ABBREVIATIONS

ABV	above
AFF	above finish floor
ASC	above suspended ceiling
ACC	access
ACFL	access floor
AP	access panel
AC	acoustical
ACPL	acoustical plaster
ACT	acoustical tile
ACR	acrylic plastic
ADD	addendum
ADH	adhesive
ADJ	adjacent
ADJT	adjustable
AGG	aggregate
A/C	air conditioning
ALT	alternate
AL	aluminum
ANC	anchor, anchorage
AB	anchor bolt
ANOD	anodized
APX	approximate
ARCH	architect (ural)
AD	area drain
ASB	asbestos
ASPH	asphalt
AT	asphalt tile
AUTO	automatic
BP	back plaster (ed)
BSMT	basement
BRG	bearing
BPL	bearing plate
BJT	bed joint
BM	bench mark
BEL	below
BET	between
BVL	beveled
BIT	bituminous
BLK	block
BLKG	blocking
BD	board
BW	both ways
BOT	bottom
BRK	brick
BRZ	bronze
BLDG	building
BUR	built up roofing
BBD	bulletin board
CAB	cabinet
CAD	cadmium
CPT	carpet (ed)
CSMT	casement
CI	cast iron
CIPC	cast-in-place concrete
CST	cast stone
CB	catch basin
CK	calk (ing) caulk (ing)
CLG	ceiling
CHT	ceiling height
CEM	cement
CPL	cement plaster (portland)
CM	centimeter (s)
CER	ceramic
CT	ceramic tile
CMT	ceramic mosaic (tile)
CKBD	chalkboard
CHAM	chamfer
CR	chromium (plated)
CIR	circle
CIRC	circumference
CLR	clear (ance)
CLS	closure
COL	column
COMB	combination
COMPT	compartment
COMPO	composition (composite)
COMP	compress (ed), (ion), (ible)
CONC	concrete
CMU	concrete masonry unit
CX	connection
CONSTR	construction
CONT	continuous or continue
CONTR	contract (or)
CLL	contract limit line
CJT	control joint
CPR	copper
CG	corner guard
CORR	corrugated
CTR	counter
CFL	counterflashing
CS	countersink
CTSK	countersunk screw
CRS	course (s)
CRG	cross grain
CFT	cubic foot
CYD	cubic yard
DPR	damper
DP	dampproofing
DL	dead load
DEM	demolish, demolition
DMT	demountable
DEP	depressed
DLT	detail
DIAG	diagonal
DIAM	diameter
DIM	dimension
DPR	dispenser
DIV	division
DR	door
DA	doubleacting
DH	double hung
DTA	dovetail anchor
DTS	dovetail anchor slot
DS	downspout
D	drain
DRB	drainboard
DT	drain tile
DWR	drawer
DWG	drawing
DF	drinking fountain
DW	dumbwaiter
EF	each face
E	east
ELEC	electric (al)
EP	electrical panelboard
EWC	electric water cooler
EL	elevation
ELEV	elevator
EMER	emergency
ENC	enclose (ure)
EQ	equal
EQP	equipment
ESC	escalator
EST	estimate
EXCA	excavate
EXH	exhaust
EXG	existing
EXMP	expanded metal plate
EB	expansion bolt
EXP	exposed
EXT	exterior
EXS	extra strong
FB	face brick
FOC	face of concrete
FOF	face of finish
FOM	face of masonry
FOS	face of studs
FF	factory finish
FAS	fasten fastener
FBD	fiberboard
FN	fence
FGL	fiberglase
FIN	finish (ed)
FFE	finished floor elevation
FFL	finished floor line
FA	fire alarm
FBRK	fire brick
FE	fire extinguisher
FEC	fire extinguisher cabinet
FHS	fire hose station
FPL	fireplace
FP	fireproof
FRC	fire-resistant coating
FRT	fire-retardant
FLG	flashing
FHMS	flathead machine screw
FHWS	flathead wood screw
FLX	flexible
FLR	floor (ing)
FLCO	floor cleanout
FD	floor drain
FPL	floor plate
FLUR	fluorescent
FJT	flush joint
FTG	footing
FRG	forged
FND	foundation
FR	frame (d), (ing)
FRA	fresh air
FS	full size
FBO	furnished by others
FUR	furred (ing)
FUT	future
GA	gage, gauge
GV	galvanized
GI	galvanized iron
GP	galvanized pipe
GSS	galvanized steel sheet
GKT	gasket (ed)
GC	general contract (or)
GL	glass, glazing
GLB	glass block
GLF	glass fiber
GCMU	glazed concrete masonry units
GST	glazed structural tile
GB	grab bar
GD	grade, grading
GRN	granite
GVL	gravel
GF	ground face
GT	grout
GPDW	gypsum dry wall
GPL	gypsum lath
GPPL	gypsum plaster
GPT	gypsum tile
HH	handhold
HBD	hardboard
HDW	hardware
HWD	hardwood
HJT	head joint
HDR	header
HTG	heating
HVAC	heating/ventilation/air conditioning
HD	heavy duty
HT	height
HX	hexagonal
HES	high early-strength
HC	hollow core
HM	hollow metal
HK	hook (s)
HOR	horizontal
HB	hose bibb
HWH	hot water heater
INCIN	incinerator
INCL	include (d), (ing)
ID	inside diameter
INS	insulate (d), (ion)
INSC	insulating concrete
INSF	insulating fill
INT	interior
ILK	interlock
INTM	intermediate
INV	invert
IPS	iron pipe size
JC	janitor's closet
JT	joint
JF	joint filler
J	joist
KCPL	keene's cement plaster
KPL	kickplate
KIT	kitchen
KO	knockout
LBL	label
LAB	laboratory
LAD	ladder
LB	lag bolt
LAM	laminate
LAV	lavatory
LH	left hand
L	length
LT	light
LC	light control
LP	lightproof
LW	lightweight
LWC	lightweight concrete
LMS	limestone
LTL	lintel
LL	live load
LVR	louver
LPT	low point
MB	machine bolt
MI	malleable iron
MH	MH manhole
MFR	manufacture (er)
MRB	marble
MFR	manufacture (er)
MAS	masonry
MO	masonry opening
MTL	material (s)
MAX	maximum
MECH	mechanic (al)
MC	medicine cabinet
MED	medium
MBR	member
MMB	membrane
MET	metal
MFD	metal floor decking
MTFR	metal furring
MRD	metal roof decking
MTHR	metal threshold
M	meter
MM	millimeter (s)
MWK	millwork
MIN	minimum
MIR	mirror
MISC	miscellaneous
MOD	modular
MLD	molding, moulding
MR	mop receptor
MT	mount (ed), (ing)
MOV	movable
MULL	mullion
NL	nailable
NAT	natural
NI	nickel
NR	noise reduction
NRC	noise reduction coefficient
NOM	nominal
NOM	nonmetallic
N	North
NIC	not in contract
NTS	not to scale
OBS	obscure
OC	on center (s)
OP	opaque
OPG	opening
OJ	open-web joist
OPP	opposite
OPH	opposite hand
OPS	opposite surface
OD	outside diameter
OHMS	ovalhead machine screw
OHWS	ovalhead wood screw
OA	overall
OH	overhead
PNT	paint (ed)
PNL	panel
PB	panic bar
PTD	paper towel dispenser
PTR	paper towel receptor
PAR	parallel
PK	parking
PBD	particle board
PTN	partition
PV	pave (d), (ing)
PVMT	pavement
PED	pedestal
PERF	perforate (d)
PERI	perimeter
PLAS	plaster
PLAM	plastic laminate
PL	plate
PG	plate glass
PWD	plywood
PT	point
PVC	polyvinyl chloride
PE	porcelain enamel
PTC	post-tensioned concrete
PCF	pounds per cubic foot
PFL	pounds per linear foot
PSF	pounds per square foot
PSI	pounds per square inch
PCC	precast concrete
PFB	prefabricate (d)
PFN	prefinished
PRF	preformed
PSC	prestressed concretee
PL	property line
QT	quarry tile
RBT	rabbet, rebate
RAD	radius
RL	rail (ing)
RWC	rainwater conductor
REF	reference
RFL	reflect (ed),(ive)(or)
REFR	refrigerator
REG	register
RE	reinforce (d), (ing)
RCP	reinforced concrete pipe
REM	remove
RES	resilient
RET	return
RA	return air
RVS	reverse (side)
REV	revision (s), revised
RH	right hand
ROW	right of way
R	riser
RVT	rivet
RD	roof drain
RFH	roof hatch
RM	room
RO	rough opening
RB	rubber base
RBT	rubber tile
RBL	rubber stone
SFGL	safety glass
SCH	schedule
SCN	screen
SNT	sealant
STG	seating
SEC	section
SSK	service sink
SHTH	sheating
SHT	sheet
SG	sheet glass
SH	shelf, shelving
SHO	shore (d), (ing)
SIM	similar
SKL	skylight
SL	sleeve
SC	solid core
SP	sound proof
S	south
SPC	spacer
SPK	speaker
SPL	special
SPEC	specification(s)
SQ	square
SST	stainless steel
STD	standard
STA	station
ST	steel
STO	storage
SD	storm drain
STR	structural
SCT	structural clay tile
SUS	suspended
SYM	symmetry (ical)
SYN	synthetic
SYS	system
TKBD	tackboard
TKS	tackstrip
TEI	telephone
TV	television
TC	terra cotta
TZ	terrazo
THK	thick (ness)
THR	threshold
TPTN	toilet partition
TPD	toilet paper dispenser
TOL	tolerance
T&G	tongue and groove
TSL	top of slab
TST	top of steel
TW	top of wall
TB	towel bar
TR	transom
T	tred opening
TYP	typical
UC	undercut
UNF	unfinished
UR	urinal
VJ	v-joint
VB	vapor barrier
VAR	varnish
VNR	veneer
VRM	vermiculite
VERT	vertical
VG	vertical grain
VIN	vinyl
VAT	vinyl asbestos tile
VB	vinyl base
VF	vinyl fabric
VT	vinyl tile
WSCT	wainscot
WTW	wall to wall
WH	wall hung
WC	water closet
WP	waterproofing
WR	water repellent
WS	waterstop
WWF	welded wire fabric
W	west
WHB	wheel bumper
W	width, wide
WIN	window
WG	wired glass
WM	wire mesh
WO	without
WD	wood
WB	wood base
WPT	working point
WI	wrought iron

CODE SUMMARY

OFFICE & LIVING QUARTERS / POLICE SUBSTATION - BUSINESS - ONE STORY
AREA GROSS EXISTING ..... 5,114 SQFT.
OCCUPANCY CLASSIFICATION ..... GROUP "B"
CONSTRUCTION TYPE II B - UNPROTECTED, SPRINKLERED
ALLOWABLE TOTAL
23,000 + 46,000 = 69,000 ..... 5,114 SQFT.

APPARATUS BAY - STORAGE - ONE STORY
AREA GROSS EXISTING ..... 3,657 SQFT.
OCCUPANCY CLASSIFICATION ..... GROUP "S-2"
CONSTRUCTION TYPE II B - UNPROTECTED, SPRINKLERED
ALLOWABLE TOTAL
26,000 + 52,000 = 78,000 ..... 3,657 SQFT.

DORMITORIES OCCUPANCY
945 SQFT. NET USABLE @ 50 SQFT. PER OCCUPANT ..... 19 OCCUPANTS

OFFICE OCCUPANCY
735 SQFT. NET USABLE @ 100 SQFT. PER OCCUPANT ..... 8 OCCUPANTS

PARKING GARAGE OCCUPANCY
3,657 SQFT. NET USABLE @ 200 SQFT. PER OCCUPANT ..... 18 OCCUPANTS
TOTAL ..... 45 OCCUPANTS

PLUMBING FACILITIES REQUIREMENTS

	DORMITORIES & OFFICE FOR 27 OCCUPANTS REQUIRED	PARKING GARAGE FOR 18 OCCUPANTS REQUIRED	HAVE
WATER CLOSETS	1/25 -> 2/27	1/100 -> 1/18	7 W/C & 2 URINAL
LAVATORIES	1/40 -> 1/27	1/100 -> 1/18	5
DRINKING FOUNTAIN	1/100 -> 1/27	1/1000 -> 1/18	1
OTHER	1 SERVICE SINK	1 SERVICE SINK	1

EGRESS WIDTH PER OCCUPANT SERVED

	REQUIRED	HAVE
0.15" PER OCCUPANT	222 * 0.15" = 33.3"	144"

GENERAL NOTES

1. ALL CONSTRUCTION INCLUDING MATERIAL AND WORKMANSHIP, SHALL CONFORM TO THE 2012 INTERNATIONAL BUILDING CODE.
2. ALL ASTM STANDARDS LISTED HERE WITHIN, SHALL BE AS REFERENCED IN THE LATEST ISSUE OF THE ANNUAL BOOK OF STANDARDS OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS
3. THE CONTRACTOR, SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE BEGINNING WORK. THE ARCHITECT AND ENGINEER, SHALL IMMEDIATELY BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
   THE CONTRACTOR SHALL CAREFULLY STUDY AND COORDINATE THE MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEMS WITH THE ARCHITECTURAL WORK PRIOR TO INSTALLATION AND SHALL NOTIFY THE ARCHITECT IN WRITING OF ALL APPARENT INCONSISTENCIES FOR CLARIFICATION.
4. ALL OMISSIONS AND OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER. WORK SHOULD NOT PROCEED UNTIL A SOLUTION IS GIVEN BY THE ARCHITECT OR ENGINEER.
5. IN CASE OF CONFLICTS BETWEEN GENERAL NOTES AND DETAILS, THE DETAILS, SHALL TAKE PRECEDENCE OVER THE GENERAL NOTES. TYPICAL DETAILS, SHALL BE USED WHENEVER APPLICABLE. REFER TO SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE NOTES OR DRAWINGS.
6. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF WORK, THE CONSTRUCTION, SHALL BE THE SAME AS FOR SIMILAR WORK.
7. COORDINATE FOUNDATION PLANS AND MECHANICAL DRAWINGS, FOR ALL OPENINGS, INSERTS AND OTHER RELATED ITEMS.
8. DIMENSIONS ARE TO FINISH FACE OF WALLS UNLESS NOTED OTHERWISE.
9. ADDITIONAL MISCELLANEOUS STEEL ITEMS NOT SHOWN ON STRUCTURAL DRAWINGS MAY BE REQUIRED. GENERAL CONTRACTOR AND FABRICATOR SHALL COORDINATE ALL REQUIREMENTS AND SHALL NOTIFY THE ARCHITECT IN WRITING OF ALL APPARENT INCONSISTENCIES FOR CLARIFICATION. (SUCH AS SIMPSON STRONG TIES)
10. DO NOT DIMENSION THIS DRAWING. ANY DIMENSIONS, QUESTIONS, SHOULD BE DIRECTED TO THE ARCHITECT OR ENGINEER.

MATERIALS LEGEND

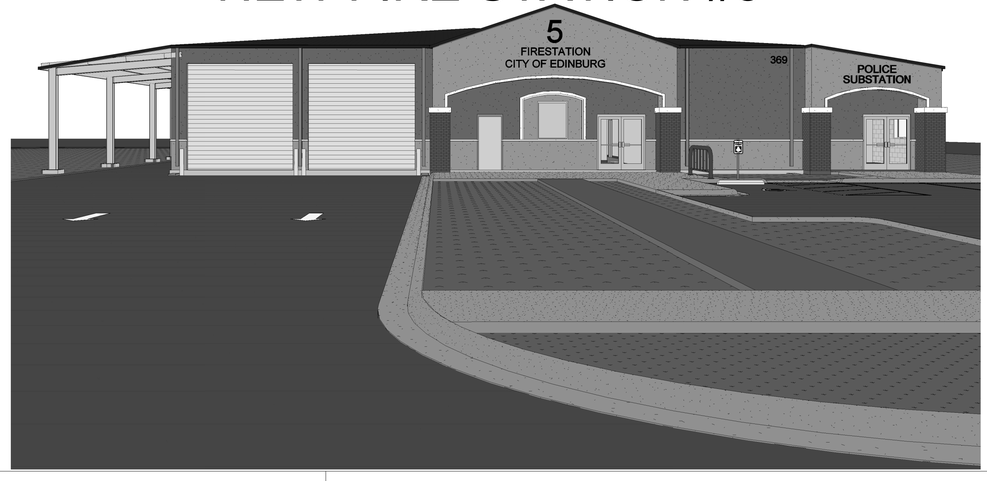
- CONTINUOUS WOOD BLOCKING
- NON-CONTINUOUS WOOD BLOCKING (SHIM)
- STEEL
- GYPSUM BOARD
- PLYWOOD
- RIGID INSULATION
- BATT INSULATION
- CONCRETE MASONRY UNITS

SYMBOLS

- X A.X.X — ELEVATION SYMBOL
- X A.X.X — SECTION/DETAIL SYMBOL
- X — WALL TYPE SYMBOL
- X — WINDOW SYMBOL
- ROOM NAME / RM # / FIN # — ROOM NAME & NUMBER SYMBOL, FINISH NUMBER
- XX — DOOR SYMBOL

INDEX OF DRAWINGS

NEW FIRE STATION #5



PROJECT CONTACTS

OWNER:
SHAWN SNIDER — CITY OF EDINBURG. FIRE DEPT.
212 W. McINTYRE STREET
EDINBURG, TX
(956) 383-7691

ARCHITECT:
RUDY MOLINA, A.I.A. — MILNET ARCHITECTURAL SERVICES
608 S. 12th STREET
Mc ALLEN. TEXAS 78501
(956) 688-5656

MEP:
EDWARD PUENTES, P.E. — DBR ENGINEERING
200 S. 10th STREET
Mc ALLEN. TEXAS 78501
(956) 683-1640

CIVIL & STRUCTURAL:
RICARDO HINOJOSA, P.E. — HINOJOSA ENGINEERING
108 W. 8th St.
MISSION, TEXAS 78572
(956) 581-0143

SITE PLAN/LOCATION MAP

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
RUDY R. MOLINA, JR.
14740
STATE OF TEXAS

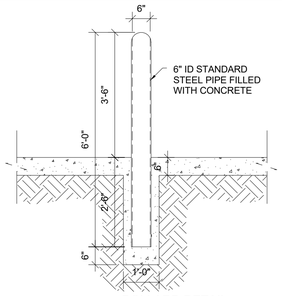
EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

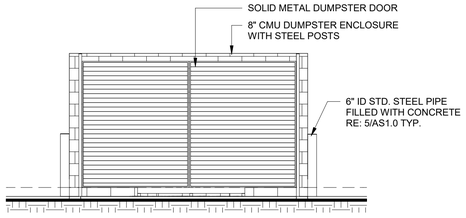
DATE
FEBRUARY 28, 2019

ISSUED FOR BID

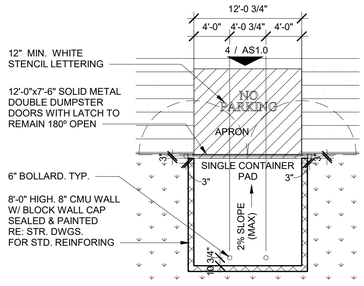
SHEET
A0.0
OF



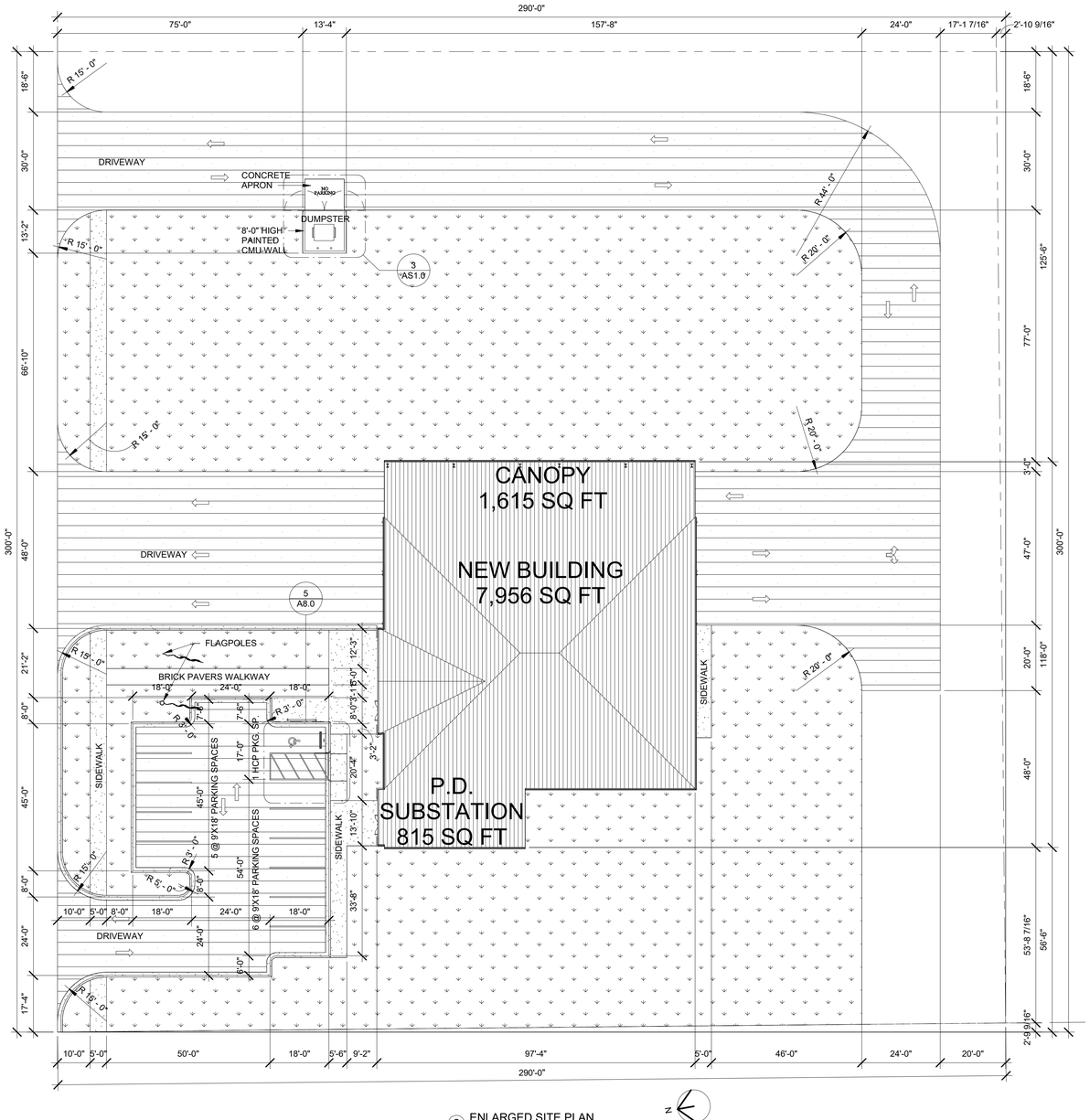
5 BOLLARD DETAIL
1/2" = 1'-0"



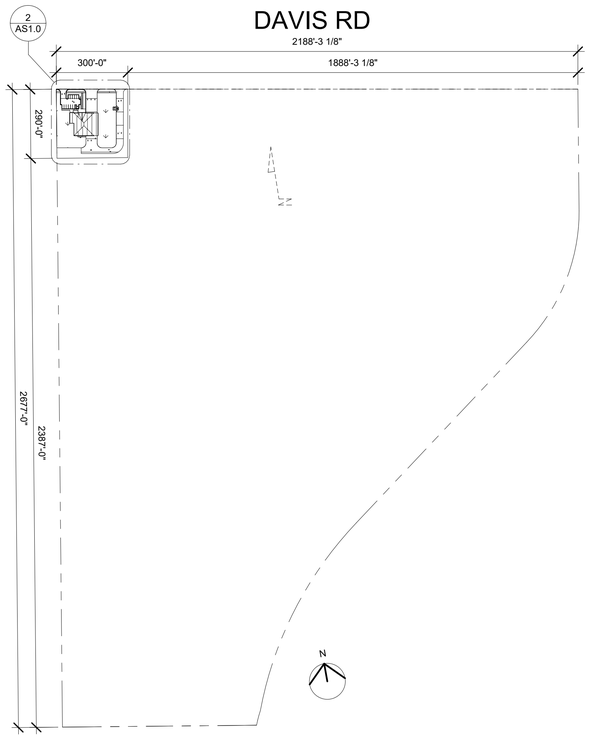
4 DUMPSTER ELEV.
1/4" = 1'-0"



3 DUMPSTER DETAIL
1/8" = 1'-0"



2 ENLARGED SITE PLAN
1" = 20'-0"



1 SITE PLAN
1" = 300'-0"

GENERAL NOTES:

1. FOR UTILITIES, RE: MEP
2. WARNING:
   CONTACT AEP FOR ELECTRICAL SERV. & CITY OF EDINGURG FOR WATER & SEWER UTILITIES.
3. ALL CONSTRUCTION AND MATERIALS FOR DRAINAGE, GRADING AND PAVING TO BE IN ACCORD WITH "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
4. CONTRACTOR TO SET CONTROL GRADES AT 25' INTERVALS ALONG ALL PAVING FLOW LINES.
5. ALL SOIL PLACED ONTO SITE IS TO BE COMPACTED AS STIPULATED IN GEOTECHNICAL ENGINEERING REPORT UNDER PAVING COMPACTION IS TO BE 95%, U.N.O.
6. ALL PIPES SLEEVES SHALL BE SCH TO PVC.
7. PROVIDE C.J. AT 5'-0" o.c. & E.J. @ 20'-0" o.c. TYP.
8. 6" CONC. CURB & 12" GUTTER
9. PROVIDE AND INSTALL NEW GRASS SOD AS INDICATED IN DRAWINGS. ALL GRASS SOD SHALL BE A NURSERY GROWN NATIVE MIXTURE OF REBEL, REBEL II WRANGLER AND BONANZA OR APPROVED EQUAL FREE OF OBJECTIONABLE GRASSY AND BROAD LEAF WEEDS.

PARKING REQUIRED:

FIRE STATION = 4 PARKING SPACES PER VEHICLE BAY .....
..... 2 VEHICLE BAY PROVIDED (4 * 2) = 8 PK. SP.

POLICE STATION = 1 PARKING SPACE PER 250 SQ. FT. .....
..... 815 / 250 = 4 PK. SP.
TOTAL REQUIRED ..... 12 PK. SP.

PARKING PROVIDED:

11 STANDARD PK. SP.
1 HCP PK. SP.
TOTAL HAVE ..... 12 PK. SP.

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
RICHARD R. MOLINA
14740
STATE OF TEXAS

EDINBURG FIRE STATION #5

CITY OF EDINBURG

DAVIS RD.

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019

ISSUED FOR BID

SHEET
AS1.0
OF

PLANT AND LANDSCAPE MATERIAL SCHEDULE

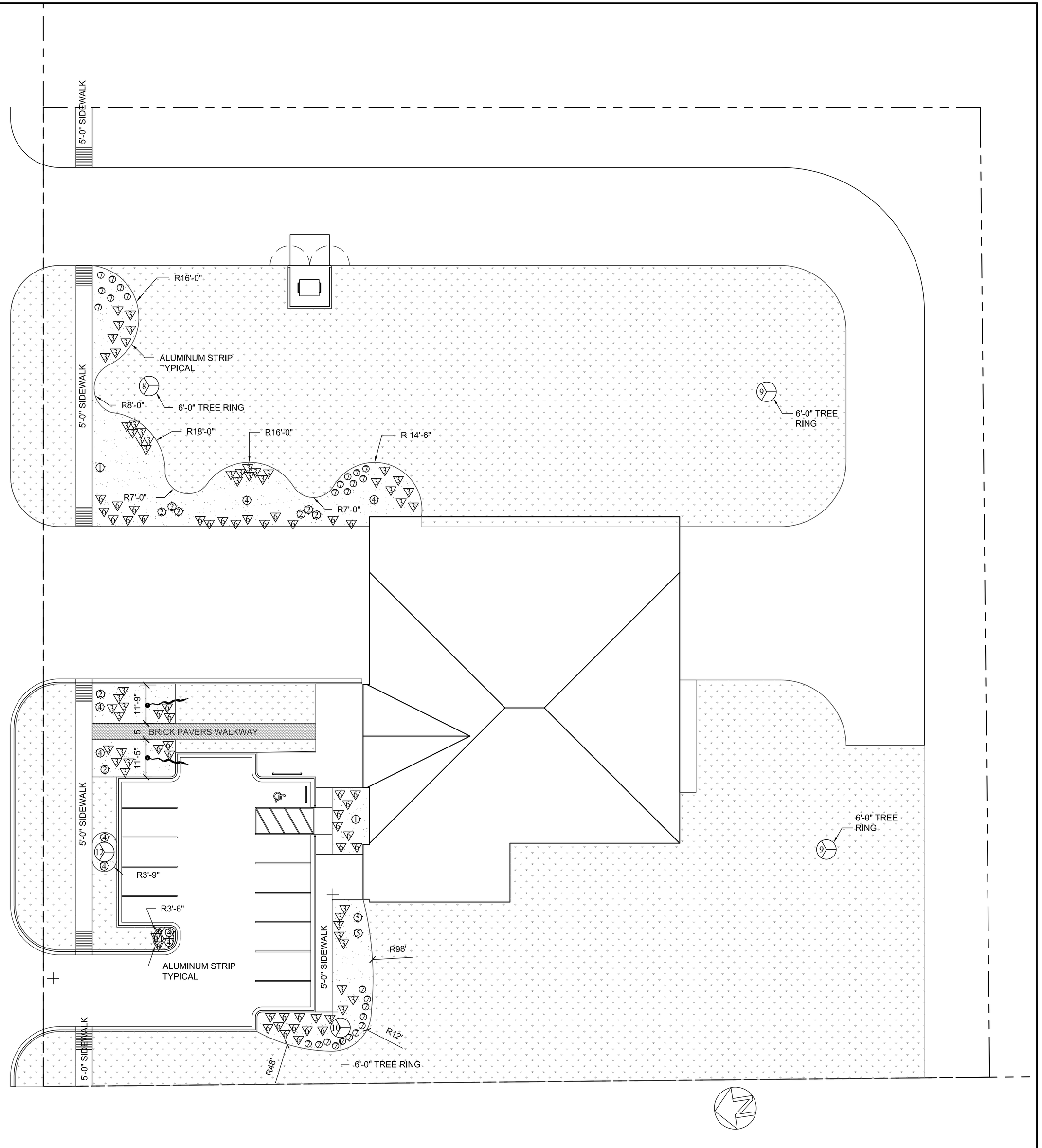
CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	COMMENTS
①	2	SALVIA LAUCANTHA	MEXICAN BUSH SAGE	GROUNDCOVER 1 GALLON
②	8	ROSMARINUS OFFICINALIS	ROSEMARY	SHRUB 3 GALLON
③	50	LANTANA SPP.	LANTANA	ANNUAL 1 GALLON
④	8	HESPERALOE PARVIFLORA	RED YUCCA	SHRUB 1.5 GALLON
⑤	2	HAMELIA PATENS	FIREBUSH	SHRUB 3 GALLON
⑥	44	MELAMPODIUM LEUCANTHUM	BLACKFOOT DAISY	GROUNDCOVER 1 GALLON
⑦	27	PENTAS LANCEOLATA	PENTA	ANNUAL 1 GALLON
⑧	1	PROSOPIS GLANDULOSA	HONEY MESQUITE	TREE 3" CALIPER
⑨	2	QUERCUS VIRGINIANA	LIVE OAK	TREE 3" CALIPER
⑪	1	CORDIA BOISSIERI	ANACAHUITE	SMALL TREE 1" CALIPER
⑪	1	JACARANDA MIMOSIFOLIA	JACARANDA	TREE 2" CALIPER
⑫	1	ULMUS PARVIFOLIA	LACEBARK ELM	TREE 2" CALIPER
	350 SQ. FT. (APX.)	-	BRICK PAVERS	PROVIDE SAMPLES
	1,000 CU. FT. (APX.)	-	CEDAR MULCH	PROVIDE SAMPLES 3" DEEP
	36,000 SQ FT. (APX.)	-	MIXTURE OF REBEL, REBEL II, WRANGLER AND BONANZA	GRASS SOD NURSERY GROWN NATIVE FREE OF OBJECTIONABLE GRASSY & BROAD LEAF WEEDS

GENERAL NOTES:

1. IF ANY EXISTING UTILITIES SHOWN, THEY ARE SCHEMATICALLY AND ARE FOR THE CONTRACTOR'S REFERENCE ONLY, THE CONTRACTOR MUST FIELD VERIFY THE LOCATION OF ALL UTILITIES
2. ALL SITE IMPROVEMENTS MUST COMPLY WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE TEXAS ACCESSIBILITY STANDARDS.
3. NO MATERIALS OR VEHICLES SHALL BE STORED WITHIN THE DISCIPLINES OF ANY EXISTING TREES.
4. IF ANY FIELD CONDITIONS DIFFER FROM THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING UPON DISCOVERY
5. THE CONTRACTOR IS ENCOURAGED TO VISIT THE SITE TO REVIEW EXISTING CONDITIONS PRIOR TO BIDDING.
6. ALL SITE IMPROVEMENTS SHALL BE STAKED IN THE FIELD FOR OWNER APPROVAL PRIOR TO INSTALLATION
7. ALL TRAFFIC CONTROL DEVICES SHALL BE IN CONFORMANCE WITH TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL MATERIALS TESTING WITH THE OWNER
9. ALL EXISTING TREES TO REMAIN, LANDSCAPE CURB MAY BE MODIFIED TO GO AROUND EXISTING TREES THAT ARE NOT SHOW ON PLANS. MIN CURB DISTANCE FROM EXISTING TREE TRUNK EDGE TO BE 3'.
10. WORK UNDER THIS CONTRACT INCLUDES SITE REVIEW AND COORDINATION WITH EXISTING CONDITIONS, SITE CLEANUP, EXCAVATION, BED PREP, TILLING, EDGING, PLANTING, STAKING, MAINTENANCE AND GUARNATEE

LANDSCAPING NOTES:

1. THE LOCATION OF ALL TREES, BOULDERS, SHRUBS AND EDGING SHALL BE STAKED OR MARKED IN THE FIELD BY THE CONTRACTOR FOR OWNER APPROVAL PRIOR TO INSTALLATION
2. CONTRACTOR SHALL PROVIDE THE COMPOST NEEDED FOR THE LANDSCAPE BEDS. ADDITIONAL SCREENED TOP SOIL WILL BE REQUIRED. EXCAVATING TO A TWELVE INCH DEPTH AND INSTALL OF A PLANTING MIX WILL BE REQUIRED
3. CONTRACTOR TO VERIFY EXACT PROPERTY LINES, PROJECT BOUNDARIES AND UTILITIES EASEMENTS PRIOR TO CONSTRUCTION. ALL PROPERTY LINES AND EASEMENTS SHALL BE STACKED AND FLAGGED BY SURVEYOR AND GENERAL CONTRACTOR.
4. CONTRACTOR SHALL SUPPLY AND INSTALL COMPLETE AUTOMATIC IRRIGATION SYSTEM INCLUDING WATER METER, BACK FLOW DEVICE, CONTROLLER, MAINLINE, SLEEVES, LATERALS, POP UP HEADS & DRIP LINE TO COVER ALL LANDSCAPE AREAS PER PLAN/DETAILS. IRRIGATION SYSTEM SHALL BE INSTALLED BY A TEXAS LICENSED IRRIGATOR ONLY.
5. THE IRRIGATOR CONTRACTOR SHALL COORDINATE INSTALLATION OF THE SYSTEM WITH THE LANDSCAPE CONTRACTOR, SO THAT ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.
6. THE IRRIGATION CONTRACTOR SHALL SELECT THE PROPER ARC AND RADIUS FOR EACH NOZZLE TO INSURE 100% AND PROPER COVERAGE OF ALL LAWN AREAS AND PLAN MATERIAL. ALL NOZZLES IN PARKING LOTS AND PLANTING BEDS SHALL BE LOW ANGLE TO MINIMIZE OVER SPRAY ON PAVEMENT SURFACES. NO WATER WILL BE ALLOWED TO SPRAY ON BUILDING.
7. THE IRRIGATION CONTRACTOR SHALL WARRANTY ALL SYSTEM COMPONENTS FOR A PERIOD OF ONE YEAR.



1 LANDSCAPE PLAN
SCALE: 1/16" = 1'-0"

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
14740
STATE OF TEXAS

EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019

ISSUED FOR BID

SHEET
AS1.1
OF

SITE PLAN NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY, COUNTY, STATE, FEDERAL AND OSHA REGULATIONS.
2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, RAMPS, SIDEWALKS, EXIT PORCHES, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY ENTRANCE LOCATIONS, AND TOTAL NUMBER, LOCATION, AND SIZE OF DOWNSPOUTS.
3. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH, AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
4. ALL ISLANDS WITH CURB & GUTTER SHALL BE LANDSCAPED. THOSE ISLANDS ARE TO HAVE 18" CURB & GUTTER. ALL REMAINING ISLANDS ARE TO BE STRIPPED AS SHOWN.
5. ALL DIMENSIONS AND RADII ARE TO THE BACK OF CURB, EDGE OF PAVEMENT, CENTER OF STRIPE OR OBJECT, OR FACE OF BUILDING UNLESS OTHERWISE NOTED.
6. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS THAT ARE TO BE ABANDONED, REMOVED OR RELOCATED, SHALL BE DONE IN A PROPER MANNER OFFSITE, AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REGULATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
8. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED "THE CITY STANDARD SITE WORK SPECIFICATIONS".
9. CONTRACTOR SHALL MATCH EXISTING CURB & GUTTER IN GRADE, SIZE, TYPE AND ALIGNMENT WHERE APPLICABLE.
10. CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REPLACEMENT OF PROPERTY CORNERS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO DAMAGE OR ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS BUT NOT LIMITED TO; DRAINAGE, UTILITIES, PAVEMENT, STRIPPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL WORK IN ACCORDANCE WITH THE CONTRACT DRAWINGS, NO ADDITIONS, DELETIONS OR MODIFICATIONS TO THE WORK SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

DEMOLITION PLAN NOTES

"CAUTION" - NOTICE TO CONTRACTOR:

1. THE CONTRACTOR IS PUT ON NOTICE THAT THERE ARE NUMEROUS UNDERGROUND UTILITIES IN THE LINE OF WORK, INCLUDING WATER, SEWER, GAS, TELEPHONE, IRRIGATION (CONCRETE PIPE) AND ELECTRIC. THERE MAY BE OTHER UTILITIES INCLUDING CABLE TELEVISION, TELECOMMUNICATIONS AND OTHERS, SOME OF THESE UTILITIES MAY BE ABANDONED, WHILE MANY ARE ACTIVE,
2. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN CONDUCTING EXCAVATION OPERATIONS, AND IF ANY EXISTING UTILITIES ARE DAMAGED, THEY SHALL BE REPAIRED IMMEDIATELY AT NO COST TO THE OWNER. THE CONTRACTOR IS TO BE AWARE THAT IF ANY EXISTING UTILITIES ARE SHOWN ON THE PLANS THEY ARE SHOWN IN THEIR APPROXIMATE LOCATION ONLY AND THAT THE EXISTING UTILITIES SHOWN REPRESENT ONLY A DILIGENT EFFORT TO SHOW THE APPROXIMATE LOCATION OF SOME OF THE UTILITIES.
3. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST FIELD LOCATION OF UTILITIES.

"NOTICE TO CONTRACTOR" - TEXAS ONE CALL SYSTEM:

1. AS REQUIRED BY THE "TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT" TEXAS ONE CALL SYSTEM MUST BE CONTACTED (800-245-4545) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATIONS PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT TEXAS ONE SYSTEM.

GENERAL DEMOLITION NOTES:

1. NO EARTH DISTURBING ACTIVITIES SHALL COMMENCE UNTIL ALL PERIMETER EROSION CONTROL MEASURES ARE IN PLACE IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLAN.
2. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH ALL REGULATIONS GOVERNING THE DEMOLITION, REMOVAL, TRANSPORTATION AND DISPOSAL OF ALL DEMOLITION DEBRIS.
3. THE CONTRACTOR SHALL LOCATE AND REMOVE ALL UNDERGROUND UTILITY PIPING, IRRIGATION PIPING, AND CONDUIT ON EXISTING SITE, UP TO A DEPTH OF 24 INCHES BELOW EXISTING GRADES AS PART OF THE BASE BID.
4. CONTRACTOR SHALL LOCATE AND REMOVE ALL UNDERGROUND UTILITY CABLES (ELECTRIC, TELEPHONE, ETC.) ON THIS SITE UP TO A DEPTH OF 24 INCHES BELOW EXISTING GRADES AS PART OF THE BASE BID.
5. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS FOR EXCAVATING AND TRENCHING PROCEDURES. CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, ETC. AS NECESSARY FOR THESE OPERATIONS, AND SHALL COMPLY WITH ALL OSHA PERFORMANCE CRITERIA.
6. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL PROPERTY CORNER MONUMENTS, AND SHALL HAVE ALL CORNER MONUMENTS REPLACED WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES. AT CONTRACTOR EXPENSE.
7. NOTES SHOWN HERE ON REGARDING SPECIFIC ITEMS OF DEMOLITION ARE GENERAL IN NATURE, AND ARE NOT INTENDED TO BE WHOLLY INCLUSIVE, THE CONTRACTOR SHALL DEMOLISH AND REMOVE ALL EXISTING IMPROVEMENTS TO THE EXTENT AS NOTED IN THE SPECIFICATIONS, TO THE SATISFACTION OF THE OWNER.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DISCONNECTION OF ALL UTILITIES SERVING THE EXISTING SITE WITH THE APPROPRIATE UTILITY COMPANY, AND SHALL OBTAIN APPROVAL FROM SAME TO COMMENCE DEMOLITION ACTIVITIES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLUGGING, CAPPING, OR OTHERWISE TERMINATING UTILITY SERVICE LINES AT EXISTING METER LOCATIONS, CLEANOUTS, ETC.
10. **CONTRACTOR SHALL LOCATE, REMOVE AND DISCARD ALL EXISTING IRRIGATION LINES, STAND PIPES, APPURTENANCE ON THIS SITE. CONTRACTOR SHALL INCLUDE BACKFILL AND COMPACTED TO 100% STP. PROCTOR DENSITY.**

INSPECTIONS/CERTIFICATIONS NOTE:

1. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.

UTILITY PLAN NOTES

1. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINES.
3. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED) , THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE, MEETING REQUIREMENTS OF ANSI A21,10 OR ANSI 21,11 (AWWA C-151) (CLASS 50), CONTRACTOR SHALL BE RESPONSIBLE FOR ADDING 45° BENDS WHERE NECESSARY TO ROUTE PROPOSED WATER LINES AROUND PROPOSED STORM SEWER.
4. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE CITY UTILITY DEPARTMENT AS TO LOCATION AND SCHEDULING OF TIE-INS/CONNECTIONS PRIOR TO EXISTING UTILITIES.
5. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
6. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO BACKFILLING.
7. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3,000 P.S.I.
8. DRAWINGS TO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
9. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
10. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
11. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURE. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS OUTLINED BY OSHA
12. CONTRACTOR SHALL REFER TO ARCHITECTS PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL UTILITY ENTRANCES TO INCLUDE: SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE.
13. ALL STEEL ENCASEMENT PIPE SHALL HAVE A WALL THICKNESS OF 0.25 INCHES.
14. ALL SANITARY SEWER AND WATER LINES SHALL COMPLY WITH THE REQUIREMENTS AS SPECIFIED IN THE SITE WORK SPECIFICATIONS.
15. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING, TO CENTERLINE OR MANHOLE, FACE OF BUILDING, OR BACK OR CURB UNLESS OTHERWISE NOTED.
16. IN THE EVENT OF DAMAGE TO UNDERGROUND FACILITIES, WHETHER SHOWN OR NOT SHOWN IN THE DRAWINGS, THE CONTRACTOR SHALL MAKE THE NECESSARY REPAIRS TO PLACE THE FACILITIES BACK IN SERVICE AT NO INCREASE IN THE CONTRACTOR'S PRICE, AND SHALL SUCH REPAIRS SHALL CONFORM TO THE REQUIREMENTS OF THE COMPANY OR AGENCY SERVING THE FACILITY.
17. THE CONTRACTOR SHALL EXERCISE EXTRA CARE TO PREVENT DAMAGE TO ALL OTHER STRUCTURES IN THE AREA INCLUDING BUILDINGS, FENCES, ROADS, PIPELINES, UTILITIES, ETC., WHETHER PUBLICLY OR PRIVATELY OWNED.
18. UNTIL ACCEPTANCE BY THE ENGINEER OF ANY PART OR ALL OF THE CONSTRUCTION, AS PROVIDED FOR IN THE PLANS AND SPECIFICATIONS, IT SHALL BE UNDER THE CHARGE AND CARE OF THE CONTRACTOR, AND CONTRACTOR SHALL TAKE EVERY NECESSARY PRECAUTION AGAINST INJURY OR DAMAGE TO ANY PART OF THE WORK. THE CONTRACTOR SHALL REBUILD REPAIRS, RESTORE AND MAKE GOOD.
19. COORDINATE ALL UTILITY WORK WITH PLUMBING PLANS BEFORE COMMENCING ANY UTILITY WORK. REFER TO PLUMBING PLANS FOR CONTINUATION.
20. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE CITY FOR ANY CONSTRUCTION DONE ON PUBLIC R.O.W. AND SHALL INCLUDE TRAFFIC CONTROL AS REQUIRED.
21. NOTICE TO CONTRACTOR: TEXAS ONE CALL SYSTEM AS REQUIRED BY THE "TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT" TEXAS ONE CALL SYSTEM MUST BE CONTACTED (800-245-4545) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATIONS PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT TEXAS ONE SYSTEM.
22. CONTRACTOR SHALL VISIT EXISTING CONDITIONS OF THE SITE.
23. CONTRACTORS SHALL IDENTIFY ALL UNDERGROUND LINES BEFORE COMMENCING WORK, CONTRACTOR SHALL ADJUST ANY ELECTRICAL LINES THAT CONFLICT WITH CONSTRUCTION OF THESE IMPROVEMENTS.
24. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CONSTRUCTION PERMITS AS NEEDED FROM CITY AND/OR OTHER LOCAL AUTHORITIES. CONTRACTOR SHALL PAY ALL PERMIT FEES ASSOCIATED WITH OBTAINING PERMITS.
25. CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON THE GROUND. ANY DISCREPANCY BETWEEN CONTRACTOR'S MEASUREMENTS AND CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND CONTRACTOR SHALL CEASE WORK UNTIL DISCREPANCY IS RESOLVED.
26. CONTRACTOR SHALL INCLUDE IN HIS BID A TOTAL OF 3 ADDITIONAL CONFLICT MAN HOLES (PRICED AT $2,500 EACH), IF THEY ARE NOT UTILIZED DURING CONSTRUCTION THEY SHALL BE CREDITED BACK TO THE OWNER AT THE END OF THE PROJECT CONSTRUCTION.

TRAFFIC CONTROL NOTE:

1. GUIDELINES SET FORTH IN PART IV "STANDARD AND GUIDES FOR TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY, AND INCIDENT MANAGEMENT OPERATIONS" OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MOST RECENT EDITION AS REVISED) SHALL BE OBSERVED.

UTILITY PLAN DETAIL NOTES

GENERAL NOTES FOR WATER CONSTRUCTION:

1. DISINFECTION OF NEW WATER LINE MAINS SHALL BE IN CONFORMANCE WITH AWWA C601 & C9051. ALL NEW WATER MAINS SHALL BE DISINFECTED BEFORE THEY ARE PLACED IN THE SERVICE. ALL WATER MAINS TAKEN OUT OF SERVICE FOR INSPECTING, REPAIRING OR OTHER ACTIVITY WHICH MIGHT LEAD TO CONTAMINATION OF THE WATER SHALL BE DISINFECTED BEFORE THEY ARE RETURNING TO SERVICE.
2. ALL WATER LINE PIPE FURNISHED SHALL MEET THE REQUIREMENTS OF AWWA C900. LATEST REVISION. HYDROSTATIC TEST SPEC. SHALL BE 150 P.S.I. FOR 8 HOURS OR 180 P.S.I. FOR 4 HOURS.
3. DUCTILE IRON PIPE SHALL CONFORM TO AWWA C110 STANDARDS.
4. CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND THRUST PRESSURE. NO SEPARATE PAY.
5. WATER LINE TRENCHES INSIDE STREET RIGHT OF WAY SHALL HAVE SAND BEDDING TO THE SPRING-LINE OF THE PIPE AND THEN BACKFILLED WITH SELECT FILL IN MAX 8" LIFTS AND COMPACTED TO A MINIMUM OF 95% STD. DENSITY, AT +/-3% OF OPTIMUM MOISTURE CONTENT.
6. MAINTAIN A MINIMUM OF 18 INCHES VERTICAL CLEARANCE BETWEEN WATER LINES AND ALL OTHER UTILITIES.
7. UNLESS OTHERWISE APPROVED, ALL WATER MAINS SHALL BE PLACED A MINIMUM DEPTH OF 4' - 6' BELOW TOP OF PROPOSED STREET CURBS OR 48" OF COVER ABOVE PIPE LOCATED IN THE RIGHT OF WAY OR EASEMENTS.
8. ALL CONCRETE BLOCKING SHALL CONSIST OF 3,000 - P.S.I. CONCRETE.
9. ALL WORK AND MATERIAL SHALL BE SUBJECT TO CITY ENGINEERS APPROVAL DURING CONSTRUCTION AND UPON COMPLETION.
10. ALL WATER SERVICE LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH GOVERNING REGULATIONS.
11. TRACER WIRE SHALL BE INSTALLED ON ALL PUBLIC WATER LINES.

MANHOLE TESTING:

1. MANHOLES SHALL BE TESTED FOR LEAKAGE SEPARATELY AND INDEPENDENTLY OF THE OF THE WASTEWATER LINES BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING OR OTHER METHODS ACCEPTABLE TO THE COMMISSION. IF A MANHOLE FAILS A LEAK TEST, THE MANHOLE MUST BE MADE WATER TIGHT AND RETESTED. THE MAXIMUM LEAK FOR HYDROSTATIC TESTING SHALL BE 0.025 GALLONS PER FOOT DIAMETER PER FOOT ON MANHOLE DEPTH PER HOUR.

SEWER PIPE TESTING:

1. EXFILTRATION TEST SHALL BE PERFORMED ON ALL SEWER PIPE USING LOW PRESSURE AIR TEST. THE PROCEDURE FOR THE LOW PRESSURE AIR TEST SHALL CONFORM TO THE PROCEDURE DESCRIBED IN ASTM C-924, ASTM F-1417, OR OTHER APPROPRIATE PROCEDURES.

DEFLECTION TESTING:

1. DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE PIPES. FOR PIPE WITH INSIDE DIAMETERS LESS THAN 27 INCHES, A RIGID MANDREL SHALL BE USED TO MEASURE DEFLECTION. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.

GENERAL NOTES FOR SEWER CONNECTION:

1. THE TOP ELEVATION OF MANHOLES AND CLEANOUTS CONSTRUCTED IN PAVED AREAS SHALL MATCH FINISHED PAVEMENT GRADE, THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN GRASSED AREAS SHALL BE 6 INCHES ABOVE FINISHED GRADE (UNLESS NOTED OTHERWISE).
2. SEWER PIPE DIAMETER AND MATERIAL SHALL BE AS INDICATED ON PLANS AND SPECIFICATIONS.
3. IN THE EVENT THAT PLANS OR STANDARD DETAILS CONFLICT WITH THE CITY PLUMBING ORDINANCES, CITY ORDINANCES SHALL CONTROL AND BE ADHERE TO IN ALL CASES.
4. CONTRACTOR MUST BE LICENSED AND BONDED BY THE CITY.
5. PIPE SHALL BE BURIED A MINIMUM OF 4'.
6. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE.
7. REPAIR OF ALL EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL MAKE EVERY EFFORT POSSIBLE TO MINIMIZE THE DISTURBANCE OF ALL EXISTING SHRUBS, LAWNS, AND OTHER LANDSCAPING FEATURES AND SHALL COORDINATE REMOVAL OF TREES WITH OWNERS OR ENGINEER.
9. PLUGS BETWEEN THE EXISTING AND PROPOSED SYSTEM SHALL BE REMOVED ONLY WHEN THE PROPOSED SANITARY SEWERS HAVE BEEN COMPLETED, TESTED AND ACCEPTED, NO PLUG SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER
10. SEWER SERVICE SHALL BE MAINTAINED TO ALL RESIDENCES AT ALL TIMES. IF FOR ANY REASON, THE CONTRACTOR NEEDS TO INTERRUPT SERVICE, HE SHALL FIRST OBTAIN APPROVAL FROM ENGINEER.
11. ALL CUT & PLUG OF SEWER LINES SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS. NO SEPARATE PAY WILL BE ALLOWED.
12. WHENEVER SANITARY SEWER CROSSES WITHIN 10 FEET ABOVE OR BELOW A WATER LINE THE SANITARY SEWER SHALL BE CONSTRUCTED OF D.I.,CLASS 50, PRESSURE PIPE OR AWWA C900 PVC FOR A MINIMUM DISTANCE OF 10 FEET ON EITHER SIDE OF THE WATER LINE.
13. ALL SANITARY SEWER MAINS SHALL BE SDR-26 PVC WITH 4' MINIMUM BURY, PIPE PER THE CITY REQUIREMENTS.
14. P.V.C. PIPE SHALL HAVE BELL AND SPIGOT JOINTS. NO CHEMICALLY WELDED JOINTS SHALL BE PERMITTED.
15. GRADES FOR SEWER MAINS MAY BE VARIED FROM ELEVATIONS INDICATED ON THE PLANS ONLY ON THE DIRECTION AND APPROVAL OF THE OWNER OR HIS AUTHORIZED REPRESENTATIVE, AND BY THE CITY.
16. ALL UTILITIES MY BE OPEN - CUT UNLESS SPECIFICALLY NOTED OTHERWISE. REPAIR OF ALL EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE LINED.

STORM SEWER PLAN NOTES

STORM SEWER NOTES:

1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT SIZE, NUMBER AND LOCATION OF ALL ROOF DRAINS.
2. IF THE CONTRACTOR RELOCATES BENCHMARK WITH NEW BENCHMARK, IT SHALL BE LOCATED WITHIN A TOLERANCE OF 0.10',
3. CONTRACTOR SHALL COMPLY WITH ALL GOVERNING CODES AND BE CONSTRUCTED TO SAME.
4. SEE SPECIFICATIONS FOR BACKFILLING AND COMPACTION REQUIREMENTS OF STORM SEWER TRENCHES.
5. ALL PIPES ENTERING STORM SEWER STRUCTURES SHALL BE GROUTED WITH NON-SHIRNK GROUT TO ASSURE A WATERTIGHT FIT.
6. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING LIDS. MANHOLES IN UNPAVED AREAS SHALL HAVE 6 INCHES ABOVE FINISHED GRADE. LIDS SHALL BE LABELED "STORM SEWER".
7. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS OUTLINED IN THE T.P.D.E.S. PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING SWPPP AND REQUIRED PERMITS.
8. CONTRACTOR SHALL UTILIZE PREFABRICATED BENDS, FIELD FABRICATED BENDS OR RADIUS PIPE TO ACCOUNT FOR DEFLECTIONS IN STORM SEWER PIPE WHERE SHOWN HEREON.
9. PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION.
10. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED TO REMOVE ALL SILT AND DEBRIS.
11. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
12. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT OUT.
13. REINFORCED CONCRETE PIPE SHALL BE CLIII RUBBER GASKET.

GRADING PLAN NOTES

GENERAL GRADING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED ARE TO BE REMOVED TO THE RIGHT OF WAY.
2. ALL CUT OR FILL SLOPES SHALL BE 3:1 UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE SMOOTH FIT AND CONTINUOUS GRADE.
4. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOR ALL NATURAL AND PAVED AREAS.
5. ALL UN-SURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3:1 OR STEEPER.
6. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
7. STRIP THE TOP 6 INCHES OF TOPSOIL AND VEGETATION FROM PROPOSED PAVING AND SIDEWALKS. STRIPPED TOPSOIL MAY BE STOCKPILED AND USED FOR FILL IN LANDSCAPE AND LAWN AREAS PROVIDED IT IS FREE OF ROCKS AND TRASH.
8. FILL BELOW PROPOSED PAVEMENT AREAS MAY BE SELECT FILL WITH PLASTICITY INDEX RANGING FROM 5 - 17%.
9. ALL SIDEWALKS SHALL HAVE A MINIMUM SLOPE OF ¼" PER FOOT. ELEVATIONS OF TOP OF CURB NEAR BUILDING ASSUME ¼" PER FOOT SLOPE ACROSS COVERED ENTRY AND SIDEWALK.
10. EXPANSION JOINTS TO BE PLACED WHERE BUILDING FOUNDATION MEET CONCRETE PAVEMENT OR SIDEWALK.
11. ALL REQUIRED SELECT FILL TO BE PLACED IN 6 INCH LIFTS WITH COMPACTION TO 95% PROCTOR.
12. ALL CURB AND GUTTER TO BE BACKFILLED AND STABILIZED AS REQUIRED.
13. ALL GRADING TO BE ESTABLISHED TO PROVIDE SURFACE TO DRAINAGE.
14. ALL OBSTRUCTIONS BUILDINGS, POLES, WIRES, SLABS, FENCING OR GUARD RAILS CONFLICTING WITH THE PROPOSED IMPROVEMENTS ARE TO BE REMOVED, RELOCATED AND/OR DISPOSED OF BY THE CONTRACTOR AS PER ENGINEERS WRITTEN INSTRUCTIONS.
15. HANDICAP SIGNAGE TO CONFORM WITH FEDERAL REGULATIONS (A.D.S.).
16. CONTRACTOR TO INCLUDE ALL SIGNS AND STRIPING FOR PARKING LOTS, STREETS & ROADWAYS
17. CIVIL ENGINEER WILL NOT PROVIDE CONSTRUCTION STAKING ON (ON-SITE) IMPROVEMENTS.
18. CONTRACTOR TO GRADE SWALES AS REQUIRED FROM SIDEWALK DRAINAGE OPENINGS, FIRE LANES, CULVERTS AND CURB SLOTS TO INLETS.
19. CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROL THROUGHOUT THE DURATION OF THE CONSTRUCTION.
20. CONTRACTOR SHALL PROVIDE SWPPP AS PART OF PERMITTING PROCESS.

HINOJOSA ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

CIVIL OBSERVATIONS

1. JOB SITE OBSERVATIONS BY THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONSIST OF VISUAL OBSERVATION OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE INTENT.
2. SUCH OBSERVATIONS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHALL IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT.
3. SPECIFICALLY BUT WITHOUT LIMITATION, OBSERVATIONS BY THE DESIGN PROFESSIONAL SHALL NOT REQUIRE THE DESIGN PROFESSIONAL TO ASSUME RESPONSIBILITY FOR THE MEANS AND METHODS OF CONSTRUCTION, NOR FOR SAFETY ON THE JOB SITE, NOR FOR ITEMS NOT INSTALLED OR IMPROPERLY INSTALLED BY THE CONTRACTOR OR HIS SUBCONTRACTORS.
4. NOTIFY ENGINEER 48 HOURS IN ADVANCED WHEN A CIVIL OBSERVATION IS REQUIRED.
5.

CONSTRUCTION STAGE	REQUIRED
BEFORE PLACEMENT OF CONCRETE FOR SLAB/FOUNDATION	X

ABBREVIATIONS

TYP	TYPICAL
PVC	POLYVINYL CHLORIDE
HDPE	HIGH DENSITY POLYETHYLENE
RCP	REINFORCED CONCRETE PIPE
L.F.	LINEAR FOOT/LINEAR FEET
TP	TOP OF PAVEMENT
BC	BACK OF CURB
TW	TOP OF WALK
TC	TOP OF CURB
PVMT	PAVEMENT
FL	FLOW LINE
CONC.	CONCRETE
WT.	WEIGHT
SAN,SWR.	SANITARY SEWER
MH	MANHOLE

GENERAL NOTES

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

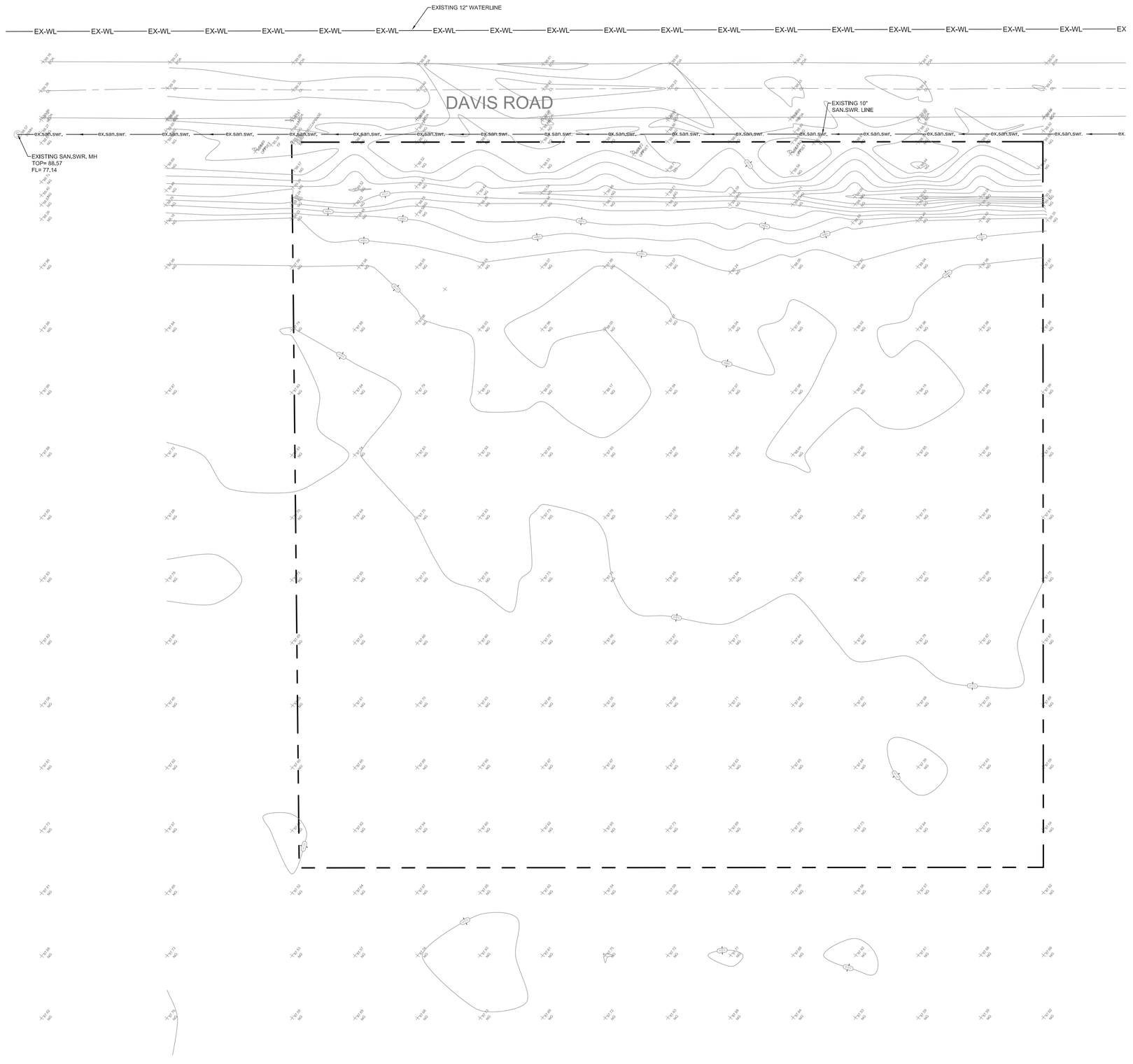
DATE
February 28, 2019

ISSUED FOR BID

SHEET

OF

C1



HINOJOSA ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19

LEGEND

- 1/2" IRON ROD SET
- 1/2" IRON ROD FND
- POWER POLE
- LIGHT POLE
- GUY WIRE
- SIGN/MARKER
- CLEAN OUT
- WATER METER
- TELEPHONE PEDESTAL
- WATER LINE
- WOOD FENCE
- POWER LINE
- TELEPHONE LINE
- TREE
- WATER VALVE
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- ELECTRIC BOX
- PALM TREE
- POST
- SANITARY SEWER MAN HOLE
- GAS METER
- MONUMENT
- BUSH

WARNING
CONTRACTOR TO FIELD VERIFY DEPTH & LOCATION OF EXIST. UTILITIES PRIOR TO CONSTRUCTION

EXISTING CONDITIONS LAYOUT

SCALE : 1" = 20'

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

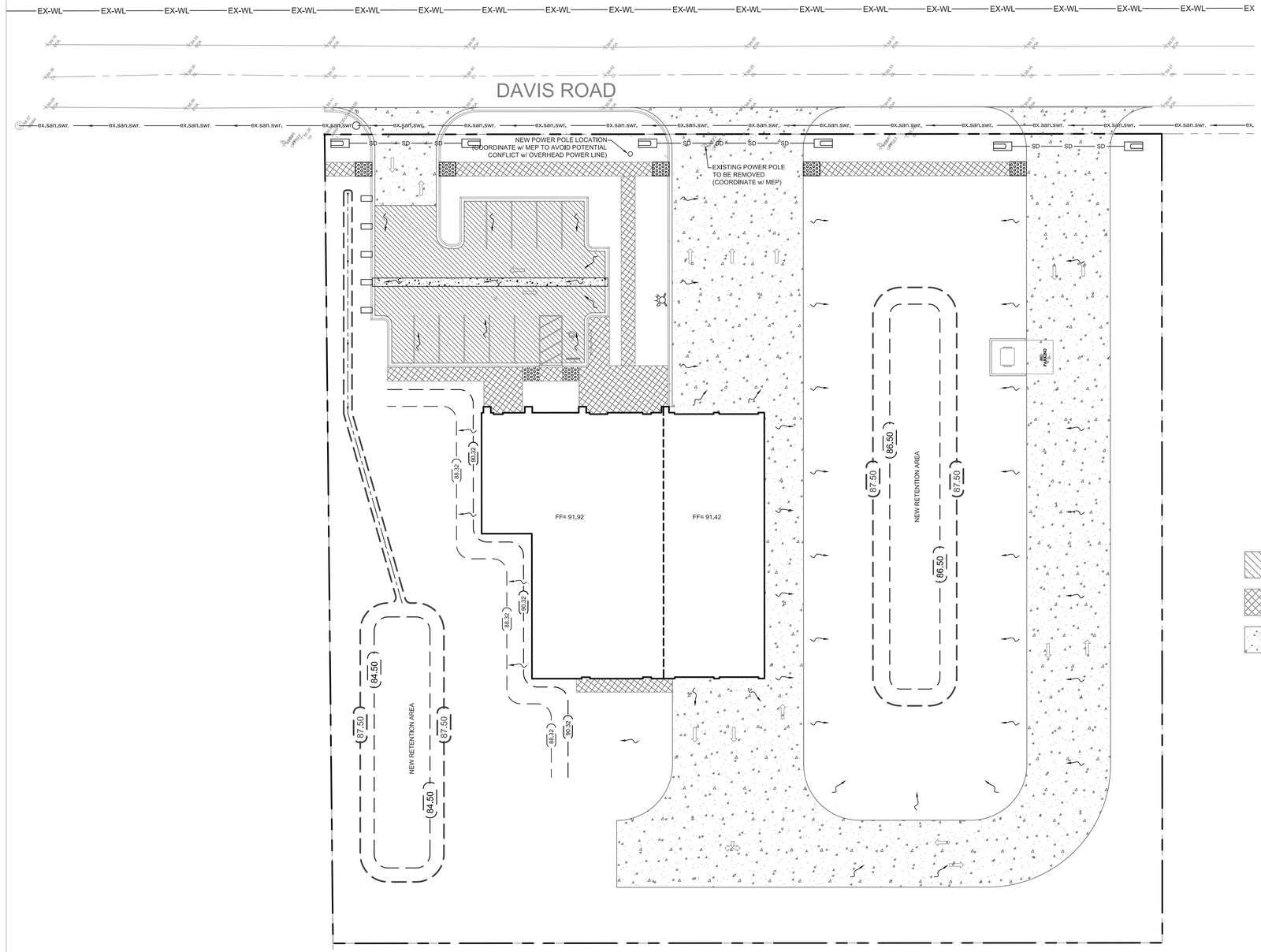
DATE
February 28, 2019

ISSUED FOR BID

SHEET

OF

C2



NEW HMAC

NEW CONCRETE FLATWORK

NEW 8" CONCRETE DRIVE

NEW SITE LAYOUT

SCALE : 1" = 20'

HINOJOSA ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

Milnet Architectural Services

AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

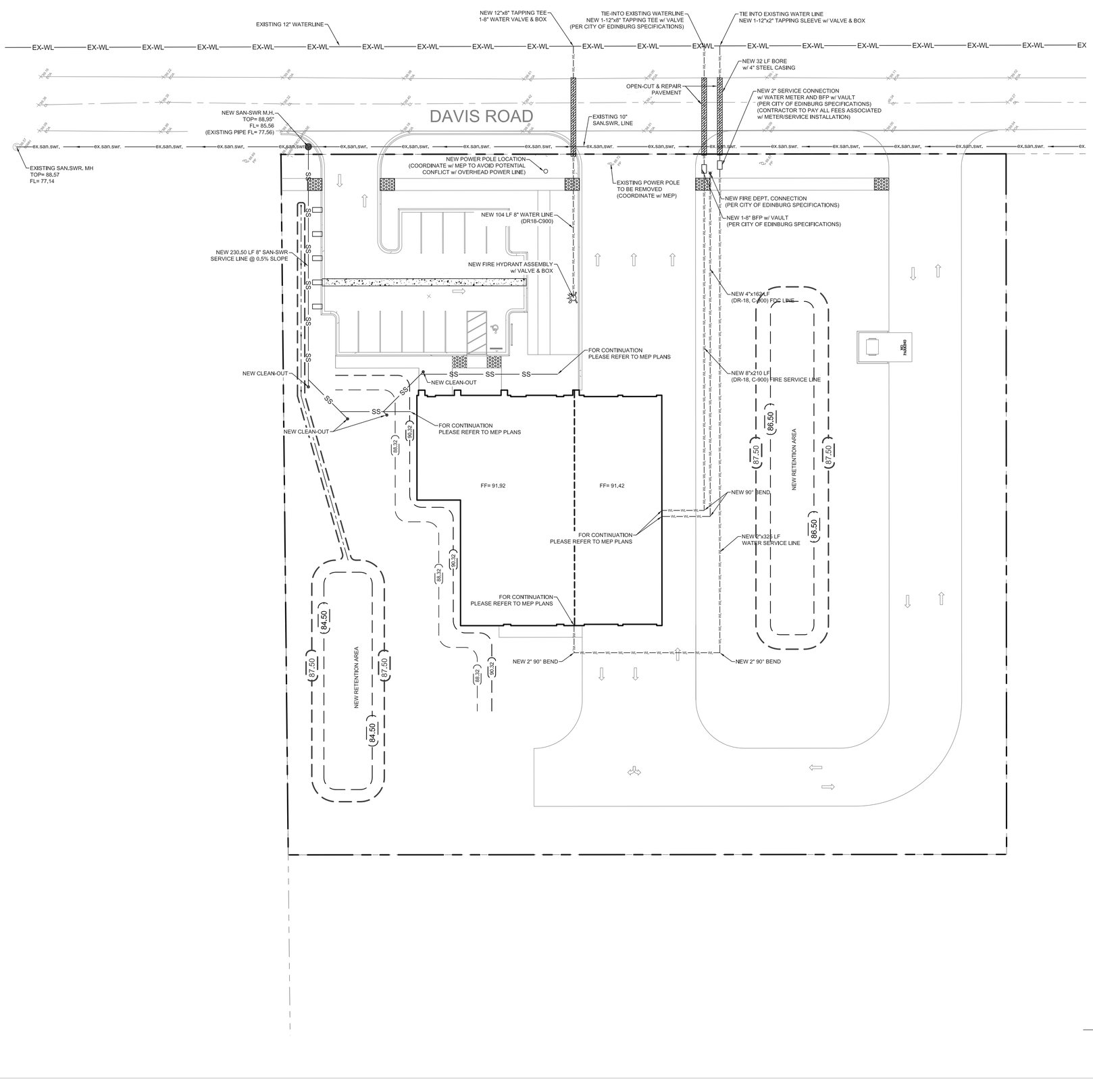
DATE
February 28, 2019

ISSUED FOR BID

SHEET

OF

C3



NEW UTILITIES LAYOUT

SCALE : 1" = 20'

HINOJOSA
ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

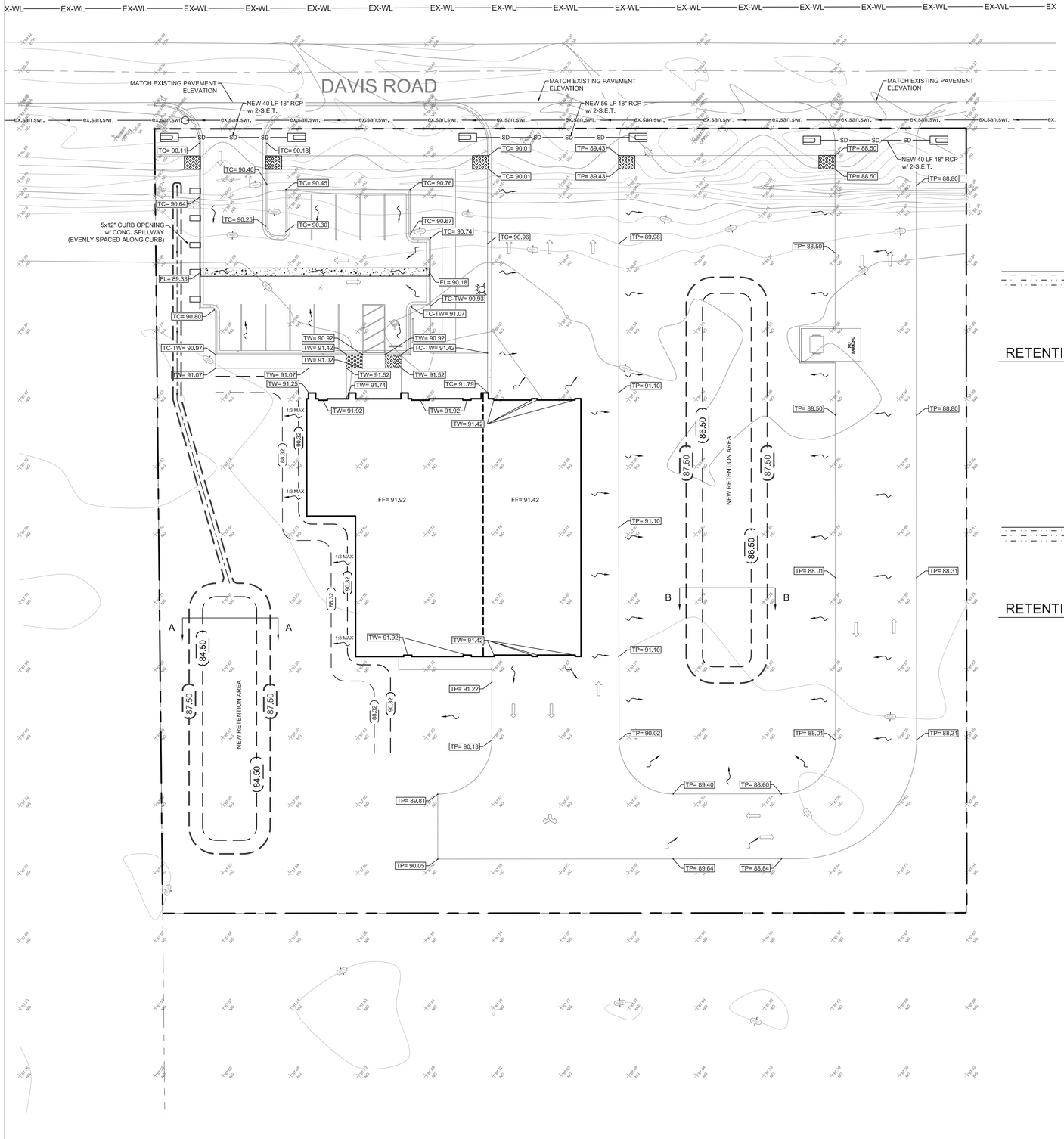
DATE
February 28, 2019

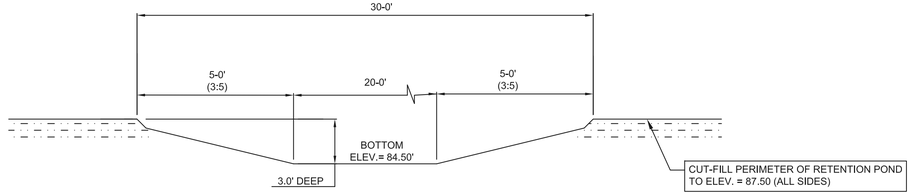
ISSUED FOR BID

SHEET

OF

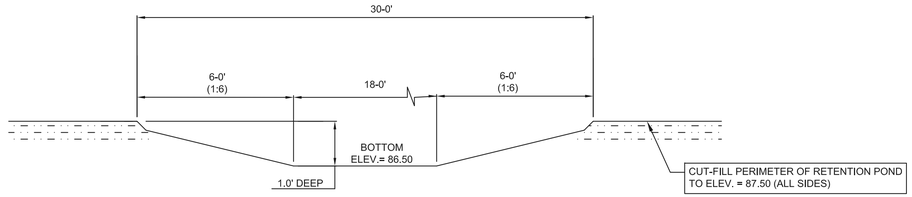
C4





RETENTION AREA TYPICAL CROSS-SECTION A-A (ESTIMATED 3,276.00 C.F. CAPACITY)

N.T.S.



RETENTION AREA TYPICAL CROSS-SECTION B-B (ESTIMATED 3,468.00 C.F. CAPACITY)

N.T.S.

NEW GRADING & DRAINAGE LAYOUT

SCALE : 1" = 20'

HINOJOSA ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

Milnet Architectural Services

AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

STATE OF TEXAS W.R.HINOJOSA 65228 REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

DATE
February 28, 2019

ISSUED FOR BID

SHEET

OF

C5

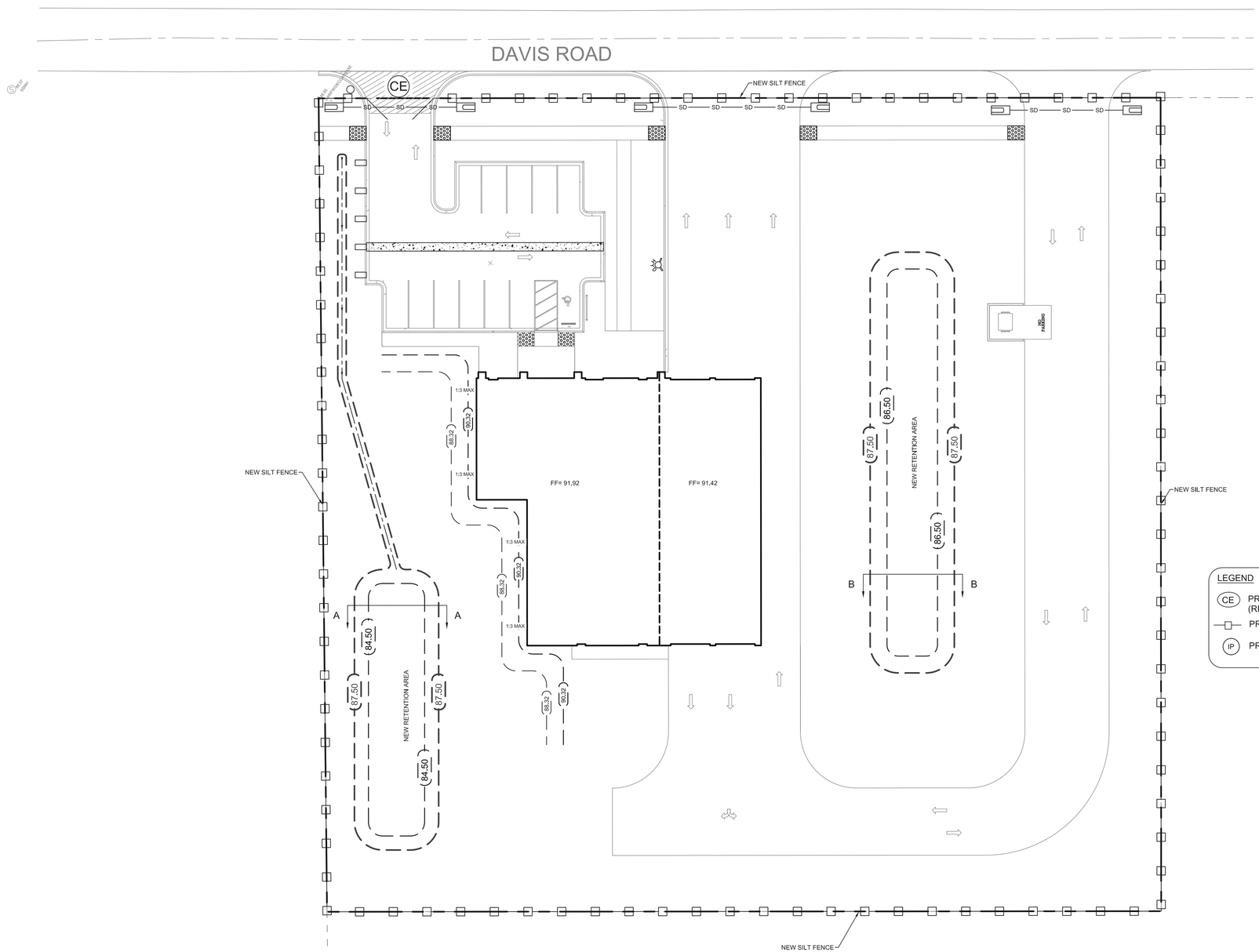
HINOJOSA
ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED
PROFESSIONAL
ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19



*** REFER TO SHEETS C1 & C10 FOR GENERAL NOTES AND DETAILS**

LEGEND

- (CE) PROP. TEMPORARY STONE CONSTRUCTION ENTRANCE (REFER TO DETAILS)
- PROP. SILT FENCE (REFER TO DETAILS)
- (IP) PROP. INLET PROTECTION (REFER TO DETAILS)

SUGGESTED EROSION & SEDIMENT CONTROL LAYOUT

SCALE : 1" = 20'

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

DATE
February 28, 2019

ISSUED FOR BID

SHEET

OF

C6

HINOJOSA ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19

GENERAL NOTES

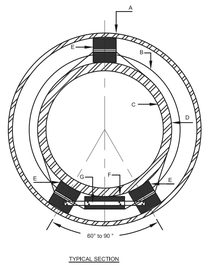
1. METHOD OF END CLOSURE TO BE DESIGNED TO SUIT CONDITIONS.
2. ALL BORINGS UNDER STATE ROADS SHALL CONFORM TO STATE OF TEXAS DEPARTMENT OF HIGHWAYS & PUBLIC TRANSPORTATION BORE SPECIFICATIONS.

BORING INSTALLATION	
PIPE CASING SIZE	CARRIER PIPE SIZE
14" SCHEDULE 40	6"
16" SCHEDULE 40	8"
18" STANDARD CLASS	10"
22" STANDARD CLASS	12"
24" SCHEDULE 20	14"
26" SCHEDULE 20	16"
30" 0.375 WALL	18"
36" 0.375 WALL	24"

PIPE CASING AND CARRIER PIPE DATA

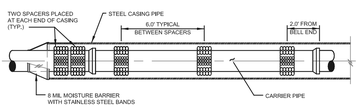
CONSTRUCTION NOTES

A. WELDING STEEL PIPE CASING.
B. BELL DIA. OF CARRIER PIPE.
C. CARRIER PIPE.
D. STAINLESS STEEL STRAPS.
E. 3" X 3" X 16" REDWOOD OR CEDAR SKID BLOCKS, TREATED WITH PENTACHLOROPHENOL, TO BE PLACED AT EACH END OF PIPE SECTIONS AND SPACED AROUND PIPE AS SHOWN. BLOCKS ARE STRAPPED TOGETHER WITH STAINLESS STEEL STRAPS. STRAPS, WILL PASS THROUGH BLOCKS.
F. 2" X 4" BLOCK, TREATED REDWOOD OR CEDAR
G. 1" CLEAT TREATED REDWOOD OR CEDAR.

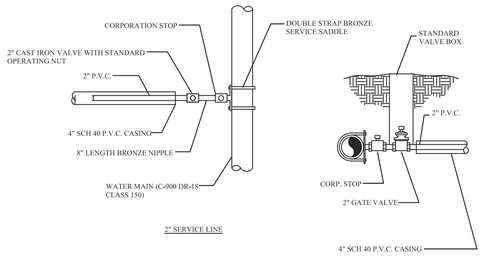


TYPICAL SECTION

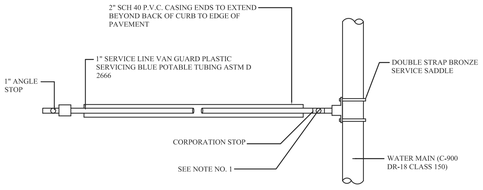
WATER BORING INSTALLATION



BORING and CASING DETAIL



2" SERVICE LINE

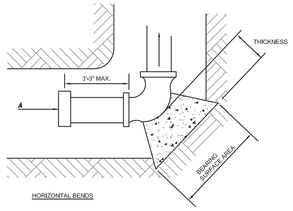


1" SERVICE LINE

NOTES:

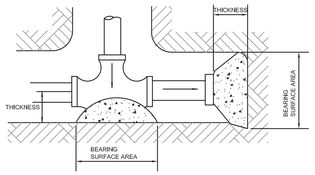
1. SERVICE LINES GREATER THAN 1" REQUIRE P.V.C. SCHEDULE 40 PIPE.
2. 2" SERVICES REQUIRE BOTH CORP. STOP AND CAST IRON VALVE.
3. ONE SERVICE REQUIRED FOR EACH LOT.
4. 2" ANGLE STOPS REQUIRED FOR 2" SERVICES AT METER LOCATION.
5. A U-BRANCH FITTING REQUIRED FOR 1" SERVICES AT METER LOCATION.

TYPICAL SERVICE CONNECTION

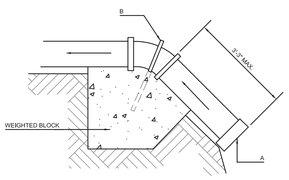


HORIZONTAL BENDS

PVC PIPE _____ CLASS	_____
PVC Municipal Water Vinylutron AWWA C900	100(DR 25) 150(DR 18) 200(DR 14)
PVC WATER TRANSMISSION AWWA C905	DR 25 (165 PSI) DR 25 (165 PSI)
PVC PRESSURE PIPE (IPS) ASTM D 2241	80 (SDR 51) 100 (SDR 41) 118 (SDR 35) 125 (SDR 32.5) 160 (SDR 26) 200 (SDR 21) 250 (SDR 17)
PVC GRAVITY SEWER ASTM D 3034 (1)	SDR 35 SDR 26
PVC GRAVITY SEWER ASTM F 679	SDR 35 SDR 26



HORIZONTAL TEES AND DEAD ENDS

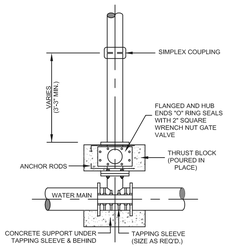


VERTICAL BENDS

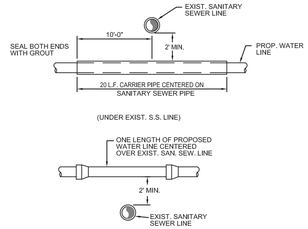
DIAMETER OF PIPE INCHES	HORIZONTAL BEND BEARING SURFACE AREA SQ. FT.	HORIZONTAL BEND THICKNESS INCHES	WEIGHT AT VERTICAL BENDS-LBS
22-1/2° BENDS			
6 OR LESS	2	8	1,700
8	3	12	3,000
10	3.5	12	4,500
12	5	14	6,600
14	5	18	9,000
16	7	18	11,800
45° BENDS			
6 OR LESS	4	12	3,200
8	5	14	5,800
10	6	18	9,000
12	7	18	13,000
14	8	24	17,000
16	11.5	24	23,200
90° BENDS			
6 OR LESS	6	12	6,000
8	8	15	10,700
10	10	18	16,700
12	12	18	24,000
14	18	24	32,600
16	21	24	42,700
TEES & DEAD ENDS			
6 OR LESS	3	12	----
8	4	15	----
10	6	18	----
12	8.5	18	----
14	11.5	24	----
16	15	24	----

GENERAL NOTES:

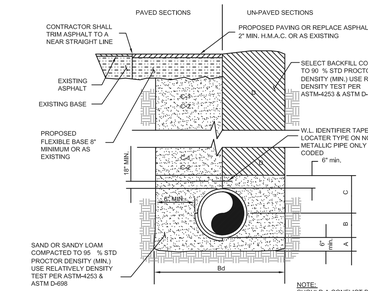
1. SEE THRUST BLOCK SIZE CHART FOR PROPER THICKNESS AND BEARING SURFACE AREAS. THE CHART IS FOR A SOIL RESISTANCE OF 2,000 LBS./SQ. FT. WITH PIPELINE HAVING A MINIMUM OF 30" OF COVER.
2. THE ENGINEER MAY CONSIDER REDUCTIONS OF THRUST BLOCK SURFACE AREA UPON SUBMITTAL OF APPROVED SOIL RESISTANT TEST RESULTS GREATER THAN 2000 LBS/SQ.FT.
3. THE LOCATION OF THRUST BLOCKS DEPENDS UPON THE DIRECTION OF THRUST AND TYPE OF FITTINGS.



TAPPING SLEEVE AND VALVE INSTALLATION



WHERE WATERLINE CROSSES SS LINE



A. SAND OR SANDY LOAM BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE, (MIN. THICKNESS=6")

B. SAND SANDY LOAM BACKFILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, HAND TAMPED) B© TRENCH WIDTHS SHALL BE PIPE O.D. + 12" OR IN ACCORDANCE WITH ASTM 2321 FOR PVC PIPE.

C. SAND OR SANDY LOAM BACKFILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE. (6" LIFTS, HAND TAMPED)

C-1 (CITY STREETS, PARKING AREA, DRIVEWAYS) SELECT EXCAVATED BACKFILL COMPACTED TO 95 %

C-2 (STATE MAINTAINED ROADWAYS) COMPACTED SAND/CEMENT STABILIZED BACK FILL WITH 7 % PORTLAND CEMENT COMPACTED AS PER ASTM D-4253 AND ASTM D-698

D. SELECT EARTH BACKFILL COMPACTED TO 90 % STANDARD PROCTOR DENSITY (12" LIFT, MECHANICAL COMPACTION). FOUNDATION PREPARATION (WELLPOINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE. BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENT, AND PER ASTM D-4253 & ASTM D-698), THE THICKNESS OF EACH LOOSE LAYER SHALL NOT EXCEED 6". STRUCTURAL BACKFILL MATERIAL SHALL BE SAND, APPROVED SITE SOIL, OR OTHER APPROVED SUBSTITUTE.

NOTE:
SHOULD A CONFLICT BETWEEN THIS STANDARD AND THE RECOMMENDATION OF ANY GEOTECHNICAL REPORT ARISE, WRITTEN APPROVAL MUST BE RECIEVED BY CONTRACTOR FROM THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF EITHER.

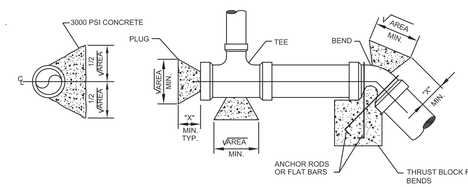
WATERLINE BEDDING DETAIL & NOTES

CONSTRUCTION NOTES

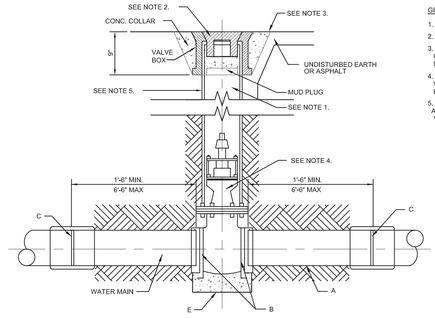
A. SIMPLEX COUPLING
B. ANCHOR ROD

GENERAL NOTES

1. SEE THRUST BLOCK SIZE CHART FOR PROPER THICKNESS AND BEARING SURFACE AREAS. THE CHART IS FOR A SOIL RESISTANCE OF 2,000 LBS./SQ. FT. WITH PIPELINE HAVING A MINIMUM OF 30" OF COVER.



THRUST BLOCK DETAIL



TYPICAL VALVE AND BOX INSTALLATION

GENERAL NOTES

1. VALVE BOX IN BOOT SHALL BE CAST IRON.
2. VALVE COVER SHALL BE MARKED "WATER".
3. VALVE TOP SHALL BE FLUSH WITH FINISHED GRADE OR NATURAL GROUND OR AS DIRECTED BY ENGINEER.
4. GATE VALVE SHALL BE RESILIENT SEATED TYPE WITH RING-TITE ENDS OR APPROVED EQUAL.
5. EARTH UNDER FLANGE TO BE FIRM AND AND WELL TAMPERED TO INSURE AGAINST VALVE BOX SETTING.

CONSTRUCTION NOTES

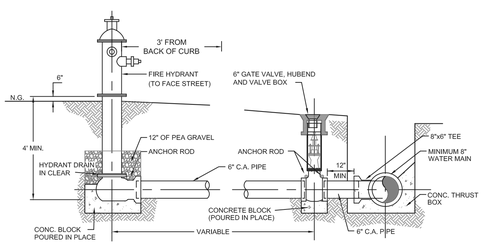
A. WATER MAIN (C-900-DR18 CLASS 150).
B. ANCHOR RODS
C. SIMPLEX COUPLING
D. 6" CAST IRON NIPPLE
E. CONCRETE BLOCK (POURED IN PLACE) (30"x30"x6") w/6"x6" WIRE MESH

THRUST BLOCK REQUIREMENTS VS. FITTING TYPE											
DIAMETER	"X"	END/TEE	90° BEND		45° BEND		22.5° BEND		11.25° BEND	
(IN.)	(FT.)	(S.F.)	(S.F.)	(LB.)	(S.F.)	(LB.)	(S.F.)	(LB.)	(S.F.)	(LB.)
4	1	1,4	1,9	3839	1,0	2077	0,5	1059	0,3	532
6	1	2,8	4,0	7932	2,1	4293	1,1	2188	0,5	1100
8	1,25	4,8	6,8	13646	3.7	7385	1,9	3765	0,9	1892
10	1,25	7,3	10,3	20528	5,6	11110	2,8	5664	1,4	2846
12	1,50	10,3	14,5	29030	7,9	15711	4,0	8009	2,0	4024
14	1,75	13,8	19,5	39001	10,6	21107	5,4	10760	2,7	5406
16	2	17,8	25,2	50442	13,6	27299	7,0	13917	3,5	6992

NOTES:

1. THRUST BLOCKING TO BE PLACED AT ALL DEAD ENDS, TEES, BENDS, WYES, AND REDUCERS AND OTHER AREAS THAT REQUIRE THRUST RESISTANCE.
2. MINIMUM AREAS SHOWN ARE IN SQUARE FEET, BLOCK WEIGHTS FOR VERTICAL BENDS ARE IN POUNDS.
3. THRUST BLOCK AREAS SHOWN ARE BASED ON A TEST PRESSURE OF 150 P.S.I., SOIL BEARING PRESSURE OF 2000 PSF, AND MINIMUM 30" COVER. IF REQUIRED TEST PRESSURE IS LESS OR THE SOIL BEARING CAPACITY IS GREATER, THE CONTRACTOR MAY, AFTER APPROVAL BY THE ENGINEER, REDUCE THE THRUST BLOCK AREA SHOWN. THRUST BLOCKING AREA SHALL BE INCREASED IF SOIL BEARING CAPACITY IS LESS THAN 2000 PSI.
4. AT DOWNWARD VERTICAL BENDS, PIPING SHALL BE RESTRAINED BY THRUST BLOCK AS SHOWN WITH WEIGHT INDICATED IN THE TABLE. ANCHOR RODS OR FLAT BARS SHALL BE STAINLESS STEEL.
5. BEARING MUST BE ON UNDISTURBED EARTH.
6. USE 3000 PSI CONCRETE.
7. RESTRAINING JOINTS MAY BE REQUIRED AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER
8. THRUST BLOCK SHALL BEAR ON FULL 180° OF CIRCUMFERENCE OF PIPE.

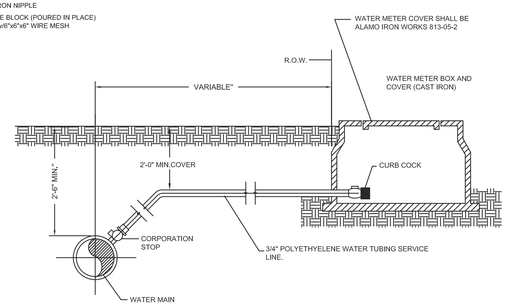
CONCRETE THRUST BLOCKS



FIRE HYDRANT INSTALLATION

NOTES:

1. FIRE HYDRANT ELEVATIONS WILL BE SET BY THE ENGINEER.
2. FLANGE MUST BE AT FINISHED GRADE OR 3" TO 6" ABOVE 2. FLANGE MUST BE AT FINISHED GRADE OR 3" TO 6" ABOVE TOP OF CURB.
3. FLANGED GATE VALVE INSTALLATION TO BE USED WITH 10" WATER LINES OR GREATER.
4. BBF TEES TO BE USED WITH 10" WATER LINE OR GREATER BBF TEES TO BE USED WITH SMALLER DIA. PIPES.
5. ACCEPTABLE HYDRANT BRANDS ARE MUELLER, AMERICAN DARLING AND KENNEDY.



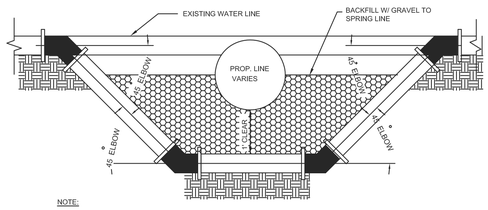
NOTES:

1. ALL SERVICE CONNECTIONS NEED TO HAVE A MIN. 2'-0" COVER FROM FINISHED GRADE.
2. WATER METER COVER SHALL BE ALAMO IRON WORKS 813-05-2.
3. ALL WATER MAINS HAVE 30 INCHES OF COVER FROM FINISHED GRADE.
4. METER BOX SHALL BE CAST IRON.
5. ALL CONCRETE TO HAVE A MIN. 28 DAYS COMPRESSIVE STRENGHT OF 3,000 P.S.I.
6. 2" GATE VALVE ONLY REQUIRED FOR 2" SERVICE.
7. POLYETHYLENE TUBING ACCEPTABLE FOR LINE SIZES 1" OR LESS, SCHEDULE 40 PVC REQUIRED FOR LINE SERVICES GREATER THAN 1".

CONSTRUCTION NOTES:

A. WATER VALVE COVER
B. CURB COCK
C. METER BOX & METER PROVIDED
D. WATER TUBING SERVICE LINE
E. CORPORATION STOP
F. WATER MAIN

TYPICAL SERVICE CONNECTION WITH METER BOX



NOTE:
ALL BENDS AND JOINTS MUST BE SUPPORTED BY A CONC. THRUST BLOCK, APPROVED EQUAL,OR AS DIRECTED BY ENGINEER

WATER LINE ADJUSTMENT PVC

WATER DETAILS

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

DATE
February 28, 2019

ISSUED FOR BID

SHEET

OF

C7

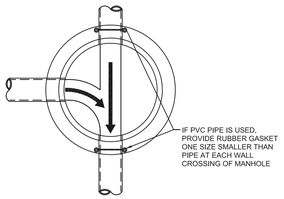
HINOJOSA ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

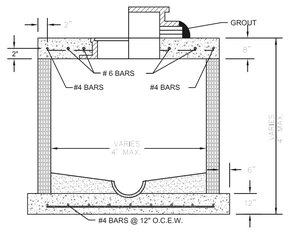
2-28-19

STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19



MANHOLE FLOOR PLAN

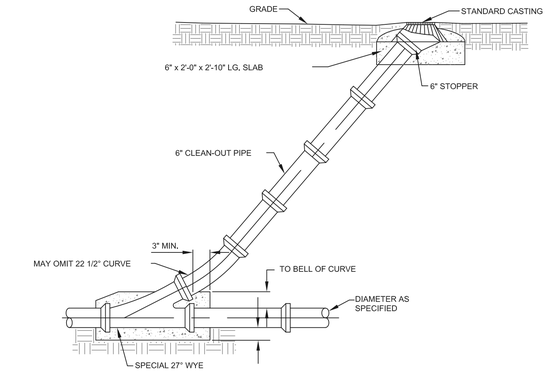


SHALLOW MANHOLE SECTION

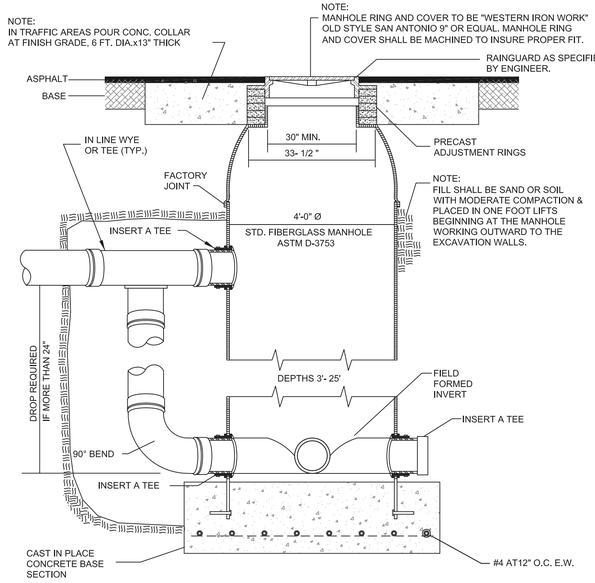
General Notes:

1. It shall be the contractors responsibility to locate underground utilities, whether shown or not shown on the drawings, sufficiently in advance of operation, to preclude damage to same.
2. In the event of damage to underground facilities, whether shown or not in the drawings, the contractor shall make the necessary repairs to place the facilities back in service at no increase in the contractors price, and all such repairs shall conform to the requirements or the company or agency serving the facility.
3. The contractor shall exercise extra care to prevent damage to all other structures in the area including building, fences, roads, pipelines, utilities, etc.., whether publicly or privately owned.
4. Until acceptance by the engineer of any part or all of the construction, as provided for in the plans and specifications, It shall be under the charge and care of the contractor, and he shall take every necessary precaution against injury or damage to any part of the work. The contractor shall rebuild repairs, restore and make good, at his own expense, all Injuries or damage to any portion of the work before its completion and acceptance.
5. No open trenches of excavation shall be left open overnight.
6. Coordinate all utility work with All affected Utility Companies for accurate determination and identification of all Utility lines, whether shown or not shown on the drawings, sufficiently in advance of operation to preclude damage to same.
7. Contractor shall conform with the requirements of McAllen, Texas
8. Water and sewer Improvements to be installed by City of McAllen approved plumbing contractor.

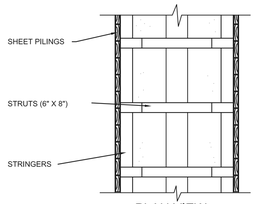
SHALLOW MANHOLE DETAIL



TYPICAL CLEANOUT



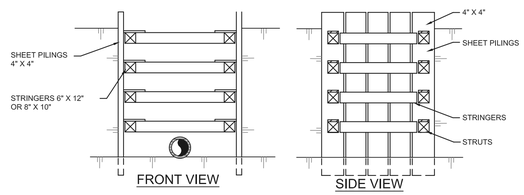
TYPICAL FIBERGLASS MANHOLE



PLAN VIEW

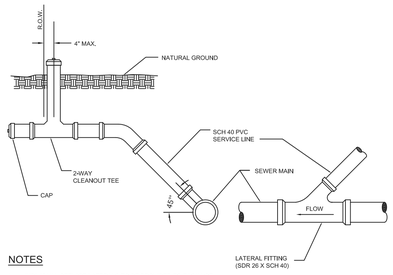
TIMBER: SOUTHERN PINE WITH F_b 1750 p.s.i.

NOTE:
1. CONTRACTOR MAY PROPOSE ALTERNATE MEANS OF TRENCH PROTECTION.
2. PROVIDE FOR ALL TRENCHES 5' OR GREATER IN DEPTH.
3. ALL METHODS, MATERAILS & PRACTICES MUST MEET O.S.H.A. STANDARDS.
4. FOR USE IN MEDIUM CLAY TRENCHES TO BE 12.5' +/- DEEP.
5. SEE SPECIFICATIONS FOR CERTIFICATION REQUIREMENTS.



FRONT VIEW SIDE VIEW

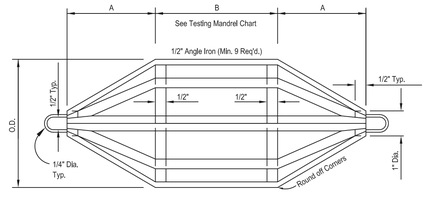
TYPICAL TRENCH PROTECTION



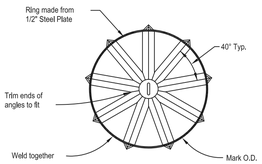
NOTES

1. INDIVIDUAL SERVICE LATERALS TO BE PROVIDED TO EACH LOT.
2. SINGLE FAMILY SERVICE SHALL BE 4" MIN. MULTI-FAMILY, COMMERCIAL, AND INDUSTRIAL SERVICE SHALL BE 6" OR GREATER AS REQUIRED.

STANDARD SERVICE CONNECTION



SIDE OR TOP VIEW



END VIEW

SIZE	A	B *	MANDREL O.D. PVC (SDR-35)	MANDREL O.D. PVC (SDR-26)	RING O.D. PVC (SDR-35)	RING O.D. PVC (SDR-26)
6"	4.0"	4.5"	5.62	5.50	4.91	4.79
8"	5.5"	6.0"	7.52	7.37	6.81	6.66
10"	7.0"	7.5"	9.41	9.21	8.70	8.50
12"	8.0"	9.0"	11.19	10.96	10.48	10.25
15"	10.0"	11.0"	13.70	13.42	12.99	12.71
18"	12.0"	13.5"	16.75	——	16.04	——
21"	14.0"	16.0"	19.74	——	19.03	——
24"	16.0"	18.0"	22.21	——	21.50	——
27"	18.0"	20.0"	25.03	——	24.32	——

* Minimum Length

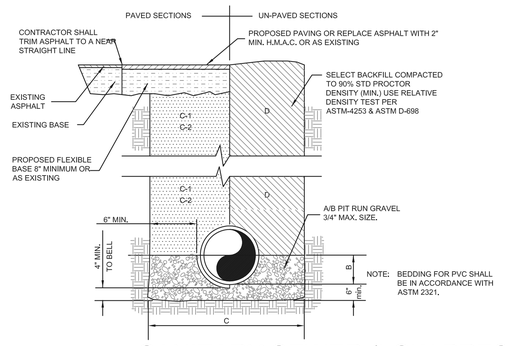
TESTING MANDREL CHART

Notes:

PVC pipes and fittings six inches (6") to fifteen inches (15") in diameter shall conform to ASTM D-3034, PVC pipes and fittings eighteen Inches (18") to twenty-seven inches (27") in diameter shall conform to ASTM F-679.

This information is provided as a reference. All deflection testing shall be done in accordance with TNRCC Chapter 317.

GO, NO-GO DEFLECTION TESTING MANDREL



A. GRAVEL BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE (MIN. THICKNESS = 6") - PIT RUN GRAVEL 3/4" MAX. SIZE.

B. GRAVEL PLACED AFTER PIPE ID LAID, FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. PIT RUN GRAVEL 3/4" MAX. SIZE.

C. TRENCH WIDTHS SHALL BE PIPE BELL O.D. + 12".

C-1 (CITY STREETS, PARKING AREA, DRIVEWAYS) SELECT EXCAVATED BACKFILL COMPACTED TO 95% SPD, 8" LIFTS, MECHANICAL COMPACTION.

C-2 (STATE MAINTAINED ROADWAYS) COMPACTED SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED AS PER ASTM D-4253 AND ASTM D-698.

D. SELECT EARTH BACKFILL COMPACTED TO 90% STANDARD PROCTOR DENSITY (12" LIFT, MECHANICAL COMPACTION), FOUNDATION PREPARATION (WELLPOINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE. BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO 95% STD. PROCTOR DENSITY (USE RELATIVELY DENSITY TEST PER ASTM D-4253 & ASTM D-698). THE THICKNESS OF EACH LOOSE LAYER SHALL NOT EXEED 6". STRUCTURAL BACKFILL MATERIAL SHALL BE SAND, APPROVED SITE SOIL, OR OTHER APPROVED SUBSTITUTE.

SANITARY SEWER (LOW PRESSURE PIPE)

SANITARY SEWER DETAILS

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

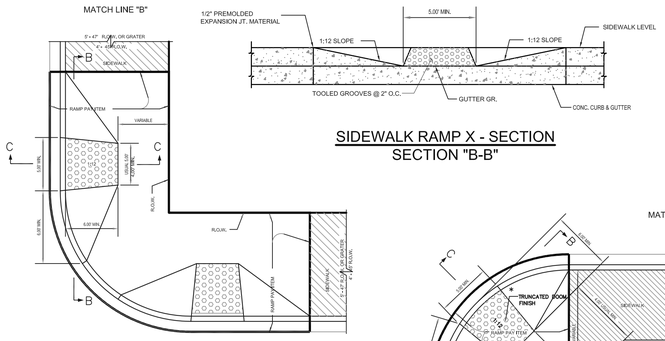
DATE
February 28, 2019

ISSUED FOR BID

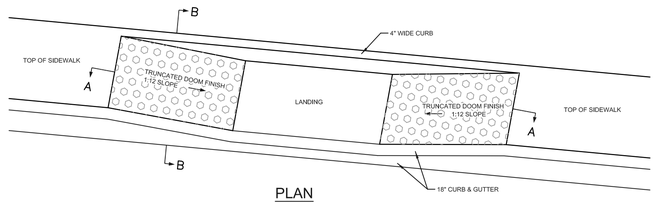
SHEET

OF

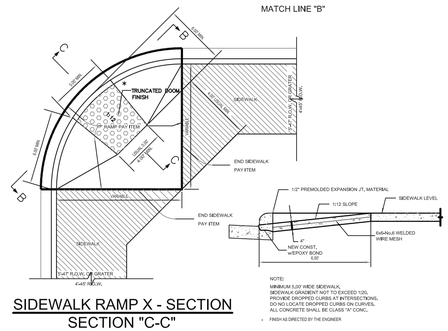
C8



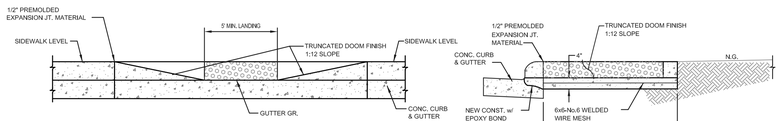
SIDEWALK RAMP X - SECTION
SECTION "B-B"



PLAN



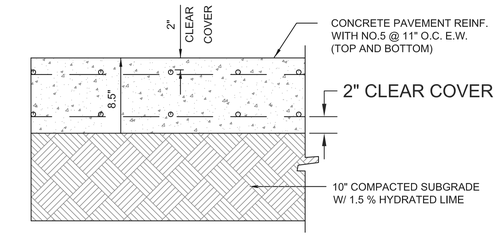
SIDEWALK RAMP X - SECTION
SECTION "C-C"



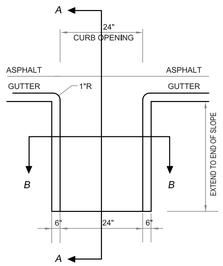
SECTION "A-A"

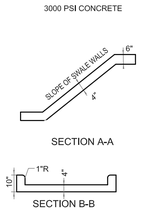
SECTION "B-B"

SIDEWALK RAMP DETAILS

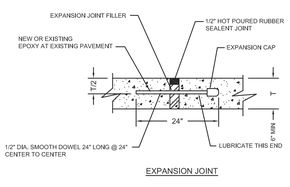


CONCRETE PAVEMENT SECTION AT PARKING LOT
CONC. STRENGTH: 4400 PSI @ 28 DAYS

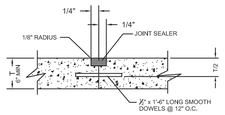




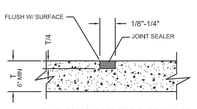
SPILLWAY PAD DETAIL
N.T.S.



EXPANSION JOINT

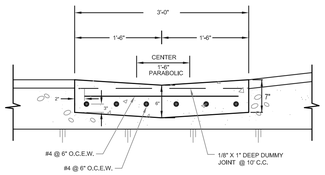


CONSTRUCTION JOINT



SAWED CONTRACTION JOINT

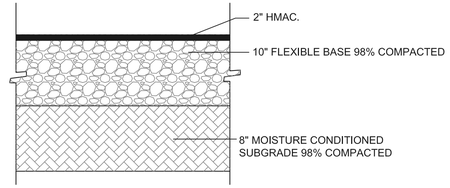
TYPICAL CONCRETE JOINT DETAILS



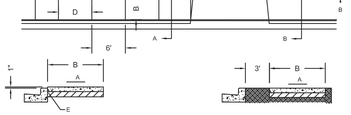
CONCRETE VALLEY GUTTER

NOTES:

1. THE VALLEY GUTTER WILL BE MEASURED FOR PAYMENT BY LENGTH AND WILL INCLUDE ALL OF THE C&G TO THE END OF THE RADII
2. THE FILLET SECTION AND CURB SHALL BE POURED MONOLITHICALLY,
3. 1/2" PRE-MOLDED EXPANSION JOINTS SHALL BE PLACED AS SHOWN.
4. CONC. GUTTER AND FILLET WILL BE LAID ON FLEXIBLE BASE

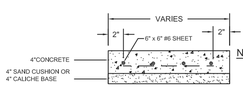


ASPHALT SECTION



SECTION A-A
SIDEWALK ADJACENT TO CURB

SECTION B-B
SIDEWALK OFFSET 5 FT FROM CURB



NOTE

1. CONCRETE SHALL HAVE 3,500 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. SUBGRADE SHALL BE COMPACTED TO 90% MAX DENSITY.

GENERAL NOTES:

1. DEVIATIONS FROM THESE STANDARDS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
2. SIDEWALK SHALL BE CONSTRUCTED WITHIN STREET R.O.W.
3. PROVIDE 5' X 5' PASSING SPACE AT A MAXIMUM 200' INTERVALS. IF SIDEWALK IS LESS THAN 5' IN WIDTH (DRIVEWAY IS CONSIDERED A PASSING SPACE)

CONSTRUCTION NOTES:

A. CROSS-SLOPE AT 2.0% MAX.

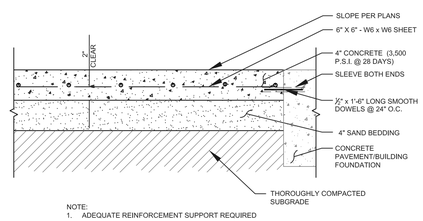
B. SIDEWALK ALIGNMENT MUST MATCH EXISTING ALIGNMENT IN AREA OR BE SET A MINIMUM OF 3 FT FROM THE BACK OF CURB.

C. SEE DRIVEWAY APRON DETAIL.

D. CONTRACTION JOINTS EVERY 6 FT.; EXPANSION JOINT EVERY 30 FT, AND ALONG CURB AND GUTTER WHEN SIDEWALK ADJACENT TO CURB AND ALONG ANY STRUCTURE EXISTING.

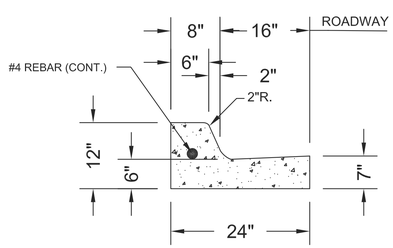
E. 1/2" EXPANSION JOINT.

TYPICAL SIDEWALK DETAIL

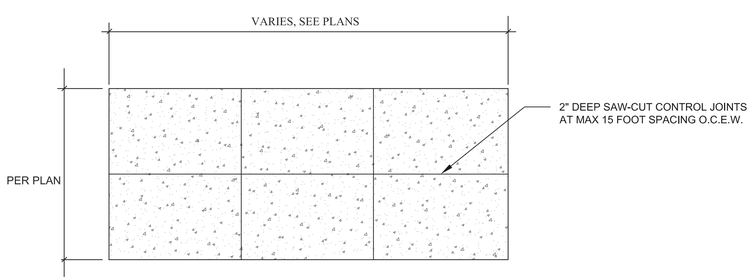


NOTE:
1. ADEQUATE REINFORCEMENT SUPPORT REQUIRED

CONCRETE WALKS



STANDARD CURB & GUTTER



CONCRETE PAVEMENT SECTION
CONC. STRENGTH: 4400 PSI @ 28 DAYS

NOTES:
1. ALL CONC. SHALL BE MIN. 4,400 PSI CONCRETE.
2. WHEN ADJACENT TO EXISTING OR PROPOSED SIDEWALK, CONCRETE PAVEMENT SHALL BE DOWELED INTO SIDEWALK. CONTRACTOR SHALL PLACE EXPANSION JOINT BETWEEN CONCRETE PAVEMENT AND SIDEWALK.
3. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.
4. CONCRETE SHALL BE ALLOWED TO CURE FOR A MIN. OF 7 DAYS w/ 2,500 PSI BEFORE OPENING THE PAVEMENT TO ANY LOADING.

PAVING-SIDEWALK-DRAINAGE DETAILS

HINOJOSA ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

DATE
February 28, 2019

ISSUED FOR BID

SHEET
OF
C9

HINOJOSA ENGINEERING, INC.
STRUCTURAL & CIVILENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA P.E. 65228 DATED 02-28-19

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-132A

DATE
February 28, 2019

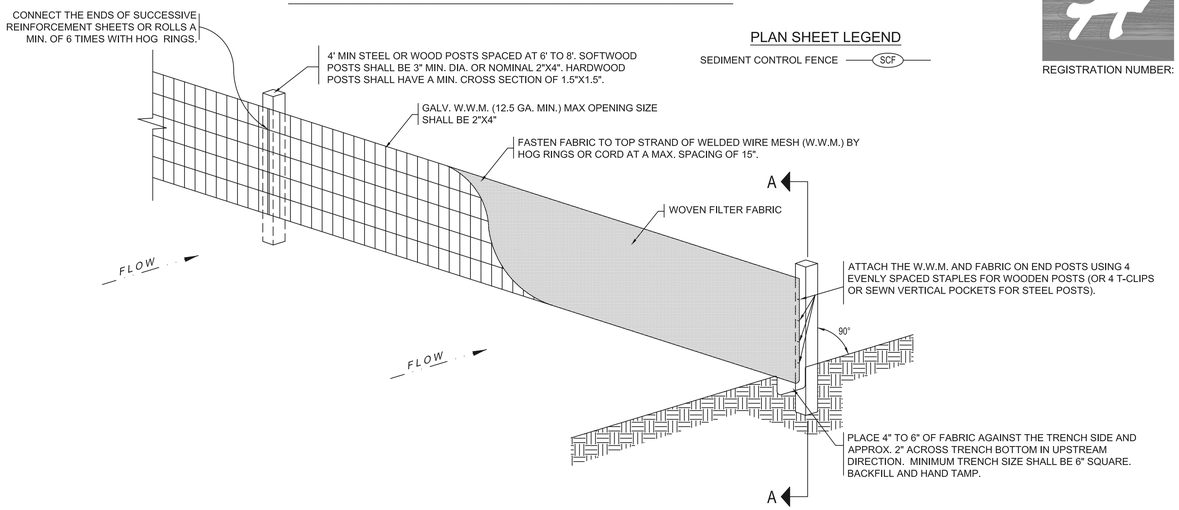
ISSUED FOR BID

SHEET

OF

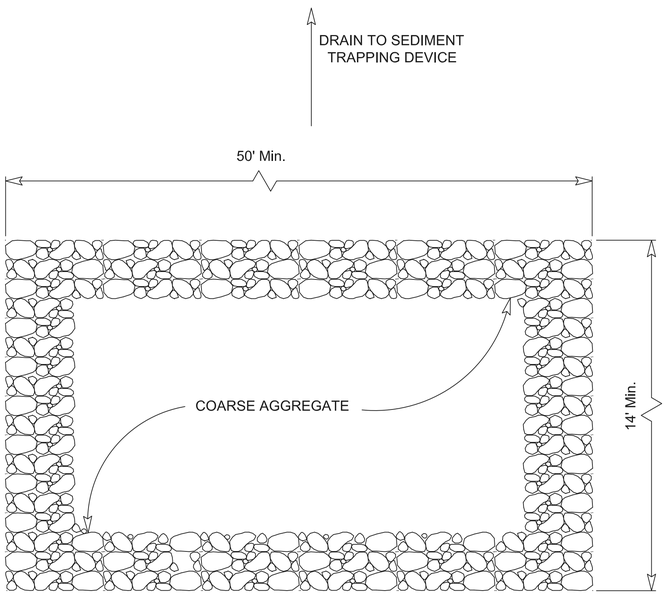
C10

TEMPORARY SEDIMENT CONTROL FENCE

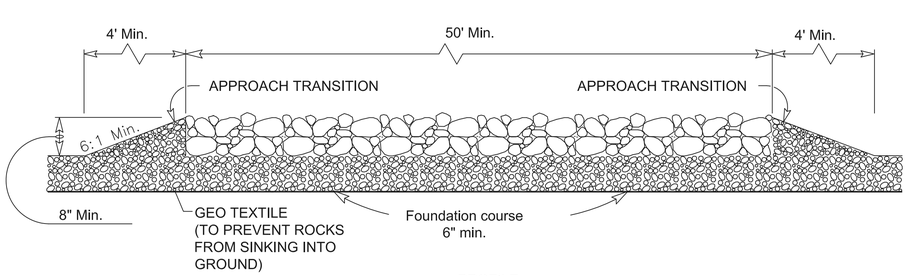


PLAN SHEET LEGEND

SEDIMENT CONTROL FENCE — SCF



PLAN



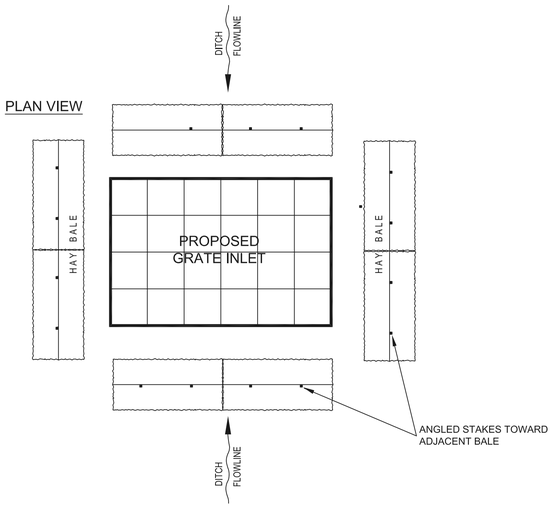
PROFILE

CONSTRUCTION EXIT (TYPE 1)

GENERAL NOTES

1. THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'.
2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 4" TO 8".
3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
4. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
5. THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
6. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

PLAN VIEW



GENERAL NOTES :

1. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

SEDIMENT CONTROL FENCE USAGE GUIDELINES 2

A SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A 2-YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED. SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAX. FLOW THROUGH RATE OF 100 GPM/FT . SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA LARGER THAN TWO ACRES.

GENERAL NOTES :

1. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.
2. HAY BALES SHALL BE A MINIMUM OF 30" IN LENGTH AND WEIGH A MINIMUM OF 50 LBS.
3. HAY BALES SHALL BE BOUND BY EITHER WIRE OR NYLON OR POLYPROPYLENE STRING. THE BALES SHALL BE COMPOSED ENITRELY OF VEGETABLE MATTER.
4. HAY BALES SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4" AND WHERE POSSIBLE 1/2 THE HEIGHT OF THE BALE.
5. HAY BALES SHALL BE PLACE IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. THE BALES SHALL BE PLACED WITH BINDINGS PARALLEL TO THE GROUND.
6. HAY BALES SHALL BE SECURELY ANCHORED IN PLACE WITH 3/8" DIA. REBAR OR 2"X2" WOOD STAKES DRIVE THROUGH THE BALES. THE FIRST STAKE SHALL BE ANGLED TOWARDS THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.

BALED HAY USAGE GUIDELINES

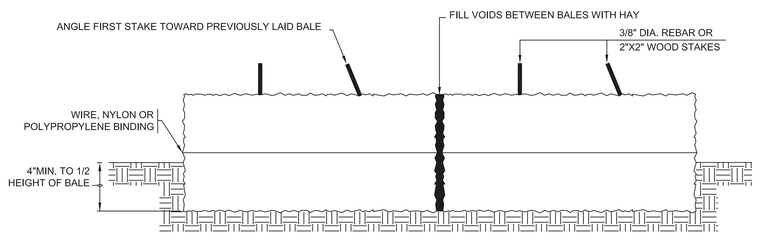
A BALED HAY INSTALLATION MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A TWO YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOWRATE TO BE FILTERED. THE INSTALLATION SHOULD BE SIZED TO FILTER A MAX- IMUM FLOW THRU RATE OF 5 GPM/FT OF CROSS SECTIONAL AREA. BALED HAY MAY BE USED AT THE FOL- LOWING LOCATIONS:

1. WHERE THE RUNOFF APPROACHING THE BALED HAY FLOWS OVER DISTURBED SOIL LESS THAN 100'. IF THE SLOPE OF THE DISTURBED SOIL EXCEEDS 10%, THE LENGTH OF SLOPE UPSTREAM THE BALED HAY SHOULD BE LESS THAN 50'.
2. WHERE THE INSTALLATION WILL BE REQUIRED FOR LESS THAN 3 MONTHS.
3. WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1/2 ACRE.

FOR BALED HAY INSTALLATIONS IN SMALL DITCHES, THE ADDITIONAL FOLLOWING CONSIDERATIONS APPLY:

1. THE DITCH SIDESLOPES SHOULD BE GRADED AS FLAT AS POSSIBLE TO MAXIMIZE THE DRAINAGE FLOWRATE THRU THE HAY.
2. THE DITCH SHOULD BE GRADED LARGE ENOUGH TO CONTAIN THE OVERTOPPING DRAINAGE WHEN SEDIMENT HAS FILLED TO THE TOP OF THE BALED HAY.

BALES SHOULD BE REPLACE USUALLY EVERY TWO MONTHS OR MORE OFTEN DURING WET WEATHER WHEN LOSS OF STRUCTURAL INTEGRITY IS ACCELERATED.



BALED HAY FOR EROSION CONTROL

PLAN SHEET LEGEND

BALED HAY — BH

EROSION & SEDIMENT CONTROL DETAILS

GENERAL NOTES

1. THIS CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING SAFETY NETS, SUPPORT AND BRACING FOR CRANES, POLES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER DO NOT INCLUDE INSPECTION OF THE ABOVE AND BELOW ITEMS.
2. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL COMPLY WITH THE GOVERNING BUILDING CODES AND REGULATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, TOLERANCES AND CONDITIONS AT THE JOB SITE BEFORE COMMENCEMENT OF WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR OMISSIONS TO THE ARCHITECT AND ENGINEER IN WRITING BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
4. IN CASE OF CONFLICT; NOTES AND DETAILS ON THE BALANCE OF THE DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS.
5. WHERE CONSTRUCTION DETAILS ARE NOT SPECIFICALLY SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIALS. WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ENGINEER SHALL BE CONSULTED FOR CLARIFICATION.
6. EACH SUBCONTRACTOR IS CONSIDERED AN EXPERT IN HIS RESPECTIVE FIELD AND SHALL PRIOR TO THE SUBMISSION OF A BID OR PERFORMANCE OF WORK, NOTIFY THE GENERAL CONTRACTOR, ARCHITECT, ENGINEER OR OWNER, IN WRITING OF ANY WORK CALLED OUT ON THE DRAWINGS IN HIS TRADE THAT CANNOT BE GUARANTEED OR PERFORMED AS INDICATED.
7. THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT DEVIATES IN WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND APPROVAL OBTAINED PRIOR TO INSTALLATION.
8. THIS STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AS REQUIRED TO INSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE, OR ANY PORTION THEREOF, DURING CONSTRUCTION.
9. NEITHER THE OWNER NOR THE ARCHITECT NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
10. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY. SUBSTITUTIONS WILL BE PERMITTED AS APPROVED BY THE ENGINEER.
11. ANY OPTIONS OR APPROVED SUBSTITUTIONS ARE FOR CONTRACTORS CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES, ADDITIONAL COSTS (INCLUDING REDESIGN BY THE ENGINEER), AND COORDINATION WITH ALL ITEMS THAT THE SUBSTITUTIONS MAY IMPACT.
12. THE ARCHITECT AND ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION AT THE SITE BEGINS.
13. ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER.
14. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY EXISTING UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK.
15. PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. UNLESS NOTED CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

DESIGN CRITERIA

1. DESIGN LOADS, STRUCTURAL ANALYSIS AND PREPARATIONS OF STRUCTURAL MEMBERS IS BASED UPON THE FOLLOWING CRITERIA:
2. CODE: .... IBC 2012
3. ROOF DEAD LOAD:
   - A. METAL BUILDING SYSTEM .... SELF WEIGHT PSF
   - B. COLLATERAL LOAD .... 10 PSF
4. BUILDING DRIFT:
   - A. WITH METAL SIDING .... H/ 240
   - B. WITH CMU WALLS .... H/ 600
5. GIRT DEFLECTION:
   - A. WITH METAL SIDING .... H/ 240
   - B. WITH CMU WALLS .... H/ 600
6. ROOF LIVE LOAD: .... 20 PSF
7. ROOF RAIN LOAD: .... 0 PSF
8. ROOF SNOW LOAD DATA:
   - A. GROUND SNOW LOAD, P_g, ... 0 PSF
9. MEZZANINE DEAD LOAD: .... N/A
10. MEZZANINE LIVE LOAD: .... N/A
11. WIND DESIGN DATA: (ASCE 7-10)
    - A. ULTIMATE DESIGN WIND SPEED
      - (1) (3-SECOND GUST), V_{ult} .... 141 MPH
      - (2) (V_{ASD}) .... 110 MPH
    - B. RISK CATEGORY IV
    - C. WIND EXPOSURE C
    - D. INTERNAL PRESSURE COEFFICIENT .... (+0.18,-0.18)
    - E. COMPONENTS AND CLADDING .... SEE TABLE
12. EARTHQUAKE DESIGN DATA:
    - A. RISK CATERGORY IV
    - B. SEISMIC IMPORTANCE FACTOR, I_e 1.5
    - C. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS, S_s AND S_1 .... 0.044g & 0.015g
    - D. SITE CLASS .... D
    - E. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS, S_{DS} AND S_{D1} .... 0.047g & 0.024g
    - F. SEISMIC DESIGN CATEGORY .... A
13. GEOTECHNICAL INFORMATION
    - A. PREPARED BY: MILLENNIUM ENGINEERS GROUP
      PROJECT NO.: MEG REPORT No. 01-19-29113
      DATE: MARCH 1, 2019
    - B. SHALLOW FOUNDATION

MINIMUM FOOTING DEPTH BELOW F.G.E.:	24	INCHES
MINIMUM FOOTING WIDTH:	12	INCHES
ALLOWABLE BEARING PRESSURE (CONTINUOUS FOOTING) :	1500	PSF
ALLOWABLE BEARING PRESSURE (ISOLATED FOOTING):	1800	PSF
WIRE REINFORCEMENT INSTITUTE (WRI) CRITERIA		
FOR EXISTING CONDITIONS :		
EFFECTIVE PLASTICITY INDEX	17	
CLIMATIC RATING Cw	15	
SOIL SUPPORT INDEX, (C)	0.98	
PVR	<1	INCHES
FOR PROPOSED CONDITIONS :		
EFFECTIVE PLASTICITY INDEX	16	
CLIMATIC RATING Cw	15	
SOIL SUPPORT INDEX, (C)	0.99	
PVR	<1	INCH

STRUCTURAL OBSERVATIONS

1. JOB SITE OBSERVATIONS BY THE PROFESSIONAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONSIST OF VISUAL OBSERVATION OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE INTENT.
2. SUCH OBSERVATIONS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHALL IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT.
3. SPECIFICALLY BUT WITHOUT LIMITATION, OBSERVATIONS BY THE DESIGN PROFESSIONAL SHALL NOT REQUIRE THE DESIGN PROFESSIONAL TO ASSUME RESPONSIBILITY FOR THE MEANS AND METHODS OF CONSTRUCTION, NOR FOR SAFETY ON THE JOB SITE, NOR FOR ITEMS NOT INSTALLED OR IMPROPERLY INSTALLED BY THE CONTRACTOR OR HIS SUBCONTRACTORS.
4. NOTIFY ENGINEER 48 HOURS IN ADVANCE WHEN A STRUCTURAL OBSERVATION IS REQUIRED.
5.

CONSTRUCTION STAGE	REQUIRED
BEFORE PLACEMENT OF CONCRETE FOR SLAB/FOUNDATION	X
BEFORE PLACEMENT OF FOUR (4) FEET OF GROUT IN CMU & BMU WALL	X
AFTER FRAMING OF ROOF STRUCTURE BUT BEFORE PLACEMENT OF ROOFING MATERIAL.	X

SHOP DRAWINGS AND SUBMITTALS

1. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW TO THE STRUCTURAL ENGINEER FOR EACH STRUCTURAL BUILDING MATERIAL AS INDICATED IN THE STRUCTURAL GENERAL NOTES AND THE CONTRACT SPECIFICATIONS. SEE THE CONTRACT SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND ADDITIONAL INFORMATION
2. SHOP DRAWINGS SHALL USE DRAFTING LINE WORK AND LETTERING THAT IS CLEARLY LEGIBLE. SHOP DRAWINGS SHALL NOT CONTAIN NO REPRODUCTIONS OF THE CONTRACT DRAWING PLANS OR DETAILS.
3. SUBMIT ONE REPRODUCIBLE VELLUM AND ONE COPY OF EACH SHOP DRAWING.
4. SHOP DRAWINGS SHALL NOT SHOW MATERIALS FOR MORE THAN ONE LEVEL OF THE SAME PLAN.
5. SHOP DRAWINGS SHALL SHOW CLEAR AND COMPLETE INFORMATION FOR THE FABRICATION (DETAIL SHEETS AND/OR MATERIAL LISTS) AND INSTALLATION.
6. ALLOW A MINIMUM OF (2) WEEKS FOR REVIEW OF EACH SET OF SHOP DRAWINGS.
7. CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS SUBMITTED BY THE SUB-CONTRACTOR AND COORDINATE SHOP DRAWINGS WITH ALL OTHER TRADES PRIOR TO SUBMITTING THEM FOR ENGINEER REVIEW.
8. CONTRACTOR SHALL ANSWER ALL QUESTIONS OR CLARIFICATIONS BY THE SUB-CONTRACTOR BEFORE SUBMITTING TO ENGINEER FOR REVIEW. ANY QUESTIONS THAT THE CONTRACTOR CANNOT ANSWER WITH THE INFORMATION ON THE DRAWINGS SHALL CLEARLY BE MARKED FOR THE ENGINEER FOR REVIEW.
9. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, SEE NOTE NUMBER 3 UNDER GENERAL NOTES.
10. REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR GENERAL CONFORMANCE TO THE STRUCTURAL DRAWINGS. APPROVAL OF THE SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEF THE CONTRACTOR FOR ANY ERRORS IN DIMENSIONS OR MATERIALS INDICATED ON THE SHOP DRAWINGS.
11. IF THERE IS ANY DISCREPANCY BETWEEN THE STRUCTURAL DRAWINGS AND SHOP DRAWINGS, THE INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS GOVERN. INFORMATION THAT IS NOT INDICATED ON THE SHOP DRAWINGS SHALL BE OBTAINED FROM THE STRUCTURAL DRAWINGS.
12. PROVIDE SUBMITTALS FOR THE FOLLOWING ITEMS:

ITEM	REQUIRED
A. CONCRETE MIX DESIGN	X
B. CURING COMPOUND FOR CONCRETE	X
C. REINFORCING STEEL	X
D. STRUCTURAL STEEL	X
E. STEEL JOIST	N/A
F. METAL DECKING (INDICATE LAYOUT AND TYPES OF DECK PANELS, ANCHORAGE DETAILS, REINFORCING CHANNELS, PANS, DECK OPENINGS, SPECIAL JOINTING, ACCESSORIES, AND ATTACHMENTS TO OTHER CONSTRUCTION.)	N/A
G. MORTAR MIX DESIGN	X
H. GROUT MIX DESIGN	X
I. MASONRY ASSEMBLAGE	X
J. PRE-MANUFACTURED METAL BUILDING (INCLUDE CALC'S & REACTIONS)	X

REINFORCING STEEL

1. BAR REINFORCEMENT SHALL CONFORM TO THE FOLLOWING GRADES OF ASTM A615, INCLUDING SUPPLEMENT S1. GRADE 40 - #3 AND SMALLER, GRADE 60 - #4 AND LARGER
2. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318, UNLESS OTHERWISE NOTED.
3. VERTICAL REINFORCEMENT SHALL BE TIED AND FIXED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 48 INCHES O.C.
4. WELDED STEEL WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185
5. LAPS OF WELDED STEEL WIRE FABRIC AT SPLICES SHALL BE NOT LESS THAN 12 INCHES.
6. WALLS, PILASTERS, COLUMNS SHALL BE DOWELED TO THE SUPPORTING FOOTINGS WITH REINFORCEMENT OF THE SAME SIZE, GRADE AND AT THE SAME SPACING AS THE VERTICAL REINFORCEMENT IN THE WALLS, PILASTERS, OR COLUMNS.
7. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI), EXCEPT AT SLABS; THE REINFORCING SHALL BE SUPPORTED BY CHAIRS SPACED AT 36 INCHES O.C. FOR #3 REBARS AND 48 INCHES ON CENTER FOR LARGER REBARS. CHAIRS FOR SLAB ON GRADE SHALL BE CONCRETE BLOCKS.
8. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
9. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT.
10. PROVIDE CORNER BARS TOP AND BOTTOM AT ALL BEAM CORNERS AND DEAD END BEAM INTERSECTIONS. BARS TO EQUAL SIZE AND QUANTITY OF THE NOTED BEAM STEEL. BARS SHALL LAP BEAM REINFORCEMENTS.
11. BARS DETAILED AS CONTINUOUS SHALL BE LAPPED AT SPLICES.
12. EXTEND THE SLAB REINFORCING STEEL, PERPENDICULAR TO BEAM, TO THE TOP OUTSIDE REINFORCING BAR OF PERIMETER BEAMS. START THE SLAB REINFORCING STEEL, PARALLEL TO BEAM, NOT MORE THAN 6" FROM THE TOP INSIDE REINFORCING BAR OF PERIMETER BEAMS.
13. PROVIDE #4 "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 2". THE "Z" BARS SHALL LAP THE MAIN SLAB REINFORCING STEEL.
14. ALL CONDUIT OR PLUMBING LINES IN SLAB SHALL BE PLACED BELOW SLAB THICKNESS AREA. ALL CONDUIT NO GREATER THAN 1" DIAMETER MAY BE PLACED IN CENTER OF SLAB. NO CONDUITS OR PLUMBING LINES GREATER THAN 1 INCH ALLOWED IN THE SLAB.
15. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
16. WELDING OF REINFORCING STEEL IS NOT PERMITTED.
17. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
18. LAPS AT BAR SPLICES, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

MASONRY - GRADE 60: LAP 50 DIA. (30" MIN.)
GRADE 40: LAP 48 DIA. (24" MIN.)
CONCRETE - LAP PER SCHEDULE BELOW

BAR SPLICE LAP LENGTH IN CONCRETE

BAR SIZE	f'c = 2000 PSI	f'c = 3000 PSI	f'c = 4000 PSI	f'c = 5000 PSI
#3	22	22	22	22
#4	29	29	29	29
#5	40	40	40	40
#6	57	57	57	57
#7	77	63	54	54
#8	100	82	71	71

FOR WELDED WIRE FABRIC: SPACING OF WIRE PLUS 12".

19. CONCRETE COVER FOR REINFORCING AS FOLLOWS:

EXPOSURE CONDITION	MINIMUM COVER	TOLERANCE
DRILLED PIERS, FOOTINGS AND OTHER PRINCIPAL STRUCTURAL MEMBERS IN WHICH CONCRETE IS DEPOSITED AGAINST GROUND:	3"	3/8"
WHERE CONCRETE SURFACES, AFTER REMOVAL OF FORMS, ARE EXPOSED TO WEATHER OR GROUND:		
FOR BARS 5/8" IN DIAMETER	3"	1/4"
FOR BARS 5/8" OR LESS IN DIAMETER	3"	1/4"
WHERE SURFACES ARE NOT DIRECTLY EXPOSED TO WEATHER OR GROUND:		
FOR SLAB ON GRADE (FROM TOP OF SLAB)	1 1/2"	1/4"
FOR BEAMS, COLUMNS	2"	1/4"
FOR JOISTS AND SLABS	2 1/2"	1/8"

SPECIAL NOTES TO OWNER

1. UNDER NORMAL CONDITIONS, AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AND MASONRY DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF VERTICAL AND OTHER STRUCTURAL ELEMENTS TO WHICH THE BEAMS/SLABS ARE TIED.
2. THE CRACKS FORMED ARE NORMALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. IT IS EMPHASIZED THAT ALTHOUGH SPECIAL EFFORT IS MADE TO REDUCE THE POTENTIAL CAUSES AND NUMBER OF SUCH CRACKS, IT IS NOT PRACTICAL TO PROVIDE TOTAL ARTICULATION BETWEEN THE FLOOR SYSTEM AND ITS SUPPORTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF ALL CRACKS.
3. MOST SUCH CRACKS DEVELOP OVER THE FIRST THREE YEARS OF THE LIFE OF THE FLOOR SYSTEM. CRACKS WHICH ARE WIDER THAN 0.01 INCH MAY NEED TO BE PRESSURE EPOXIED. REFER TO THE NOTES UNDER "ALLOWANCES".
4. THE OBJECT OF THE JOINTS PROVIDED IS TO ALLOW MOVEMENT. MOVEMENTS DUE TO CREEP AND SHRINKAGE MAY BE NOTICEABLE AT JOINTS UP TO TWO YEARS AFTER CONSTRUCTION, BEYOND WHICH MOVEMENTS DUE TO VARIATIONS IN TEMPERATURE WILL PERSIST.

STRUCTURAL STEEL

1. MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING ASTM DESIGNATIONS:

MATERIAL	DESIGNATION	STRENGTH
ANCHOR BOLTS	A36	Fy=36 ksi
PLATES	A36	Fy=36 ksi
ANGLES	A36	Fy=36 ksi
CHANNELS	A36	Fy=36 ksi
WIDE FLANGE SHAPES	A572	Fy=50 ksi
STEEL PIPE	A53 GRADE B	Fy=35 ksi
SQUARE & RECT. STEEL TUBES (HSS)	A500 GRADE B	Fy=46 ksi
ROUND TUBES (HSS)	500 GRADE B	Fy=42 ksi

3. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMENDED AS FOLLOWS:
   SECTION 4.2.1, DELETE FIRST TWO SENTENCES.
   SECTION 7., ALL REFERENCE TO OWNER SHALL BE CHANGED TO GENERAL CONTRACTOR.
   SECTION 7.9.3, THE CONTRACTOR SHALL PROVIDE THE SEQUENCE AND SCHEDULE OF PLACEMENT OF NON-SELF SUPPORTING STEEL FRAMES.
   SECTION 7.9.4, THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
4. WELDING SHALL BE DONE IN ACCORDANCE WITH THE STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION AS PUBLISHED BY THE AMERICAN WELDING SOCIETY, EXCEPT THAT ALL WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO ANSI/AWS D1.1-04
5. DETAILED AND OR SCHEDULED CONNECTIONS HAVE BEEN DESIGNED BY STRUCTURAL ENGINEER. ANY CONNECTION NOT DETAILED OR SCHEDULED OR ALTERED FOR FABRICATION PURPOSES SHALL BE SIZED AND DETAILED BY FABRICATOR AND SHALL BE MARKED FOR ENGINEER'S VERIFICATION. FABRICATOR SIZED AND DETAILED CONNECTIONS SHALL SUPPORT ONE HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE TABLES OF UNIFORM CONSTANTS, PART 2 OF THE AISC MANUAL OF STEEL CONSTRUCTION FOR THE GIVEN BEAM, SPAN AND GRADE OF STEEL SPECIFIED. THE EFFECT OF ANY CONCENTRATION LOADS MUST BE TAKEN INTO ACCOUNT.
6. SEE ARCHITECTURAL PLANS FOR MISCELLANEOUS STEEL ITEMS NOT INDICATED ON STRUCTURAL DRAWINGS. STEEL ITEMS SHOWN ON ARCHITECTURAL DRAWINGS AND NOT SPECIFIED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGN BY THE STEEL FABRICATOR. SEE DESIGN CRITERIA FOR LOADING.
7. ALL WELDED CONNECTIONS SHALL BE MADE USING 1/4" FILLET WELD, U.N.O.
8. ALL BOLTED CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER HIGH STRENGTH BOLTS, ASTM A325, BEARING TYPE CONNECTION w/ WASHERS ASTM F436, U.N.O. ON DESIGN DRAWINGS. SPECIAL INSPECTION REQUIRED FOR ALL HIGH STRENGTH BOLTING. ALL NUTS SHALL BE PER ASTM A563
9. ALL CONNECTION PLATES AND STIFFENERS SHALL BE MADE WITH 1/4" THICK PLATES, UNLESS OTHERWISE NOTED ON PLANS.
10. ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED. (INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO). SEE ARCHITECTURAL PLANS IF STRICTER REQUIREMENTS ARE REQUIRED.
11. ALL EXPOSED STEEL SHALL FOLLOW SECTION 10 OF THE CODE OF STANDARD PRACTICE OF AISC. SECTION 10 OF THE CODE ADDRESSES ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)
12. CONNECTIONS SHALL BE PER HOLLOW STRUCTURAL SECTIONS, CONNX. MANUAL BY AISC.
13. WHERE STEEL MEMBER PASS THROUGH CMU WALLS, PROVIDE HALF INCH GAP BETWEEN THE CMU AND THE STEEL MEMBER. PROVIDE ELASTOMERIC MATERIAL BETWEEN THE THE STEEL MEMBER AND CMU WALL.
14. ALL BEAMS NOT SHOWN SHALL BE W18x35. ALL COLUMNS NOT SHOWN SHALL BE HSS5x5x1/4.
15. STEEL SHOP SHALL BE AISC CERTIFIED.
16. HOLES FOR BOLTS IN STRUCTURAL STEEL SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES SHALL NOT BE PERMITTED. UNLESS NOTED OTHERWISE, HOLES SHALL BE STANDARD SIZE 1/16 INCH LARGER THAN THE BOLT.
17. ALL STRUCTURAL STEEL SHAPES SHALL BE PRIMED WITH A RUST RESISTANT PRIMER BEFORE SHIPMENT TO THE PROJECT SITE. PRIMER SHALL NOT BE APPLIED TO THE IMMEDIATE AREA OF STEEL INTENDED TO RECEIVE SLIP CRITICAL BOLTED CONNECTIONS
18. HIGH STRENGTH BOLTS INSTALLATION SHALL BE CONTINUOUSLY INSPECTED BY A SPECIAL INSPECTOR. FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
    - A. HE SHALL VERIFY THE MILL CERTIFICATES FOR MATERIAL.
    - B. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
    - C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES, TOOL CALIBRATIONS WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND AND BUILDING CODE.
    - D. FOR SNUG-TIGHT CONNECTIONS, HE SHALL VERIFY THAT THE PLIES OF THE CONNECTED ELEMENTS HAVE BEEN BROUGHT INTO SNUG CONTACT WITH EACH OTHER.
    - E. FOR SLIP-TIGHT CONNECTIONS, HE SHALL VERIFY THE PRETENSION METHOD SELECTED BY THE CONTRACTOR HAS INDUCED THE REQUIRED MINIMUM TENSION IN THE BOLT.
    - F. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.
19. WELDING IN THE FIELD SHALL BE CONTINUOUSLY INSPECTED, BY A SPECIAL INSPECTOR FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
    - A. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
    - B. HE SHALL VERIFY THE WELDER'S QUALIFICATIONS.
    - C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES AND WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND BUILDING CODE.
    - D. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.
20. ALL NON SHRINK GROUT FOR LEVELING OF BASE PLATES SHALL HAVE A MINIMUM 5000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. GROUT SHALL COMPLY WITH CORPS OF ENGINEERS SPECIFICATION CRD-C 621.

REINFORCED CONCRETE MASONRY UNIT WALLS

1. CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90, ASTM C426 AND AS FOLLOWS:
   * UNIT COMPRESSIVE STRENGTH: 1900 PSI MINIMUM AVERAGE NET AREA COMPRESSIVE STRENGTH.
   * WEIGHT CLASSIFICATION: MEDIUM WEIGHT
   * CONCRETE MASONRY ASSEMBLAGE (f'm) SHALL BE 1500 PSI.
   * MORTAR SHALL BE TYPE "S".
2. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL AND SHALL CONFORM TO ASTM A-615, GRADE 60, REINFORCING BARS #3 AND SMALLER MAY BE GRADE 40.
3. CONCRETE SHALL CONFORM TO ASTM C150 TYPE I, LOW ALKALI, MASONRY CEMENTS ARE NOT ALLOWED.
4. UNLESS DETAILED OTHERWISE, TYPICAL VERTICAL REINFORCEMENT SHALL BE #6 AT 48" ON CENTER, AND TWO (2) #6 AT JAMBS OF ALL OPENINGS, THREE (3) #6 AT CORNERS, PROVIDE ADDITIONAL VERTICAL REINFORCEMENT FOR SPECIAL CONDITIONS AS DETAILED, ALL VERTICAL REINFORCMENT TO BE IN CONCRETE OR GROUT FILLED CELLS, PROVIDE DOWELS FROM FOUNDATION, SAME SIZE AND SPACING.
5. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED CONTINUOUS VERTICAL.
6. ALL REINFORCING SHALL BE IN PLACE PRIOR TO PLACING CONCRETE OR GROUT. VERTICAL REINFORCING BARS SHALL BE HELD IN POSITION AT THE TOP, BOTTOM AND AT INTERVALS NOT FARTHER APART THAN 50 BAR DIAMETERS.
7. TYPICAL HORIZONTAL REINFORCEMENT SHALL BE TWO (2) #5 CONTINUOUS IN 8"x16" DEEP CONTINUOUS CONCRETE FILLED BOND BEAM BELOW EACH FLOOR AND ROOF LEVEL, UNLESS NOTED OTHERWISE. PROVIDE STANDARD DUR-O-WALL TRUSS-TYPE REINFORCING OR PREVIEWED EQUIVALENT EVERY OTHER COURSE (16" ON CENTER) AND AS PRE MANUFACTURER'S RECOMMENDATIONS.
8. WALL LENGTHS LESS THAN OR EQUAL TO FOUR (4) TIMES ITS THICKNESS SHALL BE CONSIDERED COLUMN SECTIONS AND SHALL BE REINFORCED WITH #6 VERTICAL REINFORCING IN FILLED CELLS, PROVIDE 1/4 INCH DIAMTER TIES EVERY COURSE (8" ON CENTER) IN LIEU OF DUR-O-WALL REINFORCING, PLACE TIES NOT LESS THAN 1 1/2" NOR MORE THAN 5" FROM THE SURFACE OF THE COLUMN.
9. PROVIDE HORIZONTAL JOINT REINFORCEMENT EVERY OTHER COURSE WHERE HORIZONTAL BAR REINFORCEMENT IS NOT SPECIFIED.
10. ALL CELLS CONTAINING VERTICAL REINFORCEMENT SHALL BE FILLED SOLIDLY WITH PEA GRAVEL CONCRETE (3/8" MAX. AGGREGATE SIZE) OR GROUT, EACH WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, GROUT OR CONCRETE SHALL BE A WORKABLE MIX SUITABLE FOR PUMPING WITHOUT SEGRAGATION AND SHALL BE THOROUGHLY MIXED, GROUT OR CONCRETE SHALL BE PLACED BY PUMPING OR AN APPROVED ALTERNATE METHOD AND SHALL BE PLACED BEFORE INITIAL SET OR HARDENING OCCURS. GROUTING SHALL BE PER NCMA TEK 3-2
11. ALLOW C.M.U. WALLS TO SET AT LEAST 24 HOURS AFTER COMPLETION BEFORE GROUTING, GROUT OR CONCRETE SHALL BE CONSOLIDATED BY RECONSOLIDATION AFTER EXCESS MOISTURE HAS BEEN ABSORBED BUT BEFORE WORKABILITY IS LOST, THE FILLING OF ANY SECTION OF A WALL SHALL BE COMPLETED IN ONE DAY WITHOUT INTERRUPTIONS GREATER THAN ONE HOUR, AND PLACED IN LAYERS OF 4 FEET MAXIMUM.
12. WHERE THE CONCRETE OR GROUT POUR EXCEEDS 4 FEET IN HEIGHT, CLEANOUTS SHALL BE PROVIDED BY SUITABLE OPENINGS IN THE FACE SHELLS IN THE BOTTOM COURSE OF EACH CELL TO BE FILLED, OR OTHER APPROVED LOCATIONS, THE CLEANOUTS SHALL BE SEALED AFTER INSPECTION AND BEFORE BEING FILLED.
13. WHEN CELL FILLING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINT SHALL BE FORMED BY STOPPING THE POUR OF CONCRETE OR GROUT APPROXIMATELY 1/2 INCH ABOVE OR BELOW BED JOINT.
14. END WALLS AND CROSS WEBS FORMING CELLS TO BE FILLED SHALL BE FULL BEDDED IN MORTAR TO PREVENT LEAKAGE OF CONCRETE OR GROUT UNLESS WALL IS TO BE POURED SOLID.
15. PROVIDE VERTICAL CONTROL JOINTS AT A MAXIMUM SPACING OF 24' (10' FROM CORNERS). DO NOT CONTINUE THE TYPICAL TRUSS TYPE JOINT REINFORCEMENT THROUGH THE JOINT. CONTROL JOINTS LOCATIONS SHALL BE COORDINATED WITH ARCHITECT BUT NOT EXCEED THE MAXIMUM SPACING. BOND BEAM REINFORCEMENT SHALL BE INTERRUPTED AT THE CONTROL JOINT, ALTHOUGH CHORD REINFORCING STEEL AT FLOORS & ROOFS MUST CONTINUE THROUGH THE CONTROL JOINTS.
16. DURING ERECTION, COVER TOP OF WALLS, PROJECTIONS AND SILLS WITH WATERPROOF SHEATHING AT THE END OF EACH DAY'S WORK.
17. ALLOW CMU WALL GROUT TO SET AT LEAST 24 HOURS AFTER GROUTING BEFORE CONTINUING BLOCK INSTALLATION ON TOP OF IT.

POST-INSTALLED ANCHORS

1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE. PROVIDE CONTINUOUS SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE EVALUATION REPORT. CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE INITIAL TRAINING AND INSTALLATION OF ANCHORS AND FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY. CALL SIMPSON STRONG-TIE AT (800) 999-5099.

A. **CONCRETE ANCHORS**
   - i. **MECHANICAL ANCHORS** SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED AND UNCRACKED CONCRETE RECOGNITION. PRE-APPROVED MECHANICAL ANCHORS INCLUDE:
     SIMPSON
     (1) SIMPSON STRONG-TIE "TITEN-HD" AND "TITEN-HD ROD HANGER" (ICC-ES ESR-2713)
     (2) SIMPSON STRONG-TIE "STRONG-BOLT" (ICC-ES ESR-1771)
     (3) SIMPSON STRONG-TIE "STRONG-BOLT 2" (ICC-ES ESR-3037)
     (4) SIMPSON STRONG-TIE "TORQ-CUT" (ICC-ES ESR-2705)
     HILTI
     (1) HILTI KWIK HUS EZ AND KWIK EZ-I SCREW ANCHORS PER ICC ESR-3027
     (2) HILTI KWIK BOLT-TZ EXPANSION ANCHORS PER ICC ESR-1917
     (3) HILTI KWIK BOLT 3 EXPANSION ANCHORS PER ICC ESR-2302
     (4) HILTI HDA UNDERCUT ANCHORS PER ICC ESR-1546
     (5) HILTI HSL-3 EXPANSION ANCHORS PER ICC ESR-1545
   - ii. **ADHESIVE ANCHORS** SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED AND UNCRACKED CONCRETE RECOGNITION. PRE-APPROVED ADHESIVE ANCHORS INCLUDE:
     SIMPSON
     (1) SIMPSON STRONG-TIE "SET-XP" (ICC-ES ESR-2138)
     HILTI
     (1) HILTI HIT-RE 500-SD EPOXY ADHESIVE ANCHORING SYTEM PER ICC ESR-2322
     (2) HILTI HIT-HY 150 MAX-SD ADHESIVE ANCHORING SYSTEM PER ICC ESR-3013
     (3) HILTI HIT-HY 150 MAX-SD ADHESIVE ANCHOR SYSTEM PER ICC ESR-2262
     (4) STEEL ANCHOR ELEMENT SHALL BE HILTI HIS-N INTERNALLY THREADED INSERTS (USED WITH RE 500-SD AND HY 150 MAX ONLY). HILTI HAS-E CONTINUOUSLY THREADED ROD, CONTINUOUSLY DEFORMED STEEL REBAR.
   - iii. **POWDER ACTUATED FASTENERS** SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC70. PRE-APPROVED POWDER ACTUATED FASTENERS INCLUDE:
     (1) SIMPSON STRONG-TIE "POWER-DRIVEN FASTENERS" (ICC-ES ESR-2138)

B. **MASONRY ANCHORS**
   - i. **ANCHORAGE TO SOLID-GROUTED CONCRETE MASONRY**
     (1) MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC01 OR AC106. PRE-APPROVED MECHANICAL ANCHORS INCLUDE:
       (a) SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-1056)
       (b) SIMPSON STRONG-TIE "STRONG BOLT 2" (IAPMO-ES ER-0240)
       (c) SIMPSON STRONG-TIE "WEDGE-ALL" (ICC-ES ESR-1396)
     (2) ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC58. PRE-APPROVED ADHESIVE ANCHORS INCLUDE:
       (a) SIMPSON STRONG-TIE "SET" (ICC-ES ESR-1772)
   - ii. **ANCHORAGE TO HOLLOW CONCRETE MASONRY/ UNREINFORCED CLAY BRICK MASONRY**
     SIMPSON
     (1) MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC01 OR AC106. PRE-APPROVED MECHANICAL ANCHORS
       (a) SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-1056)
     (2) ADHESIVE ANCHORS WITH SCREEN TUBES SHALL BE TESTED AND QUALIFIED IN ACCORDANCE WITH ICC-ES AC58 OR AC60, AS APPROPRIATE. THE APPROPIATE SCREEN TUBE SHALL BE USED AS RECOMMENDED BY THE ADHESIVE MANUFACTURER. PRE-APPROVED ADHESIVE ANCHORS WITH SCREEN TUBES INCLUDE:
       (a) SIMPSON STRONG-TIE "SET" (ICC-ES ESR-1772)
   - iii. **ANCHORAGE TO HOLLOW / MULTI-WYTHE MASONRY**
     HILTI
     (1) HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM PER ICC ESR-3442
     (2) STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
     (3) THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER ADHESIVE MANUFACTURES RECOMMENDATION.

HINOJOSA
ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

STRUCTURAL MASONRY (SPECIAL INSPECTION)

	INSPECTION TASK	INSPECTION: CONTINUOUS DURING TASK LISTED	INSPECTION: PERIODICALLY DURING TASK LISTED
1.	AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
	A. PROPORTIONS OF SITE PREPARED MORTAR.		X
	B. CONSTRUCTION OF MORTAR JOINTS.		X
	C. LOCATION OF REINFORCEMENT AND CONNECTORS.		X
2.	THE INSPECTION PROGRAM SHALL VERIFY:		
	A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.		X
	B. TYPE, SIZE AND LOCATION OF DOWELS, ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES AND OTHER CONSTRUCTION		X
	C. CHECK GROUT MIX FOR COMPLIANCE WITH CODE AND SPECIFICATIONS.		X
	D. WELDING OF REINFORCING BARS.	X	
	E. PROTECTION OF MASONRY DURING COLD WEATHER (TEMP. BELOW 40 °F) OR HOT		X
	F. WEATHER (TEMP. ABOVE 90 °F). CUTTING OF CLEAN OUT HOLES, KNOCKING DOWN OF FINS AND REMORAL OF DEBRIS.		X
3.	PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
	A. GROUT SPACE IS CLEAN.	X	
	B. PLACEMENT OF REINFORCEMENT AND CONNECTOR.	X	
	C. CHECK GROUT MIX FOR COMPLIANCE WITH CODE AND SPECIFICATIONS.	X	
	D. CONSTRUCTION OF MORTAR JOINTS.	X	
	E. CHECK INSTALLATION OF CLEAN OUT CLOSURE.	X	
4.	GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS. (SUCH AS MECHANICAL VIBRATION DURING PLACEMENT AND LATER DURING RECONSOLIDATION.)	X	
5.	PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	X	
6.	COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE PROVISIONS OF THE CONSTRUCTON DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.		X
7.	CHECK THAT CURING REQUIREMENTS ARE BEING FOLLOWED		X
8.	VERIFY PLACEMENT OF ANCHORS INTO CONCRETE MASONRY UNITS.	X	
9.	FREQUENCY OF TESTS: A. CONCRETE MASONRY UNIT TEST- FOR EACH TYPE, CLASS, AND GRADE OF CONCRETE MASONRY UNIT INDICATED, TEST UNITS BY METHOD OF SAMPLING AND TESTING OF ASTM C140. ONE SET FO CMU STANDARD PRISM TEST SHALL BE CONDUCTED FOR EVERY 5,000 SQ. FT. OF WALL DURING CONSTRUCTION IN ACCORDANCE TO ASTM C1314, BUT NOT LESS THAN ONE SET OF 3 MASONRY PRISMS FOR THE PROJECT B. MORTAR TEST: FOR EACH TYPE INDICATED, TEST MORTAR BY METHODS OF SAMPLING AND TESTNG OF ASTM C780. CONDUCT TESTS NO LESS FREQUENTLY THAN THAT REQUIRED TO EVALUATE MORTAR USED TO INSTALL EACH INCREMENT OF MASONRY UNITS INDICATED ABOVE FROM WHICH SAMPLES ARE TAKEN FOR TESTING. TEST MORTAR FOR EVERY 1,500 SQ. FT. OF WALL CONSTRUCTION. C. GROUT TEST: AT START OF GROUTNG OPERATION, TAKE ONE TEST PER DAY FOR FIRST 3 DAYS. EACH GROUT TEST CONSISTS OF THREE SPECIMENS MADE IN ACCORDANCE WITH ASTM C1019. AFTER FIRST THREE TESTS, SPECIMENS FOR CONTINUING QUALITY CONTROL SHOULD BE TAKEN ONCE A WEEK FOR EVERY 25 CUBIC YARDS OF GROUT OR FOR EVERY 2,500 SQ. FT. OF WALL, WHICHEVER COMES FIRST.	X	
10.	MASONRY TESTING REQUIREMENTS	X	

TESTING METHOD OPTIONS	PRIOR TO CONSTRUCTION	DURING CONSTRUCTION
METHOD 1: MASONRY PRISM TESTING	5 PRISMS	3 PRISMS FOR EVERY 5,000 S.F. OF WALL
METHOD 2: MASONRY PRISM TEST RECORD	APPROVED 30 PRISM RECORD	3 PRISMS FOR EVERY 5,000 S.F. OF WALL
METHOD 3: UNIT STRENGTH METHOD	UNITS AND GROUT OR 5 PRISM	UNITS AND GROUT OR 3 PRISMS FOR EVERY 5,000 S.F. OF WALL

ABBREVIATIONS

AMSL	ABOVE MEAN SEA LEVEL
BMU	BRICK MASONRY UNIT
BOS	BOTTOM OF STEEL
CMU	CONCRETE MASONRY UNIT
TYP	TYPICAL
TOS	TOP OF STEEL
SIM	SIMILAR
S&T	SIMILAR AND TYPICAL

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19
W.R.HINOJOSA
65228

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-135A

DATE
FEBRUARY 08, 2019

SHEET
STRUCTURAL
GENERAL NOTES

S1.1

METAL BUILDING SYSTEM (M.B.S.)

1. PRE-MANUFACTURED METAL BUILDING SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND HAVING THREE (3) OR MORE YEARS EXPERIENCE IN THE DESIGN OF THE TYPE OF THE BUILDING INDICATED ON THE CONTRACT DOCUMENTS.
2. THE METAL BUILDING AND COMPONENTS SHALL BE DESIGNED TO CARRY ITS OWN WEIGHT PLUS ALL SUPERIMPOSED DEAD AND LIVE LOADS INCLUDING WIND LOADS FROM ALL DIRECTIONS AND INCLUDING ALL MECHANICAL, ELECTRICAL AND ARCHITECTURAL LOADS. VERIFY ALL LOADS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL PLANS.
3. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO DESIGN, FABRICATION OR ERECTION OF PRE-MANUFACTURED BUILDINGS.
4. PRE-MANUFACTURED BUILDING FRAMES AND THE CONNECTION OF FRAME TO THE FOUNDATION IS TO BE DESIGNED BY OTHERS AND IS NOT THE RESPONSIBILITY OF HINOJOSA ENGINEERING, INC. (H.E.) CONTRACTOR SHALL COORDINATE THE CONNECTION OF THE BUILDING FRAME WITH THE SUPPLIER PRIOR TO CONSTRUCTION.
5. THIS FOUNDATION HAS BEEN DESIGNED USING ASSUMED REACTIONS FROM THE PRE-MANUFACTURED BUILDING COMPONENTS AND IS FOR BID PURPOSES ONLY. THE CONTRACTOR SHALL SUBMIT BASE CONNECTION DETIALS (SIZE AND THICKNESS BASE PLATE AND DIAMETER AND LENGTH ANCHOR BOLTS) AND REACTIONS OF THE BUILDING FRAMES TO THE ENGINEER PRIOR TO CONSTRUCTION SO THE DESIGN ASSUMPTIONS CAN BE VERIFIED. DEPTH OF ANCHOR BOLTS SHALL BE SUFFICIENT TO PREVENT CONICAL SHEAR OF THE CONCRETE FOUNDATION.
6. PRE-MANUFACTURED METAL BUILDING ANCHOR BOLTS SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND HAVING THREE (3) OR MORE YEARS EXPERIENCE IN THE DESIGN OF THE TYPE OF THE BUILDING INDICATED ON THE CONTRACT DOCUMENTS.
7. METAL BUILDING SUPPLIER SHALL PROVIDE AND SUBMIT FOR REVIEW ALL DESIGN CALCULATIONS AND DRAWINGS. ALLOW TWO (2) WEEKS FOR REVEIW OF SHOP DRAWINGS.
8. ANY ADDITIONAL COST OF FOUNDATION WORK REQUIRED BY REVISIONS OF THE FOUNDATION DESIGN AFTER PRE-MANUFACTURED BUILDING REACTIONS ARE SUBMITTED SHALL BE BY THE CONTRACTOR.
9. METAL ROOF DOES NOT PROVIDE LATERAL BRACING FOR THE PURLINS, BRIDGING SHALL BE DESIGNED AND SUPPLIED BY THE PURLIN MANUFACTURER.
10. REFER TO MECHANICAL DRAWINGS FOR ROOF SUPPORTED HVAC UNITS AND PROVIDE SUPPORT FOR ADDITIONAL LOADS AS REQUIRED.
11. MAXIMUM PURLIN SPACING SHALL BE 5'-0" O.C. WITH A MAXIMUM ALLOWABLE TOTAL DEFLECTION OF L/240. THE WIND LOAD FOR THESE PURLINS SHALL BE COMPONENTS AND CLADDING WIND LOADS.
12. PRE-MANUFACTURED BUILDING MANUFACTURER SHALL PROVIDE ADDITIONAL FRAMING REQUIRED TO SUPPORT THE WEIGHT OF MECH'L UNITS AND PROVIDE PROPER SERVICEABILITY OF SUSPENDED MECHANICAL UNITS, MECHANICAL DUCTWORK, LIGHT FIXTURES, AND ALL OTHER SUSPENDED ITEMS AND ITEMS SUPPORTED ON TOP OF ROOF.
13. DETAILS SHALL BE INCLUDED WHICH CLEARLY DETAIL RIGID FRAME BASE, HAUNCH, RIDGE PLATE CONNECTIONS AND OTHER MEMBER-TO-MEMBER CONNECTIONS.
14. WIND LOAD DESIGN SHALL INDICATE METHOD OF TRANSFERRING FORCES TO:
    A. ENDWALL WIND LOAD TO SIDE WALL FOUNDATIONS.
    B. AT END BAY SIDE WALL WIND LOAD TO ENDWALL FOUNDATIONS, CALCULATIONS SHALL SHOW HOW WIND LOAD IS TRANSFERRED TO EAVE STRUT.
15. PORTAL MOMENT FRAMES SHALL BE USED TO RESIST HORIZONTAL WIND FORCES. DESIGN OF ALL CONNECTIONS SHALL BE CLEARLY INDICATED.
16. DESIGN OF HORIZONTAL CROSS-BRACING IN PLANE OF ROOF FRAMING SHALL BE COMPLETE AND SHALL INDICATE METHOD OF TRANSFERRING TRIBUTARY WIND LOAD TO RIGID FRAMES OR THE SIDE WALL PORTAL FRAMES.
17. ALL COLUMN BASE PLATES SHALL BE SET AND GROUTED UNDER FOR FULL CONTACT BEARING.
18. ALL BASES FOR THE COLUMNS SHALL BE "PINNED" AND NOT ASSUMED AS FIXED. NO MOMENT FORCES SHALL BE TRANSFERRED INTO THE BUILDING FOUNDATION.
19. PROVIDE BUILDING CROSS SECTIONS AND ELEVATIONS WHICH CLEARLY SHOW THE PRIMARY STRUCTURAL RIGID MOMENT FRAME, PORTAL MOMENT FRAME, END WALL POST AND BEAMS, INTERIOR COLUMNS, AND OTHER STRUCTURAL MEMBERS THAT ARE TO BE USED ON THE SUBMITTED BUILDING. SIZE OF ALL STANDARD AISC MEMBERS AND OF ALL WEB AND FLANGE SECTIONS USED IN BUILT UP MEMBER SHALL BE NOTED AS WELL AS BOLTS AND WELDING.
20. DESIGN AND MEMBERS FOR FRAMED OPENINGS SHALL BE PROVIDED AS PART OF THE METAL BUILDING DESIGN. THE WIND LOAD FOR THESE FRAMED OPENINGS SHALL BE COMPONENTS AND CLADDING WIND LOADS.
21. ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED. (INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO). SEE ARCHITECTURAL PLANS IF STRICTER REQUIREMENTS ARE REQUIRED.
22. ALL LATERAL SUPPORT BEAMS SHALL BE DESIGNED BY METAL BUILDING SYSTEM SUPPLIER. THE WIND LOAD FOR THE LATERAL SUPPORT BEAM SHALL BE COMPONENTS AND CLADDING WIND LOADS.
23. DEFLECTION CRITERIA:
    a. GIRTS SUPPORTING METAL STUD WALLS L/600
    b. GIRTS SUPPORTING CMU WALLS L/600
    c. HORIZONTAL DEFLECTION OF FRAME L/480
    d. VERTICAL DEFLECTION OF FRAME L/360
    e. LATERAL SUPPORT BEAMS FOR METAL STUD WALLS L/600
    f. LATERAL SUPPORT BEAMS FOR CMU WALLS L/600

THE WIND LOAD FOR THE GIRTS AND LATERAL SUPPORT BEAMS SHALL BE COMPONENTS AND CLADDING WIND LOADS.

CAST-IN-PLACE CONCRETE (CONT.)

1. VERIFY ALL DIMENSIONS. COORDINATE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES.
2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE SPECIFICATIONS, ACI #301-05, OR LATEST EDITION. DRILLED PIERS SHALL COMPLY WITH ACI 336.1-01 AND ACI 336.3R-05
3. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, ACCESSORIES UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI #315 LATEST EDITION
4. THE MINIMUM 28 DAYS CYLINDER STRENGTH SHALL BE AS FOLLOWS:

LOCATION	STRENGTH AT 28 DAYS	MAXIMUM SLUMP	SIZE OF LARGE AGGREGATE	WATER/CEMENT RATIO
FOUNDATIONS	3000 PSI	5"	1 1/2"	0.50
SLAB ON GRADE	3000 PSI	5"	1 1/2"	0.50
GRADE BEAMS	3000 PSI	5"	1 1/2"	0.50
WALL AND BEAMS	3000 PSI	6"	3/4"	0.50

*ALL MIXES SHALL HAVE A MINIMUM OF 5 SACKS OF CEMENTITIOUS MATERIAL PER CUBIC YARD.

5. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN SLABS OR BEAMS.
6. VERTICAL CONSTRUCTION JOINTS IN SLABS ARE TO BE AS SHOWN ON PLANS OR AS APPROVED BY ENGINEER.
7. ALL OPENINGS IN SLAB (FOR PIPING, DRAINS, ETC.) SHALL BE SEALED WITH 1/2 SEALANT '2A' (SELF-LEVELING 2-PART POLYURETHANE).
8. UTILITIES THAT PROJECT THROUGH SLAB FLOORS SHOULD BE DESIGNED WITH EITHER SOME DEGREE OF FLEXIBILITY OR WITH SLEEVES IN ORDER TO PREVENT DAMAGE TO THESE LINE SHOULD VERTICAL MOVEMENT OCCUR.
9. BACKFILL AROUND PERIMETER TO PROVIDE POSITIVE DRAINAGE AWAY FROM SLAB. FLOOR TOLERANCES
10. F-NUMBER SYSTEM

	COMPOSITE	MINIMUM LOCAL VALUE
FLATNESS (F_F)	30	23
LEVELNESS (F_L)	25	19

IN ALL INSTANCES MINIMUM SLAB THICKNESS SHALL BE OBTAINED. COORDINATE SLAB FINISHES WITH ARCHITECTURAL PLANS.

11. ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
12. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ALL MOLDS. GROOVES, REGLETS, ORNAMENTAL CLIPS, PIPES, CONDUITS, INSERTS, ETC. TO BE CAST IN CONCRETE. PROVIDE OVERSIZED SLEEVES FOR PLUMBING AND ELECTRICAL CONDUITS AND PIPES. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE, FOOTINGS, OR SLAB UNLESS SPECIFICALLY DETAILED IN THESE PLANS, OR AS DIRECTED BY THE ENGINEER.
13. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.
14. CONCRETE TESTING SHALL BE ONE SET OF CYLINDERS FOR EVERY 50 CUBIC YARDS OR PORTION THEREOF FOR EACH TYPE OF CONCRETE POURED ON ANY GIVEN DAY. ONE SET CONSISTS OF 2 CYLINDERS TESTED FOR COMPRESSION AT 7 DAYS AND 2 CYLINDERS AT 28 DAYS.
15. NO CONCRETE PLACEMENT IS PERMITTED WHEN AMBIENT TEMPERATURE IS BELOW 50° F.
16. NO CONCRETE PLACEMENT IS PERMITTED DURING RAIN FALL.
17. ALL EXPOSED CONCRETE BEAMS AND COLUMNS SHALL BE FREE OF HONEYCOMBS AND DISCOLORATION. CONCRETE SHALL HAVE A SMOOTH SURFACE.
18. EARTH FORMS: FORMS FOR FOOTINGS MAY BE CUT INTO EARTH PROVIDED THAT EARTH IS DRY, STABLE, LEVEL AND SOUND. PROVIDE A 2x12 VERTICAL BOARD FORM MINIMUM BELOW BRICK LUG ELEVATION AT ALL PERIMETER GRADE BEAMS AND FOOTINGS.
19. VAPOR BARRIER
    A. VAPOR BARRIER (UNDER SLAB): SHALL CONFORM TO ASTM E1745, CLASS A OR BETTER AND SHALL HAVE A MINIMUM WATER VAPOR PERMEANCE OF 0.01 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. VAPOR RETARDANT SHALL BE NOT LESS THAN 15 MILS THICK.

    APPROVED PRODUCTS
    A. STEGO WRAP (15 MIL). BY STEGO INDUSTIES LLC. (887) 464-7834.

    INSTALLATION
    A. LAY SHEETS SMOOTHLY, STRETCH AND WEIGHT EDGES, LAP JOINTS TWELVE (12) INCHES AND SEAL WITH TAPE AS SPECIFIED BY VAPOR BARRIER MANUFACTURER. TURN BARRIER UP SIX 6 INCHES AT WALLS AND AT ALL PIPES, ABUTMENTS, ETC. TAPE AND SEAL AT PENETRATIONS AND AT EDGES.
    B. AT GRADE BEAMS, EXTEND VAPOR RETARDANT DOWN SIDES OF BEAM TRENCHES (AND FOOTING EXCAVATIONS) TO WITHIN 4" OF TRENCH BOTTOM AND SECURE TO SIDES OF TRENCH. EXTEND BARRIER ACROSS BOTTOM OF BEAM TRENCH.

    PATCHING:
    A. PATCH ALL PUNCTURES WITH A MINIMUM OVERLAP OF 6" IN ALL DIRECTIONS AND TAPE AROUND ENTIRE PERIMETER OF REPAIR.

A. PREINSTALLATION CONFERENCE:

1. AT LEAST 30 DAYS PRIOR TO THE START OF THE CONCRETE SLAB CONSTRUCTION SCHEDULE, THE CONTRACTOR SHALL CONDUCT A MEETING TO REVIEW THE PROPOSED MIX DESIGNS AND TO DISCUSS THE REQUIRED METHODS AND PROCEDURES TO ACHIEVE THE REQUIRED CONCRETE CONSTRUCTION. THE CONTRACTOR SHALL SEND A PRE-CONCRETE CONFERENCE AGENDA TO ALL ATTENDEES 20 DAYS PRIOR TO THE SCHEDULED DATE OF THE CONFERENCE.
2. THE CONTRACTOR SHALL REQUIRE RESPONSIBLE REPRESENTATIVES OF EVERY PARTY CONCERNED WITH THE CONCRETE WORK TO ATTEND THE CONFERENCE, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
    A) CONTRACTOR'S SUPERINTENDENT
    B) LABORATORY RESPONSIBLE FOR CONCRETE MIXES AND/ OR FIELD QUALITY CONTROL
    C) READY-MIX CONCRETE PRODUCER
    D) CONCRETE SUBCONTRACTOR
    E) ADMIXTURE MANUFACTURER(S)
    F) LIQUID DENSIFIER AND SEALER MANUFACTURER
    G) LIQUID DENSIFIER AND SEALER APPLICATOR
    H) JOINT FILLING APPLICATOR
3. MINUTES OF THE MEETING SHALL BE RECORDED, TYPED AND PRINTED BY THE CONTRACTOR AND DISTRIBUTED BY HIM TO ALL CONCERNED PARTIES, INCLUDING THE OWNER'S REPRESENTATIVE, THE ARCHITECT, AND THE STRUCTURAL ENGINEER WITHIN FIVE DAYS OF THE MEETING.

B. CONCRETE SUBCONTRACTOR QUALIFICATION:

1. THE CONCRETE SUBCONTRACTOR SHALL INCLUDE IN THEIR BID PACKAGE TO THE CONTRACTOR, SUFFICIENT DATA THAT CLEARLY INDICATES THE CONCRETE CONTRACTOR'S ABILITY TO SUCCESSFULLY PERFORM THE WORK AND TO ACHIEVE THE FLOOR SLAB TOLERANCES SPECIFIED IN THIS SECTION. THE CONCRETE SUBCONTRACTOR'S TEAM SHALL HAVE PARTICIPATED IN THE MAJORITY OF THESE PROJECTS, AND THAT TEAM SHALL REMAIN THE SAME THROUGH THE DURATION OF THIS PROJECT.

C. CONCRETE MATERIAL:

1. PORTLAND CEMENT: ASTM C 150, TYPE I. USE ONE BRAND OF CEMENT THROUGHOUT THE PROJECT.
2. COARSE AND FINE AGGREGATES: ASTM C33. COMBINED AGGREGATE GRADATION FOR SLABS ON GRADE AND OTHER DESIGNATED CONCRETE SHALL BE 8% - 18% FOR LARGE TOP AGGREGATES (1 1/2") OR 8% - 22% FOR SMALLER TOP SIZE AGGREGATES (1" OR 3/4") RETAINED ON EACH SIEVE BELOW THE TOP SIZE AND ABOVE THE NO. 100 SIEVE. SLABS ON GRADE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 1-1/2" FOOTINGS AND PIERS 1" AND BEAMS 3/4".
3. WATER: COMPLYING WITH ASTM C 94.
4. ALL CONCRETE SHALL CONTAIN "POZZOLITH" ADMIX AS PER MANUFACTURER'S SPECIFICATIONS, IN ACCORDANCE WITH ASTM C494.

D. ADMIXTURES:

1. AIR-ENTRAINING ADMIXTURES: SHALL CONFORM TO ASTM C-260. ADMIXTURE MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION THAT THE AIR-ENTRAINING ADMIXTURE IS COMPATIBLE WITH OTHER REQUIRED ADMIXTURES. ALL EXTERIOR SLABS SHALL BE AIR-ENTRAINED (4% - 6%). ACCEPTABLE PRODUCTS: EUCLID CHEMICAL AEA-92 AND AIRMIX 200, MASTER BUILDERS MICROAIR, W.R. GRACE DARAVAIR 1000 AND DAREX-11.
   NOTE: AIR-ENTRAINING ADMIXTURE SHALL NOT BE USED ON INTERIOR CONCRETE.
2. WATER-REDUCING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE A AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL WR-89 AND WR-91, MASTER BUILDERS 200N AND 322N, W.R. GRACE WRDA 36 AND WRDA 64.
3. WATER REDUCING, RETARDING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE D, AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL RETARDER 75, MASTER BUILDERS POZZOLITH R, W.R. GRACE DARATARD 17.
4. HIGH RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER): SHALL CONFORM TO ASTM C494, TYPE F OR TYPE G AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS : EUCLID CHEMICAL EUCON 37, MASTER BUILDERS REOBUILD 1000 W.R. GRACE DARACEM - 1000.
5. WATER-REDUCING, NON-CORROSIVE ACCELERATING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE C OR E, AND CONTAIN NOT MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. THE ADMIXTURE MANUFACTURER MUST HAVE LONG-TERM, NON-CORROSIVE TEST DATA FROM AN INDEPENDENT TESTING LABORATORY (OF AT LEAST A YEAR'S DURATION) USING AN ACCEPTABLE ACCELERATED CORROSION TEST METHOD SUCH AS THAT USING ELECTRICAL POTENTIAL MEASURES. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL ACCELGUARD 80/90 AND ACCELGUARD NCA, MASTER BUILDERS NC534 AND POZZUTEC 20, W.R. GRACE POLARSET.

CAST-IN-PLACE CONCRETE (CONT.)

6. PROHIBITED ADMIXTURES:
   a.) CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS ARE NOT PERMITTED.

E. EVAPORATION RETARDER:

1. WATERBORNE, MONOMOLECULAR FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
   a.) ACCEPTABLE PRODUCTS:
   "EUCOBAR" BY THE EUCLID CHEMICAL COMPANY - CONTACT: PHIL BRANDT (877) 438-3826

F. CURING MATERIALS:

1. EXTERIOR CURING: ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND. THE LIQUID MEMBRANE-FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C 1315 WITH A MAXIMUM V.O.C. CONTENT OF 700 G/L.
   a.) ACCEPTABLE PRODUCTS:
   "SUPER REZ SEAL" BY EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT (877) 438-3826
2. INTERIOR CURING: ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A REDUCED ODOR, DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND THAT IS FORMULATED FROM HYDROCARBON RESINS. THE DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C-309 AND V.O.C. CONTENTS IN ACCORDANCE TO EPA 40 CFR, PART 59, TABLE I, SUBPART D FOR CONCRETE CURING COMPOUNDS WITH A MAXIMUM V.O.C. CONTENT OF 350 G/L. APPLY AT 400 S.F./GALLON.
   a.) ACCEPTABLE PRODUCTS:
   "KUREZ DR VOX" BY THE EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT (877) 438-3826

ALL CONCRETE SLABS SHALL ALSO BE MAINTAINED MOIST FOR 7 DAYS

G. CONCRETE MIXES

1. COMPLY WITH ACI 301 REQUIREMENTS FOR CONCRETE MIXTURE, U.N.O..
2. PREPARE DESIGN MIXES SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, PROPORTIONED ACCORDING TO ACI 301, FOR NORMAL WEIGHT CONCRETE DETERMINED BY EITHER LABORATORY TRIAL MIX OR FIELD TEST DATA AS FOLLOWS: CONCRETE MATERIALS INCLUDED IN THE MIX DESIGN SHALL BE THE SAME MATERIALS PROVIDED TO THE PROJECT, AND SHALL BE PREPARED BY AN INDEPENDENT TESTING LABORATORY APPROVED BY THE OWNER. THE LABORATORY MIX DESIGN SHALL NOT EXCEED THE DESIRED JOB STRENGTH OF CONCRETE BY 1,200 PSI. FOUR COPIES OF THE MIX DESIGN SHALL BE SUBMITTED TO THE OWNER BEFORE CONCRETE WORK BEGINS.
3. SLUMP: CONCRETE CONTAINING HRWR SHALL HAVE A MAXIMUM SLUMP OF 8" (200MM). ALL OTHER CONCRETE SHALL NOT EXCEED 4 INCHES (100 MM) UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
4. ADJUSTMENT TO CONCRETE MIXES: MIX DESIGN ADJUSTMENTS MAY BE REQUESTED BY CONTRACTOR WHEN CHARACTERISTICS OF MATERIALS, JOB CONDITIONS, WEATHER, TEST RESULTS OR OTHER CIRCUMSTANCES WARRANT, AT NO ADDITIONAL COST TO OWNER AND AS ACCEPTED BY OWNER. LABORATORY TEST DATA FOR REVISED MIX DESIGN AND STRENGTH RESULTS MUST BE SUBMITTED TO AND ACCEPTED BY OWNER BEFORE USING IN WORK. BOTH THE CONCRETE TESTING AND INSPECTION AGENCY AND THE CONCRETE CONTRACTOR SHALL SATISFY THEMSELVES THAT THE CONCRETE MIX DESIGN WILL PRODUCE A CONCRETE WHICH WILL MEET THE SPECIFICATIONS FOR THIS PROJECT. IN ADDITION, THE CONTRACTOR AND CONCRETE FINISHER SHALL VERIFY THAT THE WORKABILITY, FINISHABILITY AND SETTING TIMES ARE APPROPRIATE FOR SLAB INSTALLATIONS. PLACEMENT SHALL BE MADE BY CHUTE DIRECTLY FROM THE CONCRETE TRUCKS. IF PUMPING OF THE CONCRETE IS CONTEMPLATED FOR ANY SPECIAL LOCATIONS, THE PROPORTIONS ESTABLISHED ABOVE SHALL NOT BE ALTERED TO SUIT THE CAPABILITIES OF THE PUMPING EQUIPMENT.
5. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94. WHEN AIR TEMPERATURE IS BETWEEN 85° AND 90° F, REDUCE MIXING AND DELIVERY TIME FROM 90 MINUTES TO 75 MINUTES; WHEN AIR TEMPERATURE IS ABOVE 90° F, REDUCE MIXING AND DELIVERY TIME TO 6O MINUTES.
6. WATER CEMENT RATIO SHALL BE BASED ON SURFACE DRY MATERIAL.

H. CONTRACTION JOINTS IN SLABS-ON-GRADE:

FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS, AS FOLLOWS:

SAWED JOINTS: ALL SAW CUTTING SHALL BE ACCOMPLISHED WITH A SOFT-CUT SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR. NOTE: CONCRETE DUST SHALL BE REMOVED COMPLETELY AND IMMEDIATELY. IF CHALK LINES ARE USED FOR SAW CUTS, ALL CHALK REMAINING ON SLAB SHALL BE REMOVED COMPLETELY AND IMMEDIATELY AFTER SAWING.

I. FLOOR SLAB TOLERANCES:

COMPLY WITH ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS." ALL INTERIOR FLOOR SLABS SHALL MEET THE REQUIREMENTS OF A TYPE 5, SINGLE COURSE, HARD STEEL - TROWELED FINISH AS DESCRIBED IN ACI 302.IR- LATEST EDITION.

J. CONCRETE CURING AND PROTECTION:

1. EXTERIOR SLAB - CURING:
   a) FIRST, ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F. BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.
   b) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST SEVEN (7) DAYS AFTER PLACEMENT.
2. INTERIOR SLABS - CURING:
   a) FIRST, ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F. BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.
   b) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND PONDED WITH WATER FOR SEVEN (7) DAYS AFTER CONCRETE PLACEMENT.
   c) THIRD, CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE- FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F.
   d) AT CONCRETE WHERE FINISH OF SLAB IS TO BE POLISHED; PROVIDE BURLAP MEMBRANE DURING ENTIRE CONSTRUCTION OF THE BUILDING. (DO NOT PROVIDE CURING COMPOUND)
3. INTERIOR SLAB PROTECTION:
   TAKE THE FOLLOWING MEASURES TO PROTECT FLOOR SLAB:
   A. WRAP OR "DIAPER" ALL MOTORIZED AND HYDRAULIC EQUIPMENT TO PREVENT FLUID LEAKS.
   B. PROVIDE NON-MARKING TIRES ON RUBBER TIRED VEHICLES OR EQUIP RUBBER TIRES WITH TIRE BOOTS MADE OF NYLON FABRIC.
   C. SOURCE FOR DIAPERS AND BOOTS: R&R TIRE SURFACE PROTECTORS, INC., FORT COLLINS CO 80526, (970) 266-4082
   D. PROVIDE MATS AT ALL ENTRANCES TO PREVENT MUD STAINS.
   E. COVER SLAB PRIOR TO PAINTING. ALL SPILLS TO BE CLEANED WITH SOAP AND WATER. LACQUER THINNER WILL NOT BE ACCEPTABLE.

SPECIAL INSPECTION, MATERIALS TESTING.

1. RESPONSIBILITIES OF THE OWNER
   A. EMPLOY AND PAY THE SPECIAL INSPECTION AGENCY TO PERFORM INSPECTIONS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
   B. EMPLOY AND PAY THE MATERIALS TESTING LABORATORY TO PERFORM TESTS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
      1) RETESTING - THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR RE-TESTING WHERE RESULTS OF INSPECTIONS AND TESTS PROVE UNSATISFACTORY AND INDICATE NONCOMPLIANCE WITH REQUIREMENTS.
   C. EMPLOY THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN OR ANOTHER ENGINEER OR ARCHITECT DESIGNATED BY THE (DPR) TO PERFORM STRUCTURAL OBSERVATION. (REF 1702)
2. DEFINITIONS
   A. APPROVED FABRICATOR: A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD, TO PERFORM WORK, OFF SITE, REQUIRING SPECIAL INSPECTION WITHOUT SPECIAL INSPECTION. THE DESCRIPTION IN SECTION 1701.1 OF THE 1998 CALIFORNIA BUILDING CODE IS APPLICABLE.
   B. SPECIAL INSPECTION AGENCY: THE ACCREDITED INSPECTION BODIES DESIGNATED HEREIN AND APPROVED BY THE ENGINEER OF RECORD TO PERFORM SPECIAL INSPECTION AS REQUIRED BY THE BUILDING CODE AND THE PROJECT SPECIFICATIONS AND AS DESCRIBED IN SECTION 1701 1998 CALIFORNIA BUILDING CODE.
   C. SPECIAL INSPECTOR: A QUALIFIED PERSON, EMPLOYED BY THE SPECIFIED SPECIAL INSPECTION AGENCY, WHO HAS DEMONSTRATED COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. DUTIES INCLUDE VISUAL OBSERVATIONS AND FIELD MEASUREMENTS OF MATERIALS, OBTAINING SPECIMENS FOR TESTS AND RELATED ACTIONS INCLUDING PREPARATION OF REPORTS.

SPECIAL INSPECTION, MATERIALS TESTING. (CONT.)

   D. TESTING LABORATORY: AN ACCREDITED MATERIALS TESTING LABORATORY, APPROVED BY THE ENGINEER OF RECORD, TO MEASURE, EXAMINE, TEST, CALIBRATE OR OTHERWISE DETERMINE THE CHARACTERISTICS OR PERFORMANCE OF CONSTRUCTION MATERIALS.
   E. CONTINUOUS INSPECTION: ON SITE INSPECTION BY THE SPECIAL INSPECTOR ON A CONTINUOUS BASIS OBSERVING ALL WORK REQUIRING SPECIAL INSPECTION.
   F. PERIODIC INSPECTION: INTERMITTENT INSPECTION AS PERMITTED BY THE PLAN SPECIFICATIONS AT PREDETERMINED INTERVALS OR MORE FREQUENTLY AS WORK PROGRESSES. NO SIGNIFICANT ELEMENTS OR AREAS SHALL BE COVERED BY ADDITIONAL WORK UNTIL APPROVED BY THE MUNICIPAL BUILDING INSPECTOR AND/OR THE SPECIAL INSPECTOR.
   G. STRUCTURAL OBSERVATION: THE VISUAL OBSERVATION, BY THE ENGINEER OF RECORD OR HIS DESIGNEE, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS, OF THE STRUCTURAL SYSTEM, FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATION, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL AND MUNICIPAL INSPECTIONS REQUIRED BY CODES AND SPECIFICATIONS.
   H. EOR: ENGINEER OF RECORD
   I. DPR: ENGINEER OF RECORD/DESIGN PROFESSIONAL OF RECORD
   J. SPECIAL INSPECTION AND MATERIALS TESTING
   THIS SECTION APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION.
   DOCUMENTED METHODS AND PROCEDURES SHALL BE USED FOR INSPECTION AND TESTING REQUIRED OF CONTRACTUAL DOCUMENTS, AND FOR ESTABLISHING ACCEPTANCE CRITERIA. ALL INSTRUCTIONS, STANDARDS, PROCEDURES, CHECKLISTS RELEVANT TO THE WORK WILL BE KEPT UP TO DATE AND READILY AVAILABLE FOR USE. NO INSPECTION OR TEST WILL BE PERFORMED IF THE SAFETY OF THE TESTING PERSONNEL IS IN QUESTION DUE TO JOB SITE CONDITIONS. PRIOR TO PROJECT COMMENCEMENT, THE TESTING AGENCY WILL CONFER WITH AND OBTAIN THE APPROVAL FROM THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD REGARDING THE INSPECTION AND TESTING PROCEDURES OR SPECIFICATIONS INCLUDING ANY APPROPRIATE ASTM METHODS, CODE REQUIREMENTS OR PROJECT SPECIFICATION REQUIREMENTS. AT THE START OF AND DURING EACH INSPECTION OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS, AS REQUIRED, AND PROCEDURES WITH APPLICABLE CODES, PLANS, AND SPECIFICATIONS. APPLICABLE CODES, PLANS, AND SPECIFICATIONS.
      1. ALL INSPECTIONS SHALL BE PERFORMED BY AN ACCREDITED, APPROVED SPECIAL INSPECTION AGENCY EMPLOYED BY THE OWNER OR OWNER'S AGENT, NOT THE CONTRACTOR OR SUBCONTRACTOR,
      ACCREDITATION TO ASTM E-329-95C, STANDARD
      SPECIFICATIONS FOR AGENCIES ENGAGED IN THE TESTING AND/OR INSPECTION OF MATERIALS USED IN CONSTRUCTION, IS PREFERRED.
      COPIES OF THE TEST RESULTS AND FINAL REPORTS SHALL BE FURNISHED TO THE ENGINEER OF RECORD (EOR) IN ADDITION TO OTHER NORMAL DISTRIBUTIONS, WITHIN TWO DAYS OF THE TEST. IN THE CASE OF DISCREPANCIES OR DEFICIENCIES, THE SPECIAL INSPECTION AGENCY SHALL IMMEDIATELY NOTIFY THE EOR. TESTING FREQUENCY SHALL BE PER APPLICABLE STRUCTURAL MASONRY, REINFORCED CONCRETE, AND STRUCTURAL STEEL WELDING CODES AND STANDARDS AND ARE PART OF THIS SPECIFICATION.
         A. CERTIFICATE OF SATISFACTORY COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITED TO THE INSPECTION SERVICES DIVISION BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND/OR INSPECTION FIRM WITH A CONSTRUCTION SCHEDULE TO FACILITATE THE PROPER COORDINATION. ANY WORK PERFORMED WITHOUT SPECIAL INSPECTION IS SUBJECT TO REMOVAL AT CONTRACTOR'S EXPENSE
4. THE SPECIAL INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE ENGINEER AT A MINIMUM PER WEEK FREQUENCY. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT, SIGNED BY BOTH HE AND HIS SUPERVISOR, STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE WORKMANSHIP PROVISIONS OF THE CBC.
5. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN IF UNCORRECTED, TO THE PROPER DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
6. SPECIAL INSPECTION REPORTS
   THESE REPORTS SHALL INCLUDE, AS A MINIMUM, THE FOLLOWING INFORMATION:
   A. PERMIT NUMBER
   B. NAME OF THE MUNICIPAL INSPECTOR, IF AVAILABLE, AND OF THE GOVERNING MUNICIPALITY
   C. SPECIAL INSPECTION AGENCY NAME, ADDRESS, AND PHONE NUMBER
   D. UNIQUE IDENTIFICATION OF THE REPORT AND OF EACH PAGE.
   E. CLIENT NAME AND ADDRESS
   F. NAME AND ADDRESS OF THE DESIGN PROFESSIONAL OF RECORD, AND OTHER DESIGNERS OR ENGINEERS APPLICABLE TO THE PROJECT
   G. DESCRIPTION OF THE TYPE OF INSPECTION PERFORMED
   H. ANY UNRESOLVED DEVIATIONS, EXCLUSIONS, AND ADDITIONS TO OR FROM THE APPROVED DRAWINGS AND SPECIFICATIONS RELEVANT TO THE SPECIFIC INSPECTION OR TEST.
   I. COMPLIANCE FINDINGS AND REFERENCE
   J. DESCRIPTION OF LOCATION WHERE THE INSPECTION WAS PERFORMED WITHIN THE PROJECT
   K. TIME AND DATE OF THE INSPECTION
   L. MEASUREMENTS, EXAMINATIONS, AND DERIVED RESULTS SUPPORTED BY TABLES, GRAPHS, SKETCHES, OR PHOTOGRAPHS AS APPROPRIATE
   M. THE NAME, SIGNATURE, TITLE, AND IDENTIFICATION NUMBER, AS APPROPRIATE, OF THE FIELD INSPECTOR PERFORMING THE INSPECTION
   N. IDENTIFICATION OF SUBCONTRACTORS EMPLOYED TO CARRY OUT TESTS OR PARTS OF TESTS
7. TESTS REPORTS
   LABORATORY TESTS AND MILL CERTIFICATIONS ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER OF RECORD. THESE REPORTS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   1. CONCRETE CYLINDERS
   2. REINFORCING STEEL
   3. STRUCTURAL STEEL
   4. CONCRETE MIXES
   5. CONCRETE ANCHORS
8. SPECIAL INSPECTION BY A SPECIAL OR DEPUTY INSPECTOR FROM AN ACCREDITED, EOR APPROVED INSPECTION AGENCY AND WITH THE APPROPRIATE CURRENT MUNICIPAL LICENSES AND CERTIFICATIONS SHALL BE REQUIRED FOR THE TYPE OF WORK LISTED BELOW.

8A. CONTINUOUS INSPECTION REQUIRED FOR THE FOLLOWING:
   A. REINFORCED CONCRETE:
      1. DURING PLACEMENT OF REINFORCED CONCRETE WHERE THE STRUCTURAL DESIGN IS BASED ON F'C GREATER THAT 3,000 PSI AND THE TAKING TEST SPECIMENS. THE NUMBER OF AND FREQUENCY OF TAKING OF TEST SPECIMENS SHALL BE THE MINIMUM REQUIRED BY THE GOVERNING MUNICIPAL BUILDING CODE OR AS SPECIFIED BY THE APPROVED STRUCTURAL PLANS, WHICHEVER IS THE GREATER NUMBER.
      2. DURING THE PLACEMENT OF REINFORCING STEEL AND PRE STRESS TENDONS UNLESS THE SPECIAL INSPECTOR HAS INSPECTED FOR CONFORMANCE WITH THE APPROVED PLANS PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE.
      3. DURING THE PLACEMENT OF REINFORCING STEEL AND CONCRETE FOR CAST-IN-PLACE DRILLED PILES OR CAISSONS.
      4. INSPECTION IS REQUIRED ON CAST-IN-PLACE PILES OR CAISSONS, EVEN IF F'C IS LESS THAN 2,500 PSI.
      5. PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS WHEN STRESS INCREASES PERMITTED BY FOOTNOTE 5 OF TABLE 19E, SECTION 1925 OF THE UNIFORM BUILDING CODE FOR THE USE OF FULL VALUES FOR EMBEDDED BOLTS.
      6. PRIOR TO AND DURING THE INSTALLATION OF ANCHORS REQUIRING TO BE DRILLED INTO CONCRETE.
      7. DURING THE STRESSING AND GROUTING OF TENDONS IN PRE STRESSED
      8. CONTINUOUS INSPECTION FOR THE PLACEMENT OF THE REINFORCEMENT AND CONCRETE AT CONCRETE MOMENT FRAMES WITHIN SEISMIC ZONES 3 & 4
      9. SHOT CRETE PLACEMENT AND DURING THE TAKING OF TEST SPECIMENS.
      PERIODIC INSPECTION FOR REINFORCED CONCRETE SHALL BE PERFORMED WHEN SPECIFIED, AS MINIMUMS:
         1. AT THE START OF AND DURING EACH INSPECTION OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.
         2. REINFORCEMENT VERIFICATION PRIOR TO THE PLACEMENT OF CONCRETE
         3. DURING THE PLACEMENT OF CONCRETE
         4. DURING THE MOLDING, CONSTRUCTION OF TAKING OF COMPRESSION SAMPLES, BEAMS, CORES OR PANELS.
         5. AT SUCH FREQUENCY AS NECESSARY TO CLEARLY CONFIRM THE PLACEMENT OF TIES, HOOPS, STIRRUPS, CONNECTIONS, AND ANY ADDITIONAL SPECIFIED REINFORCEMENT (IE @ OPENINGS, BEAMS, CORNERS, COLUMNS, PIERS, AND CAISSONS) BEFORE THEY ARE COVERED.
         6. DURING SAMPLING OF CONCRETE AT DISCHARGE FROM MIXER.
         7. BEFORE ANY CONCRETE IS PLACED FOR VERIFICATION OF MIX DESIGN
         8. ALL FUNCTIONS AT THE BATCHING PLANT FOR READY MIX. THIS COULD INCLUDE CEMENT SAMPLING OR TEST RESULTS, GRAVEL GRADATION, CHECKING CALIBRATION OF EQUIPMENT AND ADMIXTURE APPROVALS.

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

SPECIAL INSPECTION, MATERIALS TESTING. (CONT.)

B. STRUCTURAL WELDING - GENERAL - INSPECTOR'S DUTIES
   1. ALL FIELD WELDING NOT DONE IN AN APPROVED FABRICATORS SHOP EXCEPT THAT PERIODIC INSPECTION THE FREQUENCY OF WHICH IS DETERMINED PRIOR TO THE START OF THE PROJECT SHALL BE ALLOWED PER SECTION 1701.5, #5 EXCEPTIONS.
   2. DURING ALL FIELD WELDING OF SPECIAL MOMENT-RESISTING FRAMES; IN ADDITION, NONDESTRUCTIVE TESTING AS REQUIRED BY SECTION 1703.
   3. THE SPECIAL INSPECTOR SHALL REVIEW EOR APPROVED WELDING PROCEDURES SPECIFICATIONS (WPS) WHEN OTHER THAN STANDARD AWS PRE QUALIFIED JOINTS AND PROCEDURES ARE INVOLVED.
   4. THE SPECIAL INSPECTOR SHALL REVIEW APPLICABLE SECTION OF REFERENCED CODES, PARTICULARLY THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE (AWS D1.1) AND THE MANUAL, AND SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
   5. THE SPECIAL INSPECTOR SHALL REVIEW MILL TEST REPORTS AND CHECK HEAT NUMBERS WITH MATERIAL AS RECEIVED. VERIFY THAT PROPER IDENTIFICATION OF STEEL IS MAINTAINED DURING FABRICATION.
   6. THE SPECIAL INSPECTOR SHALL, WHEN REQUIRED BY PROJECT SPECIFICATIONS, MARK SAMPLE LOCATION WITH STEEL STAMP ON EACH PIECE TESTED.
   7. THE SPECIAL INSPECTOR SHALL RECORD SAMPLE NUMBER AND LOCATION AND CHECK THAT SAMPLE IDENTIFICATION IS MAINTAINED AS SAMPLES ARE DELIVERED TO LABORATORY AND TESTED.
   8. THE SPECIAL INSPECTOR SHALL WHEN STEEL MEMBERS ARE DELIVERED TO FINISH AND NO "CROP ENDS" ARE AVAILABLE FOR SAMPLE CUTTING, COORDINATE CUTTING AND PATCHING REQUIREMENTS WITH THE ARCHITECT/ENGINEER

9A. WELDING OBSERVATION - (APPLICABLE TO SHOP AND FIELD)
   1. THE SPECIAL INSPECTOR SHALL CHECK EACH WELDER'S CERTIFICATION AND VERIFY THAT THE WELDER DOES WORK ONLY AS QUALIFIED BY HIS CERTIFICATION.
   2. THE SPECIAL INSPECTOR SHALL KEEP A WRITTEN RECORD OF EACH WELDER BY NAME, IDENTIFICATION NUMBER AND HIS IDENTIFYING STEEL MARK, IF APPLICABLE, AND THE PERCENTAGE OF REJECTABLE WELDS.
   3. THE SPECIAL INSPECTOR SHALL UPON DETECTION OF REJECTABLE WELD (EITHER VISUALLY OR BY NONDESTRUCTIVE TEST), THE INSPECTOR OF RECORD WILL NOTIFY THE WELDER AND HIS FOREMAN FOR VERIFICATION OF DEFECT. THE INSPECTOR OF RECORD WILL OBSERVE REMOVAL, REWORK, OR REPAIRS.
   4. THE SPECIAL INSPECTOR SHALL CHECK STRUCTURAL MEMBERS FOR THICKNESS ADJACENT TO WELDS, OPENING, ETC. REWORK, OR REPAIRS.
   5. THE SPECIAL INSPECTOR SHALL INSPECT JOINTS FOR PROPER PREPARATION, INCLUDING BEVEL, ROOT FACES, ROOT OPENING, ETC. REWORK, OR REPAIRS.
   6. THE SPECIAL INSPECTOR SHALL CHECK THE TYPE AND SIZE OF ELECTRODES TO BE USED FOR THE VARIOUS JOINTS, AND POSITIONS. CHECK THE STORAGE FACILITIES TO SEE IF THEY ARE ADEQUATE TO KEEP THE ELECTRODES DRY.
   7. THE SPECIAL INSPECTOR SHALL OBSERVE THE TECHNIQUE OF EACH THE SPECIAL INSPECTOR SHALL WELDER WITH USE OF A WELDING INSPECTION SHIELD.
   8. THE SPECIAL INSPECTOR SHALL VERIFY THE USE OF PROPER PREHEAT AND INTER PASS TEMPERATURES. INSPECTOR SHALL WELDER WITH USE OF A WELDING INSPECTION SHIELD.
   9. THE SPECIAL INSPECTOR SHALL CONTINUOUSLY OBSERVE MULTI-PASS WELDS. CONTINUOUS INSPECTION IS DEFINED AS FOLLOWS: THE INSPECTOR IS PRESENT IN THE WELDING AREA AT ALL TIMES AND IS FULLY AWARE OF THE PROGRESS OF THE WELDING AT ANY GIVEN TIME. THE INSPECTOR MAY WATCH MULTIPLE WELDERS PROVIDED THEY ALL BE IN THE AREA, CLOSE ENOUGH FOR EFFECTIVE VISUAL INSPECTION OF THE WORK PERFORMED.
   10. THE SPECIAL INSPECTOR SHALL DETERMINE THAT THE OPERATOR IS CAPABLE OF PRODUCING THE REQUIRED WELDS.
   11. THE SPECIAL INSPECTOR SHALL OBSERVE SINGLE PASS FILLET WELDS PERIODICALLY, OR MORE OFTEN IF CODES AND SPECIFICATIONS REQUIRE.
   12. THE SPECIAL INSPECTOR SHALL, IF STRAIGHTENING OR RESTRAINING OF WELDMENTS IS NECESSARY, VERIFY THAT APPROVED METHODS WILL BE USED.
   13. THE SPECIAL INSPECTOR SHALL TAG OR STAMP ACCEPTED WELDMENTS WITH THE INSPECTOR'S IDENTIFICATION STAMP. APPROVED METHODS WILL BE USED.

SPECIAL INSPECTION, MATERIALS TESTING. (CONT.)

8A. PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:		YES	NO	N/A
FOUNDATION	A. COMPACTED FILL, GRADING, AND EXCAVATIONS	X		
	B. CONTINUOUS INSPECTION OF PIERS			X
CONCRETE	A. CONTINUOUS INSPECTION AND TEST CYLINDERS FOR CONCRETE.	X		
	B. CONTINUOUS INSPECTION FOR SLAB CONCRETE		X	
	C. TEST CYLINDERS FOR SLAB CONCRETE		X	
	D. ANCHOR BOLTS OR EMBEDS IN CONCRETE (INSTALLATION AND CONCRETE PLACEMENT)	X		
DRILLED IN ANCHORS	A. ALL ADHESIVE ANCHORS, RODS, DOWELS, SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION.	X		
	B. ADDITIONAL TESTING MAY BE REQUIRED AS SPECIFIED ON THE PLANS.	X		
	C. ADHESIVE ANCHORS IN CONCRETE OR MASONRY	X		
REINFORCING STEEL	A. PLACING OF REINFORCING		X	
	B. SAMPLING AND TESTING STEEL (MILL REPORTS AND IDENTIFICATION OF STEEL)		X	
WELDING	A. ALL STRUCTURAL WELDING EXCEPT WELDING IN APPROVED SHOPS	X		
	B. ULTRASONIC TESTING OF FULL PENETRATION WELD CONNECTIONS , AND FIELD WELDS.	X		
	C. STRUCTURAL LIGHT GAGE METAL FRAME WELDING.	X		
	D. REINFORCING STEEL WELDING	X		
BOLTING	A. HIGH STRENGTH BOLT A325 & A490 (TORQUE VERIFICATION)	X		
	B. HIGH STRENGTH BOLT A325N,X & A480N,X (SNUG CONTACT OF PLYS)	X		
MASONRY	A. SAMPLING OF MASONRY UNITS	X		
	B. MASONRY PRISM CONSTRUCTION	X		
	C. MORTAR SAMPLING	X		
	D. CONTINUOUS INSPECTION DURING PLACEMENT AND GROUTING OF MASONRY UNITS AND REINFORCEMENT PLACEMENT.	X		
	E. ANCHOR BOLTS OR EMBEDS IN MASONRY (INSTALLATION AND GROUT PLACEMENT)	X		
INSULATING CONCRETE FILL	A. TEST CYLINDERS AND INSPECTIONS			
STRUCTURAL STEEL	A. MILL REPORTS AND IDENTIFICATION OF STEEL (AFFIDAVIT OF COMPLIANCE)	X		X
	B. SAMPLING AND TESTING		X	
	C. DURING PLACEMENT OF PAINT AS SPECIFIED BY THE ARCHITECT.		X	
SHEAR DIAPHRAGMS	A. INSPECTION OF SHEATHING PLACEMENT AND NAIL SPACING			
APPROVED FABRICATORS	APPROVED FABRICATORS: MUST SUBMIT CERTIFICATE OF COMPLIANCE FOR ALL OFF SITE FABRICATION SUCH AS STRUCTURAL STEEL GLU-LAMS PRECAST CONCRETE, ETC.	X		X
STRUCTURAL OBSERVATION	STRUCTURAL OBSERVATIONS REQUIRED. WHEN REQUIRED BY THIS ENGINEER OR THE BUILDING DEPARTMENT, THE CONTRACTOR SHALL EMPLOY AN ENGINEER APPROVED BY THE EOR TO PERFORM STRUCTURAL OBSERVATION.	X		

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19

W.R.HINOJOSA
65228

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-135A

DATE
FEBRUARY 08, 2019

SHEET

STRUCTURAL
GENERAL NOTES

S1.2

17 NOT USED

18 NOT USED

19 NOT USED

20 NOT USED

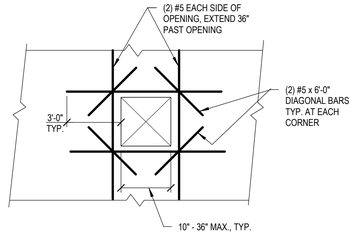
13 NOT USED

14 NOT USED

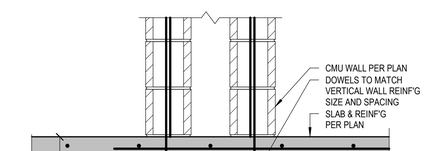
15 NOT USED

16 NOT USED

9 REINFORCING AT CONCRETE OPENINGS

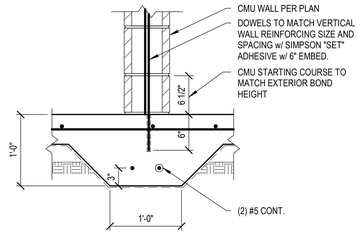


10 STANDARD HOOKS



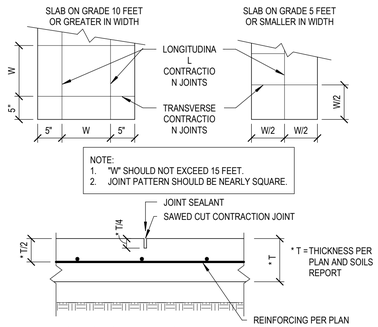
DIAMETER OF BENDS	
STIRRUPS AND TIES	4 db FOR #3 THRU #5 BARS
	6 db FOR #6 THRU #8 BARS
ALL OTHERS	6 db FOR #3 THRU #8 BARS
	8 db FOR #9 THRU #11 BARS
	10 db FOR #14 THRU #18 BARS

11 TYP. THICKENED SLAB AT NON BEARING CMU WALL

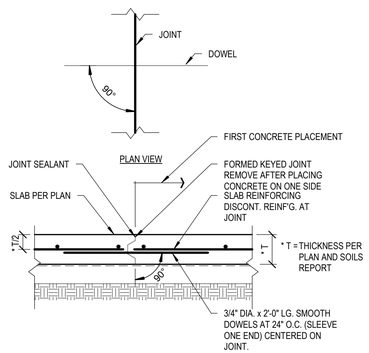


12 TYP. INTERIOR FOOTING AT CHASE

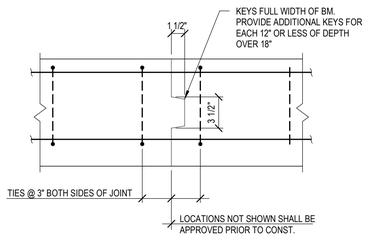
5 SLAB CONTRACTION JOINT



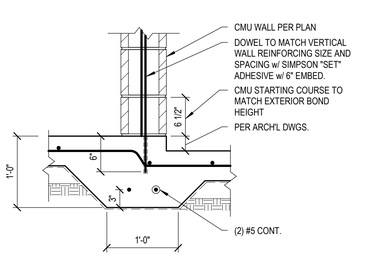
6 SLAB CONSTRUCTION JOINT



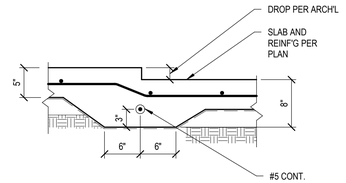
7 GRADE BEAM CONSTRUCTION JOINT



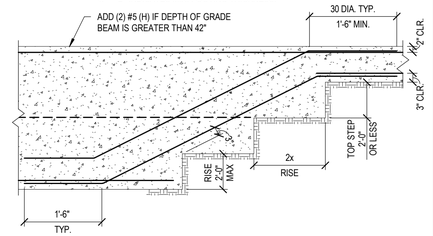
8 TYPICAL THICKENED SLAB AT CMU WALL AT DROP



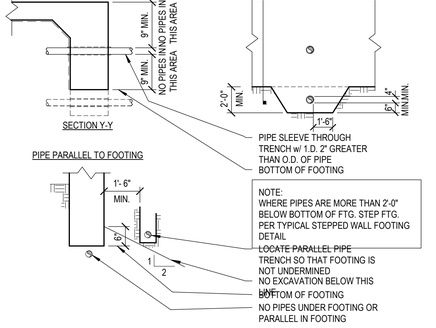
1 TYPICAL DROP AT SLAB ON GRADE



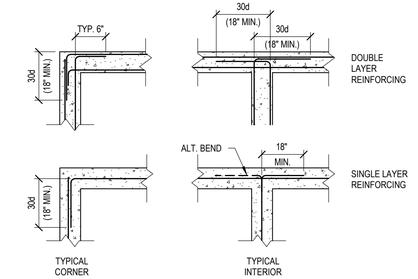
2 TYPICAL STEPPED WALL FOOTING



3 TYPICAL PIPING AT FOOTING



4 TYPICAL REINF. AT INT. OF CONC. FT'GS.



HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19
STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-135A

DATE
FEBRUARY 08, 2019

SHEET
STRUCTURAL TYPICAL DETAILS

S1.3

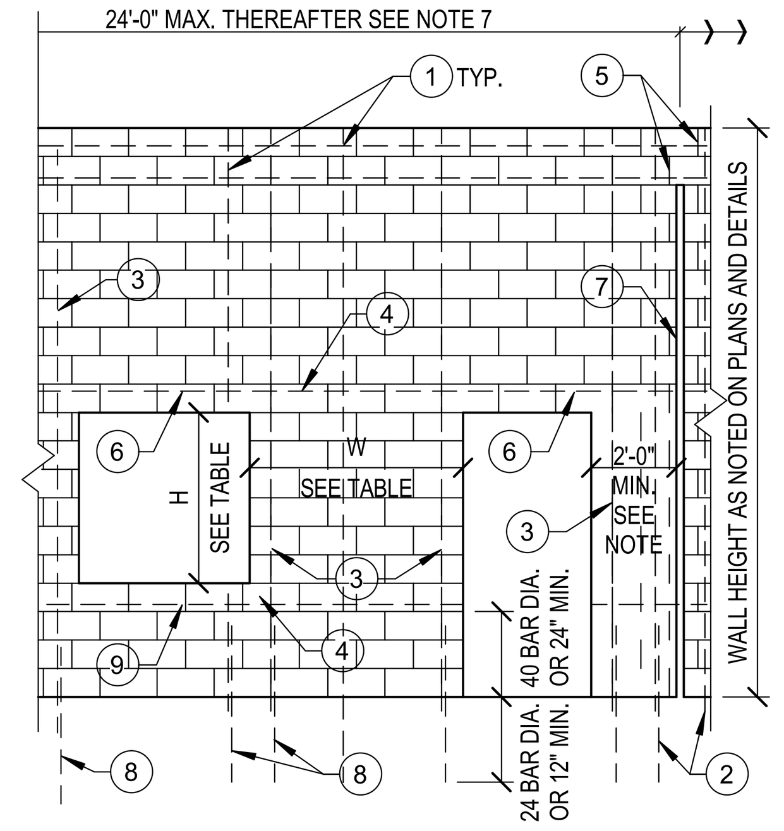
HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19
STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER

17 NOT USED

13 NOT USED



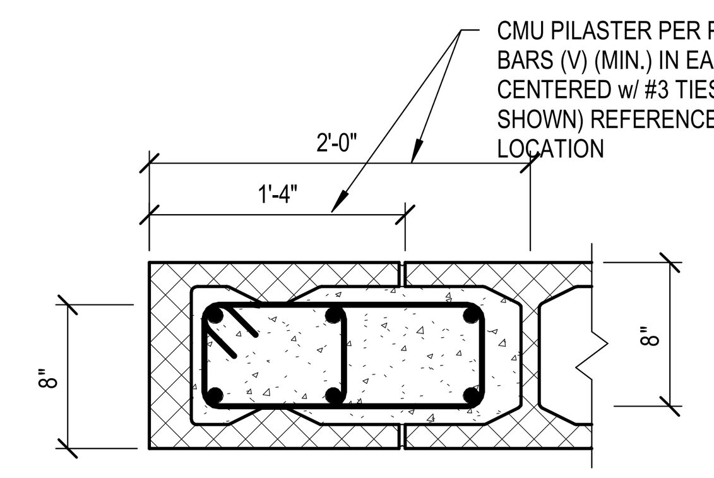
WALL THICKNESS (T)	DIMENSIONAL LIMITS		
	CLEAR	PIER	COLUMN
6"	H > 24" AND W > 32"	H > 24" AND 32" > W > 24"	H > 24" AND W < 24"
8"	H > 32" AND W > 40"	H > 32" AND 40" > W > 24"	H > 32" AND W < 24"
12"	H > 48" AND W > 64"	H > 48" AND 64" > W > 40"	H > 48" AND W < 40"

COLUMN DETAIL: W; T; 1/4" DIA. SMOOTH BAR TIES AT 8" O.C., SET IN CMU JOINTS; 4 (V) BARS TO MATCH TYPICAL WALL REINFORCING

PIER DETAIL: W; T; 1/4" DIA. SMOOTH BAR TIES w/ HOOKED END AT 8" O.C., SET IN CMU JOINTS; VERTICAL BARS EACH CELL TO MATCH TYPICAL WALL REINFORCING

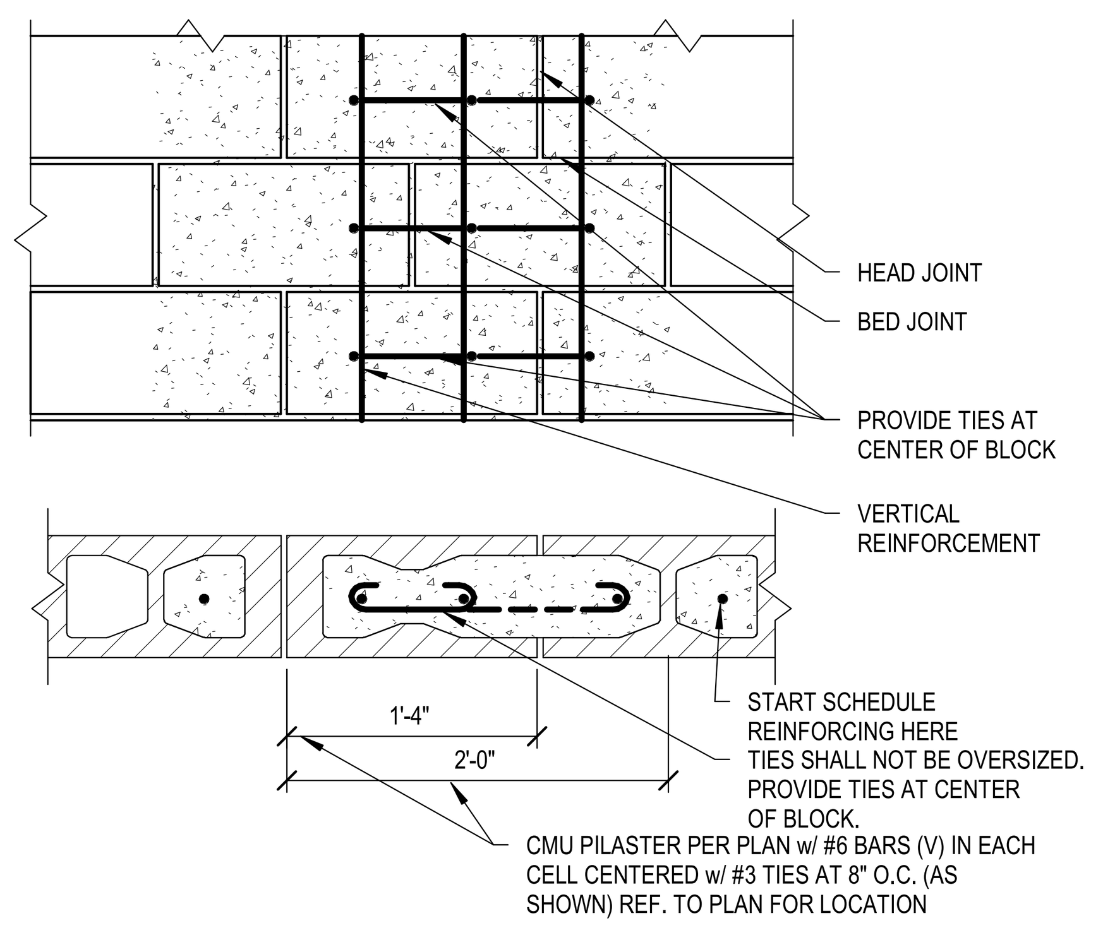
1. NORMAL WALL REINFORCING AS NOTED ON DETAILS AND DESCRIBED IN GENERAL NOTES.
2. ADDITIONAL VERTICAL REINFORCING AT CONTROL JOINTS - SEE TYPICAL CONTROL JOINT DETAIL.
3. ADDITIONAL VERTICAL REINFORCING AT JAMBS OF WALL OPENINGS
4. INTERMEDIATE BOND BEAM REINFORCED AND SPACED AS REQUIRED ON DRAWINGS. ONE INTERMEDIATE BOND BEAM SHALL BE PLACED AT WINDOW LINTEL ELEVATION AND AT 8'-0" O.C.
5. ROOF LEVEL BOND BEAM REINFORCED AS NOTED ON DETAILS- CONTINUE ALL REINFORCING UNCUT THROUGH CONTROL JOINTS.
6. LINTEL REINFORCING AS DETAILED AND/OR SCHEDULED.
7. CONTROL JOINTS (CJ): UNLESS NOTED OTHERWISE ON THE ARCHITECTURAL DRAWINGS. THE CJ SPACING NOTED IS THE MAXIMUM PERMITTED. THE SPACING OF CJ'S SHALL BE COORDINATED WITH THE WALL OPENING LOCATIONS AND IN NO CASE SHALL A CJ BE LOCATED CLOSER THAN 24" TO THE JAMB OF ANY WALL OPENING.
8. FOUNDATION DOWELS TO MATCH VERTICAL WALL REINFORCING SIZE AND SPACING.
9. FOUNDATION DOWELS TO MATCH VERTICAL WALL REINFORCING SIZE AND SPACING.

5 ELEVATION OF TYPICAL MASONRY WALL REINFORCING



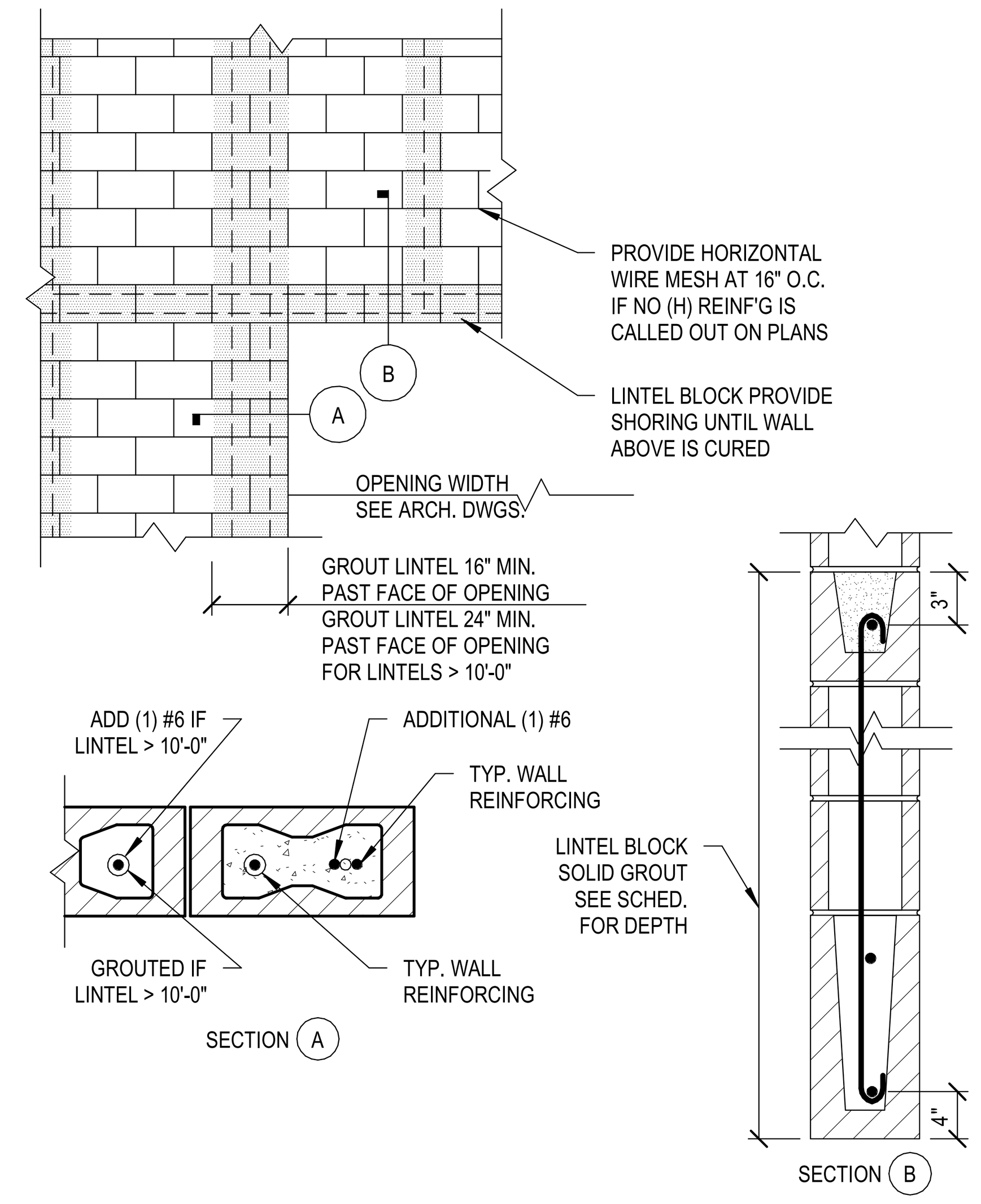
1 12" CMU PILASTER PLAN VIEW

18 NOT USED

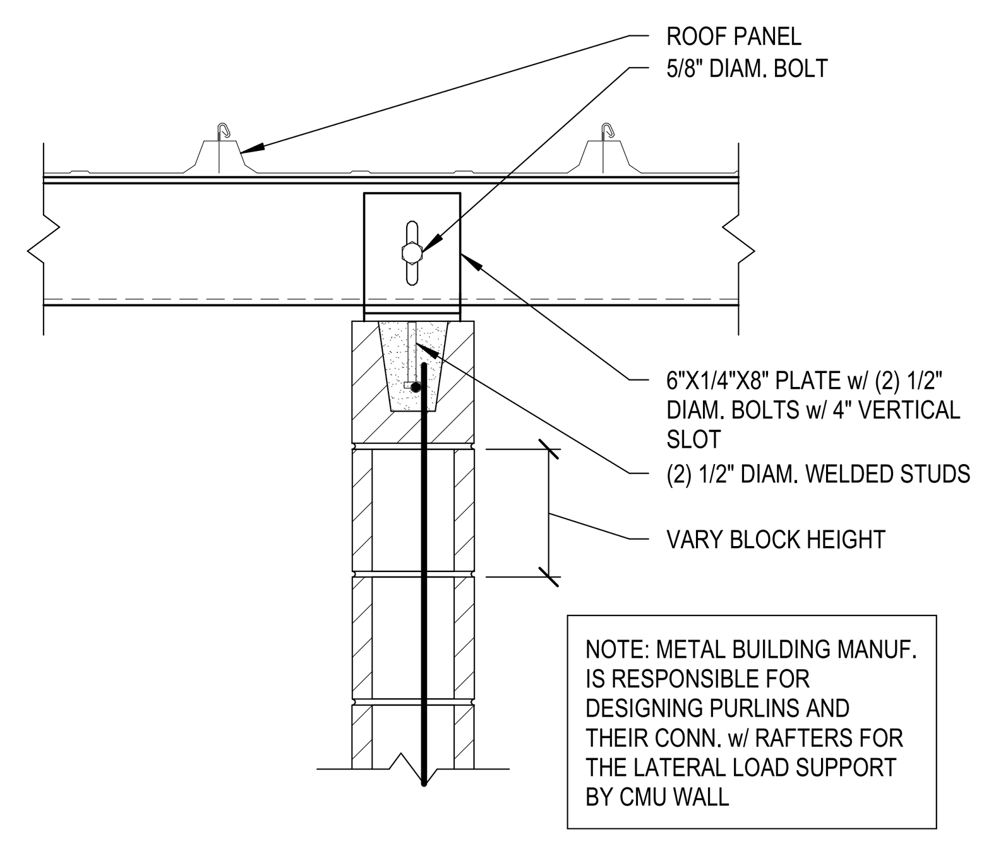


14 TYPICAL FLUSH WALL PILASTER

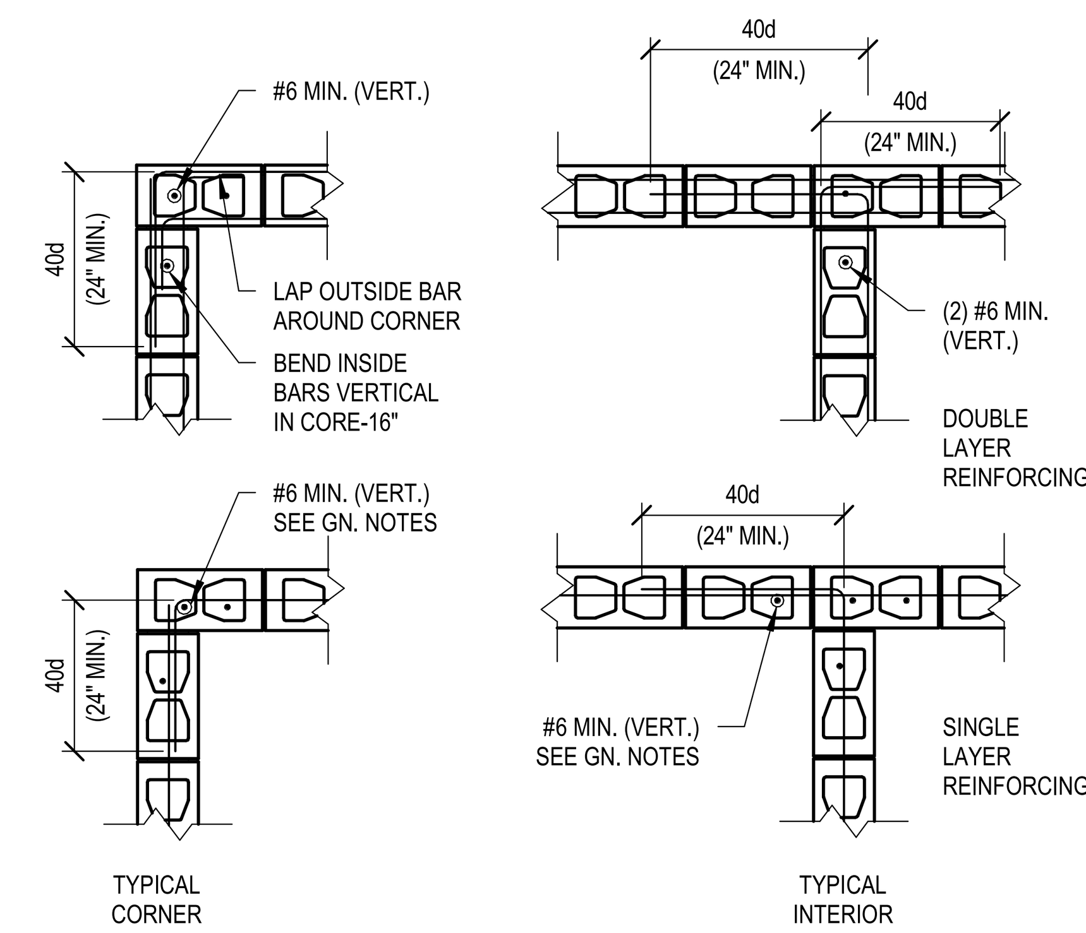
CLEAR SPAN	WIDTH	DEPTH	REINFORCING	#3 TIES AT:	REMARKS
<3'-4"	8"	8"	(1) #6		
<4'-8"	8"	16"	(1) #6 (T) & (B)	8"	
<6'-8"	8"	24"	(1) #7 (T) & (B)	8"	
<10'-0"	8"	32"	(1) #7 (T) & (B)	8"	
<16'-0"	8"	32"	(1) #7 (T) & (B)	8"	
<3'-4"	12"	8"	(2) #5		
<4'-6"	12"	16"	(2) #5 (T) & (B)	8"	
<6'-8"	12"	24"	(2) #7 (T) & (B)	8"	
<12'-0"	12"	32"	(2) #7 (T) & (B)	8"	



11 TYPICAL CMU LINTEL SCHEDULE AND DETAILS



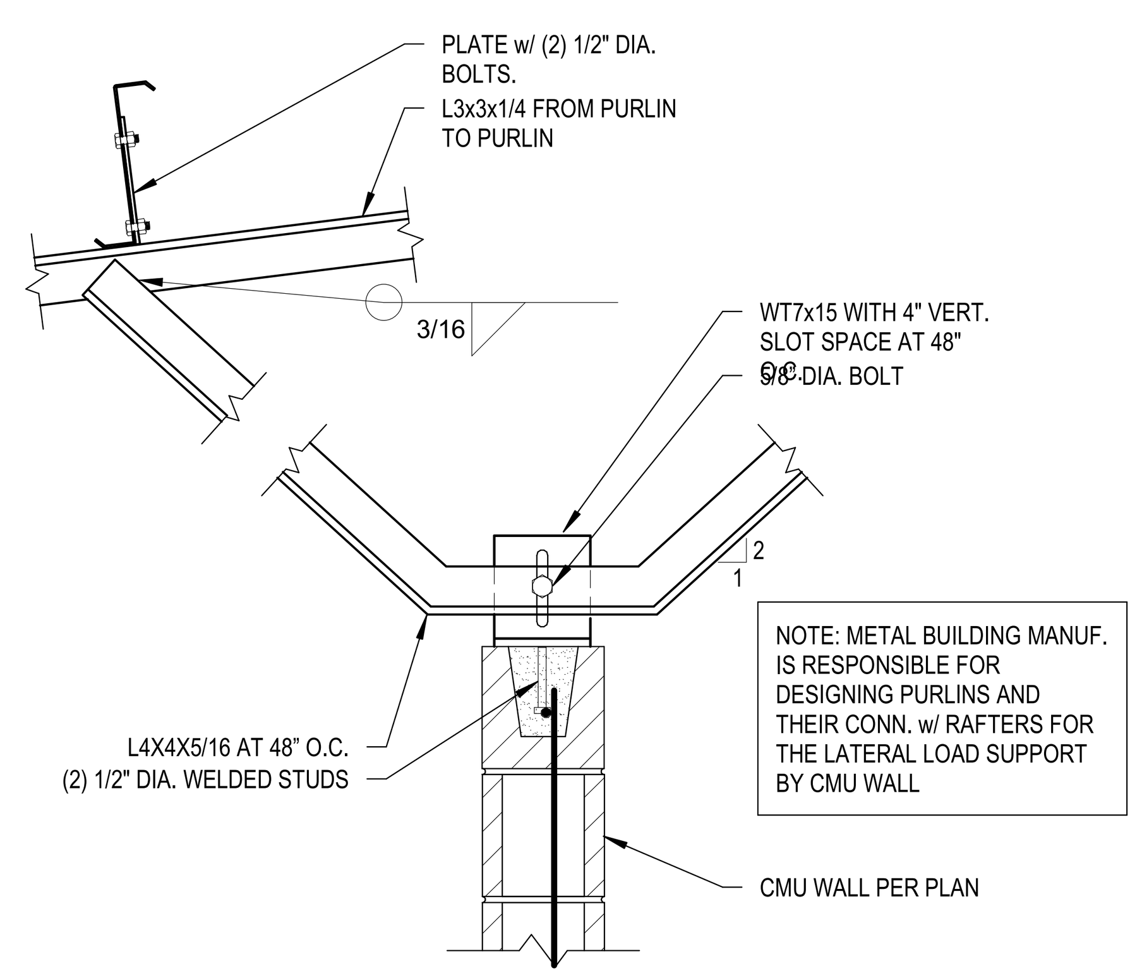
6 TYP. ATTACHMENT OF CMU TO ROOF STRUCT.



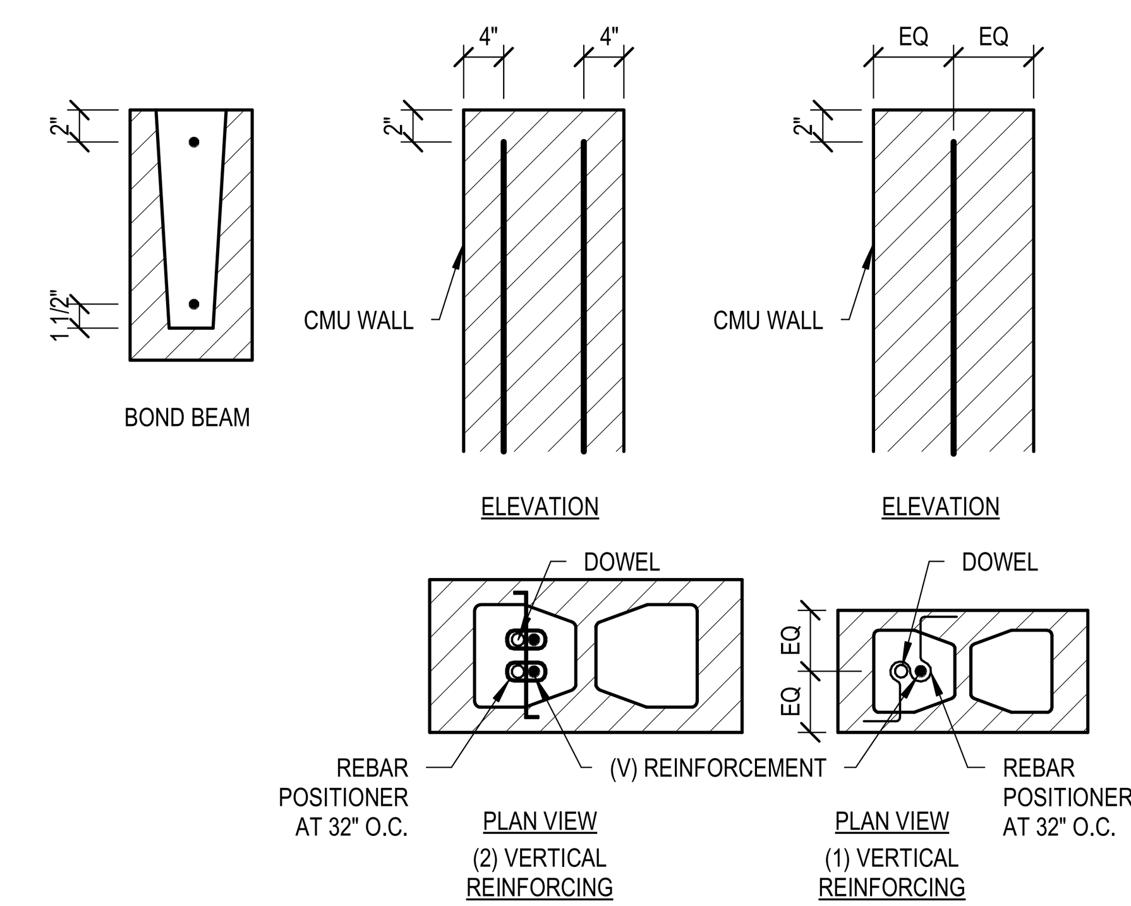
2 TYPICAL REINF'G. AT INT. OF CMU WALLS

19 NOT USED

15 NOT USED



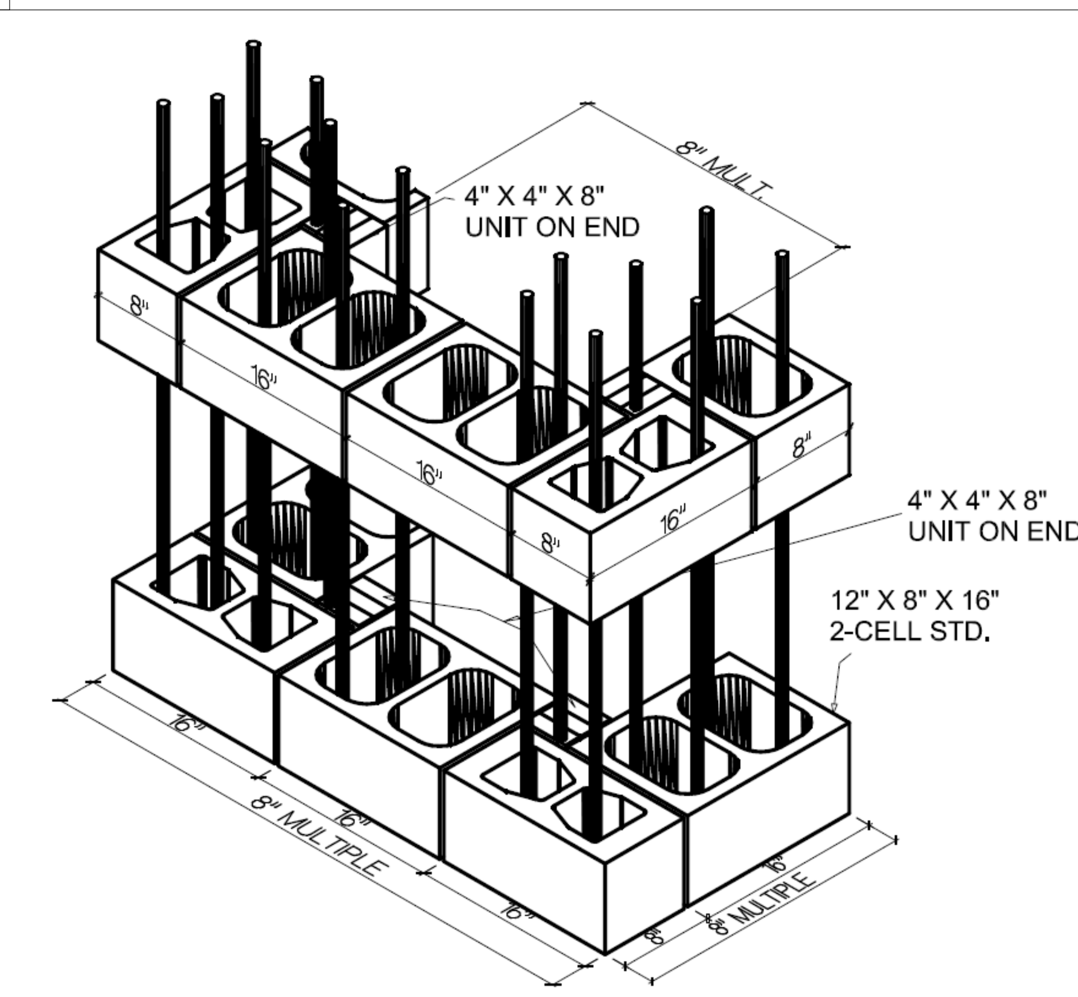
7 TYP. ATTACHMENT OF CMU TO ROOF STRUCT.



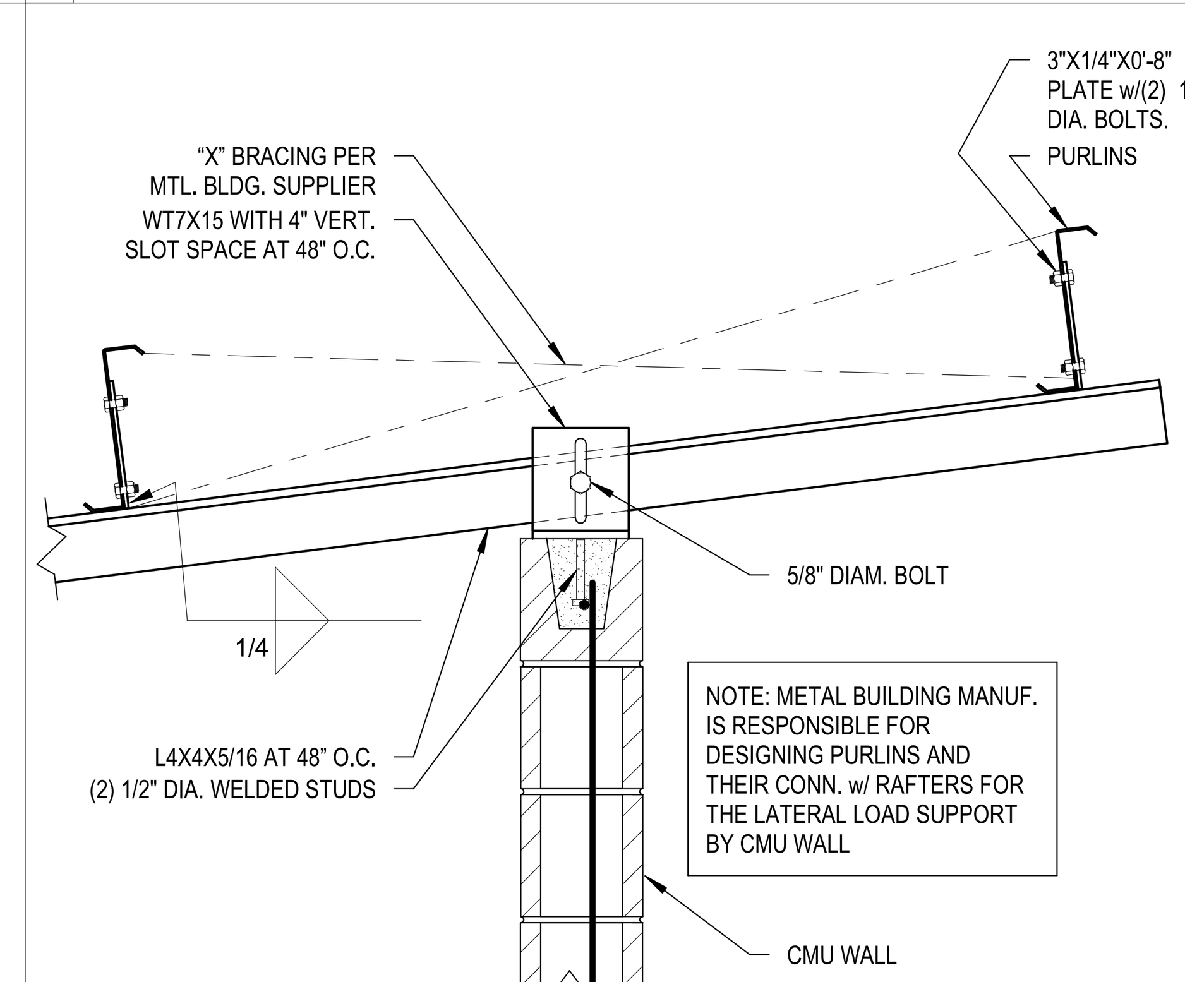
3 TYPICAL REINF'G. PLACEMENT AND CLEARANCE

20 NOT USED

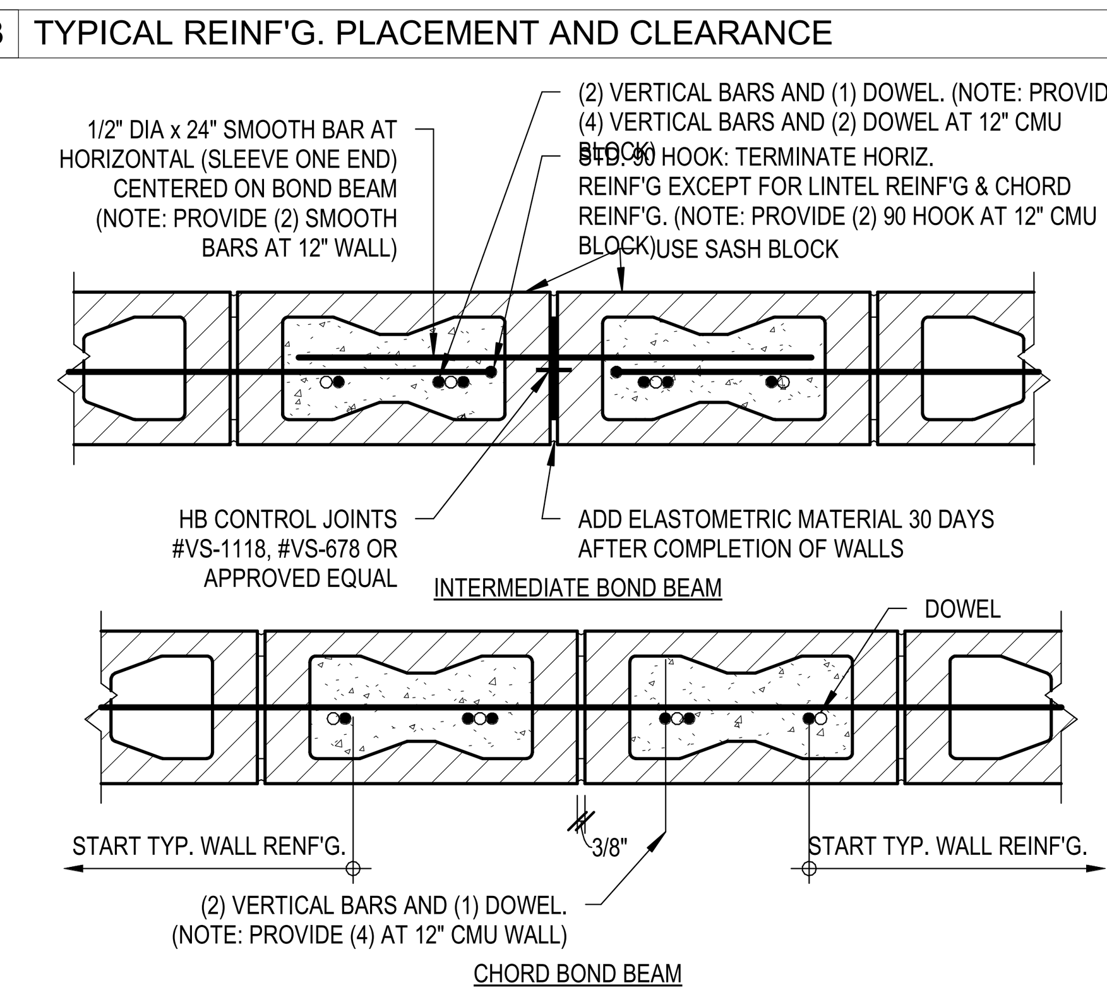
16 NOT USED



12 12" WALL TO 12" WALL



8 TYP. ATTACHMENT OF CMU TO ROOF STRUCT.



NOTE: SPACE C.J. AT 24'-0" O.C. MAX. PROVIDE PORPOSED LOCATION TO STRUCTURAL ENGINEER FOR APPROVAL

4 TYPICAL CMU CONTROL JOINT (C.J.)

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER 18-135A

DATE FEBRUARY 08, 2019

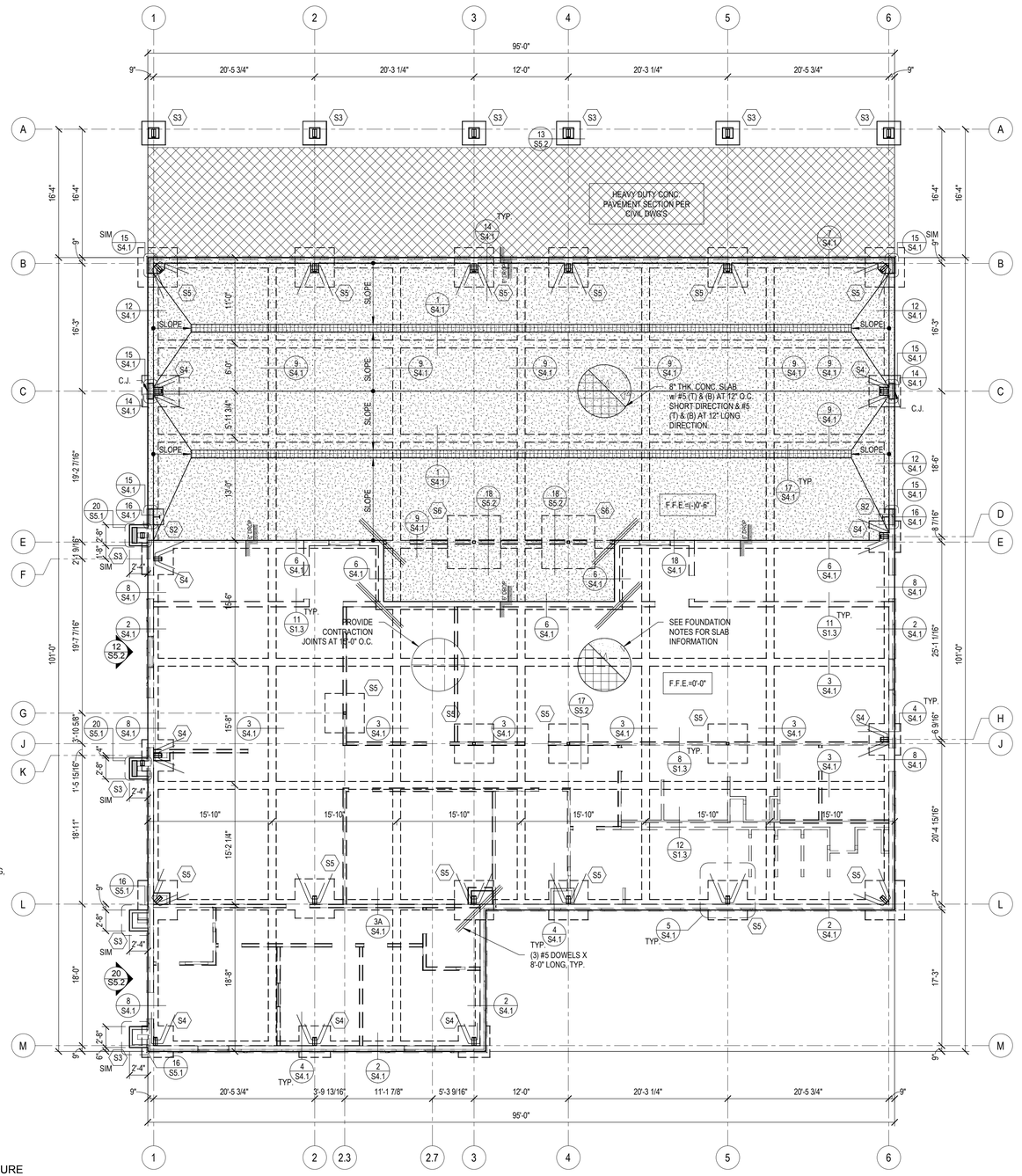
SHEET
STRUCTURAL TYPICAL DETAILS

S1.4

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19
STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER



DUMPSTER ENCLOSURE FOUNDATION PLAN
2 1/4" = 1'-0"

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

FOUNDATION SUBGRADE

1. PREPARATION OF EXISTING GROUND
   ALL AREAS TO SUPPORT SELECT FILL SHALL BE STRIPPED OF ALL VEGETATION AND/OR ORGANIC TOPSOIL.
   MINIMUM DEPTH OF REMOVAL: 24 INCHES
   EXTEND BEYOND BUILDING FOOT PRINT: 5 FEET
   REMOVE THE EXISTING SUBGRADE SOILS DOWN TO A MINIMUM ELEVATION OF: 85.67' AMSL

   EXTEND BEYOND BUILDING FOOT PRINT 5 FEET
   THE EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 12 INCHES AND MOISTURE CONDITIONED FROM -2 TO 2% ABOVE OPTIMUM. THE SUBGRADE SHALL BE COMPACTED TO 98 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM D-698) COMPACTION TEST. FOLLOWING COMPLETE CLEARING AND PREPARATION OF THE SITE FOR CONSTRUCTION, THE GEOTECHNICAL ENGINEER SHALL OBSERVE THE SITE TO DETERMINE THAT SATISFACTORY PREPARATION HAS BEEN ACCOMPLISHED.
2. SELECT FILL MATERIAL
   A) THE FOLLOWING SOILS, AS CLASSIFIED ACCORDING TO THE USCS MAY BE CONSIDERED SATISFACTORY FOR USE AS SELECT FILL MATERIALS AT THIS SITE: REFER TO PROJECT'S GEOTECHNICAL REPORT.
   B) THE FOLLOWING SOILS, AS CLASSIFIED ACCORDING TO THE USCS, ARE NOT CONSIDERED SATISFACTORY FOR USE AS SELECT FILL MATERIALS AT THIS SITE: REFER TO PROJECT'S GEOTECHNICAL REPORT.
   * FINISH FLOOR SHALL BE 18" MINIMUM ABOVE TOP OF CURB ELEVATION OR 18" MINIMUM ABOVE CROWN OF STREET, OR AS INDICATED ON CIVIL DRAWINGS, INCREASE INDICATED AMOUNT OF FILL AS REQUIRED TO ACHIEVE MOST STRINGENT REQUIREMENTS
   MINIMUM AMOUNT OF SELECT FILL: 70 INCHES AT OFFICES
   61 INCHES AT BAYS
   PLASTICITY INDEX: REFER TO PROJECT'S GEOTECHNICAL REPORT
   MAXIMUM LIQUID LIMIT: REFER TO PROJECT'S GEOTECHNICAL REPORT
   NO ORGANIC OR OTHER PERISHABLE MATERIAL
   NO STONES LARGER THAN TWO (4) INCHES
3. PLACING SELECT FILL
   FILL LIFTS: NOT EXCEEDING 8 INCHES, LOOSE LIFTS; 6 INCHES, COMPACTED
   MINIMUM AMOUNT OF SELECT FILL: 70 INCHES AT OFFICES
   61 INCHES AT BAYS
4. COMPACTION OF SELECT FILL
   MOISTURE: WITHIN (-2) PERCENT BELOW TO (2) PERCENT ABOVE OPTIMUM MOISTURE CONTENT
   COMPACTION: 98 PERCENT MAXIMUM DENSITY, IN ACCORDANCE WITH ASTM D698
5. COMPACTION TESTING
   ATTERBERG LIMITS: ONE AT A RATE OF 5,000 CUBIC YARDS.
   COMPACTION: ONE TEST PER 3,000 SQUARE FEET PER LIFT (MINIMUM OF 3 PER LIFT)
6. THE SOILS ENGINEER SHALL BE THE OWNERS REPRESENTATIVE TO CONTROL THE PLACEMENT OF COMPACTED FILL. THE SOILS ENGINEER SHALL APPROVE THE SUB-GRADE PREPARATION. THE FILL MATERIALS, THE METHOD OF PLACEMENT AND COMPACTION, SHALL GIVE WRITTEN APPROVAL OF THE COMPLETED FILL.
7. THE SOILS REPORT/FOUNDATION INVESTIGATION IS TO BE CONSIDERED A PART OF THESE PLANS AND SHALL BE COMPLIED WITH BY THE CONTRACTOR. ALL EARTHWORK AND GRADING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE FOUNDATION INVESTIGATION OR PER NOTES 1 THRU 4 ABOVE WHICHEVER HAS THE MOST STRINGENT REQUIREMENTS. REFER TO GEOTECHNICAL INVESTIGATION REPORT FOR GROUND WATER ELEVATIONS AND SOIL CONDITIONS. DEWATERING SHALL BE ANTICIPATED BY THE CONTRACTOR.
8. IN THE EVENT FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR FOOTING AT NO ADDITIONAL EXPENSE TO THE OWNER. NO UNCONTROLLED FILL WILL BE PERMITTED.
9. THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND STANDING WATER.
10. THE FOUNDATION EXCAVATIONS SHOULD BE OBSERVED BY THE SOILS ENGINEER PRIOR TO STEEL OR CONCRETE PLACEMENT TO ASSESS THAT THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE DESIGN LOADS AND ARE CONSISTENT WITH THE MATERIALS DISCUSSED IN THE REPORT. THIS IS ESPECIALLY IMPORTANT TO IDENTIFY THE ACCEPTABILITY OF THE SUBGRADE OR FILL MATERIAL UNDER THE FOOTING. SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BOTTOM OF THE FOOTING OR BEAM EXCAVATIONS SHOULD BE REMOVED TO THE LEVEL OF COMPETENT SOIL AS DIRECTED BY THE GEOTECHNICAL ENGINEER. CAVITIES FORMED AS A RESULT OF EXCAVATION OF SOFT OR LOOSE SOIL ZONES SHOULD BE BACKFILLED WITH LEAN CONCRETE OR SELECT FILL AS DETERMINED BY THE GEOTECHNICAL ENGINEER .
11. CARE SHOULD BE TAKEN TO SHAPE THE BUILDING AREAS SUCH THAT WATER WILL NOT POND AROUND THE STRUCTURE DURING CONSTRUCTION AND CAUSE THE NEAR SURFACE CLAYS TO SWELL. THE PROPOSED STRUCTURE SHALL BE ISOLATED FROM ANY MOISTURE SOURCE WHICH MIGHT ALSO CAUSE SWELLING OF THE CLAYS AFTER COMPLETION OF THE CONSTRUCTION.
12. WHEN THE STRUCTURE IS COMPLETE, THE GROUND SURFACE SHOULD SLOPE AWAY FROM THE STRUCTURE AND DOWN SPOUTS SHOULD CARRY RUNOFF WATER SEVERAL FEET FROM THE BUILDING, PREFERABLY INTO PAVED AREAS OR BEWERS, BEFORE DISCHARGING.
13. DO NOT PLANT OR LEAVE IN PLACE DEEP ROOTED TREES WITHIN PROXIMITY TO THE PERIMETER OF THE STRUCTURE. DEEP ROOTED TREES HAVE POTENTIAL TO REMOVE MOISTURE FROM BENEATH THE BUILDING IF PLANTED CLOSE ENOUGH TO ALLOW THE ROOT BULB EXTEND NEAR OR BENEATH THE BUILDING.
14. AIR CONDITIONING CONDENSER DRAIN LINES TO DISCHARGE WATER A MINIMUM OF 5 FEET FROM THE PERIMETER OF THE STRUCTURE. THE DISCHARGE AREA SHALL HAVE SUFFICIENT SLOPE AWAY FROM THE STRUCTURE TO PREVENT STANDING WATER.

FOUNDATION NOTES

1. FOR GENERAL NOTES SEE SHEET S1.1 & S1.2
2. FOR TYPICAL DETAILS NOT REFERENCE IN PLAN SEE SHEET S1.3 & S1.4
3. CONTRACTOR/SUBCONCRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANY WORK. THE CONTRACTOR/ SUBCONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT/ ENGINEER BEFORE THE WORK HAS BEGUN.
4. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONS.
5. REFER TO ARCHITECTURAL PLANS FOR FLOOR DRAINS.
6. 5" THK. SLAB ON GRADE w/ #4 AT 12" O.C. EACH WAY AT MID-DEPTH OF SLAB OVER 15 MIL STEGO WRAP OVER APPROVED COMPACTED FILL AT NON-BAY AREAS.
7. 8" THK. SLAB ON GRADE w/ #5 TOP & BOTTOM AT 12" O.C. SHORT DIRECTION AND #5 TOP AND BOTTOM AT 12" O.C. LONG DIRECTION.
8. SLAB CONTRACTION JOINT, SEE DETAIL 5/S1.3.
9. FOR DROP IN SLAB ON GRADE, REFER TO DETAIL 1/S1.3.
10. FOR TYPICAL THICKEN SLAB UNDER CMU WALL, REFER TO DETAIL 11/S1.3.
11. FOR TYPICAL THICKEN SLAB UNDER CMU WALL WITH DEPRESSED SLAB, REFER TO DETAIL 8/S1.3.
12. REFERENCE FRAMING PLANS FOR CMU WALL REINFORCEMENT.
13. VERIFY ALL SLAB DEPRESSIONS w/ ARCH'L DWGS. FOR EXTENT AND LOCATION.
14. REFER TO DETAIL 20/S4.1 FOR FOOTING SCHEDULE.

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-135A

DATE
FEBRUARY 08, 2019

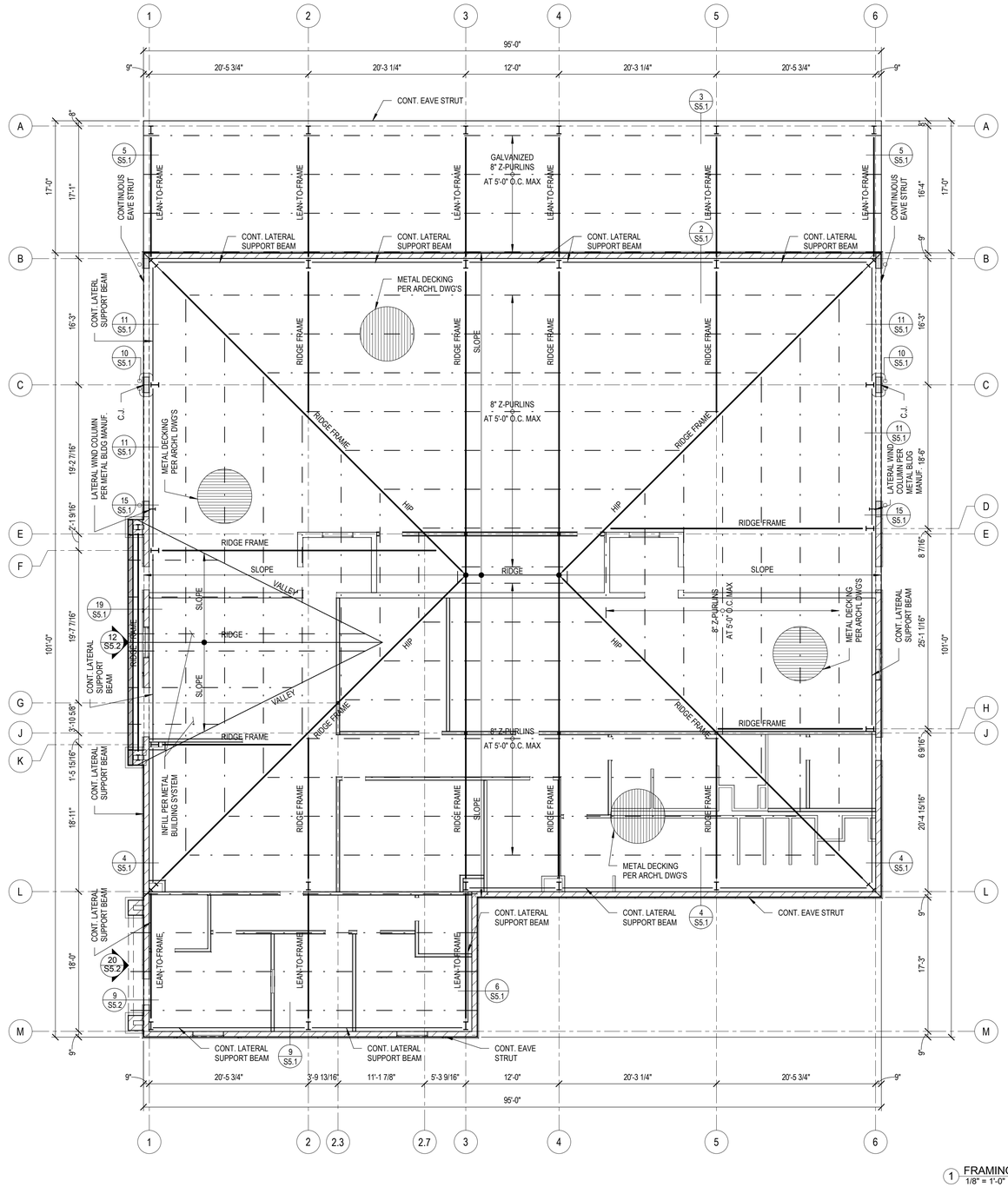
SHEET
STRUCTURAL FOUNDATION PLAN

S2.1

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19
STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER



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

ROOF COMPONENT AND CLADDING GROSS WIND PRESSURES

ROOF ZONE		TRIBUTARY AREA					
		10 SF.		20 SF.		50 SF.	
		GCp(+)	GCp(-)	GCp(+)	GCp(-)	GCp(+)	GCp(-)
#1	INTERM.	PER METAL BUILDING SYSTEM MANUFACTURER					
#2	EDGE.						
#3	CORN.						

(-) INDICATES AN UPWARD DIRECTION

*WIND PRESSURES SHOWN ARE GROSS VALUES USING LOAD RESISTANCE FACTOR DESIGN (LRFD).
*NET UPLIFT IS PER METAL BUILDING SYSTEMS MANUFACTURER.
*EDGE DISTANT ("a")= PER METAL BUILDING SYSTEMS MANUFACTURER.
*ALLOWABLE PORTION OF DEAD LOAD TO BE SUBTRACTED FROM GROSS UPLIFT= PER METAL BUILDING SYSTEMS MANUFACTURER.
*ULTIMATE DESIGN WIND SPEED= 141 MPH.
1. DOORS & WINDOWS MAXIMUM DESIGN WIND PRESSURES:
   P+ = +45.9 TOWARDS THE SURFACE.
   P- = -61.5 AWAY FROM THE SURFACE.
2. THE STRUCTURE IS DESIGNED TO MEET ASCE 7-10 WIND PRESSURES. ALL COMPONENTS AND CLADDING (EX. WINDOWS, DOORS, RTU'S AND ARCHITECTURAL COPING AND ROOFING MATERIALS); SHALL MEET MINIMUM CODE REQUIREMENTS.

2 WIND LOAD ZONE DIAGRAMS

FRAMING NOTES

1. FOR GENERAL NOTES SEE SHEET S1.1 AND S1.2
2. FOR TYPICAL DETAILS SEE SHEET S1.3 AND S1.4
3. DIMENSIONS ARE SHOWN FOR GENERAL INFORMATION. COORDINATE WITH ARCHITECTURAL PLANS.
4. SEE ARCHITECTURAL ROOF PLAN FOR ROOF HATCHES.
5. NOT USED.
6. NOT USED.
7. ALL STEEL COLUMN SHALL BE PER METAL BUILDING SYSTEM MANUF. U.N.O. ON PLANS.
8. ▨ INDICATES 8" CMU WALL w/ (1) #6 (V) AT 32" AND (1) #5 (H) AT 48" O.C., U.N.O. VERIFY CMU WALLS THICKNESS WITH ARCHITECTURAL PLANS. 8" WALLS SHOWN ON STRUCTURAL PLANS ARE MINIMUM THICKNESS AND GOVERN OVER ARCHITECTURAL DRAWINGS.
9. ▭ INDICATES CMU LINTEL (NOT ALL LINTELS ARE SHOWN), SEE DETAIL: 11 S1.4
10. NOT USED.
11. NOT USED.
12. NOT USED.
13. FOR CMU WALLS EXTENDING TO THE UNDERSIDE OF ROOF DECK, SEE DETAIL: 6 8 S1.4
14. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED.
15. FOR CMU WALL BRACE TO ROOF STRUCTURE SEE DETAILS: 6 7 8 S1.4

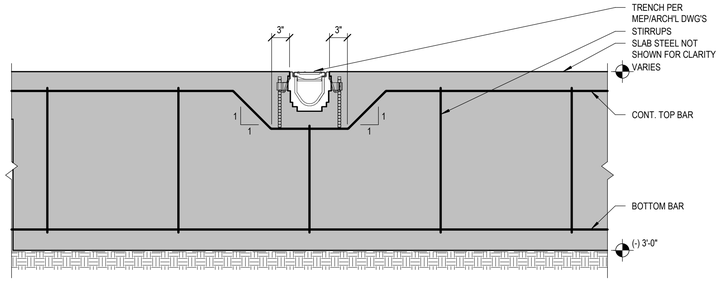
FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-135A

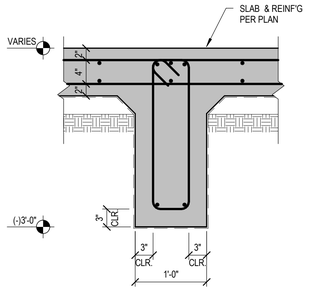
DATE
FEBRUARY 08, 2019

SHEET
STRUCTURAL FRAMING PLAN

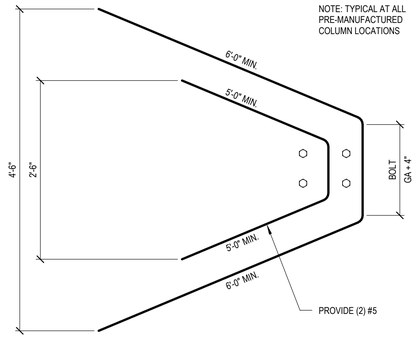
S3.1



17 INTERIOR GRADE BEAM

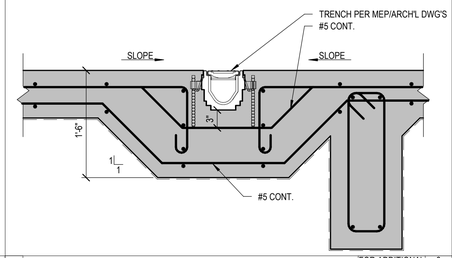


9 TYP. INTERIOR GRADE BEAM AT 8" SLAB



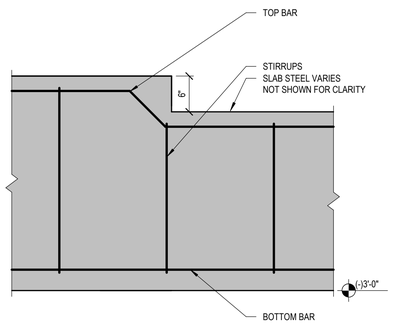
5 PLAN VIEW, THRUST BAR

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

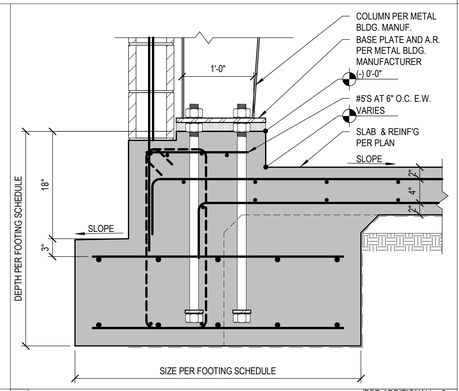


1 TRENCH DETAIL

FOR ADDITIONAL 2 INFO SEE DETAIL S4.1

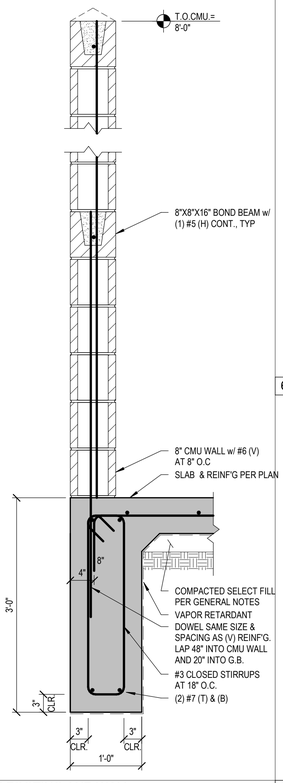


18 GRADE BEAM WITH DROP



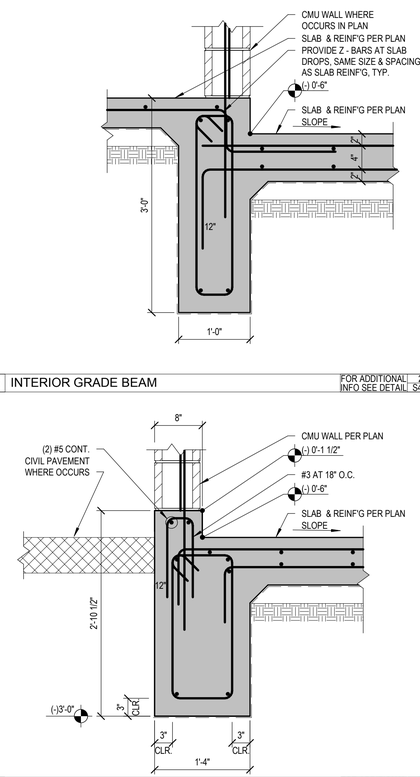
14 TYP. METAL BLDG. COL. FOOTING

FOR ADDITIONAL 2 INFO SEE DETAIL S4.1



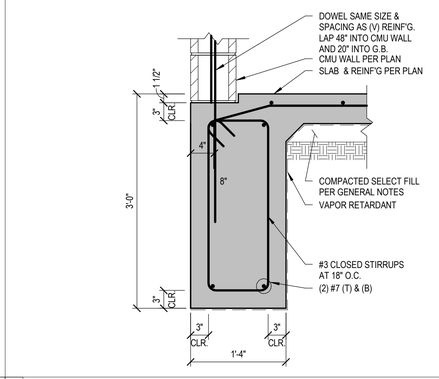
11 DUMPSTER ENCLOSURE FOOTING AND WALL

FOR ADDITIONAL 2 INFO SEE DETAIL S4.1



6 INTERIOR GRADE BEAM

FOR ADDITIONAL 2 INFO SEE DETAIL S4.1

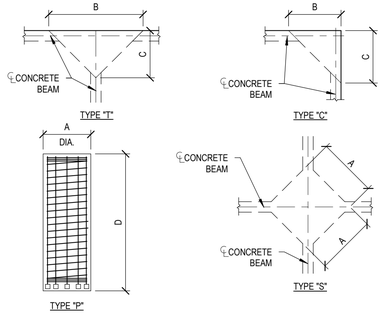


2 EXTERIOR GRADE BEAM

FOR ADDITIONAL 2 INFO SEE DETAIL S4.1

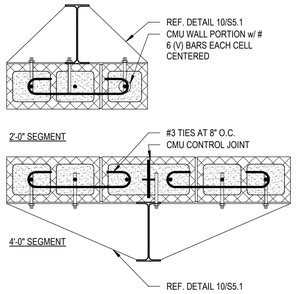
FOOTING SCHEDULE					
TYPE	A	B	C	D	REINFORCING
S2	2'-0"			3'-0"	#5'S @ 10" O.C. E.W. TOP & BOTT.
S3	3'-0"			3'-0"	#5'S @ 10" O.C. E.W. TOP & BOTT.
S4	4'-0"			3'-0"	#5'S @ 10" O.C. E.W. TOP & BOTT.
S5	5'-6"			3'-0"	#5'S @ 10" O.C. E.W. TOP & BOTT.
S6	6'-9"			3'-0"	#5'S @ 10" O.C. E.W. TOP & BOTT.

NOTES:
1. D= FOOTING BELOW FINISH FLOOR.
2. FOOTING DIMENSIONS ARE FOR BIDDING PURPOSES ONLY. ACTUAL DIMENSION MAY VARY.
3. PROVIDE UNIT PRICES (ON A CUBIC YARD BASIS) FOR REINFORCED (#5'S @ 12" O.C. E.W. TOP & BOTT.) WIDENED BEAM CONCRETE FOOTINGS.

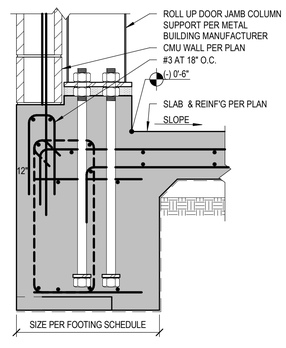


WIDENED BEAM FOOTINGS

20 FOOTING SCHEDULE

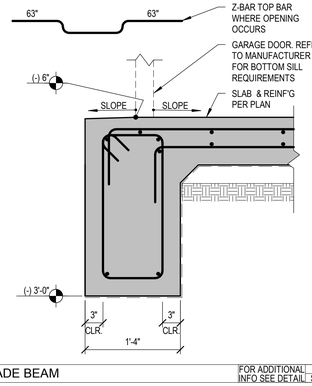


15 8" WALL SEGMENTS



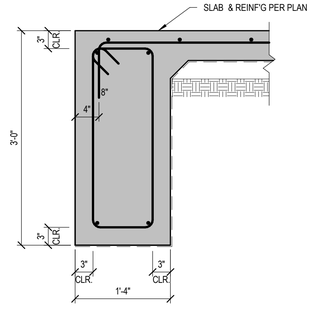
16 EXTERIOR GRADE BEAM

FOR ADDITIONAL 2 INFO SEE DETAIL S4.1



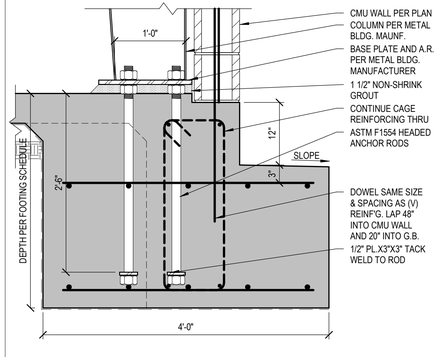
12 EXTERIOR GRADE BEAM

FOR ADDITIONAL 2 INFO SEE DETAIL S4.1



8 EXTERIOR GRADE BEAM

FOR ADDITIONAL 2 INFO SEE DETAIL S4.1



4 TYP. METAL BLDG. COL. FOOTING

FOR ADDITIONAL 2 INFO SEE DETAIL S4.1

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19
STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL CIVIL ENGINEER

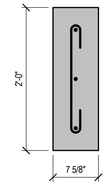
FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-135A

DATE
FEBRUARY 08, 2019

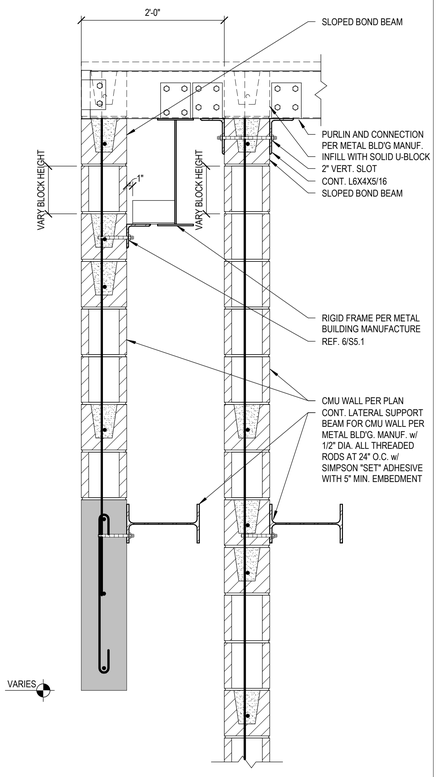
SHEET
STRUCTURAL FOUNDATION DETAILS

S4.1

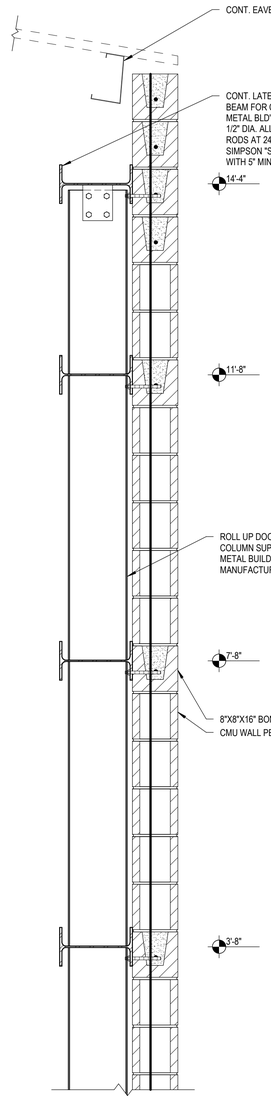


NOTES:
1. 3500 PSI CONC. COLUMN
2. (3) #7 VERTICALS FULL HT. (NO SPLICE)
3. #3 TIES AT 8" O.C.

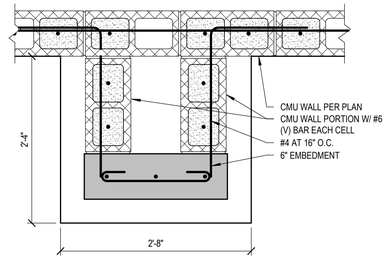
17 CONCRETE COLUMN



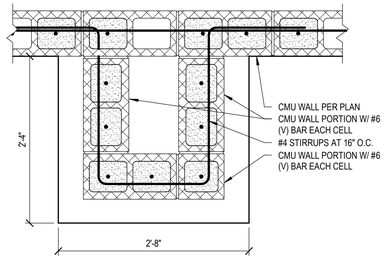
19 FRAMING SECTION DETAIL



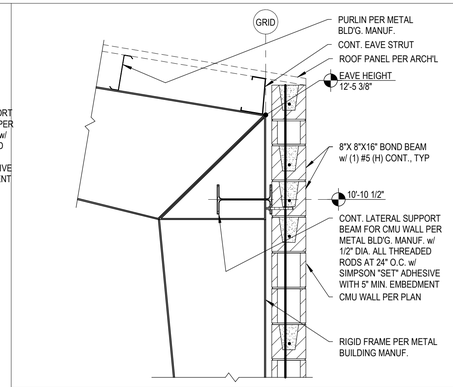
15 JAMB SUPPORT COLUMN



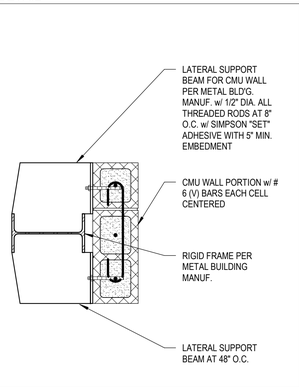
20 PLAN VIEW



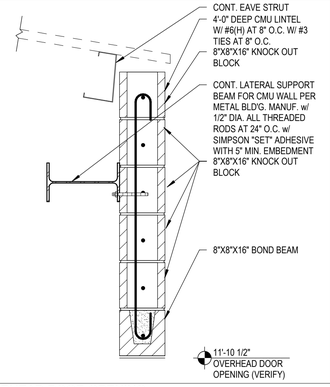
16 PLAN VIEW



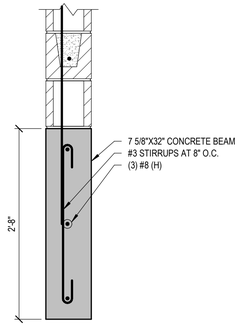
9 FRAMING SECTION DETAIL



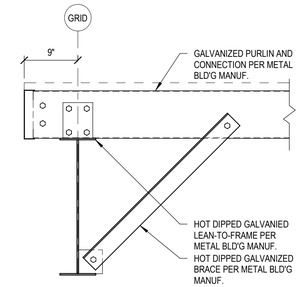
10 FRAMING SECTION DETAIL



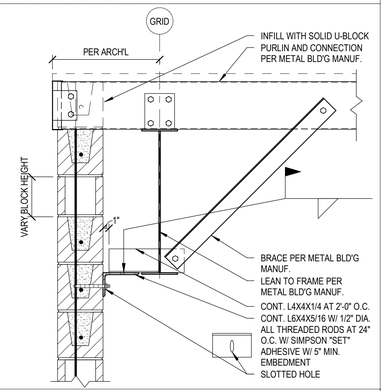
11 LINTEL AT OVERHEAD DOOR OPENING



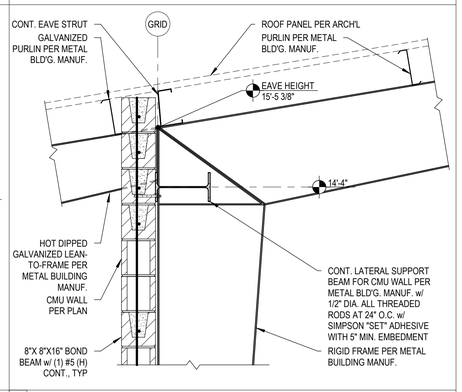
12 FRAMING SECTION DETAIL



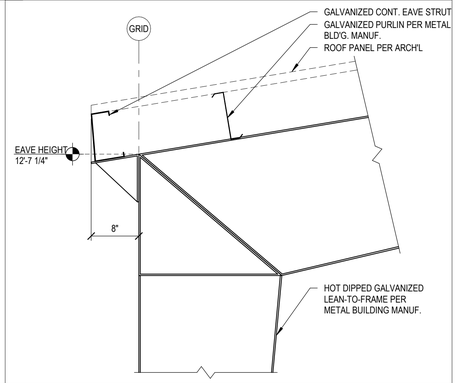
5 PURLINS TO METAL BUILDING



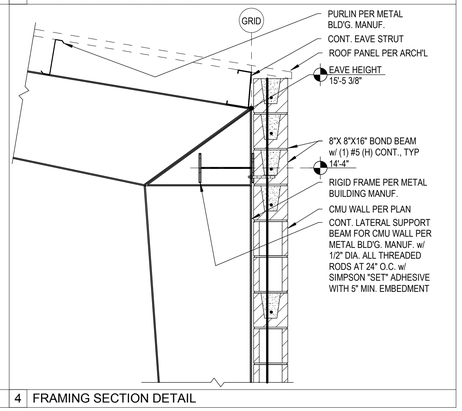
6 PURLINS TO METAL BUILDING



2 FRAMING SECTION DETAIL



3 FRAMING SECTION DETAIL



4 FRAMING SECTION DETAIL

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19
STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER

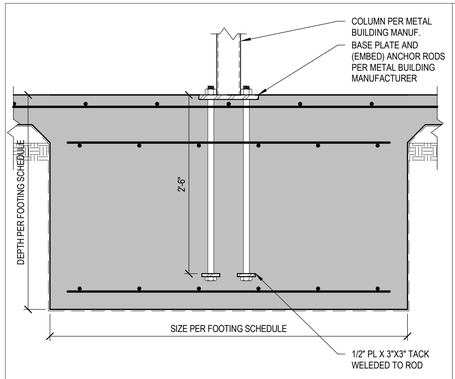
FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-135A

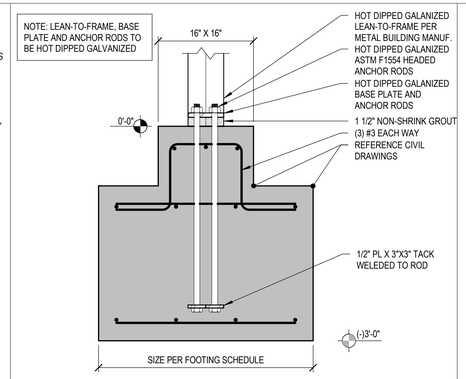
DATE
FEBRUARY 08, 2019

SHEET
STRUCTURAL FRAMING DETAILS

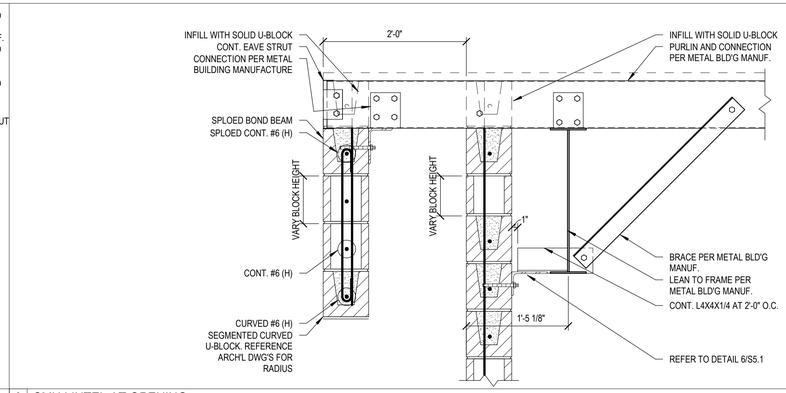
S5.1



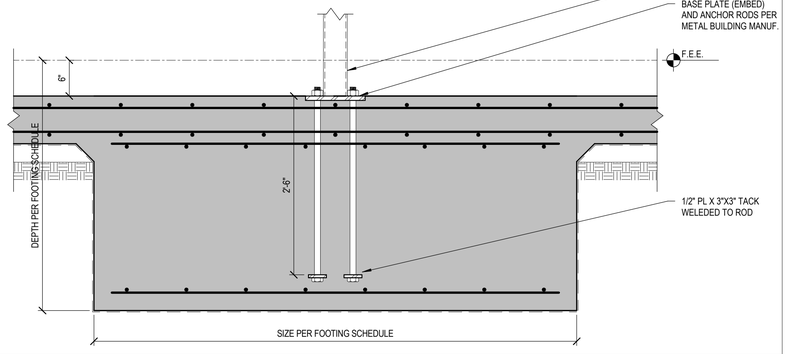
17 INTERIOR METAL BLDG COLUMN FOOTING



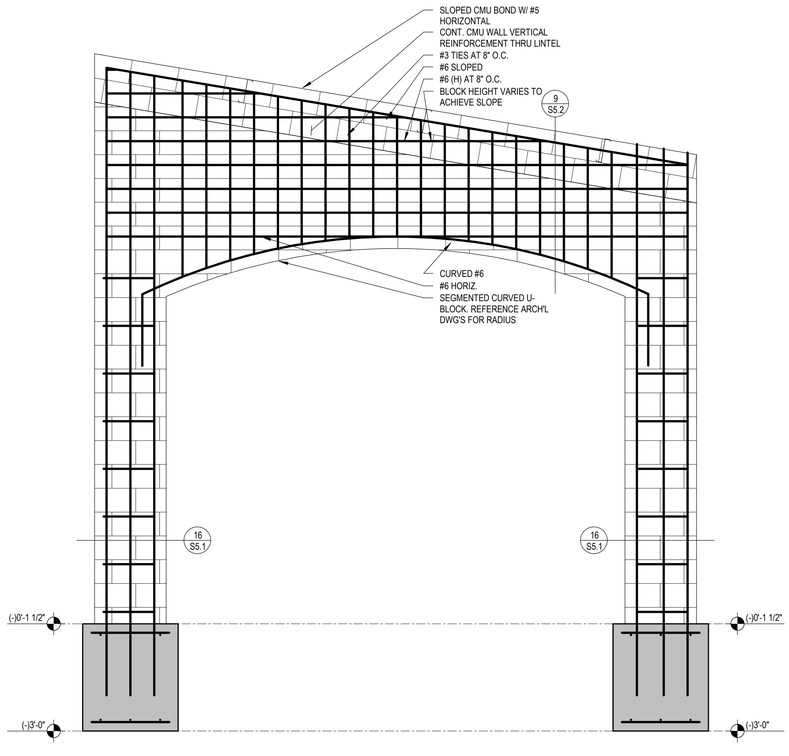
13 TYP. LEAN-TO-FRAME FOOTING ALONG GRIDLINE "A"



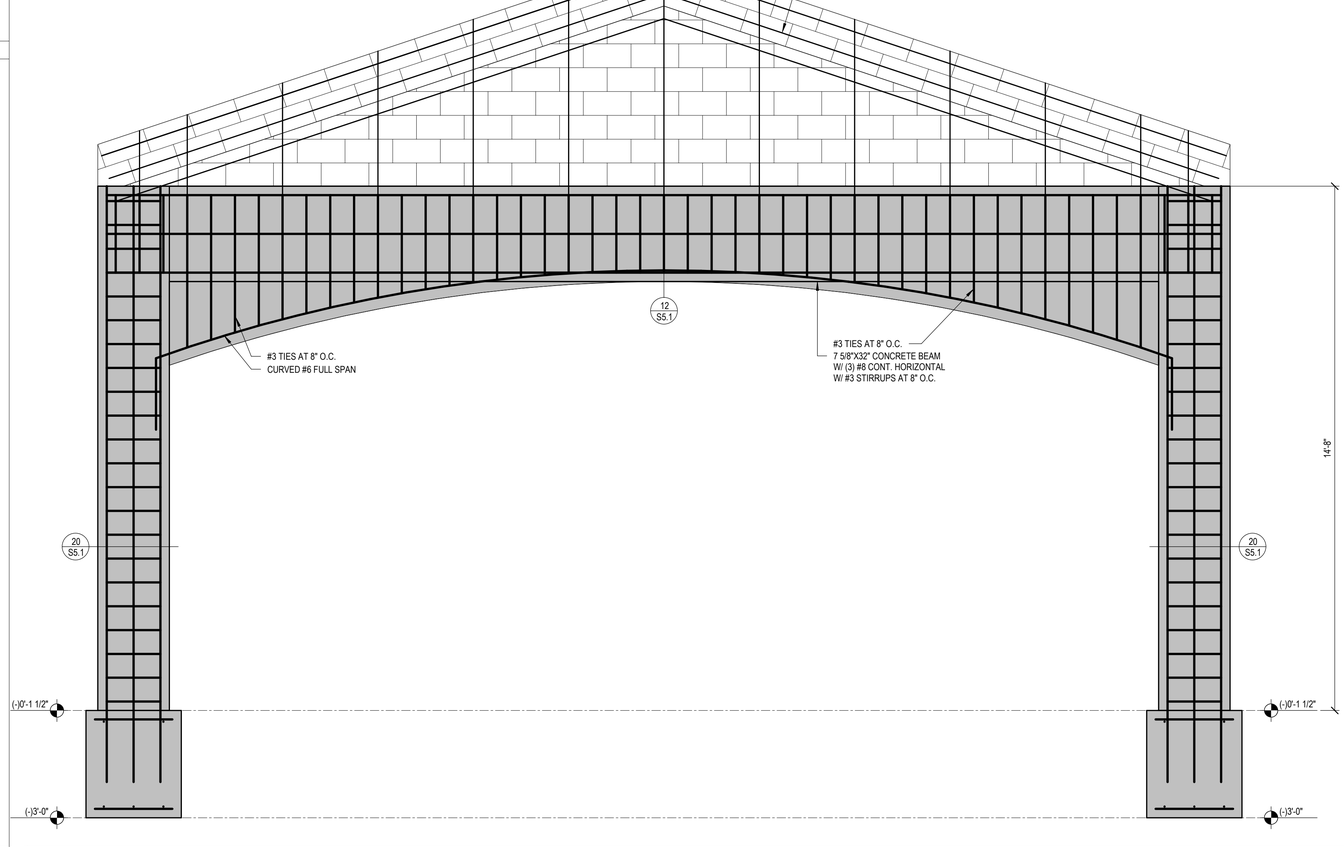
9 CMU LINTEL AT OPENING



18 INTERIOR METAL BLDG COLUMN FOOTING



20 ELEVATION PROFILE



12 ELEVATION PROFILE

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

2-28-19
STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER

FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
18-135A

DATE
FEBRUARY 08, 2019

SHEET
STRUCTURAL FRAMING DETAILS

S5.2

GENERAL NOTES:

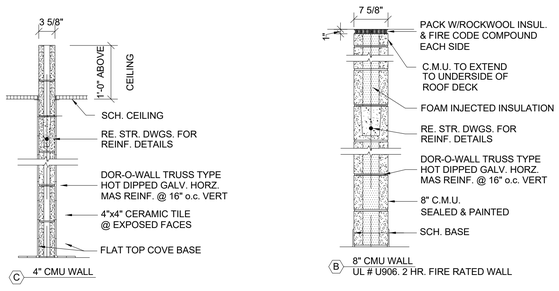
1. RE: A7.0 & A7.1 FOR DOOR, WINDOW & FINISH SCHEDULE.
2. ALL PENETRATIONS IN TOP OR BOTTOM PLATES FOR PLUMBING OR ELECTRICAL RUNS TO BE SEALED. SEE ELECTRICAL PLANS FOR ADDITIONAL SPECIFICATIONS.
3. ALL DIMENSIONS TO FINISH FACE OF WALL.
4. ALL WALLS PAINTED W/EGGSHELL FINISH.
5. BUILDING MUST HAVE A PANEL BOX (LOCATION AS OF CITY CODES).
6. ALL SMOKE DETECTORS ARE TO BE PLACED AS OF CITY CODES. RE: MEP
7. ALL LIGHT FIXTURES TO BE REVIEWED BY CONTRACTOR & OWNER. RE: ELEC.
8. ALL PARTITIONS ARE (A) U.N.O. RE:2/A1.0
9. ROOM NO. ——▭—— FINISH NO.
10. F.E. LOCATION AS PER FIRE MARSHALL REQUEST. PROVIDE MAXIMUM 4 F. E. WITH RECESSED FIRE CLOSET. RE. SPECS.
11. PROVIDE ELECTRICAL HANDRYERS AT RESTROOMS 109, 110, 201 & 205
12. PROVIDE INTERIOR ROOM SIGNAGE. AND BUILDING LETTERS. RE: SPECS.
13. PROVIDE HORIZONTAL LOUVER BLINDS. AT WINDOWS TYPE A. RE: SPECS.
14. AS PART OF BASE BID, G.C. SHOULD INSTALL THE FOLLOWING KITCHEN EQUIPMENT: (OWNER PROVIDED)
    * 300 LB ICE MAKER.
    * BIN FOR ICE MAKER.
    * 6 BURNER STOVE & OVEN.
    * 1 DOOR REFR. Mo. TRUE T-23
    * 1 DOOR FREEZER, Mo. TRUE T-23F
    * 1 UNDER COUNTER DISHWASHER
15. AS PART OF BASE BID, G.C. SHOULD INSTALL THE FOLLOWING EQUIPMENT: (OWNER PROVIDED)
    * 1 PROJECTOR. CEILING MOUNTED
    * 1 TV. WALL MOUNTED
    * AIR COMPRESSOR
    * FRONT LOAD H.E. WASHER 4.5 CU. FT.
    * ELECTRIC H.E. DRYER 7.3 CU. FT.
16. AS PART OF BASE BID, G.C. TO PROVIDE AND INSTALL THE FOLLOWING EQUIPMENT:
    * ELECTRIC PROJECTION SCREEN HDTV 16:9 PART No. 800007 FROM ACCUSCREEN. WALL MOUNTED.
    * POWER GENERATOR. RE: MEP DWGS.
    * GROVES INC. WALL MOUNTED RED RACK 24 COMPARTMENTS 24"W x 72"H FROM www.thefirestore.com
    * HIGH PERFORMANCE WASHER-EXTRACTOR MODEL EH040. FROM CONTINENTAL GIRBAU
    * EXPRESSDRY GEAR DRYER. MODEL C4-MU FROM CONTINENTAL GIRBAU

SQUARE FOOTAGE:

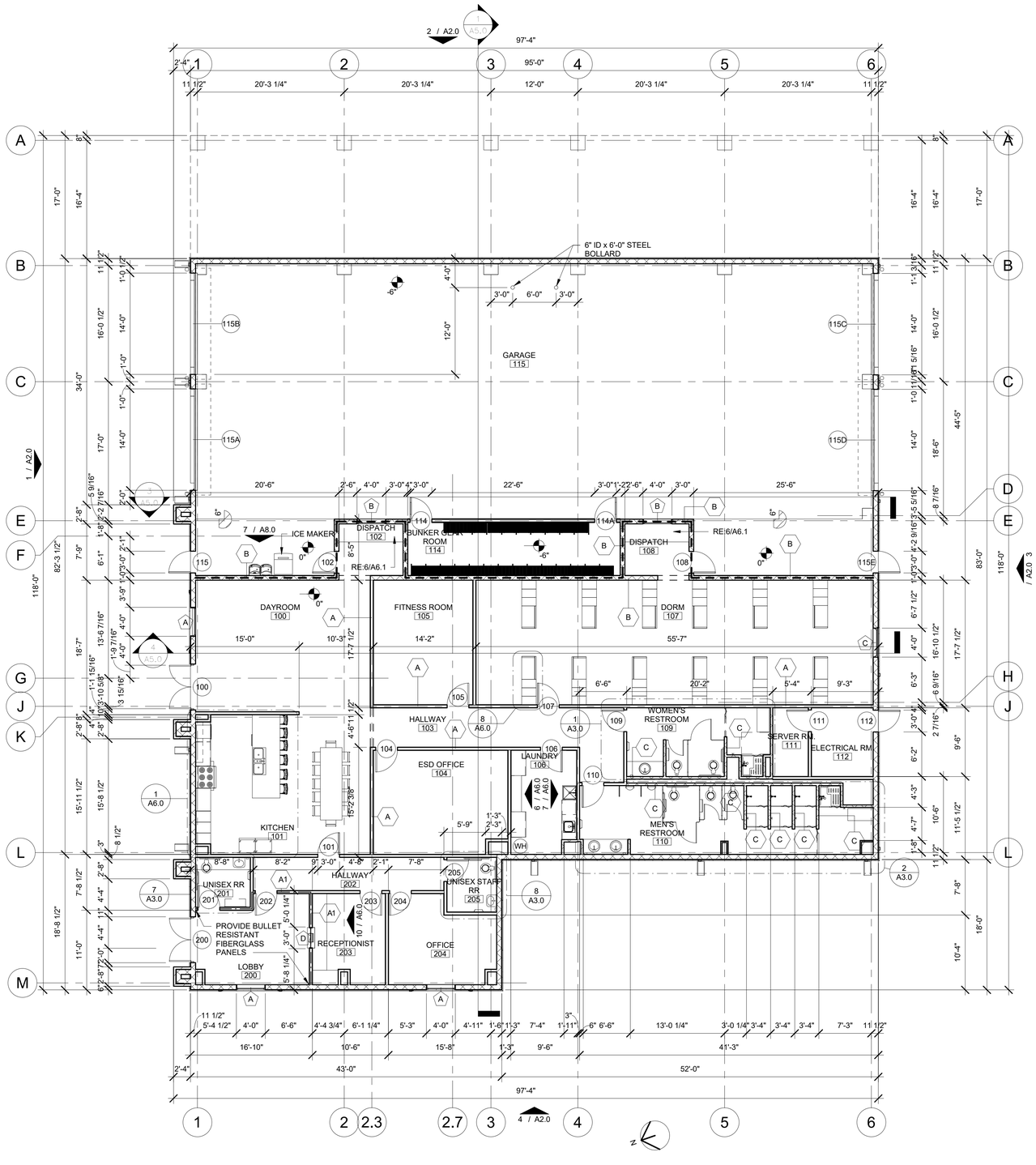
GARAGE AREA:	3,657 SQ. FT.
OFFICE & DORMITORIES:	4,299 SQ. FT.
OFFICE POLICE SUBSTATION:	815 SQ. FT.
CARPORT:	1,615 SQ. FT.
TOTAL BASE BID:	10,386 SQ. FT.

LEGEND:

- — — — DENOTES 2HR. FIRE RATED WALL. RE: PTN. WALL TYPE B. 2/A1.0
- —·—·— DENOTES BULLET RESISTANT FIBERGLASS PANEL WALL. LEVEL 1 RE: PTN. WALL TYPE A1. 2/A1.0



2 PARTITION WALL TYPES
3/4" = 1'-0"



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

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS
REGISTERED ARCHITECT
PROFESSIONAL
14740
STATE OF TEXAS

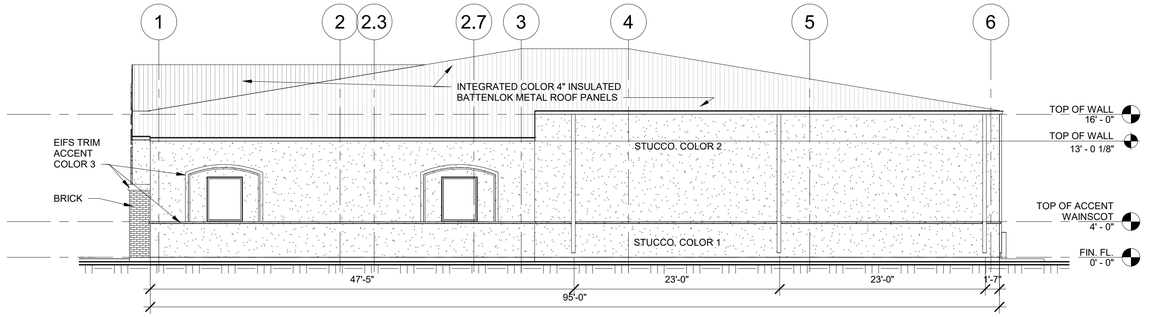
EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

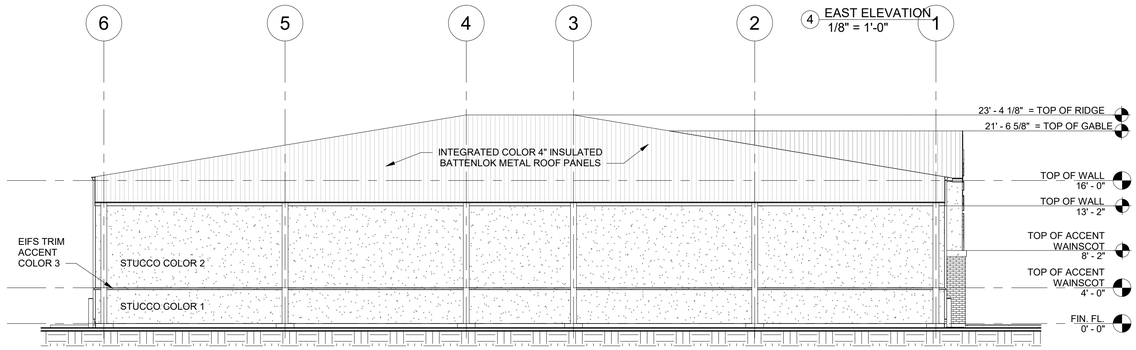
DATE
FEBRUARY 28, 2019

ISSUED FOR BID

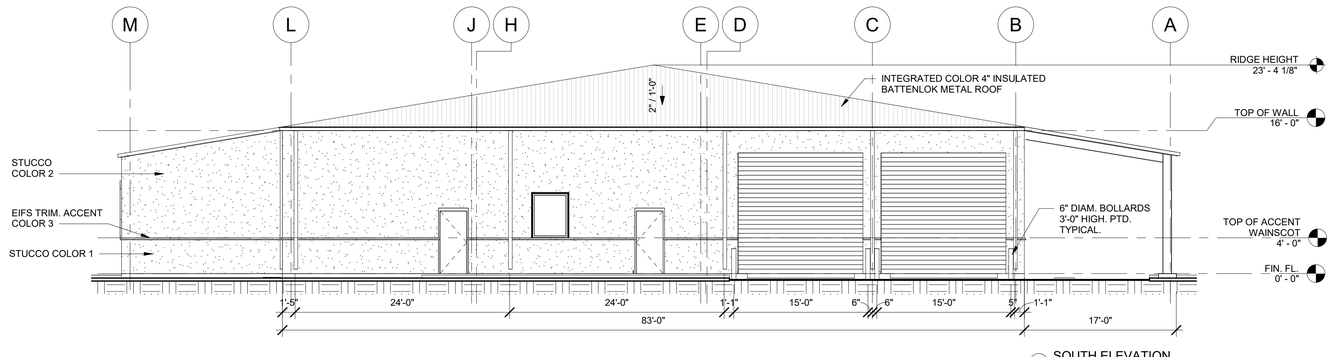
SHEET
A1.0
OF



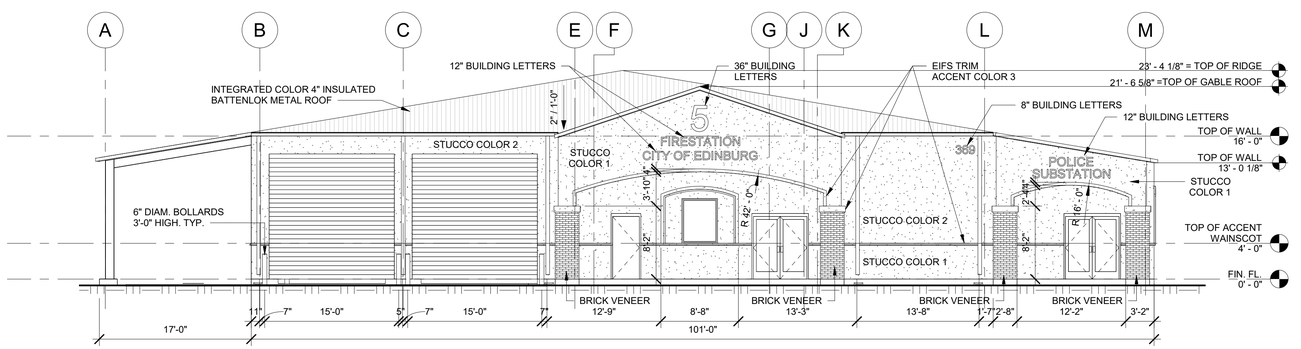
4 EAST ELEVATION
1/8" = 1'-0"



2 WEST ELEVATION
1/8" = 1'-0"



3 SOUTH ELEVATION
1/8" = 1'-0"



1 NORTH ELEVATION
1/8" = 1'-0"

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
JOSEPH R. MILNET
14740
STATE OF TEXAS

EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019

ISSUED FOR BID

SHEET
A2.0
OF

TOILET ACCESSORIES LEGEND

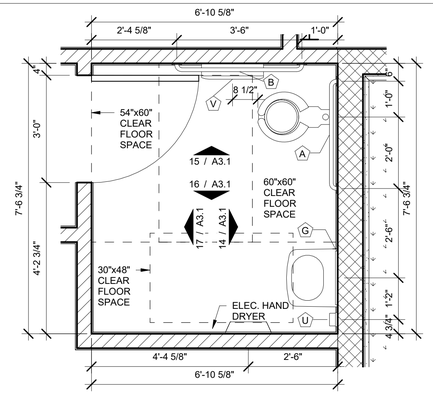
A	STAINLESS STL GRAB BAR 36" LONG	B-6206-36	1
B	STAINLESS STL GRAB BAR 42" LONG	B-6206-42	1
C	STAINLESS STL SHOWER GRAB BAR 18"x30"	B-6861	1
D	NOT USED		
E	REVERSIBLE FOLDING SHOWER SEAT	B-5181	1
F	NOT USED		
G	FRAMED PLATE GLASS MIRROR 18"x36"	B-290-1836	2
H	NOT USED		
I	STAINLESS STL MOP & BROOM HOLDER 24" LONG	B-223-24	2
J	TOWEL HOOK	B-672	2
K	RECESSED SOAP DISH	B-4380	4
L	NOT USED		
M	NOT USED		
N	RECESSED MOUNTED AUTOMATIC HAND DRYER	B-750	5, 6 & 7
P	NOT USED		
Q	SHOWER ROD, REFER TO PLAN FOR DIMENSION	B-6107	7
R	SHOWER CURTAIN & HOOKS	B204-1 & B-204-2 & B204-3	8
S	NOT USED		
T	NOT USED		
U	SURFACE MOUNTED SOAP DISPENSER KIMBERLY CLARK	# 92144	6 & 7
V	SURFACE MOUNTED TWO-ROLL TISSUE DISPENSER BOBRICK	B-265	6

TOILET ACCESSORIES NOTES

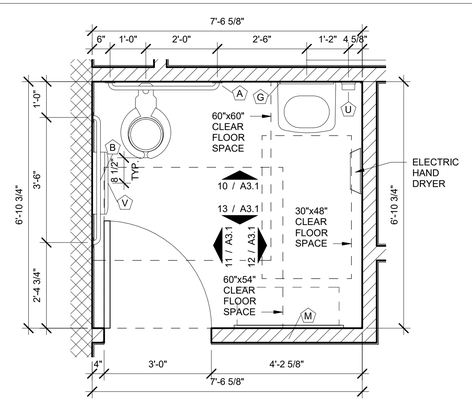
1. PROVIDE ALL NECESSARY ANCHORING PLATES AND FASTENERS.
2. PROVIDE EXPANSION SHIELDS FOR CMU PTN OR ANCHORING PLATE AND TOGGLE BOLTS AT GYP BD WALL CONDITIONS FOR SECURE ATTCHMENT.
3. COORDINATE WITH WALL PTN CONSTRUCTION FOR RECESSED ACCESSORY.
4. COLOR TO BE SELECTED BY OWNER FROM MANUFACTURERS STANDARD COLORS.
5. COORDINATE ELECTRICAL REQUIREMENTS AND ANCHORING.
6. COORDINATE LOCATION WITH OTHER ACCESSORIES ON WALL.
7. UNIT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS PART OF BASE BID.
   - SOAP DISPENSERS
   - TISSUE DISPENSERS
   - TOWEL PIN
   - HAND DRYERS
   - SHOWER CURTAINS & HOOKS
   - GRAB BARS
   - MIRRORS
   - RECESSED SOAP DISH
8. RE: A3.0 FOR MOUNTING HEIGHTS

GENERAL NOTES

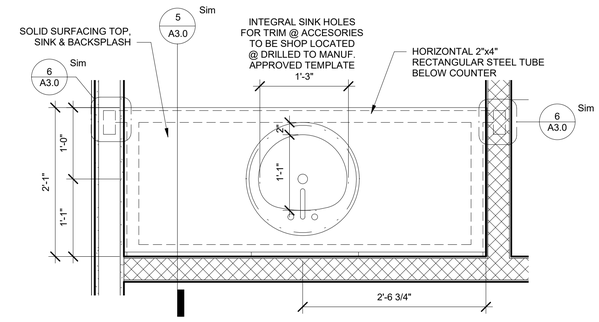
1. GENERAL CONTRACTOR SHALL VISIT SITE AND FAMILIARIZE WITH ALL EXISTING CONDITIONS AND CONTRACT DOCUMENTS. CONTRACTOR SHALL REPORT TO THE ARCHITECT ANY DISCREPANCIES OR IRREGULARITIES THAT MAY EXIST PRIOR TO SUBMITTING A BID.
2. GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS AND CONSTRUCTION MATERIAL OFF OF SITE AND DISPOSE ON APPROPRIATE DUMPSITE.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS, DIMENSIONS, QUANTITIES, ETC. PRIOR TO BIDDING.
4. PAINT ALL WALLS WHERE NEW CONSTRUCTION HAS OCCURRED
5. FURNISH & INSTALL STAINLESS STEEL MOP & BROOM HOLDER IN ROOM No. 106



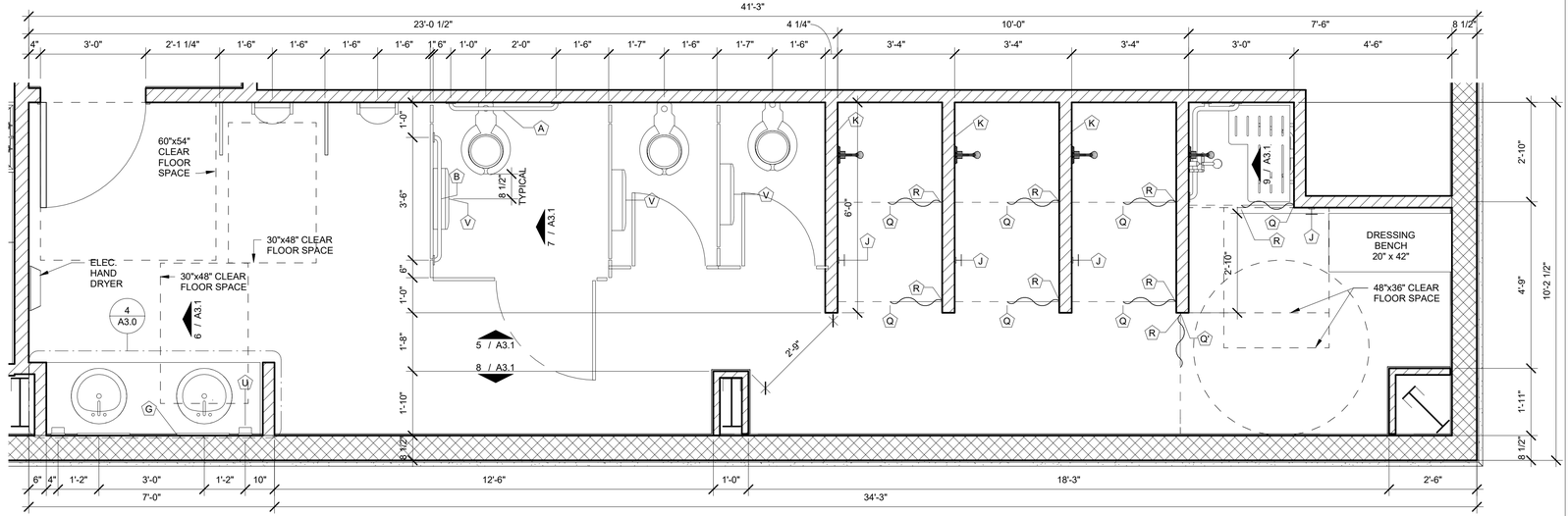
8 UNISEX RR PD STAFF
1/2" = 1'-0"



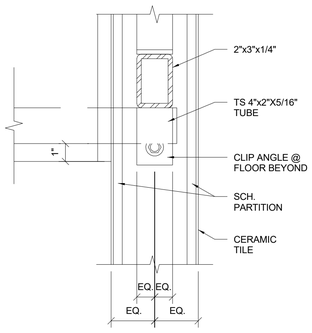
7 UNISEX RR PD
1/2" = 1'-0"



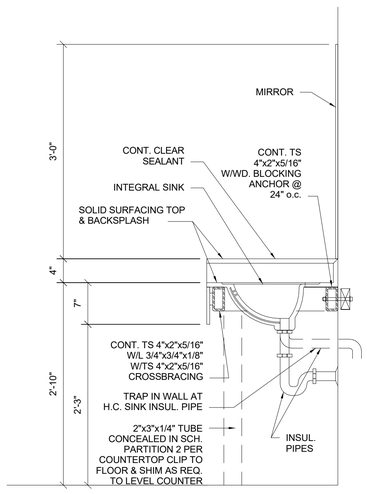
3 SINK DETAIL
1" = 1'-0"



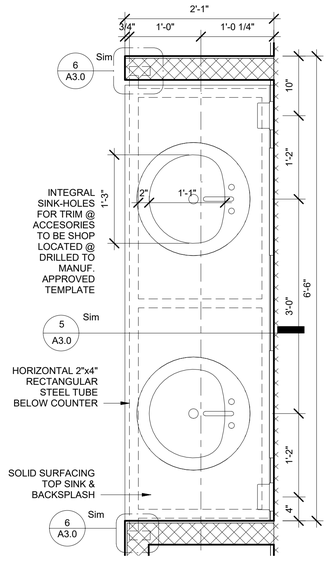
2 MEN GANG BATHROOM
1/2" = 1'-0"



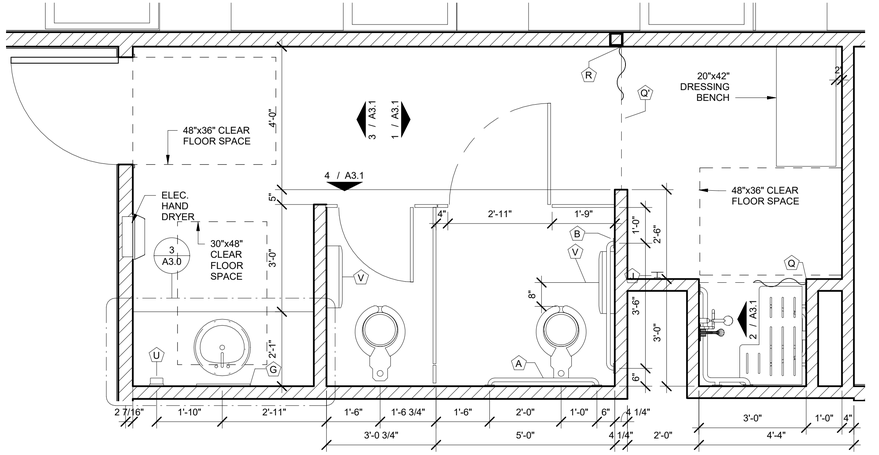
6 LAV. DETAIL
3" = 1'-0"



5 LAVATORY DETAIL
1" = 1'-0"



4 SINK DETAIL
1" = 1'-0"



1 WOMEN GANG BATHROOM
1/2" = 1'-0"

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
PROFESSIONAL
14740
STATE OF TEXAS

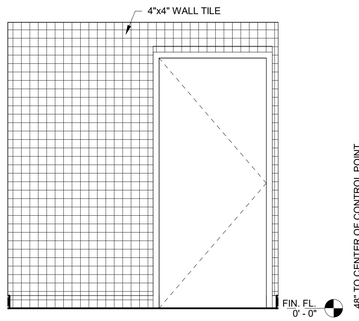
EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

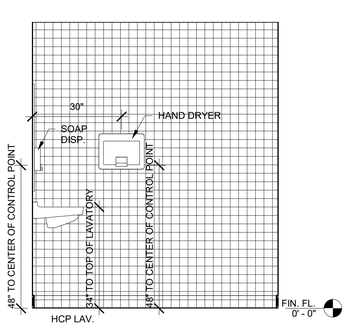
DATE
FEBRUARY 28, 2019

ISSUED FOR BID

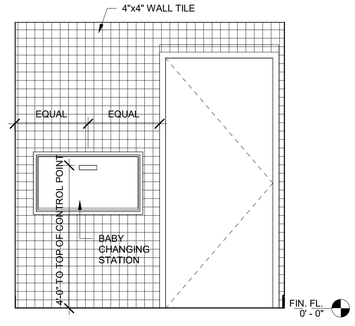
SHEET
A3.0
OF



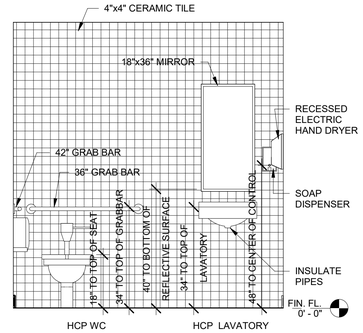
17 WALL DETAIL
1/2" = 1'-0"



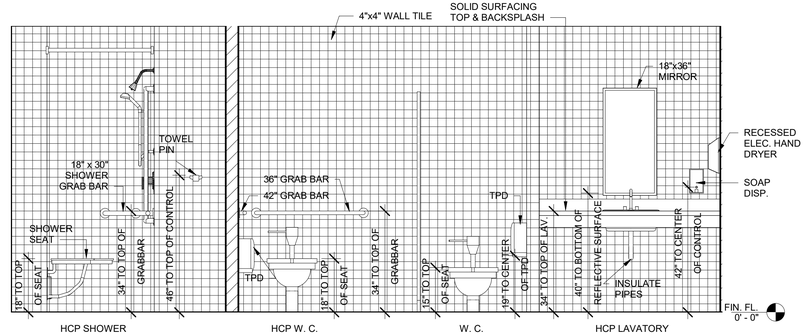
16 LAVATORY ELEV.
1/2" = 1'-0"



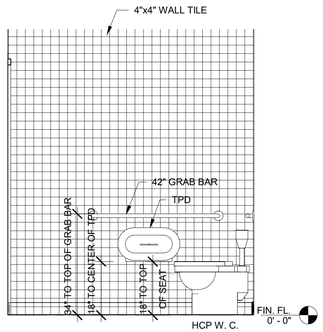
13 WALL DETAIL
1/2" = 1'-0"



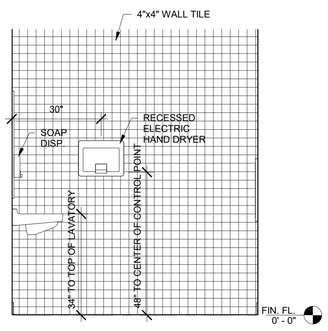
10 RESTROOM ELEV.
1/2" = 1'-0"



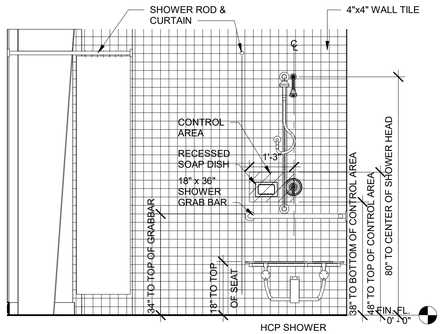
4 RESTROOM ELEV.
1/2" = 1'-0"



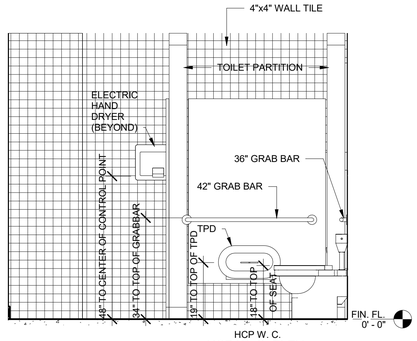
15 HCP W.C. ELEV.
1/2" = 1'-0"



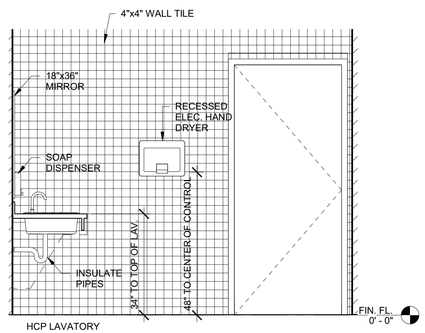
12 LAVATORY ELEV.
1/2" = 1'-0"



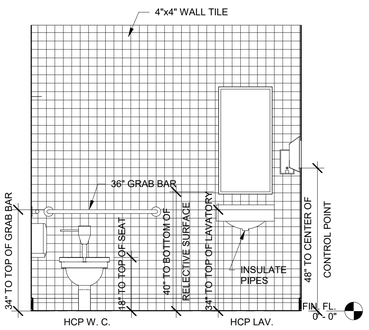
9 HCP SHOWER ELEV.
1/2" = 1'-0"



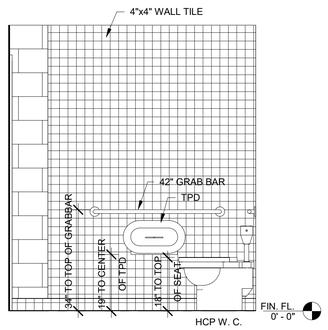
7 HCP W. C. ELEV.
1/2" = 1'-0"



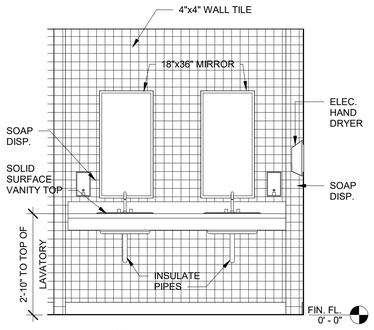
3 LAVATORY ELEV.
1/2" = 1'-0"



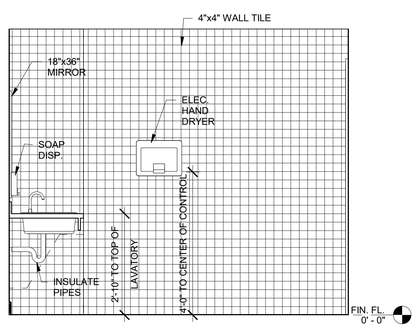
14 RESTROOM ELEV.
1/2" = 1'-0"



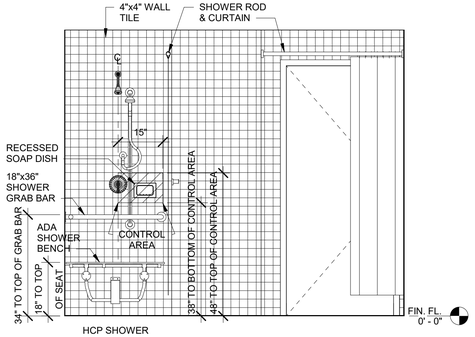
11 HCP W.C. ELEV.
1/2" = 1'-0"



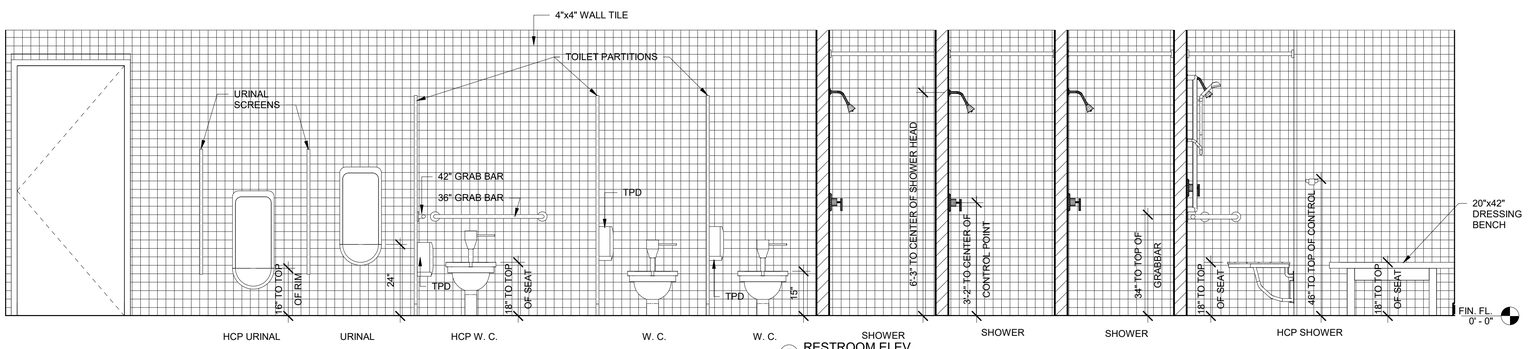
8 LAVATORY ELEV.
1/2" = 1'-0"



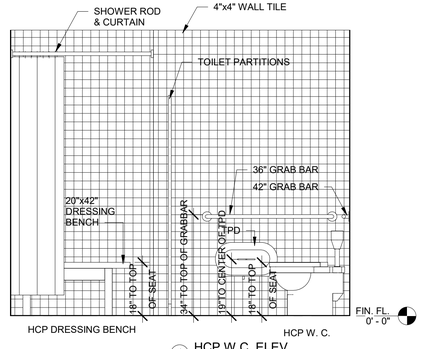
6 LAVATORY ELEV.
1/2" = 1'-0"



2 HCP SHOWER ELEV.
1/2" = 1'-0"



5 RESTROOM ELEV.
1/2" = 1'-0"



1 HCP W.C. ELEV.
1/2" = 1'-0"

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
DONALD R. MOLINA
14740
STATE OF TEXAS

EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019

ISSUED FOR BID

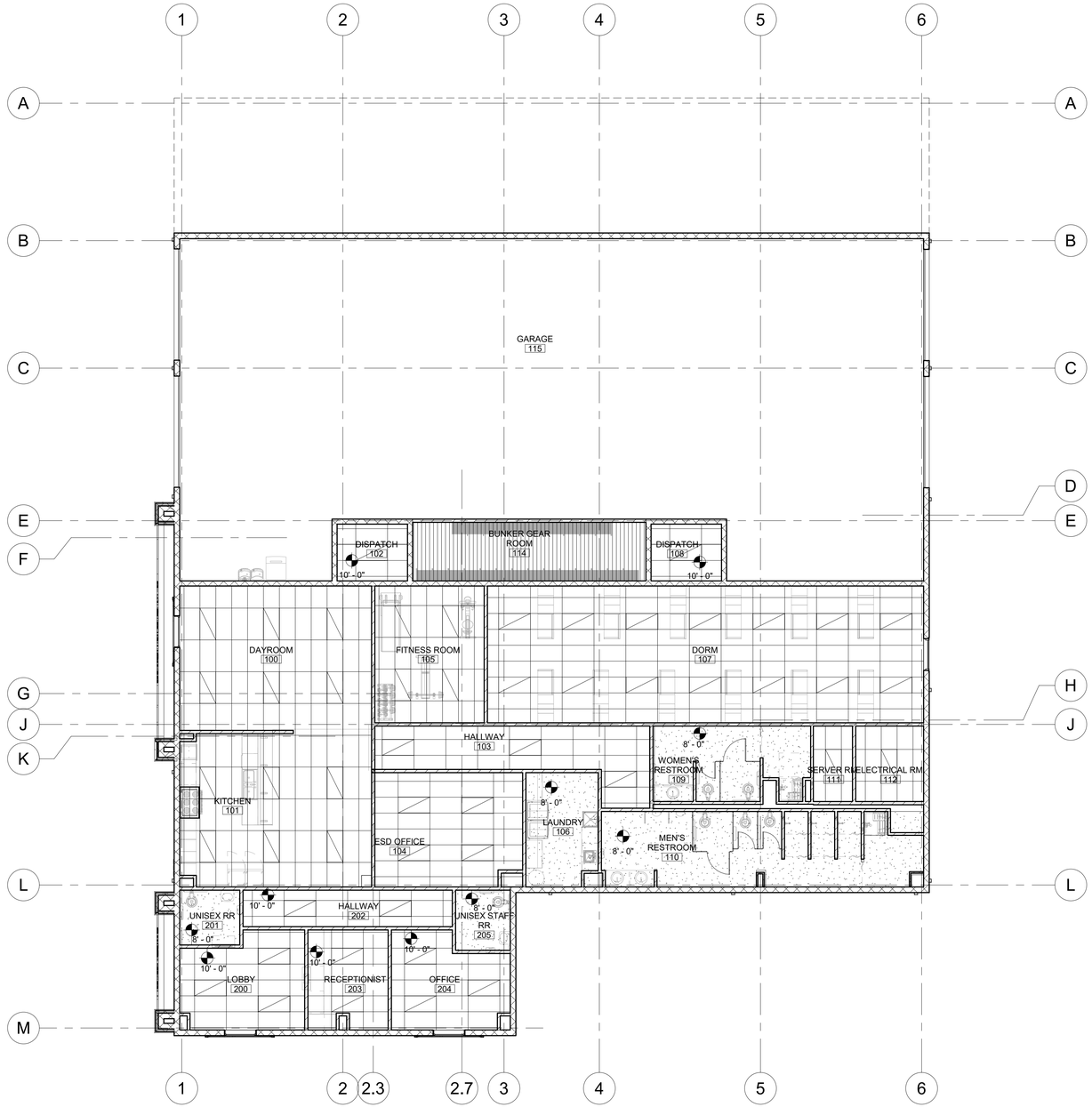
SHEET
A3.1
OF

GENERAL NOTES:

1. ALL OUTLETS SHALL BE @ 18" A.F.F. UNLESS NOTED OTHERWISE. ALSO, OUTLETS SHALL BE PLACED 12'-0" MAX. DISTANCE ALONG INSIDE WALLS.
2. GROUND FAULT INTERRUPTERS (GFI) ARE REQ'D ON CONVENIENCE OUTLETS IN RESTROOMS & KITCHEN.
3. WEATHER PROOF (W.P.) CONVENIENCE OUTLETS ARE REQUIRED OUTSIDE.
4. ALL CLG. ARE 12'-0" A.F.F. UNLESS NOTED OTHERWISE.
5. LIGHT SWITCH @ H.C. RESTROOMS @ 46" O.C. ROOM #'s: 109, 110, 201 & 205
6. RE: MEP DWGS. FOR ADDITIONAL INFO.

LEGEND

- SUSPENDED CEILING
- PAINTED GYPSUM BOARD
- OPEN STRUCTURE. PAINTED
- TONGUE AND GROOVE CEDAR WOOD PAINTED



1 CEILING FINISH PLAN
1/8" = 1'-0"

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
PROPERTY OF R. MILNET
14740
STATE OF TEXAS

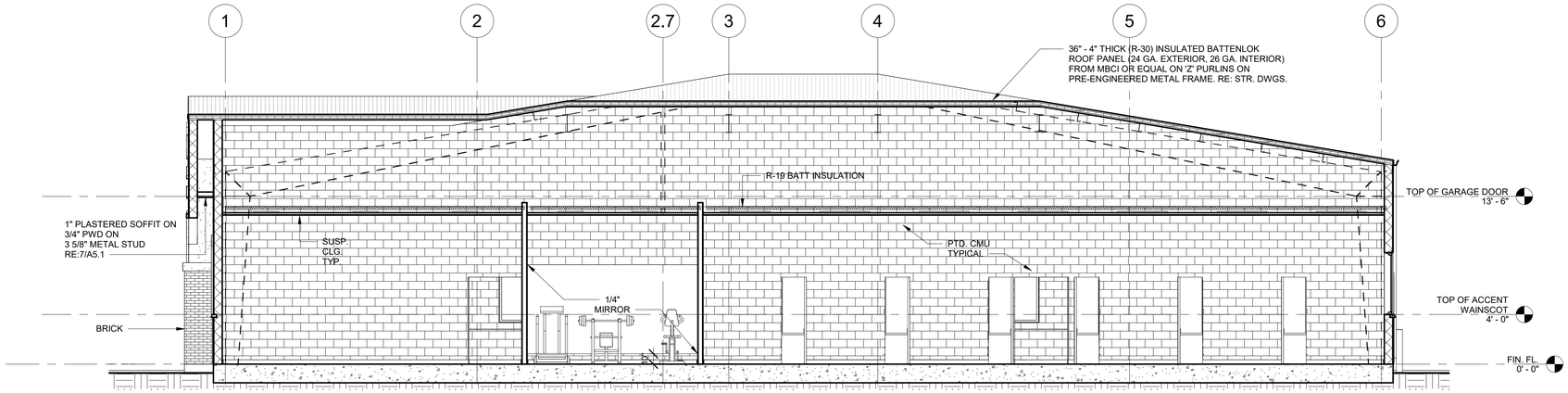
EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

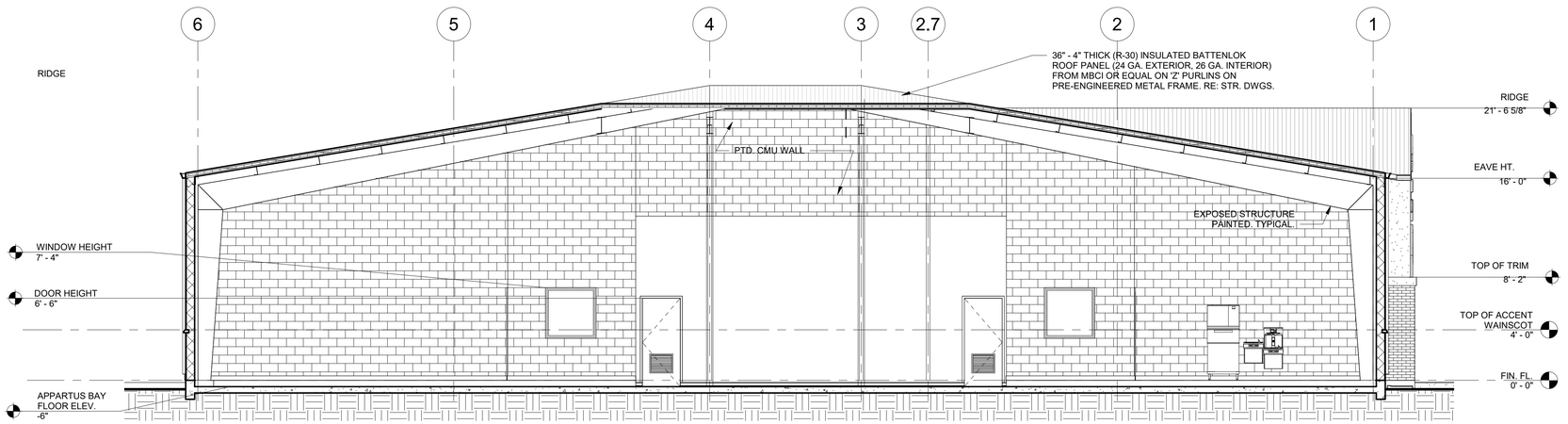
DATE
FEBRUARY 28, 2019

ISSUED FOR BID

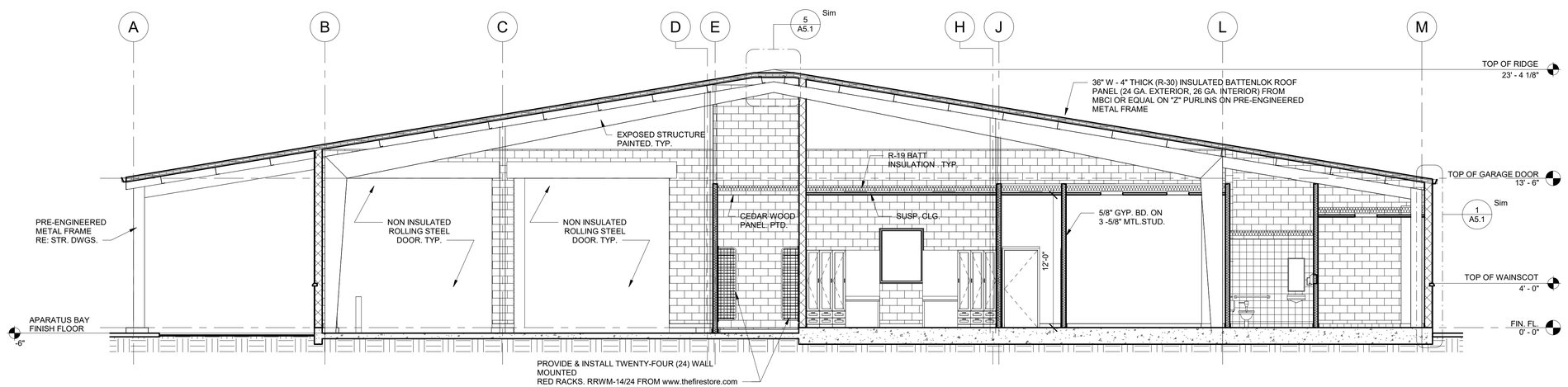
SHEET
A4.0
OF



4 BUILDING SECTION
3/16" = 1'-0"



3 BUILDING SECTION
3/16" = 1'-0"



1 BUILDING SECTION
3/16" = 1'-0"

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
JOSEPH R. MILNET
14740
STATE OF TEXAS

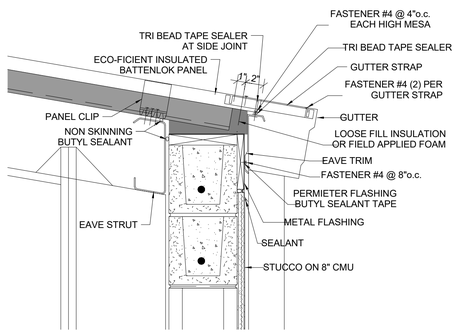
EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

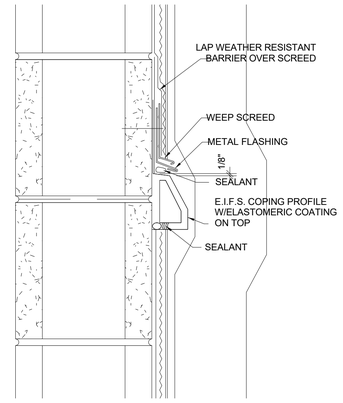
DATE
FEBRUARY 28, 2019

ISSUED FOR BID

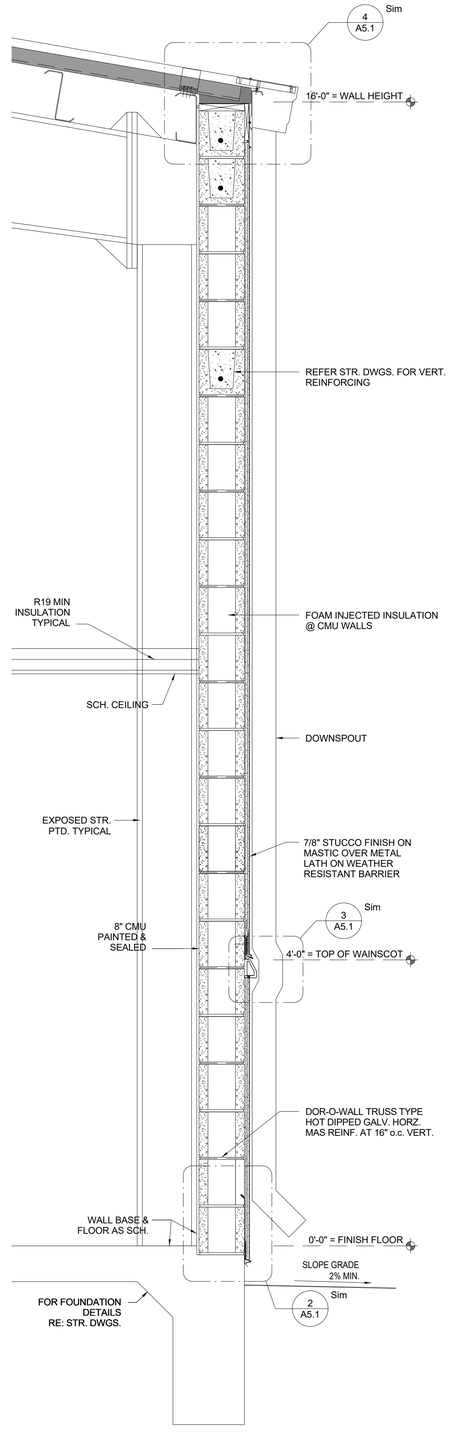
SHEET
A5.0
OF



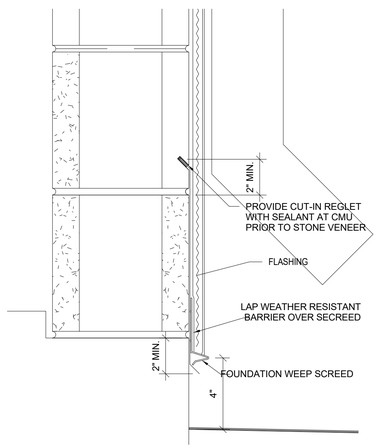
4 GUTTER DETAIL
1 1/2" = 1'-0"



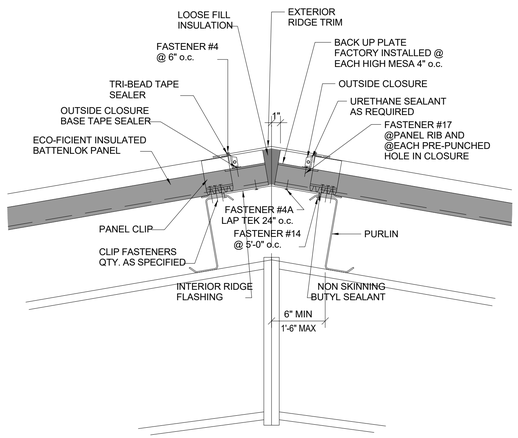
3 WAINSCOT DETAIL
3" = 1'-0"



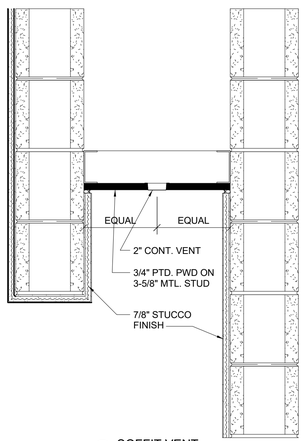
1 WALL DETAIL
1" = 1'-0"



2 WALL DETAIL
3" = 1'-0"



5 RIDGE DTL
1 1/2" = 1'-0"



7 SOFFIT VENT
1 1/2" = 1'-0"

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
PROFESSIONAL
14740
STATE OF TEXAS

EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019

ISSUED FOR BID

SHEET
A5.1
OF

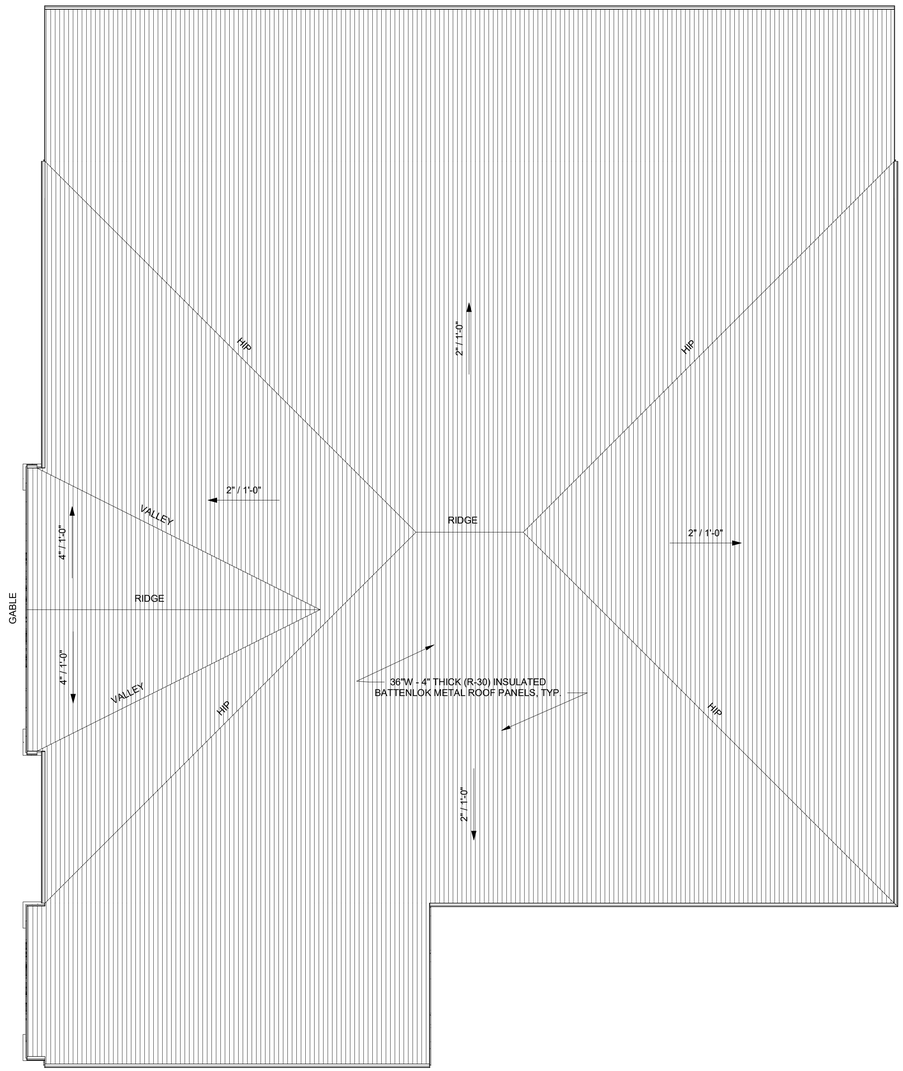
SCOPE OF WORK

A. INSTALL SPECIFIED ROOF INSULATION SYSTEM AND AS INDICATED ON THE PLANS.

B. INSTALL ALL FLASHING AND SHEET METAL COMPONENTS

GENERAL NOTES:

1. GENERAL CONTRACTOR SHALL VISIT SITE TO INSPECT EXIST. CONDITIONS WITH REGARD TO THE SCOPE OF WORK PRIOR TO BIDDING PROJECT. IMMEDIATELY NOTIFY ARCHITECT, IN WRITING, OF ANY AMBIGUITIES FOR CLARIFICATION.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD-VERIFY EXISTING CONDITIONS, DIMENSIONS, QUANTITIES, ETC. PRIOR TO BIDDING.
3. ALL EXISTING ITEMS TO REMAIN OR BE RELOCATED SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, AS DIRECTED BY ARCHITECT.
4. ALL SURFACES, INCLUDING WALLS AND CONCRETE WALKS, MUST BE PROTECTED FROM WELDING SPARK, PAINT, ASPHALT AND OTHER MATERIALS OR OBJECTS WHICH MAY DAMAGE ANY SURFACES. DAMAGED SURFACES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, AS DIRECTED BY THE ARCHITECT.
5. AT NO TIME DURING THE PROCESS OF THE WORK SHALL THE CONTRACTOR INTERRUPT THE CONTINUITY OF ANY OF THE REQUIRED SERVICES TO THE EXISTING BUILDINGS DURING REGULARLY SCHEDULED USAGE BY THE OWNER. ANY DAMAGE TO THESE SERVICES SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
6. CONTRACTOR TO LEGALLY DISPOSE OF ALL CONSTRUCTION DEBRIS, EXTRA MATERIALS & DEMOLISHED ITEMS.
7. AT NEW ROOF AREAS, WALK THROUGH EVERY ROOM IN BUILDING WITH THE OWNERS REPRESENTATIVE & IDENTIFY & LOCATE WATER DAMAGED CEILINGS, WALLS, ETC. TO DETERMINE LOCATION & AMOUNTS OFINTERIOR WATER DAMAGE PRIOR TO BEGINNING WORK. MAIL COPY OF THIS LIST TO OWNER & ARCHITECT. VIDEO TAPE IS ACCEPTABLE.
8. THE PORTION OF THIS PROJECT HAS BEEN DESIGNED TO BE IN COMPLIANCE WITH ALL APPLICABLE CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE - 2012. THE SPECIFIED ROOFING SYSTEM MEETS FACTORY MUTUAL RESEARCH CORP. STANDARD 4470 APPROVAL REQUIREMENTS FOR CLASS 1 FIRE AND 1-90 WINDSTORM CLASSIFICATION.
9. CONTRACTOR TO REVIEW M.E.P. DRAWINGS FOR LOCATIONS OF NEW ROOF TOP EQUIPMENT & PENETRATIONS.



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

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
ROBERT R. MILNET
14740
STATE OF TEXAS

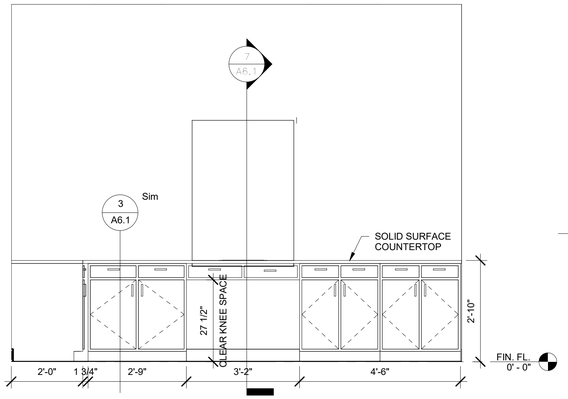
EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

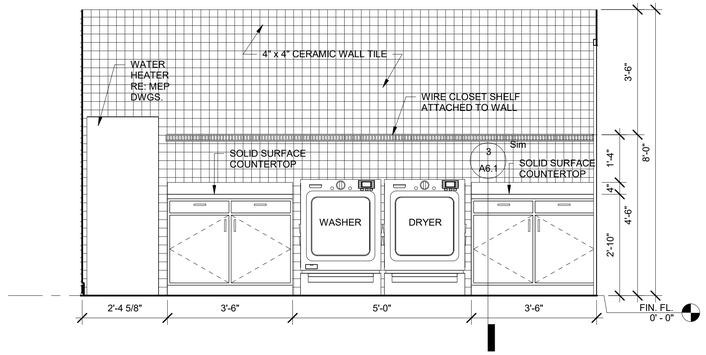
DATE
FEBRUARY 28, 2019

ISSUED FOR BID

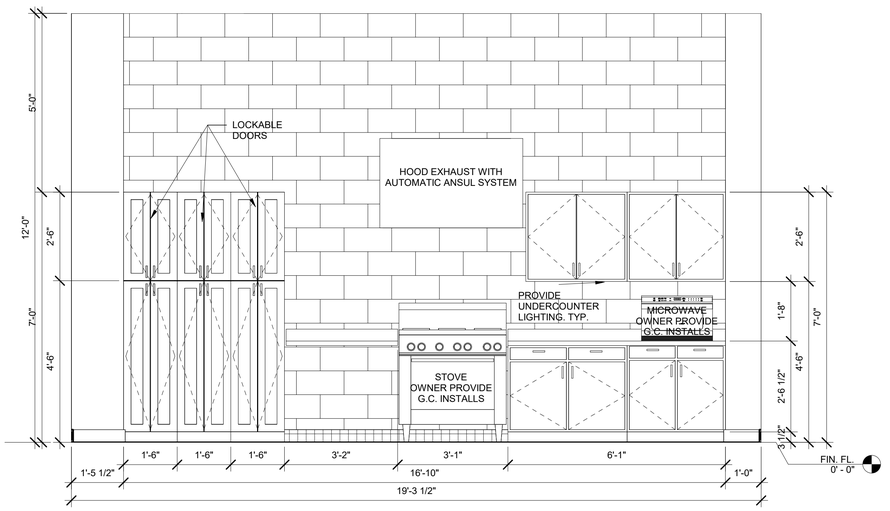
SHEET
A5.2
OF



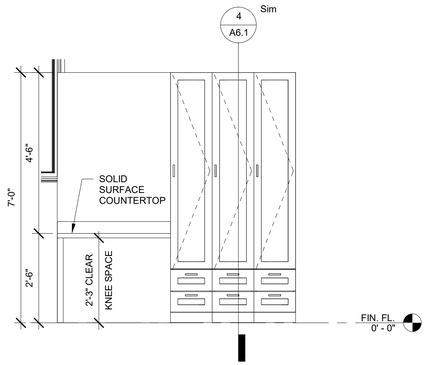
10 RECEPTION ELEV.
1/2" = 1'-0"



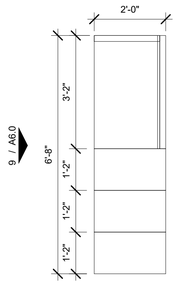
6 LAUNDRY ELEV.
1/2" = 1'-0"



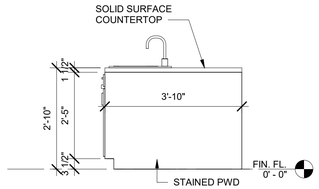
2 KITCHEN ELEV.
1/2" = 1'-0"



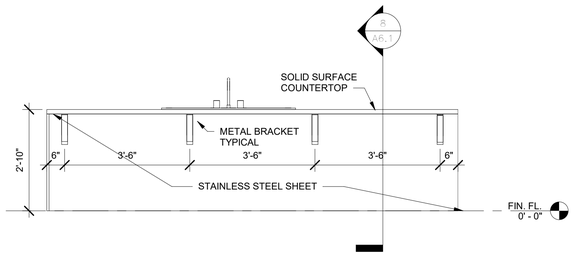
9 CLOSET ELEV. TYPICAL
1/2" = 1'-0"



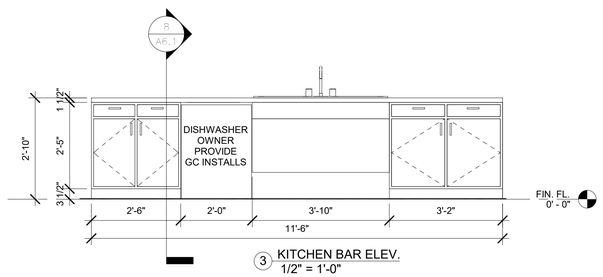
8 DORM MILLWORK
1/2" = 1'-0"



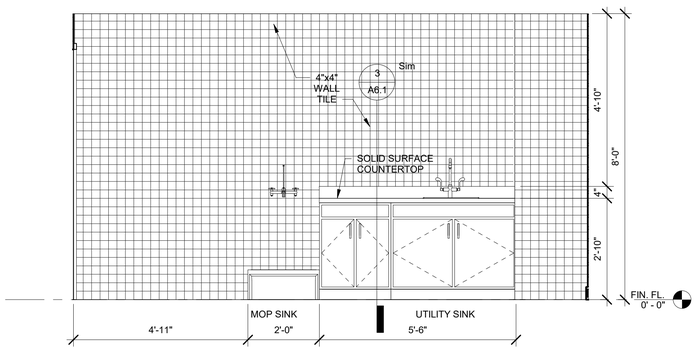
5 KITCHEN BAR ELEV.
1/2" = 1'-0"



4 KITCHEN BAR ELEV.
1/2" = 1'-0"



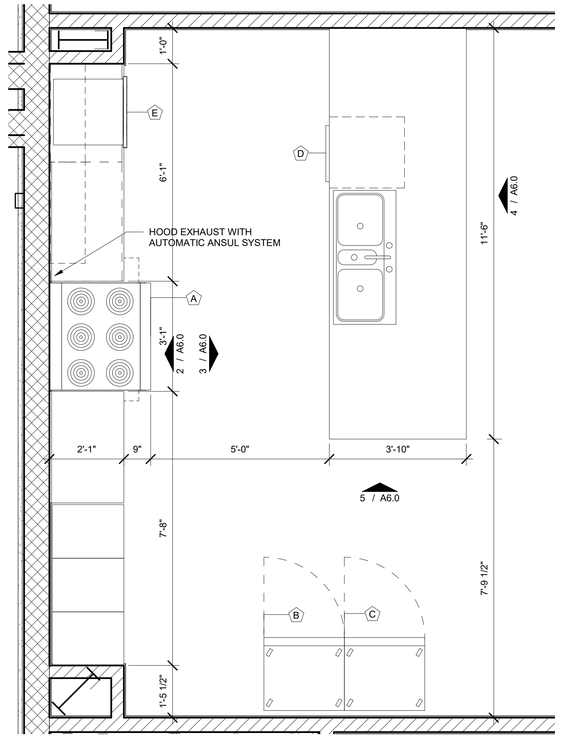
3 KITCHEN BAR ELEV.
1/2" = 1'-0"



7 LAUNDRY ELEV.
1/2" = 1'-0"

KITCHEN EQUIPMENT

ID	DESCRIPTION	NOTES
A	6 BURNER STOVE	180,000 BTU's
B	T-12-HC REACH IN REFRIGERATOR	12.0 Cu. Ft. - 115V - 60Hz - 2.0 Amp. Single Phase
C	T-12F REACH IN FREEZER	12.0 Cu. Ft. - 115V - 60Hz - 2.0 Amp. Single Phase
D	DISHWASHER	120V - 60Hz - 8.2 Amp. Single Phase
E	MICROWAVE	Commercial grade- 120V



1 KITCHEN LAYOUT
1/2" = 1'-0"

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS
REGISTERED ARCHITECT
JOSEPH R. MILNET
14740
STATE OF TEXAS

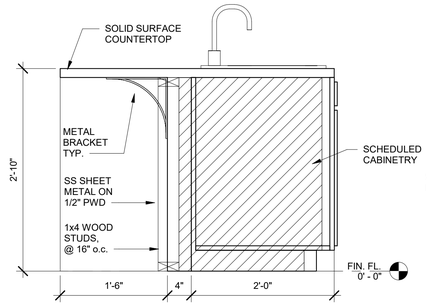
EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

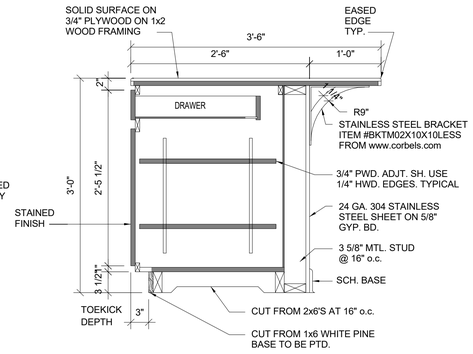
DATE
FEBRUARY 28, 2019

ISSUED FOR BID

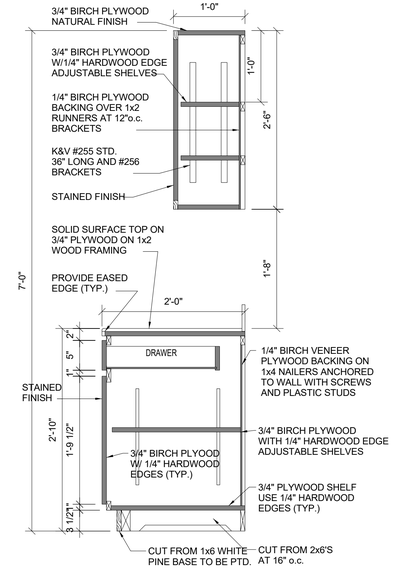
SHEET
A6.0
OF



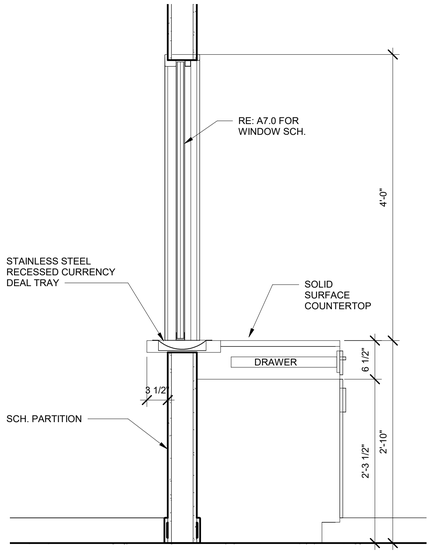
8 Section 14
1" = 1'-0"



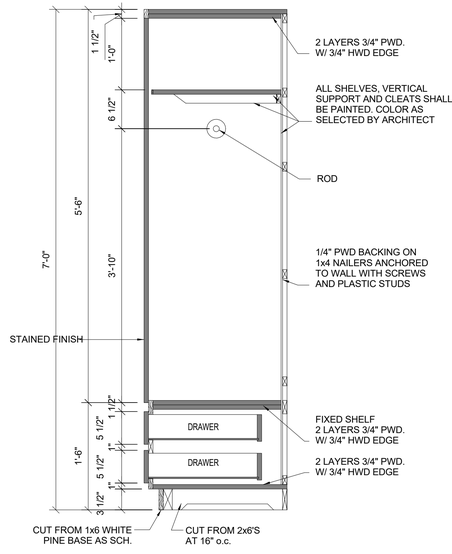
5 MILLWORK SECTION
1" = 1'-0"



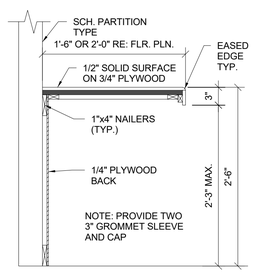
2 MILLWORK SECTION
1" = 1'-0"



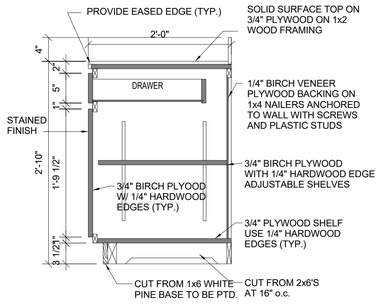
7 MILLWORK SECTION
1" = 1'-0"



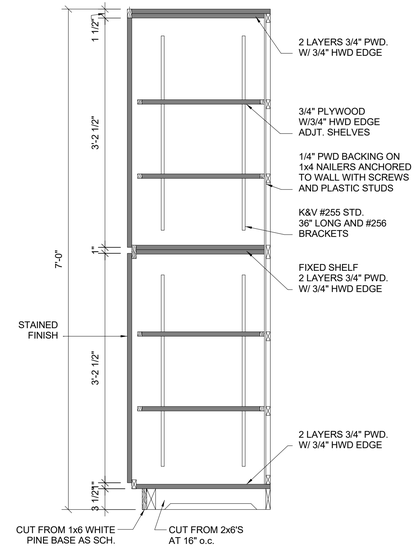
4 MILLWORK SECTION
1" = 1'-0"



6 MILLWORK SECTION
1" = 1'-0"



3 MILLWORK SECTION
1" = 1'-0"



1 MILLWORK SECTION
1" = 1'-0"

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
RONALD R. MILNET
14740
STATE OF TEXAS

EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019

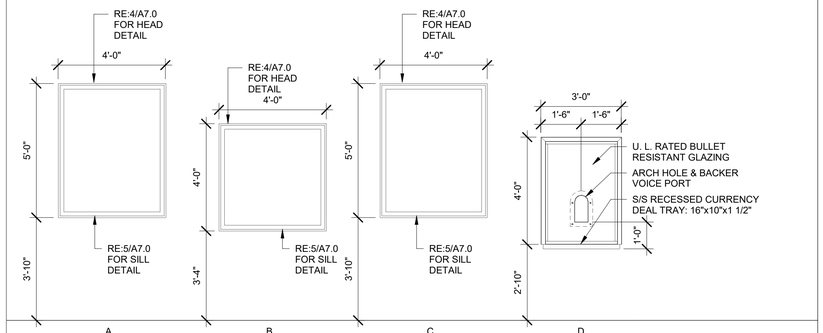
ISSUED FOR BID

SHEET
A6.1
OF

DOOR SCHEDULE

	DOOR DESCRIPTION	TYPE	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	FRAME TYPE	FIRE RATED	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	COMMENTS
100	DAYROOM. MAIN ENTRY	A	3' - 0"	7' - 0"	0' - 2"	ALUMINUM & GLASS. DOUBLE DOOR	ANODIZED	ALUM					REFER MFR. SPECS.
101	KITCHEN-P. D.	C	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
102	DISPATCH	E	3' - 0"	7' - 0"	0' - 2"	HOLLOW METAL DOOR	PAINTED	A	40 MIN	1/A7.0	2/A7.0	3/A7.0	
104	ESD OFFICE	B	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
105	FITNESS ROOM	B	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
106	LAUNDRY	C	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
107	DORMITORIES	C	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
108	DISPATCH	E	3' - 0"	7' - 0"	0' - 2"	HOLLOW METAL DOOR	PAINTED	A	40 MIN	1/A7.0	2/A7.0	3/A7.0	
109	WOMENS BATHROOM	C	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
110	MENS BATHROOM	C	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
111	SERVER ROOM	C	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
112	ELECTRICAL ROOM	E	3' - 0"	7' - 0"	0' - 2"	HOLLOW METAL DOOR	PAINTED	A		1/A7.0	2/A7.0	3/A7.0	
114	BUNKER GEAR STORAGE	D	3' - 0"	7' - 0"	0' - 2"	HOLLOW METAL DOOR	PAINTED	B		6/A7.0	7/A7.0	8/A7.0	
114A	BUNKER GEAR STORAGE	D	3' - 0"	7' - 0"	0' - 2"	HOLLOW METAL DOOR	PAINTED	B		6/A7.0	7/A7.0	8/A7.0	
115	GARAGE. AUX. ENTRY	E	3' - 0"	7' - 0"	0' - 2"	HOLLOW METAL DOOR	PAINTED	A		1/A7.0	2/A7.0	3/A7.0	REFER NOTE 2
115A	GARAGE DOOR	F	14' - 0"	14' - 0"	0' - 2"	ROLLING STEEL DOOR	PRE-MFR. FINISH	C		9/A7.0	10/A7.0	9/A7.0	REFER NOTE 1
115B	GARAGE DOOR	F	14' - 0"	14' - 0"	0' - 2"	ROLLING STEEL DOOR	PRE-MFR. FINISH	C		9/A7.0	10/A7.0	9/A7.0	REFER NOTE 1
115C	GARAGE DOOR	F	14' - 0"	14' - 0"	0' - 2"	ROLLING STEEL DOOR	PRE-MFR. FINISH	C		9/A7.0	10/A7.0	9/A7.0	REFER NOTE 1
115D	GARAGE DOOR	F	14' - 0"	14' - 0"	0' - 2"	ROLLING STEEL DOOR	PRE-MFR. FINISH	C		9/A7.0	10/A7.0	9/A7.0	REFER NOTE 1
115E	GARAGE EXIT	E	3' - 0"	7' - 0"	0' - 2"	HOLLOW METAL DOOR	PAINTED	A		1/A7.0	2/A7.0	3/A7.0	
200	P.D. LOBBY	A	3' - 0"	7' - 0"	0' - 2"	ALUMINUM & GLASS. DOUBLE DOOR	ANODIZED	ALUM					REFER MFR. SPECS.
201	UNISEX RESTROOM. PUBLIC	C	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
202	HALLWAY	B	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	REFER NOTE 3
203	RECEPTIONIST	B	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
204	P.D. OFFICE	B	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	
205	UNISEX RESTROOM. STAFF	C	3' - 0"	7' - 0"	0' - 2"	SOLID WOOD DOOR	STAINED	B		6/A7.0	7/A7.0	8/A7.0	

WINDOW DETAILS



TINTED TEMPERED 1" INSULATED GLASS W/ALUM. METAL FRAME

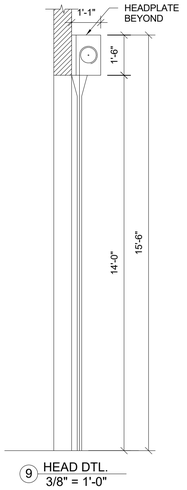
TINTED TEMPERED 1" INSULATED GLASS W/ALUM. METAL FRAME 40 MIN FIRE RATED

TINTED TEMPERED 1" INSULATED GLASS W/ALUM. METAL FRAME CASEMENT W/WINDOW WITH CONCEALED HINGES

TSS HB TRNSACTION WINDOW W/ALUM. METAL FRAME CASH TRAY COUNTER MOUNTED, STAINLESS STEEL GLAZING PANELS SHALL BE: BULLET RESISTANT LEVEL 1 1 1/4" AR COATED ACRYLIC

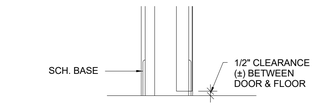
NOTES:

1. PROVIDE AND INSTALL ROLLING STEEL DOOR MODEL 610 (STANDARD C-187 SLAT PROFILE. 22 GA.) WITH RHX ELECTRIC OPERATOR. FACE TO WALL MOUNTED. FROM OVERHEAD DOOR OR APPROED EQUAL
2. PROVIDE AND INSTALL MAGLOCK WITH COMBINATION KEYPAD TO OPEN DOOR
3. PROVIDE MAGNETIC RELEASE OPERATED BY RECEPTIONIST AND CARD READER TO OPEN

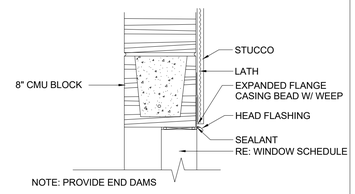


10 JAMB DTL. 1 1/2" = 1'-0"

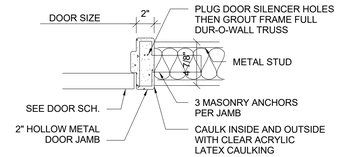
9 HEAD DTL. 3/8" = 1'-0"



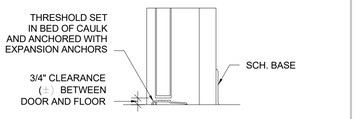
8 SILL DETAIL 1 1/2" = 1'-0"



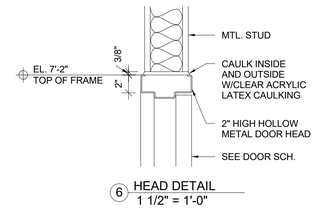
4 HEAD WIN DTL 1 1/2" = 1'-0"



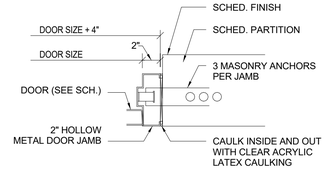
7 JAMB DETAIL 1 1/2" = 1'-0"



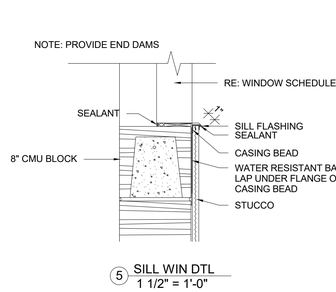
3 SILL DTL 1 1/2" = 1'-0"



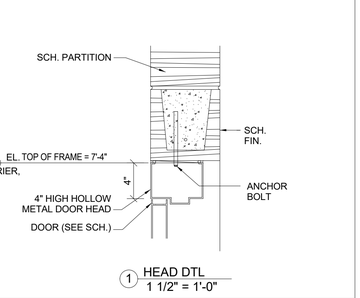
6 HEAD DETAIL 1 1/2" = 1'-0"



2 JAMB DTL 1 1/2" = 1'-0"

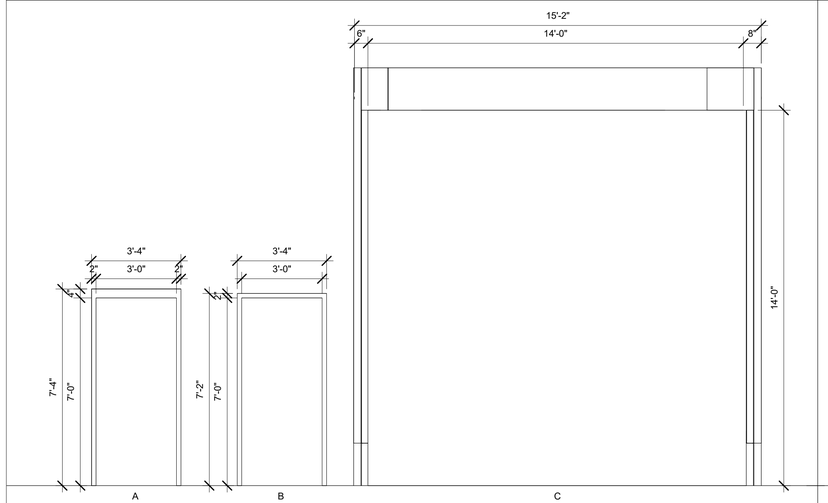


5 SILL WIN DTL 1 1/2" = 1'-0"



1 HEAD DTL 1 1/2" = 1'-0"

FRAME DETAILS

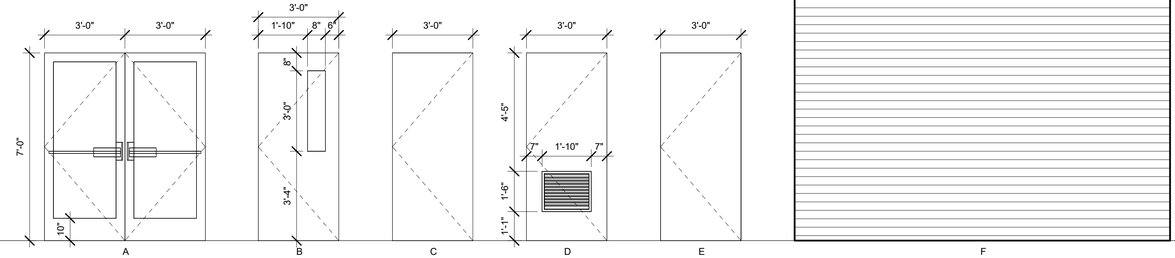


HOLLOW METAL PAINTED FRAME 2" x 5 3/4"

HOLLOW METAL PAINTED FRAME 2" x 5 3/4"

HOLLOW METAL PAINTED FRAME 2" x 5 3/4"

DOOR DETAILS



ALUMINUM & TINTED TEMPERED 1" INSULATED GLASS DOOR

SOLID WOOD DOOR STAINED & CLEAR COATED W/ VISION PANEL

SOLID WOOD DOOR STAINED & CLEAR COATED

HOLLOW METAL DOOR PAINTED WITH VENT

HOLLOW METAL DOOR PAINTED

ROLLING STEEL DOOR 610 SERIES FROM OVERHEAD DOOR OR APPROVED EQUAL

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS
REGISTERED ARCHITECT RODOLFO R. MOLINA 14740 STATE OF TEXAS

EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019

ISSUED FOR BID

SHEET
A7.0
OF

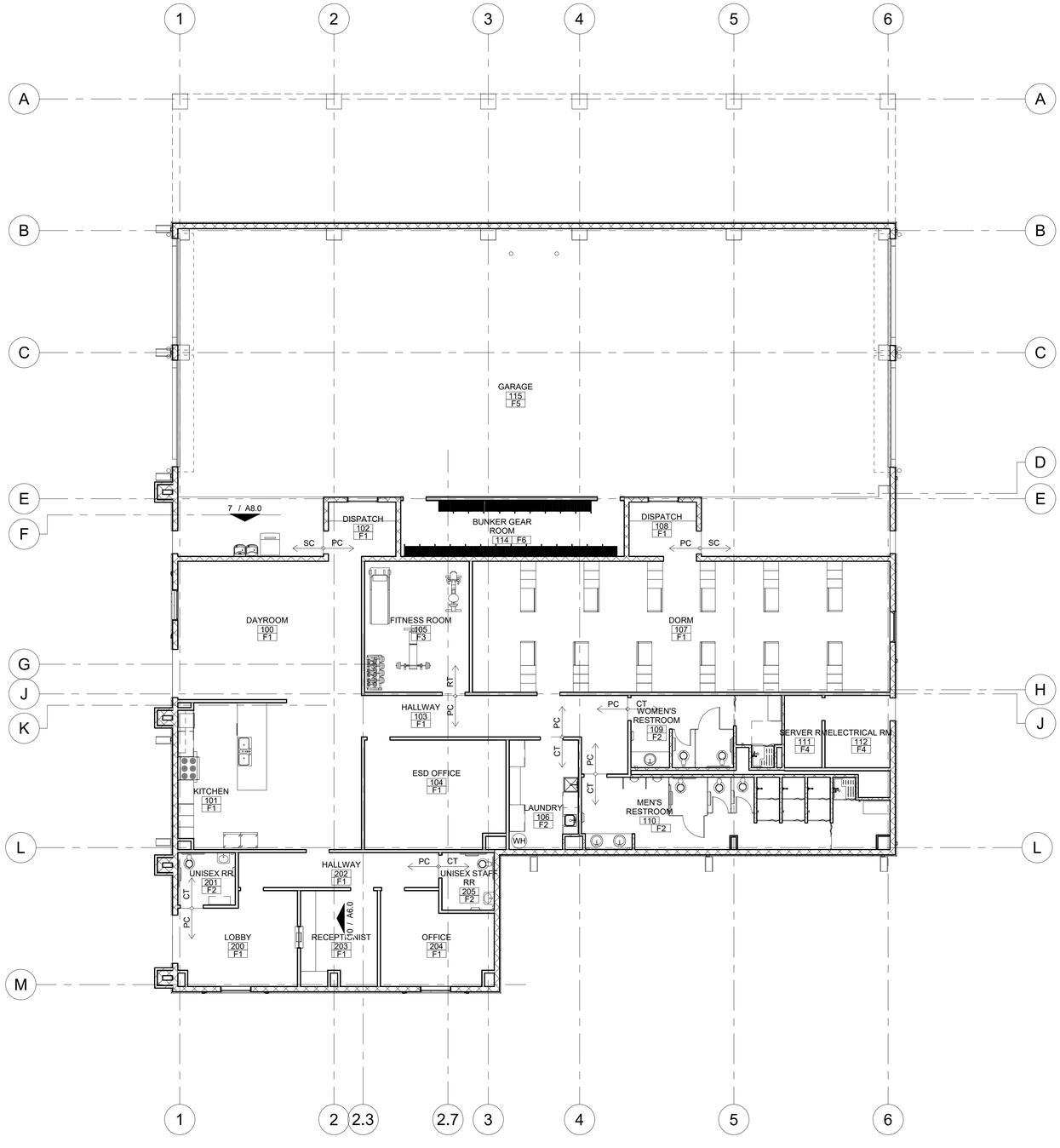
ROOM FINISH SCHEDULE

ROOM #	DESCRIPTION	FINISH #	WALLS	BASE	FLOOR	CEILING	COMMENTS
100	DAYROOM	F1	P-1	B-1	PC	C-1	
101	KITCHEN	F1	P-1	B-1	PC	C-1	
102	DISPATCH	F1	P-1	B-1	PC	C-1	
103	HALLWAY	F1	P-1	B-1	PC	C-1	
104	ESD OFFICE	F1	P-1	B-1	PC	C-1	
105	FITNESS ROOM	F3	P-1	B-1	RT	C-1	PROVIDE MIRROR FROM 10" TO 8'-0" AFF AT ALL FOUR WALLS
106	LAUNDRY	F2	P-2	B-2	CT	C-2	10% OF WALL TILE TO BE ACCENT COLOR. FROM PRICE GROUP 4 & 5.
107	DORM	F1	P-1	B-1	PC	C-1	
108	DISPATCH	F1	P-1	B-1	PC	C-1	
109	WOMEN'S RESTROOM	F2	P-2	B-2	CT	C-2	10% OF WALL TILE TO BE ACCENT COLOR. FROM PRICE GROUP 4 & 5.
110	MEN'S RESTROOM	F2	P-2	B-2	CT	C-2	10% OF WALL TILE TO BE ACCENT COLOR. FROM PRICE GROUP 4 & 5.
111	SERVER RM.	F4	P-1	B-1	SC	C-2	
112	ELECTRICAL RM.	F4	P-1	B-1	SC	C-2	
113	RISER	F4	P-1	B-1	SC	C-2	
114	BUNKER GEAR ROOM	F6	P-1	B-1	SC	C-4	
115	GARAGE	F5	P-1	B-1	SC	C-3	
200	LOBBY	F1	P-1	B-1	PC	C-1	
201	UNISEX RR	F2	P-2	B-2	CT	C-2	10% OF WALL TILE TO BE ACCENT COLOR. FROM PRICE GROUP 4 & 5.
202	HALLWAY	F1	P-1	B-1	PC	C-1	
203	RECEPTIONIST	F1	P-1	B-1	PC	C-1	
204	OFFICE	F1	P-1	B-1	PC	C-1	
205	UNISEX STAFF RR	F2	P-2	B-2	CT	C-2	10% OF WALL TILE TO BE ACCENT COLOR. FROM PRICE GROUP 4 & 5.

ROOM FINISH STANDARDS

WALLS	P-1	PAINTED GYPSUM BOARD OR CMU (LATEX PAINT)
	P-2	CERAMIC TILE
BASE	B-1	4" RUBBER BASE
	B-2	CERAMIC TILE BASE
FLOOR	PC	POLISHED CONCRETE FLOOR. RE: NOTE
	CT	CERAMIC TILE
	RT	RUBBER TILE
	SC	SEALED CONCRETE
CEILING	C-1	SUSPENDED CEILING
	C-2	PAINTED GYPSUM BOARD
	C-3	OPEN CEILING
	C-4	PAINTED TONGUE & GROOVE CEDAR WOOD PANEL

NOTE: POLISHED CONCRETE FLOOR CUT & SHINE LEVELS:
CUT LEVEL: GRADE 2, LIGHT EXPOSURE OF COURSE AGGREGATE
SHINE LEVEL: CLASS 1, 400 GRIT POLISH.
FINISH COAT: APPLY TWO APPLICATIONS OF SCOFIELD FINISH COAT



1 FLOOR FINISH PLAN
1/8" = 1'-0"

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
RODOLFO R. MOLINA
14740
STATE OF TEXAS

EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

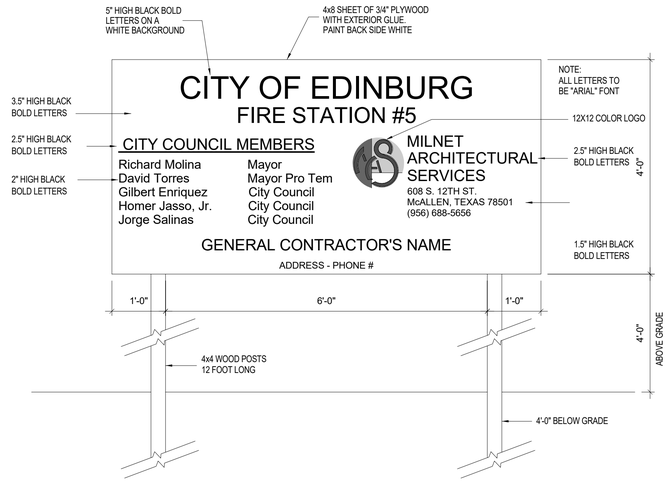
PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019

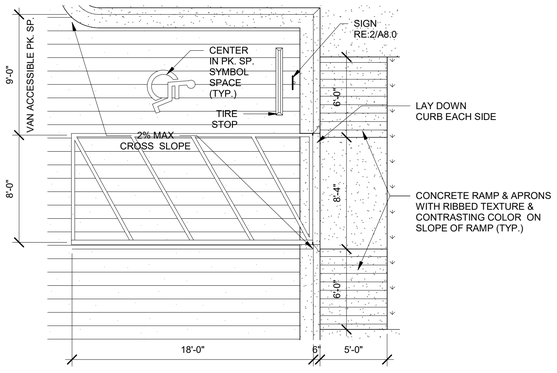
ISSUED FOR BID

SHEET
A7.1
OF

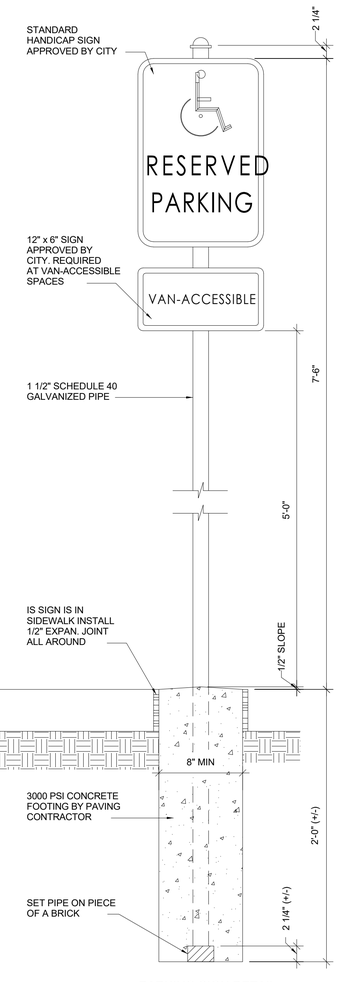
6 BUILDING PLAQUE DTL.
3" = 1'-0"



3 CONSTRUCTION SIGN
3/4" = 1'-0"

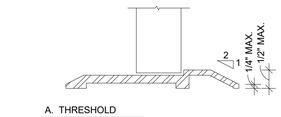


5 HCP PARKING SPACE DTL
3/16" = 1'-0"



2 PARKING SIGN DETAIL
3/16" = 1'-0"

DOOR CRITERIA:



A. THRESHOLD

NOTES:

1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.

2. 1 : 2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERTICAL LEVEL CHANGE.

DOOR TYPE:

1. MINIMUM 10" HIGH SMOOTH SURFACE AT DOOR BOTTOM, EITHER ATTACHED PANEL OR BOTTOM RAIL.

HARDWARE:

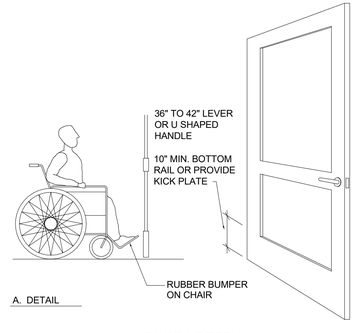
2. OPERABLE FROM INSIDE WITHOUT USE OF KEY OR SPECIAL KNOWLEDGE OR EFFORT.

3. OPENABLE BY SINGLE EFFORT LEVER-TYPE DEVICE (NOT REQUIRING GRASPING).

4. MOUNTED 36" TO 42".

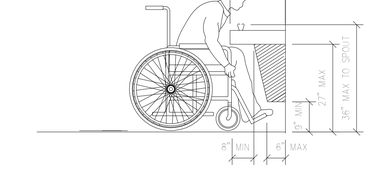
5. MAXIMUM 8.5 POUNDS EFFORT TO OPERATE EXTERIOR DOOR, 5 POUNDS FOR INTERIOR.

6. HARDWARE TO CONFORM TO 3304(C) OF THE UBC 91.

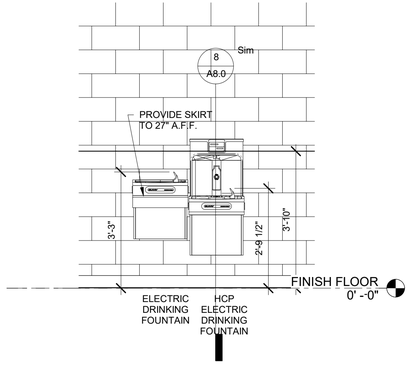


A. DETAIL

1 DOOR CRITERIA
3/8" = 1'-0"

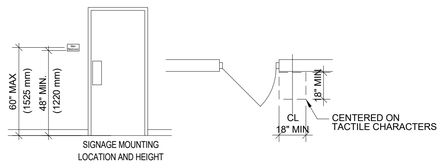


8 D. F. SECTION VIEW
1/2" = 1'-0"



7 DRINKING FOUNTAIN DTL.
1/2" = 1'-0"

1. COLOR AS CLOSE TO COUNTERTOP AS POSSIBLE BASED ON STANDARD COLORS.
2. SIGNS THAT DESIGNATE PERMANENT ROOMS AND SPACES MUST COMPLY WITH REQUIREMENTS FOR CHARACTER PROPORTION, RAISED AND BRAILED CHARACTERS AND PICTORIAL SYMBOLS SIGNS, FINISH AND CONTRAST AND MOUNTING AND LOCATION HEIGHT.
3. CHARACTER PROPORTION: CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".
4. RAISED AND BRAILLED CHARACTERS AND PICTORIAL SYMBOL SIGNS (PICTOGRAMS): LETTERS AND NUMERALS SHALL BE RAISED 1/32 IN, UPPER-CASE, SANS SERIF AND SHALL BE ACCOMPANIED WITH GRADE 2 BRAILLE. RAISED CHARACTERS SHALL BE AT LEAST 5/8 IN. (16mm) HIGH, BUT NO HIGHER THAN 2 IN. (50mm). PICTOGRAMS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE 6 IN. (152mm) MINIMUM IN HEIGHT.
5. FINISH AND CONTRAST: CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.
6. MOUNTING LOCATION AND HEIGHT. WHERE PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ALONGSIDE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE INSTALLED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE INSTALLED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGND SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18" MIN. BY 18" MIN., CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION.



4 ROOM SIGN DETAILS
1/4" = 1'-0"

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

REGISTERED ARCHITECT
RODOLFO R. MOLINA JR.
14740
STATE OF TEXAS

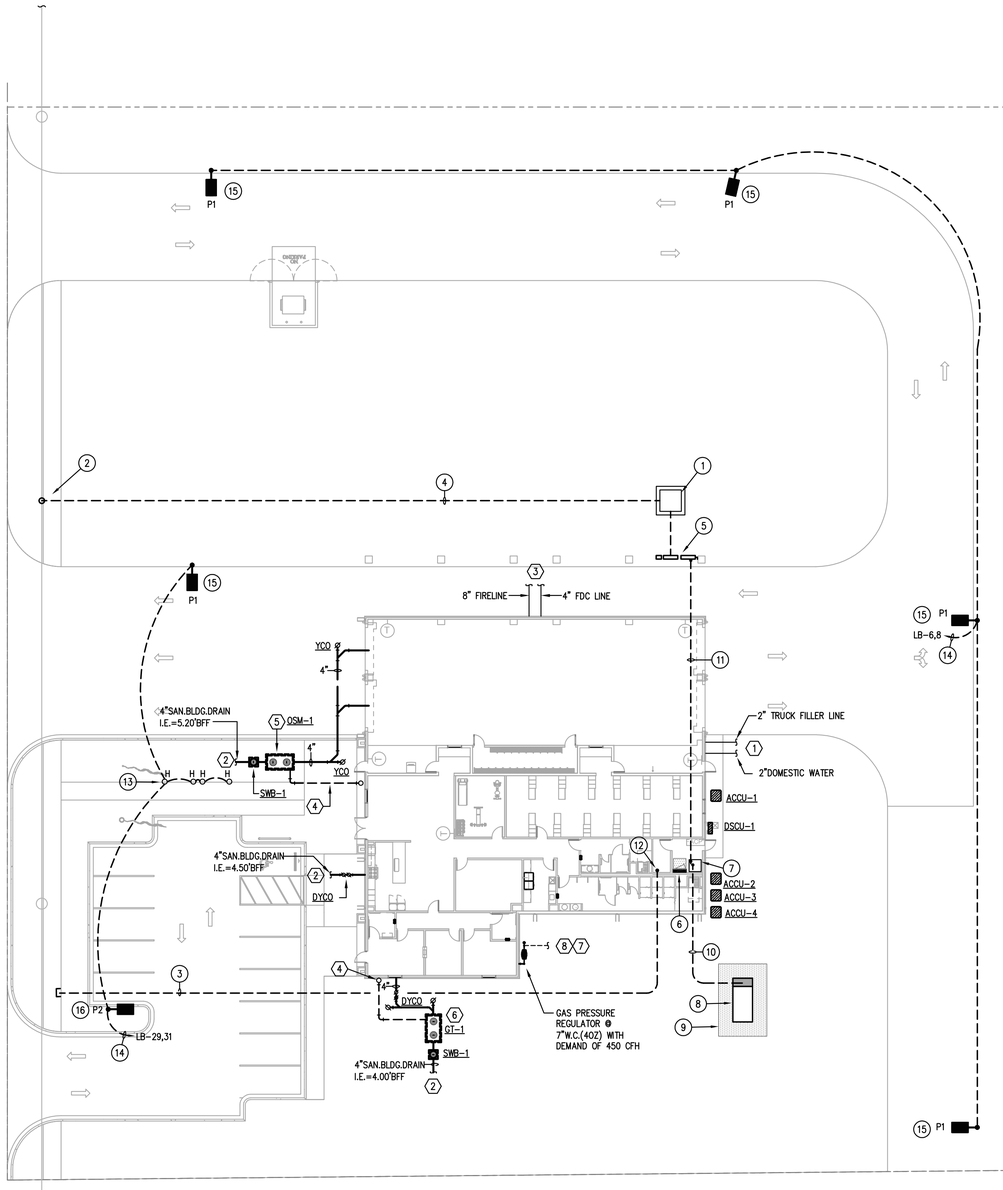
EDINBURG FIRE STATION #5
CITY OF EDINBURG
DAVIS RD.

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019

ISSUED FOR BID

SHEET
A8.0
OF



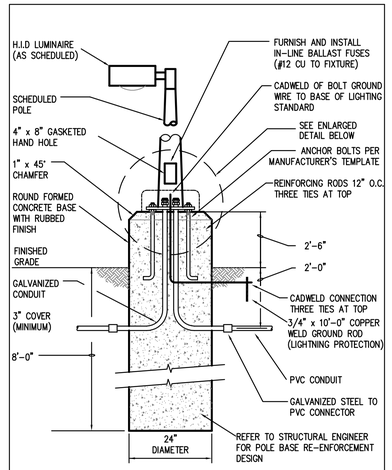
1 MEP2.1 **MEP SITE PLAN**
1"=20'-0"

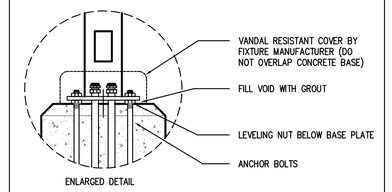
ELECTRICAL KEYED NOTES:

1. APPROXIMATE LOCATION OF POWER CO. PAD MOUNTED TRANSFORMER. COORDINATE EXACT LOCATION WITH LOCAL POWER CO. PROVIDE PAD PER POWER CO. STANDARDS.
2. PROPOSED LOCATION OF NEW POWER CO. DIP POLE BY AEP. PROVIDE 16'-0" X 24'-0" EASEMENT. COORDINATE EXACT LOCATION OF POLE WITH AEP IN FIELD.
3. ROUTE (4) 4" UNDERGROUND PVC CONDUITS TO RIGHT OF WAY, FOR COPPER TELEPHONE, FIBER, CABLE TV AND SPARE.
4. PROPOSED ROUTING OF NEW UNDERGROUND PRIMARY SERVICE LATERAL.
5. PROPOSED LOCATION OF NEW C/T CAN, METER AND SERVICE DISCONNECT.
6. APPROXIMATE LOCATION OF MDP IN BUILDING ELECTRICAL ROOM.
7. APPROXIMATE LOCATION OF NEW AUTOMATIC TRANSFER SWITCH "ATS". REFER TO ONE-LINE DIAGRAM AND POWER PLAN FOR ADDITIONAL INFORMATION.
8. APPROXIMATE LOCATION OF NEW DIESEL GENERATOR. REFER TO SPECIFICATIONS AND E4.1 MODEL.
9. PROVIDE 6" CONCRETE PAD.
10. APPROXIMATE ROUTING OF NEW UNDERGROUND GENERATOR POWER FEEDERS TO ATS, PROVIDE ADDITIONAL CONDUITS FOR CONTROL AND FOR CADLING TO ANNUNCIATOR.
11. PROPOSED ROUTING OF SECONDARY SERVICES FROM MAIN DISCONNECT TO ELECTRICAL ROOM.
12. APPROXIMATE LOCATION OF DATA ROOM. REFER TO FIRST LEVEL POWER PLAN FOR CONDUIT STUB UP LOCATIONS.
13. PROVIDE GROUND MOUNTED FLAG POLE LIGHTS MOUNTED ON CONCRETE FOOTING. FIXTURE SHALL BE LUMARK #NFFLD-A40-E-UNV-66-S-CB-TS2/NFFLD-CB. SEE DETAIL 4, THIS SHEET.
14. CONTROL CIRCUIT BY PHOTOCELL-ON/TIMECLOCK-OFF. PROVIDE PHOTOCELL MOUNTED ON ROOF, AIMED NORTH. PROVIDE DIGITAL TIMECLOCK ADJACENT TO PANEL.
15. POLE MOUNTED AREA LIGHT. FIXTURE SHALL BE: McGRAW EDISON #GLEON-AF-02-LED-E1-SL3-HSS MOUNTED ON 25' POLE. POLE SHALL BE VALMONT #DS330-4000250. PROVIDE POLE WITH CONCRETE FOUNDATION PER DETAIL 3, THIS SHEET. VERIFY ALL FOUNDATION PARAMETERS WITH LICENSED STRUCTURAL ENGINEER TO ENSURE POLE IS RATED FOR 130m.p.h. WIND.
16. POLE MOUNTED AREA LIGHT. FIXTURE SHALL BE: McGRAW EDISON #GLEON-AF-02-LED-E1-SL4-HSS MOUNTED ON 25' POLE. POLE SHALL BE VALMONT #DS330-4000250. PROVIDE POLE WITH CONCRETE FOUNDATION PER DETAIL 3, THIS SHEET. VERIFY ALL FOUNDATION PARAMETERS WITH LICENSED STRUCTURAL ENGINEER TO ENSURE POLE IS RATED FOR 130m.p.h. WIND.

PLUMBING KEYED NOTES:

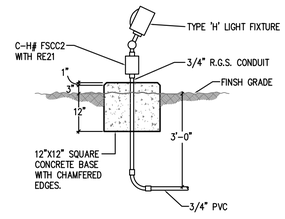
1. DOMESTIC WATER SERVICE ENTRY, SIZE AS NOTED. REFER TO CIVIL UTILITY DRAWINGS FOR CONTINUATION AND LOCATION OF METER WITH BACKFLOW PREVENTOR.
2. SANITARY BUILDING DRAIN, SIZE AS NOTED. REFER TO CIVIL SITE UTILITY PLAN FOR CONTINUATION.
3. FIRE SPRINKLER WATER SERVICE ENTRY. REFER TO CIVIL SITE UTILITY PLAN FOR CONTINUATION, BACKFLOW PREVENTER, AND REMOTE FDC.
4. 3" VENT BELOW GRADE FROM INTERCEPTOR.
5. SAND/OIL INTERCEPTOR (750 GALLON); REFER TO DETAIL 1/P4.3.
6. GREASE INTERCEPTOR (500 GALLON); REFER TO DETAIL 2/P4.3.
7. PROPOSED LOCATION OF GAS METER. CONTRACTOR TO COORDINATE EXACT LOCATION WITH GAS COMPANY. GAS METER ASSEMBLY AND YARD LINES BY GAS UTILITY COMPANY. TOTAL DEMAND OF 450 CFH AT 4 TO 8 OZ PRESSURE.
8. CONTRACTOR TO BE RESPONSIBLE FOR ALL COST/FEES ASSOCIATED WITH GAS SERVICE.





NOTE: THE CONCRETE POUR SHALL BE MONOLITHIC.

1 **CONCRETE POLE BASE DETAIL (TYP.)**
NOT TO SCALE



2 **GROUND MOUNTED FLAG POLE LIGHT FIXTURE MOUNTING DETAIL**
NOT TO SCALE

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

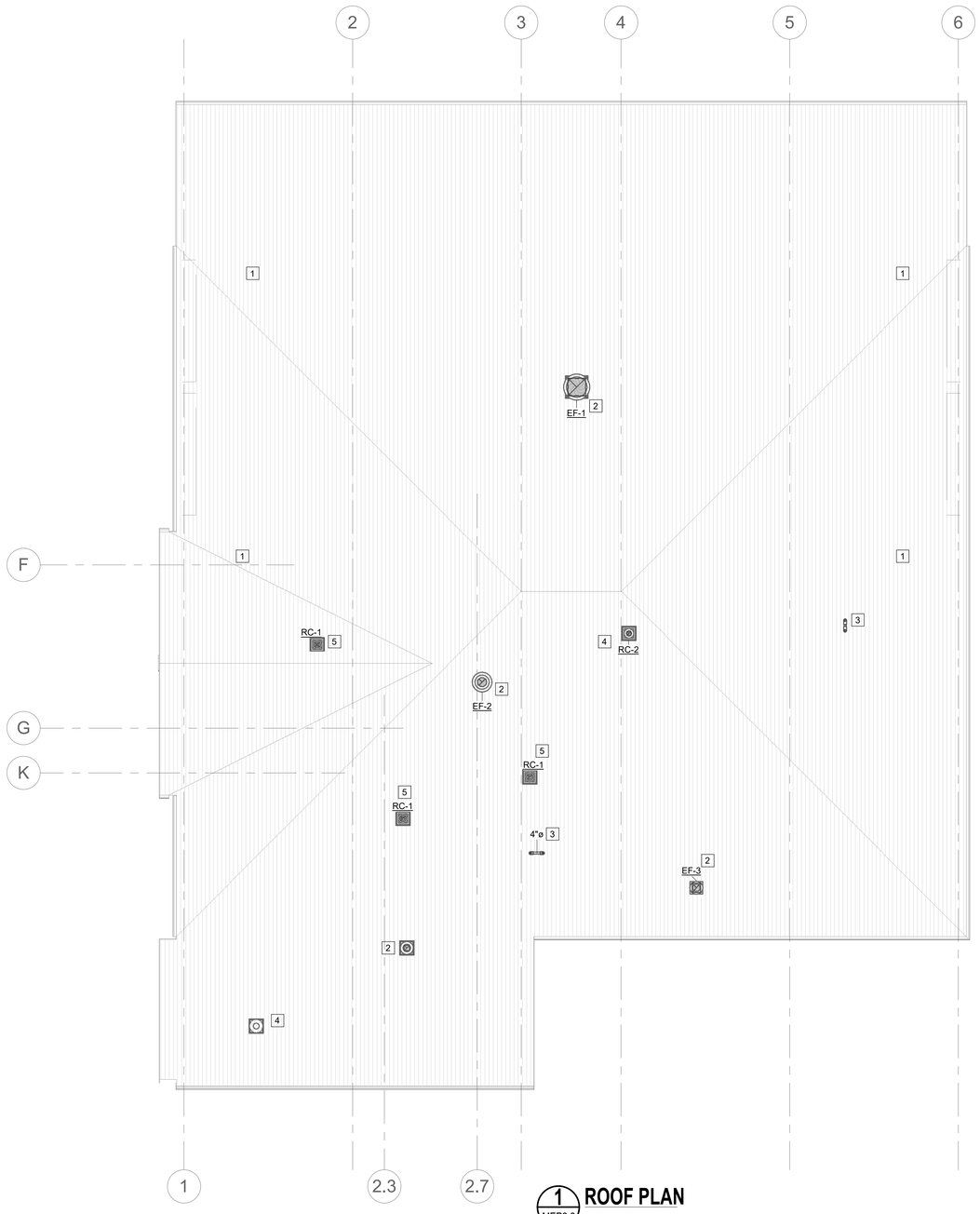
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

SHEET
MEP2.1
OF



1 MEP2.2 **ROOF PLAN**
1/8" = 1'-0"

GENERAL MECHANICAL NOTES - M1.0

A. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION OF EQUIPMENT, DUCTS, AND GRILLES ETC. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS THAT COMPLETE MECHANICAL SYSTEMS BE FURNISHED, INSTALLED, TESTED AND READY FOR OPERATION WHETHER OR NOT EVERY ITEM OF EQUIPMENT, ACCESSORY, DEVICE, ETC. IS SHOWN. REFERENCE SHALL BE MADE TO THE FULL DRAWING PACKAGE INCLUDING ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR COORDINATION AND POTENTIAL CONFLICTS. THE MECHANICAL SUBCONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICTS WITH OTHER TRADES, OR FOR PROPER EXECUTION OF THE WORK. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATING DUCTWORK.

B. DUCT DIMENSIONS INDICATED ON DRAWINGS ARE CLEAR INSIDE AIR STREAM DIMENSIONS.

C. ALL NEW A/C EQUIPMENT SHALL BE CLEANED AFTER THE FINISHING OF DRYWALL AND PRIOR TO THE RELEASE OF BUILDING TO OWNER. MECHANICAL CONTRACTOR TO PROVIDE DOCUMENTATION WITH DATE AND TIME OF UNIT CLEANING.

D. UPON THE COMPLETION OF THE MODIFICATIONS OF THE EXISTING HVAC SYSTEMS, COMPLETE TESTING, ADJUSTING, AND BALANCING OF THE AIR AND HYDRONIC SYSTEMS SHALL BE PERFORMED.

F. PROVIDE DUCT-MOUNTED SMOKE DETECTOR IN RETURN DUCT FOR ROOF TOP UNITS SUPPLYING 2000 CFM AND GREATER.

KEYED MECHANICAL NOTES - M1.0

1 PROVIDE FLUE PIPE AND VENT AS PER MANUFACTURES RECOMMENDATION.

2 PROVIDE ROOF MOUNTED EXHAUST FANS AS SCHEDULED.

3 APPROXIMATE LOCATION FOR DRYER VENT.

4 PROVIDE ROOF CURB AND CAP FOR BUNKER EXHAUST FAN. SIMILAR TO COOK MODEL PR-8.

5 PROVIDE ROOF CURB AND CAP FOR OUTSIDE AIR INTAKE. SIMILAR TO COOK MODEL PR-12.

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28,2019

ISSUED FOR BID

SHEET
MEP2.2
OF

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

ABBREVIATIONS (NOT ALL ITEMS INDICATED APPLY TO THIS PROJECT)

A

A	AIR (COMPRESSED)
ABV	ABOVE
A/C	AIR CONDITIONING
AC	ALTERNATING CURRENT AIR COMPRESSOR
ACCH	AIR COOLED CHILLER
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR, AREA DRAIN
ADJ	ADJUSTABLE
AF	AIR FILTER
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMB	AMBIENT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARI	AMERICAN REFRIGERANT INSTITUTE
ARCH	ARCHITECT, ARCHITECTURAL
AS	AIR SEPARATOR
ASHRAE	AMERICAN SOCIETY OF HEATING AND REFRIGERATION ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AV	ACID VENT, AIR VENT
AVG	AVERAGE
AWS	AMERICAN WELDING SOCIETY
AUX	AUXILIARY

B

B	BOILER
BC	BELOW COUNTER
B/C	BACK OF CURB
BFV	BUTTERFLY VALVE
BH	BOX HYDRANT
BLDG	BUILDING
BM	BENCHMARK
BOF	BOTTOM OF FOOTING
BOS	BOTTOM OF STRUCTURE
BT	BATH TUB, BREAK TANK
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BWV	BACK WATER VALVE

C

C	CELSIUS
CAB	CABINET
CB	CATCH BASIN
CD	CONDENSATE DRAIN LINE
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CH	CHILLER
CHW	CHILLED WATER
CHWP	CHILLED WATER PUMP
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CIRC	CIRCULATING
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CPI	CAST IRON PIPE INSTITUTE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CO	CLEAN OUT
COL	COLUMN
COMB	COMBINATION
COMP	COMPRESSOR
CON	CONVERTER
CONC	CONCRETE, CONCENTRIC
COND	CONDENSER, CONDENSATE
CONN	CONNECTION
CONT	CONTINOUS, CONTINUATION
CONTR	CONTROLLER, CONTRACTOR
CRAC	COMPUTER ROOM A/C UNIT
CRT	CATHODE RAY TUBE
CT	COOLING TOWER
CTR	CENTER
CU	COPPER
CW	COLD WATER
CWP	CONDENSER WATER PUMP
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY

D

D	DEPTH, DRAIN, DRYER
DB	DRY BULB
DC	DOUBLE DUCT CONSTANT VOLUME, DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DESIG	DESIGNATION
DTL	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DISC	DISCONNECT
DN	DOWN
DPR	DAMPER
DS	DOWNSPOUT, DOUBLE SUCTION
DV	DOUBLE DUCT VAV
DW	DISHWASHER
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWP	DOMESTIC WATER PUMP
DX	DIRECT EXPANSION

E

EA	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EDB	ENTERING DRY BULB
EDF	ELECTRIC DRINKING FOUNTAIN
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EFF	EFFICIENCY
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR EMERGENCY ENCLOSURE
EMERG	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
ES	END SUCTION, EMERGENCY SHOWER
ESP	EXTERNAL STATIC PRESSURE EXPANSION TANK
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EVAP	EVAPORATOR
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EX	EXPLOSION-PROOF
EXT	EXTERNAL
EXTG	EXISTING

F

F	FAHRENHEIT, FIRE
FBO	FURNISHED BY OTHERS
FCO	FLOOR CLEAN OUT
FCS	FLOOR CONTROL STATION
FCU	FAN COIL UNIT
FD	FLOOR DRAIN, FIRE DAMPER
FDS	FIRE DEPARTMENT SIAMESE
FDV	FIRE DEPARTMENT VALVE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FL	FLOW LINES
FLR	FLOOR
FP	FIRE PUMP
FPT	FAN POWERED TERMINAL
FRZR	FREEZER
FS	FLOW SWITCH, FIRE SPRINKLER
FSK	FLOOR SINK
FT	FOOT, FEET
FUT	FUTURE

G

G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GLV	GLOBE VALVE
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GSH	GRAND SENSIBLE HEAT
GTH	GRAND TOTAL HEAT
GV	GATE VALVE

H

HB	HOSE BIBB
HD	HEAD, HUB DRAIN
HE	HEAT EXCHANGER
HF	HUMIDIFIER
HORIZ	HORIZONTAL
HP	HORSEPOWER, HALON PANEL
HPU	HEAT PUMP UNIT
HKP	HOUSEKEEPING PAD
HSC	HORIZONTAL SPLIT CASE
HSTAT	HUMIDISTAT
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HWC	HOT WATER CIRCULATOR
HWP	HEATING WATER PUMP
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	HERTZ

I

ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IH	INFRARED HEATER
IN	INCH
INSUL	INSULATION
INT	INTERNAL, INTERIOR
IW	INDIRECT WASTE

J

JB	JUNCTION BOX
JP	JOCKEY PUMP

K

KEC	KITCHEN EQUIPMENT CONTRACTOR
KO	KNOCKOUT
KVA	KILOVOLT- AMPS
KW	KILOWATT

L

L	LENGTH, LAVATORY
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LF	LINEAR FEET
LP	LOW PRESSURE
LRA	LOCKED ROTOR AMPS
LVL	LEVEL
LWB	LEAVING WET BULB
LWCO	LOW WATER CUT OFF
LWT	LEAVING WATER TEMPERATURE

M

MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBTUH	THOUSAND OF BTU'S
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MI	MALLEABLE IRON
MIN	MINIMUM
MP	MEDIUM PRESSURE
MS	MOP SINK
MTD	MOUNTED
MU	MAKE-UP
MVD	MANUAL VOLUME DAMPER

N

N.C.	NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE

O

OA	OUTSIDE AIR
OAF	OUTSIDE AIR FAN
OAHU	OUTSIDE AIR HANDLING UNIT
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER, OVERFLOW DRAIN
OFCU	OUTSIDE AIR FAN COIL UNIT
OPG	OPENING
OS&Y	OPEN STEM AND YOLK M0.0

P

P	PUMP, PLUMBING EQUIPMENT
PC	PLUMBING CONTRACTOR
PCR	PUMPED CONDENSATE RETURN
PD	PRESSURE DROP, PLANTER DRAIN
PH	PHASE, POST HYDRANT
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PNEU	PNEUMATIC
PNL	PANEL
PNTH	PENTHOUSE
PP	POLYPROPYLENE
PPM	PART PER MILLION
PRI	PRIMARY
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	PLUMBING TRIM
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE

Q

QTY	QUANTITY

R

RA	RETURN AIR
RAD	REFRIGERATED AIR DRYER
RAF	RETURN AIR FAN
RAG	RETURN AIR GRILL
RAT	RETURN AIR TEMPERATURE
RCP	REFLECTED CEILING PLAN, REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RE	REFERENCE, REFER
RECIRC	RECIRCULATE
RED	REDUCER
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCING
REQD	REQUIRED
REV	REVISION, REVSE
RH	RELATIVE HUMIDITY
RHG	REFRIGERANT HOT GAS
RKVA	RUNNING KILOVOLT-AMPS
RKW	RUNNING KILOWATTS
RL	REFRIGERANT LIQUID
RLA	RUNNING LOAD AMPS
RM	ROOM, REFRIGERATION MACHINE
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
RV	RELIEF VALVE

S

S	STEAM
SA	SUPPLY AIR
SAF	SUPPLY AIR FAN
SAG	SUPPLY AIR GRILLE
SAN	SANITARY SEWER
SAR	SUPPLY AIR REGISTER
SC	STEAM CONDENSATE
SCHED	SCHEDULED
SCR	SILICON CONTROLLED RECTIFIER
SD	STORM DRAIN
SE	SEWAGE EJECTOR
SEC	SECONDARY
SECT	SECTION
SENS	SENSIBLE
SF	SQUARE FEET
SFCS	SPRINKLER FLOOR CONTROL STATION
SH	SHOWER
SHT	SHEET
SIM	SIMILAR
SK	SINK
SKVA	STARTING KILOVOLT-AMPS
SKW	STARTING KILOWATTS
SM	SHEETMETAL
SP	SUMP PUMP, STATIC PRESSURE
SPEC	SPECIFICATION
SPR	SPRINKLER
SQ	SQUARE
SS	SERVICE SINK
SSD	SUBSURFACE DRAIN
SSFU	SANITARY SEWER FIXTURE UNITS
SSSC	SOLID STATE SPEED CONTROL
STD	STANDARD
STL	STEEL
STR	STRAINER
SURF	SURFACE
SUSP	SUSPEND
SV	SANITARY VENT

T

TC	TEMPERATURE CONTROL
TCC	TEMPERATURE CONTROL COMPRESSOR
TD	TRENCH DRAIN
TF	TRANSFER FAN
TDH	TOTAL DYNAMIC HEAD
TH BLK	THRUST BLOCK
TP	TRAP PRIMER
TPD	TRAP PRIMER DEVICE
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TYP	TYPICAL

U

U	URINAL
UCD	UNDER CUT DOOR
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
U/F	UNDERFLOOR
U/S	UNDERSLAB

V

V	VOLT, VENT
VA	VOLT- AMPERE
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VALVE BOX, VACUUM BREAKER
VCP	VITRIFIED CLAY PIPE
VD	VOLUME DAMPER
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIB	VALVE IN BOX
VOV	VALVE ON VERTICAL
VP	VACUUM PUMP
VR	VARIABLE AIR VOLUME REHEAT
VTR	VENT THRU ROOF

W

W	WATT, WASTE, WIDTH, WASHER
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WH	WALL HYDRANT
WM	WATER METER
WP	WEATHERPROOF
WPD	WATER PRESSURE DROP
WWF	WELDED WIRE FABRIC
WT	WATERTIGHT, WEIGHT

Y

Y	YARD HYDRANT

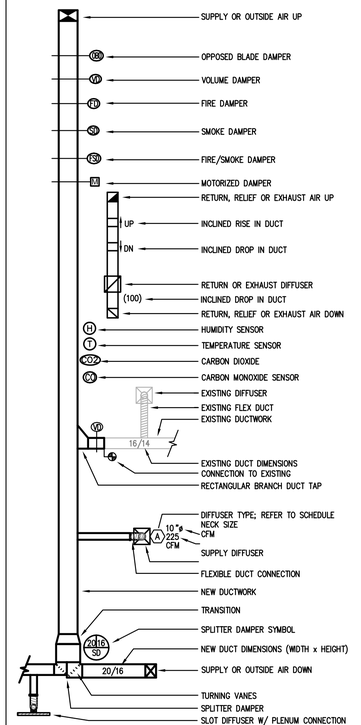
Z

Z	ZONE

MECHANICAL PIPING SYMBOLS

CWS	CONDENSER WATER SUPPLY		STRAINER WITH BLOW DOWN VALVE
CWR	CONDENSER WATER RETURN		GATE VALVE, HVAC BALANCING/STOP VALVE
CHS	CHILLED WATER SUPPLY		GLOBE VALVE
CHR	CHILLED WATER RETURN		BALL VALVE
CD	CONDENSATE DRAIN LINE		BALANCING VALVE WITH DIFFERENTIAL PRESSURE TAPS
	CAP ON END OF PIPE		OS&Y VALVE
	ELBOW UP		CHECK VALVE
	ELBOW DOWN		BUTTERFLY VALVE
	VALVE IN DROP		TWO-WAY MODULATING CONTROL VALVE
	VALVE IN RISE		THREE-WAY MODULATING CONTROL VALVE
	DIRECTION OF FLOW		SOLENOID VALVE
	DIRECTION OF SLOPE DOWN		PRESSURE REDUCING VALVE
	CONCENTRIC REDUCER		GAS REGULATOR
	ECCENTRIC REDUCER		GAS COCK
	TEE OUTLET UP	FCS	SPRINKLER FLOOR CONTROL STATION
	TEE OUTLET DOWN		MANUAL AIR VENT
	UNION		AUTOMATIC AIR VENT
	FLANGE		T&P RELIEF VALVE
	PIPE ANCHOR		PRESSURE GAUGE WITH GAUGE COCK
	EXPANSION JOINT		STEAM TRAP
	PRESSURE AND TEMPERATURE TAP		WATER METER
	FLOW VENTURI		FLEXIBLE CONNECTION
	VACUUM BREAKER		
	VACUUM RELIEF VALVE		
	BACKFLOW PREVENTOR		
	THERMOMETER		
	CIRCULATING PUMP		

DUCTWORK SYMBOLS - NEW



1 M0.0 **MECHANICAL LEGEND**

NOT TO SCALE

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

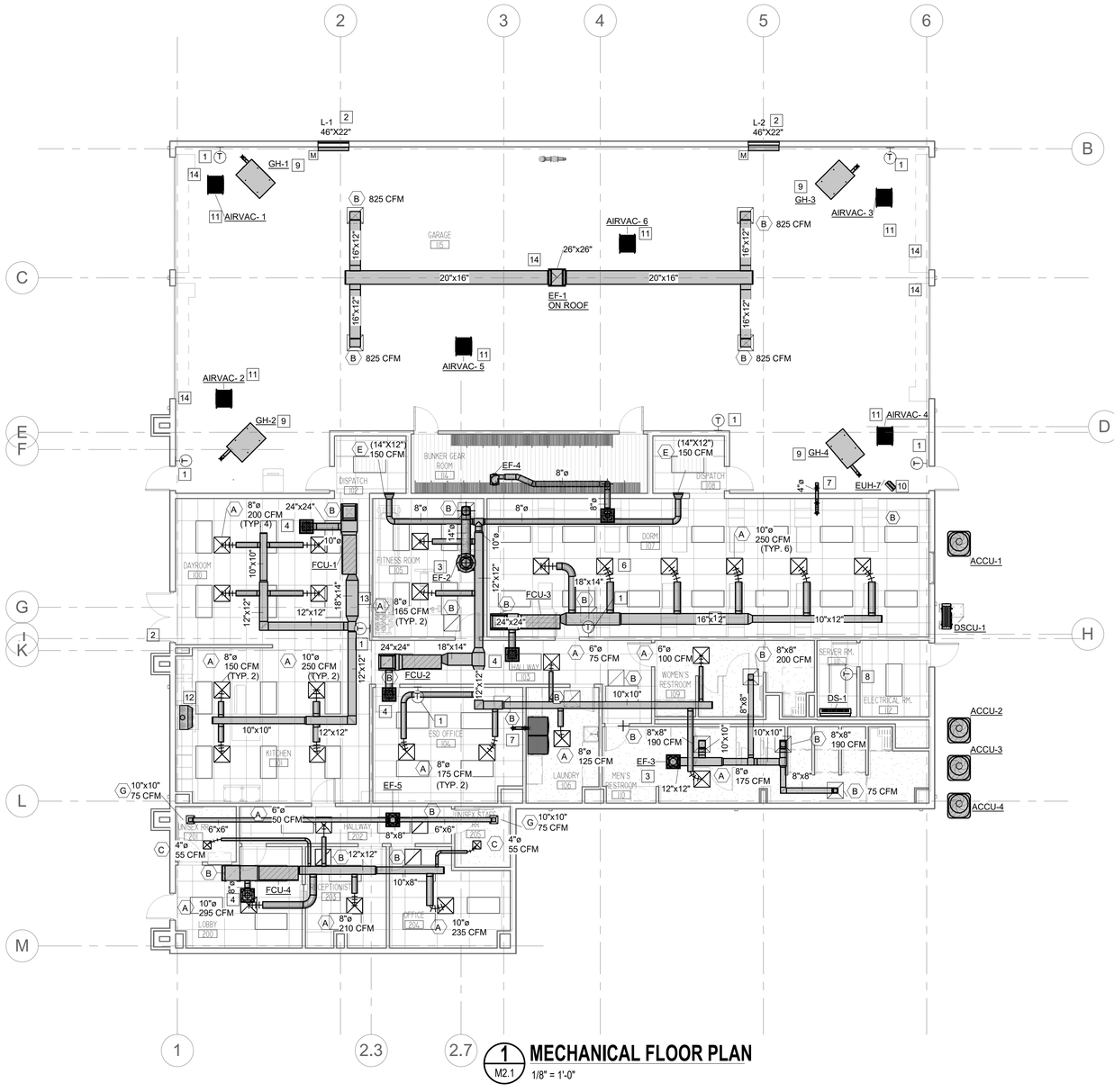
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

SHEET
M0.0
OF



1 M2.1 **MECHANICAL FLOOR PLAN**

1/8" = 1'-0"

GENERAL MECHANICAL NOTES - M1.0

A. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION OF EQUIPMENT, DUCTS, AND GRILLES ETC. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS THAT COMPLETE MECHANICAL SYSTEMS BE FURNISHED, INSTALLED, TESTED AND READY FOR OPERATION WHETHER OR NOT EVERY ITEM OF EQUIPMENT, ACCESSORY, DEVICE, ETC. IS SHOWN. REFERENCE SHALL BE MADE TO THE FULL DRAWING PACKAGE INCLUDING ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR COORDINATION AND POTENTIAL CONFLICTS. THE MECHANICAL SUBCONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICTS WITH OTHER TRADES, OR FOR PROPER EXECUTION OF THE WORK. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATING DUCTWORK.

B. DUCT DIMENSIONS INDICATED ON DRAWINGS ARE CLEAR INSIDE AIR STREAM DIMENSIONS.

C. ALL NEW A/C EQUIPMENT SHALL BE CLEANED AFTER THE FINISHING OF DRYWALL AND PRIOR TO THE RELEASE OF BUILDING TO OWNER. MECHANICAL CONTRACTOR TO PROVIDE DOCUMENTATION WITH DATE AND TIME OF UNIT CLEANING.

D. UPON THE COMPLETION OF THE MODIFICATIONS OF THE EXISTING HVAC SYSTEMS, COMPLETE TESTING, ADJUSTING, AND BALANCING OF THE AIR AND HYDRONIC SYSTEMS SHALL BE PERFORMED.

KEYED MECHANICAL NOTES - M1.0

1 PROVIDE THERMOSTAT AND MOUNT 48" A.F.F. PROVIDE PROTECTIVE COVER. TYPICAL.

2 INSTALL LOUVER AS HIGH AS POSSIBLE. COORDINATE EXACT LOCATION WITH ARCHITECT. LOUVERS SHALL HAVE A MOTORIZED DAMPER INTERLOCKED WITH EF-1. DAMPERS SHALL OPEN WHEN FAN IS ACTIVATED. COORDINATE COLOR WITH ARCHITECT PRIOR TO INSTALLATION. REFER TO DETAIL SHEET M4.01.

3 PROVIDE ROOF MOUNTED EXHAUST FANS AS SCHEDULED. COORDINATE ROOF CURB WITH TYPE AND PITCH PRIOR TO ORDERING AND INSTALLATION. REFER TO DETAILS

4 PROVIDE 10" OUTSIDE AIR DUCT FROM ROOF CAP. CONNECT DUCT TO RETURN DUCT. PROVIDE OBD AND MOTORIZED DAMPER INTERLOCKED WITH UNIT.

5 PROVIDE DUCTLESS SPLIT SYSTEM AS ON SCHEDULE. INDOOR UNIT SHALL BE MOUNTED ON WALL WHERE INDICATED AS HIGH AS POSSIBLE. ROUTE REFRIGERANT PIPING CONCEALED ABOVE CEILING THROUGH THE ROOF WHERE THE CONDENSING UNIT IS MOUNTED. CONTRACTOR SHALL VERIFY EXACT REFRIGERANT PIPE ROUTING PRIOR TO ORDERING. PROVIDE 3/4" CONDENSATE DRAIN PIPE FROM INDOOR UNIT TO ADJACENT ROOM. PIPE SHALL BE ROUTE IN A NEAT AN DIRECT MANOR, FASTENED TO WALL TERMINATE 3/4" DRAIN 6" ABOVE TOP OF MOP SINK. VERIFY EXACT LOCATION OF MOP SINK.

6 FOR ALL SPIRAL DUCT, GRILLES SHALL BE POINTING DOWN FROM HORIZONTAL POSITION 45 DEGREES. SPIRAL DUCT SHALL BE MOUNTED TIGHT TO STRUCTURE. SPIRAL DUCT SHALL BE PREP FOR PAINTING. COORDINATE DUCT COLOR WITH ARCHITECT.

7 ROUTE 4" DRYER VENT FROM DRYER UP THROUGH WALL THROUGH ROOF. CONTRACTOR SHALL VERIFY DRYER VENT SIZE WITH DRYER MANUFACTURER PRIOR TO PURCHASE/INSTALLATION. RE: DETAIL SHEET M4.01.

8 PROVIDE STAND ALONE HVAC CONTROLS PANELS. COORDINATE WITH ELECTRICAL AND CONTROLS CONTRACTOR PRIOR TO INSTALLATION.

9 INSTALL GAS UNIT HEATERS AS HIGH AS POSSIBLE AND AT A SLIGHT ANGLE DOWNWARD. HEATERS SHALL BE CONNECTED TO TSTATS WHICH WILL CONTROL WHEN THEY ARE ACTIVATED. TYPICAL FOR BAY. PROVIDE FLUE DUCT AND FLUE CAP. COORDINATE EXACT SIZE OF DUCT AND CAP BASED ON MANUFACTURES RECOMMENDATIONS.

10 INSTALL ELECTRIC UNIT HEATER IN RISER ROOM AND INTERLOCK WITH TSTAT FOR FREEZE PROTECTION.

11 PROVIDE AIRVAC911 SYSTEMS (QTY.6) AND INSTALL AS PER MANUFACTURES RECOMMENDATIONS. UNITS SHALL BE MODEL AIRVAC 911 EXHAUST REMOVAL SYSTEM WITH FILTER PACK, FILTER GAUGE, AVEC-8C/T3 CONTROL PANEL, ACTIVATION PACKAGE AND PRE FILTERS. COORDINATE FINAL LOCATION OF CONTROL PANEL WITH OWNER/ARCHITECT. CONTACT AIR VACUUM CORPORATION AT 1-800-540-7264 .

12 PROVIDE KITCHEN HOOD BY DENLAR FIRE PROTECTION HOOD MODEL D1036-I. 36" STAINLESS STEEL HOOD WITH FIRE SUPPRESSION SYSTEM AND INLINE FAN WITH ROOF CAP. INTERLOCK TO FACP AND FIRE SUPPRESSION SYSTEM SHALL BE PREINSTALLED WITH ALL CUTOFF/SHUT OFF VALUES. CONTACT TEXAS AIR PRODUCT AT 1-800-580-8100.

13 RETURN AND EXHAUST DUCTS SHALL HAVE AN ELBOW AND THE OPENINGS SHALL BE COVERED IN MECHANICAL MESH. SIZES ON PLAN. KEEP DUCTWORK IN STRUCTURE AND NOT BELOW.

14 EXHAUST FAN EF-1 SHALL BE INTERLOCKED WITH CARBON MONOXIDE SENSORS TO ACTIVATE EXHAUST FAN. FAN SHALL HAVE A MOTOR CONTROLLER/STARTER. COORDINATE EXACT LOCATION WHERE SENSOR SHALL BE INSTALLED AND THE MOTOR STARTER WITH OWNER AND ARCHITECT.

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

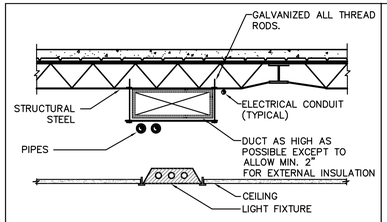
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER 219003

DATE FEBRUARY 28,2019

ISSUED FOR BID

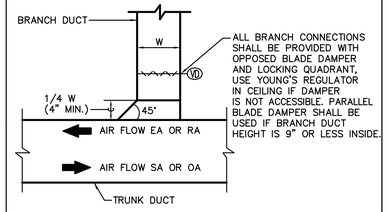
SHEET M2.1 OF



NOTES:

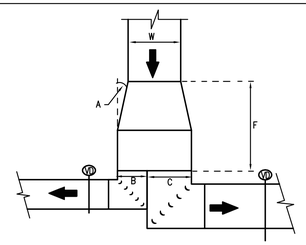
1. PIPES (INCLUDING SPRINKLER PIPING) AND ELECTRICAL CONDUIT CAN BE ROUTED BETWEEN JOISTS OR THROUGH JOIST WEB SPACE AS REQUIRED. DUCT SHALL BE LOCATED AS HIGH AS POSSIBLE.
2. U.L. DESIGN ASSEMBLY NUMBERS ARE SHOWN ON ARCHITECTURAL PLANS WHEN REQUIRED.
3. INSTALLATION OF ALL SERVICES MUST BE COORDINATED BY THE CONTRACTOR.

1 TYP. MEP INSTALLATION DETAIL
NOT TO SCALE



NOTE: THIS CONNECTION SHALL BE TYPICAL FOR ALL RECTANGULAR BRANCH DUCT CONNECTIONS TO RECTANGULAR TRUNK DUCTS, INCLUDING SUPPLY, RETURN, OUTSIDE AIR AND EXHAUST DUCTS.

2 RECTANGULAR BRANCH DUCT TAP
NOT TO SCALE

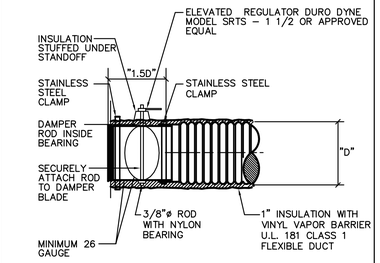


DIMENSIONAL RELATIONSHIPS

1. ANGLE "A" TO BE 15° OR LESS (BOTH SIDES)
2. SEE FLOOR PLANS FOR B, C, & W.
3. VERTICAL DIMENSION TO BE MAINTAINED THRU F.
4. CHANGE IN VERTICAL DIMENSION TO OCCUR AFTER TURNS.

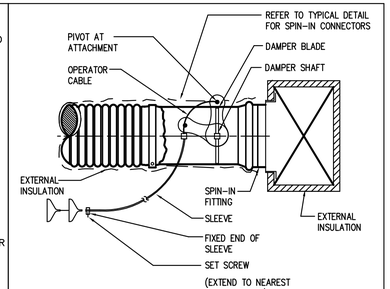
NOTE: VOLUME DAMPERS REQUIRED FOR LOW PRESSURE DUCT SYSTEMS ONLY.

3 DUCTWORK TEE DETAIL
NOT TO SCALE



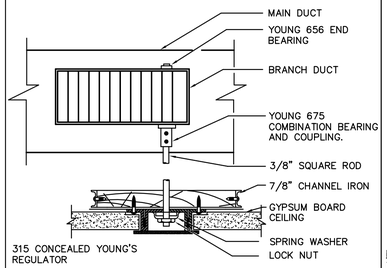
NOTE: 1. ALL FLEXIBLE DUCT OFFSETS AND BENDS SHALL MAINTAIN A RADIUS OF 1.5 X ("D") MINIMUM 3'–0" AND MAXIMUM 6'–0"
2. TYPICAL OF ROUND DUCT CONNECTIONS TO RECTANGULAR DUCTS
3. ALL JOINTS SHALL BE SEALED WITH MASTIC AND FIBER CLOTH PER SPECIFICATIONS.

4 SPIN-IN DETAIL
NOT TO SCALE

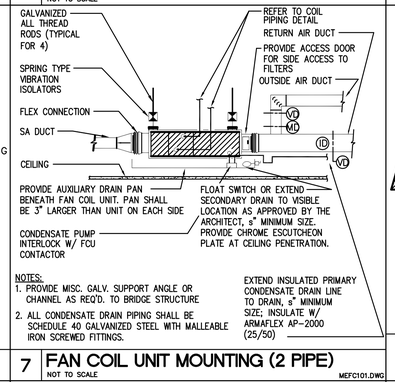


NOTE: MOUNT OPERATOR CRANK AND CABLE PLATFORM ON TOP OF EXTERNAL INSULATION AT DAMPER.

5 REMOTE SPIN-IN DAMPER OPERATOR
NOT TO SCALE



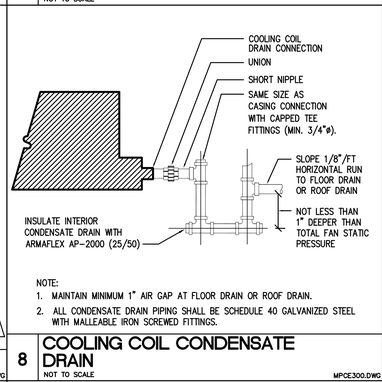
6 YOUNG'S REGULATOR OPERATOR
NOT TO SCALE



NOTES:

1. PROVIDE MISC. GALV. SUPPORT ANGLE OR CHANNEL AS REQ'D. TO BRIDGE STRUCTURE
2. ALL CONDENSATE DRAIN PIPING SHALL BE SCHEDULE 40 GALVANIZED STEEL WITH MALLEABLE IRON SCREWED FITTINGS.

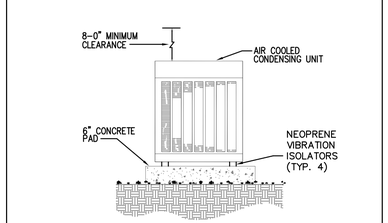
7 FAN COIL UNIT MOUNTING (2 PIPE)
NOT TO SCALE — MEFC101.DWG



NOTE:

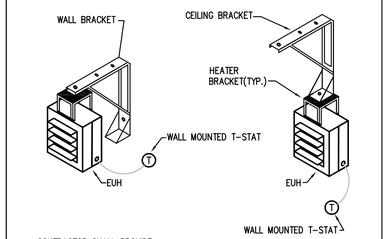
1. MAINTAIN MINIMUM 1" AIR GAP AT FLOOR DRAIN OR ROOF DRAIN.
2. ALL CONDENSATE DRAIN PIPING SHALL BE SCHEDULE 40 GALVANIZED STEEL WITH MALLEABLE IRON SCREWED FITTINGS.

8 COOLING COIL CONDENSATE DRAIN
NOT TO SCALE — MPCE300.DWG



NOTE: PROVIDE CLEARANCE AROUND UNIT FOR AIR FLOW AND SERVICE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

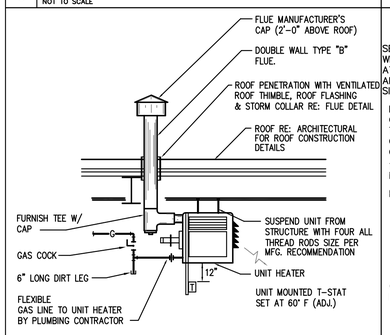
9 CONDENSING UNIT MOUNTING ON GRADE
NOT TO SCALE — MECU100.DWG



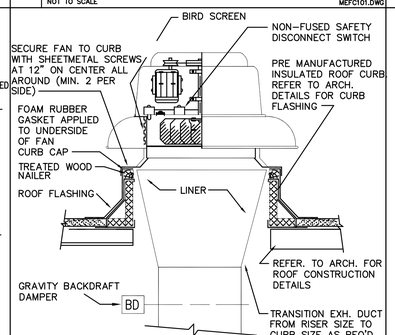
CONTRACTOR SHALL PROVIDE:

- WALL-MOUNTED THERMOSTAT
- LOW VOLTAGE CONTROL TRANSFORMER
- UNIVERSAL WALL AND CEILING-MOUNTED BRACKET
- AUTOMATIC RESET THERMAL CUT-OUT
- ADJUSTABLE DISCHARGE
- REMOTE SUMMER FAN SWITCH

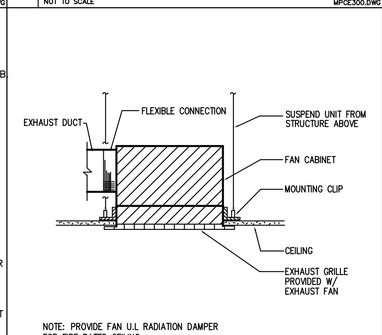
10 ELECTRIC UNIT HEATER DETAIL
NOT TO SCALE



11 GAS UNIT HEATER MOUNTING
NOT TO SCALE — MEHE400.DWG

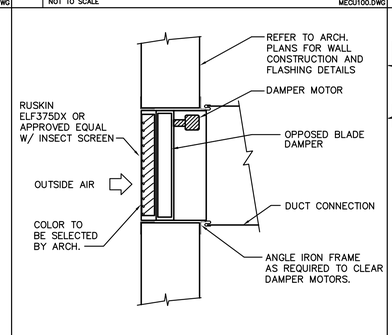


12 CENTRIFUGAL ROOF EXHAUST FAN
NOT TO SCALE — MEFA100.DWG

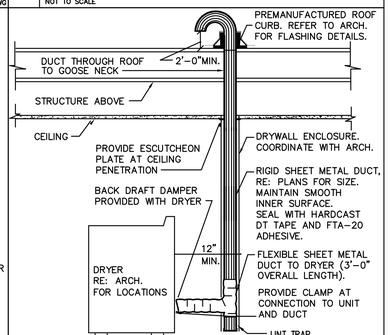


NOTE: PROVIDE FAN U.L RADIATION DAMPER FOR FIRE RATED CEILING.

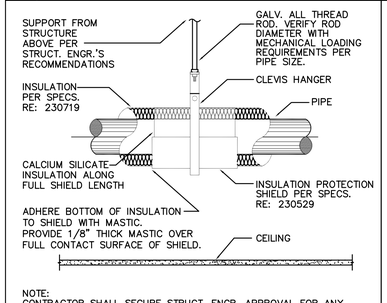
13 CEILING MOUNTED EXHAUST FAN
NOT TO SCALE



14 INTAKE LOUVER MOUNTING
NOT TO SCALE

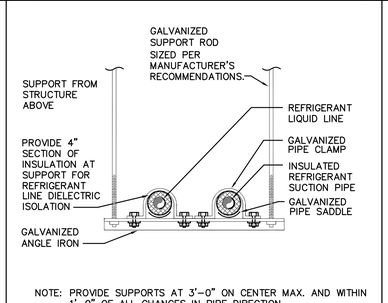


15 DRYER EXHAUST DETAIL
NOT TO SCALE — MADT200.DWG



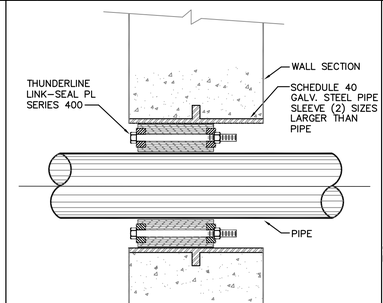
NOTE:
CONTRACTOR SHALL SECURE STRUCT. ENGR. APPROVAL FOR ANY AND ALL PIPE MOUNTING DETAILS TO CONCRETE OR STEEL STRUCTURE. CONTRACTOR SHALL CONFORM TO ALL MAXIMUM SPAN DISTANCES PER SPECIFICATIONS FOR HANGER SPACING. RE: 230529

16 PIPE HANGER DETAIL (1-PIPE)
NOT TO SCALE — MPHS102.DWG

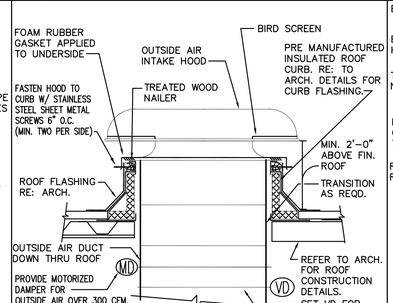


NOTE: PROVIDE SUPPORTS AT 3'–0" ON CENTER MAX. AND WITHIN 1'–0" OF ALL CHANGES IN PIPE DIRECTION.

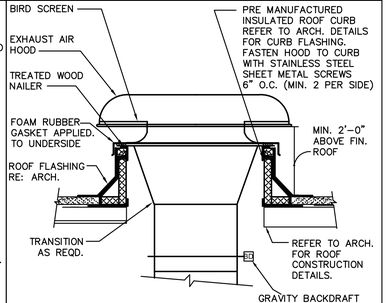
17 REFRIGERANT PIPE HANGER
NOT TO SCALE — MPRE201.DWG



18 PIPE PENETRATION BELOW GRADE
NOT TO SCALE — MPPE301.DWG



19 OUTSIDE AIR INTAKE HOOD
NOT TO SCALE — MADT103.DWG



20 EXHAUST AIR HOOD
NOT TO SCALE

1 MECHANICAL DETAILS
M4.0 — NOT TO SCALE

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

SHEET
M4.0
OF

AIR DEVICE SCHEDULE

MARK	MANUFACTURER/MODEL	TYPE	NC	REMARKS
A	TITUS/TMS-AA	24"X24" SUPPLY	25	ALUMINUM CONSTRUCTION. NECK SIZES AS INDICATED BELOW UNLESS NOTED ON PLAN.
B	TITUS/50F	24"X24" EGGCRATE RETURN	20	ALUMINUM CONSTRUCTION.EXHAUST GRILLES TO HAVE OBD'S.
C	TITUS/TMS	12"X12" SUPPLY	25	STEEL CONSTRUCTION. NECK SIZES AS INDICATED BELOW UNLESS NOTED ON PLAN.
D	TITUS/350FL	RETURN/EXHAUST GRILLES	25	ALUMINUM CONSTRUCTION. EXHAUST GRILLES TO HAVE OBD'S.
E	TITUS/300FS	SIDEWALL SUPPLY	25	ALUMINUM CONTRUCTION.
F	TITUS/TMR-AA	ROUND CONE DIFFUSER	25	ALUMINUM CONSTRUCTION. SIZE ON PLAN
G	TITUS/50F	12"X12" EGGCRATE RETURN/EXHAUST	20	ALUMINUM CONSTRUCTION.EXHAUST GRILLES TO HAVE OBD'S.

NOTES:
1. PROVIDE STANDARD WHITE FINISH FOR ALL AIR DEVICES UNLESS NOTED OTHERWISE ON PLAN.
2. PAINT ALL SURFACES VISIBLE THROUGH FACE OF RETURN AIR GRILLES FLAT BLACK. THIS SHALL INCLUDE PIPING, CONDUIT, DUCTWORK, AND STRUCTURAL MEMBERS.
3. PROVIDE FRAME FOR MOUNTING AIR DEVICE IN LAY-IN GRID CEILING UNLESS REFLECTED CEILING PLAN INDICATES HARD CEILING. IN AREAS WITH HARD CEILINGS, PROVIDE FRAMES FOR SURFACE MOUNTING.
4. UNLESS OTHERWISE NOTED, BRANCH DUCTS SERVING AIR DEVICES SHALL BE SAME SIZE AS NECK OF AIR DEVICE. FOR ROUND NECK DIFFUSERS:
   6" DIA: 0-120 CFM
   8" DIA: 125-220 CFM
   10" DIA: 225-380 CFM
   12" DIA: 385-600 CFM

GAS UNIT HEATER SCHEDULE

MARK	GH-1	GH-2	GH-3	GH-4
SERVES	BAY	BAY	BAY	BAY
CFM	770	770	770	770
GAS HEAT INPUT/OUTPUT (MBH)	60/49.8	60/49.8	60/49.8	60/49.8
VENT SIZE (IN)	4	4	4	4
MCA / MOCP	2.4 / 15	2.4 / 15	2.4 / 15	2.4 / 15
VOLTS/PHASE/HERTZ	120/1/60	120/1/60	120/1/60	120/1/60
MANUFACTURER	REZNOR	REZNOR	REZNOR	REZNOR
MODEL NO.	UDAP	UDAP	UDAP	UDAP
WEIGHT (LBS)	70	70	70	70
NOTES	1, 2	1, 2	1, 2	1, 2

NOTES:
1. WITH 24V CONTROL TRANSFORMER, REMOTE T-STAT, INTEGRATED CIRCUIT BOARD WITH DIAGNOSTIC LIGHTS, MULTI-TRY DIRECT SPARK IGNITION WITH 100% LOCKOUT, FAN RELAY, FAN GUARD, CEILING SUSPENSION KIT
2. PROVIDE WITH VENT PIPE AND APPROVED VENT CAP AS REQUIRED.

ENGINE EXHAUST REMOVAL SCHEDULE

MARK	AIRVAC - 1	AIRVAC - 2	AIRVAC - 3	AIRVAC - 4	AIRVAC - 5	AIRVAC - 6
SERVES	BAY	BAY	BAY	BAY	BAY	BAY
HP	3/4	3/4	3/4	3/4	3/4	3/4
VOLTS/PHASE/HERTZ	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60
AMPS	13 FL	13 FL	13 FL	13 FL	13 FL	13 FL
MANUFACTURER	AIRVAC	AIRVAC	AIRVAC	AIRVAC	AIRVAC	AIRVAC
SIZE (LXWXH)	26"X25"X35"	26"X25"X35"	26"X25"X35"	26"X25"X35"	26"X25"X35"	26"X25"X35"
WEIGHT (LBS)	196	196	196	196	196	196
MODEL NUMBER	AIRVAC 911	AIRVAC 911	AIRVAC 911	AIRVAC 911	AIRVAC 911	AIRVAC 911
NOTES	1	1	1	1	1	1

NOTES:
1. PROVIDE 4-STAGE FILTER PACK, FILTER GAUGE, CONTROL PANEL ACTIVATION PACKAGE WITH PHOTO EYE SET AND TRACK MOUNTED DOOR SWITCHES AND 12 EXTRA FILTERS.

DUCTLESS SPLIT SYSTEM SCHEDULE

INDOOR UNIT	MARK	DS-1	
	SERVES	IDF ROOM	
	TYPE	HIGH WALL	
	AIRFLOW (CFM)	750	
	TOTAL COOLING (MBH)	36	
	HEATING (KW)	-	
	VOLTS/PHASE/HERTZ	208-230 / 1 / 60	
	MCA	1	
	MOCP	15	
	MANUFACTURER	MITSHIBISHI	
	MODEL NUMBER	PKA-A36	
OUTDOOR UNIT	MARK	DSCU-1	
	VOLTS/PHASE/HERTZ	208-230 / 1 / 60	
	MCA	25	
	MOCP	40	
	MANUFACTURER	MITSHIBISHI	
	MODEL NUMBER	PUY-36	
NOTES:		1, 2, 3, 4	

NOTES:
1. PROVIDE REFRIGERANT PIPING IN ACCORDANCE WITH MFR'S RECOMMENDATIONS.
2. PROVIDE FULL SIZE CONDENSATE DRAIN TO NEAREST FLOOR DRAIN
3. PROVIDE WALL MOUNTED THERMOSTAT.
4. PROVIDE CONDENSATE PUMP.

ELECTRIC UNIT HEATER SCHEDULE

MARK	EUH-7	
SERVES	RISER RM	
CFM	350	
KW / STAGES	3.3 / 1	
VOLTS/PHASE/HERTZ	208/1/60	
MCA/MOCP	--/40	
MANUFACTURER	REZNOR	
MODEL NO.	EGEB	
NOTES	1	

NOTES:
1, SHALL INCLUDE FUSED CONTROL CIRCUIT, MANUAL RESET HIGH LIMIT, "FAN ONLY" SWITCH, AND WALL BRACKET AND WALL MOUNTED TSTAT.

LOUVER SCHEDULE

MARK	L-1	L-2
SERVICE	BAY	BAY
SIZE (WIDTH X HEIGHT)	42 X 22	42 X 22
CFM	1,150	1,150
MAX. FREE AREA VELOCITY (FPM)	850	850
MIN. FREE AREA (S.F.)	2.35	2.35
MAX. P.D. (IN. W.G.)	0.15	0.15
MANUFACTURER	RUSKIN	RUSKIN
MODEL NO.	EME420DD	EME420DD
NOTES	ALL	ALL

NOTES
1. WITH BIRD SCREEN
2. PERFORMANCE OF LOUVER SHALL BE VERIFIED BY AMCA PUBLICATION 511.
3. WIND DRIVEN RAIN RESISTANT LOUVER: 100% EFFECTIVE FOR 3 IN/HR RAIN WITH 29 MPH WIND.
4. COLOR BY ARCHITECT.
5. PROVIDE MOTORIZED DAMPER INTERLOCKED WITH EF-1 IN BAY. MORTORIZED DAMPERS SHALL OPEN WHEN EF-1 IS ACTIVATED.

GRAVITY HOOD SCHEDULE

MARK	IH-1	IH-2	IH-3	RH-1
SERVES	O.A	O.A	O.A	RELIEF
CFM	350	190	200	700
MAX. P.D. (IN. W.G.)	0.05	0.05	0.05	0.05
INTAKE/RELIEF	INTAKE	INTAKE	INTAKE	RELIEF
THROAT SIZE (IN.)	12"	12"	12"	16"
MANUFACTURER	COOK	COOK	COOK	COOK
MODEL NO.	PR-12	PR-12	PR-12	PR-16
NOTES	1	1	1	1, 2

NOTES:
1. PROVIDE ROOF CURB.
2. PROVIDE BAROMETRIC DAMPER SIMILAR TO RUSKIN CBD6 SET AT 0.05 IN. WG; 0.125" EXTRUDED AL FRAME; 0.070" BLADES W/ VINYL EDGE SEALS.

DX SPLIT SYSTEM SCHEDULE (ELECTRIC HEAT)

			FCU-1	FCU-2	FCU-3	FCU-4
INDOOR UNIT	GENERAL	MARK				
		SUPPLY AIR (CFM)	1,500	1,550	1,500	900
		OUTSIDE AIR (CFM)	350	190	200	105
		EXT. SP. (IN W.G.)	0.7	0.7	0.7	0.7
		FAN MOTOR HORSEPOWER	1	1	1	0.5
		BELT/DIRECT DRIVE	DIRECT	DIRECT	DIRECT	DIRECT
	COOLING COIL	TOTAL COOLING (MBH)	56.7	56.7	56.7	33.4
		SENSIBLE COOLING (MBH)	46.0	46.0	46.0	28.9
		ENTERING AIR TEMP. DB/WB (F)	80/64.8	80/64.8	80/64.8	83/65
		LEAVING AIR TEMP. DB/WB (F)	55.8/54.4	55.8/54.4	55.8/54.4	52.4/51.8
	HEATING	TOTAL HEATING (KW) / STAGES	12.5/1	12.5/1	12.5/1	8/1
		ENTERING AIR TEMP. DB (F)	68	68	68	64
		LEAVING AIR TEMP. DB (F)	86.6	86.6	86.6	85
	ELECTRIC	VOLTS/PHASE/HERTZ	208/1	208/1	208/1	208/1
		MCA	66	66	66	41
		MOCP	70	70	70	45
	BASIS	MANUFACTURER	LENNOX	LENNOX	LENNOX	LENNOX
		MODEL	CBA27UHE-060-230	CBA27UHE-060-230	CBA27UHE-060-230	CBA27UHE-036-230
		NOMINAL TONS	5	5	5	3
		WEIGHT (LBS)	199	199	199	150
		NOTES	4, 5, 7	4, 5, 7	4, 5, 7	4, 5, 7
CONDENSING UNIT	GENERAL	MARK	ACCU-1	ACCU-2	ACCU-3	ACCU-4
		STEPS OF CAPACITY	2	2	2	2
		SEER/EER (ARI)	15.1	15.1	15.1	15
		AMBIENT AIR	100	100	100	100
	ELECTRIC	VOLTS/PHASE/HERTZ	208/1	208/1	208/1	208/1
		MCA	35.7	35.7	35.7	20.8
		MOCP	50	50	50	30
	BASIS	MANUFACTURER	LENNOX	LENNOX	LENNOX	LENNOX
		MODEL	16ACX-060-230	16ACX-060-230	16ACX-060-230	16ACX-036-230
		NOMINAL TONS	5	5	5	3
		WEIGHT (LBS)	280	280	280	243
		NOTES	1, 2, 3, 6	1, 2, 3, 6	1, 2, 3,6	1, 2, 3,6

NOTES:
1. PROVIDE CONDENSER COIL HAIL GUARDS.
2. PROVIDE LOW AMBIENT CONTROL TO 30F.
3. PROVIDE REFRIGERANT PIPING IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. PROVIDE SINGLE POINT ELECTRICAL CONNECTION.
5. PROVIDE FACTORY TSTAT WITH HUMIDITY RELAY KIT FOR IMPROVED HUMIDITY CONTROL.
6. PROVIDE FACTORY APPROVED CONDENSER COATING PROVIDING 5,000 HOUR SALT SPRAY RESISTANCE PER ASTM B117-90.
7. PROVIDE SECONDARY DRAIN PAN WITH FLOAT SWITCH.

FAN SCHEDULE

MARK	EF-1	EF-2	EF-3	EF-4	EF-5
SERVES	GARAGE	FITNESS	LOCKER RM	UNIFORM RM	UNISEX RR'S
CFM	3,300	150	600	200	150
E.S.P. (IN W.G.)	0.5	0.375	0.375	0.375	0.375
TYPE	ROOF	ROOF	ROOF	CEILING	ROOF
DIRECT/BELT DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
FAN RPM	1,075	1,550	1,550	1,400	1,550
MOTOR HORSEPOWER	3/4	1/8	1/8	168 W	1/8
VOLTS/PHASE/HERTZ	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60
WEIGHT	155	51	54	17	51
MANUFACTURER	COOK	COOK	COOK	COOK	COOK
MODEL NO.	ACE-D	ACE-D	ACE-D	GC-182	ACE-D
NOTES	1, 2, 3	1, 2	1, 2	1	1, 2

NOTES:
1. PROVIDE WITH SPEED CONTROLLER, FACTORY MOUNTED DISCONNECT, AND BACKDRAFT DAMPER.
2. PROVIDE ROOF CURB FOR TYPE AND SLOPE OF ROOF. COORDINATE WARRANTY ISSUES WITH ROOFING CONTRACTOR.
3. INTERLOCK EXHAUST FAN WITH CARBON MONOXIDE SENSOR. INTERLOCK WITH MOTORIZED DAMPER ON LOUVERS TO OPEN WHEN FAN IS ACTIVATED. PROVIDE MOTOR SPEED CONTROL. EXHAUST FAN SHALL ENERGIZE WHEN CARBON MONOXIDE DETECTS A CONCENTRATION OF 50 PPM.

1 M5.0 **MECHANICAL SCHEDULES**
NOT TO SCALE

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

SHEET
M5.0
OF

ABBREVIATIONS

A

A	AMPERES
ABV	ABOVE
A/C	AIR CONDITIONING
AC	ALTERNATING CURRENT, AIR COMPRESSOR, ABOVE COUNTER
ACC	AIR COOLED CHILLER
ACCU	AIR COOLED CHILLER UNIT
AD	ACCESS DOOR
ADA	AMERICANS WITH DISABILITIES ACT
AF	AMPERE FUSE, AMPERE FRAME
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPT CAPACITY
AL	ALUMINUM
AM	AMMETER
AMP	AMPLIFIER
ANN	ANNUNCIATOR
AP	ACCESS PANEL, ALARM PANEL
ARCH	ARCHITECT, ARCHITECTURAL
ASC	AMPERES SHORT CIRCUIT
AT	AMPERE TRIP RATING
ATS	AUTOMATIC TRANSFER SWITCH
AVG	AVERAGE
AUX	AUXILIARY
AWG	AMERICAN WIRE GUAGE

B

BC	BELOW COUNTER
BKR	BREAKER
BLDG	BUILDING

C

C	CONDUIT, CELSIUS
CATV	CABLE TELEVISION SYSTEM
CCTV	CLOSED CIRCUIT TELEVISION
CWP	CONDENSER WATER PUMP
CH	CHILLER
CHP	CHILLED WATER PUMP
CIRC	CIRCULATING
CKT	CIRCUIT
CL	CENTERLINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS, CONTINUATION
CONTR	CONTROLLER, CONTRACTOR
CP	CIRCULATING PUMP
CPUC	CPU CHILLER
CRU	CONDENSATE RETURN UNIT
CT	CURRENT TRANSFORMER, COOLING TOWER
CTR	CENTER
CU	COPPER

D

dB	DECIBEL
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DTL	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DISC	DISCONNECT
DN	DOWN
DP	DISTRIBUTION PANEL
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DR	DROPPED RECEPTACLE
DW	DISHWASHER
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWP	DOMESTIC WATER PUMP
DXFC	DX FAN COIL UNIT

E

(E)	EXISTING
EA	EACH
EC	ELECTRICAL CONTRACTOR
E.C.	EMPTY CONDUIT
EDF	ELECTRIC DRINKING FOUNTAIN
EF	EXHAUST FAN
EFF	EFFICIENCY
EHC	ELECTRIC HEATING COIL
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
ENCL	ENCLOSURE
ENGR	ENGINEER
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
(ER)	EXISTING TO REMAIN
EUH	ELECTRIC UNIT HEATER
EWH	ELECTRIC WATER HEATER
EXH	EXHAUST

F

F	FAHRENHEIT, FAN, FIRE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FLUOR	FLUORESCENT
FP	FIRE PUMP, FAN POWERED
FPTB	FAN POWERED TERMINAL BOX
FRZR	FREEZER
FS	FUSED SWITCH, FLOW SWITCH
FSD	MOTORIZED FIRE SMOKE DAMPER
FT	FOOT, FEET
FTL	FEED-THRU LUGS
FUT	FUTURE
FVNR	FULL VOLTAGE, NON-REVERSING

G

GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GUH	GAS UNIT HEATER

H

HACR	HEATING, AIR CONDITIONING RATED CIRCUIT BREAKER
HD	ELECTRIC HAND DRYER
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HS	HAND SET
HSC	HAND SCANNER
HTG	HEATING
HTR	HEATER
GUH	HOT WATER/GAS UNIT HEATER
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HVU	HEATING/VENTILATING UNIT
HWB	HOT WATER BOILER
HWC	HOT WATER CIRCULATOR
HWP	HEATING WATER PUMP
HZ	HERTZ

I

ID	INSIDE DIAMETER
IG	ISOLATED GROUND
IN	INCH
INCAND	INCANDESCENT
INT	INTERNAL, INTERIOR

J,K,L

JB	JUNCTION BOX
JP	JOCKEY PUMP
KEC	KITCHEN EQUIPMENT
KO	CONTRACTOR KNOCKOUT
KVA	KILO-VOLT AMPS
KW	KILOWATT
KWH	KILOWATT-HOUR
LF	LINEAR FEET
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE TRANSFORMER
LVL	LEVEL

M

M	METER
MAP	MASTER ALARM PANEL
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX.	MAXIMUM
MBP	MAINTENANCE BYPASS
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MECH.	MECHANICAL
MFR	MANUFACTURER
MH	METAL HALIDE
MIC	MICROPHONE
MIN.	MINIMUM
MLO	MAIN LUGS ONLY
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MV	MERCURY VAPOR

N

N3R	NEMA 3R ENCLOSURE
N4X	NEMA 4X ENCLOSURE
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATON
NF	NON-FUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NFS	NON FUSED SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE

O

OAF	OUTSIDE AIR FAN
OAHU	OUTSIDE AIR HANDLING UNIT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OHE	OVERHEAD ELECTRICAL
OPG	OPENING

P,Q

P	POLE, PUMP
PB	PUSHBUTTON
PC	PLUMBING CONTRACTOR
PH	PHASE
PL	PILOT LIGHT
PLBG	PLUMBING
PNEU	PNEUMATIC
PNL	PANEL
POS	POINT OF SALE
PP	POWER POLE
PR	PAIR
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
PWR	POWER
QTY	QUANTITY

R

R	EXISTING TO BE REMOVED
RA	RETURN AIR
RAD	REFRIGERATED AIR DRYER
RAF	RETURN AIR FAN
RC	RECONNECT EXISTING DEVICE TO CIRCUIT INDICATED
RCP	REFLECTED CEILING PLAN
RCPT	RECEPTACLE
RE	REFERENCE, REFER
REC	RECEPTACLE
REFR	REFRIDGERATOR
REINF	REINFORCING
REL	EXISTING TO BE RELOCATED
REL/EX	NEW LOCATION OF RELOCATED EQUIPMENT
REQD	REQUIRED
REV	REVISION, REVISE
RGS	RIGID GALV. STEEL CONDUIT
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RR	REMOVE AND REPLACE
RTU	ROOFTOP UNIT

S

SA	SUPPLY AIR
SAF	SUPPLY AIR FAN
SCHED	SCHEDULE
SE	SEWAGE EJECTOR
SEC	SECONDARY
SECT	SECTION
SF	SHARED CIRCUIT
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SKVA	STARTING KILOVOLTOAMPS
SKW	STARTING KILOWATTS
SP	SUMP PUMP
SPEC	SPECIFICATION
SPF	STAIR PRESSURIZATION FAN
SPKR	SPEAKER
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SQ	SQUARE
SRF	SMOKE REMOVAL FAN
SS	START-STOP PUSH BUTTON
SSSC	SOLID STATE SPEED CONTROL
ST	SHUNT TRIP
STB	STEAM BOILER
STD	STANDARD
STL	STEEL
SURF	SURFACE
SW	SWITCH
SWBD	SWITCHBOARD

T

TC	TEMPERATURE CONTROL
TEL	TELEPHONE
TF	TRANSFER FAN
TL	TWIST LOCK
TOC	TOP OF CURB
TOS	TOP OF STEEL
TP	CHILD TAMPER PROOF DEVICE
TSTAT	THERMOSTAT
TTB	TELEPHONE TERMINAL BOARD
TTC	TELEPHONE TERMINAL CABINET
TU	TERMINAL UNIT
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL

U

UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY

V

V	VOLT
VA	VOLT-AMPERE
VAV	VARIABLE AIR VOLUME
VC	VOLUME CONTROL
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VP	VACUUM PUMP
VM	VOLT METER

W

W	WATT, WIRE, WIDTH
WG	WIREGUARD
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
WS	WATER SOFTENER
WT	WATERTIGHT, WEIGHT
WWF	WELDED WIRE FABRIC

X,Z

XFMR	TRANSFORMER
Z	ZONE

ELECTRICAL SYMBOLS

MOTORS AND CONTROLS

- SINGLE/THREE PHASE MOTOR –NUMBER INDICATES HORSE POWER
- DISCONNECT (SAFETY) SWITCH – '200/3/150/N3R' DENOTES 'FRAME-SIZE/POLE/FUSE/NEMA-RATING' 'NF' DENOTES NON-FUSED
- ENCLOSED CIRCUIT BREAKER – '200/3/250/N3R' DENOTES 'FRAME-SIZE/POLE/TRIP-RATING'
- MOTOR STARTER – FURNISHED BY DIV. 23, INSTALLED BY DIV. 26
- COMBINATION STARTER/DISCONNECT (SAFETY) – '30/3/15' DENOTES 'FRAME-SIZE/POLE/FUSE'. 'NF' DENOTES NON-FUSED. PROVIDED BY DIV. 23, INSTALLED BY DIV. 26.
- VARIABLE FREQUENCY DRIVE. –PROVIDED BY DIV. 23, INSTALLED BY DIV. 26.
- EPO — EMERGENCY POWER OFF BUTTON
- LC — LIGHTING CONTACTOR
- TC — TIME CLOCK
- TS — TIME SWITCH
- PC — PHOTOCELL (AS PART OF OR ADDITION TO TIME-CLOCK)
- R — RELAY – MULTIPLE TYPES (REFER TO PLANS FOR USE)

RECEPTACLES AND OUTLETS

REFER TO SPECIFICATIONS FOR MOUNTING HEIGHT OF ALL DEVICES

- SIMPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V
- DUPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V
  - 'AC': ABOVE COUNTER
  - 'DR': DROPPED RECEPTACLE
  - 'GFI': GROUND FAULT INTERRUPTER
  - 'IG': ISOLATED GROUND
  - 'TP': TAMPER PROOF
  - 'UC': UNDER COUNTER
  - 'WP': WATERPROOF
  - 'USB': UNIVERSAL SERIAL BUS
  - 'C': CEILING
  - 'H': HORIZONTALLY ORIENTED RECEPTACLE REFER TO ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING HEIGHT
- DUPLEX WALL RECEPTACLE ON EMERGENCY CIRCUIT. RED COLOR.
- DUPLEX WALL RECEPTACLE ON A DEDICATED CIRCUIT TO DATA PROCESSING, GRAY COLOR. PROVIDE ISOLATED GROUND WHERE NOTED.
- SPLIT WIRED RECEPTACLE. TOP RECEPTACLE SHALL BE SWITCHED ACCORDING TO PLANS, BOTTOM REMAINS UNSWITCHED
- FOURPLEX (DOUBLE DUPLEX) WALL RECEPTACLE. NEMA 5-20R, 20A, 125V.
- FOURPLEX WALL RECEPACLE ON EMERGENCY CIRCUIT. RED COLOR.
- SPECIAL RECEPTACLE. NEMA CONFIGURATION AS NOTED ON PLAN
- DUPLEX RECEPTACLE, PEDESTAL MOUNT
- FLUSH MOUNTED FLOOR OUTLET.
- MULTI-OUTLET SURFACE RACEWAY OR PLUGMOLD. SEE ARCHITECTURAL DRAWINGS FOR EXACT LENGTH AND MOUNTING HEIGHT.
- JUNCTION BOX
- PULL BOX (OVER 4" SQUARE)
- 2 GANG FLOOR OUTLET
- 3 GANG FLOOR OUTLET
- POWER POLE
- DIRECT CONNECTION TO EQUIPMENT
- CLOCK RECEPTACLE, MOUNTED 12" BELOW FINISHED CEILING. (2) DENOTES DOUBLE SIDED
- CORD REEL POWER
- FURNITURE FEED
- TELEVISION SET, SEE 'COMMUNICATION' SECTION
- PUSHBUTTON ROUGH-IN. 42" AFF
- HAND DRYER CONNECTION

ELECTRICAL EQUIPMENT

- DISTRIBUTION PANEL
- SWITCHBOARD, MAIN DISTRIBUTION PANEL, OR MOTOR CONTROL CENTER
- PANELBOARD (FLUSH/SURFACE MOUNT)
- FLOOR MOUNTED DRY-TYPE TRANSFORMER
- SUSPENDED OR WALL MOUNTED TRANSFORMER
- ATS — AUTOMATIC TRANSFER SWITCH
- PLYWOOD TERMINAL BOARD. 4'x8'x3/4" U.N.O
- TERMINAL CABINET (FLUSH/SURFACE MOUNT) 24"x48"x3-1/2" U.N.O.
- BAT — BATTERY/INVERTER UNIT
- LV — LOW VOLTAGE TRANSFORMER.

LIGHTING

LETTER(S) DENOTE TYPE – REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.

- 2'x4' FLUORESCENT LIGHTING FIXTURE.
- 2'x2' FLUORESCENT LIGHTING FIXTURE
- 1'x4' FLUORESCENT LIGHTING FIXTURE
- 1'x2' FLUORESCENT LIGHTING FIXTURE
- 1'x1' FLUORESCENT LIGHTING FIXTURE
- FLUORESCENT STRIP FIXTURES
- STAGGERED STRIP FIXTURE
- INCANDESCENT, FLUORESCENT, LED, OR HID DOWNLIGHT
- WALL MOUNTED INCANDESCENT, FLUORESCENT, LED OR HID FIXTURE
- TRACK LIGHTING FIXTURE.
- CEILING MOUNTED EXIT SIGHT. ARROWS AS INDICATED. SHADED AREA DENOTES FACE(S)
- WALL MOUNTED EXIT SIGN. ARROWS AS INDICATED. SHADED AREA DENOTES FACE(S)
- EMERGENCY WALL MOUNTED LIGHTING FIXTURE. BATTERY OPERATED UNLESS NOTED OTHERWISE
- HID SECURITY WALL-PACK
- SITE LIGHTING FIXTURE
- POST-TOP FIXTURE/ACORN FIXTURE. BRACKET ARM INDICATES WALL MOUNT WITH ARM
- LIGHT FIXTURE ON EMERGENCY BRANCH CIRCUIT OR WITH BATTERY PACK.

RACEWAYS AND WIRING

- HASH MARKS INDICATE NUMBER OF CONDUTORS. LEFT TO RIGHT:PHASE/NEUTRAL/GROUND/ISOLATED GROUND. NO HASH MARKS INDICATE (2) #12, PLUS #12 GROUND, UNLESS OTHERWISE
- 1LA-2,4 — HOMERUN TO PANEL WITH CIRCUIT NUMBER(S) INDICATED
- (SC) 1LA-2,4 — PARTIAL (SHARED) CIRCUIT HOMERUN
- CAP AND STAKE CONDUIT
- CONDUIT CONCEALED IN WALL OR CEILING
- CONDUIT UNDERSLAB OR UNDERGROUND
- EXPOSED CONDUIT
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN
- 'X' — CONDUIT OR CABLE, WHERE 'X':
  - 'C' MASTER CLOCK
  - 'D' DATA
  - 'FA' FIRE ALARM
  - 'I' INTERCOM
  - 'PA' PAGING
  - 'S' SECURITY
  - 'T' TELEPHONE
  - 'V' VIDEO
  - 'OHE' OVERHEAD ELECTRIC
  - 'UG' UNDERGROUND ELECTRIC
  - 'DB' CONCRETE ENCASE DUCTBANK
  - 'EM' EMERGENCY CONDUIT

SECURITY/ACCESS CONTROL

- K — CARD KEY ACCESS
- CR — CARD READER
- CAMERA
- CAMERA WITH TILT/PAN
- DC — DOOR CONTACT SWITCH
- KP — KEYPAD
- HSC — HAND SCANNER
- CEILING MOUNTED MOTION DETECTOR
- WALL MOUNTED MOTION DETECTOR
- DC — DOOR CONTACT
- GB — GLASS BREAK SENSOR
- VS — SAFE VIBRATION SENSOR
- H — HOLD UP BUTTON
- ACB — ALARM CONTROL BOX
- A — ALARM AUDIO DEVICE

SCOPE OR WORK REQUIRED BY DIV. 26:

ALL SECURITY DEVICES SHALL BE 'ROUGH-IN' ONLY. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH DIV. 27 AND 28 FOR EXACT ROUGH-IN REQUIREMENTS. AT A MINIMUM, ALL ROUGH-INS PROVIDED BY DIV. 26 SHALL HAVE A 3/4" CONDUIT FROM ROUGH-IN TO NEAREST ACCESSIBLE CEILING SPACE.

ONE LINE AND RISER DIAGRAMS

- TRANSFORMER, TYPE & RATINGS AS NOTED
- 800A/3P — SWITCH, RATINGS AS SHOWN
- 400A — FUSE, RATING AS SHOWN
- CL — CIRCUIT BREAKER, RATING AS SHOWN. 3-POLE U.N.O. 'CL' DENOTES CURRENT LIMITING
- DRAWOUT CIRCUIT BREAKER, RATING AS SHOWN. 3-POLE U.N.O.
- ST — SHUNT TRIP
- GFI — GROUND FAULT RELAY
- K — KIRK KEY INTERLOCK
- M — DIGITAL METER
- 1200/5 — CURRENT TRANSFORMER, RATED AS SHOWN.
- 12.47KV/120V — POTENTIAL TRANSFORMER, RATING AS SHOWN
- GROUND CONNECTION
- LIGHTING ARRESTOR
- G — GENERATOR SET
- AUTOMATIC TRANSFER SWITCH
- BUS DUCT PLUG
- SPD — SURGE PROTECTION DEVICE
- M — ELECTRICAL METER

FIRE ALARM

- W — WATER FLOW SWITCH
- SP — SUPERVISORY SWITCH
- S — SMOKE DETECTOR – "D" INDICATES DUCT TYPE
- H — HEAT DETECTOR
- BT — BEAM DETECTOR TRANSMITTER, HIGH IN CEILING WALL DIRECT LINE OF SIGHT.
- BR — BEAM DETECTOR RECEIVER, HIGH IN CEILING WALL DIRECT LINE OF SIGHT.
- D — MAGNETIC DOOR HOLDER
- R — AUXILIARY CONTROL RELAY
- F — FIRE ALARM PULL STATION +42" AFF
- FIREMAN'S TELEPHONE JACK +42" AFF
- SPEAKER STROBE/HORN STROBE. (REFER TO SPECIFICATIONS TO DETERMINE IF F.A. WILL CONTAIN VOICE EVAC.) +80" AFF- 15/75cd U.N.O.
- SPEAKER/HORN (REFER TO SPECIFICATIONS TO DETERMINE IF F.A. WILL CONTAIN VOICE EVAC) +80" AFF
- VISUAL FIRE ALARM (STROBE) +80" AFF- 15/75cd U.N.O.
- FACP — FIRE ALARM CONTROL PANEL
- ANN — REMOTE FIRE ALARM ANNUNCIATOR PANEL
- VEP — FIRE ALARM VOICE EVACUATION PANEL
- FH — FIRE FIGHTER HANDSET
- RPS — REMOTE POWER SUPPLY FOR AUDIO/VISUAL FIRE ALARM DEVICES.
- FSD — FIRE SMOKE DAMPER

FIRE ALARM NOTES:

DO NOT PROVIDE SPEAKER AND HORNS IN THE SAME STRUCTURE. IF FIRE ALARM SPECIFIED REQUIRES VOICE EVACUATION, PROVIDE SPEAKER STROBES. IF VOICE EVACUATION IS NOT REQUIRED, PROVIDE HORN STROBES. REFER TO SPECIFICATIONS FOR DETAILS.

COMMUNICATIONS

THE FOLLOWING NOTATIONS REFER TO ALL COMMUNICATIONS OUTLETS:

- DATA OUTLET, SAME HEIGHT AS RECEPTACLES
- FLUSH DATA FLOOR OUTLET,
- TV — TELEVISION OUTLET: PROVIDE (1) RECESSED BOX WITH (2) SINGLE GANG BOXES. DIV. 26 SHALL PROVIDE (1) DUPLEX RECEPTACLE IN 1 GANG AND (1) SPARE GANG BOX FOR A/V/DATA. 60" U.N.O.
- VC S — CEILING MOUNTED SPEAKER. "VC" INDICATES VOLUME CONTROL ON SPEAKER. "L" INDICATES LOCAL SOUND SYSTEM.
- S — WALL MOUNTED SPEAKER.
- C — SCHOOL INTERCOMMUNICATION CALLBACK.
- VC — VOLUME CONTROL – WALL MOUNTED

SCOPE OR WORK REQUIRED BY DIV. 26:

ALL DATA/AV DEVICES SHALL BE 'ROUGH-IN' ONLY. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH DIV. 27 AND 28 FOR EXACT ROUGH-IN REQUIREMENTS. AT A MINIMUM, ALL ROUGH-INS PROVIDED BY DIV. 26 SHALL HAVE A 3/4" CONDUIT FROM ROUGH-IN TO NEAREST ACCESSIBLE CEILING SPACE. TV ROUGH-INS SHALL BE PROVIDED WITH 1-1/4" CONDUIT FROM THE DATA/AV BOX TO CEILING SPACE ABOVE.

ANNOTATIONS AND TAGS

- 1 — KEYED NOTE REFERENCE
- 1 — FEEDER SCHEDULE REFERENCE

DRAWING/DETAIL REFERENCE

REFER TO DRAWING/DETAIL NUMBER 1 / E3-2 — SHEET NUMBER

RE: 1 / E3-2

GENERAL NOTES

1. NOT ALL SYMBOLS SHOWN ON THIS SYMBOL LIST ARE USED IN THE CONTRACT DOCUMENTS.
2. REFER TO SPECIFICATIONS FOR ALL MOUNTING HEIGHTS. MOUNTING HEIGHT STATED IN SPECIFICATIONS TAKE PRECEDENCE TO HEIGHTS STATED ON THIS SHEET.

SWITCHES

ALL SWITCHES SHALL BE MOUNTED AT 42" ABOVE FINISHED FLOOR TO CENTER OF DEVICE U.N.O.
ALL SWITCHES SHALL BE RATED FOR 20A, 120/277V U.N.O

- $ — SWITCH, SPST
- $x — SWITCH, WHERE 'X':
  - '2' DENOTES DPST
  - '3' DENOTES THREE-WAY
  - '4' DENOTES FOUR-WAY
  - 'F' FAN SPEED CONTROLLER
  - 'K' DENOTES KEY SWITCH
  - 'P' DENOTES PILOT LIGHT
  - 'R' DENOTES RED
  - 'M' MOTOR RATED SWITCH WITH THERMAL OVERLOADS
  - 'T' TIMER SWITCH
  - 'DM' DIMMER CONTROL SWITCH, 600 WATT U.N.O
  - 'MC' SPDT, CENTER OFF, MOMENTARY CONTACT
  - 'OC' OCCUPANCY SENSOR
  - 'OC2' DUAL RELAY OCCUPANCY SENSOR
  - 'PS' MOTORIZED PROJECTION SCREEN SWITCH
  - 'RS' ROLL-UP DOOR SWITCH OR CONTROLLER MODULE
- OC — CEILING MOUNTED OCCUPANCY SENSOR
- MP — MASTER OCCUPANCY SENSOR POWER PACK
- $0 — DIGITAL ADDRESSABLE SWITCH, WHERE:
  - 'D1' 1-BUTTON DIGI-SWITCH
  - 'D2' 2-BUTTON DIGI-SWITCH
  - 'D3' 3-BUTTON DIGI-SWITCH
  - 'D4' 4-BUTTON DIGI-SWITCH
  - 'D5' 5-BUTTON DIGI-SWITCH
  - 'D6' 6-BUTTON DIGI-SWITCH
  - 'DM' SINGLE DIMMER DIGI-SWITCH
  - 'DM2' DOUBLE DIMMER DIGI-SWITCH
  - 'DK' KEYED DIGI-SWITCH

$1 — SWITCH ADDRESS (IF APPLICABLE)
$0 — SWITCH TYPE

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS — THOMAS RAVENEY — 128311 — LICENSED PROFESSIONAL ENGINEER
2/28/2019

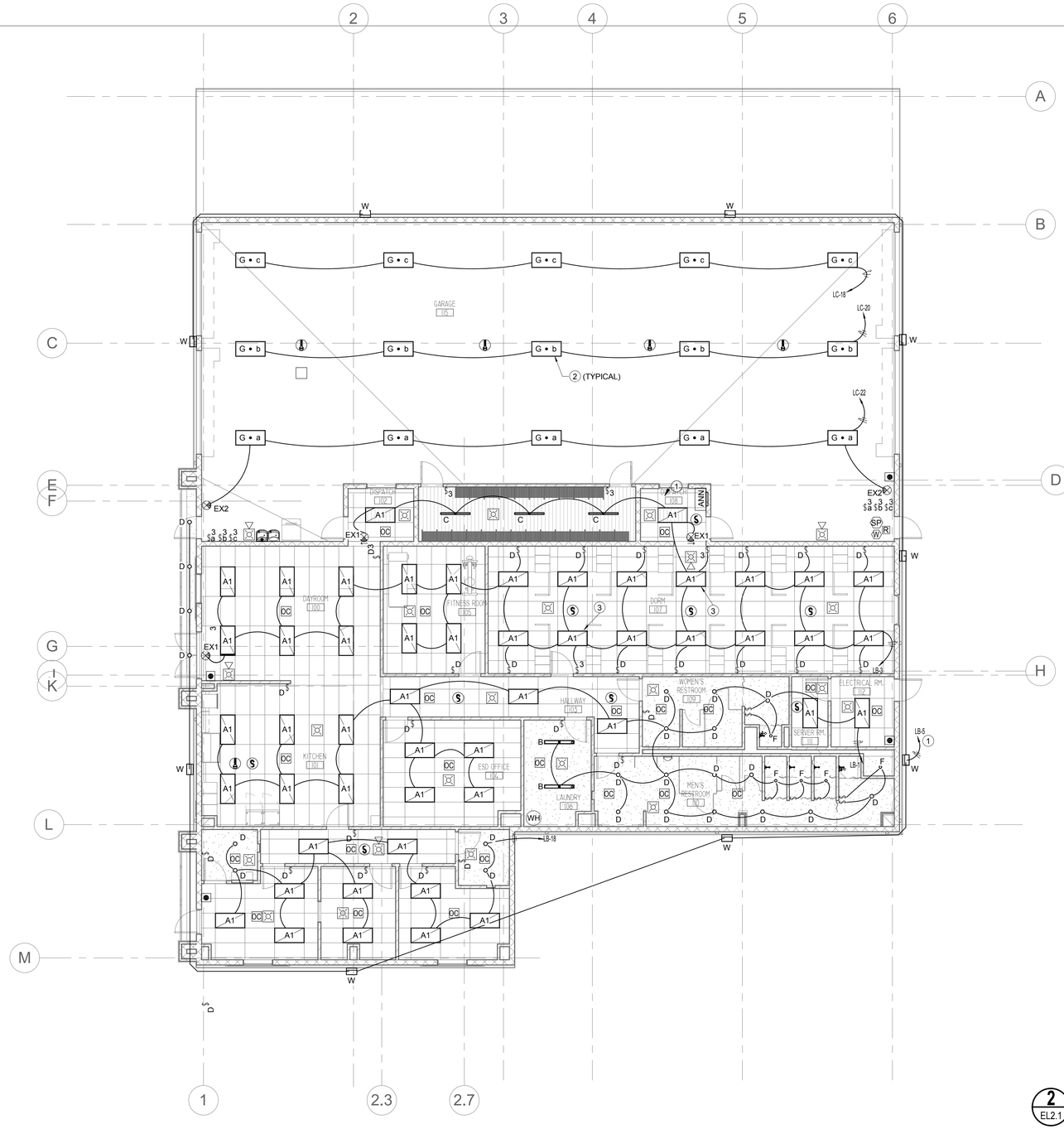
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER 219003

DATE FEBRUARY 28, 2019 ISSUED FOR BID

REVISIONS:

SHEET E0.0 OF



GENERAL FIRE ALARM NOTES:

A. FIRE ALARM STROBE CANDELA RATING OF ALL VISUAL DEVICES SHALL BE RATED TO COMPLY WITH ADA, NFPA AND UL.

B. ALL CEILING MOUNTED DEVICES SHALL BE CENTERED IN THE CEILING TILE.

C. ELECTRICAL CONTRACTOR SHALL PROVIDE RACEWAYS FOR ALL LOW VOLTAGE CABLING IN AREAS WITH EXPOSED STRUCTURE. NO CABLING SHALL BE ROUTED EXPOSED.

D. PROVIDE BACKBOXES TO ALL SPEAKERS, SPEAKERS PROVIDED AND INSTALLED BY OTHERS, FIELD COORDIANTE EXACT LOCATIONS WITH A/V CONTRACTOR. TYPICAL UNLESS OTHERWISE NOTES.

GENERAL ELECTRICAL NOTES:

A. EMERGENCY EGRESS LIGHTING PROVIDED VIA EMERGENCY GENERATOR WIRED TO ENTIRE BUILDING LIGHTING.

B. PROVIDE #10 AWG MIN NEUTRAL FOR ALL MUTLIWIRE BRANCH CIRCUITS AND PROVIDE HANDLE TIES FOR CIRCUIT BREAKERS AS REQUIRED BY NEC 210.4

C. ALL CEILING MOUNTED OCCUPANCY SENSORS SHALL BE HUBBEL #OMNI-DT2000. PROVIDE POWER MODULE AND OVER RIDE SWITCHES AS INDICATED ON DRAWINGS. REFER TO DETAIL 08/E-302 FOR WIRING INFORMATION.

D. ALL EXIT SIGNS SHALL BE TYPE 'X1' UNLESS OTHERWISE NOTED.

LIGHTING KEYED NOTES:

1. CONTROL CIRCUIT BY PHOTOCELL-ON/TIMECLOCK-OFF. PROVIDE PHOTOCELL ON ROOF, AIMED NORTH. PROVIDE DIGITAL TIME CLOCK ADJACENT TO PANEL.
2. TYPE 'G' LIGHT FIXTURES SUPSPENDED FROM STUCTURE AT 16'-0"A.F.F. LOWER CASE LETTER DESIGNATES CONTROL BY CORRESPONDING THREEWAY SWITCHES.
3. THESE TWO FIXTURES SHALL BE CONTROLLED BY THREE-WAY SWITCHES. ALL OTHER FIXTURES IN THIS ROOM SHALL BE INDIVIDUALLY CONTROLLED BY SWITCH NEXT TO EACH BED.

1 EL2.1 LIGHTING AND FIRE ALARM PLAN

1/8" = 1'-0"

2 EL2.1 LIGHTING EXTERIOR VIEW

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
129311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

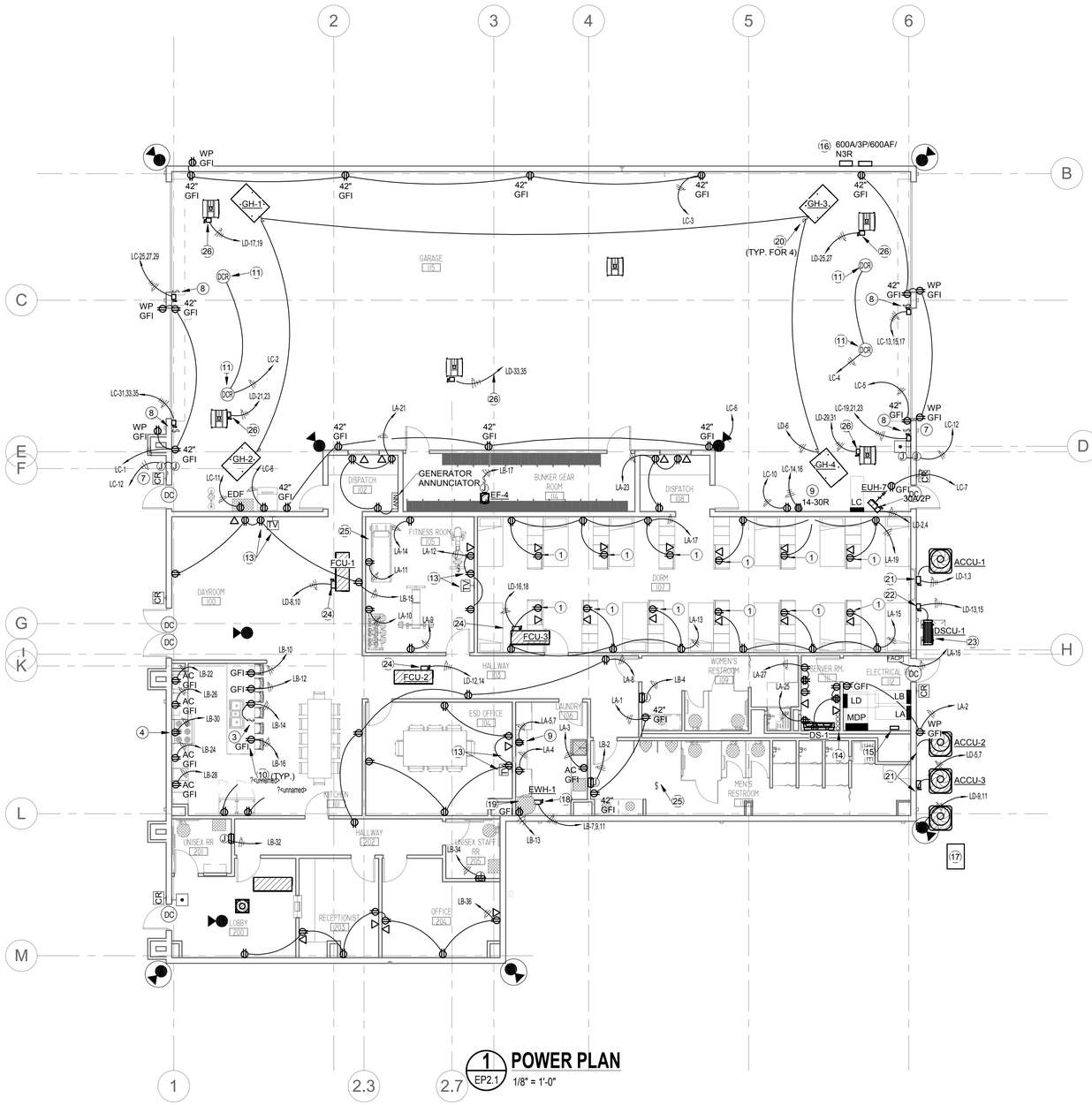
PROJECT NUMBER 219003

DATE FEBRUARY 28,2019

ISSUED FOR BID

ADDENDUM#2 01-14-16

SHEET EL2.1 OF



1 EP2.1 **POWER PLAN**

1/8" = 1'-0"

ELECTRICAL GENERAL NOTES:
APPLIES TO ALL SHEETS

A. SEE ALL OTHER PLANS FOR ADDITIONAL DEVICES. SOME POWER CIRCUITING MAY BE ON OTHER PLANS. COORDINATE THE LOCATIONS OF DATA/CATV JACKS WITH THE RECEPTACLES. MOUNT ADJACENT TO EACH OTHER.

B. WHEN LOCATING SYSTEMS NEXT TO DOORS, LOCATE 8 INCHES OFF DOOR JAMB TO CENTER OF DEVICE. WHEN MULTIPLE DEVICES ARE TOGETHER, STACK BUT NO MORE THAN 72 INCHES AFF.

C. MINIMUM CIRCUIT SIZE IS 2 #12 AND 1 #12 GROUND IN 3/4" CONDUIT FOR INDIVIDUAL CIRCUITS, 3/4" CONDUIT FOR MULTIPLE CIRCUITS. ALL CONDUCTORS SHALL BE 75 DEGREE (MINIMUM) COPPER THHN, COLOR CODED AS PER NEC AND LOCAL AMENDMENTS WITH SIZE, TEMPERATURE, AND VOLTAGE PERMANENTLY PRINTED ON THE JACKET. ALL JOINTS SHALL BE MADE UP USING SELF LOCKING, TWIST-ON, COLOR CODED, SQUARE WIRE SPRING GRAB, LONG SKIRT, WIRE CONNECTORS WITH SWEPT WINGS.

D. PROVIDE #10 AWG MIN NEUTRAL FOR ALL MUTLIWIRE BRANCH CIRCUITS AND PROVIDE HANDLE TIES FOR CIRCUIT BREAKERS AS REQUIRED BY NEC 210.4

E. CONDUCTOR SIZES INDICATED ASSUME NO MORE THAN (3) SINGLE POLE BRANCH CIRCUITS IN EACH CONDUIT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DE-RATE CONDUCTORS PER NEC TABLE 310.15(B)(2)(a) FOR CONDUITS WITH MORE THAN (3) CURRENT "CARRYING CONDUCTORS". THE NEUTRAL CONDUCTOR SHALL BE CONSIDERED "CURRENT CARRYING" FOR ALL BRANCH CIRCUITS SERVING MORE THAN (4) COMPUTERS.

F. REFER TO VOLTAGE DROP FEEDER SCHEDULE FOR BRANCH CIRCUITS EXCEEDING 100' IN LENGTH.

G. COORDINATE RECEPTACLE LOCATIONS WITH MILLWORK AND COUNTERS. DO NOT LOCATE RECEPTACLES BEHIND DRAWERS OR HIDDEN IN MILLWORK UNLESS SPECIFICALLY DIRECTED BY OWNER/ARCHITECT. REVIEW ARCHITECTURAL ELEVATIONS PRIOR TO RECEPTACLE ROUGH-INS. SEE ARCH. ELEVATIONS IN BREAKROOMS FOR APPLIANCES AND RECEPTACLE MOUNTING LOCATIONS.

H. MOUNT RECEPTACLES 18" AFF, 6" ABOVE BACKSPLASH AT COUNTERS, 4-2" IN TOILET ROOMS, AT EQUIPMENT ROUGH-IN LOCATIONS FOR APPLIANCES, AND 96" FOR TV'S. PROVIDE GFI RECEPTACLES AT/LOCATED ALL SINKS, ROOFTOP RECEPTACLES, KITCHEN RECEPTACLES, BATHROOM/TOLIT ROOMS, EXTERIOR RECEPTACLES, AND UNDERCOUNTER EQUIPMENT. ALSO, ALL RECEPTACLES SERVING DRINKING FOUNTAINS SHALL HAVE GFI.

I. ALL EQUIPMENT SHALL HAVE A LOCAL DISCONNECTING MEANS, EITHER CORDED PLUG AND RECEPTACLE OR SWITCHED DISCONNECT. VERIFY FROM EQUIPMENT SUBMITTED OR RELOCATED IF DIRECT CONNECT OR RECEPTACLE. IF DIRECT CONNECT, PROVIDE SWITCH AS PER NEC OTHERWISE, PROVIDE RECEPTACLE, CORD PLUG AS REQUIRED BY EQUIPMENT SUBMITTAL.

J. ON CIRCUITS GREATER THAN 20A, FEEDING MULTIPLE PIECES OF EQUIPMENT, PROVIDE FUSED DISCONNECTS (SIZED FOR EQUIPMENT PROTECTING).

K. PROVIDE INDIVIDUAL DISCONNECTS FOR ALL SMOKE FIRE DAMPERS AND VAV'S. NO EXCEPTIONS.

L. FIRESTOP ALL CONDUIT PENETRATIONS IN RATED WALLS. SEE ARCHITECTURAL FOR WALL RATINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO SHEET ROCK AND REPAIR.

M. PROVIDE FIRE RATED SLEEVES IN ALL FLOOR PENETRATIONS.

N. CONNECT NO MORE THAN 5 RECEPTACLES TO ANY CIRCUIT. VERIFY AND TRACE RECEPTACLE COUNT PRIOR TO CONNECTING TO EXISTING CIRCUITS.

O. ALL ISOLATED GROUND RECEPTACLES SHALL BE ORANGE IN COLOR AND HAVE ISOLATED GROUND FEEDER IG0020.

P. PROVIDE TAMPER PROOF RECEPTACLES FOR ALL TOILET ROOMS AND LOCKER ROOMS.

ELECTRICAL KEYED NOTES:

1. PROVIDE EMT RACEWAYS FOR RECEPTACLES AND DATA ROUGH-IN IN DORM CASEWORK/MILLWORK. MC CABLE NOT APPROVED. SECURE ALL CONDUIT EVERY 18" MINIMUM, IN LEAST VISIBLE SPACE OF MILLWORK. PROVIDE A SAMPLE ROUTING OF A SINGLE STATION AND HAVE SAMPE VERIFIED BY ARCHITECT PRIOR TO INSTALLING ROUGH-INS FOR REMAINING DORMS STATIONS.
2. (1) 3/4" CONDUIT FOR POWER, AND (1) 1-1/4" CONDUIT FOR DATA/AV, FROM FLOORBOX TO WALL CAVITY BEHIND TV ROUGH-IN.
3. ABOVE COUNTER SWITCH WITH BELOW COUNTER RECEPTACLE FOR DISPOSAL. CIRCUIT SUCH THAT SWITCH CONTROLS RECEPTACLE.
4. RECEPTACLE FOR RANGE HOOD FAN. VERITY MOUNTING HEIGHT WITH INSTALLATION INSTRUCTION OF RANGE HOOD. EXTEND CIRCUIT TO RANGE FOR GAS CONTROL. COORDINATE EXACT REQUIREMENTS WITH FURNISHED EQUIPMENT.
5. PROVIDE CONDUIT FOR CEILING MOUNTED PROJECTOR AND SCREEN. COORDINATE WITH OWNER/ARCHITECT FOR EXACT LOCATION.
6. COORDINATE WITH TECHNOLOGY FOR REQUIRED SPECIFICATIONS.
7. PROVIDE BACKBOX FOR KEYPAD. ROUTE 1" CONDUIT TO CONTROL BOX. COORDINATE WITH OWNER/ARCHITECT AT FIELD FOR EXACT LOCATION.
8. COORDINATE EXACT LOCATION FOR BIFOLD DOOR MOTOR WITH OWNER/ARCHITECT. PROVIDE CONTROL SWITCH AND RELAY AS REQUIRED FOR DOOR MOTOR CONTROL.
9. PROVIDE NEMA 14-30R RECEPTACLE FOR DRYER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH FURNISHED EQUIPMENT.
10. RECEPTACLES MOUNTED IN MILLWORK. COORDINATE EXACT LOCATION AND ROUTING OF CONDUIT WITH ARCHITECT IN FIELD.
11. PROVIDE DROP CORDS ON DRIVER'S SIDE LOCATION. GENERAL CONTRACTOR TO COORDINATE LOCATIONS WITH OWNER PRIOR TO INSTALLATION.
12. ROUTE (1) 3/4" CONDUIT TO DSCU-1 UNIT ON ROOF COORDINATE FIELD LOCATION WITH OWNER/ARCHITECT AT FIELD.
13. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF RECEPTACLE AND TV OUTLET WITH ARCHITECT IN FIELD BEFORE ROUGH-IN.
14. (4) 4" CONDUIT STUB-UPS. RE:MEP2.1.
15. APPROXIMATE LOCATION OF ATS FIELD VERIFY WITH ARCHITECT/OWNER FOR EXACT LOCATION.
16. APPROXIMATE LOCATION OF CT/METER AND SERVICE DISONNECT. FIELD VERIFY WITH ARCHITECT/OWNER FOR EXACT LOCATION.
17. APPROXIMATE LOCATION OF DIESEL GENERATOR. 6" CONCRETE PAD, VERIFY WITH ARCHITECT/OWNER FOR EXACT LOCATION. REFER TO SHEET MEP2.1 FOR DETAILS.
18. 208V, 60A/3P, N.F, NEMA 1 DISCONNECT SWITCH FOR WATER HEATER. MAKE CONNECTIONS TO EQUIPMENT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH PLUMBING CONTRACTOR.
19. GFI, DUPLEX RECEPTACLE FOR CIRC. PUMP. EXTEND CIRCUIT TO TIME SWITCH. COORDINATE EXACT LOCATIONS OF EQUIPMENT AND REQUIREMENTS WITH PLUMBING CONTRACTOR.
20. 120V, 20A/1P DISCONNECT SWITCH FOR GAS UNIT HEATER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL.
21. 208V, 60A/2P, NEMA 3R DISCONNECT SWITCH FUSED PER NAMEPLATE DATA OF FURNISHED EQUIPMENT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL.
22. 208V, 30A/2P, NEMA 3R DISCONNECT SWITCH FUSED PER NAMEPLATE DATA OF FURNISHED EQUIPMENT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL.
23. PROVIDE 3/4" CONDUIT FOR CONTROL WIRING FROM DSCU-1 OUTDOOR UNIT TO DS-1 INDOOR UNIT IN SERVER ROOM #111. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL.
24. 208V, 100A/2P, NEMA 1, N.F. DISCONNECT SWITCH. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL.
25. PROVIDE 120V, 20A/1P, MOTOR RATED DISCONNECT FOR EXHAUST FAN AS REQUIRED. EXHAUST FAN SHALL BE CONNECTED TO LIGHTING CIRCUIT AND CONTROLLED WITH LIGHTS IN ROOM. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL.
26. 208V, 30A/2P, NEMA 1, N.F. DISCONNECT SWITCH. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL.

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
No. 129311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

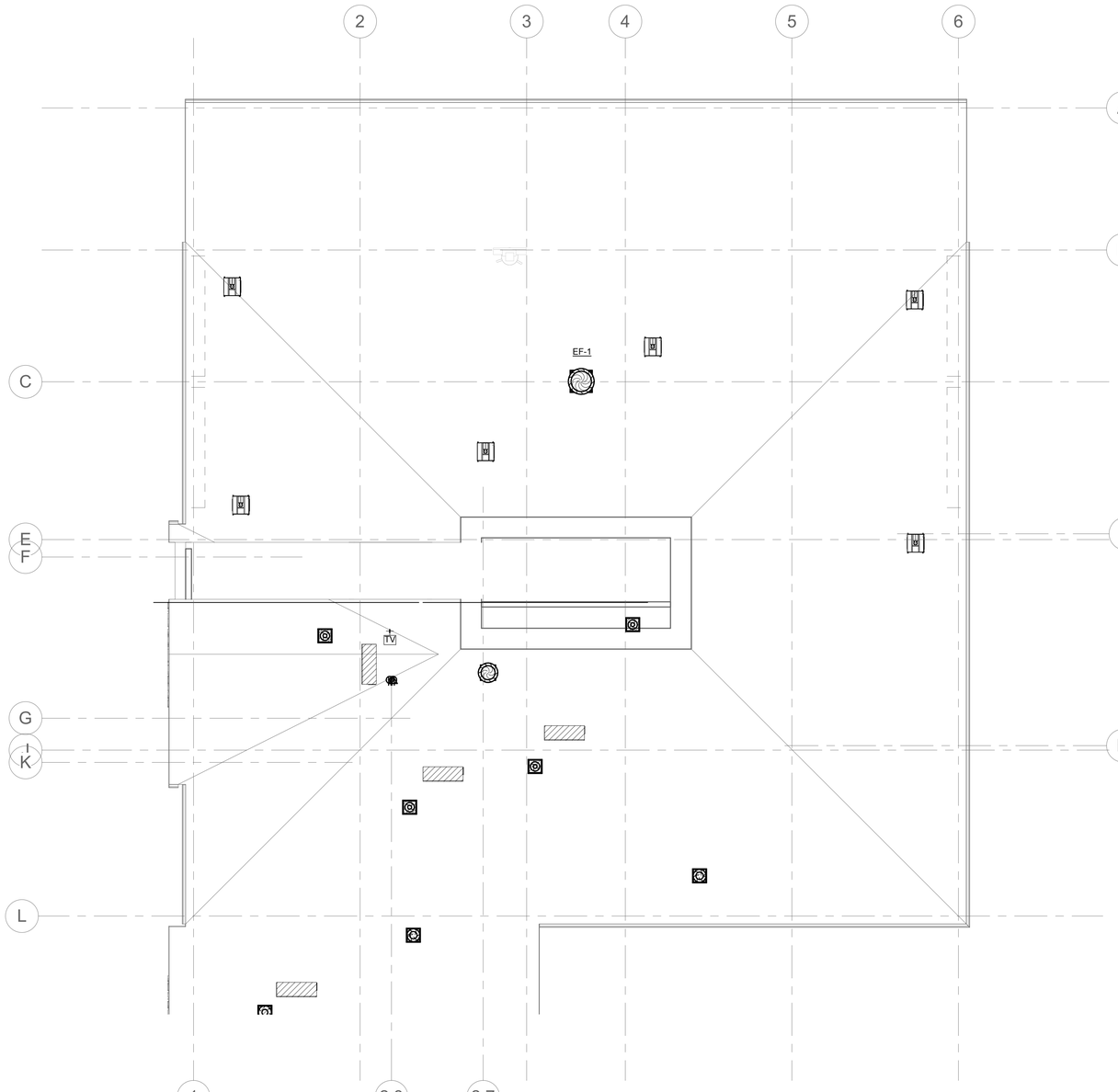
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28,2019

ISSUED FOR BID

SHEET
EP2.1
OF



1 EP2.2 **POWER PLAN - ROOF**
1/8" = 1'-0"

ELECTRICAL GENERAL NOTES:
APPLIES TO ALL SHEETS

A. SEE ALL OTHER PLANS FOR ADDITIONAL DEVICES. SOME POWER CIRCUITING MAY BE ON OTHER PLANS. COORDINATE THE LOCATIONS OF DATA/CATV JACKS WITH THE RECEPTACLES. MOUNT ADJACENT TO EACH OTHER.

B. WHEN LOCATING SYSTEMS NEXT TO DOORS, LOCATE 8 INCHES OFF DOOR JAMB TO CENTER OF DEVICE. WHEN MULTIPLE DEVICES ARE TOGETHER, STACK BUT NO MORE THAN 72 INCHES AFF.

C. MINIMUM CIRCUIT SIZE IS 2 #12 AND 1 #12 GROUND IN 3/4" CONDUIT FOR INDIVIDUAL CIRCUITS, 3/4" CONDUIT FOR MULTIPLE CIRCUITS. ALL CONDUCTORS SHALL BE 75 DEGREE (MINIMUM) COPPER THHN, COLOR CODED AS PER NEC AND LOCAL AMENDMENTS WITH SIZE, TEMPERATURE, AND VOLTAGE PERMANENTLY PRINTED ON THE JACKET. ALL JOINTS SHALL BE MADE UP USING SELF LOCKING, TWIST-ON, COLOR CODED, SQUARE WIRE SPRING GRAB, LONG SKIRT, WIRE CONNECTORS WITH SWEPT WINGS.

D. PROVIDE #10 AWG MIN NEUTRAL FOR ALL MUTLIWIRE BRANCH CIRCUITS AND PROVIDE HANDLE TIES FOR CIRCUIT BREAKERS AS REQUIRED BY NEC 210.4

E. CONDUCTOR SIZES INDICATED ASSUME NO MORE THAN (3) SINGLE POLE BRANCH CIRCUITS IN EACH CONDUIT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DE-RATE CONDUCTORS PER NEC TABLE 310.15(B)(2)(a) FOR CONDUITS WITH MORE THAN (3) CURRENT "CARRYING CONDUCTORS". THE NEUTRAL CONDUCTOR SHALL BE CONSIDERED "CURRENT CARRYING" FOR ALL BRANCH CIRCUITS SERVING MORE THAN (4) COMPUTERS.

F. REFER TO VOLTAGE DROP FEEDER SCHEDULE FOR BRANCH CIRCUITS EXCEEDING 100' IN LENGTH.

G. COORDINATE RECEPTACLE LOCATIONS WITH MILLWORK AND COUNTERS. DO NOT LOCATE RECEPTACLES BEHIND DRAWERS OR HIDDEN IN MILLWORK UNLESS SPECIFICALLY DIRECTED BY OWNER/ARCHITECT. REVIEW ARCHITECTURAL ELEVATIONS PRIOR TO RECEPTACLE ROUGH-INS. SEE ARCH ELEVATIONS IN BREAKROOMS FOR APPLIANCES AND RECEPTACLE MOUNTING LOCATIONS.

H. MOUNT RECEPTACLES 18" AFF, 6" ABOVE BACKSPLASH AT COUNTERS, 48" IN TOILET ROOMS, AT EQUIPMENT ROUGH-IN LOCATIONS FOR APPLIANCES, AND 96" FOR TV'S. PROVIDE GFI RECEPTACLES AT/LOCATED ALL SINKS, ROOFTOP RECEPTACLES, KITCHEN RECEPTACLES, BATHROOM/TOLIT ROOMS, EXTERIOR RECEPTACLES, AND UNDERCOUNTER EQUIPMENT. ALSO, ALL RECEPTACLES SERVING DRINKING FOUNTAINS SHALL HAVE GFI.

I. ALL EQUIPMENT SHALL HAVE A LOCAL DISCONNECTING MEANS, EITHER CORDED PLUG AND RECEPTACLE OR SWITCHED DISCONNECT. VERIFY FROM EQUIPMENT SUBMITTED OR RELOCATED IF DIRECT CONNECT OR RECEPTACLE. IF DIRECT CONNECT, PROVIDE SWITCH AS PER NEC OTHERWISE, PROVIDE RECEPTACLE, CORD PLUG AS REQUIRED BY EQUIPMENT SUBMITTAL.

J. ON CIRCUITS GREATER THAN 20A, FEEDING MULTIPLE PIECES OF EQUIPMENT, PROVIDE FUSED DISCONNECTS (SIZED FOR EQUIPMENT PROTECTING).

K. PROVIDE INDIVIDUAL DISCONNECTS FOR ALL SMOKE FIRE DAMPERS AND VAV'S. NO EXCEPTIONS.

L. FIRESTOP ALL CONDUIT PENETRATIONS IN RATED WALLS. SEE ARCHITECTURAL FOR WALL RATINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO SHEET ROCK AND REPAIR.

M. PROVIDE FIRE RATED SLEEVES IN ALL FLOOR PENETRATIONS.

N. CONNECT NO MORE THAN 5 RECEPTACLES TO ANY CIRCUIT. VERIFY AND TRACE RECEPTACLE COUNT PRIOR TO CONNECTING TO EXISTING CIRCUITS.

O. ALL ISOLATED GROUND RECEPTACLES SHALL BE ORANGE IN COLOR AND HAVE ISOLATED GROUND FEEDER IG0020.

P. PROVIDE TAMPER PROOF RECEPTACLES FOR ALL TOILET ROOMS AND LOCKER ROOMS.

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
123911
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

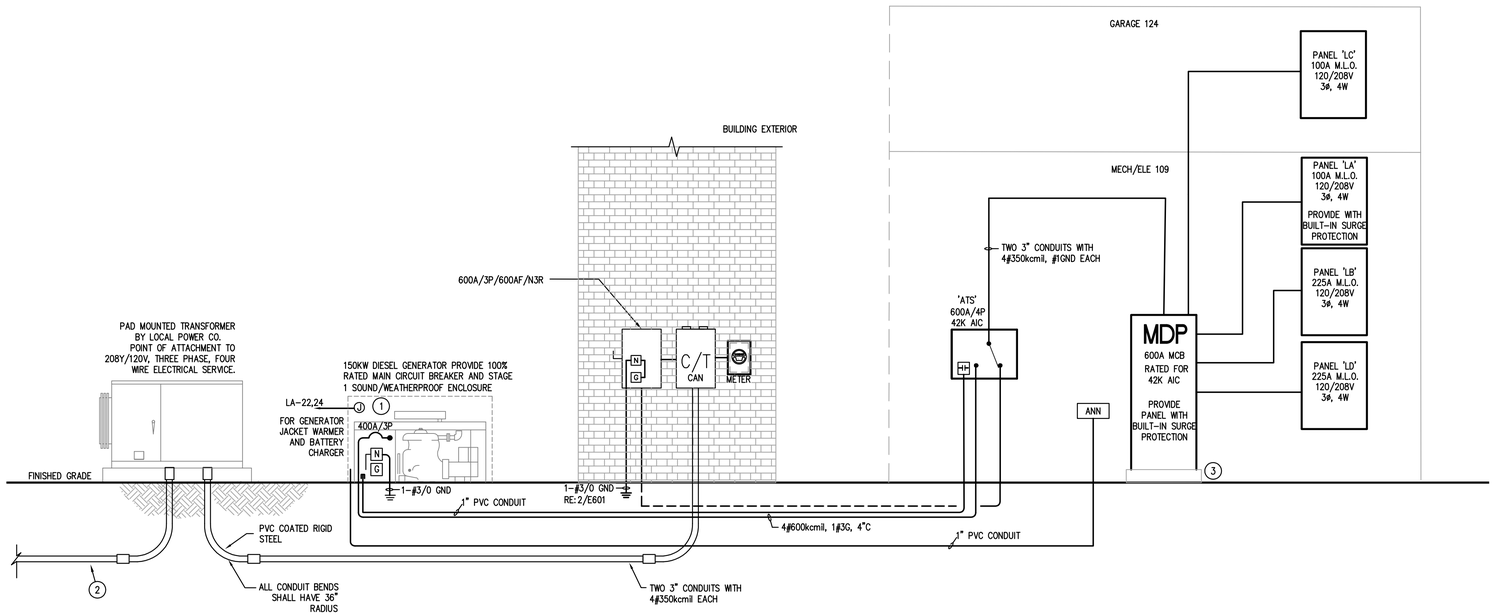
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28,2019

ISSUED FOR BID

SHEET
EP2.2
OF



ONE-LINE GENERAL NOTES:

A. MANUFACTURER OF ELECTRICAL GEAR SHALL PROVIDE A COORDINATION STUDY FOR THE ENTIRE ELECTRICAL SYSTEM IN ORDER TO SET BREAKERS. REFER TO SPECIFICATIONS. MANUFACTURER SHALL ALSO PROVIDE A FAULT CIRCUIT STUDY FOR THE ENTIRE ELECTRICAL SYSTEM IN ORDER TO SELECT INTERRUPTING RATINGS OF ALL CIRCUIT BREAKERS, DISTRIBUTION PANELBOARDS, PANELBOARDS, ETC. A SERIES RATED SYSTEM SHALL BE USED. SUBMIT INTERRUPTING RATING FOR ALL ELECTRICAL GEAR IN SUBMITTALS. CONTRACTOR SHALL SUPPLY WITH THEIR SUBMITTALS ON ALL NEW EQUIPMENT THE MANUFACTURERS UL DATA LISTING THE SERIES RATING OF ALL EQUIPMENT. THIS SWITCHBOARD AND ALL NEW EQUIPMENT CONNECTED DOWNSTREAM SHALL BEAR LABELS INDICATING "SERIES RATED EQUIPMENT" ON THEIR EXTERIOR AS SPECIFIED IN THE SPECIFICATIONS. CONTRACTOR SHALL INSTRUCT MANUFACTURER TO INCLUDE IN THEIR SUBMITTALS ALL TRIP CURVES AND ALL LITERATURE INDICATING THE INTERRUPTING RATING CHARACTERISTICS OF EQUIPMENT BEING SUPPLIED.

B. CONTRACTOR SHALL PROVIDE AN ENGRAVED NAMEPLATE ON ALL NEW ELECTRICAL EQUIPMENT INDICATING EQUIPMENT VOLTAGE, AMPERAGE, AND AVAILABLE SHORT CIRCUIT RATING PER 2011 NEC.

C. ALL WIRING SHALL BE THHN/THWN COPPER UNLESS NOTED OTHERWSE.

D. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND CONDUIT AS REQUIRED BY UTILITY COMPANY FOR METERING PURPOSES.

E. REFER TO FLOOR PLAN FOR SIZES OF ALL DISCONNECTS AND STARTERS.

ONE-LINE DIAGRAM KEYED NOTES:

1. 208V JUNCTION BOX CONNECTION TO GENERATOR'S JACKET HEATER, FIELD COORDINATE EXACT LOCATION WITH INSTALLER AND ADDITIONAL MANUFACTURER'S REQUIREMENTS PRIOR TO ROUGH-IN.
2. SERVICE LATERAL CONDUCTOR FURNISHED AND INSTALLED BY AEP. EC SHALL PROVIDE TRENCH AND CONDUIT AS PER AEP SPECIFICATIONS.
3. CONTRACTOR WILL PROVIDE CONCRETE KEEPING PAD.

FEEDER SCHEDULE

	COPPER CONDUCTORS			ALUMINUM CONDUCTORS		
AMPERAGE	SETS	CONDUCTOR SIZE	CONDUIT (INCHES)	SETS	CONDUCTOR SIZE	CONDUIT (INCHES)
30A	1	4#10, 1#10 G.	3/4"C	1	N/A	N/A
40A	1	4#8, 1#10 G.	1"C	1	N/A	N/A
50A	1	4#8, 1#10 G.	1"C	1	N/A	N/A
60A	1	4#6, 1#10 G.	1"C	1	N/A	N/A
70A	1	4#4, 1#8 G.	1 1/4"C	1	N/A	N/A
80A	1	4#4, 1#8 G.	1 1/4"C	1	N/A	N/A
90A	1	4#3, 1#8 G.	1 1/4"C	1	N/A	N/A
100A	1	4#3, 1#8 G.	1 1/4"C	1	N/A	N/A
125A	1	4#1, 1#6 G.	1 1/2"C	1	N/A	N/A
150A	1	4#1/0, 1#6 G.	1 1/2"C	1	N/A	N/A
175A	1	4#2/0, 1#6 G.	2"C	1	N/A	N/A
200A	1	4#3/0, 1#6 G.	2"C	1	4#250KCMIL, 1#4G.	2 1/2"C
225A	1	4#4/0, 1#4 G.	2 1/2"C	1	4#300KCMIL, 1#2G.	3"C
250A	1	4#250KCMIL, 1#4 G.	2 1/2"C	1	4#350KCMIL, 1#2G.	3"C
300A	1	4#350KCMIL, 1#4 G.	3"C	1	4#500KCMIL, 1#2G.	4"C
350A	1	4#500KCMIL, 1#3 G.	3 1/2"C	2	4#4/0, 1#1G.	2 1/2"C
400A	1	4#500KCMIL, 1#3 G.	4"C	2	4#250KCMIL, 1#1G.	2 1/2"C
450A	2	4#4/0, 1#2 G.	2 1/2"C	2	4#300KCMIL, 1#1/0G.	3"C
500A	2	4#250KCMIL, 1#2G.	2 1/2"C	2	4#350KCMIL, 1#1/0G.	3"C
600A	2	4#350KCMIL, 1#1G.	3"C	2	4#500KCMIL, 1#2/0G.	3"C
700A	2	4#500KCMIL, 1#1/0G.	4"C	3	4#350KCMIL, 1#3/0G.	3"C
800A	2	4#600KCMIL, 1#1/0G.	4"C	3	4#400KCMIL, 1#3/0G.	3"C
1000A	3	4#500KCMIL, 1#2/0G.	4"C	4	4#350KCMIL, 1#4/0G.	4"C
1200A	4	4#350KCMIL, 1#3/0G.	3"C	4	4#500KCMIL, 1#250KCMIL G.	4"C

1. ALUMINUM CONDUCTORS SHALL BE COMPRESSION TYPE CONDUCTORS AND SHALL USE PENETROX WITH COMPRESSION TERMINATION FITTINGS.
2. ALUMINUM FEEDERS ARE NOT APPROVED FOR USE ON THE FOLLOWING:
   - CHILLERS
   - TRANSFORMER SECONDARY
   - ELEVATORS
   - VARIABLE FREQUENCY DRIVE
3. ELECTRICAL CONTRACTOR SHALL PROVIDE THE NUMBER OF LUGS AND PROPER LUG SIZES TO ACCEPT CONDUCTOR SIZES SHOWN.
4. GROUND NOT REQUIRED AT SERVICE LATERAL.

ESTIMATED ELECTRICAL LOAD

SERVICE = 600A, 120/208V, 3ø

DESCRIPTION	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
LIGHTING	10458	125%	13073
RECEPTACLES	20320	(1st 10KVA-100%) (REMAINDER-50%)	15160
H.V.A.C. (COOLING)	27415	(100% OF LARGEST OF HEATING OR COOLING 0% OF SMALLEST)	–
H.V.A.C. (HEATING)	44484		44484
FANS	13520	100%	13520
KITCHEN	13000	65%	8450
WATER HEATERS	18000	100%	18000
MISC. SINGLE PHASE LOADS	17796	100%	17796
TOTAL VOLT-AMPERES	164993		130483
TOTAL LOAD (AMPS) @ 208V, 3ø	458A		362A

1 / E4.1 ELECTRICAL ONE-LINE DIAGRAM

NOT TO SCALE

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet
Architectural
Services
AMERICAN INSTITUTE OF ARCHITECTS

THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
2/28/2019

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

SHEET
E4.1
OF

Panelboard LA

14000 AIC Rating
X New
Existing

120/208 Wye Volt, 3 Phase, 4 Wire, 1 Section, Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB, 100 A BUS (Copper), - | X Single, Double, Feed - Thru | Mounting: X Surface, Flush

NOTE	Load (VA)	Type	Description	Wire	CB	CKT		CB	Wire	Description	Type	Load (VA)	NOTE
	360 VA	R	R Space 109E	12	20 A	1	2	20 A	12	R Mech./Elec 109	R	360 VA	
	180 VA	R	R Space 109D	12	20 A	3	4	20 A	12	M Space 109D	M	1500 VA	
	2400 VA	M	DRYER	10	30 A	5	6	20 A	12	R Space 109C	R	900 VA	
						7	8	20 A	12	R Space 109G	R	720 VA	
	1000 VA	M	FITNESS CENTER	12	20 A	9	10	20 A	12	FITNESS CENTER	M	1000 VA	
	1000 VA	M	FITNESS CENTER	12	20 A	11	12	20 A	12	FITNESS CENTER	R	720 VA	
	1080 VA	R	R Dorm 119	12	20 A	13	14	20 A	12	FITNESS CENTER	M	1000 VA	
	1080 VA	R	R Dorm 119	12	20 A	15	16	20 A	12	FACP	M	500 VA	
	1080 VA	R	R Dorm 119	12	20 A	17	18	20 A	12	R Day Rm. 110	R	360 VA	
	1080 VA	R	R Dorm 119	12	20 A	19	20	20 A	12	R Office 114	R	180 VA	
	1040 VA	R; M	DISPATCH 102	12	20 A	21	22	20 A	12	GENERATOR BASE HEATER	M	1200 VA	
	540 VA	R	DISPATCH 108	12	20 A	23	24	20 A	12	GENERATOR BATTERY...	M	1200 VA	
	1080 VA	R	R IDF ROOM	12	20 A	25	26	20 A	--	SPARE	--	--	--
	720 VA	R	R IDF ROOM	12	20 A	27	28	20 A	--	SPARE	--	--	--
--	--	--	SPACE	--	--	29	30	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	31	32	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	33	34	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	35	36	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	37	38	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	39	40	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	41	42	--	--	SPACE	--	--	--

N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity	N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity
220.44	(R)Receptacle	10980 VA	95.54%	10490 VA	210.20(a)	(L)Lighting			
220.56	(K)Kitchen					(EL)Ext. Ltg.			
220.60	(C)Cooling			0 VA	620.14	(E)Elevators			
220.60	(H)Heating			0 VA		(WH)Wat. Htr.			
220.60	(F)Fans				220.5	(MT)Lrg. Motor			
	(M)Misc.	11300 VA	100.00%	11300 VA		(SP)Sub Pnl.			
630.00	(W)Welder								

Total Connected Load: 22280 VA VA = 62 A
Total Load (Diversified): 21790 VA VA = 60 A

Location of Panel: ELECTRICAL RM. 112

Panelboard LB

14000 AIC Rating
X New
Existing

120/208 Wye Volt, 3 Phase, 4 Wire, 1 Section, Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB, 225 A BUS (Copper), - | X Single, Double, Feed - Thru | Mounting: X Surface, Flush

NOTE	Load (VA)	Type	Description	Wire	CB	CKT		CB	Wire	Description	Type	Load (VA)	NOTE
	995 VA	L	OFF/R.R./KITCHEN LIGHTING	12	20 A	1	2	20 A	12	HAND DRYER	R	1800 VA	
	1038 VA	L	DORM/DAYROOM LIGHTING	12	20 A	3	4	20 A	12	HAND DRYER	R	1800 VA	
	822 VA	L	EXTERIOR LIGHTING	12	20 A	5	6	20 A	12	DRIVEWAY LIGHTING	L	791 VA	
						7	8						
	18000 VA	WH	EWH-1	6	60 A	9	10	20 A	12	KITCHEN COUNTER	K	1200 VA	
						11	12	20 A	12	DISHWASHER	K	1000 VA	
	180 VA	R	CIRC. PUMP/TIME SWITCH	12	20 A	13	14	20 A	12	DISPOSAL	Ot...	1200 VA	
	720 VA	R	DAY ROOM RECEPTS	12	20 A	15	16	20 A	12	KITCHEN COUNTER	K	1200 VA	
	0 VA	Ot...	EF-5	12	20 A	17	18	20 A	12	L Space 120	L	444 VA	
	1260 VA	L	SECURITY CAMERAS	12	20 A	19	20						
	1260 VA	L	SECURITY CAMERAS	12	20 A	21	22	20 A	12	KITCHEN COUNTER	K	1200 VA	
	1260 VA	L	SECURITY CAMERAS	12	20 A	23	24	20 A	12	KITCHEN COUNTER	K	1200 VA	
--	--	--	SPARE	--	20 A	25	26	20 A	12	KITCHEN COUNTER	K	1200 VA	
--	--	--	SPARE	--	20 A	27	28	20 A	12	KITCHEN COUNTER	K	1200 VA	
	742 VA	L	PARKING LOT/FLAG POLE LIGHTING	12	20 A	29	30	20 A	12	RANGE HOOD	R	180 VA	
						31	32	20 A	12	HAND DRYER	R	1800 VA	
--	--	--	SPARE	--	20 A	33	34	20 A	12	HAND DRYER	R	1800 VA	
--	--	--	SPARE	--	20 A	35	36	20 A	12	R Room 120, 119, 116	R	1260 VA	
--	--	--	SPARE	--	20 A	37	38	--	--	SPACE	--	--	--
--	--	--	SPARE	--	20 A	39	40	--	--	SPACE	--	--	--
--	--	--	SPARE	--	20 A	41	42	--	--	SPACE	--	--	--

N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity	N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity
220.44	(R)Receptacle	9540 VA	100.00%	9540 VA	210.20(a)	(L)Lighting	8612 VA	125.00%	10765 VA
220.56	(K)Kitchen	9400 VA	65.00%	6110 VA		(EL)Ext. Ltg.			
220.60	(C)Cooling			0 VA	620.14	(E)Elevators			
220.60	(H)Heating			0 VA		(WH)Wat. Htr.	18000 VA	100.00%	18000 VA
220.60	(F)Fans				220.5	(MT)Lrg. Motor			
	(M)Misc.					(SP)Sub Pnl.			
630.00	(W)Welder								

Total Connected Load: 45552 VA VA = 126 A
Total Load (Diversified): 44415 VA VA = 123 A

Location of Panel: ELECTRICAL RM. 112

Panelboard LC

14000 AIC Rating
X New
Existing

120/208 Wye Volt, 3 Phase, 4 Wire, 1 Section, Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB, 100 A BUS (Copper), - | X Single, Double, Feed - Thru | Mounting: X Surface, Flush

NOTE	Load (VA)	Type	Description	Wire	CB	CKT		CB	Wire	Description	Type	Load (VA)	NOTE
	720 VA	R	GARAGE RECEPTS	12	20 A	1	2	20 A	12	GARAGE DROP CORDS	R	360 VA	
	900 VA	R	GARAGE RECEPTS	12	20 A	3	4	20 A	12	GARAGE DROP CORDS	R	360 VA	
	900 VA	R	GARAGE RECEPTS	12	20 A	5	6	20 A	12	GARAGE RECEPTS	R	720 VA	
	180 VA	R	RISER ROOM	12	20 A	7	8	20 A	12	ICE MAKER	K	1200 VA	
						9	10	20 A	12	WASHER GARAGE 124	M	1500 VA	
	600 VA	R	EDF	12	20 A	11	12	20 A	12	R GARAGE 124	Po...	100 VA	
	1332 VA	M	GARAGE DOOR	12	20 A	13	14	30 A	10	DRYER GARAGE 124	M	2400 VA	
						15	16						
	1332 VA	M	GARAGE DOOR	12	20 A	17	18	20 A	12	LIGHTING GARAGE	L	760 VA	
						19	20	20 A	12	LIGHTING GARAGE	L	760 VA	
	1332 VA	M	GARAGE DOOR	12	20 A	21	22	20 A	12	LIGHTING GARAGE	L	770 VA	
						23	24	--	--	SPACE	--	--	--
	1500 VA	M	GARAGE DOOR	12	20 A	25	26	--	--	SPACE	--	--	--
						27	28	--	--	SPACE	--	--	--
	1332 VA	M	GARAGE DOOR	12	20 A	29	30	--	--	SPACE	--	--	--
						31	32	--	--	SPACE	--	--	--
						33	34	--	--	SPACE	--	--	--
						35	36	--	--	SPACE	--	--	--
--	--	--	SPARE	--	20 A	37	38	--	--	SPACE	--	--	--
--	--	--	SPARE	--	20 A	39	40	--	--	SPACE	--	--	--
--	--	--	SPARE	--	20 A	41	42	--	--	SPACE	--	--	--

N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity	N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity
220.44	(R)Receptacle	4840 VA	100.00%	4840 VA	210.20(a)	(L)Lighting	2290 VA	125.00%	2863 VA
220.56	(K)Kitchen	1200 VA	100.00%	1200 VA		(EL)Ext. Ltg.			
220.60	(C)Cooling			0 VA	620.14	(E)Elevators			
220.60	(H)Heating			0 VA		(WH)Wat. Htr.			
220.60	(F)Fans				220.5	(MT)Lrg. Motor			
	(M)Misc.	9396 VA	100.00%	9396 VA		(SP)Sub Pnl.			
630.00	(W)Welder								

Total Connected Load: 17726 VA VA = 49 A
Total Load (Diversified): 18299 VA VA = 51 A

Location of Panel: Space 115

Lighting Fixture Schedule

TYPE	MANUFACTURER	CATALOG #	MOUNTING	# LAMPS	INPUT WATTS	Count
A1	METALUX	24FR-LD4-40-UNV-L835-CD-1	LAY-IN	LED	36 VA	52
A2	LITHONIA	2SP8 3 32 A12125 MVOLT 1/3	LAY-IN	F32T8/TL84/XLL/ALTO	1260 VA	3
B	METALUX	4SLWP3940ND-120V	SURFACE	LED	40 VA	2
C	METALUX	4SNLED-30SL-LC-UNV-L835-CD-1-WG/SNF-4FT-AYC CHAIN SET	SUSPENDED	LED	29 VA	3
D	HALO	PD6-20-ED010-835	RECESSED	LED	21 VA	23
EX1	SURELITES	LPX-6	UNIVERSAL	LED	5 VA	3
EX2	SURELITES	LPX-6-WG10	UNIVERSAL	LED	5 VA	2
F	HALO	SLD405-8-35-WH	SURFACE	LED	12 VA	5
G	METALUX	HBLED-LD4-18-W-AI-UNV-L840-CD-2-U-WG/HBL6-4FT-B	SUSPENDED	LED	152 VA	15
W	LUMARK	XTOR9ARL	SURFACE	LED	82 VA	9

Panelboard LD

14000 AIC Rating
X New
Existing

120/208 Wye Volt, 3 Phase, 4 Wire, 1 Section, Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB, 225 A BUS (Copper), - | X Single, Double, Feed - Thru | Mounting: X Surface, Flush

NOTE	Load (VA)	Type	Description	Wire	CB	CKT		CB	Wire	Description	Type	Load (VA)	NOTE
	7405 VA	C	ACCU-1	8	50 A	1	2	20 A	12	EUH-7	H	3300 VA	
						3	4						
	7405 VA	C	ACCU-2	8	50 A	5	6	20 A	12	GAS UNIT HEATERS	Ot...	1152 VA	
	7405 VA	C	ACCU-3	8	50 A	7	8	20 A	12	FCU-1	H	13728 VA	
						9	10						
	5200 VA	C	DSCU-1	12	20 A	11	12	20 A	12	FCU-2	H	13728 VA	
						13	14						
	2704 VA	F	AIRVAC 1	12	20 A	15	16	20 A	12	FCU-3	H	13728 VA	
						17	18						
	2704 VA	F	AIRVAC 2	12	20 A	19	20	--	--	SPACE	--	--	--
						21	22	--	--	SPACE	--	--	--
	2704 VA	F	AIRVAC 3	12	20 A	23	24	--	--	SPACE	--	--	--
						25	26	--	--	SPACE	--	--	--
	2704 VA	F	AIRVAC 4	12	20 A	27	28	--	--	SPACE	--	--	--
						29	30	--	--	SPACE	--	--	--
	2704 VA	F	AIRVAC 5	12	20 A	31	32	--	--	SPACE	--	--	--
						33	34	--	--	SPACE	--	--	--
--	--	--	SPARE	--	20 A	35	36	--	--	SPACE	--	--	--
--	--	--	SPARE	--	20 A	37	38	--	--	SPACE	--	--	--
--	--	--	SPARE	--	20 A	39	40	--	--	SPACE	--	--	--
--	--	--	SPARE	--	20 A	41	42	--	--	SPACE	--	--	--

N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity	N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity
220.44	(R)Receptacle				210.20(a)	(L)Lighting			
220.56	(K)Kitchen					(EL)Ext. Ltg.			
220.60	(C)Cooling	27415 VA	100.00%	0 VA	620.14	(E)Elevators			
220.60	(H)Heating	44484 VA	100.00%	44484 VA		(WH)Wat. Htr.			
220.60	(F)Fans	13520 VA	100.00%	13520 VA	220.5	(MT)Lrg. Motor			
	(M)Misc.					(SP)Sub Pnl.			
630.00	(W)Welder								

Total Connected Load: 86571 VA VA = 240 A
Total Load (Diversified): 59156 VA VA = 164 A

Location of Panel: ELECTRICAL RM. 112

Panelboard MDP

42000 AIC Rating
X New
Existing

120/208 Wye Volt, 3 Phase, 4 Wire, 1 Section, Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB, 600 A BUS (Copper), - | X Single, Double, Feed - Thru | Mounting: X Surface, Flush

NOTE	Load (VA)	Type	Description	Wire	CB	CKT		CB	Wire	Description	Type	Load (VA)	NOTE
						1	2						
	22280 VA	R; M	PANEL 'LA'	3	100 A	3	4	225 A	4/0	PANEL 'LB'	Other; L; R;...	45552 VA	
						5	6						
						7	8						
	17726 VA	Power; L; R; ...	PANEL 'LC'	3	100 A	9	10	225 A	4/0	PANEL 'LD'	Other; F; C; H	59156 VA	
						11	12						
--	--	--	SPACE	--	--	13	14	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	15	16	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	17	18	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	19	20	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	21	22	--	--	SPACE	--	--	--
--	--	--	SPACE	--	--	23	24	--	--	SPACE	--	--	--

N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity	N.E.C. (2014)	Load Type	Conn.	Fct.	Diversity
220.44	(R)Receptacle	25360 VA	69.72%	17680 VA	210.20(a)	(L)Lighting	10902 VA	125.00%	13628 VA
220.56	(K)Kitchen	10600 VA	65.00%	6890 VA		(EL)Ext. Ltg.			
220.60	(C)Cooling	27415 VA	100.00%	0 VA	620.14	(E)Elevators			
220.60	(H)Heating	44484 VA	100.00%	44484 VA		(WH)Wat. Htr.	18000 VA	100.00%	18000 VA
220.60	(F)Fans	13520 VA	100.00%	13520 VA	220.5	(MT)Lrg. Motor			
	(M)Misc.	20696 VA	100.00%	20696 VA		(SP)Sub Pnl.			
630.00	(W)Welder								

Total Connected Load: 172129 VA VA = 478 A
Total Load (Diversified): 136050 VA VA = 378 A

Location of Panel: ELECTRICAL RM. 112

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
123911
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

EDINBURG FIRE STATION #5
JASMAN RD & FM2812
CITY OF EDINBURG

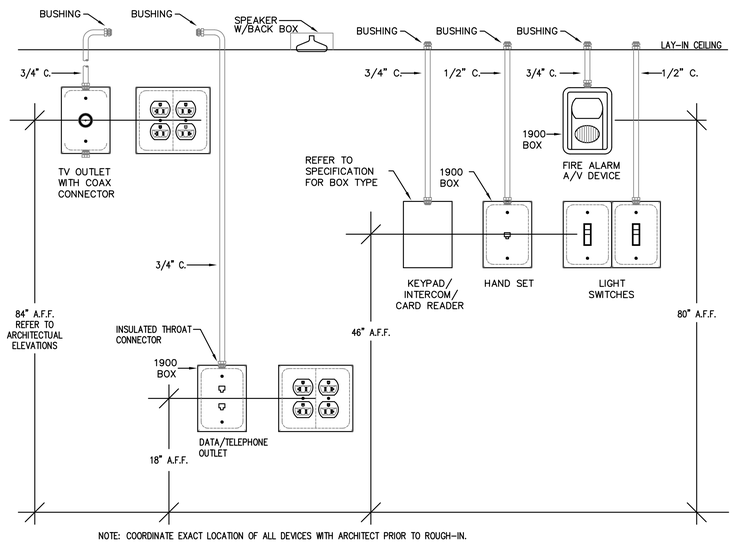
PROJECT NUMBER
219003

DATE
FEBRUARY 28,2019

ISSUED FOR BID

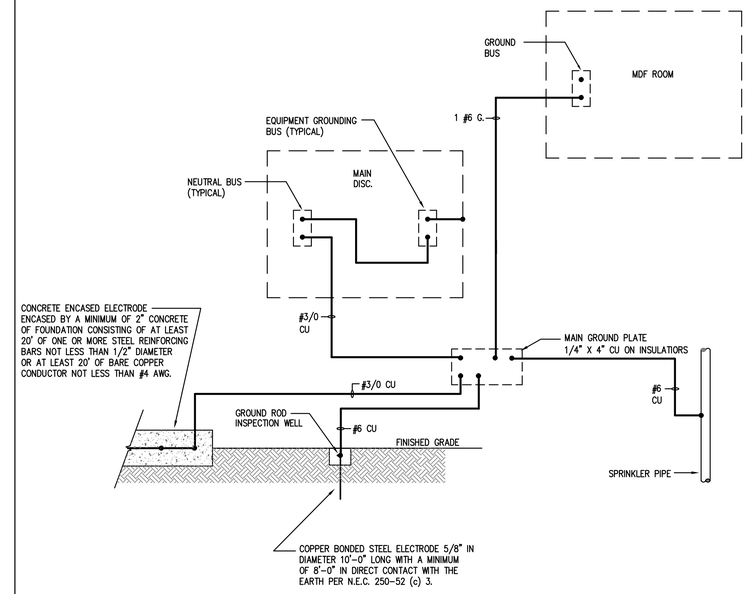
ADDENDUM#2 01-14-16

SHEET
E5.1
OF



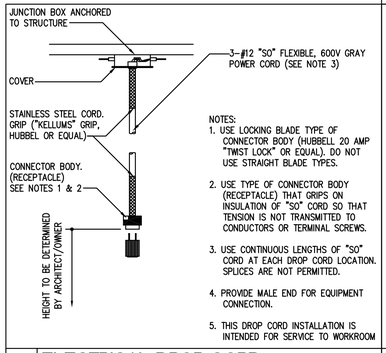
NOTE: COORDINATE EXACT LOCATION OF ALL DEVICES WITH ARCHITECT PRIOR TO ROUGH-IN.

2 TYPICAL DEVICE ELEVATIONS
NOT TO SCALE



3 GROUNDING ELECTRODE SYSTEM DETAIL
NOT TO SCALE

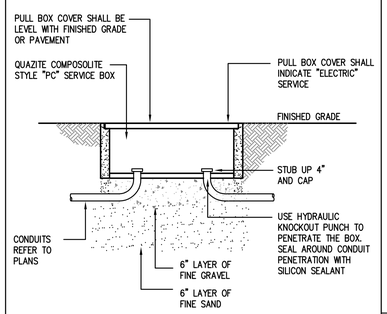
EPG001.DWG



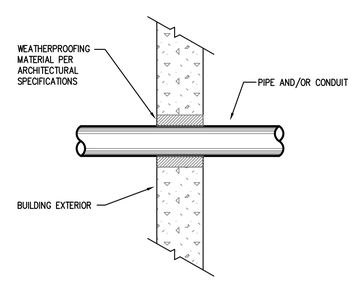
NOTES:
1. USE LOCKING BLADE TYPE OF CONNECTOR BODY (HUBBELL 20 AMP "TWIST LOCK" OR EQUAL). DO NOT USE STRAIGHT BLADE TYPES.
2. USE TYPE OF CONNECTOR BODY (RECEPTACLE) THAT GRIPS ON INSULATION OF "SO" CORD SO THAT TENSION IS NOT TRANSMITTED TO CONDUCTORS OR TERMINAL SCREWS.
3. USE CONTINUOUS LENGTHS OF "SO" CORD AT EACH DROP CORD LOCATION. SPLICES ARE NOT PERMITTED.
4. PROVIDE MALE END FOR EQUIPMENT CONNECTION.
5. THIS DROP CORD INSTALLATION IS INTENDED FOR SERVICE TO WORKROOM

4 ELECTRICAL DROP CORD
NOT TO SCALE

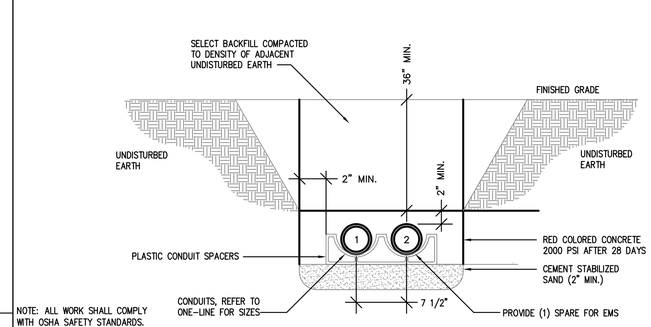
EPR010.DWG



5 PULL BOX DETAIL
NOT TO SCALE

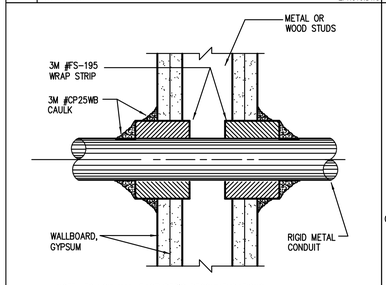


6 PIPE AND/OR CONDUIT PENETRATION
NOT TO SCALE



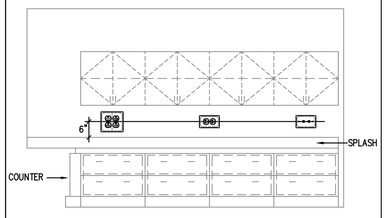
NOTE: ALL WORK SHALL COMPLY WITH OSHA SAFETY STANDARDS.

7 SECONDARY SERVICE TRENCH DETAIL
NOT TO SCALE



NOTE: FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION

8 1 AND 2 HR. GYPSUM/WALLBOARD PIPE PENETRATION
NOT TO SCALE



9 TYPICAL COUNTERTOP DEVICE ELEVATION
NOT TO SCALE

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

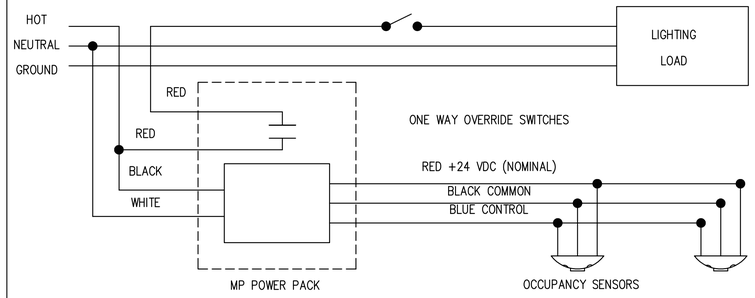
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

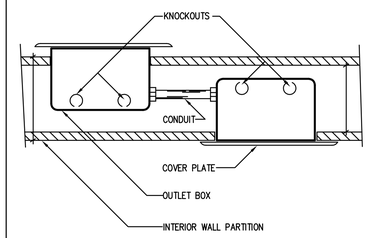
DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

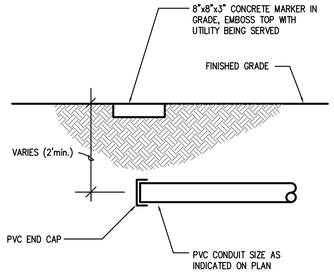
SHEET
E6.1
OF



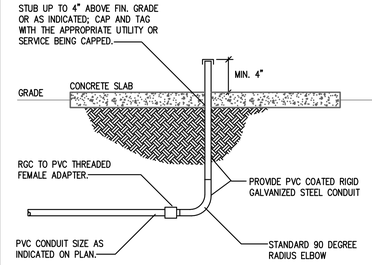
1 **1 WAY OCCUPANCY SENSOR**
NOT TO SCALE
ELC018.DWG



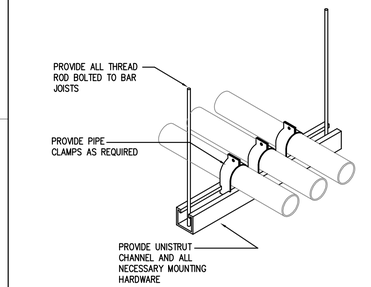
2 **BACK-TO-BACK OUTLETS**
NOT TO SCALE
2



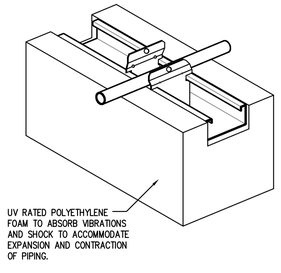
3 **CAP AND STAKE DETAIL**
NOT TO SCALE
EPC007.DWG



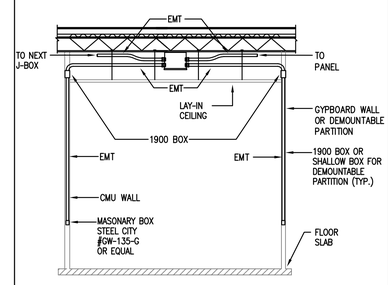
4 **CONDUIT STUB-UP DETAIL**
NOT TO SCALE



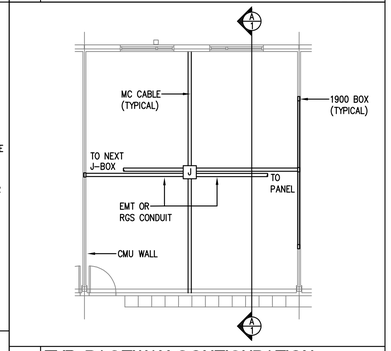
5 **UNISTRUT CONDUIT DETAIL**
NOT TO SCALE
EPC001.DWG



6 **CADDY PIPE PIER SUPPORT DETAIL**
NOT TO SCALE
EPC017.DWG



7 **A-A SECTION OF TYPICAL RACEWAY CONFIGURATION**
NOT TO SCALE
EPW006.DWG



8 **TYP. RACEWAY CONFIGURATION**
NOT TO SCALE
EPW005.DWG

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

EDINBURG FIRE STATION #5

CITY OF EDINBURG

JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

SHEET
E6.2
OF

PLUMBING SYMBOLS AND ABBREVIATIONS

(NOT ALL ITEMS INDICATED APPLY TO THIS PROJECT)

ABBREVIATIONS

A

A	AIR (COMPRESSED)
ABV	ABOVE
AC	ABOVE CEILING
AD	ACCESS DOOR, AREA DRAIN
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AP	ACCESS PANEL
ARCH	ARCHITECT, ARCHITECTURAL
AS	AIR SEPARATOR
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AV	ACID VENT
AVG	AVERAGE
AW	ACID WASTE
AWS	AMERICAN WELDING SOCIETY
AUX	AUXILIARY

B

B	BOILER
BC	BELOW COUNTER
B/C	BACK OF CURB
BF	BELOW FLOOR
BFV	BUTTERFLY VALVE
BH	BOX HYDRANT
BLDG	BUILDING
BM	BENCHMARK
BOF	BOTTOM OF FOOTING
BOS	BOTTOM OF STRUCTURE
BT	BATH TUB
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BWV	BACK WATER VALVE

C

C	CELSIUS
CAB	CABINET
CB	CATCH BASIN
CD	CONDENSATE DRAIN LINE
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CH	CHILLER
CP	CIRCULATING PUMP
CI	CAST IRON
CIRC	CIRCULATING
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CPI	CAST IRON PIPE INSTITUTE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CO	CLEAN OUT
COL	COLUMN
COMB	COMBINATION
COMP	COMPRESSOR
CONC	CONCRETE, CONCENTRIC
CONN	CONNECTION
CONT	CONTINOUS,CONTINUATION
CONTR	CONTROLLER, CONTRACTOR
CRAC	COMPUTER ROOM A/C UNIT
CTR	CENTER
CU	COPPER
CW	COLD WATER

D

D	DEPTH, DRAIN, DRYER
DESIG	DESIGNATION
DTL	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DISC	DISCONNECT
DN	DOWN
DS	DOWNSPOUT, DOUBLE SUCTON
DW	DISHWASHER
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWP	DOMESTIC WATER PUMP

E

EA	EACH
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EDF	ELECTRIC DRINKING FOUNTAIN
EFF	EFFICIENCY
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPTMENT
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EXT	EXTERNAL
EXTG	EXISTING

F

F	FARENHEIT, FIRE
FBO	FURNISHED BY OTHERS
FCO	FLOOR CLEAN OUT
FCS	FLOOR CONTROL STATON
FD	FLOOR DRAIN, FIRE DAMPER
FDSC	FIRE DEPARTMENT SIAMESE CONNECTION
FDV	FIRE DEPARTMENT VALVE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FIXT	FIXTURE
FLEX	FLEXIBLE
FL	FLOW LINES
FLR	FLOOR
FP	FIRE PUMP
FRZR	FREEZER
FS	FLOW SWITCH, FIRE SPRINKLER
FSK	FLOOR SINK
FT	FOOT, FEET
FUT	FUTURE

G

G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GLV	GLOBE VALVE
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GV	GATE VALVE

H

HB	HOSE BIBB
HD	HEAD, HUB DRAIN
HORIZ	HORIZONTAL
HP	HORSEPOWER
HKP	HOUSEKEEPING PAD
HSC	HORIZONTAL SPLIT CASE
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	HERTZ

I

ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INSUL	INSULATION
INT	INTERNAL, INTERIOR
IW	INDIRECT WASTE

J

JP	JOCKEY PUMP

K

KEC	KITCHEN EQUIPTMENT CONTRACTOR
KO	KNOCKOUT
KVA	KILOVOLT- AMPS
KW	KILOWATT

L

L	LENGTH, LAVATORY
LAV	LAVATORY
LF	LINEAR FEET
LP	LOW PRESSURE
LRA	LOCKED ROTOR AMPS

M

MAX	MAXIMUM
MBTUH	THOUSAND OF BTU'S
MC	MECHANICAL CONTRACTOR
MCWCO	MOP SINK CLEAN OUT
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MI	MALLEABLE IRON
MIN	MINIMUM
MP	MEDIUM PRESSURE
MS	MOP SINK
MTD	MOUNTED
MU	MAKE-UP

N

N.C.	NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE

O

OC	ON CENTER
OD	OUTSIDE DIAMETER, OVERFLOW DRAIN
OFCU	OUTSIDE AIR FAN COIL UNIT
OPG	OPENING
OS&Y	OPEN STEM AND YOLK
O	MEDICAL OXYGEN

P

P	PUMP, PLUMBING EQUIPTMENT
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP, PLANTER DRAIN
PH	PHASE, POST HYDRANT
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PNEU	PNEUMATIC
PNL	PANEL
PNTH	PENTHOUSE
PP	POLYPROPYLENE
PPM	PART PER MILLION
PRI	PRIMARY
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	PLUMBING TRIM
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE

Q

QTY	QUANTITY

R

RCP	REFLECTED CEILING PLAN, REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RE	REFERENCE,REFER
RECIRC	RECIRCULATE
RED	REDUCER
REFR	REFRIGERATOR
REINF	REINING'FORCING
REQD	REQUIRED
REV	REVISION, REVISE
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
RV	RELIEF VALVE

S

SCHED	SCHEDULED
SD	STORM DRAIN
SE	SEWAGE EJECTOR
SEC	SECONDARY
SECT	SECTION
SF	SQUARE FEET
SFCS	SPRINKLER FLOOR CONTROL STATION
SH	SHOWER
SHT	SHEET
SIM	SIMILAR
SK	SINK
SP	SUMP PUMP, STATIC PRESSURE
SPEC	SPECIFICATION
SPR	SPRINKLER
SQ	SQUARE
SS	SERVICE SINK
SSD	SUBSURFACE DRAIN
SSFU	SANITARY SEWER FIXTURE UNITS
STD	STANDARD
STL	STEEL
STR	STRAINER
SURF	SURFACE
SUSP	SUSPEND
SV	SANITARY VENT
SW	SOFT WATER

T

TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TH BLK	THRUST BLOCK
TP	TRAP PRIMER
TPD	TRAP PRIMER DEVICE
TYP	TYPICAL

U

U	URINAL
UCD	UNDER CUT DOOR
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
U/F	UNDERFLOOR
U/S	UNDERSLAB

V

V	VOLT, VENT
VAC	VACUUM(MEDICAL)
VB	VALVE BOX, VACUUM BREAKER
VCP	VITRIFIED CLAY PIPE
VEL	VELOCITY
VERT	VERTICAL
VIB	VALVE IN BOX
VOV	VALVE ON VERTICAL
VP	VACUUM PUMP
VTR	VENT THRU ROOF

W

W	WATT, WASTE, WIDTH, WASHER
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WM	WATER METER
WP	WEATHERPROOF
WPD	WATER PRESSURE DROP
WWF	WELDED WIRE FABRIC
WT	WATERTIGHT, WEIGHT

Y

Y	YARD HYDRANT

Z

Z	ZONE

SYMBOLS

PLUMBING SYSTEMS

	SANITARY DRAIN BELOW FLOOR
	SANITARY DRAIN ABOVE FLOOR
	SANITARY VENT
GW	GREASE WASTE(ABOVE CEILING)
GW	GREASE WASTE(BELOW FLOOR)
SD	STORM DRAIN(ABOVE CEILING)
SD	STORM DRAIN(BELOW FLOOR)
OD	OVERFLOW DRAIN(ABOVE CEILING)
OD	OVERFLOW DRAIN(BELOW FLOOR)
AW	ACID WASTE(ABOVE CEILING)
AW	ACID WASTE(BELOW FLOOR)
AV	ACID VENT(ABOVE CEILING OR BELOW FLOOR)
	COLD WATER
110°	HOT WATER(FINAL DELIVERY TEMPERATURE AS NOTED)
110°	HOT WATER RECIRCULATION (TEMPERATURE AS NOTED)
G	NATURAL GAS
T 110°	TEMPERED WATER(FINAL DELIVERY TEMPERATURE AS NOTED)
CA	COMPRESSED AIR
A	MEDICAL AIR
O	MEDICAL OXYGEN
V	MEDICAL VACUUM
F	FIRE STANDPIPE, FIRE LINE
FS	WET AUTOMATIC FIRE SPRINKLER
TP	TRAP PRIMER
D	DRAIN LINE
SW	SOFT WATER

SYMBOLS

PIPING FITTINGS

	CAP ON END OF PIPE
	ELBOW UP
	ELBOW DOWN
	VALVE IN DROP
	VALVE IN RISE
	DIRECTION OF FLOW
	DIRECTION OF SLOPE DOWN
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	TEE OUTLET UP
	TEE OUTLET DOWN
	UNION
	FLANGE
	PIPE ANCHOR
	EXPANSION JOINT
	STRAINER WITH BLOWDOWN VALVE
	GATE VALVE, HVAC BALANCING/STOP VALVE
	GLOBE VALVE
	BALL VALVE
	BALANCING VALVE WITH DIFFERENTIAL PRESSURE TAPS
	OS&Y VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	TWO-WAY MODULATING CONTROL VALVE
	THREE-WAY MODULATING CONTROL VALVE
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	GAS REGULATOR
	GAS COCK
	SPRINKLER FLOOR CONTROL STATION
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	T&P RELIEF VALVE
	LINE CLEANOUT/ WALL CLEANOUT
	FLOOR CLEANOUT
	YARD CLEANOUT
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER
	WATER METER
	FLEXIBLE CONNECTION
	PRESSURE AND TEMPERATURE TAP
	FLOW VENTURI
	VACUUM BREAKER
	VACUUM RELIEF VALVE
	BACKFLOW PREVENTOR
	CIRCULATING PUMP
	DRAIN(TYPE AND SIZE AS NOTED ON PLANS)
	ROOF DRAIN OR OVERFLOW DRAIN
	ROOF DRAIN OR OVERFLOW DRAIN(FROM ABOVE)
	WATER HAMMER ARRESTOR

MISCELLANEOUS

	HOSE BIBB
	WALL HYDRANT
	PLUMBING FIXTURES
	POINT OF NEW CONNECTION TO EXISTING PIPING
1	PLUMBING DRAWING NOTE REFERENCE
2 / P2.1	DETAIL NUMBER OR PLAN / SHEET WHERE DETAIL OR PLAN IS SHOWN
FS	FLOW SWITCH
TS	TAMPER SWITCH
	FIRE HOSE CABINET
	FIRE DEPARTMENT SIAMESE CONNECTION(WALL MOUNTED)
	FIRE DEPARTMENT SIAMESE CONNECTION(FREE STANDING)

GENERAL FIRE PROTECTION NOTE

1 ENTIRE BUILDING SHALL BE PROVIDED/PROTECTED WITH A HYDRAULICALLY DESIGNED, SIZED AND INSTALLED WET PIPE SPRINKLER SYSTEM. THE DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF NFPA 13, NFPA 24 AND ALL LOCAL CODES. SUBMIT SHOP DRAWINGS AND CALCULATIONS AS SPECIFIED. CONTRACTOR TO DETERMINE IF SEPARATE FIRE RISERS ARE NEEDED AND INCLUDE COST IN BID.

2 AREAS SUBJECT TO FREEZING SHALL BE PROTECTED WITH A HYDRAULICALLY DESIGNED, SIZED, AND INSTALLED DRY-PIPE SYSTEM IN ACCORDANCE WITH NFPA 13 AND ALL LOCAL CODES.

3 DRAWINGS INDICATE THE FIRE SPRINKLER SERVICE TO THE BUILDINGS. PROVIDE ALL VALVES, DEVICES, FITTINGS, APPURTENANCES, ETC., REQUIRED FOR A COMPLETE SYSTEM. ALL SPRINKLER HEADS SHALL BE INDICATED ON APPROVED SHOP DRAWINGS.

4 COORDINATE LOCATIONS OF SPRINKLER FLOW, PRESSURE AND TAMPER SWITCHES WITH FIRE ALARM TRADES.

5 PROVIDE LIGHT HAZARDS PROTECTION FOR ENTIRE BUILDING EXCEPT FOR MECHANICAL ROOMS AND ELECTRICAL ROOMS SHALL RECEIVE ORDINARY HAZARD, GROUP 2 PROTECTION.

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

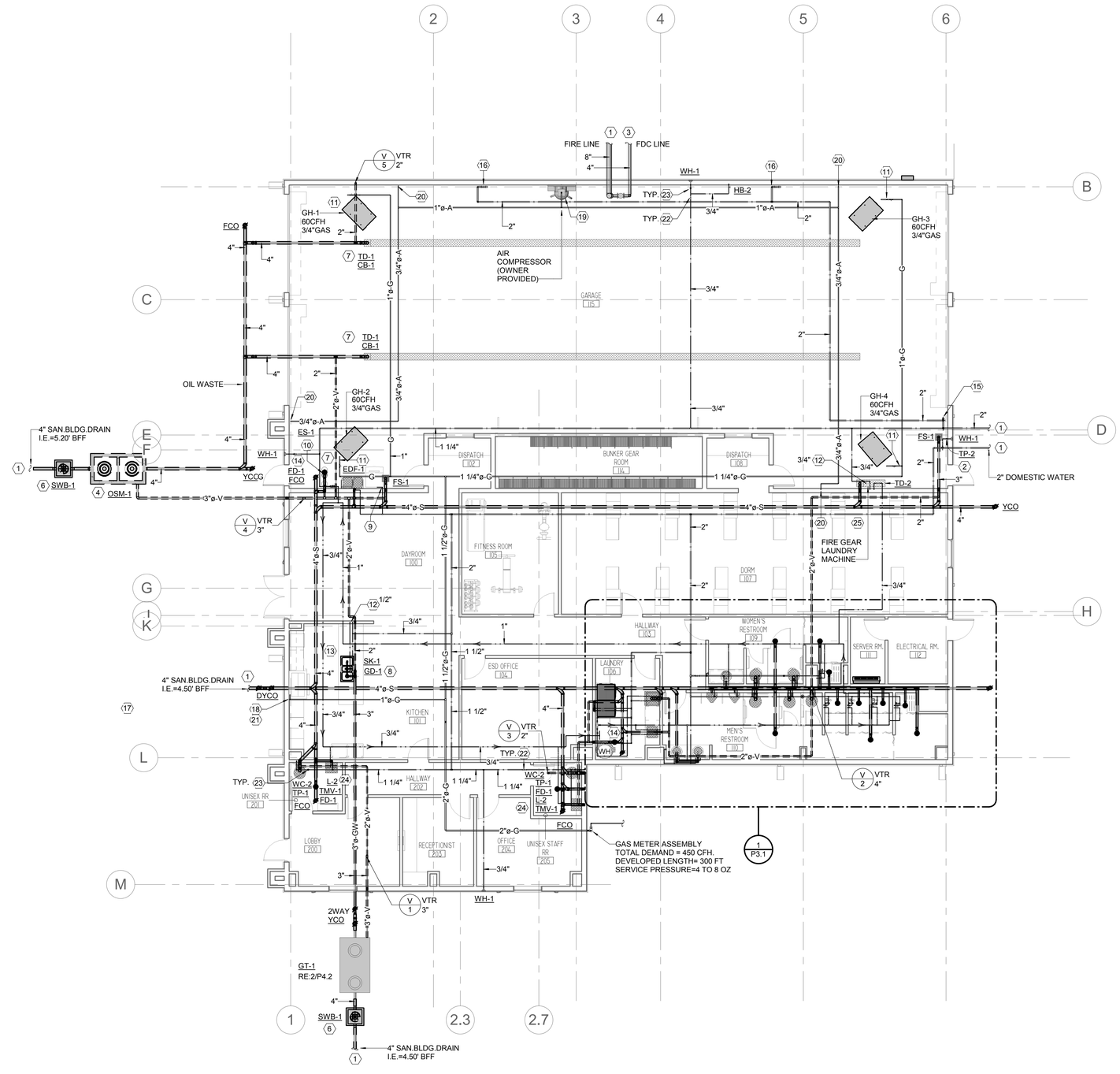
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

SHEET
P0.0
OF



1 PLUMBING FLOOR PLAN
P2.1
1/8" = 1'-0"

GENERAL NOTES:

(A) DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES. REFER TO RISER DIAGRAMS FOR MORE SIZING INFORMATION AND REQUIREMENTS.

(B) PROVIDE ROUGH-INS AS REQUIRED FOR ALL FIXTURES AND EQUIPMENT PROVIDED BY SEPARATE DIVISION AND/OR OWNER. PROVIDE ALL MATERIALS AND LABOR TO INSTALL AND MAKE FINAL CONNECTIONS TO ALL EQUIPMENT. ALL CONNECTIONS FOR EQUIPMENT TO BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF HEALTH DEPARTMENT AND PLUMBING CODES.

PLUMBING KEYED NOTES:

1. REFER TO CIVIL SITE UTILITY PLAN FOR CONTINUATION. CONTRACTOR TO BE RESPONSIBLE FOR COORDINATION, VERIFICATION AND CONNECTION OF ALL UTILITIES TO SITE UTILITY STUB-OUTS.
2. DOMESTIC WATER ENTRY. RE: DETAIL 1/P4.2
3. FIRE SPRINKLER SYSTEM BY FIRE PROTECTION CONTRACTOR. PROVIDE FIRE SPRINKLER CONTROL/ALARM VALVE ASSEMBLY RISERS AND REMOTE FIRE DEPARTMENT CONNECTION (FDC). REFER TO CIVIL SITE PLAN FOR LOCATION OF ROADSIDE VALVE AND FDC. CONTRACTOR IS RESPONSIBLE FOR FINAL SIZING OF PIPES AND COMPONENTS BASED ON THEIR HYDRAULIC CALCULATIONS RE: DETAIL 19/P4.2 AND 20/P4.2.
4. PROVIDE SAND/OIL INTERCEPTOR EQUAL TO PARK MODEL NO. SOCMP-750 GALLON PRE-CAST, DIRECT BURIAL INTERCEPTOR. RE: DETAIL 1/P4.3
5. PROVIDE HUB DRAIN IN MEZZANINE FLOOR FOR CONDENSATE FROM COMPRESSED AIR SYSTEM. ROUTE SANITARY DOWN THROUGH WALL.
6. PROVIDE SAMPLE WELL BASIN EQUAL TO PARK MODEL SWB-154, SEE DETAIL 3/P4.3.
7. COORDINATE LOCATION OF TRENCH DRAINS, CATCH BASIN AND ALL FLOOR DRAINS/SINKS WITH STRUCTURAL PRIOR TO SLAB CONSTRUCTION.
8. ISLAND KITCHEN SINK, RE: 4/P4.3.
9. 1/2" CW DROP FOR SERVICE TO ICE MACHINE, PROVIDE RPZ BFP DEVICE EQUAL TO WATTS LF009 .RE: DETAIL 13/P4.2.
10. EMERGENCY SHOWER AND EYEWASH UNIT. RE: SCHEDULE AND DETAIL 16/P4.2.
11. 3/4" GAS (60 CFH) TO GAS UNIT HEATER, COORDINATE ALL ROUTING AND CONNECTIONS WITH MECHANICAL CONTRACTOR.
12. COLD AND HOT WATER DROPS TO FIXTURE(S) OR EQUIPMENT; SIZES AS NOTED. REFER TO PLUMBING RISER DIAGRAM FOR CONTINUATION IN WALL OR CHASE.
13. CONTRACTOR TO PROVIDE ALL PLUMBING CONNECTIONS TO DISHWASHER .
14. PROVIDE "TRAP GUARD" SEWER GAS EMISSION PROTECTION IN THIS FLOOR/HUB DRAIN/FLOOR SINK. RE: DETAIL 14/P4.2.
15. 2" CW RISER FOR FIRE TRUCK FILLING AND NON-POTABLE USE. RE: 21/P4.2.
16. 2" CW (NON-POTABLE) DROP, ANCHOR TO WALL AND PROVIDE 2" BALL VALVE WITH 2" THREADED FITTING FOR "QUICK FILLING" OF FIRE TRUCKS. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH OWNER/ARCHITECT.
17. PROPOSED LOCATION OF GAS METER. COORDINATE EXACT LOCATION WITH GAS COMPANY. GAS METER ASSEMBLY BY LOCAL UTILITY COMPANY. TOTAL DEMAND OF 450 CFH @ 4oz. CONTRACTOR TO BE RESPONSIBLE FOR ALL COST/FEES ASSOCIATED WITH GAS SERVICE.
18. 1" GAS (210 CFH) PIPING DROP FOR GAS RANGE. PROVIDE ALL FINAL CONNECTIONS, ASSOCIATED VALVE AND DIRT LEG.
19. AIR COMPRESSOR PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR. CONTRACTOR TO COORDINATE EXACT LOCATIONS OF CA OUTLETS WITH OWNEER/ARCHITECT. PROVIDE ALL FINAL CONNECTIONS.
20. 1/2" CA DROP TO COMPRESSED AIR OUTLET . PROVIDE REGULAR AUTOMOTIVE AIR HOSE BIBB FEMALE CONNECTOR AND UNIVERSAL TWIST LOCK CONNECTOR WITH 1/4 TURN GATE VALVE.
21. PROVIDE PVC SLEEVE FOR ALL GAS LINES UNDER PAVEMENT AND PROVIDE SLEEVE FOR GAS PIPING THRU WALL.
22. BALL VALVE ABOVE CEILING. PROVIDE ACCESS PANEL WHERE LOCATED IN AN INACCESSIBLE CEILING. PANEL SHALL BE 12"X12" PAINTED TO MATCH CEILING. PROVIDE MARKING OF VALVE LOCATION ALONG THE CEILING TILE.
23. WATER HAMMER ARRESTOR, SIZE AS NOTED. PROVIDE PROPERLY SIZED WATER HAMMER ARRESTOR FOR EACH GROUP OF FIXTURES WHETHER SHOWN OR NOT ON PLANS.
24. PROVIDE ALL LAVATORIES WITH POINT OF USE ASSE 1070 LISTED TMV-1.
25. PROVIDE PLUMBING LINES FOR FIRE GEAR WASHER. TRENCH DRAIN DETAIL 6/P4.3. PROVIDE HOT AND COLD WATER HOSE BIBS. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT.

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

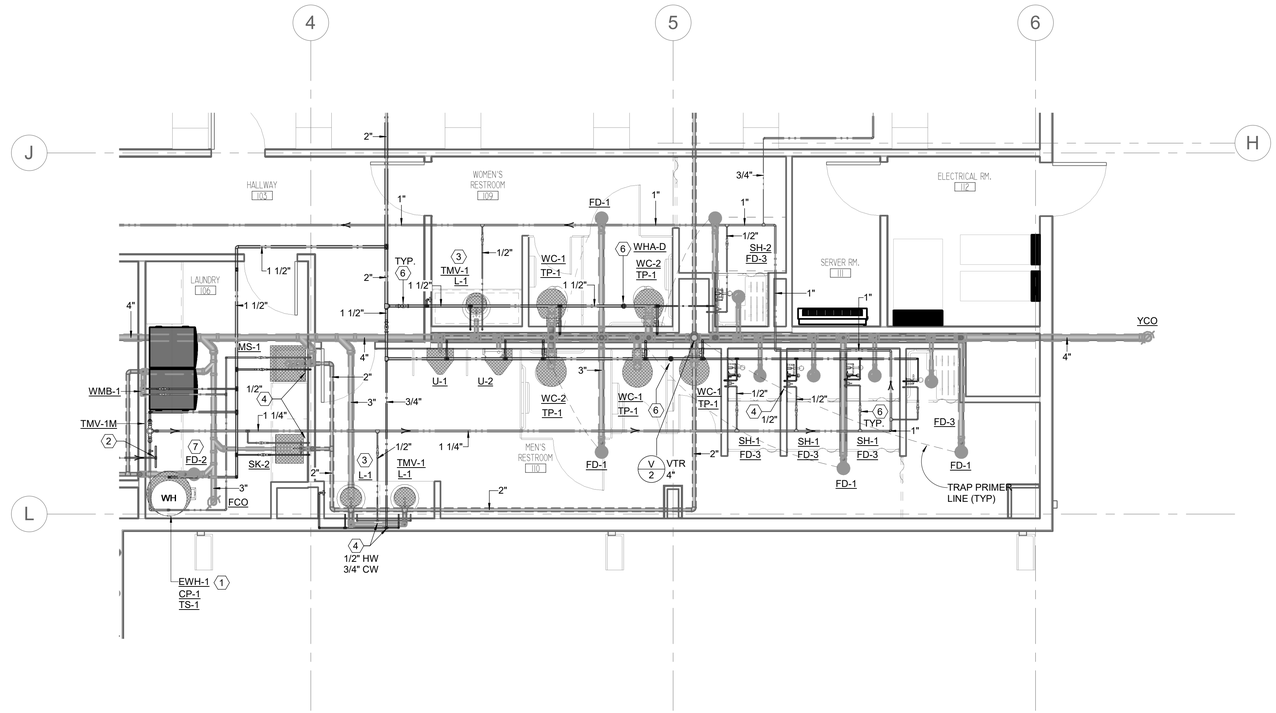
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219005

DATE
FEBRUARY 28,2019

ISSUED FOR BID

SHEET
P2.1
OF



1 ENLARGED PLUMBING PLAN
P3.1

1/4" = 1'-0"

GENERAL NOTES:

(A) DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES. REFER TO RISER DIAGRAMS FOR MORE SIZING INFORMATION AND REQUIREMENTS.

(B) PROVIDE ROUGH-INS AS REQUIRED FOR ALL FIXTURES AND EQUIPMENT PROVIDED BY SEPARATE DIVISION AND/OR OWNER. PROVIDE ALL MATERIALS AND LABOR TO INSTALL AND MAKE FINAL CONNECTIONS TO ALL EQUIPMENT. ALL CONNECTIONS FOR EQUIPMENT TO BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF HEALTH DEPARTMENT AND PLUMBING CODES.

PLUMBING KEYED NOTES:

(1) ELECTRIC WATER HEATER WITH RECIRCULATING SYSTEM AND MIXING VALVE. RE: 10/P4.2.

(2) 3/4" HOT WATER RETURN DROP TO CIRCULATING PUMP. RE: 10/P4.2.

(3) PROVIDE LAVATORY ALL LAVATORY WITH TMV-1 , SET AT MAXIMUM OF 110°F. INSTALL TMV BELOW FIXTURE AS HIGH AS POSSIBLE. RE: 12/P4.2.

(4) COLD AND HOT WATER DROPS TO FIXTURE(S) OR EQUIPMENT; SIZED AS NOTED. PROVIDE WATER HAMMER ARRESTORS AS INDICATED. REFER TO PLUMBING RISER DIAGRAM FOR CONTINUATION IN WALL OR CHASE.

(5) BALL VALVE ABOVE CEILING. PROVIDE ACCESS PANEL WHERE LOCATED IN AN INACCESSIBLE CEILING. PANEL SHALL BE 12"X12" PAINTED TO MATCH CEILING.

(6) WATER HAMMER ARRESTOR, PROVIDE ACCESS PANEL WHERE LOCATED IN AN INACCESSIBLE WALL/CEILING. PANEL SHALL BE 12'12" PAINTED TO MATCH WALL/CEILING.

(7) PROVIDE THIS FLOOR DRAIN WITH TRAPGUARD. RE: 14/P4.2.

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number	198001.000			
AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

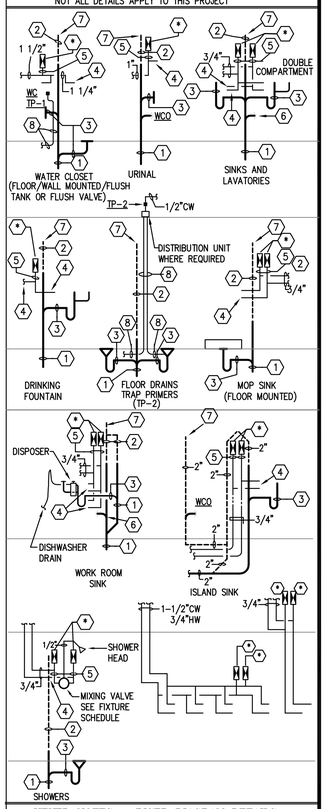
DATE
FEBRUARY 28,2019

ISSUED FOR BID

SHEET
P3.1
OF

PLUMBING RISER DETAILS

NOT ALL DETAILS APPLY TO THIS PROJECT



KEYED NOTES - RISER DIAGRAM DETAILS:

(SEE PLUMBING FIXTURE SCHEDULE ON SHEET P3.01)

1. REFER TO PLUMBING FIXTURE SCHEDULE FOR SOIL OR WASTE ROUGH-IN PIPE SIZE. MINIMUM SOIL OR WASTE DRAIN LINE SIZE (EXCEPT AS NOTED) FOR THIS FIXTURE.
2. REFER TO PLUMBING FIXTURE SCHEDULE FOR SANITARY VENT ROUGH-IN PIPE SIZE. MINIMUM SANITARY VENT BRANCH SIZE (EXCEPT AS NOTED) FOR THIS FIXTURE
3. REFER TO PLUMBING FIXTURE SCHEDULE FOR FIXTURE DRAIN ROUGH-IN PIPE SIZE. MINIMUM FIXTURE DRAIN AND TRAP SIZE (EXCEPT AS NOTED) FOR THIS FIXTURE
4. REFER TO PLUMBING FIXTURE SCHEDULE FOR WATER PIPING ROUGH-IN PIPE SIZE. MINIMUM WATER SUPPLY BRANCH SIZE (EXCEPT AS NOTED) FOR THIS FIXTURE.
5. SHOCK ARRESTOR INLET; REFER TO SHOCK ARRESTOR SCHEDULE FOR SIZE. LOCATION SHOWN HERE FOR INDIVIDUAL FIXTURE WILL VARY WHERE INCLUDED AS PART OF PLUMBING CHASE BATTERY OF PIPING. REFER TO RISER DIAGRAMS FOR BATTERY LOCATIONS. ARRANGE ALL WATER LINES TO GRAVITY DRAIN.
6. WALL CLEANOUTS SHALL BE PROVIDED AT ALL END OF BATTERY OR END OF BRANCH LINE FIXTURES AND WHERE REQUIRED BY PLUMBING CODE OFFICIALS TO ASSURE COMPLETE ACCESS TO ALL PORTIONS OF DRAIN.
7. SANITARY VENT PIPES SHALL CONTINUE TO CEILING OR HEADER TOGETHER AT MINIMUM 42" ABOVE FINISHED FLOOR.
8. TRAP REFULL LINE; SEE PLUMBING DETAILS SHEET. EXTEND AND CONNECT TO FLOOR DRAIN TRAP AS SHOWN.

SHOCK ARRESTOR SCHEDULE

P.D.I. SYMBOL	FIXTURE UNITS	SIZE
A	1-11	1/2" NPT
B	12-32	3/4" NPT
C	33-60	1" NPT
D	61-113	1 1/4" NPT
E	114-154	1 1/2" NPT
F	155-330	2" NPT

PIPING RISER DIAGRAMS ILLUSTRATE WATER HAMMER ARRESTORS AND AIR CHAMBERS FOR FIXTURE WATER PIPE OPENINGS. AIR CHAMBERS SHALL NOT BE USE TO REPLACE WATER HAMMER ARRESTORS. PROVIDE WATER HAMMER ARRESTORS FOR EACH GROUP OF FIXTURES WHETHER SHOWN OR NOT ON PLANS.

PLUMBING FIXTURE SCHEDULE

PLAN MARK	MINIMUM ROUGH-IN SIZES					DESCRIPTION
	WST & VENT		DRAIN	CW	HW	
WATER CLOSET WC-1	4"	2"	4"	1"	----	AMERICAN STANDARD No.2234.015 "MADERA" WHITE V.C. ELONGATED SIPHON JET FLOOR MTD. (1.6 GPF) BOWL WITH TOP SPUD, BOLT CAPS, OLSONITE No.95-SS WHITE OPEN FRONT SEAT, LESS COVER AND SLOAN No 8111-1.6 EXPOSED ELECTRONIC DUAL FLUSH BATTERY POWERED SENSOR ACTIVATED FLUSH VALVE.
WATER CLOSET WC-2 ADA	4"	2"	4"	1"	----	AMERICAN STANDARD No.3043.102 "MADERA" WHITE V.C. ELONGATED SIPHON JET FLOOR MTD. (1.6 GPF) BOWL WITH TOP SPUD, BOLT CAPS, OLSONITE No.95-SS WHITE OPEN FRONT SEAT, LESS COVER AND SLOAN No 8111-1.6 EXPOSED ELECTRONIC DUAL FLUSH BATTERY POWERED SENSOR ACTIVATED FLUSH VALVE.
URINAL U-1, U-2 STANDARD	2"	2"	2"	3/4"	----	AMERICAN STANDARD No.6590.125 "WASHBROOK" WHITE V.C. UHE 0.125 GPF, WITH 3/4" TOP SPUD AND WALL HANGERS. WITH SLOAN ECOS No.MODEL 8186-0.125 BATTERY POWERED SENSOR ACTIVATED FLUSH VALVE AND WADE OR EQUAL FLOOR MOUNTED CARRIER.
LAVATORY L-1	2"	2"	1-1/4"	1/2"	1/2"	AMERICAN STANDARD NO.0496.221 WHITE VC 19 X 16 OVAL FIXTURE WITH UNGLAZED RIM, FRONT OVERFLOW AND MOUNTING KIT FOR UNDER COUNTER INSTALLATION. PROVIDE CHICAGO 802-VE2805-665ABCP METERING FAUCET, 4" CENTERS, WITH FIXED GRID DRAIN STRAINER, CHROME PLATED BRASS P-TRAP,STOPS AND SUPPLIES.
LAVATORY L-2	2"	2"	1-1/4"	1/2"	1/2"	AMERICAN STANDARD No.0355.012 WHITE V.C. LAVATORY WITH FRONT OVERFLOW AND FAUCET HOLES DRILLED ON 4" CENTERS FOR CHICAGO 802-VE2805-665ABCP, 0.5 GPM METERING FAUCET W/ PERFORATED FIXED GRID DRAIN STRAINER, P-TRAP, STOPS AND SUPPLIES. PROVIDE ZURN OR EQUAL FLOOR MOUNTED CONCEALED ARM CARRIER.PROVIDE OFFSET TAILPIECE AND INSULATION KIT FOR ADULT ADA REQUIREMENTS. WITH TMV-1. REFER TO ARCH'L PLANS FOR MOUNTING HEIGHTS.
SINK SK-1 3-COMPARTMENT	2"	2"	1-1/2"	1/2"	1/2"	ELKAY No. LGR4322C "HARMONY" 3 HOLE PUNCH TRIPLE BOWL STAINLESS STEEL SINK.PROVIDE WITH PACKAGE INCLUDED LK3001CR FAUCET AND ELKAY No. LK-18 GRID DRAIN STRAINERS, TAILPIECE, LK-53 CONTINUOUS WASTE, CAST BRASS P-TRAP WITH CO, STOPS AND SUPPLIES. PROVIDE TRUBRO LAV GUARDS WHERE PIPING IS EXPOSED.
SINK SK-2 1-COMPARTMENT	2"	2"	1-1/2"	1/2"	1/2"	ELKAY No. DLR-1919-10 "GOURMET" DEEP SINGLE BOWL STAINLESS STEEL SINK PROVIDE AMERICAN STANDARD No.7890.002.342V GOOSE-NECK FAUCET WITH BRASS LEVER HANDLES, AND SWING SPOUT, ELKAY No. LK-18 GRID DRAIN STRAINERS, TAILPIECE, CAST BRASS P-TRAP WITH CO,STOPS AND SUPPLIES.PROVIDE TRUBRO LAV GUARDS WHERE PIPING IS EXPOSED.
ELECTRIC DRINKING FOUNTAIN EDF-1 ADA	2"	2"	1-1/2"	1/2"	----	ELKAY MODEL LZSTLBWSSP FREE WALL MOUNTED BI-LEVEL WATER COOLER WITH BOTTLE FILLING STATION, WITH WATERSENTRY PLUS 3000 GALLON CAPACITY FILTRATION SYSTEM. 8.0 GPH CAPACITY COOLED TO 50° F WITH 80° F AMBIENT TEMP, 370 WATTS, 4.2 FL. AMPS WIRED FOR 120V/60/1 POWER. PROVIDE ZURN OR EQUAL FLOOR MOUNTED PLATE TYPE CARRIER. PROVIDE APRON FOR SIDE ACCESS CLEARANCE AND TRAP AND SUPPLY AS NOTED BELOW. PROVIDE WITH ALL STAINLESS STEEL CABINET.
SHOWER SH-1 STD	2"	2"	2"	1/2"	1/2"	BRADLEY BUILT-IN SHOWER No.1C-TMV/E1 INDIVIDUAL SHOWER, WITH THERMOSTATIC MIXING VALVE, WITH ECONOMY SOFT FLOW SHOWERHEAD.
SHOWER SH-2 ADA	2"	2"	2"	1/2"	1/2"	BRADLEY No. HN200-TMV-ES-6' INDIVIDUAL RECESSED MOUNTED SHOWER UNIT WITH LEVER HANDLE THERMOSTATIC MIXING VALVE, INLET STOPS, RECESSED SOAP DISH, HOSE BRACKET AND 2.0 GPM SOFT FLOW SHOWER HEAD WITH VOLUME CONTROL, DIVERTER VALVE AND FLEX-SHOWER WITH V.B. LESS QUICK DISCONNECT. PROVIDE ZURN SHOWER DRAIN ZN-415-5B & MIN. 4 P.S.F. LEAD OR 40 MIL. VINYL SHOWER LINER. SHOWER CURTAIN, ROD, SEAT AND GRAB BARS ARE PROVIDED UNDER ARCHITECTURAL DIVISIONS. FIELD COORDINATE FOR SEAT RIGHT OR LEFT PER ARCH'L DRAWINGS.
MOP SINK MS-1	3"	2"	3"	3/4"	3/4"	FIAT TSB 100 24 X 24 X 12 WITH STAINLESS STEEL CAP AND CAULK OUTLET DRAIN WITH N.B. STRAINER. PROVIDE CHICAGO No.897-RCF WALL MOUNT FAUCET WITH INTEGRAL STOPS, WALL BRACE AND VACUUM BREAKER. PROVIDE T-35 HOSE AND WALL BRACKET AND T-40 STAINLESS STEEL MOP HANGER.
HOSE BIBB HB-1	----	----	----	3/4"	----	WADE 8600MT RECESSED STAINLESS STEEL WALL BOX WITH COLD WATER WHEEL HANDLE VALVE, INTEGRAL STOP, VB AND HINGED LOCKING COVER STAMPED 'WATER' INSTALL FLUSH AND RIGID TO FINISHED WALL AND SEAL WATERTIGHT.
HOSE BIBB HB-2	----	----	----	3/4"	----	WADE 8601MT NON-REMOVABLE COMBINED CHECK VALVE AND VACUUM BREAKER AND LOOSE KEY OPERATING HANDLE.
TRAP PRIMER TP-1	----	----	1/2"	----	----	PROVIDE SLOAN No. VBF-72-A1 FLUSH VALVE VACUUM BREAKER TRAP REFILL SUPPLY. ALL EXPOSED PIPES TO BE CHROME PLATED AND RUN SHORT AS POSSIBLE TO WALL. CONCEALED DRAIN TUBING SHALL BE 1/2" TYPE 'K' SOFT COPPER SLOPING UNIFORMLY TO DRAIN WRAPPED IN CONTINUOUS PLASTIC SLEEVE.
TRAP PRIMER TP-2	----	----	1/2"	1/2"	----	PRECISION PLUMBING PRODUCTS, INC. "OREGON" NO.1 FULLY AUTOMATIC TRAP PRIMER VALVE. INSTALL EXPOSED IN ACCESSIBLE LOCATION, INSTALL AT MINIMUM 15" ABOVE FINISHED FLOOR.
ICE MAKER WALL BOX WB-1	----	----	----	1/2"	----	GUY GRAY NO. BIM-875 WITH 1/2 X 1/4 O.D. TUBE, CHROME PLATED FIXTURE SUPPLY STOP. INSTALL BOX 54" AFF BEHIND FREE STANDING REFRIGERATOR WITH ICE MAKER AND 18" AFF FOR UNDER COUNTER REFRIGERATOR OR ICE MAKER LEAVE 48" COIL OF 1/4" O.D. TYPE 'K' SOFT COPPER FOR EQUIP. CONNECTION AND PROVIDE CUNO ICEASSURE1 FILTER BRACKETED TO WALL.
EMERGENCY EYEWASH FLOOR DRAIN COMBINATION ES-1	---- 3"	---- 2"	1-1/2" 3"	1/2" ----	---- ----	SEPARATE DIVISIONS. THIS CONTRACTOR SHALL PROVIDE AND INSTALL ALL ASSOCIATED PIPING, TO INCLUDE STAY OPEN VALVES. PROVIDE FLOOR DRAIN FD-1 CENTERED DIRECTLY BELOW SHOWER HEAD. WITH TRAP GUARD. ALL EXPOSED PIPE TO BE CHROME PLATED. PROVIDE THERMOSTATIC MIXING VALVE EQUAL TO GUARDIAN G3802LF WITH SURFACE MOUNTED CABINET SET AT MIN. 60°F, MAX. 90°F. INSTALLATION TO COMPLY WITH ANSI/ISEA Z345.1-2014 AND MANUFACTURER'S DETAILS AND RECOMMENDATIONS. EQUAL TO GURDIANGBF1909-BC.

PLUMBING FIXTURE SCHEDULE

PLAN MARK	MINIMUM ROUGH-IN SIZES					DESCRIPTION
	WST & VENT		DRAIN	CW	HW	
WASHING MACHINE BOX WMB-1	2"	2"	2"	1/2"	1/2"	GUY GRAY NO.B-200 WITH TWO 3/4 BRASS HOSE BIBBS WITH V.B. AND SLIP JOINT CONNECTOR WITH LOCKING NUT TO SECURE RISER. BOX AND AND COVER TO BE GALV. STEEL WITH WHITE EPOXY PAINT FINISH.
WALL HYDRANT WH-1	----	----	----	3/4"	----	WADE 8600MT RECESSED NON-FREEZE BRONZE WALL BOX, ANTI-SIPHON HYDRANT, WITH LOOSE KEY OPERATOR AND POLISHED NICKEL BRONZE LOCKING COVER. INSTALL WITH FACE FLUSH AND SQUARE TO FINISHED WALL.
FLOOR DRAIN FD-1	SEE PLAN	2"	----	----	----	WADE 1100-STD6 CAST IRON DRAIN WITH 6" DIAMETER TYPE 'B' STRAINER AND 1/2" IPS TRAP PRIMER CONNECTION. (PLUGGED WHERE NOT REQUIRED)
FLOOR DRAIN FD-2	3"	2"	----	----	----	WADE 1100ER CAST IRON DRAIN WITH ADJUSTABLE 7" DIA. TYPE 'ER' STRAINER WITH EXTENDED RIM AND TRAP PRIMER CONNECTION. PLUG WHEN NOT NEEDED.
FLOOR DRAIN FD-3	2"	2"	----	----	----	OATEY 130 SERIES SHOWER DRAIN 42210. WITH STAINLESS STEEL STRAINER.
FLOOR SINK FS-1	3"	2"	----	----	----	WADE 9140-TY-16-26-27,12" SQUARE, 8" DEEP CAST IRON DRAIN WITH ENAMELLED INTERIOR, SEDIMENT BUCKET STRAINER AND SECURED HALF NICKEL BRONZE GRATE.
WALL CLEAN-OUT WCO	----	----	----	----	----	WADE 8550 AND 8480S DURO-COATED CAST IRON CLEANOUT TEE WITH COUNTER-SUNK GASKET, WATERTIGHT THREADED PLUG AND SQUARE SMOOTH ACCESS COVER WITH VANDAL PROOF SCREWS.
FLOOR CLEAN-OUT FCO,YCO	----	----	----	----	----	WADE 6000 SERIES CAST IRON CLEANOUT WITH COUNTER-SUNK PLUG AND SUITED FOR THE INSTALLATION REQUIRED. VERIFY TOP FINISHES WITH ARCHITECT.
GARBAGE DISPOSER GD-1	----	----	----	----	----	IN-SINK-ERATOR MODEL BADGER 5, 1/2 HP GARBAGE DISPOSER. CONNECT TO SINK TAILPIECE.
ELECTRIC WATER HEATER EWH-1	----	----	----	SEE PLAN		RHEEM No.E120-18, 119 GALLON STORAGE WITH WATER HEATER TO HAVE 6-3 KW ELEMENTS WIRED FOR 208V, 3 PH. POWER AND SIMULTANEOUS OPERATION; VERIFY WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT. UNIT SHALL HAVE CAPACITY OF 93 GPH RECOVERY AT 80° F. TEMPERATURE RISE.PROVIDE ASME TEMPERATURE AND PRESSURE RELIEF VALVE, AND THERMOMETER IN HW OUTLET PIPING. PROVIDE EXPANSION TANK AMTROL MODEL ST-12-C.
CIRCULATING PUMP CP-1	----	----	----	----	3/4"	GRUNDFOS MODEL UP15-42SF, ALL BRONZE FLANGED PUMP. 1/25 HP WIRED FOR 120/60/1 POWER AND FITTED WITH REMOTE HEAT SENSING AQUASTAT CONTROLLER AND SHUT-OFF TIMER TS-1.
TIME SWITCH TS-1	----	----	----	----	----	TORK ELECTROMECHANICAL 24 HOUR TIME SWITCH POWERED BY A SELF STARTING SYNCHRONOUS MOTOR. INSTALL ON WALL ADJACENT TO CIRCULATING PUMPS. COORDINATE WITH ELECTRICAL AND PROVIDE FOR 120/1/60 POWER REQUIREMENT.
THERMOSTATIC MIXING VALVE TMV-1				1/2"	1/2"	POWERS No. LFe480 ADJUSTABLE POINT-OF-USE THERMOSTATIC MIXING VALVE, ASSE 1070 WITH INLET CHECK STOPS TO LIMIT HOT WATER TEMPERATURE TO MAXIMUM 105° F AT FAUCET OUTLET. SUPPLY CW TO MIXING VALVE FROM CW RISER TO FAUCET. INSTALL BELOW FIXTURE AND HIGH AS POSSIBLE TO PROVIDE NEAT AND CLEAN APPEARANCE.
THERMOSTATIC MIXING VALVE TMV-1M				1"	1"	POWERS LM490 THERMOSTATIC TEMPERING MIXING VALVE WITH INTEGRAL CHECKS AND SCREEN PREVENT CROSS FLOW AND CONTAMINATION, MINIMUM FLOW 0.5 GPM, LIMIT HOT WATER TO MAXIMUM 110° F. AT FAUCET OUTLET. PROVIDE WALL MOUNTED WALL BRACKETS AND MOUNT AT 42"AFF. CONTRACTOR SHALL PROVIDE A FINAL CONNECTION PER MANUFACTURERS RECOMMENDATIONS.
BACKFLOW PREVENTER BFP-1	----	----	----	SEE PLANS		WATTS No.LF009 DOUBLE CHECK VALVE BACKFLOW PREVENTER. PROVIDE SHUT OFF VALVE & FULL SIZE STRAINER ON INLET AND SHUT OFF VALVE ON OUTLET RISER. TEST AND CERTIFY PER AWWA C-511.
TRENCH DRAIN TD-1 MAINTENANCE BAY WITH CATCH BASIN CB-1 ZURN Z887-12	4"	2"	----	----	----	ZURN No.Z-886-GFG-6 WIDE PRE-SLOPED POLY-ETHYLENE COMPOSITE 80" SEGMENTAL TRENCH DRAIN SET FLUSH WITH LOW POINT OF SERVICE BAY AREA. PROVIDE CATCH BASIN ZURN Z887-24X24 @ LOWEST POINTS AS SHOWN ON PLAN, SEE PLUMBING DETAIL FOR CATCH BASIN. PROVIDE SPECIAL DUTY GALVANIZED STEEL GRATING WITH HEAVY DUTY LOCKDOWN HARDWARE AND STAINLESS STEEL FRAME. INSTALL AS PER MANUFACTURER'S DETAILS AND RECOMMENDATIONS.

SAND/OIL/WATER SEPARATOR SCHEDULE

CALCULATIONS

6 DRAINS x 6 F.U. x .65 USAGE FACTOR x 3 GPM/F.U. = 70.2 GPM FLOWRATE

PLAN MARK	MAKE & MODEL #	DESCRIPTION
OSM-1 SAND/OIL/MUD WATER SEPARATOR	PARK EQUIPMENT CO. SOCMP-750 WITH GAS TIGHT COVERS	750 US GAL LIQUID CAPACITY, 375 GAL. OIL CAPACITY 9,900 LBS EMPTY WEIGHT, 7'-10" LONG x 4'-4" WIDE x 6'-0" HEIGHT INLET FL1= 4'-5", OUTLET FL2= 4'-2" 75 GPM FLOW RATE
SWB-1 SAMPLING WELL	PARK EQUIPMENT CO. SWB154 WITH GAS TIGHT COVERS	PRECAST CONCRETE SAMPLING WELL WITH HEAVY DUTY CAST IRON FRAME AND COVER. PIPE SIZE IS 4"

GREASE INTERCEPTOR SCHEDULE

MINIMUM SIZE: 500 GALLON CAPACITY

PLAN MARK	MAKE & MODEL #	DESCRIPTION
GT-1 GREASE TRAP	PARK EQUIPMENT CO. GT-500 WITH GAS TIGHT COVERS	500 US GAL LIQUID CAPACITY, 1200 LBS GREASE CAPACITY 7'-10" LONG x 4'-4" WIDE x 4'-6" HEIGHT
SWB-1 SAMPLING WELL	PARK EQUIPMENT CO. SWB154 WITH GAS TIGHT COVERS	PRECAST CONCRETE SAMPLING WELL WITH HEAVY DUTY CAST IRON FRAME AND COVER. PIPE SIZE IS 4"

GENERAL NOTES - PLUMBING FIXTURES

1. MOUNTING HEIGHT ELEVATION OF ALL WALL HUNG OR COUNTER MOUNTED FIXTURES SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION OF ROUGH-IN WORK.
2. FOR ALL FIXTURES AND EQUIPMENT WITH ASSOCIATED TRIM OR COMPONENT ACCESSORIES PROVIDED UNDER SEPARATE DIVISIONS AND REQUIRING PLUMBING CONNECTIONS; THIS CONTRACTOR SHALL FIELD COORDINATE EXACT REQUIREMENTS OF, MAKE PROVISIONS FOR, AND SUPPLY ALL MATERIALS AND LABOR FOR MAKING FINAL CONNECTIONS.
4. CONTRACTOR SHALL REFER TO SHOP DRAWINGS OF EQUIPMENT TO BE SUPPLIED FOR FINAL COORDINATION OF ALL ROUGH-IN OPENINGS BEFORE BEGINNING WORK.
5. ALL FIXTURE AND EQUIPMENT STUB-OUTS SHALL BE PROVIDED WITH A STOP VALVE. ALL FIXTURE STOPS SHALL BE SOLID BRASS, LOOSE KEY OPERATED, CHROME PLATED (WHERE EXPOSED), AND FITTED TIGHT TO CHROME PLATED BRASS WALL ESCUTCHEON PLATES. SUPPLY RISERS SHALL BE STAINLESS STEEL FLEXIBLE CONNECTORS.
6. ALL P-TRAPS WITHIN THE BUILDING, ABOVE GRADE AND EXPOSED TO INSPECTION SHALL BE C.P. ADJUSTABLE, CAST BRASS WITH CLEANOUT PLUG. PROVIDE CAST BRASS SLIP NUTS AND WASHERS, 17 GAGE SEAMLESS TUBULAR BRASS DRAIN TO WALL AND WALL FLANGE. PROVIDE McGUIRE No. 8872C, 1-1/4" P-TRAP FOR ALL LAVATORIES AND SIMILAR FIXTURES PROVIDE McGUIRE No. 8912C, 1-1/2" P-TRAP FOR ALL SINKS AND SIMILAR FIXTURES.
7. PROVIDE DEEP SEAL P-TRAP FOR ALL DRAINS OF INFREQUENT USE OR REQUIRING TRAP PRIMER.
8. ALL ROUGH IN OPENINGS SHALL BE FITTED WITH CHROME PLATED, WROUGHT BRASS DEEP BELL OR BOX ESCUTCHEON PLATES FITTED TIGHT TO THE PIPE AND FLUSH TO THE WALL. STEEL ESCUTCHEON PLATES ARE NOT ACCEPTED.
9. ALL EXPOSED BRASS SHALL BE CHROME PLATED.
10. ALL HANDICAPPED ACCESSIBLE FIXTURES INDICATED WITH ♿ SHALL BE PROVIDED OF APPROVED TYPES AND WITH REQUIRED CONTROLS AND INSTALLED TO HEIGHTS AND CLEARANCES, AS PRESCRIBED BY AMERICANS WITH DISABILITIES ACT (ADA). FIXTURES SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL ACCESSIBILITY CODE REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED MOUNTING HEIGHTS AND SPECIFIED CLEARANCE REQUIREMENTS. PROVIDE FIXTURES WITH DEPTHS AT MAXIMUM PERMITTED AND AVAILABLE FOR INTENDED FIXTURE USE.
11. ALL WHEELCHAIR LAVATORY AND SINK PIPING WHERE EXPOSED SHALL BE INSULATED. PROVIDE OFFSET DRAIN FITTINGS WHERE REQUIRED TO PROVIDE MINIMUM CLEARANCES. REFER TO SPECIFICATIONS SECTION 15440.
12. ALL SINKS FOR HANDICAPPED USE SHALL BE STAMPED WITH DRAIN OUTLET AT REAR OF BOWL.
13. PLUMBING FIXTURES SHALL BE OF WATER CONSERVATION TYPE IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS FOR WATER SAVING PERFORMANCE. LAVATORY AND SINK FAUCETS SHALL INCLUDE 2.2 GPM FLOW CONTROL.
14. ORIENT ADA WATER CLOSET FLUSH VALVE WITH OPERATOR ON WIDE SIDE OF ENCLOSURE.
15. SEAL ALL SPACES BETWEEN PLUMBING FIXTURES AND MOUNTING SURFACES WITH WHITE LATEX CAULK WIPED SMOOTH AND FLUSH WITH FIXTURE.
16. FLOOR DRAINS SHALL BE INSTALLED AT LOW POINTS OF UNIFORMLY SLOPED FLOOR. CONTRACTOR SHALL FIELD COORDINATE WITH STRUCTURAL TO INSURE FLOORS ARE SLOPED UNIFORMLY ACROSS ENTIRE TOILET ROOMS OR OVER AS WIDE AN AREA AS PRACTICAL FOR OPEN AREA FLOOR DRAINS. CONVEX FLOOR SLOPE IN THE IMMEDIATE VICINITY OF THE FLOOR DRAIN IS NOT ACCEPTABLE.

PLUMBING GENERAL PLAN NOTES:

(A) DRAINAGE PIPING INVERT ELEVATIONS NOTED ON FLOOR PLANS AS: INV. EL.= 0.00' BFF ARE BELOW FINISHED FLOOR TAKEN FROM FIRST FLOOR FINISHED ELEVATION OF 0.00' TO INSIDE BOTTOM OF PIPE.

(B) PLUMBER SHALL FIELD VERIFY EXACT BUILDING FINISHED FLOOR ELEVATION AND THE INVERT ELEVATION OF ALL DRAIN LINES AT PROPOSED CONNECTING POINTS WITH SITE CIVIL UTILITIES PRIOR TO INSTALLATION OF BUILDING PIPING.

(C) ALL PIPE PASSING THROUGH FIRE RATED WALLS OR FLOOR SLABS SHALL BE SUPPORTED AT PENETRATION AND OPENINGS SHALL BE SEALED WITH APPROVED, NON-HARDENING, FIRE STOP MATERIALS AS SPECIFIED OR REQUIRED.

(D) CONTRACTOR SHALL COORDINATE WITH THE STRUCTURAL CONDITIONS AT THE SITE AND PROVIDE PROPER ROUGH-IN CONNECTIONS REQUIRED WITHOUT DAMAGE TO STRUCTURE. WHERE STRUCTURAL MODIFICATIONS ARE NECESSARY, CONTRACTOR SHALL FIRST RECEIVE WRITTEN APPROVAL OF THE ARCHITECT AND STRUCTURAL ENGINEER.

(E) THIS CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD COORDINATING LOCATIONS AND ELEVATIONS OF ALL PLUMBING PIPING WITH OTHER TRADES PRIOR TO INSTALLATION. CORRECTIONS OR RELOCATIONS DUE TO MISALIGNED PIPE SHALL BE PERFORMED IN A TIMELY MANNER AT NO ADDITIONAL COST TO OWNER.

(F) DO NOT SCALE THE PLUMBING DRAWINGS FOR ROUGH-IN WORK. CONTRACTOR SHALL REFER TO THE DIMENSIONED ARCHITECTURAL AND STRUCTURAL DRAWINGS TO FIELD DETERMINE EXACT LOCATIONS OF PLUMBING ROUGH-IN WORK.

(G) SANITARY DRAINAGE PIPING 2" AND SMALLER SHALL HAVE A UNIFORM MINIMUM CONTINUOUS SLOPE OF 1/4 INCH PER FOOT OF RUN. DRAINAGE PIPING OF 3" SIZE AND LARGER SHALL SLOPE MINIMUM 1/8 INCH PER FOOT OF RUN. SLOPE ALL VENT PIPING MINIMUM 6" PER 100 FEET OF RUN BACK TO DRAIN.

(H) STORM DRAINAGE PIPING SHALL HAVE A UNIFORM MINIMUM CONTINUOUS SLOPE OF 1/8 INCH PER FOOT OF RUN. SLOPES OF 1/4 INCH PER FOOT ARE PERMITTED WHERE NOTED ON PLAN OR AS REQUIRED.

(I) PROVIDE BRACING TO PREVENT AXIAL MOVEMENT FOR ALL STORM DRAINAGE PIPING ABOVE GROUND. PROVIDE RESTRAINTS FOR ALL DRAINAGE PIPING AT ALL CHANGES IN DIRECTION AND AT ALL DIAMETER CHANGES GREATER THAN TWO PIPE SIZES. BRACES, BLOCKS, RODDING AND OTHER PERMANENT METHODS AS PRESCRIBED BY PIPE AND COUPLING MANUFACTURER SHALL BE ACCEPTABLE.

(J) PROVIDE AND INSTALL CLEANOUTS AT EACH CHANGE OF DIRECTION OF THE BUILDING SANITARY DRAIN, AT MINIMUM 75' INTERVALS ALONG STRAIGHT RUNS OF MAIN DRAIN AND BRANCHES, AT EACH HORIZONTAL CHANGE OF DIRECTION IN SOIL OR WASTE PIPES GREATER THAN 45 DEGREES, AT END OF INDIVIDUAL BRANCH DRAINS LONGER THAN 5'. PROVIDE CLEANOUTS IN ACCORD WITH INTERNATIONAL PLUMBING CODE SECTION 708.

(K) PROVIDE FITTINGS FOR SANITARY DRAIN WASTE AND VENT PIPING SYSTEMS IN COMPLIANCE WITH INTERNATIONAL PLUMBING CODE SECTION 708.

(L) INSTALL EACH WATER HEATER AND ALL PLUMBING EQUIPMENT WITH ADEQUATE CLEARANCES FOR ACCESS BY SERVICE PERSONNEL AND WITH PROPER ORIENTATION FOR ELEMENT REMOVALS/REPLACEMENTS.

(M) PROVIDE ISOLATION VALVES FOR ALL BRANCHES OFF DOMESTIC WATER MAINS. ALL PLUMBING SYSTEM VALVES SHALL BE INSTALLED IN ACCESSIBLE CEILING SPACES. WHERE CEILING IS NOT ACCESSIBLE, OR SPACE IS CONFLICTING, VALVES SHALL BE INSTALLED IN PARTITIONS OR PIPE CHASES. PROVIDE APPROVED PAINTED STEEL HINGED ACCESS PANELS IN LOCATIONS PRE-APPROVED BY THE ARCHITECT. PROVIDE STAINLESS STEEL ACCESS DOORS FOR SHOWER, LOCKER AND LOCKER TOILET ROOM PANELS. PROVIDE MARKINGS ON CEILING TILES ON LOCATIONS OF ISOLATION VALVES.

(N) THIS CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD COORDINATING LOCATIONS OF ALL SANITARY VENTS UP THROUGH ROOF TO MAINTAIN MINIMUM 15' CLEARANCE TO ANY BUILDING OUTDOOR AIR INLET.

1 / P4.1 **PLUMBING SCHEDULES**

NOT TO SCALE

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

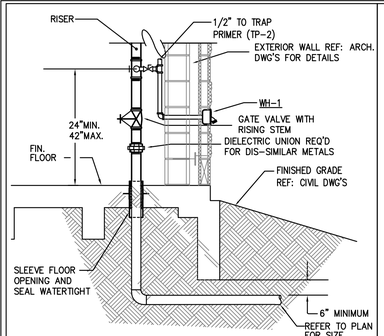
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER 219003

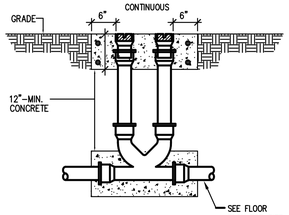
DATE FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

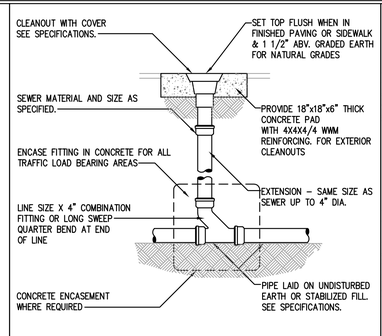
SHEET P4.1 OF



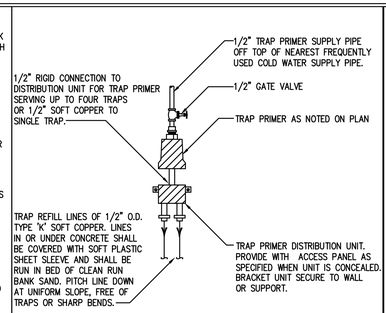
1 DOMESTIC WATER ENTRY DETAIL
NOT TO SCALE



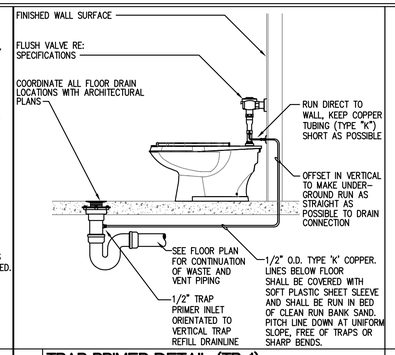
2 TWO-WAY YARD CLEAN-OUT (DYCO)
NOT TO SCALE



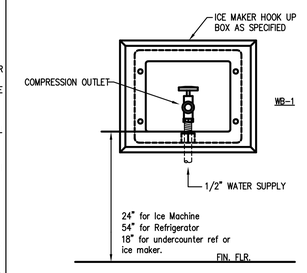
3 CLEAN-OUT DETAIL (FCO,YCO)
NOT TO SCALE



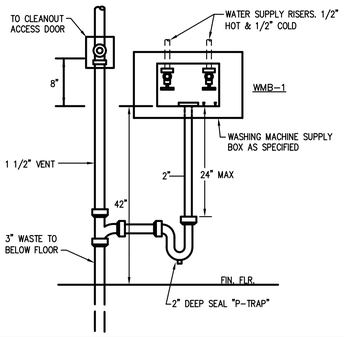
4 TRAP PRIMER DETAIL (TP-2)
NOT TO SCALE



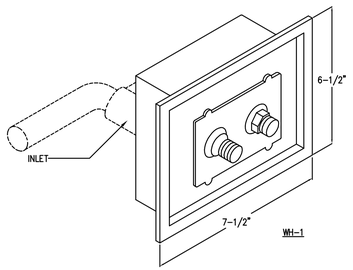
5 TRAP PRIMER DETAIL (TP-1)
NOT TO SCALE



6 ICE MAKER SUPPLY BOX DETAIL (WB-1)
NOT TO SCALE

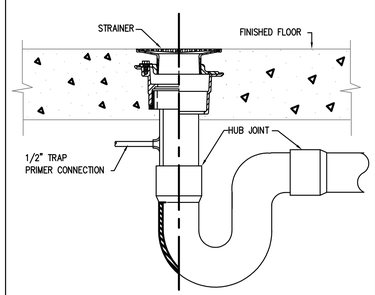


7 WASHER DRAIN BOX DETAIL (WMB-1)
NOT TO SCALE

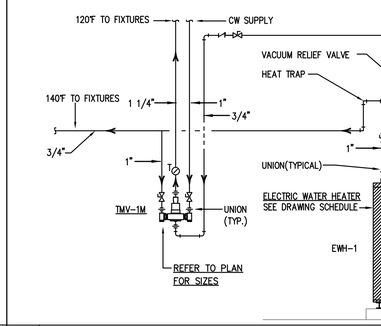


NOTE: WALL HYDRANTS SHOWN WITHOUT LOCKING DOOR FOR CLARITY. UNIT FURNISHED WITH VACUUM BREAKER AND LOCKING T-KEY HANDLE.

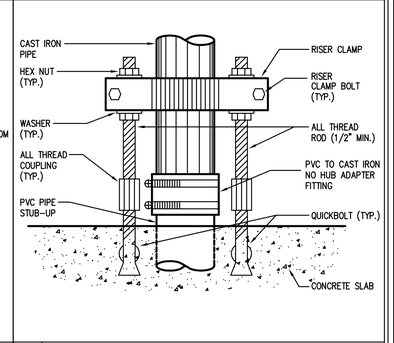
8 WALL HYDRANT
NOT TO SCALE



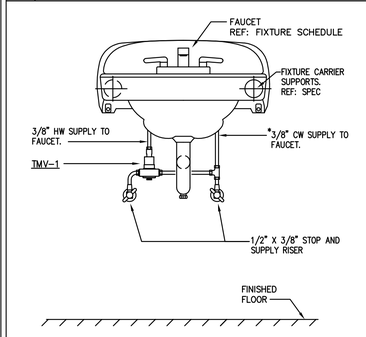
9 FLOOR DRAIN DETAIL (FD-1)
NOT TO SCALE



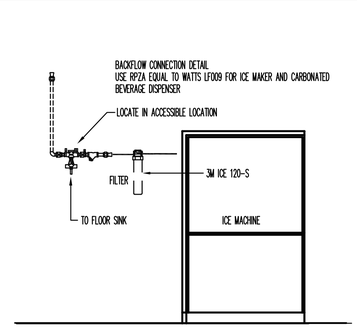
10 ELECTRIC WATER HEATER DETAIL WITH TMV (EWH-1)
NOT TO SCALE



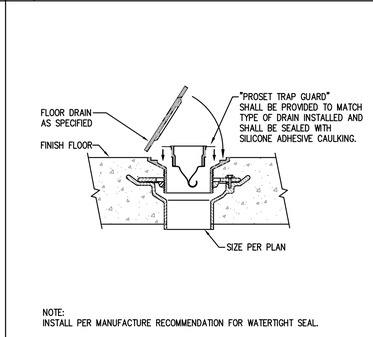
11 PVC TO CAST IRON SUPPORT
NOT TO SCALE



12 TMV INSTALLATION DETAIL (TMV-1)
NOT TO SCALE

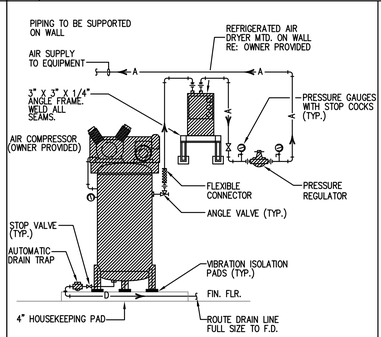


13 BFP/ICE MACHINE PLUMBING DETAIL
NOT TO SCALE

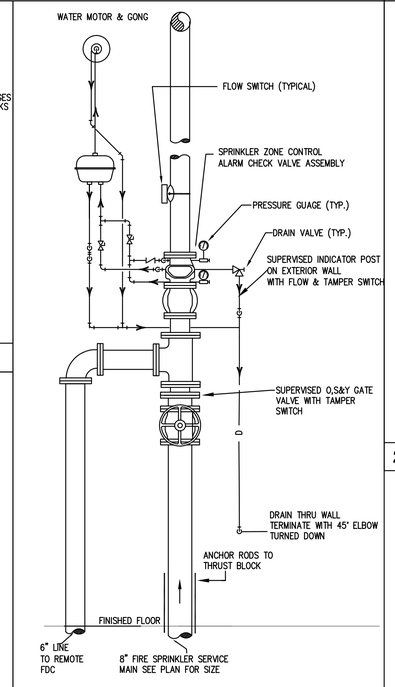


NOTE:
INSTALL PER MANUFACTURE RECOMMENDATION FOR WATERTIGHT SEAL.

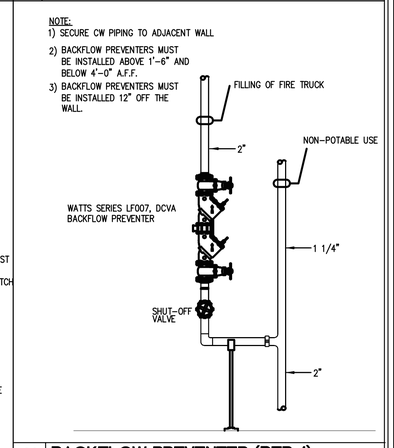
14 TRAPGUARD DETAIL
NOT TO SCALE



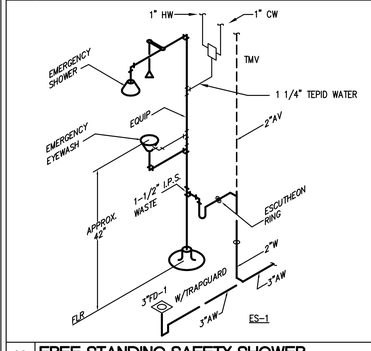
15 AIR COMPRESSOR DETAIL
NOT TO SCALE



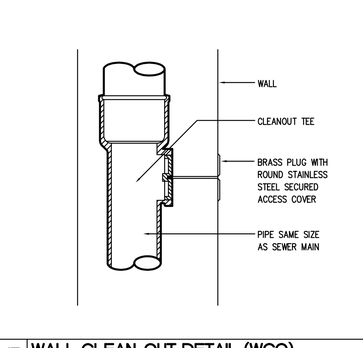
20 FIRE RISER DETAIL
NOT TO SCALE



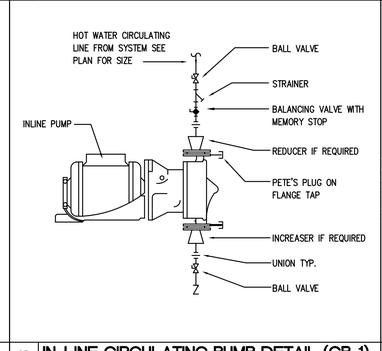
21 BACKFLOW PREVENTER (BFP-1)



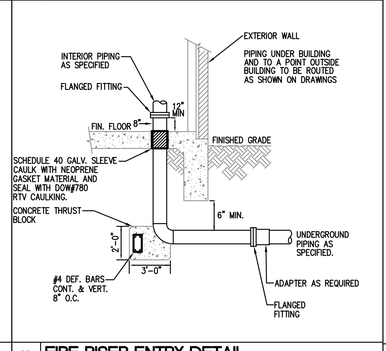
16 FREE STANDING SAFETY SHOWER
NOT TO SCALE



17 WALL CLEAN-OUT DETAIL (WCO)
NOT TO SCALE



18 IN-LINE CIRCULATING PUMP DETAIL (CP-1)
NOT TO SCALE



19 FIRE RISER ENTRY DETAIL
NOT TO SCALE

1 P4.2 **PLUMBING DETAILS**
NOT TO SCALE

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

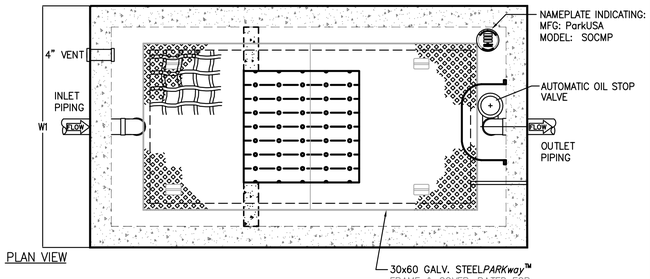
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

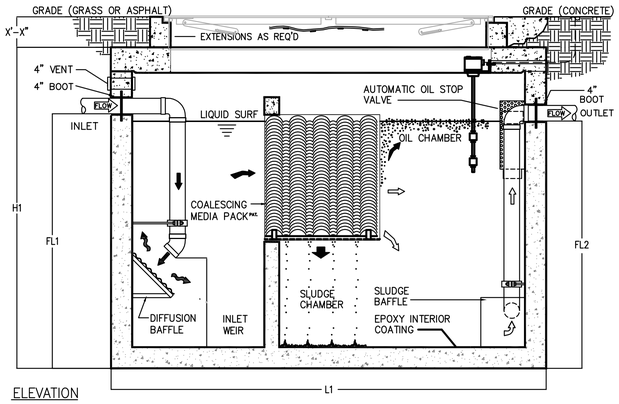
SHEET
P4.2
OF



PLAN VIEW

SAND-OIL INTERCEPTOR SCHEDULE

MODEL NO.	CAPACITY USGal	OIL CAP. US (GAL)	FLOW RATE (GPM)	EMPTY WT (LBS)	LENGTH L1	WIDTH W1	HEIGHT H1	INLET FL1	OUTLET FL2
SOCMP-500	500	250	50	9,500	7'-10"	4'-4"	4'-6"	3'-3"	3'-0"
SOCMP-750	**750**	**375**	**75**	**9,900**	**7'-10"**	**4'-4"**	**6'-0"**	**4'-5"**	**4'-2"**
SOCMP-1000	1,000	500	100	13,350	8'-8"	5'-0"	6'-0"	4'-9"	4'-6"
SOCMP-1500	1,500	750	150	16,050	9'-2"	5'-8"	7'-0"	5'-9"	5'-6"
SOCMP-2000	2,000	1000	200	21,250	9'-0"	6'-0"	8'-0"	6'-9"	6'-6"



ELEVATION

Specifications

CONCRETE : Class II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced with steel rebar conforming to ASTM A615 on required centers or equal.

MATERIALS: Access frame & cover shall be fabricated with min. 1/4" thick nonskid floor plate, boltdown, & lifting handles. All materials to be corrosion resistant.

Engineering Data

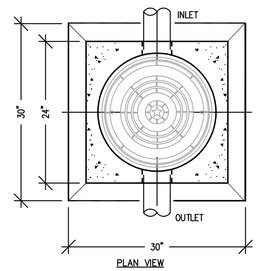
Interceptor is structurally and hydraulically engineered conforming to Uniform Plumbing Code. Nominal total liquid capacity and oil holding capacity as indicated. Recommended for flow rates of 5 to 200 GPM (consult Park for proper sizing). Manufacturer shall submit performance calculations for oil & water seperation certified by a licensed professional engineer. Field excavation and preparation shall be completed prior to delivery of interceptor.

1 SAND/OIL INTERCEPTOR DETAIL (OSM-1)

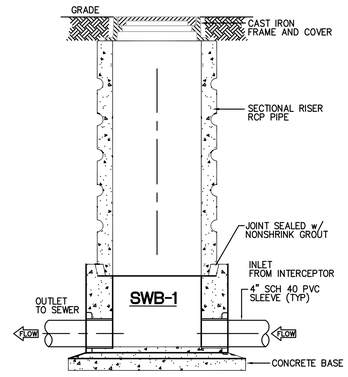
PLUMBING PIPE MATERIALS SCHEDULE

PIPING SYSTEM	PIPING MATERIAL
SANITARY DRAINS AND VENTS INSIDE BUILDING AND BELOW GROUND	SCHEDULE 40 PVC PIPE
SANITARY DRAINS AND VENTS INSIDE BUILDING AND ABOVE GROUND	CAST IRON (SERVICE WEIGHT), NO-HUB DWV
SANITARY DRAINS AND VENTS INSIDE BUILDING AT PLENUM CEILING	CAST IRON (SERVICE WEIGHT), NO-HUB DWV
COMPRESSED AIR	COPPER, TYPE "L" HARD DRAWN
NATURAL GAS	BLACK STEEL SCHEDULE 40
DOMESTIC HOT & COLD WATER INSIDE BUILDING AND ABOVE GROUND	COPPER, TYPE "L" HARD DRAWN
DOMESTIC HOT & COLD WATER INSIDE BUILDING AND BELOW GROUND	COPPER, TYPE "K" SOFT ANNEALED
DOMESTIC WATER AT ENTRY	COPPER, TYPE "K" HARD DRAWN
FIRE SPRINKLER BELOW GROUND	DUCTILE IRON
FIRE SPRINKLER ABOVE GROUND – 2" AND SMALLER	BLACK STEEL SCHEDULE 40
FIRE SPRINKLER ABOVE GROUND – 2-1/2" AND LARGER	BLACK STEEL SCHEDULE 10

NOTE: REFER TO SPECIFICATIONS FOR COMPLETE PIPING MATERIAL REQUIREMENTS FOR ASSOCIATED PIPING SYSTEMS.

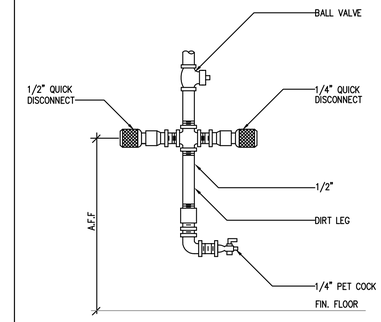


PLAN VIEW

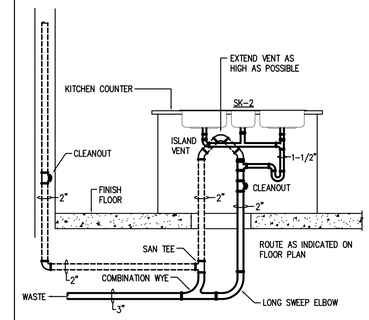


SIDE VIEW

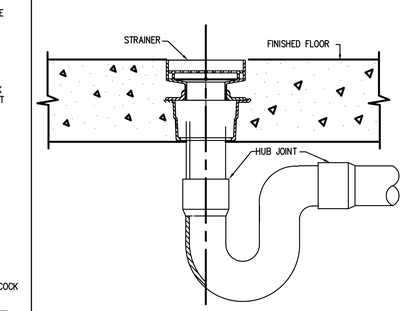
3 SAMPLE WELL BASIN DETAIL



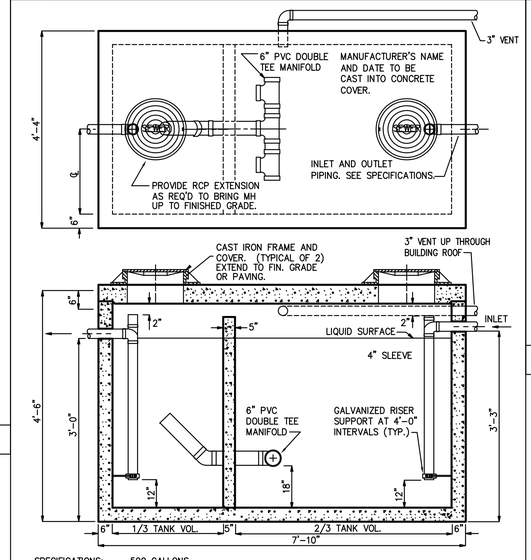
5 COMPRESSED AIR OUTLET DETAIL
NOT TO SCALE



4 ISLAND SINK PLUMBING DETAIL (SK-1)
NOT TO SCALE



7 LAUNDRY RM FLOOR DRAIN DETAIL (FD-2)
NOT TO SCALE



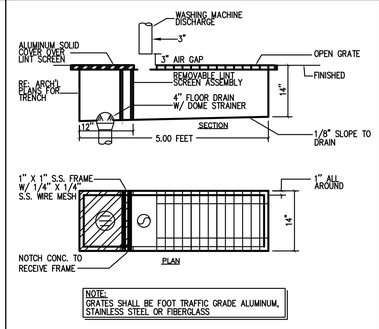
SPECIFICATIONS: 500 GALLONS

CONCRETE: CLASS 1 CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS.

REINFORCEMENT: GRADE 60 REINFORCED. NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON 12" CENTERS OR EQUAL.

MANHOLE COVERS: MANHOLE FRAMES AND COVERS SHALL BE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 35. MANHOLE SHALL HAVE 24" INSIDE DIAMETER AND BE TRAFFIC DUTY.

2 GREASE INTERCEPTOR DETAIL (GT-1)
NOT TO SCALE



6 LAUNDRY TRENCH DETAIL (TD-2)
NOT TO SCALE

1 PLUMBING DETAILS
NOT TO SCALE

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

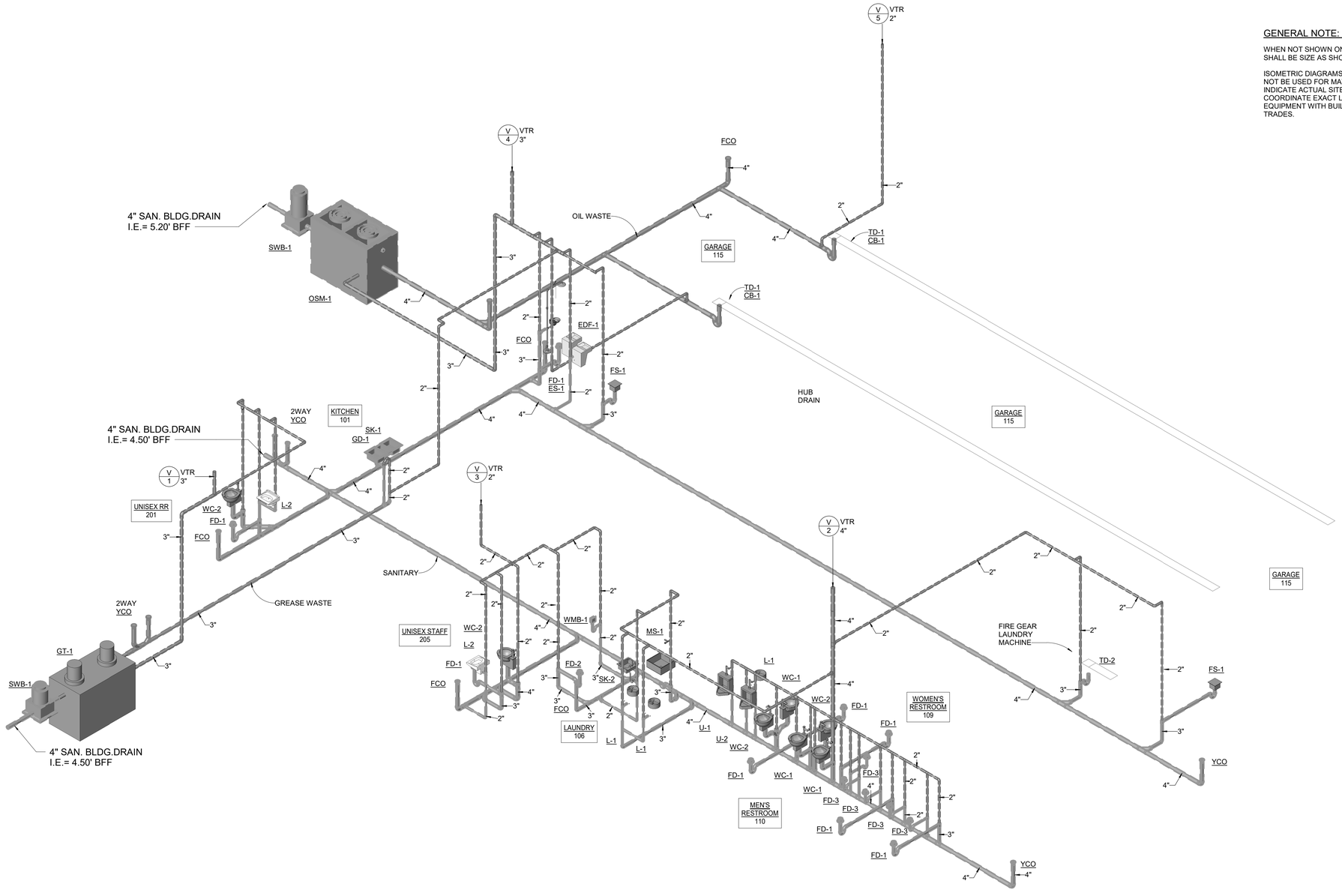
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER 219003

DATE FEBRUARY 28, 2019 ISSUED FOR BID

REVISIONS:

SHEET P4.3 OF



1 P5.1 **PLUMBING RISERS - SEWER & VENT**

GENERAL NOTE: PLUMBING RISERS

WHEN NOT SHOWN ON PLANS, INDIVIDUAL FIXTURE CONNECTIONS SHALL BE SIZE AS SHOWN ON PLUMBING FIXTURE SCHEDULE.

ISOMETRIC DIAGRAMS ARE FOR SIZING PURPOSES ONLY AND SHALL NOT BE USED FOR MATERIAL TAKE-OFFS, OR BE CONSTRUED TO INDICATE ACTUAL SITE INSTALLATION. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 26,2019

ISSUED FOR BID

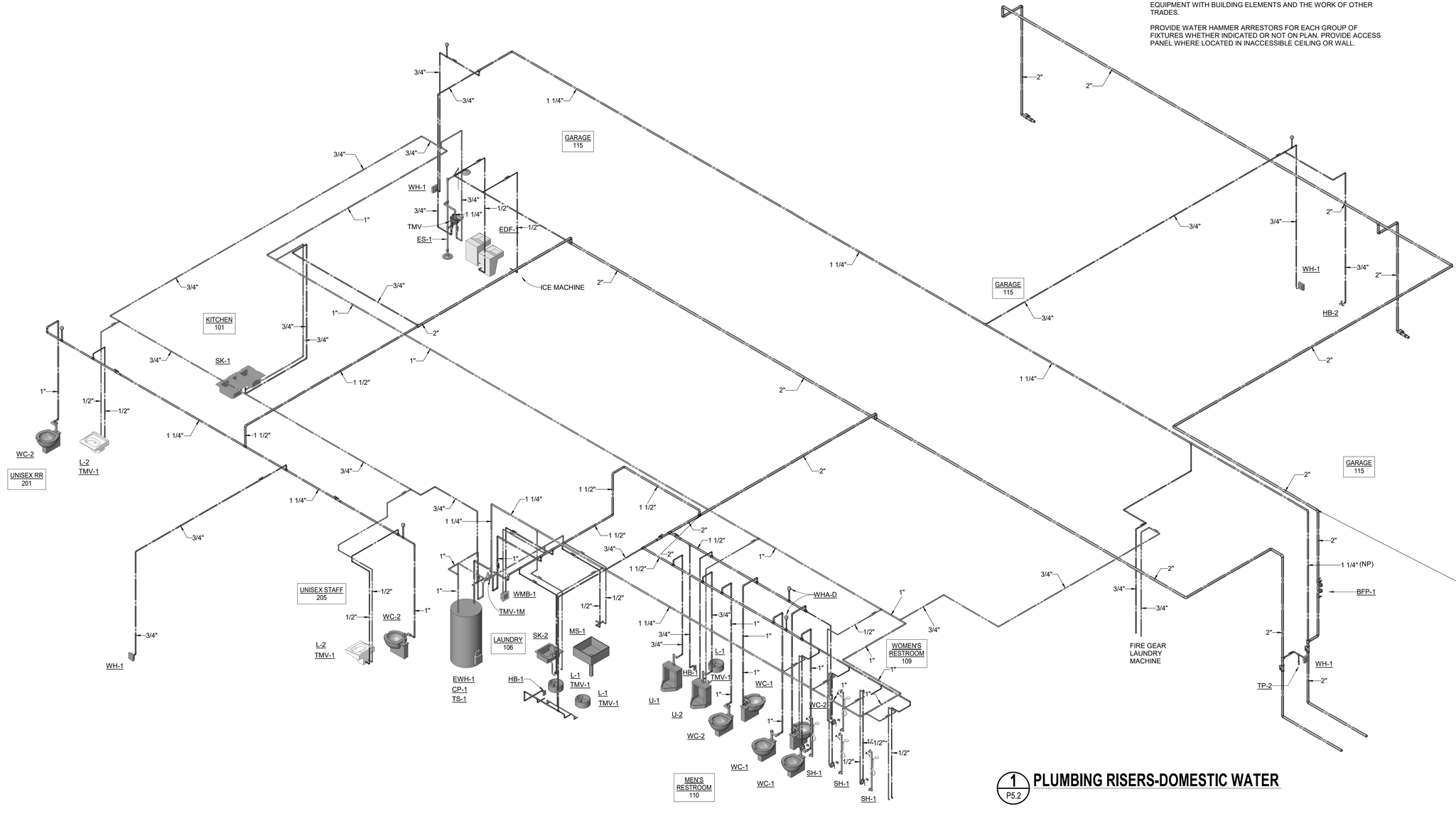
SHEET
P5.1
OF

GENERAL NOTE: PLUMBING RISERS

WHEN NOT SHOWN ON PLANS, INDIVIDUAL FIXTURE CONNECTIONS SHALL BE SIZE AS SHOWN ON PLUMBING FIXTURE SCHEDULE.

ISOMETRIC DIAGRAMS ARE FOR SIZING PURPOSES ONLY AND SHALL NOT BE USED FOR MATERIAL TAKE-OFFS, OR BE CONSTRUED TO INDICATE ACTUAL SITE INSTALLATION. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.

PROVIDE WATER HAMMER ARRESTORS FOR EACH GROUP OF FIXTURES WHETHER INDICATED OR NOT ON PLAN. PROVIDE ACCESS PANEL WHERE LOCATED IN INACCESSIBLE CEILING OR WALL.



1 P5.2 **PLUMBING RISERS-DOMESTIC WATER**

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

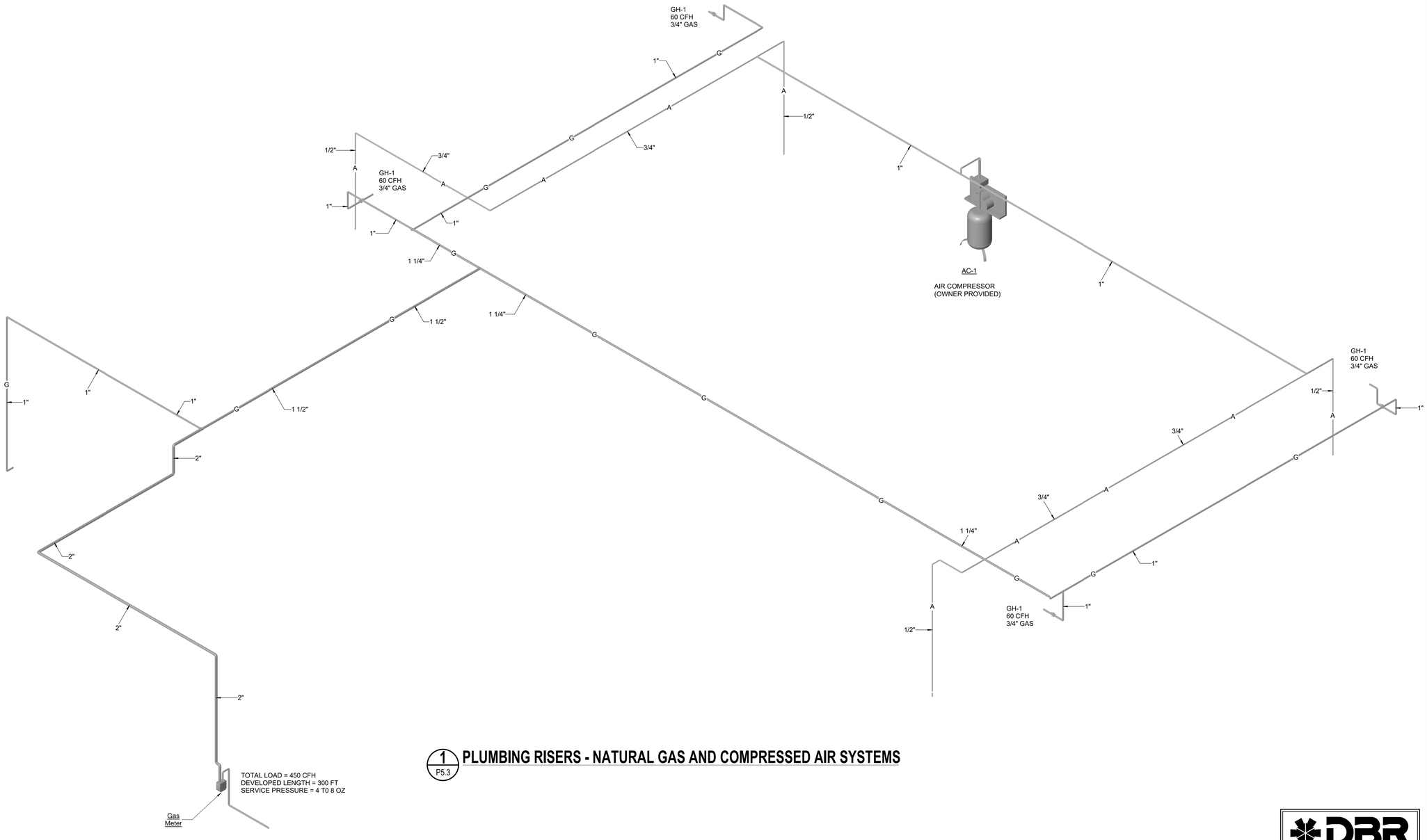
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER 219003

DATE FEBRUARY 28,2019

ISSUED FOR BID

SHEET P5.2 OF



1 P5.3 PLUMBING RISERS - NATURAL GAS AND COMPRESSED AIR SYSTEMS

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28,2019

ISSUED FOR BID

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

TECHNOLOGY LEGEND

GROUP	SYMBOL	DESCRIPTION
DEVICES	▽	INDICATES THE LOCATION OF A NEW TECHNOLOGY OUTLET. CONTRACTOR TO PROVIDE FACEPLATE WITH A MINIMUM OF 4-PORTS AT EACH LOCATION UNLESS OTHERWISE NOTED. ELECTRICAL CONTRACTOR TO PROVIDE A DOUBLE GANG BACK BOX WITH A SINGLE GANG REDUCER RING AND A 1" EMT CONDUIT FROM THE BOX TO THE NEAREST ACCESSIBLE CEILING. SOME EXISTING BUILDINGS MAY REQUIRE SURFACE MOUNTED RACEWAY. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL RACEWAY AS SPECIFIED AND DESIGNATE IN THE ELECTRICAL CONTRACT DOCUMENTS. SYSTEM INSTALLER TO PROVIDE AND INSTALL A PLASTIC PROTECTIVE BUSHING, ON EACH CONDUIT STUB-OUT, TO PREVENT CABLE DAMAGE.
	⊙	INDICATES THE LOCATION OF A FLOOR MOUNTED TECHNOLOGY OUTLET. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL A FLOOR BOX WITH (1) 1" CONDUIT PER EVERY (6) CABLES INSTALLED. ALL CONDUITS SHALL ROUT FROM THE FLOOR BOX, DIRECTLY TO THE IDF SERVING THIS AREA AND STUB-UP IN THE SAME LOCATION AS THE BUILDING SERVICE CONDUITS.
	⌖	INDICATES THE LOCATION OF A CEILING MOUNTED OUTLET. CONTRACTOR SHALL MOUNT THIS OUTLET AT +12" ABOVE THE CEILING AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
	'D#'	DESIGNATES THAT THE ASSOCIATED TECHNOLOGY OUTLET IS INTENDED FOR THE USE OF A NETWORK CONNECTION. THE '#' SHALL BE REPLACED WITH NUMERIC TEXT THAT IDENTIFIES THE TOTAL NUMBER OF CATEGORY 6, NETWORK CABLES THAT ARE TO BE INSTALLED AT THE TECHNOLOGY OUTLET LOCATION. CONTRACTOR TO PROVIDE AND INSTALL CATEGORY 6, NETWORK CABLES, CATEGORY 6, CONNECTORS, STAINLESS STEEL FACEPLATES WITH IDENTIFICATION WINDOWS, LABELS, BLANK INSERTS, AND ANY OTHER MATERIALS REQUIRED TO FURNISH COMPLETELY FUNCTIONAL AND TESTED OUTLET LOCATION. ALL FACEPLATES PROVIDED SHALL CONTAIN A MINIMUM 4-PORTS AND SHALL BE APPROPRIATELY SIZED TO ACCOMMODATE THE NUMBER OF CIRCUITS BEING INSTALLED AT THIS TECHNOLOGY OUTLET LOCATION.
	'W'	DESIGNATES THAT THE ASSOCIATED TECHNOLOGY OUTLET IS INTENDED FOR THE USE OF A WALL MOUNTED TELEPHONE CONNECTION. CONTRACTOR TO PROVIDE AND INSTALL (1) CATEGORY 6, NETWORK CABLE, (1) CATEGORY 6, CONNECTOR, STAINLESS STEEL WALL TELEPHONE FACEPLATE, LABELS, AND ANY OTHER MATERIALS REQUIRED TO FURNISH A COMPLETELY FUNCTIONAL AND TESTED CIRCUIT AT EACH LOCATION SHOWN. CONTRACTOR SHALL MOUNT THIS OUTLET AT +42" AFF AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 8" OF CLEARANCE ON ALL FOUR SIDES OF THE BACK BOX. OUTLETS SHALL REMAIN CLEAR OF ROOM DOORS, CABINET DOORS, APPLIANCE DOORS, AND SLIDING DRAWERS.
	'AP'	DESIGNATES THAT THE ASSOCIATED TECHNOLOGY OUTLET IS INTENDED FOR THE USE OF A WIRELESS ACCESS POINT CONNECTION. CONTRACTOR TO PROVIDE AND INSTALL (2) CATEGORY 6, NETWORK CABLE, (2) CATEGORY 6, CONNECTOR, STAINLESS STEEL FACEPLATE WITH IDENTIFICATION WINDOWS, LABELS, AND ANY OTHER MATERIALS REQUIRED TO FURNISH A COMPLETELY FUNCTIONAL AND TESTED CIRCUIT AT EACH LOCATION SHOWN. PROVIDE (2) 10' PLENUM PATCH CABLE FOR EACH LOCATION INSTALLED. PATCH CABLE TO BE INSTALLED AND ROUTED BY OWNER.

AUDIO/VIDEO LEGEND

GROUP	SYMBOL	DESCRIPTION
DEVICES	'#MP'	INDICATES THE LOCATION OF A VIDEO PROJECTOR # TO BE REPLACED WITH "C" OR "W". "C" INDICATES THAT THE DEVICE IS A CEILING MOUNTED DEVICE AND "W" INDICATES IT IS TO BE WALL MOUNTED. CONTRACTOR TO PROVIDE AND INSTALL ONE (1) CATEGORY 6 DATA CABLE, ALL AUDIO/VIDEO CABLING, AUDIO/VIDEO COMPONENTS AND EQUIPMENT.
	'AV-#'	INDICATES THAT THE DESIGNATED TECHNOLOGY OUTLET IS INTENDED FOR AN AUDIO/VIDEO (A/V) INPUT. CONTRACTOR TO PROVIDE AND INSTALL ONE (1) 1900 BOX WITH TWO (2) 1" CONDUITS ROUTING INTO THE NEAREST, PLENUM ACCESSIBLE CEILING WITHIN THE SAME ROOM. # TO BE REPLACED WITH A ALPHEBETICAL OR NUMERICAL TEXT, IDENTIFYING SPECIFIC INFORMATION ABOUT EACH OUTLET. REFERENCE SPECIFICATION AND SYSTEM DETAILS FOR ADDITIONAL INFORMATION. AV-I – STANDALONE INSTRUCTIONAL SPACE TYPE A/V INPUT PLATE AV-L# – LECTURE ROOM (ROOM #) A/V INPUT PLATE # TO BE REPLACED WITH A NUMERIC VALUE DEPICTING THE SPECIFIC PLATE LOCATION ON THE FLOOR PLAN AND THE SYSTEM SCHEMATIC DETAIL.
	'LED#'	INDICATES THE LOCATION OF A LED VIDEO DISPLAY CONTRACTOR TO PROVIDE AND INSTALL ONE (1) CATEGORY 6, UTP NETWORK CABLE, A/V CABLING, AND ALL REQUIRED TERMINATION HARDWARE AS PER THE PROJECT SPECIFICATIONS. # SHALL BE REPLACE WITH NUMERIC VALUE THAT DESIGNATES A SPECIFIC TYPE OF DEVICE. REFERENCE A/V SCHEMATIC AND SPECIFICATION FOR ADDITIONAL INFORMATION.
	'DS#'	INDICATES THE LOCATION OF A DIGITAL SIGNAGE DISPLAY. CONTRACTOR TO PROVIDE AND INSTALL ONE (1) CATEGORY 6, UTP NETWORK CABLE, AND ALL REQUIRED TERMINATION HARDWARE AS PER THE PROJECT SPECIFICATIONS. # SHALL BE REPLACE WITH NUMERIC VALUE THAT DESIGNATES A SPECIFIC TYPE OF DEVICE. REFERENCE SPECIFICATION FOR ADDITIONAL INFORMATION.
	(S) L	INDICATES A SPEAKER TIED TO LOCAL SOUND SYSTEM WITHIN THE SPACE INDICATED. REFERENCE AV ONE-LINE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
	(S)	INDICATES A GENERAL PAGING SPEAKER.

TECHNOLOGY GENERAL NOTES

1. CONTRACTOR SHALL COORDINATING WITH DBR ENGINEERING PRIOR TO THE INSTALLATION OF RACKS AND RACK EQUIPMENT. NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
2. THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
3. SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AS ESTABLISHED BY ANSI/EIA/TIA, BICSI, AND THE NEC.
4. ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
5. ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
6. ALL INDUSTRY STANDARD CATEGORY 6 CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
7. ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
8. ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
9. ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND DBR.
10. CONTRACTOR TO PROVIDE LIGHTNING PROTECTION ON ALL COMMUNICATION CABLE BETWEEN BUILDINGS.
11. ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
12. NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED NOTED OTHERWISE.
13. CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
14. ALL CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
15. THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A PANDUIT J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANDUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST, IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
16. STRUCTURED CABLING SYSTEM CONTRACTOR SHALL PROVIDE ONE (1) CATEGORY 6 CABLE TO EACH VIDEO SURVEILLANCE CAMERA ON THE ENTIRE PROJECT. PROVIDE AN ABOVE CEILING BOX AT EACH AND TERMINATE THE CIRCUIT WITH AN RJ45 INSERT. PROVIDE ONE (1) 20' PLENUM PATCH CABLE AT THE DEVICE END OF EACH LOCATION.
17. STRUCTURED CABLING SYSTEM CONTRACTOR SHALL PROVIDE ONE (1) CATEGORY 6 CABLE TO EACH ACCESS CONTROLLED DOOR ON THE ENTIRE PROJECT. PROVIDE AN ABOVE CEILING BOX AT EACH AND TERMINATE THE CIRCUIT WITH AN RJ45 INSERT. PROVIDE ONE (1) 20' PLENUM PATCH CABLE AT THE DEVICE END OF EACH LOCATION.
18. CONTRACTOR TO PROVIDE AND INSTALL ALL REQUIRED CABLING AND COMPONENTS TO FURNISH TWO (2) ANALOG TELEPHONE CABLES TO THE FIRE ALARM SYSTEM. CONTRACTOR TO COORDINATE WITH THE SYSTEM INSTALLER FOR EXACT LOCATIONS AND TERMINATION INSTRUCTIONS PRIOR TO INSTALLATION.
19. CONTRACTOR TO PROVIDE AND INSTALL ALL REQUIRED CABLING AND COMPONENTS TO FURNISH TWO (2) CATEGORY 6 CABLES TO BUILDING AUTOMATION SYSTEM. (1) CABLE SHALL BE INSTALLED AT +18" AFF FOR TECHNICIAN NETWORK CONNECTIVITY AND THE OTHER SHALL PROVIDE CONNECTIVITY TO THE SYSTEM. CONTRACTOR TO COORDINATE WITH SYSTEM INSTALLERS FOR EXACT LOCATIONS AND TERMINATION INSTRUCTIONS PRIOR TO INSTALLATION.
20. CONTRACTOR TO PROVIDE AND INSTALL (1) CATEGORY 6 CABLE TO THE BUILDING'S ACCESS CONTROL HEAD END PANEL. TERMINATION OF THIS CABLE SHALL BE COORDINATED WITH THE SYSTEM INSTALLER.
21. CONTRACTOR TO PROVIDE AND INSTALL (1) CATEGORY 6 CABLE TO THE BUILDING'S INTRUSION DETECTION CONTROL PANEL. TERMINATION OF THIS CABLE SHALL BE COORDINATED WITH THE SYSTEM INSTALLER.

NOTES TO CONTRACTOR

1. EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS. REFER TO GENERAL ELECTRICAL NOTES FOR WALL-MOUNTED DEVICE MOUNTING HEIGHTS.
2. REFERENCE SPECIFICATIONS FOR MATERIALS AND METHODS.
3. COMPLETE INSTALLATION OF ALL PRODUCTS SHALL BE IN COMPLIANCE WITH ALL CODES, INDUSTRY STANDARDS, COMMON PRACTICES AND MANUFACTURER'S INSTRUCTIONS.
4. ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS AND MOUNTING HEIGHTS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.

GENERAL NOTES

1. ALL 120V POWER REQUIRED FOR THE FUNCTIONALITY OF EACH SYSTEM SHALL BE A DEDICATED CIRCUIT AND ON EMERGENCY POWER WHEN AVAILABLE. PROJECTS ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER TO MAIN CONTROL PANELS, REMOTE POWER SUPPLIES AND ALL HEAD END EQUIPMENT. SYSTEM INSTALLERS SHALL COORDINATE LOCATIONS AND CONNECTIONS WITH THE PROJECT'S ELECTRICAL CONTRACTOR.
2. THE PROJECT'S ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN CONDUITS, BACK BOXES, JUNCTION BOXES, RACEWAYS, AND SLEEVES REQUIRED TO ESTABLISH CLEAR PATHWAYS FOR ALL SYSTEMS. ALL CONDUITS, SLEEVES, BOXES, AND RACEWAYS SHALL BE PROPERLY SIZED TO MAINTAIN A 40% MAXIMUM FILL RATIO.
3. ALL EXPOSED SYSTEM'S WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT, PROVIDED AND INSTALLED BY THE PROJECT'S ELECTRICAL CONTRACTOR. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
4. EACH SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
5. NO CONDUITS SHALL BE INSTALLED ON THE EXTERIOR OF THE BUILDING. IF EXTERIOR CONDUITS ARE REQUIRED FOR A COMPLETE INSTALLATION, EACH SYSTEM CONTRACTOR SHALL COORDINATE WITH THE PROJECTS CONSULTANT PRIOR TO ANY ROUGH-IN.
6. EACH SYSTEM INSTALLER SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
7. ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.

TYPICAL SUBSCRIPTS LEGEND

TEXT	DESCRIPTION
'WM'	INDICATES THAT THE DESIGNATED DEVICE IS TO BE WALL MOUNTED AT SPECIFIED HEIGHT OR IN COMPLIANCE WITH CODE REQUIREMENTS. ALL WALL MOUNTED HEIGHTS ARE TO BE CONFIRMED WITH THE PROJECT'S ARCHITECT PRIOR TO ROUGH-IN.
'WP'	INDICATES THAT THE DESIGNATED DEVICE SHALL BE WEATHER PROOF AND RATED FOR EXTERIOR CONDITIONS INSTALLATION.
'AC'	INDICATES THAT THE DESIGNATED DEVICE IS TO BE INSTALLED ABOVE THE COUNTERTOP. A NUMERIC VALUE SHALL REPLACE THE '#' SYMBOL AND SHALL DESIGNATE THE SPECIFIC HEIGHT ABOVE COUNTER. ALL HEIGHTS ARE TO BE CONFIRMED WITH THE PROJECT'S ARCHITECT PRIOR TO ROUGH-IN.
'AFF'	INDICATES THAT THE DESIGNATED DEVICE IS TO BE INSTALLED ABOVE THE FINISHED FLOOR. A NUMERIC VALUE SHALL REPLACE THE '#' SYMBOL AND SHALL DESIGNATE THE SPECIFIC HEIGHT ABOVE FINISHED FLOOR. ALL HEIGHTS ARE TO BE CONFIRMED WITH THE PROJECT'S ARCHITECT PRIOR TO ROUGH-IN.
'AG'	INDICATES THAT THE DESIGNATED DEVICE IS TO BE INSTALLED ABOVE THE GRADE LEVEL. A NUMERIC VALUE SHALL REPLACE THE '#' SYMBOL AND SHALL DESIGNATE THE SPECIFIC HEIGHT ABOVE GRADE. ALL HEIGHTS ARE TO BE CONFIRMED WITH THE PROJECT'S ARCHITECT PRIOR TO ROUGH-IN.
'SM'	INDICATES THAT THE DESIGNATED DEVICE IS TO BE SURFACE MOUNTED. CONTRACTOR TO PROVIDE ALL MATERIALS REQUIRED FOR A COMPLETE, SURFACE MOUNTED SOLUTION. ALL SURFACE MOUNTED PRODUCTS SHALL BE APPROVED BY THE PROJECT'S ARCHITECT PRIOR TO PROCUREMENT AND/OR INSTALLATION.
'UC'	INDICATES THAT THE DESIGNATED DEVICE IS TO BE MOUNTED ON THE UNDERSIDE OF THE ELEVATED CANOPY.
'UF'	INDICATES THAT THE DESIGNATED DEVICE IS TO BE INSTALLED UNDER A RAISED FLOOR SYSTEM.
'CM'	INDICATES THAT THE DESIGNATED DEVICE IS TO BE CORNER MOUNTED AT SPECIFIED HEIGHT. ALL WALL MOUNTED HEIGHTS ARE TO BE CONFIRMED WITH THE PROJECT'S ARCHITECT PRIOR TO ROUGH-IN.

VIDEO SURVEILLANCE LEGEND

GROUP	SYMBOL	DESCRIPTION
DEVICES		INTERIOR VIDEO SURVEILLANCE CAMERA.
		VANDAL RESISTANT, WEATHER PROOF, EXTERIOR SECURITY CAMERA.
	VRS	VIDEO RECORDING SERVER. REFERENCE SPECIFICATIONS FOR INFORMATION CONCERNING ANALOG OR IP BASED TYPE SYSTEM.

NOTES:

1. REFERENCE ACCESS CONTROL SCHEDULE, DIVISION 8 AND DIVISION 28 SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

ACCESS CONTROL LEGEND

GROUP	SYMBOL	DESCRIPTION
DEVICES	RCR	WALL OR MULLION MOUNTED ACCESS CONTROL PROXIMITY CARD READER.
	CR	ACCESS CONTROL PROXIMITY CARD READER THAT IS INTEGRATED INTO THE DOOR HARDWARE.
	DR	DOOR RELEASE BUTTON
	PIR	MOTION REQUEST TO EXIT DEVICE
	ACP	DESIGNATES THE LOCATION OF THE ACCESS CONTROL SYSTEM, CONTROL PANEL. ELECTRICAL CONTRACTOR TO PROVIDE 120V. POWER TO PANEL. PROVIDE NETWORK CABLE TO PANEL AND COORDINATE WITH THE OWNER'S TECHNOLOGY DEPARTMENT ON ACQUIRING AN IP ADDRESS.
	IDS	WALL OR MULLION MOUNTED, 2-WAY AUDIO/VIDEO INTERCOM DOOR STATION.
	DS	DOOR MOUNTED, 2-WAY AUDIO/VIDEO INTERCOM DOOR STATION.
	MS	2-WAY AUDIO/VIDEO INTERCOM MASTER STATION.
	ADB	ADA AUTO DOOR OPEN BUTTON. SHOWN FOR REFERENCE ONLY, BUTTON AND AUTO DOOR OPERATOR PROVIDED AND INSTALLED BY THE DOOR SYSTEM INSTALLER.
	ADO	AUTO DOOR OPERATOR. OPERATOR TO BE PROVIDED AND INSTALLED BY THE DOOR SYSTEM INSTALLER.

NOTES:

1. REFERENCE ACCESS CONTROL SCHEDULE, DIVISION 8 AND DIVISION 28 SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS
2. REFERENCE ACCESS CONTROL SCHEDULE, DIVISION 8 AND DIVISION 28 SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

SECURITY GENERAL NOTES

1. THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
2. THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM AN APPROVED CABLE SUPPORT SYSTEM AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. THE CABLE SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
3. SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CEILING MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH CEILING MOUNTED CAMERA KIT SHALL HAVE A SUPPORT WIRE ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME. AT NO POINT SHALL THE WEIGHT OF THE CEILING MOUNTED SECURITY CAMERA BE SUPPORTED BY THE CEILING GRID SYSTEM OR CEILING TILES. ALL CEILING MOUNTED CAMERAS SHALL BE FLUSH MOUNTED.
4. ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS AND MOUNTING HEIGHTS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
5. PROVIDE AND INSTALL MAGNETIC DOOR CONTACT AT ALL ROOF HATCHES ON THE ENTIRE PROJECT. CONTACTS TO BE CONNECTED TO THE BUILDINGS INTRUSION DETECTION SYSTEM.
6. CONTRACTOR TO PROVIDE AND INSTALL A MONITOR RELAY AND ALL REQUIRED MATERIALS TO CONNECT THE RELAY TO THE FREEZER/COOLER TEMPERATURE GAUGE AND BACK TO THE INTRUSION DETECTION SYSTEM, THE INTRUSION DETECTION SYSTEM SHALL BE PROGRAMMED TO NOTIFY THE OWNER'S DESIGNATED PERSONNEL IN THE EVENT OF EXTENSIVE CHANGE IN TEMPERATURE.

1 / T0.0 TECHNOLOGY AND SECURITY NOTES AND LEGENDS

NOT TO SCALE

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

THOMAS RAVENEY 128311 LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
2/28/2019

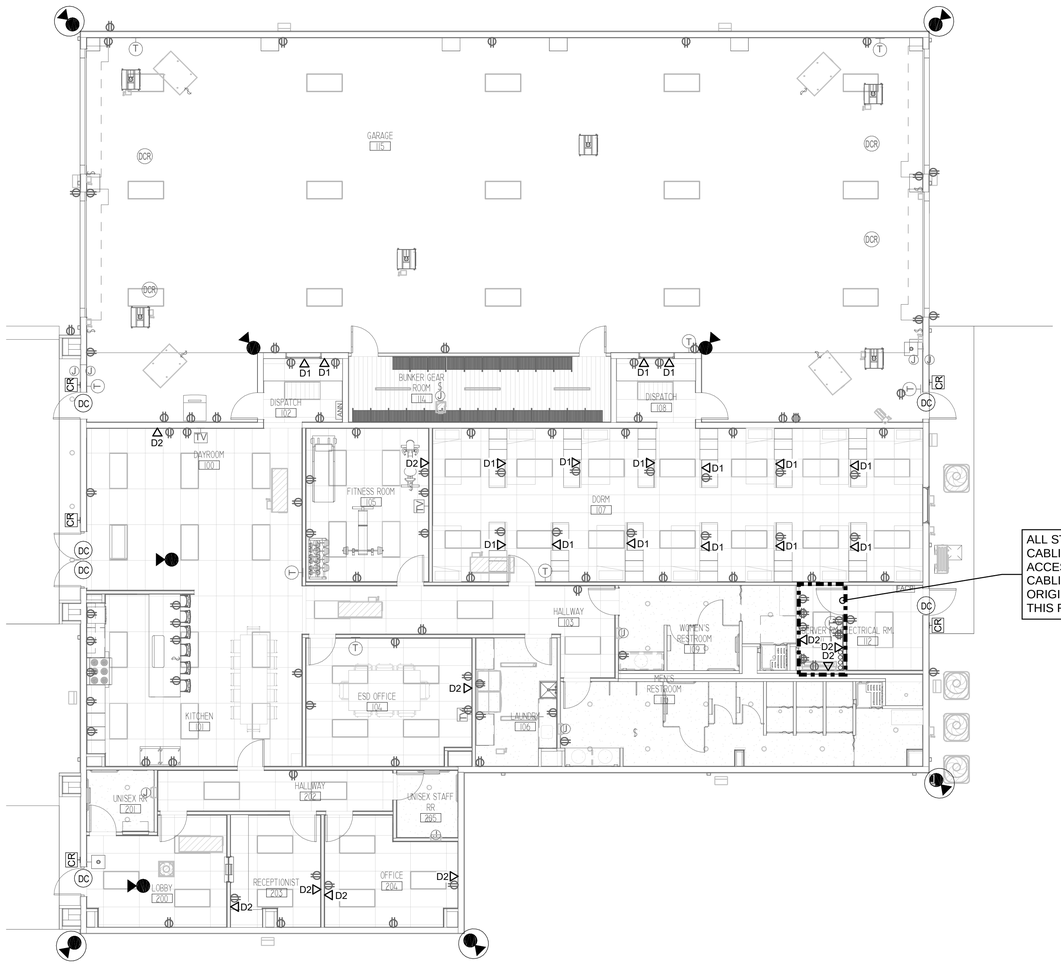
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER 219003

DATE FEBRUARY 28, 2019 ISSUED FOR BID

REVISIONS:

SHEET T0.0 OF



1 / T2.1 TECHNOLOGY PLAN

1/8" = 1'-0"

GENERAL NOTES:

A. REFERENCE NOTES AND LEGENDS AND SPECIFICATION FOR MATERIALS AND METHODS.

B. REFERENCE SHEET TX.X FOR NOTES AND SYMBOL LEGENDS

C. REFERENCE TECHNOLOGY ROUTING PLAN FOR TELECOMMUNICATIONS WORKSTATION CABLING ORIGINATION POINT.

D. ALL EXTERIOR CAMERAS SHALL BE MOUTNED AT 12'-0" A.F.G UNLESS OTHERWISE NOTED.

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28,2019

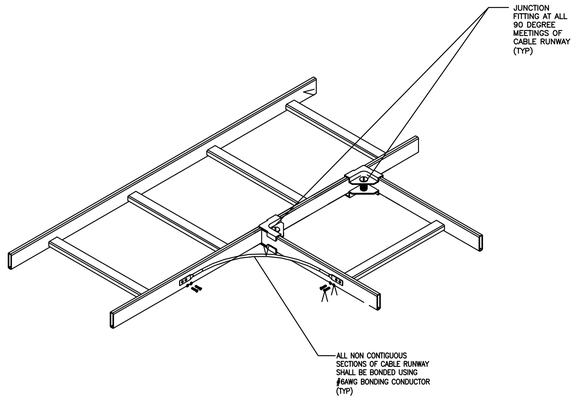
ISSUED FOR BID

SHEET
T2.1
OF

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

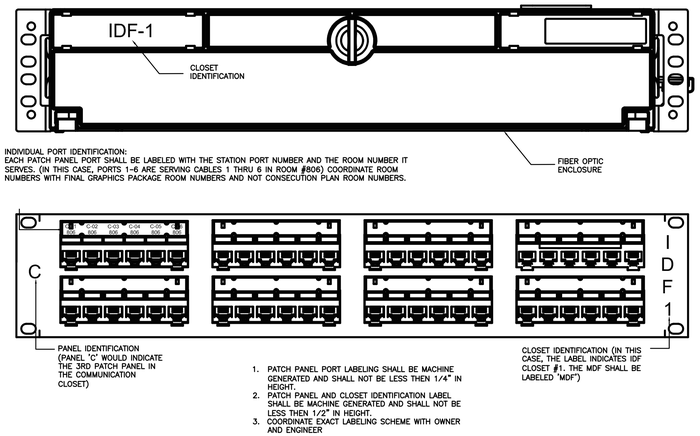
DBR Project Number	198001.000

AS	MG	JB	TL	--



07 CABLE RUNWAY - JUNCTION AND BONDING

NOT TO SCALE

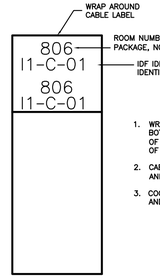


INDIVIDUAL PORT IDENTIFICATION:
EACH PATCH PANEL PORT SHALL BE LABELED WITH THE STATION PORT NUMBER AND THE ROOM NUMBER IT SERVES. (IN THIS CASE, PORTS 1-6 ARE SERVING CABLES 1 THRU 6 IN ROOM #806) COORDINATE ROOM NUMBERS WITH FINAL GRAPHICS PACKAGE ROOM NUMBERS AND NOT CONSECUTION PLAN ROOM NUMBERS.

1. PATCH PANEL PORT LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THEN 1/4" IN HEIGHT.
2. PATCH PANEL AND CLOSET IDENTIFICATION LABEL SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THEN 1/2" IN HEIGHT.
3. COORDINATE EXACT LABELING SCHEME WITH OWNER AND ENGINEER

05 FIBER ENCLOSURE/ COPPER PATCH PANEL LABELING DETAIL

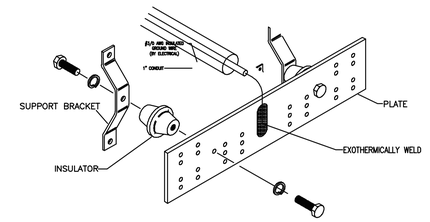
NOT TO SCALE



1. WRAP AROUND CABLE LABEL TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
2. CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THEN 1/8" IN HEIGHT.
3. COORDINATE EXACT LABELING SCHEME WITH OWNER AND ENGINEER

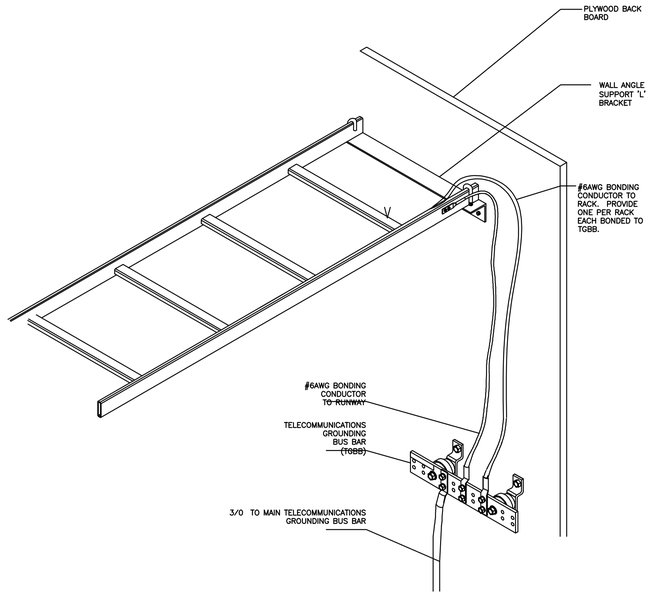
04 CABLE LABEL DETAIL

NOT TO SCALE



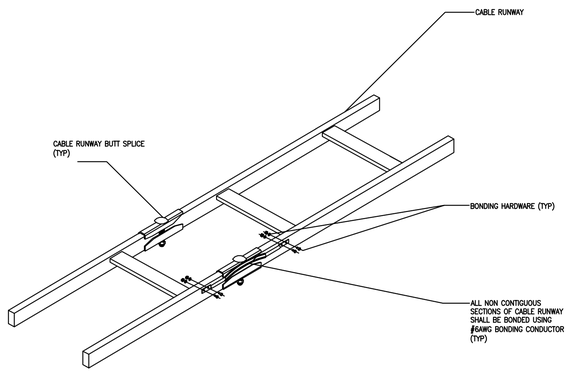
02 GROUND BUS BAR DETAIL

NOT TO SCALE



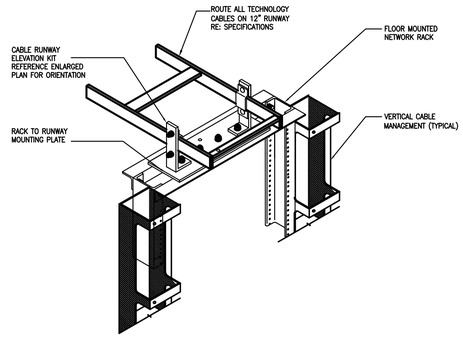
06 TR - GROUNDING AND BONDING

NOT TO SCALE



03 CABLE RUNWAY - BONDING AND BUTT SPLICE

NOT TO SCALE



01 RACK TO RUNWAY DETAIL

NOT TO SCALE

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

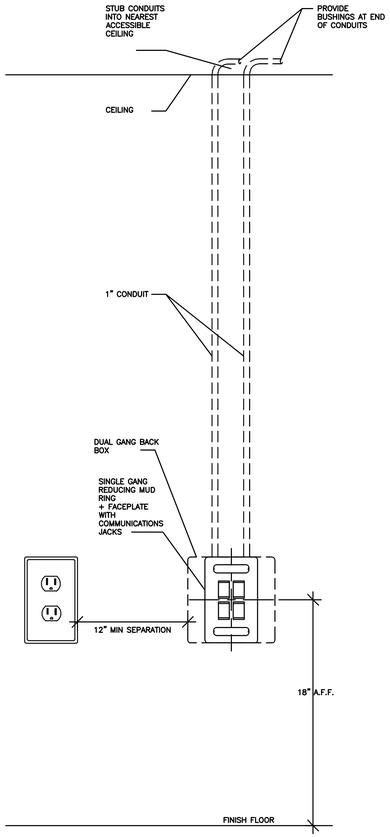
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

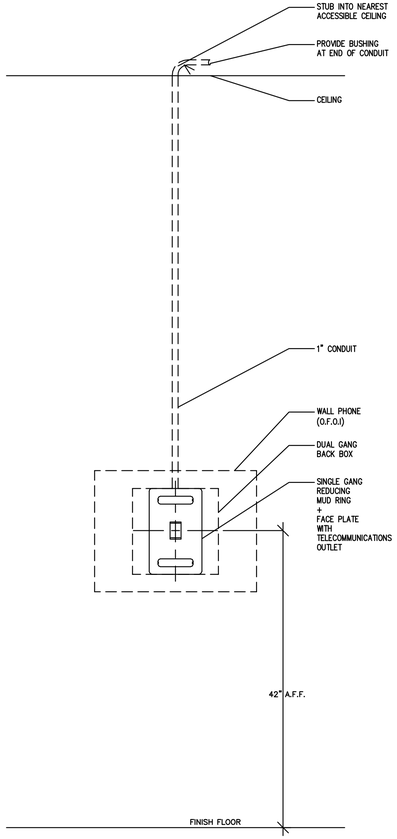
DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

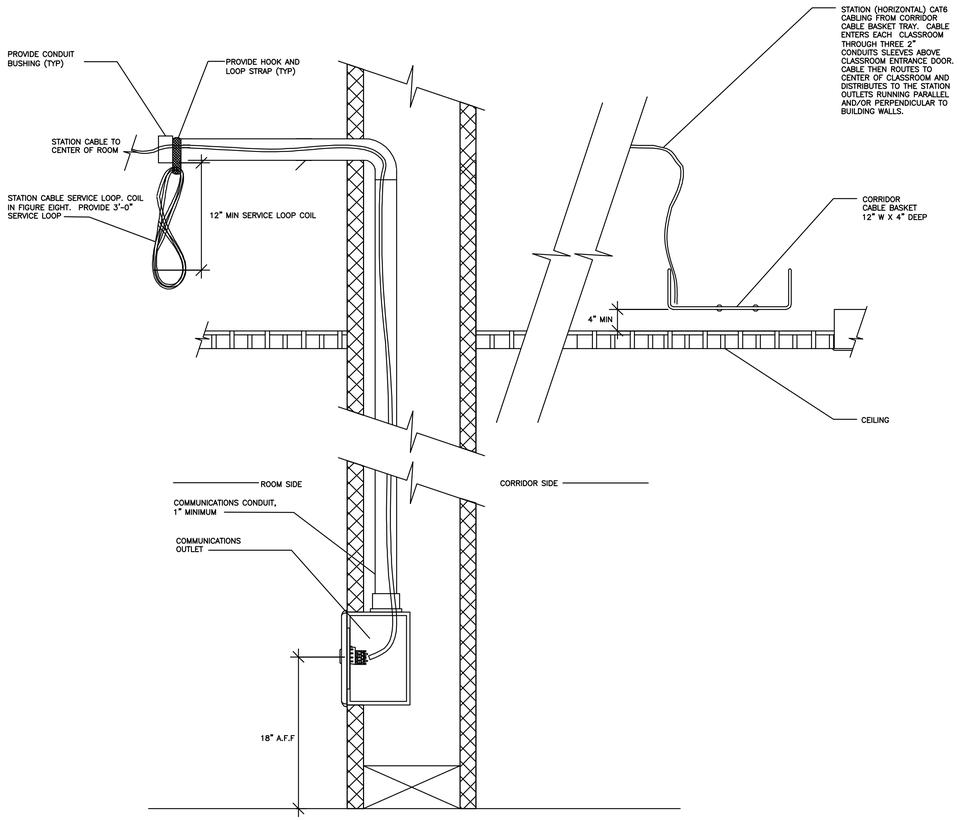
SHEET
T5.1
OF



05 WORKSTATION OUTLET DETAIL NOT TO SCALE

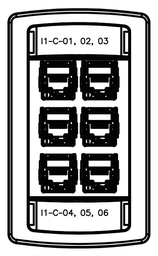


04 WALLPHONE OUTLET NOT TO SCALE



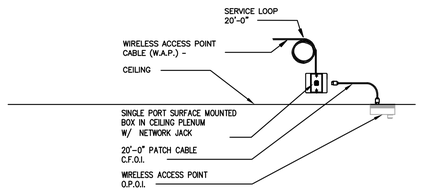
03 WALL OUTLET ROUGH-IN AND CABLE TRAY DISTRIBUTION NOT TO SCALE

06 NOT TO SCALE



1. FACEPLATE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THEN 1/4" IN HEIGHT.
2. PROVIDE BLANK INSERTS FOR ANY UNUSED PORTS
3. COORDINATE EXACT LABELING SCHEME WITH OWNER AND ENGINEER.

02 FACEPLATE LABEL DETAIL NOT TO SCALE



01 WIRELESS ACCESS POINT DETAIL NOT TO SCALE

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--

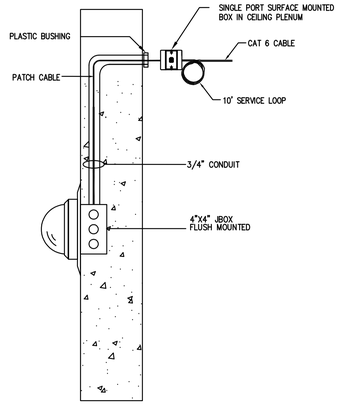
EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

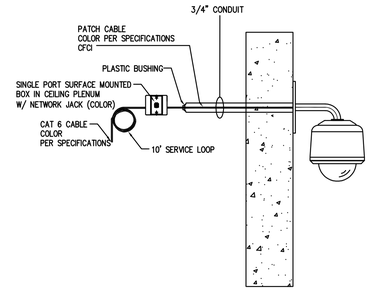
SHEET
T5.2
OF



NOTE:
ELECTRICAL CONTRACTOR SHALL PROVIDE AND ROUGH-IN 4"X4" BOX, FLUSH MOUNTED IN STAIRWELL WALL. ELECTRICAL CONTRACTOR SHALL PROVIDE 3/4" CONDUIT WITH PULL STRING TO NEAREST AVAILABLE PLENUM SPACE. SECURITY CONTRACTOR TO COORDINATE MOUNTING HEIGHT WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.

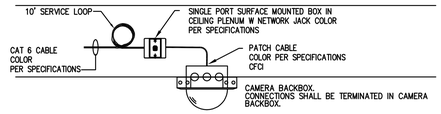
01 CCTV CAMERA- SIDE WALL MOUNTING DETAIL

NOT TO SCALE



NOTE:
ELECTRICAL CONTRACTOR SHALL PROVIDE 3/4" CONDUIT WITH PULL STRING TO NEAREST AVAILABLE PLENUM SPACE. SECURITY CONTRACTOR SHALL PROVIDE CABLE FEED-THROUGH MOUNT FOR CAMERA. NO EXPOSED CABLE WILL BE ALLOWED. SECURITY CONTRACTOR TO COORDINATE MOUNTING HEIGHT WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.

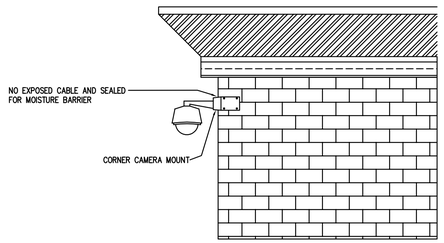
02 CCTV CAMERA- EXTERIOR MOUNTING DETAIL



NOTE:
PROVIDE ALL MOUNTING AND SUPPORT HARDWARE AS REQUIRED BY THE MANUFACTURER. CONTRACTOR SHALL PROVIDE 20'-0" SERVICE LOOP FOR EACH CAMERA LOCATION.

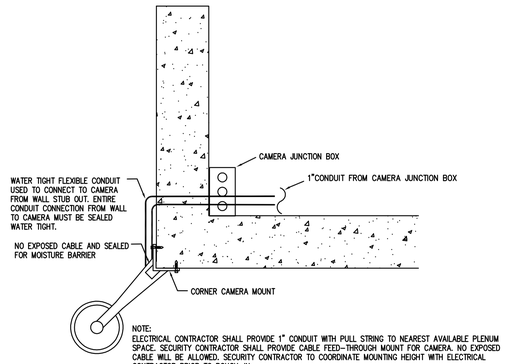
03 CCTV CAMERA- CEILING MOUNTING DETAIL

NOT TO SCALE



04 CORNER MOUNTING DETAIL

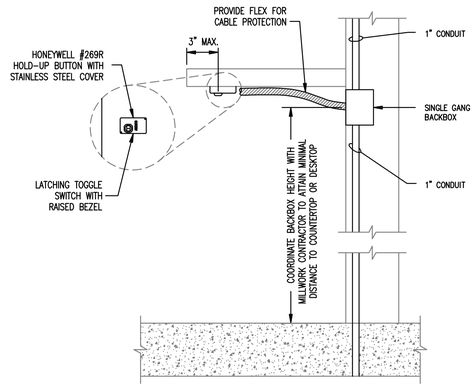
NOT TO SCALE



NOTE:
ELECTRICAL CONTRACTOR SHALL PROVIDE 1" CONDUIT WITH PULL STRING TO NEAREST AVAILABLE PLENUM SPACE. SECURITY CONTRACTOR SHALL PROVIDE CABLE FEED-THROUGH MOUNT FOR CAMERA. NO EXPOSED CABLE WILL BE ALLOWED. SECURITY CONTRACTOR TO COORDINATE MOUNTING HEIGHT WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.

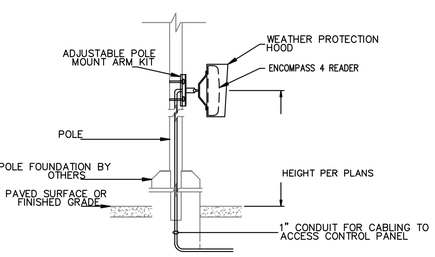
05 EXPLODED CORNER MOUNTING DETAIL

NOT TO SCALE



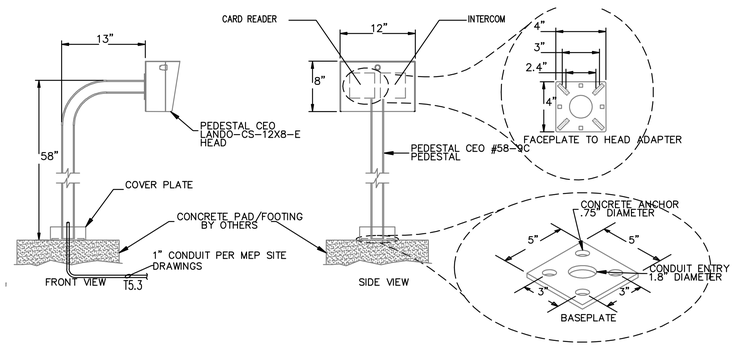
06 UNDER COUNTER PANIC BUTTON DETAIL

NOT TO SCALE



07 RFID ANTENNA MOUNTING DETAIL

NOT TO SCALE



08 CARD READER PEDESTAL MOUNTING DETAIL

NOT TO SCALE

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

EDINBURG FIRE STATION #5

CITY OF EDINBURG

JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

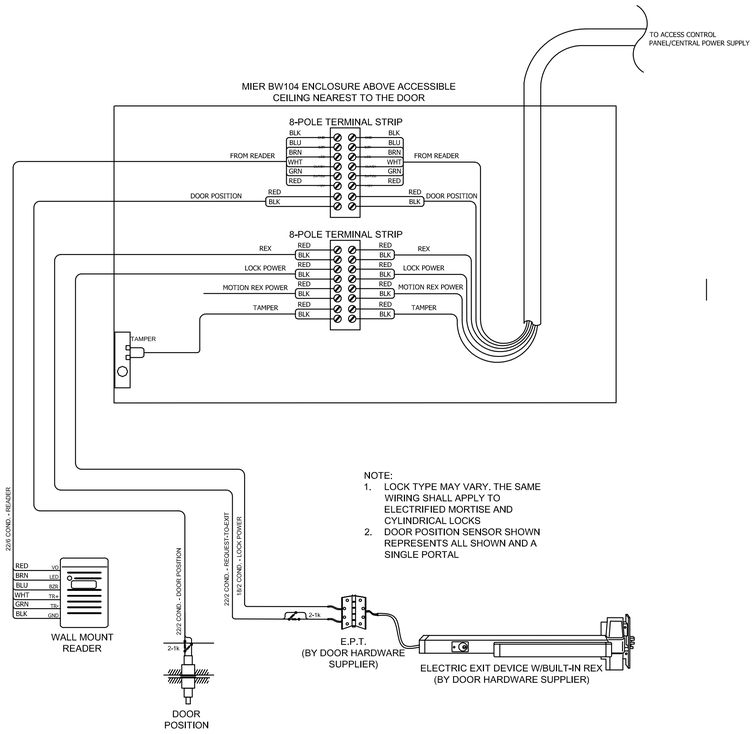
REVISIONS:

SHEET
T5.3
OF

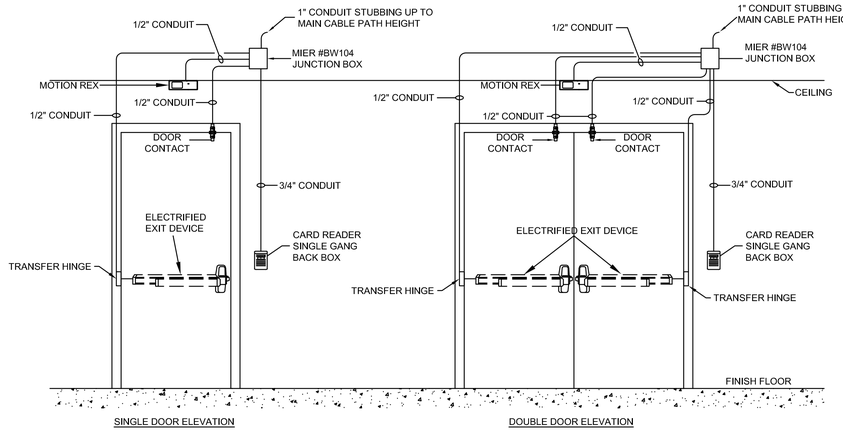
DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--



WIRING DETAIL



1 T5.4 ACCESS CONTROL DETAILS

NOT TO SCALE

Milnet Architectural Services
AMERICAN INSTITUTE OF ARCHITECTS

STATE OF TEXAS
THOMAS RAVENEY
128311
LICENSED PROFESSIONAL ENGINEER
2/28/2019

EDINBURG FIRE STATION #5
CITY OF EDINBURG
JASMAN RD & FM2812

PROJECT NUMBER
219003

DATE
FEBRUARY 28, 2019
ISSUED FOR BID

REVISIONS:

SHEET
T5.4
OF

DBR
200 South 10th Street Suite 901
Mc Allen, Texas 78501
956.683.1640 p 956.683.1903 f
TBPE Firm Registration No. 2234

DBR Project Number 198001.000

AS	MG	JB	TL	--