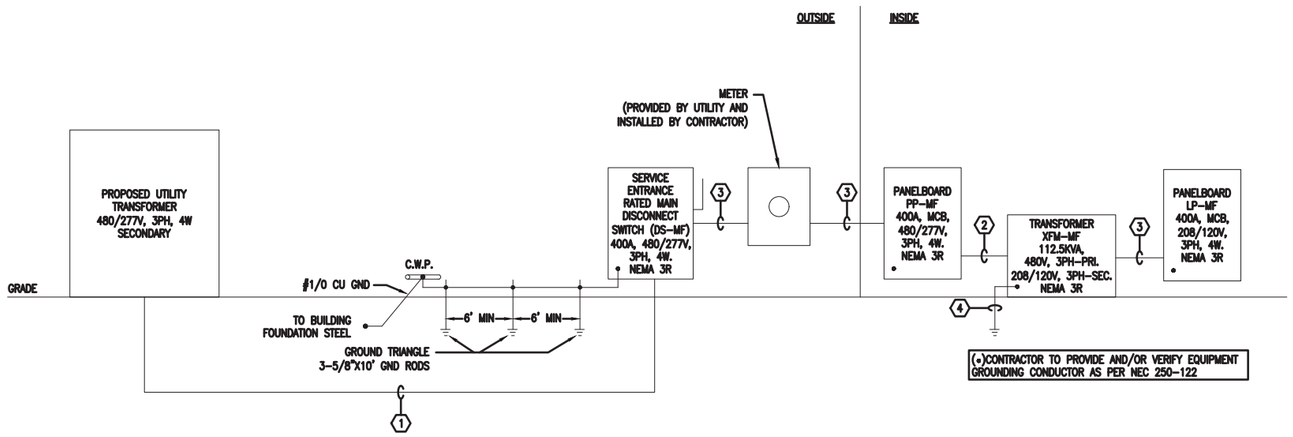
ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

ELECTRICAL LEGEND AND GENERAL NOTES

SHEET NO.
E-0.1

X:\Active Projects\2018 Projects\18017–ES RWR Maintenance Building\1.0 Drawings\1.1 Electrical\E–0.1 LEGEND.dwg — 11/26/2018

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685



1 ELECTRICAL RISER DIAGRAM

RISER DIAGRAM NOTES:

1. CONTRACTOR SHALL COORDINATE LOCATION OF THE 480/277V TRANSFORMER AND CONCRETE PAD REQUIREMENTS WITH SNAPPING SHOALS EMC DAVID FORD, DFORD@SSEMC.COM, (770) 385-2712. CONTRACTOR IS RESPONSIBLE FOR PAYING ALL COSTS ASSOCIATED WITH BRINGING 480/277V, 3PH, 4W SERVICE TO THE SITE.
2. CONTRACTOR SHALL PROVIDE A GROUND TRIANGLE CONSISTING OF THREE (3) 3/4" DIAMETER x 10' LONG COPPERCLAD GROUND RODS. THE RODS SHALL BE DRIVEN IN GROUND CONNECTED TOGETHER WITH #1/0 AWG BARE STRANDED COPPER CONDUCTORS. PROVIDE A GROUND WELL FOR ONE ROD.

CONDUCTOR/CONDUIT SCHEDULE
(1) 4/c #600KCMIL IN 4" C.
(2) 3/c #2/0 & 1/c #6 GND IN 1-1/2" C.
(3) 4/c #600KCMIL & 1/c #3 GND IN 3-1/2" C.
(4) 1/c #1/0 IN 1" C.

PANELBOARD PP-MF

VOLTAGE (L-N):	277V			ENCLOSURE TYPE:			NEMA 3R						
VOLTAGE (L-L):	480V			MOUNTING:			SURFACE						
PHASES, WIRES:	3 ϕ 4 W			AIC RATING (A):			42000						
MINIMUM BUS CAPACITY (A):	400A			NOTES:	—								
MAIN O.C. DEVICE (A):	400A MCB												

CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP) A		B		C		POLE	TRIP AMPS	DESCRIPTION	CKT NO
1	UNIT HEATER UH-1	30	3	18.0	18.0					3	30	UNIT HEATER UH-2	2
3						18.0	18.0						4
5								18.0	18.0				6
7	UNIT HEATER UH-3	30	3	18.0	18.0					3	30	UNIT HEATER UH-4	8
9						18.0	18.0						10
11								18.0	18.0				12
13	UNIT HEATER UH-5	30	3	18.0	5.5					3	20	WATER HEATER WH-1	14
15						18.0	5.5						16
17								18.0	5.5				18
19	AIR COMPRESSOR	100	3	40.0	0.0					1	20	SPARE	20
21						40.0	0.0			1	20	SPARE	22
23								40.0	0.0	1	20	SPARE	24
25	SPARE	50	3	0.0	0.0					1	20	SPARE	28
27						0.0	0.0			1	20	SPARE	28
29								0.0	0.0	1	20	SPARE	30
31	SPARE	50	3	0.0	0.0					1		SPACE	32
33						0.0	0.0			1		SPACE	34
35								0.0	0.0	1		SPACE	36
37	SPACE		1	0.0	82.8					3	175	TRANSFORMER XFM-MF	38
39	SPACE		1			0.0	96.0						40
41	SPACE		1					0.0	82.2				42
USE #12 FOR 20A CB				CONNECTED LOAD PHASE TOTALS (AMP)								USE #1 & #8GND FOR 100A CB	
USE #10 FOR 30A CB				218.5		231.7		217.9				REFER TO RISER DIAGRAM FOR CABLES THAT ARE NOT LISTED	

PANELBOARD LP-MF

VOLTAGE (L-N):	120V			ENCLOSURE TYPE:			NEMA 3R						
VOLTAGE (L-L):	208V			MOUNTING:			SURFACE						
PHASES, WIRES:	3 ϕ 4 W			AIC RATING (A):			22000						
MINIMUM BUS CAPACITY (A):	400A			NOTES:	PROVIDE 54 CIRCUIT PANELBOARD								
MAIN O.C. DEVICE (A):	400A MB												

CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP) A		B		C		POLE	TRIP AMPS	DESCRIPTION	CKT NO
1	AIR HANDLER AH-1	40	3	31.5	31.5					3	40	AIR HANDLE AH-2	2
3						31.5	31.5						4
5								31.5	31.5				6
7	HEAT PUMP HP-1	30	2	16.2	16.2					2	30	HEAT PUMP HP-2	8
9						16.2	16.2						10
11	EXHAUST FAN EF-2	20	2					4.8	6.0	1	20	SHOP RECEPTACLES	12
13				4.8	6.0					1	20	SHOP RECEPTACLES	14
15	OPEN OFFICE RECEPTACLES	20	1			12.0	4.5			1	20	SHOP RECEPTACLES	16
17	MICROWAVE	20	1					12.0	1.5	1	20	BATHROOM RECEPTACLE	18
19	SMALL REFRIGERATOR	20	1	12.0	6.0					1	20	OFFICE 3 RECEPTACLES	20
21	OFFICE 2 RECEPTACLES	20	1			6.0	6.0			1	20	OFFICE 1 RECEPTACLES	22
23	OFFICE 4 RECEPTACLES	20	1					6.0	6.0	1	20	OFFICE 5 RECEPTACLES	24
25	RECORDS RECEPTACLES	20	1	6.0	6.0					1	20	RECORDS RECEPTACLES	28
27	FIRE ALARM CONTROL PANEL ACP-MF	20	1			15.0	2.7			1	20	OUTDOOR LIGHTING	28
29	FIRST FLOOR LIGHTING	20	1					5.5	5.0	1	20	SECOND FLOOR LIGHTING	30
31	SHOP LIGHTING	20	1	10.0	1.0					1	20	LOUVER L-1	32
33	WELDING RECEPTACLE WR-1	50	2			40.0	40.0			2	50	WELDING RECEPTACLE WH-2	34
35								40.0	40.0				36
37	AIR DRYER AD-1	20	1	12.0	12.0					1	20	SCADA COMPUTER	38
39	SPARE	20	1			0.0	0.0			1	20	SPARE	40
41	SPARE	20	1					0.0	0.0	1	20	SPARE	42
43	PHONE BOARD RECEPTACLE	20	1	5.0	5.0					1	20	LIGHTING CONTACTOR LC-MF	44
45	SPARE	20	1			0.0	0.0			1	20	SPARE	46
47	SPARE	20	1					0.0	0.0	1	20	SPARE	48
49	BLASTING CAB	20	1	10.0	0.0					1		SPACE	50
51	SPACE		1			0.0	0.0			1		SPACE	52
53	SPACE		1					0.0	0.0	1		SPACE	54
USE #12 FOR 20A CB				CONNECTED LOAD PHASE TOTALS (AMP)								USE #8 & #10GND FOR 50A CB	
USE #10 FOR 30A CB				191.2		221.6		188.8					

2 PANELBOARD SCHEDULES

BID SET

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

GEORGIA REGISTERED No. 30613 PROFESSIONAL ENGINEER ALEC ZAYCHIK

PROJECT NUMBER: 18-11011
DATE: SEPTEMBER 2018

Δ	REVISION	DATE
A	ISSUED FOR REVIEW	11/27/18

DSGN: JB
DRWN: JB
CHCK: AZ

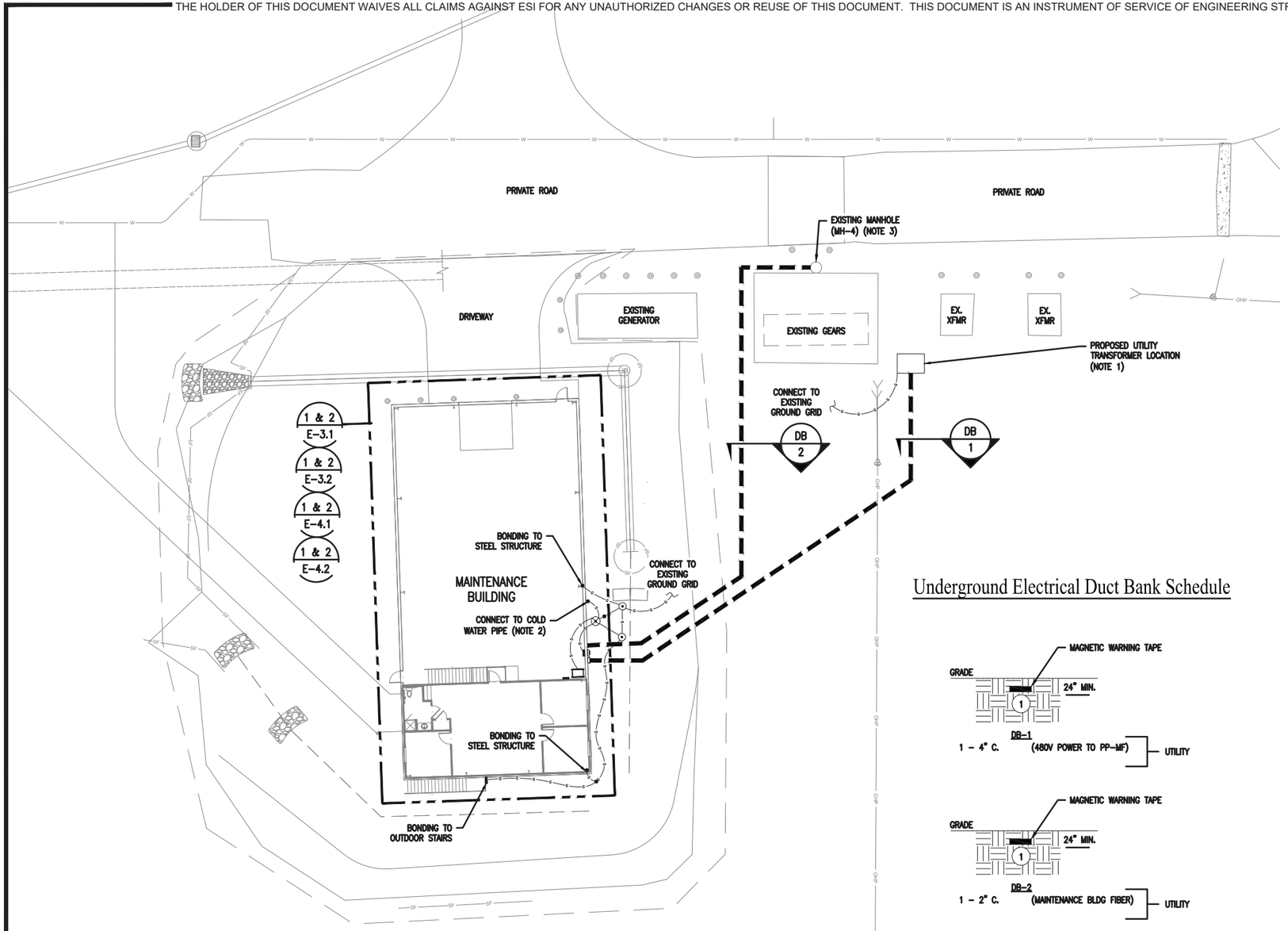
BAR BELOW IS 1" LONG FOR SCALES ENSURE THIS SHEET IS NOT LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

ELECTRICAL RISER DIAGRAM AND PANELBOARD SCHEDULE

SHEET NO.
E-1.1

X:\Active Projects\2018 Projects\18017-ES RWR Maintenance Building\1.0 Drawings\1.1 Electrical\E-1.1 RISER.dwg — 11/26/2018



Underground Electrical Duct Bank Schedule

ELECTRICAL SITE PLAN NOTES:

1. CONTRACTOR SHALL COORDINATE LOCATION OF THE 480/277V TRANSFORMER AND CONCRETE PAD REQUIREMENTS WITH SNAPPING SHOALS EMC DAVID FORD, DFORD@SSEMC.COM, (770) 385-2712. CONTRACTOR IS RESPONSIBLE FOR PAYING ALL COSTS ASSOCIATED WITH BRINGING 480/277V, 3PH, 4W SERVICE TO THE SITE.
2. CONTRACTOR SHALL PROVIDE CONNECTION TO THE COLD WATER PIPING AS PER NEC 250 FOR GROUNDING TERMINATION. REFER TO RISER DIAGRAM ON DWG. E-1.1, DETAIL 1 FOR FURTHER DETAILS.
3. CONTRACTOR SHALL ROUTE DUCT BANK DB-2 INTO EXISTING MAN HOLE MH-4 TO USE THE EXISTING SPARE CONDUITS TO CONNECT THE EXISTING PLANT TO THE PROPOSED MAINTENANCE BUILDING.
4. EXISTING MANHOLES ARE SHOW IN APPROXIMATE LOCATIONS FOR CONTRACTOR TO CALCULATE REQUIRED CABLE DISTANCES BETWEEN EXISTING PLANT AND PROPOSED MAINTENANCE BUILDING.
5. CONTRACTOR SHALL COORDINATE WITH ROCKDALE COUNTY TECHNOLOGY SERVICES TO PROVIDE THE REQUIRED FIBER CABLE TO EXTEND THE INTERNET AND PHONE SERVICE TO THE PROPOSED MAINTENANCE BUILDING AND TO PERFORM THE REQUIRED TERMINATIONS TO EXISTING PLANT COMMUNICATION TOWER/SERVICE AND TO PROPOSED EQUIPMENT AT THE MAINTENANCE BUILDING.

1 MAINTENANCE BUILDING ELECTRICAL SITE PLAN
SCALE: 1/16" = 1'-0"

GRAPHIC SCALE
16 0 8 16 32 64
(IN FEET)
1/16 inch = 1 ft.

2 EXISTING PLANT ELECTRICAL SITE PLAN
SCALE: 1/128" = 1'-0"

GRAPHIC SCALE
128 0 64 128 256 512
(IN FEET)
1/128 inch = 1 ft.

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

GEORGIA REGISTERED No. 26513 PROFESSIONAL ENGINEER ALEC ZAYCHIK

ESI ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

X:\Active Projects\2018 Projects\18017-ES RWR Maintenance Building\1.0 Drawings\1.1 Electrical\E-3.0 SITE PLAN.dwg — 11/26/2018

PROJECT NUMBER: 18-11011
DATE: SEPTEMBER 2018

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A	ISSUED FOR REVIEW	11/27/18

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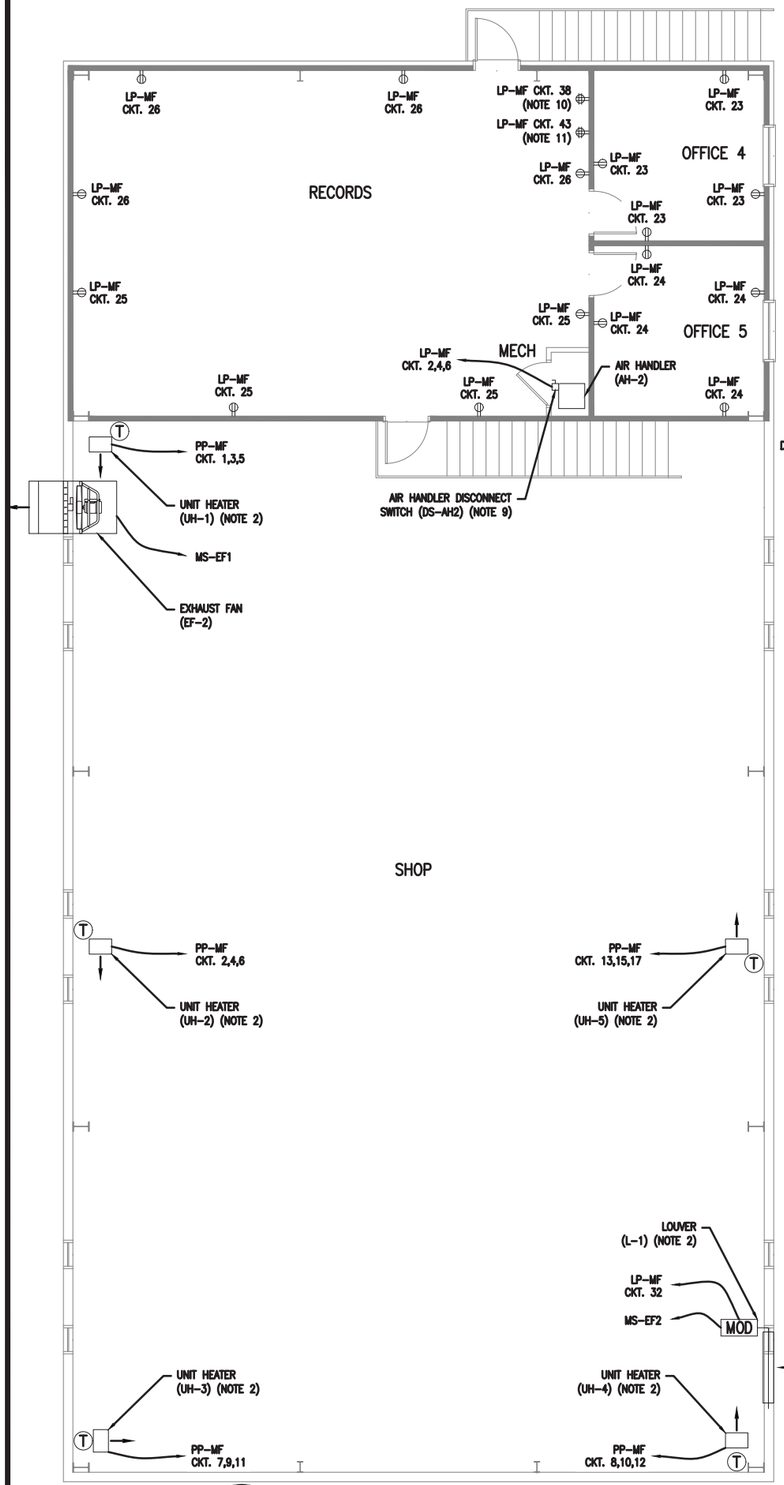
BAR BELOW IS 1" LONG FOR SCALES ADJUST IF SHEET IS NOT 1" LONG ON THIS SHEET. ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

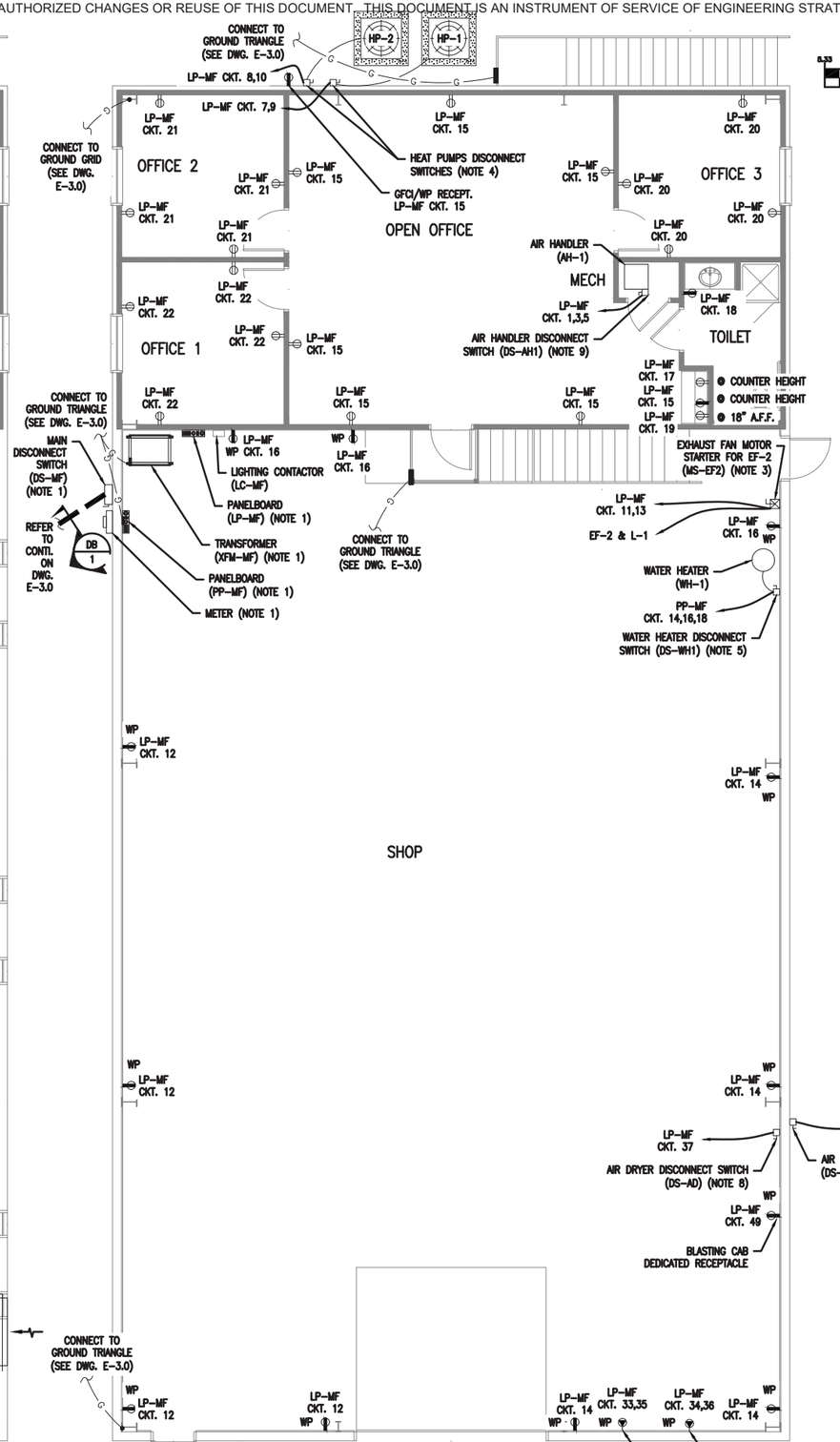
POWER AND GROUNDING
ELECTRICAL SITE PLAN

SHEET NO.
E-3.0

BID SET



1 UPPER FLOOR ELECTRICAL PLAN
SCALE: 3/16" = 1'-0"



2 MAIN FLOOR ELECTRICAL PLAN
SCALE: 3/16" = 1'-0"

GRAPHIC SCALE

8.33 0 2.67 5.33 10.67 21.33

(IN FEET)
3/16 inch = 1 ft.

EDEC, INC.
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ELECTRICAL PLANS NOTES:

1. CONTRACTOR SHALL REFER TO ONE LINE DIAGRAM AND PANELBOARD SCHEDULES ON DWG. E-1.1, FOR FURTHER EQUIPMENT DETAILS AND INFORMATION.
2. ELECTRIC UNIT HEATERS SHALL BE PROVIDED WITH INTEGRAL FUSIBLE OVER CURRENT PROTECTION AS INDICATED IN MECHANICAL DRAWING SPECS. TO BE PROVIDED BY MECHANICAL CONTRACTOR.
3. EXHAUST FAN 2 MOTOR STARTER SHALL BE PROVIDED BY MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS FOR FURTHER DETAILS. MOTOR STARTER SHALL BE PROVIDED WITH INTEGRAL OVER CURRENT PROTECTION AND BE FIELD LOCATED TO AVOID ANY INTERFERENCES AND TO PROVIDE THE REQUIRED WORKING CLEARANCES AND SHALL BE WITH IN LINE OF SITE OF THE EXHAUST FAN EF-2.
4. CONTRACTOR SHALL PROVIDE AND INSTALL 30A, 2POLE, 208V DISCONNECT SWITCH IN NEMA 3R ENCLOSURE FOR THE OUTDOOR HEAT PUMPS. DISCONNECT SWITCH SHALL BE FIELD LOCATED TO AVOID ANY INTERFERENCES AND TO PROVIDE THE REQUIRED WORKING CLEARANCES.
5. CONTRACTOR SHALL PROVIDE AND INSTALL 30A, 3POLE, 480V DISCONNECT SWITCH IN NEMA 3R ENCLOSURE FOR THE WATER HEATER. DISCONNECT SWITCH SHALL BE FIELD LOCATED TO AVOID ANY INTERFERENCES AND TO PROVIDE THE REQUIRED WORKING CLEARANCES.
6. CONTRACTOR SHALL PROVIDE AND INSTALL 50A, 208V, 1PH WELDING RECEPTACLE AND SHALL COORDINATE WITH OWNER FOR EXACT WELDING RECEPTACLE LOCATIONS. MOUNT WELDING RECEPTACLES AT COUNTER HEIGHT ELEVATION.
7. CONTRACTOR SHALL PROVIDE AND INSTALL 100A, 3POLE, 480V DISCONNECT SWITCH IN NEMA 3R ENCLOSURE FOR THE AIR COMPRESSOR. DISCONNECT SWITCH SHALL BE FIELD LOCATED TO AVOID AND INTERFERENCES AND TO PROVIDE THE REQUIRED WORKING CLEARANCES. CONTRACTOR SHALL COORDINATE WITH OWNER FOR EXACT EQUIPMENT LOCATION.
8. CONTRACTOR SHALL PROVIDE AND INSTALL 20A, 1POLE, 120V DISCONNECT SWITCH IN NEMA 3R ENCLOSURE FOR THE AIR DRYER. DISCONNECT SWITCH SHALL BE FIELD LOCATED TO AVOID AND INTERFERENCES AND TO PROVIDE THE REQUIRED WORKING CLEARANCES. CONTRACTOR SHALL COORDINATE WITH OWNER FOR EXACT EQUIPMENT LOCATION.
9. CONTRACTOR SHALL PROVIDE AND INSTALL 60A, 3POLE, 208V DISCONNECT SWITCHES IN NEMA 3R ENCLOSURE FOR THE AIR HANDLERS. DISCONNECT SWITCHES SHALL BE FIELD LOCATED TO AVOID AND INTERFERENCES AND TO PROVIDE THE REQUIRED WORKING CLEARANCES.
10. CONTRACTOR SHALL COORDINATE WITH OWNER FOR EXACT LOCATION OF THE SCADA COMPUTER SYSTEM AND PROVIDE THE DEDICATED RECEPTACLE/CIRCUIT FOR SCADA. (BRIAN PATTERSON @ TECHNOLOGY SERVICES – 770-278-7084).
11. CONTRACTOR SHALL COORDINATE WITH OWNER FOR EXACT LOCATION OF THE TELEPHONE/INTERNET SYSTEM BOARD AND PROVIDE THE DEDICATED RECEPTACLE/CIRCUIT. (BRIAN PATTERSON @ TECHNOLOGY SERVICES – 770-278-7084).

GEORGIA REGISTERED No. 29513 PROFESSIONAL ENGINEER ALEC ZAYCHIK

ESI
ENGINEERING STRATEGIES, INC.
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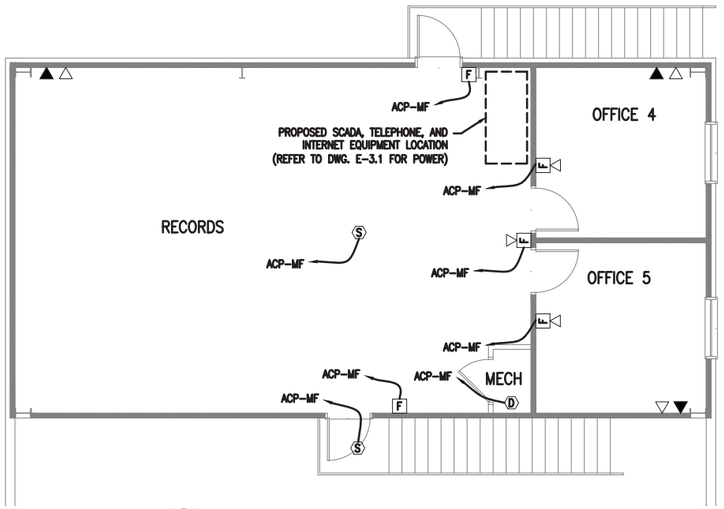
X:\Active Projects\2018 Projects\18017-ES RWR Maintenance Building\1.0 Drawings\1.1 Electrical\E-3.1 POWER PLAN.dwg — 11/26/2018

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

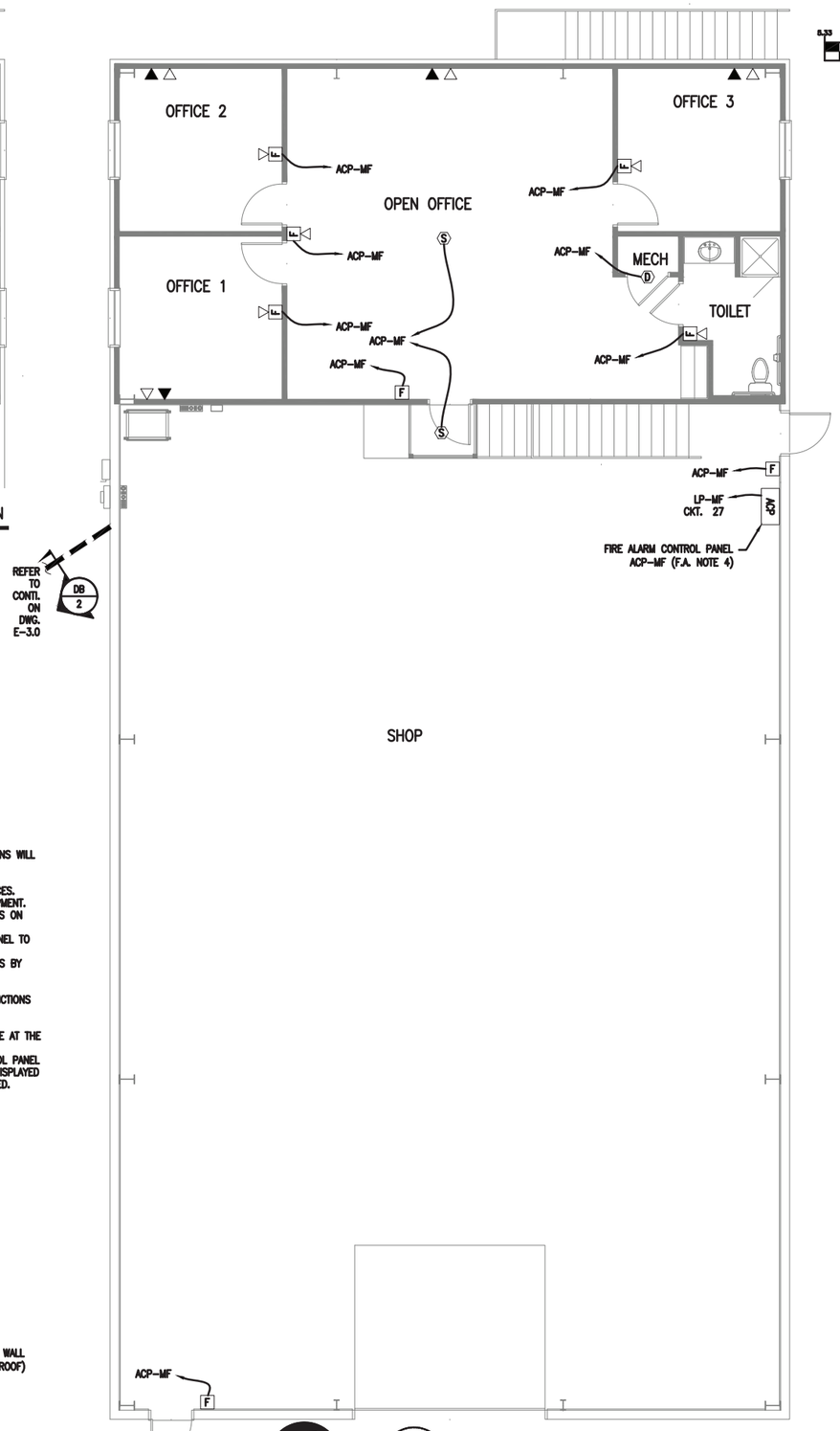
ELECTRICAL POWER
FIRST AND SECOND FLOOR PLANS

SHEET NO.
E-3.1

BID SET



1 UPPER FLOOR FIRE ALARM & COMMUNICATIONS PLAN
SCALE: 3/16" = 1'-0"



2 MAIN FLOOR FIRE ALARM & COMMUNICATIONS PLAN
SCALE: 3/16" = 1'-0"

GRAPHIC SCALE
8.33 0 2.67 5.33 10.67 21.33
(IN FEET)
3/16 inch = 1 ft.

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

PHONE AND INTERNET NOTES:

1. PROVIDE IEEE CATEGORY 6E ETHERNET CABLE FROM EACH NEW TELEPHONE JACK TO TELEPHONE BOARD IN RECORDS ROOM.
2. PROVIDE IEEE BOOTED CATEGORY 6E ETHERNET CABLE FORM EACH NEW NETWORK JACK TO THE RECORDS ROOM FOR CONNECTION TO INTERNET SERVICE SYSTEM EQUIPMENT.
3. CONTRACTOR SHALL PROVIDE ALL NECESSARY CABLE TERMINATIONS AND FACEPLATES FOR THE NETWORK AND TELEPHONE JACKS ON BOTH ENDS.
4. ROUTE TELEPHONE AND NETWORK CABLE IN 0.5" EMT CONDUIT.
5. CONTRACTOR SHALL ROUTE/PULL ETHERNET CABLES TO THE RECORDS ROOM FROM THE PROPOSED ETHERNET NETWORK CONNECTION JACKS AND CONNECT INTO PROPOSED NETWORK EQUIPMENT.
6. MOUNTING LOCATION OF ALL TELEPHONE AND NETWORK JACKS SHALL BE COORDINATED WITH THE RECEPTACLES SHOWN ON DWG. E-3.1.
7. TELEPHONE AND NETWORK JACKS SHALL BE MOUNTED IN THE WALL ABOVE THE CABINETRY BACK SPLASH WHERE APPROPRIATE.

PHONE AND INTERNET SYMBOLS:

▷ TELEPHONE BOX. MOUNT 18" A.F.F., INSTALL A 1/2" CONDUIT FROM BOX TO 6" ABOVE CEILING. PROVIDE PULL CORD FOR FUTURE CONNECTIONS AS REQUIRED.

▶ ETHERNET BOX. MOUNT 18" A.F.F., INSTALL A 1/2" CONDUIT FROM BOX TO 6" ABOVE CEILING. PROVIDE PULL CORD FOR FUTURE CONNECTIONS AS REQUIRED.

FIRE ALARM SYSTEM NOTES:

1. FURNISH AND INSTALL WIRING AND CONDUIT IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND THE NATIONAL ELECTRIC CODE. ALL WIRING SHALL BE IN METALLIC CONDUIT UP TO 15' A.F.F., 3/4" MIN. TRADE SIZE. WIRING ABOVE 15' A.F.F. SHALL BE SUPPORTED AND TRAINED ALONG STRUCTURAL MEMBERS. WALL MOUNTED DEVICES ARE TO RECESSED WHERE POSSIBLE. WHERE DEVICES AND RACEWAYS ARE REQUIRED TO BE SURFACE MOUNTED, USE SURFACE METAL RACEWAY WITH MATCHING FITTINGS AND BOXES.
2. NO WIRING SHALL BE SMALLER THAN #14 AWG. NO WIRING OTHER THAN THAT DIRECTLY ASSOCIATED WITH THE FIRE ALARM SYSTEM AND ITS AUXILIARY FUNCTIONS SHALL BE PERMITTED IN FIRE ALARM RACEWAYS.
3. SIGNALING LINE CIRCUITS SHALL BE CLASS "A" WIRING WITH NO "T" TAPS AND A MINIMUM OF 25% SPARE ADDRESSES FOR FUTURE USE. NOTIFICATION APPLIANCE CIRCUITS SHALL BE CLASS "B" WIRING, NOT TO EXCEED 80% OF RATED MODULE OUTPUT.
4. THE RISER DIAGRAM INDICATES TYPICAL SYSTEM DEVICES REQUIRED ONLY. SEE FLOOR PLANS FOR NUMBER AND LOCATION OF ALL DEVICES REQUIRED. FINAL LOCATION OF FIRE ALARM DEVICES SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES AND FIRE MARSHALL REQUIREMENTS.
5. LOCATE SMOKE DETECTORS AWAY FROM THE DIRECT AIR FLOW AND NO CLOSER THAN 3 FEET FROM AIR SUPPLY DIFFUSERS.
6. ALL AUDIBLE NOTIFICATION DEVICES SHALL ALARM WITH A 3-PULSE TEMPORAL PATTERN WHEN BUILDING EVACUATION IS REQUIRED.
7. NOTIFICATION DEVICES SHALL BE SYNCHRONIZED ACCORDING TO NFPA 72 6.8.6.4.3 AND ANNEX A WHERE MORE THAN TWO VISIBLE APPLIANCES ARE LOCATED WITHIN THE SAME FIELD OF VIEW OR NOTIFICATION ZONE. MORE THAN TWO VISIBLE APPLIANCES ARE NOT PERMITTED IN ANY FIELD OF VIEW UNLESS THEIR FLASHES ARE SYNCHRONIZED.
8. ENTIRE FIRE ALARM SYSTEM DESIGN SHALL BE APPROVED BY THE FIRE MARSHAL PRIOR TO ROUGH-IN.
9. FIRE ALARM SYSTEM DEVICE AND EQUIPMENT QUANTITIES, WIRING SIZES, ROUTING, ETC. SHALL BE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS AND REQUIREMENTS OF THE FIRE ALARM SYSTEM MANUFACTURER AND AS APPROVED BY THE OFFICE OF THE FIRE MARSHAL.
10. PROVIDE ANY ADDITIONAL FIRE ALARM DEVICES TO COMPLY WITH CODE REQUIREMENTS.
11. FURNISH AND INSTALL ALL REQUIRED INTERLOCK WIRING BETWEEN THE FIRE ALARM SYSTEM AND AIR HANDLING EQUIPMENT CONTROLS, DUCT SMOKE DAMPERS AND/OR MOTORIZED DAMPERS AS REQUIRED TO PERFORM THE AIR HANDLING SYSTEM SHUTDOWN FUNCTIONS AS DESCRIBED IN THE PROJECT SPECIFICATIONS OR AS REQUIRED BY CODE. PROVIDE ALL NECESSARY WIRING TO FIRE DAMPERS. SEE MECHANICAL DRAWINGS FOR QUANTITIES AND LOCATIONS.

FIRE ALARM SYSTEM SEQUENCE OF OPERATION:

IN THE EVENT OF A FIRE CONDITION THE FOLLOWING FUNCTIONS WILL OCCUR ON ALL PANELS.

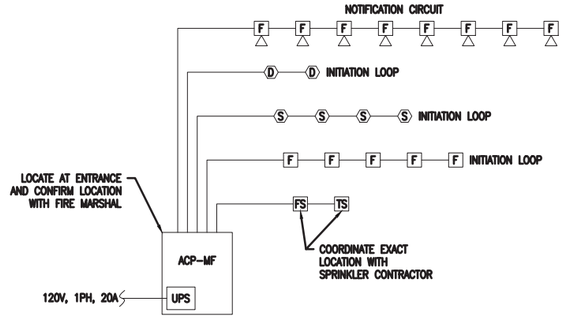
A. SOUND AND DISPLAY LOCAL FIRE ALARM SIGNALING DEVICES.
B. TRANSMIT ZONE CODE SIGNAL TO REMOTE STATION EQUIPMENT.
C. INDICATE LOCATION OF ALARM ZONE AND DEVICE ADDRESS ON FIRE ALARM CONTROL PANEL.
D. TRANSMIT SIGNAL TO BUILDING MECHANICAL CONTROL PANEL TO INITIATE SHUT DOWN OF MECHANICAL EQUIPMENT.
E. TRANSMIT SIGNAL TO RELEASE DOOR HOLD-OPEN DEVICES BY ZONE.

IN THE EVENT OF A TROUBLE CONDITION THE FOLLOWING FUNCTIONS WILL OCCUR ON ALL PANELS.

A. VISUAL AND AUDIBLE TROUBLE ALARM INDICATED BY ZONE AT THE FIRE ALARM CONTROL PANEL.
B. MANUAL ACKNOWLEDGE FUNCTION AT FIRE ALARM CONTROL PANEL SILENCES AUDIBLE TROUBLE ALARM. VISUAL ALARM IS DISPLAYED UNTIL INITIATING FAILURE OR CIRCUIT TROUBLE IS CLEARED.

FIRE ALARM SYSTEM SYMBOLS:

ACP	–	ALARM CONTROL PANEL
F	–	PULL STATION
S	–	SMOKE DETECTOR
D	–	DUCT SMOKE DETECTOR
F	–	SPEAKER/STROBE (CANDELA NOTED) WALL MOUNTED. (WP INDICATES WEATHERPROOF)
FS	–	AIR FLOW SWITCH INSIDE AIR DUCT



3 FIRE ALARM RISER DIAGRAM

BID SET

GEORGIA REGISTERED No. 26513 PROFESSIONAL ENGINEER ALEC ZAYCHIK

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

PROJECT NUMBER: 18-11011
DATE: SEPTEMBER 2018

	REVISION	DATE
A	ISSUED FOR REVIEW	11/27/18

DSGN: JB
DRWN: JB
CHCK: AZ

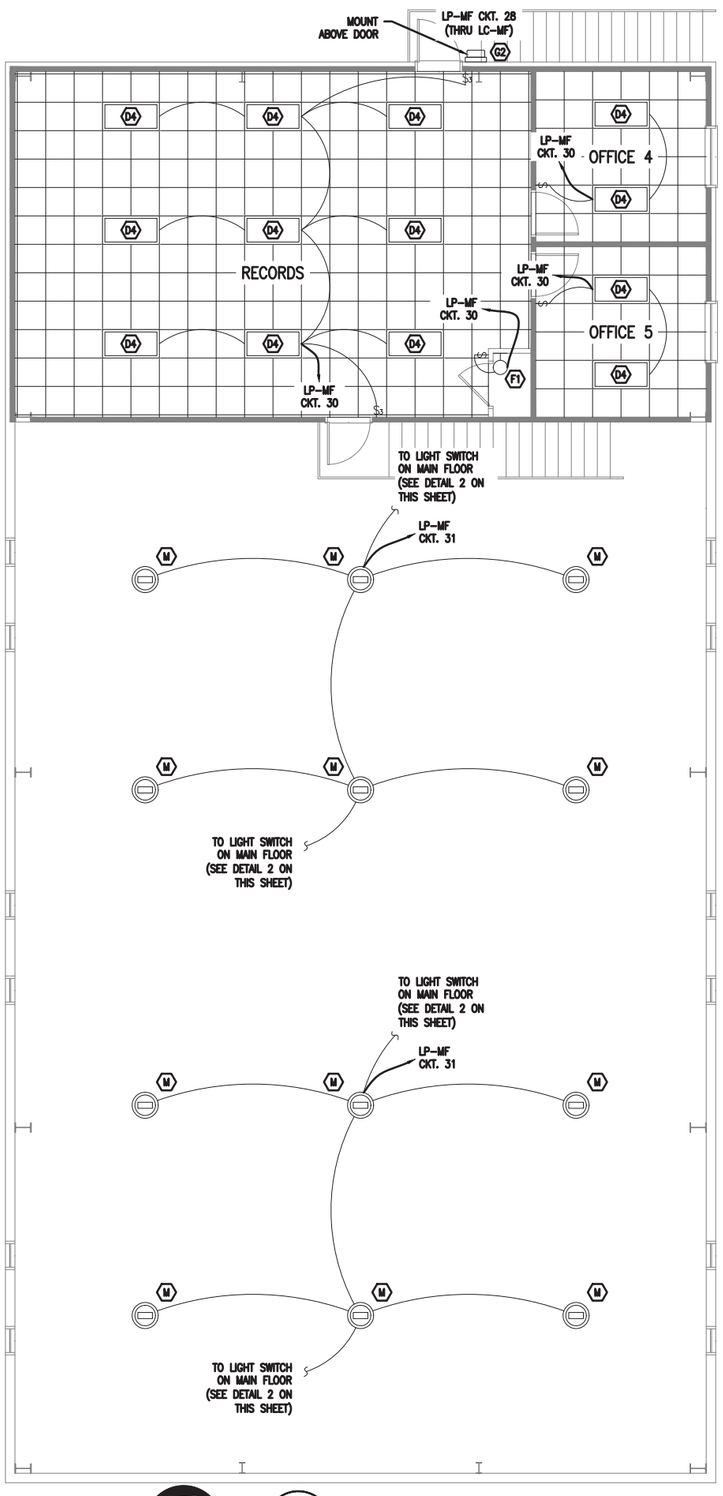
BAR BELOW IS 1" LONG FOR SCALES ENSURE THIS SHEET IS NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

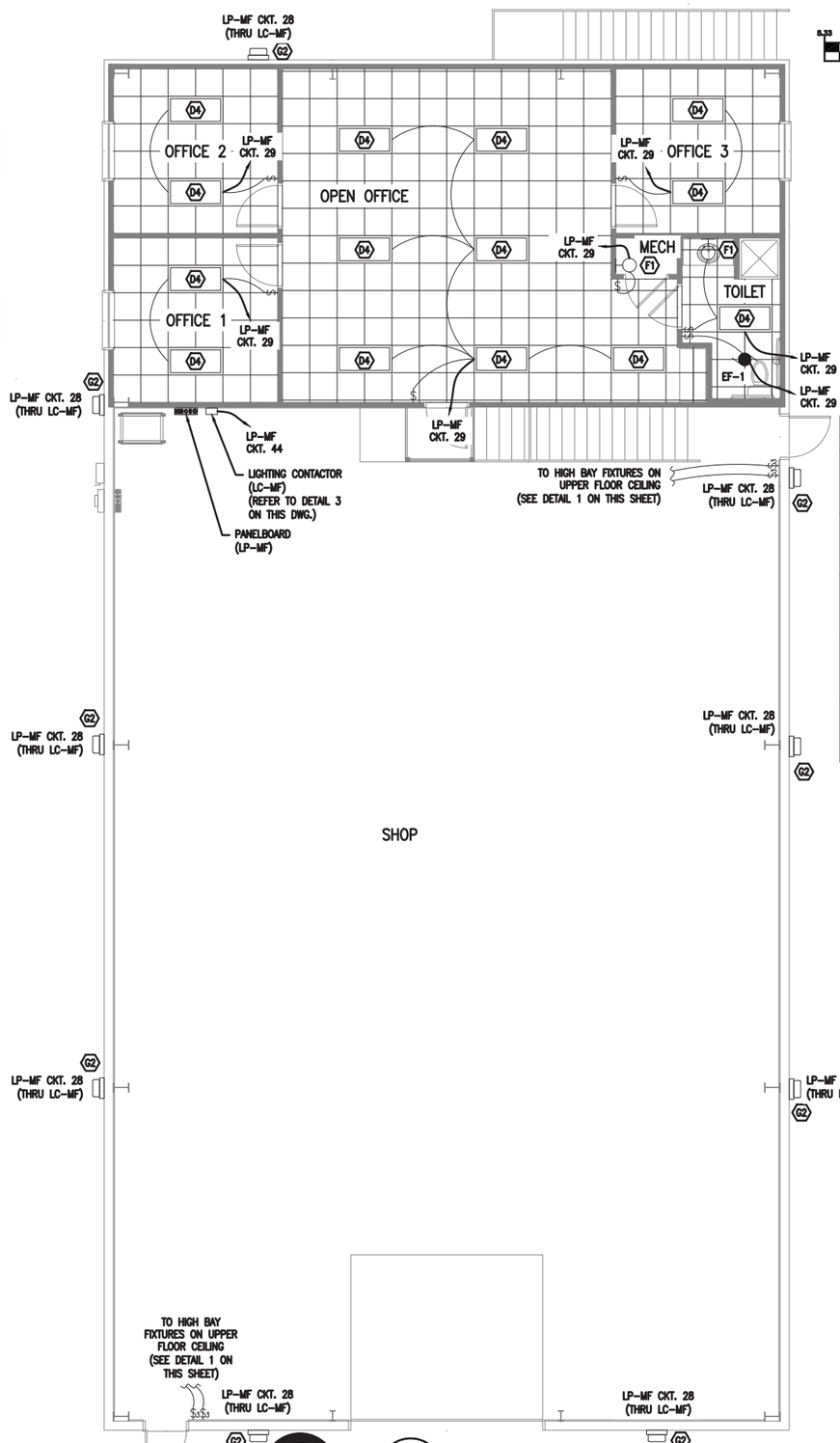
FIRE ALARM AND COMMUNICATIONS
FIRST AND SECOND FLOOR PLANS

SHEET NO.
E-3.2

X:\Active Projects\2018 Projects\18017-ES RWR Maintenonce Building\1.0 Drawings\1.1 Electrical\E-3.2 POWER PLAN.dwg — 11/26/2018



1 UPPER FLOOR LIGHTING PLAN
SCALE: 3/16" = 1'-0"

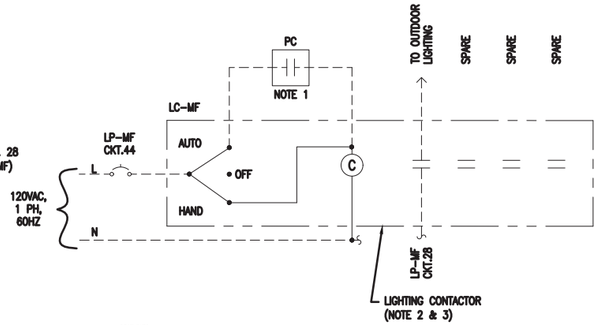


2 MAIN FLOOR LIGHTING PLAN
SCALE: 3/16" = 1'-0"

GRAPHIC SCALE
8.33 0 2.67 5.33 10.67 21.33
(IN FEET)
3/16 inch = 1 ft.

LIGHTING/POLE SCHEDULE			
SYMBOL/TYPE	DESCRIPTION	LAMP/VOLTAGE	MOUNTING
D4	2' X 4' INDOOR LIGHT FIXTURE LITHONIA #2TL4-48L-FW-A19-LP850	LED 120/277V, 1PH 40WATTS	CEILING/ RECESSED @8'A.F.F.
F1	ARCHITECTURAL INDOOR SCONCE LIGHT FIXTURE LITHONIA #MWSC-BNP & DRBL-1001	LED 120V, 1PH 9.5WATTS	WALL/ SURFACE
G2	ADJUSTABLE WALLPACK FIXTURE, FOR WET LOCATIONS, CORROSION RESISTANT (27W=100W-MH) LITHONIA #TWHLED-P1-50K-T3M-MVOLT-DDBXD	LED 120/277V, 1PH 27WATTS	WALL/ SURFACE @15'A.F.F.
M	LED HIGH BAY LIGHT FIXTURE LITHONIA MODEL #VEBL-18L-50K-80CRI-WH WITH ALL THE REQUIRED MOUNTING HARDWARE	LED 120/277V, 1PH 136WATTS	CEILING/ SURFACE @18'A.F.F.

NOTE:
DESIGN IS BASED ON THE EQUIPMENT SHOWN IN THE ABOVE SCHEDULE. LIGHTS AND POLE SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR PER SCHEDULE. ANY SUBSTITUTIONS SHALL BE APPROVED BY ENGINEER PRIOR TO PURCHASE/INSTALLATION.



NOTES:

1. "PC" – PHOTOCELL, 120V. LOCATE ON THE ROOF FACING NORTH. "TS" – TIME SWITCH WITH MANUAL INTEGRAL OVERRIDE SWITCH.
2. ELECTRICALLY-HELD HEAVY-DUTY LIGHTING CONTACTOR. 4 POLES, 20A RATED CONTACTS. TAG THE CONDUCTORS ON THE LINE SIDE OF THE LIGHTING CONTACTOR WITH THEIR RESPECTIVE CIRCUIT NUMBER.
3. INSTALL LIGHTING CONTROL IN NEMA 3R, 12 GAUGE GALVANIZED STEEL CABINET, FINISHED IN GRAY ENAMEL WITH HINGED DOOR AND LOCKING HANDLE. THE CONTACTOR SHALL BE 4 POLES, 120V COIL VOLTAGE EATON CLASS ECC03 OR APPROVED EQUAL.

3 LIGHTING CONTACTOR SCHEMATIC

BID SET

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

GEORGIA REGISTERED No. 29513 PROFESSIONAL ENGINEER ALEC ZAYCHIK

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

DATE: SEPTEMBER 2018
PROJECT NUMBER: 18-11011

△	REVISION	DATE
A	ISSUED FOR REVIEW	11/27/18

DSGN: JB
DRWN: JB
CHCK: AZ

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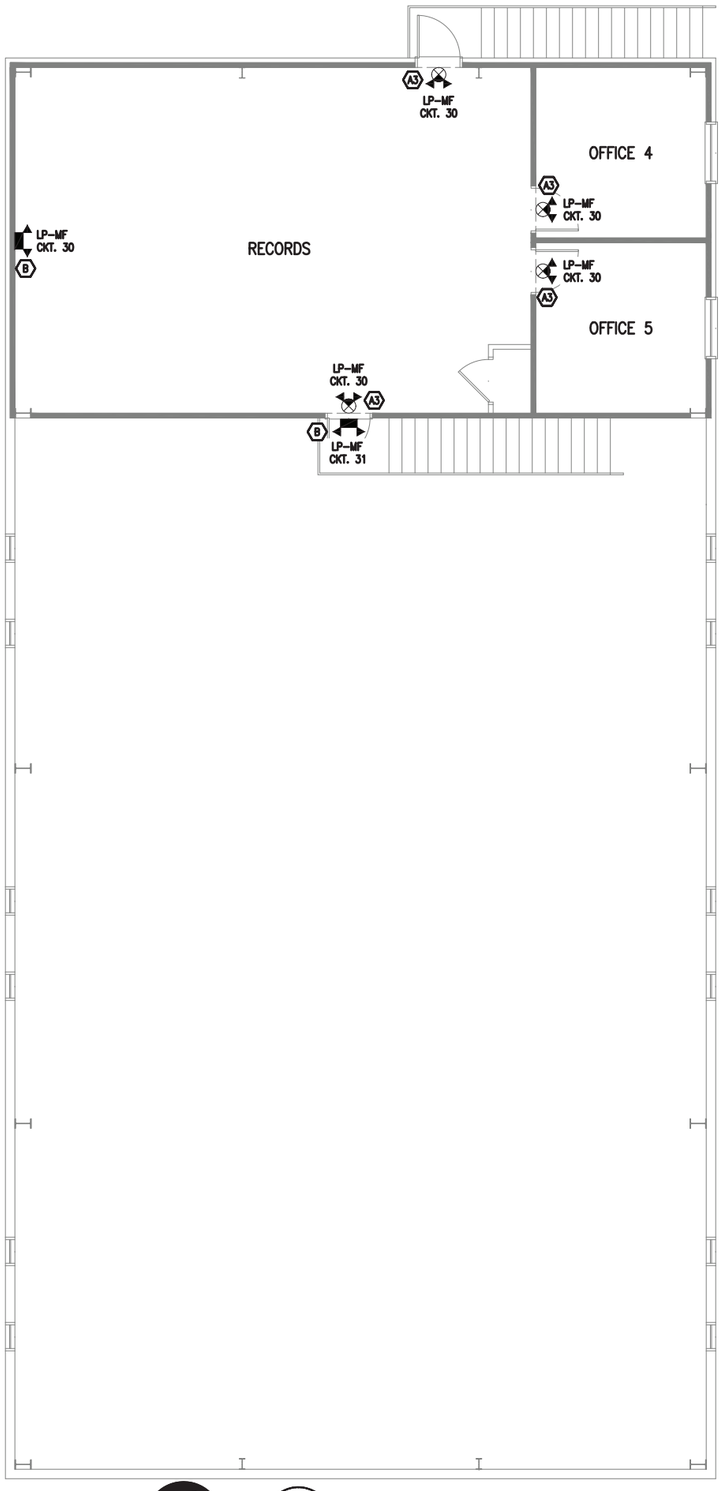
ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

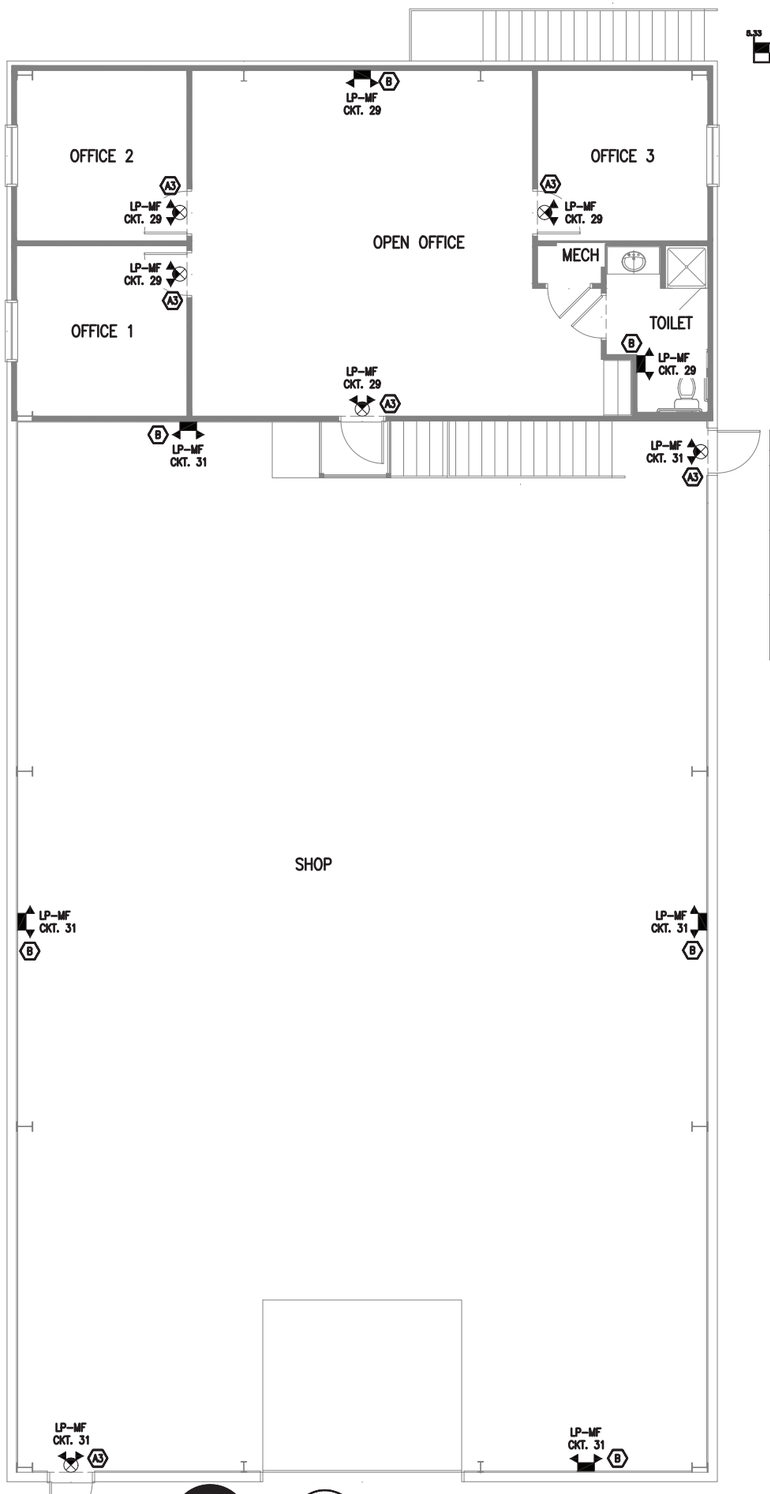
ELECTRICAL LIGHTING
FIRST AND SECOND FLOOR PLANS

SHEET NO.
E-4.1

X:\Active Projects\2018 Projects\18017-ES RWR Maintenance Building\1.0 Drawings\1.1 Electrical\E-4.1 LIGHTING PLAN.dwg — 11/26/2018



1 UPPER FLOOR EMERGENCY LIGHTING PLAN
SCALE: 3/16" = 1'-0"



2 MAIN FLOOR EMERGENCY LIGHTING PLAN
SCALE: 3/16" = 1'-0"

GRAPHIC SCALE
8.33 0 2.67 5.33 10.67 21.33
(IN FEET)
3/16 inch = 1 ft.

EDEC, INC.
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DULUTH, GEORGIA 30097
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ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

LIGHTING PLANS NOTES:

1. CONTRACTOR SHALL CONNECT ALL EMERGENCY LIGHTING AHEAD OF THE LOCAL LIGHTING SWITCH. ALL EMERGENCY LIGHTING FIXTURES SHALL BE POWERED BY THE LOCAL LIGHTING CIRCUIT AS NOTED.

LIGHTING/POLE SCHEDULE

SYMBOL/TYPE	DESCRIPTION	LAMP/VOLTAGE	MOUNTING
A3	EMERGENCY LIGHT COMBO FIXTURE, CORROSION RESISTANT, CLASS I & II, DIVISION 2, GROUPS A, B, C, AND D, ZONE 2, GROUPS IIA, IIB + H2 AND IIC. LITHONIA #LHZ618-S-1-R-H0806-SD	LED 120/277V, 1PH 18WATTS	CEILING/ WALL/ SURFACE
B	EMERGENCY INDOOR LIGHT FIXTURE, FOR DAMP LOCATIONS, CORROSION RESISTANT LITHONIA #ELM2-LED-HO	LED 120/277V, 1PH 12WATT	CEILING/ WALL/ SURFACE

NOTE:
DESIGN IS BASED ON THE EQUIPMENT SHOWN IN THE ABOVE SCHEDULE. LIGHTS AND POLE SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR PER SCHEDULE. ANY SUBSTITUTIONS SHALL BE APPROVED BY ENGINEER PRIOR TO PURCHASE/INSTALLATION.

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ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

ELECTRICAL EMERGENCY LIGHTING
FIRST AND SECOND FLOOR PLANS

SHEET NO.
E-4.2

BID SET

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EDEC, INC.
3069 PEACHTREE IND. BLVD.
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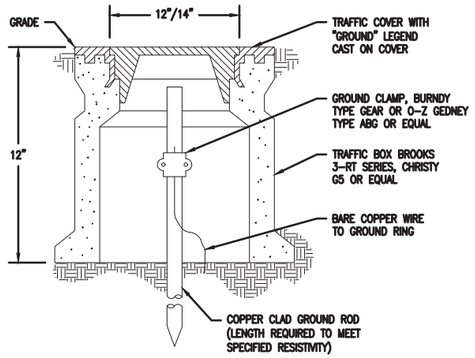
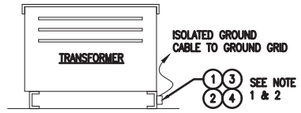
DULUTH, GEORGIA 30097
TEL. (770) 493-8685



A GROUND WELL INSTALLATION DETAIL

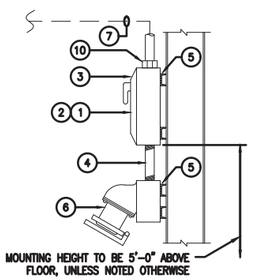


EQUIPMENT GROUNDING NOTES:

1. DRILL AND TAP (2) 3/8" U.N.C. HOLES IN EQUIPMENT OR USE NUT AND STAR WASHER ON INSIDE OF EQUIPMENT FRAME WHEN THICKNESS OF FRAME IS LESS THAN 3/8".
2. EQUIPMENT SURFACE MUST BE CLEANED TO BARE METAL AND CROUSE-HINDS TYPE STL CONDUCTING GREASE APPLIED PRIOR TO LUG ATTACHMENT

BILL OF MATERIAL			
ITEM	QTY	DESCRIPTION	REMARKS
1	1	COMPRESSION LUG, 2 HOLE	
2	2	BOLT, HEX HD 3/8" UNC X 3/4" LONG	
3	2-4	WASHER STAR LOCK 3/8"	
4	0-2	NUT, HEX 3/8" UNC	
5	2	LIQUIDTIGHT CONNECTOR	
6	1	CONDENSATE DRAIN AND BREATHER	

B TRANSFORMER GROUNDING INSTALLATION DETAIL



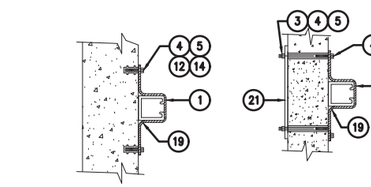
NOTE:

1. ALL MOUNTING HARDWARE SHALL BE GALV. STEEL

BILL OF MATERIAL			
ITEM	QTY	DESCRIPTION	REMARKS
1	A/R	NEMA 12 FUSED SAFETY SW. OR CIRCUIT BREAKER	
2	A/R	REFER TO ELECTRICAL SPECIFICATIONS FOR CIRCUIT BREAKER OR FUSE SIZE AND TYPE	
3	A/R	NAMEPLATE WITH 1/4" CHARACTERS	
4	A/R	CONDUIT NIPPLE	
5	A/R	GALVANIZED CHANNEL TACK WELD TO COLUMN	
6	A/R	WELDING RECEPTACLE, REFER TO ELECT. SPEC. FOR TYPE	
7	A/R	REFER TO PANELBOARD SCHEDULE	

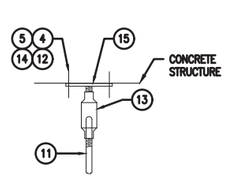
A/R=AS REQUIRED

C WELDING RECEPTACLE INSTALLATION DETAIL

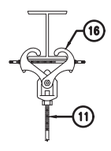


D.1 SUPPORT TO CONCRETE WALL

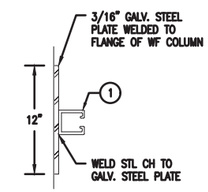
D.2 SUPPORT THRU BLOCK WALL



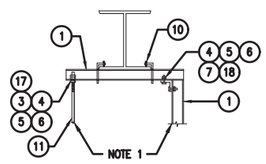
D.3 HANGING SUPPORT FROM CONCRETE CEILING



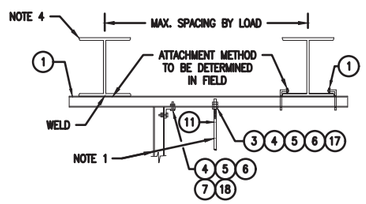
D.4 BEAM CLAMP



D.5 VERTICAL SUPPORT OFF COLUMN FLANGE



D.6 HANGING SUPPORT FROM BEAM



D.7 TRAPEZE SUPPORT FROM BEAMS

ELECTRICAL SUPPORT AND CONNECTION NOTES:

1. FIELD DETERMINE TYPE OF SUPPORT TO USE (THREADED RODS, OR METAL STRUT CHANNELS). MIXING PROHIBITED. RODS AND STRUT ARE SHOWN FOR INFORMATION PURPOSES ONLY.
2. ALL MOUNTING MATERIAL AND HARDWARE SHALL BE GALVANIZED STEEL, UNLESS OTHERWISE NOTED.
3. A MAXIMUM LOAD ON A THREADED STEEL ROD SHALL NOT EXCEED 1100 POUNDS FOR 1/2" ROD.
4. MEMBER SIZE AFFECTED BY WEIGHT AND SPAN

BILL OF MATERIAL			
ITEM	QTY	DESCRIPTION	REMARKS
1	A/R	STRUT GALVANIZED STEEL CHANNEL 1-5/8" X 1-5/8"	
2	A/R	STRUT METAL FRAMING CHANNEL 1-5/8" X 3-1/4" (DOUBLE) IF REQ'D	
3	A/R	HEXAGON NUT	
4	A/R	FLAT WASHER OR CLEVIS WASHER	
5	A/R	LOCK WASHER	
6	A/R	SPRING NUT	
7	A/R	HEX HEAD CAP SCREW	
8	A/R	TRAY HOLD DOWN CLIP	
9	A/R	VERTICAL TRAY HANGER	
10	A/R	"U" BOLT BEAM CLAMP (ONE FOR EACH SIDE)	
11	A/R	THREADED ROD (SIZED TO SUIT CONDITIONS)	
12	A/R	CONCRETE INSERT (SIZED TO SUIT APPLICATION)	
13	A/R	THREADED ROD COUPLING	
14	A/R	GALVANIZED MACHINE BOLTS (LENGTH TO SUIT)	
15	A/R	NELSON TYPE STUD (SIZED TO SUIT)	
16	A/R	BEAM CLAMP	
17	A/R	FLANGE	
18	A/R	PLATE FITTING 90°	
19	A/R	U SHAPED STRUT FITTING	
20	A/R	SUPPORT ANGLE	
21	A/R	GALVANIZED FLAT STEEL PLATE-1/4" TH x 3" WIDE x LENGTH TO SUIT WITH TWO 9/16" DIA. HOLES	
22	A/R	ONE HOLE FLAT PLATE FITTING - FOR STRUT CHANNEL	

A/R=AS REQUIRED

D ELECTRICAL SUPPORT AND CONNECTION INSTALLATION DETAILS

BID SET

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

GEORGIA REGISTERED No. 30613 PROFESSIONAL ENGINEER ALEC ZAYCHIK

REVISION	DATE
A ISSUED FOR REVIEW	11/27/18

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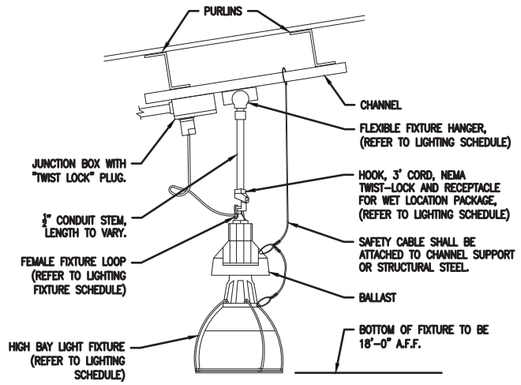
ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

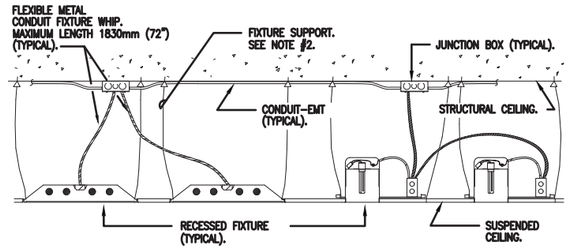
ELECTRICAL INSTALLATION DETAILS

SHEET NO.
E-9.1

X:\Active Projects\2018 Projects\18011-ES RWR Maintenance Building\1.0 Drawings\1.1 Electrical\E-9.1 DETAILS.dwg — 11/26/2018



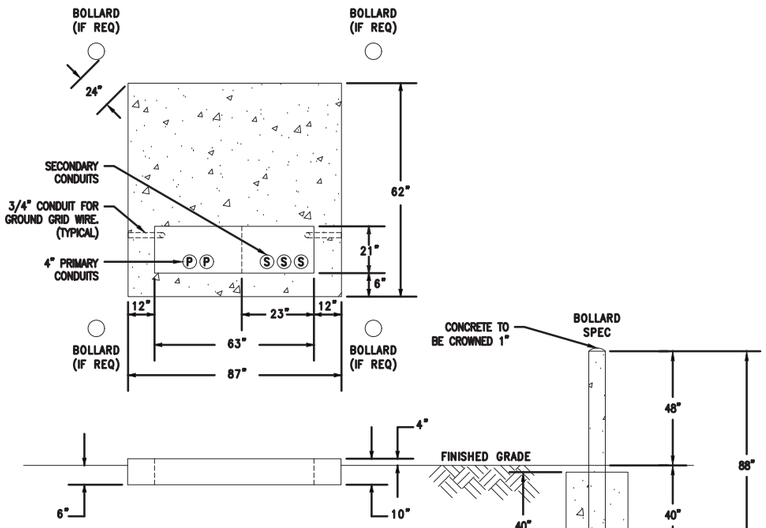
A HIGH BAY FIXTURE MOUNTING INSTALLATION DETAIL



NOTES:

1. MC CABLE IS ACCEPTABLE ONLY IN NON-SCIENCE APPLICATIONS.
2. FOR LINEAR FLUORESCENT: MINIMUM TWO 2.5mm (0.1") (#10 AWG) GALVANIZED STEEL WIRES AT DIAGONAL CORRIDORS (WITHIN 100mm (4") OF FIXTURE CORRIDOR) DIRECTLY FROM STRUCTURES.
   FOR DOWNLIGHTS: MINIMUM ONE 2.5mm (0.1") WIRE FROM STRUCTURE.

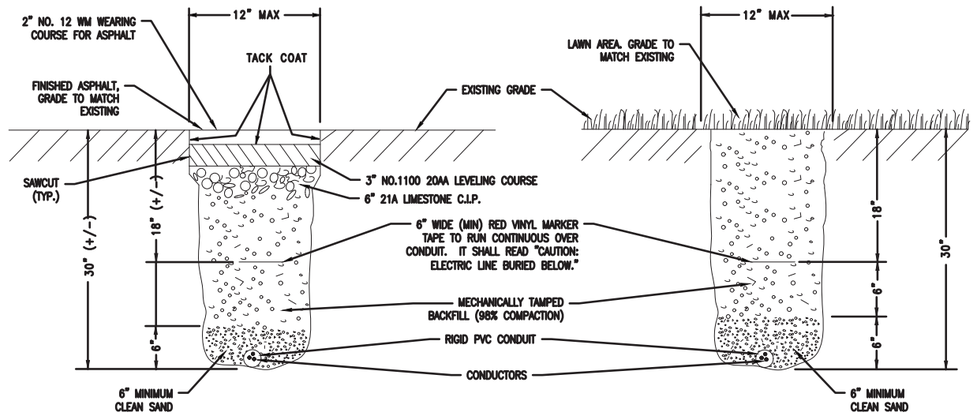
B SUSPENDED CEILING LIGHT INSTALLATION DETAIL



TRANSFORMER PAD NOTES:

1. EMC STAKING TECHNICIAN SHALL BE CONTACTED AFTER FORM HAS BEEN CONSTRUCTED BUT PRIOR TO POURING OF CONCRETE.
2. PAD SHALL BE INSTALLED NO LESS THAN 7 WORKING DAYS PRIOR TO TRANSFORMER INSTALLATION.
3. CONCRETE TO BE 3000 PSI IN 30 DAYS.
4. REINFORCE CONCRETE WITH NO. 4 REBAR ON 12" CENTERS.
5. SCH. 40 PVC CONDUITS FOR PRIMARY CABLES TO BE STUBBED OUT THREE (3) FEET FROM PAD (UNLESS IT HAS TO BE EXTENDED UNDER PAVEMENT). 42" DEEP IN DIRECTION OF THE PRIMARY FEEDER ROUT. (SIZE OF CONDUIT WILL BE SPECIFIED BASED ON EACH CASE.)
6. ALL SECONDARY CONDUITS TO BE LOCATED WITHIN THE SECONDARY COMPARTMENT AREA AND CENTERED.
7. NOT LESS THAN SIX (6) FEET OF SECONDARY CABLE PER RUN SHALL BE LEFT ABOVE TRANSFORMER PAD FOR CONNECTIONS.
8. PAD TO BE POURED SO PRIMARY AND SECONDARY COMPARTMENT DO NOT FACE BUILDING.
9. PLACEMENT OF TRANSFORMER PAD SHALL MEET LOCAL STATE AND FEDERAL FIRE CODES.
10. SNAPPING SHOALS EMC WILL NOT BE RESPONSIBLE FOR ANY DELAYS IN INSTALLATION OF ELECTRICAL SERVICE DUE TO TRANSFORMER PAD CONSTRUCTION.
11. BOLLARDS/BARRIERS MAY BE REQUIRED DEPENDING ON LOCATION OF TRANSFORMER PAD. (TO BE DETERMINED BY STAKING TECH)
    a. BOLLARD WILL BE A MINIMUM 6" STEEL PIPE FILLED WITH CONCRETE, SET IN A 40" H x 24" W, 3000 PSI CONCRETE FOUNDATION AS SHOWN.
    b. BOLLARD LOCATION MAY VARY DEPENDING ON EXACT LOCATION OF PAD.

C TRANSFORMER PAD INSTALLATION DETAIL



D TYPICAL TRENCH INSTALLATION DETAIL

BID SET

EDEC, INC.
3069 PEACHTREE IND. BLVD.
SUITE 110
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

GEORGIA REGISTERED No. 30613 PROFESSIONAL ENGINEER ALEC ZAYCHIK

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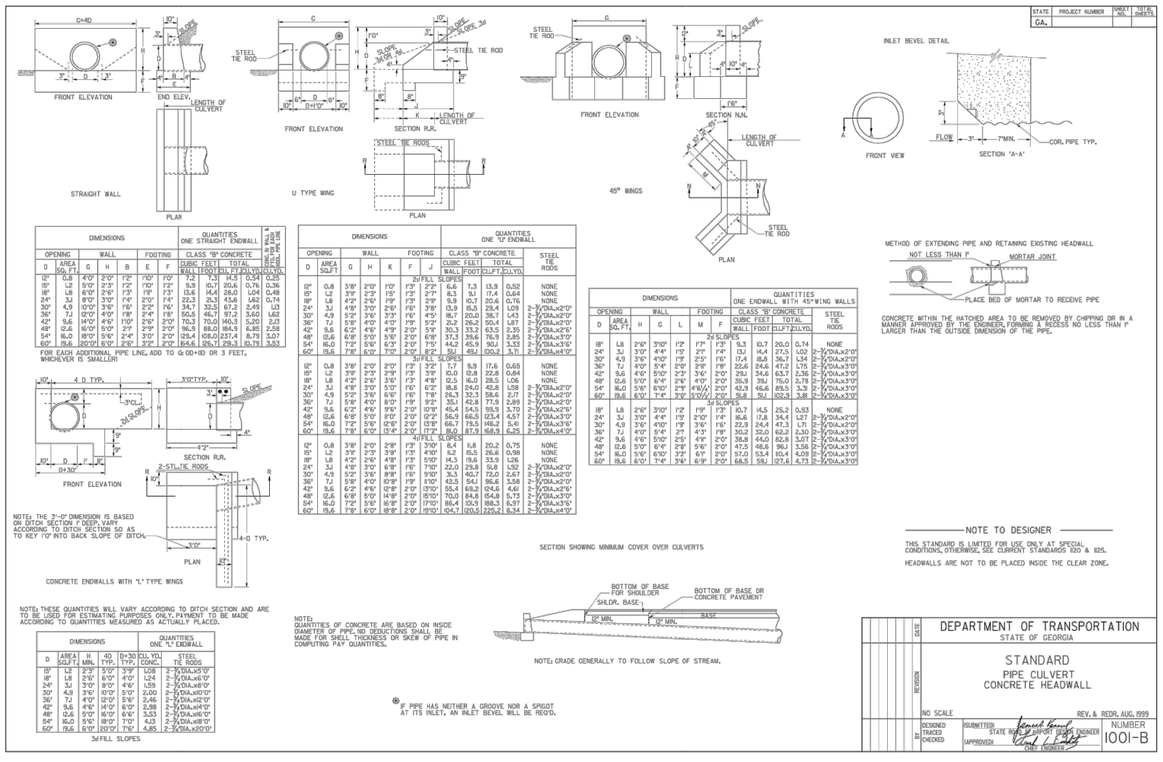
ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

ELECTRICAL INSTALLATION DETAILS

SHEET NO.
E-9.2

X:\Active Projects\2018 Projects\18017-ES RWR Maintenance Building\1.0 Drawings\1.1 Electrical\E-9.2 DETAILS.dwg — 11/26/2018



DIMENSIONS							QUANTITIES ONE STRAIGHT ENDWALL			
OPENING		WALL			FOOTING		CLASS "B" CONCRETE			STEEL TIE RODS
D	AREA SQ. FT	G	H	B	E	F	CUBIC FEET WALL	TOTAL FOOT	TOTAL CU.FT.	TOTAL CU.YDS.
12"	0.8	4'0"	2'0"	1'2"	1'0"	1'0"	7.2	7.3	14.5	0.54
15"	1.2	5'0"	2'3"	1'2"	1'0"	1'2"	9.8	10.1	20.6	0.76
18"	1.8	6'0"	2'6"	1'3"	1'3"	1'3"	13.6	14.4	28.0	1.04
24"	3.1	8'0"	3'0"	1'4"	1'3"	1'4"	22.3	23.3	45.6	1.69
30"	4.9	10'0"	3'6"	1'6"	1'6"	2'2"	34.7	32.5	67.2	2.49
36"	7.1	12'0"	4'0"	1'8"	1'9"	2'4"	50.5	46.7	97.2	3.60
42"	9.6	14'0"	4'6"	1'10"	2'0"	2'6"	70.3	70.0	140.3	5.20
48"	12.6	16'0"	5'0"	2'0"	2'3"	2'8"	96.5	98.0	194.5	6.85
54"	16.0	18'0"	5'6"	2'4"	3'0"	2'0"	129.4	108.0	237.4	8.78
60"	19.6	20'0"	6'0"	2'6"	3'2"	2'2"	164.6	126.1	290.7	10.79

FOR EACH ADDITIONAL PIPE LINE, ADD TO G: 0D+8D OR 3 FEET, WHICHEVER IS SMALLER

DIMENSIONS								QUANTITIES ONE "U" ENDWALL			
OPENING		WALL				FOOTING		CLASS "B" CONCRETE			STEEL TIE RODS
D	AREA SQ.FT	G	H	K	F	J		CUBIC FEET WALL	TOTAL FOOT	TOTAL CU.FT	TOTAL CU.YD
							2H:1V FILL SLOPES				
12"	0.8	3'8"	2'0"	1'0"	1'3"	1'3"		6.6	7.3	13.9	0.52
15"	1.2	3'9"	2'3"	1'5"	1'3"	2'7"		8.3	9.1	17.4	0.64
18"	1.8	4'2"	2'6"	1'9"	1'3"	2'8"		9.9	10.7	20.6	0.76
24"	3.1	4'8"	3'0"	2'6"	1'6"	3'8"		13.9	15.5	29.4	1.09
30"	4.9	5'2"	3'6"	3'3"	1'9"	4'6"		18.7	20.0	38.7	1.43
36"	7.1	5'8"	4'0"	4'0"	1'9"	5'2"		23.2	26.2	50.4	1.87
42"	9.6	6'2"	4'6"	4'9"	2'0"	5'8"		30.3	33.2	63.5	2.35
48"	12.6	6'8"	5'0"	5'6"	2'0"	6'8"		37.3	39.6	76.9	2.85
54"	16.0	7'2"	5'6"	6'3"	2'0"	7'6"		44.2	45.9	90.1	3.33
60"	19.6	7'8"	6'0"	7'3"	2'0"	8'4"		50.1	49.4	100.5	3.71
							3H:1V FILL SLOPES				
12"	0.8	3'8"	2'0"	2'0"	1'3"	1'3"		7.1	9.9	17.6	0.65
15"	1.2	3'9"	2'3"	2'9"	1'3"	1'3"		10.0	12.8	22.8	0.84
18"	1.8	4'2"	2'6"	3'5"	1'3"	1'8"		12.5	16.0	28.5	1.06
24"	3.1	4'8"	3'0"	5'0"	1'6"	2'6"		18.8	24.0	42.8	1.58
30"	4.9	5'2"	3'6"	6'6"	1'9"	3'4"		26.3	32.3	58.6	2.17
36"	7.1	5'8"	4'0"	8'0"	1'9"	5'2"		35.1	42.8	77.9	2.89
42"	9.6	6'2"	4'6"	9'6"	2'0"	5'8"		45.4	54.5	99.9	3.70
48"	12.6	6'8"	5'0"	11'0"	2'0"	6'8"		56.9	66.5	123.4	4.57
54"	16.0	7'2"	5'6"	12'6"	2'0"	7'8"		68.7	79.5	148.2	5.49
60"	19.6	7'8"	6'0"	13'6"	2'0"	8'4"		80.0	87.9	168.9	6.25
							4H:1V FILL SLOPES				
12"	0.8	3'8"	2'0"	2'8"	1'3"	1'3"		8.4	11.8	20.2	0.75
15"	1.2	3'9"	2'3"	3'8"	1'3"	1'3"		11.8	15.5	26.4	0.98
18"	1.8	4'2"	2'6"	4'8"	1'3"	1'8"		14.3	19.6	33.9	1.26
24"	3.1	4'8"	3'0"	6'8"	1'6"	2'6"		22.0	29.8	51.8	1.92
30"	4.9	5'2"	3'6"	8'8"	1'6"	3'10"		31.3	40.7	72.0	2.67
36"	7.1	5'8"	4'0"	10'8"	1'9"	5'0"		42.5	54.1	96.6	3.58
42"	9.6	6'2"	4'6"	12'8"	2'0"	5'10"		55.4	69.2	124.6	4.61
48"	12.6	6'8"	5'0"	14'8"	2'0"	6'10"		70.0	84.8	154.8	5.73
54"	16.0	7'2"	5'6"	16'8"	2'0"	7'10"		86.4	104.9	188.3	6.97
60"	19.6	7'8"	6'0"	18'8"	2'0"	8'10"		104.7	120.5	225.2	8.34

DIMENSIONS						QUANTITIES ONE ENDWALL WITH 45° WING WALLS				
OPENING		WALL		FOOTING		CLASS "B" CONCRETE				STEEL TIE RODS
D	AREA SQ.FT	H	G	L	M	F	CUBIC FEET WALL	TOTAL FOOT	TOTAL CU.FT	TOTAL CU.YD
						2H:1V SLOPES				
18"	1.8	3'6"	3'10"	1'2"	1'7"	1'3"	11.3	10.7	20.0	0.74
24"	3.1	3'0"	4'4"	1'5"	2'1"	1'4"	13.1	14.4	27.5	1.02
30"	4.9	3'6"	4'10"	1'9"	2'5"	1'6"	17.4	18.8	36.7	1.34
36"	7.1	4'0"	5'4"	2'0"	2'8"	1'8"	22.6	24.6	47.2	1.75
42"	9.6	4'6"	5'10"	2'3"	3'6"	2'0"	29.4	34.6	63.7	2.36
48"	12.6	5'0"	6'4"	2'6"	4'0"	2'0"	36.9	39.1	75.0	2.78
54"	16.0	5'6"	6'10"	2'9"	4'6½"	2'0"	42.9	46.6	89.5	3.32
60"	19.6	6'0"	7'4"	3'0"	5'0½"	2'0"	51.8	50.1	102.0	3.78
						3H:1V SLOPES				
18"	1.8	2'6"	3'10"	1'2"	1'9"	1'3"	10.7	14.5	25.2	0.93
24"	3.1	3'0"	4'4"	1'5"	2'10"	1'4"	16.6	17.8	34.4	1.27
30"	4.9	3'6"	4'10"	1'9"	3'6"	1'5"	22.9	24.4	47.3	1.75
36"	7.1	4'0"	5'4"	2'1"	4'3"	1'8"	30.2	33.0	62.2	2.30
42"	9.6	4'6"	5'10"	2'5"	4'9"	2'0"	38.8	44.0	82.8	3.07
48"	12.6	5'0"	6'4"	2'8"	5'6"	2'0"	47.5	48.6	96.1	3.56
54"	16.0	5'6"	6'10"	3'2"	6'1"	2'0"	57.0	53.4	110.4	4.09
60"	19.6	6'0"	7'4"	3'6"	6'9"	2'0"	68.5	58.1	126.6	4.73

NOTE TO DESIGNER

THIS STANDARD IS LIMITED FOR USE ONLY AT SPECIAL CONDITIONS, OTHERWISE, SEE CURRENT STANDARDS 520 & 825.

HEADWALLS ARE NOT TO BE PLACED INSIDE THE CLEAR ZONE.

NOTE: THESE QUANTITIES WILL VARY ACCORDING TO DITCH SECTION AND ARE TO BE USED FOR ESTIMATING PURPOSES ONLY. PAYMENT TO BE MADE ACCORDING TO QUANTITIES MEASURED AS ACTUALLY PLACED.

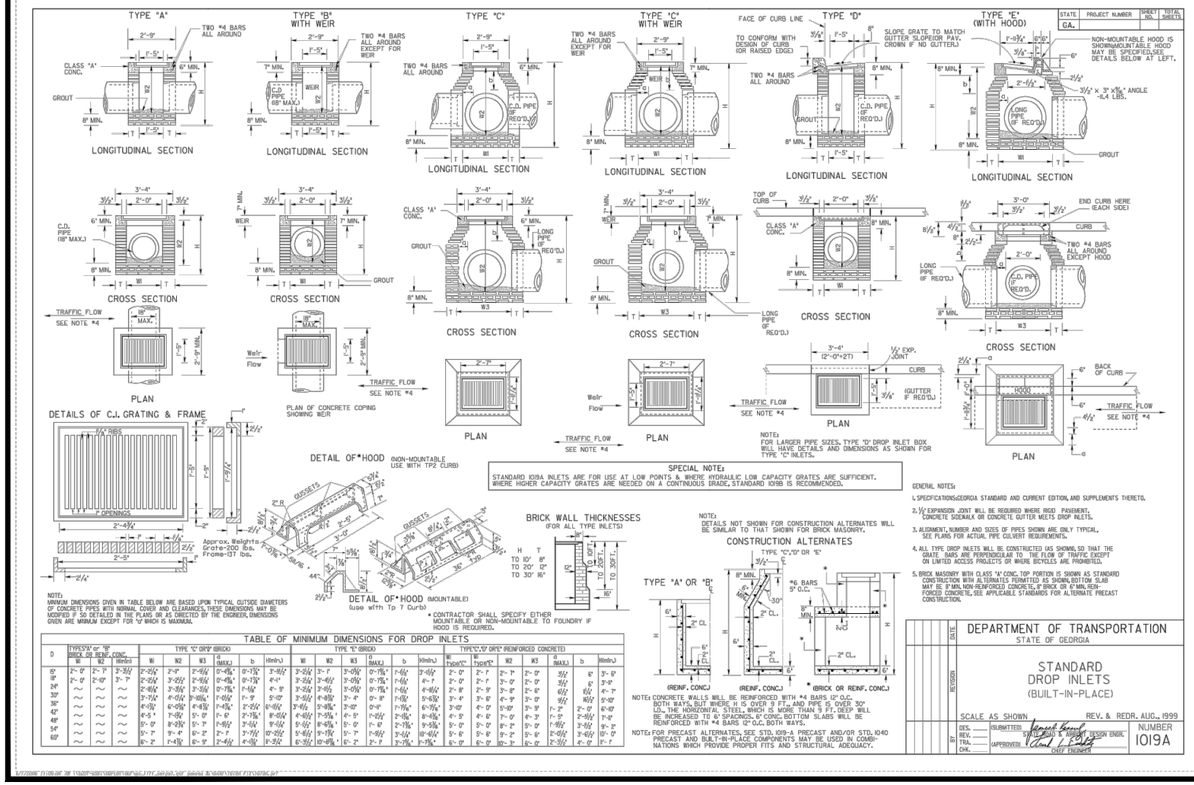
DIMENSIONS				QUANTITIES ONE "L" ENDWALL	
D	AREA SQ.FT	H MIN.	4D TYP.	CU. YD. CONC.	STEEL TIE RODS
15"	1.2	2'3"	5'0"	1.08	2-⅝"DIA.x5'0"
18"	1.8	2'6"	6'0"	1.24	2-⅝"DIA.x6'0"
24"	3.1	3'0"	8'0"	1.59	2-⅝"DIA.x8'0"
30"	4.9	3'6"	10'0"	2.00	2-⅝"DIA.x10'0"
36"	7.1	4'0"	12'0"	2.46	2-⅝"DIA.x12'0"
42"	9.6	4'6"	14'0"	2.98	2-⅝"DIA.x14'0"
48"	12.6	5'0"	16'0"	3.63	2-⅝"DIA.x16'0"
54"	16.0	5'6"	18'0"	4.13	2-⅝"DIA.x18'0"
60"	19.6	6'0"	20'0"	4.85	2-⅝"DIA.x20'0"

3:1 FILL SLOPES

NOTE: QUANTITIES OF CONCRETE ARE BASED ON INSIDE DIAMETER OF PIPE. NO DEDUCTIONS SHALL BE MADE FOR SHELL THICKNESS OR SKEW OF PIPE IN COMPUTING PAY QUANTITIES.

IF PIPE HAS NEITHER A GROOVE NOR A SPIGOT AT ITS INLET, AN INLET BEVEL WILL BE REQ'D.

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
STANDARD PIPE CULVERT CONCRETE HEADWALL			
NO SCALE	REV. & REDR. AUG. 1999		
DESIGNED / TRACED / CHECKED	SUBMITTED / APPROVED	STATE ROAD & TOLLWAY DESIGN ENGR. / CHIEF ENGINEER	NUMBER 1001-B



SPECIAL NOTE:
STANDARD 1018A INLETS ARE FOR USE AT LOW POINTS & WHERE HYDRAULIC LOW CAPACITY GRATES ARE SUFFICIENT. WHERE HIGHER CAPACITY GRATES ARE NEEDED ON A CONTINUOUS GRADE, STANDARD 1018B IS RECOMMENDED.

GENERAL NOTES:
1. SPECIFICATIONS: GEORGIA STANDARD AND CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. ½" EXPANSION JOINT WILL BE REQUIRED WHERE INDD PAVEMENT, CONCRETE SIDEWALK OR CONCRETE GUTTER MEETS DROP INLETS.
3. ALIGNMENT, NUMBER AND SIZES OF PIPES SHOWN ARE ONLY TYPICAL. SEE PLANS FOR ACTUAL PIPE CULVERT REQUIREMENTS.
4. ALL TYPE DROP INLETS WILL BE CONSTRUCTED (AS SHOWN) SO THAT THE GRATE BARS ARE PERPENDICULAR TO THE FLOW OF TRAFFIC EXCEPT ON LIMITED ACCESS PROJECTS OR WHERE BICYCLES ARE PROHIBITED.
5. BRICK MASONRY WITH CLASS "A" CONC. TOP PORTION IS SHOWN AS STANDARD CONSTRUCTION WITH ALTERNATES PERMITTED AS SHOWN. BOTTOM SLAB MAY BE 8" MIN. NON-REINFORCED CONCRETE, 8" BRICK OR 6" MIN. REINFORCED CONCRETE. SEE APPLICABLE STANDARDS FOR ALTERNATE PRECAST CONSTRUCTION.

NOTE: DETAILS NOT SHOWN FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO THAT SHOWN FOR BRICK MASONRY.

NOTE: CONCRETE WALLS WILL BE REINFORCED WITH #4 BARS 12" O.C. BOTH WAYS, BUT WHERE H IS OVER 9 FT., AND PIPE IS OVER 30" I.D., THE HORIZONTAL STEEL, WHICH IS MORE THAN 9 FT. DEEP WILL BE INCREASED TO 6" SPACINGS, 6" CONC. BOTTOM SLABS WILL BE REINFORCED WITH #4 BARS 12" O.C. BOTH WAYS.

NOTE: FOR PRECAST ALTERNATES, SEE STD. 1019-A PRECAST END/OR STD. 1040 PRECAST AND BUILT-IN-PLACE COMPONENTS MAY BE USED IN COMBINATIONS WHICH PROVIDE PROPER FITS AND STRUCTURAL ADEQUACY.

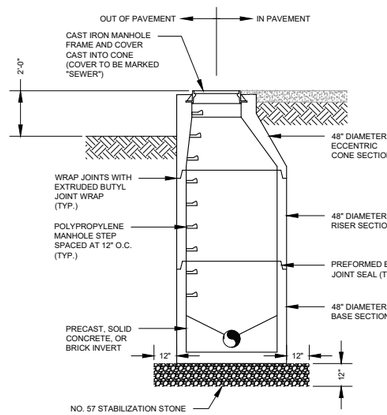
NOTE: MINIMUM DIMENSIONS GIVEN IN TABLE BELOW ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPES WITH NORMAL COVER AND CLEARANCES. THESE DIMENSIONS MAY BE MODIFIED IF SO DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER. DIMENSIONS GIVEN ARE MINIMUM EXCEPT FOR "D" WHICH IS MAXIMUM.

* CONTRACTOR SHALL SPECIFY EITHER MOUNTABLE OR NON-MOUNTABLE TO FOUNDRY IF HOOD IS REQUIRED.

TABLE OF MINIMUM DIMENSIONS FOR DROP INLETS

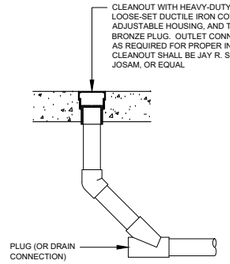
D	TYPES "A" or "B" BRICK OR REINF. CONC.			TYPE "C" DROP (BRICK)					TYPE "C" DROP (REINFORCED CONCRETE)					TYPE "D"				TYPE "E"			
	W1	W2	W3	W4 (MAX.)	b	t (min.)	W1	W2	W3	W4 (MAX.)	b	t (min.)	W1 TYPE "C"	W1 TYPE "D"	W2	W3	d (MAX.)	b	t (min.)
15"	2'-0"	2'-0"	2'-3½"	3'-0"	2'-4½"	2'-0"	2'-0½"	2'-0"	2'-4½"	3'-0"	0'-7⅞"	1'-4½"	3'-4½"	3'-1"	3'-0½"	0'-7⅞"	1'-4½"	3'-4½"	2'-1"	2'-1"	2'-1"
18"	2'-0"	2'-0"	2'-3½"	3'-1"	2'-5½"	2'-0"	2'-0½"	2'-0"	2'-4½"	3'-0"	0'-7⅞"	1'-4½"	3'-4½"	3'-2"	3'-0½"	0'-7⅞"	1'-4½"	3'-4½"	2'-0"	2'-1"	2'-0"
24"	2'-0"	2'-0"	2'-3½"	3'-3"	2'-7½"	2'-0"	2'-0½"	2'-0"	2'-4½"	3'-0"	0'-7⅞"	1'-4½"	3'-4½"	3'-4"	3'-0½"	0'-7⅞"	1'-4½"	3'-4½"	2'-0"	2'-1"	2'-0"
30"	~~	~~	~~	3'-5"	2'-9½"	2'-0"	~~	~~	~~	3'-0"	0'-7⅞"	1'-4½"	~~	3'-6"	~~	0'-7⅞"	1'-4½"	~~	2'-0"	2'-1"	2'-0"
36"	~~	~~	~~	3'-7½"	4'-0½"	2'-0½"	~~	~~	~~	3'-0"	0'-9"	1'-5½"	~~	3'-8"	~~	0'-9"	1'-5½"	~~	2'-0"	2'-1"	2'-0"
42"	~~	~~	~~	4'-0½"	4'-4½"	2'-1½"	~~	~~	~~	3'-6½"	0'-9"	1'-6½"	~~	3'-10"	~~	0'-9"	1'-6½"	~~	2'-0"	2'-1"	2'-0"
48"	~~	~~	~~	4'-5"	4'-8½"	2'-2½"	~~	~~	~~	3'-11"	0'-10½"	1'-7½"	~~	4'-0"	~~	0'-10½"	1'-7½"	~~	2'-0"	2'-1"	2'-0"
54"	~~	~~	~~	5'-0"	5'-0½"	2'-3½"	~~	~~	~~	4'-3½"	1'-0"	1'-8½"	~~	4'-2"	~~	1'-0"	1'-8½"	~~	2'-0"	2'-1"	2'-0"
60"	~~	~~	~~	5'-3"	5'-4½"	2'-4½"	~~	~~	~~	4'-6"	1'-1"	1'-9½"	~~	4'-4"	~~	1'-1"	1'-9½"	~~	2'-0"	2'-1"	2'-0"
66"	~~	~~	~~	5'-6"	5'-8½"	2'-5½"	~~	~~	~~	4'-9"	1'-2"	1'-10½"	~~	4'-6"	~~	1'-2"	1'-10½"	~~	2'-0"	2'-1"	2'-0"
72"	~~	~~	~~	5'-9"	6'-0½"	2'-6½"	~~	~~	~~	5'-0"	1'-3"	1'-11½"	~~	4'-8"	~~	1'-3"	1'-11½"	~~	2'-0"	2'-1"	2'-0"
78"	~~	~~	~~	6'-0"	6'-4½"	2'-7½"	~~	~~	~~	5'-3"	1'-4"	2'-0½"	~~	4'-10"	~~	1'-4"	2'-0½"	~~	2'-0"	2'-1"	2'-0"
84"	~~	~~	~~	6'-3"	6'-8½"	2'-8½"	~~	~~	~~	5'-6"	1'-5"	2'-1½"	~~	5'-0"	~~	1'-5"	2'-1½"	~~	2'-0"	2'-1"	2'-0"
90"	~~	~~	~~	6'-6"	7'-0½"	2'-9½"	~~	~~	~~	5'-9"	1'-6"	2'-2½"	~~	5'-2"	~~	1'-6"	2'-2½"	~~	2'-0"	2'-1"	2'-0"
96"	~~	~~	~~	6'-9"	7'-4½"	2'-10½"	~~	~~	~~	6'-0"	1'-7"	2'-3½"	~~	5'-4"	~~	1'-7"	2'-3½"	~~	2'-0"	2'-1"	2'-0"
102"	~~	~~	~~	7'-0"	7'-8½"	2'-11½"	~~	~~	~~	6'-3"	1'-8"	2'-4½"	~~	5'-6"	~~	1'-8"	2'-4½"	~~	2'-0"	2'-1"	2'-0"
108"	~~	~~	~~	7'-3"	8'-0½"	3'-0½"	~~	~~	~~	6'-6"	1'-9"	2'-5½"	~~	5'-8"	~~	1'-9"	2'-5½"	~~	2'-0"	2'-1"	2'-0"
114"	~~	~~	~~	7'-6"	8'-4½"	3'-1½"	~~	~~	~~	6'-9"	1'-10"	2'-6½"	~~	5'-10"	~~	1'-10"	2'-6½"	~~	2'-0"	2'-1"	2'-0"
120"	~~	~~	~~	7'-9"	8'-8½"	3'-2½"	~~	~~	~~	7'-0"	1'-11"	2'-7½"	~~	6'-0"	~~	1'-11"	2'-7½"	~~	2'-0"	2'-1"	2'-0"

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
STANDARD DROP INLETS (BUILT-IN-PLACE)			
SCALE AS SHOWN	REV. & REDR. AUG., 1999		
DES. / REV. / TRA. / CHK.	SUBMITTED / APPROVED	STATE ROAD & TOLLWAY DESIGN ENGR. / CHIEF ENGINEER	NUMBER 1019A

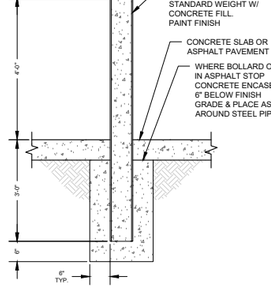


NOTES:
1. MANHOLES LOCATED OUTSIDE OF PAVEMENT SHALL HAVE BOLT-DOWN LIDS.
2. MANHOLES SHALL HAVE A MINIMUM DROP OF 0.10 FEET FROM INFLUENT INVERT TO EFFLUENT INVERT.

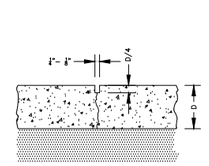
SANITARY SEWER MANHOLE DETAIL
SCALE: N.T.S.



CLEANOUT DETAIL
SCALE: N.T.S.

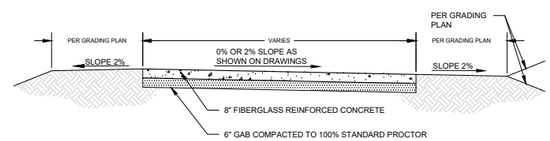


TYPICAL BOLLARD DETAIL
SCALE: N.T.S.



UNDOWLED TRANSVERSE CONTRACTION OR LONGITUDINAL JOINT, SAWED OR PRE-MOULDED.

TYPICAL CONTROL JOINT
SCALE: N.T.S.



TYPICAL SECTION - CONCRETE DRIVEWAY
SCALE: N.T.S.

GEORGIA REGISTERED No. 017126 PROFESSIONAL ENGINEER PEDRO M. ROSSELLO

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

L:\Rockdale County\WTP Maintenance Bldg\Dwg\Sheets\G-Civil Details.dwg - 7/16/2020

PROJECT NUMBER: 18-11011 | DATE: MARCH 2020

	REVISION	DATE
1	ISSUED FOR BID	10/29/2019

DSGN: JBH
DRWN: JBH
CHCK: PMR

BAR BELOW IS 1" LONG FOR SCALES SHOWN ON THIS SHEET. ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

CIVIL DETAILS

SHEET NO.
D-1

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR CONTROL DEVICE FOR UP TO SIX MONTHS, BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, DEPENDING ON THE MATERIAL USED, ANCHORED, AND HAVE CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF AN AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATION TECHNIQUES SHALL BE EMPLOYED.

SITE PREPARATION
1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSION BERMS, TERRACES, AND SEDIMENT BARRIERS.
3. LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

APPLYING MULCH
WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.

1. DRY STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.
2. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENIAL VEGETATION, 20-30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES.
3. CUTBACK ASPHALT SHALL BE APPLIED UNIFORMLY. CARE SHOULD BE TAKEN IN AREAS OF PEDESTRIAN TRAFFIC DUE TO PROBLEMS OF TRACKING IN, OR DAMAGE TO SHOES, CLOTHING, ETC.
4. APPLY POLYETHYLENE FILM ON EXPOSED AREAS.

ANCHORING MULCH
1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL PACKER DISK. DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL LEAVING MUCH OF IT IN AN ERECT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION.
2. STRAW OR HAY SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED WITH EMULSIFIED ASHPALT (GRADE AE-5 OR SS-1). THE ASPHALT EMULSION SHALL BE SPRAYED ONTO THE MULCH AS IT IS EJECTED FROM THE MACHINE. USE 100 GALLONS OF EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH. TACKIFIERS AND BINDERS CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. PLASTIC MESH OR NETTING WITH A MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANIFACTURER'S SPECIFICATIONS.
3. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
4. POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY.

Ds1 MULCHING

VEGETATIVE COVERS

	MONTH	TEMPORARY SEED	RATE/ACRE	RATES/1,000 SQ. FT. FERTILIZER	RATES/1,000 SQ. FT. LIME STONE	PERMANENT SEED	RATE/ACRE	RATES/1,000 SQ. FT. FERTILIZER	RATES/1,000 SQ. FT. LIME STONE	MAINTENANCE
1)	JANUARY	RYEGRASS	40 - 50 LB.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA (2)	8 - 10 LB. 30 - 40 LB. (1)	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
2)	FEBRUARY	RYEGRASS	40 - 50 LB.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA (2) FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
3)	MARCH	RYE ANNUAL LESPEDEZA WEEPING LOVEGRASS	2 - 3 BU. 20 - 25 LB. 4 - 6 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA (2) FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
4)	APRIL	RYE BROWN TOP MILLET ANNUAL LESPEDEZA SUDAN ANNUAL	2 - 3 BU. 30 - 40 LB. 20 - 25 LB. 35 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	WEEPING LOVEGRASS HULLED BERMUDA BAHIA	4 - 6 LB. 5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
5)	MAY	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	WEEPING LOVEGRASS HULLED BERMUDA BAHIA	4 - 6 LB. 5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
6)	JUNE	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB.	WEEPING LOVEGRASS HULLED BERMUDA BAHIA	4 - 6 LB. 5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
7)	JULY	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB.	WEEPING LOVEGRASS SUDAN GRASS BROWN TOP MILLET	4 - 6 LB. 35 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
8)	AUGUST	RYEGRASS WEEPING LOVEGRASS	40 - 50 LB. 4 - 6 LB.	12 LB (10-10-10) 12 LB (10-10-10)	45 LB. 45 LB.	HULLED BERMUDA BAHIA	5 - 6 LB. 40 - 60 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
9)	SEPTEMBER	RYEGRASS TALL FESCUE	40 - 50 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	TALL FESCUE	30 - 50 LB.	35 LB (6-12-12)	45 LB.	10 LB (10-10-10)
10)	OCTOBER	WHEAT	2 - 3 BU.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA (2) FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
11)	NOVEMBER	WHEAT	2 - 3 BU.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA FESCUE SERICEA LESPEDEZA	8 - 10 LB. 30 - 50 LB. 30 - 40 LB.	12 LB (10-10-10) 35 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
12)	DECEMBER	RYE RYEGRASS WHEAT	2 - 3 BU. 40 - 50 LB. 2 - 3 BU.	12 LB (10-10-10) 12 LB (10-10-10) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA FESCUE	8 - 10 LB. 30 - 40 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)

(1) - USE A MINIMUM OF 40 LBS. SCARIFIED SEED. REMAINDER MAY BE UNSCARIFIED, CLEAN HULLED SEED.
(2) - USE EITHER COMMON SERALA, OR INTERSTATE SERICEA LESPEDEZA.

THE ABOVE SEEDING CHART LISTS ALL POTENTIAL OPTIONS. CONTRACTOR IS TO SUBMIT THE SCHEDULE AND PROPOSED SEED MIXTURE FOR THIS PROJECT FOR ENGINEER'S APPROVAL PRIOR TO SEEDING.

Ds2 Ds3 TEMPORARY & PERMANENT GRASSING

CONSTRUCTION SCHEDULE

CERTIFICATION
I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION, AND AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100002.

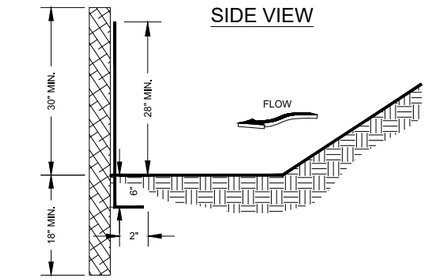
I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

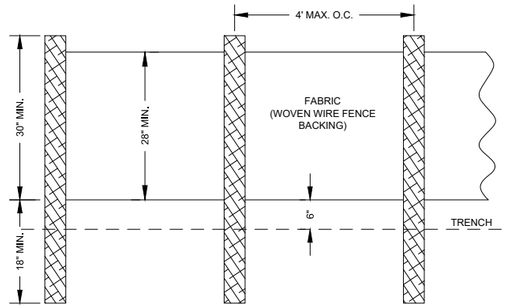
"I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STEAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100002, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER."

Pedro M. Rossello

PEDRO M. ROSSELLO, P.E.
LEVEL II CERTIFIED DESIGN PROFESSIONAL #19365
EXP. DATE: 10/13/2021

CERTIFIED EROSION CONTROL DESIGN
PROFESSIONAL NUMBER 0000019365

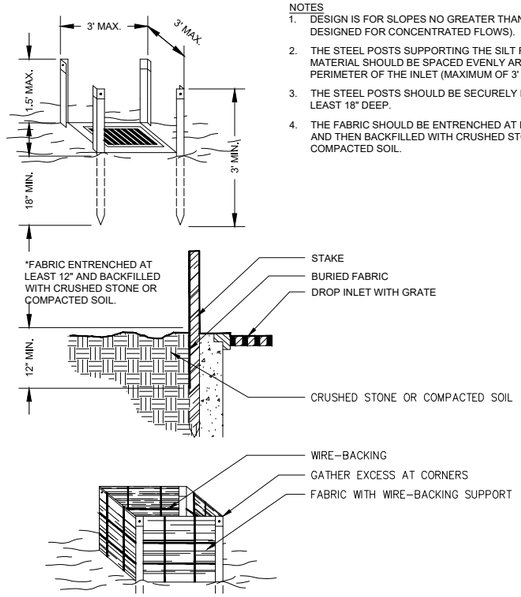




NOTES:
1. USE STEEL POSTS AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

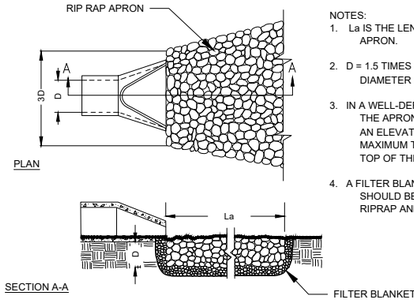
SILT FENCE - TYPE SENSITIVE
Sd1-S

FABRIC AND SUPPORTING FRAME FOR INLET PROTECTION



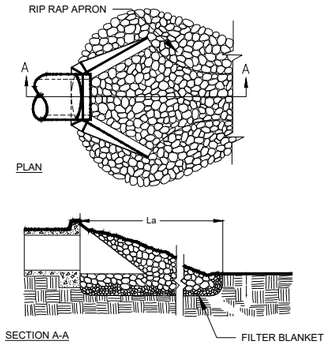
NOTES
1. DESIGN IS FOR SLOPES NO GREATER THAN 5% (NOT DESIGNED FOR CONCENTRATED FLOWS).
2. THE STEEL POSTS SUPPORTING THE SILT FENCE MATERIAL SHOULD BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET (MAXIMUM OF 3' APART).
3. THE STEEL POSTS SHOULD BE SECURELY DRIVEN AT LEAST 18" DEEP.
4. THE FABRIC SHOULD BE ENTRENCHED AT LEAST 12" AND THEN BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL.

STEEL FRAME AND SILT FENCE INSTALLATION
Sd2-F



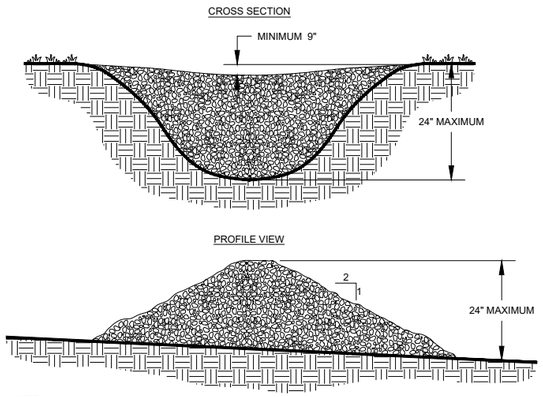
NOTES:
1. La IS THE LENGTH OF THE RIPRAP APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESSTHAN 6".
3. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND THE SOIL FOUNDATION.

PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL



PIPE OUTLET TO WELL DEFINED CHANNEL

RIP RAP OUTLET PROTECTION
St



NOTES:
1. CHECK DAMS ARE TO BE USED ONLY IN SMALL OPEN CHANNELS (THEY ARE NOT TO BE USED IN LIVE STREAMS).
2. THE DRAINAGE AREA FOR STONE CHECK DAMS SHALL NOT EXCEED TWO ACRES.
3. THE CENTER OF THE CHECK DAM MUST BE AT LEAST 9 INCHES LOWER THAN THE OUTER EDGES.
4. THE DAM HEIGHT SHOULD BE A MAXIMUM OF 2 FEET FROM CENTER TO RIM EDGE.
5. THE SIDE SLOPES OF THE CHECK DAM SHALL NOT EXCEED A 2:1 SLOPE.
6. GEOTEXTILE SHALL BE USED TO PREVENT THE MITIGATION OF SUBGRADE SOIL PARTICLES INTO THE STONES (REFER TO AASHTO M288-96, SECTION 7.3, TABLE 3).

STONE CHECK DAM
Sd-S

GEORGIA REGISTERED No. 017126 PROFESSIONAL ENGINEER PEDRO M. ROSSELLO

ESI
ENGINEERING STRATEGIES, INC.
3855 SHALLOWFORD ROAD, SUITE 525
MARIETTA, GA 30062
(770) 429-0001

L:\Rockdale County\WTP Maintenance Bldg\Dwg\Sheets\G-Erosion Details.dwg - 7/16/2020

PROJECT NUMBER: 18-11011	DATE: MARCH 2020		
△	REVISION	DATE	
1	ISSUED FOR BID	10/29/2019	

DSGN: JBH
DRWN: JBH
CHCK: PMR

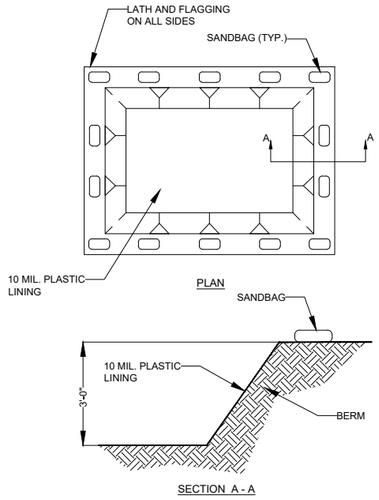
BAR BELOW IS 1" LONG FOR SCALES SHOWN ON SHEET. IF NOT 1" LONG ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ROCKDALE COUNTY WATER RESOURCES
GEES MILL WTP MAINTENANCE BUILDING

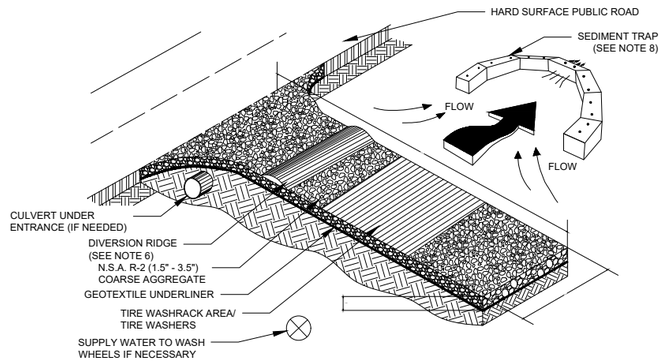
EROSION CONTROL DETAILS

SHEET NO.
D-2

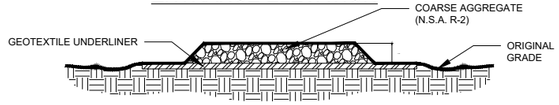
NOTES:
1. THE CONTRACTOR SHALL PROVIDE A DESIGNATED AREA FOR CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS, AND THE REAR OF THE VEHICLES. THIS AREA MUST HAVE A CONCRETE WASHOUT FACILITY AND SHALL BE CONSTRUCTED ACCORDING TO THE DETAIL SHOWN BELOW.
2. THE CONCRETE WASHOUT FACILITY SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES.
3. WASHOUT DISCHARGE FROM THE CLEANING OF CONCRETE TRUCKS, TOOLS,A ND OTHER EQUIPMENT SHALL NOT BE DISCHARGED INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
4. EXCESS CONCRETE SHALL NOT BE DISPOSED OF ON-SITE. ALL EXCESS CONCRETE SHALL BE TRANSPORTED OFF-SITE AND DISPOSED OF PROPERLY.
5. IT IS PROHIBITED TO WASHOUT THE MIXING DRUM OF CONCRETE TRUCKS ON-SITE.



CONCRETE WASH DOWN
SCALE: N.T.S.

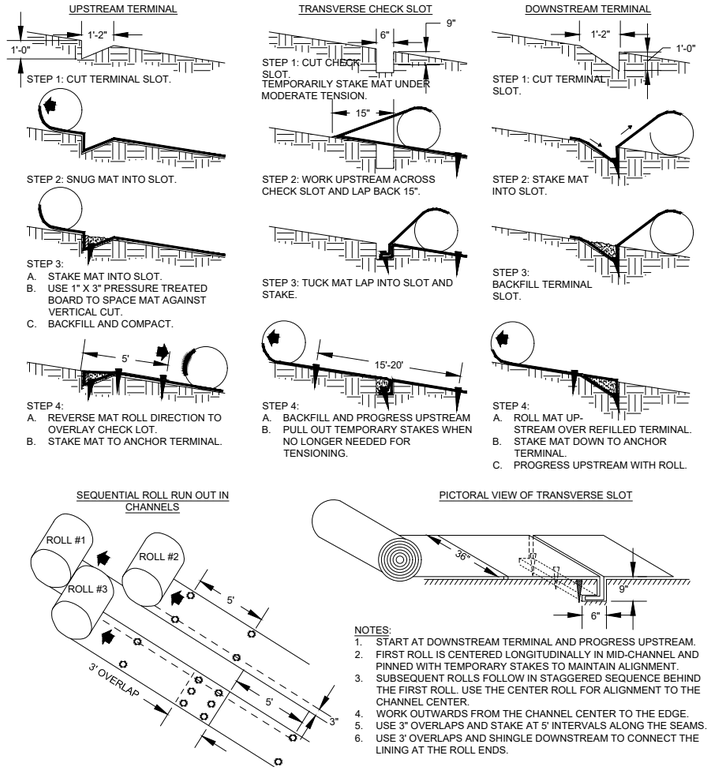


ENTRANCE ELEVATION



NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%..
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

CRUSHED STONE CONSTRUCTION EXIT
Co



NOTES:
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
5. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE SEAMS.
6. USE 3' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.

BLANKET AND MATTING INSTALLATION CROSS-SECTIONS
Ss

CERTIFIED EROSION CONTROL DESIGN
PROFESSIONAL NUMBER 0000019365

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 017126 PEDRO M. ROSSELLO

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ENGINEERING STRATEGIES, INC.
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GEES MILL WTP MAINTENANCE BUILDING

EROSION DETAILS

SHEET NO.
D-3