CITY OF GEORGETOWN
FIRE STATION No. 6

6700 R.M. 2338
GEORGETOWN, TX, 78633
BRW PROJECT NO.: 217079.00
11/16/2018

OWNER
CITY OF GEORGETOWN
3500 D B WOOD RD.
GEORGETOWN, TX 78628
(512) 930-3621

ARCHITECT / LANDSCAPE ARCHITECT
BROWN REYNOLDS WATFORD ARCHITECTS, INC.
CENTURY SQUARE BUILDING B
175 CENTURY SQUARE DRIVE
SUITE 350
COLLEGE STATION, TX 77840
(979) 694-1791

CIVIL ENGINEER
STRAND ASSOCIATES, INC.
203 S JACKSON ST.
BRENHAM, TX 77833
(979) 836-7937

STRUCTURAL ENGINEER
GESSNER ENGINEERING
2501 ASHFORD DR.
COLLEGE STATION, TX 77840
(979) 680-8840

MECHANICAL / ELECTRICAL / PLUMBING ENGINEER
DAWSON VAN ORDEN, INC.
1250 WOOD BRANCH PARK DRIVE
SUITE 210
HOUSTON, TX 77079
(281) 293-7500

PROFESSIONAL SANITARIAN
BRANDON L. COUCH, R.S.
2314 ROCK LEDGE DR.
GEORGETOWN, TX 78626
(512) 630-8600

SYMBOL LEGEND

- NORTH ARROWS (PLAN / TRUE)
- ARTIFICIAL PROPERTY LINE / LIMITS OF CONSTRUCTION
- BUILDING SETBACK LINE/EASEMENT
- EXISTING CONTOURS (100)
- REVISED CONTOURS (100)
- EXISTING SPOT GRADE (100)
- REVISED SPOT GRADE (100)
- WORKING POINT, CONTROL OR DATUM POINT
- COLUMN DESIGNATION (0)
- DETAIL BUBBLE (1 / A463)
- BUILDING SECTION (1 / A301)
- WALL SECTION (1 / A314)
- FACE OF FINISH DIMENSIONING (1")
- MATCH LINE
- 1 TITLE / SCALE — VIEW TITLE
- EXTERIOR ELEVATION (A101 / 1)
- INTERIOR ELEVATION (3 / A411 / 1)
- KEYNOTE (3111.10)
- WALL TYPE (A1)
- DOOR NUMBER (101)
- WINDOW TYPE (A)
- REVISIONS (1)
- ROOM NAME DESIGNATION & NUMBER (ROOM NAME / C101B)
- CEILING FINISH / WALL FINISH / BASE FINISH / FLOOR FINISH
- NEW CONSTRUCTION
- NEW FIRE RATED CONSTRUCTION (2)
- EXISTING WALL TO REMAIN
- ALIGN
- TEMPERED GLASS
- REFERENCES: (3/A463) SHEET NUMBER / DETAIL NUMBER
- SHEET NUMBERING: (A463) SHEET NUMBER / SHEET TYPE DESIGNATOR / DISCIPLINE DESIGNATOR

ARCHITECTURAL ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR	NOM.	NOMINAL
B.O.	BOTTOM OF	N.I.C.	NOT IN CONTRACT
C.J.	CONTROL JOINT	O.C.(E.W.)	ON CENTER (EACH WAY)
CLR	CLEAR	O.H.	OPPOSITE HAND
DIA.	DIAMETER	O.P.C.I	OWNER PROVIDE CONTRACTOR INSTALL
DN	DOWN	RE:	REFERENCE
E.J.	EXPANSION JOINT	REQ./REQD	REQUIRED
EQ.	EQUAL	R.O.	ROUGH OPENING
F.F.	FINISH FLOOR	SIM.	SIMILAR
F.V.	FIELD VERIFY	T.O.	TOP OF
GA.	GAUGE	TYP.	TYPICAL
M.O.	MASONRY OPENING	W	WITH
MAX.	MAXIMUM	W.B.	WIND BRACE
MIN.	MINIMUM	W.P	WORKING POINT
MNTD.	MOUNTED		

CODE INFORMATION

BUILDING: 2015 INTERNATIONAL BUILDING CODE
STORM SHELTER: 2014 ICC 500
MECHANICAL: 2015 INTERNATIONAL MECHANICAL CODE
PLUMBING: 2015 INTERNATIONAL PLUMBING CODE
ELECTRICAL: 2017 NATIONAL ELECTRIC CODE
FIRE: 2015 INTERNATIONAL FIRE CODE
LIFE SAFETY: 2015 INTERNATIONAL BUILDING CODE
ACCESSIBILITY: TEXAS ARCHITECTURAL BARRIER STANDARDS
ENERGY: 2015 INTERNATIONAL ENERGY CONSERVATION CODE

OCCUPANCY CLASSIFICATION: **B, S-1**
SPRINKLERED: **NFPA 13 - FULLY SPRINKLERED**
CONSTRUCTION TYPE: **TYPE V-B**
NUMBER OF STORIES (ABOVE GRADE PLANE): **2**
ALLOWED NUMBER OF STORIES (ABOVE GRADE PLANE): **3**

BUILDING AREA (FIRST STORY): **9,466 SF**
BUILDING AREA (SECOND STORY): **1,659 SF**
TOTAL BUILDING AREA: **11,125 SF**
ALLOWED BUILDING AREA (PER STORY): **18,000 SF**

BUILDING HIGH POINT: **37'-4"**
ALLOWED BUILDING HEIGHT: **60' - 0"**

FAR: N/A

TOTAL LOT AREA: **93,218 SF**
IMPERVIOUS SITE COVERAGE: **48,701 SF**

SUBDIVISION: FIRE STATION NO. 6 REPLAT
LEGAL DESCRIPTION: 2.14 ACRES FREDERICK FOY SURVEY ABSTRACT 229

MINIMUM FIRE FLOW RATE PER 2012 IFC, APPENDIX B:
2,750 - (2,750 x 0.75) = 688 GPM, **MIN. 1,500 GPM REQUIRED, 2 HOUR DURATION**

OCCUPANT LOAD/EGRESS: **REFER TO SHEET LS1.1 - LIFE SAFEY PLAN**

NOTE: AREA TABULATION IS FOR CITY USE ONLY. CONTRACTOR SHALL COMPLETE HIS/HER OWN TAKE-OFFS AND CALCULATIONS.

TYPICAL INSULATION VALUES

TYPICAL WALL INSULATION: R-20
TYPICAL ROOF INSULATION: R-38
TYPICAL WINDOW GLAZING:
U-FACTOR (FIXED): 0.50
U-FACTOR (OPERABLE): 0.50
SHGC: 0.25
VISIBILE TRANSMITTANCE: 0.35 MIN.

UTILITY PROVIDERS

ELECTRIC: PEDERNALES ELECTRIC COOPERATIVE, INC. ENGINEERING/PLANNING: 877.372.0391

WATER: CITY OF GEORGETOWN

SANITARY SEWER: SEPTIC (ON-SITE RE: CIVIL DRAWINGS, SPECIFICATIONS)

GAS: LIQUID PETROLEUM (ON-SITE RE: SITE PLAN)

CABLE: SUDDENLINK: 512.931.2964

TELEPHONE: VERIZON: DANNY FORTENE 512.869.2217

OWNER PROVIDED CONTRACTS

ACCESS CONTROL/ CCTV: CONVERGINT TECHNOLOGIES: 512.351.4042

DATA/CABLING & A/V: ERIC JOHNSON, CITY OF GEORGETOWN ERIC.JOHNSON@GEORGETOWN.ORG

ALERTING SYSTEM: US DIGITAL DESIGNS: JAMES AMOS 602.687.1730

VICINITY MAP

BID ALTERNATES

REFERENCE SPECIFICATION SECTION 01 23 00 - ALTERNATES:
DEDUCT ALTERNATE 1: PROVIDE A COMPOSITION SHINGLE ROOF IN LIEU OF STANDING SEAM METAL ROOF SYSTEM.
DEDUCT ALTERNATE 2: PROVIDE HORIZONTAL CEDAR SCREEN WALLS IN LIEU OF CONCRETE UNIT MASONRY AND STONE VENEER SCREEN WALLS. RE: AS1.1 AND AS1.2 FOR SCREEN WALL LOCATIONS AND DIMENSIONS. RE: SPECIFICATION SECTION 32 31 29
DEDUCT ALTERNATE 3: PROVIDE CONVENTIONAL A/C SPLIT SYSTEM IN LIEU OF VARIABLE-REFRIGERANT-FLOW CASSETTE CEILING UNITS IN SLEEPING ROOMS. RE: MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
DEDUCT ALTERNATE 4: DELETE ONE (1) PULL-THROUGH APPARATUS BAY.
ADD ALTERNATE 5: PROVIDE DIRECT CAPTURE EXHAUST SYSTEM IN APPARATUS BAYS. RE: MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
ADD ALTERNATE 6: PROVIDE OPEN-CELL SPRAY POLYURETHANE FOAM INSULATION IN LIEU OF BATT INSULATION. PROVIDE SOLID BLOCKING IN LIEU OF VENTED BLOCKING BETWEEN ROOF TRUSSES (RE: STRUCTURAL DRAWINGS). SPRAY FOAM INSULATION SHALL BE INSTALLED AT A REQUIRED THICKNESS TO ACHIEVE SPECIFIED R-VALUE. RE: SPECIFICATION SECTION 07 21 29. SEE ADDITIONAL NOTES ON ROOF PLAN 1/A1.3.
ADD ALTERNATE 7: PROVIDE ADDITIONAL IRRIGATION COVERAGE AS INDICATED ON 1/L1.2.
ADD ALTERNATE 8: PROVIDE SLIDING CANTILEVERED VEHICLE GATES, OPERATORS, POST MOUNTED STANCHION WITH BACK BOX HOUSING, SENSOR LOOPS, AND SAFETY DEVICES FOR FULLY FUNCTIONAL SYSTEM. PROVIDE NECESSARY CONDUIT AND PULL-STRING AS PART OF THE BASE-BID. RE: SITE PLANS AND DETAILS, AND SPECIFICATION SECTION 32 31 19.

INDEX OF DRAWINGS

INDEX OF DRAWINGS

CITY PROJECT NO.: SWP-2018-009

CITY OF GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78633

DATE	11/16/2018
DRAWN BY	HR, NB
CHECKED BY	RH
BRW PROJECT NUMBER	217079.00

NO.	REVISION	DATE

G1.1
TITLE SHEET AND DRAWING INDEX

MASTER KEYNOTE LIST

0100	DIVISION 01 - GENERAL REQUIREMENTS
0150.01	TEMPORARY CONSTRUCTION FENCE
0150.05	TEMPORARY TREE PROTECTION
0200	DIVISION 02 - EXISTING CONDITIONS (TO REMAIN, U.N.O.) & DEMOLITION
0220.01	EXISTING TREE (RE: SURVEY)
0220.10	EXISTING FIRE HYDRANT
0300	DIVISION 03 - CONCRETE
0310.01	TAMPED, SCREEDED DRY SAND
0310.02	3/4" CHAMFER
0320.01	DOWEL INTO CONCRETE SLAB
0320.02	STEEL REINFORCING (RE: STRUCTURAL)
0320.03	DOWEL SLEEVE AND END CAP
0320.05	DOWEL
0330.01	CONCRETE (RE: STRUCTURAL)
0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0330.05	CONCRETE GRADE BEAM (RE: STRUCTURAL)
0330.07	CONCRETE FOOTING (RE: STRUCTURAL)
0330.12	CONCRETE BOLLARD
0330.21	SAWCUT CONTROL JOINT
0330.22	CONCRETE EXPANSION JOINT - FILL W/ JOINT SEALER 1/4" BELOW SURFACE
0330.23	ANCHOR BOLT
0360.01	LEAD CAULKING OVER WATERPROOF CEMENT GROUT
0360.03	FILL WITH GROUT
0400	DIVISION 04 - MASONRY
0405.01	FLASHING END DAM
0405.03	MASONRY EXPANSION JOINT
0405.04	MASONRY CONTROL JOINT
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.10	4" CONCRETE MASONRY UNITS
0420.13	6" CONCRETE MASONRY UNITS
0420.14	8" CONCRETE MASONRY UNITS
0420.22	STONE / CONCRETE MASONRY UNIT SCREEN WALL WITH HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.23	CONCRETE MASONRY BOND BEAM
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W
0440.09	THIN STONE VENEER
0440.10	2" CUT STONE
0440.11	4" CUT STONE
0440.12	6" CUT STONE
0470.01	CAST STONE
0470.05	CAST STONE SILL WITH DRIP
0470.06	CAST STONE CAP - PIN BOLT CONNECTIONS
0470.07	CAST STONE SIGNAGE PANEL
0470.12	RECESSED CAST LETTERING
0500	DIVISION 05 - METALS
0510.01	STEEL STRUCTURE (RE: STRUCTURAL)
0510.02	STEEL COLUMN (RE: STRUCTURAL)
0510.03	STEEL TUBE COLUMN (RE: STRUCTURAL)
0510.04	STEEL ANGLE (RE: STRUCTURAL)
0510.05	STEEL CHANNEL (RE: STRUCTURAL)
0510.06	STEEL LINTEL / PLATE (RE: STRUCTURAL)
0510.07	STEEL BEAM (RE: STRUCTURAL)
0510.08	STEEL DIAGONAL BRACE (RE: STRUCTURAL)
0520.01	STEEL JOIST (RE: STRUCTURAL)
0530.04	METAL ROOF DECK (RE: STRUCTURAL)
0530.06	GALVANIZED METAL DECK (RE: STRUCTURAL)
0550	Metal Fabrications
0550.02	3" X 3" X 1/4" STEEL ANGLE
0550.19	6" PIPE BOLLARD. FILL WITH CONCRETE
0550.20	1/2" STEEL PLATE WITH 3/4" DIAMETER LIGHTNING ARRESTOR SPIKE. EXTEND 2'-0" BELOW CONCRETE
0550.24	GALVANIZED METAL CANOPY
0550.28	STEEL CHANNEL STRINGER
0550.38	PIPE SLEEVE
0550.39	1 1/4" DIAMETER STANDARD STEEL PIPE HANDRAIL (3'-0" HIGH U.N.O.)
0550.40	1 1/4" DIAMETER STANDARD STEEL PIPE HANDRAIL WITH 3/8" PLATE STEEL BRACKETS AT 5'-0" O.C. MAX.
0550.59	HOT-DIPPED GALVANIZED STEEL PIPE U-BRACKET CLAMP
0550.60	GALVANIZED 6" PIPE BOLLARD. FILL WITH CONCRETE
0550.61	GALVANIZED METAL FASTENER (RE: STRUCTURAL)
0550.62	2" X 2" X 1/4" STEEL ANGLE
0600	DIVISION 06 - WOOD, PLASTICS, & COMPOSITES
0610.01	SHIM AS REQUIRED
0610.02	1X WOOD BLOCKING
0610.03	2X WOOD BLOCKING
0610.04	2X PRESSURE TREATED WOOD BLOCKING
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.06	5/8" EXTERIOR GRADE PLYWOOD
0610.07	3/4" EXTERIOR GRADE PLYWOOD
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.11	2 X 6 WOOD FRAMING
0610.12	2 X 8 WOOD FRAMING
0610.13	2 X 10 WOOD FRAMING
0610.14	2 X 12 WOOD FRAMING
0610.15	WOOD TOP PLATE
0610.16	WOOD SILL PLATE
0610.17	METAL HANGER
0610.19	WOOD WEDGE
0610.20	1x WOOD FURRING STRIP
0610.25	GLUE-LAMINATED BEAM (RE: STRUCTURAL)
0610.28	3/4" PLYWOOD
0610.29	2X WOOD FURRING STRIPS
0610.30	2X WOOD HEADER (RE: STRUCTURAL)
0610.31	PREFABRICATED WOOD TRUSS (RE: STRUCTURAL)
0610.32	2X WOOD FRAMING (RE: STRUCTURAL)
0610.37	2 X 4 WOOD FRAMING
0610.38	2X VENTILATED BLOCKING (RE: STRUCTURAL)
0610.39	2 X 8 STUDS AT 16" O.C.
0640.01	HARDWOOD VENEER BASE CABINETS WITH ADJUSTABLE SHELVES
0640.02	HARDWOOD VENEER WALL CABINETS WITH ADJUSTABLE SHELVES
0640.05	PLASTIC LAMINATE COUNTERTOP / 4" SPLASH AS SHOWN
0640.07	3/4" PLYWOOD
0640.08	3/4" HARDWOOD VENEER PLYWOOD
0640.09	1/2" HARDWOOD VENEER PLYWOOD
0640.17	DRAWER GLIDE
0640.18	ADJUSTABLE SHELVING
0640.21	3" WIRE GROMMET
0640.22	CABINET PULLS
0640.24	ADJUSTABLE METAL SHELF STANDARDS. PROVIDE BLOCKING IN WALL AS REQUIRED
0640.25	HARDWOOD VENEER PLYWOOD SHELVES (5) ON ADJUSTABLE METAL STANDARDS. PROVIDE BLOCKING IN WALL AS REQUIRED
0640.26	HARDWOOD DRAWER WITH 1/4" HARDWOOD BOTTOM
0640.32	SHELF BRACKET
0640.40	PLASTIC LAMINATE DESK
0640.47	TOE KICK
0640.48	HEAVY DUTY COAT ROD
0640.52	WOOD STAIR STRINGER
0640.54	WOOD STAIR TREAD
0640.55	WOOD STAIR RISER
0640.57	HARDWOOD VENEER SUPPORT BRACKET
0640.58	HARDWOOD VENEER CABINET BACK
0640.59	HARDWOOD VENEER PLYWOOD SHELF
0640.60	HARDWOOD VENEER REMOVABLE ACCESS PANEL
0640.61	HARDWOOD VENEER DRAWER
0640.62	HARDWOOD VENEER LOCKER WITH DRAWERS AND ADJUSTABLE SHELVES
0640.63	1/2" PLYWOOD
0640.64	4" GROMMET WITH AIR VENT GROMMET CAP
0640.65	3/4" HARDWOOD VENEER COMBINATION-CORE PLYWOOD
0640.66	HARDWOOD VENEER PLYWOOD BED STAND WITH STORAGE CABINETS
0640.69	HARDWOOD VENEER PLYWOOD FILLER
0700	DIVISION 07 - THERMAL & MOISTURE PROTECTION
0710.01	BITUMINOUS DAMPPROOFING
0710.02	SELF ADHERING SHEET WATERPROOFING MEMBRANE AND DRAINAGE COURSE
0710.05	ROOFING UNDERLAYMENT
0720.01	3 1/2" BATT INSULATION
0720.03	5 1/2" NATURAL FIBER INSULATION
0720.17	GRANULAR INSULATING FILL IN CMU BLOCKS
0720.18	5 1/2" BATT INSULATION
0720.19	BATT INSULATION (R-38 @ ATTIC/CEILING)
0720.20	INSULATION BAFFLE
0720.21	WIRE MESH NETTING
0725.01	UNDERSLAB VAPOR BARRIER
0725.02	SELF-ADHERING MODIFIED BITUMINOUS SHEET AIR BARRIER
0725.03	PLASTIC FILM AIR BARRIER
0725.06	SELF-ADHERING FLEXIBLE SURROUND FLASHING
0740.01	PREFINISHED METAL ROOF PANEL
0740.05	Z-CLOSURE BY STANDING SEAM METAL ROOF MANUFACTURER
0740.07	CONCEALED STEEL CLIP BY STANDING SEAM METAL ROOF MANUFACTURER
0740.08	VALLEY FLASHING BY STANDING SEAM METAL ROOF MAUNFACTURER
0740.09	METAL REGLET W/ SEALANT & COUNTERFLASHING BY STANDING SEAM METAL ROOF MANUFACTURER
0740.12	PREFINISHED METAL STANDING SEAM ROOFING
0740.19	FIBER REINFORCED CEMENTITIOUS VENTED SOFFIT PANEL AND TRIMS
0740.20	FIBER REINFORCED CEMENTITIOUS TRIM
0740.21	FIBER REINFORCED CEMENTITIOUS FASCIA
0740.28	FIBER REINFORCED CEMENTITIOUS SIDING
0740.30	PREFINISHED CONTINUOUS RAKE FLASHING BY METAL ROOFING MANUFACTURER
0740.31	FIBER REINFORCED CEMENTITIOUS SOFFIT PANEL AND TRIMS
0760.01	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
0760.02	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.)
0760.03	GALVANIZED METAL GUTTER
0760.05	GALVANIZED METAL DOWNSPOUT WITH FABRICATED TRANSITION TO DOWNSPOUT BOOT
0760.06	GALVANIZED METAL DOWNSPOUT
0760.15	PREFINISHED METAL Z-CLIP
0760.29	PREFINISHED RAKEWALL TRIM
0760.30	PREFINISHED EAVE TRIM
0760.31	SILL SEALER
0760.34	STAINLESS STEEL WATERSTOP FLASHING CONTINUOUS UNDER FRAME
0760.35	PREFINISHED METAL FLASHING
0760.36	GALVANIZED METAL FLASHING
0770.02	CONTINUOUS CLEAT
0770.04	PREFINISHED METAL REGLET WITH SEALANT AND COUNTERFLASHING
0770.17	PREFABRICATED PIPE PORTAL SYSTEM WITH METAL COLLAR
0770.18	CONCRETE SPLASH BLOCK
0770.24	VENTED SCREED (F-MOLDING)
0770.26	RIDGE VENT
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0790.02	CAULKING
0790.07	SET IN BED OF SEALANT
0800	DIVISION 08 - OPENINGS
0810.02	HOLLOW METAL FRAME
0810.03	HOLLOW METAL STOP
0810.04	HOLLOW METAL DOOR AND FRAME
0810.05	JAMB ANCHOR (3 PER JAMB)
0810.06	HOLLOW METAL DOOR
0810.08	SOLID CORE WOOD DOOR
0810.09	RAIL AND STILE PANELED WOOD DOOR
0810.12	METAL LOUVER
0810.13	SLIDING TRACK
0810.14	FLOOR GUIDE
0830.02	WALL ACCESS DOOR
0830.03	WALL ACCESS PANEL
0830.17	UPWARD-ACTING SECTIONAL DOOR
0830.18	UPWARD-ACTING SECTIONAL DOOR TRACK
0830.19	UPWARD-ACTING SECTIONAL DOOR MOTOR / HOUSING
0830.26	ELECTRIC OPERATED FOLDING DOORS
0830.27	TORNADO RESISTANT DOOR AND FRAME
0840.01	ALUMINUM STOREFRONT
0840.02	ALUMINUM STOREFRONT DOOR
0840.03	.060 ALUMINUM SILL WITH HEMMED AND CLOSED ENDS
0840.05	CONTINUOUS ALUMINUM SILL FLASHING
0840.08	ALUMINUM STOREFRONT OPERABLE WINDOW
0840.15	.060 ALUMINUM BRAKE METAL, FINISH TO MATCH STOREFRONT
0850.01	FIXED ALUMINUM WINDOW
0850.02	OPERABLE ALUMINUM WINDOW
0850.05	ALUMINUM SINGLE-HUNG WINDOW
0850.07	APPLIED METAL MUNTIN
0870.01	METAL THRESHOLD. SET IN SEALANT
0870.03	BRUSH-WEATHER SEAL
0880.05	1/4" SPANDREL GLASS
0880.13	1/4" GLASS MIRROR
0880.17	1/4" CLEAR GLASS, TEMPERED
0880.18	1/2" TINTED GLASS, INSULATED, LOW-E, TEMPERED
0880.19	1" TINTED GLASS, INSULATED, LOW-E
0880.20	1" TINTED GLASS, INSULATED, LOW-E, TEMPERED
0890.01	PREFINISHED FIXED ALUMINUM LOUVER (WITH INSECT SCREEN)
0890.05	CLOTHES DRYER VENT WITH FLAP
0900	DIVISION 09 - FINISHES
0920.02	2 1/2" METAL STUDS (20 GAUGE MINIMUM) AT 16" O.C.
0920.07	6" METAL STUDS (20 GAUGE MINIMUM) AT 16" O.C.
0920.08	STUD BRACE AT 4'-0" O.C. MAX.
0920.10	7/8" FURRING CHANNEL AT 16" O.C.
0920.17	5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM
0920.25	ALUMINUM "Z" REGLET
0920.26	5/8" CEMENTITIOUS BACKER BOARD
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.31	1/2" GYPSUM BOARD (TYPE X) AT BOTTOM CHORD OF ROOF TRUSS, TYPICAL U.N.O.
0920.34	GYPSUM BOARD GUSSETS AT 16" O.C.
0920.35	CORNER BEAD, TYPICAL
0920.36	J-MOULD, TYPICAL
0920.37	GYPSUM BOARD CONTROL JOINT
0920.38	PRE-MANUFACTURED CONTINUOUS ALUMINUM F REVEAL MOLDING
0920.45	5/8" GYPSUM BOARD MOISTURE RESISTANT (TYPE X)
0930.01	PORCELAIN TILE
0930.07	7/8" GRANITE THRESHOLD
0930.09	THICKSET TILE (SLOPE TO DRAIN)
0930.10	METAL TILE TRIM
0930.11	FLUID-APPLIED FABRIC REINFORCED WATERPROOFING MEMBRANE
0930.12	PREFABRICATED SHOWER NICHE
0950.01	SUSPENDED ACOUSTICAL LAY-IN TILE CEILING (2' X 2')
0950.06	SUSPENDED LINEAR WOOD CEILING SYSTEM
0960.01	FLOORING AS SCHEDULED
0960.03	METAL EDGE / TRANSITION TRIM
0960.13	4" RESILIENT BASE
0960.14	RUBBER TREAD / RISER / FLOORING
0980.03	3 1/2" FIBERGLASS SOUND ATTENUATION INSULATION
1000	DIVISION 10 - SPECIALTIES
1010.12	CAST BRONZE PLAQUE
1010.18	METAL LETTERING
1010.19	WINDOW LETTERING
1010.30	RAISED LETTERS AND SYMBOLS
1010.31	RAISED BRAILLE LETTERING
1010.33	POLE MOUNTED SIGNAGE - "H.C. PARKING ONLY"
1010.34	POLE MOUNTED SIGNAGE - "VAN-ACCESSIBLE"
1010.40	POLE MOUNTED SIGNAGE - "NO PARKING - EMERGENCY SERVICE VEHICLES ONLY"
1010.47	POLE MOUNTED SIGNAGE - "FUEL EFFICIENT VEHICLE PARKING"
1010.51	GATE MOUNTED SIGNAGE - "PULL FORWARD TO LINE TO ACTIVATE GATE"
1020.12	WALL AND CORNER GUARDS
1020.16	STAINLESS STEEL 1 1/2" DIAMETER GRAB BAR (36" LONG) PROVIDE BLOCKING IN WALL
1020.17	STAINLESS STEEL 1 1/2" DIAMETER GRAB BAR (42" LONG) PROVIDE BLOCKING IN WALL
1020.20	SOAP DISPENSER (SURFACE-MOUNTED)
1020.24	STAINLESS STEEL SURFACE MOUNTED TOILET PAPER DISPENSER
1020.30	STAINLESS STEEL SEMI-RECESSED PAPER TOWEL DISPENSER / TRASH RECEPTACLE
1020.32	STAINLESS STEEL FRAMED MIRROR
1020.34	VINYL-COATED PIPING WRAP
1020.35	ROBE / TOWEL HOOK
1020.36	COAT HOOK
1020.37	WALL-MOUNTED FOLDING SHOWER SEAT. PROVIDE BLOCKING IN WALL AS REQUIRED
1020.38	STAINLESS STEEL SHOWER CURTAIN ROD WITH VINYL CURTAIN AND HOOKS.
1020.41	WALL MOUNTED TOWEL BAR
1020.47	WALL-MOUNTED FOLDING BABY CHANGING STATION, PROVIDE BLOCKING IN WALL AS REQUIRED
1022.01	MODULAR WIRE MESH PARTITION SYSTEM
1022.02	WIRE MESH DOOR WITH SFIC CYLINDER LOCK
1040.01	LOCKBOX FOR FIRE DEPARTMENT KEY ACCESS (COORDINATE LOCATION WITH FIRE MARSHAL)
1040.02	FIRE EXTINGUISHER AND WALL BRACKET
1040.03	FIRE EXTINGUISHER AND SEMI-RECESSED CABINET
1050.06	BUNKER GEAR RACK
1050.09	SCBA TANK STORAGE UNIT
1070.03	GROUND-SET FLAGPOLE
1070.04	WALL-MOUNTED FLAGPOLE
1070.05	FLAGPOLE COLLAR
1100	DIVISION 11 - EQUIPMENT
1120.05	CLOTHES EXTRACTOR
1120.07	BUNKER GEAR DRYING CABINET
1130.01	MICROWAVE
1130.02	REFRIGERATOR
1130.05	DISHWASHER
1130.06	WASHING MACHINE
1130.07	CLOTHES DRYER
1130.09	GAS RANGE
1130.10	OUTDOOR GAS GRILLE (O.P.C.I.)
1130.11	FOOD DISPOSAL
1130.12	RANGE HOOD
1140.09	ICE MACHINE
1180.01	DUMPSTER (N.I.C.)
1180.02	RECYCLING DUMPSTER (N.I.C.)
1200	DIVISION 12 - FURNISHINGS
1220.09	MANUAL ROLLER SOLAR SHADES
1230.23	QUARTZ COUNTERTOP WITH SPLASH AS SHOWN
1230.24	QUARTZ COUNTERTOP
1250.04	BED (N.I.C.)
1300	DIVISION 13 - SPECIAL CONSTRUCTION
1400	DIVISION 14 - CONVEYING EQUIPMENT
1410.01	COMMERCIAL DUMBWAITER
1410.02	FIRE RATED BI-PARTING HOISTWAY DOOR WITH EMERGENCY RELEASE AND NON-PLUGABLE INTERLOCK
1410.03	BI-PARTING CAR GATE
1410.04	ELECTRIC HOISTING CABLE MOTOR
1410.05	GUIDE RAIL
2100	DIVISION 21 - FIRE SUPRESSION (RE: PLumbing)
2110.02	REMOTE FIRE DEPARTMENT SIAMESE CONNECTION
2200	DIVISION - 22 PLUMBING (RE: Plumbing)
2210.01	PLUMBING VENT
2210.06	FLOOR DRAIN
2210.08	TRAFFIC RATED TRENCH DRAIN
2210.17	AIR COMPRESSOR/TANK (RE: MECHANICAL)
2210.19	SCBA (O.P.C.I.)
2210.24	TRENCH DRAIN
2240.01	WATER CLOSET. ORIENT FLUSH VALVE TOWARDS ACCESSIBLE SPACE AT ACCESSIBLE STALLS / RESTROOMS
2240.03	WALL-HUNG LAVATORY WITH CARRIER
2240.05	STAINLESS STEEL UNDERMOUNT SINK
2240.06	STAINLESS STEEL SINK
2240.09	SHOWER HEAD
2240.11	MOP SINK
2240.12	UTILITY SINK
2240.19	WATER FOUNTAIN
2240.20	UNDERMOUNT SINK
2240.22	POT FILLER
2300	DIVISION 23 - HEATING, VENTILATING, & AIR-CONDITIONING (HVAC) (RE: Mechanical)
2320.05	INSULATED CONDENSATE PIPING, ROUTE THROUGH 4" PERFORATED PIPE TO BUILDING
2330.01	HVAC DUCTWORK
2330.03	MOTORIZED DAMPER
2330.06	OUTSIDE AIR INTAKE HOOD
2330.20	EXHAUST FAN WITH GALVANIZED STEEL CABLE SUPPORT SYSTEM (RE: MECHANICAL)
2330.21	EXHAUST VENT CAP WITH INTEGRAL BACKDRAFT DAMPER
2360.02	HVAC CONDENSING UNIT
2600	DIVISION 26 - ELECTRICAL (RE: Electrical)
2609.01	LIGHTING CONTROL SWITCH
2620.01	CONDUIT
2620.04	ELECTRICAL OUTLET
2630.01	EMERGENCY GENERATOR
2650.01	RECESSED LIGHT FIXTURE
2650.03	SURFACE-MOUNTED LIGHT FIXTURE
2650.04	PENDANT LIGHT FIXTURE
2650.09	UNDER CABINET LIGHT
2650.16	WALL PACK LIGHT FIXTURE
2650.17	LIGHT POLE / FIXTURE ON CONCRETE BASE
2650.18	LED FLEXIBLE LIGHTING SYSTEM
2650.19	EXTERIOR LIGHT FIXTURE
2650.20	FLAGPOLE LIGHT FIXTURE
2650.21	CEILING FAN
2700	DIVISION 27 - COMMUNICATIONS
2800	DIVISION 28 - ELECTRONIC SAFETY & SECURITY
2810.07	PARKING KEYPAD / CARD ACCESS CONTROL ON METAL STANCHION
2810.09	SLIDING GATE OPERATOR
3100	DIVISION 31 - EARTHWORK
3120.01	GRADE
3120.02	COMPACTED SELECT FILL
3200	DIVISION 32 - EXTERIOR IMPROVEMENTS
3210.09	4" CONCRETE SIDEWALK WITH #3'S AT 18" O.C.E.W.
3210.11	ACCESSIBLE CONCRETE CURB RAMP WITH INTEGRAL COLOR CONCRETE AND TACTILE WARNING SURFACE
3210.14	CONCRETE PAVING (RE: CIVIL)
3210.15	CONCRETE APPROACH PER CITY REQUIREMENTS
3210.18	CONCRETE GENERATOR PAD
3210.20	CONCRETE CONDENSER PAD
3210.22	PAVING EXPANSION JOINT - FILL WITH JOINT SEALER 1/4" BELOW SURFACE
3210.24	PRE-CAST CONCRETE PAVING UNITS WITH TRUNCATED DOMES (ADA COMPLIANT)
3210.27	BRICK ADA WARNING PAVER
3210.30	6" CONCRETE CURB (WITH GUTTER AS REQUIRED) (RE: CIVIL)
3210.33	4" PAVEMENT MARKING (DIAGONAL STRIPING AT 2'-0" O.C. TYPICAL)
3210.35	FIRE LANE STRIPING PER CITY/COUNTY REQUIREMENTS
3210.39	CONCRETE
3210.40	CONCRETE SIDEWALK (RE: CIVIL)
3210.41	CONCRETE GATE OPERATOR PAD
3210.43	CAST-IN-PLACE CONCRETE WITH SIX #5 VERTICALS WITH #3 SPIRAL TIES @ 16" O.C.
3230.30	1" PLUNGER ROD AND GUIDE
3230.36	THROUGH-BOLT
3230.38	DECORATIVE METAL FENCE
3230.39	DECORATIVE METAL GATE
3230.40	4" X 4" STEEL TUBE POST
3230.41	GALVANIZED TUBE STEEL GATE WITH FIXED LOUVERS
3230.48	HEAVY DUTY METAL HINGES
3230.53	MONUMENT SIGN
3230.54	DECORATIVE FENCE
3230.55	DECORATIVE GATE
3230.57	VEHICLE DETECTION LOOP
3230.58	3" X 3" TUBE POST
3230.59	1" SQUARE PICKET WITH CLOSED TOP AT 4 1/2" O.C.
3290.01	LANDSCAPE BED
3290.03	1/8" X 4" METAL EDGING
3290.08	MULCH
3290.09	BEDDING SAND
3290.10	ROOT BALL
3290.11	PREPARED SOIL MIX
3290.12	RIVER STONE
3290.13	STEEL STAKE
3290.14	LIMESTONE BOULDER
3290.16	4" PERFORATED METAL EDGING
3300	DIVISION 33 - UTILITIES (RE: Civil & MEP)
3330.02	SAND / OIL SEPARATOR
3330.03	SEPTIC TANK (RE: SPECIFICATION SECTION 33 36 00)
3330.08	WASTEWATER HOLDING TANK WITH FLOAT SWITCH AND ALARM SYSTEM
3340.01	PIPE CULVERT (RE: CIVIL)
3340.03	CURB INLET (RE: CIVIL)
3340.04	AREA DRAIN INLET (RE: CIVIL)
3340.13	FILTER FABRIC
3340.17	GEOTEXTILE TURN UP AT SIDES TO COVER PAVERS
3340.18	UNDERGROUND STORM WATER DETENTION SYSTEM (RE: CIVIL)
3340.19	CONCRETE LEVEL SPREADER (RE: CIVIL)
3340.20	CONCRETE SAFETY END TREATMENTS (RE: CIVIL)
3350.05	BELOW GROUND PROPANE TANK
3370.08	BARE COPPER GROUND
3370.09	COPPER GROUND ROD (8'-0" LONG)
3400	DIVISION 34 - TRANSPORTATION

MASTERFORMAT 2004

THE MASTER KEYNOTE LIST USES CSI MASTERFORMAT 2004 EDITION LEVEL 2 NUMBERS AND TITLES

EXAMPLE KEYNOTE

0960.01 -	**09**	**60**	**.01**
	(DIVISION)	**(LEVEL 2)**	**(UNIQUE IDENTIFIER)**

DIVISION 01 GENERAL REQUIREMENTS

DIVISION 02 EXISTING CONDITIONS (TO REMAIN, U.N.O.) & DEMOLITION

DIVISION 03 CONCRETE

DIVISION 04 MASONRY

DIVISION 05 METALS

DIVISION 06 WOOD, PLASTICS, & COMPOSITES

DIVISION 07 THERMAL & MOISTURE PROTECTION

DIVISION 08 OPENINGS

DIVISION 09 FINISHES

DIVISION 10 SPECIALTIES

DIVISION 11 EQUIPMENT

DIVISION 12 FURNISHINGS

DIVISION 21 FIRE SUPPRESSION (RE: PLUMBING)

DIVISION 22 PLUMBING (RE: PLUMBING)

DIVISION 25 INTEGRATED AUTOMATION

DIVISION 26 ELECTRICAL (RE: ELECTRICAL)

DIVISION 27 COMMUNICATIONS

DIVISION 28 ELECTRONIC SAFETY & SECURITY

DIVISION 31 EARTHWORK

DIVISION 32 EXTERIOR IMPROVEMENTS

DIVISION 33 UTILITIES (RE: CIVIL & MEP)

NOTE:

WHERE KEYNOTES REFERENCE OTHER ENGINEERING DISCIPLINES, SUCH AS:

(RE: STRUCTURAL), (RE: CIVIL), (RE: MECHANICAL), (RE: PLUMBING), (RE: ELECTRICAL), (RE: MEP), REFER TO ENGINEER'S DRAWINGS AND/OR SPECIFICATIONS FOR ADDITIONAL DETAILS AND INFORMATION. ITEMS SO NOTED ARE TO BE INCLUDED IN THE CONTRACT WHETHER OR NOT ENGINEER'S DRAWINGS AND SPECIFICATIONS CONTAIN ADDITIONAL INFORMATION OR REQUIREMENTS FOR EACH SPECIFIC ITEM KEYNOTED. UPON FINDING A DISCREPENCY OR APPARENT LACK OF COORDINATING INFORMATION IN ENGINEER'S DRAWINGS OR SPECIFICATIONS, CONTRACTOR SHALL REQUEST ADDITIONAL INFORMATION FROM ARCHITECT, IN ADVANCE TO AVOID COST OR TIME IMPACT.

REGISTERED ARCHITECT RAYMOND HOLLIDAY STATE OF TEXAS 11/16/2018

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
DALLESTOWN, TEXAS 77840
972.644.1797
WWW.BRWARCH.COM

DATE	11/16/2018
DRAWN BY	NB
CHECKED BY	RH, MEW
BRW PROJECT NUMBER	217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78633

NO.	REVISION	DATE

G1.2

MASTER KEYNOTE LIST

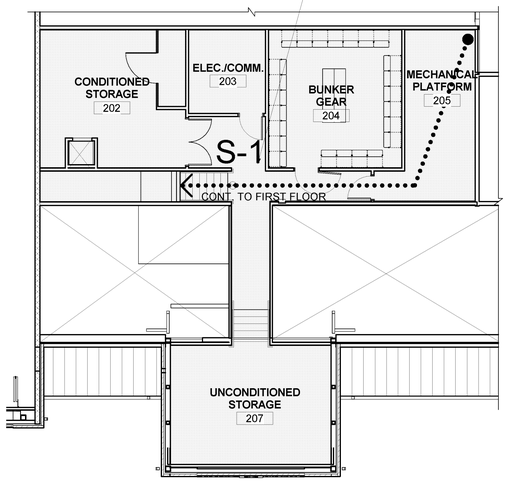
STORAGE 'S-1' OCCUPANCY

GROSS AREA: 6,994 SF

ALLOWABLE EXIT DISTANCE: 250' - 0"
MAX DISTANCE TRAVELED: 144' - 4"

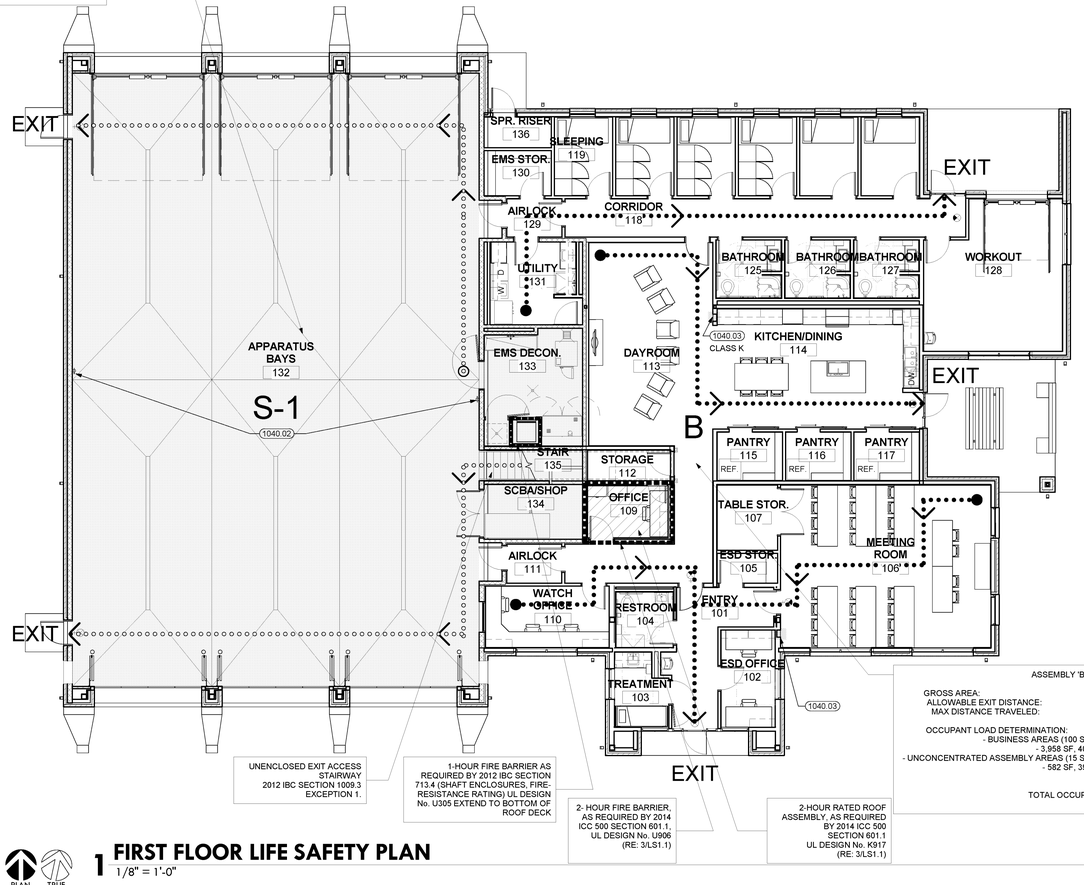
OCCUPANT LOAD DETERMINATION:
- FIRE APPARATUS BAYS (200 SF/OCCUPANT)
- 4,721 SF, 24 OCCUPANTS
- STORAGE AREAS/MECH. EQUIPMENT ROOMS ABOVE (300 SF/OCCUPANT)
- 2,273 SF, 8 OCCUPANTS

TOTAL OCCUPANT LOAD: 32



PLAN NORTH / TRUE NORTH

2 SECOND FLOOR LIFE SAFTEY PLAN
1/8" = 1'-0"



UNENCLOSED EXIT ACCESS STAIRWAY
2012 IBC SECTION 1009.3 EXCEPTION 1.

1-HOUR FIRE BARRIER AS REQUIRED BY 2012 IBC SECTION 713.4 (SHAFT ENCLOSURES, FIRE-RESISTANCE RATING) UL DESIGN No. U305 EXTEND TO BOTTOM OF ROOF DECK

2- HOUR FIRE BARRIER, AS REQUIRED BY 2014 ICC 500 SECTION 601.1, UL DESIGN No. U906 (RE: 3/LS1.1)

2-HOUR RATED ROOF ASSEMBLY, AS REQUIRED BY 2014 ICC 500 SECTION 601.1 UL DESIGN No. K917 (RE: 3/LS1.1)

ASSEMBLY 'B' OCCUPANCY

GROSS AREA: 4,611 SF
ALLOWABLE EXIT DISTANCE: 250' - 0"
MAX DISTANCE TRAVELED: 69' - 0"

OCCUPANT LOAD DETERMINATION:
- BUSINESS AREAS (100 SF/OCCUPANT)
- 3,958 SF, 40 OCCUPANTS
- UNCONCENTRATED ASSEMBLY AREAS (15 SF/OCCUPANT)
- 582 SF, 39 OCCUPANTS

TOTAL OCCUPANT LOAD: 79

PLAN NORTH / TRUE NORTH

1 FIRST FLOOR LIFE SAFETY PLAN
1/8" = 1'-0"

KEYNOTES

0320.01	DOWEL INTO CONCRETE SLAB
0320.02	STEEL REINFORCING (RE: STRUCTURAL)
0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0330.05	CONCRETE GRADE BEAM (RE: STRUCTURAL)
0330.07	CONCRETE FOOTING (RE: STRUCTURAL)
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.13	6" CONCRETE MASONRY UNITS
0420.23	CONCRETE MASONRY BOND BEAM
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.29	2X WOOD FURRING STRIPS
0640.52	WOOD STAIR STRINGER
0640.54	WOOD STAIR TREAD
0725.01	UNDERSLAB VAPOR BARRIER
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0830.27	TORNADO RESISTANT DOOR AND FRAME
0920.17	5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.38	PRE-MANUFACTURED CONTINUOUS ALUMINUM F REVEAL MOLDING
0920.45	5/8" GYPSUM BOARD MOISTURE RESISTANT (TYPE X)
0950.01	SUSPENDED ACOUSTICAL LAY-IN TILE CEILING (2' X 2')
1040.02	FIRE EXTINGUISHER AND WALL BRACKET
1040.03	FIRE EXTINGUISHER AND SEMI-RECESSED CABINET

LEGEND

EXIT	EXIT / EXIT DISCHARGE
	MEANS OF EGRESS PATH
	FIRE EXTINGUISHER
	1 - HR FIRE BARRIER
	2 - HR FIRE BARRIER
	ILLUMINATED EXIT SIGN CEILING / WALL MOUNT

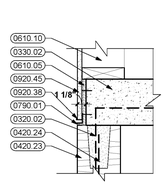
CODE ANALYSIS

IBC CONSTRUCTION TYPE	V-B
SPRINKLER SYSTEM	FULL NFPA 13
OCCUPANCY TYPE	MIXED (B, S-1)
REQUIRED SEPARATION	NOT REQUIRED PER TABLE 508.4 2012 IBC
OCCUPANCY LOAD	
BUSINESS	79
STORAGE	32
TOTAL	111
TOTAL AREA (APPROPRIATE FOR CODE REVIEW ONLY)	
FIRST FLOOR	9,665 SF
STORAGE/MECH. ABOVE	1,870 SF

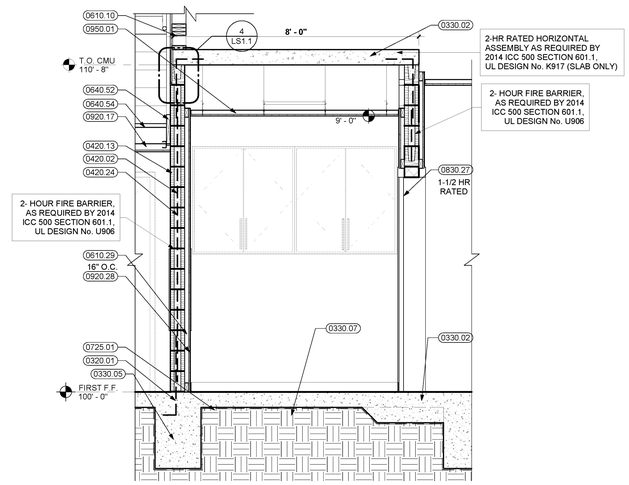
NOTE:

1) SQUARE FOOTAGES IN ANALYSIS ARE FOR CODE OFFICIALS AND OWNER. CONTRACTOR SHALL MAKE HIS/HER OWN TAKE OFFS AND CALCULATIONS AS REQUIRED.

2) EXIT/EGRESS SIGNAGE: PROVIDE INTERIOR TACTILE ROOM SIGNAGE AT ALL DOORS ALONG PASSAGEWAYS, EXIT STAIRWAYS, AND EXIT DISCHARGE LEADING TO ACCESSIBLE MEANS OF EGRESS. REFER TO SIGNAGE ON DRAWING A5.0



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



3 WALL SECTION
1/2" = 1'-0"

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
COLLEGE STATION, TEXAS 77840
979.693.1797
WWW.BRWARCH.COM

REGISTERED ARCHITECT RAYNE HOLLIDAY STATE OF TEXAS 11/16/2018

DATE 11/16/2018
DRAWN BY NB
CHECKED BY RH
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

NO.	REVISION	DATE

LS1.1

LIFE SAFETY PLAN

NOTES:

1. BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE X (NOT SHADED) - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 48491C0275E, THAT BEARS AN EFFECTIVE/REVISED DATE OF SEPTEMBER 26, 2008. THE SURVEYOR MAKES NO ASSURANCE AS TO THE ACCURACY OF THE DELINEATIONS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP. THIS STATEMENT IS FOR INSURANCE PURPOSES ONLY AND IS NOT AN OPINION THAT THE PROPERTY WILL OR WILL NOT FLOOD. A FLOOD STUDY WAS NOT CONDUCTED ON THE PROPERTY.

2. BEARINGS ARE BASED ON THE TEXAS COORDINATE SYSTEM OF 1983, CENTRAL ZONE (NAD_83 (2011)). ALL DISTANCES SHOWN HEREON ARE SURFACE VALUES REPRESENTED IN U.S. SURVEY FEET BASED ON A GRID-TO-SURFACE COMBINED ADJUSTMENT FACTOR OF 1.00015.

3. VERTICAL POSITIONS WERE DETERMINED USING THE "LEICA SMARTNET" AND GPS REAL TIME SURVEY METHODS AND ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM (NAVD) 88, USING GEOID 12A.

4. THE SYMBOLS REFLECTED IN THE LEGEND AND ON THIS SURVEY MAY HAVE BEEN ENLARGED FOR CLARITY. THE SYMBOLS HAVE BEEN PLOTTED AT THE CENTER OF THE FIELD LOCATION AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.

5. TREES SHOWN HERE ON WERE LOCATED AND MEET THE STANDARDS SET FORTH IN THE CITY OF GEORGETOWN UNIFIED DEVELOPMENT CODE, CHAPTER 8: TREE PRESERVATION, LANDSCAPING AND FENCING, SECTION 8.02 TREE PRESERVATION AND PROTECTION. OTHER TREES AND VEGETATION MAY EXIST ON SITE.

6. (M) - TREE DIAMETER OF MULTI-TRUNK TREE DETERMINED BY ADDING THE DIAMETER OF THE LARGEST TRUNK TO 1/2 THE DIAMETER OF EACH ADDITIONAL TRUNK

7. TREE CROWNS SHOWN HERE ON ARE A GRAPHICAL DEPICTION OF THE PROBABLE EXTENTS OF THE TREE CANOPY BASED ON THE TRUNK SIZE USING THE FORMULA OF ONE (1) FOOT OF RADIUS FOR EVERY ONE (1) INCH OF TRUNK DIAMETER AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE TREE CANOPY.

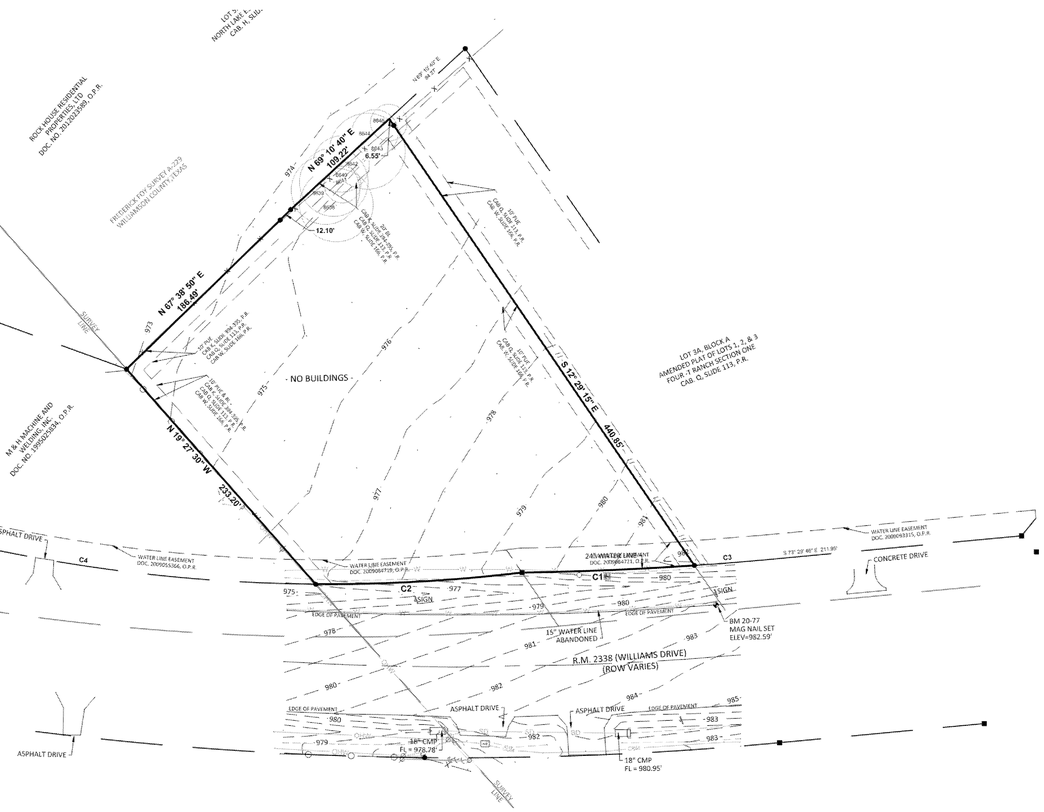
8. UTILITY INFORMATION SHOWN HEREON CONSTITUTES FIELD RECOVERY OF OBSERVED EVIDENCE OF UTILITIES TOGETHER WITH EVIDENCE FROM MARKINGS BY UTILITY COMPANIES CONTACTED THROUGH THE "DIG TESS" UTILITY LOCATING SERVICE. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES, SUCH AS ELECTRICAL, TELEPHONE, CABLE TV AND PIPELINES, MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES. FOR INFORMATION REGARDING BURIED UTILITIES/STRUCTURES OR BEFORE ANY EXCAVATION IS BEGUN, CONTACT THE APPROPRIATE AGENCIES FOR VERIFICATION OF UTILITY TYPE AND FIELD LOCATION.

9. REFERENCE IS HEREBY MADE TO THAT CERTAIN TITLE COMMITMENT (THE "TITLE COMMITMENT") ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, UNDER GF NO. 2017017120, EFFECTIVE JUNE 16, 2017, ISSUED JUNE 27, 2017. THE EASEMENTS AND RESTRICTIONS LISTED ON SCHEDULE B OF THE TITLE COMMITMENT WERE REVIEWED BY THE SURVEYOR AND ARE SHOWN HEREON. SURVEYOR HAS RELIED UPON THE TITLE COMMITMENT AND MADE NO INDEPENDENT INQUIRY AS TO EASEMENTS AND RESTRICTIONS AFFECTING THE PROPERTY, OTHER THAN VISIBLE AND APPARENT EASEMENTS NOTED BY SURVEYOR DURING THE PREPARATION OF THE SURVEY AND REFLECTED HEREON.

BENCHMARK:

BM 20-77: MAG NAIL WITH WASHER STAMPED "CONTROL POINT" SET IN EDGE OF PAVEMENT OF R.M. 2338, APPROXIMATELY 10 FEET SOUTHWEST OF SIGN MARKING MILES TO ANDICE, "ANDICE 9," AND APPROXIMATELY 265 FEET NORTH WEST OF A TxDOT TYPE II CONCRETE MONUMENT FOUND.

NORTHING: 10232197.32
EASTING: 3104253.34
ELEV: 982.59'



GRAPHIC SCALE: 1" = 50'

TREE LIST	
TAG #	Description
8638	35in (M) LIVE OAK
8639	28in LIVE OAK
8640	29in LIVE OAK
8641	19in LIVE OAK
8642	23in (M) ELM
8643	31in LIVE OAK
8644	15in LIVE OAK
8645	19in (M) LIVE OAK

LEGEND

- T-DOT TYPE II MONUMENT FOUND
- IRON REBAR FOUND (1/2", OR AS NOTED)
- O.P.R. OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
- D.R. DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
- P.R. PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS
- R.O.W. RIGHT-OF-WAY
- P.U.E. PUBLIC UTILITY EASEMENT
- BENCH MARK
- FIRE HYDRANT
- OHW OVERHEAD ELECTRIC
- POWER POLE
- GUY WIRE
- TELEPHONE JUNCTION BOX
- WM WATER METER
- CHAIN LINK FENCE
- BARB WIRE FENCE
- COM UNDERGROUND COMMUNICATION LINE
- SD UNDERGROUND STORM DRAIN

THIS IS TO CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND JULY 19 & 20, 2017, BY ME OR UNDER MY SUPERVISION, THAT THIS SURVEY PLAT REPRESENTS THE FACTS FOUND AT THE TIME OF THE SURVEY, AND THAT THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL LAND SURVEYORS STANDARDS AND SPECIFICATIONS FOR A CATEGORY 1A, CONDITION II, LAND TITLE SURVEY.

STEGER BIZZELL

MIGUEL A. ESCOBAR, L.S.L.S., R.P.L.S. DATE
TEXAS REG. NO. 5630
1978 S. AUSTIN AVE
GEORGETOWN, TEXAS
PHONE 512.930.9412
TBPLS FIRM REG. # 10003700

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STEGER BIZZELL

ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No. 10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

TOPOGRAHIC SURVEY OF
LOT A & LOT B OF THE
AMENDED PLAT OF LOTS 1, 2, & 3, BLOCK A
FOUR-T RANCH SECTION ONE SUBDIVISION
OUT OF THE
FREDERICK FOY SURVEY A-229
WILLIAMSON COUNTY, TEXAS

Project No: 22536

SHEET 01 of 01

NOTE:
THIS SURVEY IS PROVIDED FOR INFORMATION PURPOSES ONLY. IT WAS PREPARED BY STEGER BIZZELL FOR WILLIAMSON COUNTY ESD NO. 8/CITY OF GEORGETOWN, NOT BY OR UNDER DIRECTION OF BROWN REYNOLDS WATFORD ARCHITECTS, INC.

BROWN REYNOLDS WATFORD ARCHITECTS, INC. MAKES NO WARRANTIES OR ASSURANCES TO THE SURVEY'S ACCURACY OR CORRECTNESS.

P:\22000-22999\22536-Fire Station No. 6\Survey Data\CAD\22536-Topo.dwg, 9/27/2017 2:50:08 PM

BROWN REYNOLDS WATFORD
ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
COLLEGE STATION, TEXAS 77840
979.694.1797
WWW.BRWARCH.COM

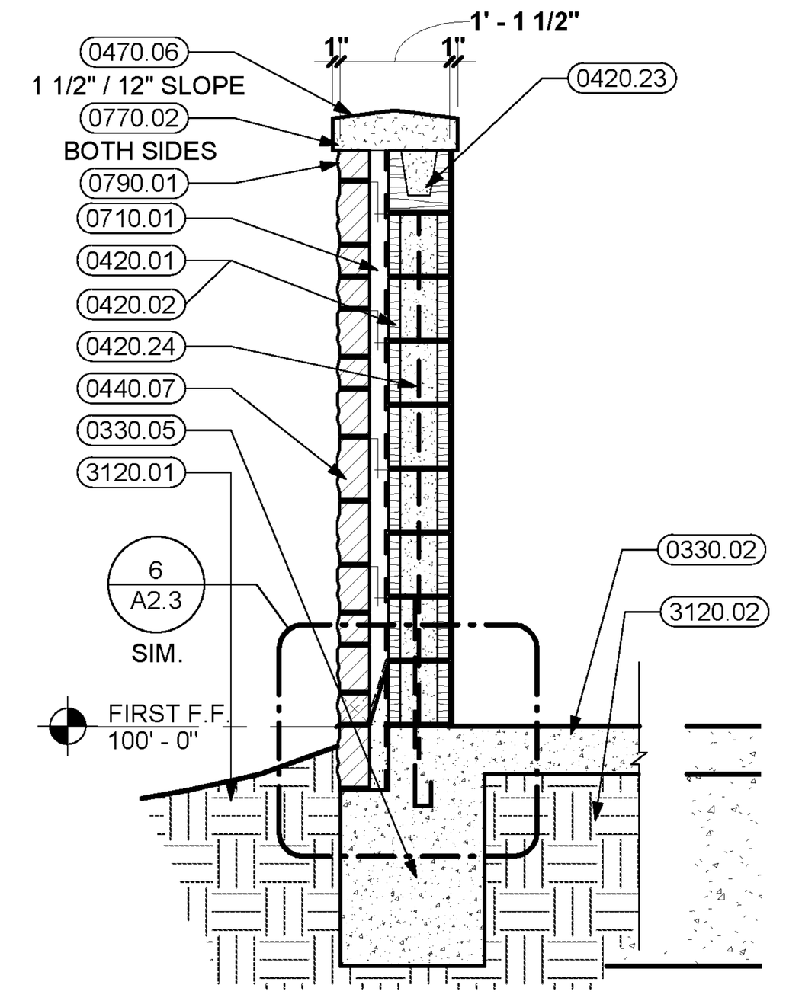
DATE 11/16/2018
DRAWN BY
CHECKED BY
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78633

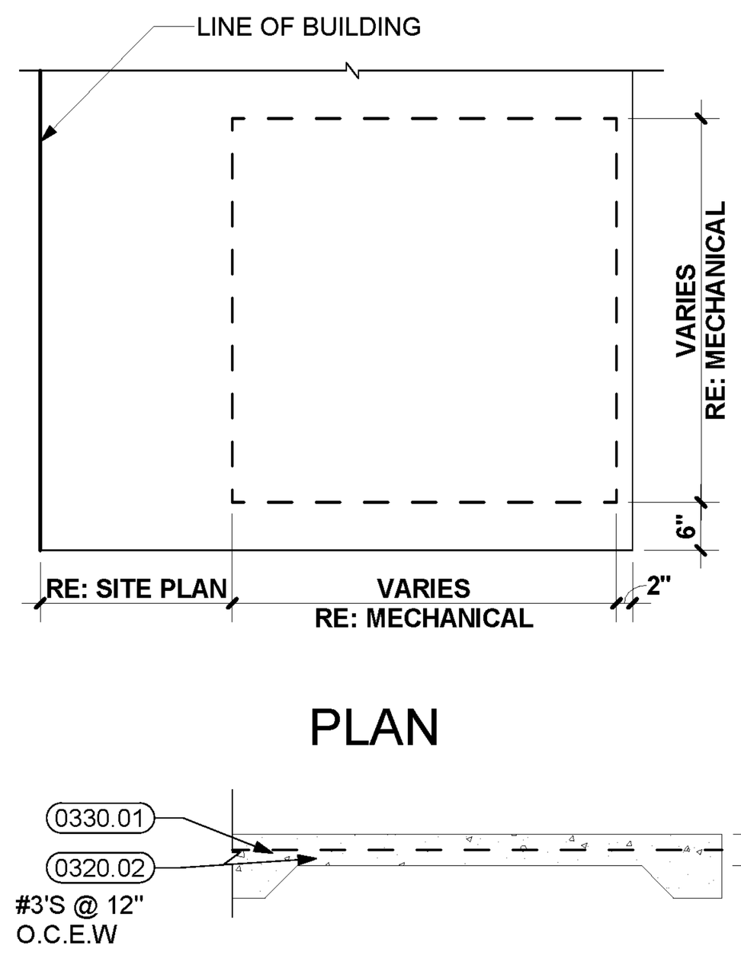
NO.	REVISION	DATE

C0.0

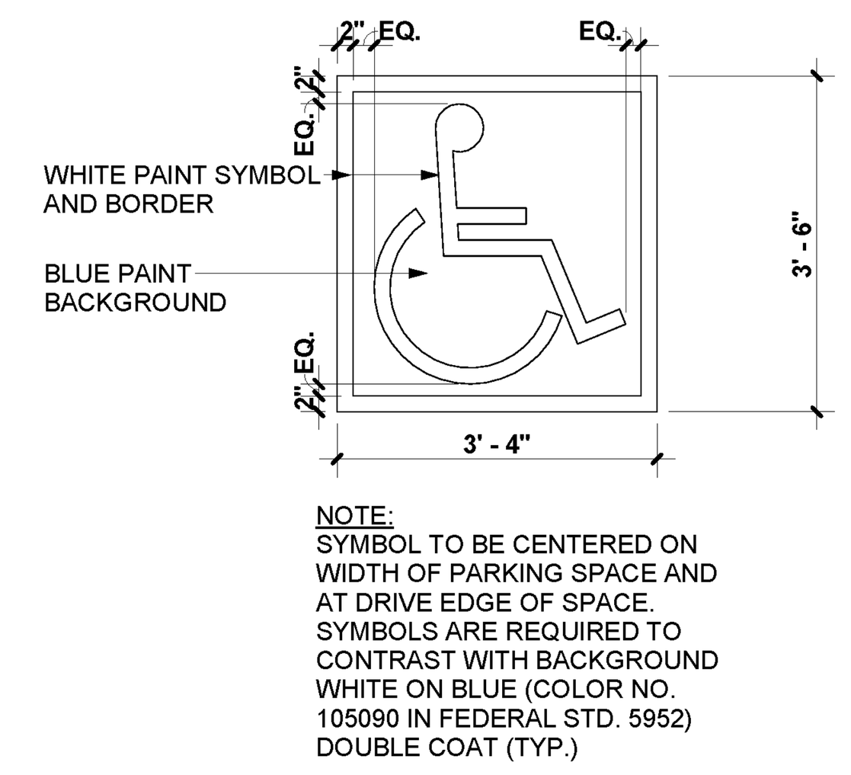
BOUNDARY AND TOPOGRAPHY SURVEY



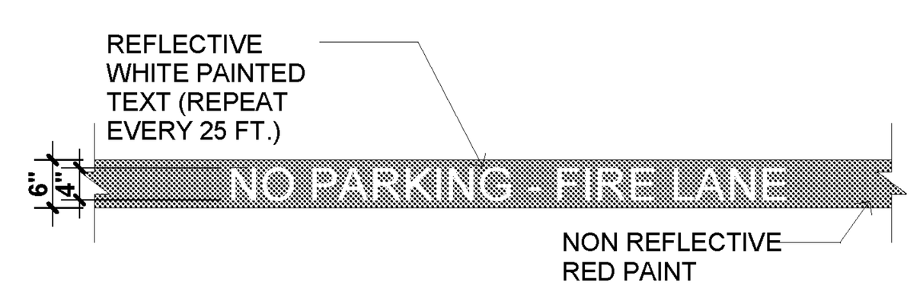
4 WALL SECTION
1/2" = 1'-0"



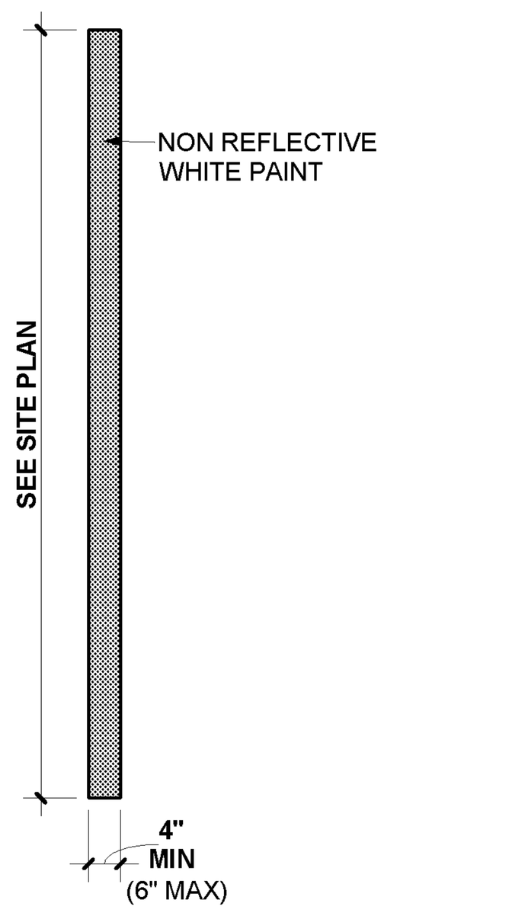
3 CONCRETE PAD DETAIL
1/2" = 1'-0"



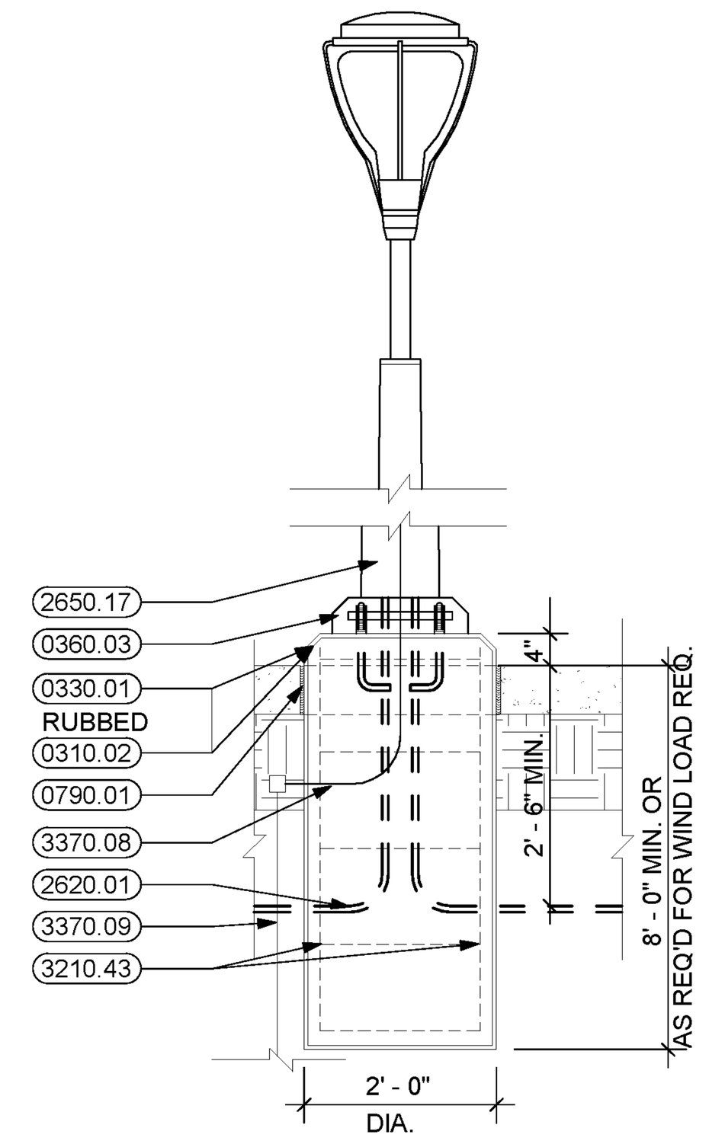
2 HC PAVEMENT MARKING
1/2" = 1'-0"



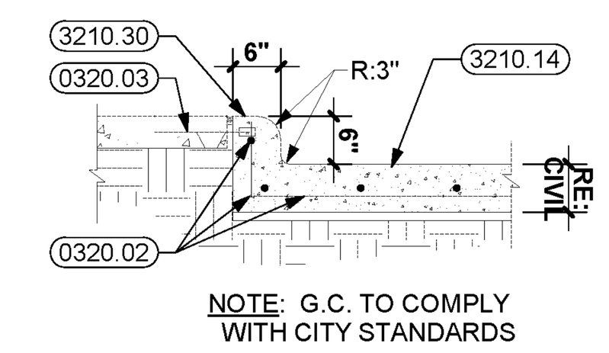
5 FIRE LANE STRIPING
1/2" = 1'-0"



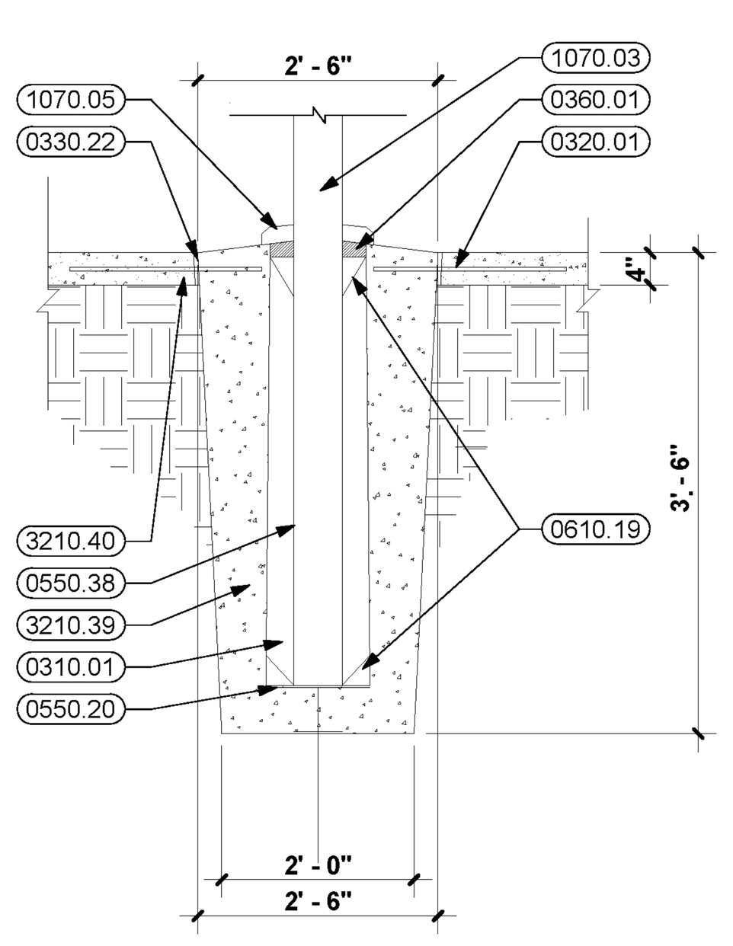
8 PAVEMENT MARKING
1/2" = 1'-0"



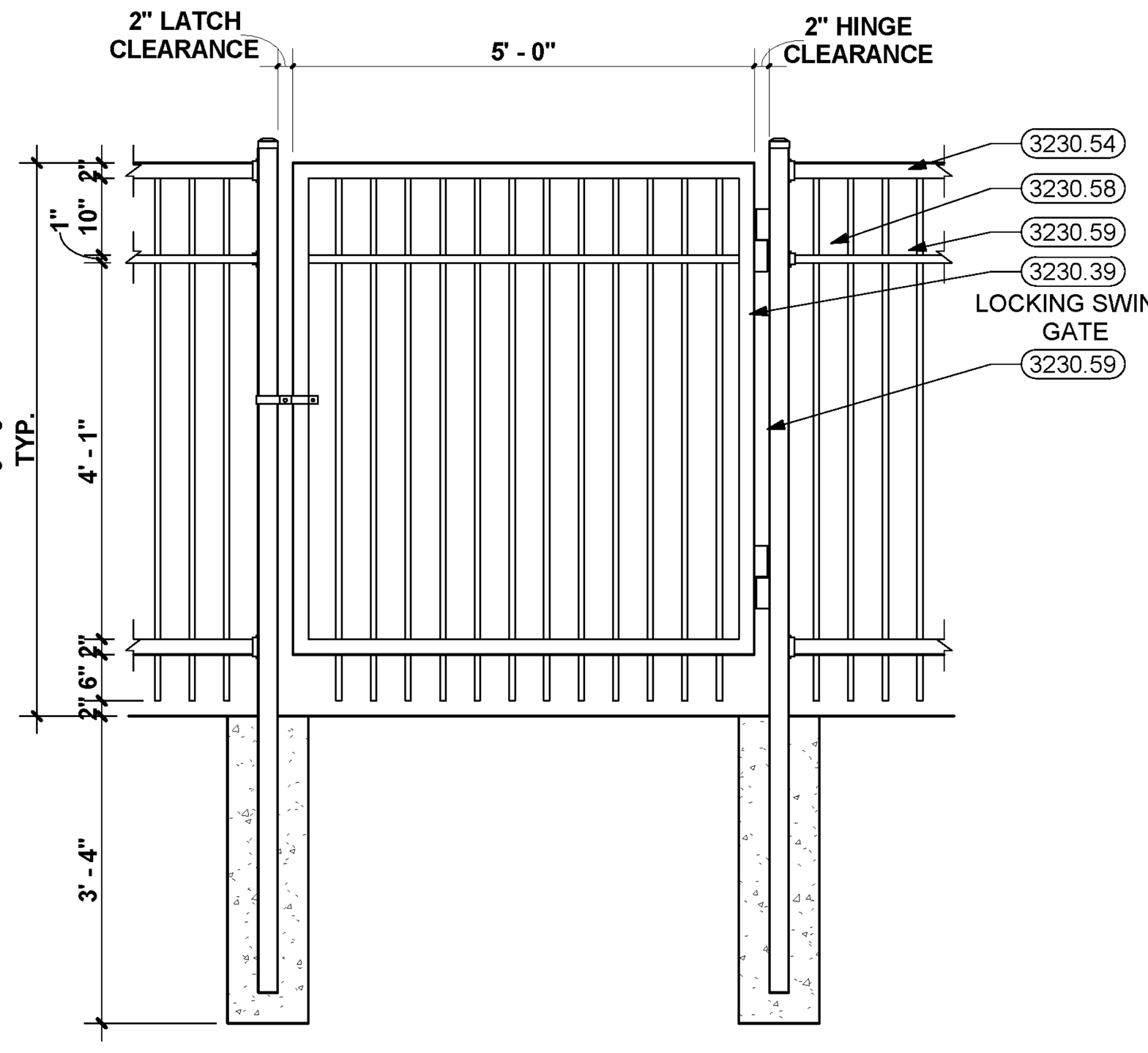
7 LIGHT POLE
1/2" = 1'-0"



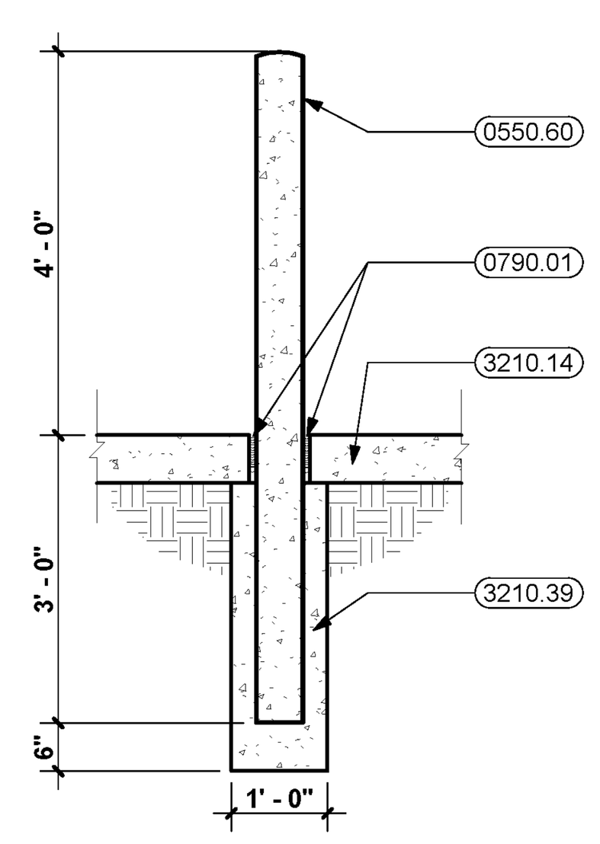
6 CURB DETAIL
1/2" = 1'-0"



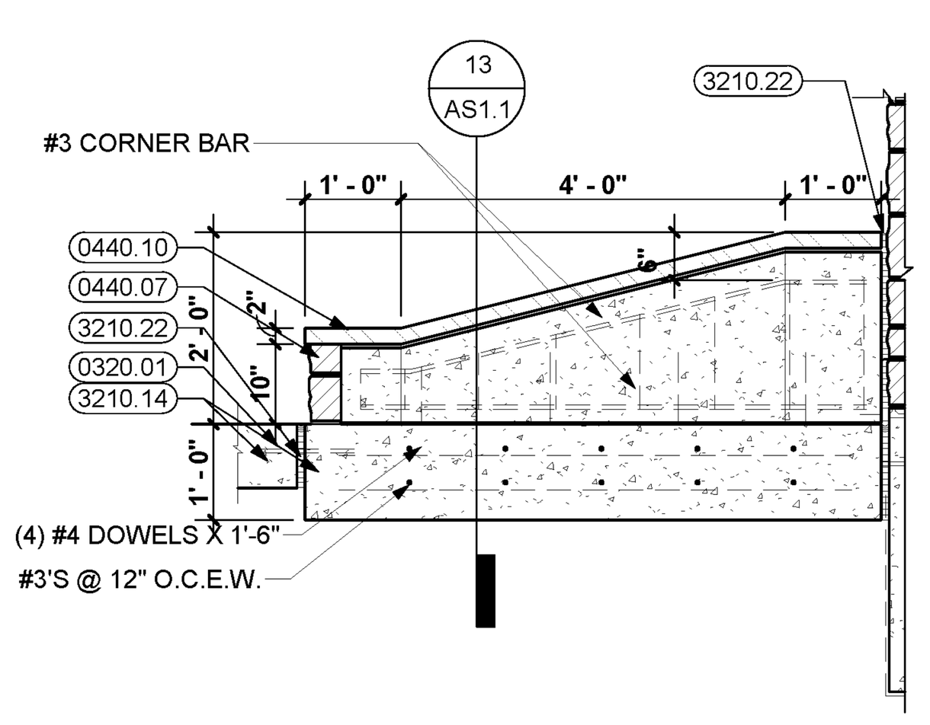
11 FLAGPOLE DETAIL
1/2" = 1'-0"



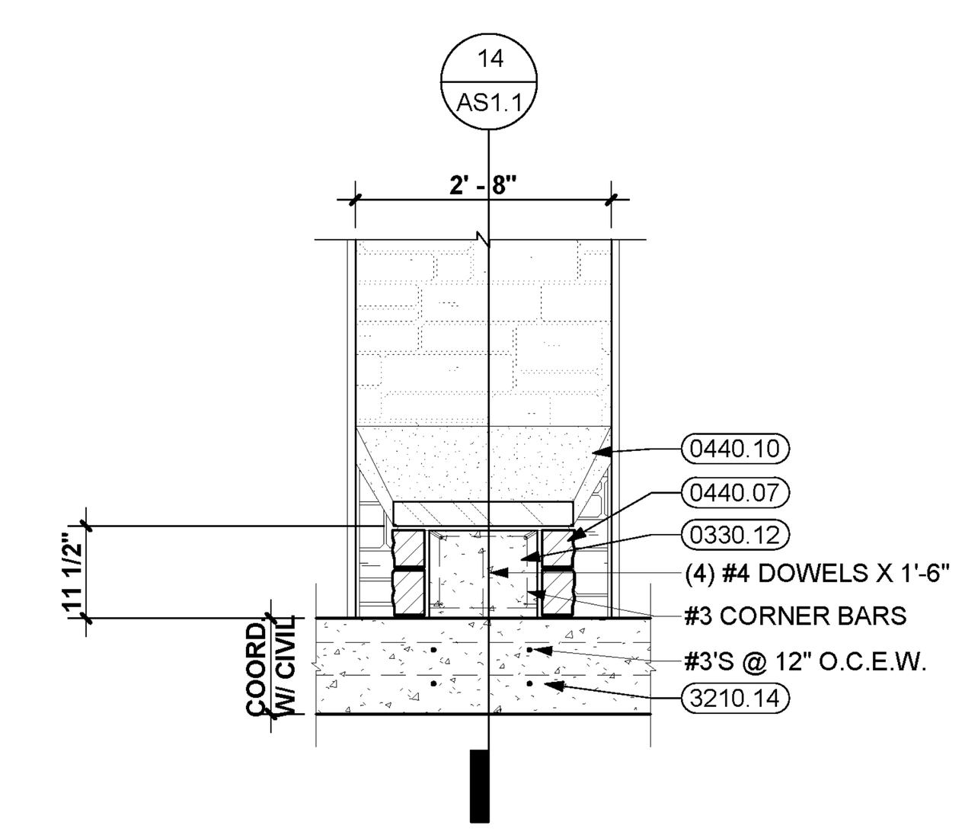
10 GATE ELEVATION
1/2" = 1'-0"



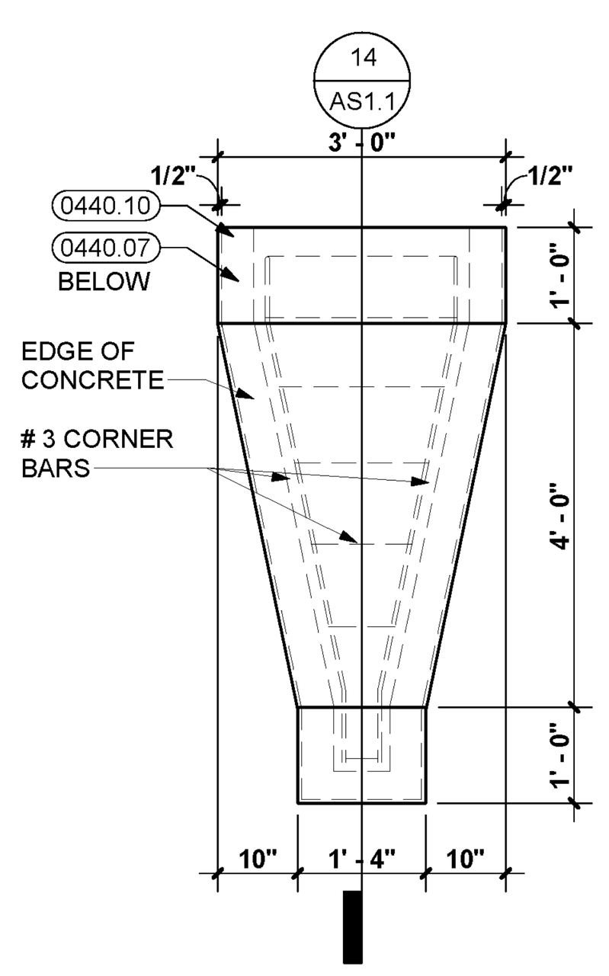
9 PIPE BOLLARD
1/2" = 1'-0"



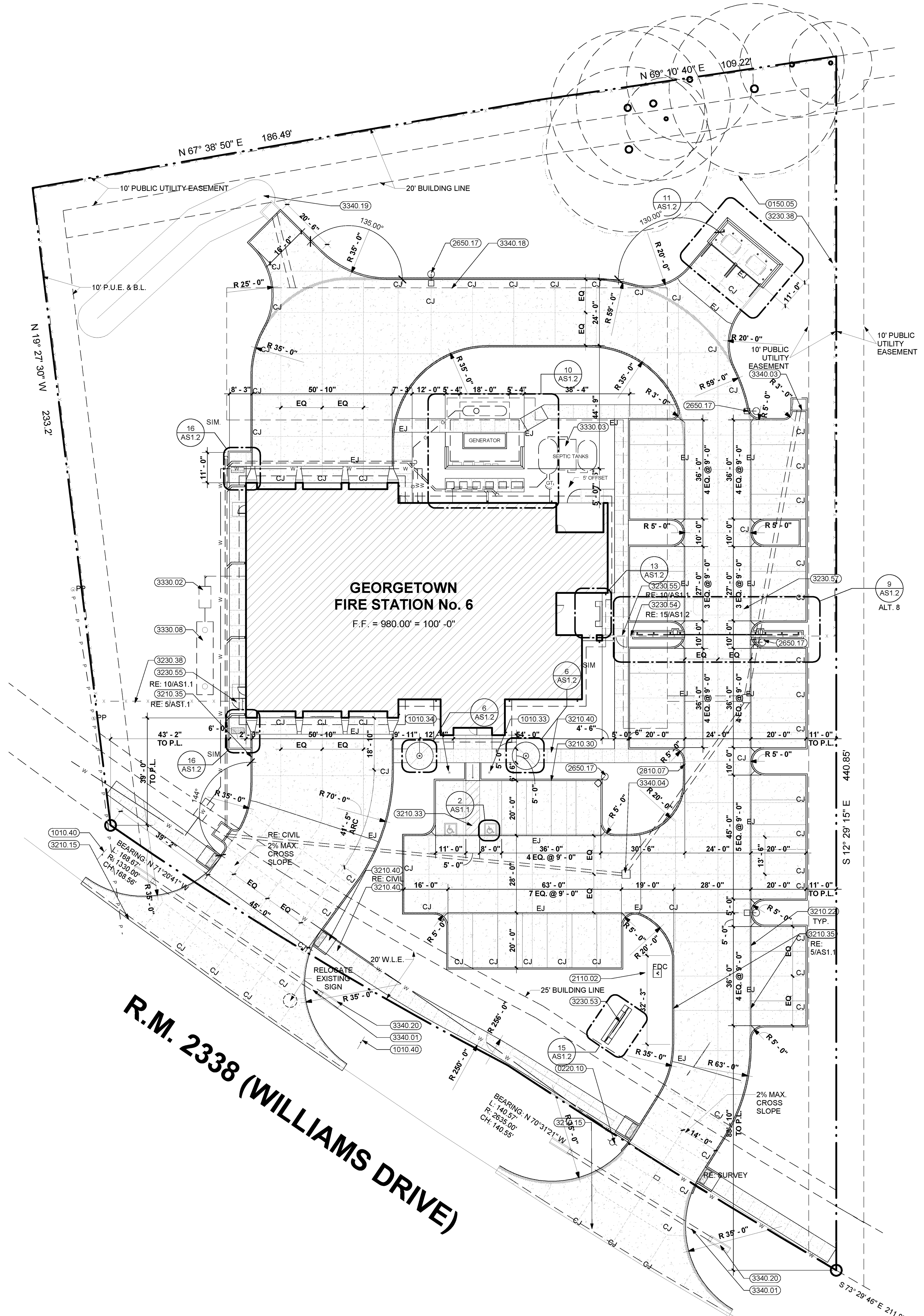
14 BOLLARD DETAIL
1/2" = 1'-0"



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



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



1 SITE PLAN
1" = 20'-0"

PLAN NORTH TRUE NORTH

KEYNOTES

0150.05	TEMPORARY TREE PROTECTION
0220.10	EXISTING FIRE HYDRANT
0310.01	TAMPED, SCREEDED DRY SAND
0310.02	3/4" CHAMFER
0320.01	DOWEL INTO CONCRETE SLAB
0320.02	STEEL REINFORCING (RE: STRUCTURAL)
0320.03	DOWEL SLEEVE AND END CAP
0330.01	CONCRETE (RE: STRUCTURAL)
0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0330.05	CONCRETE GRADE BEAM (RE: STRUCTURAL)
0330.12	CONCRETE BOLLARD
0330.22	CONCRETE EXPANSION JOINT - FILL W/ JOINT SEALER 1/4" BELOW SURFACE
0360.01	LEAD CAULKING OVER WATERPROOF CEMENT GROUT
0360.03	FILL WITH GROUT
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.23	CONCRETE MASONRY BOND BEAM
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0440.07	STONE VENEER
0440.10	2" CUT STONE
0470.06	CAST STONE CAP - PIN BOLT CONNECTIONS
0550.20	1/2" STEEL PLATE WITH 3/4" DIAMETER LIGHTNING ARRESTOR SPIKE. EXTEND 2'-0" BELOW CONCRETE
0550.38	PIPE SLEEVE
0550.60	GALVANIZED 6" PIPE BOLLARD. FILL WITH CONCRETE
0610.19	WOOD WEDGE
0710.01	BITUMINOUS DAMPPROOFING
0770.02	CONTINUOUS CLEAT
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
1010.33	POLE MOUNTED SIGNAGE - "H.C. PARKING ONLY"
1010.34	POLE MOUNTED SIGNAGE - "VAN-ACCESSIBLE"
1010.40	POLE MOUNTED SIGNAGE - "NO PARKING - EMERGENCY SERVICE VEHICLES ONLY"
1070.03	GROUND-SET FLAGPOLE
1070.05	FLAGPOLE COLLAR
2110.02	REMOTE FIRE DEPARTMENT SIAMESE CONNECTION
2620.01	CONDUIT
2650.17	LIGHT POLE / FIXTURE ON CONCRETE BASE
2810.07	PARKING KEYPAD / CARD ACCESS CONTROL ON METAL STANCHION
3120.01	GRADE
3120.02	COMPACTED SELECT FILL
3210.14	CONCRETE PAVING (RE: CIVIL)
3210.15	CONCRETE APPROACH PER CITY REQUIREMENTS
3210.22	PAVING EXPANSION JOINT - FILL WITH JOINT SEALER 1/4" BELOW SURFACE
3210.30	6" CONCRETE CURB (WITH GUTTER AS REQUIRED) (RE: CIVIL)
3210.33	4" PAVEMENT MARKING (DIAGONAL STRIPING AT 2'-0" O.C. TYPICAL)
3210.35	FIRE LANE STRIPING PER CITY/COUNTY REQUIREMENTS
3210.39	CONCRETE
3210.40	CONCRETE SIDEWALK (RE: CIVIL)
3210.43	CAST-IN-PLACE CONCRETE WITH SIX #5 VERTICALS WITH #3 SPIRAL TIES @ 16" O.C.
3230.38	DECORATIVE METAL FENCE
3230.39	DECORATIVE METAL GATE
3230.53	MONUMENT SIGN
3230.54	DECORATIVE FENCE
3230.55	DECORATIVE GATE
3230.57	VEHICLE DETECTION LOOP
3230.58	3" X 3" TUBE POST
3230.59	1" SQUARE PICKET WITH CLOSED TOP AT 4 1/2" O.C.
3330.02	SAND / OIL SEPARATOR
3330.03	SEPTIC TANK (RE: SPECIFICATION SECTION 33 36 00)
3330.08	WASTEWATER HOLDING TANK WITH FLOAT SWITCH AND ALARM SYSTEM
3340.01	PIPE CULVERT (RE: CIVIL)
3340.03	CURB INLET (RE: CIVIL)
3340.04	AREA DRAIN INLET (RE: CIVIL)
3340.18	UNDERGROUND STORM WATER DETENTION SYSTEM (RE: CIVIL)
3340.19	CONCRETE LEVEL SPREADER (RE: CIVIL)
3340.20	CONCRETE SAFETY END TREATMENTS (RE: CIVIL)
3370.08	BARE COPPER GROUND
3370.09	COPPER GROUND ROD (8'-0" LONG)

RAY W. HOLLIDAY 18834 REGISTERED ARCHITECT STATE OF TEXAS
[illegible]
11/16/2018

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 350
COLLEGE STATION, TEXAS 77840
979-694-1791
WWW.BRWARCH.COM
BRW

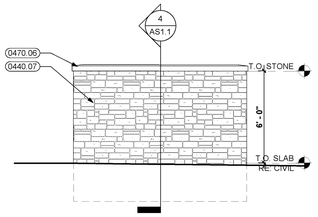
DATE	11/16/2018
DRAWN BY	NB
CHECKED BY	RH
BRW PROJECT NUMBER	217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78633

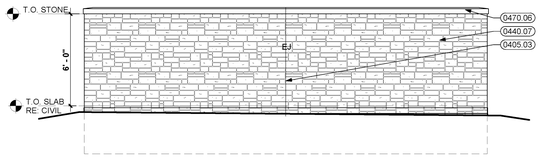
NO.	REVISION	DATE

AS1.1

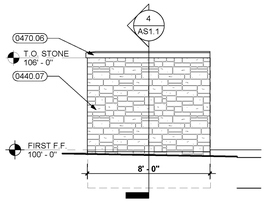
ARCHITECTURAL SITE PLAN



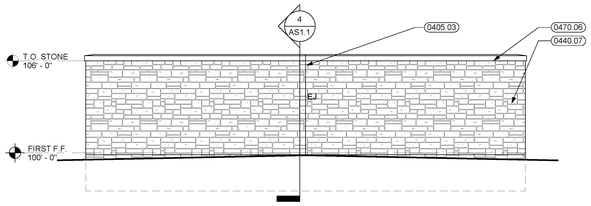
4 EXTERIOR ELEV. (SOUTHEAST)
1/4" = 1'-0"



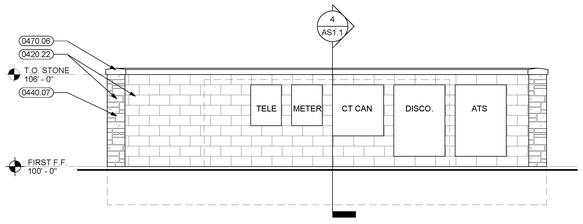
3 EXTERIOR ELEV. (NORTHEAST)
1/4" = 1'-0"



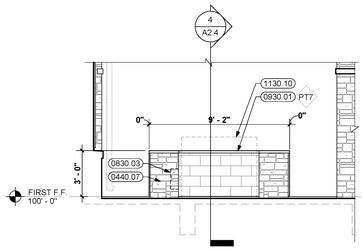
2 EXTERIOR ELEVATION (EAST/WEST O.H.)
1/4" = 1'-0"



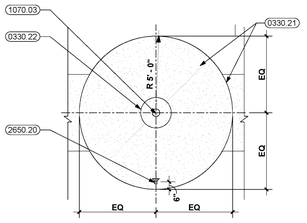
1 EXTERIOR ELEVATION (SOUTH)
1/4" = 1'-0"



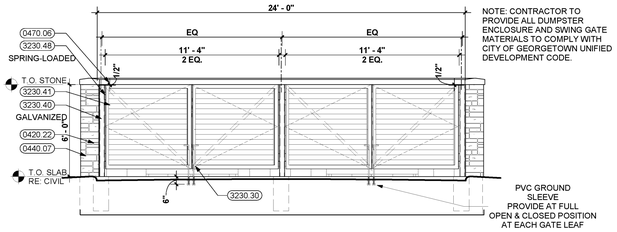
8 EXTERIOR ELEVATION (NORTH)
1/4" = 1'-0"



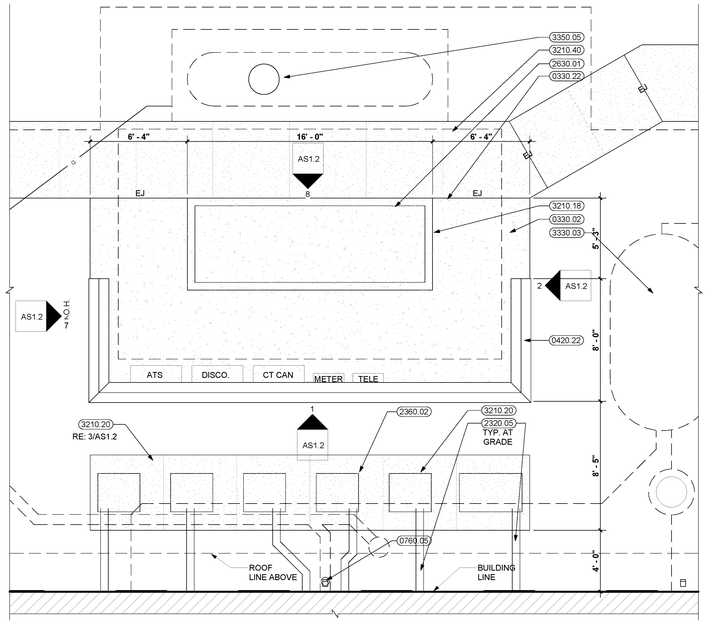
7 EXTERIOR ELEV.
1/4" = 1'-0"



6 FLAGPOLE DETAIL
1/4" = 1'-0"

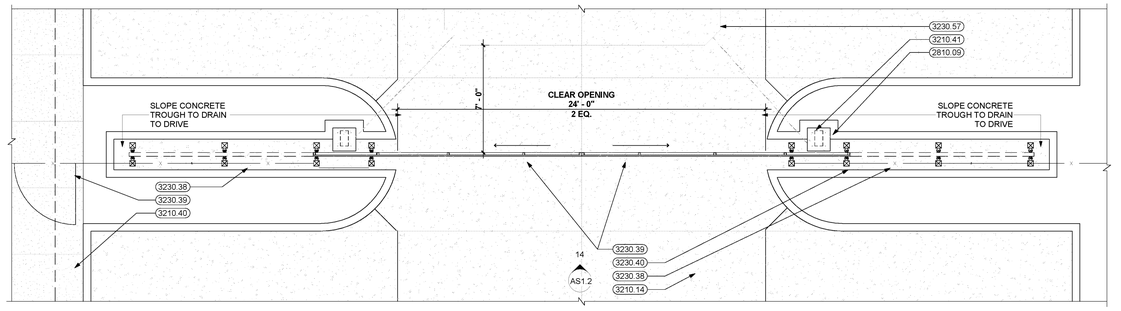


5 EXTERIOR ELEV. (SOUTHWEST)
1/4" = 1'-0"

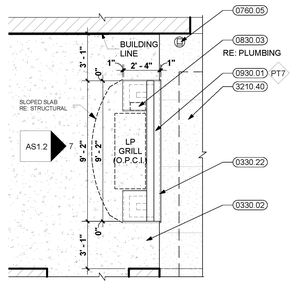


10 ENLARGED SITE PLAN
1/4" = 1'-0"

PLAN NORTH TRUE NORTH

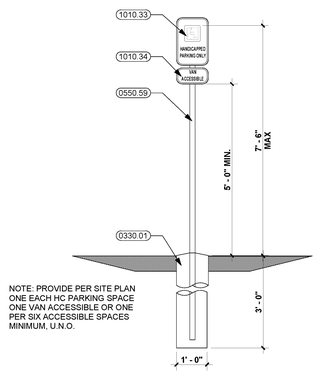


9 ENLARGED GATE PLAN - ALT. 8
1/4" = 1'-0"

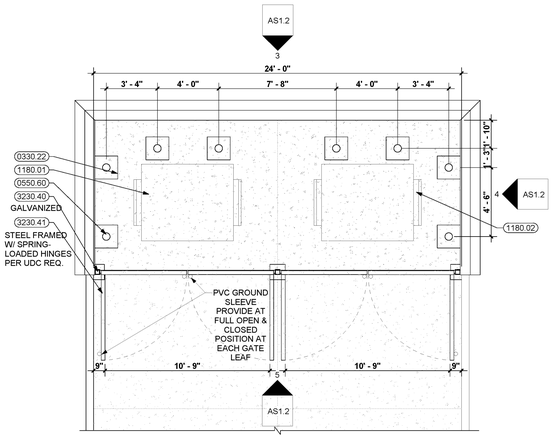


PLAN NORTH TRUE NORTH

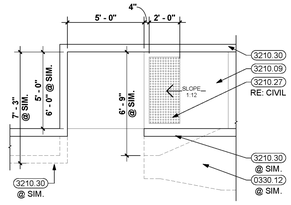
13 ENLARGED SITE PLAN
1/4" = 1'-0"



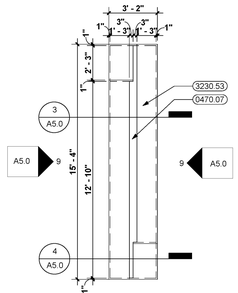
12 HC PARKING SIGNAGE
1/2" = 1'-0"



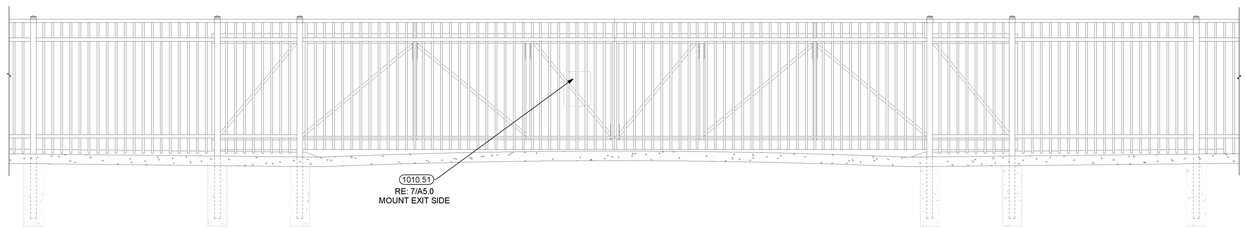
11 ENLARGED SITE PLAN
1/4" = 1'-0"



16 SITE RAMP PLAN
1/4" = 1'-0"



15 SIGN PLAN
1/4" = 1'-0"



14 GATE & FENCE ELEV. - DBL. CANTILEVER - ALT. 8
N.T.S.

KEYNOTES

0330.01	CONCRETE (RE: STRUCTURAL)
0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0330.12	CONCRETE BOLLARD
0330.21	SAWCUT CONTROL JOINT
0330.22	CONCRETE EXPANSION JOINT - FILL W/ JOINT SEALER 1/4" BELOW SURFACE
0405.03	MASONRY EXPANSION JOINT
0420.22	STONE / CONCRETE MASONRY UNIT SCREEN WALL WITH HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0440.07	STONE VENEER
0470.06	CAST STONE CAP - PIN BOLT CONNECTIONS
0470.07	CAST STONE SIGNAGE PANEL
0550.59	HOT-DIPPED GALVANIZED STEEL PIPE U-BRACKET CLAMP
0550.60	GALVANIZED 6" PIPE BOLLARD. FILL WITH CONCRETE
0760.05	GALVANIZED METAL DOWNSPOUT WITH FABRICATED TRANSITION TO DOWNSPOUT BOOT
0830.03	WALL ACCESS PANEL
0930.01	PORCELAIN TILE
1010.33	POLE MOUNTED SIGNAGE - "H.C. PARKING ONLY"
1010.34	POLE MOUNTED SIGNAGE - "VAN-ACCESSIBLE"
1010.51	GATE MOUNTED SIGNAGE - "PULL FORWARD TO LINE TO ACTIVATE GATE"
1070.03	GROUND-SET FLAGPOLE
1130.10	OUTDOOR GAS GRILLE (O.P.C.I.)
1180.01	DUMPSTER (N.I.C.)
1180.02	RECYCLING DUMPSTER (N.I.C.)
2320.05	INSULATED CONDENSATE PIPING, ROUTE THROUGH 4" PERFORATED PIPE TO BUILDING
2360.02	HVAC CONDENSING UNIT
2630.01	EMERGENCY GENERATOR
2650.20	FLAGPOLE LIGHT FIXTURE
2810.09	SLIDING GATE OPERATOR
3210.09	4" CONCRETE SIDEWALK WITH #3'S AT 18" O.C.E.W.
3210.14	CONCRETE PAVING (RE: CIVIL)
3210.18	CONCRETE GENERATOR PAD
3210.20	CONCRETE CONDENSER PAD
3210.27	BRICK ADA WARNING PAVER
3210.30	6" CONCRETE CURB (WITH GUTTER AS REQUIRED) (RE: CIVIL)
3210.40	CONCRETE SIDEWALK (RE: CIVIL)
3210.41	CONCRETE GATE OPERATOR PAD
3230.30	1" PLUNGER ROD AND GUIDE
3230.38	DECORATIVE METAL FENCE
3230.39	DECORATIVE METAL GATE
3230.40	4" X 4" STEEL TUBE POST
3230.41	GALVANIZED TUBE STEEL GATE WITH FIXED LOUVERS
3230.48	HEAVY DUTY METAL HINGES
3230.53	MONUMENT SIGN
3230.57	VEHICLE DETECTION LOOP
3330.03	SEPTIC TANK (RE: SPECIFICATION SECTION 33 36 00)
3350.05	BELOW GROUND PROPANE TANK

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
COLLEGE STATION, TEXAS 77840
979.693.1797
WWW.BRWARCH.COM

BRW

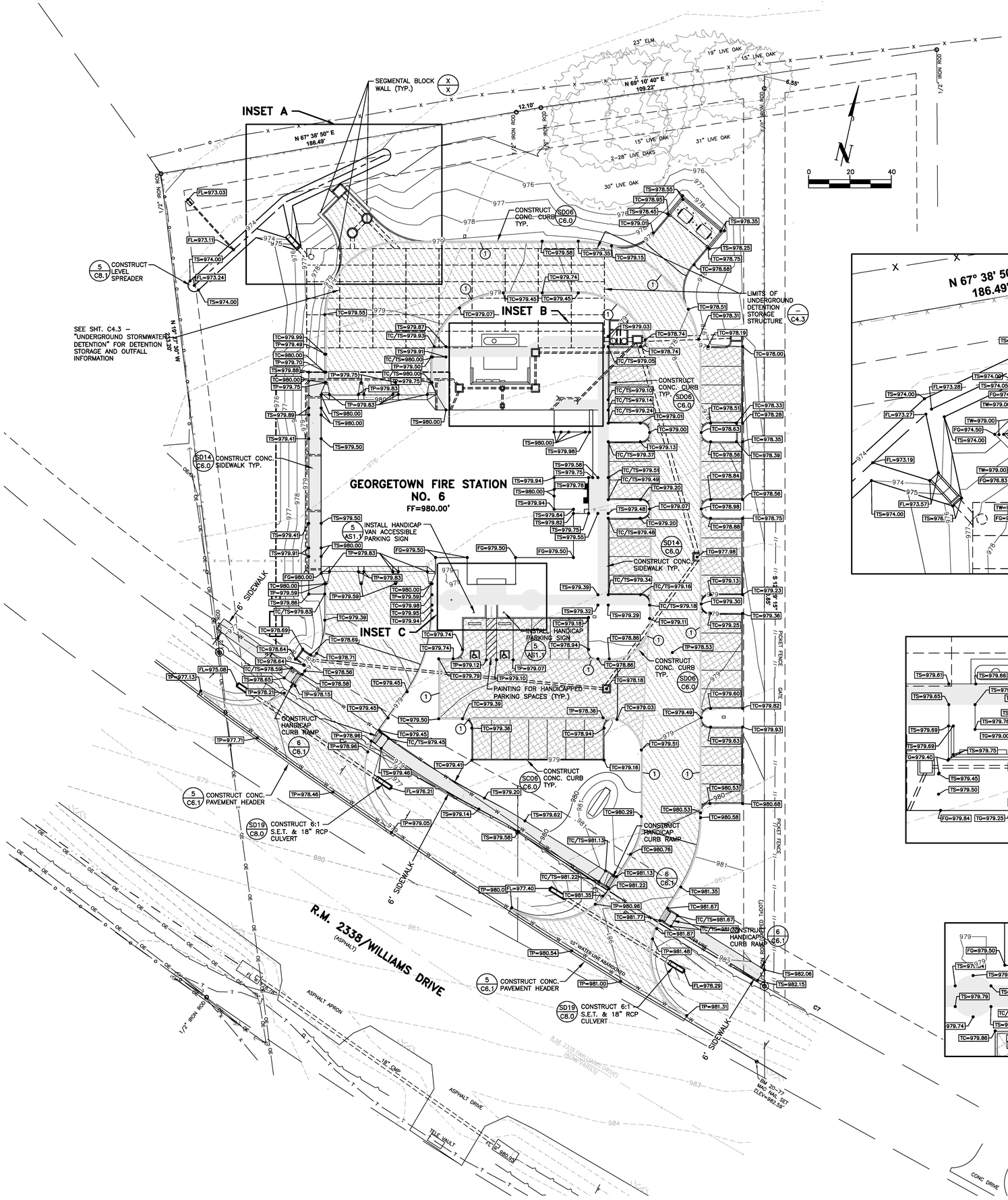
DATE 11/16/2018
DRAWN BY HR, NB
CHECKED BY RH
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

NO.	REVISION	DATE

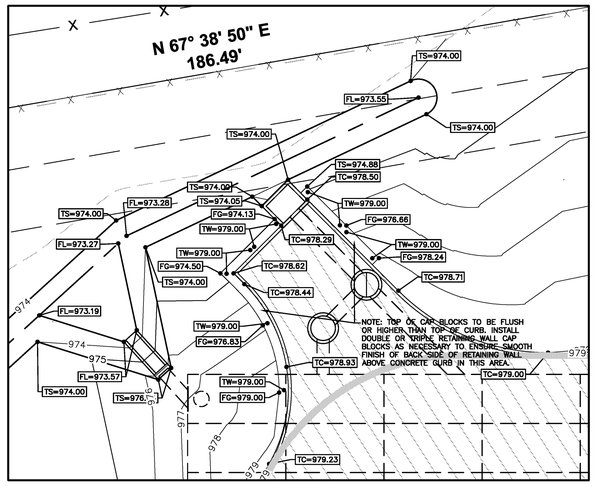
AS1.2

ARCHITECTURAL SITE DETAILS

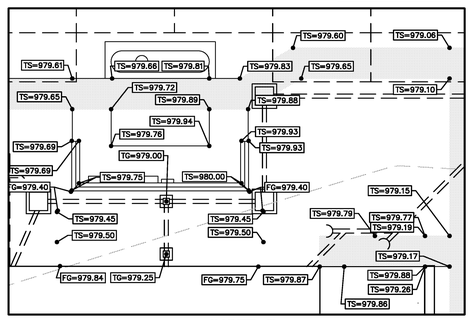


SITE GRADING LEGEND

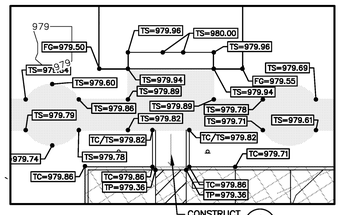
TP=XXX.XX	–	TOP OF PAVING
TS=XXX.XX	–	TOP OF SIDEWALK
FG=XXX.XX	–	FINISHED GRADE
TC=XXX.XX	–	TOP OF GRATE INLET
FL=XXX.XX	–	FLOW LINE
	–	5" THICK PARKING AREA PAVEMENT (1 C6.1)
	–	7" THICK DRIVEWAYS AND TRUCK TRAFFIC PAVEMENT (1 C6.1)
	–	4" THICK SIDEWALK
	–	ACCESSIBLE ROUTE



INSET A



INSET B



INSET C

General Notes

1. These construction plans were prepared, sealed and dated by a Texas Licensed Professional Engineer. Therefore based on the engineer's concurrence of compliance, the construction plans for construction of the proposed project are hereby approved subject to the standard Construction Specifications and Details Manual and all other applicable City, State and Federal Requirements and Codes.

2. This project is subject to all City Standard Specifications and Details in effect at the time of submittal of the project of the City.

3. The site construction plans shall meet all requirements of the approved site plan.

4. Wastewater mains and service lines shall be SDR 26 PVC.

5. Wastewater mains shall be installed without horizontal or vertical bends.

6. Maximum distance between wastewater manholes is 500 feet.

7. Wastewater mains shall be low pressure air tested and mandrel tested by the contractor according to City of Georgetown and TCEQ requirements.

8. Wastewater manholes shall be vacuum tested and coated by the contractor according to City of Georgetown and TCEQ requirements.

9. Wastewater mains shall be camera tested by the contractor and submitted to the City on DVD format prior to paving the streets.

10. Private water system fire lines shall be tested by the contractor to 200 psi for 2 hours.

11. Private water system fire lines shall be ductile iron piping from the water main to the building sprinkler system, and 200 psi C900 PVC for all others.

12. Public water system mains shall be 150 psi C900 PVC and tested by the contractor at 150 psi for 4 hours.

13. All bends and changes in direction on water mains shall be restrained and thrust blocked.

14. Long fire hydrant leads shall be restrained.

15. All water lines are to bacteria tested by the contractor according to the City standards and specifications.

16. Water and Sewer main crossings shall meet all requirements of the TCEQ and the City.

17. Flexible base material for public streets shall be TXDOT Type A Grade 1.

18. Hot mix asphaltic concrete pavement shall be Type D unless otherwise specified and shall be a minimum of 2 inches thick on public streets and roadways.

19. All sidewalk ramps are to be installed with the public infrastructure.

20. A maintenance bond is required to be submitted to the City prior to acceptance of the public improvements. This bond shall be established for 1 year in the amount of 25% of the cost of the public improvements and shall follow the City format.

21. Record drawings of the public improvements shall be submitted to the City by the design engineer prior to acceptance of the project. These drawings shall be on mylar or on TIFF or PDF (300p dpi). If a disk is submitted, a bond set shall be included with the disk.

CIVIL GENERAL NOTES:

1. IN ADDITION TO THE OTHER NOTIFICATIONS REQUIRED BY THE SPECIFICATIONS AND CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE CITY OF GEORGETOWN, THE ENGINEER AND THE ARCHITECT WHEN THE FOLLOWING PHASES OF CONSTRUCTION ARE ABOUT TO BEGIN:
   (a) 48 HOURS BEFORE ACTUAL WORK BEGINS, AND
   (b) 24 HOURS BEFORE ANY REQUIRED TESTING.

2. CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITY LINES LOCATED AT LEAST 48 HOURS BEFORE DIGGING.

3. ANY PROPERTY BOUNDARY MONUMENTS DISTURBED BY CONTRACTOR SHALL BE REPLACED TO THEIR ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.

4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF GEORGETOWN NOTES, SPECIFICATIONS, AND DETAILS.

5. CONTRACTOR SHALL GRADE THE SITE TO THE PROPOSED SPOT ELEVATIONS AND CONTOURS SHOWN ON THE SITE GRADING PLAN.

6. THE CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING OPERATIONS REQUIRED TO INSTALL THE IMPROVEMENTS COVERED UNDER THIS PROJECT.

7. ANY EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ADDITIONALLY, THE CONTRACTOR MAY BE LIABLE FOR ADDITIONAL DAMAGES SUCH AS LOST GAS, WATER, ETC., OR LOST REVENUE FOR CABLE DAMAGE.

8. EROSION CONTROL MEASURES SHALL CONFORM TO ALL STATE AND FEDERAL REQUIREMENTS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION OF THE PROJECT. THE EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL INSTALL ALL ADDITIONAL MEASURES TO MEET THE REGULATORY REQUIREMENTS.

9. TOPSOIL SHALL BE STRIPPED IN EXCAVATION AREAS, THOSE AREAS BROUGHT TO FINAL GRADE (MINUS TOPSOIL DEPTH), AND THEN THE STRIPPED TOPSOIL SHALL BE PLACED TO FINISHED GRADE.

10. ANY UNPAVED AREA DISTURBED BY CONTRACTOR SHALL BE GRADED, SHAPED, AND GRASSED PER PROJECT SPECIFICATIONS.

11. WATER SHALL BE APPLIED TO ALL GRASSED AREAS CONTINUOUSLY AS NEEDED TO ESTABLISH ACCEPTABLE GRASS COVERAGE.

12. SIDEWALKS ADJACENT TO AREAS TO BE GRASSED SHALL BE FINISHED APPROXIMATELY 1 INCH HIGHER THAN FINISHED GROUND ELEVATION TO ALLOW FOR ESTABLISHMENT OF GRASS. ESTABLISHMENT OF GRASS SHALL NOT TRAP WATER ON THE SIDEWALK.

13. REFERENCE ARCHITECTURAL SHEETS FOR EXISTING TREE PRESERVATION.

14. REFERENCE LANDSCAPING SHEETS FOR LOCATION OF ALL PROPOSED LANDSCAPING IMPROVEMENTS. LANDSCAPING NOT SHOWN FOR CLARITY OF GRADING PLAN.

15. CONTRACTOR SHALL PERFORM MINIMUM GRADING NEEDED AROUND HERITAGE TREES TO AVOID DISTURBING SOIL AROUND THOSE TREES.

FIRE LANE STRIPING NOTE:

(1) PROPOSED FIRE LANE STRIPING.
REF: ARCHITECTURAL SHEET 5/AS1.1 FOR DETAIL.

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STRAND ASSOCIATES®
STRAND JOB # 3935.034

DATE	5/14/2018
DRAWN BY	Author
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BRW PROJECT NUMBER	217079.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

NO.	REVISION	DATE

C2.0

SITE GRADING PLAN

LEGEND

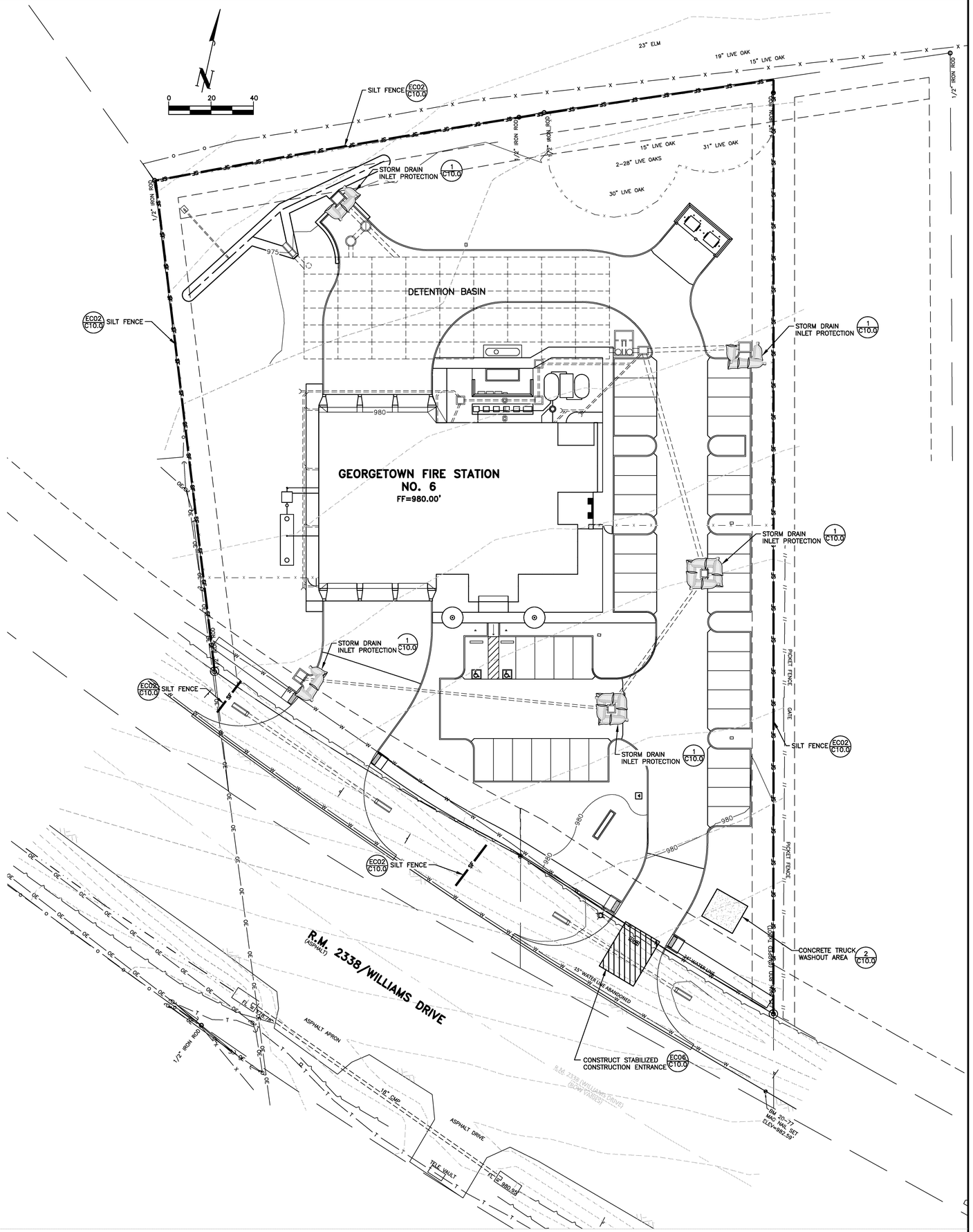
INLET PROTECTION W/ GRAVEL BAGS (1 / C10.0)

SF SF SF – SILT FENCE (EC02 / C10.0)

GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL STORM WATER POLLUTION PREVENTION AND PLANNING IN ACCORDANCE WITH PROJECT TECHNICAL SPECIFICATION. PRIOR TO BEGINNING WORK, CONTRACTOR SHALL INSTALL SILT FENCING, EROSION CONTROL SOCKS AND CONSTRUCTION ENTRANCE AS SHOWN ON THIS SHEET. THE SILT FENCING SHALL BE ERECTED IN ADDITION TO ANY STRUCTURAL CONTROLS THAT MAY BE STIPULATED IN A STORM WATER POLLUTION PREVENTION PLAN (SW3P) THAT IS PREPARED BY CONTRACTOR. THE SILT FENCING SHALL BE MAINTAINED BY CONTRACTOR THROUGHOUT THE DURATION OF CONSTRUCTION AND THEN REMOVED BY CONTRACTOR AFTER FINAL STABILIZATION OF THE SITE.

2. CONTRACTOR SHALL INSTALL SAND BAGS AT ALL PROPOSED AREA INLETS AND CURB INLETS. (1 / C10.0)



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GEORGETOWN FIRE STATION No. 6
2700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION	DATE

C2.1

EROSION CONTROL PLAN

GENERAL NOTES:

1. IN ADDITION TO THE OTHER NOTIFICATIONS REQUIRED BY THE SPECIFICATIONS AND CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE CITY OF GEORGETOWN AT (512)930-3648, AND STRAND ASSOCIATES, AT (979)836-7937, WHEN THE FOLLOWING PHASES OF CONSTRUCTION ARE ABOUT TO BEGIN:
   (a) 48 HOURS BEFORE ACTUAL WORK BEGINS, AND
   (b) 24 HOURS BEFORE ANY REQUIRED TESTING.

2. CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITY LINES LOCATED AT LEAST 48 HOURS BEFORE DIGGING.

3. CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY TO PROVIDE FOR TRAFFIC CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. IN THE EVENT OF STREET CLOSURES, CONTRACTOR SHALL NOTIFY ALL EMERGENCY SERVICE PROVIDERS AT LEAST 24 HOURS PRIOR TO CLOSING STREETS TO TRAFFIC.

4. ALL UNDERGROUND UTILITY LINES SHOWN ON THE PLANS ARE SHOWN FOR THE PURPOSE OF MAKING THE CONTRACTOR AWARE THAT THEY EXIST. NEITHER THE OWNER, NOR THE ENGINEER, GUARANTEES THE ACCURACY THEREOF. ALSO, THE LOCATIONS OF SOME EXISTING UTILITY LINES ARE NOT KNOWN AND THE CONTRACTOR WILL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES DURING CONSTRUCTION. THE FINAL ALIGNMENT OF THE PROPOSED LINES ARE SUBJECT TO MODIFICATION PENDING THE ESTABLISHMENT OF THE EXISTING UTILITY LOCATIONS.

5. ALL EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ADDITIONALLY, THE CONTRACTOR MAY BE LIABLE FOR ADDITIONAL DAMAGES SUCH AS LOST GAS, WATER, ETC. OR LOST REVENUE FOR CABLE DAMAGE.

6. ANY PROPERTY BOUNDARY MONUMENTS DISTURBED BY CONTRACTOR SHALL BE REPLACED TO THEIR ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.

7. CONTRACTOR SHALL MAINTAIN EXISTING ACCESS TO ALL ADJACENT PROPERTIES DURING CONSTRUCTION.

8. THE CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING OPERATIONS REQUIRED TO CONSTRUCT THE NEW IMPROVEMENTS ON THIS PROJECT.

9. THE CONTRACTOR SHALL BE AWARE THAT OVERHEAD POWER AND TELEPHONE LINES MAY EXIST WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT MAINTAIN A MINIMUM SAFE CLEARANCE FROM ALL ENERGIZED POWER LINES.

10. THE CONTRACTOR SHALL PROTECT EXISTING YARDS, DRIVES, CURBS, MAIL BOXES, SIGNS, CULVERTS, ETC. FROM DAMAGE DURING CONSTRUCTION. DAMAGE DONE TO THESE ITEMS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL MOVE AND REINSTALL SUCH MOVABLE OBJECTS AS MAIL BOXES, TRAFFIC CONTROL DEVICES AND STREET SIGNS AS NECESSARY FOR CONSTRUCTION.

11. THE CONTRACTOR SHALL DISPOSE OF ALL SURPLUS MATERIALS FROM THE PROJECT IN A MANNER ACCEPTABLE TO THE OWNER AND THE ENGINEER AND IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

12. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED AT ALL WATER BENDS IN ACCORDANCE WITH CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS. NO SEPARATE PAYMENT WILL BE MADE FOR THRUST BLOCKING AND THE COST OF SAME SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR LINE WORK. CONTRACTOR SHALL EXERCISE CARE NOT TO GET CONCRETE USED FOR THRUST BLOCKING ON BOLTS AND GLANDS OF FITTINGS.

13. ALL PVC WATER LINES SHALL BE INSTALLED WITH TRACE WIRE PER CITY OF GEORGETOWN TECHNICAL SPECIFICATIONS.

14. ALL WORK TO MEET CITY OF GEORGETOWN REQUIREMENTS.

15. CONTRACTOR IS RESPONSIBLE FOR ADJUSTING ALL VALVE BOXES, METER BOXES, FIRE HYDRANTS, MANHOLES & CLEANOUTS TO FINISHED GRADE.

16. SEE ARCHITECTURAL SHEETS FOR EXISTING TREE PRESERVATION REQUIREMENTS.

17. SEE LANDSCAPING SHEETS FOR LOCATION OF ALL PROPOSED LANDSCAPING IMPROVEMENTS.

18. WATER PRESSURE AT FINISHED FLOOR ELEVATION IS 85.73 PSI. WATER PRESSURE IS NOT TO EXCEED 80 PSI PER CITY OF GEORGETOWN BUILDING CODE REQUIREMENTS. CONTRACTOR TO INSTALL WATER PRESSURE REDUCING VALVE (SEE NOTE 19 UNDER "WATER LEGEND" FOR TYPE AND INSTALLATION LOCATION.

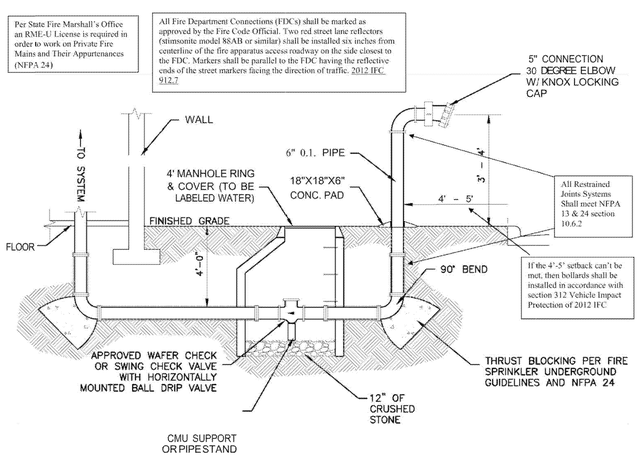
WATER LEGEND

1. REMOVE AND DISPOSE OF EXISTING METER BOXES. IF METERS ARE PRESENT, RETURN TO CITY OF GEORGETOWN. CAP EXISTING WATER SERVICE TAP ON 24 WATER LINE.
2. INSTALL 6" TAPPING SLEEVE AND VALVE & VALVE BOX ON EX. 24" WATER LINE. (– / C5.0)
3. INSTALL 4" WATER METER. WATER METER TO BE PROVIDED BY THE CITY OF GEORGETOWN.
4. IRRIGATION TAP WILL NEED TO BE SIZED ONCE IRRIGATION SYSTEM IS DESIGNED BY A LICENSED IRRIGATION DESIGNER DURING BIDDING/CONSTRUCTION. OWNER TO PAY TAP FEE.
5. 6" 45° BEND
6. 6" CL. 150 C-900 PVC WATER LINE
7. 2" SCH. 40 PVC WATER LINE
8. 6"x2" TEE
9. 6" 90° BEND
10. INSTALL CUSTOMER CUT-OFF VALVE (W20 / C5.0)
11. CONNECT TO 6" STUB-OUT FROM BUILDING (FIRE SUPPLY). REF. MEP PLANS FOR CONTINUATION OF LINE INSIDE BUILDING.
12. CONNECT TO 2" STUB-OUT FROM BUILDING (DOMESTIC SUPPLY). REF. MEP PLANS FOR CONTINUATION OF LINE INSIDE BUILDING.
13. EXISTING FIRE HYDRANT TO REMAIN.
14. INSTALL REMOTE FIRE DEPARTMENT CONNECTION
15. FIRE WATER LINE TO FIRE DEPARTMENT CONNECTION TO BE SIZED BY FIRE SPRINKLER DESIGNER
16. STANDARDIZED OS&Y TO BE LOCATED AT THE BUILDING REF. MEP PLANS
17. RPZ BACKFLOW PREVENTER TO BE INSTALLED IN BUILDING ON FIRE LINE REF. MEP PLANS
18. IRRIGATION REDUCED PRESSURE ZONE BACKFLOW PREVENTER AND METER REF. LANDSCAPE PLANS
19. INSTALL WATTS MODEL NO. LF223SHP WATER PRESSURE REDUCING VALVE OR APPROVED EQUAL AND OLDCASTLE VALVE BOX MODEL NO. 1324BCF WITH FLUSH SOLID COVER LID OR APPROVED EQUAL

ESTIMATED WATER USAGE:

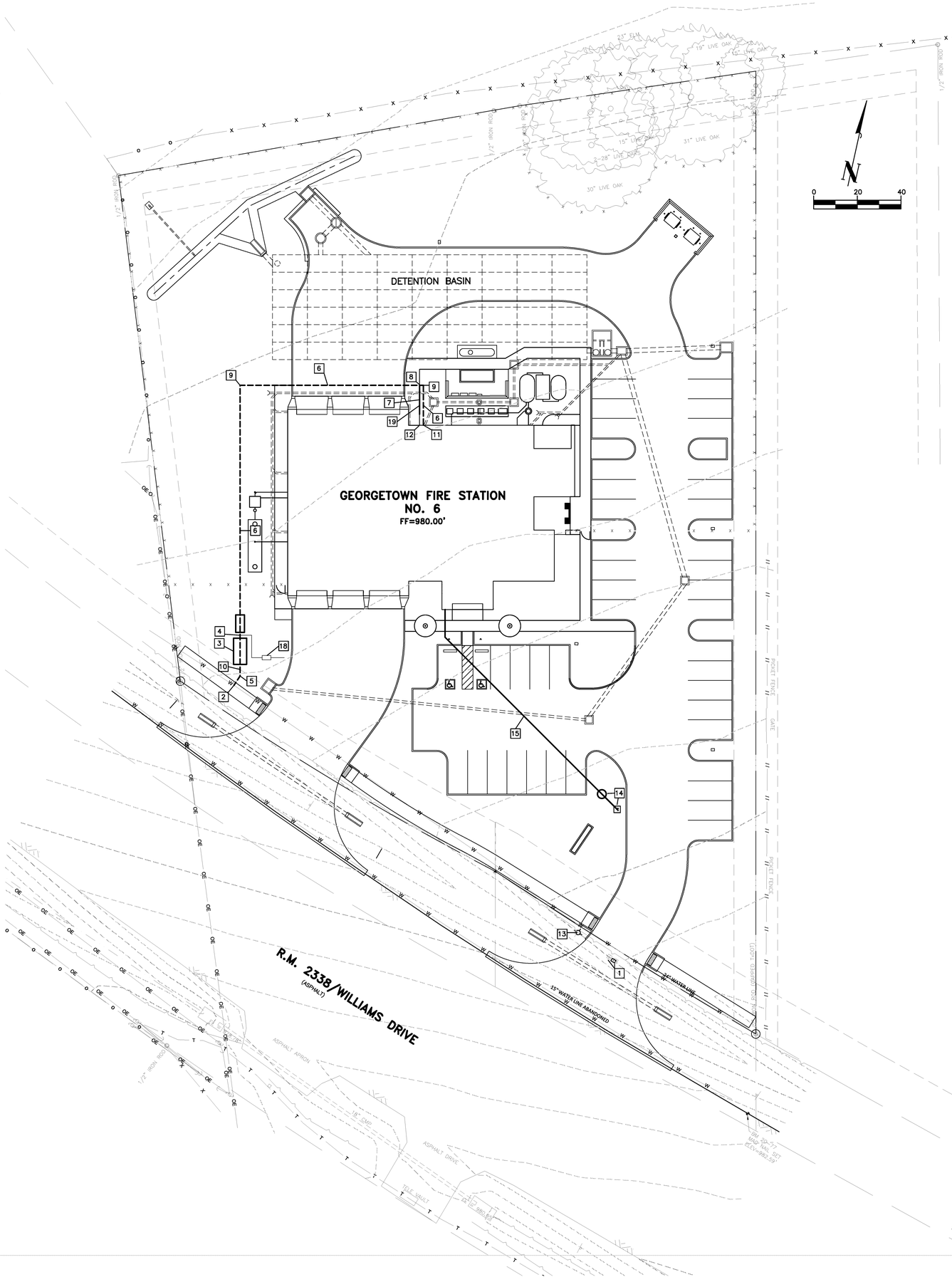
THIS FIRE STATION WILL HOUSE SIX (6) EMPLOYEES FOR A 24 HOUR DURATION. WE HAVE CALCULATED (100) GALLONS PER DAY TIMES SIX (6) EMPLOYEES EQUALS (600) GPD.

CALCULATED WATER DEMAND = 58 GPM



FIRE DEPARTMENT CONNECTION

NOT TO SCALE



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GEORGETOWN FIRE STATION No. 6
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GEORGETOWN, TX. 78626

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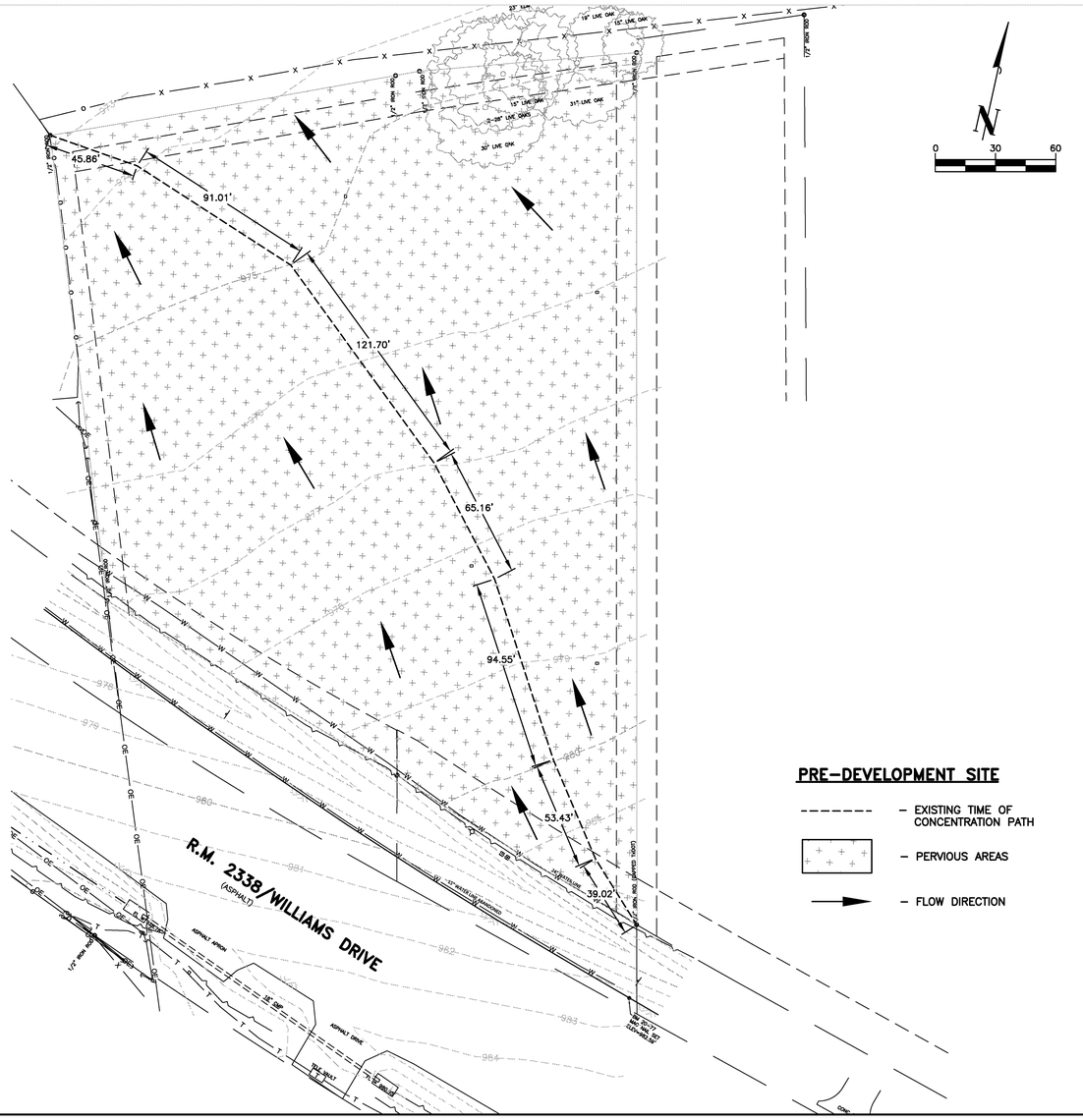
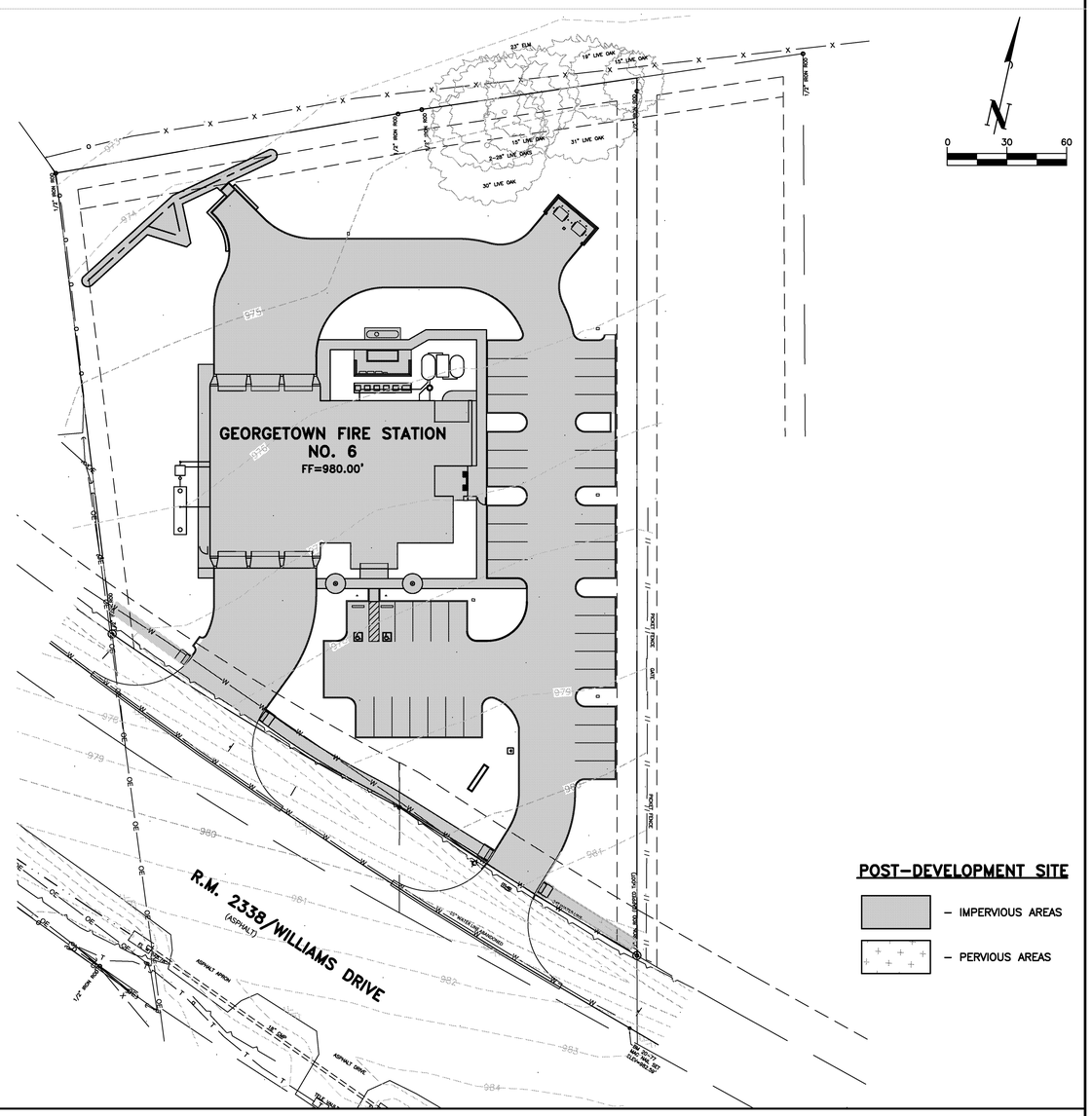
SITE UTILITY PLAN





PRE-DEVELOPMENT CONDITIONS

TYPE	AREA (ACRES)
PERVIOUS	2.120
IMPERVIOUS	0.000
TOTAL	**2.120**

POST-DEVELOPMENT CONDITIONS

TO DETENTION

TYPE	AREA (ACRES)
PERVIOUS	0.316
IMPERVIOUS	1.058
TOTAL	**1.374**

BYPASS

TYPE	AREA (ACRES)
PERVIOUS	0.703
IMPERVIOUS	0.043
TOTAL	**0.746**

Pond *Type III 24-hr 100 year Rainfall=9.50"*
Prepared by Strand Associates, Inc Printed 8/13/2018
HydroCAD® 10.00-21 s/n 09696 © 2018 HydroCAD Software Solutions LLC Page 10

Summary for Subcatchment PR2: EAST

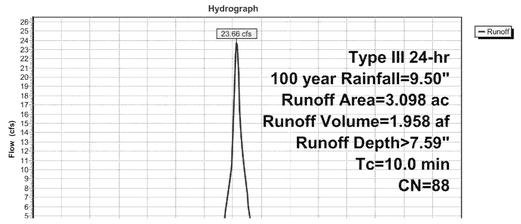
Runoff = 23.66 cfs @ 12.14 hrs, Volume= 1.958 af, Depth> 7.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 year Rainfall=9.50"

Area (ac)	CN	Description
1.823	98	Paved parking, HSG D
0.052	86	Woods/grass comb., Poor, HSG D
1.223	74	>75% Grass cover, Good, HSG C
3.098	88	Weighted Average
1.275		41.16% Pervious Area
1.823		58.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment PR2: EAST



POND

	EXISTING FLOW (CFS)	PROPOSED FLOW (CFS)	PROPOSED BYPASS FLOW (CFS)	TARGET FLOW (CFS)	ACTUAL RELEASED FLOW (CFS)	WATER SURFACE ELEVATION (FT)	STORAGE (AC-FT)
2 YEAR	2.01	3.41	1.52	0.49	0.79	975.02	0.122
10 YEAR	4.12	6.25	3.09	1.03	1.16	975.85	0.232
25 YEAR	5.26	7.75	3.92	1.34	1.34	976.33	0.292
100 YEAR	7.51	10.72	5.59	1.92	1.50	976.86	0.422

1. THE CITY OF GEORGETOWN'S DRAINAGE CRITERIA STATES THAT THE MINIMUM ORIFICE DIAMETER (OR DIMENSION FOR A RECTANGULAR ORIFICE) IS 12". DAVID MUNK WITH THE CITY OF GEORGETOWN WAS CONTACTED. HE STATED THAT A 6" DIAMETER ORIFICE WOULD BE ACCEPTED DUE TO OUR SITE CONDITIONS.
2. OVERALL DRAINAGE AREA = 2.12 AC.
   NEW IMPERVIOUS AREA = 1.06 AC.
   POST DEVELOPMENT IMPERVIOUS COVER = 50%
3. THE DETENTION FACILITY PASSES THE 100 YEAR STORM EVENT WITH 0.92' OF FREEBOARD.

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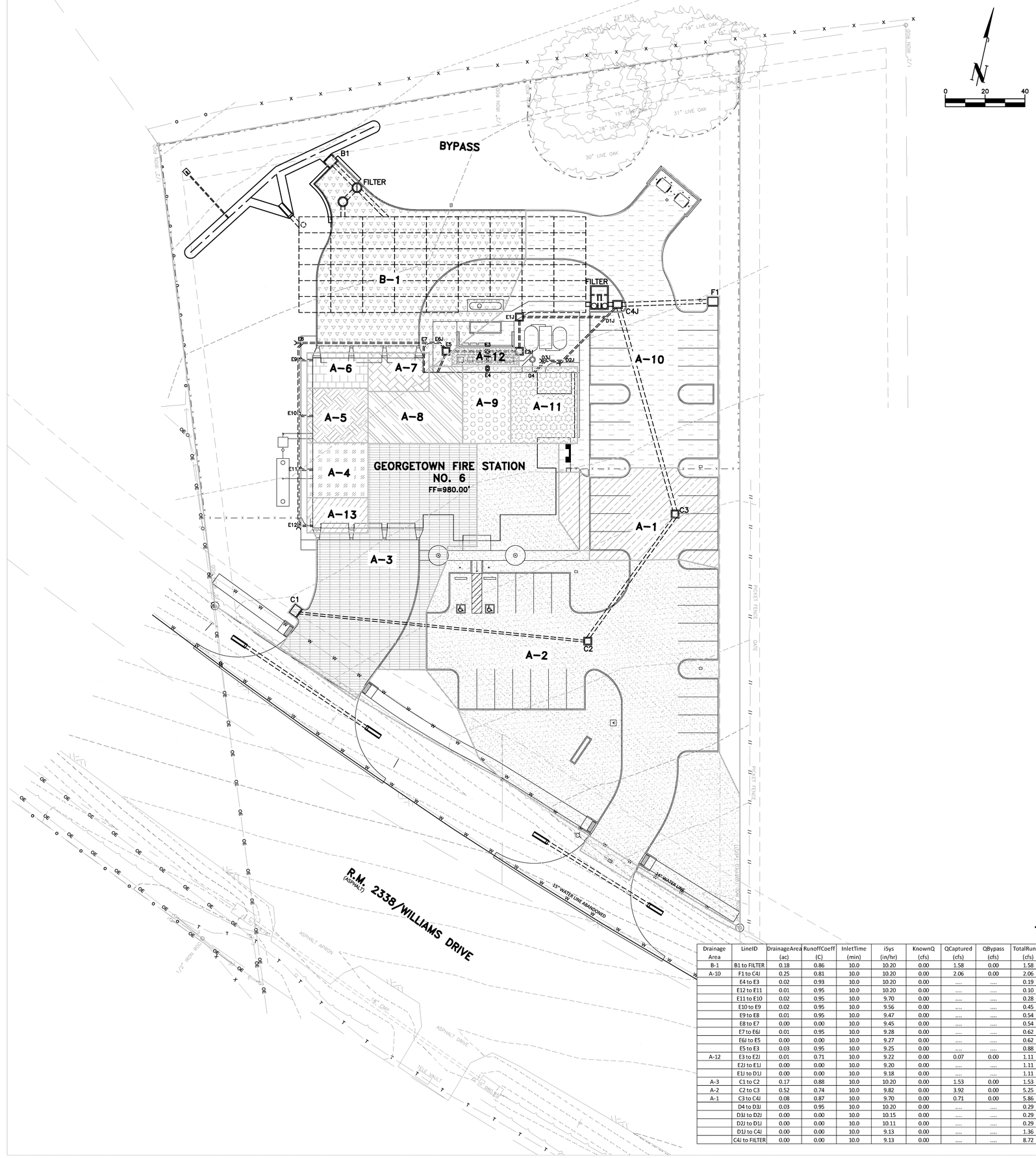
SITE DRAINAGE AREA MAPS & DETENTION STORAGE CALCULATIONS



DRAINAGE AREA LEGEND

- A–1
- A–2
- A–3
- A–4
- A–5
- A–6
- A–7
- A–8
- A–9
- A–10
- A–11
- A–12
- A–13
- B–1

100–YEAR STORM SEWER DESIGN SUMMARY

Drainage Area	LineID	DrainageArea (ac)	RunoffCoeff (C)	InletTime (min)	iSys (in/hr)	KnownQ (cfs)	QCaptured (cfs)	QBypass (cfs)	TotalRunoff (cfs)	LineLength (ft)	LineSize (in)	n-valuePipe	LineSlope (%)	FlowRate (cfs)	CapacityFull (cfs)	VelUp (ft/s)	EnergyLoss (ft)	Grnd/RimElev Up (ft)	InletDepth (ft)	HGLUp (ft)	HGLDn (ft)	InvertUp (ft)	InvertDn (ft)
B-1	B1 to FILTER	0.18	0.86	10.0	10.20	0.00	1.58	0.00	1.58	39.303	24	0.013	0.74	1.58	19.43	0.50	0.002	978.27	0.22	977.08	977.08	974.37	974.08
A-10	F1 to C4J	0.25	0.81	10.0	10.20	0.00	2.06	0.00	2.06	49.939	18	0.013	0.24	2.06	5.15	1.17	0.019	978.00	0.45	977.23	977.21	974.76	974.64
	E4 to E3	0.02	0.93	10.0	10.20	0.00	....	....	0.19	10.625	8	0.012	3.01	0.19	2.27	0.54	0.002	979.25	....	978.57	978.57	976.00	975.68
	E12 to E11	0.01	0.95	10.0	10.20	0.00	....	....	0.10	28.238	8	0.012	0.25	0.10	0.65	0.28	0.002	979.75	....	979.04	979.04	976.15	976.08
	E11 to E10	0.02	0.95	10.0	9.70	0.00	....	....	0.28	27.000	8	0.012	0.26	0.28	0.67	0.79	0.012	979.75	....	979.04	979.02	976.08	976.01
	E10 to E9	0.02	0.95	10.0	9.56	0.00	....	....	0.45	27.998	8	0.012	0.25	0.45	0.65	1.30	0.034	979.75	....	979.02	978.99	976.01	975.94
	E9 to E8	0.01	0.95	10.0	9.47	0.00	....	....	0.54	8.603	8	0.012	0.23	0.54	0.63	1.55	0.015	979.75	....	978.98	978.97	975.94	975.92
	E8 to E7	0.00	0.00	10.0	9.45	0.00	....	....	0.54	62.889	8	0.012	0.24	0.54	0.64	1.54	0.107	979.48	....	978.93	978.82	975.92	975.77
	E7 to E6J	0.01	0.95	10.0	9.28	0.00	....	....	0.62	7.961	8	0.012	0.25	0.62	0.66	1.77	0.018	979.75	....	978.81	978.80	975.77	975.75
	E6J to E5	0.00	0.00	10.0	9.27	0.00	....	....	0.62	5.292	8	0.012	0.38	0.62	0.80	1.77	0.012	979.75	....	978.76	978.75	975.75	975.73
	E5 to E3	0.03	0.95	10.0	9.25	0.00	....	....	0.88	20.831	8	0.012	0.24	0.88	0.64	2.52	0.094	979.75	....	978.66	978.57	975.73	975.68
A-12	E3 to E2J	0.01	0.71	10.0	9.22	0.00	0.07	0.00	1.11	15.998	8	0.012	0.25	1.11	0.65	3.19	0.116	979.00	0.05	978.33	978.22	975.68	975.64
	E2J to E1J	0.00	0.00	10.0	9.20	0.00	....	....	1.11	17.169	8	0.012	0.23	1.11	0.63	3.18	0.124	979.52	....	978.06	977.93	975.64	975.60
	E1J to D1J	0.00	0.00	10.0	9.18	0.00	....	....	1.11	41.616	8	0.012	0.24	1.11	0.64	3.18	0.299	979.80	....	977.78	977.48	975.60	975.50
A-3	C1 to C2	0.17	0.88	10.0	10.20	0.00	1.53	0.00	1.53	147.511	12	0.012	0.25	1.53	1.93	1.94	0.231	978.66	0.41	978.37	978.14	975.98	975.61
A-2	C2 to C3	0.52	0.74	10.0	9.82	0.00	3.92	0.00	5.25	77.354	18	0.013	0.26	5.25	5.34	2.97	0.193	978.18	0.30	977.95	977.76	975.11	974.91
A-1	C3 to C4J	0.08	0.87	10.0	9.70	0.00	0.71	0.00	5.86	109.221	18	0.013	0.25	5.86	5.22	3.32	0.340	977.98	0.12	977.55	977.21	974.91	974.64
	D4 to D3J	0.03	0.95	10.0	10.20	0.00	....	....	0.29	8.191	8	0.012	4.52	0.29	2.78	1.01	0.004	979.75	....	977.51	977.51	977.00	976.63
	D3J to D2J	0.00	0.00	10.0	10.15	0.00	....	....	0.29	6.486	8	0.012	4.62	0.29	2.81	0.83	0.003	979.75	....	977.51	977.50	976.63	976.33
	D2J to D1J	0.00	0.00	10.0	10.11	0.00	....	....	0.29	31.116	8	0.012	4.56	0.29	2.80	0.83	0.015	979.75	....	977.49	977.48	976.33	974.91
	D1J to C4J	0.00	0.00	10.0	9.13	0.00	....	....	1.36	8.158	8	0.012	0.37	1.36	0.79	3.90	0.089	978.44	....	977.30	977.21	975.50	975.47
	C4J to FILTER	0.00	0.00	10.0	9.13	0.00	....	....	8.72	7.084	24	0.013	0.28	8.72	12.02	2.78	0.011	978.84	....	977.09	977.08	974.64	974.62

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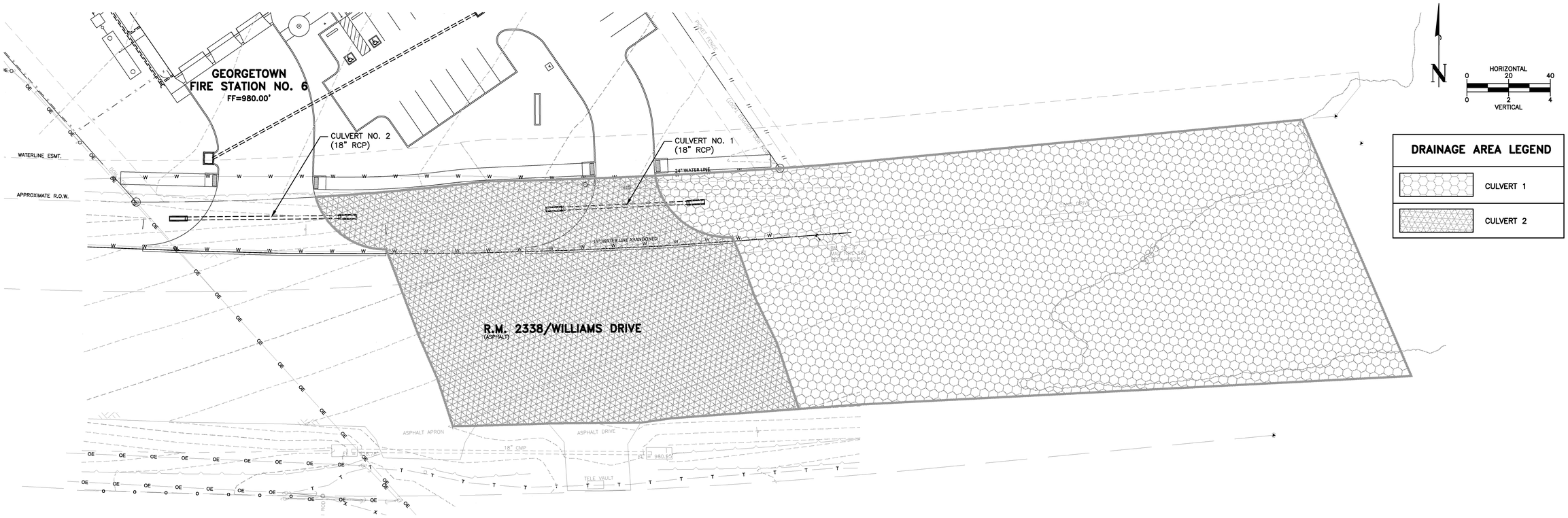
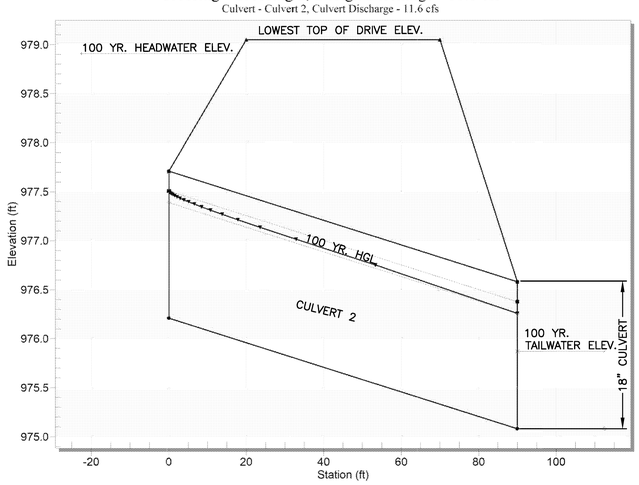
C4.1

STORM SEWER MAP & SIZING CALCULATIONS



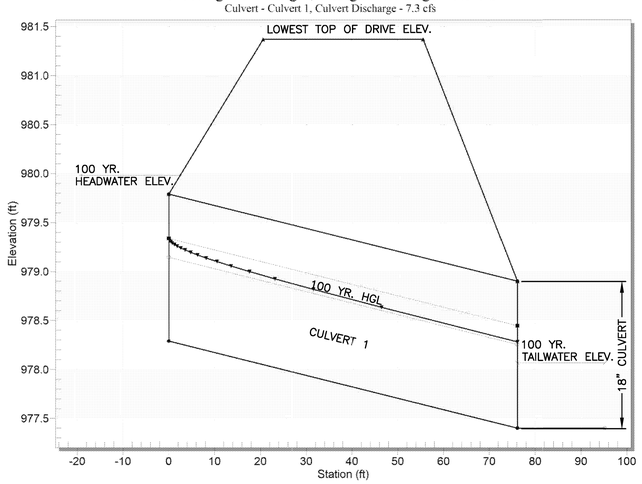
Crossing - Crossing 2, Design Discharge - 11.6 cfs

Culvert - Culvert 2, Culvert Discharge - 11.6 cfs



Crossing - Crossing 1, Design Discharge - 7.3 cfs

Culvert - Culvert 1, Culvert Discharge - 7.3 cfs



HY-8 100 YR. Analysis - Culvert Summary Table: Culvert 2

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
0.00	0.00	976.21	0.000	0.000	0-NF	0.000	0.000	0.000	0.000	0.000	0.000
1.50	1.50	976.64	0.626	0.0*	1-S2n	0.352	0.454	0.364	0.367	4.374	1.808
3.00	3.00	977.15	0.941	0.0*	1-S2n	0.503	0.658	0.513	0.476	5.359	2.150
4.50	4.50	977.42	1.209	0.0*	1-S2n	0.626	0.810	0.647	0.554	5.962	2.380
6.00	6.00	977.67	1.456	0.372	1-S2n	0.738	0.942	0.738	0.617	6.705	2.567
7.50	7.50	977.93	1.721	0.803	5-S2n	0.846	1.067	0.871	0.671	6.825	2.704
9.00	9.00	978.24	2.027	1.459	5-S2n	0.956	1.155	0.986	0.719	7.089	2.830
10.50	10.50	978.60	2.389	1.999	5-S2n	1.074	1.244	1.074	0.767	7.535	2.941
11.61	11.61	978.91	2.697	2.367	5-S2n	1.178	1.267	1.178	0.797	7.599	3.015
13.50	12.29	979.11	2.903	2.596	7-M2c	1.500	1.325	1.320	0.837	7.441	3.132
15.00	12.42	979.16	2.945	2.646	7-M2c	1.500	1.320	1.330	0.870	7.499	3.215

*TAILWATER ELEVATION CALCULATED BY USING DITCH SECTION AT MOST DOWNSTREAM CULVERT OUTLET LOCATION

HY-8 100 YR. Analysis - Culvert Summary Table: Culvert 1

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
0.00	0.00	978.29	0.000	0.000	0-NF	0.000	0.000	0.000	0.000	0.000	0.000
1.00	1.00	978.80	0.606	0.0*	1-S2n	0.292	0.369	0.292	0.316	3.006	1.626
2.00	2.00	979.02	0.731	0.0*	1-S2n	0.414	0.530	0.414	0.439	4.665	1.944
3.00	3.00	979.23	0.942	0.0*	1-S2n	0.512	0.656	0.512	0.477	5.438	2.151
4.00	4.00	979.41	1.125	0.104	1-S2n	0.598	0.765	0.598	0.531*	5.881	2.312
5.00	5.00	979.58	1.292	0.324	1-S2n	0.678	0.866	0.678	0.577	6.234	2.444
6.00	6.00	979.75	1.457	0.567	1-S2n	0.754	0.962	0.754	0.618	6.538	2.558
7.00	7.00	979.92	1.630	0.833	5-S2n	0.829	1.021	0.854	0.655	6.521	2.659
7.34	7.34	979.98	1.691	0.0*	5-S2n	0.854	1.046	0.881	0.666	6.569	2.690
9.00	9.00	980.32	2.027	1.596	5-S2n	0.961	1.156	0.961	0.719	7.109	2.901
10.00	10.00	980.55	2.262	1.901	5-S2n	1.063	1.218	1.066	0.746	7.030	2.967

*TAILWATER ELEVATION CALCULATED BY USING DITCH SECTION AT MOST DOWNSTREAM CULVERT OUTLET LOCATION

Culvert Design *Type III 24-hr 100 Year Rainfall=9.25"*
Prepared by Strand Associates, Inc Printed 10/16/2018
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Summary for Subcatchment 1S: Drainage Area

[49] Hint: Tc<2dt may require smaller dt

Runoff = 7.34 cfs @ 12.05 hrs, Volume= 0.510 af, Depth> 7.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 Year Rainfall=9.25"

Area (ac)	CN	Description
0.776	93	Paved roads w/open ditches, 50% imp, HSG D
0.388		50.00% Pervious Area
0.388		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	164	0.0360	1.73		**Sheet Flow,** n= 0.013 P2= 3.40"
2.1	204	0.0117	1.62		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
3.7	368	Total			

Culvert Design *Type III 24-hr 100 Year Rainfall=9.25"*
Prepared by Strand Associates, Inc Printed 10/16/2018
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Summary for Subcatchment 3S: Drainage Area 2

[49] Hint: Tc<2dt may require smaller dt

Runoff = 4.27 cfs @ 12.03 hrs, Volume= 0.290 af, Depth> 7.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 Year Rainfall=9.25"

Area (ac)	CN	Description
0.441	93	Paved roads w/open ditches, 50% imp, HSG D
0.220		50.00% Pervious Area
0.220		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	150	0.0300	1.81		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.40"
0.7	75	0.0130	1.71		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
2.1	225	Total			

DRAINAGE AREA 1 = 7.34 CFS
DRAINAGE AREA 2 = 4.27 CFS

TOTAL CFS = 11.61 CFS

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C4.2
STORM SEWER CULVERT & SIZING CALCULATIONS

STORM SEWER LEGEND

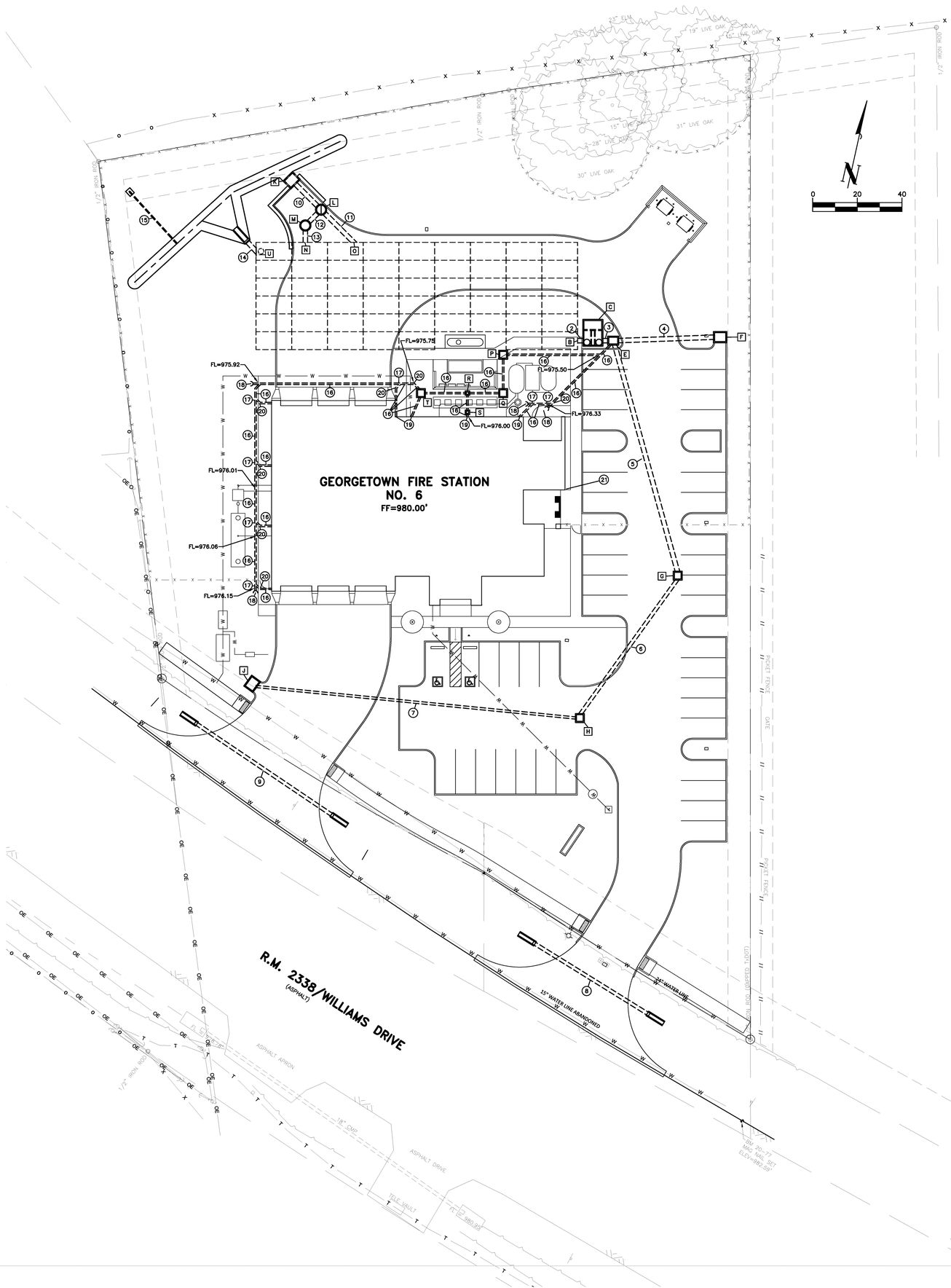
INLETS

- A NOT USED
- B MAKE CONNECTION INTO UNDERGROUND CONCRETE DETENTION BASIN FL 24" IN E=974.08
- C INSTALL CONTECH 8'x11' VAULT JELLYFISH FILTER (A1 C9.1)
- D NOT USED
- E MIN. 5'x4' JUNCTION BOX FL 8" IN SW=975.48 FL 18" IN SE=974.65 FL 18" IN E=974.65 FL 24" OUT W=974.65 (1 C8.1)
- F 5' CURB INLET FL 18" OUT W=974.77 (4 C8.1)
- G 3'x3' AREA INLET FL 18" IN SE=974.91 FL 18" OUT NW=974.91 (2 C8.1)
- H 3'x3' AREA INLET FL 12" IN W=975.61 FL 18" OUT NE=975.11 (2 C8.1)
- J 5' CURB INLET FL 12" OUT E=975.98 (4 C8.1)
- K MODIFIED 5' CURB INLET WITH 5' WIDE x 11" TALL REAR THROAT REAR THROAT FL=977.08 FL 24" OUT SE=974.37 (4 C8.1)
- L INSTALL 4' BYPASS MANHOLE FL 24" IN NW=974.23 FL 8" OUT SW=972.23 FL 24" OUT SE=974.23 (1,2 C9.2)
- M INSTALL CONTECH JELLYFISH MODEL JF4 TOTAL SUSPENDED SOLIDS FILTER (B1 C9.1)
- N MAKE CONNECTION INTO UNDERGROUND CONCRETE DETENTION BASIN FL 8" IN N=974.08
- O MAKE CONNECTION INTO UNDERGROUND CONCRETE DETENTION BASIN FL 24" IN NW=974.08
- P 30"x30" JUNCTION BOX FL 8" IN S=975.60 FL 8" OUT W=975.60 (1 C8.1)
- Q 30"x30" JUNCTION BOX FL 8" IN S=975.64 FL 8" OUT W=975.64 (1 C8.1)
- R NDS 12" SQUARE DRAIN KIT (PN 1200BLKIT), 12" SQUARE CATCH BASIN RISERS (NO BOTTOM) AS NECESSARY (PN 1216) OR APPROVED EQUAL. FL 8" IN W=975.68 FL 8" IN S=975.68 FL 8" OUT E=975.68
- S NDS 12" SQUARE DRAIN KIT (PN 1200BLKIT), 12" SQUARE CATCH BASIN RISERS (NO BOTTOM) AS NECESSARY (PN 1216) OR APPROVED EQUAL. FL 8" IN S=975.92 FL 8" OUT N=970.92
- T 30"x30" JUNCTION BOX FL 8" IN S=975.73 FL 8" OUT W=975.73 (1 C8.1)
- U MAKE CONNECTION INTO UNDERGROUND CONCRETE DETENTION BASIN AND PLACE RESTRICITOR PLATE ON INSIDE WALL OF DETENTION CHAMBER FL 24" OUT E=974.08 (7 C8.1)

PIPES

1. NOT USED
2. 3 LF OF 24" RCP STORM SEWER @ 0.33%
3. 3 LF OF 24" RCP STORM SEWER @ 0.25%
4. 44 LF OF 18" RCP STORM SEWER @ 0.25%
5. 106 LF OF 18" RCP STORM SEWER @ 0.25%
6. 75 LF OF 18" RCP STORM SEWER @ 0.25%
7. 145 LF OF 12" SCH. 40 PVC STORM SEWER @ 0.25%
8. 62 LF OF 18" RCP STORM SEWER @ 1.46% WITH 6:1 S.E.T.'s. SEE GRADING PLAN FOR FLOWLINES (6 C8.1)
9. 75 LF OF 18" RCP STORM SEWER @ 1.51% WITH 6:1 S.E.T.'s. SEE GRADING PLAN FOR FLOWLINES (6 C8.1)
10. 15 LF OF 24" RCP STORM SEWER @ 0.47%
11. 20 LF OF 24" RCP STORM SEWER @ 0.75%
12. 7 LF OF 8" SCH. 40 PVC STORM SEWER @ 0.00%
13. 6 LF OF 8" SCH. 40 PVC STORM SEWER @ 2.50%
14. 8 LF OF 24" RCP STORM SEWER @ 3.64% WITH 4:1 S.E.T. SEE GRADING PLAN FOR FLOWLINE OF S.E.T. (6 C8.1)
15. 32 LF OF 6" HDPE STORM SEWER @ 0.25% W/ 4:1 S.E.T. (6 C8.1)
16. 8" SCH. 40 PVC STORM SEWER @ MIN. 0.25% SLOPE
17. 8" SCH. 40 PVC WYE
18. 6" DOWNSPOUT CLEANOUT (5 C8.1)
19. TIE-IN TO DOWNSPOUT (1 C8.0)
20. 8" SCH. 40 PVC 45° BEND
21. INSTALL INVISAFLOW 4200 STEALTH SPOUT EXTENSION (CONTRACTOR TO DETERMINE THE NUMBER OF EXTENSIONS REQUIRED TO REACH THE FACE OF CURB)

NOTE:
SEE GRADING PLANS FOR
TOP OF INLET ELEVATIONS



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C4.3

STORM SEWER DRAINAGE PLAN

CONSTRUCT STORMWATER TREATMENT BASIN. CONTECH JELLYFISH OR APPROVED EQUAL. C9.1

C9.0 CONSTRUCT UNDERGROUND DETENTION STORAGE. OLDCASTLE STORMCAPTURE SYSTEM OR APPROVED EQUAL. PROVIDE 0.380 ACRE-FT OF STORAGE WITH 52 BASINS. EACH BASIN MEASURES 8'X16'X3'.

INSTALL RESTRICTOR PLATE. 7 C8.1

INSTALL MANWAY ADJACENT TO OUTLET FOR VISIBLE INSPECTION OF RESTRICTOR.

CONSTRUCT CONCRETE LEVEL SPREADER 4 C8.1

CONSTRUCT STORMWATER TREATMENT BASIN. CONTECH JELLYFISH OR APPROVED EQUAL. C9.1

GEORGETOWN FIRE STATION NO. 6
FF=979.00'

1/2" IRON ROD

15" LIVE OAK

31" LIVE OAK

2-28" LIVE OAKS

30" LIVE OAK

PICKET FENCE

GATE

N

0 10 20

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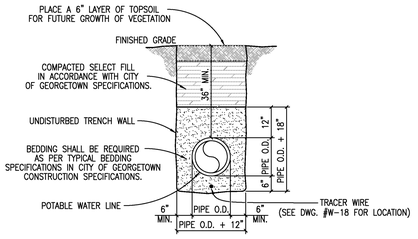
C4.4

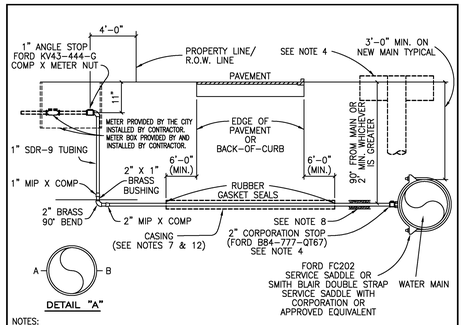
DETENTION STORAGE & TREATMENT LAYOUT



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

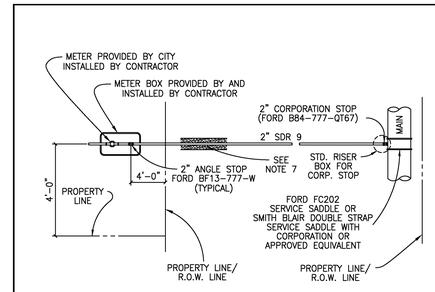
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS	DRAWING NAME: W02
	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



NOTES:
1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT THE CENTERLINE AS SHOWN ON DETAIL "A".
2. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE.
3. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
4. ROTATE THE CORPORATION STOP SO THAT THE OPERATING NUT IS ACTUATED FROM THE VERTICAL POSITION RATHER THAN THE HORIZONTAL. SEE STD. RISER FOR CORP. STOP DETAIL, (DWG # W08).
5. SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO CORPORATION STOP WITH NO FITTINGS IN BETWEEN.
6. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
7. CASING REQUIRED FOR ALL PAVEMENT CROSSINGS. 4" SDR-26 REQUIRED FOR OPEN-CUT. STEEL CASING PIPE REQUIRED FOR JACK AND BORE. LIMITS OF CASING SHOULD EXTEND SIX FEET BEYOND THE EDGE OF PAVEMENT OR BACK-OF-CURB.
8. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. METER BOX TO BE CAPABLE OF HOUSING ITRON AUTOMATIC METER READING DEVICE. USE DFW-PLASTICS, INC. PART NO. 1200.SBAMR OR APPROVED EQUAL.
11. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY. SEE DETAIL W23.
12. CASING SHALL EXTEND OUT TO WITHIN 4' INSIDE OF THE R.O.W. LINE, ON BOTH SIDES.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

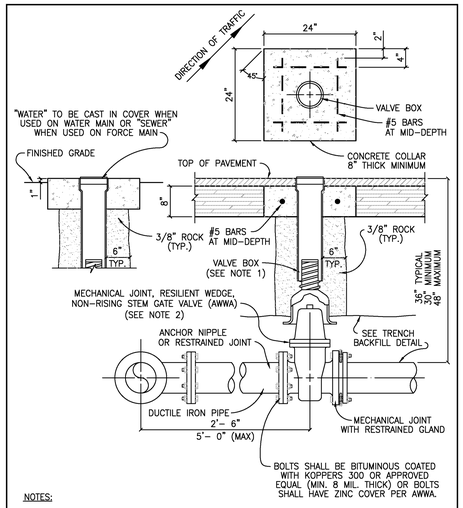
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 01/23/2013
TYPICAL WATER SERVICE-ELEVATION	DRAWING NAME: W03
	SCALE: NTS; DATE: 1/2013; DRAWN BY: --; APPROVED BY: MH



NOTES:
1. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
2. ANGLE STOP SHALL BE 1" MINIMUM.
3. 1" ANGLE STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.
4. MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER SERVICE AND SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
5. ANGLE STOPS 1 1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH A LOCKING CAP AND METER FLANGE.
6. ANGLE STOPS SHALL BE INSTALLED 8" BELOW FINISHED GRADE AND MARKED WITH A 2" X 2" X 48" TREATED WOOD STAKE, PAINTED BLUE.
7. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
8. CASING REQUIREMENTS FOR SERVICE LINES CROSSING ROADWAYS SEE DETAIL W-03 NOTE #7.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

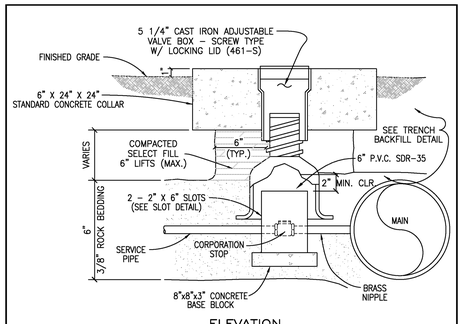
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 01/23/2013
SINGLE WATER SERVICE PLAN	DRAWING NAME: W04
	SCALE: NTS; DATE: 1/2013; DRAWN BY: --; APPROVED BY: MH



NOTES:
1. VALVE BOX SHALL BE 5 1/4" CAST IRON ADJUSTABLE HAVING AN ADJUSTABLE RANGE OF + OR – 6 INCHES FROM INSTALLED FINISH GRADE.
2. ACCEPTABLE GATE VALVES ARE:
   A. AMERICAN FLOW CONTROL – SERIES 2500
   B. MUELLER – 2360 SERIES
   C. CLOW

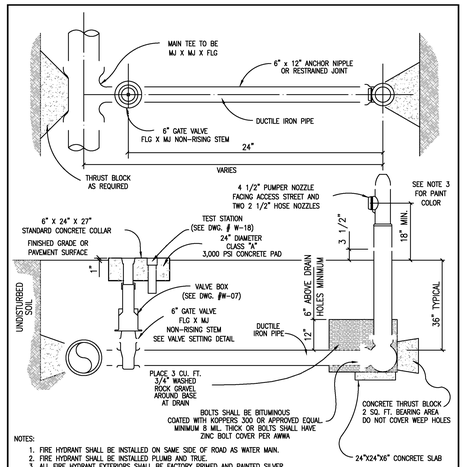
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
TYPICAL VALVE SETTING	DRAWING NAME: W07
	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



The Architect/Engineer assumes responsibility for appropriate use of this standard.

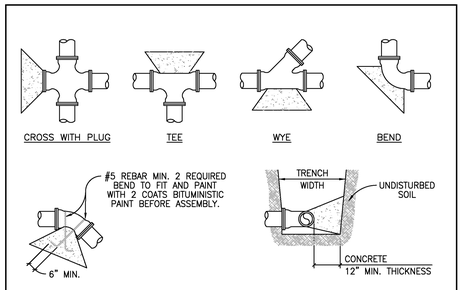
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
STANDARD RISER BOX FOR CORPORATION STOP	DRAWING NAME: W08
	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



NOTES:
1. FIRE HYDRANT SHALL BE INSTALLED ON SAME SIDE OF ROAD AS WATER MAIN.
2. FIRE HYDRANT SHALL BE INSTALLED PLUMB AND TRUE.
3. ALL FIRE HYDRANT EXTERIORS SHALL BE FACTORY PRIMED AND PAINTED SILVER
4. HEEL AND THRUST BLOCKS TO REST IN UNDISTURBED SOIL.
5. THE ONLY FIRE HYDRANTS ACCEPTABLE ARE:
   A. KENNEDY – K81
   B. AMERICAN DARLING – B84B
   C. CLOW MEDALLION
6. DOUBLE BLUE REFLECTOR "HYE-LITES" BRAND, MANUFACTURED BY PAVEMENT MARKERS INC. TO BE INSTALLED AT CENTERLINE OF STREET PERPENDICULAR TO HYDRANT.
7. ALL METALLIC PIPES AND FITTINGS SHALL BE WRAPPED WITH 8 MILL. POLYETHELENE FILM.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
TYPICAL FIRE HYDRANT INSTALLATION	DRAWING NAME: W10
	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



*DEADMAN
TYPICAL SECTION

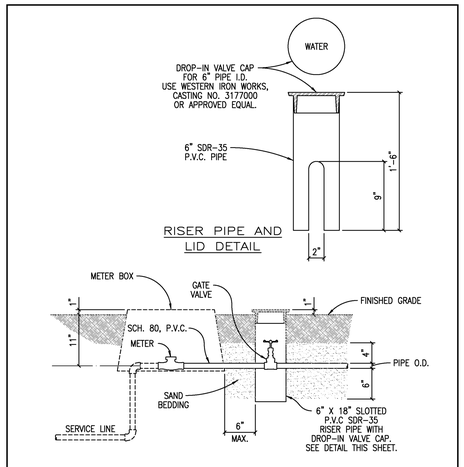
ALL THRUST BLOCKS SHALL BE FORMED. LAID FORMS SHALL BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO THE POURING OF CONCRETE AND SHALL ALSO BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO COVERING. TYPICAL LOCATIONS WHICH REQUIRE CONCRETE REACTION (THRUST) BLOCKS, FOR PRESSURE MAINS FOUR INCHES (4") AND GREATER. CONCRETE SHALL HAVE 2,500 P.S.I. MINIMUM STRENGTH AT TWENTY EIGHT (28) DAYS AND BEAR AGAINST UNDISTURBED STABLE SOILS, AREA OF CONTACT SHALL BE GOVERNED BY PIPE SIZE, MAXIMUM PRESSURE IN PIPE, AND BEARING CAPACITY OF SOIL. PROTECT FITTINGS, BOLTS, ETC. BY COVERING WITH VISQUEEN OR OTHER ACCEPTABLE MATERIAL. CONCRETE SHALL BE A MINIMUM OF TWELVE INCHES (12") THICK.

PIPE SIZE	THRUST BLOCK AREA REQUIRED	PIPE SIZE	THRUST BLOCK AREA REQUIRED	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	VALUES ARE FOR 90° BENDS, BASED ON 2000 P.S.F. SAFE BEARING LOAD AND PIPE PRESSURE OF 150 P.S.I. PLUS 33% SAFETY FACTOR FOR OTHER SOILS AND PRESSURES, THE AREA REQUIRED IS IN DIRECT PROPORTION.
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	
8"	6.6 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.0 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

* THE ENGINEER OF RECORD SHALL CALCULATE THE SIZE OF THE DEADMAN REQUIRED AS WELL AS ANY INSTALLATION WHICH IS NOT COVERED BY THE ABOVE.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
TYPICAL THRUST BLOCKS FOR WATER AND FORCE MAIN	DRAWING NAME: W11
	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



NOTES:
1. GATE VALVE SHALL BE A HAMMOND IB645, CLASS 125, BRONZE GATE, SCREWED BONNET, NON-RISING STEM, SOLID WEDGE DISC WITH THREADED ENDS OR APPROVED EQUAL.
2. DROP-IN VALVE CAP SHALL BE CAST WITH THE WORD "WATER" ON TOP.
3. USE SCHEDULE 80, M.I.P. ADAPTER AS REQUIRED.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	REVISION NOTE: ADOPTED 6/21/2006
CUSTOMER'S CUT-OFF	DRAWING NAME: W20
	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

NOTE:
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STRAND JOB # 3935.034

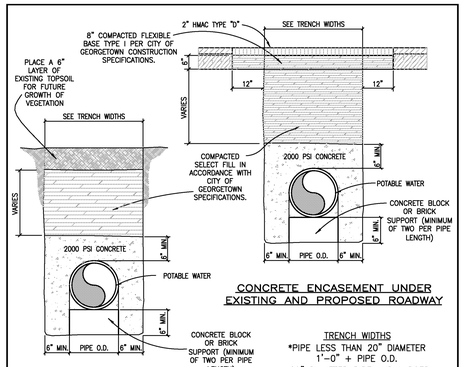
DATE 5/14/2018
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

NO.	REVISION	DATE

C5.0

WATER DETAILS I



CONCRETE ENCASEMENT UNDER EXISTING AND PROPOSED ROADWAY

CONCRETE ENCASEMENT UNDER NATURAL GROUND

TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

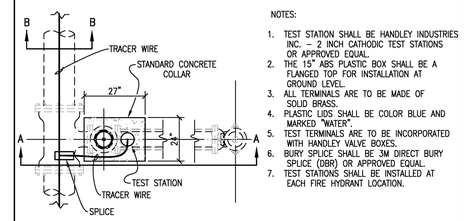
NOTES:
1. ENCASEMENT TO BE CONSTRUCTED WHERE SEWER LINES PASS OVER OR UNDER A WATER MAIN WITH LESS THAN TWELVE INCHES (12") CLEAR DISTANCE.
2. AT CROSSINGS, ENCASEMENT SHALL EXTEND TEN FEET (10'-0") ON EITHER SIDE OF CROSSING.
3. BEGINNING AND ENDING OF ENCASEMENTS SHALL NOT BE MORE THAN SIX INCHES (6") FROM A PIPE JOINT.
4. WHERE WATER AND SEWER LINES PARALLEL WITH LESS THAN TEN FEET (10'-0") HORIZONTAL CLEAR DISTANCE, NO ENCASEMENT IS REQUIRED IF BOTH LINES ARE 150 PSI PRESSURE PIPE.
5. RAW WATER MAINS SHALL BE 150 PSI PRESSURE RATED WHEN PARALLELING POTABLE WATER MAINS WITH LESS THAN NINE FEET (9'-0") HORIZONTAL CLEARANCE.
6. WHERE MINIMUM COVER, THIRTY SIX INCHES (36") IS NOT AVAILABLE, ENCASEMENT WILL BE REQUIRED.
7. ALL CONCRETE ENCASEMENTS MUST BE FORMED AND INSPECTED BY THE CITY OF GEORGETOWN INSPECTOR PRIOR TO PLACING CONCRETE AND BACKFILLING.
8. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE:	ADOPTED 6/21/2006
DRAWING NAME:	W15

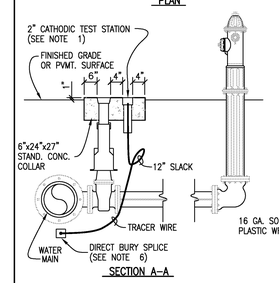
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CONCRETE ENCASEMENT DETAIL

SCALE	DATE
NTS	1/2003
DRAWN BY	APPROVED BY
MRS	TRB

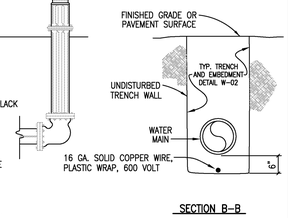


PLAN

NOTES:
1. TEST STATION SHALL BE HANDLEY INDUSTRIES INC. – 2 INCH CATHODIC TEST STATIONS OR APPROVED EQUAL.
2. THE 15" ABS PLASTIC BOX SHALL BE A FLANGED TOP FOR INSTALLATION AT GROUND LEVEL.
3. ALL TERMINALS ARE TO BE MADE OF SOLID BRASS.
4. PLASTIC LIDS SHALL BE COLOR BLUE AND MARKED "WATER".
5. TEST TERMINALS ARE TO BE INCORPORATED WITH HANDLEY VALVE BOXES.
6. BURY SPLICE SHALL BE 3M DIRECT BURY SPLICE (DBR) OR APPROVED EQUAL.
7. TEST STATIONS SHALL BE INSTALLED AT EACH FIRE HYDRANT LOCATION.



SECTION A–A



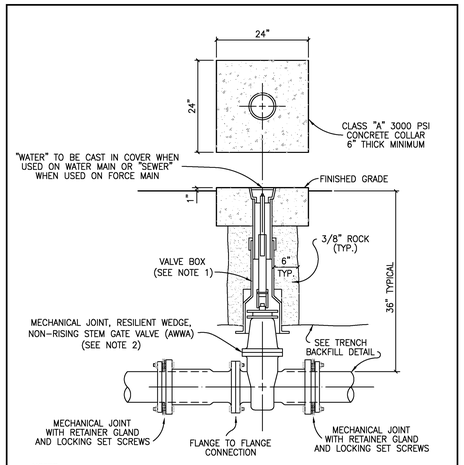
SECTION B–B

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE:	ADOPTED 6/21/2006
DRAWING NAME:	W18

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRACER WIRE INSTALLATION AND TEST STATION LOCATION

SCALE	DATE
NTS	1/2003
DRAWN BY	APPROVED BY
MRS	TRB



NOTES:

1. SEE VALVE SETTING DETAIL, DWG. #W-07.
2. ACCEPTABLE GATE VALVES ARE:
   A. MUELLER – 2360 SERIES
   B. CLOW

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE:	ADOPTED 6/21/2006
DRAWING NAME:	W21

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
INLINE VALVE INSTALLATION

SCALE	DATE
NTS	1/2003
DRAWN BY	APPROVED BY
MRS	TRB

NOTE:
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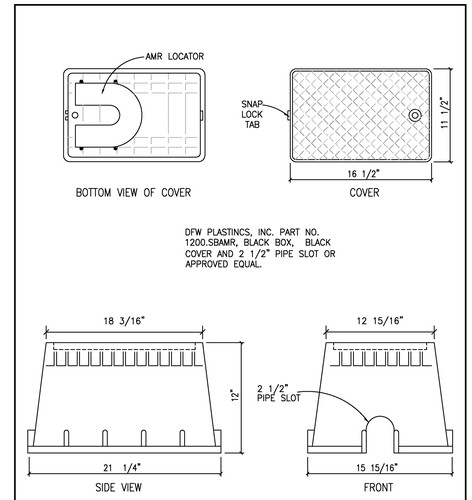

DFW PLASTINCS, INC. PART NO. 1200.SBAMR, BLACK BOX, BLACK COVER AND 2 1/2" PIPE SLOT OR APPROVED EQUAL.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE:	ADOPTED 6/21/2006
DRAWING NAME:	W23

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
METER BOX (NON-TRAFFIC AREAS)

SCALE	DATE
NTS	1/2003
DRAWN BY	APPROVED BY
MRS	TRB

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11/16/18

STRAND ASSOCIATES®

STRAND JOB # 3935.034

DATE 5/14/2018
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

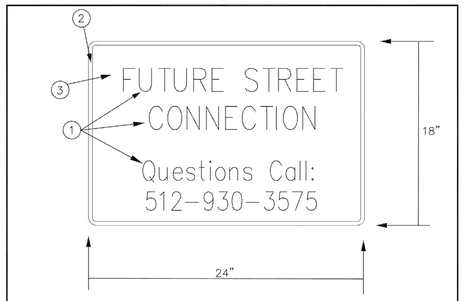
CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION	DATE

C5.1

WATER DETAILS II

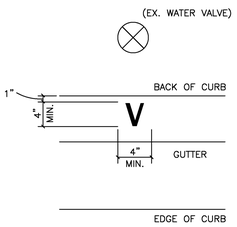
NOTE:
ALL APPLICABLE GEORGETOWN STANDARD DETAILS ARE NOT NECESSARILY INCLUDED HEREIN. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING A COMPLETE COPY OF THE CITY OF GEORGETOWN'S UNIFIED DEVELOPMENT CODE AND APPLICABLE CITY STANDARD DETAILS.



NOTES:
1. (3") WHITE LETTERS
2. (1 3/8") WHITE BORDER
3. REFLECTIVE SILVER SHEETING .080 ALUMINUM 2290, BLUE PAINT 710, 3M CO. OR APPROVED EQUIVALENT.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS FUTURE ROAD EXTENSION SIGN DETAIL	REVISION NOTE: DRAWING NAME: SD-21A SCALE: NTS DATE: 9/2017 DRAWN BY: TP APPROVED BY: CG



PLAN VIEW
(TYPICAL)

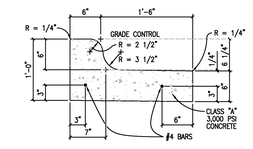
NOTES:
1. ALL WATER SERVICE, WASTE WATER SERVICE AND VALVE LOCATIONS SHALL BE APPROXIMATLEY MARKED AS FOLLOWS:

WATER SERVICE	"W"	TOP OF CURB
WASTE WATER SERVICE	"S"	TOP OF CURB
VALVE	"V"	TOP OF CURB

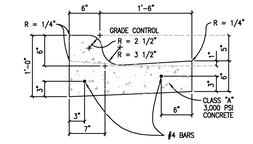
2. LETTERS SHALL HAVE A 1/2" MAX. WIDTH.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

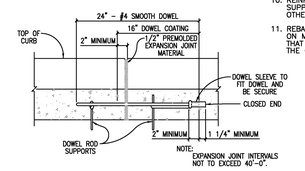
	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS CURB STAMP DETAIL	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NAME: SD05 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB



SPILL CURB



CATCH AND LAYDOWN CURB

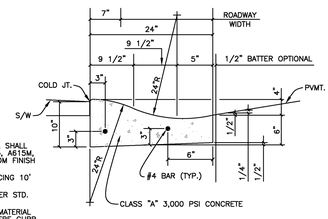


CURB DOWEL DETAIL

NOTES:
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR THE CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. THE FOLLOWING SCHEME OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACEMENT AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
   A. ALL CURB AND CURB AND GUTTER (REINFORCED) SHALL HAVE TWO #4 LONGITUDINAL REINFORCING BARS.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THAT REBAR IS PROPERLY GUIDED INTO THE CURB SECTION.

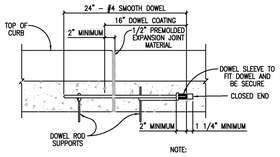
The Architect/Engineer assumes responsibility for appropriate use of this standard.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS CURB AND GUTTER DETAILS	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NAME: SD06 SCALE: NTS DATE: DRAWN BY: MRS APPROVED BY: TRB



MOUNTABLE CURB

NOTES:
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR TH CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. ONE OF THE FOLLOWING SCHEMES OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACEMENT AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
   A. CURB AND GUTTER (REINFORCED) SHALL HAVE LONGITUDINAL REINFORCING BARS AS FOLLOWS: THREE #4.
   B. ALL TYPES OF CURB (REINFORCED) SHALL HAVE #4 BAR FOR LONGITUDINAL REINFORCEMENT.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THAT REBAR IS PROPERLY GUIDED INTO THE CURB SECTION.

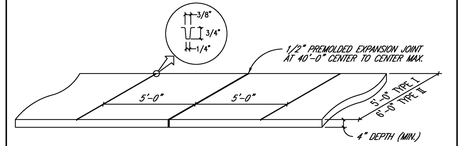


NOTE:
EXPANSION JOINT INTERVALS NOT TO EXCEED 40'-0".

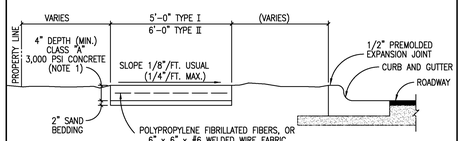
CURB DOWEL DETAIL

The Architect/Engineer assumes responsibility for appropriate use of this standard.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS MOUNTABLE CURB AND GUTTER DETAILS	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NAME: SD07 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB



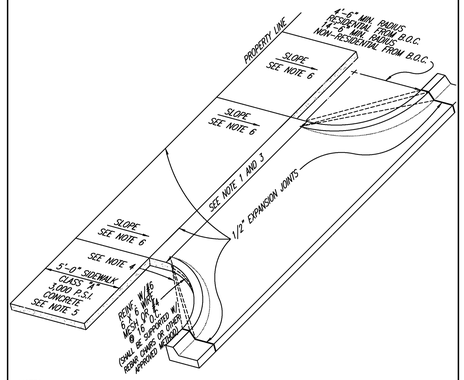
TYPE I – AS REQUIRED FOR SINGLE FAMILY, DUPLEXES AND TOWNHOUSES, TRIPLEXES AND QUADRAPLEXES.
TYPE II – AS REQUIRED FOR MULTI-FAMILY, OTHER NON-RESIDENTIAL USES AND PARKING LOTS/STRUCTURES.
ALL THOROUGHFARES (COLLECTOR AND ABOVE) REQUIRE TYPE II.



NOTES:
1. STANDARD LOCATION OF SIDEWALK SHALL BE IN CONFORMANCE WITH THE UDC.
2. SIDEWALK SHALL CONFORM TO CURRENT TDLR/TAS STANDARDS.
3. ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND ENGINEER OF RECORD.
4. ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT SHALL BE APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND BY THE CITY ENGINEER.
5. SLIP DOWEL SHALL BE INSTALLED AT EVERY LONGITUDINAL EXPANSION JOINT (UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER DURING ENGINEERING PLAN REVIEW PRIOR TO FINAL DESIGN).

The Architect/Engineer assumes responsibility for appropriate use of this standard.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS SIDEWALK SECTION AND JOINT DETAIL	REVISION NOTE: REVISED 6/25/2015 WBD REVISED NOTE: ADOPTED 6/21/2006 TRB DRAWING NAME: SD14 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB



NOTES:
1. MAXIMUM WIDTH OF APPROACH SHALL BE 24'–0" FOR RESIDENTIAL, 30'–0" FOR NON–RESIDENTIAL UNDIVIDED AND 45'–0" FOR NON–RESIDENTIAL DIVIDED.
2. DRIVEWAY PERMITS SHALL BE ACQUIRED FROM CITY INSPECTION OFFICE.
3. MINIMUM WIDTH OF APPROACH SHALL BE 10'–0" FOR RESIDENTIAL AND 15'–0" FOR NON–RESIDENTIAL.
4. LINEAR "RADIUS" AT CORNERS, PERMITTED FOR "SINGLE FAMILY" OR "TWO FAMILY" RESIDENTIAL DRIVEWAY APPROACH.
5. SIDEWALK LOCATION SHALL BE APPROVED BY CITY ENGINEER PRIOR TO FINAL DESIGN.
6. SLOPE 1/8" PER FOOT USUAL, SHALL NOT EXCEED 2.0%.
7. DRIVEWAY APPROACH THICKNESS SHALL BE A MIN. OF 6".

The Architect/Engineer assumes responsibility for appropriate use of this standard.

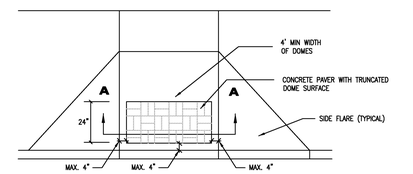
	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS CONCRETE DRIVEWAY APPROACH TYPICAL	REVISION NOTE: REVISED 6/25/2015 WBD REVISED NOTE: ADOPTED 6/21/2006 TRB DRAWING NAME: SD15 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.

NOTES:
1. COMMERCIAL SIDEWALKS WIDTHS – 6'
   RESIDENTIAL SIDEWALKS WIDTHS – 5'
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. FLATTER SLOPES THAT WILL STILL DRAIN PROPERLY ARE ENCOURAGED.
3. ALL CONCRETE SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
4. FOR PURPOSES OF WARNING, THE CURB RAMPS SHALL HAVE A LIGHT REFLECTIVE VALUE AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES.
5. TEXTURES MAY CONSIST OF PAVERS WITH TRUNCATED DOMED SURFACES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
6. COLOR CONTRAST, FOR EXAMPLE, MAY BE ACCOMPLISHED WITH COLORED CONCRETE PAVERS THAT HAVE TRUNCATED DOMES WHICH WOULD PROVIDE A CONTRAST WITH TYPICALLY LIGHT COLORED CONCRETE.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, VISIBILITY AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
8. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS IF THEY ARE UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. MEDIAN CROSSING SHALL BE A MINIMUM OF 5' WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR TROUGH THEM.
9. ALL SIDEWALK PLANS AND DETAILS SHALL BE SUBMITTED AND APPROVED BY "REGISTERED ACCESSIBILITY SPECIALIST" (RAS).
10. ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GRATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP. IF A RAMP HAS A RISE GREATER THAN 6 INCHES OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL MEET THE REQUIREMENTS OF A RAMP PER TAS 405.THE ONLY EXCEPTION IS AT CURB RAMPS. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHERE EVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
11. TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SHALL BE PLACED SO NOT TO OBSTRUCT THE ACCESSIBLE ROUTE OR ACT PROTRUDING OBJECTS.
12. ALL SIDEWALKS SHALL BE DOWELED INTO EXISTING SIDEWALKS, DRIVEWALKS, DRIVEWAYS, INLET BOXES, RETAINING WALLS, ETC.
13. ALL SIDEWALK CROSS-SLOPES SHALL NOT EXCEED 1:50, UNLESS A VARIANCE IS PROVIDED BY TDLR.

(PENETRATES) A CURB.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS PEDESTRIAN RAMPS GENERAL NOTES	REVISION NOTE: REVISED 6/25/2015 WBD REVISED NOTE: ADOPTED 6/21/2006 TRB DRAWING NAME: SD28 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB



TRUNCATED DOME PATTERN CURB RAMP

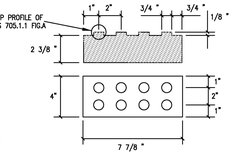
GENERAL NOTES

CONCRETE PAVER UNITS SHALL MEET ALL REQUIREMENTS OF ASTM C-936, C-33, AND SHALL BE LAID IN A TWO BY TWO UNIT BASKET WEAVE PATTERN, UNLESS SHOWN OTHERWISE IN THE PLANS.

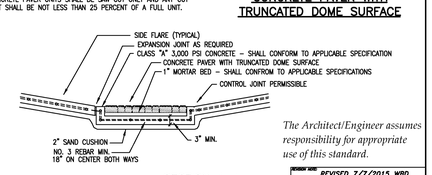
CONCRETE PAVER UNIT SHALL HAVE A TRUNCATED DOME TOP SURFACE FOR DETECTABLE WARNING TO PEDESTRIANS.

CONCRETE PAVER UNIT COLOR FOR THE RAMP SHALL BE A CONTRASTING COLOR TO THE ADJACENT SURFACES. THE COLOR OF THE CONCRETE PAVER UNITS SHALL BE SHOWN ELSEWHERE IN THE PLANS. (ADJACENT SURFACES INCLUDE SIDE FLARES).

CONCRETE PAVER UNITS SHALL BE SAW CUT ONLY AND ANY CUT UNIT SHALL BE NOT LESS THAN 25 PERCENT OF A FULL UNIT.



CONCRETE PAVER WITH TRUNCATED DOME SURFACE



SECTION A–A

The Architect/Engineer assumes responsibility for appropriate use of this standard.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS CURB RAMP TEXTURES TYPE A	REVISION NOTE: REVISED 7/7/2015 WBD REVISED NOTE: REVISED 5/14/2014 WBD REVISED NOTE: ADOPTED 6/21/2006 TRB DRAWING NAME: SD37 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS/AP APPROVED BY: TRB

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STRAND JOB # 3935.034

DATE 5/14/2018
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

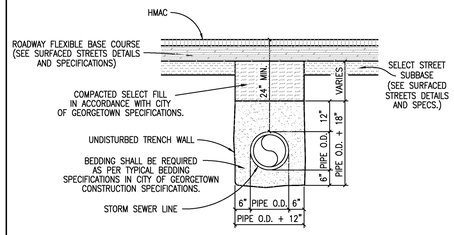
CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION	DATE

C6.0

STREET & ROADWAY DETAILS I

NOTE:
ALL APPLICABLE GEORGETOWN STANDARD DETAILS ARE NOT NECESSARILY INCLUDED HEREIN. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING A COMPLETE COPY OF THE CITY OF GEORGETOWN'S UNIFIED DEVELOPMENT CODE AND APPLICABLE CITY STANDARD DETAILS.



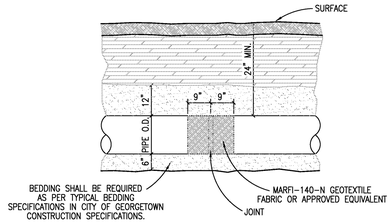
NOTES:

1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

GEORGETOWN TEXAS	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY FOR STORM SEWER	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NUMBER: SD41 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB

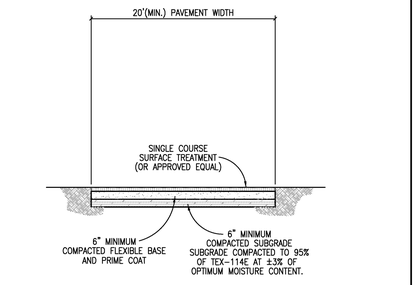


NOTES

1. PIPE SHALL BE REINFORCED CONCRETE PIPE CLASS III UNLESS THE DEPTH OF PIPE REQUIRES A STRONGER CLASS.
2. ALL FITTINGS AND WYES SHALL BE MANUFACTURED AND NOT CONSTRUCTED ON THE PROJECT WITHOUT PRIOR APPROVAL FROM THE CITY.
3. ALL JOINTS SHALL BE WRAPPED WITH MARFI-140-N GEOTEXTILE FABRIC OR APPROVED EQUIVALENT. EACH JOINT SHALL BE WRAPPED WITH 18" WIDE FABRIC CENTERED ON THE JOINT.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

GEORGETOWN TEXAS	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS TRENCH AND EMBEDMENT DETAIL (PROFILE) FOR STORM SEWER	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NUMBER: SD42 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB



NOTES:

1. EVERY BUILDING CONSTRUCTED SHALL BE ACCESSIBLE TO EMERGENCY APPARATUS BY WAY OF TEMPORARY ALL WEATHER DRIVING SURFACES.
2. A TEMPORARY ALL WEATHER DRIVING SURFACE SHALL EXTEND TO WITHIN 150' OF ALL EXTERIOR PORTIONS OF BUILDINGS.
3. TEMPORARY ALL WEATHER DRIVING SURFACES SHALL BE CONSTRUCTED AS SHOWN ON CONSTRUCTION PLANS AND IN ACCORDANCE WITH ITEM 316 SURFACE TREATMENTS OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES.
4. TEMPORARY ALL WEATHER DRIVING SURFACES SHALL BE CAPABLE OF SUPPORTING A DESIGN WHEEL LOAD OF 16,000 LB. (H-20 LOADING) IN ORDER TO SUPPORT A GROSS VEHICLE WEIGHT OF 80,000 LB. IF SUBGRADE CONDITIONS CHANGE OR ARE VERY UNSTABLE, AN ADDITIONAL GEOTECHNICAL AND/OR ENGINEERING DESIGN MAY REQUIRE A GREATER CROSS SECTION.
5. CONTRACTOR OR DEVELOPER SHALL MAINTAIN TEMPORARY ALL WEATHER DRIVING SURFACE THROUGHOUT CONSTRUCTION.
6. APPLICABLE SIGNAGE SHALL BE INSTALLED BY THE CONTRACTOR TO DISALLOW PARKING (NO PARKING – FIRE LANE).
7. TEMPORARY ALL WEATHER DRIVING SURFACES SHALL BE INSTALLED PRIOR TO THE ERECTION OF ANY STRUCTURAL FRAMING ABOVE THE FOUNDATION SLAB. CONTACT FIRE SERVICES FOR THE COORDINATION OF TEMPORARY ALL WEATHER DRIVING SURFACES FOR CONSTRUCTION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

GEORGETOWN TEXAS	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS TEMPORARY ALL WEATHER DRIVING SURFACE	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NUMBER: SD43 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB

NOTES:

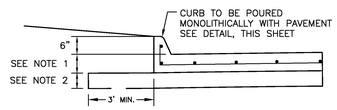
1. PARKING AREA PAVEMENT– 5" THICK CONCRETE (MINIMUM 28–DAY STRENGTH OF 3,500 P.S.I.) WITH NO. 3 BARS @ 18" O.C.E.W.

   DRIVEWAYS AND TRUCK TRAFFIC PAVEMENT – 7" THICK CONCRETE (MINIMUM 28–DAY STRENGTH OF 3,500 P.S.I.) WITH NO. 3 BARS @ 18" O.C.E.W.

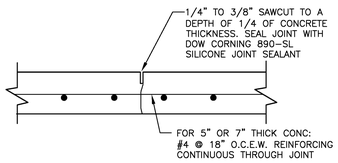
2. MOISTURE CONDITIONED SUBGRADE.

   PI≤
   SOIL SUBGRADE SHOULD BE SCARIFIED TO A DEPTH OF 6", MOISTURE CONDITIONED AND RECOMPACTED TO A MINIMUM 95% PER ASTM D 698 WITHIN +/–3%.

   PI>
   SOIL SUBGRADE SHOULD BE SCARIFIED TO A DEPTH OF 6", MOISTURE CONDITIONED AND RECOMPACTED TO A MINIMUM 95% PER ASTM D 698 WITHIN OPTIMUM +4%.

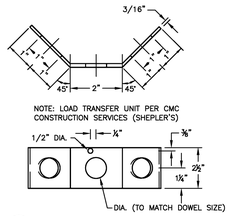


1 CONCRETE PAVEMENT SECTION

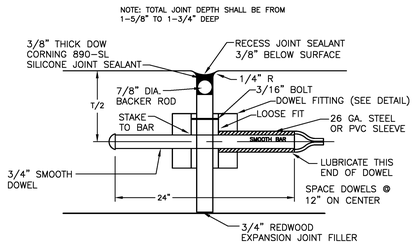


3 SAW CUT CONTRACTION JOINT
NTS

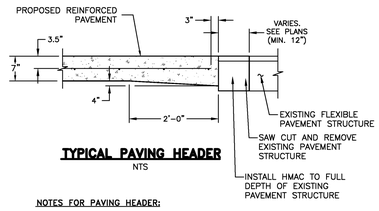
NOTE: SAWED JOINTS SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE WITHOUT DAMAGE TO THE PAVEMENT REGARDLESS OF TIME OF DAY OR WEATHER CONDITIONS AND SHALL BE COMPLETED WITHIN 24 HOURS OF CONCRETE PLACEMENT.



2 DOWEL FITTING



4 DOWEL TYPE EXPANSION JOINT IN CONCRETE PAVEMENT
NTS

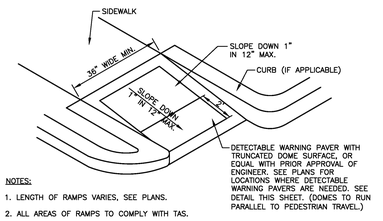


TYPICAL PAVING HEADER
NTS

NOTES FOR PAVING HEADER:

1. ADDITIONAL CONCRETE FOR PAVING HEADER SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAVING BID ITEMS.
2. DISTURBED MATERIAL IN THE FLEXIBLE PAVEMENT WILL BE BACKFILLED WITH ASPHALT CONCRETE PAVEMENT (ACP). THE ACP WILL BE CONSIDERED INCIDENTAL TO VARIOUS PAVING BID ITEMS.

5 CONCRETE HEADER DETAIL
NTS



NOTES:

1. LENGTH OF RAMPS VARIES, SEE PLANS.
2. ALL AREAS OF RAMPS TO COMPLY WITH TAS.

6 HANDICAP CURB RAMP
NTS

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STRAND ASSOCIATES®
STRAND JOB # 3935.034

DATE 5/14/2018
DRAWN BY Author
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CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
4700 R.M. 2338
GEORGETOWN, TX. 78626

NO.	REVISION	DATE

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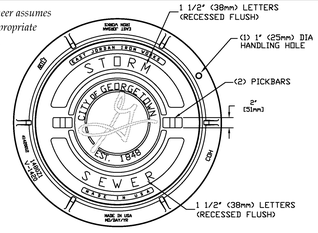
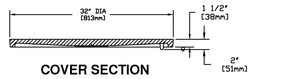
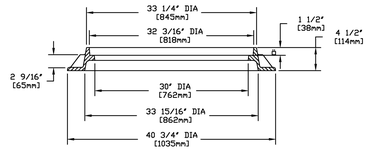
STREET & ROADWAY DETAILS II

The Architect/Engineer assumes responsibility for appropriate use of this standard.





COVER SECTION



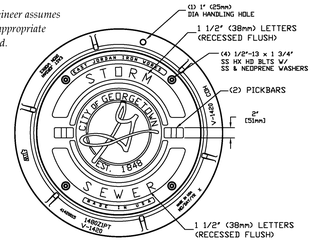
FRAME SECTION

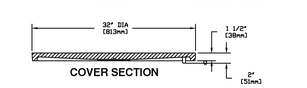
NOTES:

1. STANDARD STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420\1480Z1, COVER TO BE STAMPED WITH "STORM SEWER".
2. STANDARD STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148391.
4. FOR BOLTED STORM SEWER MANHOLE SET REFER TO DETAIL SD11A.

		REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS Georgetown Utility Systems	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS **STANDARD STORM SEWER MANHOLE SET**	DRAWING NAME: SD11 SCALE: NTS; DATE: 1/2003 DRAWN BY: MRS; APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.





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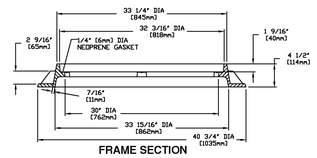
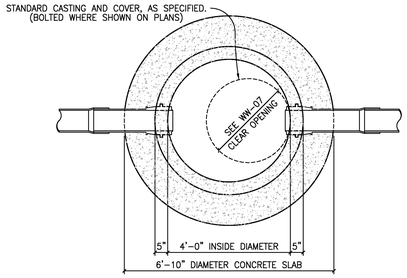


FRAME SECTION

NOTES:

1. BOLTED STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480APT V-1420\1480Z1PT. COVER TO BE STAMPED WITH "STORM SEWER"
2. BOLTED STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 00148393 41420015.
4. FOR STANDARD STORM SEWER MANHOLE SET REFER TO DETAIL SD11.

		REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS Georgetown Utility Systems	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS **BOLTED STORM SEWER MANHOLE SET**	DRAWING NAME: SD11A SCALE: NTS; DATE: 1/2006 DRAWN BY: MRS; APPROVED BY: TRB



MANHOLE PLAN

CITY OF GEORGETOWN NOTES:

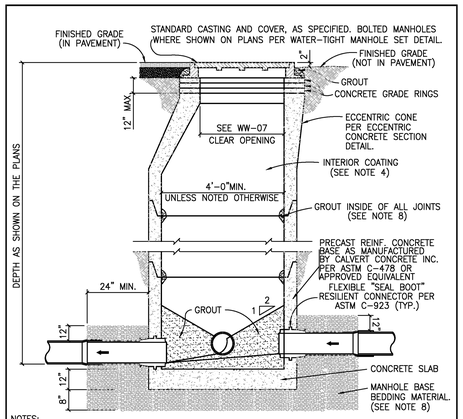
MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

A. ALL MANHOLES SHALL BE 48" I.D., R.C.P., CLASS III, WITH RUBBER O-RING GASKET JOINTS CONFORMING TO ASTM C478, C433 AND C76.
B. ALL MANHOLES SHALL HAVE FRAME AND COVER, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL # WW-07) OR APPROVED EQUIVALENT.
C. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
D. ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE.
E. MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF GEORGETOWN, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURED BY CALVERT CONCRETE OR APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING, AND O-RING JOINT CONFORMING TO ASTM C443.
F. INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C-923, SHALL BE CAST INTO BASE SECTION.
G. MINIMUM DROP BETWEEN INVERTS SHALL BE ONE-TENTH OF A FOOT (0.1').
H. GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING WITH A MAXIMUM OF FIVE (5) GRADE RINGS ARE ALLOWED.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

		REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS Georgetown Utility Systems	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS **STANDARD STORM SEWER MANHOLE PLAN**	DRAWING NAME: SD12 SCALE: NTS; DATE: 1/2003 DRAWN BY: MRS; APPROVED BY: TRB

NOTE:
ALL APPLICABLE GEORGETOWN STANDARD DETAILS ARE NOT NECESSARILY INCLUDED HEREIN. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING A COMPLETE COPY OF THE CITY OF GEORGETOWN'S UNIFIED DEVELOPMENT CODE AND APPLICABLE CITY STANDARD DETAILS.

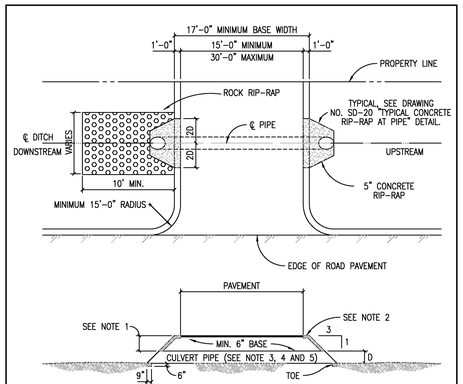


NOTES:

1. MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET - SINGLE OFF-SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL TO BE APPLIED TO ENTIRE INTERIOR OF EACH STORM SEWER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
8. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:
   SIEVE SIZE 2", PERCENT (%) RETAINED 0
   SIEVE SIZE 1 1/2", % RETAINED 0-10
   SIEVE SIZE 1", % RETAINED 45-80
   SIEVE SIZE 3/4", % RETAINED 85-100
   SIEVE SIZE 3/8", % RETAINED 95-100

The Architect/Engineer assumes responsibility for appropriate use of this standard.

		REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS Georgetown Utility Systems	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS **STANDARD STORM SEWER MANHOLE - SECTION**	DRAWING NAME: SD13 SCALE: NTS; DATE: 1/2003 DRAWN BY: MRS; APPROVED BY: TRB

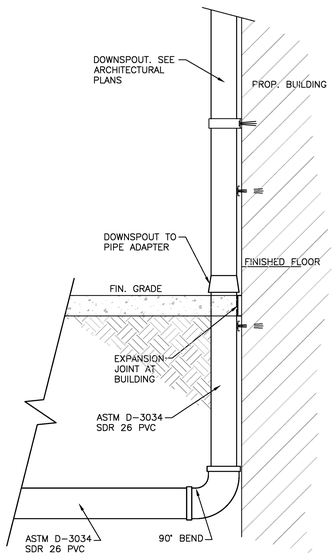


NOTES:

1. MINIMUM COVER OVER CULVERT PIPE SHALL BE 6" (SEE NOTE 5).
2. 5" CONCRETE RIP-RAP SHALL BE INSTALLED.
3. CULVERT PIPE TO BE MINIMUM OF 12" DIAMETER.
4. CULVERT PIPE MATERIAL TO BE R.C.P. (CLASS III), UNLESS PRIOR APPROVAL IS GRANTED BY THE CITY OF GEORGETOWN.
5. MINIMUM COVER OVER CULVERT PIPE SHALL PROVIDE H20 LOADING.
6. BACKFILL AROUND CULVERT PIPE SHALL BE SELECT MATERIAL TO BE PLACED AND COMPACTED TO 95% TEX-114E.
7. ROCK RIP-RAP SHALL SHALL EXTEND 10' FROM THE DOWN STREAM SIDE USING THE AVERAGE STONE SIZE DIA. OF 8" AT A DEPTH OF 16" (MINIMUM).
8. MINIMUM CHANNEL SIDE SLOPE SHALL BE 4:1.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

		REVISION NOTE: ADOPTED 6/21/2006
GEORGETOWN TEXAS Georgetown Utility Systems	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS **RURAL NON-RESIDENTIAL UNDIVIDED DRIVEWAY APPROACH WITH CULVERT PIPE**	DRAWING NAME: SD18 SCALE: NTS; DATE: 1/2003 DRAWN BY: MRS; APPROVED BY: TRB



1 DOWNSPOUT CONNECTION
NTS

BROWN REYNOLDS WATFORD ARCHITECTS
2700 EARL RUDDER FRWY SOUTH
SUITE 4000
COLLEGE STATION, TEXAS 77845
979.694.1791
WWW.BRWARCH.COM

ROBERT C. SCHMIDT
50465
REGISTERED
PROFESSIONAL ENGINEER
STATE OF TEXAS
11/16/18

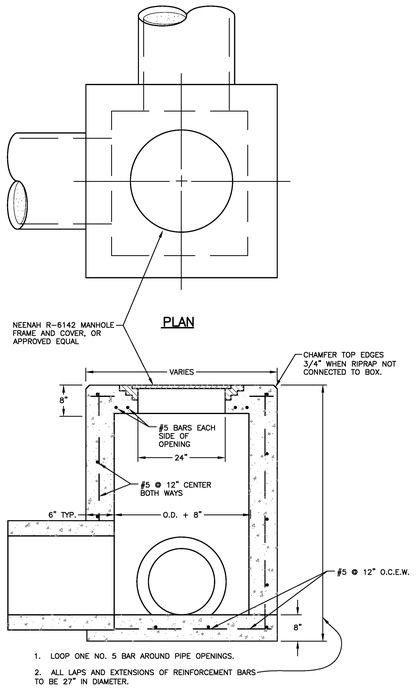
STRAND ASSOCIATES®
STRAND JOB # 3935.034

DATE 5/14/2018
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

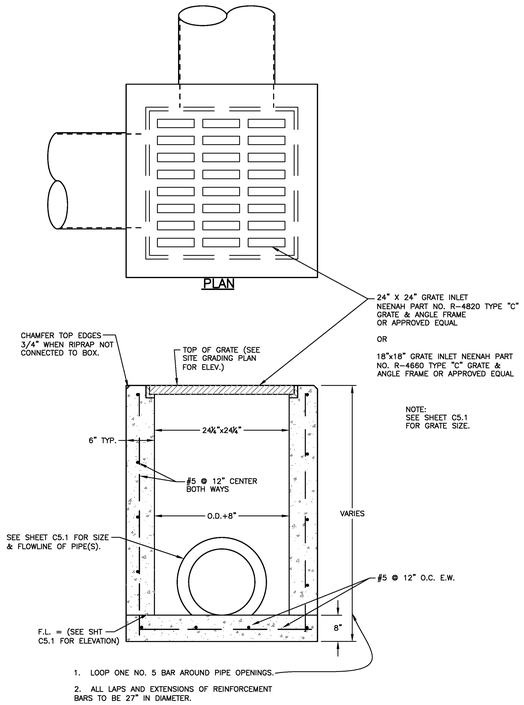
CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
4700 R.M. 2338
GEORGETOWN, TX. 78626

NO.	REVISION	DATE

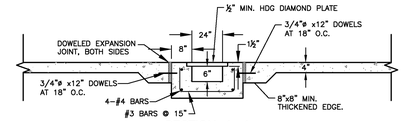
C8.0
DRAINAGE DETAILS I



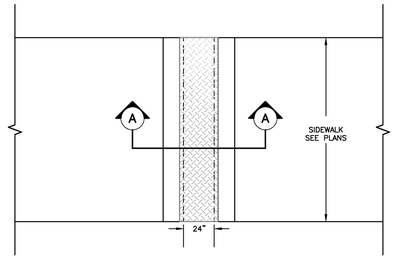
SECTION
1 JUNCTION BOX
NTS



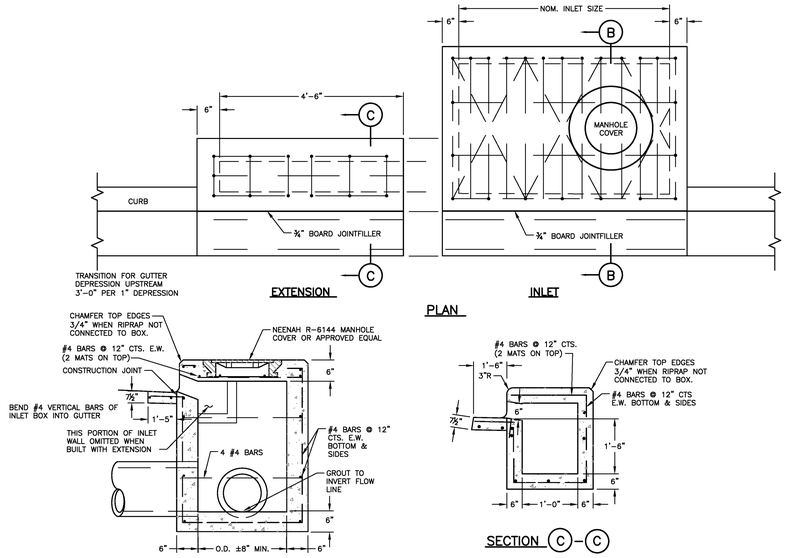
SECTION
2 TYPICAL AREA INLET
NTS



SECTION A–A

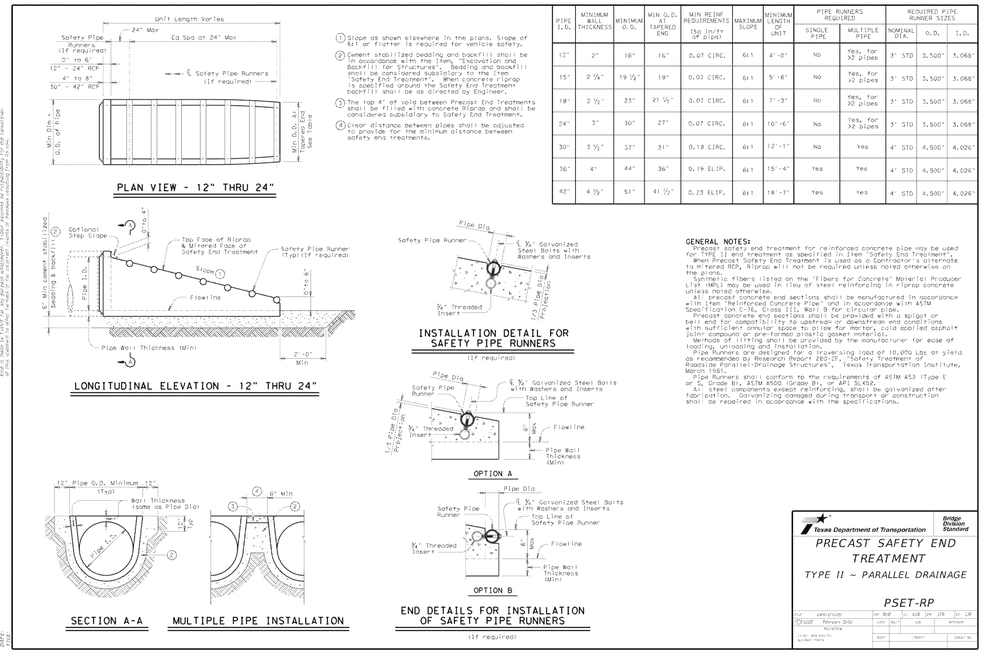


3 PLATED TRENCH SIDEWALK DRAIN
NTS



4 TYPICAL CURB INLET

PIPE I.D.	MINIMUM WALL THICKNESS	MINIMUM O.D.	MIN O.D. AT TAPERED END	MIN REINF REQUIREMENTS (sq. inch/ft of pipe)	MAXIMUM SLOPE	MINIMUM LENGTH OF UNIT	PIPE RUNNERS REQUIRED		REQUIRED PIPE RUNNER SIZES		
							SINGLE PIPE	MULTIPLE PIPE	NOMINAL DIA.	O.D.	I.D.
12"	2"	16"	14"	0.07 CIRC.	6:1	4'-0"	No	Yes, for 32 pipes	3" STD	3.500"	3.068"
15"	2 ¼"	19 ½"	19"	0.07 CIRC.	6:1	5'-8"	No	Yes, for 32 pipes	3" STD	3.500"	3.068"
18"	2 ½"	23"	21 ½"	0.07 CIRC.	6:1	7'-3"	No	Yes, for 32 pipes	3" STD	3.500"	3.068"
24"	3"	30"	27"	0.07 CIRC.	6:1	10'-6"	No	Yes, for 32 pipes	3" STD	3.500"	3.068"
30"	3 ½"	37"	31"	0.18 CIRC.	6:1	12'-11"	No	Yes	4" STD	4.500"	4.026"
36"	4"	44"	36"	0.19 ELIP.	6:1	15'-4"	Yes	Yes	4" STD	4.500"	4.026"
42"	4 ½"	51"	41 ½"	0.23 ELIP.	6:1	18'-1"	Yes	Yes	4" STD	4.500"	4.026"



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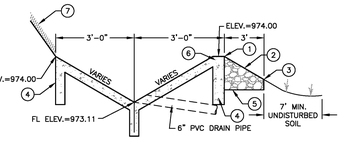
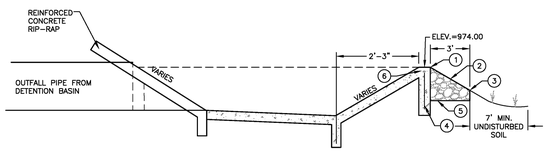
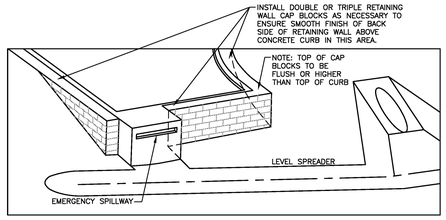


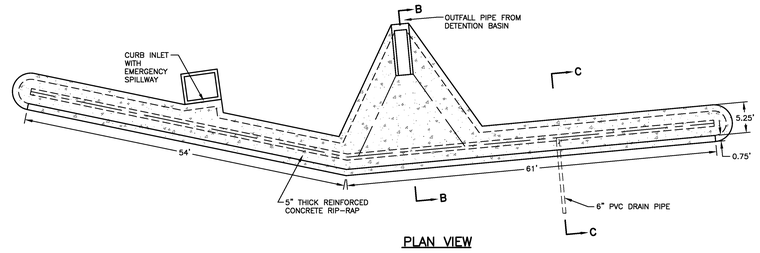
SECTION C–C



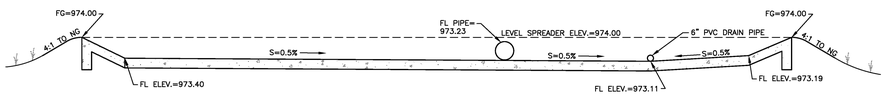
SECTION B–B



ISOMETRIC VIEW



PLAN VIEW

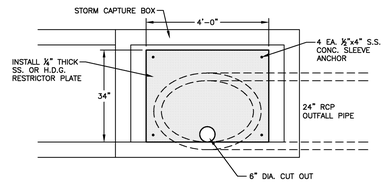


SECTION A–A

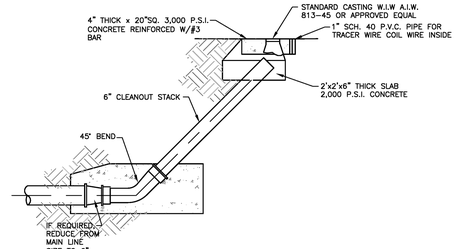
5 LEVEL SPREADER DETAIL
NTS

LEGEND

1. SECURE GEOTEXTILE FABRIC AND WIRE MESH BASKET TO CONCRETE TOEWALLS WITH STAINLESS STEEL ANCHORS
2. ¾" TO 3" COURSE AGGREGATE IN GALVANIZED WIRE MESH BASKET
3. SECURE GEOTEXTILE FABRIC AND WIRE MESH BASKET TO GROUND WITH STAPLES.
4. 9'W x 36"D REINFORCED CONCRETE TOEWALL.
5. GEOTEXTILE FABRIC
6. CONCRETE TOEWALL ON 0% GRADE
7. SLOPE STABILIZATION SHALL CONSIST OF 6" OF TOPSOIL THAT SHALL BE SEEDED AND FERTILIZED. AFTER SEEDING AND FERTILIZING, SOIL RETENTION BLANKETS SHALL BE INSTALLED. SOIL RETENTION BLANKETS SHALL MEET TXDOT STANDARD SPECIFICATION ITEM 169 SOIL RETENTION BLANKETS, CLASS 2, TYPE F (CURLEX III STITCHED OR APPROVED ALTERNATE), AND BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION. CONTRACTOR SHALL PROVIDE ADEQUATE WATERING TO PROMOTE THE GROWTH OF VEGETATIVE COVER.



7 RESTRICTOR PLATE
NTS



TRENCH LOCATED IN AREA WITH NEW PAVEMENT SECTION:
SEE SITE PAVING PLAN & APPLICABLE DETAILS & SPECIFICATION FOR REQUIREMENTS RELATED TO NEW PAVEMENT SECTIONS.

8 DOWNSPOUT CLEANOUT

BROWN REYNOLDS WATFORD ARCHITECTS
2700 EAST BUDDER FRWY SOUTH
SUITE 4000
FORT WORTH, TEXAS 77845
972.654.1797
WWW.BRWARCH.COM

STRAND ASSOCIATES®
STRAND JOB # 3935.034

DATE 5/14/2018
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

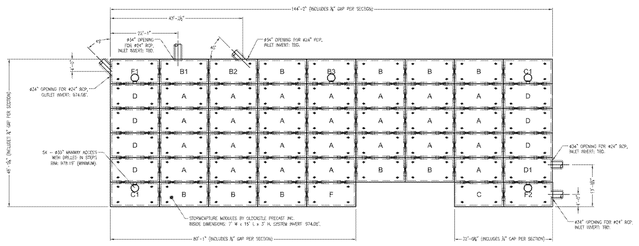
CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION	DATE

C8.1
DRAINAGE DETAILS II

REVISIONS			
REVISION	DATE	REV BY	DESCRIPTION OF REVISION
1	8/4/18	CJS	REVISED STORAGE VOLUME AND REDUCED FOOTPRINT
2	7/17/18	CJS	REVISED LAYOUT

STAGE-STORAGE		
STAGE HEIGHT (FT)	VOLUME (CF)	VOLUME (AC-FT)
0	0	0.000
0.5	2,820	0.065
1	6,440	0.148
1.5	10,140	0.233
2	11,363	0.261
2.5	14,092	0.324
3	16,822	0.386



Underground Detention

PLAN VIEW
SCALE: 1" = 20'-0"

DESIGN NOTES:
1. DESIGN LOADINGS:
   - A. AASHTO HS-20-44 W/ IMPACT.
   - B. DEPTH OF COVER = 6" - 5'-0" (120 PCF ASSUMED)
   - C. ASSUMED WATER TABLE = BELOW BOTTOM OF PRECAST.
   - D. DRY LATERAL EARTH PRESSURE (EFP) = 45 PCF.
   - E. LATERAL LIVE LOAD SURCHARGE = 89 PSF (APPLIED TO 9' BELOW GRADE).
   - F. NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALL PIERS, OR FOUNDATIONS.
2. CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 6,000 PSI.
3. STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
4. MESH REINFORCEMENT: ASTM A-704, 81.2 GRADE 80.
5. CEMENT: ASTM C-150 SPECIFICATION.
6. STORMCAPTURE MODULE TYPE = DETENTION
7. REQUIRED BASE LAYER DEPTH = NOT APPLICABLE.
8. REQUIRED NATIVE ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSF.
9. REFERENCE STANDARDS:
   - A. ASTM C 990
   - B. ASTM C 891
   - C. ASTM C 913
10. CONSTRUCTION EQUIPMENT EXCEEDING DESIGN LOADING SHALL NOT BE ALLOWED ON STRUCTURE. ANY DESIGN CONSTRAINT DIFFERENT FROM ABOVE REQUIRES CUSTOM STRUCTURAL DESIGN AND MAY REQUIRE THICKER SUBGRADE AND REVISED PRICING.

NOTES TO REVIEWING ENGINEER:
1. THIS SYSTEM IS DESIGNED TO THE PARAMETERS NOTED. PLEASE VERIFY THAT THESE PARAMETERS MEET PROJECT REQUIREMENTS (I.E. LIVE LOAD AND FILL RANGE). IF DESIGN PARAMETERS ARE INCORRECT NOTIFY OLDCASTLE IMMEDIATELY FOR REDESIGN AND RE-PRICING.
2. REVIEWING ENGINEER TO CONFIRM ALL PIPE PENETRATION LOCATIONS, SIZES, AND INVERTS.
3. REVIEWING ENGINEER TO CONFIRM ALL MANWAY ACCESS LOCATIONS AND RIM ELEVATIONS.
4. UNLESS OTHERWISE NOTED, ALL PIPE SUPPLIED AND INSTALLED BY OTHERS.
5. THIS SYSTEM IS DESIGNED FOR A GROUNDWATER TABLE BELOW SYSTEM INVERT. REVIEWING ENGINEER TO VERIFY THAT THE DESIGN GROUNDWATER TABLE IS BELOW INVERT OF PRECAST. IF DESIGN PARAMETERS ARE INCORRECT NOTIFY OLDCASTLE IMMEDIATELY FOR REDESIGN AND REVISED PRICING.
6. THIS SYSTEM IS DESIGNED WITHOUT A CONTAINMENT MEMBRANE LINER. IF A LINER IS NEEDED PLEASE CONTACT OLDCASTLE TO PROVIDE THIS OPTION IN THE FINAL DESIGN.

Stormwater

- PRELIMINARY -
NOT FOR CONSTRUCTION

Oldcastle Precast®
7901 Stanford Park, Suite 600 | Littleton, CO | 80120
Ph: 720.279.7810 | oldcastleprecast.com

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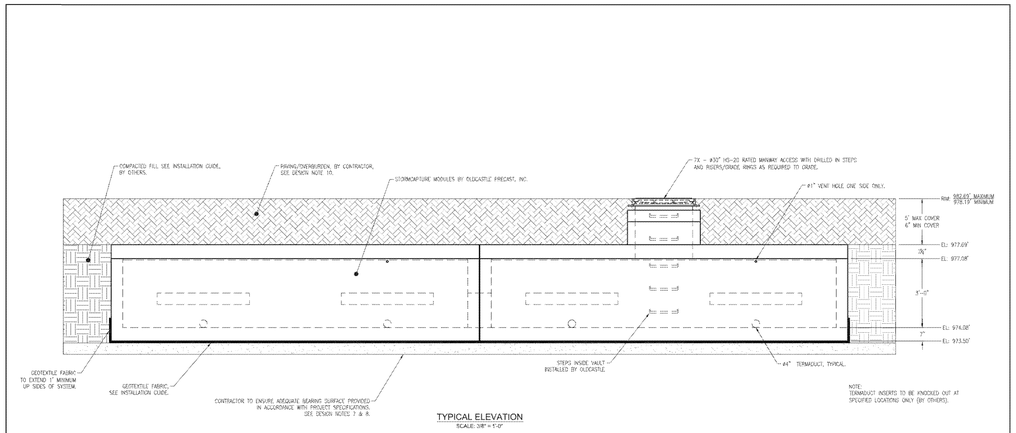
STORMCAPTURE ®
SC1 Detention System

Customer:
Strand Associates

Job Name:
Georgetown Fire Station No. 6 - Georgetown, TX

DATE	SALES	DRAWN	TECHNICIAN	CHECKED	ORDER ORDER
7/23/18	EE	CJS	CJS		
DRAWING NUMBER			REVISION	SHEET	
SCDD-0916-2-SC1_DT			8/4/18 7/17/18	1 OF 2	



TYPICAL ELEVATION
SCALE: 3/8" = 1'-0"

- PRELIMINARY -
NOT FOR CONSTRUCTION

Oldcastle Precast®
7901 Stanford Park, Suite 600 | Littleton, CO | 80120
Ph: 720.279.7810 | oldcastleprecast.com

STORMCAPTURE ®
SC1 Detention System

Customer:
Strand Associates

Job Name:
Georgetown Fire Station No. 6 - Georgetown, TX

DATE	SALES	DRAWN	TECHNICIAN	CHECKED	ORDER ORDER
7/23/18	EE	CJS	CJS		
DRAWING NUMBER			REVISION	SHEET	
SCDD-0916-2-SC1_DT			8/4/18 7/17/18	2 OF 2	

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2700 EARL RUDDER FRWY SOUTH
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ROBERT C. SCHMIDT
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REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS
11/16/18

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CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION	DATE

C9.0

DETENTION BASIN DETAILS

Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: Georgetown Fire Station No6
Date Prepared: 11/9/2018

1. The Required Load Reduction for the total project:

Calculations from RG-348 — Page 3-29 Equation 3.3: $L_M = 27.16(A_N \times P)$
Pages 3-27 to 3-30

$L_{M\,TOTAL\,PROJECT}$ = Required TSS removal resulting from the proposed development = 85% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	2.12	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	1.07	acres
Total post-development impervious cover fraction * =	0.50	
P =	32	inches
$L_{M\,TOTAL\,PROJECT}$ =	931	lbs.

Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = A1

Total drainage basin/outfall area =	1.20	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.92	acres
Post-development impervious fraction within drainage basin/outfall area =	0.77	
$L_{M\,THIS\,BASIN}$ * =	801	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	JF	abbreviation
Removal efficiency =	86	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
LR = (BMP efficiency) x P x (A_A x 34.6 + A_P x 0.54)

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	1.20	acres
A_I =	0.92	acres
A_P =	0.29	acres
L_R =	871	lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{TOTAL\,TREATED}$ =	801	lbs.
P =	0.92	

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Offsite area draining to BMP =	0.00	acres
Offsite impervious cover draining to BMP =	0.00	acres
Rainfall Intensity =	1.20	inches per hour
Effective Area =	0.83	acres
Cartridge Length =	24	inches
Peak Treatment Flow Required =	1.00	cubic feet per second

Calculations from RG-348
Pages Section 3.2.22

7. Jellyfish
Designed as Required in RG-348
Section 3.2.22

Flow Through Jellyfish Size:

Jellyfish Size for Flow-Based Configuration =	JF6-4-1	
Jellyfish Treatment Flow Rate =	1.16	cfs

ROBERT C. SCHMIDT 50465 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS
Robert C. Schmidt
11/12/18

Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: Georgetown Fire Station No6
Date Prepared: 9/18/2018

1. The Required Load Reduction for the total project:

Calculations from RG-348 — Page 3-29 Equation 3.3: $L_M = 27.16(A_N \times P)$
Pages 3-27 to 3-30

$L_{M\,TOTAL\,PROJECT}$ = Required TSS removal resulting from the proposed development = 85% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	2.12	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	1.07	acres
Total post-development impervious cover fraction * =	0.50	
P =	32	inches
$L_{M\,TOTAL\,PROJECT}$ =	930	lbs.

Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = A1

Total drainage basin/outfall area =	1.20	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.92	acres
Post-development impervious fraction within drainage basin/outfall area =	0.77	
$L_{M\,THIS\,BASIN}$ * =	834	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	JF	abbreviation
Removal efficiency =	86	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
LR = (BMP efficiency) x P x (A_A x 34.6 + A_P x 0.54)

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	1.20	acres
A_I =	0.92	acres
A_P =	0.29	acres
L_R =	870	lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{TOTAL\,TREATED}$ =	833	lbs.
P =	0.96	

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Offsite area draining to BMP =	0.00	acres
Offsite impervious cover draining to BMP =	0.00	acres
Rainfall Intensity =	2.50	inches per hour
Effective Area =	0.83	acres
Cartridge Length =	24	inches
Peak Treatment Flow Required =	2.08	cubic feet per second

Calculations from RG-348
Pages Section 3.2.22

7. Jellyfish
Designed as Required in RG-348
Section 3.2.22

Flow Through Jellyfish Size:

Jellyfish Size for Flow-Based Configuration =	JFD6D6-11-3	
Jellyfish Treatment Flow Rate =	2.23	cfs

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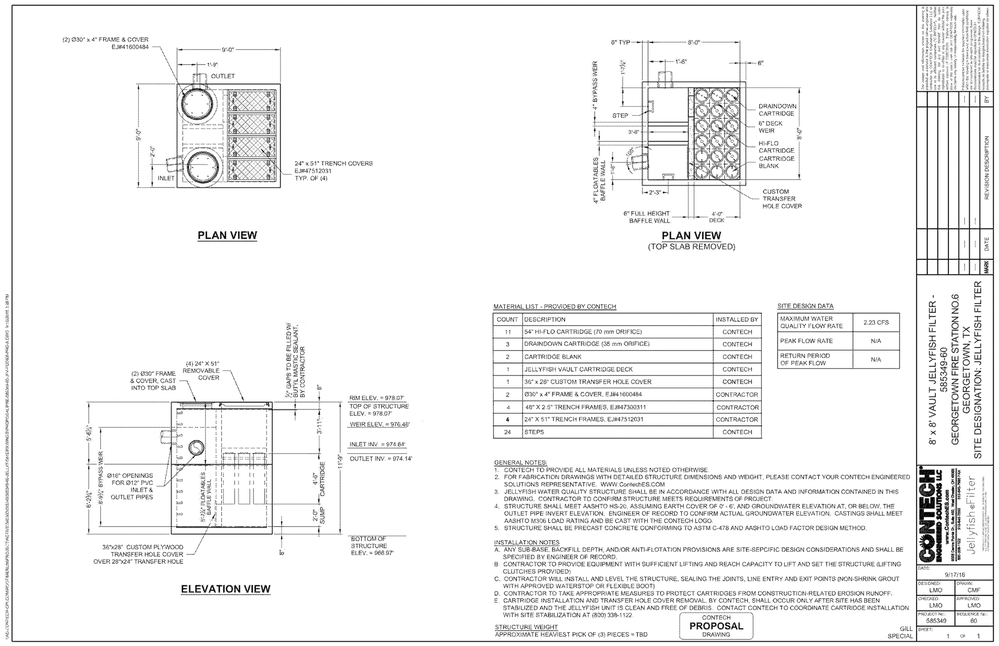
11/13/18
Robert C. Schmidt



MATERIAL LIST - PROVIDED BY CONTECH

COUNT	DESCRIPTION	INSTALLED BY
11	54" HI-FLO CARTRIDGE (70 mm ORIFICE)	CONTECH
3	DRAINDOWN CARTRIDGE (35 mm ORIFICE)	CONTECH
2	CARTRIDGE BLANK	CONTECH
1	JELLYFISH VAULT CARTRIDGE DECK	CONTECH
1	35" x 28" CUSTOM TRANSFER HOLE COVER	CONTECH
2	Ø30" x 4" FRAME & COVER, EJ#41600484	CONTRACTOR
4	48" X 2.0" TRENCH FRAMES, EJ#47300311	CONTRACTOR
4	24" X 51" TRENCH FRAMES, EJ#47512031	CONTRACTOR
24	STEPS	CONTECH

SITE DESIGN DATA

MAXIMUM WATER QUALITY FLOW RATE	2.23 CFS
PEAK FLOW RATE	N/A
RETURN PERIOD OF PEAK FLOW	N/A

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE, WWW.ContechES.COM
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20, ASSUMING EARTH COVER OF 0' - 6', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES:
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION AND TRANSFER HOLE COVER REMOVAL, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (800) 338-1122

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK OF (3) PIECES = TBD

CONTECH
PROPOSAL
Drawing

GILL SPECIAL

BASIN A1

NO.	REVISION	DATE	BY

CONTECH STORMWATER SOLUTIONS
www.ContechES.com
800.338.1122
513.645.7000
513.645.7993 Fax
9025 Centre Pointe Drive, Suite 400, West Chester, OH 45069

DATE: 9/17/16
DESIGNED: LMO
DRAWN: CMF
CHECKED: LMO
APPROVED: LMO
PROJECT No.: 585349
SEQUENCE No.: 60
SHEET: 1 OF 1

8' x 8' VAULT JELLYFISH FILTER - 585349-60
GEORGETOWN FIRE STATION NO.6
GEORGETOWN, TEXAS
SITE DESIGNATION: JELLYFISH FILTER

jellyfish filter

BROWN REYNOLDS WATFORD ARCHITECTS
2700 EARL RUDDER FRWY SOUTH
SUITE 4000
COLLEGE STATION, TEXAS 77845
979.694.1791
WWW.BRWARCH.COM

STATE OF TEXAS
ROBERT C. SCHMIDT
50465
REGISTERED
PROFESSIONAL ENGINEER
Robert C. Schmidt
11/16/18

STRAND ASSOCIATES®
STRAND JOB # 3935.034

DATE 5/14/2018
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

NO.	REVISION	DATE

C9.1

STORM WATER TREATMENT DETAILS 1

Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: Georgetown Fire Station No6
Date Prepared: 11/9/2018

1. The Required Load Reduction for the total project:

Calculations from RG-348 — Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
Pages 3-27 to 3-30

$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

80s Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	2.18	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	1.07	acres
Total post-development impervious cover fraction * =	0.50	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	931	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	3	

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	**B2.**	
Total drainage basin/outfall area =	0.18	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.15	acres
Post-development impervious fraction within drainage basin/outfall area =	0.83	
$L_{M\ THIS\ BASIN}$ =	130	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**JF**	abbreviation
Removal efficiency =	**80**	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
LR = (BMP efficiency) x P x (A_1 x 34.6 + A_2 x 0.54)

A_C = Total On-Site drainage area in the BMP catchment area
A_1 = Impervious area proposed in the BMP catchment area
A_2 = Previous area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	0.18	acres
A_1 =	0.15	acres
A_2 =	0.03	acres
L_R =	142	lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ =	130	lbs.
Y =	0.91	

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Offsite area draining to BMP =	0.00	acres
Offsite impervious cover draining to BMP =	0.00	acres
Rainfall Intensity =	1.15	inches per hour
Effective Area =	0.13	acres
Cartridge Length =	54	inches
Peak Treatment Flow Required =	**0.16**	cubic feet per second

Calculations from RG-348
Pages Section 3.2.22

7. Jellyfish
Designed as Required in RG-348
Section 3.2.22

Flow Through Jellyfish Size		
Jellyfish Size for Flow Based Configuration =	**JF4-1-1**	
Jellyfish Treatment Flow Rate =	**0.27**	cfs

STATE OF TEXAS — ROBERT C. SCHMIDT — 50465 — REGISTERED PROFESSIONAL ENGINEER

Robert C. Schmidt
11/12/18

Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: Georgetown Fire Station No6
Date Prepared: 11/12/2018

1. The Required Load Reduction for the total project:

Calculations from RG-348 — Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
Pages 3-27 to 3-30

$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

80s Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	2.18	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	1.07	acres
Total post-development impervious cover fraction * =	0.50	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	950	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	3	

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	**B1.**	
Total drainage basin/outfall area =	0.176	acres
Predevelopment impervious area within drainage basin/outfall area =	0.000	acres
Post-development impervious area within drainage basin/outfall area =	0.149	acres
Post-development impervious fraction within drainage basin/outfall area =	0.85	
$L_{M\ THIS\ BASIN}$ =	138	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**JF**	abbreviation
Removal efficiency =	**80**	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
LR = (BMP efficiency) x P x (A_1 x 34.6 + A_2 x 0.54)

A_C = Total On-Site drainage area in the BMP catchment area
A_1 = Impervious area proposed in the BMP catchment area
A_2 = Previous area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	0.18	acres
A_1 =	0.15	acres
A_2 =	0.03	acres
L_R =	142	lbs.

5. Calculate: Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ =	138	lbs.
F =	0.97	

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Offsite area draining to BMP =	0.00	acres
Offsite impervious cover draining to BMP =	0.00	acres
Rainfall Intensity =	2.00	inches per hour
Effective Area =	0.13	acres
Cartridge Length =	54	inches
Peak Treatment Flow Required =	**0.27**	cubic feet per second

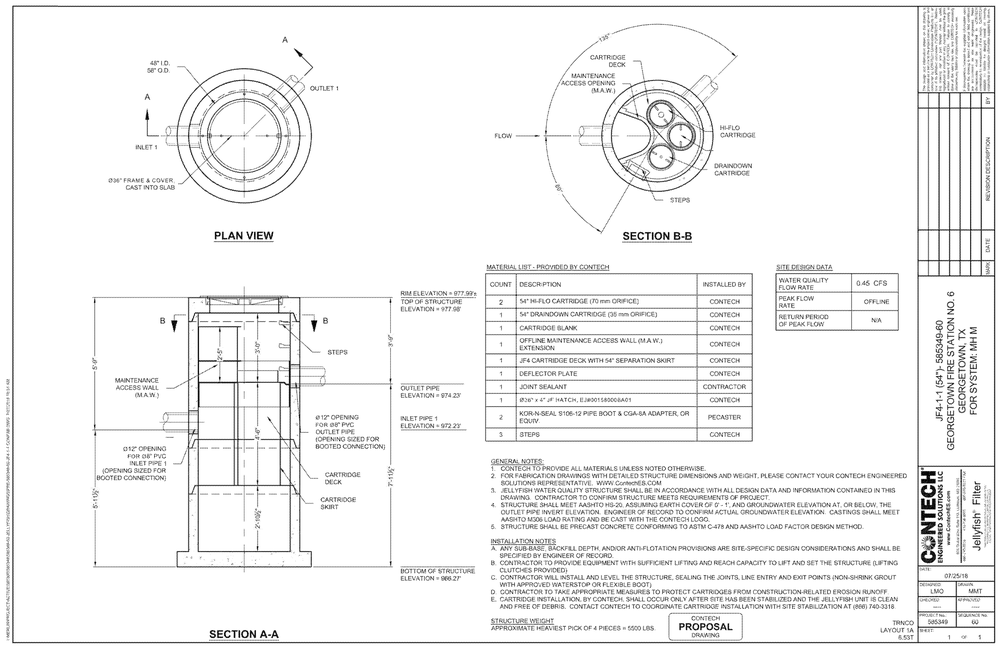
Calculations from RG-348
Pages Section 3.2.22

7. Jellyfish
Designed as Required in RG-348
Section 3.2.22

Flow Through Jellyfish Size		
Jellyfish Size for Flow Based Configuration =	**JF4-2-1**	
Jellyfish Treatment Flow Rate =	**0.48**	cfs

STATE OF TEXAS — ROBERT C. SCHMIDT — 50465 — REGISTERED PROFESSIONAL ENGINEER

11/13/18
Robert C. Schmidt



MATERIAL LIST - PROVIDED BY CONTECH

COUNT	DESCRIPTION	INSTALLED BY
2	54" HI-FLO CARTRIDGE (70 mm ORIFICE)	CONTECH
1	54" DRAINDOWN CARTRIDGE (35 mm ORIFICE)	CONTECH
1	CARTRIDGE BLANK	CONTECH
1	OFFLINE MAINTENANCE ACCESS WALL (M.A.W.) EXTENSION	CONTECH
1	JF4 CARTRIDGE DECK WITH 54" SEPARATION SKIRT	CONTECH
1	DEFLECTOR PLATE	CONTECH
1	JOINT SEALANT	CONTRACTOR
1	Ø36" x 4" JF HATCH, EJ#3015800GBA01	CONTECH
2	KOR-N-SEAL S106-12 PIPE BOOT & CGA-8A ADAPTER, OR EQUIV	PECASTER
5	STEPS	CONTECH

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.45 CFS
PEAK FLOW RATE	OFFLINE
RETURN PERIOD OF PEAK FLOW	N/A

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE, WWW.ContechES.COM
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOADING, ASSUMING EARTH COVER OF 0' - 1', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (888) 740-3318

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK OF 4 PIECES = 5550 LBS.

CONTECH **PROPOSAL** DRAWING

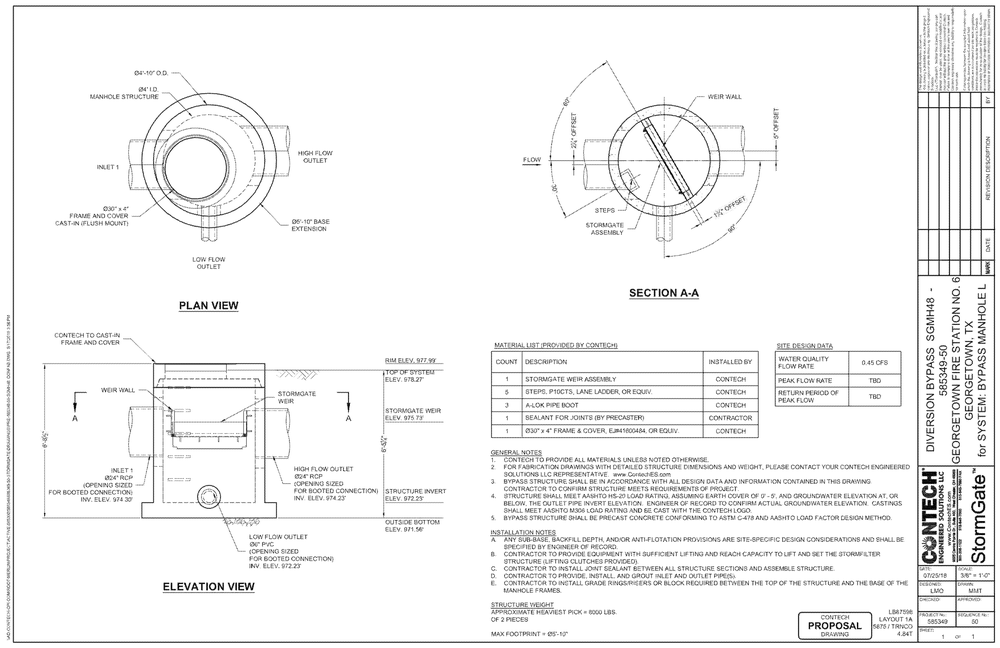
TRNCO LAYOUT 1A 6.53T

NO.	DATE	REVISION DESCRIPTION	BY

JF4-1-1 (54") 585640-60
GEORGETOWN FIRE STATION NO. 6
GEORGETOWN, TX
FOR SYSTEM: MH M

CONTECH ENGINEERED SOLUTIONS LLC — 9025 Centre Pointe Drive, Suite 400, West Chester, OH 45069 — (800) 338-1122 — www.ContechES.com — (513) 645-7000 — (513) 645-7993 Fax
Jellyfish® Filter

DATE:	07/25/18
DESIGNED:	LMO
DRAWN:	MMT
APPROVED:	
PROJECT No:	585349
DRAWING No:	60
SHEET:	1 OF 1



MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	STORMGATE WEIR ASSEMBLY	CONTECH
5	STEPS, P10CTS, LANE LADDER, OR EQUIV.	CONTECH
3	A-LOK PIPE BOOT	CONTECH
1	SEALANT FOR JOINTS (BY PRECASTER)	CONTRACTOR
1	Ø30" x 4" FRAME & COVER, EJ#41600484, OR EQUIV.	CONTECH

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.45 CFS
PEAK FLOW RATE	TBD
RETURN PERIOD OF PEAK FLOW	TBD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. BYPASS STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. BYPASS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S).
E. CONTRACTOR TO INSTALL GRADE RINGS/RISERS OR BLOCK REQUIRED BETWEEN THE TOP OF THE STRUCTURE AND THE BASE OF THE MANHOLE FRAMES.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 6000 LBS.
OF 2 PIECES

MAX FOOTPRINT = Ø5'-10"

LB#7556
CONTECH **PROPOSAL** DRAWING
LAYOUT 1A
5675 / TRNCO 4.84T

NO.	DATE	REVISION DESCRIPTION	BY

DIVERSION BYPASS SGMH48 - 585349-50
GEORGETOWN FIRE STATION NO. 6
GEORGETOWN, TX
for SYSTEM: BYPASS MANHOLE L

CONTECH ENGINEERED SOLUTIONS LLC — 9025 Centre Pointe Drive, Suite 400, West Chester, OH 45069 — (800) 338-1122 — www.ContechES.com — (513) 645-7000 — (513) 645-7993 Fax
StormGate™

DATE:	07/25/18
SCALE:	3/8" = 1'-0"
DESIGNED:	LMO
DRAWN:	MMT
CHECKED:	
APPROVED:	
PROJECT No:	585349
DRAWING No:	60
SHEET:	1 OF 1

BASIN B1

BROWN REYNOLDS WATFORD ARCHITECTS
2700 EARL RUDDER FRWY SOUTH
SUITE 4000
COLLEGE STATION, TEXAS 77845
979.694.1791
WWW.BRWARCH.COM

ROBERT C. SCHMIDT — 50465 — REGISTERED PROFESSIONAL ENGINEER
Robert C. Schmidt
11/16/18

STRAND ASSOCIATES®
STRAND JOB # 3935.034

DATE 5/14/2018
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION	DATE

C9.2

C9.2 - STORM WATER TREATMENT DETAILS 2

GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS

TYPE OF STRUCTURE	REACH LENGTH	MAXIMUM DRAINAGE AREA	SLOPE
SILT FENCE	N/A	2 ACRES	0 – 10%
	200 FEET	2 ACRES	10 – 20%
	100 FEET	1 ACRE	20 – 30%
	50 FEET	1/2 ACRE	> 30%
TRIANGLE FILTER DIKE	100 FEET	1/2 ACRE	< 30% SLOPE
	50 FEET	1/4 ACRE	> 30% SLOPE
ROCK BERM *, **	500 FEET	< 5 ACRES	0 – 10%

* FOR ROCK BERM DESIGN WHERE PARAMETERS ARE OTHER THAN STATED, DRAINAGE AREA CALCULATIONS AND ROCK BERM DESIGN MUST BE SUBMITTED FOR REVIEW.

** HIGH SERVICE ROCK BERMS MAY BE REQUIRED IN AREAS OF ENVIRONMENTAL SIGNIFICANCE AS DETERMINED BY THE CITY OF GEORGETOWN.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TEMPORARY EROSION AND SEDIMENTATION CONTROL GUIDELINES

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: EC01 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

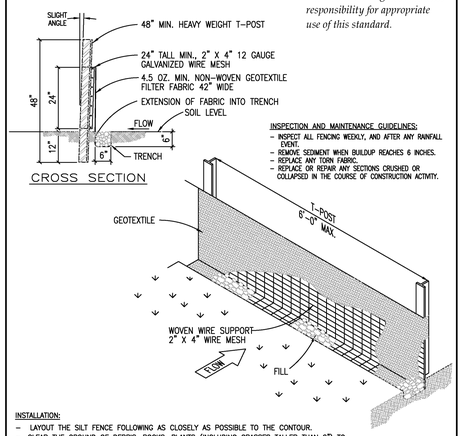
NOTE: THIS SECTION IS INTENDED TO ASSIST THOSE PERSONS PREPARING WATER POLLUTION ABATEMENT PLANS (WPAP) OR STORM WATER POLLUTION PREVENTION PLANS (SWSP) THAT COMPLY WITH FEDERAL, STATE AND/OR LOCAL STORM WATER REGULATIONS.

1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
4. ALL PLANTING SHALL BE DONE BETWEEN MAY 1 AND SEPTEMBER 15 EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING. IF PLANTING IS AUTHORIZED TO BE DONE OUTSIDE THE DATES SPECIFIED, THE SEED SHALL BE PLANTED WITH THE ADDITION OF WINTER FESCUE (KENTUCKY 31) AT A RATE OF 100lb/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 80% PURE LIVE SEED. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE A, RECENT CROP, RECLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
5. ALL DISTURBED AREAS TO BE RESTORED AS NOTED IN THE WATER POLLUTION ABATEMENT PLAN.
6. THE PLANTED AREA TO BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF FOUR (4) INCHES. THE IRRIGATION TO OCCUR AT 10–DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS . RAINFALL OCCURRENCES OF 1/2 INCH OR GREATER TO POSTPONE THE WATERING SCHEDULE ONE WEEK.
7. RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1–1/2 INCHES HIGH WITH 95# COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 25 SQUARE FEET EXIST.
8. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL TO BE PLACED IN ALL AREAS DISTURBED BY CONSTRUCTION.
9. THE CONTRACTOR TO HYDROMULCH OR SOD (AS SHOWN ON PLANS) ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION.
10. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINE.
11. TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIPLINE AREAS.
12. WHERE A FENCE IS CLOSER THAN FOUR (4) FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED–ON PLANKING TO A HEIGHT OF EIGHT (8) FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE FENCING.
13. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
14. ANY ROOT EXPOSED BY CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
15. CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES").
16. THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/4 INCH TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL SITE. THE CONTRACTOR TO CONDUCT PERIODIC INSPECTIONS OF ALL EROSION/SEDIMENTATION CONTROLS AND TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
17. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR FEET (2'–4') BEHIND THE AREA IN QUESTION.
18. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES TO BE STORED ON THE PROJECT SITE.
19. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVE AND THE CONTRACTOR TO EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONSTRUCTION. ANY DAMAGE TO PREEXISTING EROSION AND SEDIMENTATION CONTROLS NOTED TO BE REPAIRED AT OWNERS EXPENSE.
20. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: EC01A | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



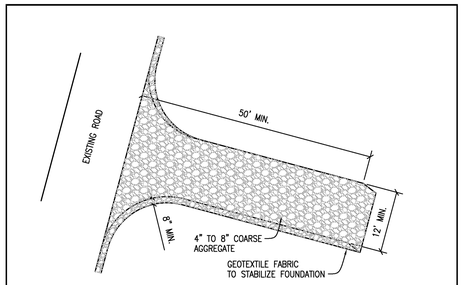
The Architect/Engineer assumes responsibility for appropriate use of this standard.

INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
- REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
- REPLACE ANY TORN FABRIC.
- REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

INSTALLATION:
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY T–POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW.
- ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T–POST WITH 11 1/2 GAUGE GALVANIZED T–POST CLIPS. THE TOP OF THE WIRE TO BE 34" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SILT FENCE DETAIL

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: EC02 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



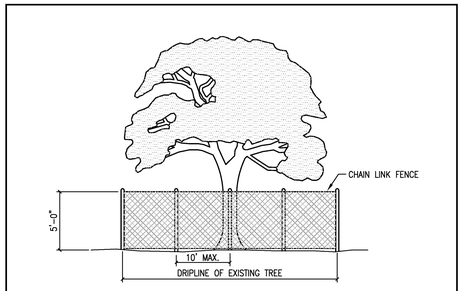
INSTALLATION:
- CLEAR THE AREA OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- GRADE THE AREA FOR THE ENTRANCE TO FLOW BACK ON TO THE CONSTRUCTION SITE. RUNOFF FROM THE STABILIZED CONSTRUCTION
- PLACE GEOTEXTILE FABRIC AS APPROVED BY THE CITY.
- PLACE ROCK AS APPROVED BY THE CITY.

INSPECTIONS AND MAINTENANCE GUIDELINES:
- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS–OF–WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
- WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS–OF–WAY.
- WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STABILIZED CONSTRUCTION ENTRANCE

REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: EC06 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

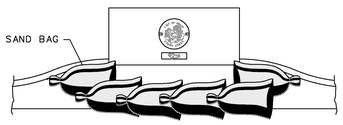


NOTES:
1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; WILL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
   C. WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
3. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   B. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'–0") TO BUILDING.

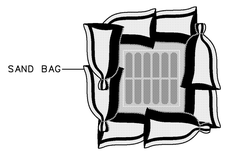
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TREE PROTECTION – CHAIN LINK FENCE

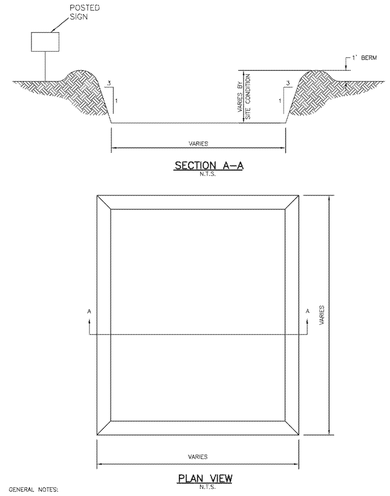
REVISION NOTE: ADOPTED 6/21/2006 | DRAWING NAME: EC09 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



NOTE:
TEMPORARY DEVICES AROUND STORM DRAINS ARE USED TO DETAIN AND/OR FILTER SEDIMENT–LADEN RUNOFF. THE PROTECTION ALLOWS SEDIMENT TO SETTLE PRIOR TO DISCHARGE INTO A STORM DRAIN INLET OR CATCH BASIN. SAND BAGS SHALL BE UV RESISTANT AND MUST NOT DEGRADE DUE TO ATMOSPHERIC CONDITIONS. SAND BAGS SHALL BE REPLACED UPON FIRST SIGN OF DETERIORATION.



1 STORM DRAIN INLET PROTECTION
NTS



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

CONCRETE TRUCK WASHOUT AREA

2 CONCRETE TRUCK WASHOUT AREA
NTS

NOTE:
ALL APPLICABLE GEORGETOWN STANDARD DETAILS ARE NOT NECESSARILY INCLUDED HEREIN. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING A COMPLETE COPY OF THE CITY OF GEORGETOWN'S UNIFIED DEVELOPMENT CODE AND APPLICABLE CITY STANDARD DETAILS.

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ROBERT C. SCHMIDT
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STATE OF TEXAS
11/16/18

STRAND ASSOCIATES®
STRAND JOB # 3935.034

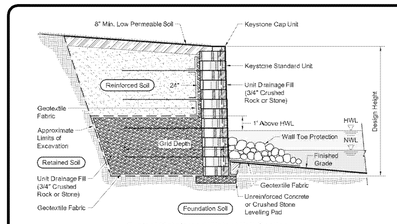
DATE 5/14/2018
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION	DATE

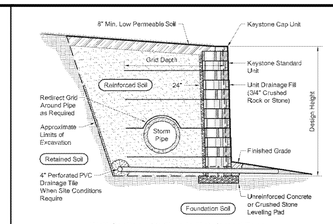
C10.0

EROSION CONTROL DETAILS



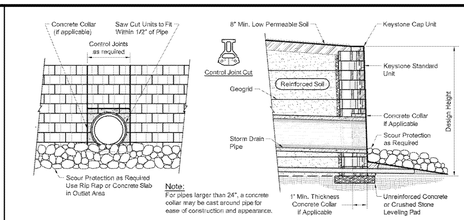
Typical Reinforced Water Wall Section

Standard Unit - Near Vertical Setback



Wall Section with Pipe in Reinforced Zone

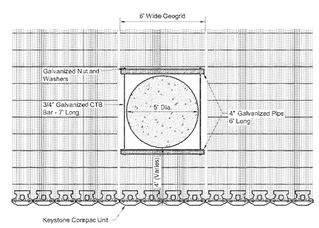
Standard Unit - Near Vertical Setback



Typical Pipe Outlet Detail

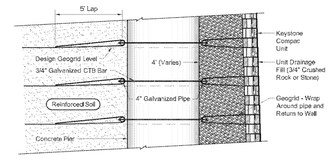
Typical Pipe Outlet Section

Standard Unit - Near Vertical Setback



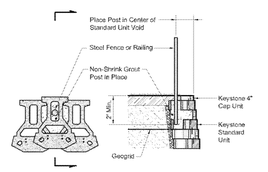
Wall Plan at Pier / Manhole

Compac Unit



Wall Section at Pier / Manhole

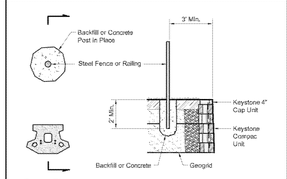
Compac Unit - Near Vertical Setback



Fence Plan Detail

Fence SectionDetail

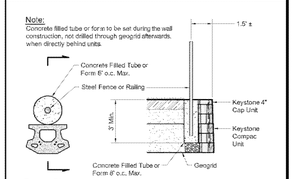
Standard Unit - 1" Setback



Fence Plan Detail

Fence SectionDetail

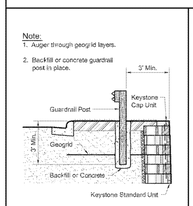
Compac Unit - Near Vertical Setback



Fence Plan Detail

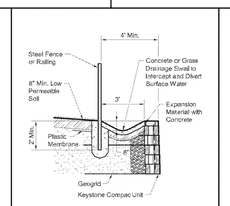
Fence Section & Plan Detail

Compac III Unit - Near Vertical Setback



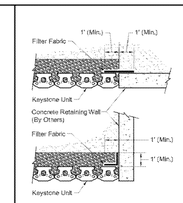
Typical Guardrail Detail

Standard Unit - Near Vertical Setback Shown



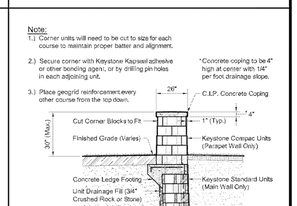
Drainage Swale Detail

Compac Unit - Near Vertical Setback Shown



Connection Details

Compac Units - Shown



Parapet End Detail

Near Vertical Setback Shown

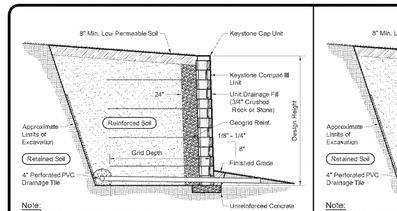
Design is for internal stability of the KEYSTONE wall structure only. External stability, including but not limited to foundation and slope stability is the responsibility of the Owner. The design is based on the assumption that the materials within the retained mass, methods of construction, and quality of materials conform to KEYSTONE's specification for this project.

This drawing is being furnished for this specific project only. Any party accepting this document does so in confidence and agrees that it shall not be duplicated in whole or in part, nor disclosed to others without the consent of Keystone Retaining Wall Systems, Inc.

No.	Date	Revision	By

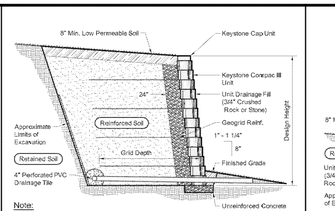
KEYSTONE RETAINING WALL SYSTEMS
A CUNTECH COMPANY
4444 W 78th Street
Minneapolis, MN 55435
952-897-1040

Designed By:	RKM
Checked By:	CDM
Scale:	No Scale
Title:	Conceptual Details
Project:	Keystone Retaining Wall Systems Typical Wall Details
Date:	
Project No:	
Drawing No:	



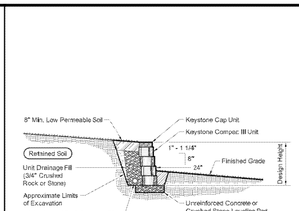
Typical Reinforced Wall Section

Compac III Unit - Near Vertical Setback



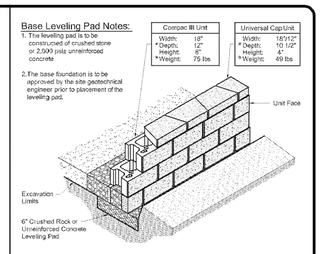
Typical Reinforced Wall Section

Compac III Unit - 1" Setback



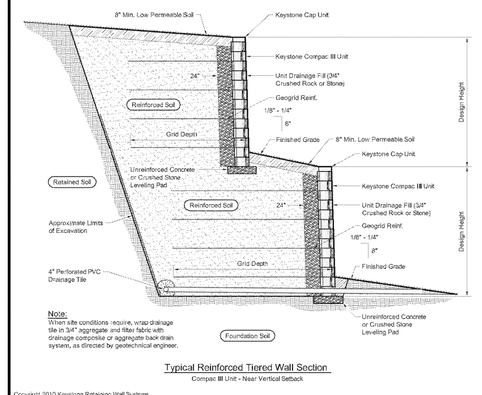
Typical Gravity Wall Section

Compac III Unit - 1" Setback



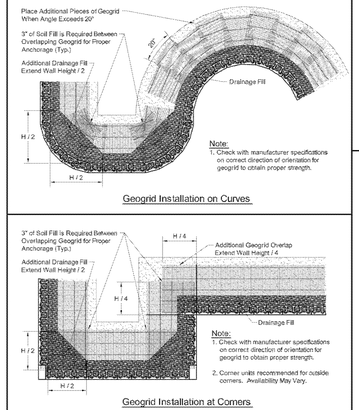
Compac III Unit/Base Pad Isometric Section View

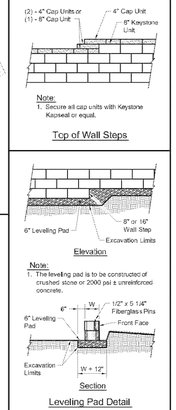
* Dimensions & Weight May Vary by Region

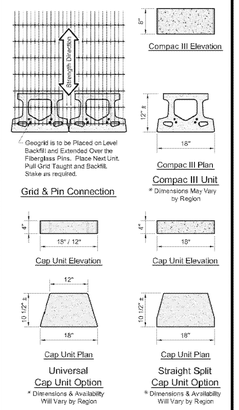


Typical Reinforced Tiered Wall Section

Compac III Unit - Near Vertical Setback







Design is for internal stability of the KEYSTONE wall structure only. External stability, including but not limited to foundation and slope stability is the responsibility of the Owner. The design is based on the assumption that the materials within the retained mass, methods of construction, and quality of materials conform to KEYSTONE's specification for this project.

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No.	Date	Revision	By

KEYSTONE RETAINING WALL SYSTEMS
A CUNTECH COMPANY
4444 W 78th Street
Minneapolis, MN 55435
952-897-1040

Designed By:	RKM
Checked By:	CDM
Scale:	No Scale
Title:	Compac III Unit - Straight Face Details
Project:	Keystone Retaining Wall Systems Typical Wall Details
Date:	
Project No:	
Drawing No:	

BROWN REYNOLDS WATFORD ARCHITECTS
2700 EARL RUDDER FRWY SOUTH
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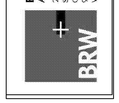

STRAND ASSOCIATES®

STRAND JOB # 3935.034

DATE 5/14/2018
DRAWN BY Author
CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION	DATE

C11.0

RETAINING WALL DETAILS

DISCLAIMER:
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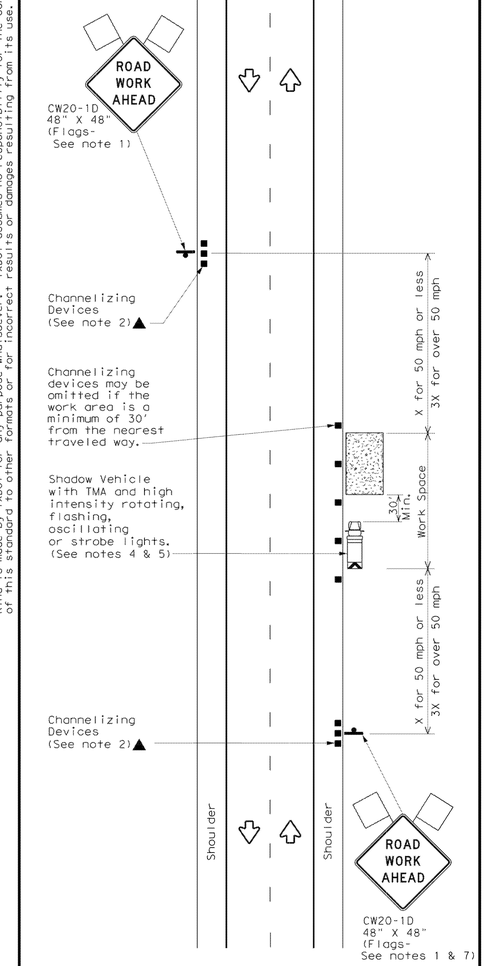
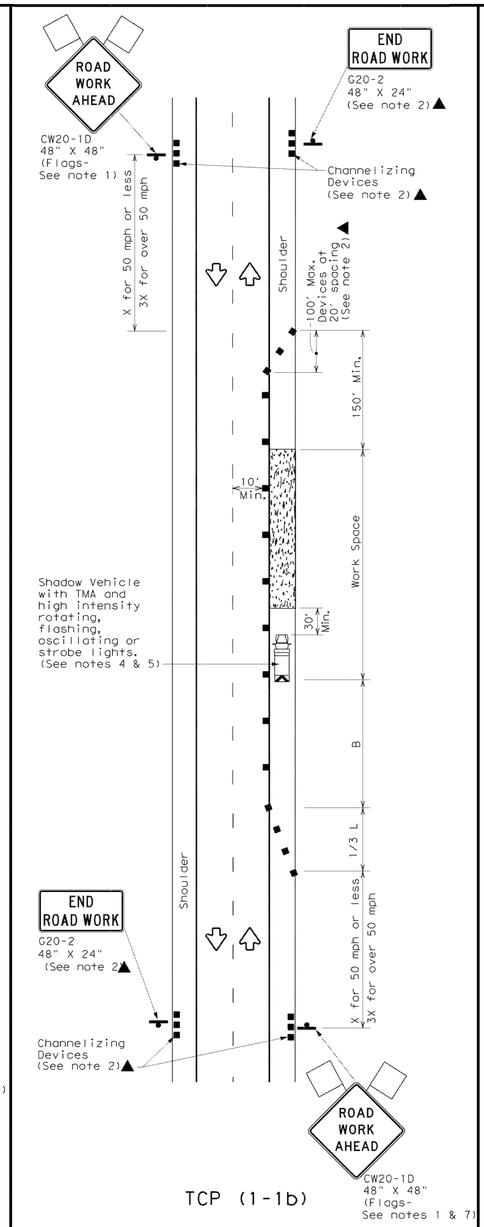


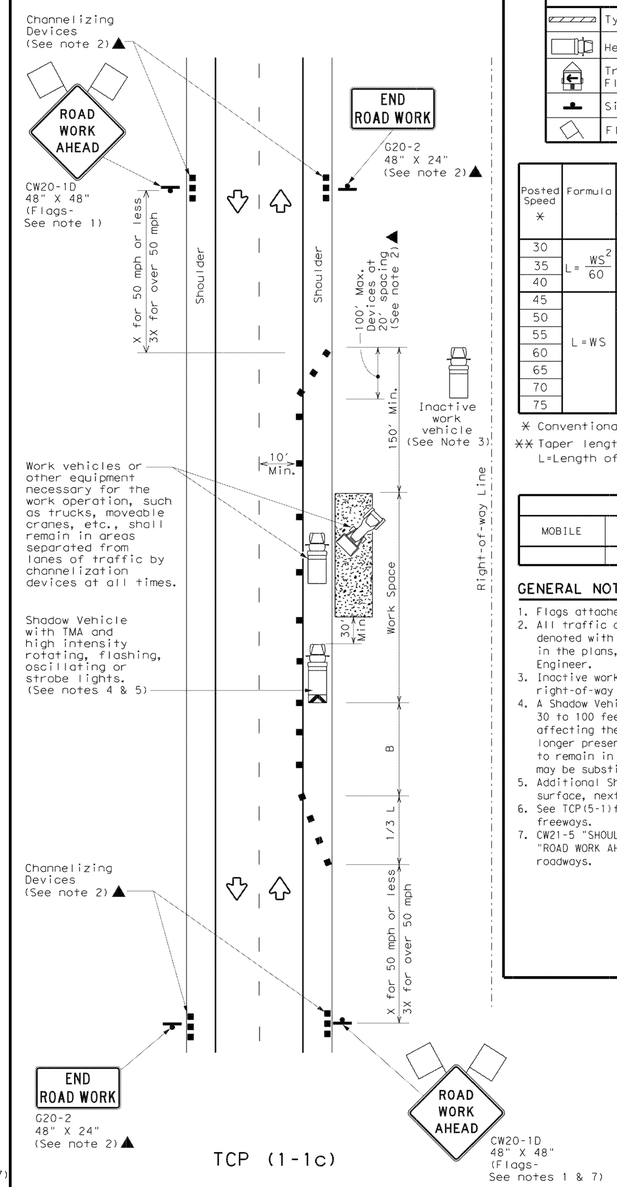
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1)for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation — Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-18

FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-94 4-98 8-95 2-12 1-97 2-18	DIST	COUNTY		SHEET NO.
				151

DATE:
FILE:

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ROBERT C. SCHMIDT 50465 REGISTERED PROFESSIONAL ENGINEER
11/16/18

STRAND ASSOCIATES®
STRAND JOB # 3935.034

DATE 5/14/2018
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CHECKED BY Checker
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CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION	DATE

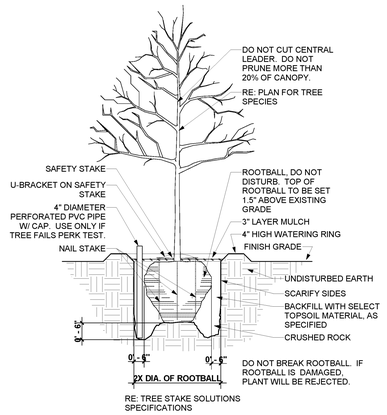
C12.0
TRAFFIC CONTROL PLAN

LEGEND

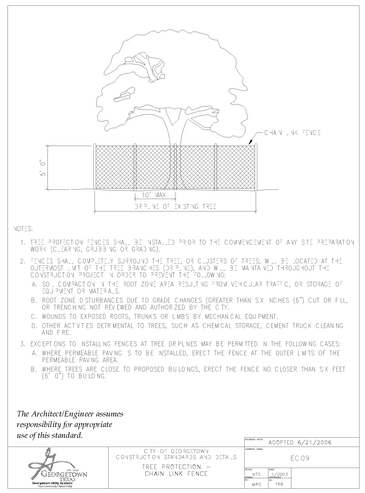
SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
	-	CYNODON DACTYLON	BERMUDAGRASS SOD	-	RE: SPECIFICATIONS
	-	CYNODON DACTYLON	BERMUDAGRASS HYDROMULCH	-	RE: SPECIFICATIONS NOT REQUIRED IN UNDISTURBED AREAS
	197	SALVIA COCCINEA	SCARLET SAGE	1 GAL.	1' - 2'-6" SPACING CONTAINER GROWN
	34	SALVIA GREGGI	AUTUMN SAGE (PERENNIAL)	1 GAL.	12"- 18" SPACING CONTAINER GROWN
	92	LANTANA HORRIDA	TEXAS LANTANA (SHRUB)	1 GAL. MIN.	12"- 24" SPACING CONTAINER GROWN
	61	LEUCOPHYLLUM FRUTESCENS	TEXAS SAGE (SHRUB)	3 GAL. MIN. 18" HEIGHT	3' SPACING CONTAINER GROWN
	23	HESPERALOE PARVIFLORA	RED YUCCA (SHRUB)	5 GAL. MIN. 18" HEIGHT	3' SPACING CONTAINER GROWN
	15	ANISACANTHUS QUADRIFIDUS VAR WRIGHTII	FLAME ACANTHUS (SHRUB)	5 GAL. MIN. 18" HEIGHT	4' - 5' SPACING CONTAINER GROWN
	5	QUERCUS POLYMORPHA (MEXICAN WHITE)	MONTEREY OAK (SHADE TREE)	MIN. 4" CALIPER 6" FROM BASE	STRAIGHT TRUNK
	16	-	SMALL BOULDER	2' - 3' DIAMETER	-
	6	-	MEDIUM BOULDER	3' - 4' DIAMETER	-
TOTAL	-				

KEYNOTES

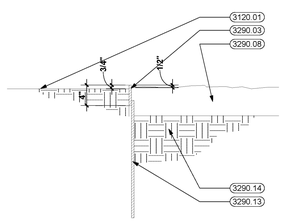
0150.05	TEMPORARY TREE PROTECTION
0220.01	EXISTING TREE (RE: SURVEY)
0770.18	CONCRETE SPLASH BLOCK
3120.01	GRADE
3290.01	LANDSCAPE BED
3290.03	1/8" X 4" METAL EDGING
3290.08	MULCH
3290.10	ROOT BALL
3290.11	PREPARED SOIL MIX
3290.12	RIVER STONE
3290.13	STEEL STAKE
3290.14	LIMESTONE BOULDER
3290.16	4" PERFORATED METAL EDGING
3340.13	FILTER FABRIC



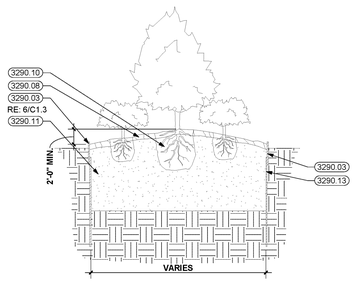
4 LANDSCAPE DETAIL
1/4" = 1'-0"



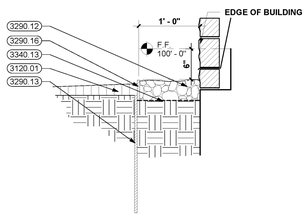
3 TREE PROTECTION DETAIL



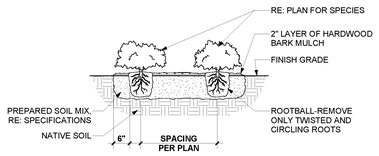
6 LANDSCAPE DETAIL
1" = 1'-0"



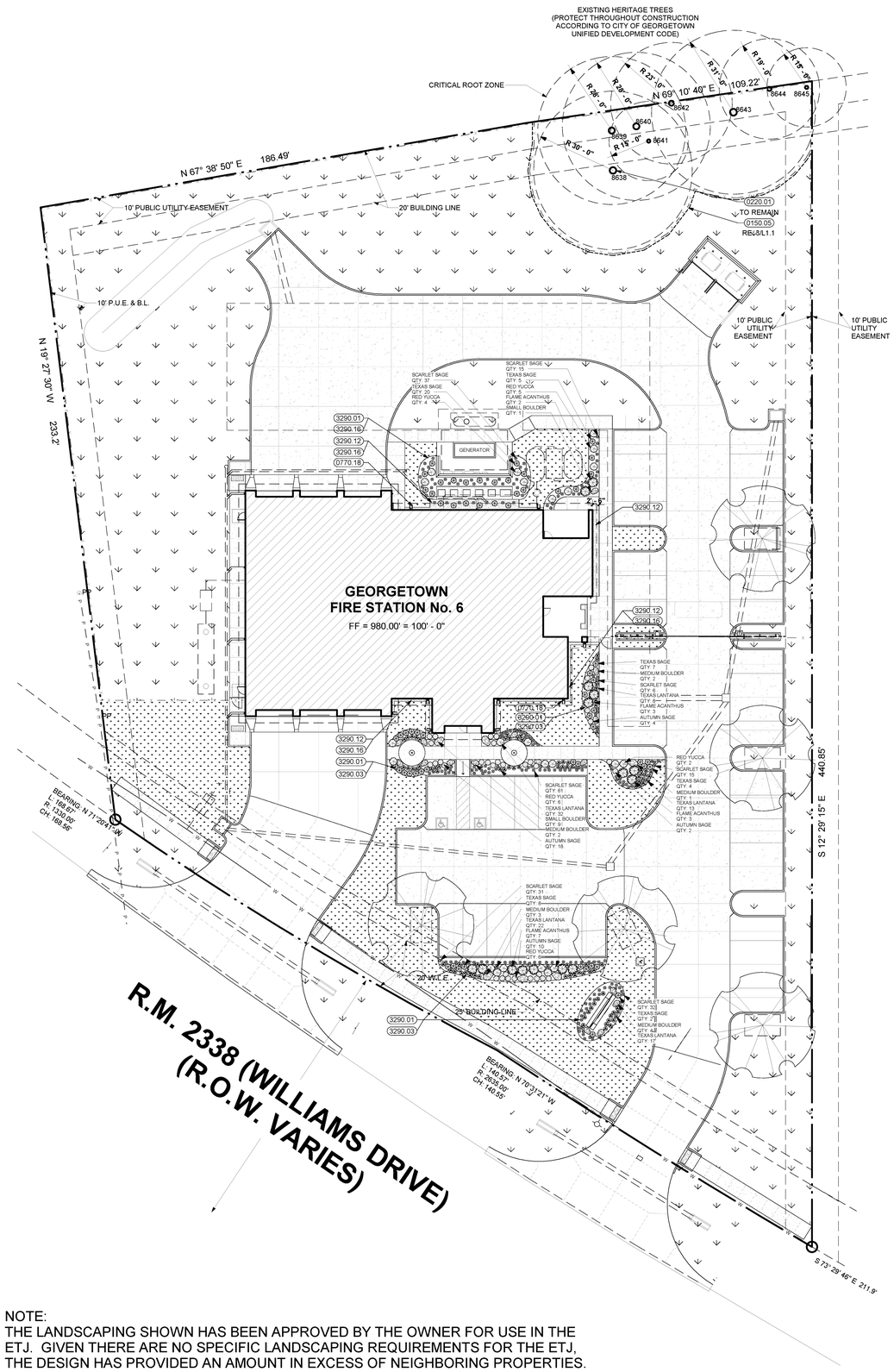
5 LANDSCAPE DETAIL
1/2" = 1'-0"



8 LANDSCAPE DETAIL
1" = 1'-0"



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



NOTE:
THE LANDSCAPING SHOWN HAS BEEN APPROVED BY THE OWNER FOR USE IN THE ETJ. GIVEN THERE ARE NO SPECIFIC LANDSCAPING REQUIREMENTS FOR THE ETJ, THE DESIGN HAS PROVIDED AN AMOUNT IN EXCESS OF NEIGHBORING PROPERTIES.

PLAN NORTH / TRUE NORTH

1 LANDSCAPE PLAN
1" = 20'-0"

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 350
COLLEGE STATION, TEXAS 77840
979.846.1797
WWW.BRWARCH.COM

REGISTERED ARCHITECT RYAN HOLLIDAY STATE OF TEXAS 11/16/2018

DATE	11/16/2018
DRAWN BY	HR, NB
CHECKED BY	RH
BRW PROJECT NUMBER	217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

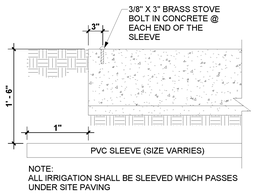
NO.	REVISION	DATE

L1.1

LANDSCAPE PLANS AND DETAILS

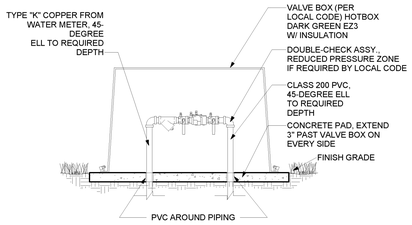
LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NO.
	AREA TO BE IRRIGATED WITH SPRAY HEADS / ROTARY HEADS AS BASE-BID	HUNTER	AS REQUIRED, REFERENCE DETAILS AND SPECIFICATIONS
	ADDITIONAL AREA TO BE IRRIGATED WITH SPRAY HEADS / ROTARY HEADS AS ADD-ALTERNATE No. 7	HUNTER	AS REQUIRED, REFERENCE DETAILS AND SPECIFICATIONS
	PLANTING BEDS TO BE IRRIGATED BY BUBBLER/SHORT RADIUS HEADS	HUNTER	AS REQUIRED, REFERENCE DETAILS AND SPECIFICATIONS
	AREA TO BE IRRIGATED BY SEPTIC DISPOSAL SYSTEM	RE: SANITARY	RE: SANITARY
-------	MAINLINE PIPING	REFER TO SPEC.	CLASS 200 PVC
NN	BACKFLOW PREVENTER & ENCLOSURE	FEBCO HOTBOX/ CITY APPROVED	850 MASTER SERIES POLY ROK PHR2/ CITY APPROVED
M	FIRE/DOM. WATER METER (RE: CIVIL)	CITY APPROVED	PER LOCAL BUILDING CODE IRRIGATION METER NOT REQUIRED
C	CONTROLLER	HUNTER	HUNTER ACC-99D MOUNT AT INTERIOR WALL U.N.O. PROVIDE NECESSARY ICD-XXX DECODERS AS REQUIRED (RE: 8/L1.3)

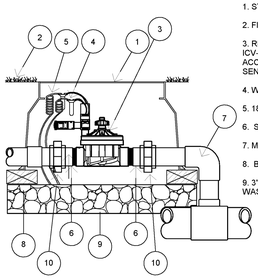


NOTE:
ALL IRRIGATION SHALL BE SLEEVED WHICH PASSES UNDER SITE PAVING

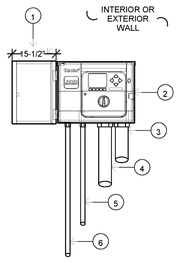
3 PAVING DETAIL



2 IRRIGATION BACKFLOW PREVENTER



1. STANDARD VALVE BOX
2. FINISH GRADE
3. REMOTE CONTROL VALVE ICV-XXXG (SIZE AS REQUIRED) ACCU-SYNC-ADJ WITH FILTER SENTRY
4. WATERPROOF CONNECTORS
5. 18-24" COILED WIRE
6. SCH 80 T.O.E. NIPPLE
7. MAIN LINE PIPE & FITTINGS
8. BRICK SUPPORTS (4)
9. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL



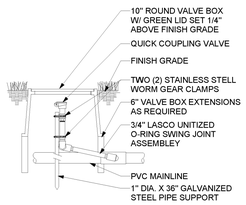
ACC-99D CONTROLLER

1. MINIMUM CLEARANCE FOR DOOR OPENING
2. MODEL ACC-99D
3. ADDITIONAL WIRE CONDUIT, UP TO 2" SIZE.
4. DECODER WIRE CONDUIT, UP TO 2-1/2" SIZE.
5. SUPPLEMENTAL GROUND WIRE INSTALL PER ASIC GUIDELINES
6. 3/4" POWER SUPPLY CONDUIT J-BOX INSIDE CONTROLLER CONNECT PER LOCAL CODE

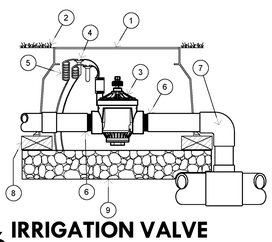
VERIFY WITH OWNER/ARCHITECT MOUNTING HEIGHT, REFERENCE PLAN FOR LOCATION

5 IRRIGATION CONTROL VALVE

4 IRRIGATION CONTROLLER



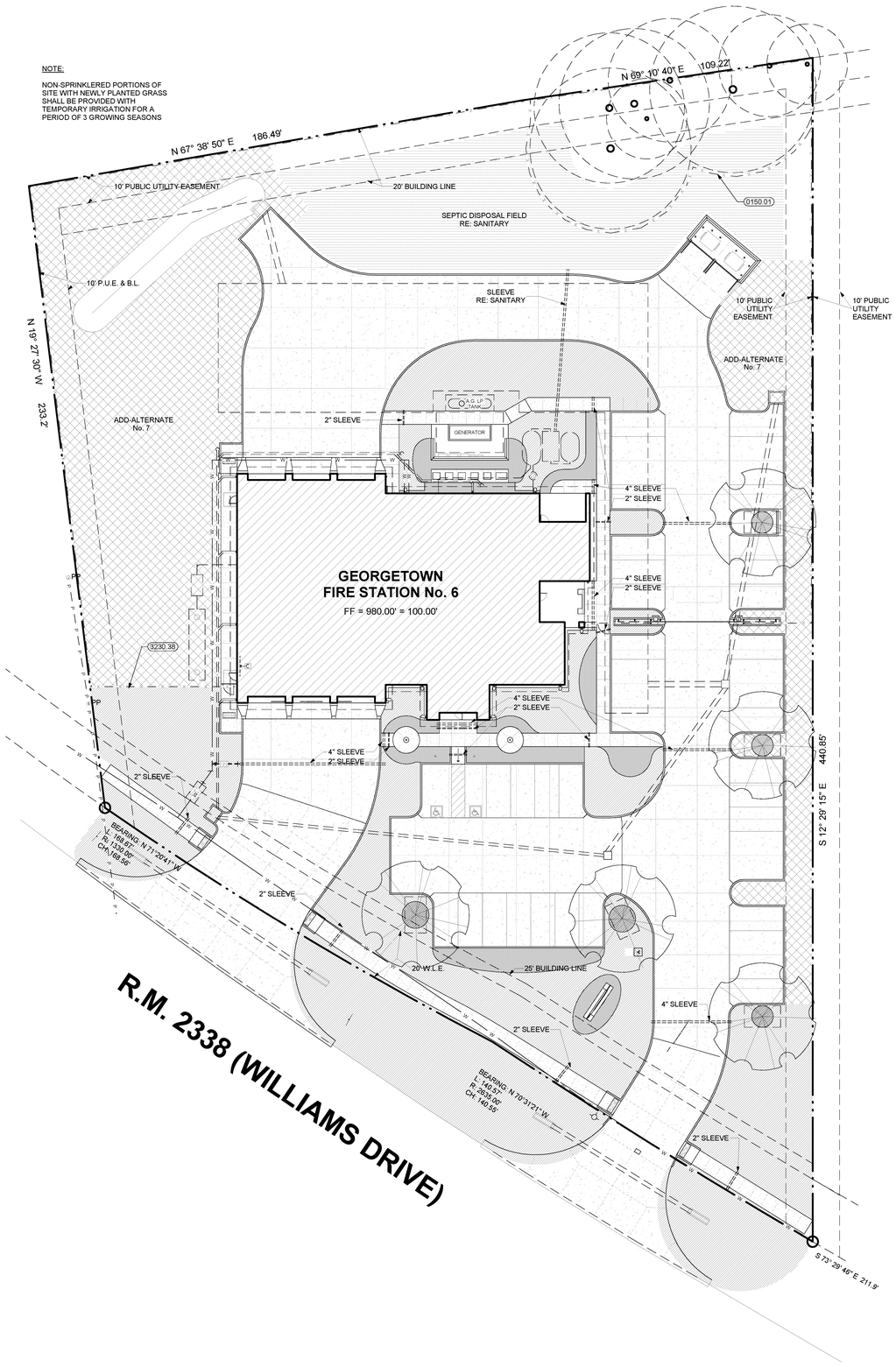
7 QUICK COUPLING VALVE



1. STANDARD VALVE BOX
2. FINISH GRADE
3. REMOTE CONTROL VALVE MODEL PGV-XXXG (SIZE AS REQUIRED)
4. WATERPROOF CONNECTORS
5. 18-24" COILED WIRE
6. SCH 80 T.O.E. NIPPLE
7. MAIN LINE PIPE & FITTINGS
8. BRICK SUPPORTS (4)
9. 3" MINIMUM DEPTH 3/4" WASHED GRAVEL

6 IRRIGATION VALVE

NOTE:
NON-SPRINKLERED PORTIONS OF SITE WITH NEWLY PLANTED GRASS SHALL BE PROVIDED WITH TEMPORARY IRRIGATION FOR A PERIOD OF 3 GROWING SEASONS



PLAN NORTH / TRUE NORTH

1 IRRIGATION PLAN

1" = 20'-0"

KEYNOTES

0150.01 TEMPORARY CONSTRUCTION FENCE
3230.38 DECORATIVE METAL FENCE

NOTES:

1. ALL 24 VOL LEAD AND COMMON VALVE WIRING SHALL BE A MINIMUM OF UF-14 GA. SINGLE CONDUCTOR. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR PROPER WIRE SIZE. WIRE SPLICES SHALL BE PERMANENT AND WATERPROOF.
2. COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH LANDSCAPE CONTRACTOR TO ENSURE ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.
3. LATERAL PIPING SHALL HAVE A MINIMUM OF 12 INCHES OF COVER. MAINLINE AND PIPING UNDER PAVING SHALL HAVE A MINIMUM OF 18 INCHES COVER.
4. PIPING AND VALVES IN PAVING SHOWN FOR CLARITY, INSTALL IN ADJACENT PLANTING BED OF LAWN AREA.
5. CONNECT LAWN AND HIGH-POP SPRAY HEADS TO LATERAL PIPING WITH 1/2" FLEXIBLE PVC AND 1/2" SCH. 40 PVC FITTINGS AS REQUIRED, PER DETAIL SHOWN. USE WELD-ON #795 SOLVENT AND #P070 PRIMER ON THESE CONNECTIONS.
6. CONNECT ROTARY HEADS TO LATERAL PIPE WITH LASCO UNITIZED, O-RING SWING JOINTS PER DETAIL SHOWN.
7. INSTALL QUICK COUPLING VALVES ON 10" VALVE BOX PER DETAIL SHOWN. CONNECT QUICK COUPLING VALVES TO MAINLINE PIPE WITH LASCO UNITIZED, O-RING SWING JOINTS PER DETAIL SHOWN. SUPPLY OWNER WITH THREE (3) COUPLER KEYS WITH SWIVEL HOSE ELLS EACH.
8. INSTALL REMOTE CONTROL VALVES IN 10" VALVE BOXES PER DETAIL SHOWN.
9. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH LOCAL BUILDING CODE. POWER (120V) SHALL BE LOACTED IN A JUNCTION BOX WITHIN 5 FEET OF CONTROLLER LOCATION BY OTHER TRADES.
10. SLEEVES SHALL BE CLASS 200 PVC, LAG BOLTS PLACED IN SIDEWALK AT ENDS OF SLEEVES AND INSTALLED BY OTHER TRADES. PROVIDE ADDITIONAL SLEEVES NOT SHOWN ON PLANS FOR A COMPLETE AND FUCTIONAL IRRIGATION SYSTEM.
11. ROUTE COMMON WIRE FROM CONTROLLER TO REMOTE SENSORS IN SERIES PRIOR TO CONNECTIONS TO REMOTE CONTROL VALVES.
12. INSTALL ADEQUATE NUMBER OF BUBBLER/SPRAY HEADS FOR EACH SHRUB / TREE IN LANDSCAPE BEDS.
13. TEN DAYS PRIOR TO START OF CONSTRUCTION, VERIFY STATIC PRESSURE. IF STATIC PRESSURE IS LESS THAN 110 PSI, DO NOT START WORK UNTIL NOTIFIED TO PROCEED BY OWNER. DESIGN PRESSURE IS 65.0 PSI.
14. INSTALL PRESSURE REDUCING VALVE IN A 12"X17" VALVE BOX WITHIN FIVE (5') FEET OF ANY BACKFLOW PREVENTOR. DISCHARGE PRESSURE REDUCING VALVE TO BE SET AT APPROX. 80 PSI.
15. ALL WORK INCLUDED IN THE INSTALLATION OF THE IRRIGATION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
16. THE INSTALLATION OF THE IRRIGATION SYSTEM WILL BE MADE BY AN INDIVIDUAL OR FIRM DULY LICENSED AS AN IRRIGATOR BY THE STATE OF TEXAS.
17. DOUBLE-CHECK BACK FLOW PREVENTOR SHALL BE INSTALLED AND TESTED UPON INSTALLATION BY A CERTIFIED BACKFLOW TESTER.
18. MAXIMUM LENGTH OF DRIP LINE SHALL BE 275 FEET.
19. THE MAXIMUM SPACING BETWEEN EMISSION DEVICES MUST NOT EXCEED THE MANUFACTURER'S PUBLISHED RADIUS OR SPACING OF THE DEVICE(S).
20. THE IRRIGATION SYSTEMS SHALL NOT UTILIZE ABOVE-GROUND SPRAY EMISSION DEVICES IN LANDSCAPES THAT ARE LESS THAN 48 INCHES NOT INCLUDING THE IMPERVIOUS SURFACES IN EITHER LENGTH OR WIDTH AND WHICH CONTAIN IMPERVIOUS PEDESTRIAN OR VEHICULAR TRAFFIC SURFACES ALONG TWO OR MORE PERIMETERS.
21. SPRINKLER HEADS MUST DIRECT FLOW AWAY FROM ANY ADJACENT SURFACE AND SHALL NOT BE INSTALLED CLOSER THAN FOUR INCHES FROM A HARDSCAPE, SUCH AS, BUT NOT LIMITED TO, A BUILDING FOUNDATION, FENCE, CONCRETE, ASPHALT, PAVERS, OR STONES SET IN MORTAR.
22. IRRIGATION SYSTEMS SHALL NOT SPRAY WATER OVER SURFACES MADE OF CONCRETE, ASPHALT, BRICK, WOOD, STONES SET IN MORTAR, OR ANY OTHER IMPERVIOUS MATERIAL, SUCH AS, BUT NOT LIMITED TO, WALLS, FENCES, SIDEWALKS, STREETS, ETC.
23. COVERAGE OF PIPING MUST BE INSTALLED TO PROVIDE MINIMUM DEPTH COVERAGE OF SIX INCHES OF SELECT BACKFILL, BETWEEN THE TOP OF PIPE AND THE NATURAL GRADE OF THE TOP SOIL.
24. UNDERGROUND ELECTRICAL WIRING THAT CONNECTS AN AUTOMATIC CONTROLLER TO ANY ELECTRICAL COMPONENT OF THE IRRIGATION SYSTEM MUST BE BURRIED WITH A MINIMUM OF SIX INCHES OF SELECT BACKFILL.
25. ALL IRRIGATION LINES RUNNING UNDER SITE PAVING SHALL BE SLEEVED.

REGISTERED ARCHITECT RAYMOND HOLLIDAY SIXTE STATE OF TEXAS 1883
11/16/2018

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 350
GEORGETOWN, TEXAS 78640
512.868.1797
WWW.BRWARCH.COM

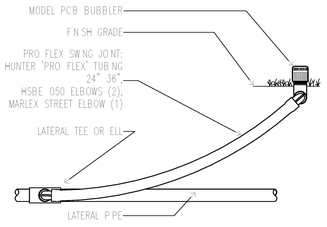
DATE 11/16/2018
DRAWN BY HR
CHECKED BY RH
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

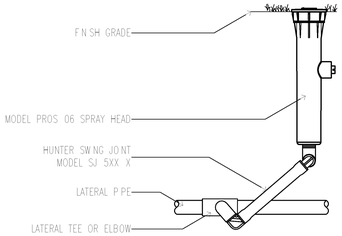
NO.	REVISION	DATE

L1.2

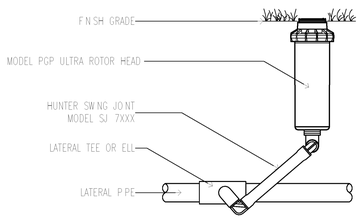
IRRIGATION PLAN AND DETAILS



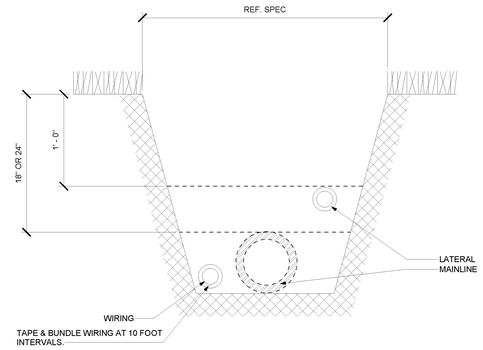
4 EMITTER DETAIL



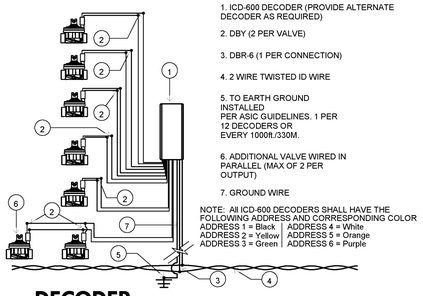
3 SPRAY HEAD
3" = 1'-0"



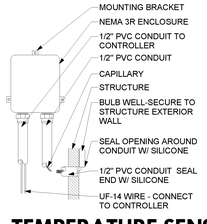
2 ROTOR HEAD



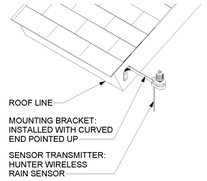
1 TRENCHING DETAIL



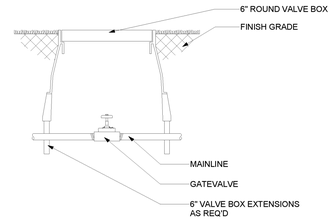
8 DECODER
3" = 1'-0"



7 TEMPERATURE SENSOR



6 RAIN SENSOR



5 IRRIGATION VALVE

NOTES:

1. ALL 24 VOL LEAD AND COMMON VALVE WIRING SHALL BE A MINIMUM OF UF-14 GA. SINGLE CONDUCTOR. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR PROPER WIRE SIZE. WIRE SPLICES SHALL BE PERMANENT AND WATERPROOF.
2. COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH LANDSCAPE CONTRACTOR TO ENSURE ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.
3. LATERAL PIPING SHALL HAVE A MINIMUM OF 12 INCHES OF COVER. MAINLINE AND PIPING UNDER PAVING SHALL HAVE A MINIMUM OF 18 INCHES COVER.
4. PIPING AND VALVES IN PAVING SHOWN FOR CLARITY, INSTALL IN ADJACENT PLANTING BED OF LAWN AREA.
5. CONNECT LAWN AND HIGH-POP SPRAY HEADS TO LATERAL PIPING WITH 1/2" FLEXIBLE PVC AND 1/2" SCH. 40 PVC FITTINGS AS REQUIRED, PER DETAIL SHOWN. USE WELD-ON #795 SOLVENT AND #P070 PRIMER ON THESE CONNECTIONS.
6. CONNECT ROTARY HEADS TO LATERAL PIPE WITH LASCO UNITIZED, O-RING SWING JOINTS PER DETAIL SHOWN.
7. INSTALL QUICK COUPLING VALVES ON 10" VALVE BOX PER DETAIL SHOWN. CONNECT QUICK COUPLING VALVES TO MAINLINE PIPE WITH LASCO UNITIZED, O-RING SWING JOINTS PER DETAIL SHOWN. SUPPLY OWNER WITH THREE (3) COUPLER KEYS WITH SWIVEL HOSE ELLS EACH.
8. INSTALL REMOTE CONTROL VALVES IN 10" VALVE BOXES PER DETAIL SHOWN.
9. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH LOCAL BUILDING CODE. POWER 9120V) SHALL BE LOACTED IN A JUNCTION BOX WITHIN 5 FEET OF CONTROLLER LOCATION BY OTHER TRADES.
10. SLEEVES SHALL BE CLASS 200 PVC, LAG BOLTS PLACED IN SIDEWALK AT ENDS OF SLEEVES AND INSTALLED BY OTHER TRADES.
11. ROUTE COMMON WIRE FROM CONTROLLER TO REMOTE SENSORS IN SERIES PRIOR TO CONNECTIONS TO REMOTE CONTROL VALVES.
12. INSTALL ADEQUATE NUMBER OF SPRAY HEADS FOR EACH SHRUB / TREE IN LANDSCAPE BEDS.
13. TEN DAYS PRIOR TO START OF CONSTRUCTION, VERIFY STATIC PRESSURE. IF STATIC PRESSURE IS LESS THAN 110 PSI, DO NOT START WORK UNTIL NOTIFIED TO PROCEED BY OWNER. DESIGN PRESSURE IS 65.0 PSI.
14. INSTALL PRESSURE REDUCING VALVE IN A 12"X17" VALVE BOX WITHIN FIVE (5') FEET OF ANY BACKFLOW PREVENTOR. DISCHARGE PRESSURE REDUCING VALVE TO BE SET AT APPROX. 80 PSI.
15. ALL WORK INCLUDED IN THE INSTALLATION OF THE IRRIGATION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
16. THE INSTALLATION OF THE IRRIGATION SYSTEM WILL BE MADE BY AN INDIVIDUAL OR FIRM DULY LICENSED AS AN IRRIGATOR BY THE STATE OF TEXAS.
17. DOUBLE-CHECK BACK FLOW PREVENTOR SHALL BE INSTALLED AND TESTED UPON INSTALLATION BY A CERTIFIED BACKFLOW TESTER.
18. MAXIMUM LENGTH OF DRIP LINE SHALL BE 275 FEET.
19. THE MAXIMUM SPACING BETWEEN EMISSION DEVICES MUST NOT EXCEED THE MANUFACTURER'S PUBLISHED RADIUS OR SPACING OF THE DEVICE(S).
20. THE IRRIGATION SYSTEMS SHALL NOT UTILIZE ABOVE-GROUND SPRAY EMISSION DEVIES IN LANDSCAPES THAT ARE LESS THAN 48 INCHES NOT INCLUDING THE IMPERVIOUS SURFACES IN EITHER LENGTH OR WIDTH AND WHICH CONTAIN IMPERVIOUS PEDESTRIAN OR VEHICULAR TRAFFIC SURFACES ALONG TWO OR MORE PERIMETERS.
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23. COVERAGE OF PIPING MUST BE INSTALLED TO PROVIDE MINIMUM DEPTH COVERAGE OF SIX INCHES OF SELECT BACKFILL, BETWEEN THE TOP OF PIPE AND THE NATURAL GRADE OF THE TOP SOIL.
24. UNDERGROUND ELECTRICA WIRING THAT CONNECTS AN AUTOMATIC CONTROLLER TO ANY ELECTRICAL COMPONENT OF THE IRRIGATION SYSTEM MUST BE BURRIES WITH A MINIMUM OF SIX INCHES OF SELECT BACKFILL.
25. ALL IRRIGATION LINES RUNNING UNDER SITE PAVING SHALL BE SLEEVED.

REGISTERED ARCHITECT RAYNE HOLLIDAY STATE OF TEXAS 1883
11/16/2018

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
DALLAS, TEXAS 75240
972.644.1797
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DATE 11/16/2018
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CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

GEORGETOWN TEXAS

NO.	REVISION	DATE

L1.3

IRRIGATION DETAILS

GENERAL

1. THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, **2015** EDITION.
2. THE DESIGN GRAVITY LOADS ARE AS FOLLOWS:
   DEAD LOADS:
   MATERIAL WEIGHTS WITH A 4 PSF MECHANICAL SURCHARGE LOAD AND 10 PSF PARTITION LOAD
   LIVE LOADS:
   A. ROOF — 20 PSF
   B. ASSEMBLY AREAS — 100 PSF
   C. LIGHT STORAGE — 125 PSF
   D. LOBBIES AND FIRST FLOOR CORRIDORS — 100 PSF
   E. SLEEPING AREAS — 40 PSF
   F. OFFICES — 50 PSF
   G. APPARATUS BAY — 250 PSF/HS-20 WHEEL LOAD
3. EXCEPT FOR LOADS EQUAL TO OR IN EXCESS OF 100 PSF, LIVE LOADS ARE REDUCED ACCORDING TO SECTION 1607.9 OF THE IBC.
4. WIND DESIGN CRITERIA
   A. ASCE 7-10, ENVELOPE PROCEDURE, SIMPLIFIED FOR LOW-RISE BUILDINGS W/ ENCLOSED SIMPLE DIAPHRAGM.
   B. BASIC WIND SPEED (3-SEC PEAK GUST, MRI = 1700 YRS)* — 120 MPH
   C. OCCUPANCY CATEGORY — IV
   D. IMPORTANCE FACTOR** — 1.0
   E. EXPOSURE CATEGORY — C
   F. ENCLOSURE CLASSIFICATION — ENCLOSED BUILDING
   G. DIRECTIONALITY FACTOR (K_d) — 0.85
   H. TOPOGRAPHY FACTOR (K_{zt}) — 1.0
   I. GUST EFFECT FACTOR (G) — 0.85
   J. BASIC WIND PRESSURE, (q_h) — 30.8 PSF
   * SPECIFIED BASIC WIND SPEED IS BASED ON THE BUILDING OCCUPANCY CATEGORY
   ** IMPORTANCE FACTOR IS ALWAYS 1.0 FOR ASCE 7-10 BASED DESIGN
5. OFFICE 109 IS DESIGNED AS A TORNADO SHELTER FOR A WINDSPEED OF 200 MPH, CONFORMING TO FEMA P-361 AND ICC 500-2014
6. STRUCTURAL DRAWINGS SHALL BE COORDINATED WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
7. THIS DESIGN IS BASED ON THE PREPARED ARCHITECTURAL DRAWINGS, WHERE CONDITIONS OTHER THAN THOSE SHOWN ON ARCHITECTURAL DRAWINGS EXIST, THE CONTRACTOR SHALL CONTACT GESSNER ENGINEERING TO ADDRESS THOSE DIFFERENCES.

CONCRETE MASONRY UNITS

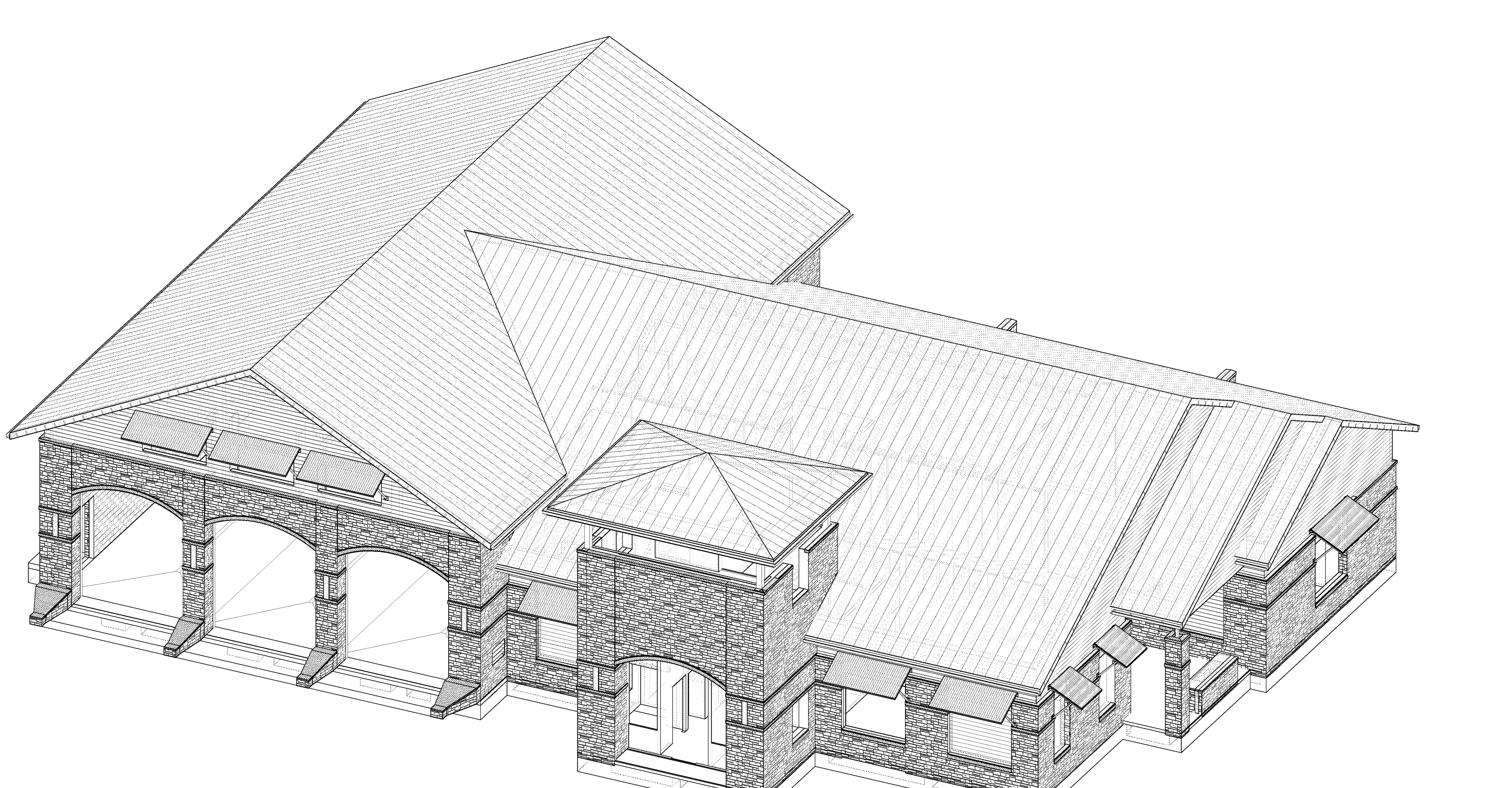
1. ALL EXTERIOR MASONRY WALLS SHALL BE 8" NOMINAL CONCRETE BLOCK, UNO. GROUT AND REINFORCE ALL EXTERIOR MASONRY WALLS IN ACCORDANCE WITH THE TABLE BELOW AND AS NOTED ON PLANS. GROUT FILL ALL REINFORCED CELLS.
2. ALL CONCRETE MASONRY ASSEMBLIES SHALL HAVE A MINIMUM NET COMPRESSIVE STRENGTH OF 2,000 PSI. MASONRY UNITS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C90 NORMAL WEIGHT HOLLOW CORE, WITH A MINIMUM NET COMPRESSIVE STRENGTH OF 2,000 PSI. BOND BEAMS AT TOP OF WALLS AND AT MID-HEIGHT SHALL BE KNOCKOUT TYPE. MORTAR SHALL CONFORM TO ASTM C270, TYPE S.
3. PEA GRAVEL GROUT FILL SHALL HAVE A MAXIMUM 3/8" DIAMETER AGGREGATE SIZE AND SHALL BE PROPORTIONED ACCORDING TO ASTM C476, TABLE 1., AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI WITH A SLUMP OF 10" TO 11".
4. ALL WALLS AND BOND BEAMS SHALL BE GROUTED USING LOW-LIFT GROUTING TECHNIQUE. LAY CMU TO MAXIMUM POUR HEIGHT, BUT DO NOT EXCEED 5' HEIGHT, OR IF BOND BEAM OCCURS BELOW 5' HEIGHT STOP POUR AT COURSE BELOW BOND BEAM.
5. A MINIMUM CLEAR DIMENSION FROM THE EXTERIOR FACE OF THE MASONRY TO REINFORCING OF 2" . SHALL BE PROVIDED IN ALL VERTICAL CORES TO BE GROUTED.
6. PLACE VERTICAL REINFORCEMENT PRIOR TO PLACEMENT OF CMU. EXTEND ABOVE ELEVATION OF MAXIMUM POUR HEIGHT AS REQUIRED FOR SPLICING, AND SUPPORT WITH REBAR POSITIONERS AT A MAXIMUM SPACING OF 192 BAR DIAMETERS OR 10', WHICHEVER IS LESS.
7. PLACE HORIZONTAL BEAM REINFORCEMENT AS MASONRY IS LAID.
8. REINFORCE CONRETE MASONRY UNIT BED JOINTS WITH LADDER TYPE HOT DIP GALVANIZED COLD-DRAWN STEEL CONFIRMING TO ANSI/ASTM A951. WITH W1.7 (9 GAUGE, MW11) SIDE RODS WITH W1.7 CROSS RODS.
   A. SPACE JOINT REINFORCING AT 16" OC VERTICALLY UNLESS NOTED OTHERIWISE.
   B. LAP JOINT REINFORCING 6" AT SPLICES.
   C. PROVIDE JOINT REINFORCING AT COURSES IMMEDIATELY ABOVE AND BELOW OPENINGS.
   D. JOINT REINFORCING SHALL BE DISCONTINUOUS AT CONTROL AND EXPANSION JOINTS.
9. POUR GROUT USING CHUTE OR CONTAINER WITH SPOUT. VIBRATE GROUT DURING PLACING. PLACE GROUT CONTINUOUSLY. DO NOT INTERRUPT POURING OF GROUT FOR MORE THAN ONE HOUR. GROUT POURS SHALL TERMINATE 1 1/2" BELOW THE TOP COURSE OF THE POUR.
10. FOR BOND BEAMS, HORIZONTAL REINFORCEMENT SHALL BE PLACED IN THE BOND BEAMS WITH LAPS AT CORNERS AND INTERSECTIONS WITH MINIMUM LAP LENGTHS AS SPECIFIED IN THE TABLE BELOW. PLACE GROUT IN BOND BEAM COURSE PRIOR TO FILLING VERTICAL CORES ABOVE BOND BEAMS.
11. PROVIDE BRACING AT THE TOP OF NON-LOAD BEARING MASONRY WALLS PER DETAILS.
12. INSTALL REINFORCED UNIT MASONRY LINTELS, DEPTH AND REINFORCEMENT AS NOTED ON PLANS, OVER OPENINGS IN CMU WALLS AS FOLLOWS:
    A. DO NOT SPLICE REINFORCING BARS
    B. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT.
    C. PLACE AND CONSOLIDATE GROUT FILL WITHOUT DISPLACING REINFORCING.
    D. ALLOW MASONRY LINTELS TO ATTAIN SPECIFIED STRENGTH BEFORE REMOVING TEMPORARY SUPPORTS.
    E. MAINTAIN A MINIMUM OF 16" BEARING ON EACH SIDE OF THE OPENING, UNO.
13. PROVIDE CONTROL AND EXPANSION JOINTS AT SPECIFIC LOCATIONS NOTED ON ARCHITECTURAL PLANS. SPACING OF CONTROL AND EXPANSION JOINTS SHALL NOT EXCEED THE FOLLOWING SPACING:
    A. INTERIOR PARTITIONS: 25' - 0" OC HORIZONTALLY.
    B. EXTERIOR CAVITY WALLS: 20' - 0" OC HORIZONTALLY.
14. FORM CONTROL JOINT WITH SHEET BUILDING PAPER BOND BREAKER FITTED TO ONE SIDE OF HOLLOW CONTOUR END OF BLOCK UNIT. FILL RESULTANT CORE WITH GROUT FILL. RAKE JOINT AT EXPOSED UNIT FACES FOR PLACEMENT OF BACKER ROD AND SEALANT.
15. FORM EXPANSION JOINT BY OMITTING MORTAR AND CUTTING UNIT TO FORM OPEN JOINT.
16. SIMPSON STRONG-TIE TITEN-HD ANCHORS TO CONNECT TO CMU SHALL NOT BE INSTALLED WITHIN 1 1/2" OF CMU HEAD JOINTS.

CMU WALL REINFORCEMENT (UNO ON PLAN)		
WALL TYPE	TOTAL WALL HEIGHT TO PARAPET	VERTICAL WALL REINFORCEMENT
LOADING BEARING & EXTERIOR WALLS	22' - 3"	#5 BARS @ 24" OC
	12" - 0" AND LESS	#5 BARS @ 32" OC
PARTITION WALLS	12" - 0" AND LESS	#5 BARS @ 48" OC

ACI MASONRY LAP SPLICE LENGTHS f'm = 1500 psi, fy = 60000 psi	
W	LAP
#3	18"
#4	24"
#5	30"
#6	44"
#7	60"

STRUCTURAL STEEL

1. STRUCTURAL STEEL FABRICATOR TO BE REGISTERED AND APPROVED TO PERFORM SUCH WORK IN ACCORDANCE WITH SECTION 1704.2.5.2 OF THE IBC. ACCEPTABLE CERTIFICATIONS INCLUDE THOSE PROVIDED BY ASTM OR AWS.
2. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, 50KSI. ALL PLATES, ANGLES, AND CHANNELS SHALL CONFORM TO A36.
3. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B.
4. STRUCTURAL STEEL CAST-IN-PLACE ANCHOR BOLTS SHALL BE HEAVY HEX HEAD ANCHORS, CONFORMING TO ASTM F-1554 GR. 36, UNLESS NOTED OTHERWISE.
5. CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE HIGH STRENGTH BOLTS WHICH MEET OR EXCEED THE REQUIREMENTS OF ASTM A325, TYPE N, X, OR F. BOLTS SHALL BE DESIGNED AS BEARING TYPE BOLTS, EXCEPT AS NOTED. BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE "SNUG TIGHT" CONDITION AS OUTLINED IN THE SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED. BOLTS IN BRACING CONNECTIONS, MOMENT CONNECTIONS, OR OTHER CONNECTIONS NOTED ON THE DRAWINGS SHALL BE CONSIDERED TO BE "SLIP CRITICAL" BOLTS, AND SHALL BE DESIGNED AS FRICTION TYPE BOLTS. FRICTION TYPE CONNECTIONS SHALL BE TIGHTENED BY THE USE OF THE TURN-OF-THE-NUT METHOD OR THE USE OF LOAD INDICATING TYPE BOLTS, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. STRUCTURAL STEEL DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES". FOR THIS PROJECT, PARAGRAPH 4.2.1 OF THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IS HEREBY MODIFIED BY DELETION OF THE FOLLOWING SENTENCE: THIS APPROVAL CONSTITUTES THE OWNER'S ACCEPTANCE OF ALL RESPONSIBILITY FOR THE DESIGN ADEQUACY OF ANY CONNECTIONS DESIGNED BY THE FABRICATOR AS PART OF HIS PREPARATION OF THESE SHOP DRAWINGS.
7. WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.1. ELECTRODES FOR SHOP AND FIELD WELDS SHALL CONFORM TO AWS A5.1 OR AWS A5.5, CLASS E7OXX, LOW HYDROGEN.
8. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED ON THE CONTRACT DOCUMENTS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.
9. THE CONTRACTOR SHALL NOTIFY GESSNER ENGINEERING OF ANY MISFABRICATED STRUCTURAL STEEL PRIOR TO ERECTION OF SAME.
10. PENETRATIONS SHALL NOT BE CUT IN STRUCTURAL STEEL MEMBERS UNLESS SO INDICATED IN THE DRAWINGS OR AS REVIEWED BY THE ENGINEER.
11. HEADED CONCRETE ANCHORS SHALL BE NELSON OR KSM HEADED CONCRETE ANCHORS (OR ACCEPTABLE EQUAL), AND SHALL CONFORM TO ASTM A108, GRADES C-1010 THROUGH C-1020. ANCHORS SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE STUD WELDING EQUIPMENT IN THE SHOP OR IN THE FIELD. WELDING SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE NELSON STUD WELDING COMPANY OR THE KSM WELDING SYSTEMS COMPANY.
12. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE CONTRACT DOCUMENTS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
13. STEEL MEMBERS, FABRICATIONS, AND ASSEMBLIES EXPOSED TO WEATHER OR INDICATED ON THE DRAWINGS SHALL BE EITHER GALVANIZED OR PRIMED AND PAINTED IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
    - MEMBERS AND FABRICATIONS TO BE GALVANIZED, SHALL BE GALVANIZED AFTER FABRICATION BY HOT DIP PROCESS IN ACCORDANCE WITH ASTM A123. WEIGHT OF ZINC COATING TO CONFORM TO REQUIREMENTS SPECIFIED IN "WEIGHT OF ZINC COATING" IN ASTM A123 OR AST 1386, AS APPLICABLE.
    - MEMBERS AND FABRICATION TO BE PRIMED AND PAINTED SHALL BE CLEANED TO MEET THE SSPC-SP3 STANDARD. THIS SHALL REMOVE ALL LOOSE MILL SCALE, LOOSE RUST, LOOSE PAINT, AND OTHER LOOSE DETRIMENTAL FOREIGN MATTER BY POWER SANDING, POWER GRINDING, POWER TOOL SHIPPING, AND/OR POWER TOOL DESCALING. PRIMER AND PAINT SHALL BE APPLIED TO ALL STEEL, UNLESS NOTED OTHERWISE. PRIMERS AND PAINTS SHALL BE IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS.



GENERAL WOOD FRAMING

1. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION AND COORDINATION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS. PLANS AND DETAILS FOR FRAMING ARE A SCHEMATIC REPRESENTATION OF THE FRAMING AT VARIOUS LOCATIONS AND CONDITIONS OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL FRAMING NECESSARY TO COMPLETELY FRAME THE PROJECT AND PROVIDE FOR ALL CONDITIONS SHOWN ON THE ARCHITECTURAL DRAWINGS.
2. ALL SAWN CONVENTIONAL FRAMING LUMBER SHALL BE #2 SOUTHERN YELLOW PINE, KD TO 19% MAXIMUM MOISTURE. FASTEN PER NAILING SCHEDULE IN SECTION 2304.9 OF THE **2015** EDITION OF THE INTERNATIONAL BUILDING CODE (IBC).
3. TIMBER SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, ISSUED BY THE AMERICAN WOOD COUNCIL AND APPROVED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE, WITH CURRENT UPDATES AND ERRATA.
4. WOOD MATERIALS TO BE INDIVIDUALLY GRADE MARKED.
5. PLYWOOD SHEATHING FOR ROOFS, FLOORS, AND WALLS, SHALL BE APA RATED, EXPOSURE 1, THICKNESS AS NOTED ON DRAWINGS. ATTACH SHEATHING TO FRAMING AS NOTED ON DRAWINGS. PROVIDE GAPS BETWEEN PANELS PER APA RECOMMENDATIONS. PROVIDE APPROPRIATE ADHESIVES FROM FLOOR PANELS TO FRAMING.
6. ALL BEAMS MADE UP OF MULTIPLE 2X MEMBERS SHALL BE SUPPORTED AT EACH END BY A POST EQUAL TO OR EXCEEDING THE THICKNESS OF THE BEAM. (I.E. (2)2X BEAM SHALL REQUIRE (2) 2X STUD POST MIN.) THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS. CONTRACTOR SHALL PROVIDE ADEQUATE NUMBER OF STUDS AND BRACING AS REQUIRED FOR ALL FRAMING PARTICULARLY AT LOCATIONS OF CONCENTRATED LOADS. MULTIPLE 2X MEMBER BEAMS SHALL NOT BE SPLICED EXCEPT OVER SUPPORTS.
7. COLUMNS MADE UP OF MULTIPLE 2X MEMBERS SHALL BE GLUED AND FASTENED TO ACT AS A UNIT AS FOLLOWS:
   A. (2) 2X - 16d COMMON NAIL @12" OC
   B. (3) 2X - 20d COMMON NAIL @12" OC
   C. (4) 2X & OVER - 3/4"Ø BOLTS W/ WASHERS EACH FACE @ 12" OC
8. JOISTS WILL BE LATERALLY SUPPORTED AT EACH END AND AT EACH SUPPORT BY SOLID BLOCKING EXCEPT WHERE THE ENDS OF JOISTS ARE NAILED INTO A HEADER, BAND OR RIM JOIST, OR TO AN ADJOINING STUD. SOLID BLOCKING SHALL NOT BE LESS THAN 2" IN THICKNESS AND SHALL MATCH THE JOIST DEPTH.
9. ALL CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. (OR APPROVED EQUAL.) NAIL IN ALL NAIL HOLES.
10. WALL STUDS TO BE AS SHOWN ON FRAMING PLANS. INSTALL BLOCKING AT MID HEIGHT BETWEEN ALL STUDS IN ALL LOAD BEARING WALLS. PROVIDE TRIPLE STUD AT ALL CORNERS.
11. PROVIDE SINGLE TREATED 2X BOTTOM PLATE FOR ALL WALLS AND DOUBLE 2X TOP PLATE FOR ALL WALLS. ALL EXTERIOR WALLS AND INTERIOR LOAD BEARING WALLS SHALL HAVE SILL PLATES ANCHORED TO THE FOUNDATION WITH A307 J-BOLTS, MIN. 5/8"Ø SPACING AS NOTED AT EXTERIOR WALLS UNO, REFERENCE FRAMING FOR ADDITIONAL REQUIREMENTS.
12. DRAFTSTOPPING SHALL BE INSTALLED IN ATTICS AND IN BETWEEN FLOORS WHEN APPLICABLE ACCORDING TO THE INTERNATIONAL BUILDING CODE, SECTION 716.
13. FIREBLOCKING SHALL BE PROVIDED WITH NON-COMBUSTIBLE MATERIALS IN THE FOLLOWING LOCATIONS:
    A. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVELS, AND AT 10' - 0" INTERVALS BOTH HORIZONTAL AND VERTICAL.
    B. AT ALL INTERCONNECTIONS BETWEEN CONCEALED HORIZONTAL AND VERTICAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, AND COVE CEILINGS.
    C. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN AND BETWEEN STUDS ALONG AND IN LINE THE RUN OF STAIRS IF THE WALLS UNDER THE STAIRS ARE UNFINISHED.
    D. IN OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS, FIREPLACES, AND SIMILAR OPENINGS WHICH AFFORD A PASSAGE FOR FIRE AT CEILING AND FLOOR LEVELS.
14. WHERE REQUIRED, JOIST HANGERS SHALL BE GALVANIZED "U-TYPE" JOIST HANGERS MANUFACTURED BY SIMPSON OR APPROVED EQUIVALENT. JOIST HANGERS TO BE A MINIMUM OF 16 GA., APPLICABLE TO CORRESPONDING SIZE, INCLUDING DOUBLE OR TRIPLE JOISTS.
15. BEAMS/HEADERS OVER OPENINGS SHALL BE THE HEADERS LISTED IN THE SCHEDULE OR ON THE PLANS OR BETTER THAN SPECIFIED.
16. VERIFY LOCATION OF ALL OPENINGS WITH ARCHITECTURAL PLANS. ENSURE THAT HEADERS OR HEADER TRUSSES ARE INSTALLED ABOVE ALL OPENINGS.
17. ALL STUD WALL SILL PLATES, NAILERS, AND OTHER MEMBERS IN CONTACT WITH CONCRETE OR STRUCTURAL MASONRY OR USED IN UNCONDITIONED SPACE SHALL BE PRESSURE TREATED, WOLMANIZED, OR EQUAL.
18. ALL SPECIFIED NAILS SHALL BE COMMON NAILS, UNO.

TRUSS NOTES

1. TRUSS DRAWINGS ARE SCHEMATIC IN NATURE. DIMENSIONS AND LOCATIONS OF TRUSSES SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS. TRUSS DESIGN SHALL SUPERCEDE DIMENSIONS PROVIDED WHERE ADDITIONAL DEPTH AND STIFFNESS ARE REQUIRED.
2. TRUSS MANUFACTURER SHALL FABRICATE AND SUPPLY METAL PLATED WOOD TRUSSES AS SPECIFIED HEREIN. WORK SHALL INCLUDE ANCHORAGE, BLOCKING, CURBING, MISCELLANEOUS FRAMING, AND BRACING.
3. TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH, AT MINIMUM, ANSI/TPI 1-2014 "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSSES" TRUSS PLATE INSTITUTE, AND "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION"(NDS), AMERICAN FOREST & PAPER ASSOCIATION, AND THE CODE OF JURISDICTION.
4. MANUFACTURER SHALL FURNISH DESIGN DRAWINGS, BEARING SEAL, AND REGISTRATION NUMBER OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS. DRAWINGS SHALL BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO FABRICATION.
5. LUMBER USED FOR TRUSS MEMBERS SHALL BE IDENTIFIED BY THE GRADE MARK OF A LUMBER INSPECTION BUREAU OR AGENCY APPROVED BY BOARD OF REVIEW OF AMERICAN LUMBER STANDARDS COMMITTEE. CHORD MEMBERS SHALL BE #2 VISUALLY GRADED SOUTHERN YELLOW PINE OR BETTER WHOLE WEB MEMBERS MAY BE #3 OR BETTER. MINIMUM MEMBER SIZE SHALL BE 2X4.
6. METAL CONNECTOR PLATES SHALL BE MANUFACTURED BY COMPANIES MAINTAINING A RESEARCH REPORT WITH THE GOVERNING MODEL CODE AGENCY AND SHALL MEET OR EXCEED APPLICABLE STEEL SPECIFICATIONS.
7. TRUSSES SHALL BE FABRICATED, AT MINIMUM, IN ACCORDANCE WITH THE QUALITY REQUIREMENTS IN SECTION 4 OF ANSI/TPI 1-2014 "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSSES."
8. TRUSSES SHALL BE HANDLED DURING FABRICATION, DELIVERY, AND AT JOBSITE SO AS NOT TO BE SUBJECTED TO EXCESSIVE LATERAL BENDING. HANDLING, INSTALLATION TOLERANCES AND TEMPORARY BRACING SHALL BE AS SET FORTH IN "COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING AND BRACING METAL PLATE CONNECTED WOOD TRUSSES," HIB-91. CUTTING AND ALTERING OF TRUSSES IS NOT PERMITTED.
9. CONCENTRATED LOADS SHALL NOT BE PLACED ATOP TRUSSES UNTIL ALL SPECIFIED BRACING HAS BEEN INSTALLED AND DECKING IS PERMANENTLY NAILED IN PLACE. BRACE TRUSSES SUFFICIENTLY DURING INSTALLATION TO PREVENT TOPPLING OR DOMINOING. BRACING DURING INSTALLATION SHALL BE IN ACCORDANCE WITH HIB-91 OR "RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES," DSB-95.
10. ALL FLOOR TRUSSES TO BE DESIGNED AT MAXIMUM 2' - 0" OC FOR THE FOLLOWING LOADING UNO:

    TOP CHORD:
    LIVE LOAD: 125 PSF — DEAD LOAD: 15 PSF

    BOTTOM CHORD:
    DEAD LOAD: 5 PSF

11. ALL ROOF TRUSSES TO BE DESIGNED AT MAXIMUM 2' - 0" OC FOR THE FOLLOWING LOADING UNO:

    TOP CHORD:
    LIVE LOAD: 20 PSF — DEAD LOAD: 15 PSF

    BOTTOM CHORD:
    DEAD LOAD: 10 PSF

12. TRUSSES BELOW OVERFRAMING TO BE DESIGNED FOR ADDITIONAL DEAD LOAD INCLUDING WEIGHT OF OVERFRAMED TRUSSES AND ADDITIONAL 3 PSF DEAD LOAD FOR ROOF DECKING.
13. TRUSSES SHALL BE DESIGNED TO SUPPORT ADDITIONAL POINT LOADS AND DIFFERING DISTRIBUTED LOADS AS SHOWN. TRUSSES SHALL BE DESIGNED TO SUPPORT ADDITIONAL POINT LOADS AND DIFFERING DISTRIBUTED LOADS WHERE SHOWN ON PLAN.

SLAB-ON-GRADE SITE PREPARATION

1. THE BUILDING PAD SHALL EXTEND A MINIMUM OF 5' - 0" FROM THE EDGE OF THE BUILDING FOOTPRINT IN ALL DIRECTIONS. SELECT FILL SHALL SLOPE AWAY AT AN ANGLE THAT ALLOWS PROPER DRAINAGE.
2. CONSTRUCTION AREAS SHALL BE STRIPPED OF ALL VEGETATION, LOOSE TOPSOIL, SURFICIAL CONCRETE, ETC. ROOTS OF TREES TO BE REMOVED WITHIN THE CONSTRUCTION AREAS SHALL BE EXCAVATED AND REMOVED. ALL STRATUM I SOILS SHALL BE COMPLETELY REMOVED FROM THE BUILDING AREAS PER SECTION 4.4 "BUILDING PAD PREPARATION" OF THE GEOTECHNICAL REPORT.
3. ONCE FINAL SUBGRADE ELEVATION HAS BEEN ACHIEVED, EXPOSED SOIL SUBGRADE AREAS SHALL BE PROOFROLLED WITH A 15 TON ROLLER (MINIMUM) OR EQUIVALENT EQUIPMENT AS APPROVED BY THE GEOTECHNICAL ENGINEER. WEAK AREAS DETECTED DURING THE PROOF ROLLING PROCESS SHALL BE REMOVED AND REPLACED WITH SOILS EXHIBITING SIMILAR CLASSIFICATION, MOISTURE CONTENT, AND DENSITY AS THE ADJACENT IN SITU SOILS.
4. A MINIMUM OF **1' - 0"** OF SELECT FILL SHALL BE COMPACTED IN PLACE TO FORM A LEVEL PAD.
5. ALL FILL PLACED BELOW THE FOUNDATION SLAB SHALL BE SELECT FILL CONSISTING OF A LOW PLASTICITY CLAYEY SOIL WITH A PLASTICITY INDEX BETWEEN 5 AND 20, A MAXIMUM GRAVEL CONTENT OF 40%, AND ROCKS NO LARGER THAN 2" IN THEIR LARGEST DIMENSION. ALTERNATIVELY, A CRUSHED LIMESTONE BASE MATERIAL MEETING THE REQUIREMENTS OF THE TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT).
6. ALL STRUCTURAL FILL SHALL BE PLACED ON PREPARED SURFACES IN LIFTS NOT TO EXCEED 8" IN LOOSE MEASURE, WITH COMPACTED THICKNESS NOT TO EXCEED 6".
7. SELECT FILL SHALL BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR (ASTM D 698) DENSITY AT A MOISTURE CONTENT RANGING WITHIN 2% OF OPTIMUM MOISTURE CONTENT FOR DEPTHS OF 3' - 0" OR LESS. IF FILL IN EXCESS OF 3' - 0" IS REQUIRED, ALL STRUCTURAL AND SELECT FILL DEEPER THAN 3' - 0" SHALL BE COMPACTED TO 99% OF STANDARD PROCTOR (ASTM D 698).

GENERAL FOUNDATION

1. DESIGN BASED ON SECTION 4.3.3 "DESIGN RECOMMENDATIONS - MONOLITHIC SLAB-ON-GRADE" OF THE GEOTECHNICAL REPORT PROVIDED BY TERRACON CONSULTANTS, INC. DATED JULY 31, 2017.
2. FOUNDATION LAYOUT BASED ON ARCH. PLANS PROVIDED BY BROWN REYNOLDS WATFORD ARCHITECTS, INC. DATED FEBRUARY 13, 2018.
3. ALL FOUNDATION PLAN DIMENSIONS ARE INTERPRETED FROM AND SHALL BE VERIFIED WITH THE FLOOR PLAN AND THE OWNER NOTIFIED IF DISCREPANCIES EXIST.
4. STRUCTURAL DRAWINGS TO BE COORDINATED WITH ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR ALL OPENINGS, INSERTS, AND RELATED ITEMS.
5. ANY UNUSUAL CONDITIONS ENCOUNTERED AFFECTING THE FOUNDATION SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE ENGINEER PRIOR TO CONCRETE PLACEMENT.
6. A 2" - 4" PERVIOUS SAND OR GRANULAR LAYER MAY BE PLACED UNDER THE SLAB AT THE CONTRACTOR'S DISCRETION.
7. SAW CUT CONTROL JOINTS MAY BE INSTALLED AT THE DISCRETION OF THE ARCHITECT OR OWNER TO CONTROL SHRINKAGE CRACKING AT THE SURFACE OF THE SLAB. SAW CUT JOINTS SHALL BE SPACED AT 24 TO 36 TIMES THE SLAB THICKNESS AND CUT AS SOON AS THE CONCRETE HAS OBTAINED ADEQUATE STRENGTH TO RESIST RAVELING OF THE JOINT EDGES, GENERALLY BETWEEN 4 TO 12 HOURS AFTER THE CONCRETE HAS BEEN FINISHED. HOWEVER, IF ENTRY IS DELAYED TOO LONG, SAWING CAN BECOME DIFFICULT AND UNCONTROLLABLE CRACKING MAY OCCUR, THE BEST TIME FOR SAWING SHALL BE DETERMINED IN THE FIELD AS TIMING MAY VARY BASED ON MIX DESIGN, PLACEMENT, AND CURING CONDITIONS. SAW CUTS SHALL BE A MINIMUM 1/4 OF THE SLAB THICKNESS WITH REINFORCEMENT CONTINUOUS THROUGH SAW CUTS IN ACCORDANCE WITH THE CONTROL JOINT DETAIL.
8. CONSTRUCT FORMWORK TO MAINTAIN TOLERANCES AS OUTLINES IN ACI 347. REUSE FORMWORK ACCORDING TO ACI 347. EXTEND FORMWORK AT LEAST 6 INCHES BELOW THE FINISHED GRADE ELEVATION AT PERIMETER BEAMS. CUT TEMPORARY PORT OPENINGS IN ORDER TO DRAIN EXPOSED TRENCHES DURING CONSTRUCTION IN CASE OF INCLEMENT WEATHER.
9. TRENCH GRADE BEAMS IN ORDER TO PROVIDE THE BEAM CROSS SECTION INDICATED. BEAM AND SLAB DEPTHS AND WIDTHS INDICATED ARE MINIMUM ACCEPTABLE SIZES. LARGER SIZE BEAMS AND SLABS FORMED BY LESS ACCURATE TRENCHING MAY REQUIRE ADDITIONAL REINFORCING NOT SHOWN WHICH SHALL BE DETERMINED BY THE STRUCTURAL ENGINEER DURING THE CONSTRUCTION INSPECTION PROCESS. CUT HAUNCHES ON EACH SIDE OF TRENCHES OF ADEQUATE SIZE TO MAINTAIN THE VERTICAL SIDES OF THE TRENCH.
10. TRENCH BELOW THE SLAB THICKNESS FOR PLACING ELECTRICAL CONDUIT AND PLUMBING LINES. BURY ELECTRICAL CONDUIT AND PLUMBING LINES BELOW THE SLAB THICKNESS AND OUTSIDE OF THE GRADE BEAMS TRENCHES. DO NOT PLACE CONDUIT OR PLUMBING PIPES UNDER AND/OR PARALLEL WITHIN GRADE BEAMS. WRAP ANY SEWER, STORM, WATER, OR ELECTRICAL PIPING LINES CROSSING GRADE BEAMS OR PROJECTING THROUGH THE SLAB WITH PVC SLEEVES FOR PROTECTION FROM GROUND MOVEMENTS. EXTEND SLEEVES AT LEAST 6 INCHES PAST THE TRENCH WIDTH. ALTERNATIVELY, UTILITIES MAY BE DESIGNED WITH SOME DEGREE OF FLEXIBILITY.
11. EXPANSION JOINTS SHALL BE FORMED BY REDWOOD STRIPS OR A BITUMINOUS FILLER MATERIAL SET BELOW THE SURFACE IN ORDER TO FILL THE JOINT WITH A FLEXIBLE JOINT FILLER. EXTERIOR JOINTS SHALL BE SEALED WITH A TRAFFIC GRADE SEALANT.
12. BEAM TRENCHES SHALL BE CLEANED OF DEBRIS AND STANDING WATER PRIOR TO POURING CONCRETE.
13. A VAPOR RETARDER SHALL BE PLACED UNDER ALL FOUNDATION CONCRETE.
    A. AT A MINIMUM THE VAPOR RETARDER SHALL CONFORM TO IBC "CLASS I" WITH A PERMEANCE OF 0.1 PERMS OR LESS, ASTM E1745-17 "CLASS C", AND ACI 302.2R-06 WITH A MINIMUM THICKNESS OF 10 MIL. WHERE ARCHITECTURAL PLANS CALL FOR SENSITIVE FLOOR MATERIALS, A VAPOR RETARDER EXCEEDING THE ABOVE SPECIFICATIONS MAY BE REQUIRED.
    B. VAPOR RETARDERS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM E1643-11, WITH THE MATERIAL CONTINUOUS BELOW FOUNDATION CONCRETE AREAS AND WITH JOINTS LAPPED AT LEAST 6", OR AS INSTRUCTED BY THE MANUFACTURER.
    C. SEAMS, TEARS, AND PENETRATIONS IN THE VAPOR RETARDER SHALL BE SEALED WITH THE MANUFACTURER'S RECOMMENDED ADHESIVE OR PRESSURE SENSITIVE TAPE.
    D. AT SLAB EDGES THE VAPOR RETARDER SHALL BE SEALED TO THE EXTERIOR FACE OF THE PERIMETER GRADE BEAM.

CONCRETE

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
2. CONCRETE MIX SHALL BE PREPARED ACCORDING TO ACI 301. WATER TO CEMENT RATIO SHALL NOT EXCEED 0.55 AND SHALL BE NOTED IN THE SUBMITTED MIX DESIGNS FOR APPROVAL.
3. NOMINAL MAXIMUM SIZE OF COARSE AGGREGATE SHALL NOT BE LARGER THAN:
   A. 1/5 THE NARROWEST DIMENSION BETWEEN SIDES OF FORMS.
   B. 1/3 THE DEPTH OF SLAB.
   C. 3/4 THE MINIMUM CLEAR SPACING BETWEEN INDIVIDUAL REINFORCING BARS.
4. FLY ASH MAY BE CONSIDERED AT THE DISCRETION OF THE ENGINEER IF AMBIENT TEMPERATURE AT THE TIME OF THE POUR IS EXPECTED TO BE IN EXCESS OF 70° FAHRENHEIT. FLY ASH MAY BE USED UP TO 25% REPLACEMENT OF PORTLAND CEMENT.
5. CONCRETE SLUMP SHALL BE 5" ± 1" FOR TYPICAL SLAB AND GRADE BEAM APPLICATIONS.
6. TYPICAL CONCRETE (NOT INCLUDING A POLISHED FLOOR SLAB) SHALL HAVE AN APPROVED AIR ENTRAINMENT AGENT WITH A RESULTING MAGNITUDE OF 4.5% ± 1.5%.
7. WHERE A POLISHED SLAB FINISH IS CALLED FOR IN THE ARCHITECTURAL DRAWINGS, THE MIXTURE SHALL HAVE A WATER REDUCING ADMIXTURE COMPLYING WITH ASTM C494 AND HAVE AN AIR ENTRAINMENT OF 1.5% OR LESS, RESULTING IN A FINISHED CONCRETE PRODUCT WITH MOISTURE CONTENTS NECESSARY TO PROPERLY CURE THE CONCRETE. FLOOR SEALERS, HARDENERS, FINISHES, AND COVERINGS SHALL BE COMPATIBLE WITH CONCRETE PROPERTIES. CURING COMPOUNDS SHALL NOT BE USED ON THE FLOOR SLAB.
8. ALL CONCRETE SHALL BE PLACED AND CURED IN ACCORDANCE WITH ACI 302. DO NOT USE CONCRETE THAT HAS NOT BEEN PLACED IN THE FORMS BEFORE 1.5 HOURS AFTER THE INITIAL MIXING WATER WAS ADDED, REGARDLESS OF THE TEMPERATURE OR SLUMP. FINISH ACCORDING ACI 117 TOLERANCES.

REINFORCEMENT

1. ALL REINFORCEMENT SHALL BE ASTM A-615, GRADE 60.
2. LAPS AND SPLICES IN REINFORCING BARS SHALL BE A MINIMUM OF (30) BAR DIAMETERS.
3. BASED ON ACI 318, SECTIONS 7.2 & 7.3, ALL BARS SHALL BE COLD BENT WITH A MINIMUM INTERNAL BEND RADIUS OF (6) BAR DIAMETERS EXCEPT STIRRUPS AND TIES, WHICH SHALL BE GREATER THAN (4) BAR DIAMETERS IN REGARD TO INTERNAL BEND RADII. BENDING SHALL NOT BE DONE IN FIELD UNLESS NOTED OTHERWISE.
4. REINFORCING BARS SHALL BE SECURED AT EVERY OTHER INTERSECTION.
5. THE SLAB SHALL BE REINFORCED WITH #4 BARS @ 16" OCEW OR ALTERNATIVELY #3 BARS @ 12" OCEW IN ADDITION TO THE BEAM REINFORCEMENT SHOWN IN THE SECTIONS.
6. (3) #5 DIAGONAL BARS X 8' - 0" LONG SHALL BE INSTALLED ABOVE THE TYPICAL SLAB REINFORCEMENT AT ALL RE-ENTRANT SLAB CORNERS.
7. ALL SLAB REINFORCEMENT SHALL BE SUPPORTED WITH CHAIRS OR MASONRY BRIQUETTES AT NOT MORE THAN 6' - 0" OC.
8. SLAB DROPS WILL REQUIRE THAT THE BEAMS INTERSECTED BY THE DROP BE DEEPENED BY THE SAME AMOUNT WITH TRANSITIONS IN DEPTH OCCURRING OVER A 1 TO 12 SLOPE. PROVIDE LAPPED Z-BARS TO MATCH SLAB AND BEAM REINFORCEMENT AT STEPS GREATER THAN 1 1/2".
9. (4) CORNER BARS SHALL BE SECURELY TIED TO THE INTERSECTING BEAM BARS AT ALL EXTERIOR BEAM INTERSECTIONS. THEY SHALL BE #5 BARS BENT TO A RIGHT ANGLE WITH 1' - 6" LEGS.
10. SUPPORT FOR THE BOTTOM BEAM REINFORCEMENT SHALL BE BY #3 STIRRUPS AND SPACED AT NOT MORE THAN 2' - 0" OC.
11. EXTERIOR BEAMS WILL BE AS SHOWN EXCEPT DEPTHS WILL BE INCREASED AS NECESSARY TO PENETRATE A MINIMUM OF 1' - 0" BELOW GROUND.
12. INTERIOR BEAM LOCATIONS MAY BE SHIFTED NOT MORE THAN 6" WHERE CONFLICTS WITH PLUMBING LAYOUTS OCCUR.
13. WHERE SITE CONDITIONS REQUIRE BEAMS TO BE 4' - 0" TO 5' - 0" DEEP, A HORIZONTAL #5 BAR SHALL BE ADDED TO EACH SIDE OF THE BEAM AT MIDHEIGHT. FOR DEPTHS OF 5' - 0" TO 6' - 0", (2) HORIZONTAL #5 BARS SHALL BE ADDED TO EACH SIDE OF THE BEAM AND EQUALLY SPACED VERTICALLY. FOR BEAMS DEEPER THAN 6' - 0" THE ENGINEER SHALL BE CONTACTED FOR ADDITIONAL INFORMATION.
14. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT FOR CAST-IN-PLACE CONCRETE CONSTRUCTION:
    A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH — 3" MIN.
    B. CONCRETE EXPOSED TO EARTH OR WEATHER OR CAST IN PLACE AGAINST VAPOR RETARDER:
       a. #6 THRU #18 BARS — 2" MIN.
       b. #5 BARS AND SMALLER — 1 1/2" MIN.
    C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:
       a. SLABS, WALLS, JOIST WITH #14 & #18 BARS — 1 1/2" MIN.
       b. SLABS, WALLS, JOIST WITH #11 BARS AND SMALLER — 3/4" MIN.
       c. BEAM AND COLUMN PRIMARY REINFORCEMENT, TIES, STIRRUPS, AND SPIRALS — 1 1/2" MIN.
    D. THE MINIMUM CLEAR SPACING BETWEEN PARALLEL BARS IN A LAYER SHALL BE THE DIAMETER OF THE BAR, BUT NOT LESS THAN 1".

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STATE OF TEXAS — DANIEL A. VICARS — 131098 — LICENSED PROFESSIONAL ENGINEER — 11/16/18

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DATE	11.16.18
DRAWN BY	EH
CHECKED BY	DAV
PROJECT NO.	217079.00

WILLIAMSON CO. ESD 8 / CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX 78626

GEORGETOWN TEXAS EST. 1848

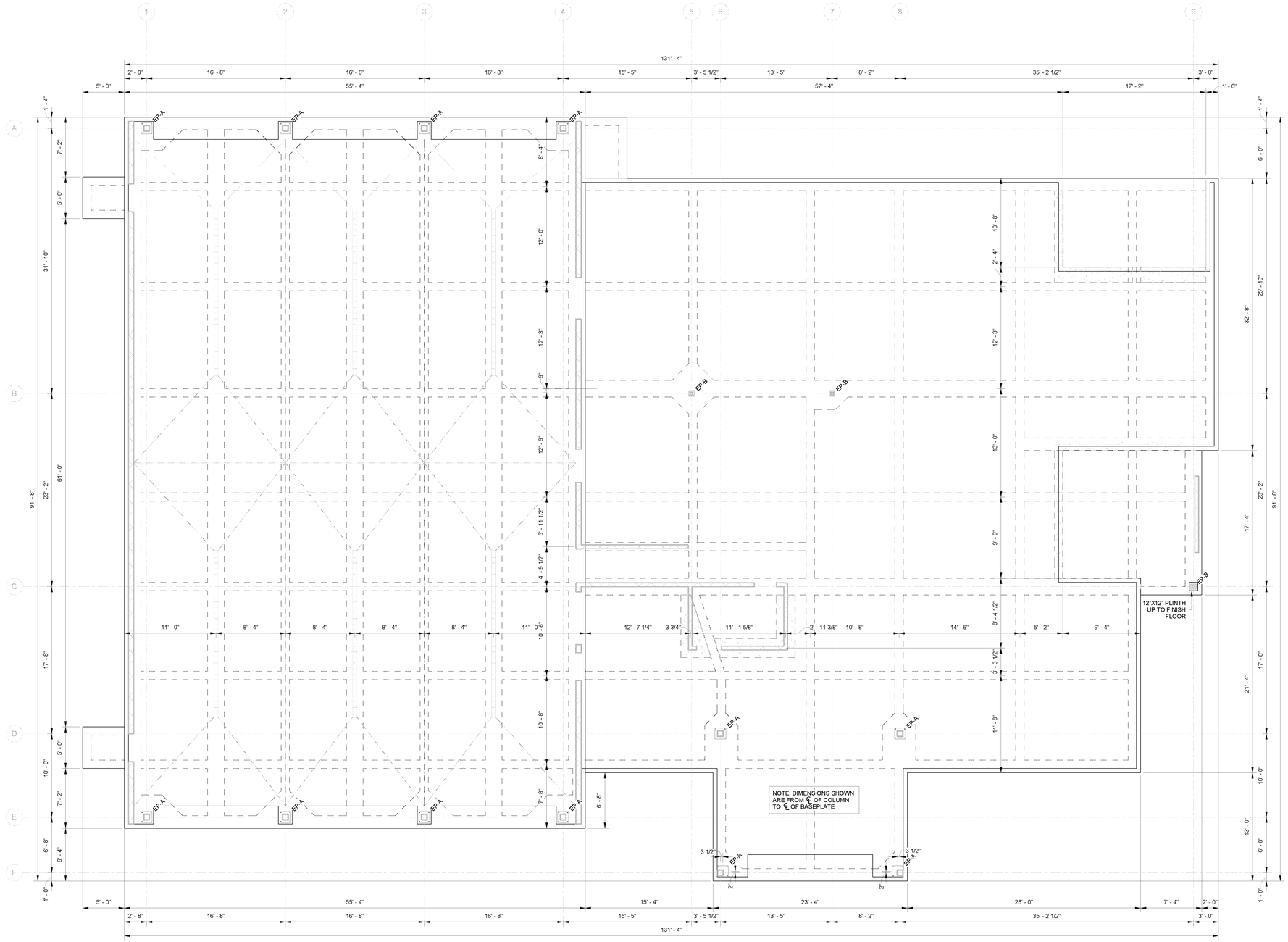
NO.	DESCRIPTION	DATE

S0.0

NOTES

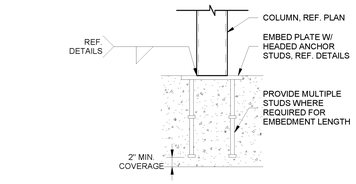
NOTES:
1. REFERENCE S0.0 NOTES FOR ADDITIONAL SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATIONS AND TYPES OF PLUMBING FIXTURES WITH ARCHITECTURAL DRAWINGS PRIOR TO COMMENCING CONSTRUCTION.
3. VERIFY ALL DIMENSIONS WITH ARCHITECT AND OWNER PRIOR TO COMMENCING CONSTRUCTION.

LEGEND:
- STRUCTURAL CMU WALL ABOVE, REF. 7 / S5.2
- TRENCH DRAIN, REF. ARCH

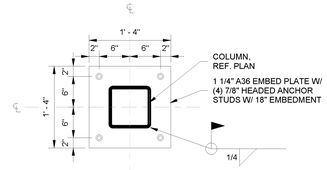


1 EMBED PLATE PLAN
3/16" = 1'-0"

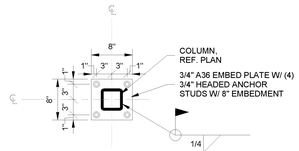
NOTE: COLUMN TO BE CENTERED ON PLATE UNLESS NOTED OTHERWISE, REF. PLAN FOR COLUMNS NOT CENTERED ON PLATE



4 TYPICAL EMBED PLATE ELEVATION
1" = 1'-0"



2 EP-A
1" = 1'-0"



3 EP-B
1" = 1'-0"

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FIRM REGISTRATION NUMBERS:
TBPE F-1451, TBPLS F-10193910

DATE 11.16.18
DRAWN BY EH
CHECKED BY DAV
PROJECT NO. 217079.00

WILLIAMSON CO. ESD 8 / CITY OF GEORGETOWN

GEORGETOWN FIRE STATION No. 6

6700 R.M. 2338
GEORGETOWN, TX 78625

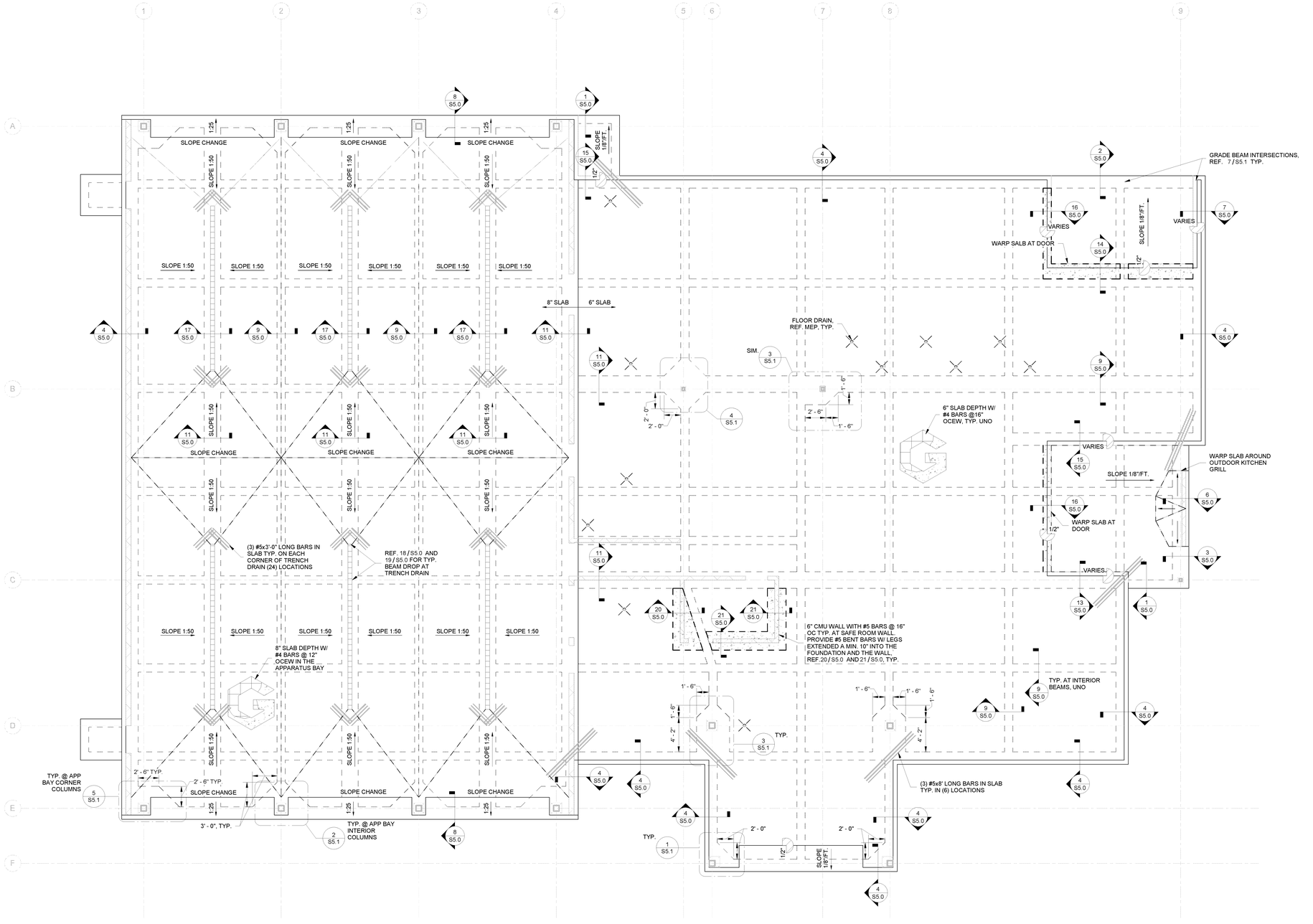
NO.	DESCRIPTION	DATE

S1.0

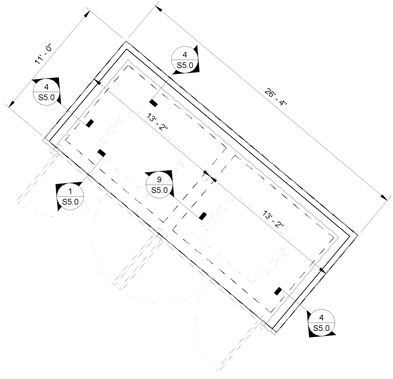
DIMENSION CONTROL PLAN

NOTES:
1. REFERENCE S0.0 NOTES FOR ADDITIONAL SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATIONS AND TYPES OF PLUMBING FIXTURES WITH ARCHITECTURAL DRAWINGS PRIOR TO COMMENCING CONSTRUCTION.
3. VERIFY ALL DIMENSIONS WITH ARCHITECT AND OWNER PRIOR TO COMMENCING CONSTRUCTION.

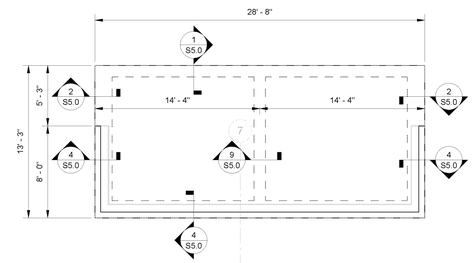
LEGEND:
- STRUCTURAL CMU WALL ABOVE, REF. 7 / S5.2
- TRENCH DRAIN, REF. ARCH



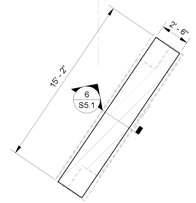
1 FOUNDATION PLAN
3/16" = 1'-0"



2 DUMPSTER PAD FOUNDATION
3/16" = 1'-0"



3 GENERATOR PAD FOUNDATION
3/16" = 1'-0"



4 SIGN FOUNDATION
3/16" = 1'-0"

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TBPE F-1451, TBPLS F-10193910

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WILLIAMSON CO. ESD 8 / CITY OF GEORGETOWN

GEORGETOWN FIRE STATION No. 6

6700 R.M. 2338
GEORGETOWN, TX 78626

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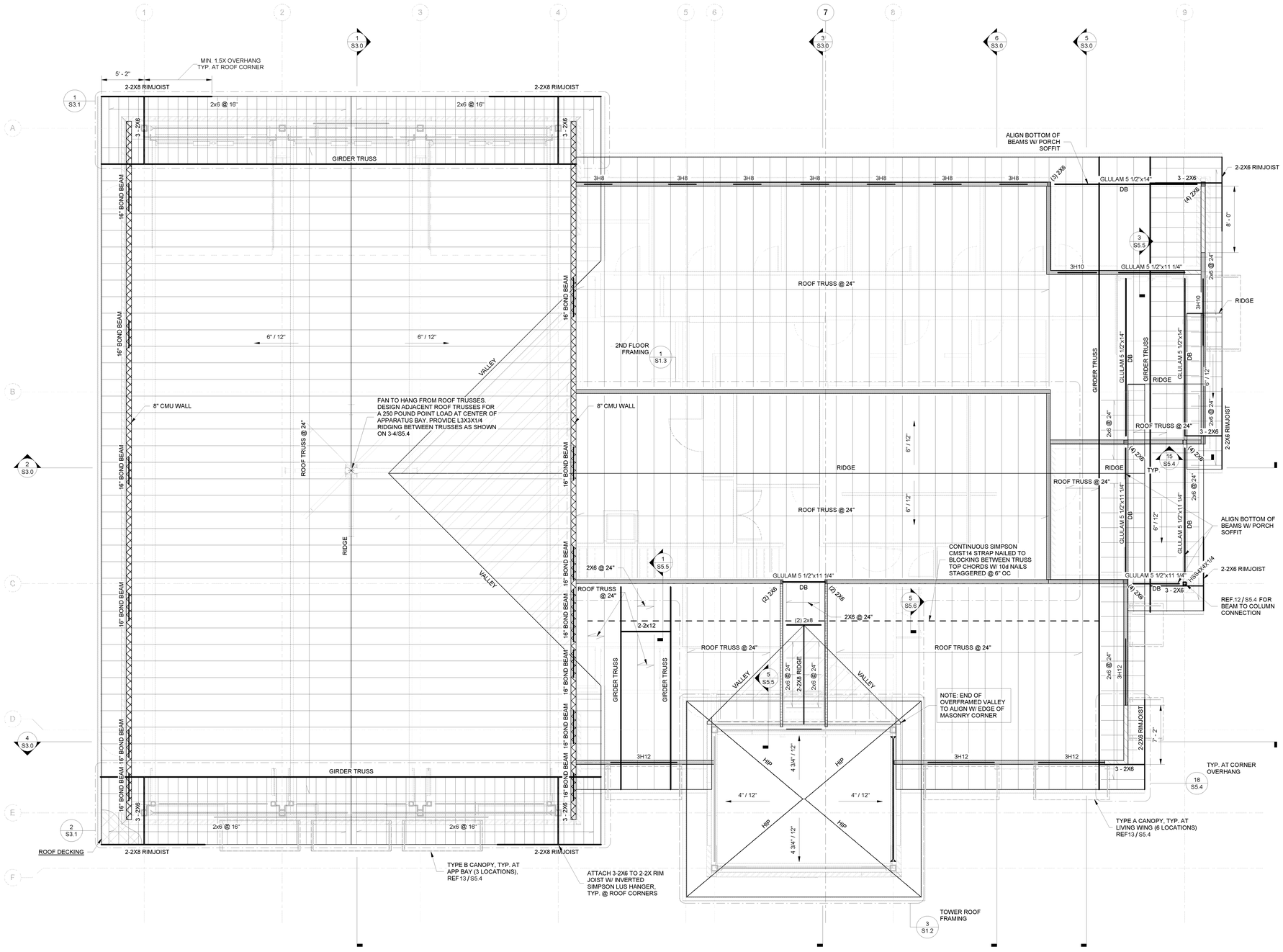
S1.1

FOUNDATION PLAN



1 ROOF
3/16" = 1'-0"

3 TOWER ROOF FRAMING PLAN
3/16" = 1'-0"

GENERAL FRAMING NOTES:

1. REFERENCE S0.0 NOTES FOR ADDITIONAL SPECIFICATIONS.
2. ALL GLULAM BEAMS SHALL BE 30F-2.1E SOUTHERN YELLOW PINE, UNO.
3. ALL LUMBER SHALL BE SOUTHERN YELLOW PINE, #2 UNO.
4. ALL WOOD HEADERS SHALL BE MULTI 2X TO MATCH WALL THICKNESS, OR FURRED OUT TO MATCH THE WALL THICKNESS.
5. ALL FLOOR AND ROOF TRUSSES SHALL BEAR AT ENDS ONLY, UNLESS AN INTERIOR BEARING WALL IS SPECIFICALLY NOTED ON PLAN.
6. ALL STUDS SHALL BE CONTINUOUS BETWEEN HORIZONTAL SUPPORTS WHICH MAY BE BUT ARE NOT LIMITED TO: FLOOR DIAPHRAGM ASSEMBLIES, ROOF DIAPHRAGM ASSEMBLIES, OR TOP PLATES BRACED TO DIAPHRAGM ASSEMBLIES.
7. ALL INTERIOR PARTITION WALLS SHALL BE A MINIMUM 1/2" SHORT OF THE ROOF FRAMING AND BRACED TO THE ROOF STRUCTURE PER 2 / S5.4 . WHERE WALLS STOP SHORTER BELOW THE BOTTOM CHORD OF TRUSSES, BRACE PARTITION WALLS TO TRUSSES W/ 2X FRAMING AS REQUIRED.
8. ALL CMU WALLS SHALL BE REINFORCED AS NOTED ON THE NOTES PAGE, UNO, AND SHALL HAVE A CONTINUOUS BOND BEAM IN ACCORDANCE WITH 10 / S5.2.
9. GESSNER ENGINEERING SHALL BE CONTACTED FOR REVIEW AND/OR REDESIGN WHEN CHANGES IN MEMBER SIZES AND/OR LOCATIONS ARE DESIRED.
10. ALL STONE LINTELS LESS THAN 10' - 0" IN LENGTH SHALL BE A MINIMUM L6X4X3/8. FOR LENGTHS GREATER THAN 10' - 0", CONTACT GESSNER ENGINEERING FOR ADDITIONAL INFORMATION.
11. WHERE UPLIFT CONNECTORS ARE ATTACHED FROM ROOF TRUSSES OR RAFTERS TO TOP PLATES, STUDS SHALL BE ATTACHED TO TOP PLATES AND SILL PLATES WITH UPLIFT CONNECTORS SPECIFIED IN THE FRAMING DETAILS.
12. SILL PLATES FOR EXTERIOR WALLS, INTERIOR BEARING WALLS, AND SHEAR WALLS TO BE ANCHORED WITH 5/8"Ø ANCHOR BOLTS WITH 3"X3"X1/4" PLATE WASHERS, REF. SILL PLATE ANCHORAGE DETAIL

LEGEND:

- 2X6 BEARING WALL W/ STUDS @ 16" OC
- 2X6 BEARING WALL W/ STUDS @ 12" OC
- 2X4 BEARING WALL W/ STUDS @ 16" OC
- STRUCTURAL CMU WALL, REF. S2.0 FOR GROUT AND REINFORCEMENT SPACING
- TRUSS OVERFRAMING LOCATION
- MOMENT FRAME CONNECTION

UPLIFT CONNECTION TABLE

LOCATION	RAFTER/ROOF TRUSS TO TOP PLATE	TOP PLATE TO STUD	STUD TO SILL PLATE	FLOOR TO FLOOR
DETAIL REF.	1 / S5.3	1 / S5.3	14 / S5.3	14 / S5.4
AT GABLE END W/ OUTRIGGERS	48" OC	48" OC	48" OC	48" OC
AT ROOF TRUSS	24" OC	24" OC	24" OC	24" OC

NOTE:

1. ALL CLIPS, CONNECTORS, AND HANGERS ARE TO BE MANUFACTURED BY SIMPSON STRONGTIE, OR APPROVED EQUAL, UNO.
2. AT OPENINGS IN EXTERIOR WALLS & LOAD BEARING INTERIOR WALL, REF 18 / S5.3 FOR HEADER CONNECTIONS.
3. FOR PORCH TRUSS CONNECTION, REF. 3 / S5.3.
4. CONTINUE ROOF DECKING ON LOWER ROOF FRAMING BELOW ALL OVERFRAMED LOCATIONS.

PANEL TABLE

USE	WALL SHEATHING	FLOOR DECKING	ROOF DECKING
PANEL GRADE	APA RATED SHEATHING EXPOSURE 1	APA RATED STURD-I-FLOOR EXPOSURE 1	APA RATED SHEATHING EXPOSURE 1
MIN. THICKNESS	7/16"	1 1/8"	19/32"
TYP. NAILING EDGE NAILING*	8d @12" OC 8d @ 6" OC	10d @12" OC 10d @ 6" OC	8d @12" OC 8d @ 6" OC

*PROVIDE EDGE NAILING AT ALL PANEL EDGES AND BLOCKING

Header Schedule	
Member Callout	Member Description
3H8	3 - 2x8
3H10	3 - 2x10
3H12	3 - 2x12

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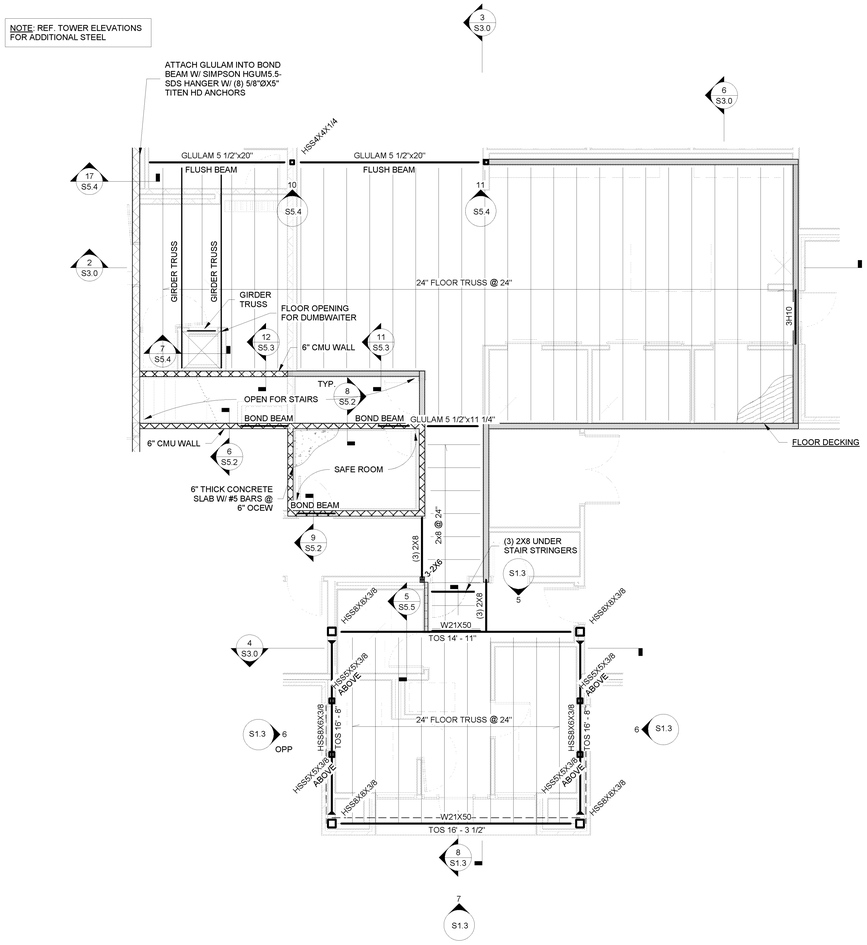
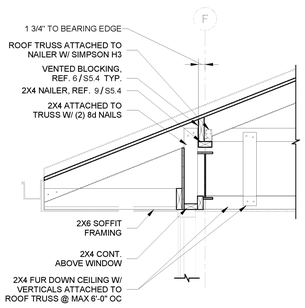
ROOF FRAMING PLAN

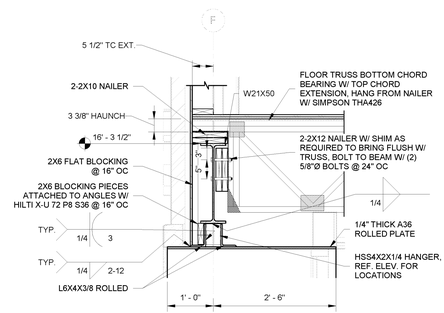
NOTE: REF. TOWER ELEVATIONS FOR ADDITIONAL STEEL



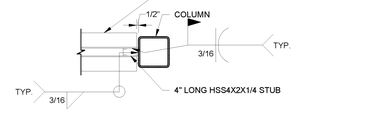
1 2ND FLOOR FRAMING PLAN
3/16" = 1'-0"



2 TOWER OVERHANG
3/4" = 1'-0"



3 SECTION AT TOWER ENTRY
3/4" = 1'-0"



4 ARCH DOOR FRAME CONNECTION
3/4" = 1'-0"

GENERAL FRAMING NOTES:
1. REFERENCE S0.0 NOTES FOR ADDITIONAL SPECIFICATIONS.
2. ALL GLULAM BEAMS SHALL BE 30F-2.1E SOUTHERN YELLOW PINE, UNO.
3. ALL LUMBER SHALL BE SOUTHERN YELLOW PINE, #2 UNO.
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5. ALL FLOOR AND ROOF TRUSSES SHALL BEAR AT ENDS ONLY, UNLESS AN INTERIOR BEARING WALL IS SPECIFICALLY NOTED ON PLAN.
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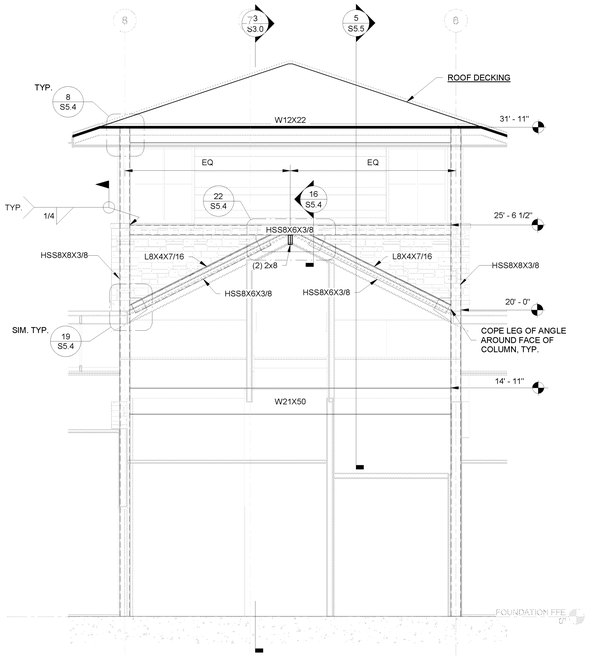
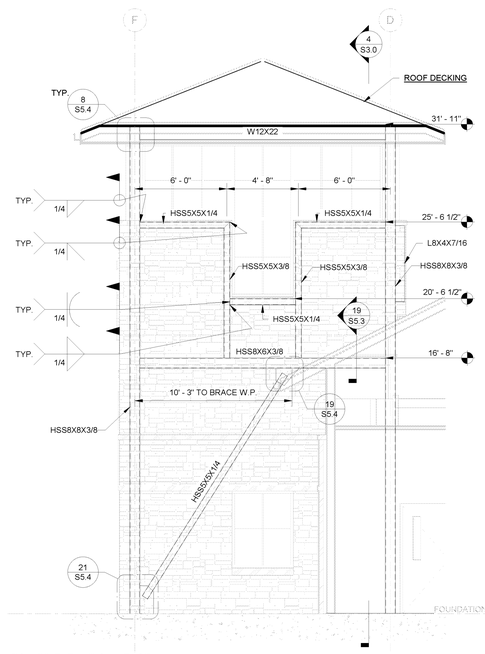
9. GESSNER ENGINEERING SHALL BE CONTACTED FOR REVIEW AND/OR REDESIGN WHEN CHANGES IN MEMBER SIZES AND/OR LOCATIONS ARE DESIRED.
10. ALL STONE LINTELS LESS THAN 10' - 0" IN LENGTH SHALL BE A MINIMUM L6X4X3/8. FOR LENGTHS GREATER THAN 10' - 0", CONTACT GESSNER ENGINEERING FOR ADDITIONAL INFORMATION.
11. WHERE UPLIFT CONNECTORS ARE ATTACHED FROM ROOF TRUSSES OR RAFTERS TO TOP PLATES, STUDS SHALL BE ATTACHED TO TOP PLATES AND SILL PLATES WITH UPLIFT CONNECTORS SPECIFIED IN THE FRAMING DETAILS.
12. SILL PLATES FOR EXTERIOR WALLS, INTERIOR BEARING WALLS, AND SHEAR WALLS TO BE ANCHORED WITH 5/8"Ø ANCHOR BOLTS WITH 3"X3"X1/4" PLATE WASHERS, REF. SILL PLATE ANCHORAGE DETAIL

LEGEND:
- 2X6 BEARING WALL W/ STUDS @ 16" OC
- 2X6 BEARING WALL W/ STUDS @ 12" OC
- 2X4 BEARING WALL W/ STUDS @ 16" OC
- STRUCTURAL CMU WALL, REF. S2.0 FOR GROUT AND REINFORCEMENT SPACING
- TRUSS OVERFRAMING LOCATION
- MOMENT FRAME CONNECTION

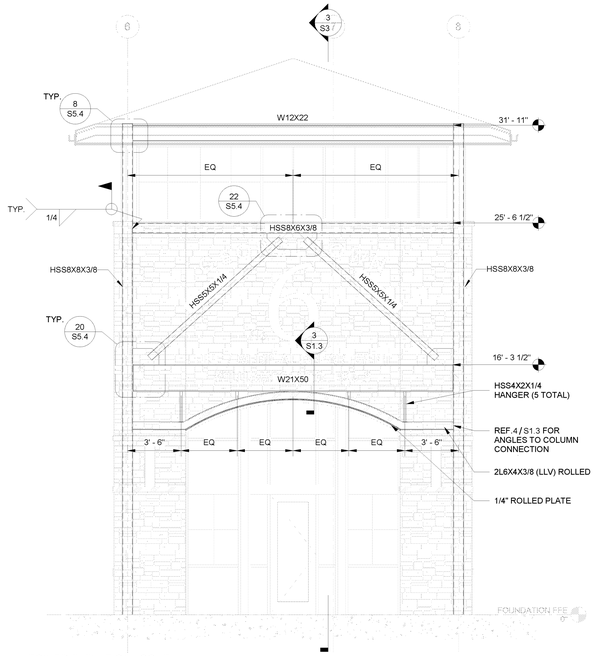
SHEET NOTES:
1. REFERENCE ARCHITECTURAL PLANS FOR OVERHANG CONDITIONS.
2. REFERENCE **PANEL TABLE** ON FRAMING PLAN SHEETS FOR WALL SHEATHING, ROOF DECKING, AND FLOOR DECKING, GRADE, PANEL THICKNESS, AND NAILING.
3. REFERENCE **UPLIFT CONNECTION TABLE** FOR RAFTER/ROOF TRUSS TO TOP PLATE; TOP PLATE TO STUD, FLOOR TO FLOOR, AND STUD TO SILL PLATE CONNECTION SPACINGS.



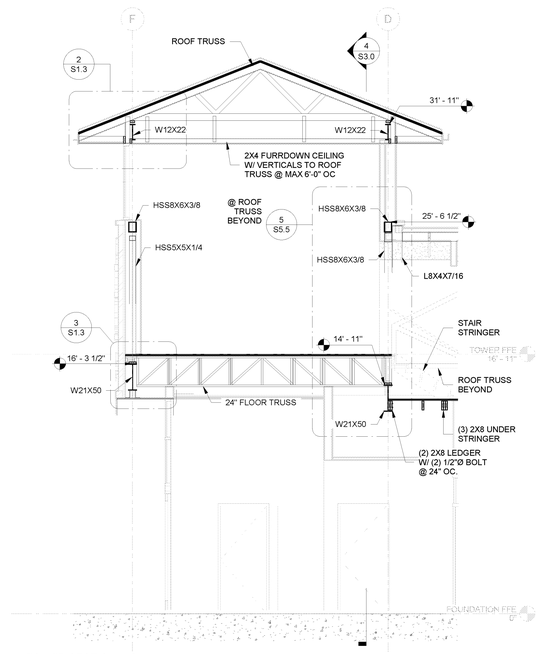
5 TOWER ELEVATION - NORTH
1/4" = 1'-0"



6 TOWER ELEVATION - EAST
1/4" = 1'-0"



7 TOWER ELEVATION - SOUTH
1/4" = 1'-0"



8 TOWER SECTION N-S
1/4" = 1'-0"

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2501 ASHFORD DRIVE
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1.877.GESSNER (437.7637)
www.gessnerengineering.com
FIRM REGISTRATION NUMBERS:
TBPE F-1451, TBPLS F-10193910

DATE 11.16.18
DRAWN BY ELF
CHECKED BY DAV
PROJECT NO. 217079.00

WILLIAMSON CO. ESD 8 / CITY OF GEORGETOWN

GEORGETOWN FIRE STATION No. 6

6700 R.M. 2338
GEORGETOWN, TX 78626

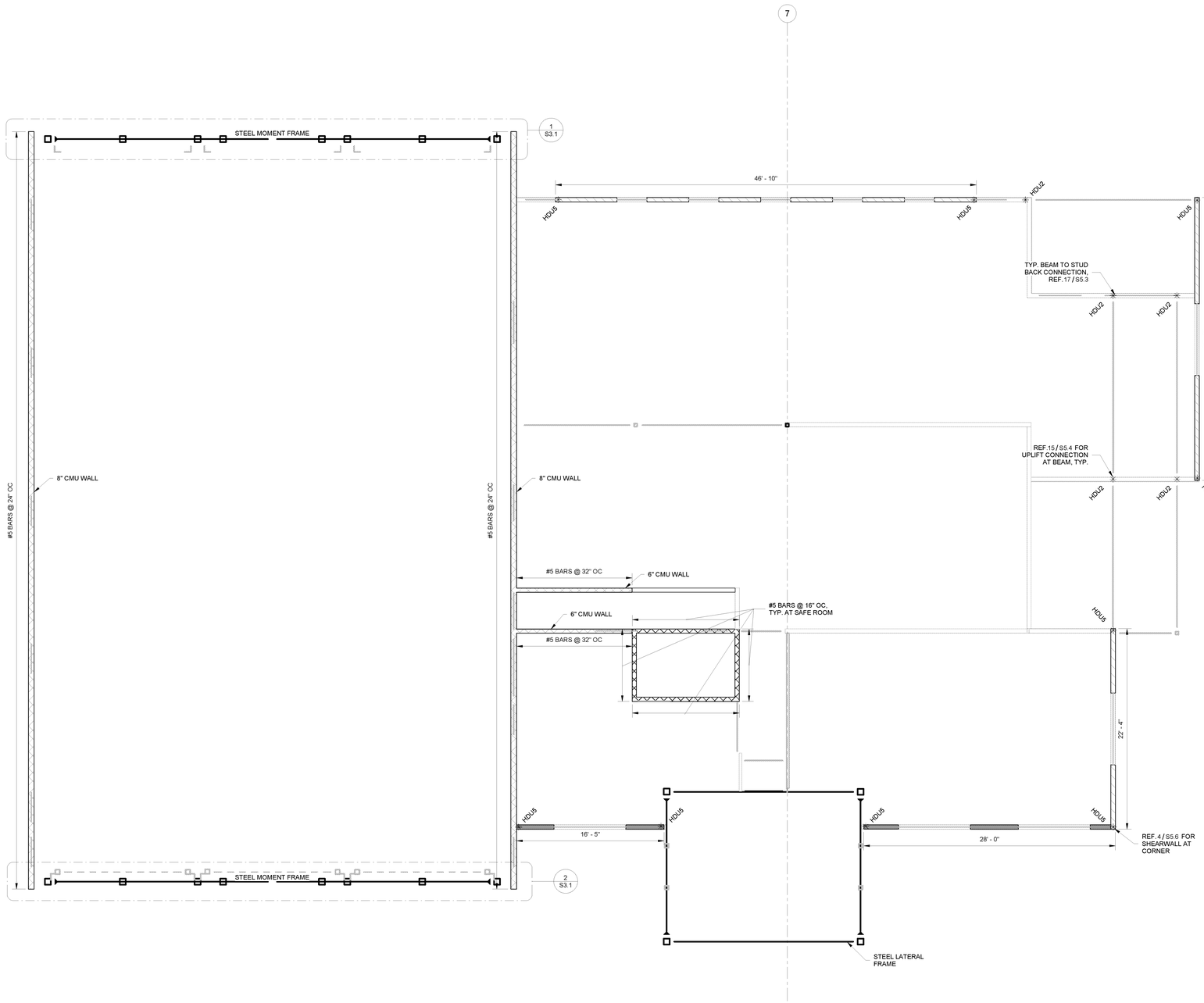
NO.	DESCRIPTION	DATE

S1.3

2ND FLOOR & TOWER FRAMING PLAN

LEGEND:

- LOCATION OF FORCE- TRACFER SHEAR WALL, REF. 1/S5.6
- LOCATION OF PERFORATED SHEARWALL, REF. 2/S5.6
- SHEAR WALL HOLDOWN, REF. 3/S5.6
- CMU WALL, REF. PLAN FOR THICKNESS



1 LATERAL FRAMING AND WALL BRACING PLAN
3/16" = 1'-0"

BROWN REYNOLDS WATFORD
ARCHITECTS
2709 EARL RUDDER FWAY (SOUTH)
SUITE 1000
COLLEGE STATION, TEXAS 77845
(979) 693-7368
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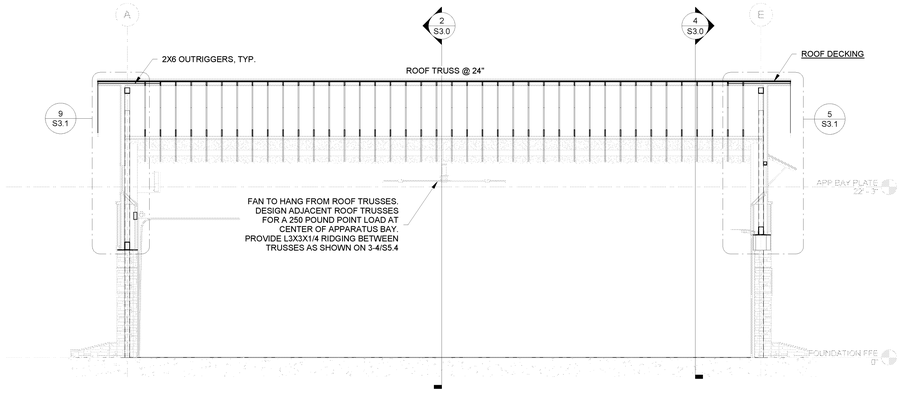
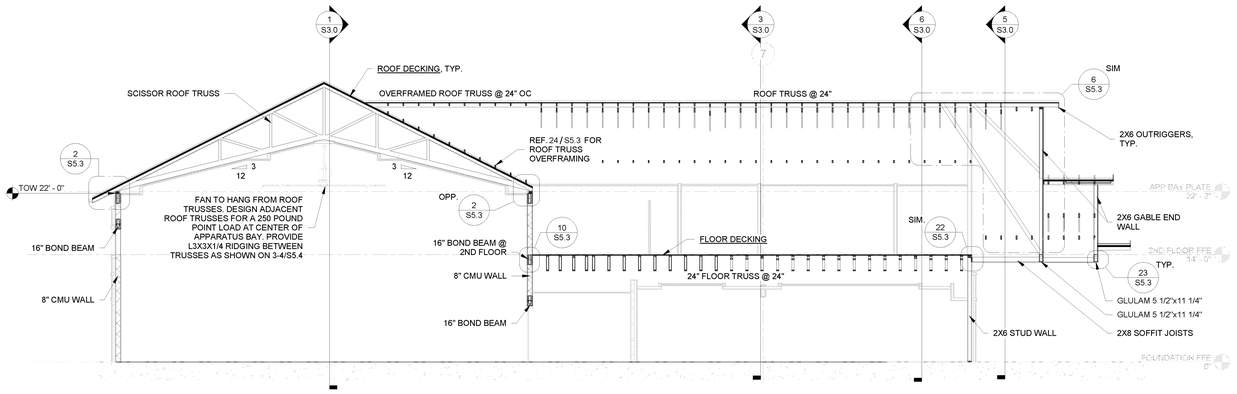
NO.	DESCRIPTION	DATE

S2.0

LATERAL FRAMING
PLAN & WALL



1 BUILDING SECTION 1
1/8" = 1'-0"



2 BUILDING SECTION 2
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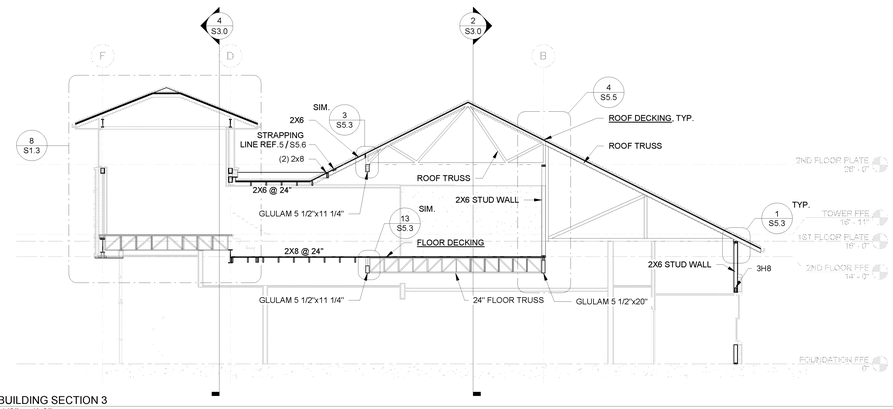
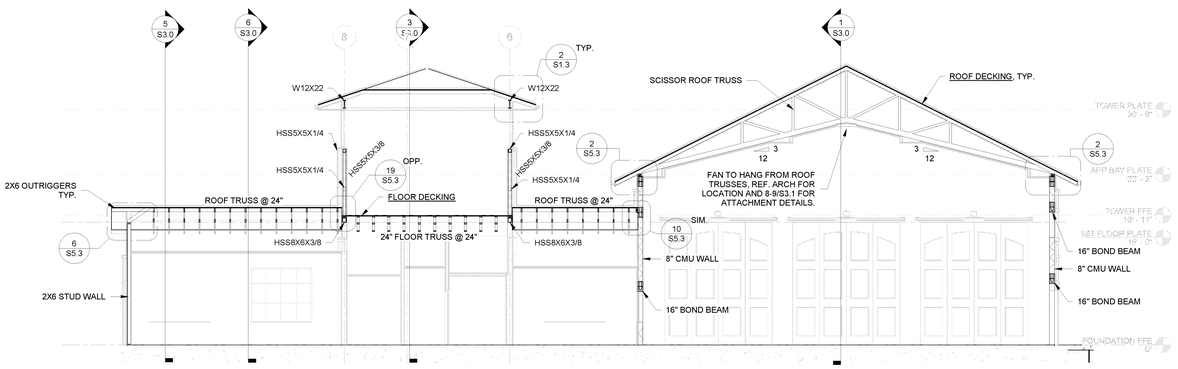
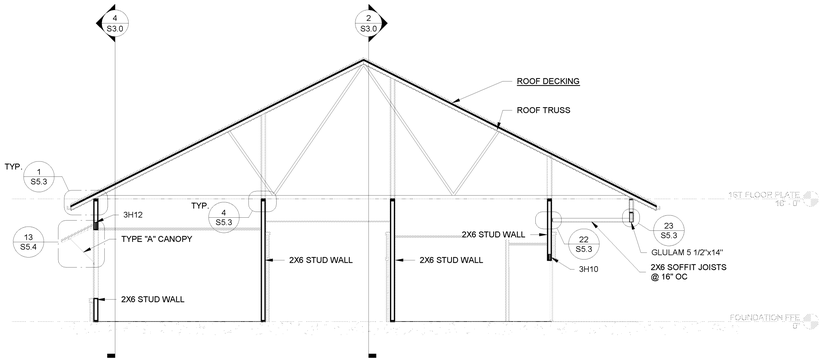


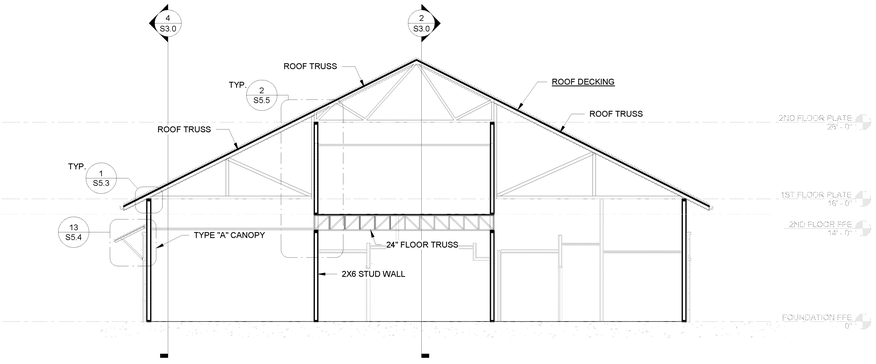
3 BUILDING SECTION 3
1/8" = 1'-0"



4 BUILDING SECTION 4
1/8" = 1'-0"



5 BUILDING SECTION 5
1/8" = 1'-0"



6 BUILDING SECTION 6
1/8" = 1'-0"

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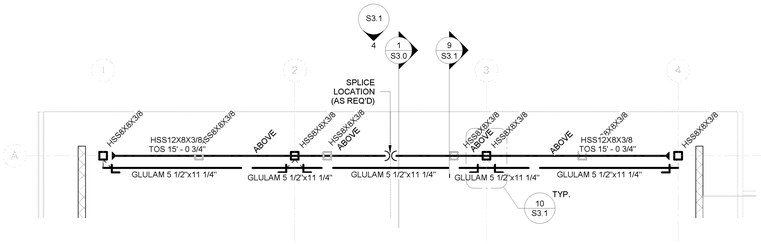
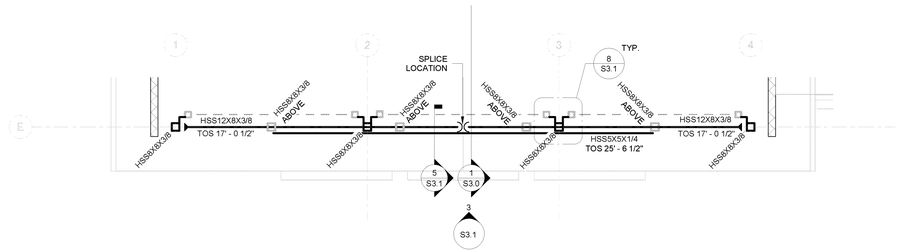
NO.	DESCRIPTION	DATE

S3.0

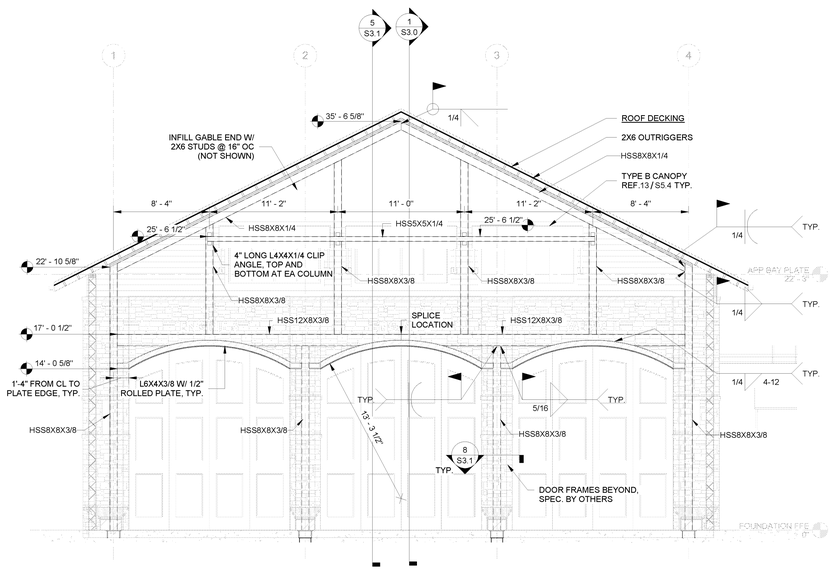
SECTIONS



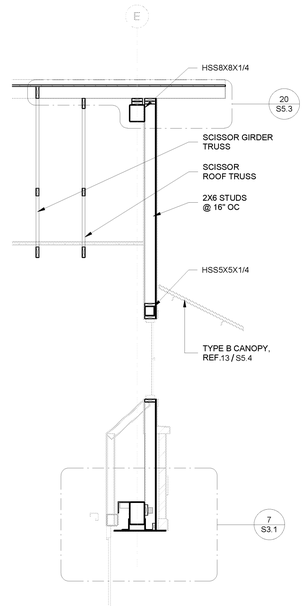


1 APP BAY DOOR FRAMING - PLAN NORTH
3/16" = 1'-0"

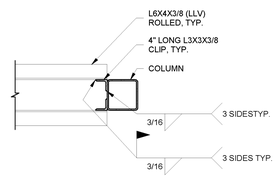
2 APP BAY DOOR FRAMING - PLAN SOUTH
3/16" = 1'-0"



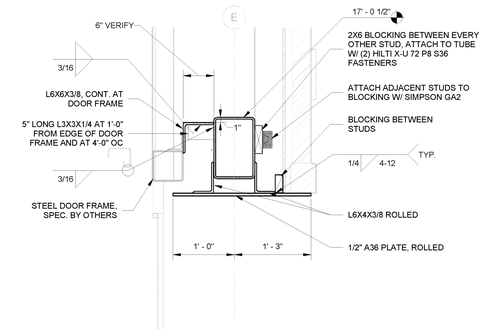
3 APP BAY ELEVATION - PLAN SOUTH
3/16" = 1'-0"



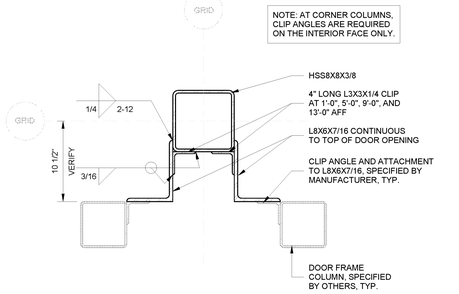
5 SECTION AT APP BAY DOOR - PLAN NORTH
3/8" = 1'-0"



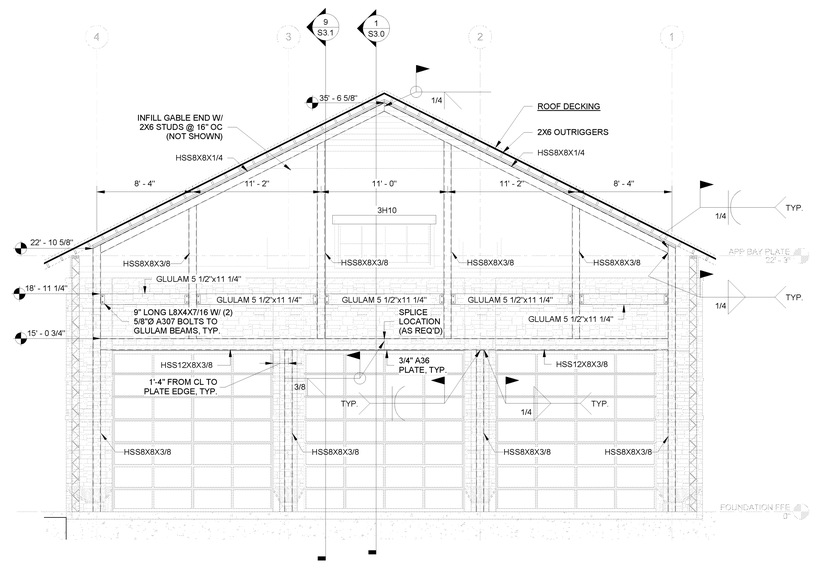
6 APP BAY ARCH FRAME TO COLUMN CONNECTION
3/4" = 1'-0"



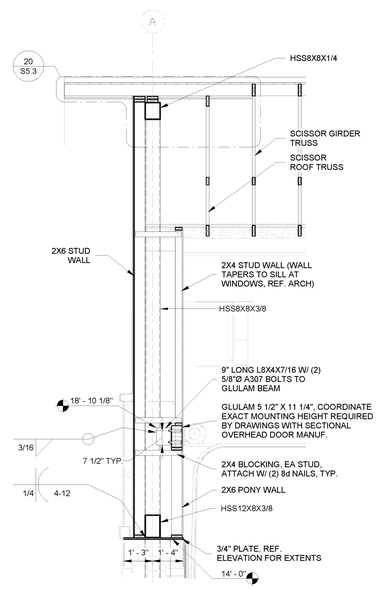
7 SECTION AT APP BAY DOOR HEADER - PLAN NORTH
1" = 1'-0"



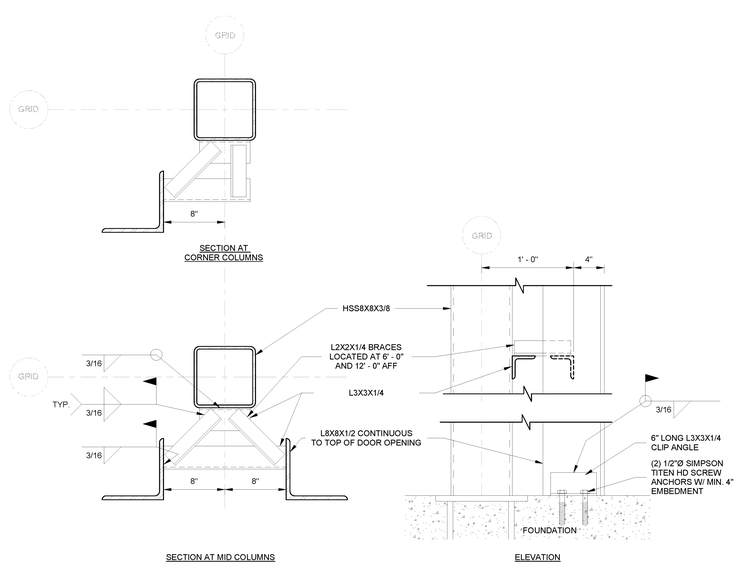
8 COLUMN ATTACHMENT TO FOLDING DOOR FRAME
1 1/2" = 1'-0"



4 APP BAY ELEVATION - PLAN SOUTH
3/16" = 1'-0"



9 SECTION AT APP BAY DOOR - PLAN SOUTH
3/8" = 1'-0"



10 COLUMN ATTACHMENT TO OVERHEAD DOOR FRAME
1 1/2" = 1'-0"

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STATE OF TEXAS
JAMES A. WATFORD
103198
REGISTERED ARCHITECT

CORPORATE OFFICE
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(979) GESSNER (437-7637)
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WILLIAMSON CO. ESD 8 / CITY OF GEORGETOWN

GEORGETOWN FIRE STATION No. 6

6700 R.M. 2338
GEORGETOWN, TX 78626

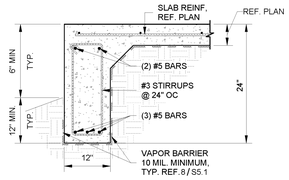
GEORGETOWN TEXAS

NO.	DESCRIPTION	DATE

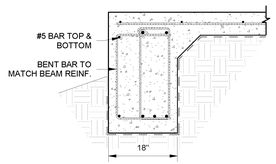
S3.1

APP BAY FRAMING PLAN

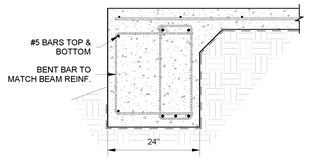
NOTES:
1. REFERENCE PLANS FOR SLOPING SLAB CONDITIONS.
2. WHERE SLAB DROP IS LESS THAN OR EQUAL TO 1 1/2", SLAB REINFORCEMENT MAY BE CONTINUOUS AND BENT BELOW DROP IN LIEU OF PROVIDING BENT BARS AS SHOWN.
3. VAPOR BARRIER AS DETAILED TO BE INSTALLED BELOW ALL FOUNDATION CONCRETE.
4. ALL SPLICES SHALL BE AS SPECIFIED IN THE GENERAL NOTES.
5. BEAM REINFORCEMENT TYPICAL UNLESS NOTED OTHERWISE.
6. BEAM WIDTH AND DEPTH TYPICAL UNLESS NOTED OTHERWISE.
7. WHERE CMU WALLS OCCUR ABOVE BEAMS, PROVIDE CAST-IN-PLACE DOWELS PER 7/S5.2.



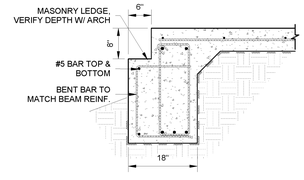
1 EXTERIOR BEAM
N.T.S.



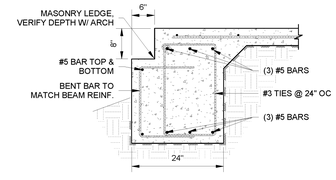
2 18" WIDENED EXTERIOR BEAM
N.T.S.



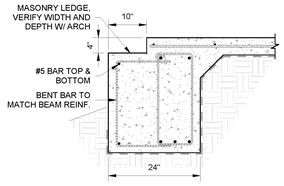
3 24" WIDENED EXTERIOR BEAM
N.T.S.



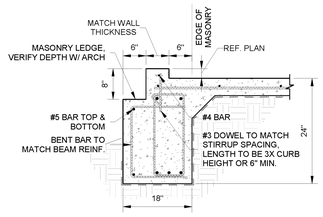
4 EXTERIOR BEAM W/ MASONRY LEDGE
N.T.S.



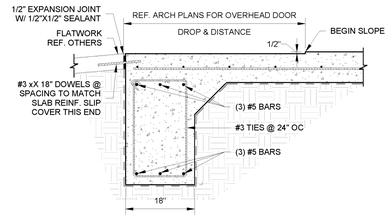
5 24" EXTERIOR BEAM W/ MASONRY LEDGE
N.T.S.



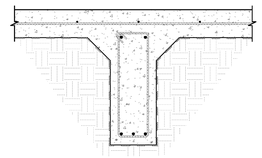
6 EXTERIOR BEAM W/ ALTERNATE MASONRY LEDGE
N.T.S.



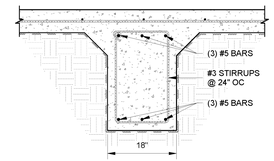
7 EXTERIOR BEAM W/ MASONRY LEDGE AT EA SIDE
N.T.S.



8 GRADE BEAM AT BIFOLD/OVERHEAD DOOR
N.T.S.



9 INTERIOR BEAM 12"
N.T.S.



10 INTERIOR BEAM 18"
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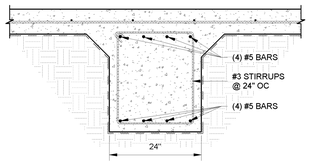
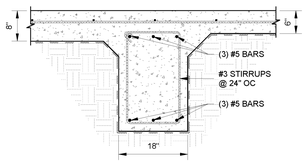
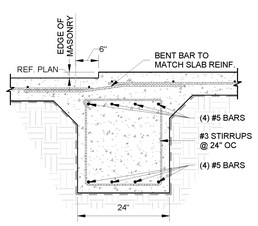


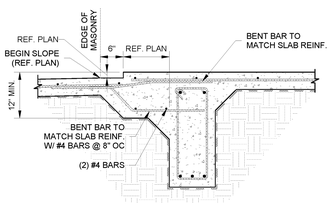
11 INTERIOR BEAM 24"
N.T.S.



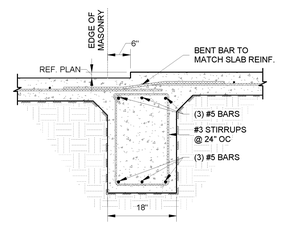
12 INTERIOR BEAM 18" W/ SLAB CHANGE
N.T.S.



13 24" INTERIOR BEAM W/ MASONRY LEDGE OFFSET IN
N.T.S.

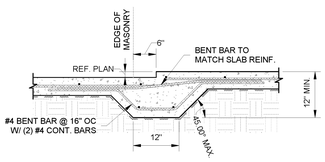


14 INTERIOR BEAM W/ THICKENED SLAB
N.T.S.

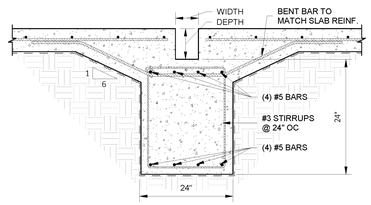


15 18" INTERIOR BEAM W/ MASONRY LEDGE
N.T.S.

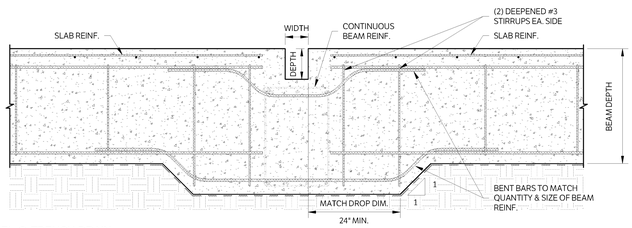
NOTES:
1. TRENCH DRAIN WIDTH & DEPTH SHALL BE DETERMINED BY MANUF. WRITTEN REQ. & INSTRUCTIONS FOR INSTALLATION.
2. NO REINF. SHALL BE CUT OR MODIFIED TO ACCOMMODATE THE TRENCH DRAIN AND/OR ALL ASSOCIATED PLUMBING. PLACEMENT OF THE STEEL REINF. & FORMWORK SHALL BE COORDINATED W/ THE TRENCH DRAINS & ASSOCIATED PLUMBING PRIOR TO CONSTRUCTION.



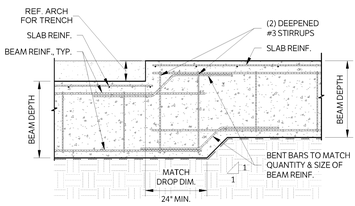
16 THICKENED SLAB W/ MASONRY LEDGE
N.T.S.



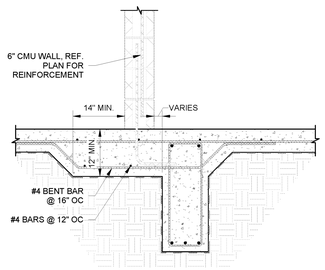
17 TRENCH DRAIN
N.T.S.



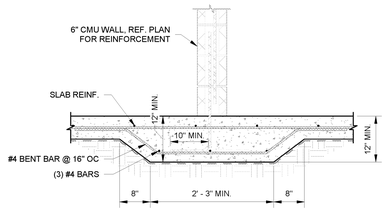
18 DROP IN BEAM STEEL @ TRENCH DRAIN
N.T.S.



19 DROP IN BEAM STEEL
N.T.S.

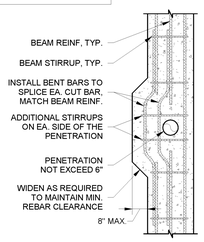


20 INTERIOR BEAM W/ CMU WALL AND THICKENED SLAB
N.T.S.



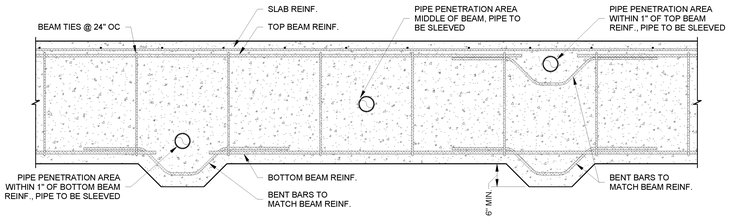
21 THICKENED SLAB UNDER CMU @ STORM SHELTER
N.T.S.

NOTE: IF PIPE PENETRATION OCCURS CENTER OF THE BEAM & THE PIPE W/ SLEEVE DIMENSION IS LESS THAN 6", THE CONTRACTOR MAY:
1. NOT WIDEN THE BEAM.
2. REPLACE BENT BARS W/ (2) 48" DOWEL EACH SIDE OF PIPE.



22 BEAM PENETRATION VERTICAL
N.T.S.

NOTES: WHEN PIPE SLEEVE IS WITHIN 1" OF BEAM REINF. BEAM REINF. SHALL BE STOPPED AND BENT BARS ADDED AS SHOWN BELOW.



23 BEAM PENETRATION DETAIL
N.T.S.

BROWN REYNOLDS WATFORD ARCHITECTS
2705 EARL RUDDER FWAY SOUTH
SUITE 1600
COLLEGE STATION, TEXAS 77845
(979) 693-3838
WWW.BRWARCH.COM

CORPORATE OFFICE
2501 ASHFORD DRIVE
COLLEGE STATION, TEXAS 77840
(979) GESSNER (437-7637)
www.gessnerengineering.com
FIRM REGISTRATION NUMBERS:
TBPE F-7451, TBPLS F-10193910

GESSNER ENGINEERING

DATE	11.16.18
DRAWN BY	EH
CHECKED BY	DAV
PROJECT NO.	217079.00

WILLIAMSON CO. ESD 8 / CITY OF GEORGETOWN

GEORGETOWN FIRE STATION No. 6

6700 R.M. 2338
GEORGETOWN, TX 78626

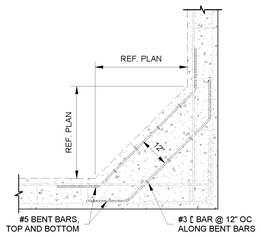
GEORGETOWN TEXAS

NO.	DESCRIPTION	DATE

S5.0

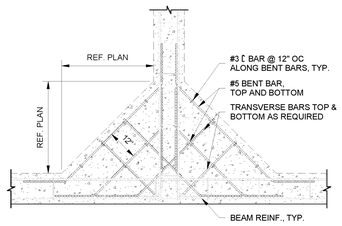
FOUNDATION DETAILS

FOOTING WIDTH	# OF BARS
12"	1
24"	2



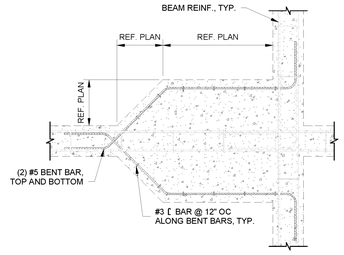
1 FOOTING AT EXTERIOR CORNER
N.T.S.

FOOTING WIDTH	# OF BENT BARS	TRANSVERSE BARS
36"	3	#5 @ 12" OC



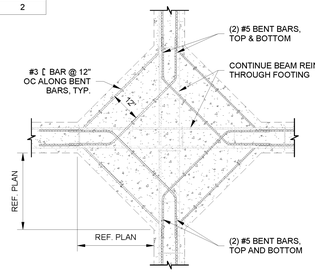
2 FOOTING AT EXTERIOR INTERSECTION
N.T.S.

FOOTING WIDTH	# OF BENT BARS
18"	1



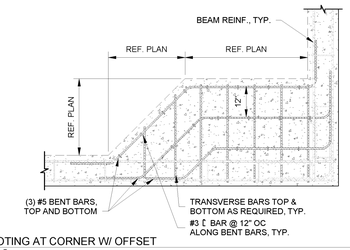
3 FOOTING AT INTERIOR CORNER W/ OFFSET
N.T.S.

FOOTING WIDTH	# OF BENT BARS
24"	2

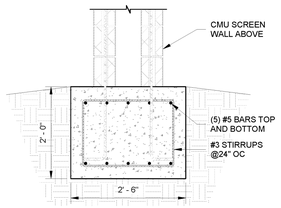


4 FOOTING AT INTERIOR INTERSECTION
N.T.S.

FOOTING WIDTH	# OF BENT BARS	TRANSVERSE BARS
30"	3	#5 BARS @ 12" OC

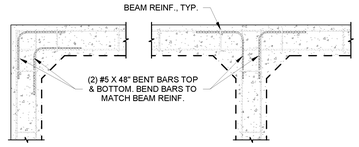


5 FOOTING AT CORNER W/ OFFSET
N.T.S.



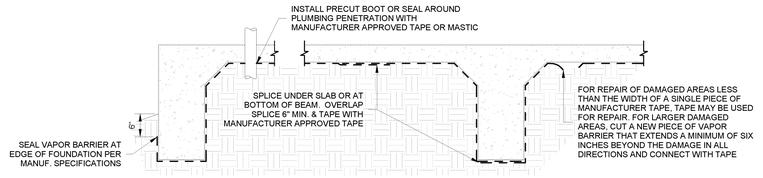
6 MONUMENT SIGN FOOTING
N.T.S.

NOTES:
1. PROVIDE CORNER BARS AS SHOWN AT ALL EXTERIOR BEAM INTERSECTIONS.
2. THIS IS A SCHEMATIC ONLY. SEE BEAM SECTIONS FOR ACTUAL BEAM REINFORCEMENT. (SLAB NOT SHOWN)



7 GRADE BEAM INTERSECTIONS
N.T.S.

NOTES:
1. VAPOR BARRIER AS DETAILED TO BE INSTALLED BELOW ALL FOUNDATION CONCRETE.
2. REFERENCE SPECIFICATION DIVISION 07 FOR VAPOR BARRIER PERMEANCE AND THICKNESS SPECIFIC TO THIS PROJECT.



8 VAPOR BARRIER DETAIL
N.T.S.

BROWN REYNOLDS WATFORD ARCHITECTS
2705 EARL RUDDER FWAY SOUTH
SUITE 1000
COLLEGE STATION, TEXAS 77845
(979) 693-0013
WWW.BRWARCH.COM

BRW

STATE OF TEXAS
ELIZABETH A. HAYES
103098
REGISTERED
ARCHITECT
11/16/18

CORPORATE OFFICE
2501 ASHFORD DRIVE
COLLEGE STATION, TEXAS 77840
(877) GESSNER (437-7637)
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FIRM REGISTRATION NUMBERS:
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GESSNER ENGINEERING

DATE 11.16.18
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WILLIAMSON CO. ESD 8 / CITY OF GEORGETOWN

GEORGETOWN FIRE STATION No. 6

6700 R.M. 2338
GEORGETOWN, TX 78626

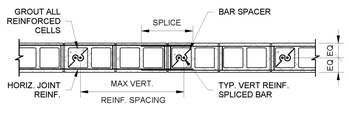
GEORGETOWN TEXAS

NO.	DESCRIPTION	DATE

S5.1

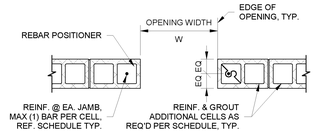
FOUNDATION DETAILS

NOTE:
1. MAINTAIN MINIMUM 3"X3" CLEAR UNOBSTRUCTED CONTINUOUS VERTICAL CELL AT EACH REBAR. PLACE WALLS TO MAX. 5' - 0" HEIGHT BEFORE GROUTING.
2. PLACE REBAR IN WALL WITH LAP SPLICE LENGTH PER SCHEDULE.
3. STOP GROUT POUR 1 1/2" BELOW TOP OF COURSE, AT EACH GROUT LIFT, EXCEPT AT LINTELS & BOND BEAMS EXTEND GROUT TO TOP OF GROUTED COURSE.
4. PROVIDE REBAR POSITIONS AT MANUFACTURER RECOMMENDED SPACING, BUT NOT TO EXCEED 48" OC.



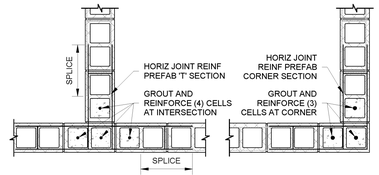
1 TYPICAL 8" CMU WALL REINFORCING DETAIL
N.T.S.

JAMB REINFORCING SCHEDULE	
W	REINFORCING
3' - 8"	(1) #5
7' - 0" TO 10' - 0"	(2) #5 (1 PER CELL)
10 - 0" TO 14' - 0"	(3) #5 (1 PER CELL)



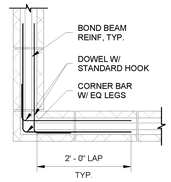
2 TYPICAL 8" CMU JAMB DETAIL
N.T.S.

NOTES:
1. INTERSECTING WALL CMU BLOCKS SHALL BE INTERLOCKED WITH INTERSECTED CMU WALL, UNLESS SPECIFICALLY NOTED AS A CONTROL OR EXPANSION JOINT.
2. AT CONTRACTORS OPTION, IN LIEU OF INTERLOCKING CMU COURSING, REMOVE WEB AND FACE SHELL AT INTERFACE AND GROUT MONOLITHICALLY.



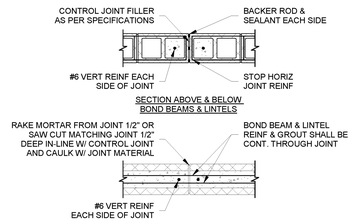
3 CMU WALL CORNER REINFORCING DETAIL
N.T.S.

NOTES:
CORNER BAR AND DOWELS SHALL MATCH SIZE OF TYPICAL BOND BEAM REINFORCING.



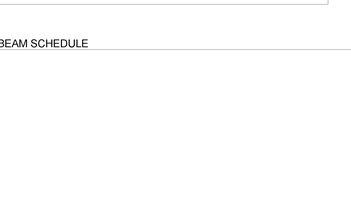
4 TYPICAL BOND BEAM CORNER REINFORCMENT
N.T.S.

NOTE: REF. ARCH. FOR CMU CONTROL JOINT LOCATIONS.



5 CMU CONTROL JOINT DETAIL
N.T.S.

NOTE:
1. SQUARE WASHER IS NOT REQUIRED AT THIS CONDITION.
2. ANCHOR SHALL BE INSTALLED THROUGH BOTTOM NAILER ONLY, WITH TOP NAILER NOTCHED TO ACCEPT ANCHOR HEADS.



6 STUD WALL TO CMU
N.T.S.

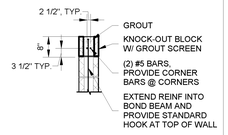
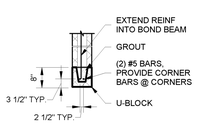
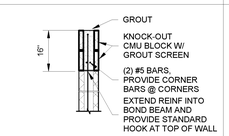
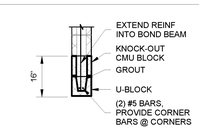
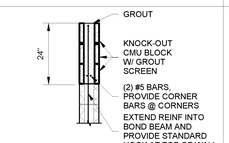
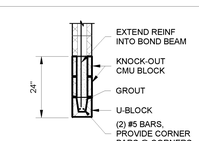
1. TYPICAL WALL REINFORCEMENT SHALL BE #5 BARS, SPACING AS NOTED ON S2.0. ADDITIONAL REINFORCEMENT AT CORNERS AND INTERSECTIONS.
2. JAMB REINFORCEMENT. 1#5 EA SIDE OF OPENING FOR MAX 5'-0" OPENING WIDTH
3. LINTEL REINFORCEMENT. REF. PLAN FOR DEPTH AND LINTEL SCHEDULE FOR REINF.
4. BOND BEAM REINFORCEMENT. SEE BOND BEAM DETAIL.
5. DOWEL EMBEDDED INTO GRADE BEAM BELOW. SIZE AND QUANTITY TO MATCH VERTICAL REINFORCEMENT WITH REQUIRED LAP SPLICE.
6. (1) #5 EACH SIDE, TOP & BOTTOM.
7. SILL REINFORCEMENT: (2) #5 SIMILAR TO BOND BEAM.
8. ALL CELLS WITH REINFORCING SHALL BE SOLIDLY GROUTED.
9. ALL COURSES WITH REINFORCING SHALL BE SOLIDLY GROUTED, PROVIDE GROUT SCREEN AS REQUIRED.

7 TYPICAL REINFORCED CMU WALL ELEVATION
N.T.S.

8 WALL AND ROOF CONNECTION FOR SHELTER
N.T.S.

9 WALL SECTION AT DOOR FOR SHELTER
N.T.S.

MASONRY LINTEL AND BOND BEAM SCHEDULE

	BOND BEAM WITHIN WALL	BOND BEAM OVER OPENING
SINGLE PROVIDE WITHIN WALL: - WHERE SHOWN - AT TOP OF ALL WALLS LESS THAN 12' - 0" TALL, U.N.O. PROVIDE OVER OPENING: - WHERE SHOWN - OVER NON-LOAD BEARING OPENINGS NOT GREATER THAN 3' - 8"		
DOUBLE PROVIDE WITHIN WALL: - WHERE SHOWN - AT ENDS OF ASSOCIATED BOND BEAM OVER OPENING -AT TOP OF ALL WALLS GREATER THAN 12' - 0" TALL, UNO PROVIDE OVER OPENING: - WHERE SHOWN - OVER NON-LOAD BEARING OPENINGS NOT GREATER THAN 7' - 0"		
TRIPLE PROVIDE WITHIN WALL: - WHERE SHOWN - AT ENDS OF ASSOCIATED BOND BEAM OVER OPENING PROVIDE OVER OPENING: - WHERE SHOWN		

NOTES:
1. WHERE CONTROL JOINTS ARE TO BE PLACED ADJACENT TO OPENINGS, MASONRY OVER NON-LOAD BEARING HEADER SPECIFIED ABOVE SHALL NOT EXCEED 4' - 0" IN HEIGHT. WHERE THIS REQUIREMENT IS NOT MET, GESSNER ENGINEERING SHALL BE CONTACTED FOR ADDITIONAL INFORMATION.
2. BARS SHALL NOT BE SPLICED OVER OPENINGS.
3. SPLICE BARS WITHIN WALL AS REQUIRED. STAGGER LAP SPLICING WITHIN COURSE.

10 BOND BEAM SCHEDULE
N.T.S.

BROWN REYNOLDS WATFORD ARCHITECTS
2100 EARL RUDDER FWAY SOUTH
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COLLEGE STATION, TEXAS 77845
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FIRM REGISTRATION NUMBERS:
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WILLIAMSON CO. ESD 9 / CITY OF GEORGETOWN

GEORGETOWN FIRE STATION No. 6

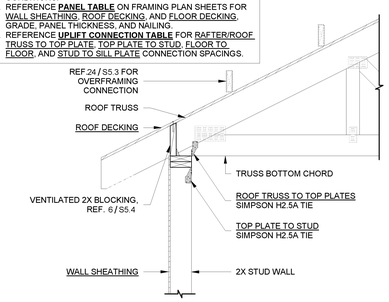
6700 R.M. 2338
GEORGETOWN, TX 78626

NO.	DESCRIPTION	DATE

S5.2

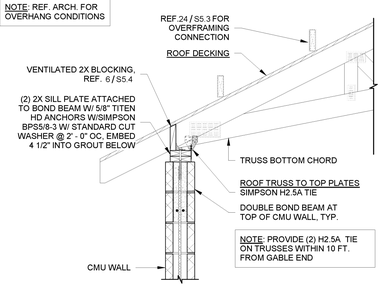
CMU DETAILS

SHEET NOTES:
1. REFERENCE ARCHITECTURAL PLANS FOR OVERHANG CONDITIONS.
2. REFERENCE **PANEL TABLE** ON FRAMING PLAN SHEETS FOR WALL SHEATHING, ROOF DECKING, AND FLOOR DECKING, GRADE, PANEL THICKNESS, AND NAILING.
3. REFERENCE **UPLIFT CONNECTION TABLE** FOR RAFTER/ROOF TRUSS TO TOP PLATE, TOP PLATE TO STUD, FLOOR TO FLOOR, AND STUD TO SILL PLATE CONNECTION SPACINGS.



1 ROOF TRUSS TO EXTERIOR WALL
N.T.S.

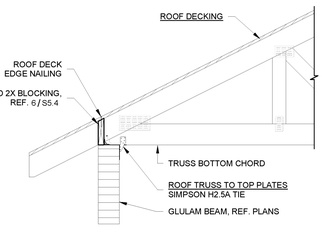
NOTE: REF. ARCH. FOR OVERHANG CONDITIONS



NOTE: PROVIDE (2) H2.5A TIE ON TRUSSES WITHIN 10 FT. FROM GABLE END

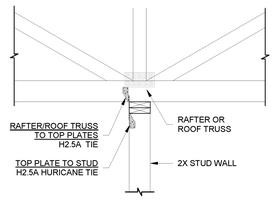
2 ROOF TRUSS TO CMU WALL
N.T.S.

NOTE: REF. ARCH. FOR OVERHANG CONDITIONS

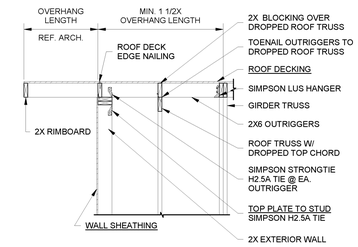


3 ROOF TRUSS TO PORCH BEAM
N.T.S.

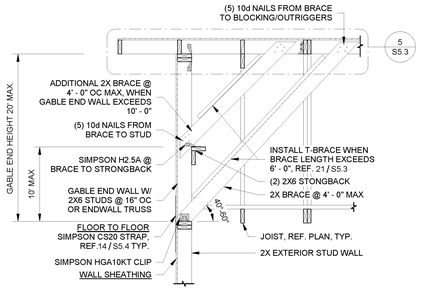
NOTE: WHERE SEPERATE TRUSSES MEET AT BEARING WALL, PROVIDE HURRICANE TIE TO EA TRUSS, REF. MANUF. DRAWINGS



4 ROOF TRUSS TO INTERIOR BEARING WALL SECTION
N.T.S.

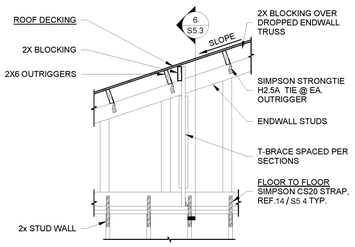


5 GABLE END OUTRIGGER W/ TRUSSES
N.T.S.

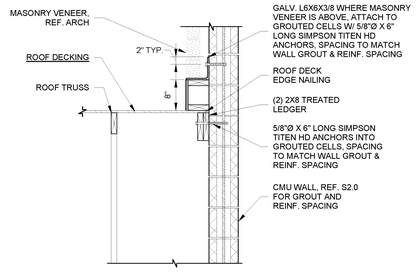


6 GABLE END W/ TRUSSES
N.T.S.

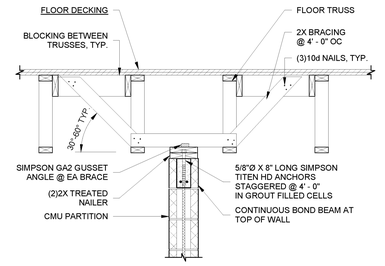
NOTE: EXTERIOR SHEATHING AND 2X RIMBOARD NOT SHOWN FOR CLARITY.



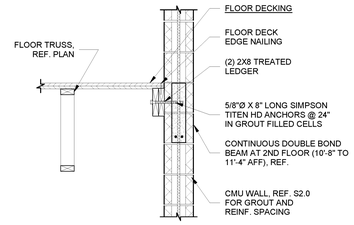
7 GABLE END WALL ELEVATION
N.T.S.



8 ROOF TRANSITION AT CMU
N.T.S.



9 CMU PARTITION AT FLOOR DECK
N.T.S.

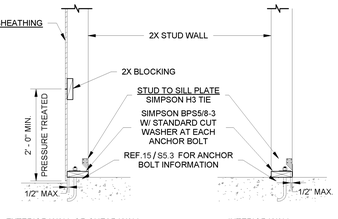


10 FLOOR DECK AT CMU
N.T.S.

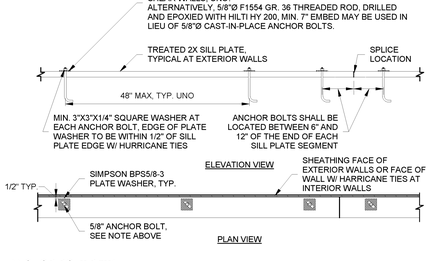
11 FLOOR TRUSS PERPENDICULAR TO WALL
N.T.S.

12 WALL SECTION
N.T.S.

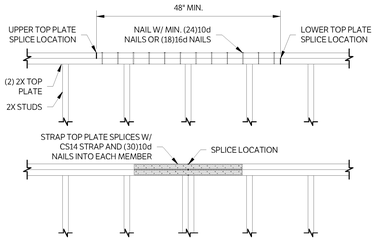
13 FLOOR TRUSS AND WALL TO BEAM
N.T.S.



14 LOAD BEARING WALL TO CONCRETE FOUNDATION
N.T.S.

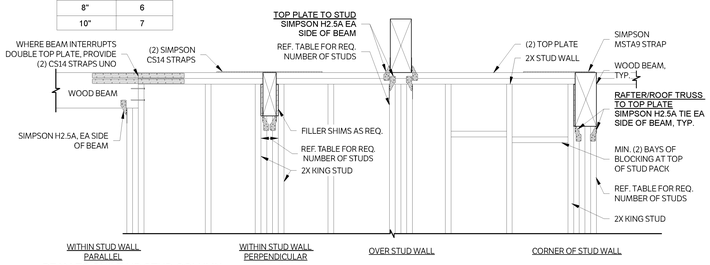


15 ANCHOR BOLT DETAIL
N.T.S.



16 TOP PLATE SPLICE
N.T.S.

BEAM WIDTH	# OF STUDS
3 1/2"	3
5 1/2"	4
8"	6
10"	7

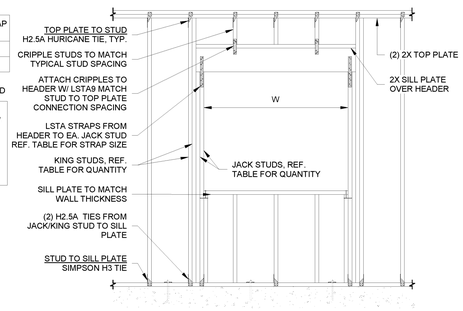


17 BEAM TO BUILT UP STUD COLUMN
N.T.S.

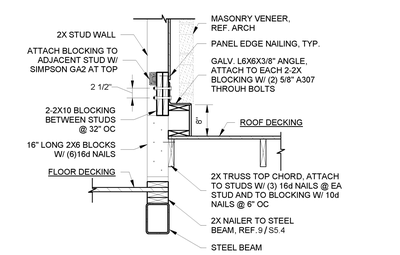
OPENING WIDTH (W)	# JACK STUDS[1]	# KING STUDS[1][2]	HEADER STRAP TO JACK
≤ 4' - 0"	1	2	LSTA12
≤ 9' - 0"	2	3	LSTA12

(1) UNLESS NOTED OTHERWISE ON PLAN
(2) INTERIOR HEADERS ONLY REQUIRE 1 KING STUD

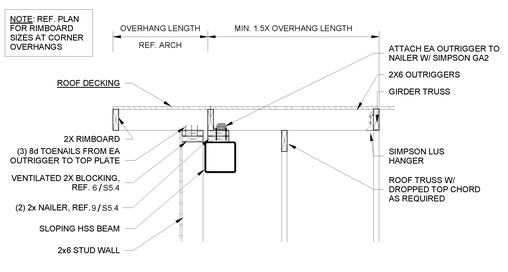
NOTES:
1. STITCH NAIL JACK/KING STUDS TOGETHER W/ 8d NAILS STAGGERED @ 6" OC, EACH LAYER
2. EXTERIOR SHEATHING NOT SHOWN FOR CLARITY
3. STRAPPING AND HURRICANE TIES SHOWN ARE NOT REQUIRED AT NON LOAD BEARING PARTITION WALLS



18 HEADER FRAMING DETAIL
N.T.S.

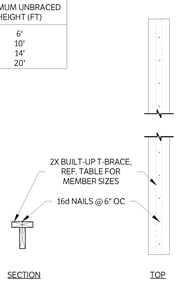


19 BRICK SUPPORT ON WALL
N.T.S.

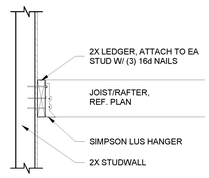


20 ROOF OVERHANG AT APP BAY
N.T.S.

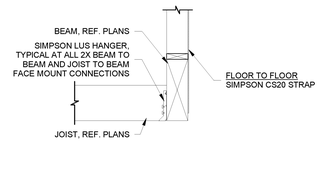
BUILT UP MEMBERS	MAXIMUM UNBRACED HEIGHT (FT)
(2) 2X4	6'
(2) 2X6	10'
(2) 2X8	14'
(2) 2X10	20'



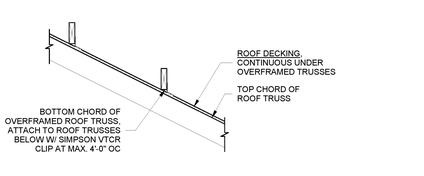
21 T-BRACE DETAIL
N.T.S.



22 JOIST LEDGER
N.T.S.



23 BEAM TO BEAM/JOIST CONNECTION
N.T.S.



24 ROOF TRUSS OVERFRAMING
N.T.S.

BROWN REYNOLDS WATFORD ARCHITECTS
2100 EARL RUDDER FRWY SOUTH
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(979) 764-7540
1-877-GESSNER (437-7637)
www.gessnerengineering.com
FIRM REGISTRATION NUMBERS:
TBPE F-1451, TBPLS F-10193910

GESSNER ENGINEERING

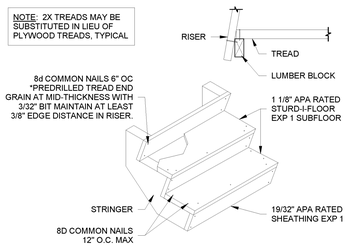
DATE 11.16.18
DRAWN BY EH
CHECKED BY DAV
PROJECT NO. 217079.00

WILLIAMSON CO. ESD 8 / CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX 78626

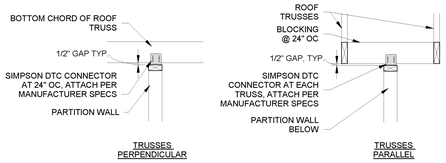
NO.	DESCRIPTION	DATE

S5.3

FRAMING DETAILS

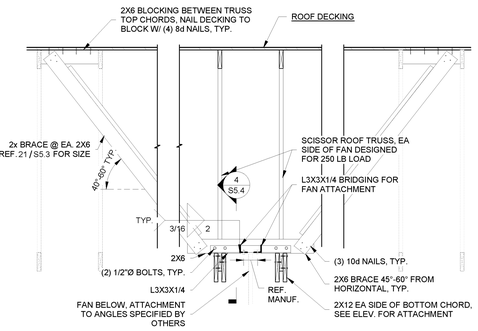


1 STAIR FRAMING
N.T.S.



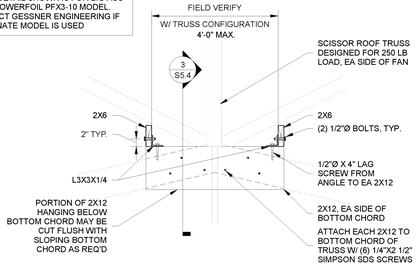
2 PARTITION WALL TO ROOF TRUSS
N.T.S.

NOTE: DETAIL SHOWN IS FOR BIG ASS FANS POWERFOIL PFX3-10 MODEL. CONTACT GESSNER ENGINEERING IF ALTERNATE MODEL IS USED

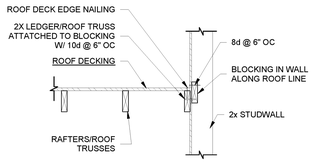


3 TRUSS SECTION AT BIG ASS FAN
N.T.S.

NOTE: DETAIL SHOWN IS FOR BIG ASS FANS POWERFOIL PFX3-10 MODEL. CONTACT GESSNER ENGINEERING IF ALTERNATE MODEL IS USED

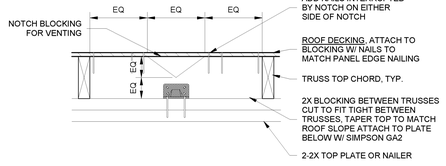


4 TRUSS ELEVATION AT BIG ASS FAN
N.T.S.

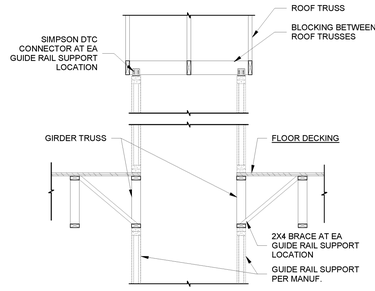


5 TYPICAL ROOF PARALLEL TO WALL
N.T.S.

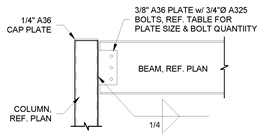
NOTE: PROVIDE SOLID BLOCKING I.L.O. VENTED BLOCKING IF ALTERNATE 6 SPRAY FOAM INSULATION IS ACCEPTED, REF. ARCH. FOR INFORMATION REGARDING PROJECT ALTERNATES.



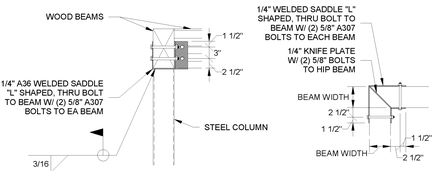
6 VENTILATED BLOCKING
N.T.S.



BEAM SIZE	PLATE SIZE	BOLTS
W12x	6"x 4 1/2"	2
W21x	18"x 4 1/2"	6

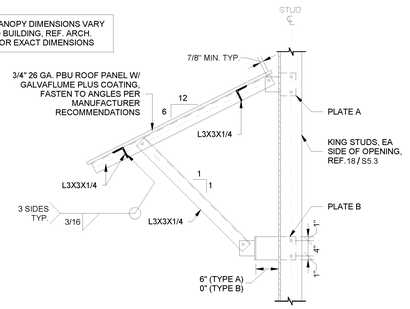


7 2ND FLOOR OPENING AT DUMBWAITER
N.T.S.



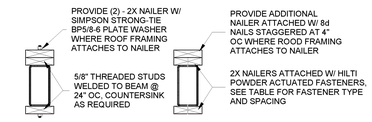
8 SHEAR CONNECTION DETAIL
N.T.S.

NOTE: CANOPY DIMENSIONS VARY AROUND BUILDING, REF. ARCH. PLANS FOR EXACT DIMENSIONS

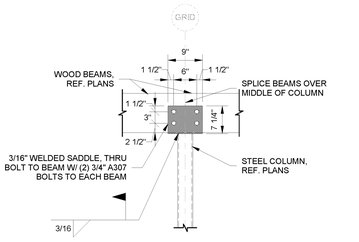


9 TYPICAL NAILER TO STEEL BEAM CONNECTION
N.T.S.

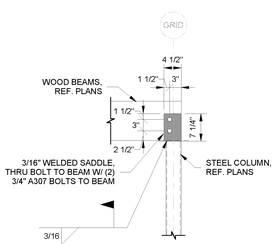
NOTE: SINGLE NAILER MAY BE USED WHERE NOTED ON PLAN



NAILER APPLICATION	FASTENER	SPACING
INFILL STUDS	X-U 47	16" OC
ROOF FRAMING	X-U 72 P8 S36	12" OC



10 INTERSECTING BEAMS TO STEEL COLUMN - TOP OF COLUMN
N.T.S.

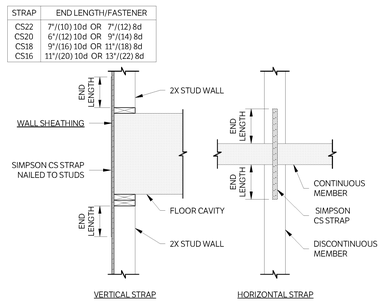


11 END BEAM TO STEEL COLUMN - TOP OF COLUMN
N.T.S.

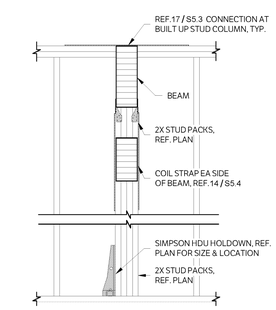
12 COLUMN CONNECTION AT CABANA
N.T.S.

13 CANOPY
N.T.S.

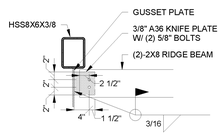
STRAP	END LENGTH/FASTENER
CS22	7"/(10) 10d OR 7"/(12) 8d
CS20	6"/(12) 10d OR 9"/(14) 8d
CS18	9"/(16) 10d OR 11"/(18) 8d
CS16	11"/(20) 10d OR 13"/(22) 8d



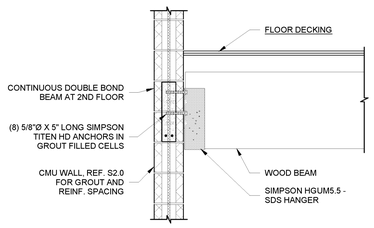
14 COIL STRAP DETAIL
N.T.S.



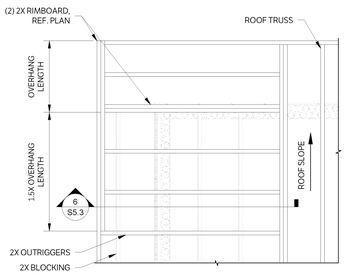
15 UPLIFT CONNECTION AT BEAM
N.T.S.



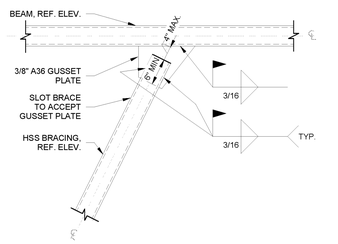
16 RIDGE BEAM TO TOWER FRAMING CONNECTION
N.T.S.



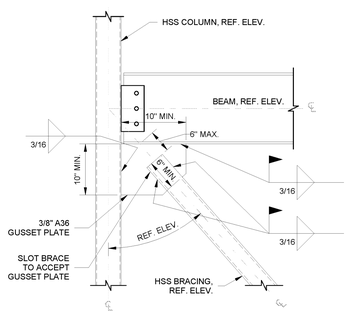
17 BEAM TO CMU CONNECTION
N.T.S.



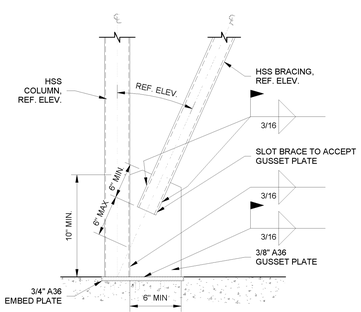
18 CORNER OVERHANG DETAIL
N.T.S.



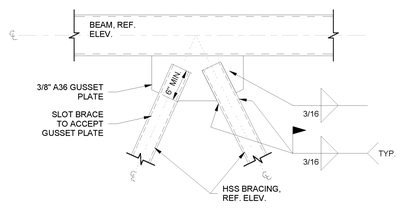
19 BRACE TO TUBE BEAM
N.T.S.



20 BRACE TO BEAM AND COLUMN
N.T.S.



21 BRACE TO COLUMN AND EMBED PLATE
N.T.S.



22 CHEVRON BRACING - GUSSET TO BEAM
N.T.S.

BROWN REYNOLDS WATFORD ARCHITECTS
2100 EARL RUDDER FWAY SOUTH
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(877) GESSNER (437-7637)
www.gessnerengineering.com
FIRM REGISTRATION NUMBERS:
TBPE F-1451, TBPLS F-10193910

GESSNER ENGINEERING

DATE 11.16.18
DRAWN BY EH
CHECKED BY DAV
PROJECT NO. 217079.00

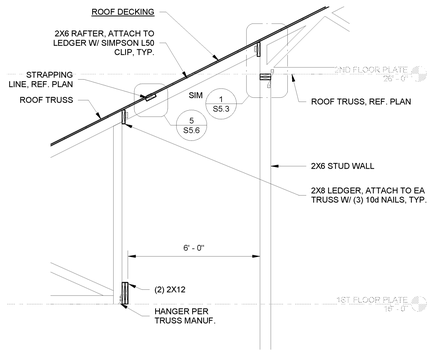
WILLIAMSON CO. ESD 9 / CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX 78626

GEORGETOWN TEXAS

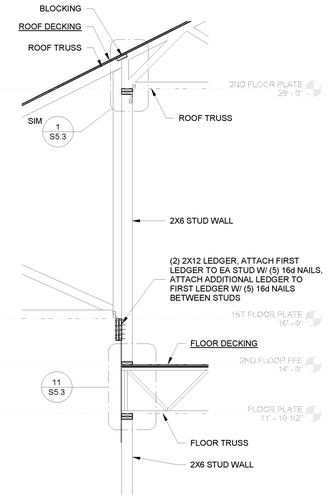
NO.	DESCRIPTION	DATE

S5.4

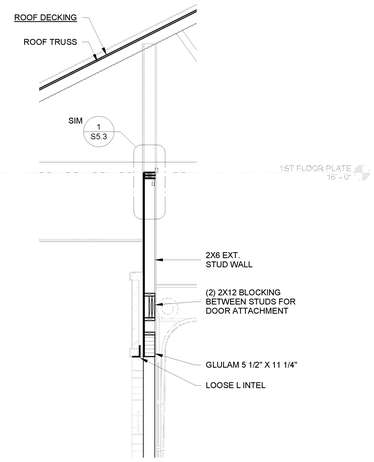
FRAMING DETAILS



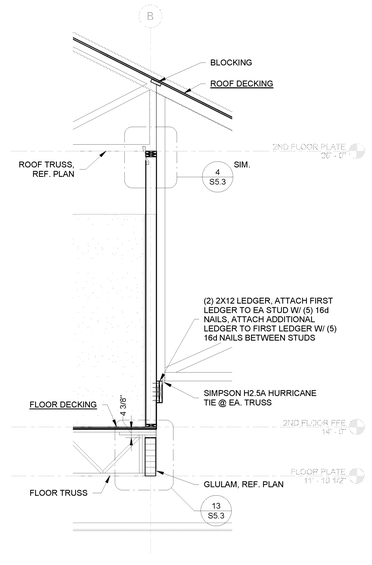
1 SECTION AT MECH. OPENING
3/8" = 1'-0"



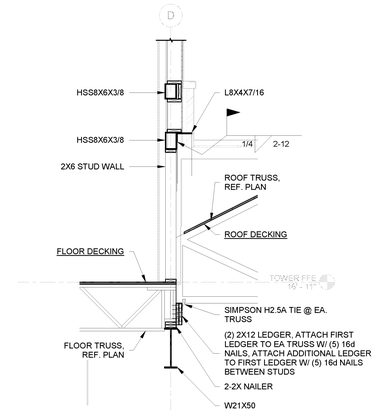
2 SECTION AT 2ND FLOOR
3/8" = 1'-0"



3 WORKOUT ROOM OVERHANG DOOR SECTION
3/8" = 1'-0"



4 SECTION AT 2ND FLOOR W/ BEAM
3/8" = 1'-0"



5 SECTION AT TOWER
3/8" = 1'-0"

BROWN REYNOLDS WATFORD ARCHITECTS
2709 EARL RUDDER FWAY SOUTH
SUITE 1000
COLLEGE STATION, TEXAS 77845
(979) 693-0013
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BRW

STATE OF TEXAS
DAVID A. VAN ZANDT
13098
REGISTERED
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FIRM REGISTRATION NUMBERS:
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GESSNER ENGINEERING

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WILLIAMSON CO. ESD 8 / CITY OF GEORGETOWN

GEORGETOWN FIRE STATION No. 6

GEORGETOWN TEXAS

6700 R.M. 2338
GEORGETOWN, TX 78626

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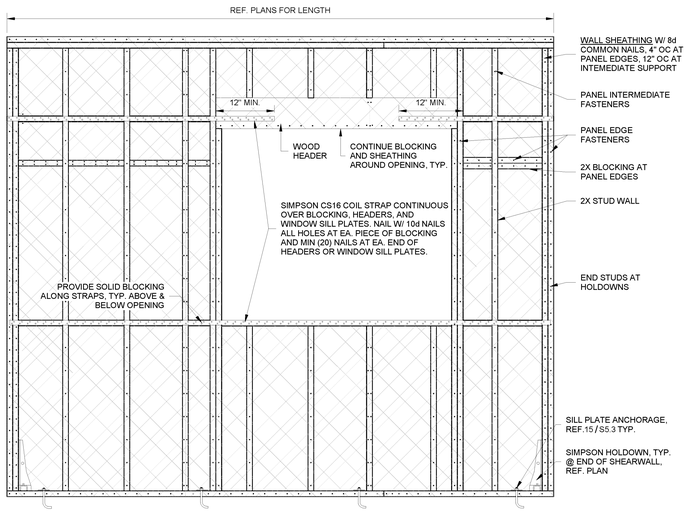
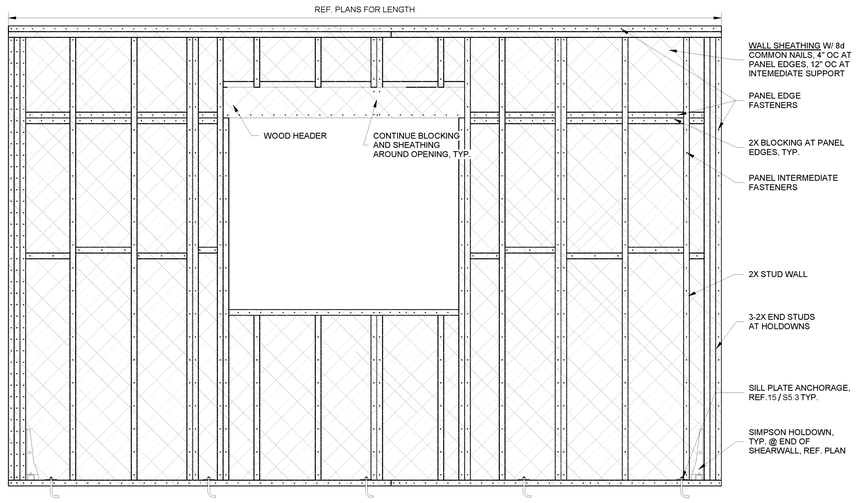
S5.5

FRAMING DETAILS

NOTES:
1. ALL PANEL EDGES SHALL OCCUR OVER FRAMING MEMBERS OR BLOCKING
2. REFERENCE DETAILS FOR CONNECTIONS OF FRAMING TO SHEAR WALLS AND SPECIAL CONDITIONS.

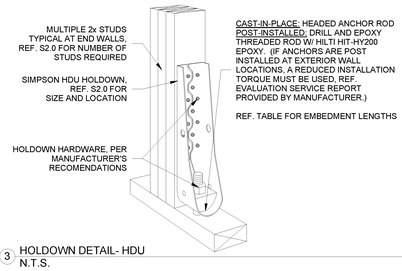


1 FORCE TRANSFER SHEAR WALL
N.T.S.



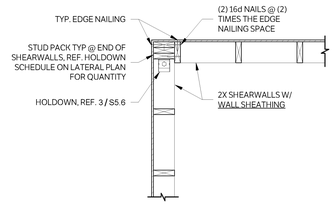
2 PERFORATED SHEAR WALL
N.T.S.

HOLDOWN	ANCHOR DIAMETER	CAST-IN-PLACE EMBEDMENT	POST-INSTALLED EMBEDMENT
HDU2-SDS2.5	5/8"	6"	10"
HDU5-SDS2.5	5/8"	8"	12"

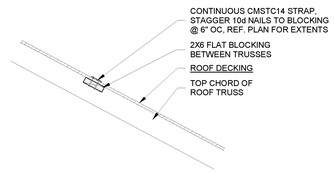


3 HOLDOWN DETAIL- HDU
N.T.S.

PANEL EDGE FASTENERS	CORNER STITCH FASTENERS
4"	9"



4 SHEARWALL AT CORNER
N.T.S.



5 STRAPPING LINE AT ROOF
N.T.S.

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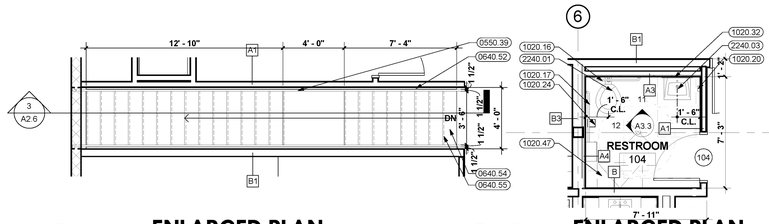
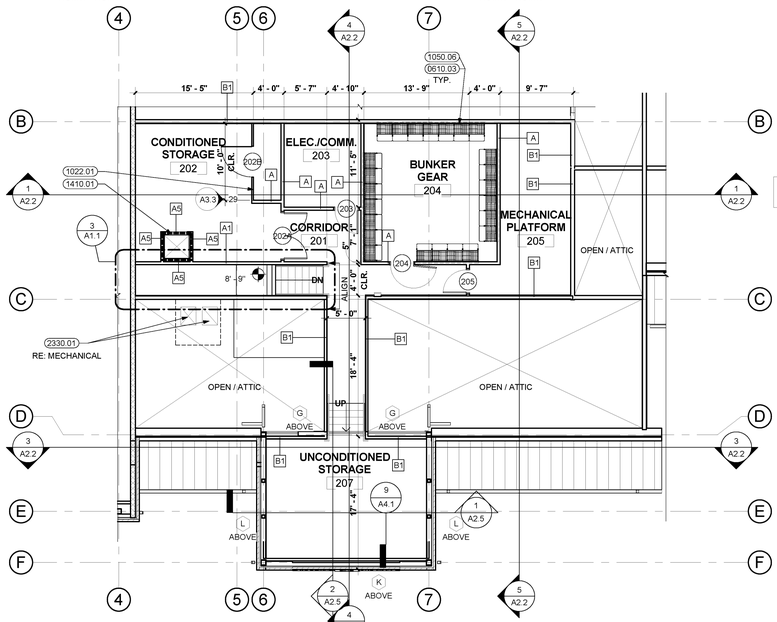
S5.6

LATERAL DETAILS

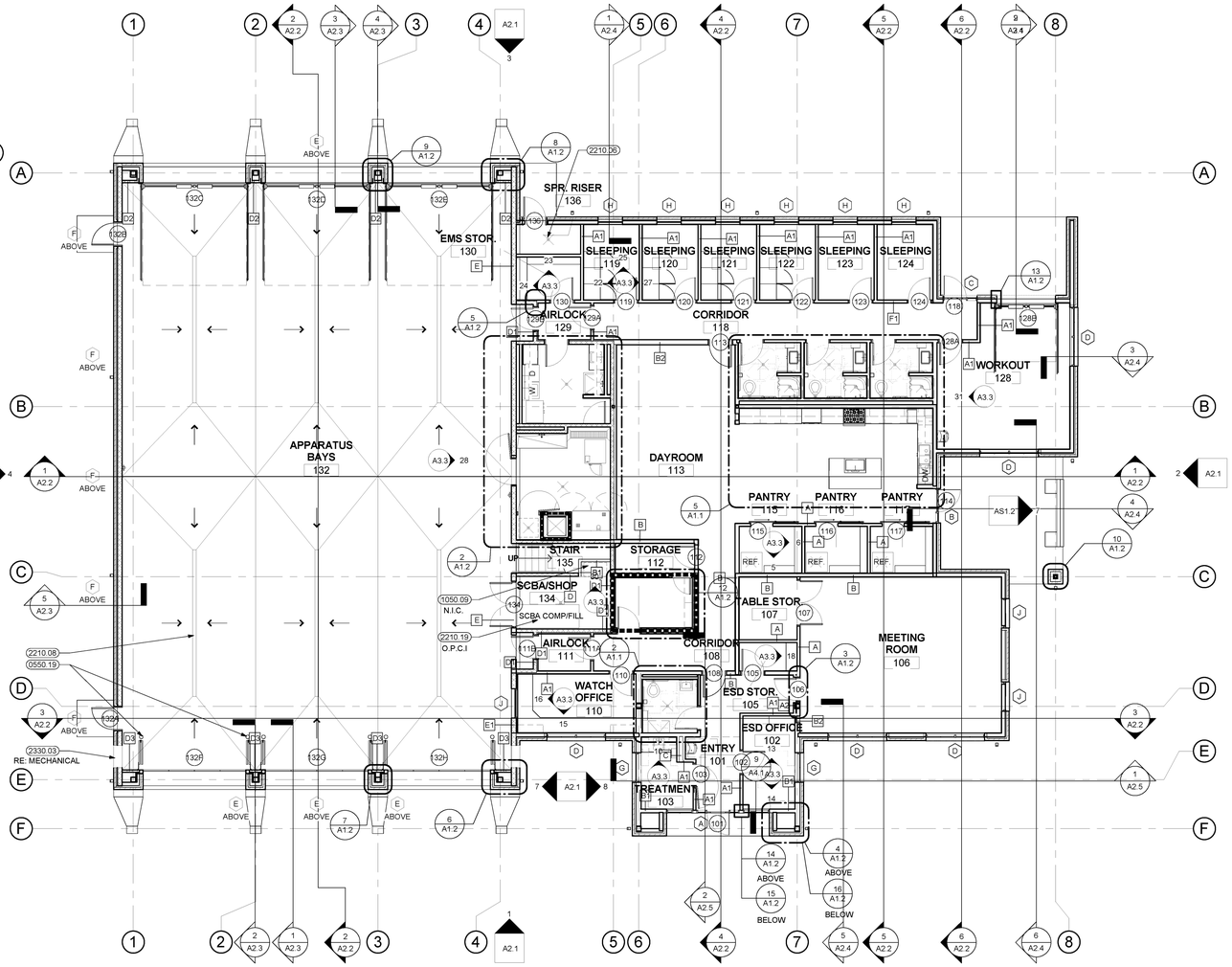


3 ENLARGED PLAN
1/4" = 1'-0"

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



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

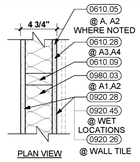


1 FIRST FLOOR PLAN
1/8" = 1'-0"

GENERAL NOTES:

1. PARTITIONS SHALL BE TYPE "A1" UNLESS OTHERWISE NOTED.
2. TYPICAL FLOOR PLAN DIMENSIONS OF PARTITIONS ARE TO THE FINISH FACE OF PARTITIONS.
3. WHERE A CLEAR DIMENSION OR OPENING IS REQUIRED OR NOTED, MEASURE DIMENSION TO FACE OF PARTITION FINISH
4. PROVIDE STUD BRACING AT 4' - 0" O.C. MAX. BRACING SHALL ATTACH TO STUDS 1' - 0" MAX. ABOVE CEILING.
5. ALL ELEMENTS OF ACOUSTIC RATED PARTITIONS SHALL EXTEND TO ROOF OR FLOOR DECK ABOVE AND ALL JOINTS AND PENETRATIONS OF ACOUSTICALLY RATED PARTITIONS SHALL BE FILLED AND SEALED.
6. PENETRATIONS IN RATED PARTITIONS AND CONNECTIONS OF THE PARTITIONS TO OTHER PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDED DETAILS AND IN COMPLIANCE WITH APPLICABLE TESTING AGENCY REQUIREMENTS.
7. INSTALL BLOCKING OR BACKER MATERIAL FOR ATTACHMENT/MOUNTING OF WALL HUNG ITEMS OR EQUIPMENT DESCRIBED IN THE DOCUMENTS.
8. PROVIDE CEMENTITIOUS BACKER BOARD AT AREAS THAT ARE SCHEDULED TO RECEIVE CERAMIC TILE FINISH AND AS REQUIRED BY CODE.
9. INSTALLATION OF GYPSUM BOARD, BACKER BOARD AND BASE BOARD SHALL CONFORM TO REQUIREMENTS FOR FIRE RATINGS AND ACOUSTICAL RATINGS.
10. WHERE PARTITIONS AND/OR FURRING MEET, MAINTAIN A FLUSH FINISH SURFACE UNLESS OTHERWISE NOTED.

A SERIES
NON-COMBUSTIBLE



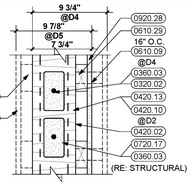
PLAN VIEW

PTN TYPE	STUD	PART WIDTH	PART HEIGHT	W/ SOUND BATTS	NOTES
A	2 X 4 @ 16" O.C. W/BRACING @4'-0" O.C.	4 3/4"	TO 3" ABOVE CEILING		1 LAYER GYP PUBLIC SIDE, 1 LAYER PLYWOOD UTILITY SIDE @ 203 COMM /ELEC
A1	2 X 4 @ 16" O.C.	4 3/4"	TO B.O. STRUCTURE	X	
A2	2 X 4 @ 16" O.C.	4 1/8"	TO B.O. STRUCTURE	X	1 LAYER GYP PUBLIC SIDE, 1 LAYER PLYWOOD UTILITY SIDE
A3	2 X 4 @ 16" O.C.	4 1/8"	TO 3" ABOVE CEILING	X	1 LAYER GYP PUBLIC SIDE
A4	2 X 4 @ 16" O.C.	2 5/8"	TO 3" ABOVE CEILING	X	ATTACH TO LOAD BEARING STUDS AS VERTICAL FURRING, PART WIDTH INCLUDES 5/8" TILE BACKER AND WALL TILE
A5	2 X 4 @ 16" O.C.	4 3/4"	TO B.O. ROOF DECK	X	AVAILABLE FIRE RESISTANCE 1-HR

NOTES:
1. CROSS-LAY MULTIPLE GWB LAYERS; JOINTS IN MULTIPLE LAYER ASSEMBLY SHALL NOT BE LAID DIRECTLY OVER EACHOTHER
2. DO NOT BRIDGE BETWEEN STUDS.

D SERIES
NON COMBUSTIBLE

NORMAL WEIGHT CONCRETE BLOCK (RE: STRUCTURAL)

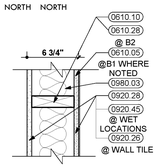


PLAN VIEW

PTN TYPE	CMU WIDTH	PART WIDTH	PART HEIGHT	INSULATED	NOTES
D	6" NOMINAL	5 5/8"	TO 10' - 0" A.F.F.	X	RE: STRUCTURAL FOR GROUTING REQUIREMENTS (TYP. ALL CMU)
D1	6" NOMINAL	7 3/4"	TO 10' - 0" A.F.F.	X	PUBLIC SIDE: 1 LAYER GYP BOARD ON 2 X 4 FURRING @ 16" O.C. (2 HR FIRE BARRIER @ OFFICE 109)
D2	4" NOMINAL	3 5/8"	TO 14' - 0" A.F.F.		
D3	4" NOMINAL	3 5/8"	TO 16' - 0" A.F.F.		
D4	6" NOMINAL	9 3/4"	TO 10' - 8" A.F.F.	X	PUBLIC SIDE: 1 LAYER GYP BOARD ON 2 X 4 STUDS @ 16" O.C. (TO STRUCTURE ABOVE, WITH SOUND BATTS)
D5	6" NOMINAL	9 7/8"	TO 10' - 8" A.F.F.	X	2 HR FIRE BARRIER @ OFFICE 109

6 PARTITION TYPES
1 1/2" = 1'-0"

B SERIES
NON-COMBUSTIBLE

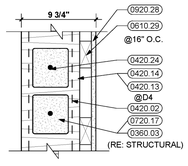


PLAN VIEW

PTN TYPE	STUD	PART WIDTH	PART HEIGHT	W/ SOUND BATTS	NOTES
B	2 X 6 @ 16" O.C	6 3/4"	TO B.O. STRUCTURE	X	
B1	2 X 6 @ 16" O.C.	6 1/8"	TO B.O. STRUCTURE	X	1 LAYER GYP PUBLIC SIDE, 1 LAYER PLYWOOD UTILITY SIDE @ 203 ELEC./COMM.
B2	2 X 8 @ 16" O.C.	8 1/2"	TO B.O. STRUCTURE	X	ROUTE ELECTRICAL AND COMMUNICATIONS CONDUIT THROUGH SLAB, UP WALL AND TO 203 ELEC./COMM.
B3	2 X 8 @ 16" O.C.	8 1/2"	TO B.O. STRUCTURE	X	

E SERIES
NON COMBUSTIBLE

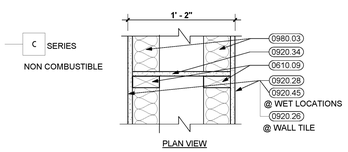
NORMAL WEIGHT CONCRETE BLOCK (RE: STRUCTURAL)



PLAN VIEW

PTN TYPE	CMU WIDTH	PART WIDTH	PART HEIGHT	INSUL	NOTES
E	8" NOMINAL	7 5/8"	TO 22' - 0" A.F.F.	X	RE: STRUCTURAL FOR GROUTING REQUIREMENTS
E1	8" NOMINAL	9 3/4"	TO 22' - 0" A.F.F.	X	PUBLIC SIDE: 1 LAYER GYP BOARD ON 2 X 4 FURRING @ 16" O.C. (TO 3" ABOVE CEILING) RE: STRUCTURAL

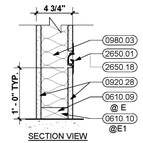
C SERIES
NON COMBUSTIBLE



PLAN VIEW

PTN TYPE	STUD	PART WIDTH	PART HEIGHT	W/ SOUND BATTS	NOTES
C	3 1/2" AT 16" O.C.	1' - 2"	TO B.O. STRUCTURE	X	

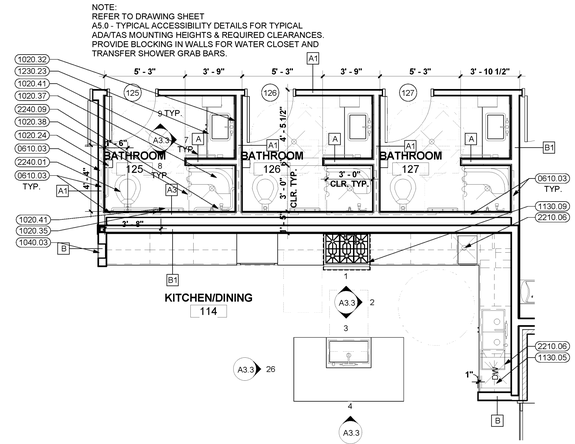
F SERIES
NONCOMBUSTIBLE



SECTION VIEW

PTN TYPE	STUD	PART WIDTH	PART HEIGHT	W/ SOUND BATTS	NOTES
F	2X4 STUDS @ 16" O.C.	4 3/4"	TO B.O. DECK OR HORIZ. ASSEMBLY	X	LINEAR LED ACCENT LIGHTING SYSTEM CONTINUOUS SECTIONS CORRIDOR SIDE. RE: ELECTRICAL
E1	2X6 STUDS @ 16" O.C.	6 3/4"	TO B.O. DECK OR HORIZ. ASSEMBLY	X	LINEAR LED ACCENT LIGHTING SYSTEM CONTINUOUS SECTIONS CORRIDOR SIDE. RE: ELECTRICAL

NOTE:
REFER TO DRAWING SHEET
A5.0 - TYPICAL ACCESSIBILITY DETAILS FOR TYPICAL ADA/TAS MOUNTING HEIGHTS & REQUIRED CLEARANCES.
PROVIDE BLOCKING IN WALLS FOR WATER CLOSET AND TRANSFER SHOWER GRAB BARS.



5 ENLARGED PLAN
1/4" = 1'-0"

KEYNOTES

0320.02	STEEL REINFORCING (RE: STRUCTURAL)
0360.03	FILL WITH GROUT
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.10	4" CONCRETE MASONRY UNITS
0420.13	6" CONCRETE MASONRY UNITS
0420.14	8" CONCRETE MASONRY UNITS
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0550.19	6" PIPE BOLLARD. FILL WITH CONCRETE
0550.39	1 1/4" DIAMETER STANDARD STEEL PIPE HANDRAIL (3'-0" HIGH U.N.O.)
0610.03	2X WOOD BLOCKING
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.28	3/4" PLYWOOD
0610.29	2X WOOD FURRING STRIPS
0640.52	WOOD STAIR STRINGER
0640.54	WOOD STAIR TREAD
0640.55	WOOD STAIR RISER
0720.17	GRANULAR INSULATING FILL IN CMU BLOCKS
0920.26	5/8" CEMENTITIOUS BACKER BOARD
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.34	GYPSUM BOARD GUSSETS AT 16" O.C.
0920.45	5/8" GYPSUM BOARD MOISTURE RESISTANT (TYPE X)
0980.03	3 1/2" FIBERGLASS SOUND ATTENUATION INSULATION
1020.16	STAINLESS STEEL 1 1/2" DIAMETER GRAB BAR (36" LONG) PROVIDE BLOCKING IN WALL
1020.17	STAINLESS STEEL 1 1/2" DIAMETER GRAB BAR (42" LONG) PROVIDE BLOCKING IN WALL
1020.20	SOAP DISPENSER (SURFACE-MOUNTED)
1020.24	STAINLESS STEEL SURFACE MOUNTED TOILET PAPER DISPENSER
1020.32	STAINLESS STEEL FRAMED MIRROR
1020.35	ROBE / TOWEL HOOK
1020.37	WALL-MOUNTED FOLDING SHOWER SEAT. PROVIDE BLOCKING IN WALL AS REQUIRED
1020.38	STAINLESS STEEL SHOWER CURTAIN ROD WITH VINYL CURTAIN AND HOOKS.
1020.41	WALL MOUNTED TOWEL BAR
1020.47	WALL-MOUNTED FOLDING BABY CHANGING STATION, PROVIDE BLOCKING IN WALL AS REQUIRED
1022.01	MODULAR WIRE MESH PARTITION SYSTEM
1040.03	FIRE EXTINGUISHER AND SEMI-RECESSED CABINET
1050.06	BUNKER GEAR RACK
1050.09	SCBA TANK STORAGE UNIT
1130.05	DISHWASHER
1130.09	GAS RANGE
1230.23	QUARTZ COUNTERTOP WITH SPLASH AS SHOWN
1410.01	COMMERCIAL DUMBWAITER
2210.06	FLOOR DRAIN
2210.08	TRAFFIC RATED TRENCH DRAIN
2210.19	SCBA (O.P.C.I.)
2240.01	WATER CLOSET. ORIENT FLUSH VALVE TOWARDS ACCESSIBLE SPACE AT ACCESSIBLE STALLS / RESTROOMS
2240.03	WALL-HUNG LAVATORY WITH CARRIER
2240.09	SHOWER HEAD
2330.01	HVAC DUCTWORK
2330.03	MOTORIZED DAMPER
2650.01	RECESSED LIGHT FIXTURE
2650.18	LED FLEXIBLE LIGHTING SYSTEM

BROWN REYNOLDS WATFORD
ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 350
COLLEGE STATION, TEXAS 77840
979.693.1797
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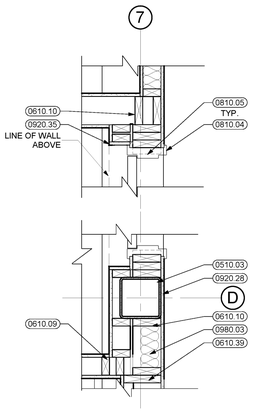
DATE 11/16/2018
DRAWN BY HR, NB
CHECKED BY RH, MW
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78633

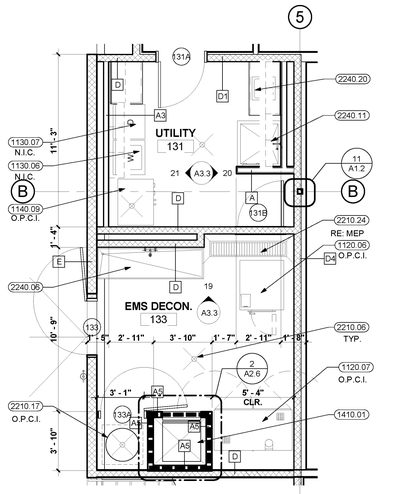
NO.	REVISION	DATE

A1.1

FLOOR PLAN AND ENLARGED PLANS

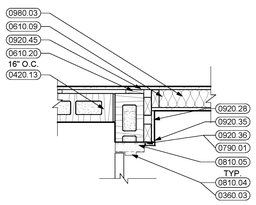


3 PLAN DETAIL
1" = 1'-0"



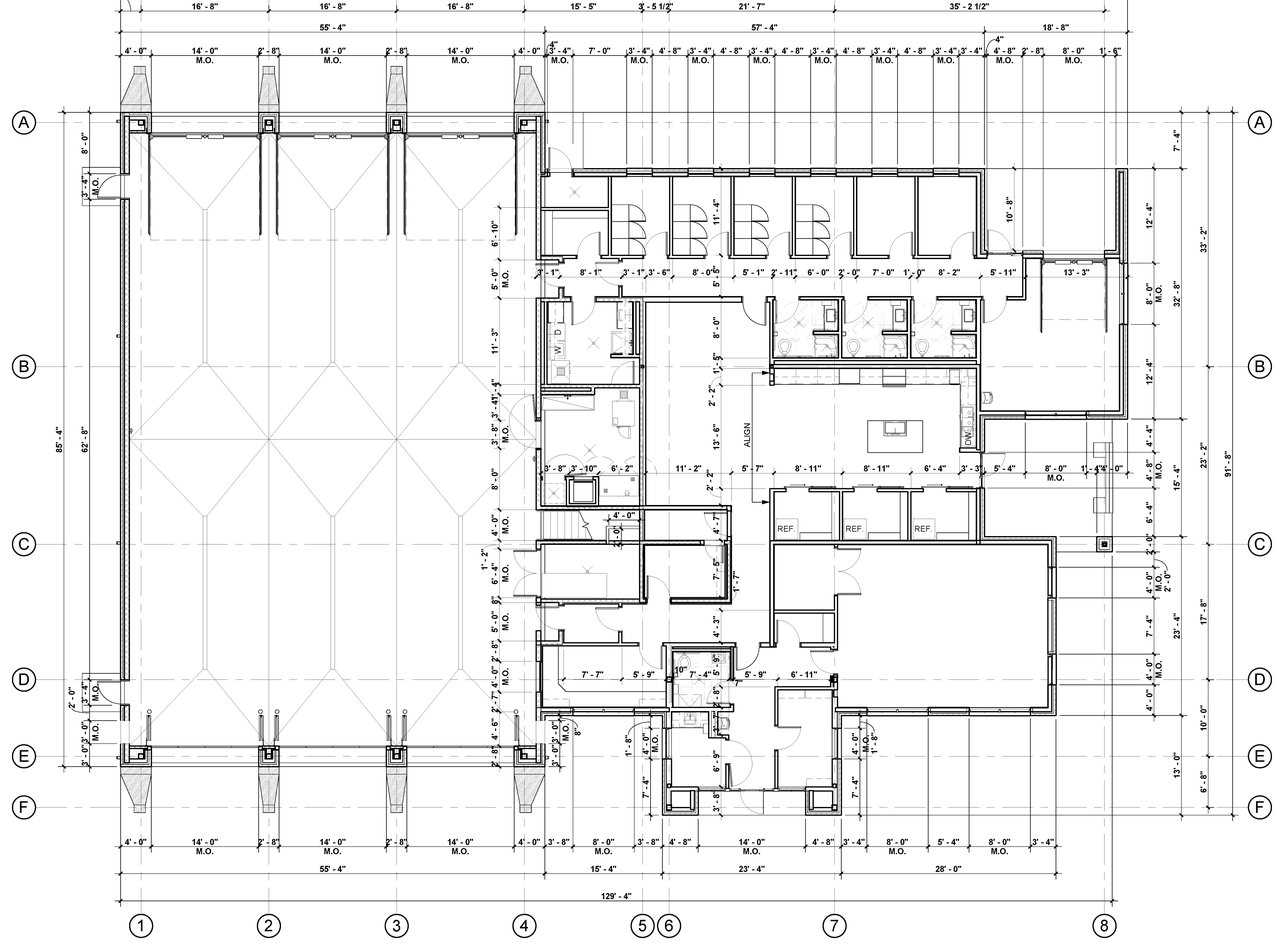
2 ENLARGED PLAN
1/4" = 1'-0"

PLAN NORTH / TRUE NORTH



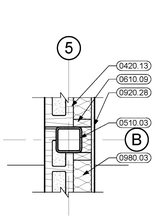
5 PLAN DETAIL
1" = 1'-0"

4 PLAN DETAIL (LOWER)
1" = 1'-0"

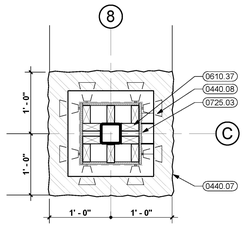


PLAN NORTH / TRUE NORTH

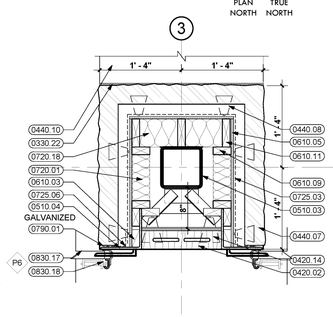
1 FIRST FLOOR DIMENSION PLAN
1/8" = 1'-0"



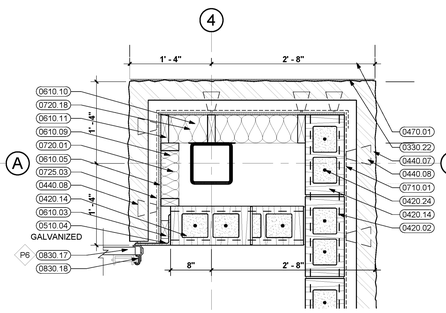
11 PLAN DETAIL
1" = 1'-0"



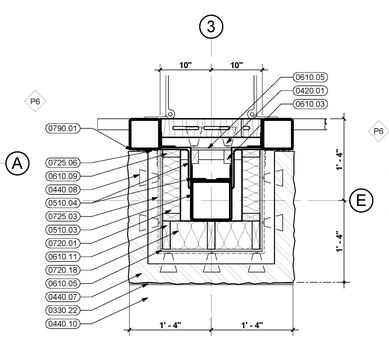
10 PLAN DETAIL
1" = 1'-0"



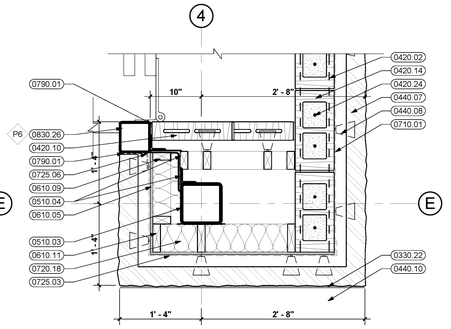
9 PLAN DETAIL
1" = 1'-0"



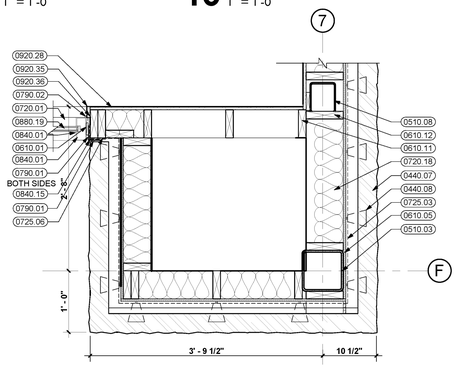
8 PLAN DETAIL
1" = 1'-0"



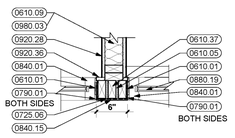
7 PLAN DETAIL
1" = 1'-0"



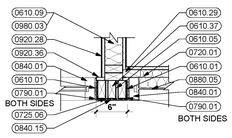
6 PLAN DETAIL
1" = 1'-0"



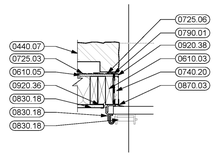
16 PLAN DETAIL
1" = 1'-0"



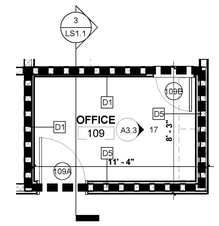
15 PLAN DETAIL
1" = 1'-0"



14 PLAN DETAIL
1" = 1'-0"



13 PLAN DETAIL
1" = 1'-0"



PLAN NORTH / TRUE NORTH

12 ENLARGED PLAN
1/4" = 1'-0"

KEYNOTES

0330.22	CONCRETE EXPANSION JOINT - FILL W/ JOINT SEALER 1/4" BELOW SURFACE
0360.03	FILL WITH GROUT
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.10	4" CONCRETE MASONRY UNITS
0420.13	6" CONCRETE MASONRY UNITS
0420.14	8" CONCRETE MASONRY UNITS
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0440.10	2" CUT STONE
0470.01	CAST STONE
0510.03	STEEL TUBE COLUMN (RE: STRUCTURAL)
0510.04	STEEL ANGLE (RE: STRUCTURAL)
0510.08	STEEL DIAGONAL BRACE (RE: STRUCTURAL)
0610.01	SHIM AS REQUIRED
0610.03	2X WOOD BLOCKING
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.11	2 X 6 WOOD FRAMING
0610.12	2 X 8 WOOD FRAMING
0610.20	1x WOOD FURRING STRIP
0610.29	2X WOOD FURRING STRIPS
0610.37	2 X 4 WOOD FRAMING
0610.39	2 X 8 STUDS AT 16" O.C.
0710.01	BITUMINOUS DAMPPROOFING
0720.01	3 1/2" BATT INSULATION
0720.18	5 1/2" BATT INSULATION
0725.03	PLASTIC FILM AIR BARRIER
0725.06	SELF-ADHERING FLEXIBLE SURROUND FLASHING
0740.20	FIBER REINFORCED CEMENTITIOUS TRIM
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0790.02	CAULKING
0810.04	HOLLOW METAL DOOR AND FRAME
0810.05	JAMB ANCHOR (3 PER JAMB)
0830.17	UPWARD-ACTING SECTIONAL DOOR
0830.18	UPWARD-ACTING SECTIONAL DOOR TRACK
0830.26	ELECTRIC OPERATED FOLDING DOORS
0840.01	ALUMINUM STOREFRONT
0840.15	.060 ALUMINUM BRAKE METAL; FINISH TO MATCH STOREFRONT
0870.03	BRUSH/WEATHER SEAL
0880.05	1/4" SPANDREL GLASS
0880.19	1" TINTED GLASS, INSULATED, LOW-E
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.35	CORNER BEAD, TYPICAL
0920.36	J-MOULD, TYPICAL
0920.37	GYPSUM BOARD CONTROL JOINT
0920.38	PRE-MANUFACTURED CONTINUOUS ALUMINUM F REVEAL MOLDING
0920.45	5/8" GYPSUM BOARD MOISTURE RESISTANT (TYPE X)
0980.03	3 1/2" FIBERGLASS SOUND ATTENUATION INSULATION
1120.06	CLOTHES EXTRACTOR
1120.07	BUNKER GEAR DRYING CABINET
1130.06	WASHING MACHINE
1130.07	CLOTHES DRYER
1140.09	ICE MACHINE
1410.01	COMMERCIAL DUMBWAITER
2210.06	FLOOR DRAIN
2210.17	AIR COMPRESSOR/TANK (RE: MECHANICAL)
2210.24	TRENCH DRAIN
2240.06	STAINLESS STEEL SINK
2240.11	MOP SINK
2240.20	UNDERMOUNT SINK

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11/16/2018

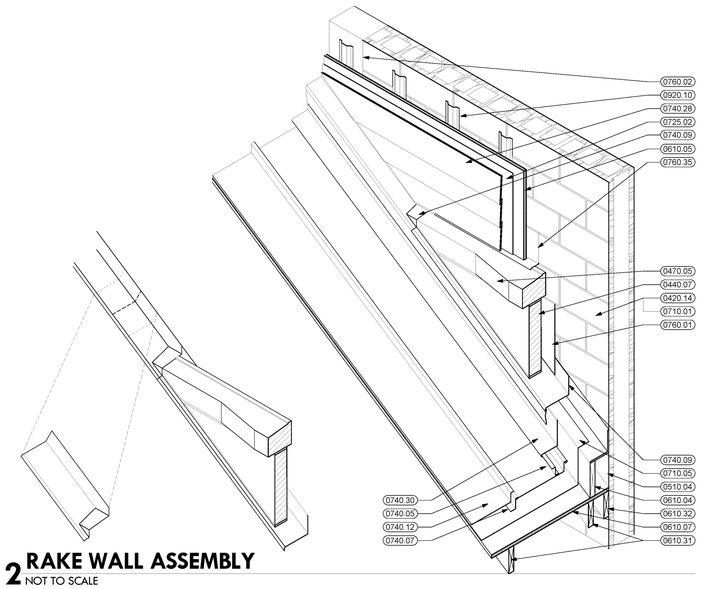
DATE 11/16/2018
DRAWN BY NB
CHECKED BY RH
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78633

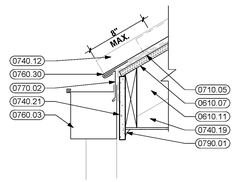
NO.	REVISION	DATE

A1.2

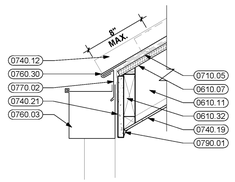
DIMENSION PLAN AND PLAN DETAILS



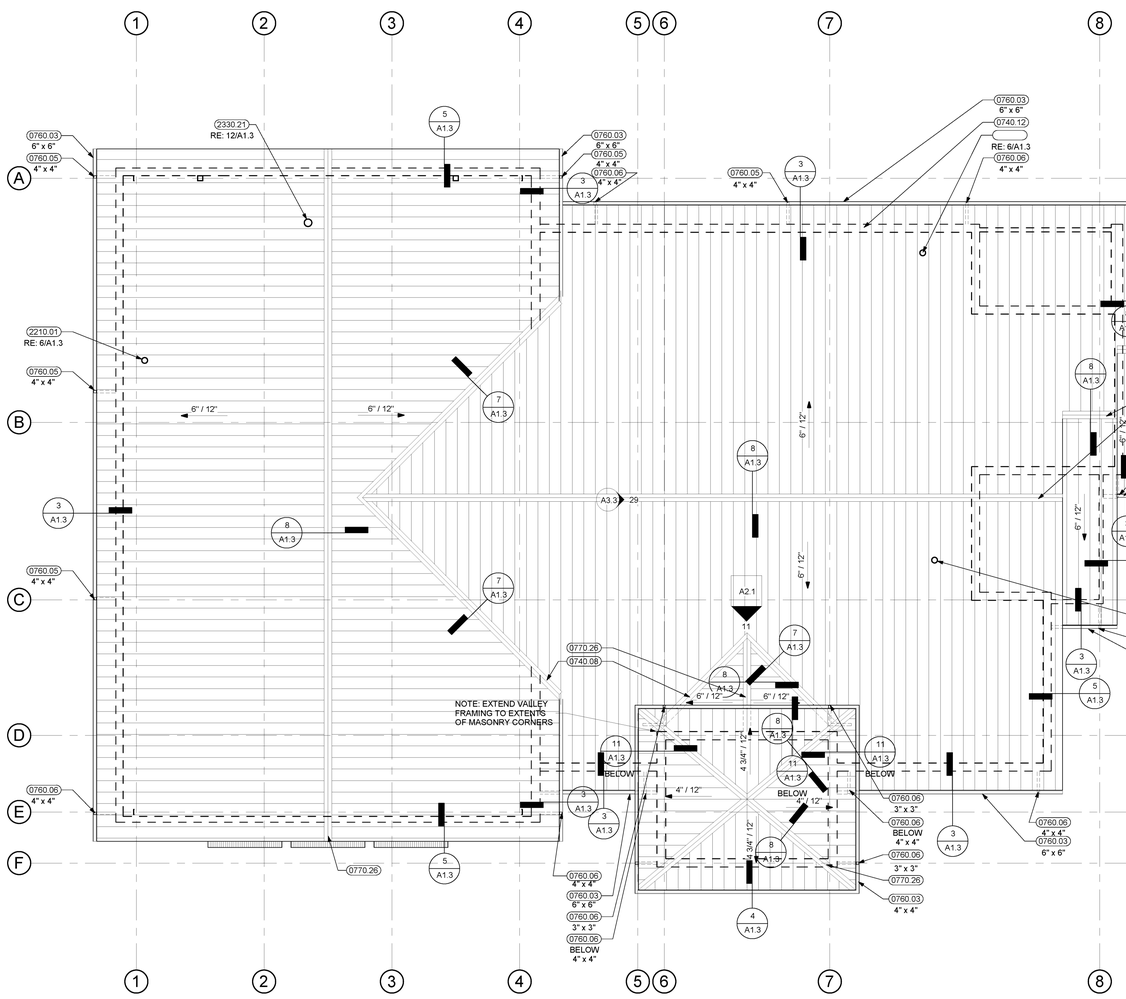
2 RAKE WALL ASSEMBLY
NOT TO SCALE



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

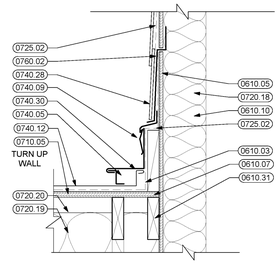


3 EAVE DETAIL
1 1/2" = 1'-0"



PLAN NORTH / TRUE NORTH

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



9 RAKE WALL DETAIL
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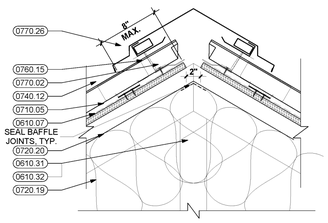
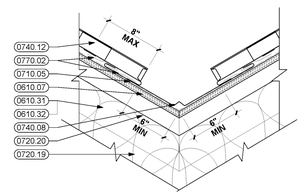
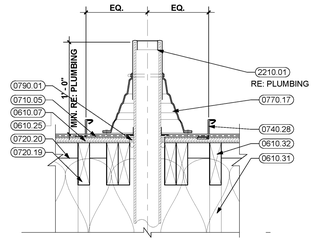


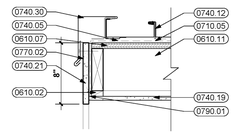
8 RIDGE/VENT DETAIL
1 1/2" = 1'-0"



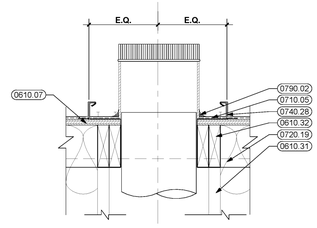
7 VALLEY DETAIL
1 1/2" = 1'-0"



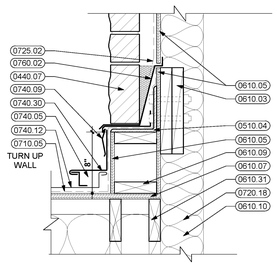
6 PLUMBING VENT DETAIL
1 1/2" = 1'-0"



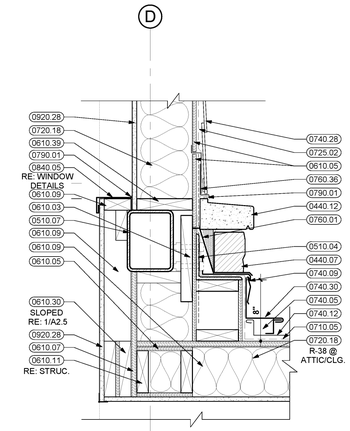
5 RAKE DETAIL
1 1/2" = 1'-0"



12 ROOF VENT DETAIL
1 1/2" = 1'-0"



11 RAKE WALL DETAIL
1 1/2" = 1'-0"



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

KEYNOTES

A	0420.14	8" CONCRETE MASONRY UNITS
	0440.07	STONE VENEER
	0440.12	6" CUT STONE
	0470.05	CAST STONE SILL WITH DRIP
	0510.04	STEEL ANGLE (RE: STRUCTURAL)
	0510.07	STEEL BEAM (RE: STRUCTURAL)
	0610.02	1X WOOD BLOCKING
	0610.03	2X WOOD BLOCKING
	0610.04	2X PRESSURE TREATED WOOD BLOCKING
	0610.05	1/2" EXTERIOR GRADE PLYWOOD
	0610.07	3/4" EXTERIOR GRADE PLYWOOD
	0610.09	2 X 4 WOOD STUDS AT 16" O.C.
	0610.10	2 X 6 WOOD STUDS AT 16" O.C.
	0610.11	2 X 6 WOOD FRAMING
	0610.25	GLUE-LAMINATED BEAM (RE: STRUCTURAL)
	0610.30	2X WOOD HEADER (RE: STRUCTURAL)
	0610.31	PREFABRICATED WOOD TRUSS (RE: STRUCTURAL)
	0610.32	2X WOOD FRAMING (RE: STRUCTURAL)
	0610.39	2 X 8 STUDS AT 16" O.C.
	0710.01	BITUMINOUS DAMPPROOFING
	0710.05	ROOFING UNDERLAYMENT
	0720.18	5 1/2" BATT INSULATION
	0720.19	BATT INSULATION (R-38 @ ATTIC/CEILING)
	0720.20	INSULATION BAFFLE
	0725.02	SELF-ADHERING MODIFIED BITUMINOUS SHEET AIR BARRIER
	0740.05	Z-CLOSURE BY STANDING SEAM METAL ROOF MANUFACTURER
	0740.07	CONCEALED STEEL CLIP BY STANDING SEAM METAL ROOF MANUFACTURER
	0740.08	VALLEY FLASHING BY STANDING SEAM METAL ROOF MANUFACTURER
B	0740.09	METAL REGLET W/ SEALANT & COUNTERFLASHING BY STANDING SEAM METAL ROOF MANUFACTURER
	0740.12	PREFINISHED METAL STANDING SEAM ROOFING
	0740.19	FIBER REINFORCED CEMENTITIOUS VENTED SOFFIT PANEL AND TRIMS
	0740.21	FIBER REINFORCED CEMENTITIOUS FASCIA
	0740.28	FIBER REINFORCED CEMENTITIOUS SIDING
	0740.30	PREFINISHED CONTINUOUS RAKE FLASHING BY METAL ROOFING MANUFACTURER
	0760.01	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
	0760.02	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.)
C	0760.03	GALVANIZED METAL GUTTER
	0760.05	GALVANIZED METAL DOWNSPOUT WITH FABRICATED TRANSITION TO DOWNSPOUT BOOT
	0760.06	GALVANIZED METAL DOWNSPOUT
	0760.15	PREFINISHED METAL Z-CLIP
	0760.30	PREFINISHED EAVE TRIM
	0760.35	PREFINISHED METAL FLASHING
	0760.36	GALVANIZED METAL FLASHING
	0770.02	CONTINUOUS CLEAT
	0770.17	PREFABRICATED PIPE PORTAL SYSTEM WITH METAL COLLAR
D	0770.26	RIDGE VENT
	0790.01	SEALANT WITH BACKER ROD AS REQUIRED
	0790.02	CAULKING
	0840.05	CONTINUOUS ALUMINUM SILL FLASHING
	0920.10	7/8" FURRING CHANNEL AT 16" O.C.
E	0920.28	5/8" GYPSUM BOARD (TYPE X)
	2210.01	PLUMBING VENT
	2330.21	EXHAUST VENT CAP WITH INTEGRAL BACKDRAFT DAMPER
F		

NOTE REGARDING ALTERNATE 6: PROVIDE NON-VENTED PREFINISHED METAL RIDGE CAP IN-LIEU-OF RIDGE VENTS IF SPRAY FOAM THERMAL INSULATION IS USED IN-LIEU-OF BATT INSULATION AND BAFFLES.

NOTE REGARDING ROOF VENTS: CONTRACTOR TO COORDINATE THAT ALL ROOF VENT PENATRATIONS ARE CENTERED BETWEEN ROOF SEAMS.

REGISTERED ARCHITECT ☆ SIXTE HOLLIDAY ☆ 1883 ☆ STATE OF TEXAS
11/16/2018

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
COLLEGE STATION, TEXAS 77840
979.694.1797
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BRW

DATE 11/16/2018
DRAWN BY PRIMARY DRAWER(S), PA/PC
CHECKED BY PM/DIRECTOR, ARCH. OF RECORD
BRW PROJECT NUMBER 217079.00

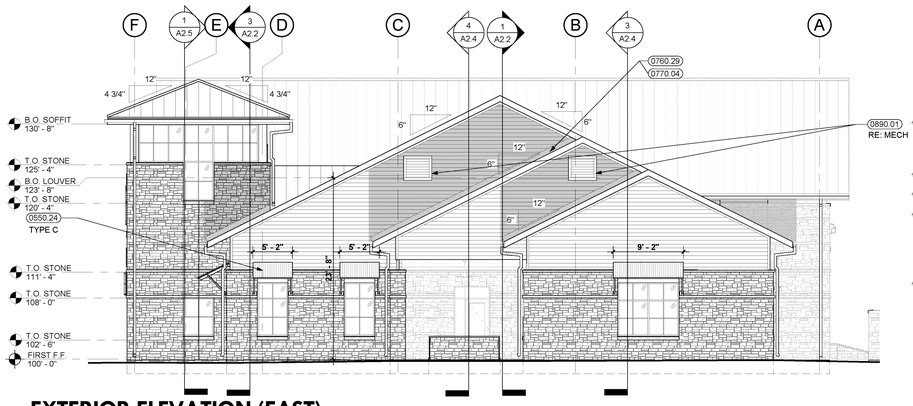
CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

GEORGETOWN TEXAS

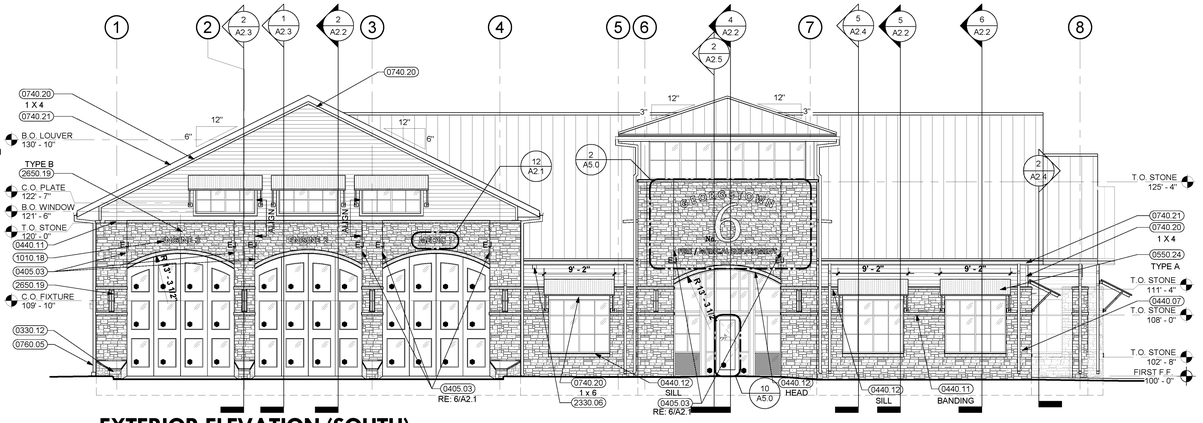
NO.	REVISION	DATE

A1.3

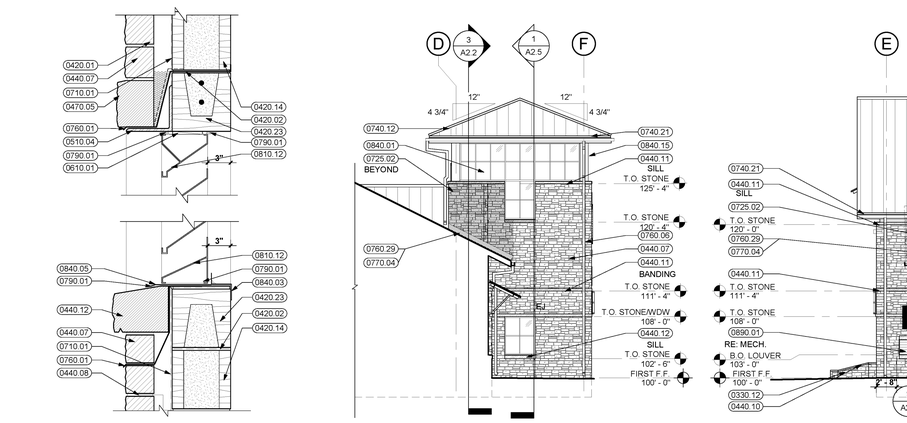
ROOF PLAN AND DETAILS



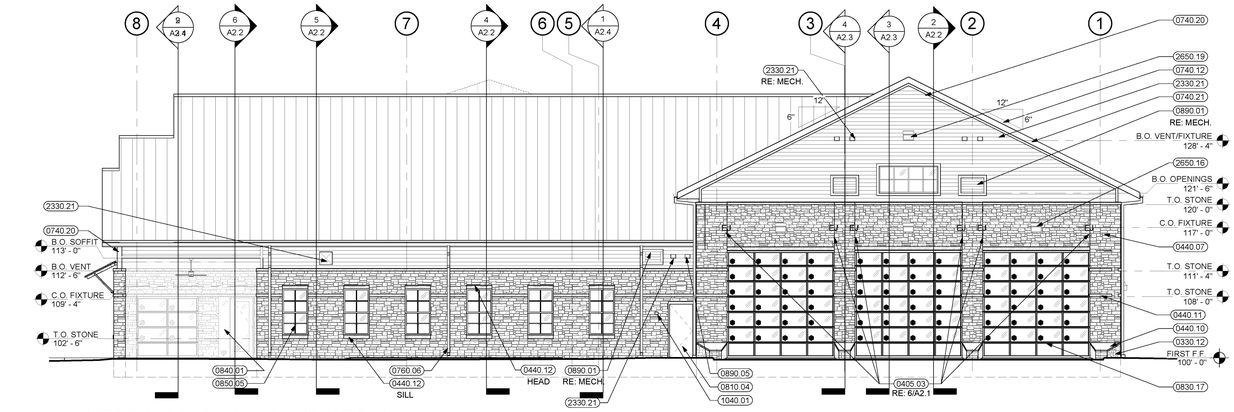
2 EXTERIOR ELEVATION (EAST)
1/8" = 1'-0"



1 EXTERIOR ELEVATION (SOUTH)
1/8" = 1'-0"



4 EXTERIOR ELEVATION (WEST)
1/8" = 1'-0"

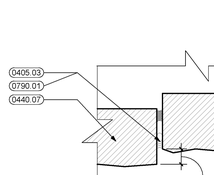


3 EXTERIOR ELEVATION (NORTH)
1/8" = 1'-0"

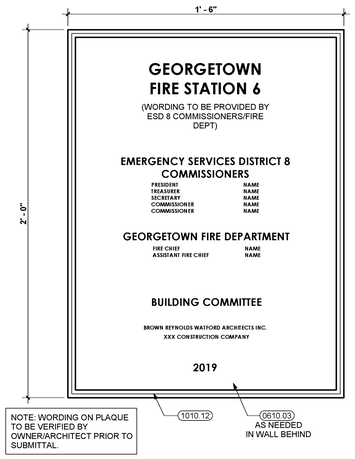
9 LOUVER DETAIL
1 1/2" = 1'-0"

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

7 PARTIAL ELEVATION
1/8" = 1'-0"

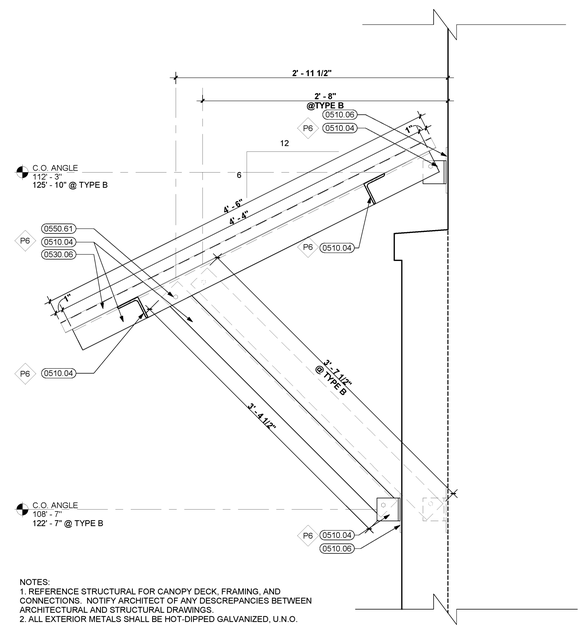


6 MASONRY DETAIL
3" = 1'-0"



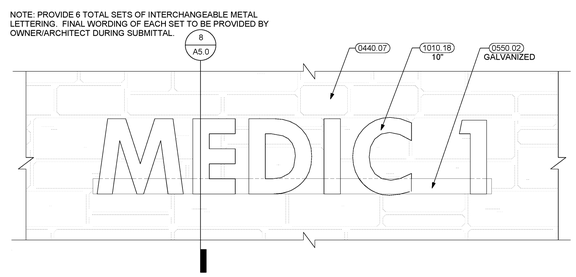
NOTE: WORDING ON PLAQUE TO BE VERIFIED BY OWNER/ARCHITECT PRIOR TO SUBMITTAL.

10 BUILDING PLAQUE
3" = 1'-0"

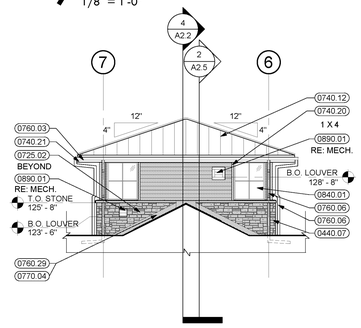


NOTES:
1. REFERENCE STRUCTURAL FOR CANOPY DECK, FRAMING, AND CONNECTIONS. NOTIFY ARCHITECT OF ANY DESCREPANCIES BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS.
2. ALL EXTERIOR METALS SHALL BE HOT-DIPPED GALVANIZED, U.N.O.

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



12 PARTIAL ELEVATION
1 1/2" = 1'-0"



11 PARTIAL ELEVATION
1/8" = 1'-0"

LEGEND	
SYMBOL	DESCRIPTION
	4" BUILDING STONE VENEER "FIREHOUSE BLEND" BY LEDBETTER BRICK & STONE CO. SAW CUT, RANDOM ASHLAR PATTERN
	SETBACK 4" BUILDING STONE VENEER "FIREHOUSE BLEND" BY LEDBETTER BRICK & STONE CO. SAW CUT, RANDOM ASHLAR PATTERN RE: 8/A2.1
	4" STONE BANDING, SILLS, HEADS "CAVE SELECT" BY LEDBETTER BRICK & STONE CO. SAW CUT, 2", 4", AND 6" HEIGHTS
	FIBER REINFORCED CEMENTITIOUS SIDING: LAP SIDING BY ALLURA, CEDAR LAP TEXTURE, 6" EXPOSURE, CEDAR STAIN FINISH FIBER REINFORCED CEMENTITIOUS SOFFIT, TRIM, AND FASCIA BY ALLURA, CEDAR TEXTUR, CEDAR STAIN FINISH
	SELF-ADHERING MODIFIED BITUMINOUS SHEET AIR BARRIER APPLIED TO SHEATHING AT **ALL** WALL-ABOVE-ROOF CONDITIONS. SPECIAL INSPECTION OF THE INSTALLED MODIFIED BITUMINOUS SHEET AIR BARRIER BY ARCHITECT IS REQUIRED PRIOR TO COVER-UP. RE: SPECIFICATION SECTION 07 27 13.
P6	EXTERIOR METAL PAINT FINISH KELLY MOORE "HAUTE COUTURE" KMA3 SHOP PRIME ALL EXPOSED STEEL REFERENCE SPECIFICATION SECTION 099000 PAINTING FOR PAINT SCHEDULES

KEYNOTES

0330.12	CONCRETE BOLLARD
0405.03	MASONRY EXPANSION JOINT
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.14	8" CONCRETE MASONRY UNITS
0420.23	CONCRETE MASONRY BOND BEAM
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0440.10	2" CUT STONE
0440.11	4" CUT STONE
0440.12	6" CUT STONE
0470.05	CAST STONE SILL WITH DRIP
0510.04	STEEL ANGLE (RE: STRUCTURAL)
0510.06	STEEL LINTEL / PLATE (RE: STRUCTURAL)
0530.06	GALVANIZED METAL DECK (RE: STRUCTURAL)
0550.02	3" X 3" X 1/4" STEEL ANGLE
0550.24	GALVANIZED METAL CANOPY
0550.61	GALVANIZED METAL FASTENER (RE: STRUCTURAL)
0610.01	SHIM AS REQUIRED
0610.03	2X WOOD BLOCKING
0710.01	BITUMINOUS DAMPPROOFING
0725.02	SELF-ADHERING MODIFIED BITUMINOUS SHEET AIR BARRIER
0740.12	PREFINISHED METAL STANDING SEAM ROOFING
0740.20	FIBER REINFORCED CEMENTITIOUS TRIM
0740.21	FIBER REINFORCED CEMENTITIOUS FASCIA
0740.28	FIBER REINFORCED CEMENTITIOUS SIDING
0760.01	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
0760.03	GALVANIZED METAL GUTTER
0760.05	GALVANIZED METAL DOWNSPOUT WITH FABRICATED TRANSITION TO DOWNSPOUT BOOT
0760.06	GALVANIZED METAL DOWNSPOUT
0760.29	PREFINISHED RAKEWALL TRIM
0770.04	PREFINISHED METAL REGLET WITH SEALANT AND COUNTERFLASHING
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0810.04	HOLLOW METAL DOOR AND FRAME
0810.12	METAL LOUVER
0830.17	UPWARD-ACTING SECTIONAL DOOR
0840.01	ALUMINUM STOREFRONT
0840.03	.060 ALUMINUM SILL WITH HEMMED AND CLOSED ENDS
0840.05	CONTINUOUS ALUMINUM SILL FLASHING
0840.15	.060 ALUMINUM BRAKE METAL; FINISH TO MATCH STOREFRONT
0850.05	ALUMINUM SINGLE-HUNG WINDOW
0890.01	PREFINISHED FIXED ALUMINUM LOUVER (WITH INSECT SCREEN)
0890.05	CLOTHES DRYER VENT WITH FLAP
1010.12	CAST BRONZE PLAQUE
1010.18	METAL LETTERING
1040.01	LOCKBOX FOR FIRE DEPARTMENT KEY ACCESS (COORDINATE LOCATION WITH FIRE MARSHAL)
2330.06	OUTSIDE AIR INTAKE HOOD
2330.21	EXHAUST VENT CAP WITH INTEGRAL BACKDRAFT DAMPER
2650.16	WALL PACK LIGHT FIXTURE
2650.19	EXTERIOR LIGHT FIXTURE

BROWN REYNOLDS WATFORD ARCHITECTS
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972.464.1797
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DATE	11/16/2018
DRAWN BY	HR, NB
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BRW PROJECT NUMBER	217079.00

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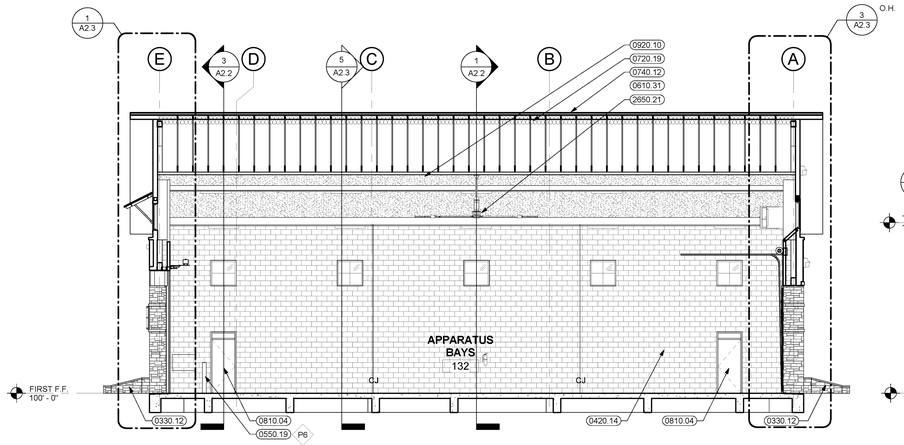
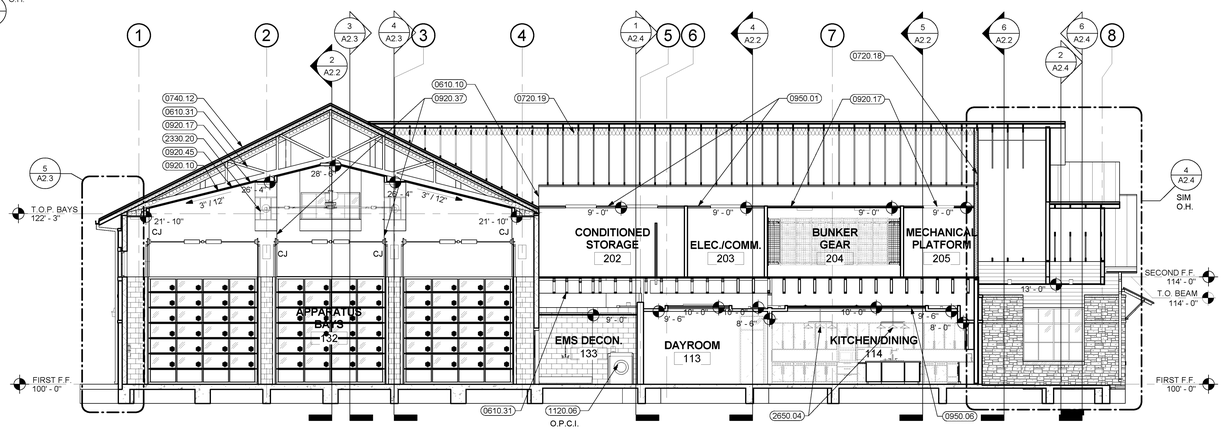
A2.1

EXTERIOR ELEVATIONS



2 BUILDING SECTION
1/8" = 1'-0"



1 BUILDING SECTION
1/8" = 1'-0"

4 BUILDING SECTION
1/8" = 1'-0"

3 BUILDING SECTION
1/8" = 1'-0"

6 BUILDING SECTION
1/8" = 1'-0"

5 BUILDING SECTION
1/8" = 1'-0"

KEYNOTES

0330.12	CONCRETE BOLLARD
0420.14	8" CONCRETE MASONRY UNITS
0440.07	STONE VENEER
0440.11	4" CUT STONE
0510.01	STEEL STRUCTURE (RE: STRUCTURAL)
0510.07	STEEL BEAM (RE: STRUCTURAL)
0550.19	6" PIPE BOLLARD. FILL WITH CONCRETE
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.31	PREFABRICATED WOOD TRUSS (RE: STRUCTURAL)
0720.18	5 1/2" BATT INSULATION
0720.19	BATT INSULATION (R-38 @ ATTIC/CEILING)
0740.12	PREFINISHED METAL STANDING SEAM ROOFING
0740.19	FIBER REINFORCED CEMENTITIOUS VENTED SOFFIT PANEL AND TRIMS
0760.03	GALVANIZED METAL GUTTER
0810.04	HOLLOW METAL DOOR AND FRAME
0810.08	SOLID CORE WOOD DOOR
0840.02	ALUMINUM STOREFRONT DOOR
0920.10	7/8" FURRING CHANNEL AT 16" O.C.
0920.17	5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.37	GYPSUM BOARD CONTROL JOINT
0920.45	5/8" GYPSUM BOARD MOISTURE RESISTANT (TYPE X)
0950.01	SUSPENDED ACOUSTICAL LAY-IN TILE CEILING (2' X 2')
0950.06	SUSPENDED LINEAR WOOD CEILING SYSTEM
1120.06	CLOTHES EXTRACTOR
2240.19	WATER FOUNTAIN
2330.20	EXHAUST FAN WITH GALVANIZED STEEL CABLE SUPPORT SYSTEM (RE: MECHANICAL)
2650.04	PENDANT LIGHT FIXTURE
2650.21	CEILING FAN

NOTE:

DASHED LINE INDICATES 1/2" TYPE X GYPSUM WITH LEVEL 2 FINISH CONTINUOUS AT THERMAL ENVELOPE, WHERE CEILING IS NOT ATTATCHED DIRECTLY TO B.O. STRUCTURE

ROUTE ALL HVAC DUCTWORK BLEOW THE DASHED LINE / THERMAL ENVELOPE

REGISTERED ARCHITECT RAYMOND HOLLIDAY SIXTE 18834 STATE OF TEXAS
11/16/2018

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
COLLEGE STATION, TEXAS 77840
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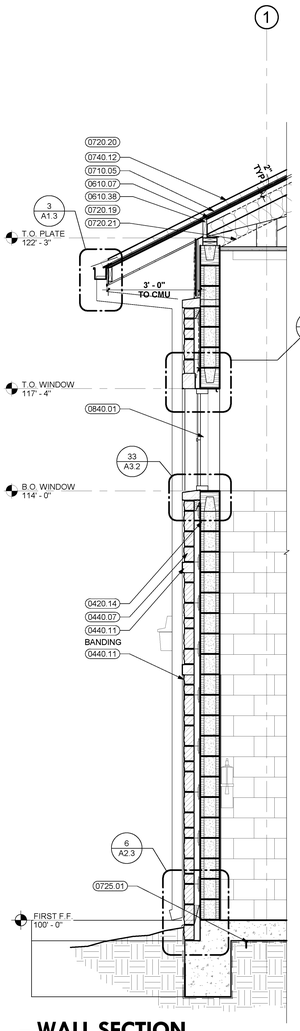
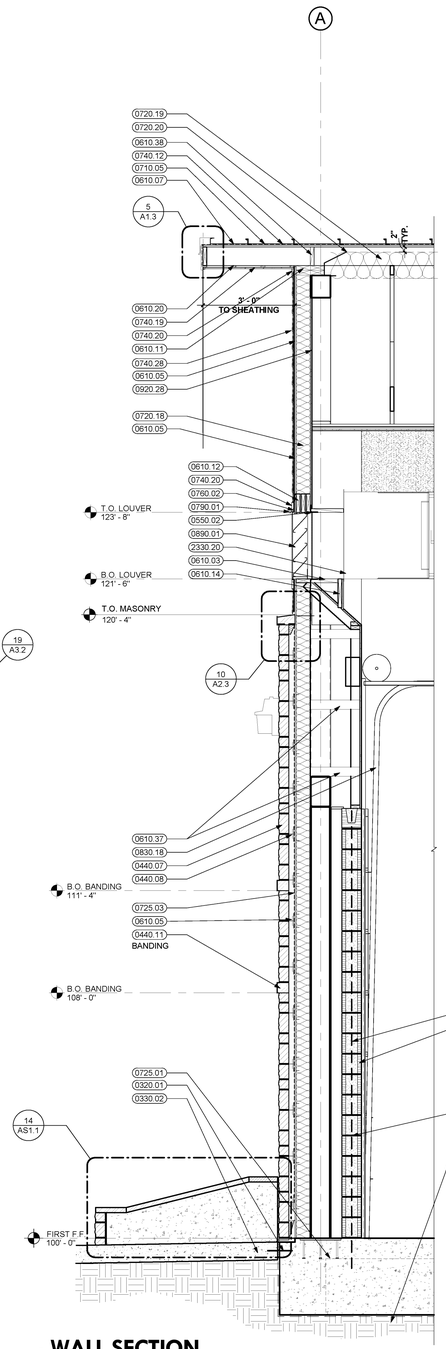
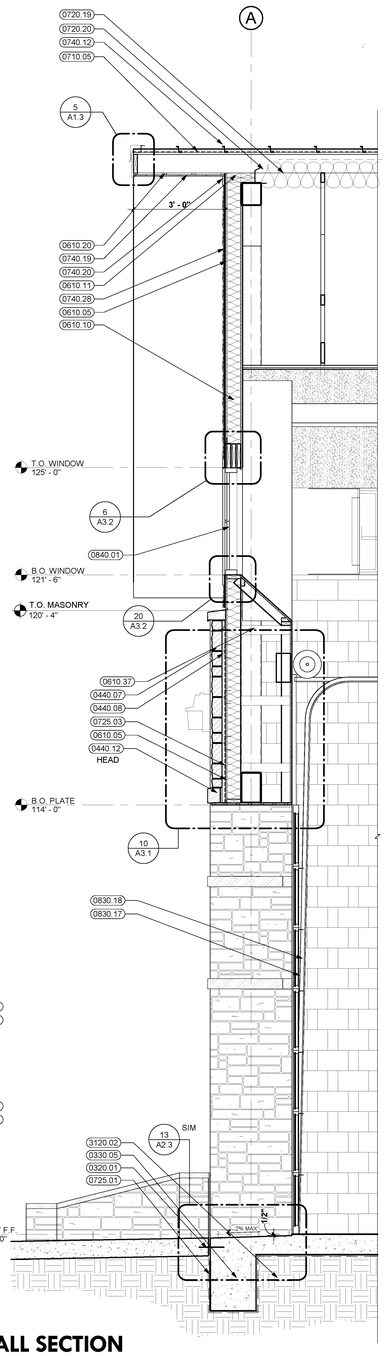
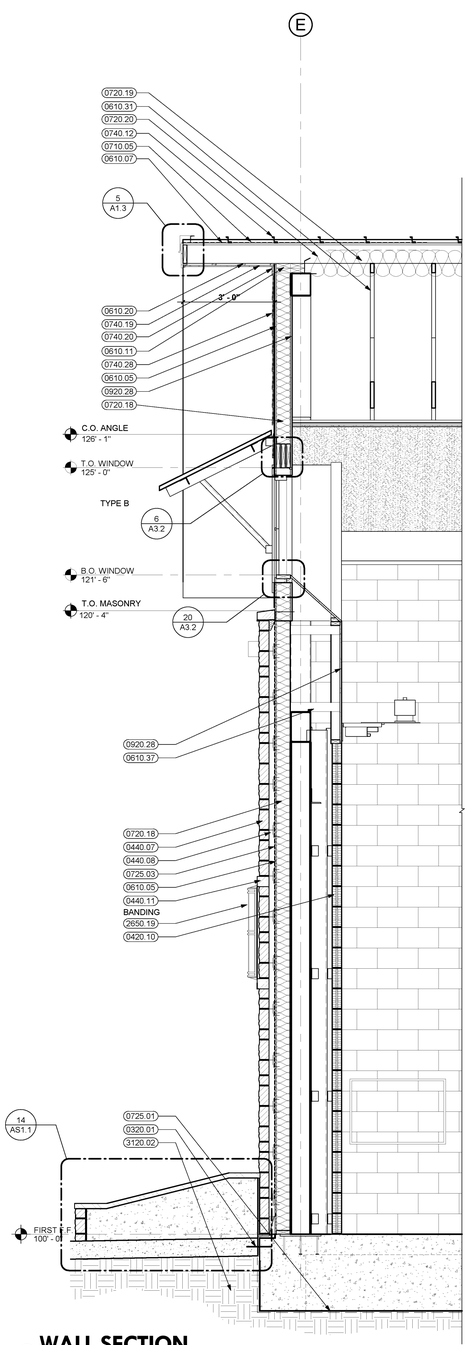
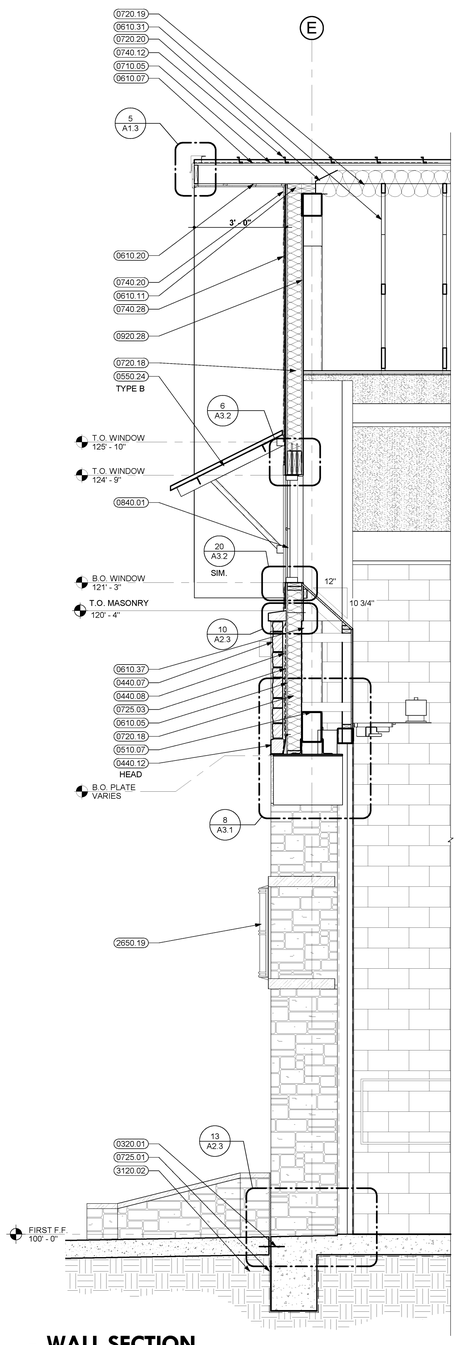
BUILDING SECTIONS











KEYNOTES

0320.01	DOWEL INTO CONCRETE SLAB
0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0330.05	CONCRETE GRADE BEAM (RE: STRUCTURAL)
0330.23	ANCHOR BOLT
0360.03	FILL WITH GROUT
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.10	4" CONCRETE MASONRY UNITS
0420.14	8" CONCRETE MASONRY UNITS
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0440.11	4" CUT STONE
0440.12	6" CUT STONE
0470.05	CAST STONE SILL WITH DRIP
0510.03	STEEL TUBE COLUMN (RE: STRUCTURAL)
0510.06	STEEL LINTEL / PLATE (RE: STRUCTURAL)
0510.07	STEEL BEAM (RE: STRUCTURAL)
0550.02	3" X 3" X 1/4" STEEL ANGLE
0550.24	GALVANIZED METAL CANOPY
0610.01	SHIM AS REQUIRED
0610.03	2X WOOD BLOCKING
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.07	3/4" EXTERIOR GRADE PLYWOOD
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.11	2 X 6 WOOD FRAMING
0610.12	2 X 8 WOOD FRAMING
0610.14	2 X 12 WOOD FRAMING
0610.17	METAL HANGER
0610.20	1x WOOD FURRING STRIP
0610.25	GLUE-LAMINATED BEAM (RE: STRUCTURAL)
0610.31	PREFABRICATED WOOD TRUSS (RE: STRUCTURAL)
0610.32	2X WOOD FRAMING (RE: STRUCTURAL)
0610.37	2 X 4 WOOD FRAMING
0610.38	2X VENTILATED BLOCKING (RE: STRUCTURAL)
0710.01	BITUMINOUS DAMPPROOFING
0710.05	ROOFING UNDERLAYMENT
0720.18	5 1/2" BATT INSULATION
0720.19	BATT INSULATION (R-38 @ ATTIC/CEILING)
0720.20	INSULATION BAFFLE
0720.21	WIRE MESH NETTING
0725.01	UNDERSLAB VAPOR BARRIER
0725.02	SELF-ADHERING MODIFIED BITUMINOUS SHEET AIR BARRIER
0725.03	PLASTIC FILM AIR BARRIER
0725.06	SELF-ADHERING FLEXIBLE SURROUND FLASHING
0740.12	PREFINISHED METAL STANDING SEAM ROOFING
0740.19	FIBER REINFORCED CEMENTITIOUS VENTED SOFFIT PANEL AND TRIMS
0740.20	FIBER REINFORCED CEMENTITIOUS TRIM
0740.28	FIBER REINFORCED CEMENTITIOUS SIDING
0740.31	FIBER REINFORCED CEMENTITIOUS SOFFIT PANEL AND TRIMS
0760.01	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
0760.02	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.)
0760.31	SILL SEALER
0760.36	GALVANIZED METAL FLASHING
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0830.17	UPWARD-ACTING SECTIONAL DOOR
0830.18	UPWARD-ACTING SECTIONAL DOOR TRACK
0830.26	ELECTRIC OPERATED FOLDING DOORS
0840.01	ALUMINUM STOREFRONT
0890.01	PREFINISHED FIXED ALUMINUM LOUVER (WITH INSECT SCREEN)
0920.10	7/8" FURRING CHANNEL AT 16" O.C.
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.38	PRE-MANUFACTURED CONTINUOUS ALUMINUM F REVEAL MOLDING
0960.13	4" RESILIENT BASE
2330.20	EXHAUST FAN WITH GALVANIZED STEEL CABLE SUPPORT SYSTEM (RE: MECHANICAL)
2650.19	EXTERIOR LIGHT FIXTURE
3120.01	GRADE
3120.02	COMPACTED SELECT FILL

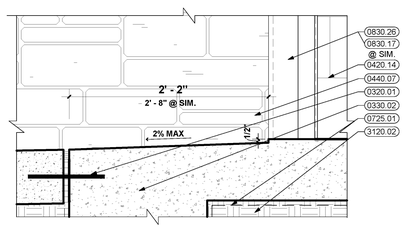
5 WALL SECTION
1/2" = 1'-0"

4 WALL SECTION
1/2" = 1'-0"

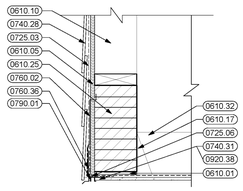
3 WALL SECTION
1/2" = 1'-0"

2 WALL SECTION
1/2" = 1'-0"

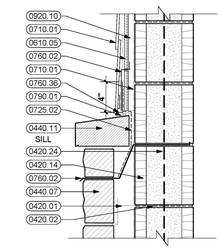
1 WALL SECTION
1/2" = 1'-0"



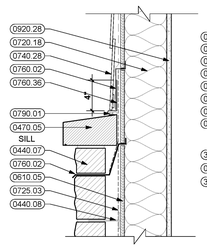
13 SECTION DETAIL
1 1/2" = 1'-0"



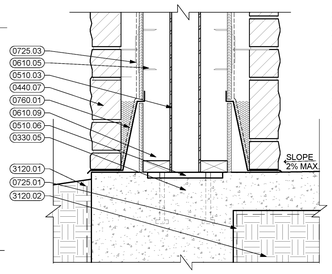
12 SECTION DETAIL
1 1/2" = 1'-0"



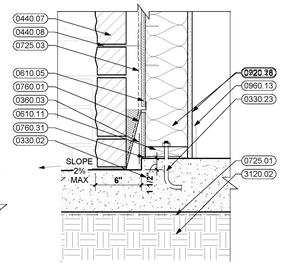
11 SECTION DETAIL
1 1/2" = 1'-0"



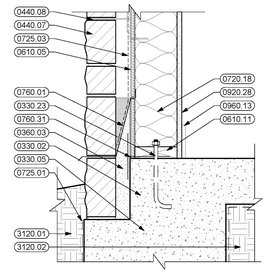
10 SECTION DETAIL
1 1/2" = 1'-0"



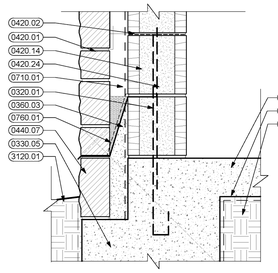
9 SECTION DETAIL
1 1/2" = 1'-0"



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



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



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

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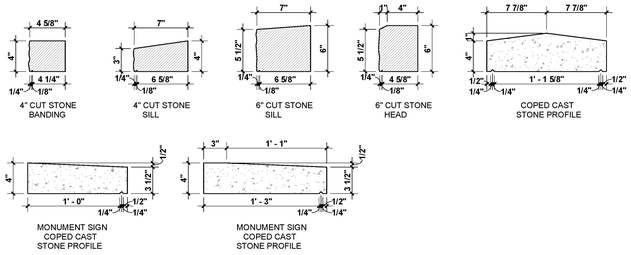
DATE 11/16/2018
DRAWN BY NB
CHECKED BY RH
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

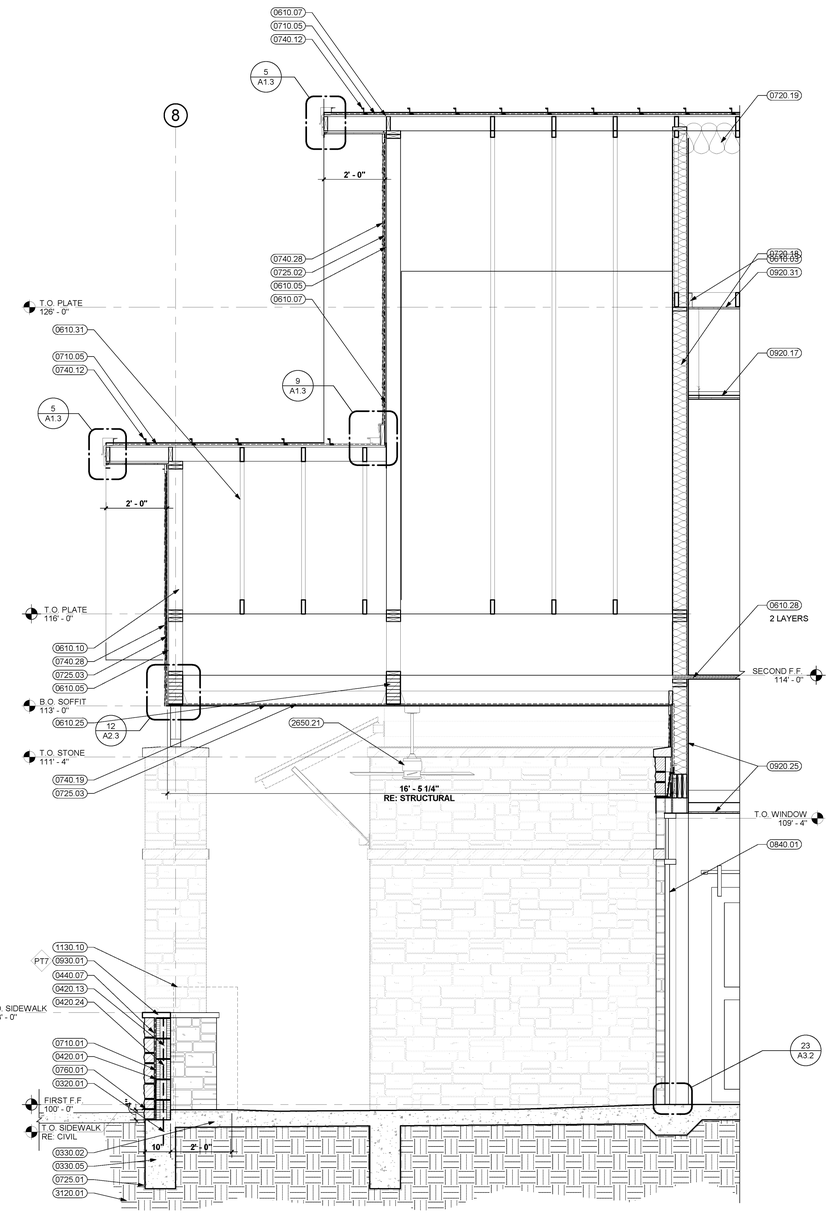
NO.	REVISION	DATE

A2.3

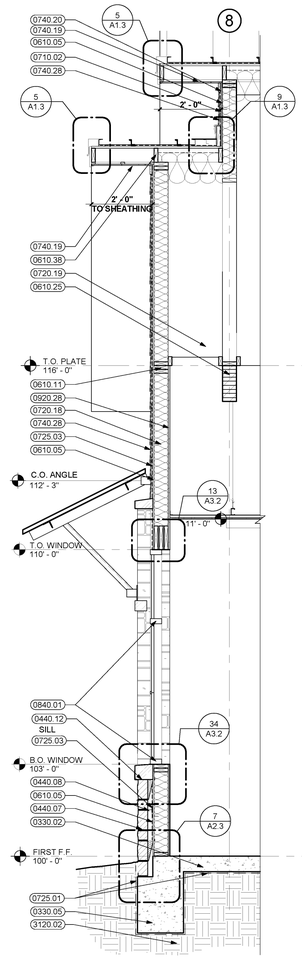
WALL SECTIONS



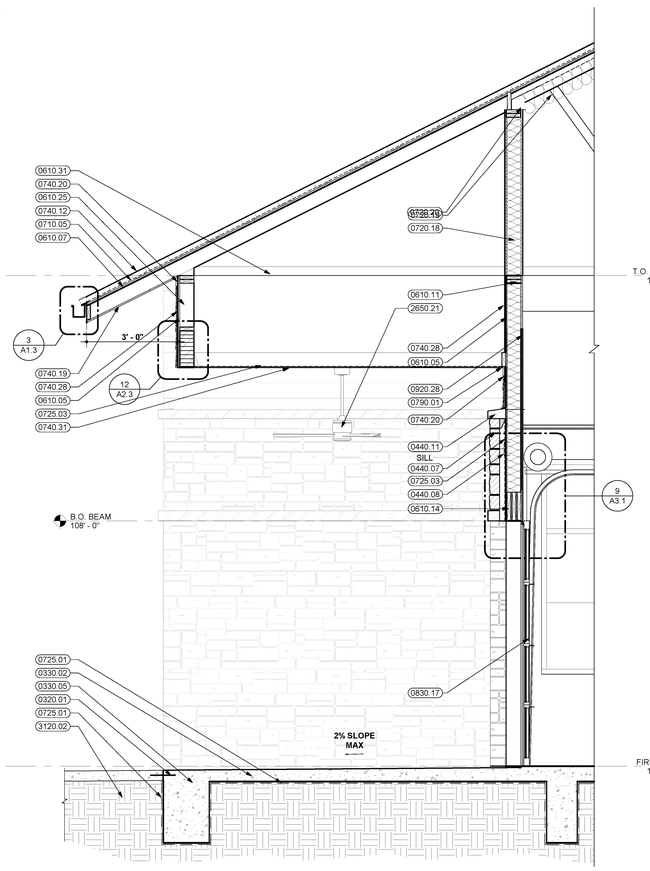
7 STONE PROFILES-CAST/CUT
1 1/2" = 1'-0"



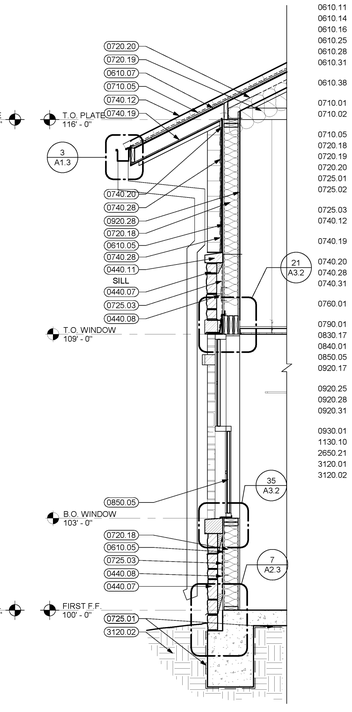
4 WALL SECTION
1/2" = 1'-0"



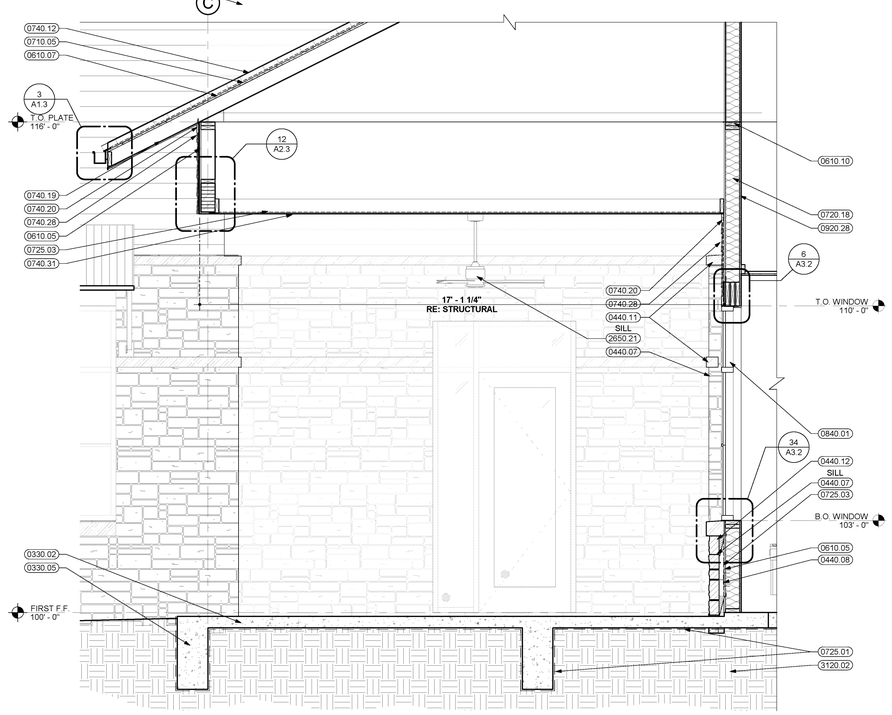
3 WALL SECTION
1/2" = 1'-0"



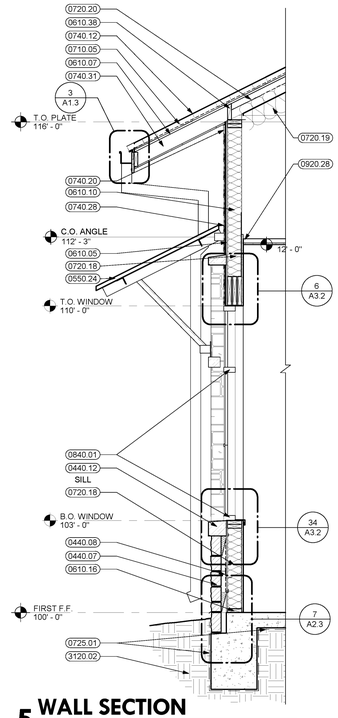
2 WALL SECTION
1/2" = 1'-0"



1 WALL SECTION
1/2" = 1'-0"



6 WALL SECTION
1/2" = 1'-0"



5 WALL SECTION
1/2" = 1'-0"

KEYNOTES

0320.01	DOWEL INTO CONCRETE SLAB
0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0330.05	CONCRETE GRADE BEAM (RE: STRUCTURAL)
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0420.13	6" CONCRETE MASONRY UNITS
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0440.11	4" CUT STONE
0440.12	6" CUT STONE
0550.24	GALVANIZED METAL CANOPY
0610.03	2X WOOD BLOCKING
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.07	3/4" EXTERIOR GRADE PLYWOOD
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.11	2 X 6 WOOD FRAMING
0610.14	2 X 12 WOOD FRAMING
0610.16	WOOD SILL PLATE
0610.25	GLUE-LAMINATED BEAM (RE: STRUCTURAL)
0610.28	3/4" PLYWOOD
0610.31	PREFABRICATED WOOD TRUSS (RE: STRUCTURAL)
0610.38	2X VENTILATED BLOCKING (RE: STRUCTURAL)
0710.01	BITUMINOUS DAMPPROOFING
0710.02	SELF ADHERING SHEET WATERPROOFING MEMBRANE AND DRAINAGE COURSE
0710.05	ROOFING UNDERLAYMENT
0720.18	5 1/2" BATT INSULATION
0720.19	BATT INSULATION (R-38 @ ATTIC/CEILING)
0720.20	INSULATION BAFFLE
0725.01	UNDERSLAB VAPOR BARRIER
0725.02	SELF-ADHERING MODIFIED BITUMINOUS SHEET AIR BARRIER
0725.03	PLASTIC FILM AIR BARRIER
0740.12	PREFINISHED METAL STANDING SEAM ROOFING
0740.19	FIBER REINFORCED CEMENTITIOUS VENTED SOFFIT PANEL AND TRIMS
0740.20	FIBER REINFORCED CEMENTITIOUS TRIM
0740.28	FIBER REINFORCED CEMENTITIOUS SIDING
0740.31	FIBER REINFORCED CEMENTITIOUS SOFFIT PANEL AND TRIMS
0760.01	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0830.17	UPWARD-ACTING SECTIONAL DOOR
0840.01	ALUMINUM STOREFRONT
0850.05	ALUMINUM SINGLE-HUNG WINDOW
0920.17	5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM
0920.25	ALUMINUM "Z" REGLET
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.31	1/2" GYPSUM BOARD (TYPE X) AT BOTTOM CHORD OF ROOF TRUSS, TYPICAL U.N.O.
0930.01	PORCELAIN TILE
1130.10	OUTDOOR GAS GRILLE (O.P.C.I.)
2650.21	CEILING FAN
3120.01	GRADE
3120.02	COMPACTED SELECT FILL

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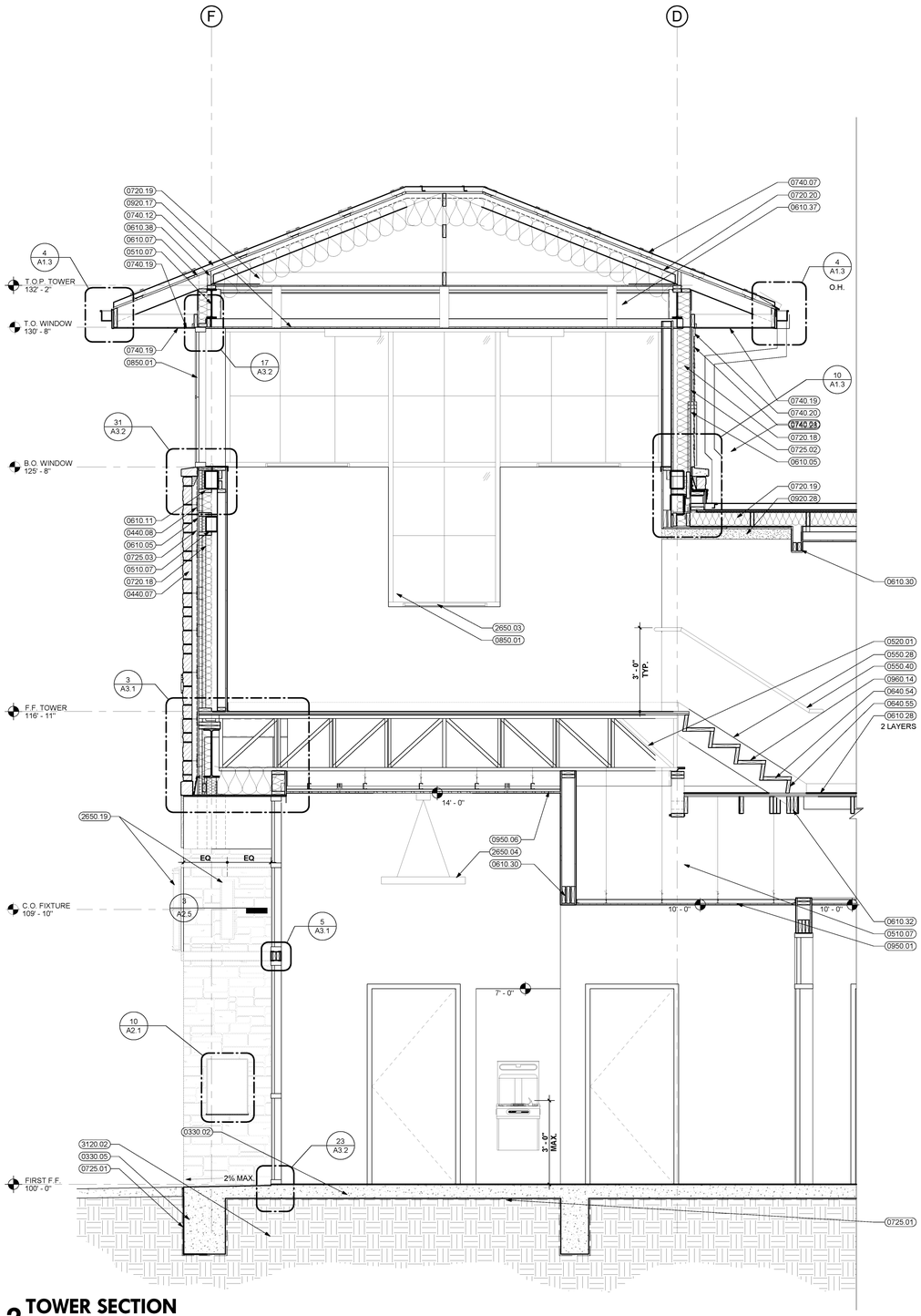
DATE 11/16/2018
DRAWN BY NB
CHECKED BY RH
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

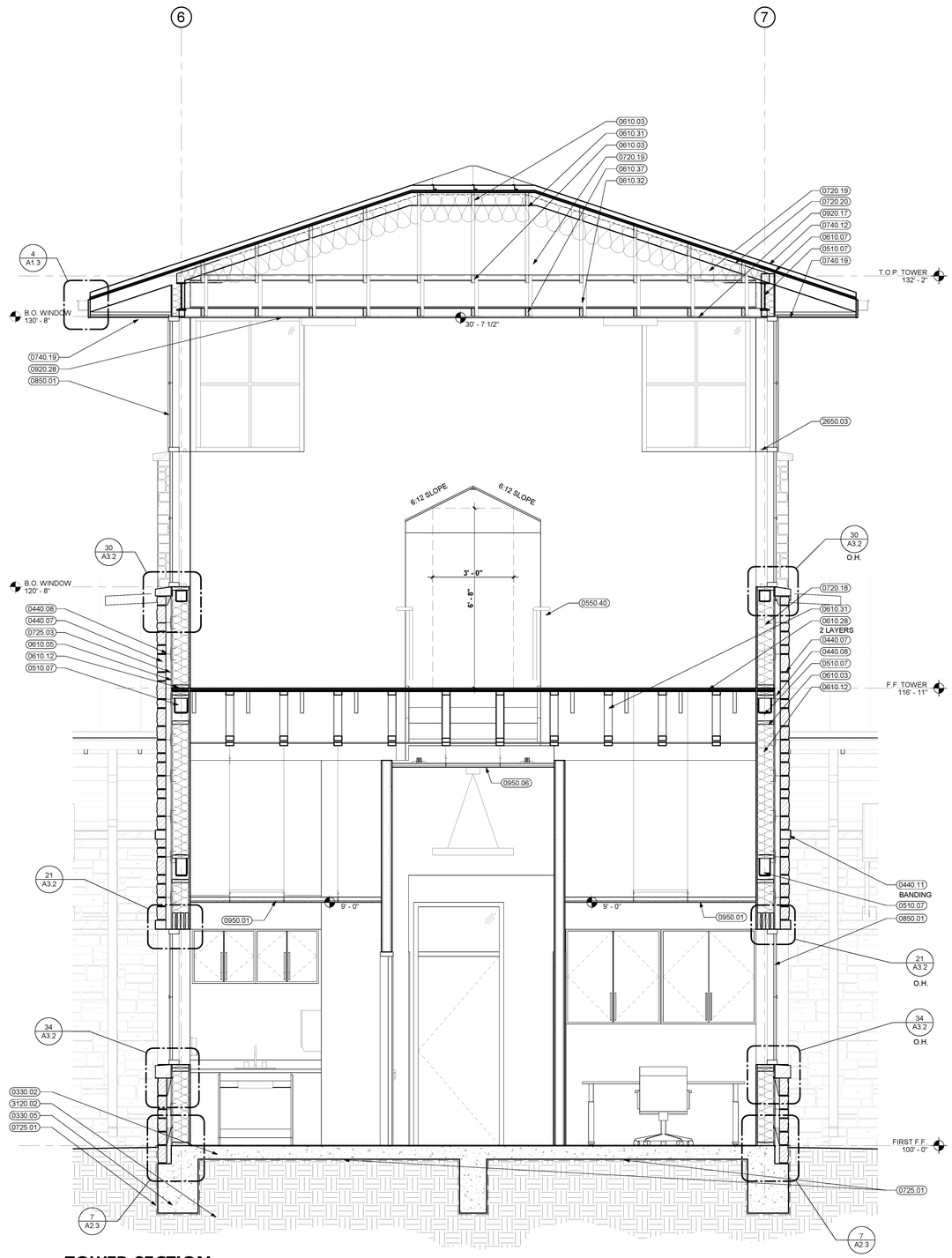
NO.	REVISION	DATE

A2.4

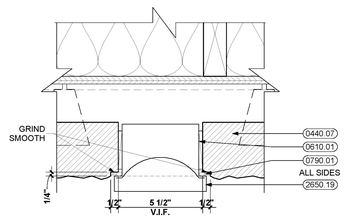
WALL SECTIONS



2 TOWER SECTION
1/2" = 1'-0"



1 TOWER SECTION
1/2" = 1'-0"



3 SECTION DETAIL
3" = 1'-0"

KEYNOTES

0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0330.05	CONCRETE GRADE BEAM (RE: STRUCTURAL)
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W
0440.11	4" CUT STONE
0510.07	STEEL BEAM (RE: STRUCTURAL)
0520.01	STEEL JOIST (RE: STRUCTURAL)
0550.28	STEEL CHANNEL STRINGER
0550.40	1 1/4" DIAMETER STANDARD STEEL PIPE HANDRAIL WITH 3/8" PLATE STEEL BRACKETS AT 5'-0" O.C. MAX.
0610.01	SHIM AS REQUIRED
0610.03	2X WOOD BLOCKING
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.07	3/4" EXTERIOR GRADE PLYWOOD
0610.11	2 X 6 WOOD FRAMING
0610.12	2 X 8 WOOD FRAMING
0610.28	3/4" PLYWOOD
0610.30	2X WOOD HEADER (RE: STRUCTURAL)
0610.31	PREFABRICATED WOOD TRUSS (RE: STRUCTURAL)
0610.32	2X WOOD FRAMING (RE: STRUCTURAL)
0610.37	2 X 4 WOOD FRAMING
0610.38	2X VENTILATED BLOCKING (RE: STRUCTURAL)
0640.54	WOOD STAIR TREAD
0640.55	WOOD STAIR RISER
0720.18	5 1/2" BATT INSULATION
0720.19	BATT INSULATION (R-38 @ ATTIC/CEILING)
0720.20	INSULATION BAFFLE
0725.01	UNDERSLAB VAPOR BARRIER
0725.02	SELF-ADHERING MODIFIED BITUMINOUS SHEET AIR BARRIER
0725.03	PLASTIC FILM AIR BARRIER
0740.01	PREFINISHED METAL ROOF PANEL
0740.07	CONCEALED STEEL CLIP BY STANDING SEAM METAL ROOF MANUFACTURER
0740.12	PREFINISHED METAL STANDING SEAM ROOFING
0740.19	FIBER REINFORCED CEMENTITIOUS VENTED SOFFIT PANEL AND TRIMS
0740.20	FIBER REINFORCED CEMENTITIOUS TRIM
0740.28	FIBER REINFORCED CEMENTITIOUS SIDING
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0850.01	FIXED ALUMINUM WINDOW
0920.17	5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM
0920.28	5/8" GYPSUM BOARD (TYPE X)
0950.01	SUSPENDED ACOUSTICAL LAY-IN TILE CEILING (2' X 2')
0950.06	SUSPENDED LINEAR WOOD CEILING SYSTEM
0960.14	RUBBER TREAD / RISER / FLOORING
2650.03	SURFACE-MOUNTED LIGHT FIXTURE
2650.04	PENDANT LIGHT FIXTURE
2650.19	EXTERIOR LIGHT FIXTURE
3120.02	COMPACTED SELECT FILL

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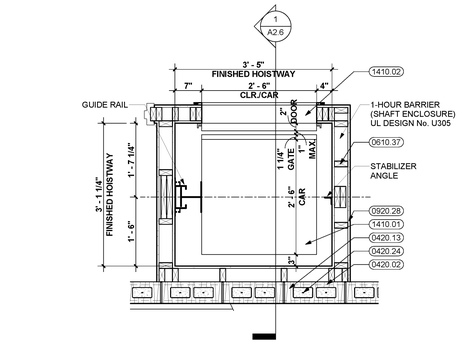
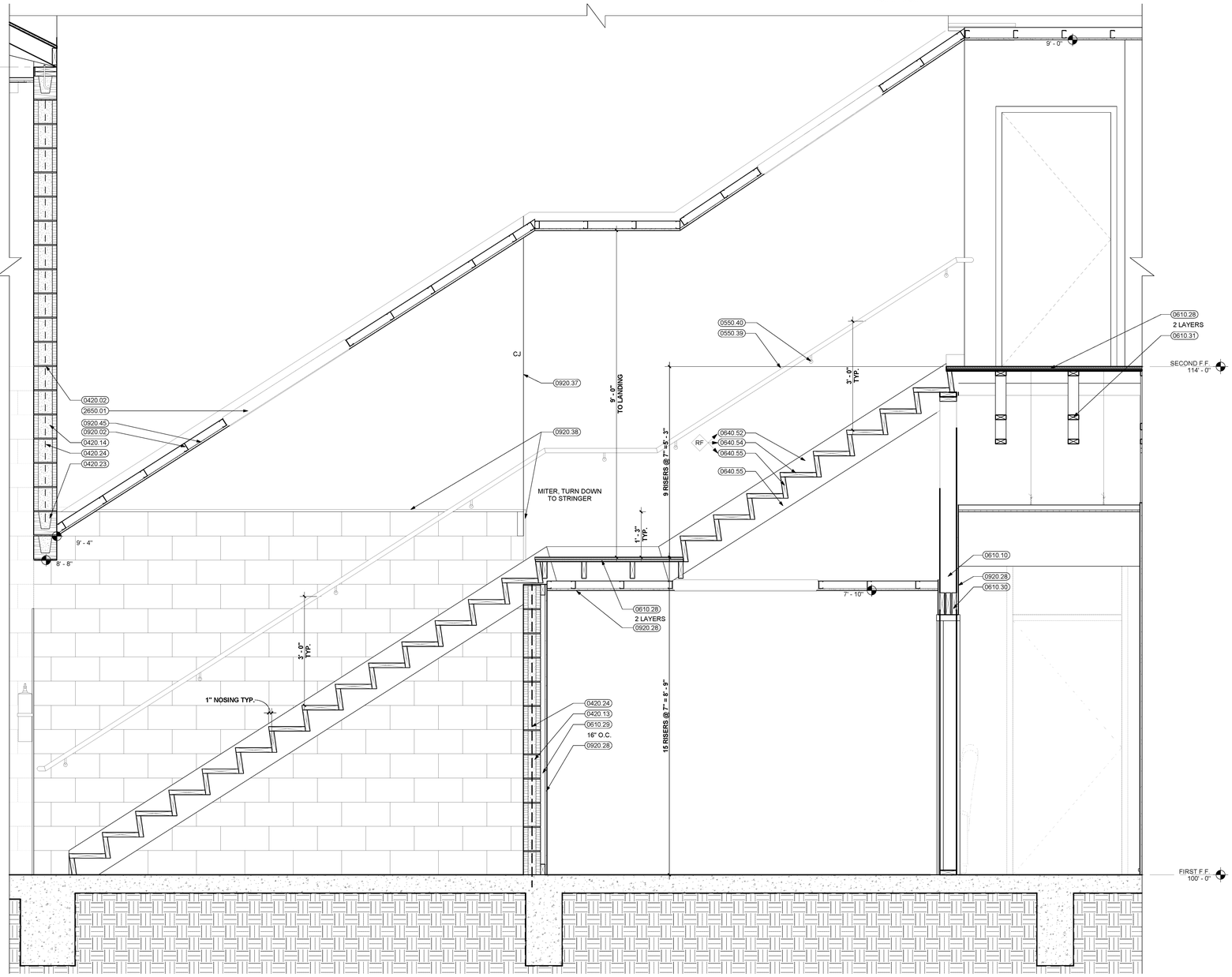
A2.5

TOWER SECTIONS

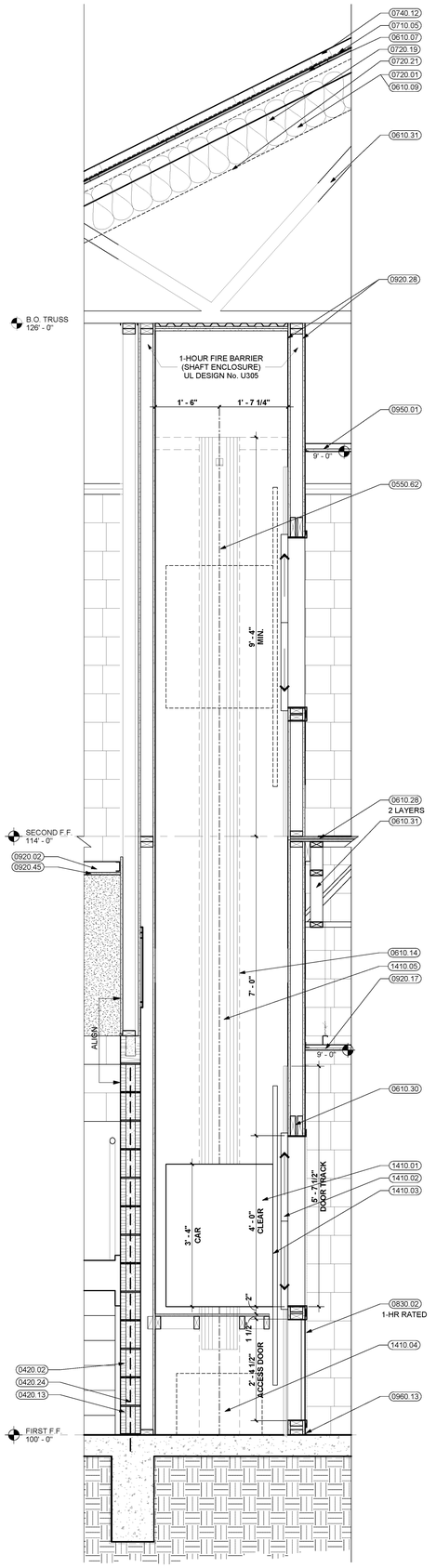


2 ENLARGED DUMBWAITER PLAN
3/4" = 1'-0"

PLAN NORTH / TRUE NORTH



3 STAIR SECTION
3/4" = 1'-0"



1 WALL SECTION
3/4" = 1'-0"

KEYNOTES

0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.13	6" CONCRETE MASONRY UNITS
0420.14	8" CONCRETE MASONRY UNITS
0420.23	CONCRETE MASONRY BOND BEAM
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0550.39	1 1/4" DIAMETER STANDARD STEEL PIPE HANDRAIL (3'-0" HIGH U.N.O.)
0550.40	1 1/4" DIAMETER STANDARD STEEL PIPE HANDRAIL WITH 3/8" PLATE STEEL BRACKETS AT 5'-0" O.C. MAX.
0550.62	2" X 2" X 1/4" STEEL ANGLE
0610.07	3/4" EXTERIOR GRADE PLYWOOD
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.14	2 X 12 WOOD FRAMING
0610.28	3/4" PLYWOOD
0610.29	2X WOOD FURRING STRIPS
0610.30	2X WOOD HEADER (RE: STRUCTURAL)
0610.31	PREFABRICATED WOOD TRUSS (RE: STRUCTURAL)
0610.37	2 X 4 WOOD FRAMING
0640.52	WOOD STAIR STRINGER
0640.54	WOOD STAIR TREAD
0640.55	WOOD STAIR RISER
0710.05	ROOFING UNDERLAYMENT
0720.01	3 1/2" BATT INSULATION
0720.19	BATT INSULATION (R-38 @ ATTIC/CEILING)
0720.21	WIRE MESH NETTING
0740.12	PREFINISHED METAL STANDING SEAM ROOFING
0830.02	WALL ACCESS DOOR
0920.02	2 1/2" METAL STUDS (20 GAUGE MINIMUM) AT 16" O.C.
0920.17	5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.37	GYPSUM BOARD CONTROL JOINT
0920.38	PRE-MANUFACTURED CONTINUOUS ALUMINUM F REVEAL MOLDING
0920.45	5/8" GYPSUM BOARD MOISTURE RESISTANT (TYPE X)
0950.01	SUSPENDED ACOUSTICAL LAY-IN TILE CEILING (2' X 2')
0960.13	4" RESILIENT BASE
1410.01	COMMERCIAL DUMBWAITER
1410.02	FIRE RATED BI-PARTING HOISTWAY DOOR WITH EMERGENCY RELEASE AND NON-PLUGABLE INTERLOCK
1410.03	BI-PARTING CAR GATE
1410.04	ELECTRIC HOISTING CABLE MOTOR
1410.05	GUIDE RAIL
2650.01	RECESSED LIGHT FIXTURE

REGISTERED ARCHITECT — RAYMOND HOLLIDAY — STATE OF TEXAS — 1883

11/16/2018

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
DALLEAS, TEXAS 75240
972.644.1797
WWW.BRWARCH.COM

BRW

DATE	11/16/2018
DRAWN BY	NB
CHECKED BY	RH
BRW PROJECT NUMBER	217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78633

GEORGETOWN TEXAS

NO.	REVISION	DATE

A2.6

VERTICAL CIRCULATION

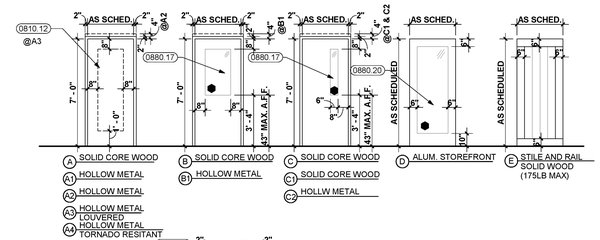
DOOR SCHEDULE

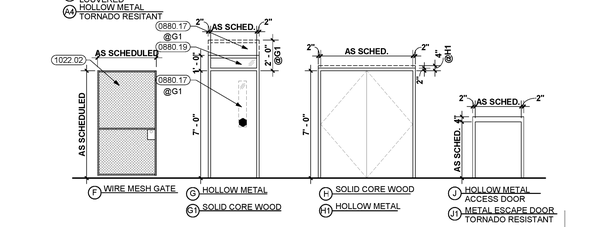
DOOR NUMBER	DESCRIPTION	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR MTL.	DOOR Door Finish	DOOR TYPE	FRAME MTL.	FRAME Finish	DETAILS SILL	DETAILS JAMB	DETAILS HEAD	HDWR. SET	FIRE RATING	REMARKS	LEVEL	TO ROOM
101	SINGLE	3' - 0"	7' - 10"	CLR. ANOD.	P6	D	AL	CLR. ANOD./P6	A3.2/29			715A			FIRST F.F.	ENTRY
102	SINGLE	3' - 0"	7' - 0"	WD/GL	P5	C	HM	P4		A3.2/1	A3.2/1	103S			FIRST F.F.	ESD OFFICE
103	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	C201		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	TREATMENT
104	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	341			FIRST F.F.	RESTROOM
105	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	203			FIRST F.F.	ESD STOR.
106	SINGLE	3' - 0"	7' - 0"	WD/GL	P5	C	HM	P4		A3.2/1	A3.2/16	C201		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	ENTRY
107	PAIR	6' - 0"	7' - 0"	WD	P5	H	HM	P4		A3.2/1	A3.2/1	212S			FIRST F.F.	MEETING ROOM
108	SINGLE	3' - 0"	7' - 0"	WD	P5	G1	HM	P4		A3.2/1	A3.2/16	C701		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	ENTRY
109A	SINGLE	3' - 0"	7' - 0"	HM	P4	A4	HM	P4		A3.2/9 SIM.	A3.2/2 SIM.	W101		TORNADO RESISTANT	FIRST F.F.	OFFICE
109B	SINGLE	2' - 4"	2' - 4"	HM	P4	J1	HM	P4		A3.2/9	A3.2/2	004		TORNADO RESISTANT	FIRST F.F.	OFFICE
110	SINGLE	3' - 0"	7' - 0"	WD/GL	P5	C	HM	P4		A3.2/1	A3.2/1	103			FIRST F.F.	WATCH OFFICE
111A	SINGLE	3' - 0"	7' - 0"	WD/GL	P5	B	HM	P4		A3.2/1	A3.2/1	C701		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	AIRLOCK
111B	SINGLE	3' - 0"	7' - 0"	HM/GL	P4	B1	HM	P4		A3.2/9	A3.2/2	C701		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	APPARATUS BAYS
112	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	203			FIRST F.F.	STORAGE
113	SINGLE	3' - 0"	7' - 0"	WD	P5	G1	HM	P4		A3.2/1	A3.2/16	503			FIRST F.F.	DAYROOM
114	SINGLE	3' - 0"	7' - 10"	CLR. ANOD.	P6	D	AL	CLR. ANOD./P6	A3.2/29		A3.2/21	C715A		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	KITCHEN/DINING
115	SINGLE	3' - 0"	7' - 0"	WD	P5	E			A3.1/7		A3.1/7	903		SLIDING BARN DOOR	FIRST F.F.	PANTRY
116	SINGLE	3' - 0"	7' - 0"	WD	P5	E			A3.1/7		A3.1/7	903		SLIDING BARN DOOR	FIRST F.F.	PANTRY
117	SINGLE	3' - 0"	7' - 0"	WD	P5	E			A3.1/7		A3.1/7	903		SLIDING BARN DOOR	FIRST F.F.	PANTRY
118	SINGLE	3' - 0"	7' - 10"	CLR. ANOD.	P6	D	AL	CLR. ANOD./P6	A3.2/29	A3.2/27	A3.2/21 SIM.	715A			FIRST F.F.	CORRIDOR
119	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	301G			FIRST F.F.	SLEEPING
120	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	301G			FIRST F.F.	SLEEPING
121	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	301G			FIRST F.F.	SLEEPING
122	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	301G			FIRST F.F.	SLEEPING
123	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	301G			FIRST F.F.	SLEEPING
124	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	301G			FIRST F.F.	SLEEPING
125	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	341			FIRST F.F.	BATHROOM
126	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	341			FIRST F.F.	BATHROOM
127	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	341			FIRST F.F.	BATHROOM
128A	SINGLE	3' - 0"	7' - 0"	WD/GL	P5	B	HM	P4		A3.2/1	A3.2/1	501			FIRST F.F.	WORKOUT
128B	OVERHEAD	8' - 0"	8' - 0"	AL/GL	P6	K				A1.2/13	A3.1/9	001		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	WORKOUT
129A	SINGLE	3' - 0"	7' - 0"	WD/GL	P5	B	HM	P4		A3.2/1	A3.2/1	C701		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	AIRLOCK
129B	SINGLE	3' - 0"	7' - 0"	HM/GL	P4	B1	HM	P4		A3.2/9	A3.2/2	C701		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	AIRLOCK
130	SINGLE	3' - 0"	7' - 0"	WD	P5	A	HM	P4		A3.2/1	A3.2/1	C201C		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	EMS STOR.
131A	SINGLE	3' - 0"	7' - 0"	WD/GL	P5	C1	HM	P4		A3.2/9	A3.2/2	503S			FIRST F.F.	UTILITY
131B	SINGLE	3' - 0"	3' - 8"	HM	P4	J	HM	P4		A3.2/15	A3.2/8	201W			FIRST F.F.	UTILITY
132A	SINGLE	3' - 0"	7' - 0"	HM	P6	G	HM	P6	A3.2/22	A3.2/10	A3.2/19 SIM.	C715		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	APPARATUS BAYS
132B	SINGLE	3' - 0"	7' - 0"	HM	P6	G	HM	P6	A3.2/22	A3.2/10	A3.2/19 SIM.	C715		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	APPARATUS BAYS
132C	OVERHEAD	14' - 0"	14' - 0"	PER SPEC.	P6	M				A1.2/9	A3.1/10	001			FIRST F.F.	APPARATUS BAYS
132D	OVERHEAD	14' - 0"	14' - 0"	PER SPEC.	P6	M				A1.2/9	A3.1/10	002			FIRST F.F.	APPARATUS BAYS
132E	OVERHEAD	14' - 0"	14' - 0"	PER SPEC.	P6	M				A1.2/9	A3.1/10	002			FIRST F.F.	APPARATUS BAYS
132F	FOUR FOLD	14' - 0"	16' - 0"	PER SPEC.	P6	L		P6		A1.2/7	A3.1/8	003			FIRST F.F.	APPARATUS BAYS
132G	FOUR FOLD	14' - 0"	16' - 0"	PER SPEC.	P6	L		P6		A1.2/7	A3.1/8	003			FIRST F.F.	
132H	FOUR FOLD	14' - 0"	16' - 0"	PER SPEC.	P6	L		P6		A1.2/7	A3.1/8	003			FIRST F.F.	APPARATUS BAYS
133	SINGLE	3' - 6"	7' - 0"	HM/GL	P4	C3	HM	P4		A3.2/15	A3.2/8	201W			FIRST F.F.	APPARATUS BAYS
133A	SINGLE	2' - 10"	7' - 0"	HM	P4	A3	HM	P4		A3.2/1	A3.2/1	203			FIRST F.F.	EMS DECON.
134	PAIR	6' - 0"	7' - 0"	HM/GL	P4	H1	HM	P4		A3.2/15	A3.2/8	212S			FIRST F.F.	SCBA/SHOP
136	SINGLE	3' - 0"	7' - 0"	HM	P6	A2	HM	P6	A3.2/22	A3.2/12	A3.2/5	C715		CARD READER W/ ELECTRIC STRIKE	FIRST F.F.	APPR. RISER
202A	PAIR	3' - 0"	7' - 0"	HM	P4	H1	HM	P4		A3.2/1	A3.2/1	210			SECOND F.F.	CONDITIONED STORAGE
202B	SINGLE	4' - 0"	8' - 0"		BLACK	F		BLACK				G203S			SECOND F.F.	CONDITIONED STORAGE
203	SINGLE	3' - 0"	7' - 0"	HM	P4	A2	HM	P4		A3.2/1	A3.2/1	201			SECOND F.F.	ELEC./COMM.
204	SINGLE	3' - 0"	7' - 0"	HM	P4	A1	HM	P4		A3.2/1	A3.2/1	501			SECOND F.F.	CORRIDOR
205	SINGLE	3' - 0"	7' - 0"	HM	P4	A2	HM	P4		A3.2/1	A3.2/1	201			SECOND F.F.	MECHANICAL PLATFORM

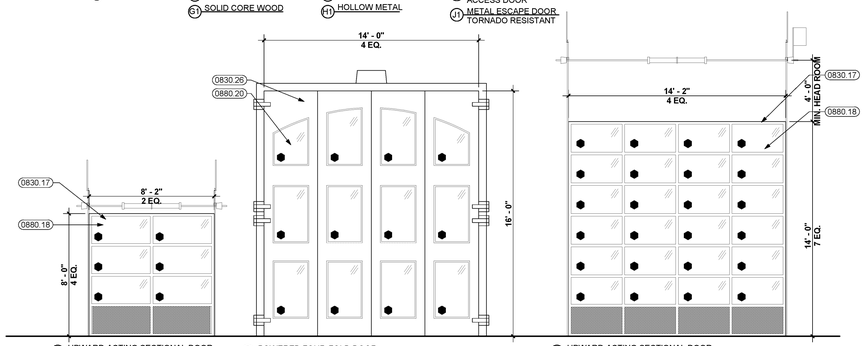
Total Doors: 53

KEYNOTES

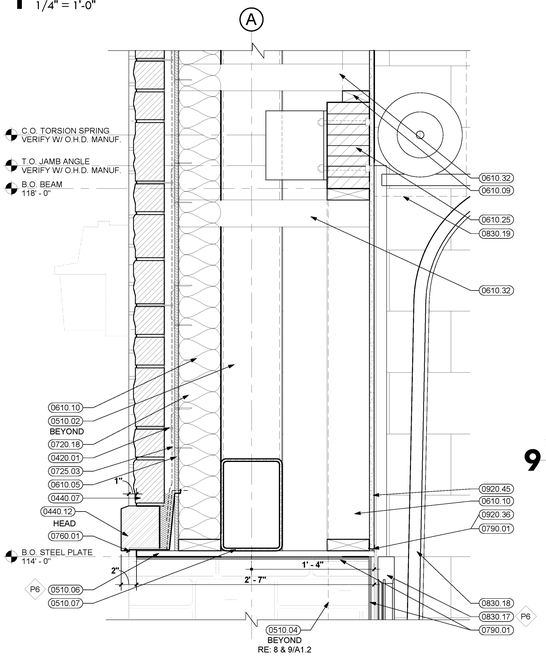
0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0440.12	6" CUT STONE
0510.01	STEEL STRUCTURE (RE: STRUCTURAL)
0510.02	STEEL COLUMN (RE: STRUCTURAL)
0510.03	STEEL TUBE COLUMN (RE: STRUCTURAL)
0510.04	STEEL ANGLE (RE: STRUCTURAL)
0510.06	STEEL LINTEL / PLATE (RE: STRUCTURAL)
0510.07	STEEL BEAM (RE: STRUCTURAL)
0610.01	SHIM AS REQUIRED
0610.02	1X WOOD BLOCKING
0610.03	2X WOOD BLOCKING
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.11	2 X 6 WOOD FRAMING
0610.13	2 X 10 WOOD FRAMING
0610.25	GLUE-LAMINATED BEAM (RE: STRUCTURAL)
0610.28	3/4" PLYWOOD
0610.29	2X WOOD FURRING STRIPS
0610.30	2X WOOD HEADER (RE: STRUCTURAL)
0610.31	PREFABRICATED WOOD TRUSS (RE: STRUCTURAL)
0610.32	2X WOOD FRAMING (RE: STRUCTURAL)
0610.37	2 X 4 WOOD FRAMING
0610.39	2 X 8 STUDS AT 16" O.C.
0720.01	3 1/2" BATT INSULATION
0720.03	5 1/2" NATURAL FIBER INSULATION
0720.18	5 1/2" BATT INSULATION
0720.19	BATT INSULATION (R-38 @ ATTIC/CEILING)
0725.03	PLASTIC FILM AIR BARRIER
0725.06	SELF-ADHERING FLEXIBLE SURROUND FLASHING
0740.28	FIBER REINFORCED CEMENTITIOUS SIDING
0760.01	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
0760.31	SILL SEALER
0760.34	STAINLESS STEEL WATERSTOP FLASHING CONTINUOUS UNDER FRAME
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0790.02	CAULKING
0790.07	SET IN BED OF SEALANT
0810.09	RAIL AND STILE PANELED WOOD DOOR
0810.12	METAL LOUVER
0810.13	SLIDING TRACK
0810.14	FLOOR GUIDE
0830.17	UPWARD-ACTING SECTIONAL DOOR
0830.18	UPWARD-ACTING SECTIONAL DOOR TRACK
0830.19	UPWARD-ACTING SECTIONAL DOOR MOTOR HOUSING
0830.26	ELECTRIC OPERATED FOLDING DOORS
0840.01	ALUMINUM STOREFRONT
0840.03	.060 ALUMINUM SILL WITH HEMMED AND CLOSED ENDS
0840.05	CONTINUOUS ALUMINUM SILL FLASHING
0840.15	.060 ALUMINUM BRAKE METAL; FINISH TO MATCH STOREFRONT
0850.05	ALUMINUM SINGLE-HUNG WINDOW
0850.07	APPLIED METAL MUNTIN
0870.03	BRUSH+WEATHER SEAL
0880.05	1/4" SPANDREL GLASS
0880.17	1/4" CLEAR GLASS, TEMPERED
0880.18	1/2" TINTED GLASS, INSULATED, LOW-E, TEMPERED
0880.19	1" TINTED GLASS, INSULATED, LOW-E
0880.20	1" TINTED GLASS, INSULATED, LOW-E, TEMPERED
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.35	CORNER BEAD, TYPICAL
0920.36	J-MOULD, TYPICAL
0920.38	PRE-MANUFACTURED CONTINUOUS ALUMINUM F REVEAL MOLDING
0920.45	5/8" GYPSUM BOARD MOISTURE RESISTANT (TYPE X)
0950.06	SUSPENDED LINEAR WOOD CEILING SYSTEM
0960.13	4" RESILIENT BASE
1022.02	WIRE MESH DOOR WITH SFIC CYLINDER LOCK



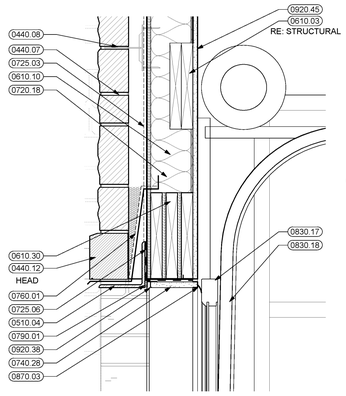




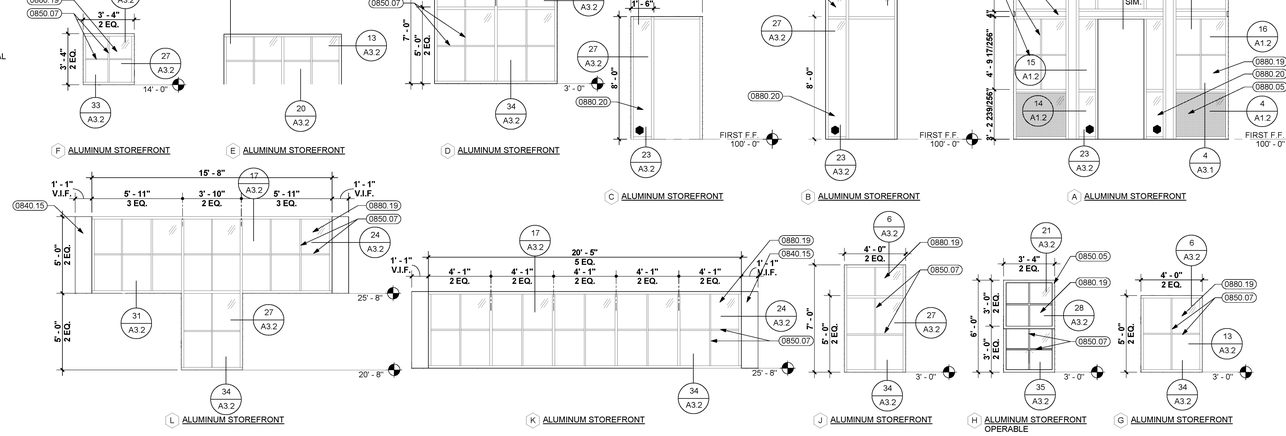
1 DOOR TYPES
1/4" = 1'-0"



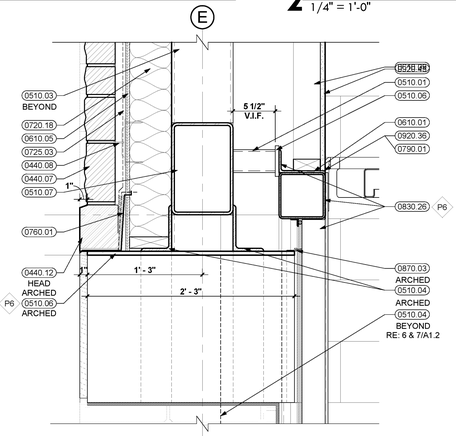
10 HEAD @ O.H. BAY DOOR
1 1/2" = 1'-0"



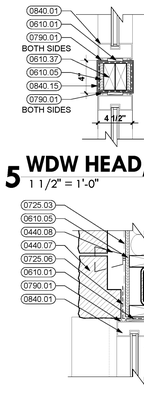
9 WALL SECTION
1 1/2" = 1'-0"



2 WINDOW TYPES
1/4" = 1'-0"



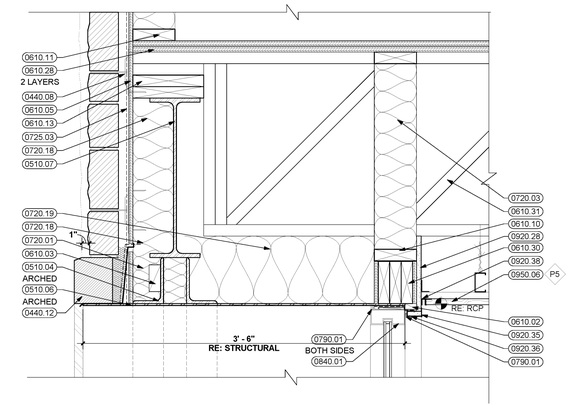
8 HEAD @ BIFOLD DOOR
1 1/2" = 1'-0"



5 WDW HEAD/SILL
1 1/2" = 1'-0"

6 WINDOW JAMB
1 1/2" = 1'-0"

4 WINDOW SILL
1 1/2" = 1'-0"



3 WINDOW HEAD
1 1/2" = 1'-0"

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
GEORGETOWN, TEXAS 78640
512.868.1797
WWW.BRWARCH.COM

DATE 11/16/2018
DRAWN BY HR, NB
CHECKED BY RH
BRW PROJECT NUMBER 21707900.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

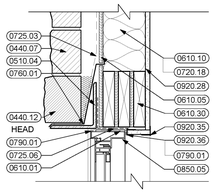
NO.	REVISION	DATE

A3.1

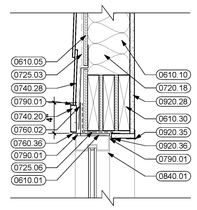
DOOR SCHEDULE, DOOR & WINDOW TYPES & DETAILS

KEYNOTES

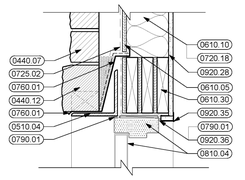
0320.01	DOWEL INTO CONCRETE SLAB
0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0330.22	CONCRETE EXPANSION JOINT - FILL W/ JOINT SEALER 1/4" BELOW SURFACE
0360.03	FILL WITH GROUT
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.13	6" CONCRETE MASONRY UNITS
0420.14	8" CONCRETE MASONRY UNITS
0420.23	CONCRETE MASONRY BOND BEAM
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W
0440.12	6" CUT STONE
0470.05	CAST STONE SILL WITH DRIP
0510.03	STEEL TUBE COLUMN (RE: STRUCTURAL)
0510.04	STEEL ANGLE (RE: STRUCTURAL)
0510.07	STEEL BEAM (RE: STRUCTURAL)
0610.01	SHIM AS REQUIRED
0610.04	2X PRESSURE TREATED WOOD BLOCKING
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.11	2 X 6 WOOD FRAMING
0610.15	WOOD TOP PLATE
0610.29	2X WOOD FURRING STRIPS
0610.30	2X WOOD HEADER (RE: STRUCTURAL)
0610.32	2X WOOD FRAMING (RE: STRUCTURAL)
0710.01	BITUMINOUS DAMPPROOFING
0720.01	3 1/2" BATT INSULATION
0720.18	5 1/2" BATT INSULATION
0725.02	SELF-ADHERING MODIFIED BITUMINOUS SHEET AIR BARRIER
0725.03	PLASTIC FILM AIR BARRIER
0725.06	SELF-ADHERING FLEXIBLE SURROUND FLASHING
0740.19	FIBER REINFORCED CEMENTITIOUS VENTED SOFFIT PANEL AND TRIMS
0740.20	FIBER REINFORCED CEMENTITIOUS TRIM
0740.21	FIBER REINFORCED CEMENTITIOUS FASCIA
0740.28	FIBER REINFORCED CEMENTITIOUS SIDING
0760.01	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
0760.02	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.)
0760.34	STAINLESS STEEL WATERSTOP FLASHING CONTINUOUS UNDER FRAME
0760.36	GALVANIZED METAL FLASHING
0770.24	VENTED SCREED (F-MOLDING)
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0790.02	CAULKING
0790.07	SET IN BED OF SEALANT
0810.02	HOLLOW METAL FRAME
0810.03	HOLLOW METAL STOP
0810.04	HOLLOW METAL DOOR AND FRAME
0810.05	JAMB ANCHOR (3 PER JAMB)
0810.06	HOLLOW METAL DOOR
0810.08	SOLID CORE WOOD DOOR
0840.01	ALUMINUM STOREFRONT
0840.03	.060 ALUMINUM SILL WITH HEMMED AND CLOSED ENDS
0840.05	CONTINUOUS ALUMINUM SILL FLASHING
0840.15	.060 ALUMINUM BRAKE METAL; FINISH TO MATCH STOREFRONT
0850.02	OPERABLE ALUMINUM WINDOW
0850.05	ALUMINUM SINGLE-HUNG WINDOW
0870.01	METAL THRESHOLD. SET IN SEALANT
0870.03	BRUSH/WEATHER SEAL
0880.19	1" TINTED GLASS, INSULATED, LOW-E
0920.17	5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.35	CORNER BEAD, TYPICAL
0920.36	J-MOULD, TYPICAL
2650.03	SURFACE-MOUNTED LIGHT FIXTURE



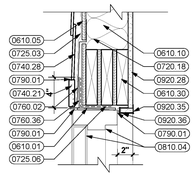
7 WINDOW HEAD
1 1/2" = 1'-0"



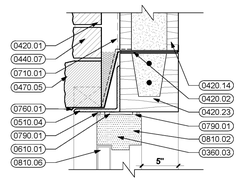
6 WINDOW HEAD
1 1/2" = 1'-0"



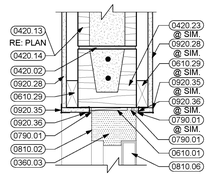
5 DOOR HEAD
1 1/2" = 1'-0"



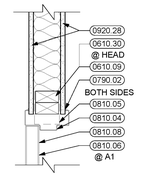
4 DOOR HEAD
1 1/2" = 1'-0"



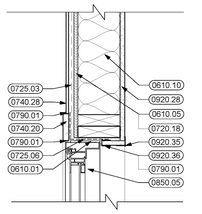
3 DOOR HEAD
1 1/2" = 1'-0"



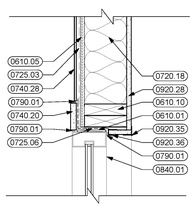
2 DOOR HEAD
1 1/2" = 1'-0"



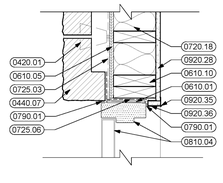
1 DOOR HEAD/JAMB
1 1/2" = 1'-0"



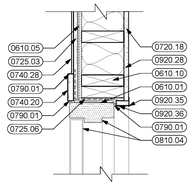
14 WINDOW JAMB
1 1/2" = 1'-0"



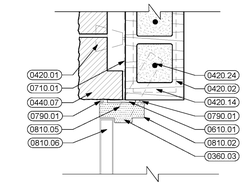
13 WINDOW JAMB
1 1/2" = 1'-0"



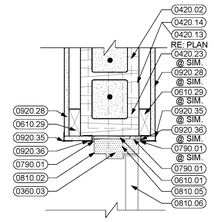
12 DOOR JAMB
1 1/2" = 1'-0"



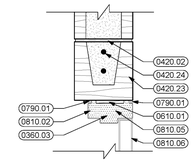
11 DOOR JAMB
1 1/2" = 1'-0"



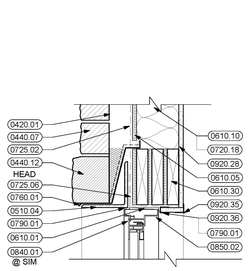
10 DOOR JAMB
1 1/2" = 1'-0"



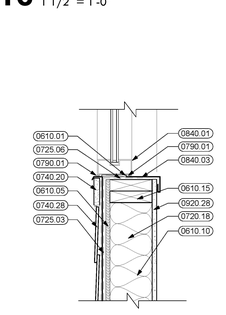
9 DOOR JAMB
1 1/2" = 1'-0"



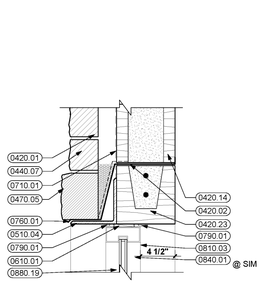
8 DOOR HEAD
1 1/2" = 1'-0"



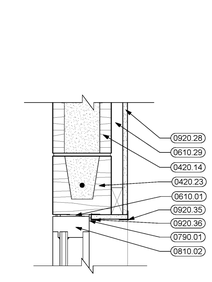
21 WINDOW HEAD
1 1/2" = 1'-0"



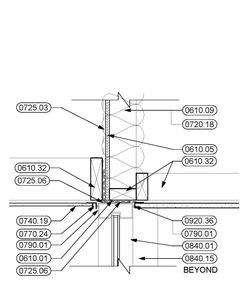
20 WINDOW SILL
1 1/2" = 1'-0"



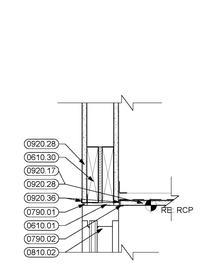
19 WINDOW HEAD
1 1/2" = 1'-0"



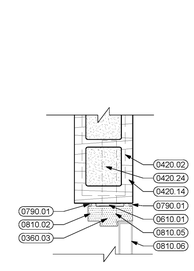
18 WINDOW HEAD
1 1/2" = 1'-0"



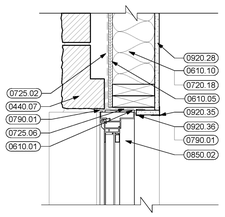
17 WINDOW HEAD
1 1/2" = 1'-0"



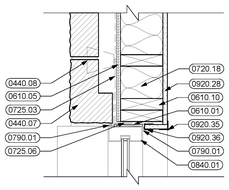
16 WINDOW HEAD
1 1/2" = 1'-0"



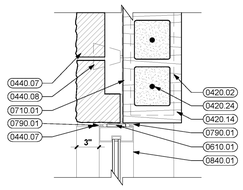
15 JAMB CMU
1 1/2" = 1'-0"



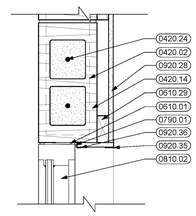
28 WINDOW JAMB
1 1/2" = 1'-0"



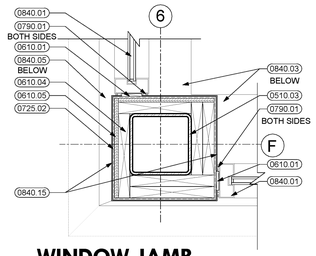
27 WINDOW JAMB
1 1/2" = 1'-0"



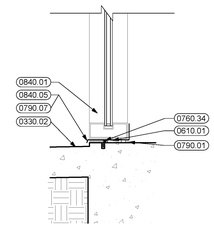
26 WINDOW JAMB
1 1/2" = 1'-0"



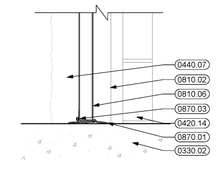
25 WINDOW JAMB
1 1/2" = 1'-0"



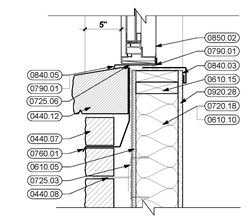
24 WINDOW JAMB
1 1/2" = 1'-0"



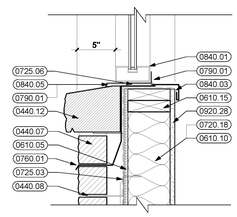
23 WINDOW SILL
1 1/2" = 1'-0"



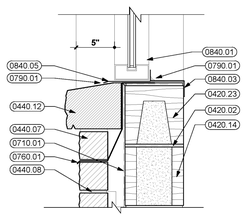
22 DOOR SILL
1 1/2" = 1'-0"



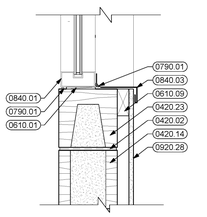
35 WINDOW SILL
1 1/2" = 1'-0"



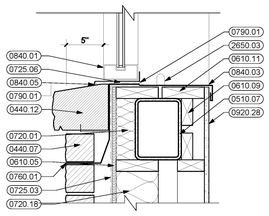
34 WINDOW SILL
1 1/2" = 1'-0"



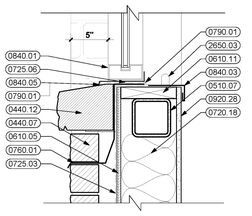
33 WINDOW SILL
1 1/2" = 1'-0"



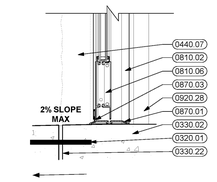
32 WINDOW SILL
1 1/2" = 1'-0"



31 WINDOW SILL
1 1/2" = 1'-0"



30 WINDOW SILL
1 1/2" = 1'-0"



29 DOOR SILL
1 1/2" = 1'-0"

BROWN REYNOLDS WATFORD
ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
DALLAS, TEXAS 75240
972.644.1797
WWW.BRWARCH.COM

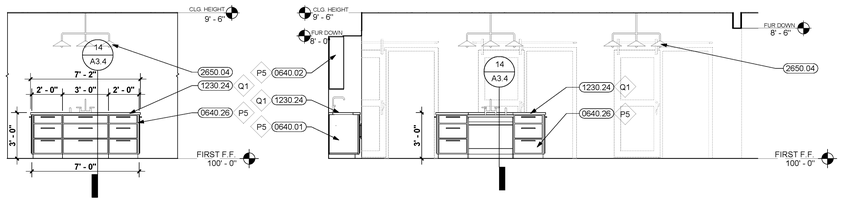
DATE	11/16/2018
DRAWN BY	GL, NB
CHECKED BY	RH
BRW PROJECT NUMBER	217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

NO.	REVISION	DATE

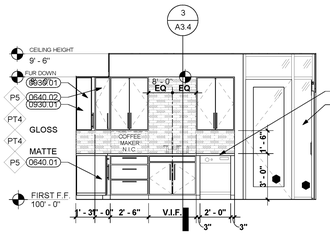
A3.2

DOOR AND WINDOW DETAILS

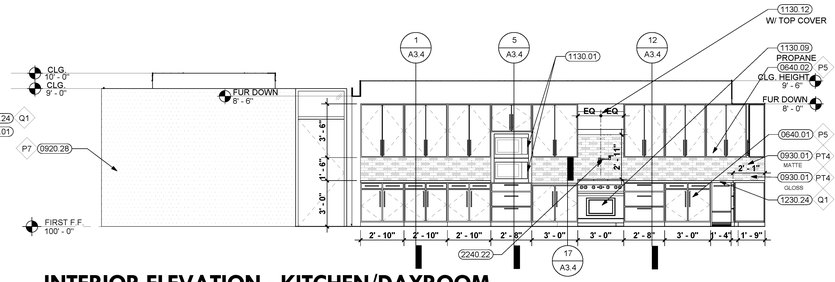


4 INTERIOR ELEVATION
1/4" = 1'-0"

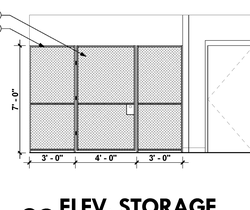
3 INTERIOR ELEVATION - KITCHEN
1/4" = 1'-0"



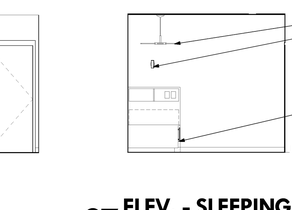
2 INT. ELEVATION - KITCHEN
1/4" = 1'-0"



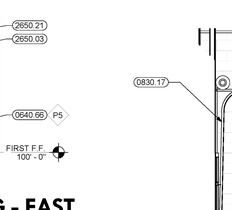
1 INTERIOR ELEVATION - KITCHEN/DAYROOM
1/4" = 1'-0"



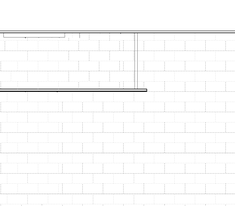
12 ELEV. - RESTROOM
1/4" = 1'-0"



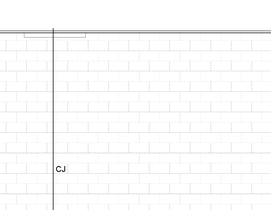
11 ELEV. - RESTROOM
1/4" = 1'-0"



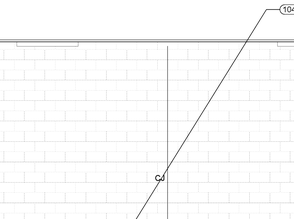
10 ELEV. - TREATMENT
1/4" = 1'-0"



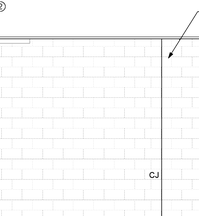
9 ELEV. - BATHROOM
1/4" = 1'-0"



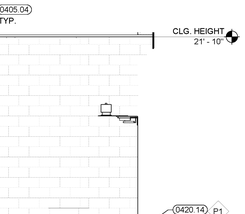
8 ELEV. - BATHROOM
1/4" = 1'-0"



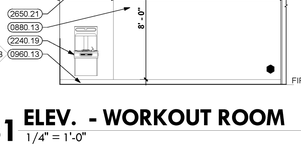
7 ELEV. - BATHROOM
1/4" = 1'-0"



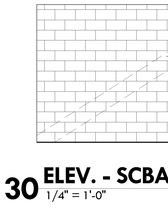
6 ELEV. - PANTRY
1/4" = 1'-0"



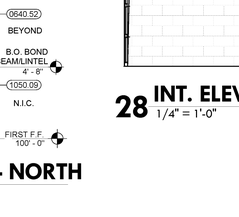
5 ELEV. - PANTRY
1/4" = 1'-0"



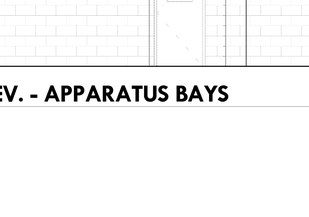
19 ELEV. - EMS DECON.
1/4" = 1'-0"



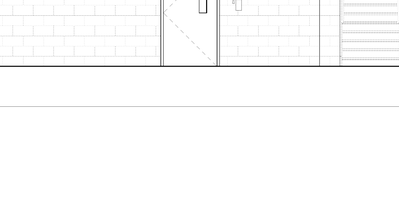
18 ELEV. - ESD STORAGE
1/4" = 1'-0"



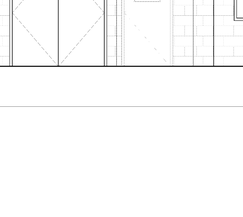
17 ELEV. - OFFICE
1/4" = 1'-0"



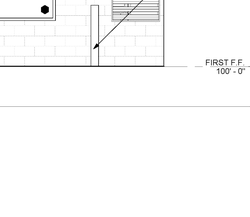
16 ELEV. - WATCH OFFICE
1/4" = 1'-0"



15 ELEV. - WATCH OFFICE
1/4" = 1'-0"



14 ELEV. - ESD OFFICE
1/4" = 1'-0"



13 ELEV. - ESD OFFICE
1/4" = 1'-0"

26 ELEV. - ISLAND
1/4" = 1'-0"

25 ELEV. - SLEEPING - NORTH
1/4" = 1'-0"

24 ELEV. - EMS STORAGE
1/4" = 1'-0"

23 ELEV. - EMS STORAGE
1/4" = 1'-0"

22 ELEV. - SLEEPING
1/4" = 1'-0"

21 ELEV. - UTILITY
1/4" = 1'-0"

20 ELEV. - UTILITY
1/4" = 1'-0"

29 ELEV. STORAGE
1/4" = 1'-0"

27 ELEV. - SLEEPING - EAST
1/4" = 1'-0"

28 INT. ELEV. - APPARATUS BAYS
1/4" = 1'-0"

31 ELEV. - WORKOUT ROOM
1/4" = 1'-0"

30 ELEV. - SCBA/SHOP - NORTH
1/4" = 1'-0"

KEYNOTES

0405.04	MASONRY CONTROL JOINT
0420.14	8" CONCRETE MASONRY UNITS
0550.19	6" PIPE BOLLARD: FILL WITH CONCRETE
0640.01	HARDWOOD VENEER BASE CABINETS WITH ADJUSTABLE SHELVES
0640.02	HARDWOOD VENEER WALL CABINETS WITH ADJUSTABLE SHELVES
0640.05	PLASTIC LAMINATE COUNTERTOP / 4" SPLASH AS SHOWN
0640.18	ADJUSTABLE SHELVING
0640.24	ADJUSTABLE METAL SHELF STANDARDS. PROVIDE BLOCKING IN WALL AS REQUIRED
0640.25	HARDWOOD VENEER PLYWOOD SHELVES (5) ON ADJUSTABLE METAL STANDARDS. PROVIDE BLOCKING IN WALL AS REQUIRED
0640.26	HARDWOOD DRAWER WITH 1/4" HARDWOOD BOTTOM
0640.32	SHELF BRACKET
0640.40	PLASTIC LAMINATE DESK
0640.52	WOOD STAIR STRINGER
0640.57	HARDWOOD VENEER SUPPORT BRACKET
0640.62	HARDWOOD VENEER LOCKER WITH DRAWERS AND ADJUSTABLE SHELVES
0640.64	4" GROMMET WITH AIR VENT GROMMET CAP
0640.66	HARDWOOD VENEER PLYWOOD BED STAND WITH STORAGE CABINETS
0640.69	HARDWOOD VENEER PLYWOOD FILLER
0810.02	HOLLOW METAL FRAME
0830.17	UPWARD-ACTING SECTIONAL DOOR
0840.01	ALUMINUM STOREFRONT
0840.03	.060 ALUMINUM SILL WITH HEMMED AND CLOSED ENDS
0840.08	ALUMINUM STOREFRONT OPERABLE WINDOW
0840.15	.060 ALUMINUM BRAKE METAL; FINISH TO MATCH STOREFRONT
0880.13	1/4" GLASS MIRROR
0890.01	PREFINISHED FIXED ALUMINUM LOUVER (WITH INSECT SCREEN)
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.45	5/8" GYPSUM BOARD MOISTURE RESISTANT (TYPE X)
0930.01	PORCELAIN TILE
0930.10	METAL TILE TRIM
0930.12	PREFABRICATED SHOWER NICHE
0960.13	4" RESILIENT BASE
1020.16	STAINLESS STEEL 1 1/2" DIAMETER GRAB BAR (36" LONG) PROVIDE BLOCKING IN WALL
1020.20	SOAP DISPENSER (SURFACE-MOUNTED)
1020.24	STAINLESS STEEL SURFACE MOUNTED TOILET PAPER DISPENSER
1020.30	STAINLESS STEEL SEMI-RECESSED PAPER TOWEL DISPENSER / TRASH RECEPTACLE
1020.32	STAINLESS STEEL FRAMED MIRROR
1020.35	ROBE / TOWEL HOOK
1020.37	WALL-MOUNTED FOLDING SHOWER SEAT PROVIDE BLOCKING IN WALL AS REQUIRED
1022.01	MODULAR WIRE MESH PARTITION SYSTEM
1022.02	WIRE MESH DOOR WITH SFIC CYLINDER LOCK
1040.02	FIRE EXTINGUISHER AND WALL BRACKET
1050.09	SCBA TANK STORAGE UNIT
1130.01	MICROWAVE
1130.02	REFRIGERATOR
1130.06	WASHING MACHINE
1130.07	CLOTHES DRYER
1130.09	GAS RANGE
1130.12	RANGE HOOD
1140.09	ICE MACHINE
1230.23	QUARTZ COUNTERTOP WITH SPLASH AS SHOWN
1230.24	QUARTZ COUNTERTOP
1250.04	BED (N.I.C.)
2240.01	WATER CLOSET: ORIENT FLUSH VALVE TOWARDS ACCESSIBLE SPACE AT ACCESSIBLE STALLS / RESTROOMS
2240.03	WALL-HUNG LAVATORY WITH CARRIER
2240.09	SHOWER HEAD
2240.11	MOP SINK
2240.12	UTILITY SINK
2240.19	WATER FOUNTAIN
2240.20	UNDERMOUNT SINK
2240.22	POT FILLER
2650.03	SURFACE-MOUNTED LIGHT FIXTURE
2650.04	PENDANT LIGHT FIXTURE
2650.21	CEILING FAN

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 350
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11/16/2018

DATE 11/16/2018
DRAWN BY HR, NB
CHECKED BY RH, MW
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

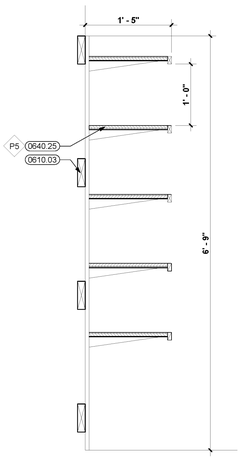
NO.	REVISION	DATE

A3.3

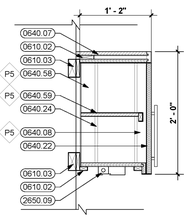
INTERIOR ELEVATIONS

KEYNOTES

0610.02	1X WOOD BLOCKING
0610.03	2X WOOD BLOCKING
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.32	2X WOOD FRAMING (RE: STRUCTURAL)
0610.37	2 X 4 WOOD FRAMING
0640.07	3/4" PLYWOOD
0640.08	3/4" HARDWOOD VENEER PLYWOOD
0640.09	1/2" HARDWOOD VENEER PLYWOOD
0640.17	DRAWER GLIDE
0640.18	ADJUSTABLE SHELVING
0640.21	3" WIRE GROMMET
0640.22	CABINET PULLS
0640.24	ADJUSTABLE METAL SHELF STANDARDS. PROVIDE BLOCKING IN WALL AS REQUIRED
0640.25	HARDWOOD VENEER PLYWOOD SHELVES (5) ON ADJUSTABLE METAL STANDARDS. PROVIDE BLOCKING IN WALL AS REQUIRED
0640.40	PLASTIC LAMINATE DESK
0640.47	TOE KICK
0640.48	HEAVY DUTY COAT ROD
0640.57	HARDWOOD VENEER SUPPORT BRACKET
0640.58	HARDWOOD VENEER CABINET BACK
0640.59	HARDWOOD VENEER PLYWOOD SHELF
0640.60	HARDWOOD VENEER REMOVABLE ACCESS PANEL
0640.61	HARDWOOD VENEER DRAWER
0640.63	1/2" PLYWOOD
0640.64	4" GROMMET WITH AIR VENT GROMMET CAP
0640.65	3/4" HARDWOOD VENEER COMBINATION-CORE PLYWOOD
0790.02	CAULKING
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.35	CORNER BEAD, TYPICAL
0960.13	4" RESILIENT BASE
1020.34	VINYL-COATED PIPING WRAP
1020.36	COAT HOOK
1130.01	MICROWAVE
1130.11	FOOD DISPOSAL
1230.23	QUARTZ COUNTERTOP WITH SPLASH AS SHOWN
1230.24	QUARTZ COUNTERTOP
2240.05	STAINLESS STEEL UNDERMOUNT SINK
2609.01	LIGHTING CONTROL SWITCH
2620.04	ELECTRICAL OUTLET
2650.01	RECESSED LIGHT FIXTURE
2650.09	UNDER CABINET LIGHT



8 SECTION DETAIL
1" = 1'-0"



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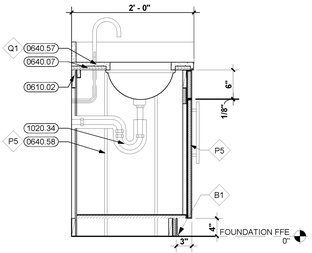

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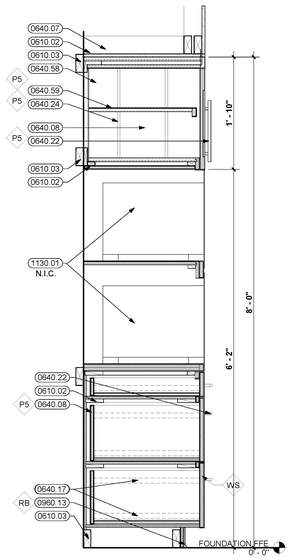

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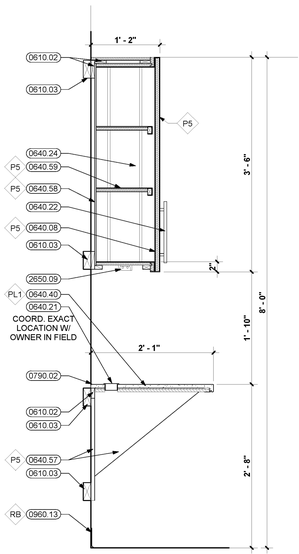

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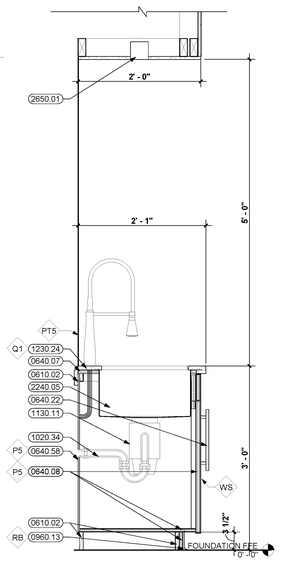

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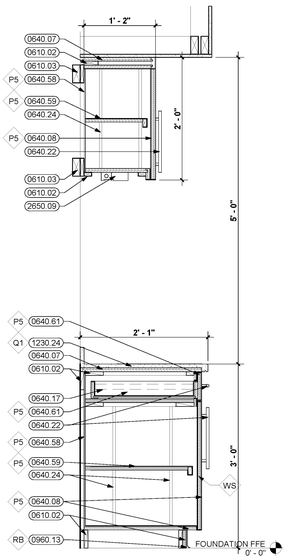

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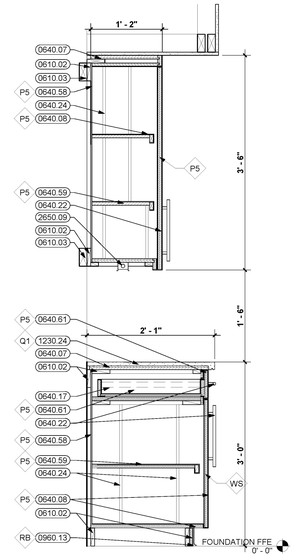

1 SECTION DETAIL
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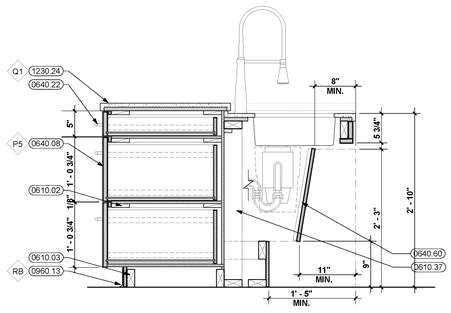
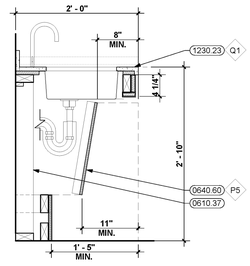
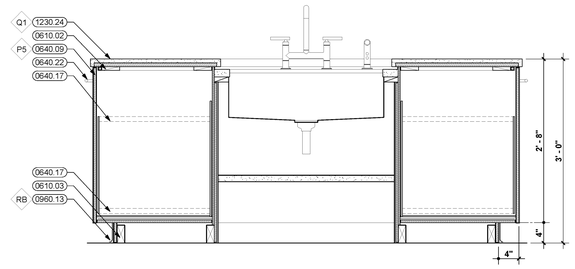


14 SECTION DETAIL
1" = 1'-0"



13 SECTION DETAIL
1" = 1'-0"



16 SECTION DETAIL
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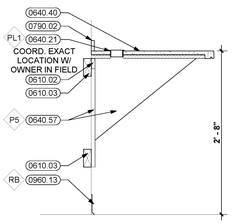
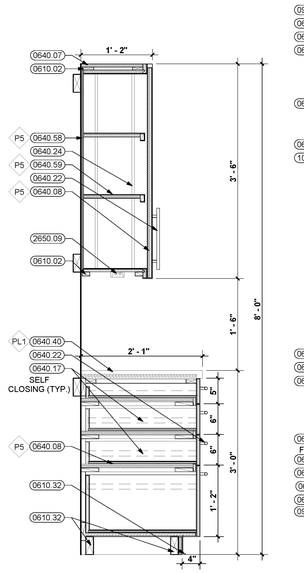


15 SECTION DETAIL
1" = 1'-0"



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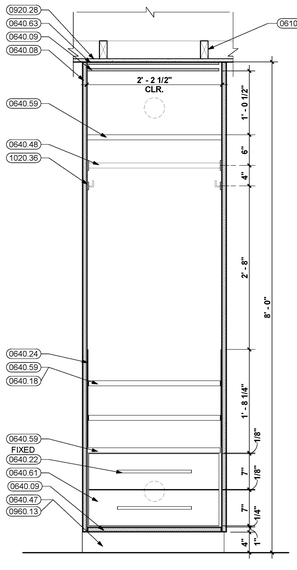
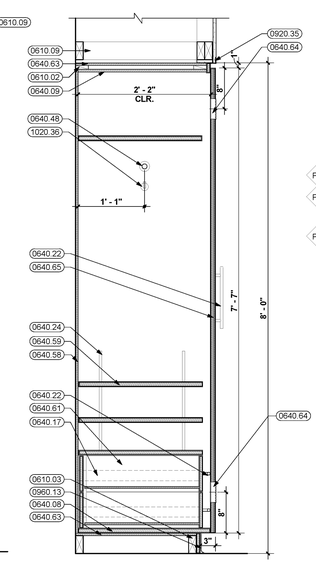


11 SECTION DETAIL
1" = 1'-0"



10 SECTION DETAIL
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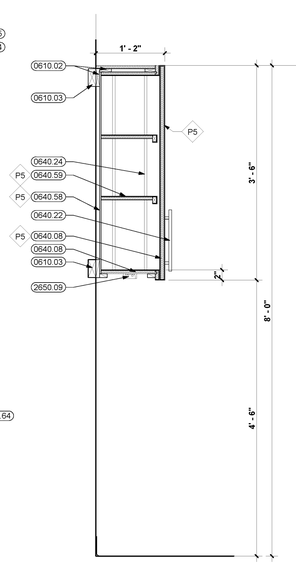

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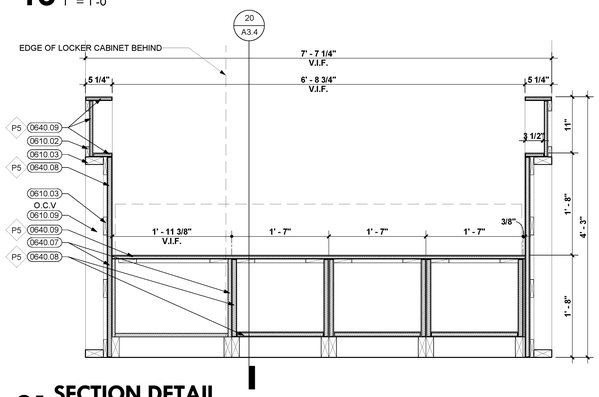
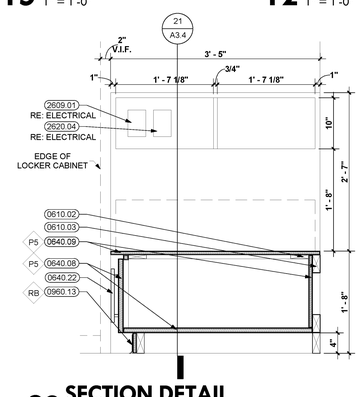
1" = 1'-0"



21 SECTION DETAIL
1" = 1'-0"



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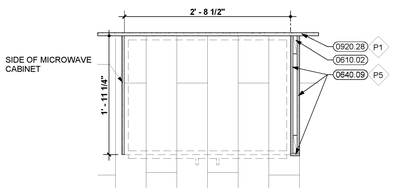
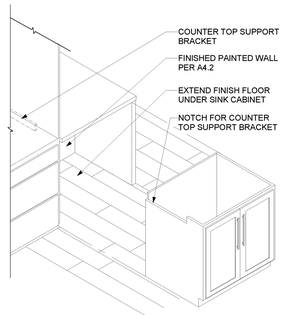
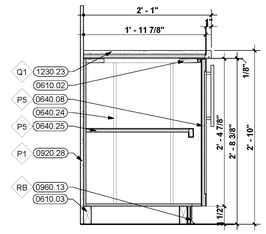
1" = 1'-0"



19 ADA MILLWORK DETAIL
1" = 1'-0"



18 ADA MILLWORK DETAIL
1/2" = 1'-0"



17 SECTION DETAIL
1" = 1'-0"

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
SUITE 330
COLLEGE STATION, TEXAS 77840
979.694.1797
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DATE 11/16/2018
DRAWN BY NB
CHECKED BY RH
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78633

NO.	REVISION	DATE

A3.4

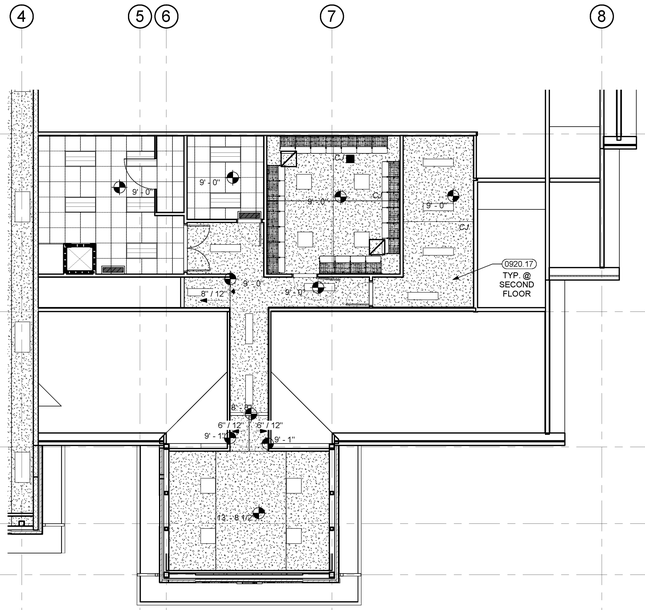
MILLWORK SECTIONS

KEYNOTES

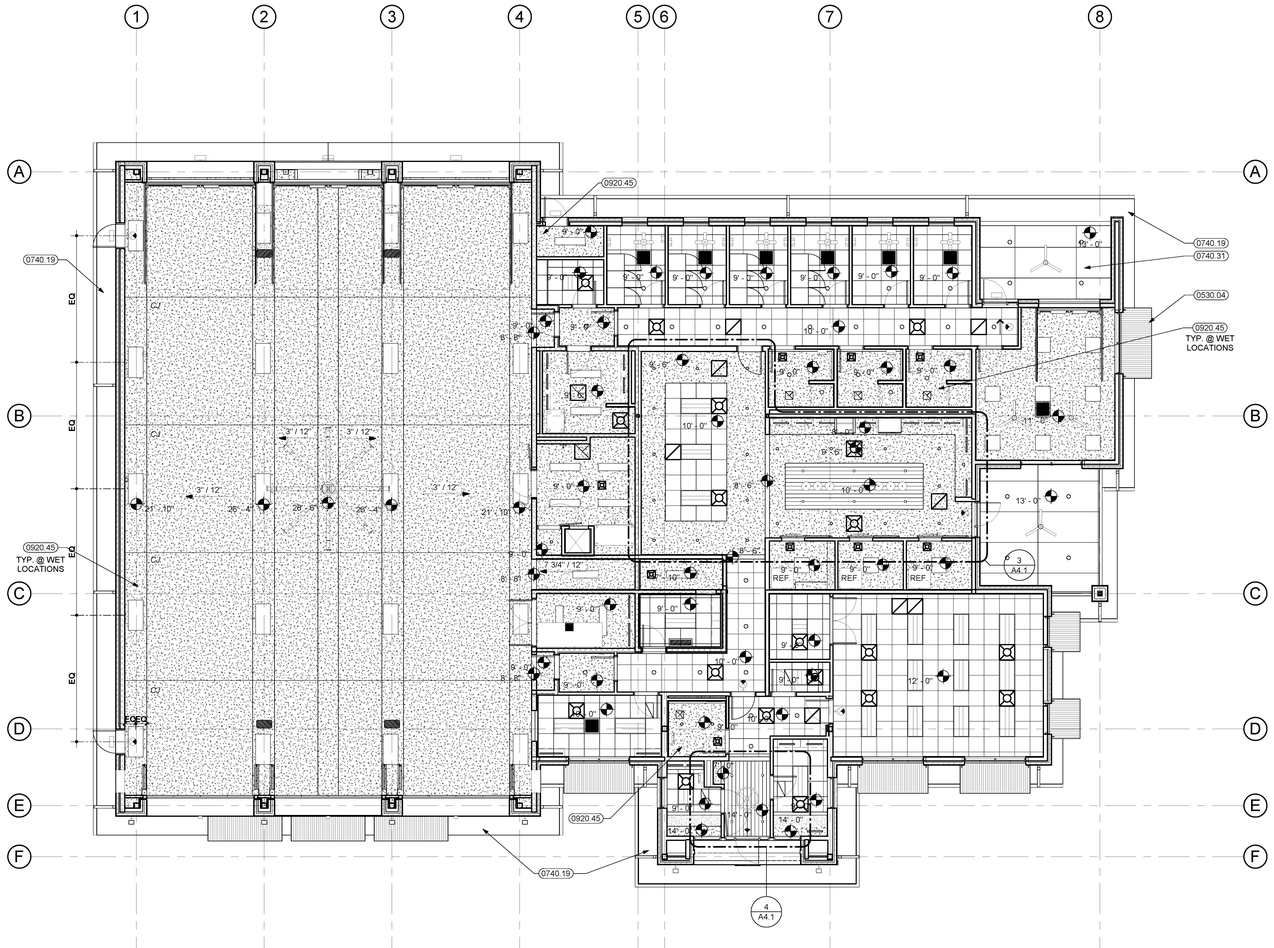
0360.03	FILL WITH GROUT
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.13	6" CONCRETE MASONRY UNITS
0420.14	8" CONCRETE MASONRY UNITS
0420.23	CONCRETE MASONRY BOND BEAM
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0530.04	METAL ROOF DECK (RE: STRUCTURAL)
0610.01	SHIM AS REQUIRED
0610.03	2X WOOD BLOCKING
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.29	2X WOOD FURRING STRIPS
0610.37	2 X 4 WOOD FRAMING
0740.19	FIBER REINFORCED CEMENTITIOUS VENTED SOFFIT PANEL AND TRIMS
0740.31	FIBER REINFORCED CEMENTITIOUS SOFFIT PANEL AND TRIMS
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0810.04	HOLLOW METAL DOOR AND FRAME
0920.17	5/8" GYPSUM BOARD ON METAL SUSPENSION SYSTEM
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.35	CORNER BEAD, TYPICAL
0920.36	J-MOULD, TYPICAL
0920.37	GYPSUM BOARD CONTROL JOINT
0920.38	PRE-MANUFACTURED CONTINUOUS ALUMINUM F REVEAL MOLDING
0920.45	5/8" GYPSUM BOARD MOISTURE RESISTANT (TYPE X)
0950.01	SUSPENDED ACOUSTICAL LAY-IN TILE CEILING (2' X 2')
0950.06	SUSPENDED LINEAR WOOD CEILING SYSTEM
0980.03	3 1/2" FIBERGLASS SOUND ATTENUATION INSULATION
2650.01	RECESSED LIGHT FIXTURE
2650.04	PENDANT LIGHT FIXTURE

LEGEND

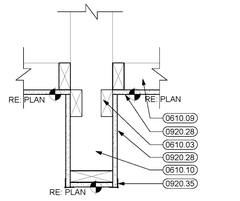
	SUPPLY AIR DIFFUSER
	RETURN AIR/EXHAUST GRILLE
	CEILING ACCESS PANEL
	EXHAUST FAN
	WALL MOUNTED MINI-SPLIT
	2 X 2 VRV CASSETTE
	GAS UNIT HEATER
	2 X 2 LAY-IN LED LIGHT FIXTURE
	2 X 2 LAY-IN LED LIGHT FIXTURE W/ EMERGENCY ILLUMINATION
	2 X 4 LAY-IN LED LIGHT FIXTURE
	2X4 LAY-IN LED LIGHT FIXTURE W/ EMERGENCY ILLUMINATION
	1 X 4 SURFACE MOUNTED LED LIGHT FIXTURE
	1 X 4 SURFACE MOUNTED LED LIGHT FIXTURE W/ EMERGENCY ILLUMINATION
	2 X 4 HIGH-BAY SURFACE MOUNTED LED LIGHT FIXTURE
	2 X 4 HIGH-BAY SURFACE MOUNTED LED LIGHT FIXTURE W/ EMERGENCY ILLUMINATION
	2 X 2 RECESSED LED LIGHT FIXTURE
	2 X 2 RECESSED LED LIGHT FIXTURE W/ EMERGENCY ILLUMINATION
	6" RECESSED LED CAN LIGHT
	6" RECESSED LED CAN LIGHT W/ EMERGENCY ILLUMINATION
	4" RECESSED LED CAN LIGHT
	4" RECESSED LED CAN LIGHT W/ EMERGENCY ILLUMINATION
	6" RECESSED LED CAN LIGHT (WET LOCATIONS)
	4" SQUARE RECESSED LED LIGHT
	4" SQUARE RECESSED LED LIGHT W/ EMERGENCY ILLUMINATION
	4' RECESSED LED LINEAR VANITY LIGHT W/ DRYWALL TRIM KIT
	8' RECESSED LED LINEAR VANITY LIGHT W/ DRYWALL TRIM KIT
	UNDERCABINET LED LIGHT
	SURFACE MOUNTED LED STRIP UPLIGHT (TOWER WINDOW SILLS)
	EXTERIOR WALL MOUNTED LED LIGHT
	EXTERIOR WALL MOUNTED LED LIGHT W/ EMERGENCY ILLUMINATION
	EXTERIOR RECESSED WALL LED LIGHT
	CEILING MOUNTED EXIT LIGHT
	BACK MOUNTED EXIT LIGHT
	KITCHEN LED PENDANT
	LOBBY LED PENDANT
	WALL MOUNTED, RECESSED LED FLEXIBLE LIGHT
	WALL MOUNTED BACK-LIT LED SIGNAGE
	14' DIAMETER HIGH VOLUME, LOW SPEED FAN
	36" CEILING FAN
	52" CEILING FAN (OUTDOOR RATED)
	T&G LINEAR WOOD CEILING STAINED TO MATCH MILLWORK/DOORS
	2X2 ACOUSTICAL CEILING TILES & GRID, TYP.
	GYPSUM BOARD CEILING W/ CONTROL JOINTS (CJ) AT SPECIFIED LOCATIONS, TYP.



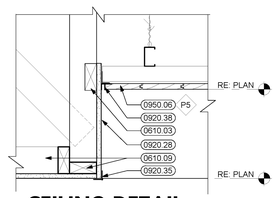
2 SECOND FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"



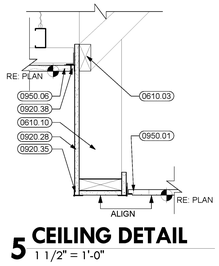
1 FIRST FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"



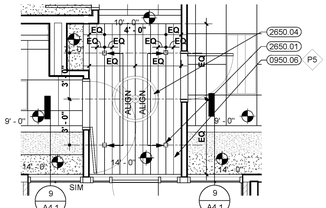
7 CEILING DETAIL
1 1/2" = 1'-0"



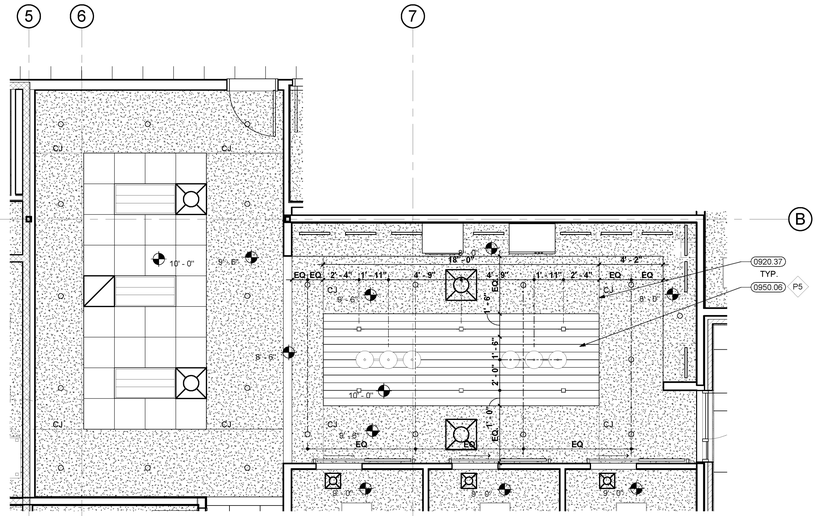
6 CEILING DETAIL
1 1/2" = 1'-0"



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

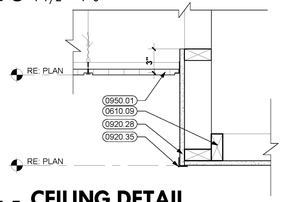


4 ENLARGED RCP
1/4" = 1'-0"

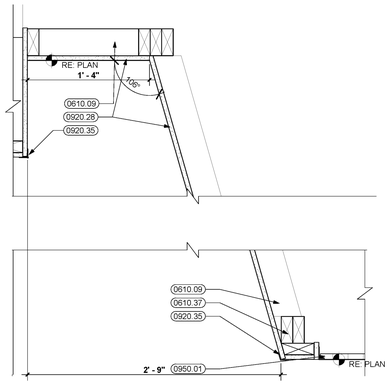


3 ENLARGED REFLECTED CEILING PLAN
1/4" = 1'-0"

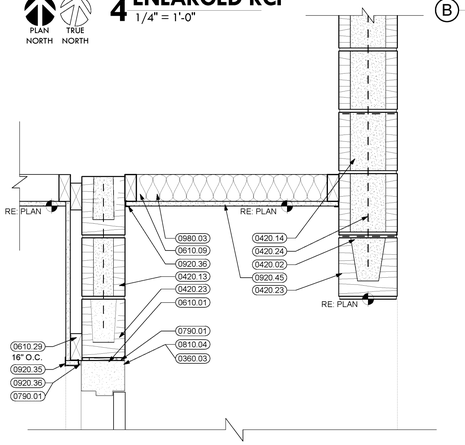
10 CEILING DETAIL
1 1/2" = 1'-0"



11 CEILING DETAIL
1 1/2" = 1'-0"



9 CEILING DETAIL
1 1/2" = 1'-0"



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

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11/16/2018

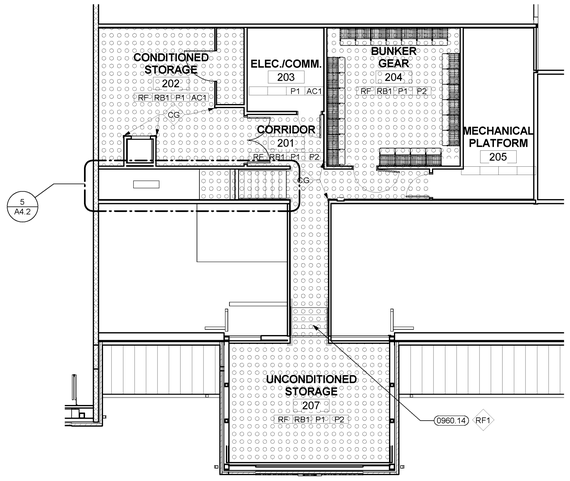
DATE	11/16/2018
DRAWN BY	NB
CHECKED BY	RH
BRW PROJECT NUMBER	217079.00

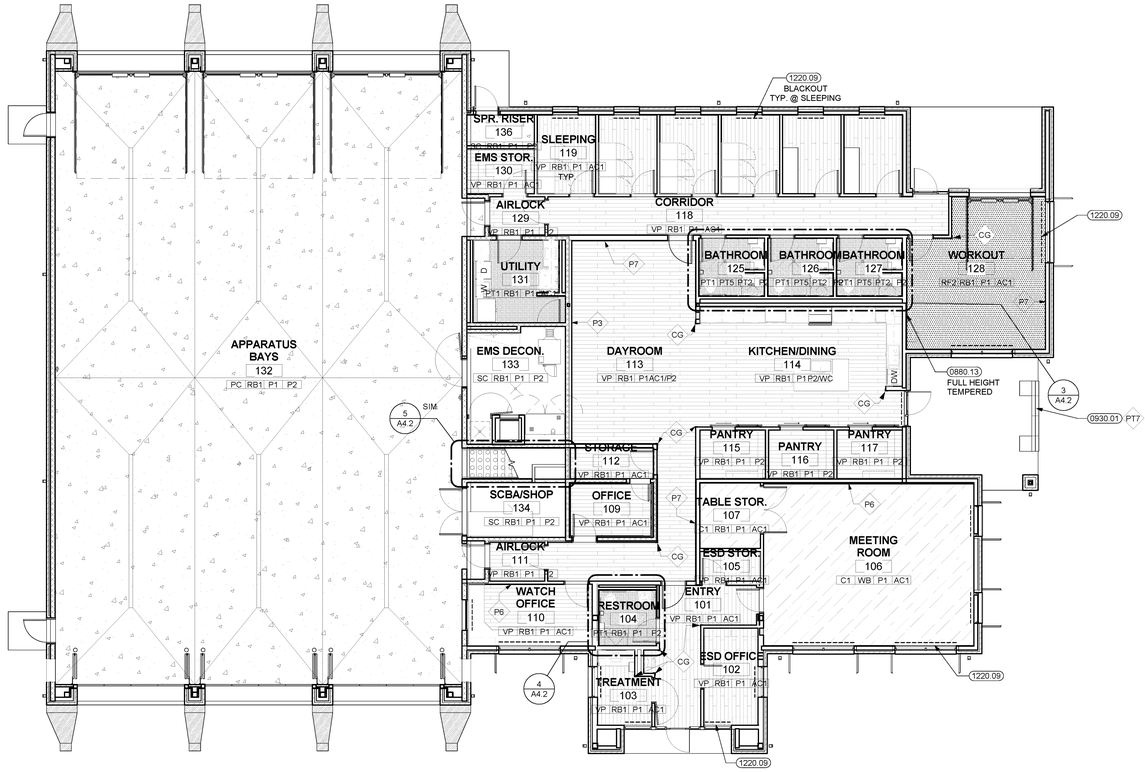
NO.	REVISION	DATE

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

A4.1

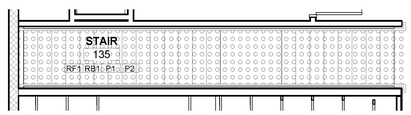
REFLECTED CEILING PLAN



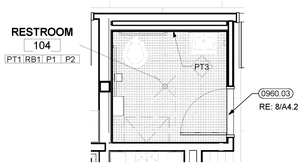


2 SECOND FLOOR FINISH PLAN
1/8" = 1'-0"

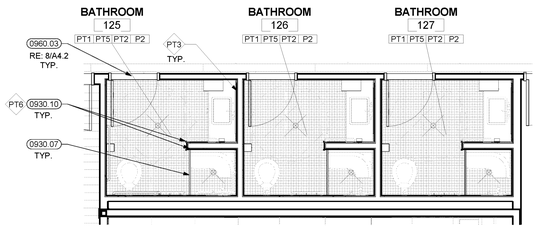
1 FIRST FLOOR FINISH PLAN
1/8" = 1'-0"



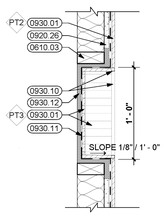
5 ENLARGED FINISH PLAN
1/4" = 1'-0"



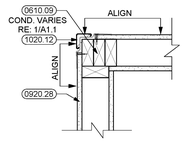
4 ENLARGED FINISH PLAN
1/4" = 1'-0"



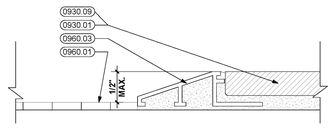
3 ENLARGED FINISH PLAN
1/4" = 1'-0"



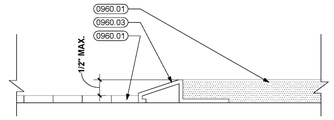
14 SHOWER NICHE
1 1/2" = 1'-0"



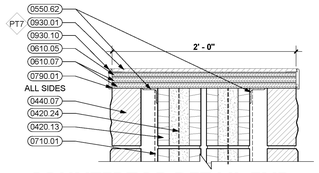
9 CORNER GUARD
1 1/2" = 1'-0"



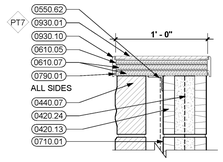
8 LVT/TILE TRANSITION
NOT TO SCALE



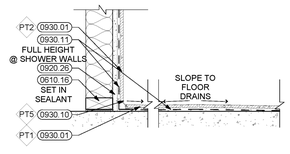
7 LVT/RF TRANSITION
NOT TO SCALE



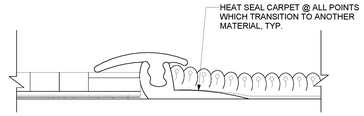
13 COUNTERTOP DETAIL END
1 1/2" = 1'-0"



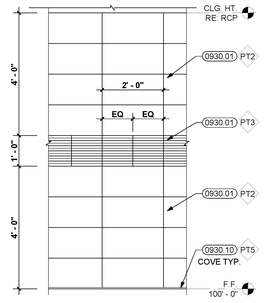
12 COUNTERTOP DETAIL
1 1/2" = 1'-0"



11 BATHROOM TILE DETAIL
1 1/2" = 1'-0"



10 LVT/CARPET TRANSITION
NOT TO SCALE



6 BATHROOM TILE ELEVATION
1/2" = 1'-0"

NOTES:

1. ALL WOOD DOORS TO BE STAINED TO MATCH MILLWORK.
2. GYPSUM BOARD CEILINGS ARE TO BE FINISH P2, U.N.O.
3. PROVIDE FLOOR LEVELING COMPOUND UNDER FINISH FLOORING AS REQUIRED
4. LINE OF TRANSITION FROM DIAMOND POLISHED TO SEALED CONCRETE SHALL BE A STRAIGHT SAWCUT JOINT, LOCATED SO THAT SEALED CONCRETE IS NOT VISIBLE BELOW CLOSED DOOR FROM THE DIAMOND POLISHED CONCRETE SIDE OF DOOR, TYP.
5. PROVIDE CONTROL JOINTS AT CONCRETE SLAB AS REQUIRED AND AT LOCATIONS SHOWN ON FINISH PLAN. RE: STRUCTURAL.
6. PROVIDE EPOXY PAINT AT ALL INTERIOR PAINTED CMU AND APPARATUS BAY/AIR LOCK VESTIBULE CEILINGS.
7. 3/4" PLYWOOD ON WALLS IN ELEC./COMM 203

KEYNOTES

0420.13	6" CONCRETE MASONRY UNITS
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0440.07	STONE VENEER
0550.62	2" X 2" X 1/4" STEEL ANGLE
0610.03	2X WOOD BLOCKING
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.07	3/4" EXTERIOR GRADE PLYWOOD
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.16	WOOD SILL PLATE
0710.01	BITUMINOUS DAMPPROOFING
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0880.13	1/4" GLASS MIRROR
0920.26	5/8" CEMENTITIOUS BACKER BOARD
0920.28	5/8" GYPSUM BOARD (TYPE X)
0930.01	PORCELAIN TILE
0930.07	7/8" GRANITE THRESHOLD
0930.09	THICKSET TILE (SLOPE TO DRAIN)
0930.10	METAL TILE TRIM
0930.11	FLUID-APPLIED FABRIC REINFORCED WATERPROOFING MEMBRANE
0930.12	PREFABRICATED SHOWER NICHE
0960.01	FLOORING AS SCHEDULED
0960.03	METAL EDGE / TRANSITION TRIM
0960.14	RUBBER TREAD / RISER / FLOORING
1020.12	WALL AND CORNER GUARDS
1220.09	MANUAL ROLLER SOLAR SHADES

FINISH LEGEND

ROOM NAME
C101B
ROOM NAME DESIGNATION & NUMBER
CEILING FINISH
WALL FINISH
BASE FINISH
FLOOR FINISH

PATTERN	DESCRIPTION
	AC - ACOUSTICAL CEILING TILE AC1: ARMSTRONG #1774 "DUNE" 24" X 24" TEGULAR TILE COLOR: WHITE
	PT - PORCELAIN TILE & TRIMS **PT1: PORCELAIN FLOOR TILE** ARIZONA TILE RESIDE, 2" X 2" COLOR: BLACK
	PT2: PORCELAIN WALL TILE ARIZONA TILE RESIDE FIELD TILE 12" X 24" COLOR: ASH
	PT3: PORCELAIN ACCENT TILE ARIZONA TILE RESIDE FIELD TILE TILE 1" X 12" COLOR: BLACK
	PT4: PORCELAIN BACKSPLASH DALTILE MODERN DIMENSIONS 2" X 8" COLOR: ARCTIC WHITE, GLOSS & MATTE
	PT5: COVE PROFILES SCHLUTER DILEX - AHK COLOR: SATIN ANODIZED ALUM. 10 MM (3/8")
	PT6: EDGE PROFILE SCHLUTER QUADEC COLOR: SATIN ANODIZED ALUM. 10 MM (3/8")
	PT7: PORCELAIN OUTDOOR COUNTER ARIZONA TILE RESIDE FIELD TILE 24" X 48" COLOR: ASH RE: DETAIL 12 & 13/A4.2
	M - MISC. METALS **M1: PAINT** EXPOSED STRUCTURAL STEEL COLUMNS SW 7020 "BLACK FOX"
	PC: DIAMOND POLISHED CONCRETE RE: SPECIFICATION SECTION 033536
	P - PAINT (RE: SPECIFICATION 099000) **P1:** WALL (SEMI-GLOSS) KM4188, "NEVADA PEAK" **P2:** CEILING (EGG-SHELL) KM5794, "EMILY ANN TAN **P3:** WALL, ACCENT (SEMI-GLOSS) KM5812, "WINTER SOLSTICE" **P4:** INTERIOR HM DOORS & FRAMES KM4904, "BALSALMIC REDUCTION" **P5:** MILLWORK, STAIN SW3114, "WARM CHESTNUT" **P6:** EXTERIOR METALS, DOORS & WINDOW FRAMES RAL 3002, "CARMINE RED"/ KM43 "HAUTE COUTURE" **P7:** LEVEL 4 DRYWALL FINISH AT WALL MURAL LOCATIONS
	PL - PLASTIC LAMINATE **PL1: PLASTIC LAMINATE COUNTERTOP** WILSONART COLOR: EVENING TIGRIS
	Q - SOLID SURFACE QUARTZ **Q1: QUARTZ COUNTERTOP** LG SURFACES VIATERA COLOR: WHITE SOLACE
	RB: RESILIENT BASE **FLEXCO** #078, "UMBER"
	RF - RUBBER FLOOR SHEET FLEXCO - 1/8", #078 "UMBER" **RF1 - RUBBER STAIR/STRINGER** FLEXCO 1/8", 48" TREAD #078, "UMBER"
	RF2 - RUBBER ATHLETIC FLOORING RF: RUBBER FLOOR TILE ECORE COMMERCIAL ECOSURFACE ECOFIT 8.2MM, 48" x 48" TILE COLOR: #620, "RED HOTS 20"
	SC: SEALED CONCRETE BASF LAPIDOLITH
	CG - CORNER GUARDS (RE: 9/A4.2) **CG: FULL HEIGHT CORNER GUARDS** **CS ACROVYN SFS-20N(RN)** **410 "BRUSHED SILVER"**
	TS - TRANSITION STRIP **TS1: METAL TRANSITION STRIP** SCHLUTER, RENU-U CLEAR ANODIZED ALUMINUM
	C1: CARPET TILE BATISTE TILE, SATEEN BAT53, 18" X 36", MONOLITHIC
	VP: VINYL PLANK KARNDEAN, ART SELECT, RL03 "AUTUMN OAK"
	WC: WOOD CEILING ARMSTRONG "WOODWORKS LINEAR VENEER PLANK" CEILING SYSTEM STAIN TO MATCH MILLWORK (P5)
	RS: MANUAL ROLLER SHADES JAMB MOUNTED RE: SPECIFICATION SECTION 12 24 00

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CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

NO.	REVISION	DATE

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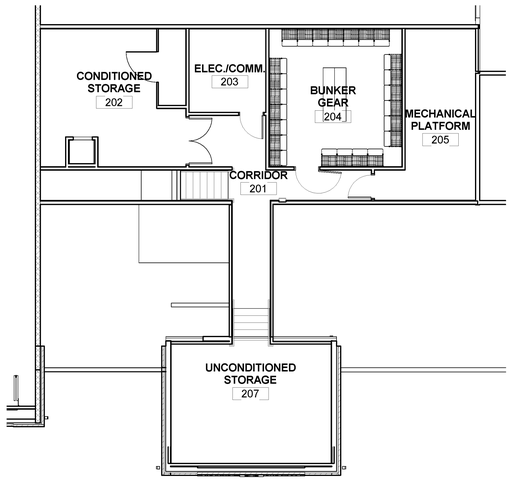
CHECKED BY RH
BRW PROJECT NUMBER 217079.00

A4.2

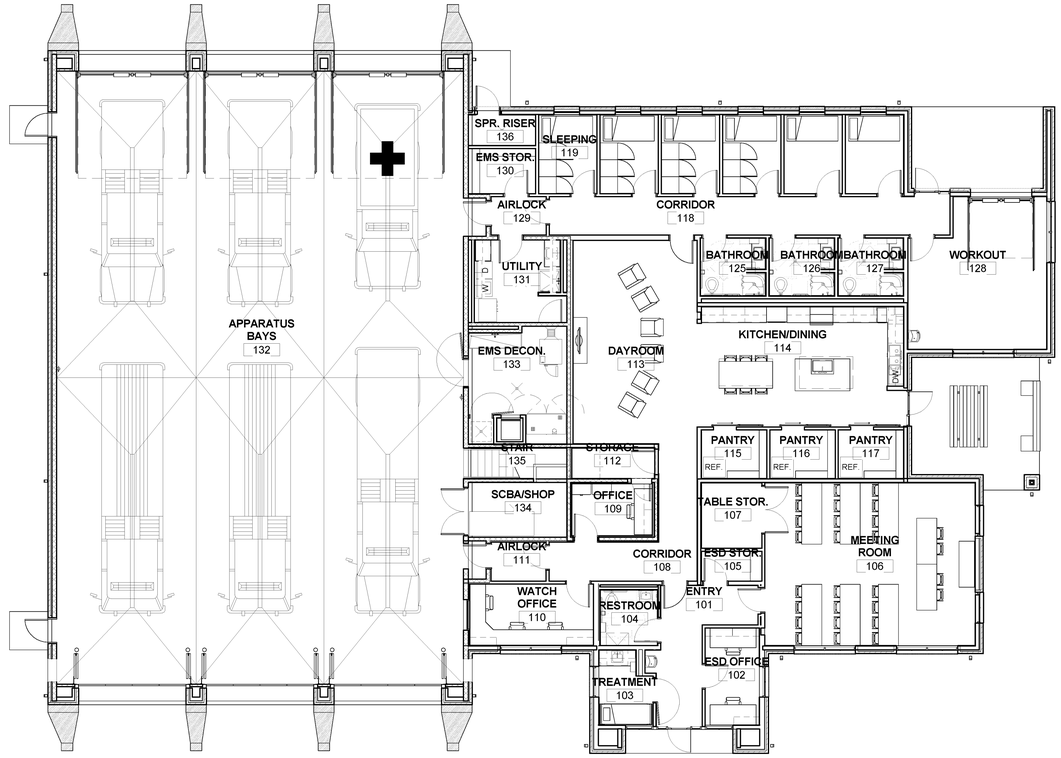
FINISH PLAN



PLAN NORTH TRUE NORTH

2 SECOND FLOOR FURNITURE / EQUIPMENT PLAN

1/8" = 1'-0"



PLAN NORTH TRUE NORTH

1 FIRST FLOOR FURNITURE / EQUIPMENT PLAN (NOT IN CONTRACT)

1/8" = 1'-0"

BROWN REYNOLDS WATFORD
ARCHITECTS
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979.693.1797
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BRW

REGISTERED ARCHITECT
RAYMOND HOLLIDAY
STATE OF TEXAS
11/16/2018

DATE 11/16/2018
DRAWN BY NB
CHECKED BY RH
BRW PROJECT NUMBER 217079.00

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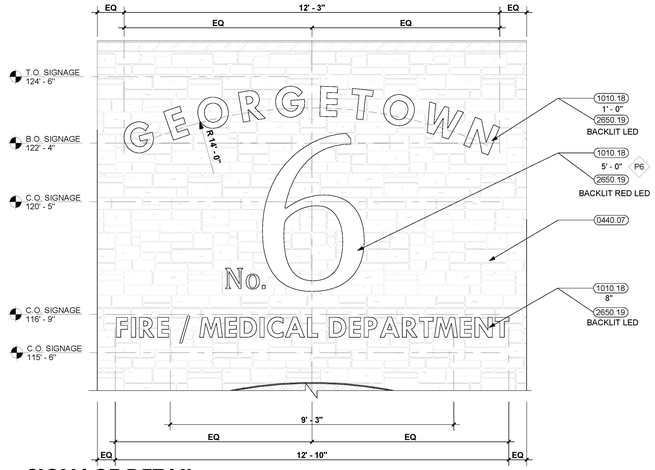
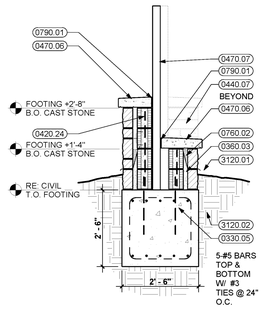
A4.3

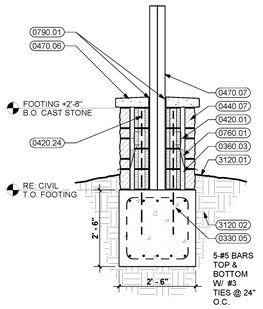
FURNITURE PLANS



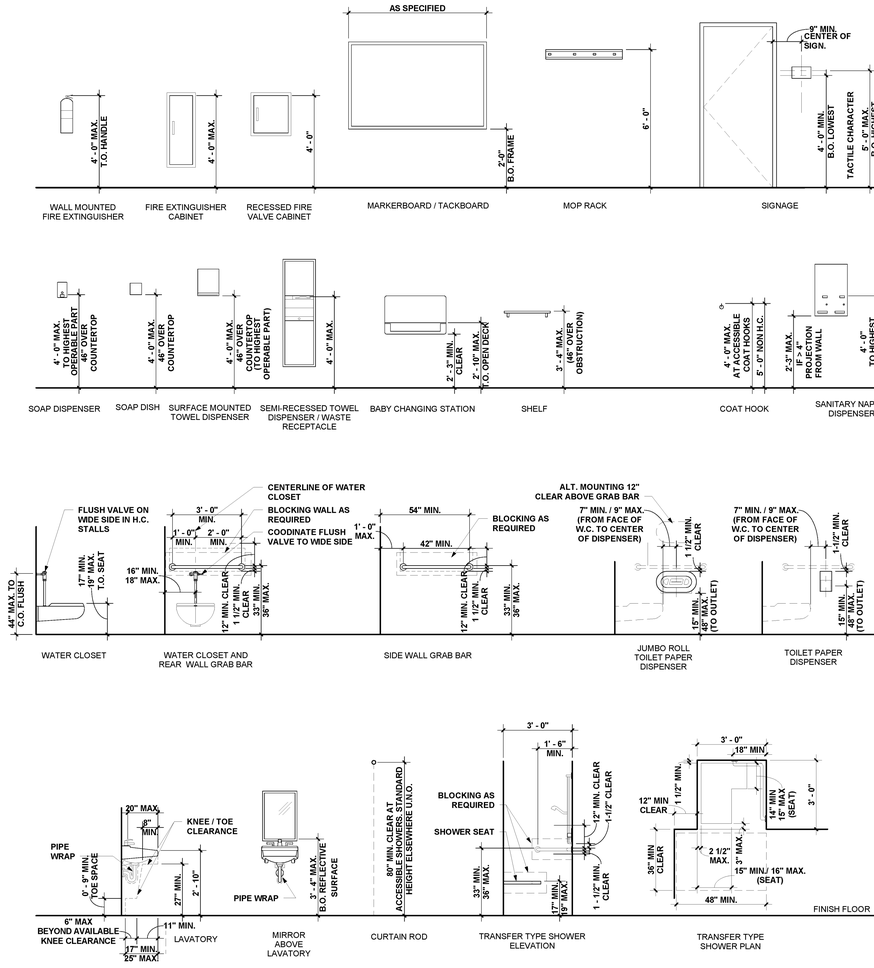
2 SIGNAGE DETAIL
1/2" = 1'-0"



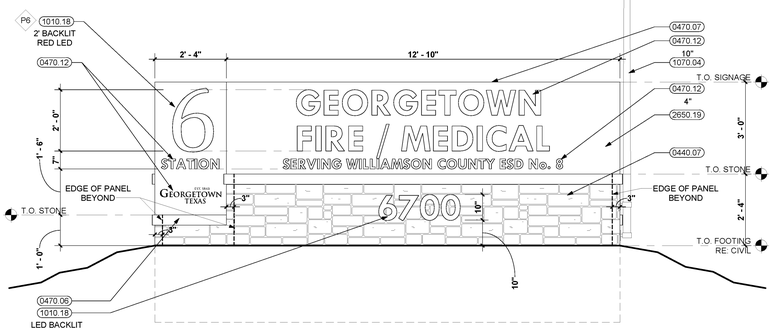
4 MONUMENT SIGN SEC.
1/2" = 1'-0"



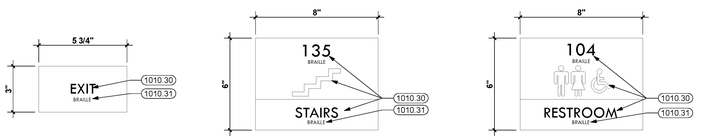
3 MONUMENT SIGN SEC.
1/2" = 1'-0"



1 TYPICAL MOUNTING HEIGHTS
NOT TO SCALE



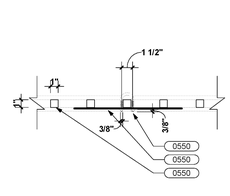
9 MONUMENT SIGN
1/2" = 1'-0"



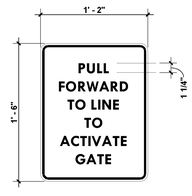
NOTES:
1) CENTER ALL TEXT/SYMBOLS/LOGOS WITHIN SIGNAGE
2) TEXT/SYMBOLS SHALL BE RAISED A MINIMUM OF 1/16"
3) EVERY ROOM SHALL RECEIVE A ROOM SIGN WITH ROOM NUMBER, AND A PICTOGRAM WITH ROOM NAME AT STAIRS, RESTROOMS, AND SHOWER ROOMS
4) OWNER SHALL FURNISH ELECTRONIC FILE(S) FOR PRINTED GRAPHIC INSERTS CONTAINING LOGOS AND ROOM NAME
5) SIGN SHALL BE A CURVED ANODIZED SILVER ALUMINUM BODY ROOM SIGN WITH BLACK IMPACT-MODIFIED PLASTIC END CAPS AND A NON-GLARE LENS
5) SIGN MANUFACTURER SHALL CONFORM TO ALL APPLICABLE STANDARDS AND ADA GUIDELINES FOR INTERIOR ROOM/TACTILE SIGNAGE
6) PROVIDE TACTILE EGRESS SIGNANGE AT ALL DOORS AT EXIT PASSAGEWAYS, EXIT DISCHARGE, AND EXIT STAIRWAYS (RE: LS1.1 FOR EXIT LOCATIONS)
7) REFERENCE A5.1 FOR MOUNTING HEIGHTS/DISTANCES FROM DOORWAYS
8) ALL INTERIOR SIGNAGE SHALL BE TAS/ADA COMPLIANT.

11 INTERIOR SIGNAGE
3" = 1'-0"

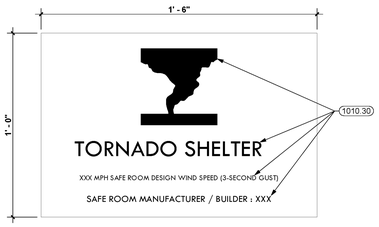
8 BAY SIGNAGE SECTION
1 1/2" = 1'-0"



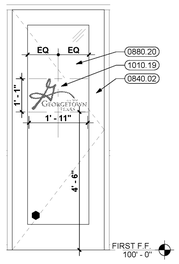
7 GATE SIGN DETAIL
1 1/2" = 1'-0"



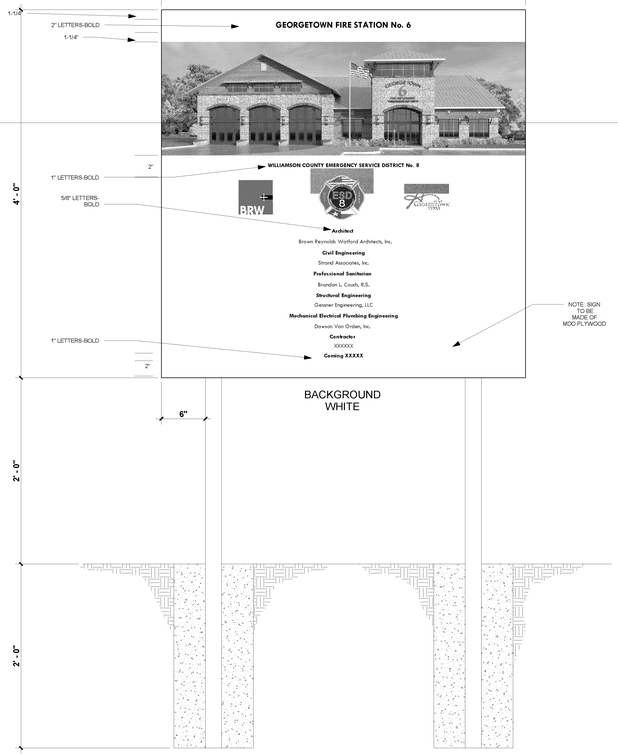
6 GATE SIGN
1 1/2" = 1'-0"



10 SIGNAGE DETAIL
1/2" = 1'-0"



5 CONSTRUCTION SIGN
1 1/2" = 1'-0"



KEYNOTES

0330.05	CONCRETE GRADE BEAM (RE: STRUCTURAL)
0360.03	FILL WITH GROUT
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0470.06	CAST STONE CAP - PIN BOLT CONNECTIONS
0470.07	CAST STONE SIGNAGE PANEL
0470.12	RECESSED CAST LETTERING
0550	Metal Fabrications
0550.62	2" X 2" X 1/4" STEEL ANGLE
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.11	2 X 6 WOOD FRAMING
0720.18	5 1/2" BATT INSULATION
0725.03	PLASTIC FILM AIR BARRIER
0760.01	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
0760.02	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.)
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0840.02	ALUMINUM STOREFRONT DOOR
0880.20	1" TINTED GLASS, INSULATED, LOW-E, TEMPERED
1010.18	METAL LETTERING
1010.19	WINDOW LETTERING
1010.30	RAISED LETTERS AND SYMBOLS
1010.31	RAISED BRAILLE LETTERING
1070.04	WALL-MOUNTED FLAGPOLE
2650.19	EXTERIOR LIGHT FIXTURE
3120.01	GRADE
3120.02	COMPACTED SELECT FILL
3230.36	THROUGH-BOLT

NOTE:

1) EXIT/EGRESS SIGNAGE: PROVIDE INTERIOR TACTILE ROOM SIGNAGE AT ALL DOORS ALONG PASSAGEWAYS, EXIT STAIRWAYS, AND EXIT DISCHARGE LEADING TO ACCESSIBLE MEANS OF EGRESS. REFER TO SIGNAGE ON DRAWING A5.0

REGISTERED ARCHITECT RAYMOND HOLLIDAY SIXTE STATE OF TEXAS 1883
11/16/2018

BROWN REYNOLDS WATFORD ARCHITECTS
175 CENTURY SQUARE DRIVE
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CITY OF GEORGETOWN
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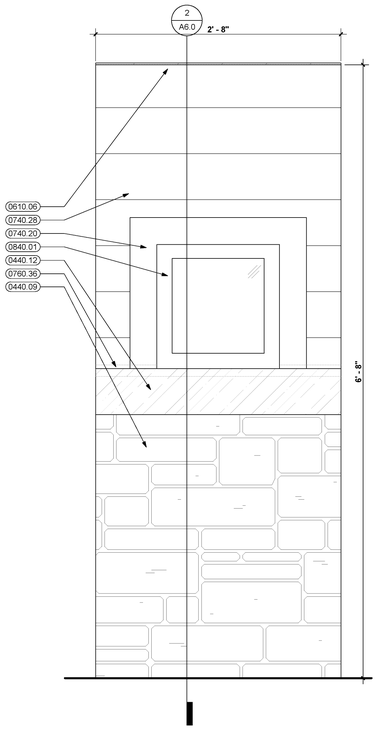
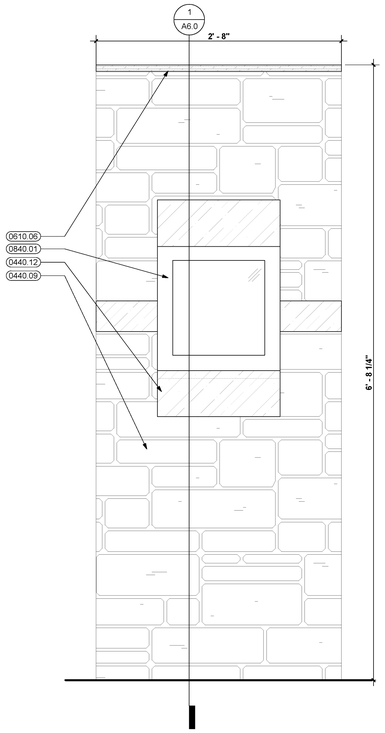
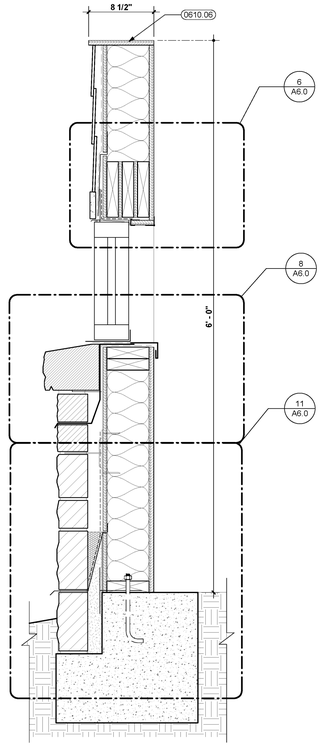
TYPICAL ACCESSIBILITY DETAILS & SIGNAGE



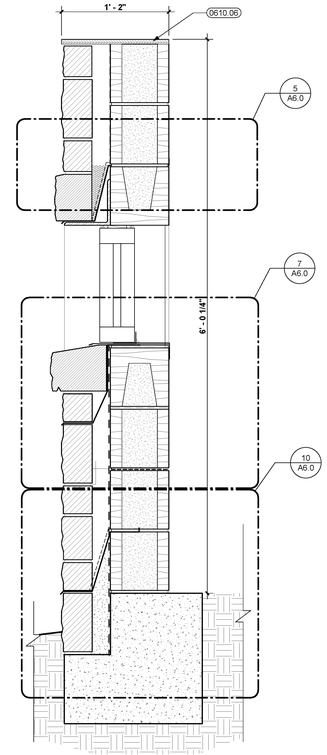
4 CMU MOCK UP WALL
1 1/2" = 1'-0"



3 CMU MOCK UP WALL
1 1/2" = 1'-0"



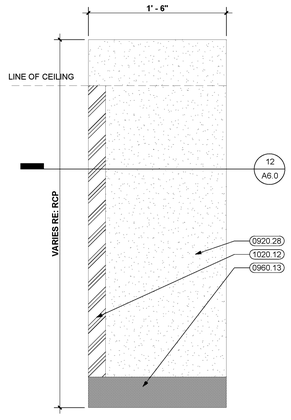
2 SECTION DETAIL
1 1/2" = 1'-0"



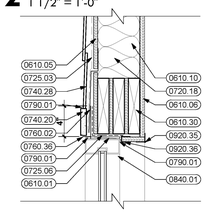
1 CMU MOCK UP WALL
1 1/2" = 1'-0"

KEYNOTES

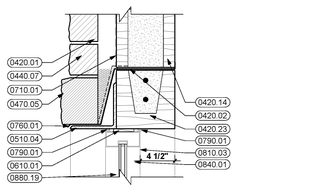
0320.01	DOWEL INTO CONCRETE SLAB
0330.02	CONCRETE SLAB (RE: STRUCTURAL)
0330.05	CONCRETE GRADE BEAM (RE: STRUCTURAL)
0330.23	ANCHOR BOLT
0360.03	FILL WITH GROUT
0420.01	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0420.02	HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY
0420.14	8" CONCRETE MASONRY UNITS
0420.23	CONCRETE MASONRY BOND BEAM
0420.24	VERTICAL REINFORCING IN CONCRETE MASONRY UNITS (RE: STRUCTURAL)
0440.07	STONE VENEER
0440.08	ADJUSTABLE MASONRY WALL TIES AT 16" O.C.E.W.
0440.09	THIN STONE VENEER
0440.12	6" CUT STONE
0470.05	CAST STONE SILL WITH DRIP
0510.04	STEEL ANGLE (RE: STRUCTURAL)
0610.01	SHIM AS REQUIRED
0610.05	1/2" EXTERIOR GRADE PLYWOOD
0610.06	5/8" EXTERIOR GRADE PLYWOOD
0610.09	2 X 4 WOOD STUDS AT 16" O.C.
0610.10	2 X 6 WOOD STUDS AT 16" O.C.
0610.11	2 X 6 WOOD FRAMING
0610.15	WOOD TOP PLATE
0610.30	2X WOOD HEADER (RE: STRUCTURAL)
0710.01	BITUMINOUS DAMPPROOFING
0720.18	5 1/2" BATT INSULATION
0725.01	UNDERSLAB VAPOR BARRIER
0725.03	PLASTIC FILM AIR BARRIER
0725.06	SELF-ADHERING FLEXIBLE SURROUND FLASHING
0740.20	FIBER REINFORCED CEMENTITIOUS TRIM
0740.28	FIBER REINFORCED CEMENTITIOUS SIDING
0760.01	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.) AND MORTAR NET
0760.02	THROUGH-WALL FLASHING (WITH WEEPS AT 2'-0" O.C.)
0760.31	SILL SEALER
0760.36	GALVANIZED METAL FLASHING
0790.01	SEALANT WITH BACKER ROD AS REQUIRED
0810.03	HOLLOW METAL STOP
0840.01	ALUMINUM STOREFRONT
0840.03	.060 ALUMINUM SILL WITH HEMMED AND CLOSED ENDS
0840.05	CONTINUOUS ALUMINUM SILL FLASHING
0880.19	1" TINTED GLASS, INSULATED, LOW-E
0920.28	5/8" GYPSUM BOARD (TYPE X)
0920.35	CORNER BEAD, TYPICAL
0920.36	J-MOULD, TYPICAL
0960.13	4" RESILIENT BASE
1020.12	WALL AND CORNER GUARDS
3120.01	GRADE
3120.02	COMPACTED SELECT FILL



9 CORNER GUARD MOCK-UP ELEV.



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



5 WINDOW HEAD
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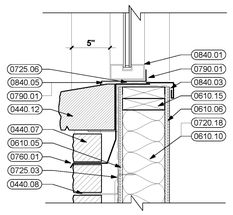
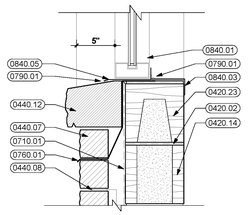
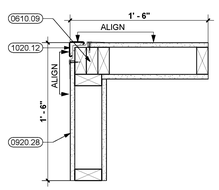


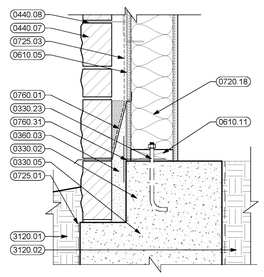
8 WINDOW SILL
1 1/2" = 1'-0"



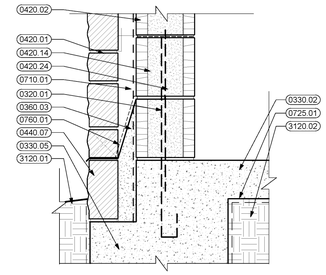
7 WINDOW SILL
1 1/2" = 1'-0"



12 PLAN DETAIL
1 1/2" = 1'-0"



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



10 SECTION DETAIL
1 1/2" = 1'-0"

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DATE 11/16/2018
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CHECKED BY Checker
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78633

NO.	REVISION	DATE

A6.0

MOCK UP WALL

MECHANICAL SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED HERE ARE USED IN THE DRAWINGS AND MAY NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE DRAWINGS.

MECHANICAL ABBREVIATIONS

AD	ACCESS DOOR	MAX	MAXIMUM
ADJ	ADJUSTABLE	MBH	THOUSANDS OF BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
AL	ALUMINUM	MCA	MINIMUM CIRCUIT AMPACITY
ALT	ALTERNATE	MCC	MOTOR CONTROL CENTER
AP	ACCESS PANEL	MEP	MECHANICAL, ELECTRICAL AND PLUMBING
APD	AIR PRESSURE DROP	MER	MECHANICAL EQUIPMENT ROOM
APPROX	APPROXIMATE	MEZZ	MEZZANINE
ARCH	ARCHITECTURAL	MFR	MANUFACTURER
AVG	AVERAGE	MIN.	MINIMUM
		MISC	MISCELLANEOUS
BAS	BUILDING AUTOMATION SYSTEM		
BOB	BOTTOM OF BEAM	NA	NOT APPLICABLE
BOD	BOTTOM OF DUCT	NC	NORMALLY CLOSED
BOP	BOTTOM OF PIPE	NIC	NOT IN CONTRACT
BTU	BRITISH THERMAL UNITS	NO	NORMALLY OPEN
BTUH	BRITISH THERMAL UNITS PER HOUR	NPS	NOMINAL PIPE SIZE
		NPSH	NET POSITIVE SUCTION HEAD
CAV	CONSTANT AIR VOLUME	NPT	NATIONAL PIPE THREAD
CFH	CUBIC FEET PER HOUR	NR	NEAR
CFM	CUBIC FEET PER MINUTE	NTS	NOT TO SCALE
CL	CENTERLINE	OA	OUTSIDE AIR
CLG	CEILING	OC	ON CENTER
COND	CONDENSATE	OED	OPEN END DUCT
CONTR	CONTRACTOR	OLP	OVERLOAD PROTECTION
COP	COEFFICIENT OF PERFORMANCE	OV	OUTLET VELOCITY
CU	COPPER		
		PC	PLUMBING CONTRACTOR
DAP	DUCT ACCESS PANEL	PCF	POUNDS PER CUBIC FOOT
DB	DRY BULB	PD	PRESSURE DROP
DDC	DIRECT DIGITAL CONTROL	PH	PHASE
DEG	DEGREES	PLBG	PLUMBING
DIA	DIAMETER	POC	POINT OF CONNECTION
DIM	DIMENSION	PPH	POUNDS PER HOUR
DN	DOWN	PRV	PRESSURE RELIEF VALVE
DWG	DRAWING	PSF	POUNDS PER SQUARE FOOT
DX	DIRECT EXPANSION	PSI	POUNDS PER SQUARE INCH
		PSIA	**POUNDS PER SQUARE INCH ABSOLUTE**
EA	EXHAUST AIR	PSIG	POUNDS PER SQUARE INCH GAUGE
EAT	ENTERING AIR TEMPERATURE	PVC	POLYVINYL CHLORIDE
EC	ELECTRICAL CONTRACTOR		
EDR	EQUIVALENT DIRECT RADIATION	RA	RETURN AIR
EFF	EFFICIENCY	REQD	REQUIRED
ELEC	ELECTRICAL	RF	ROOF
ELEV	ELEVATION	RH	RELATIVE HUMIDITY
EM	EMERGENCY	RPM	REVOLUTIONS PER MINUTE
ESP	EXTERNAL STATIC PRESSURE		
ETR	EXISTING TO REMAIN	SA	SUPPLY AIR
EWT	ENTERING WATER TEMPERATURE	SCH	SCHEDULE
EXH	EXHAUST	SHT	SHEET
EXP	EXPANSION	SP	STATIC PRESSURE
EXIST	EXISTING	SPEC	SPECIFICATION
		SQ	SQUARE
F	FAHRENHEIT	S/S	STAINLESS STEEL
FC	FORWARD CURVED	STD	STANDARD
FLA	FULL LOAD AMPS	STRUCT	STRUCTURAL
FLR	FLOOR		
FM	FACTORY MUTUAL	T&P	TEMPERATURE AND PRESSURE
FPD	FLUID PRESSURE DROP	TA	TRANSFER AIR
FPI	FINS PER INCH	TBR	TO BE REMOVED
FPM	FEET PER MINUTE	TC	TEMPERATURE CONTROL
FPS	FEET PER SECOND	TEMP	TEMPERATURE
F&T	FLOAT AND THERMOSTATIC	TOB	TOP OF BEAM
FT	FEET	TOD	TOP OF DUCT
FTG	FOOTING	TOP	TOP OF PIPE
		TOS	TOP OF SLAB
GA	GAUGE	TSP	TOTAL STATIC PRESSURE
GAL	GALLON	T STAT	THERMOSTAT
GALV	GALVANIZED	TYP	TYPICAL
GBD	GRAVITY BACKDRAFT DAMPER	UC	UNDERCUT DOOR 1" (BY GENERAL CONTRACTOR)
GC	GENERAL CONTRACTOR		
GPM	GALLONS PER MINUTE	UNO	UNLESS OTHERWISE NOTED
GPH	GALLONS PER HOUR		
		V	VOLTS
HP	HORSEPOWER	VA	VALVE
		VAV	VARIABLE AIR VOLUME
ID	INSIDE DIAMETER	VEL	VELOCITY
IE	INVERT ELEVATION	VP	VELOCITY PRESSURE
IN	INCHES	VTR	VENT THRU ROOF
LAT	LEAVING AIR TEMPERATURE	W/	WITH
LB/HR	POUNDS PER HOUR	W/O	WITHOUT
LF	LINEAR FEET	WB	WET BULB
LTG	LIGHTING	WC	WATER COLUMN
LWT	LEAVING WATER TEMPERATURE	WG	WATER GAUGE
		X	EXISTING

MECHANICAL EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT/AIR COMPRESSOR	GF	GAS FURNACE
		GV	GRAVITY VENTILATOR
ACC	AIR COOLED CONDENSER		
ACCU	AIR COOLED CONDENSING UNIT	H	HUMIDIFIER
ACU	AIR CONDITIONING UNIT	HC	HEATING COIL
AHU	AIR HANDLING UNIT	HP	HEAT PUMP
AMD	AIR MIXING DEVICE	HRC	HEAT RECOVERY COIL
ARU	AIR ROTATION UNIT	HRD	HEAT REGLAIM DEVICE
AS	AIR SEPARATOR	HX	HEAT EXCHANGER
AT	AIR TERMINAL DEVICE		
		IAH	INTAKE AIR HOOD
B	BOILER	IF	INLINE FAN
BBS	BOILER BLOWDOWN SEPARATOR	IFH	INFRARED HEATER
BC	BOOSTER COIL		
BFS	BOILER FEEDWATER SYSTEM	LP	LOUVERED PENTHOUSE
C	CONVECTOR	MAU	MAKE-UP AIR UNIT
CC	COOLING COIL	MCC	MOTOR CONTROL CENTER
CH	CHILLER		
CP	CONDENSATE PUMP	P	PUMP
CRU	CONDENSATE RETURN UNIT		
CT	COOLING TOWER	RAHU	ROOFTOP AIR HANDLING UNIT
CUH	CABINET UNIT HEATER	RCP	RADIANT CEILING PANEL
		REF	ROOF EXHAUST FAN
DC	DUST COLLECTOR	RF	RETURN FAN
DH	DEHUMIDIFIER	RH	RELIEF HOOD
		RTU	ROOFTOP UNIT
EBB	ELECTRIC BASEBOARD	RV	ROOF VENTILATOR
EF	EXHAUST FAN		
EH	EXHAUST HOOD	SA	SOUND ATTENUATOR
EJ	EXPANSION JOINT	SF	SUPPLY FAN
ET	EXPANSION TANK		
EUH	ELECTRIC UNIT HEATER	T	TANK
		TXV	THERMAL EXPANSION VALVE
F	FILTER		
FCU	FAN COIL UNIT	UH	UNIT HEATER
FD	FLOOR DRAIN	UST	UNDERGROUND STORAGE TANK
FOP	FUEL OIL PUMP	UV	UNIT VENTILATOR
FOT	FUEL OIL TANK		
FTR	FIN TUBE RADIATION	V	VALVE
		VFD	VARIABLE FREQUENCY DRIVE
		VP	VACUUM PUMP

PIPING SYSTEMS AND FITTINGS

- BBD — BOILER BLOW DOWN
- BF — BOILER FEED
- BA — BREATHABLE AIR
- CWS — CHILLED WATER SUPPLY
- CWR — CHILLED WATER RETURN
- A — COMPRESSED AIR
- CDS — CONDENSER WATER SUPPLY
- CDR — CONDENSER WATER RETURN
- D — DRAIN LINE
- FOF — FUEL OIL FILL
- FOS — FUEL OIL SUPPLY
- FOR — FUEL OIL RETURN
- FOV — FUEL OIL VENT
- GCWS — GLYCOL CHILLED WATER SUPPLY
- GCWR — GLYCOL CHILLED WATER RETURN
- HPWS — HEAT PUMP WATER SUPPLY
- HPWR — HEAT PUMP WATER RETURN
- HPS — HIGH PRESSURE STEAM
- HPC — HIGH PRESSURE CONDENSATE
- HWS — HOT WATER SUPPLY
- HWR — HOT WATER RETURN
- H — HUMIDIFICATION
- LP — LIQUEFIED PETROLEUM GAS
- LPS — LOW PRESSURE STEAM (10 PSIG)
- LPC — LOW PRESSURE CONDENSATE
- MU — MAKE-UP WATER
- MPS — MEDIUM PRESSURE STEAM
- MPC — MEDIUM PRESSURE CONDENSATE
- G — NATURAL GAS
- N2 — NITROGEN
- V — VENT LINE
- PC — PUMPED CONDENSATE
- RHG — REFRIGERANT HOT GAS
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- RV — REFRIGERANT VENT
- VAC — VACUUM (AIR)

NOTE:
(X) PRIOR TO SYSTEM TYPE DENOTES EXISTING PIPING (i.e. XHWS - EXISTING HOT WATER SUPPLY)

(XX) = SYSTEM PRESSURE IN PSIG (i.e. (5 PSIG)G)

- FLANGE
- UNION
- ANCHOR
- PIPE GUIDE
- ECCENTRIC REDUCER
- CONCENTRIC REDUCER
- LINE CONTINUATION BREAK
- PIPELINE STRAINER
- ELBOW DOWN
- ELBOW UP
- TEE DOWN
- TEE UP
- PIPE CAP
- VALVE IN VERTICAL

PIPE VALVES AND SPECIALTIES

- ANGLE VALVE
- BALANCING VALVE (CIRCUIT SETTER) — C.S.
- BALL VALVE
- BUTTERFLY VALVE
- BUTTERFLY VALVE WITH ACTUATOR
- CHECK VALVE (ARROW INDICATES FLOW DIRECTION)
- DIAPHRAGM VALVE
- DRAIN VALVE WITH CAPPED OUTLET
- FLOAT OPERATED VALVE
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- SHUTOFF VALVE (SEE SPECIFICATION FOR TYPE)
- SOLENOID VALVE — S
- THERMAL EXPANSION VALVE
- TRIPLE DUTY VALVE
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE

- AUTOMATIC AIR VENT — AV
- MANUAL AIR VENT — HV
- BALL JOINT
- EXPANSION JOINT — EJ
- FLEXIBLE CONNECTION
- FLOW SWITCH — FS
- FLOW METER — FM
- PETE'S PLUG
- PRESSURE GAUGE
- PRESSURE SWITCH — PS
- STEAM TRAP (INDICATE TYPE:
  T - THERMOSTATIC TRAP
  F&T - FLOAT AND THERMOSTATIC TRAP
  IB - INVERTED BUCKET TRAP) — XX
- THERMOMETER — T
- DIRECTION OF FLOW
- DIRECTION OF PITCH RISE (R) OR DROP (D) — R

DUCTWORK FITTINGS

SINGLE LINE DUCTWORK

DOUBLE LINE DUCTWORK

- RECTANGULAR/ROUND BRANCH TAKE OFF (SA, RA, AND EA)
- 1/4 D BUT NOT NOT LESS 6"
- 1/4 W BUT NOT NOT LESS 6"
- TEE (FOR LOW PRESSURE SUPPLY AIR DUCTWORK ONLY) — 45°
- 15° MAX. FOR DIVERGING TRANSITION, 25° MAX. FOR CONVERGING TRANSITION - ECCENTRIC
- 15° MAX. FOR DIVERGING TRANSITION, 25° MAX. FOR CONVERGING TRANSITION - CONCENTRIC
- DUCT WITH FLOW DIRECTION ARROW
- LINE CONTINUATION BREAK (RECTANGULAR, ROUND)
- SUPPLY AIR (SA) OR OUTDOOR AIR (OA) DUCT UP
- SUPPLY AIR (SA) OR OUTDOOR AIR (OA) DUCT DOWN
- RETURN AIR (RA), RELIEF AIR OR TRANSFER AIR (TA) DUCT UP
- RETURN AIR (RA), RELIEF AIR OR TRANSFER AIR (TA) DUCT DOWN
- EXHAUST AIR (EA) DUCT UP
- EXHAUST AIR (EA) DUCT DOWN
- DUCT RISE/DROP W/ 90° ELBOWS (SUPPLY RECTANGULAR DUCT SHOWN)
- R=1.5W — EITHER RADIUS OR SQUARE ELBOW (REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS)
- SQUARE ELBOW WITH TURNING VANES
- DUCT RISE (R) OR DROP (D) W/ 30° ELBOWS (RECTANGULAR DUCTS)
- DUCT CROSS OVER
- THIS DUCT RUNS UNDERNEATH

DIFFUSER, GRILLE, AND REGISTER NOTATION

DUCT SIZE IN INCHES
(NET INSIDE DIMENSIONS)
FIRST FIGURE: SIDE SHOWN
SECOND FIGURE: SIDE NOT SHOWN

12X12

A1 / XXX / 10"Ø (TYP 2)

- DIFFUSER/GRILLE MARK
- CFM
- NECK SIZE
- TYPICAL OF QUANTITY

12"Ø INDICATES ROUND DUCTWORK
12X12Ø INDICATES OVAL ROUND DUCTWORK

- SQUARE/RECTANGULAR SUPPLY DIFFUSER, GRILLE OR REGISTER
- SUPPLY REGISTER OR GRILLE (VERTICAL MOUNT)
- ROUND DIFFUSER
- EXHAUST OR RETURN REGISTER OR GRILLE (VERTICAL MOUNT)
- RETURN REGISTER OR GRILLE (HORIZONTAL MOUNT)
- EXHAUST REGISTER OR GRILLE (HORIZONTAL MOUNT)
- SIDEWALL REGISTER OR GRILLE WITH DAMPER (DUCT MOUNT)

DAMPERS AND CONTROLS

- MANUAL VOLUME DAMPER
- FIRE DAMPER
- SMOKE DAMPER
- COMBINATION FIRE/ SMOKE DAMPER
- BACKDRAFT DAMPER — BD
- MOTORIZED DAMPER — M

- T — SPACE THERMOSTAT
- H — SPACE HUMIDISTAT
- T_N — NIGHT CYCLE CONTROL THERMOSTAT
- T — TEMPERATURE SENSOR
- H — HUMIDITY SENSOR
- P — PRESSURE SENSOR
- DD — DUCT SMOKE DETECTOR
- ST — STARTER
- S — SWITCH

DUCTWORK SPECIALTIES

- DUCT REHEAT COIL
- TEST HOLE
- ACCESS DOOR — AD
- NEW TO EXISTING DUCT CONNECTION — NEW / EXISTING
- REMOVE EXISTING DUCTWORK

- FLEXIBLE DUCT
- POINT OF CHANGE IN DUCT CONSTRUCTION BY PRESSURE CLASS
- LINED DUCTWORK

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER AND SHALL COMPLY WITH ALL ADOPTED LOCAL, STATE, AND NATIONAL CODES.
2. DO NOT SCALE THE DRAWINGS.
3. DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR TO INSTALL PIPE AND DUCTWORK IN A MANNER ACCORDING TO GOOD PRACTICE. ANY MAJOR DEVIATIONS REQUIRED FROM THE DESIGN DRAWINGS SHALL BE VERIFIED WITH THE ENGINEER/ARCHITECT.
4. FINAL ELECTRICAL CONNECTIONS AT OR ABOVE 120V SHALL BE MADE BY THE ELECTRICAL CONTRACTOR.
5. INSTALL BALANCING DAMPERS AND SPLITTER DAMPERS AS SHOWN AND AS REQUIRED FOR PROPER BALANCING OF THE MECHANICAL SYSTEM. PROVIDE TO THE ENGINEER/OWNER A BALANCING REPORT SHOWING RESULTS OF BALANCE TESTING. ALL BALANCE TESTING SHALL MEET THE CURRENT NEBB STANDARDS.
6. DO NOT LOCATE FCU'S, VAV'S, OR FPT'S ABOVE LIGHTS OR CONFERENCE ROOMS.
7. REFER TO STRUCTURAL DRAWINGS AND OTHER DISCIPLINES FOR COORDINATING DUCT ROUTING IN CEILING PLENUM SPACE.
8. PROVIDE A SET OF RECORD DRAWINGS OF THE ACTUAL INSTALLATION. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM, THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT & PIPE DISTRIBUTION SYSTEM INCLUDING SIZES AND THE TERMINAL AIR DESIGN FLOW RATES.
9. AVOID ROUTING OF PIPING OR DUCTWORK ABOVE IT, ELECTRICAL OR FIRE EQUIPMENT ROOMS.
10. PROVIDE APPROPRIATELY RATED FIRE STOPPING FOR PENETRATIONS THROUGH FIRE-RATED WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED STRUCTURES.
11. COORDINATE THERMOSTAT, SENSOR AND SWITCH LOCATIONS WITH ARCHITECT/OWNER PRIOR TO INSTALLATION.
12. PROVIDE DUCT TRANSITIONS FROM EQUIPMENT CONNECTIONS TO DUCT SIZES SHOWN.
13. FLEXIBLE DUCT SHALL BE INSULATED AND SHALL BE THE SAME SIZE OF THE NECK OF THE AIR DEVICE. FLEXIBLE DUCTWORK SHALL NOT EXCEED 8'-0" IN LENGTH, PROVIDE WRAPPED RIGID ROUND DUCTWORK FOR TAKE-OFFS IN EXCESS OF 8'-0".
14. MAINTAIN A MINIMUM 10'-0" SEPARATION FROM OUTSIDE AIR INTAKES TO EXHAUST TERMINATIONS AND VENTS.
15. MAINTAIN A MINIMUM 5'-0" SEPARATION FROM EXHAUST TERMINATIONS TO OPERABLE WINDOWS.
16. ALL UNLINED DUCTWORK VISIBLE THOUGH THE AIR DEVICE SHALL BE PAINTED FLAT BLACK.
17. CEILING TILES USED TO ACCESS FAN COIL UNITS TO BE LABELED.
18. CONDENSATE DRAIN LINES SHALL BE COMPLETELY INSTALLED FOR ALL EQUIPMENT AND COMPLY WITH MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS. ALL CONDENSATE LINES TO BE INSULATED.

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Registration No. F-8334

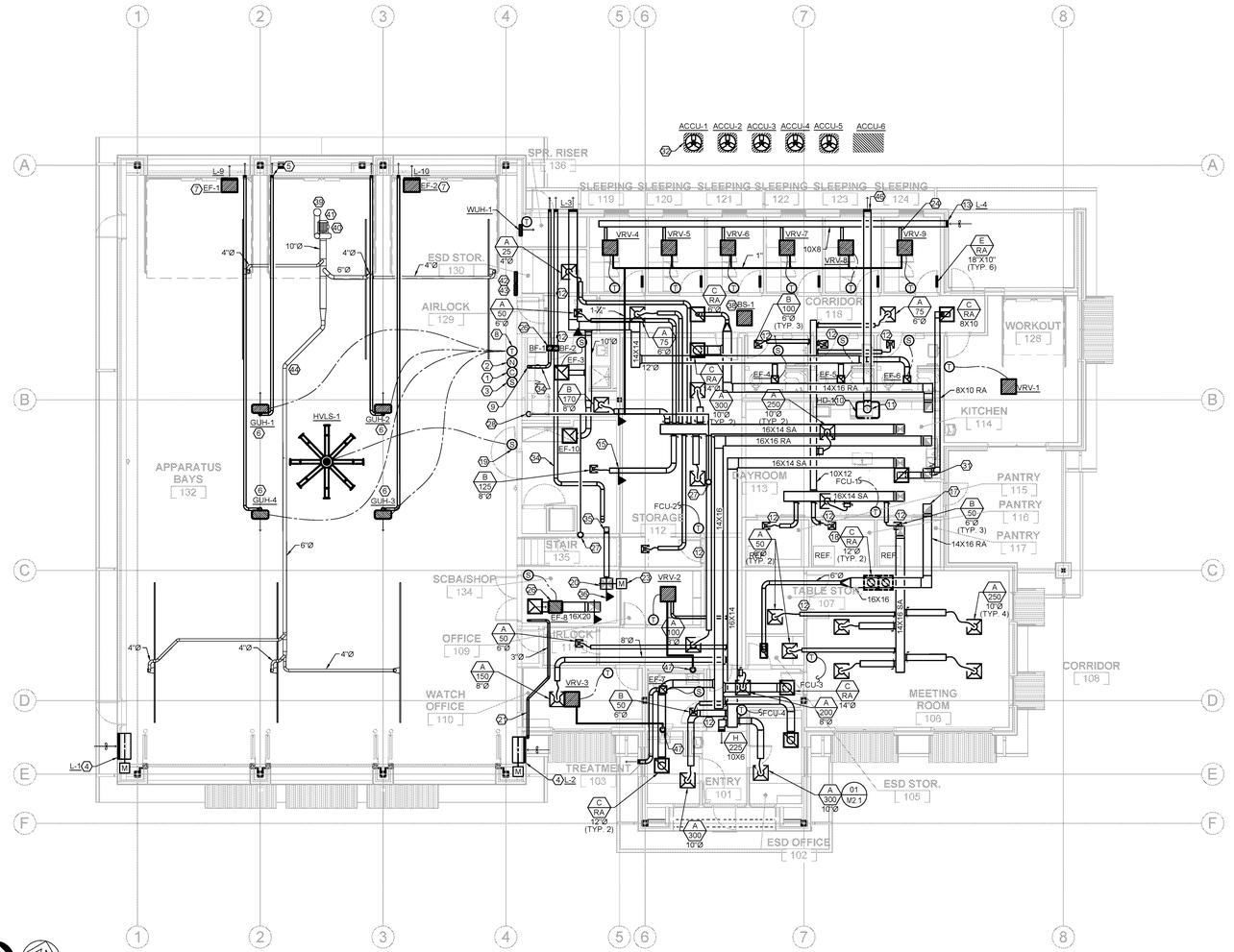
BROWN REYNOLDS WATFORD ARCHITECTS, INC.
DATE 11/16/2018
DRAWN BY EMW
CHECKED BY WD
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

NO.	REVISION	DATE
	ISSUE FOR PERMIT	11/16/18

M0.0

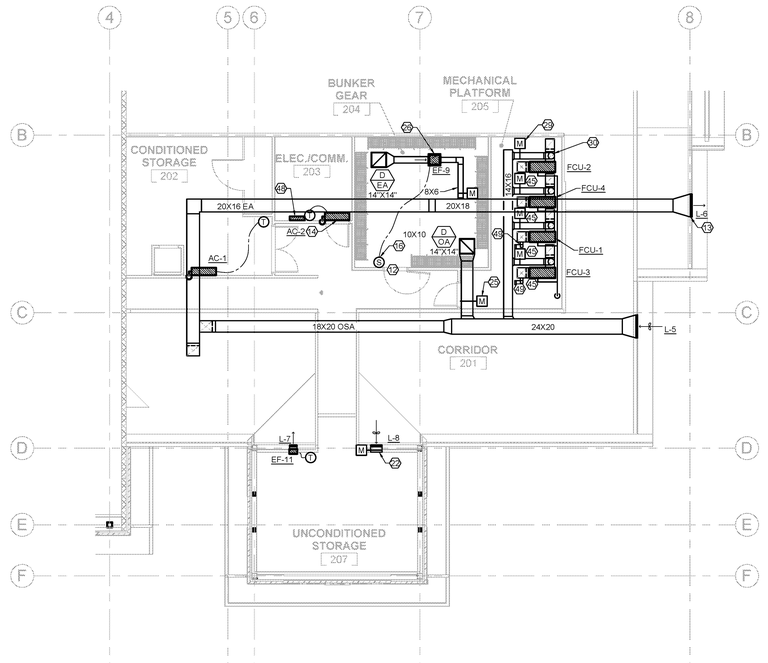
MECHANICAL SYMBOLS & ABBREVIATIONS



PLAN NORTH TRUE NORTH

1 FIRST FLOOR PLAN-MECHANICAL

1/8" = 1'-0"



PLAN NORTH TRUE NORTH

2 SECOND FLOOR PLAN-MECHANICAL

1/8" = 1'-0"

GENERAL MECHANICAL NOTES:

A. ALL DUCTWORK AND DIFFUSER/GRILLE BACK INSULATION TO HAVE A VALUE OF NO LESS THAN R-8. INSULATE ALL SUPPLY DUCTWORK.

B. ALL OUTSIDE AIR INTAKES TO BE A MINIMUM OF 10' FROM THE NEAREST EXHAUST PORT.

C. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

D. PROVIDE ACCESS PANELS TO ACCESS EQUIPMENT LOCATED ABOVE HARD LID CEILING. RE: ARCHITECTURAL.

E. INSTALL ALL DUCTWORK BELOW BOTTOM CORD OF TRUSS, WITHIN BUILDING ENVELOPE. RE: ARCHITECTURAL.

⑥ KEYED NOTES:

1. PROVIDE CO SENSOR AND INTERLOCK WITH EXHAUST FANS AND LOUVERS (EF-1,2 & L-1,2). MOUNT SENSOR AT 48" A.F.F DAMPER TO OPEN AND FAN TO ACTIVATE TO PURGE SPACE WHEN CO IS DETECTED IN EXCESS OF 25 PPM. PROVIDE AUDIO AND VISUAL ALARM AND INTERLOCK WITH STATION ALERTING SYSTEM WHEN CO EXCEEDS MANUFACTURER RECOMMENDED SETPOINTS.
2. PROVIDE NOX SENSOR AND INTERLOCK WITH EXHAUST FANS AND LOUVERS (EF-1,2 & L-1,2). MOUNT SENSOR AT 36" BELOW CEILING PANEL. DAMPER TO OPEN AND FAN TO ACTIVATE TO PURGE SPACE WHEN NOX IS DETECTED IN EXCESS OF 0.7 PPM. PROVIDE AUDIO AND VISUAL ALARM AND INTERLOCK WITH STATION ALERTING SYSTEM WHEN NOX EXCEEDS MANUFACTURER RECOMMENDED SETPOINTS.
3. PROVIDE OVERRIDE SWITCH FOR ASSOCIATED FANS AND LOUVERS (EF-1,2 & L-1,2). MOUNT AT 48" A.F.F. ALL CO AND NOX ALARMS SHALL NULLIFY OVERRIDE SWITCH.
4. INTERLOCK MOTORIZED DAMPER WITH EXHAUST FANS (EF-1 & EF-2) OPERATION. REFER TO ARCHITECTURAL FOR LOUVER LOCATION.
5. ROUTE 4"Ø TYPE B-VENT CONCENTRIC GAS FLUE ABOVE CEILING TO BACK SIDE OF BUILDING. COORDINATE FINAL LOCATION WITH ARCHITECT AND ENSURE UNITS ARE RATED FOR EXHAUST RUN LENGTHS PRIOR TO STARTING WORK. PROVIDE WITH WALL FLUE VENT CAP AT OUTLET. SIZE, ROUTE, AND INSTALL PER MANUFACTURER RECOMMENDATIONS. MOUNT ACCORDING TO MANUFACTURER SPECIFICATIONS (TYP. 4).
6. PROPANE GAS FIRED UNIT HEATER OPERATION TO BE INTERLOCKED WITH OVERHEAD DOORS. UNIT TO BE DISABLED WHEN DOORS ARE OPEN.
7. EXHAUST FAN TO BE MOUNTED TIGHT TO CEILING.
8. INTERLOCK GAS UNIT HEATERS WITH WALL MOUNTED THERMOSTAT.
9. PROVIDE 4"Ø EXHAUST DUCT CONNECTION FOR CLOTHES DRYER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. ENSURE ALL REQUIRED CLEARANCES AND REQUIREMENTS PER SECTIONS 503.3.1 AND 504 OF THE 2012 INTERNATIONAL MECHANICAL CODE.
10. PROVIDE 12"Ø EXHAUST DUCTWORK DOWN TO RANGE HOOD, HD-1.
11. ROUTE 12"Ø EXHAUST DUCTWORK THROUGH BACK SIDE OF BUILDING. COORDINATE FINAL LOCATION WITH ARCHITECT AND ENSURE RANGE HOOD IS RATED FOR EXHAUST RUN LENGTHS PRIOR TO STARTING WORK. PROVIDE WITH WALL CAP AT OUTLET. SIZE, ROUTE, AND INSTALL PER MANUFACTURER RECOMMENDATIONS.
12. UNDERCUT DOOR 3/4" FOR AIR TRANSFER.
13. COORDINATE FINAL LOUVER LOCATION WITH ARCHITECT. (TYP.)
14. MOUNT UNIT ABOVE DOOR.
15. PROVIDE FIRE DAMPER ON DUCT THROUGH WALL. (TYP.)
16. MOUNT TIMER SWITCH 48" A.F.F. AND INTERLOCK WITH EF-9. COORDINATE FINAL LOCATION WITH ARCHITECT AND TENANT.
17. DUCTWORK SERVES FAN COIL UNITS ON MECHANICAL PLATFORM. RE SECOND FLOOR PLAN-MECHANICAL. (TYP)
18. SIZE RETURN AIR GRILLES PER SCHEDULE LOCATED ON M2.1. (TYP.)
19. WALL MOUNTED SPEED CONTROLLER FOR HVLS-1.
20. TERMINATE DUCTWORK WITH WIRE MESH 20" A.F.F.
21. 3" INNER DIAMETER PVC PIPE FOR FRESH AIR INTAKE OF SCBA EQUIPMENT. CONTRACTOR SHALL CUT HOLE IN TOP OF SCBA PER MANUFACTURER'S INSTRUCTIONS. PIPE TO RUN ABOVE CEILING AND THROUGH WALL ABOVE LOUVER. TURN DOWN AND EXTEND 12". TERMINATE WITH INSECT SCREEN. PAINT ASSEMBLY TO MATCH WALL COLOR.
22. INTERLOCK MOTORIZED DAMPER WITH ASSOCIATED EF-11 OPERATION.
23. INTERLOCK MOTORIZED DAMPER WITH ASSOCIATED EF-8 OPERATION. DAMPER TO BE INSTALLED BELOW TAKE-OFF FOR GEAR DRYER MAKE-UP AIR.
24. DUCT 4"Ø OUTSIDE AIR DUCT TO VRV. BALANCE TO AIR FLOW SHOWN IN VARIABLE AIR VOLUME SCHEDULE. (TYP.)
25. INTERLOCK MOTORIZED DAMPER WITH ASSOCIATED EF-9 OPERATION.
26. PROVIDE ACCESS HATCH FOR EQUIPMENT.
27. 3/4" CONDENSATE DRAIN DOWN FROM ABOVE. CONTRACTOR TO VERIFY SLOPE AND CLEARANCES BEFORE STARTING WORK. PROVIDE 1/2" INSULATION ON PIPING. (TYP. 4)
28. 1-1/2" CONDENSATE DOWN IN WALL TO FLOOR SINK. PROVIDE AIR GAP FITTING.
29. INTERLOCK MOTORIZED DAMPER WITH ASSOCIATED FCU OPERATION. (TYP.)
30. ROUTE OUTSIDE AIR DUCT DOWN AND CONNECT TO FCU RETURN AIR DUCT. BALANCE TO AIRFLOW SHOWN IN SCHEDULE. (TYP.)
31. 6"X14" AND 10"X14" RETURN AIR DUCT UP TO 16"X14" RETURN AIR DUCT.
32. ROUTE REFRIGERANT PIPING FOR ACCU'S IN PVC SLEEVE SPECIFIED BY ARCHITECT. COORDINATE FINAL ACCU LOCATIONS AND EQUIPMENT PADS WITH ARCHITECTURAL PLANS.
33. CONTRACTOR TO ENSURE THAT EXHAUST IS INSTALLED A MINIMUM OF 10' FROM INTAKE LOUVER.
34. DRYER EXHAUST DUCT SHALL BE CONSTRUCTED OF GALVANIZED STEEL OR ALUMINUM AND MEET THE REQUIREMENTS OF 2015 IMC SECTION 603.4.
35. ROUTE 8"X8" MAKE UP AIR DUCTWORK FOR GEAR DRYER BELOW STAIRS. TERMINATE DUCTWORK WITH WIRE MESH 36" A.F.F.
36. PROVIDE FIRE DAMPER AT FLOOR PENETRATION PER 2012 IMC. (TYP.)
37. ADD ALTERNATE 5: APPARATUS EXHAUST SYSTEM SHOWN FOR COORDINATION PURPOSES ONLY. COORDINATE WITH MAGNEGRIP MANUFACTURER AND TENANT FOR FINAL LOCATION, ROUTING, AND SIZING OF ALL EQUIPMENT, DUCTWORK, AND ALL APPURTENANCES.
38. FINAL EQUIPMENT LOCATION TO BE DETERMINED BY EQUIPMENT MANUFACTURER. COORDINATE WITH OTHER DISCIPLINE REQUIREMENTS AS NECESSARY.
39. ADD ALTERNATE 5: ROOF PENETRATION FOR FAN DISCHARGE.
40. ADD ALTERNATE 5: 7.5 HP FAN MOUNTED INSIDE STRUCTURE. PROVIDE ACCESS PANEL IN CEILING TO SERVICE EQUIPMENT.
41. ADD ALTERNATE 5: VERTICAL FAN STACK WITH BACKDRAFT DAMPER AND WEATHER COVER.
42. ADD ALTERNATE 5: FUSED ELECTRICAL DISCONNECT.
43. ADD ALTERNATE 5: PLYMOVENT CENTRAL CONTROL PANEL.
44. ADD ALTERNATE 5: VEHICLE EXHAUST EXTRACTION SYSTEM TO BE PLYMOVENT MODEL ONLY. ALL DUCTWORK AND EQUIPMENT TO BE INSTALLED ABOVE THE CEILING UNLESS OTHERWISE REQUIRED BY THE MANUFACTURER. CONTACT AIR CLEANING TECHNOLOGIES FOR EQUIPMENT SPECIFICATIONS AND INSTALLATION DETAILS.
CONTACT: AARON STEWART
EMAIL: AARONS@AIRCLEANINGTECH.COM
OFFICE #: 800.351.1858 EXT. 104
CELL #: 918.852.0749
45. 3/4" CONDENSATE LINE ROUTED TO FLOOR SINK IN MECHANICAL ROOM. PROVIDE 1/2" INSULATION ON PIPING.
46. COORDINATE FINAL PENETRATION LOCATION WITH ARCHITECT.
47. CONNECT CONDENSATE TO FIXTURE TAILPIECE. PROVIDE WITH AIR GAP FITTING.
48. JACE PANEL, SPECIFIED BY OTHERS. COORDINATE FINAL LOCATION WITH ELECTRICAL EQUIPMENT. REFER TO TEMPSET SPECIFICATIONS FOR ADDITIONAL EQUIPMENT INFORMATION.
49. PROVIDE 4" TAP WITH MANUAL VOLUME DAMPER BALANCED TO 25 CFM OFF OF SUPPLY DUCT.

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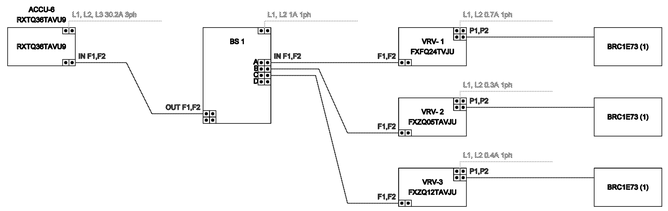
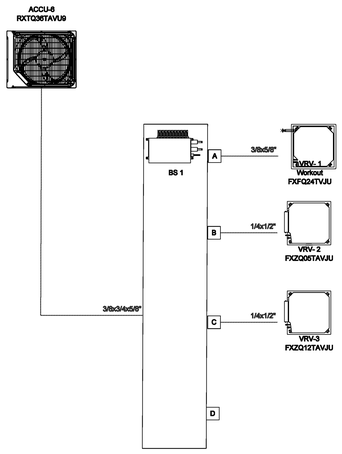
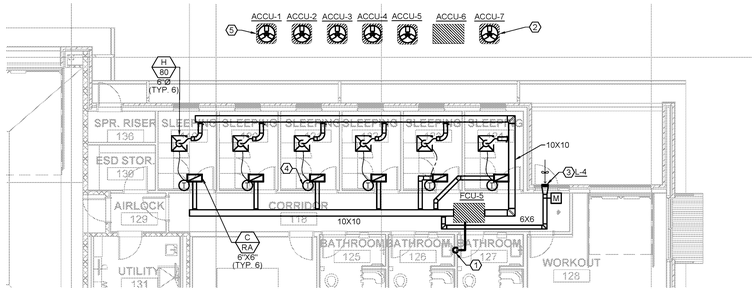
MECHANICAL FLOOR PLANS



2 VRV WIRING DIAGRAM
SCALE: NTS



1 VRV PIPING DIAGRAM
SCALE: NTS



1 FIRST FLOOR PLAN-MECHANICAL DEDUCT ALTERNATE # 3
1/8" = 1'-0"

PLAN NORTH / TRUE NORTH

GENERAL MECHANICAL NOTES:

A. ALL DUCTWORK AND DIFFUSER/GRILLE BACK INSULATION TO HAVE A VALUE OF NO LESS THAN R-8. INSULATE ALL SUPPLY DUCTWORK.

B. ALL OUTSIDE AIR INTAKES TO BE A MINIMUM OF 10' FROM THE NEAREST EXHAUST PORT.

C. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

D. PROVIDE ACCESS PANELS TO ACCESS EQUIPMENT LOCATED ABOVE HARD LID CEILING. RE: ARCHITECTURAL.

E. INSTALL ALL DUCTWORK BELOW BOTTOM CORD OF TRUSS, WITHIN BUILDING ENVELOPE. RE: ARCHITECTURAL.

(#) KEYED NOTES:

1. CONNECT CONDENSATE LINE FROM MECHANICAL EQUIPMENT TO PLUMBING FIXTURE TAILPIECE. PROVIDE WITH AIR GAP FITTING.
2. ROUTE REFRIGERANT PIPING FOR ACCU'S IN PVC SLEEVE PROVIDED BY ARCHITECT. COORDINATE FINAL ACCU LOCATIONS WITH ARCHITECTURAL PLANS.
3. COORDINATE FINAL LOUVER LOCATION WITH ARCHITECT.
4. PROVIDE VAV DIFFUSER WITH MANUFACTURER SPECIFIED THERMOSTAT. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH ARCHITECT. (TYP.)
5. ACCU-1 THROUGH ACCU-5 ARE SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO BASELINE DESIGN FOR EQUIPMENT INFORMATION.

FAN AND COIL UNIT SCHEDULE - ELECTRIC HEAT (DEDUCT ALT. #3)

MARK	DX COOLING COIL							SUPPLY FAN		ELECTRIC HEAT	VOLTS PHASE	MCA	MOCP	WEIGHT LBS.	REFRIG.	MANUFACTURER
	SUPPLY CFM	OA CFM	SUMMER EAT DB/WB	LAT DB / WB	OA TEMP DB / WB	TOTAL BTUH	SENSIBLE BTUH	HP	STATIC PRESS							
FCU-5	675	100	78.2 / 64.6	57.2 / 56.7	99 / 75	16,000	13,000	1 / 3	0.5	4 KW	208 / 1	12.8	15	100	R-410A	DAIKIN FDMQ18RVJU

1. SELECT SYSTEM ON ARI CONDITIONS.
2. CONDENSING UNIT AND FAN & COIL UNIT TO MATCH.
3. FILTERS TO BE AS SPECIFIED.
4. STATIC PRESSURE INCLUDES DUCTWORK, GRILLES AND RETURN AIR LOSS.
5. STATIC PRESSURE LOSS THRU FILTER IS CLEAN.
6. STAINLESS STEEL IAQ DRAIN PANS.
7. PROVIDE UNITS WITH CONDENSATE FLOAT SWITCH IN THE PRIMARY DRAIN PAN, REFER TO DETAIL.
8. REFER TO PLANS FOR UNIT ORIENTATION AND DUCT LOCATIONS.
9. PROVIDE WITH ACCESSIBLE HINGED ACCESS DOORS FOR MONTHLY MAINTENANCE.
10. PROVIDE FCU WITH PROGRAMMABLE THERMOSTAT.
11. PROVIDE SPRING VIBRATION ISOLATION FOR UNIT.
12. FAN COIL TAKES POWER FROM CONDENSING UNIT.

AIR DEVICE SCHEDULE (DEDUCT ALT. #3)

MARK	DESCRIPTION	RADIATION DAMPER	OBD DAMPER	MANUFACTURER: TITUS OR EQUAL
C	RETURN AIR GRILLE	NO	NO	PAR - AA, PERFORATED FACE LAY-IN, SEE PLANS FOR SIZE
H	VAV SUPPLY DIFFUSER	NO	NO	T3SQ-2, LAY-IN, 24X24

1. VERIFY ALL CEILING TYPES WITH ARCHITECTURAL DRAWINGS.
2. ALL AIR DEVICES SHALL BE ALUMINUM, UNLESS NOTED.
3. SUPPLY RADIATION DAMPERS FOR DEVICES PENETRATING RATED CEILINGS.
4. VERIFY FINAL COLOR / FINISH WITH ARCHITECT FOR ALL DIFFUSERS AND GRILLES.

A1 / 200 / 10"Ø (TYP.2) — DIFFUSER/GRILLE MARK, CFM, NECK SIZE, TYPICAL OF QUANTITY

AIR COOLED CONDENSING UNIT SCHEDULE (DEDUCT ALT. #3)

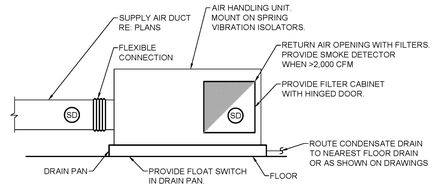
MARK	SERVES	TOTAL BTUH	AMBIENT TEMP	SEER / EER	VOLTS PHASE	MCA	MOCP	WEIGHT LBS.	REFRIG.	MANUFACTURER	NOTES
ACCU-6	VRV'S	20,000	105	18 / 12	208 / 1	16.5	25	200	R-410A	DAIKIN RXTQ36TAVU9	4,5,6,7,8,9,10
ACCU-7	FCU-5	16,000	105	18.5 / 12.5	208 / 1	12.8	15	125	R-410A	DAIKIN RX18RMVJU	1,2,3

1. PROVIDE UNIT WITH CRANK CASE HEATER, SITE GLASS, HIGH & LOW LIMIT SWITCHES, TIME GUARD RELAY, LIQUID LINE FILTER DRYER AND CONVENIENCE OUTLET.
2. INSTALL ALL UNITS ON 4" CONCRETE PAD.
3. PROVIDE WITH LOW AMBIENT CONTROL KIT.
4. SYSTEM MUST PROVIDE CONTINUOUS HEATING DURING DEFROST AND OIL RETURN. SYSTEMS WITHOUT THIS CAPABILITY MUST BE DE-RATED TO ACCOUNT FOR HEATING LOST DURING DEFROST CYCLE AND UNIT.
5. CONDENSING UNITS MUST HAVE AUTO CHANGE OVER FUNCTIONS.
6. SYSTEM SHALL BE PROVIDED WITH I-TOUCH MANAGER CONTROLLER WITH WEB BASED SOFTWARE FOR DISPLAYING UP TO 8 DIII - NET SYSTEMS WITH 128 INDOOR UNITS PER SYSTEM. PC BY OTHERS.
7. MANUFACTURER'S SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUME.
8. CONTRACTOR TO VERIFY PIPING DIMENSIONS.
9. INSTALLING CONTRACTOR MUST HAVE SUCCESSFULLY COMPLETED MANUFACTURER'S CERTIFIED INSTALLATION CLASS WITHIN PAST 36 MONTHS.
10. MANUFACTURER MUST PROVIDE 10 YEARS PARTS WARRANTY ON ALL VRV'S, CONDENSING UNITS, MODE CHANGE OVER DEVICES, AND ZONE CONTROLS. WARRANTY CONDITIONS MUST BE CLARIFIED DURING SUBMITTAL PHASE.

VARIABLE REFRIGERANT VOLUME INDOOR UNIT SCHEDULE (DEDUCT ALT. #3)

MARK	SERVES	SUPPLY CFM	COOLING MBH	HEATING MBH	VOLTS PHASE	MCA	MOCP	WEIGHT (LBS)	MANUFACTURER	NOTES
VRV-1	WORKOUT	775	11	7.5	208 / 1	0.7	15	60	DAIKIN FXFQ24TVJU	1,2
VRV-2	OFFICE	300	1	0.5	208 / 1	0.3	15	50	DAIKIN FXZQ05AVJU	1,2
VRV-3	WATCH OFFICE	350	8	3	208 / 1	0.4	15	50	DAIKIN FXZQ12AVJU	2

1. PROVIDE WITH MANUFACTURER'S FRESH AIR INTAKE KIT.
2. REFER TO BASELINE DESIGN FOR EQUIPMENT LOCATIONS.



01 FAN COIL UNIT - HORIZONTAL
SCALE: NTS

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MECHANICAL DEDUCT ALTERNATE # 4

FAN AND COIL UNIT SCHEDULE - ELECTRIC HEAT

MARK	DX COOLING COIL							SUPPLY FAN		ELECTRIC HEAT	VOLTS PHASE	MCA	MOCP	WEIGHT LBS.	REFRIG.	MANUFACTURER
	SUPPLY CFM	OA CFM	SUMMER EAT DB/WB	LAT DB / WB	OA TEMP DB / WB	TOTAL BTUH	SENSIBLE BTUH	HP	STATIC PRESS							
FCU-1	1,050	225	80.3 / 65.2	57.3 / 56.8	99 / 75	25,000	19,000	1 / 3	0.75	HK-1	208 / 1	2.2	15	150	R-410A	DAIKIN ARUF29B14A
FCU-2	1,195	250	80.1 / 65.2	57.3 / 56.8	99 / 75	25,000	17,000	1 / 3	0.75	HK-2	208 / 1	2.2	15	150	R-410A	DAIKIN ARUF29B14A
FCU-3	1,225	250	80.0 / 65.1	55.2 / 54.7	99 / 75	41,000	31,000	1 / 2	0.75	HK-3	208 / 1	4	15	175	R-410A	DAIKIN ARUF43B14A
FCU-4	1,225	225	79.9 / 65.1	55.3 / 54.8	99 / 75	31,000	26,000	1 / 3	0.75	HK-4	208 / 1	4	15	175	R-410A	DAIKIN ARUF37B14A

1. SELECT SYSTEM ON ARI CONDITIONS.
2. CONDENSING UNIT AND FAN & COIL UNIT TO MATCH.
3. FILTERS TO BE AS SPECIFIED.
4. STATIC PRESSURE INCLUDES DUCTWORK, GRILLES AND RETURN AIR LOSS.
5. STATIC PRESSURE LOSS THRU FILTER IS CLEAN.
6. STAINLESS STEEL IAQ DRAIN PANS.
7. PROVIDE UNITS WITH CONDENSATE FLOAT SWITCH IN THE PRIMARY DRAIN PAN, REFER TO DETAIL.
8. REFER TO PLANS FOR UNIT ORIENTATION AND DUCT LOCATIONS.
9. PROVIDE WITH ACCESSIBLE HINGED ACCESS DOORS FOR MONTHLY MAINTENANCE.
10. PROVIDE FCU WITH PROGRAMMABLE THERMOSTAT.
11. PROVIDE SPRING VIBRATION ISOLATION FOR UNIT.
12. ELECTRIC HEAT KITS AND FAN COIL UNITS TO BE A SINGLE CONNECTION POINT.

ELECTRIC HEAT KITS

MARK	ELECTRICAL					MANUFACTURER
	ELECTRIC HEAT KW	VOLTS/PHASE/HZ	AMPS	MCA	MOCP	
HK-1	6	208-230V/1/60	21.7	29	30	DAIKIN HKSX06KC
HK-2	6	208-230V/1/60	21.7	29	30	DAIKIN HKSX06KC
HK-3	6	208-230V/1/60	21.7	31	35	DAIKIN HKSX06KC
HK-4	6	208-230V/1/60	21.7	31	35	DAIKIN HKSX06KC

UNIT HEATERS - PROPANE GAS FIRED

MARK	TYPE	CFM	GAS FIRED BTUH		VENT DIA	HP	VOLT PHASE	MOTOR RPM	APPROX. WEIGHT (LBS)	MANUFACTURER / MOD#	NOTES
			INPUT	OUTPUT							
GUH-1	HORIZONTAL	1,600	100,000	83,000	5"~	0.10	120 / 1	1,050	150	TRANE GHNE100	ALL NOTES APPLY
GUH-2	HORIZONTAL	1,600	100,000	83,000	5"~	0.10	120 / 1	1,050	150	TRANE GHNE100	ALL NOTES APPLY
GUH-3	HORIZONTAL	1,600	100,000	83,000	5"~	0.10	120 / 1	1,050	150	TRANE GHNE100	ALL NOTES APPLY
GUH-4	HORIZONTAL	1,600	100,000	83,000	5"~	0.10	120 / 1	1,050	150	TRANE GHNE100	ALL NOTES APPLY

1. PROVIDE PERM. SPLIT CAP. MOTOR.
2. ALL FANS TO HAVE DISCONNECT SWITCHES.
3. UNIT TO HAVE ELECTRONIC IGNITION.
4. ALUMINUM HEAT EXCHANGER.
5. PROVIDE WITH CEILING HUNG MOUNTING KIT AND GAS SHUT OFF VALVE
6. INCLUDE FACTORY SUPPLIED LOCKABLE THERMOSTAT COVER. THERMOSTAT MOUNTED ON WALL.
7. GUH TO BE INTERLOCKED WITH OVERHEAD DOORS, SUCH THAT WHEN OVERHEAD DOORS ARE OPEN, GUH ARE OFF.
8. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND CLEARANCE REQUIREMENTS.
9. MINIMUM HEIGHT TO BOTTOM OF UNIT HEATER SHALL BE 16' A.F.F.
10. PROVIDE WITH MANUFACTURER'S PROPANE CONVERSION KIT.

AIR COOLED CONDENSING UNIT SCHEDULE

MARK	SERVES	TOTAL BTUH	AMBIENT TEMP	SEER / EER	VOLTS PHASE	MCA	MOCP	WEIGHT LBS.	REFRIG.	MANUFACTURER	NOTES
ACCU-1	FCU-1	25,000	105	13 / 11	208 / 1	16.7	25	150	R-410A	DAIKIN DX13SA0301A	1,2,3
ACCU-2	FCU-2	25,000	105	13 / 11	208 / 1	16.7	25	150	R-410A	DAIKIN DX13SA0301A	1,2,3
ACCU-3	FCU-3	41,000	105	13 / 11	208 / 1	23.7	40	200	R-410A	DAIKIN DX13SA0421A	1,2,3
ACCU-4	FCU-4	31,000	105	13 / 11	208 / 1	18.8	30	150	R-410A	DAIKIN DX13SA0361A	1,2,3
ACCU-5	AC-1 & 2	24,000	105	13 / 11	208 / 1	22.6	25	150	R-410A	DAIKIN 3MXL24RMVJU	1,2,3
ACCU-6	VRVS	64,500	105	15.3 EER	208 / 3	30.2	35	600	R-410A	DAIKIN REYQ72TATJU	4,5,6,7,8,9,10

1. PROVIDE UNIT WITH CRANK CASE HEATER, SITE GLASS, HIGH & LOW LIMIT SWITCHES, TIME GUARD RELAY, LIQUID LINE FILTER DRYER AND CONVENIENCE OUTLET.
2. INSTALL ALL UNITS ON 4" CONCRETE PAD.
3. PROVIDE WITH LOW AMBIENT CONTROL KIT.
4. SYSTEM MUST PROVIDE CONTINUOUS HEATING DURING DEFROST AND OIL RETURN. SYSTEMS WITHOUT THIS CAPABILITY MUST BE DE-RATED TO ACCOUNT FOR HEATING LOST DURING DEFROST CYCLE AND UNIT.
5. CONDENSING UNITS MUST HAVE AUTO CHANGE OVER FUNCTIONS.
6. SYSTEM SHALL BE PROVIDED WITH i-TOUCH MANAGER CONTROLLER WITH WEB BASED SOFTWARE FOR DISPLAYING UP TO 8 DIII - NET SYSTEMS WITH 128 INDOOR UNITS PER SYSTEM. PC BY OTHERS.
7. MANUFACTURER'S SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUME.
8. CONTRACTOR TO VERIFY PIPING DIMENSIONS.
9. INSTALLING CONTRACTOR MUST HAVE SUCCESSFULLY COMPLETED MANUFACTURER'S CERTIFIED INSTALLATION CLASS WITHIN PAST 36 MONTHS.
10. MANUFACTURER MUST PROVIDE 10 YEARS PARTS WARRANTY ON ALL VRV'S, CONDENSING UNITS, MODE CHANGE OVER DEVICES, AND ZONE CONTROLS. WARRANTY CONDITIONS MUST BE CLARIFIED DURING SUBMITTAL PHASE.

VARIABLE REFRIGERANT VOLUME INDOOR UNIT SCHEDULE

MARK	SERVES	SUPPLY CFM	COOLING MBH	HEATING MBH	VOLTS PHASE	MCA	MOCP	WEIGHT (LBS)	MANUFACTURER	NOTES
VRV-1	WORKOUT	775	11	7.5	208 / 1	0.7	15	60	DAIKIN FXFQ24TVJU	1
VRV-2	OFFICE	300	1	0.5	208 / 1	0.3	15	50	DAIKIN FXZQ05AVJU	1
VRV-3	WATCH OFFICE	350	8	3	208 / 1	0.4	15	50	DAIKIN FXZQ12AVJU	
VRV-4	SLEEPING	300	2	1.5	208 / 1	0.3	15	50	DAIKIN FXZQ05AVJU	1
VRV-5	SLEEPING	300	2	1.5	208 / 1	0.3	15	50	DAIKIN FXZQ05AVJU	1
VRV-6	SLEEPING	300	2	1.5	208 / 1	0.3	15	50	DAIKIN FXZQ05AVJU	1
VRV-7	SLEEPING	300	2	1.5	208 / 1	0.3	15	50	DAIKIN FXZQ05AVJU	1
VRV-8	SLEEPING	300	2	1.5	208 / 1	0.3	15	50	DAIKIN FXZQ05AVJU	1
VRV-9	SLEEPING	300	2	1.5	208 / 1	0.3	15	50	DAIKIN FXZQ05AVJU	1

1. PROVIDE WITH MANUFACTURER'S FRESH AIR INTAKE KIT.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	RADIATION DAMPER	OBD DAMPER	MANUFACTURER: TITUS OR EQUAL
A	CEILING DIFFUSER	NO	NO	OMNI - AA, SQUARE PLAQUE LAY-IN, 24X24
B	CEILING DIFFUSER	NO	NO	OMNI - AA, SQUARE PLAQUE SURFACE MOUNT, 24X24
C	RETURN AIR GRILLE	NO	NO	PAR - AA, PERFORATED FACE LAY-IN, 24X24
D	RETURN AIR GRILLE	NO	NO	PAR - AA, PERFORATED FACE SURFACE MOUNT, 24X24
E	DOOR GRILLE	NO	NO	CT - 700L, PROVIDE GRILLE ON BOTH SIDES OF DOOR
F	CEILING DIFFUSER	NO	NO	OMNI - AA, SQUARE PLAQUE SURFACE MOUNT, 12X12
G	EXHAUST AIR GRILLE	NO	NO	350FL, SURFACE MOUNT
H	WALL GRILLE	NO	NO	300FL, SURFACE MOUNT

1. VERIFY ALL CEILING TYPES WITH ARCHITECTURAL DRAWINGS.
2. ALL AIR DEVICES SHALL BE ALUMINUM, UNLESS NOTED.
3. SUPPLY RADIATION DAMPERS FOR DEVICES PENETRATING RATED CEILINGS.
4. VERIFY FINAL COLOR / FINISH WITH ARCHITECT FOR ALL DIFFUSERS AND GRILLES.

A1 / 000 / 10"Ø (TYP.2) — DIFFUSER/GRILLE MARK; CFM; NECK SIZE; TYPICAL OF QUANTITY

ELECTRIC WALL UNIT HEATER

MARK	SERVICE	BTU/H	AMPS	WATTS	VOLT PHASE	MANUFACTURER
WUH-1	FIRE RISER	5,120	12.5	1,500	120 / 1	BERKO - HT 1502SS

1. PROVIDE FOR RECESSED MOUNT INSTALLATION IN WALL.
2. WALL HEATER FACE PLATE DIMENSIONS TO BE 13-11/16" W x 19-9/16" H x 1" DEEP.
3. PROVIDE WITH BUILT IN FAN DELAY, PROVIDE INTEGRAL T-STAT.
4. MOUNT UNIT 18-24" A.F.F. PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

VARIABLE REFRIGERANT VOLUME -ZONE HEAT RECOVERY DEVICE SCHEDULE

TAG	SERVES	VOLTAGE PHASE	MCA	MOCP	MAX. CAPACITY (PER PORT)	DIMENSIONS (WXHXD IN.)	WEIGHT LBS	MANUFACTURER
BS-1	ACCU-6	230 / 1	1	15	54,000	22.8X11.7X18.9	85	DAIKIN BS10Q54TVJ

1. INDIVIDUAL CONTROL AND CHANGE OVER CAPACITY.
2. UNLIMITED NUMBER OF UNUSED PORTS PER BOX OR SYSTEM.
3. NO DRAIN PIPING NEEDED.
4. STANDARD LIMITED WARRANTY: 10 YEAR WARRANTY ON ALL PARTS.
5. LOCATION OF EQUIPMENT TO BE DETERMINED BY MANUFACTURER.

FAN SCHEDULE

MARK	SERVICE	CFM	STATIC PRESS	FAN RPM	DRIVE TYPE	VOLT PHASE	POWER	SONES	WEIGHT	MANUFACTURER	NOTES
EF-1	APPARATUS BAY	1800	0.75	1725	BELT	208 / 1	3 / 4 HP	22	125	GREENHECK SBE-2H24-7	1, 3, 5, 8, 9, 11
EF-2	APPARATUS BAY	1800	0.75	1725	BELT	208 / 1	3 / 4 HP	22	125	GREENHECK SBE-2H24-7	1, 3, 5, 8, 9, 11
EF-3	UTILITY	200	0.50	1050	DIRECT	115 / 1	81 W	3.5	30	GREENHECK SP-A290	1, 2, 4, 6
EF-4	TOILET	150	0.50	900	DIRECT	115 / 1	49 W	3.5	30	GREENHECK SP-A200	1, 2, 4, 6
EF-5	TOILET	150	0.50	900	DIRECT	115 / 1	49 W	3.5	30	GREENHECK SP-A200	1, 2, 4, 6
EF-6	TOILET	150	0.50	900	DIRECT	115 / 1	49 W	3.5	30	GREENHECK SP-A200	1, 2, 4, 6
EF-7	TOILET	150	0.50	900	DIRECT	115 / 1	49 W	3.5	30	GREENHECK SP-A200	1, 2, 4, 6
EF-8	SCBA	2,000	0.75	1725	DIRECT	208 /1	2 HP	13.5	150	GREENHECK SQ-160-VG	1, 2, 3, 5
EF-9	BUNKER ROOM	200	0.50	1725	DIRECT	115 / 1	1 / 4 HP	11.4	50	GREENHECK SQ-97-VG	1, 2, 3, 4, 7
EF-10	EMS DECON	125	0.50	900	DIRECT	115 / 1	49 W	3.5	30	GREENHECK SP-A200	1, 2, 4
EF-11	UNCOND. STOR	500	0.15	1725	DIRECT	115 / 1	1 / 30 HP	9.0	50	GREENHECK SDPE-D-10G-1-DS	1, 2, 3, 5
BF-1	CLOTHES DRYER	150	0.50	2175	DIRECT	115 / 1	64.8 W	--	10	FANTECH DBF 110	10
BF-2	GEAR DRYER	300	0.50	3050	DIRECT	115 / 1	140 W	--	15	VORTEX VTX600	10

1. PROVIDE WITH DISCONNECT SWITCH.
2. PROVIDE WITH SPEED CONTROLLER LOCATED ON DIRECT DRIVE FAN.
3. PROVIDE SPRING ISOLATION SUPPORTS.
4. PROVIDE WITH INTEGRAL BACKDRAFT DAMPER.
5. PROVIDE WITH INTEGRAL MOTORIZED DAMPER.
6. INTERLOCK FAN WITH WALL MOUNTED SWITCH.
7. FAN TO BE CONTROLLED WITH WALL MOUNTED TIMER SWITCH. SWITCH TO BE 2-HOUR DIAL STYLE.
8. FAN TO BE CONTROLLED WITH WALL MOUNTED IAQ SENSORS AND OVERRIDE SWITCH.
9. EXHAUST FAN TO BE INTERLOCKED WITH STATION ALERTING SYSTEM. PROVIDE WITH DELAYED ON/DELAYED OFF TIMER.
10. FAN TO BE INTERLOCKED WITH APPLIANCE OPERATION.
11. PROVIDE WITH SPEED CONTROLLER ON FAN.

LOUVER SCHEDULE

MARK	SERVICE	CFM	WIDTH (INCHES)	HEIGHT (INCHES)	VELOCITY (FPM)	FREE AREA (SF)	MANUFACTURER	NOTES
L-1	OUTSIDE AIR	1,800	36	24	612	2.94	RUSKIN - ELF6375DX	1, 2, 3, 4, 5, 6
L-2	OUTSIDE AIR	1,800	36	24	612	2.94	RUSKIN - ELF6375DX	1, 2, 3, 4, 5, 6
L-3	EXHAUST	875	16	24	723	1.21	RUSKIN - ELF6375DX	1, 2, 3, 4, 5
L-4	OUTSIDE AIR	300	14	14	577	0.52	RUSKIN - ELF6375DX	1, 2, 3, 4, 5
L-5	OUTSIDE AIR	3,450	36	36	714	4.83	RUSKIN - ELF6375DX	1, 2, 3, 4, 5
L-6	EXHAUST	2,200	36	36	455	4.83	RUSKIN - ELF6375DX	1, 2, 3, 4, 5
L-7	EXHAUST	500	12	20	704	0.71	RUSKIN - ELF6375DX	1, 2, 3, 4, 5
L-8	OUTSIDE AIR	500	12	20	704	0.71	RUSKIN - ELF6375DX	1, 2, 3, 4, 5
L-9	EXHAUST	1,800	26	26	763	2.36	RUSKIN - ELF6375DX	1, 2, 3, 4, 5
L-10	EXHAUST	1,800	26	26	763	2.36	RUSKIN - ELF6375DX	1, 2, 3, 4, 5

1. VERIFY FINAL COLOR / FINISH WITH ARCHITECT FOR ALL LOUVERS.
2. LOUVER TO BE STATIONARY TYPE.
3. LOUVER TO BE OF ALUMINUM MATERIAL.
4. PROVIDE DAMPER AS INDICATED ON DRAWINGS.
5. PROVIDE LOUVER WITH BIRD SCREEN.
6. L-1 & 2 MOTORIZED DAMPER TO BE INTERLOCKED WITH EF-1 & 2 OPERATION.

HIGH VOLUME LOW SPEED FAN SCHEDULE

MARK	BLADES	SIZE	HP	MAX RPM	VOLT PHASE	AMPS	MOCP	WEIGHT	MANUFACTURER
HVLS-1	8	10'	1.0	160	208 / 3	10.0	15	231	BAF PFX3-10

1. ALL FANS SUPPLIED WITH BAF CONTROL BOX WITH VARIABLE FREQUENCY DRIVE INCLUDING LINE FILTER.
2. CONTRACTOR TO COORDINATE WITH OWNER FOR EXACT FAN LOCATION.
3. CONTRACTOR TO COORDINATE WITH OWNER FOR SWITCH CONTROL LOCATION.
4. PROVIDE WITH 2' EXTENSION TUBE. CONTRACTOR TO VERIFY EXTENSION TUBE LENGTH AND MOUNTING BRACKET WITH MANUFACTURER PRIOR TO ORDERING.
5. BOTTOM OF FANS SHALL BE AT LEAST 10' A.F.F.
6. FANS SHALL BE AT LEAST 2' AWAY, IN ALL DIRECTIONS, FROM POSSIBLE OBSTRUCTIONS.
7. FANS SHALL NOT BE MOUNTED WITHIN 2 TIMES THE FAN DIAMETER OF EXHAUST OR RETURN AIR INTAKES, AND SHALL NOT BE IN DIRECT LINE OF DISCHARGE OF HVAC EQUIPMENT.
8. EXTENSION TUBES 4' OR LONGER SHALL BE INSTALLED WITH GUYWIRES PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
9. FANS SHALL BE AT THE SAME LEVEL OR HIGHTER THAN RADIANT HEATERS AND OUTSIDE THE MINIMUM CLEARANCE TO COMBUSTIBLES.
10. FANS SHALL BE AT LEAST TWO AND ONE-HALF TIMES THE DIAMETER OF THE LARGEST FAN AWAY FROM NEIGHBORING FANS.
11. FANS SHALL BE TIED INTO FIRE PROTECTION SYSTEM. FANS WILL SHUT DOWN UPON ACTIVATION OF FIRE ALARM.
12. MANUFACTURER TO BE BIG ASS FANS OR EQUAL.

KITCHEN RANGE HOOD

MARK	SERVICE	CFM	FAN CONTROL	FUEL CUTOFF (GAS)	VOLT PHASE	AMPS	LIGHT BULB	MANUFACTURER
HD-1	RANGE	510	INF. VAR.	120 VAC SOLENOID	120 / 1	5	60A15/TF	DENLAR D1036-IG-DF

1. DENLAR RANGE HOOD FIRE PROTECTION 1000 SERIES, WALL MOUNTED.
2. HOOD TO BE STAINLESS STEEL CONSTRUCTION.
3. HOOD TO BE PREINSTALLED WITH AUTOMATIC FIRE SUPPRESION SYSTEM, WITH 212° RATED FUSIBLE LINKS.
4. EXTINGUISHING AGENT TO BE WET CHEMICAL POTASSIUM CITRATE OR POTASSIUM ACETATE SOLUTION.
5. PROVIDE WITH 12" TOP VENTING CENTRIFUGAL IN-LINE DUCT FAN.
6. HOOD TO BE ETL LABELED TO UL300A AND UL507A.
7. HOOD SHALL AUTOMATICALLY DISCONNECT RANGE FUEL UPON SYSTEM DISCHARGE VIA GAS SOLENOID.
8. HOOD TO HAVE 2 ALARM CONNECTION TERMINALS PRE-INSTALLED AND INTERNAL AUDIBLE BUZZER (90 DB).
9. PROVIDE WITH 60W INCANDESCENT SHATTER PROOF BULB.
10. SOLENOID TO BE 3/4" FOR GAS FLOW OF 247,500 BTU/H, 50 PSI DIFFERENTIAL WITH UL LISTING FOR SAFETY SHUT-OFF VALVE (NORMALLY CLOSED).

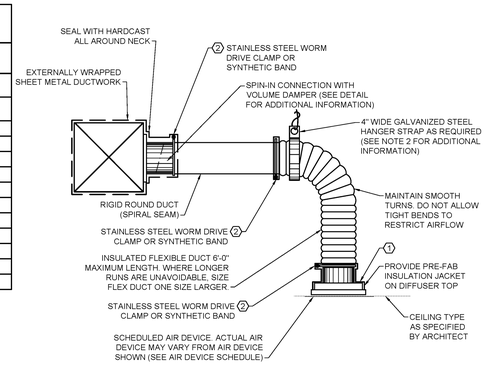
KITCHEN HOOD INFORMATION

HOOD #1
HOOD SIZE: 4.8 SQ. FT.
EXHAUST DUCT SIZE: 1 @ 12"Ø
EXHAUST DUCT GAUGE: MINIMUM 16 GAUGE THICK, WELDED BLACK STEEL INSULATED WITH 2" THICK FIRESTOP INSULATION.
EXHAUST FAN CFM: 510 CFM @ 1,500 FPM
COOKING EQUIPMENT HOOD SERVES: RANGE.

DUCTLESS SPLIT SYSTEM SCHEDULE

MARK	DX COOLING COIL		SUPPLY FAN		WEIGHT (LBS)	MANUFACTURER
	SUPPLY CFM	COOLING BTUH	WATTS	VOLTS PHASE		
AC-1	310	12,000	26	208 / 1	30	DAIKIN FTXS12LVJU
AC-2	310	12,000	26	208 / 1	30	DAIKIN FTXS12LVJU

1. PROVIDE UNITS WITH CONDENSATE FLOAT SWITCH IN THE PRIMARY DRAIN PAN, INTERLOCK WITH UNIT OPERATION TO PREVENT OVERFLOW. NO CONDENSATE PUMP TO BE PROVIDED.
2. POWERED FROM OUTDOOR UNIT.



01 CEILING DIFFUSER INSTALLATION DETAIL

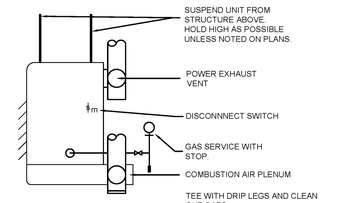
SCALE: NTS

1. CEILING DIFFUSER SHALL BE INSTALLED SUCH THAT THE FACE OF DIFFUSER IS FLUSH WITH CEILING.
2. SUPPORT FLEXIBLE DUCT FROM STRUCTURE. FLEXIBLE DUCT SHALL NOT KINK, SAG OR REST ON LIGHT FIXTURE, CEILING SUPPORT "TEES" OR CEILING TILE. 5'-0" MAXIMUM DISTANCE PER DUCT SUPPORT. MAXIMUM SAG 1/ 2" PER FOOT OF SUPPORT SPACING. KEEP AS HIGH AS POSSIBLE TO MAXIMIZE STRAIGHT APPROACH.
3. ALL DUCT INSULATION TO BE IECC REQUIRED MINIMUM OR BETTER.
4. ALL DUCTWORK AND GRILLE BACKS TO HAVE A MINIMUM INSULATION VALUE OF R-8.

KEYED NOTES:

1 FOR UNCONDITIONED CEILING PLENUMS, INSULATE ENTIRE BACK OF CEILING DIFFUSER WITH 1" DUCT WRAP AND SEAL WITH VAPOR BARRIER TAPE. INSULATION TO BE A MINIMUM OF R-8.

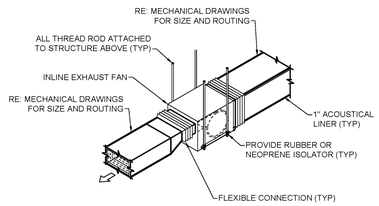
2 EXTEND INSULATION AND OUTER JACKET OVER THE SECURE CLAMP/BAND AND TAPE DOWN TO SLEEVE/COLLAR TO MAINTAIN VAPOR BARRIER INTEGRITY. (TYPICAL)



02 APPARATUS BAY UNIT HEATER DETAIL

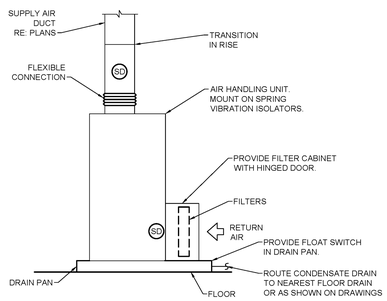
SCALE: NTS

1. UNITS MUST MEET ALL IECC REQUIREMENTS.
2. IF OVER 50 CF/1000 BTUH, NO COMBUSTION REQUIRED.



03 INLINE EXHAUST FAN DETAIL

SCALE: NTS



04 FAN COIL UNIT - VERTICAL

SCALE: NTS

BROWN REYNOLDS WATFORD ARCHITECTS
2700 EARL RUDDER FRWY SOUTH
SUITE 4000
COLLEGE STATION, TEXAS 77845
979.694.1791
WWW.BRWARCH.COM

1250 Wood Branch Park Dr
Suite 600
Houston, TX 77079
(281) 493-7500
www.dvo.com
Registration No. F-8334

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

NO.	REVISION	DATE
	ISSUE FOR PERMIT	11/16/18

BRW PROJECT NUMBER 2170700
CHECKED BY WD
DRAWN BY EMW
DATE 11/16/2018

BROWN REYNOLDS WATFORD ARCHITECTS, INC.
1250 WOOD BRANCH PARK DR. / ATFORD RD
SUITE 600 / 2700 EARL RUDDER FRWY SOUTH
HOUSTON, TX 77079 / COLLEGE STATION, TX 77845

M2.1

MECHANICAL SCHEDULES & DETAILS

MECHANICAL:
THE CONTRACTOR SHALL PROVIDE THE FOLLOWING ENERGY CODE REQUIREMENTS:
THE FOLLOWING REQUIREMENTS ARE MANDATORY PROVISIONS AND ARE NECESSARY FOR COMPLIANCE WITH THE CODE.

DRAWINGS: CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM: THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES.

MANUALS: CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT AN OPERATING MANUAL AND A MAINTENANCE MANUAL BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE. THESE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS (SEE APPENDIX E) AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
(A) SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
(B) OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
(C) NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY.
(D) HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET-POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS.
(E) A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SUGGESTED SET-POINTS.

ENERGY CODE - SHUTOFF DAMPER CONTROLS BOTH OUTDOOR AIR SUPPLY AND EXHAUST SYSTEMS SHALL BE EQUIPPED WITH MOTORIZED DAMPERS THAT WILL AUTOMATICALLY SHUT WHEN THE SYSTEMS OR SPACES SERVED ARE NOT IN USE. VENTILATION OUTDOOR AIR DAMPERS SHALL BE CAPABLE OF AUTOMATICALLY SHUTTING OFF DURING PREOCCUPANCY BUILDING WARM-UP, COOL DOWN, AND SETBACK, EXCEPT WHEN VENTILATION REDUCES ENERGY COSTS (E.G., NIGHT PURGE) OR WHEN VENTILATION MUST BE SUPPLIED TO MEET CODE REQUIREMENTS. OUTSIDE AIR DAMPERS AND EXHAUST FANS SHALL BE INTERLOCKED TO CLOSE THE DAMPER AND TURN OFF THE FAN WHEN THE SUPPLY AIR SYSTEM IS DE-ENERGIZED.
EXCEPTIONS:
(A) GRAVITY (NON-MOTORIZED) DAMPERS ARE ACCEPTABLE IN SYSTEMS WITH A DESIGN OUTDOOR AIR INTAKE OR EXHAUST CAPACITY OF 300 CFM OR LESS.
(B) IN SYSTEMS WHERE DAMPERS ARE PROHIBITED BY THE MECHANICAL CODE.
DAMPERS: WHERE OUTDOOR AIR SUPPLY AND EXHAUST AIR DAMPERS ARE REQUIRED BY SECTION C403.2.4.3 OF 2015 IECC, THEY SHALL HAVE A MAXIMUM LEAKAGE RATE OF 4 CFM PER SQUARE FOOT OF DAMPER AREA AT 1" W.G. PER AMCA STANDARD 500.

HVAC SYSTEMS SHALL BE EQUIPPED WITH AT LEAST ONE OF THE FOLLOWING:

(A) CONTROLS THAT CAN START AND STOP THE SYSTEM UNDER DIFFERENT TIME SCHEDULES FOR SEVEN DIFFERENT DAY TYPES PER WEEK, ARE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS, AND INCLUDE AN ACCESSIBLE MANUAL OVERRIDE, OR EQUIVALENT FUNCTION, THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO TWO HOURS, IS CAPABLE OF TEMPERATURE SETBACK DOWN TO 55F DURING OFF HOURS, AND IS CAPABLE OF TEMPERATURE SETUP TO 85F DURING OFF HOURS.
(B) AN OCCUPANT SENSOR THAT IS CAPABLE OF SHUTTING THE SYSTEM OFF WHEN NO OCCUPANT IS SENSED FOR A PERIOD OF UP TO 30 MINUTES.
(C) A MANUALLY OPERATED TIMER CAPABLE OF BEING ADJUSTED TO OPERATE THE SYSTEM FOR UP TO TWO HOURS.
(D) AN INTERLOCK TO A SECURITY SYSTEM THAT SHUTS THE SYSTEM OFF WHEN THE SECURITY SYSTEM IS ACTIVATED.

CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT ALL HVAC SYSTEMS BE BALANCED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS (SECTION C408.2.2 OF 2012 IECC). CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT A WRITTEN BALANCE REPORT BE PROVIDED TO THE OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER FOR THE HVAC SYSTEMS SERVING ZONES WITH A TOTAL CONDITIONED AREA EXCEEDING 5000 SF. AIR SYSTEMS SHALL BE BALANCED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES. THEN, FOR FANS WITH FAN SYSTEM POWER GREATER THAN 1 HP, FAN SPEED SHALL BE ADJUSTED TO MEET DESIGN FLOW CONDITIONS. EACH SUPPLY OUTLET AND ZONE TERMINAL DEVICE SHALL BE EQUIPPED WITH MEANS FOR AIR BALANCING.
HYDRONIC SYSTEMS SHALL BE PROPORTIONATELY BALANCED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES: THEN THE PUMP IMPELLER SHALL BE TRIMMED OR PUMP SPEED SHALL BE ADJUSTED TO MEET DESIGN FLOW CONDITIONS. INDIVIDUAL HYDRONIC HEATING AND COOLING COILS SHALL BE EQUIPPED WITH MEANS FOR BALANCING AND PRESSURE TEST CONNECTIONS
EXCEPTIONS: IMPELLERS NEED NOT BE TRIMMED NOR PUMP SPEED ADJUSTED FOR PUMPS WITH PUMP MOTORS OF 10 HP OR LESS OR WHEN THROTTLING RESULTS IN NO GREATER THAN 5 PERCENT OF THE NAMEPLATE HORSEPOWER DRAW, OR 3 HP, WHICHEVER IS GREATER, ABOVE THAT REQUIRED IF THE IMPELLER WAS TRIMMED.

ALL MECHANICAL/PLUMBING SUPPLY AND RETURN PIPING SHALL BE INSULATED PER THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE - TABLE C403.2.1 - MINIMUM PIPE INSULATION.

MINIMUM PIPE INSULATION THICKNESS

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU·IN. / (H·FT2·°F)	MEAN RATING TEMPERATURE, °F	< 1	1 TO < 1 1/2	1 1/2 TO <4	4 TO < 8	≥ 8
> 350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
251 - 350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 - 0.26	75	0.5	1.0	1.0	1.0	1.5

ALL THERMOSTATS TO BE NEW AND PROGRAMMABLE PER THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE - SECTION C403.2.4.

ALL SUPPLY AND RETURN AIR DUCTS LOCATED IN UNCONDITIONED ATTICS, UNCONDITIONED SPACES INCLUDING MECHANICAL ROOMS, UNCONDITIONED PLENUMS, OUTSIDE OF THE ENVELOPE OR OUTSIDE THE BUILDING SHALL BE INSULATED USING R-8 INSULATION AND COMPLY WITH THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE. ALL SUPPLY AND RETURN DUCTS LOCATED IN A CONDITIONED SPACE OR CONDITION PLENUM SHALL BE INSULATED USING R-6 INSULATION. EXTERNALLY INSULATED DUCT SHALL BE R-8 PER 2015 INTERNATIONAL ENERGY CONSERVATION CODE. INSULATION SHALL BE CONTINUOUS THROUGH ALL WALLS/CEILINGS INCLUDING RATED WALLS. NO INSULATION / VAPOR BARRIER BREAKS WILL BE ALLOWED. ALL SUPPLY AIR DIFFUSER BACKS TO BE INSULATED PER SPECIFICATIONS ABOVE AND PER LOCATION INSTALLED. ALL EXPOSED DUCTWORK TO BE 1" THICK DOUBLE WALL SPIRAL ROUND WITH 1" THICK INSULATION BETWEEN INNER AND OUTER LAYERS OF SHEET METAL.

ALL DUCTWORK TO BE SHEETMETAL AS SPECIFIED WITH EXTERNAL INSULATION AS SPECIFIED. ACOUSTICAL LINER IS NOT APPROVED.

ANCHOR AND SUPPORTS MUST MEET VERTICAL AND HORIZONTAL LOADS WITHIN THE STRESS LIMITATIONS SPECIFIED IN THE INTERNATIONAL BUILDING CODE FOR THE MINIMUM BASIC WIND SPEED. ANCHOR AND SUPPORTS TO COMPLY WITH SECTION 1609 - 2015 IBC.

DUCTWORK AND PLENUMS SHALL BE SEALED IN ACCORDANCE WITH SECTION 603.9 OF THE 2015 INTERNATIONAL MECHANICAL CODE AND SECTION C403.2.9 OF THE 2015 INTERNATIONAL COMMERCIAL ENERGY CONSERVATION CODE.

ALL DUCTWORK MATERIALS SHALL BE GALVANIZED STEEL. GAUGES, BRACING, AND SUPPORTS SHALL BE PER SMACNA MANUAL. PLENUMS SHALL BE 18-GAUGE. PROVIDE AIRFOIL TYPE TURNING VANES AT ALL CHANGES IN DIRECTION. EXTRACTORS SHALL HAVE OPERATORS. CROSS-BREAK ALL DUCTS 12 INCHES AND WIDER. DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. SUPPORT DUCTS A MAXIMUM OF 6 FEET ON CENTERS WITH 1" X 26 GAUGE HANGERS. SECURE SUPPORTS WITH A SHEETMETAL SCREW ON BOTTOM, AND 12" CENTERS ON SIDES. DAMPERS SHALL HAVE FELT EDGES AND BE 16 GAUGE. PROVIDE LOCKING QUADRANTS FOR DAMPERS. PROVIDE CONCEALED REGULATORS FOR EXTRACTORS ON BRANCH DUCTS, ON TAKEOFFS TO THE CEILING DIFFUSES. U.L. FIRE DAMPERS WITH ACCESS DOORS SHALL BE PROVIDED AS SHOWN ON THE PLANS OR REQUIRED BY CODE. INSTALL DAMPERS AND ACCESS DOORS PER U.L. REQUIREMENTS.

Outside Airflow Calculation

Zone Identification — Standard Case: 2015 IMC Ventilation Rate Procedure

Floor	Room #	Room Name	Occupancy Category (Table 403.3)	Area (A_z) (Ft^2)	People Outdoor Air Rate (R_p) (cfm/person)	Table 403.3 Area Outdoor Air Rate (R_a) (cfm/Ft^2)	Occupant Density (#/1000 Ft^2)	Total Occupants (P_z) (people)	Breathing Zone Outdoor Air Flow (V_{bz})(CFM)	Table 403.3.1.2 Air Distribution Configuration	Zone Air Distribution Effectiveness (E_z)	Zone Outdoor Air Flow (V_{oz}) (CFM)	Required Airflow at 20% Outside Airflow
1st	101	ENTRY	Reception areas	148	5.0	0.06	30	5	34	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	42	212
1st	102	ESD OFFICE	Office Spaces	92	5.0	0.06	0	2	16	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	19	97
1st	103	TREATMENT	Office space	64	5.0	0.06	5	2	14	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	17	87
1st	104	TOILET	Toilet Rooms (Public)	56	0.0	0.00	0	0	0	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	0	0
1st	105	ESD STORAGE	Storage Rooms	31	0.0	0.12	0	0	4	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	5	23
1st	106	MEETING ROOM	Conference/Meeting	583	5.0	0.06	50	24	155	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	194	969
1st	107	TABLE STORAGE	Storage Rooms	67	0.0	0.12	0	0	8	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	10	50
1st	108	CORRIDOR	Corridors	162	0.0	0.06	0	0	10	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	12	61
1st	109	OFFICE	Office space	81	5.0	0.06	5	1	10	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	12	62
1st	110	WATCH OFFICE	Office space	129	5.0	0.06	5	3	23	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	28	142
1st	111	AIR LOCK	Corridors	38	0.0	0.06	0	0	2	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	3	14
1st	112	STORAGE	Storage Rooms	44	0.0	0.12	0	0	5	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	7	33
1st	113	DAY ROOM	Dayroom	436	5.0	0.06	30	14	96	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	120	601
1st	114	KITCHEN	Break rooms	420	5.0	0.06	25	11	80	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	100	501
1st	115	PANTRY	Storage	55	0.0	0.00	0	0	0	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	0	0
1st	116	PANTRY	Storage	55	0.0	0.00	0	0	0	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	0	0
1st	117	PANTRY	Storage	55	0.0	0.00	0	0	0	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	0	0
1st	118	CORRIDOR	Corridors	264	0.0	0.06	0	0	16	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	20	99
1st	119	SLEEPING	Corridors	77	0.0	0.06	0	0	5	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	6	29
1st	120	SLEEPING	Bedroom/living room	79	5.0	0.06	10	1	10	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	12	61
1st	121	SLEEPING	Bedroom/living room	78	5.0	0.06	10	1	10	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	12	61
1st	122	SLEEPING	Bedroom/living room	79	5.0	0.06	10	1	10	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	12	61
1st	123	SLEEPING	Bedroom/living room	78	5.0	0.06	10	1	10	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	12	61
1st	124	SLEEPING	Bedroom/living room	79	5.0	0.06	10	1	10	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	12	61
1st	125	TOILET	Toilet Rooms (Public)	65	0.0	0.00	0	0	0	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	0	0
1st	126	TOILET	Toilet Rooms (Public)	64	0.0	0.00	0	0	0	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	0	0
1st	127	TOILET	Toilet Rooms (Public)	65	0.0	0.00	0	0	0	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	0	0
1st	128	WORKOUT	Health club/weight rooms	330	20.0	0.06	10	4	100	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	125	624
1st	129	AIR LOCK	Corridors	37	0.0	0.06	0	0	2	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	3	14
1st	130	ESD STORAGE	Storage Rooms	51	0.0	0.12	0	0	6	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	8	38
1st	131	UTILITY	Laundry rooms within dwelling units	137	5.0	0.12	10	2	26	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	33	165
1st	132	APPARATUS BAY	Transportation	4275	0.0	0.00	0	0	0	Ceiling supply of warm air 15°F or more above space temperature	0.80	0	0
1st	133	EMS DECON	Office space	188	5.0	0.06	5	1	16	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	20	102
1st	134	SCBA/SHOP	Storage Rooms	91	0.0	0.12	0	0	11	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	14	68
1st	135	STAIR	Corridors	52	0.0	0.06	0	0	3	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	4	20
1st	136	SPRINKLER RISER	Corridors	35	0.0	0.06	0	0	2	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	3	13
2nd	201	CORRIDOR	Corridors	243	0.0	0.06	0	0	15	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	18	91
2nd	202	CONDITIONED STORAGE	Storage Rooms	344	0.0	0.12	0	0	41	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	52	258
2nd	203	ELEC/COMM	Media center	109	10.0	0.06	25	0	7	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	8	41
2nd	204	BUNKER GEAR	Locker/Dressing Rooms	297	0.0	0.00	0	0	0	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	0	0
2nd	205	MECHANICAL PLATFORM	Storage Rooms	225	0.0	0.06	0	0	14	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	17	84
2nd	207	UNCONDITIONED STORAGE	Storage Rooms	345	0.0	0.12	0	0	41	Ceiling supply of warm air 15°F or more above space temperature and ceiling return.	0.80	52	259

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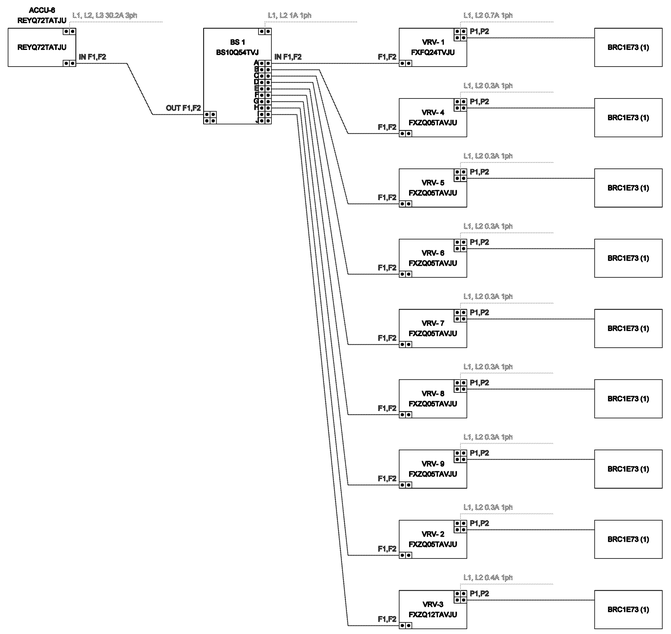
BROWN REYNOLDS WATFORD ARCHITECTS, INC.
DATE 11/16/2018
DRAWN BY EMW
CHECKED BY WD
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

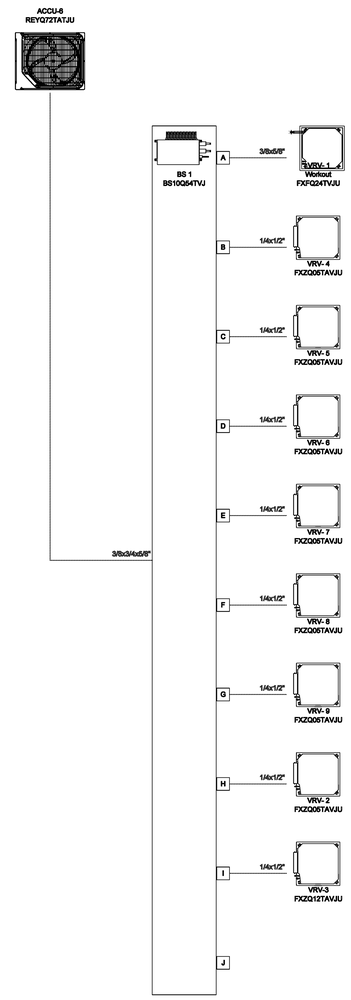
NO.	REVISION	DATE
	ISSUE FOR PERMIT	11/16/18

M2.2

MECHANICAL NOTES & SCHEDULES



2 VRV WIRING DIAGRAM
SCALE: NTS



1 VRV PIPING DIAGRAM
SCALE: NTS

COMcheck Software Version 4.0.8.1

Mechanical Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	GEORGETOWN FIRE STATION NO. 6
Location:	Austin, Texas
Climate Zone:	2a
Project Type:	New Construction

Construction Site:
6700 RM 2338
GEORGETOWN, TX 78626

Owner/Agent:
WILLIAMSON COUNTY/CITY OF GEORGETOWN
GEORGETOWN, TX 78626

Designer/Contractor:
EMILEE WILLIAMS
DVO ENGINEERING
1641 CALIFORNIA ST
SUITE 100
DENVER, CO 80202
720.479.0502 EXT. 162
EWILLIAMS@DVOENG.COM

Additional Efficiency Package(s)

Reduced interior lighting power. Requirements are implicitly enforced within interior lighting allowance calculations.

Mechanical Systems List

Quantity — System Type & Description

1 FCU-1 (Single Zone):
Heating: 1 each - Central Furnace, Electric, Capacity = 21 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Split System, Capacity = 30 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: Low Capacity Residential
Proposed Efficiency = 13.00 SEER, Required Efficiency: 13.00 SEER
Fan System: None

1 FCU-2 (Single Zone):
Heating: 1 each - Central Furnace, Electric, Capacity = 20 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Split System, Capacity = 30 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: Low Capacity Residential
Proposed Efficiency = 13.00 SEER, Required Efficiency: 13.00 SEER
Fan System: None

1 FCU-3 (Single Zone):
Heating: 1 each - Central Furnace, Electric, Capacity = 20 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Split System, Capacity = 42 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: Low Capacity Residential
Proposed Efficiency = 13.00 SEER, Required Efficiency: 13.00 SEER
Fan System: None

1 FCU-4 (Single Zone):
Heating: 1 each - Central Furnace, Electric, Capacity = 20 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Split System, Capacity = 36 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: Low Capacity Residential
Proposed Efficiency = 13.00 SEER, Required Efficiency: 13.00 SEER
Fan System: None

1 VRV-1 (Single Zone):
VRF, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 8 kBtu/h,

Quantity — System Type & Description

No minimum efficiency requirement applies
Cooling Mode: Capacity = 11 kBtu/h,
No minimum efficiency requirement applies
Fan System: VRVS -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 1 Supply, Single-Zone VAV, 700 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade

1 VRV-2 (Single Zone):
Cooling: 1 each - VRF Zone Fan Unit, Capacity = 3 kBtu/h, No Economizer, Economizer exception: VRF Outdoor/Central Unit
No minimum efficiency requirement applies
Fan System: VRVS -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 1 Supply, Single-Zone VAV, 700 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade

1 VRV-3 (Single Zone):
VRF, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 1 kBtu/h,
No minimum efficiency requirement applies
Cooling Mode: Capacity = 9 kBtu/h,
No minimum efficiency requirement applies
Fan System: VRVS -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 1 Supply, Single-Zone VAV, 700 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade

6 VRV-4,5,6,7,8,9 (Single Zone):
VRF, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 2 kBtu/h,
No minimum efficiency requirement applies
Cooling Mode: Capacity = 2 kBtu/h,
No minimum efficiency requirement applies
Fan System: VRVS -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 1 Supply, Single-Zone VAV, 700 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade

1 VRV-10 (Single Zone):
VRF, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 1 kBtu/h,
No minimum efficiency requirement applies
Cooling Mode: Capacity = 1 kBtu/h,
No minimum efficiency requirement applies
Fan System: VRVS -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 1 Supply, Single-Zone VAV, 700 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade

1 VRV-11 (Single Zone):
VRF, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 3 kBtu/h,
No minimum efficiency requirement applies
Cooling Mode: Capacity = 8 kBtu/h,
No minimum efficiency requirement applies
Fan System: VRVS -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 1 Supply, Single-Zone VAV, 700 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade

1 WUH-1 (Unknown):
Heating: 1 each - Unit Heater, Electric, Capacity = 5 kBtu/h
No minimum efficiency requirement applies
Fan System: WUH -- Compliance (Motor nameplate HP method) : Passes

Fans:

Quantity — System Type & Description

FAN 2 Supply, Constant Volume, 150 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade

1 GUH-1,2,3,4 (Unknown):
Heating: 1 each - Unit Heater, Propane, Capacity = 105 kBtu/h
Proposed Efficiency = 80.00% Ec, Required Efficiency = 80.00% Ec
Fan System: GUHS -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 3 Supply, Constant Volume, 1345 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade

1 GWH-1:
Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 150 kBtu/h w/ Circulation Pump
Proposed Efficiency: 98.00 % Et, Required Efficiency: 80.00 % Et

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.0.8.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Emilee Williams - Mech Engineer — Name - Title
Emilee Williams — Signature
04/25/2018 — Date

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BRW PROJECT NUMBER 2170700
BROWN REYNOLDS WATFORD ARCHITECTS, INC.
DRAWN BY EMW
CHECKED BY WD
DATE 11/16/2018

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
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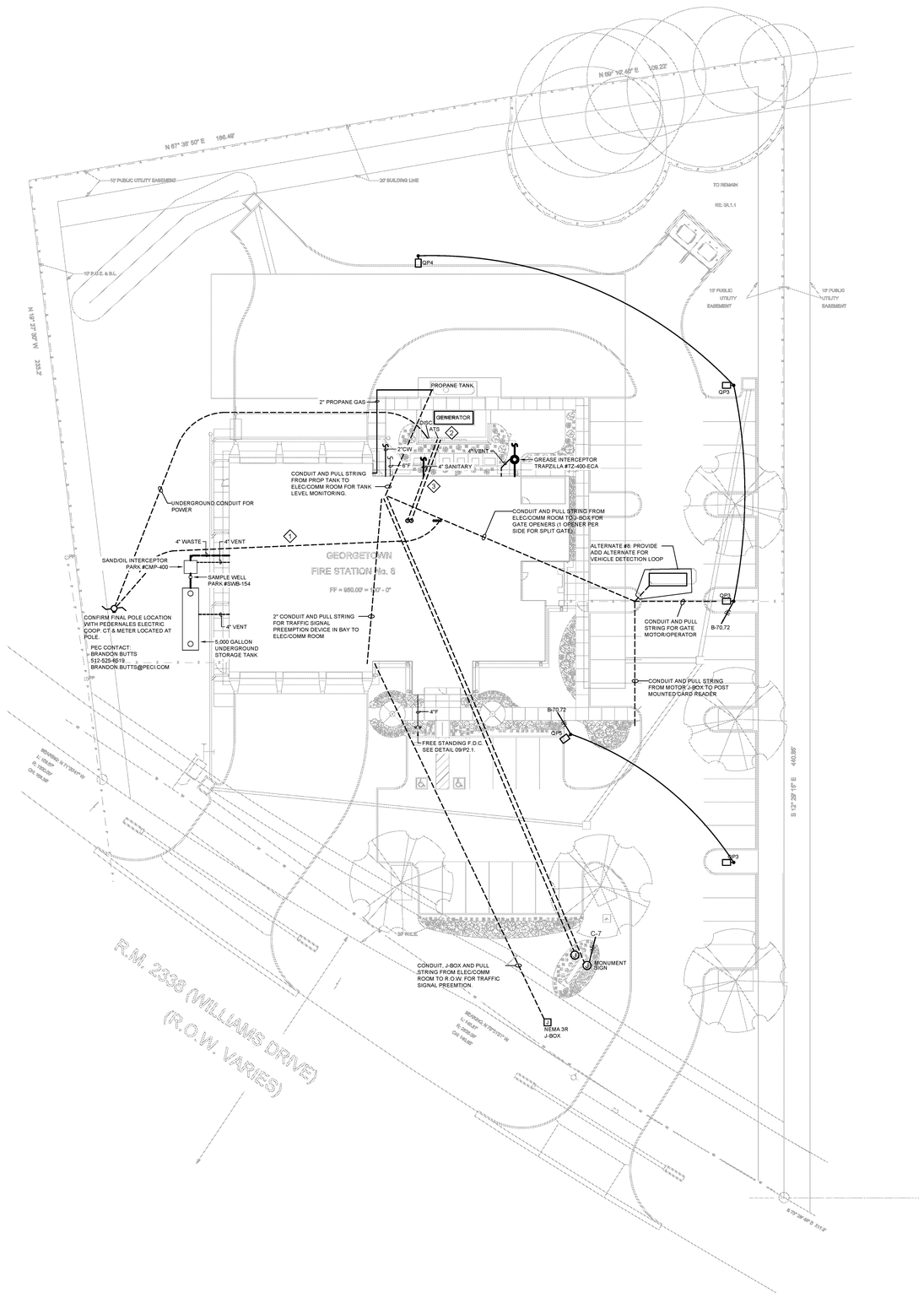
GEORGETOWN, TX. 78626

NO.	REVISED N	DATE
	ISSUE FO R PERMIT	11/16/18

M2.3

MECHANICAL DIAGRAMS & ENERGY FORM



PLAN NORTH TRUE NORTH

1 MEP SITE PLAN
1" = 20'-0"

GENERAL SITE NOTES:

A. COORDINATE ALL WORK OTHER TRADES.
B. COORDINATE INSTALLATION REQUIREMENTS, EXACT LOCATIONS AND CONDUIT TRADE SIZING AND ROUTING WITH UTILITIES PRIOR TO BEGINNING ANY WORK.
C. WIRE ALL EMERGENCY EXTERIOR EGRESS FIXTURES THROUGH BUILDING LIGHTING CONTROLS.
D. LUMINAIRES SHALL BE FURNISHED AND INSTALLED WITH LAMPS, BALLAST(S), AND MOUNTING HARDWARE. ELECTRICAL CONTRACTOR SHALL SUBMIT FIXTURE CUT SHEETS TO CLIENT AND ARCHITECT FOR THEIR FINAL APPROVAL PRIOR TO ORDERING OF THE LUMINAIRES.
E. ELECTRICAL CONTRACTOR SHALL COORDINATE LIGHTING FIXTURE QUANTITIES, MOUNTING REQUIREMENTS, FINISHES, FIXTURE AVAILABILITY AND LEAD TIME FOR DELIVERY TO SITE.
F. FLUORESCENT AND LED LUMINAIRES THAT CONTAIN BALLAST(S) AND/OR LED DRIVERS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS PER NEC ARTICLE 410.130(G) REQUIREMENTS. DISCONNECTING MEANS IS NOT REQUIRED FOR EMERGENCY ILLUMINATION REQUIRED IN 700.16.
G. CONTRACTOR SHALL COORDINATE EXACT DEVICE AND EQUIPMENT LOCATIONS WITH CLIENT /ARCHITECT, EQUIPMENT SUBCONTRACTOR OR UTILITY CONSULTANT PRIOR TO BEGINNING ANY WORK.
H. RECEPTACLE OUTLETS AND SWITCHES SHALL BE LABELED WITH DESIGNATED PANEL AND CIRCUIT NUMBER ON THE COVER PLATE.
I. ALL 125-VOLT, SINGLE PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN RESTROOMS, KITCHEN/FOOD PREP AREAS, OUTDOOR, WITHIN SIX FEET OF THE OUTSIDE EDGE OF A SINK, OR IN GARAGES, SERVICE BAYS, AND SIMILAR AREAS WHERE ELECTRICAL HAND TOOLS OR PORTABLE LIGHTING EQUIPMENT ARE TO BE USED SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR PERSONNEL PER NATIONAL ELECTRICAL CODE (NEC) ARTICLE 210.8. GFCI DEVICE SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION.
J. ELECTRICAL CONTRACTOR SHALL MAINTAIN DEDICATED ELECTRICAL SPACE IN FRONT AND ABOVE ALL ELECTRICAL EQUIPMENT REQUIRING SERVICING WHILE ENERGIZED. THIS INCLUDES CONTROL PANELS AND ELECTRICAL DISCONNECTS FOR HVAC EQUIPMENT ON LOCATED ON ROOFTOPS AND ABOVE OR BELOW CEILING. PENETRATIONS SUCH AS ROOF JACKS FOR ELECTRICAL POWER, LOW VOLTAGE CONTROL POWER, REFRIGERANT LINES, VENT PIPES, ETC., AND INCLUDING GAS LINES, DUCTWORK, ROOF DRAINS, SCREENING WALLS AND OTHER EQUIPMENT OF ANY TYPE, ARE NOT TO INTRUDE INTO DEDICATED ELECTRICAL SPACE. MINIMUM SPACE IN FRONT OF ELECTRIC EQUIPMENT SHALL BE THE WIDTH OF THE EQUIPMENT OR 30 INCHES, WHICHEVER IS GREATER, 36 INCHES OUT FROM ENCLOSURE FRONT AT THE HEIGHT OF 6.5 FEET.
K. ELECTRICAL UTILITY SERVICE SECONDARY CONDUCTORS SHALL BE BURIED AT A MINIMUM DEPTH OF 4'. COORDINATE ADDITIONAL INSTALLATION REQUIREMENTS AND ROUTING WITH ELECTRICAL UTILITY PRIOR TO BEGINNING ANY WORK.
L. FOR PAD MOUNTED TRANSFORMERS ELECTRICAL CONTRACTOR SHALL PROVIDE (2) 6" CONDUITS, OR ELECTRICAL UTILITY STANDARD SIZING BURIED AT A MINIMUM DEPTH OF 4' AND ENCASED IN RED DYED CONCRETE COORDINATE ADDITIONAL INSTALLATION REQUIREMENTS AND ROUTING WITH ELECTRICAL UTILITY PRIOR TO BEGINNING ANY WORK.
M. PVC CONDUITS INSTALLED UNDERGROUND SHALL BE BURIED IN ACCORDANCE WITH NEC ARTICLES 352.10(G), 300.5 AND TABLE 300.5 REQUIREMENTS FOR PARKING LOTS. MINIMUM DEPTH OF 24" TO THE TOP OF THE CONDUIT.
N. IF RACEWAYS ARE INSTALLED EXPOSED TO DIRECT SUNLIGHT ON OR ABOVE ROOFTOPS CORRECTIONS NEED TO BE PROVIDED FOR CONDUCTOR SIZES BASED ON AMBIENT TEMPERATURE CORRECTION FACTORS. TEMPERATURE CORRECTION FACTORS SHOWN IN NEC TABLE 310.15(B)(3)(C) SHALL BE ADDED TO THE OUTDOOR TEMPERATURE TO DETERMINE THE APPLICABLE AMBIENT TEMPERATURE FOR APPLICATION OF THE CORRECTION FACTORS IN TABLE 310.15(B)(2)(A) OR TABLE 310.15(B)(2)(B).

KEYED NOTES:

1. ELECTRICAL CONTRACTOR TO PROVIDE (4) 2" CONDUITS WITH PULL STRINGS FROM ELECTRIC/IT ROOM TO NEW POWER POLE. EXACT LOCATION OF NEW POWER POLE TO BE COORDINATED WITH UTILITY COMPANY PRIOR TO WORK.
2. ATS, MAIN DISCONNECT AND ALL GEAR TO BE MOUNTED ON UNISTRUT ON THE GENERATOR SCREEN WALL.
3. ELECTRICAL CONTRACTOR TO PROVIDE CONDUITS WITH PULL STRINGS FROM ELECTRIC/IT ROOM TO ATS.

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BROWN REYNOLDS WATFORD ARCHITECTS, INC.

DATE	11/16/2018
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CHECKED BY	JF
BRW PROJECT NUMBER	217079.00

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MEP1.1
MEP SITE PLAN

PLUMBING SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED HERE ARE USED IN THE DRAWINGS AND MAY NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE DRAWINGS.

PLUMBING ABBREVIATIONS

AB	ABOVE
ACC	ACCESS
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX.	APPROXIMATELY
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AVG	AVERAGE
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
BOT	BOTTOM
BOP	BOTTOM OF PIPE
BT	BATHTUB
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
BTW	BETWEEN
CAP	CEILING ACCESS PANEL
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFH	CUBIC FEET PER MINUTE
CFM	CUBIC FEET PER HOUR
CL	CENTERLINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COND	CONDUCTOR
CONT	CONTRACTOR
COP	COEFFICIENT OF PERFORMANCE
CTR	CENTER
CU	COPPER
CW	COLD WATER
CWFU	COLD WATER FIXTURE UNITS
DD	DRAIN DECK
DEG	DEGREES
DET	DETAIL
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
DT	DRAIN TILE
DWG.	DRAWING
E	EXISTING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EEW	EMERGENCY EYEWASH
EFF.	EFFICIENCY
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION
EM	EMERGENCY
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXP	EXPANSION
EXST	EXISTING
EXT	EXTERIOR
F	FUTURE
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FLA	FULL LOAD AMPS
FLR	FLOOR
FM	FACTORY MUTUAL
FP	FIREPROOF
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
F&T	FLOAT AND THERMOSTATIC
FT	FEET
FTG	FOOTING
FU	FIXTURE UNITS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GPH	GALLONS PER HOUR
HB	HOSE BIBB
HD	HUB DRAIN
HP	HORSE POWER
H.P.	HIGH POINT
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HW	HOT WATER
HWFU	HOT WATER FIXTURE UNITS
HWR	HOT WATER RETURN
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCHES
KO	KNOCK-OUT
L	LAVATORY
LBS.	POUNDS
LB/HR	POUNDS PER HOUR
L.F.	LINEAR FEET
LP	LOW POINT
LTG	LIGHTING
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MB	MOP BASIN
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MEP	MECHANICAL, ELECTRICAL AND PIPING
MER	MECHANICAL EQUIPMENT ROOM
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIN.	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
MTG	MOUNTING
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NPS	NOMINAL PIPE SIZE
NPSH	NET POSITIVE SUCTION HEAD
NPT	NATIONAL PIPE THREAD
NR	NEAR
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OLP	OVERLOAD PROTECTION
OV	OUTLET VELOCITY
P	PUMP
PC	PLUMBING CONTRACTOR
PCF	POUNDS PER CUBIC FOOT
PD	PRESSURE DROP
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PP	POLYPROPYLENE
PPH	POUNDS PER HOUR
PRV	PRESSURE RELIEF VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REC	RECESSED
RECPT	RECEPTACLE
REQD	REQUIRED
RF	ROOF
RI	ROUGH-IN
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE VALVE
RV	RELIEF VALVE
S	SLOPE
SCH	SCHEDULE
SDR	STANDARD DIMENSION RATIO
SH	SHOWER
SHT	SHEET
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SQ	SQUARE
SS	SERVICE SINK
S/S	STAINLESS STEEL
STD	STANDARD
STRU	STRUCTURAL
T&P	TEMPERATURE AND PRESSURE
TBR	TO BE REMOVED
TD	TRENCH DRAIN
TDFU	TOTAL DRAIN FIXTURE UNITS
TEMP	TEMPERATURE
TOB	TOP OF BEAM
TOD	TOP OF DUCT/DECK
TOJ	TOP OF JOIST
TOP	TOP OF PIPE
TOS	TOP OF SLAB
T STAT	THERMOSTAT
TWFU	TOTAL WATER FIXTURE UNITS
TYP	TYPICAL
UNO	UNLESS OTHERWISE NOTED
V	VENT
VEL	VELOCITY
VIB	VALVE IN BOX
VOL	VOLUME
W	WIDTH
W/	WITH
W/O	WITHOUT
WC	WATER COLUMN
WSFU	WATER SUPPLY FIXTURE UNITS
WG	WATER GAUGE

PIPING SYSTEMS LABELS

WATER PIPING SYSTEMS:

SCW	COLD SOFT WATER
CW	COLD WATER
F	FIRE PROTECTION
HW	HOT WATER
HWR	HOT WATER RETURN
NPW	NON-POTABLE WATER
TW	TEMPERED WATER
RO	REVERSE OSMOSIS WATER

GAS AND AIR PIPING SYSTEMS:

A	COMPRESSED AIR
H2	HYDROGEN
G	NATURAL GAS
N2	NITROGEN
VAC	VACUUM (AIR)

WASTE AND VENT SYSTEMS:

CD	CONDENSATE DRAIN
CWV	CLEARWATER VENT
CWW	CLEARWATER WASTE
FM	FORCE MAIN
IW	INDIRECT WASTE
OD	OVERFLOW DRAIN LINE
ST	STORM
SSD	SUBSOIL DRAIN LINE
	UNDERFLOOR FOR WASTE OR SOIL, SUBSOIL, STORM & FORCE MAIN
SV	VENT
SAN	WASTE OR SOIL LINE

SITE PIPING SYSTEMS:

F	FIRE MAIN
FM	FORCE MAIN
SAN	SANITARY SEWER
ST	STORM SEWER
W	WATER LINE

NOTE:
(E) PRIOR TO SYSTEM TYPE DENOTES EXISTING PIPING
(F) PRIOR TO SYSTEM TYPE DENOTES FUTURE PIPING

PIPE FITTINGS

- FLANGE
- UNION
- ANCHOR
- PIPE GUIDE
- ECCENTRIC REDUCER
- CONCENTRIC REDUCER
- TEE BRANCH
- LINE CONTINUATION BREAK
- PLUMBING FIXTURE STOPS
- PIPELINE STRAINER
- ELBOW DOWN
- ELBOW UP
- TEE DOWN
- TEE UP
- PIPE CAP
- VALVE IN VERTICAL
- DOUBLE WYE
- WYE
- WYE WITH VENT UP

DRAINS AND CLEANOUTS

- FLOOR DRAIN
- FLOOR SINK
- HUB DRAIN
- FLOOR SINK
- FIXTURE WASTE TRAP
- CO — CLEANOUT
- FCO — FLOOR CLEANOUT
- GCO — GROUND CLEANOUT
- DCO — DOUBLE CLEANOUT

PIPING VALVES AND SPECIALTIES

- ANGLE VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DIAPHRAGM VALVE
- DRAIN VALVE
- FLOAT OPERATED VALVE
- GAS SHUTOFF VALVE
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PIV — POST INDICATOR VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- QUICK OPENING VALVE
- SHUTOFF VALVE
- SOLENOID VALVE
- TRIPLE DUTY VALVE
- 2-WAY CONTROL VALVE (VALVE BODY AS SPECIFIED)
- 3-WAY MIXING VALVE
- 4-WAY VALVE WITH ARROW INDICATING FAIL POSITION
- VALVE IN BOX
- AIR VENT, AUTOMATIC
- MV — AIR VENT, MANUAL
- BACKFLOW PREVENTER
- CONSTANT FLOW REGULATOR
- X X X — DEMOLITION OF PIPING, DEVICE, ETC.
- DIRECTION OF FLOW
- R — DIRECTION OF PITCH RISE (R) OR DROP (D)
- DRAIN PLUG
- EJ — EXPANSION JOINT
- FLEXIBLE CONNECTION
- FS — FLOW SWITCH
- FM — FLOW SENSING DEVICE
- GAS REGULATOR
- GAS OUTLET
- HOSE BIBB
- PETE'S PLUG
- PRESSURE GAUGE
- PS — PRESSURE SWITCH
- XX — STEAM TRAP
- THERMOMETER
- WH — WALL HYDRANT
- WATER HAMMER ARRESTOR

PLUMBING MATERIALS, NOTES AND SYMBOLS

COLD WATER PIPING (UNDERGROUND)	COPPER TYPE "K"
COLD WATER PIPING (ABOVE GROUND)	COPPER TYPE "L"
HOT WATER PIPING	COPPER TYPE "L"
SANITARY SEWER (UNDER GROUND)	SCHEDULE 40 DWV PVC
SANITARY SEWER (ABOVE GROUND - PLENUM RETURN)	HUBLESS CAST IRON
SANITARY SEWER (ABOVE GROUND - DUCTED RETURN)	SCHEDULE 40 DWV PVC
SANITARY VENT (PLENUM RETURN)	HUBLESS CAST IRON
SANITARY VENT (DUCTED RETURN)	SCHEDULE 40 DWV PVC
NATURAL GAS PIPING (UNDERGROUND)	THERMOPLASTIC POLYETHYLENE
NATURAL GAS PIPING (ABOVE GROUND)	GAS PRESSURE PIPE
	BLACK STEEL SCHEDULE 40

PLUMBING FIXTURES MUST MEET WATER SAVINGS STANDARDS AS REQUIRED BY ANSI, CITY CODE AND SPECIFICATIONS.

WATER CLOSET	2" VENT, 4" WASTE, 1-1/4" COLD WATER
URINAL	2" VENT, 3" WASTE, 1-1/4" COLD WATER
LAVATORY	2" VENT, 2" WASTE, 3/4" HOT & COLD WATER
SINK	2" VENT, 2" WASTE, 3/4" HOT & COLD WATER
KITCHEN SINK	2" VENT, 2" WASTE, 3/4" HOT & COLD WATER
DISH WASHER	WASTE TO K SINK, 3/4 " HOT & COLD WATER
FLOOR DRAIN	2" VENT, 3" WASTE,
MOP SINK	2" VENT, 3" WASTE, 3/4" HOT & COLD WATER

MINIMUM PIPE SIZE TO TAIL PIECE IS 3/4".

GENERAL NOTES

A. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER AND AND SHALL COMPLY WITH ALL ADOPTED LOCAL, STATE, AND NATIONAL CODES.

B. DO NOT SCALE THE DRAWINGS.

C. FIELD VERIFY EXACT LOCATION OF ALL CONNECTION POINTS PRIOR TO CONSTRUCTION.

D. CONTRACTOR SHALL INSPECT SITE THOROUGHLY TO FAMILIARIZE THEMSELVES WITH THE AREA OF WORK. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND ACTUAL CONDITIONS SHALL BE REPORTED TO THE ARCHICTECT/ENGINEER FOR RESOLUTIONS PRIOR TO BID PRICING. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF EXISTING OR NEW CONDITIONS.

E. PROVIDE BALL VALVES ON ALL BRANCH LINES FOR BUILDING ISOLATION WHETHER SHOWN OR NOT.

F. OFFSET ALL PIPING AS REQUIRED TO AVOID STRUCTURAL MEMBERS, CANTS, FLASHING, MECHANICAL OR ELECTRICAL EQUIPMENT.

G. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF EXISTING WASTE, DIRECTION OF FLOW, DEPTH, ADEQUATE SLOPE AND INTEGRITY OF LINE PRIOR TO INSTALLATION.

H. MAINTAIN A MINIMUM CLEARANCE OF 25 FEET BETWEEN ALL VENT PENETRATIONS AND AIR INTAKES.

I. ALL WATER PIPING (ABOVE CEILING, IN WALLS AND BELOW SLAB, ETC.) SHALL BE INSULATED.

FIRE SPRINKLER GENERAL NOTES

A. BUILDING IS TO BE PROTECTED BY AUTOMATIC FIRE SPRINKLER SYSTEM. FIRE SPRINKLER CONTRACTOR SHALL PROVIDE A FULL AND COMPLETE SYSTEM AS REQUIRED BY NFPA. SYSTEM IS TO PROVIDE FULL AND COMPLETE COVERAGE THROUGHOUT ENTIRE BUILDING AND INCLUDE THE OUTDOOR COVERED PATIO AREA WHERE BBQ GRILLE IS LOCATED - PER NFPA CHAPTER 13.

PRE-CONSTRUCTION CHECK

A. THE PLUMBING CONTRACTOR SHALL PERFORM THE FOLLOWING PRE-CONSTRUCTION CHECK, AFTER THE AWARD OF CONTRACT, AND BEFORE BEGINNING CONSTRUCTION:

B. TEST ALL EXISTING FIXTURES, EQUIPMENT, AND WATER HEATERS TO VERIFY ALL ITEMS ARE FULLY OPERATIONAL AND REQUIRE NO REPAIRS.

C. THE CONTRACTOR SHALL NOTIFY THE BUILDING OWNER IN WRITING OF ANY DEFICIENCIES FOUND AND SHALL OBTAIN WRITTEN INSTRUCTIONS FROM THE BUILDING OWNER PRIOR TO BEGINNING CONSTRUCTION REGARDING ANY ACTION TO BE TAKEN. ITEMS NOT ADDRESSED IN THE PRE-CONSTRUCTION CHECK SHALL BE CORRECTED BY THE CONTRACTOR PRIOR TO COMPLETION OF CONSTRUCTION AT NO ADDITIONAL COST TO OWNER.

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DATE 11/16/2018
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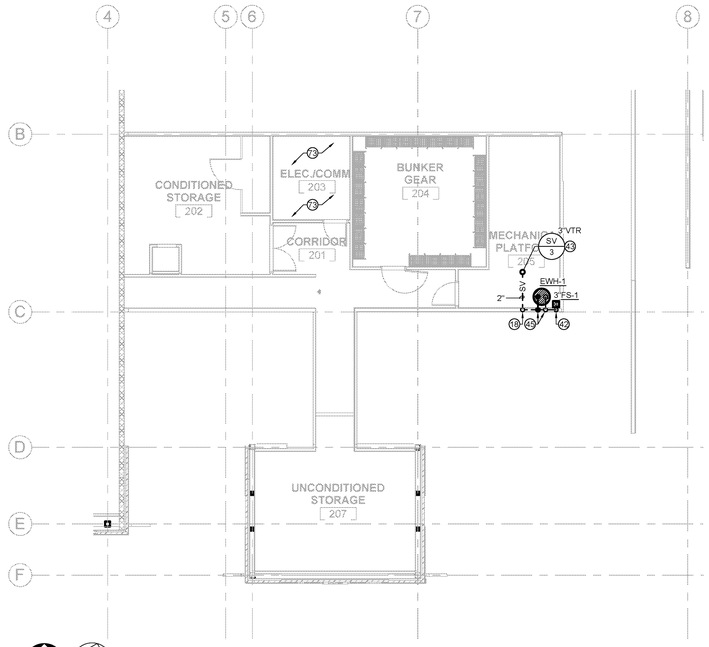
CHECKED BY WD
BRW PRO JECT NUMBER 2170700

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

NO.	REVISION	DATE
	ISSUE FOR PERMIT	11/16/18

P0.0

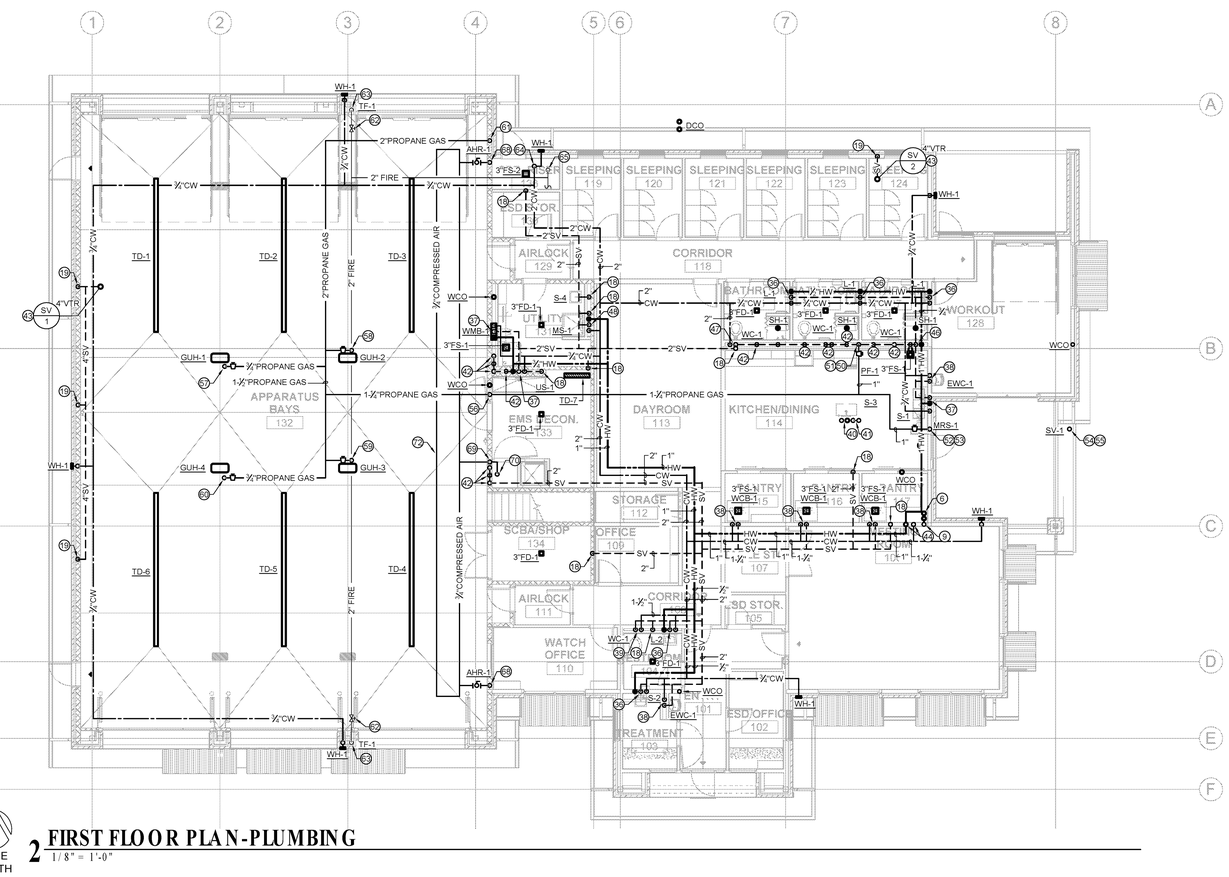
PLUMBING SYMBOLS & ABBREVIATIONS



PLAN NORTH TRUE NORTH

3 SECOND FLOOR PLAN-PLUMBING

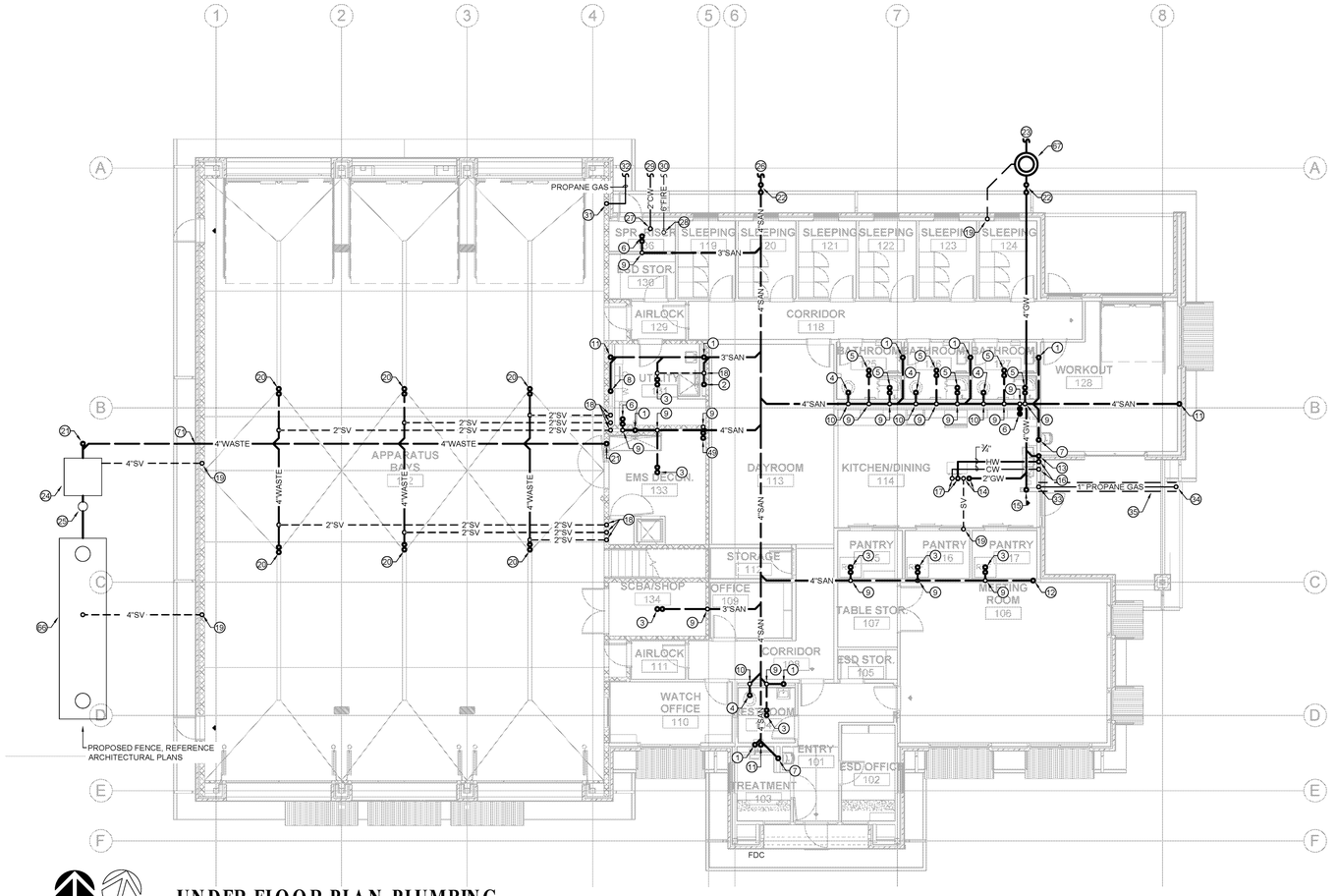
1/8" = 1'-0"



PLAN NORTH TRUE NORTH

2 FIRST FLOOR PLAN-PLUMBING

1/8" = 1'-0"



PLAN NORTH TRUE NORTH

1 UNDER FLOOR PLAN-PLUMBING

1/8" = 1'-0"

GENERAL PLUMBING NOTES:

A. REFER TO SHEET P0.0 FOR ADDITIONAL PLUMBING GENERAL NOTES.

B. REFER TO SHEET P0.0 FOR ADDITIONAL FIRE PROTECTION GENERAL NOTES.

C. VERIFY ALL DIMENSIONS AT JOBSITE.

D. PLUMBING CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AND MAKE FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT.

E. INSULATE ALL DOMESTIC WATER PIPING SUBJECTED TO FREEZING TEMPERATURE.

F. INSULATE HOT WATER LINES WITH 1" MOLDED FIBERGLASS INSULATION.

G. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT LOCATION OF FIXTURES, EQUIPMENT.

H. PLUMBING CONTRACTOR SHALL COORDINATE ALL PIPING AND EQUIPMENT WITH OTHER TRADES PRIOR TO INSTALLATION OF ANY PIPING OR EQUIPMENT.

I. VENT PIPING TO BE 2" UNLESS OTHERWISE NOTED.

J. VENT PENETRATIONS THROUGH ROOF TO HAVE CLEARANCE OF 10 FEET, MINIMUM, FROM ANY INTAKE FOR FRESH AIR.

K. COORDINATE ALL WORK WITH OWNER OR REPRESENTATIVES.

L. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL GAS PIPING AND MAKE ALL FINAL CONNECTIONS. GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE AND BANDED MALLEABLE IRON FITTINGS.

M. ALL UNDERGROUND WATER LINES SHALL BE TYPE "K" COPPER TUBING WITH 1/2" ARMAFLEX INSULATION.

N. REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AFFECTING THIS WORK.

O. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT.

ⓟ KEYED NOTES:

1. 2" SANITARY FROM LAVATORY / SINK ABOVE.
2. 3" SANITARY FROM MOP SINK ABOVE.
3. 3" SANITARY FROM FLOOR DRAIN ABOVE.
4. 4" SANITARY FROM WATER CLOSET ABOVE.
5. 3" SANITARY FROM SHOWER DRAIN ABOVE.
6. 3" SANITARY FROM FLOOR SINK ABOVE.
7. 2" SANITARY FROM DRINKING FOUNTAIN ABOVE.
8. 3" SANITARY FROM WASHING MACHINE ABOVE
9. 3" SANITARY DOWN. 2" VENT UP.
10. 4" SANITARY DOWN. 2" VENT UP.
11. 4" SANTIARY FROM CLEANOUT ABOVE.
12. 3" SANITARY FROM ABOVE.
13. 2" GREASE WASTE FROM SINK ABOVE.
14. 2" GREASE WASTE FROM SINK ABOVE. 2" VENT FROM ABOVE.
15. 4" GREASE WASTE FROM CLEANOUT ABOVE.
16. ½" CW & HW FROM ABOVE.
17. ½" CW & HW UP.
18. 2" VENT UP.
19. 4" VENT UP.
20. 4" WASTE FROM TRENCH DRAIN ABOVE.
21. 4" WASTE FROM CLEANOUT ABOVE.
22. 4" SANITARY FROM DOUBLE CLEANOUT ABOVE.
23. 4" GREASE WASTE. F.L.=5'-0" B.F.F. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
24. PROPOSED SAND/OIL INTERCEPTOR. PARK #CMP-400. SEE DETAIL 03/P2.2.
25. PROPOSED SAMPLE WELL. PARK #SWB-154. SEE DETAIL 04/P2.2.
26. 4" SANITARY. F.L.=5'-0" B.F.F. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
27. 2" CW UP. SEE DETAIL 01/P2.1.
28. 6" FIRE UP. SEE DETAIL 02/P2.1.
29. 2" DOMESTIC COLD WATER. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
30. 6" FIRE LINE. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
31. 2" PROPANE GAS UP.
32. 2" PROPANE GAS. REFER TO SHEET EP1.0 FOR CONTINUATION.
33. 1" PROPANE GAS FROM ABOVE.
34. 1" PROPANE GAS UP TO SERVE PATIO GRILLE.(200MBH)
35. 1" PROPANE GAS ROUTED BELOW SLAB IN 4" SLEEVE TO GAS GRILLE.
36. ½" CW & HW DOWN. 2" VENT UP.
37. ½" CW & HW DOWN. 2" VENT UP.
38. ½" CW DOWN. 2" VENT UP.
39. 1-½" CW DOWN. 2" VENT UP.
40. ½" CW & HW FROM BELOW.
41. 2" VENT UP, 2" ISLAND VENT DOWN.
42. 2" VENT FROM BELOW.
43. 4" VENT UP TO VTR.
44. 1-½" CW UP. 1" HW FROM ABOVE.
45. 1-½" CW FROM BELOW. 1" HW DOWN.
46. ½" HW DOWN AND EXTEND THRU CHASE. 2" VENT UP.
47. 2" CW DOWN AND EXTEND THRU CHASE. 2" VENT UP.
48. ½" CW & HW DOWN AND EXTEND THRU CHASE. 2" VENT UP.
49. 4" SANITARY FROM TRENCH DRAIN ABOVE.
50. 1" PROPANE GAS DOWN TO SERVE RANGE. (167 MBH) MANUAL RESET SWITCH AND SOLENOID VALVE FOR KITCHEN RANGE PROVIDED BY ELECTRICAL CONTRACTOR. LOCATE SOLENOID VALVE IN WALL CABINET NEAR RANGE COORDINATE LOC. WITH ARCH. PLUMBING AND ELECTRICAL CONTRACTORS TO COORDINATE FOR INSTALLATION REQUIREMENTS. PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.
51. ALARM ACTUATED SHUT OFF VALVE REST SWITCH "M.R.S." - 6" ABOVE COUNTERTOP.
52. 1" PROPANE GAS DOWN.
53. MANUAL RESET SWITCH PROVIDED BY ELECTRICAL CONTRACTOR FOR GAS GRILLE. PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
54. 1" PROPANE GAS FROM BELOW TO SERVE PATIO GRILLE. (200 MBH)
55. SOLENOID VALVE PROVIDED BY ELECTRICAL CONTRACTOR FOR GAS GRILLE TO BE INSTALLED IN A RECESSED CABINET WITH FLUSH DOOR. DOOR TO OPEN TO PATIO/GRILLE SIDE. PLUMBING CONTRACTOR SHALL PROVIDE & INSTALL RECESSED CABINET FOR SOLENOID VALVE. PLUMBING AND ELECTRICAL CONTRACTORS TO COORDINATE FOR INSTALLATIONS REQUIREMENTS PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.
56. 1-½" PROPANE GAS DOWN.
57. 1" PROPANE GAS TO SERVE GUH-1. (100 MBH)
58. 1" PROPANE GAS TO SERVE GUH-2. (100 MBH)
59. 1" PROPANE GAS TO SERVE GUH-3. (100 MBH)
60. 1" PROPANE GAS TO SERVE GUH-4. (100 MBH)
61. 2" PROPANE GAS FROM BELOW.
62. 2" VALVED CONNECTION FOR FIRE TRUCK FILL. COORDINATE EXACT REQUIREMENTS WITH FIRE DEPARTMENT. POTTER ROEMER #4065-B, #4625.
63. 2" FIRE LINE DOWN.
64. 2" CW FROM BELOW.
65. 6" FIRE LINE FROM BELOW.
66. 5,000 GALLON UNDERGROUND STORAGE TANK - HIGHLAND TANK: HYDRO WATER STORAGE TANK - OR EQUAL, 72" DIA, DOUBLE WALL WITH INNER LINER AND EXTERNAL POLYURETHANE COATING. 24' LONG WITH LEVEL FLOATS AND MONITORING PORTS. REFER TO CUT SHEET 02/P2.2 FOR REFERENCE. PROVIDE WITH ALARM & CONTROL PANEL FOR MONITORING AND LEVEL SENSING, ALARM TO PROVIDE. AN AUDIBLE ALARM FOR HIGH LEVEL AND/OR LEAKS. PROVIDE TANK WITH GRADE LEVEL MANWAYS THAT ARE FIELD ADJUSTABLE WITH EXTENSIONS AS REQUIRED FOR BURIAL DEPTH. PROVIDE WITH INSTALLATION HOLD-DOWN STRAPS AND CONCRETE DEADMEN ANCHORS AS REQUIRED BEFORE AND DURING BURYING PROCESS. PROVIDE WITH LEAK AND LEVEL SENSORS.
67. PROPOSED GREASE INTERCEPTOR. TRAPZILLA #TZ-400-ECA. REFER TO CUT SHEETS 01/P2.2 FOR REFERENCE.
68. ½" COMPRESSED AIR LINE DOWN TO SERVE AHR-1. AIR REEL MOUNTED ON WALL 14'-0" A.F.F.
69. ½" COMPRESSED AIR LINE UP TO CEILING FROM AIR COMPRESSOR.
70. ½" COMPRESSED AIR LINE FROM AIR COMPRESSOR. AIR COMPRESSOR TO BE PROVIDED AND INSTALLED BY CONTRACTOR. COMPRESSOR EQUAL TO HUSKY #C6011H, 3.7-HP, 60 GALLON AIR COMPRESSOR (240V 1-PHASE)
71. 4" WASTE. F.L.=5'-0" B.F.F.
72. COMPRESSED AIR LINE MOUNTED ON CEILING AS HIGH AS POSSIBLE.
73. DO NOT ROUTE ANY DOMESTIC/FIRE SUPPLY LINES OR SANITARY LINES ABOVE ELEC./COMM. ROOM 203.

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			11/16/18

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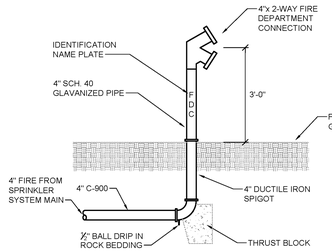
BRW PRO JECT NUMBER 217079.00

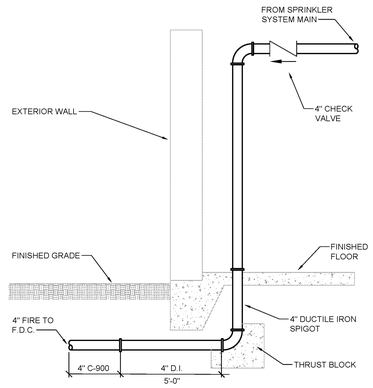
CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

P1.1

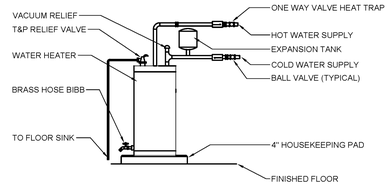
PLUMBING FLOOR PLANS



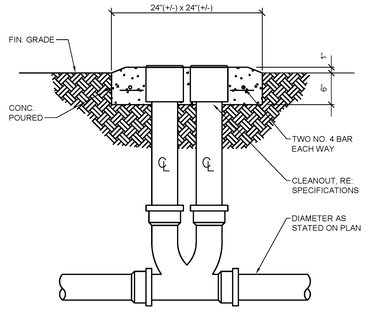
09 FREE STANDING F.D.C. DETAIL
SCALE: NTS



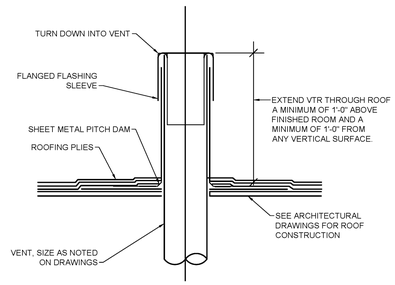
08 FIRE PIPING DETAIL
SCALE: NTS



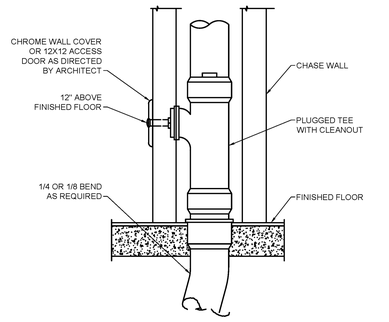
07 ELECTRIC WATER HEATER DETAIL
SCALE: NTS



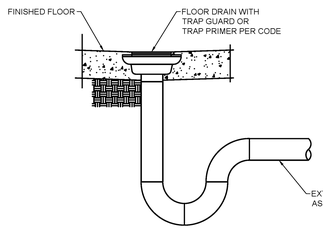
06 TWO WAY CLEANOUT DETAIL
SCALE: NTS



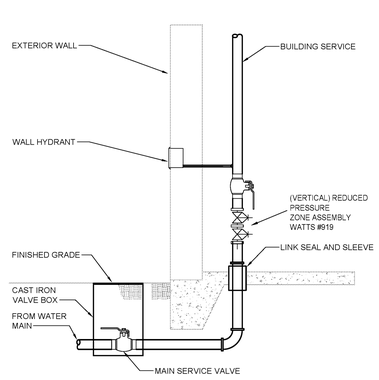
05 VENT THRU ROOF DETAIL
SCALE: NTS



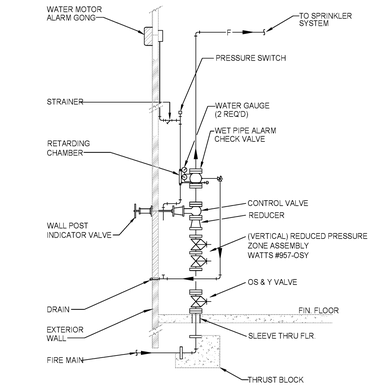
04 WALL CLEANOUT DETAIL
SCALE: NTS



03 FLOOR DRAIN DETAIL
SCALE: NTS



02 COLD WATER SERVICE ENTRY DETAIL
SCALE: NTS



01 FIRE ENTRY DETAIL
SCALE: NTS

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION / MANUFACTURER / MODEL	REMARKS
WC-1	WATER CLOSET	FIXTURE: AMERICAN STANDARD #3461.001MADERA FLOWISE, VITREOUS CHINA, ELONGATED BOWL, 1.28GPF, FLOOR MOUNTED, TOP SPUD. ADA COMPLIANT. FLUSH VALVE: AMERICAN STANDARD #6047.121.002 MANUAL. SEAT: AMERICAN STANDARD #5901.100 HEAVY DUTY OPEN FRONT LESS COVER.
L-1	LAVATORY	FIXTURE: AMERICAN STANDARD #0618.000 UNGLAZED RIM, UNDER MOUNT, VITROUS CHINA, OVERFLOW, ADA COMPLIANT. FAUCET: AMERICAN STANDARD #7353.841 TOWNSEND WIDESPREAD. MIXING VALVE: BRADLEY #S59-4000BY, BELOW DECK THERMOSTATIC MIXING VALVE WITH MOUNTING BRACKET #S45-2456 TRIM: MCGUIRE #155WC, 1-1/4" CHROME PLATED CAST BRASS OFFSET TAILPIECE WITH FLAT PERFORATED GRID STRAINER. MCGUIRE #8872C CHROME PLATED CAST BRASS P-TRAP AND CLEANOUT PLUG WITH HEAVY BRASS SLIP NUTS. MCGUIRE #LFH2165LK LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS.
L-2	WALL HUNG LAVATORY	FIXTURE: AMERICAN STANDARD #0355.012, VITREOUS CHINA, FRONT OVERFLOW, FAUCET LEDGE, 4" CENTER, WALL MOUNT AT HANDICAP HEIGHT BATHROOM SINK. FAUCET: AMERICAN STANDARD #7353.841 TOWNSEND WIDESPREAD. MIXING VALVE: BRADLEY #S59-4000BY, BELOW DECK THERMOSTATIC MIXING VALVE WITH MOUNTING BRACKET #S45-2456 TRIM: MCGUIRE #155WC, 1-1/4" CHROME PLATED CAST BRASS OFFSET TAILPIECE WITH FLAT PERFORATED GRID STRAINER. MCGUIRE #8872C CHROME PLATED CAST BRASS P-TRAP AND CLEANOUT PLUG WITH HEAVY BRASS SLIP NUTS. MCGUIRE #LFH2165LK LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS. CARRIER: JAY R SMITH #0700 SERIES, FLOOR MOUNT WITH CONCEALED ARM SUPPORTS.
S-1	KITCHEN SINK - TWO COMPARTMENT	FIXTURE: BLANCO #516217, 49" X 18" X 10", DOUBLE BOWL UNDER MOUNT, 18 GAUGE, TYPE 304 STAINLESS STEEL, REAR DRAIN PLACEMENT. FAUCET: AMERICAN STANDARD #4433.350 SEMI-PROFESSIONAL KITCHEN FAUCET. ADA COMPLIANT. TRIM: MCGUIRE #LFH2165LK LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS. DISPOSAL: INSINKERATOR #BADGER 5, CONTINUOUS FEED, WITH 1/2 H.P. MOTOR, GALVANIZED STEEL GRINDING ELEMENTS WITH TWO STAINLESS STEEL 360° SWIVEL LUGS, SELF SERVICE WRENCH.
S-2	SINK - SINGLE COMPARTMENT	FIXTURE: BLANCO #442079, 25" X 18" X 5-½", SINGLE BOWL UNDER MOUNT, 18 GAUGE, 304 STAINLESS STEEL, REAR CENTER DRAIN PLACEMENT, ADA COMPLIANT. FAUCET: AMERICAN STANDARD #6542.170 WIDESPREAD LAVATORY, 5" GOOSENECK SPOUT, 4" LEVER HANDLES, 1.5 GPM, 8" CENTERS, CAST BRASS MATERIAL, 5" SPOUT REACH, ADA COMPLIANT. TRIM: MCGUIRE #LFH2165LK LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS.
S-3	SINK - SINGLE COMPARTMENT	FIXTURE: BLANCO #442079, 25" X 18" X 5-½", SINGLE BOWL UNDER MOUNT, 18 GAUGE, 304 STAINLESS STEEL, REAR CENTER DRAIN PLACEMENT, ADA COMPLIANT. FAUCET: AMERICAN STANDARD #4433.350 SEMI-PROFESSIONAL KITCHEN FAUCET. ADA COMPLIANT. TRIM: MCGUIRE #LFH2165LK LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS. DISPOSAL: INSINKERATOR #BADGER 5, CONTINUOUS FEED, WITH 1/2 H.P. MOTOR, GALVANIZED STEEL GRINDING ELEMENTS WITH TWO STAINLESS STEEL 360° SWIVEL LUGS, SELF SERVICE WRENCH.
S-4	SINK - SINGLE COMPARTMENT	FIXTURE: BLANCO #442079, 25" X 18" X 5-½", SINGLE BOWL UNDER MOUNT, 18 GAUGE, 304 STAINLESS STEEL, REAR CENTER DRAIN PLACEMENT, ADA COMPLIANT. FAUCET: AMERICAN STANDARD #6542.170 WIDESPREAD LAVATORY, 5" GOOSENECK SPOUT, 4" LEVER HANDLES, 1.5 GPM, 8" CENTERS, CAST BRASS MATERIAL, 5" SPOUT REACH, ADA COMPLIANT. TRIM: MCGUIRE #LFH2165LK LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS.
MS-1	MOP SINK	FIXTURE: MUSTEE #63M, 24"D X 24"W X 10"H, MOLDED FROM HIGH IMPACT RESISTANT DURASTONE STRUCTURAL FIBERGLASS, ELEVATED, SELF-DRAINING SHELF AND REMOVABLE STRAINER, INTEGRAL, MOLDED-IN DRAIN FOR CONNECTION 3" ABS, PVS OR CAST IRON MOP SERVICE BASIN. FAUCET: MUSTEE #63.600A SERVICE FAUCET ACCESSORIES: MUSTEE #65.700 HOSE AND HOSE HOLDER, 65.600 MOP HANGER, HIGH IMPACT-RESISTANT VINYL BUMPER GUARDS AND MODEL #67.2424 TWO PANELS & BRACKET FOR 24" X 24" CORNER DURAGUARD WALL GUARDS.
EWC-1	ELECTRIC WATER COOLER (ADA)	FIXTURE: ELKAY #LZS8WSLK, LIGHT GRAY GRANITE, 8GPH, 115V, 6 FLA, WALL MOUNT, ADA COMPLIANT. TRIM: MCGUIRE #8872 CHROME PLATED CAST BRASS P-TRAP WITH HEAVY BRASS SLIP NUTS. MCGUIRE #LFH2165LK LOOSE KEY ANGLE STOP WITH CHROME PLATED STEEL ESCUTCHEON AND CHROME PLATED COPPER RISER.
WMB-1	WASHING MACHINE CONNECTION BOX	FIXTURE: GUY GRAY #BB200TS SPACE SAVER WASHING MACHINE SUPPLY AND DRAIN WITH ½" MPT BRASS CONNECTION, 2" DRAIN PIPE.
WCB-1	WATER CONNECTION BOX	FIXTURE: GUY GRAY #MIB1 SERIES, 20 GA STEEL BOX WITH POWDER COAT AND 1/4 TURN VALVE.
FD-1	FLOOR DRAIN	FIXTURE: JAY R. SMITH #2005-07-NB, COATED CAST IRON BODY, TWO PIECE BODY WITH DRAINAGE FLANGE, INVERTIBLE NON-PUNCTURING FLASHING COLLAR, SEEPAGE HOLES, BOTTOM OUTLET AND ADJUSTABLE 7" ROUND NICKEL BRONZE STRAINER.
FS-1	FLOOR SINK - HALF GRATE	FIXTURE: ZURN #Z-1900-P-2-23, 12" X 12" X 6" CAST IRON BODY FLOOR SINK WITH ½" GRATE, ALUMINUM BUCKET AND TRAP PRIMER CONNECTION.
FD-2	FUNNEL FLOOR DRAIN	FIXTURE: JAY R. SMITH #2005-F37-PB-3580, COATED CAST IRON BODY, TWO PIECE BODY WITH DRAINAGE FLANGE, INVERTIBLE NON-PUNCTURING FLASHING COLLAR, SEEPAGE HOLES, BOTTOM OUTLET AND ADJUSTABLE 7" ROUND POLISHED BRONZE RECESSED STRAINER AND 4" FUNNEL
PF-1	POT FILLER	FAUCET: ELKAY #LKAV4091, LEVER HANDLES, 4.0 GPM, WALL MOUNT, SINGLE FAUCET HOLE, BRASS MATERIAL, ADA COMPLIANT.
SH-1	SHOWER (ADA)	FIXTURE: REFER TO ARCHITECTURAL DRAWINGS. DRAIN: REFER TO FLOOR PLANS FOR FLOOR DRAIN DESIGNATION. SHOWER VALVE AND HEAD: AMERICAN STANDARD #7353.507 TOWNSEND SHOWER ONLY TRIM KIT WITH R111 VALVE BODY, 1.8 GPM, ADA COMPLIANT.
TD-1 - TD-6	TRENCH DRAIN	FIXTURE: ZURN #Z806, WIDE REVEAL FIBER REINFORCED POLYMER TRENCH DRAIN SYSTEM, SHALL HAVE A POSITIVE MECHANICAL CONNECTION BETWEEN CHANNEL SECTIONS, SHALL BE PROVIDED WITH STANDARD DGC GRATES THAT LOCK DOWN TO FRAME. WIDE REVEAL DUCTILE IRON SLOTTED GRATE CONFORMING TO ASTM SPECIFICATION A536-84.
TD-7	TRENCH DRAIN	FIXTURE: JAY R. SMITH #9665, STAINLESS STEEL TRENCH DRAIN CHANNELS SHALL BE 39.38" LONG, 6.38" WIDE, AND HAVE A 4" WIDE THROAT WITH BOLTING END PLATES. THE MODULAR CHANNEL SECTIONS SHALL BE MADE OF 16-GAUGE TYPE 304 STAINLESS STEEL.
MRS-1	MANUAL RESET SWITCH	MANUAL RESET SWITCH FOR GAS: LAMB INDUSTRIES (ESWITCH) KJDI7 SERIES, NORMALLY CLOSED. PROVIDED BY ELECTRICAL CONTRACTOR AND INSTALLED BY PLUMBING AND ELECTRICAL CONTRACTOR.
SV-1	SOLENOID VALVE	SOLENOID SHUT-OFF VALVE. SNAP-TITE 230-FV-BNA-AMGI. PROVIDED BY ELECTRICAL CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR COORDINATE WITH ELECTRICAL CONTRACTOR.
TF-1	TRUCK FILL	POTTER ROEMER # 4065-B, #4625, CAST BRASS VALVE WITH RED NAD WHEEL, FEMALE N.P.T INLET X MALE HOSE THREAD OUTLET. 300PSI.
WH-1	WALL HYDRANT - NON FREEZE	FIXTURE: J.R. SMITH #5509QT, BRONZE NICKEL PLATED, QUARTER TURN SELF DRAINING, NON-FREEZE, HOSE CONNECTION, INTEGRAL VACUUM BREAKER, T-HANDLE KEY AND STAINLESS STEEL BOX. W/ FULL 180°COVEROPENING.
US-1	UTILITY SINK	FIXTURE: CALIFORNIA STAINLESS MFG COVED CORNERED SINKS - SERIES 700, 16 GAUGE, TYPE 316 STAINLESS STEEL, 8" BACKSPLASH, REAR CORNER DRAIN PLACEMENT, ADA COMPLIANT. FAUCET: ELKAY #LK943C TWO HANDLE WALL MOUNT PRE-RINSE COMMERICAL FAUCET, 3.2 GPM, SOLID BRASS WITH CHROME FINISH, ADA COMPLIANT. TRIM: MCGUIRE #LFH2165LK LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS.
AHR-1	AIR HOSE REEL	COXREELS #EZ-P-LP-350 AUTO REWIND EASILY WRAPS, STORES AND PROTECT HOSE, HEAVY GAUGE 1/4" STEEL BASE & SUPPORT POST, FACTORY-MATCHED CARTRIDGE-STYLE SPRING MOTOR, BRASS NTP SWIVEL INLET MACHINED FROM SOLID, 1" SOLID STEEL AXLE WITH 1" LUBRICATED PRECISION BEARINGS, GUIDE ARM ADJUSTED TO WALL, FLOOR AND OVERHEAD POSITION, MULTI-POSITION LOCK RATCHET SECURES HOSE AT DESIRED LENGTH NON-CORROSIVE STAINLESS STEEL SPRING, PAWL & ZINC PLATED, LOW PRESSURE HOSE REEL, OPERATED AT PRESSURE 300 PSI, 50 FEET 3/8" INSIDE DIAMETER HOSE, 3/8" THREADED NOZZLE PISTOL.

ELECTRIC WATER HEATER SCHEDULE

MARK	GALLONS	KW/ELEMENTS	INPUT KW	OUTPUT TEMPERATURE	VOLTAGE AVAILABLE	MANUFACTURER MODEL NO.
EWH-1	80	6KW/3EL	18KW	140°	208V 3PH	A.O. SMITH #DRE-80

1. SIZE OF TANK BASED ON GALLONS PER HR. RECOVERY RATE OF 90°F

SHOCK ARRESTOR SCHEDULE

PIPE SIZE	FIXTURE UNITS
1 / 2"	1-11
3 / 4"	12-32
1"	33-60
1-1 / 4"	61-113
1-1 / 2"	114-154
2"	155-330

1. ACCEPTABLE MANUFACTURERS INCLUDE PRECISION PLUMBING PRODUCTS, SIOUX CHIEF, WADE AND MIFAB.

BROWN REYNOLDS WATFORD ARCHITECTS
2700 EARL RUDDER FRWY SOUTH
SUITE 4000
COLLEGE STATION, TEXAS 77845
979.694.1791
WWW.BRWARCH.COM
BRW

DVO
1250 Wood Branch Park Dr
Suite 100
Houston, TX 77079
(281) 293-7500
www.dvoinc.com
Registration No. F-8334

BRO W N REYNO LDS W ATFO RD ARCHITECTS, INC.
DATE 11/16/2018
DRAW N BY EJG
CHECKED BY WD
BRW PRO JECT NUMBER 2170790.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

GEORGETOWN TEXAS

NO.	REVISION	DATE
	ISSUE FOR PERMIT	11/16/18

P2.1

PLUMBING SCHEDULES & DETAILS

GREASE INTERCEPTOR SIZING CALCULATION

BASE ON DRAINAGE FIXTURE UNITS

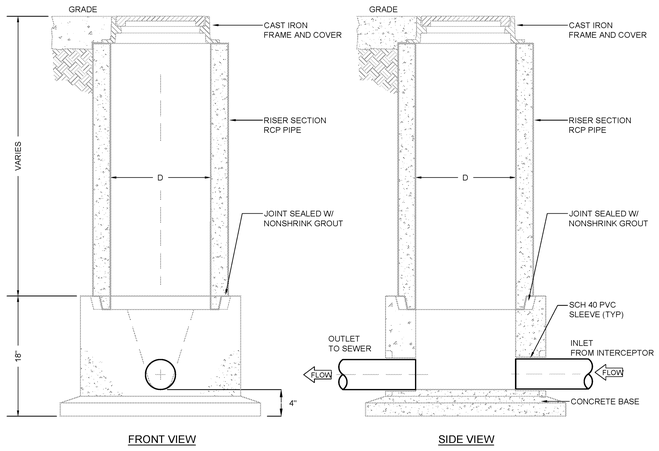
FIXTURE TYPE	GPM	QUANTITY	TOTAL GPM
KITCHEN SINK	2.5	2	5
		TOTAL GPM	5

MINIMUM GREASE INTERCEPTOR SIZE = 75 GPM

PROVIDE THERMACO TRAPZILLA MODEL #TZ-400-ECA OR EQUAL

SAND/OIL INTERCEPTOR SIZING CALCULATION

LOCATION	AREA (SQ. FT.)	CALCULATION (1 CU. FT/100 SQ. FT.)	CU. FT. TO GALLONS (CU. FT. * 7.48)
TD-1	706	7.1	52.8
TD-2	647	6.5	48.4
TD-3	706	7.1	52.8
TD-4	749	7.5	56.0
TD-5	686	6.9	51.3
TD-6	749	7.5	56.0
		TOTAL GALLONS =	317.3
MINIMUM SAND/OIL INTERCEPTOR SIZE (MINIMUM 350 GAL.) = 400 GAL.			
PROVIDE PARK USA MODEL #CMP-400			
SIZING PER 2012 UPC SECTION 1017.2			

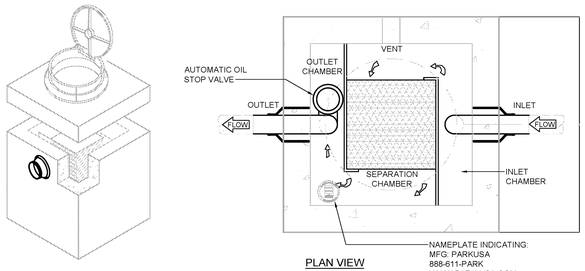


FRONT VIEW | SIDE VIEW | PLAN VIEW

MODEL	DIAMETER "D"	IN & OUT PIPE SIZE	WIDTH "W"
SWB-154	15"	4"	24"

04 SAMPLE WELL DETAIL

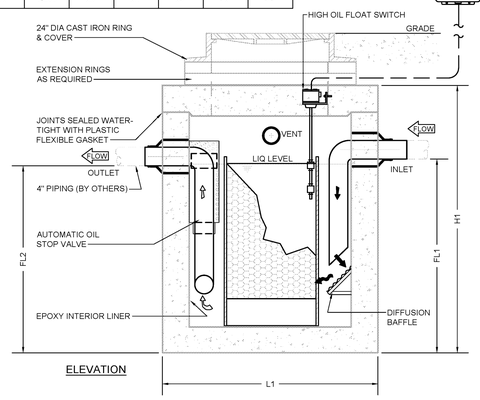
SCALE: NTS



PLAN VIEW

MODEL NO.	CAPACITY U.S. GAL	OIL CAP. U.S. (GAL)	FLOW RATE (GPM)	EMPTY WT (LBS)	LENGTH L1	WIDTH W1	HEIGHT H1	INLET FL1	OUTLET FL2
CMP-400	400	200	40	9,200	60"	60"	54"	45"	42"

HIGH OIL ALARM PANEL MOUNTED AT REMOTE LOCATION — HIGH LEVEL ALARM



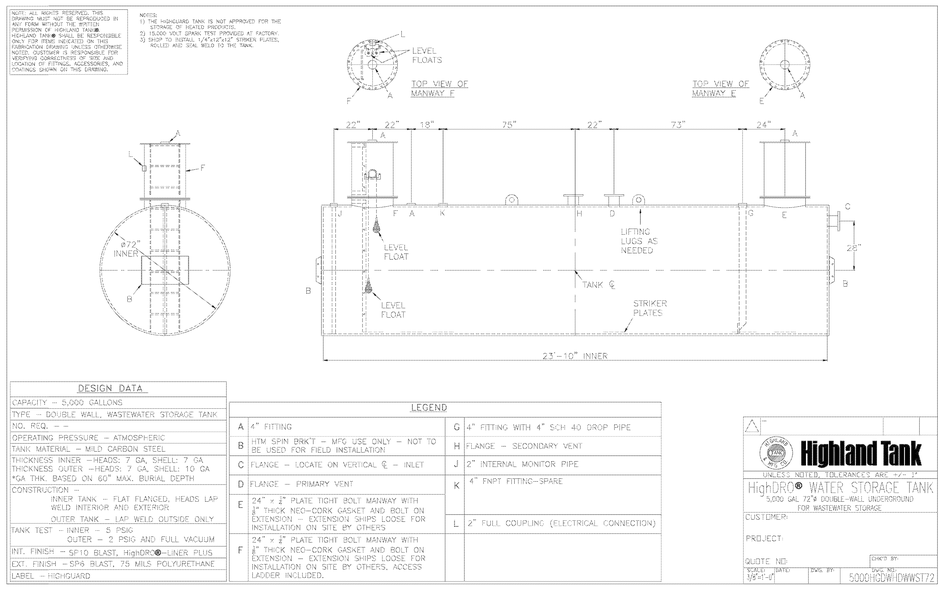
APPLICATIONS

- ☐ MAINTENANCE WASHDOWN & GARAGES
- ☐ GOLF COURSED
- ☐ EQUIPMENT & TRANSPORTATION WASHDOWN FACILITIES
- ☐ CARWASHES
- ☐ STORMWATER RUNOFF
- ☐ SERVICE STATION FUEL DEPOTS
- ☐ MANUFACTURING FACILITY EFFLUENT METER
- ☐ REMEDATION WATER CLEANUP
- ☐ GENERAL INDUSTRY

ELEVATION

03 SAND/OIL INTERCEPTOR DETAIL

SCALE: NTS



DESIGN DATA
CAPACITY – 5,000 GALLONS
TYPE – DOUBLE WALL, WASTEWATER STORAGE TANK
NO. REQ.
OPERATING PRESSURE – ATMOSPHERIC
TANK MATERIAL – MILD CARBON STEEL
THICKNESS INNER –HEADS: 7 GA, SHELL: 7 GA THICKNESS OUTER –HEADS: 7 GA, SHELL: 10 GA *GA THK. BASED ON 60" MAX. BURIAL DEPTH
CONSTRUCTION – INNER TANK – FLAT FLANGED, HEADS LAP WELD INTERIOR AND EXTERIOR OUTER TANK – LAP WELD OUTSIDE ONLY
TANK TEST – INNER – 5 PSIG OUTER – 2 PSIG AND FULL VACUUM
INT. FINISH – SP10 BLAST, HighDRI®–LINER PLUS
EXT. FINISH – SP6 BLAST, 75 MILS POLYURETHANE
LABEL – HIGHGUARD

LEGEND			
A	4" FITTING	G	4" FITTING WITH 4" SCH 40 DROP PIPE
B	HTM SPIN BRKT – MFG USE ONLY – NOT TO BE USED FOR FIELD INSTALLATION	H	FLANGE – SECONDARY VENT
C	FLANGE – LOCATE ON VERTICAL ℄ – INLET	J	2" INTERNAL MONITOR PIPE
D	FLANGE – PRIMARY VENT	K	4" FNPT FITTING–SPARE
E	24" x ¾" PLATE TIGHT BOLT MANWAY WITH ¾" THICK NEO–CORK GASKET AND BOLT ON EXTENSION – EXTENSION SHIPS LOOSE FOR INSTALLATION ON SITE BY OTHERS	L	2" FULL COUPLING (ELECTRICAL CONNECTION)
F	24" x ¾" PLATE TIGHT BOLT MANWAY WITH ¾" THICK NEO–CORK GASKET AND BOLT ON EXTENSION – EXTENSION SHIPS LOOSE FOR INSTALLATION ON SITE BY OTHERS, ACCESS LADDER INCLUDED.		

Highland Tank
UNLESS NOTED, TOLERANCES ARE: +/- .1"
HighDRI® WATER STORAGE TANK
5,000 GAL 72"ø DOUBLE–WALL UNDERGROUND FOR WASTEWATER STORAGE
CUSTOMER:
PROJECT:
QUOTE NO:
DRAWN BY:
SCALE: DATE: 1/64"=1" DWG BY: DWG NO: 5000HDWHDWWST72

02 HOLDING TANK DETAIL

SCALE: NTS

Trapzilla® Grease Interceptor
TZ-400-ECA Specifications

PRODUCT FEATURES

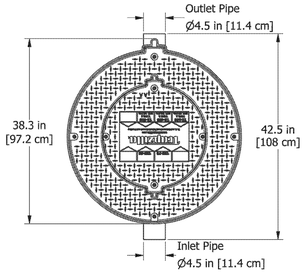
Constructed of corrosion resistant materials suitable for installation in virtually any location.

Compact footprint.

Baffle structure retains separated grease increasing retention efficiency of separator.

Includes one ECALA-TZ-18 Extension Collar Adapter Lid Assembly for in-ground installation.

Included lid rated for foot-traffic only



SPECIFICATIONS

Construction: _____ Single-Piece Rotationally Molded Polyethylene Exterior Tank with Inlet/Outlet Inverts secured using Patented Interior Radial Compression Ring

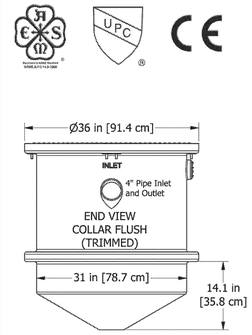
Flow Rating: _____ 75 GPM (4.73 l/s)

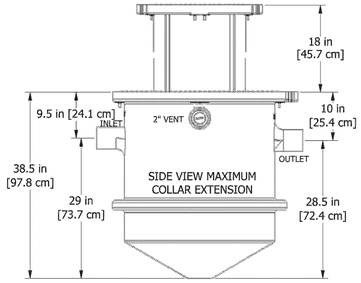
Liquid Capacity: _____ 70 gallons (265 l)

Grease Capacity: _____ 55 gal. (208.2 l)
405.6 lbs. (184 Kg)

Solids Capacity: _____ 22.6 gallons (85.6 l)

Inlet/Outlet: _____ 4" (101 mm)





Trapzilla® Grease Interceptor
TZ-400-ECA Specifications

NOTES

1. READ instruction manual included with system before installing/operating.
2. Unit requires 6" (15.24 cm) of clearance all the way around the lid from walls or other structures to allow for servicing.
3. Make piping connections with rubber "No Hub" connectors.
4. Keep outlet piping as straight as possible. Use only "sweep" connections.
5. Install vent on outlet piping.
6. If installing in conjunction with other Trapzilla products, include cleanout port before, after, and/or between each unit.
7. Do not install "P" Trap on outlet connection of tank (unit already has internal gas trap).
8. Do not reduce pipe size on outlet piping
9. Do not pressure test unit.

Equipment must be installed in compliance with all applicable laws, regulations and codes, including plumbing codes. Installation should be performed by a qualified plumbing contractor.

JOB SPECIFICATION

Grease separator(s) shall be Thermaco **Trapzilla** hydromechanical grease interceptor system(s) as manufactured by Thermaco, Inc., Asheboro, North Carolina as noted on plans.

SEPARATOR SPECIFICATIONS

Furnish and install _____ Thermaco Trapzilla Model No. TZ-400-ECA, rotationally molded polyethylene grease interceptor(s) for above or below ground installation, shall be rated at 75 GPM (4.73 l/s) with 55 gal. (208.2 l) / 405.6 lbs. (184 Kg) of total grease storage capacity with flat separation efficiency curve capable of holding 79% of volume in free-floating fats, oils, and grease at capacity, with removable cover for grease and solids removal access, integral anti-flotation anchor ring for in-ground installation, integral horizontal baffle, laminar inlet flow diverter, integral vessel vent, separate storage compartments for grease and heavier than water solids, a unitary tank body and 4" (101 mm) inlet/outlet structures without gasket interfaces, utilizing an interior radial compression ring conjoining invert to tank outlet/inlet structures without bulkhead fittings and/or gaskets, invert top and bottom secured attachment points, sloping conical bottom for solids retention, integral sewer gas trap, and a fully removable polyethylene self-positioning cover with sealed thread fasteners. Includes one extension collar assembly, linear low-density rotationally molded polyethylene for field adjustability to optimal installation depth.

SUBMITTAL OPTIONS

- ☐ ECA-TZ-29 Extension Collar with additional 29" (73.7 cm) of extension
- ☐ TZSP-40-ECA Sampling Port with 4" Inlet/Outlet, 0.5" fall with 29" (73.7 cm) Extension Collar Assembly
- ☐ TZSP-48-ECA Sampling Port with 4" Inlet/Outlet, 7.8" fall with 29" (73.7 cm) Extension Collar Assembly
- ☐ TSS-70-ECA Solids Interceptor for additional Solids Capacity
- ☐ VFCA-75 Vented Flow Control Assembly for installation at plumbing fixture level to limit flow to 75 gpm for installations with head height greater than 6'
- ☐ MFSH-44 Molded Flow Splitter Assembly for evenly diverting flow to two separate 4" Trapzilla units
- ☐ FTCA-22 Fabricated Top Cover Assembly with diamond plate aluminum surface for heavy duty foot-traffic, pallet jacks, food carts etc. (not rated for vehicle traffic)
- ☐ H20/Traffic Rated Installation, see link for installation drawings

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01 GREASE INTERCEPTOR DETAIL

SCALE: NTS

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DVO

BRO W N REYNO LDS W ATFO RD ARCHITECTS, INC.
DATE 11/16/2018
DRAW N BY EJG
CHECKED BY WD
BRW PRO JECT NUMBER 2170700

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

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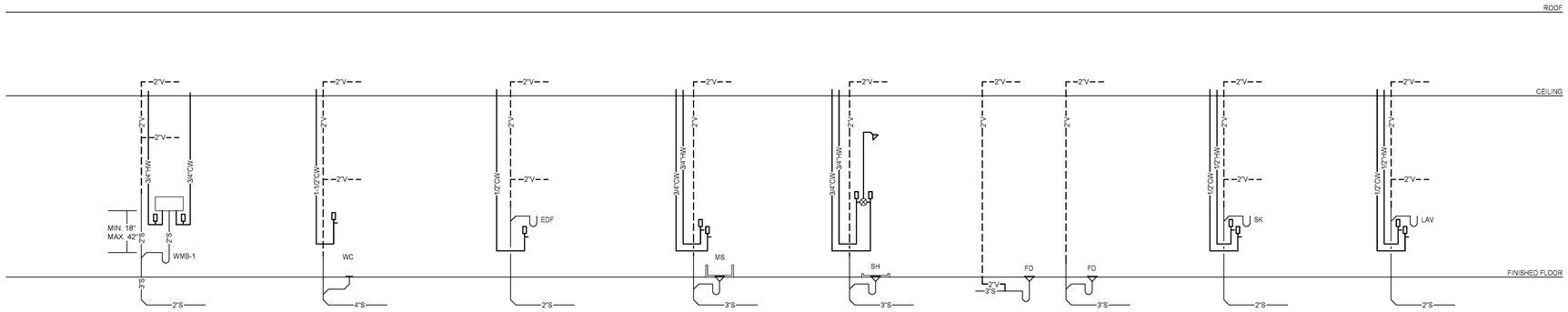
P2.2

PLUMBING DETAILS



TYPICAL SINGLE CLOTHES WASHING MACHINE | TYPICAL SINGLE WATER CLOSET | TYPICAL ELECTRIC DRINKING FOUNTAIN | TYPICAL SINGLE MOP SINK | TYPICAL SINGLE SHOWER | TYPICAL SINGLE 3"FD OR 3" FS | TYPICAL SINGLE SINK | TYPICAL SINGLE LAVATORY

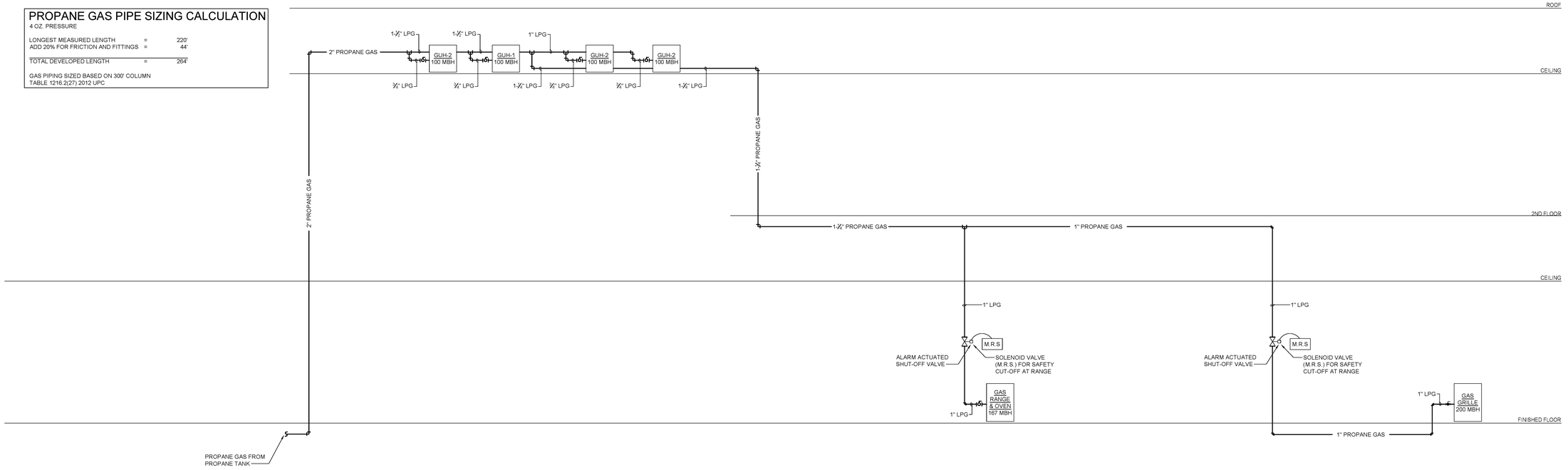
02 PLUMBING RISER DIAGRAM
SCALE: NTS

PROPANE GAS PIPE SIZING CALCULATION

4 OZ. PRESSURE

LONGEST MEASURED LENGTH	=	220'
ADD 20% FOR FRICTION AND FITTINGS	=	44'
TOTAL DEVELOPED LENGTH	=	264'

GAS PIPING SIZED BASED ON 300' COLUMN
TABLE 1216.2(27) 2012 UPC



01 PROPANE GAS RISER DIAGRAM
SCALE: NTS

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BROWN REYNOLDS WATFORD ARCHITECTS, INC.
DATE 11/16/2018
DRAWN BY EJG
CHECKED BY WD
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
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PLUMBING RISERS

ELECTRICAL SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED HERE ARE USED IN THE DRAWINGS AND MAY NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE DRAWINGS.

ELECTRICAL ABBREVIATIONS

1P	ONE POLE
2P	TWO POLE
3P	THREE POLE
4P	FOUR POLE
1P1W	ONE POLE, ONE WIRE
1P2W	ONE POLE, TWO WIRE
2P2W	TWO POLE, TWO WIRE
2P3W	TWO POLE, THREE WIRE
3P2W	THREE POLE, TWO WIRE
3P3W	THREE POLE, THREE WIRE
3P4W	THREE POLE, FOUR WIRE
4P4W	FOUR POLE, FOUR WIRE
A	AMPERE
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AS	AMP SWITCH
AT	AMP TRIP
ARCH	ARCHITECT
ATS	AUTOMATIC TRANSFER SWITCH
A/V	AUDIO VISUAL
B	PEDESTAL MOUNTED ON BENCH TOP
BF	BELOW FLOOR
BLDG	BUILDING
C	CONDUIT
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING MOUNTED
CT	CURRENT TRANSFORMER
CU	COPPER
CL	CENTERLINE
D	DEDICATED DEVICE
DC	DIRECT CURRENT
Δ	DELTA
DISC	DISCONNECT
DWG	DRAWING
E	EMERGENCY
EC	ELECTRICAL CONTRACTOR
EMT	ELECTRIC METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FLA	FULL LOAD AMPS
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFPE	GROUND FAULT PROTECTION EQUIPMENT
GND	GROUND
GRC	GALVANIZED RIGID CONDUIT
HP	HORSEPOWER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
Hz	HERTZ (cycle) PER SECOND
JB	JUNCTION BOX
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT
LP	LIGHTING PANELBOARD
LS	LIMIT SWITCH
LTG	LIGHTING
LV	LOW VOLTAGE
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
#	NUMBER
NTS	NOT TO SCALE
OH	OH
P	POLE
PB	PULL BOX
PC	PLUMBING SYSTEM CONTRACTOR
PH	PHASE
PNL	PANELBOARD
PR	PAIR
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE CONDUIT
R	RELAY
REC	RECESSED
RSC	RIGID STEEL CONDUIT
SEC	SECONDARY
SN	SOLID NEUTRAL
SP	SPARE
SS	STAINLESS STEEL
ST	SHUNT TRIP
STP	SHIELDED TWISTED PAIR
SUSP	SUSPENDED
SW	SWITCH
SWBD	SWITCHBOARD
T	TAMPER RESISTANT SAFETY RECEPTACLE
TC	TELEPHONE CABINET
TCI	TELECOMMUNICATIONS CABLING INSTALLER
TEL/DATA	TELEPHONE/DATA
TEL	TELEPHONE
TYP	TYPICAL
UG	UNDERGROUND
UTP	UNSHIELDED TWISTED PAIR
V	VOLT
UOI	UNLESS OTHERWISE INDICATED
Y	WYE
W	WATT
WP	WEATHERPROOF
XFMR	TRANSFORMER
ZAM	ZONE ADAPTER MODULE
+72	MOUNTING UNITS TO CENTERLINE ABOVE FINISHED FLOOR OR GRADE

LIGHTING AND CONTROLS

- SURFACE MOUNTED LIGHT FIXTURES
- RECESS MOUNTED LIGHT FIXTURES
- WALL MOUNTED LIGHT FIXTURES
- SUSPENDED, PENDENT, CHAIN STEM, OR CABLE HUNG LIGHT FIXTURES
- SHADING INDICATES FIXTURE FULLY WIRED TO EMERGENCY OR NIGHT LIGHTING CIRCUIT
- PARTIAL SHADING INDICATES FIXTURE PARTIALLY WIRED TO EMERGENCY OR NIGHT LIGHTING CIRCUIT. REFER TO GENERAL NOTE #17.
- STRIP OR UNDER CABINET LIGHT FIXTURE
- SINGLE HEAD SPOT LIGHT OR FLOOD LIGHT FIXTURE
- DOUBLE HEAD SPOT LIGHT OR FLOOD LIGHT FIXTURE
- EXIT LIGHT FIXTURE - ARROWS AND FACE AS INDICATED ON DRAWINGS
- LIGHTING TRACK - LENGTH AS INDICATED ON DRAWING NUMBER OF FIXTURES AS INDICATED ON DRAWING AND/OR LIGHT FIXTURE SCHEDULE
- EMERGENCY BATTERY REMOTE LIGHTING HEADS
- EMERGENCY BATTERY UNIT WITH LIGHTING HEADS
- SURFACE MOUNTED ACCENT LIGHT
- RECESS MOUNTED ACCENT LIGHT
- SINGLE POLE SWITCH - MOUNT 44" AFF UNLESS OTHERWISE NOTED
  - SWITCH DESIGNATION
  - SWITCH TYPE
  - (2) DOUBLE POLE
  - (3) 3 WAY
  - (4) 4 WAY
  - (K) KEY OPERATED
  - (P) WITH PILOT LIGHT INDICATION
  - (DL) DUAL LEVEL SWITCH
  - (VC) VACANCY SENSOR
  - (D) WALL MOUNTED DIMMER SWITCH
- R1 — LOW VOLTAGE SWITCH OVERIDE
  - RELAY DESIGNATION
- VC — LIGHTING CONTROL VACANCY SENSOR-CEILING MOUNTED
- T — TIME CLOCK - SEE SCHEDULE ON SHEET#
- C — CONTACTOR - SEE SCHEDULE ON SHEET#
- PC — PHOTO CELL
- LIGHTING CONTROLLER PANEL
- LCP/1 — LCP/1 DESIGNATION
- PNL — PANELBOARD DESIGNATION

POWER AND COMMUNICATIONS

- G N A — CIRCUIT HOME RUN WITH GROUND, HOT, NEUTRAL
- HA1-1,3,5/R1 — CIRCUIT TO BE PULLED THROUGH DESIGNATED RELAY IN LIGHTING CONTROL PANEL (IF APPLICABLE)
  - CIRCUITING INFORMATION FOR GROUPING PURPOSES ONLY. CONTRACTOR SHALL SELECT ACTUAL CIRCUIT BREAKERS AND BALANCE LOADS IN PANELBOARD.
  - PANELBOARD INFORMATION. SEE SCHEDULING SHEETS FOR MORE INFORMATION.
- DUPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS OTHERWISE NOTED
- TAMPER PROOF DUPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS OTHERWISE NOTED
- GFCI DUPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS OTHERWISE NOTED
- DUPLEX RECEPTACLE - MOUNTED 6" ABOVE COUNTER BACKSPLASH UNLESS OTHERWISE NOTED
- QUAD RECEPTACLE - MOUNTED 18" AFF UNLESS OTHERWISE NOTED
- DUPLEX RECEPTACLE - MOUNTED FLUSH IN CEILING
- X — FLOOR MOUNTED ELECTRICAL BOX SEE DRAWINGS FOR TYPES OF OUTLETS REQUIRED AT EACH BOX (F) FLUSH TYPE (P) POKE THRU TYPE
- PUSHBUTTON
- SPECIAL PURPOSE OUTLET - THIS ELECTRICAL CONNECTION REQUIRES ONSITE COORDINATION WITH OTHER CONTRACTORS AND/OR VENDORS PRIOR TO INSTALLATION. PROVIDE ALL CONNECTIONS, MOTOR STARTERS, AND DISCONNECTS REQUIRED BY CODE AND FINAL SUGGESTED MANUFACTURER REQUIREMENTS. CONTACT ENGINEER WITH ANY REQUIRED CHANGES TO ELECTRICAL DESIGN.
- 2 — MOTOR CONNECTION (2) MOTOR IDENTIFICATION
- PANELBOARD - FLUSH MOUNTED
- PANELBOARD - SURFACE MOUNTED
- TRANSFORMER - MOUNT ON 4" PAD UNLESS OTHERWISE NOTED
- PB — IN-GRADE PULLBOX
- DISCONNECT SWITCH
- F — FUSED DISCONNECT SWITCH
- COMBINATION MOTOR STARTER
- m — MOTOR RATED SWITCH
- J — JUNCTION BOX
- EPO — DOUBLE ACTION MUSHROOM HEAD EMERGENCY POWER OFF BUTTON. THIS BUTTON SHALL PROVIDE A SIGNAL TO SHUNT TRIP ALL CIRCUIT BREAKERS WHICH FEED POWER TO THIS ROOM. ALL CIRCUIT BREAKERS FEEDING THIS ROOM SHALL BE SHUNT TRIP TYPE.
- TELEPHONE/DATA OUTLET - PROVIDE SINGLE GANG BOX AND 1" CONDUIT WITH PULL STRING TO NEAREST ACCESSIBLE CEILING.

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER AND SHALL COMPLY WITH ALL ADOPTED LOCAL, STATE, AND NATIONAL CODES.
2. ALL ELECTRICAL WORK REQUIRES CITY INSPECTION. ELECTRICAL WORK COVERED OR ENCLOSED PRIOR TO CITY INSPECTION SHALL BE UNCOVERED FOR INSPECTION AND REPLACED AT NO EXPENSE TO THE OWNER.
3. ALL CONDUITS MUST CONTAIN A GROUND WIRE. USE OF THE CONDUIT BODY AS A GROUNDING METHOD IS PROHIBITED.
4. ALL CONDUITS SHALL BE INSTALLED PARALLEL AND/OR PERPENDICULAR TO BUILDING LINES.
5. ALL CONDUCTORS SHALL BE COPPER UNLESS SPECIFIED OTHERWISE.
6. DO NOT SCALE THE DRAWINGS.
7. ELECTRICAL CONDUITS AND/OR CIRCUITS PENETRATING FIRE RATED CEILING AND WALLS TO BE SEALED FIRE AND SMOKE TIGHT AT THE PENETRATION.
8. THE CONTRACTOR SHALL REPLACE AND/OR REPAIR ALL WALLS, CEILINGS, DOORS, EQUIPMENT, WIRING, CONDUIT, ETC, WHICH ARE DAMAGED OR REMOVED BY CONTRACTOR TO THE SATISFACTIONS OF THE ARCHITECT/ENGINEER.
9. ALL MATERIALS SHALL BE NEW AND UNUSED, AND OF THE BEST QUALITY. ALL MATERIAL INSTALLED SHALL BE UL LISTED OR AS REQUIRED BY LOCAL BUILDING CODES.
10. VERIFY VOLTAGE, CURRENT AND PHASES FOR ALL EQUIPMENT TO BE INSTALLED INCLUDING BY OWNER.
11. THE CONTRACTOR SHALL PROVIDE ALL FUSES AND CIRCUIT BREAKERS WHERE REQUIRED BY THE NEW CONSTRUCTION DOCUMENTS.
12. ALL ELECTRICAL CABINETS, PANELS, DISCONNECTS, TRANSFORMERS, CONTROLS, RECEPTACLES, J-BOXES, ETC., SHALL BE MARKED, TAGGED AND IDENTIFIED. NOTE FEEDER SOURCE WHERE APPLICABLE.
13. CONTRACTOR SHALL PROVIDE ALL MATERIALS EXCEPT AS NOTED AND MAKE ALL NECESSARY CONNECTIONS TO NEWLY INSTALLED EQUIPMENT.
14. UPON COMPLETION OF THE PROJECT, ALL CHANGES SHALL BE DOCUMENTED, AND REDLINED. AS-BUILT DRAWINGS SHALL BE TURNED OVER TO THE OWNER BY THE CONTRACTOR.
15. 4" HOUSEKEEPING CONCRETE PADS SHALL BE FURNISHED FOR ALL FLOOR MOUNTED EQUIPMENT, BY OTHERS.
16. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID TO VERIFY EXISTING CONDITIONS. BY SUBMITTING A BID THE CONTRACTOR ACKNOWLEDGES THAT HE HAS VISITED THE SITE AND THE BID IS ADEQUATE TO PERFORM WORK NECESSARY TO MAKE THE SYSTEMS COMPLETE AND OPERATIONAL. IF THE CONDITIONS AT THE SITE ARE NOT SUCH THAT THE WORK CAN BE INSTALLED AS SHOWN, CONTRACTOR'S BID SHALL INCLUDE COST, TO COVER NECESSARY ADJUSTMENTS AND ADDITIONS, (BASED ON SITE CONDITIONS) TO MAKE THE SYSTEMS COMPLETE AND OPERATIONAL. CONTRACTOR TO CONTACT ARCHITECT/ENGINEER WITH ANY FIELD DISCREPANCIES.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH IBC 1006.3.1 BY HAVING SELECTED LIGHTING MANUFACTURER SUBMIT EMERGENCY PHOTOMETRIC PLAN WITH LIGHTING SUBMITTAL SHOWING COMPLIANCE, AND ADDING ADDITIONAL FIXTURES WHERE REQUIRED AT NO COST TO THE OWNER.

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CITY OF GEORGETOWN
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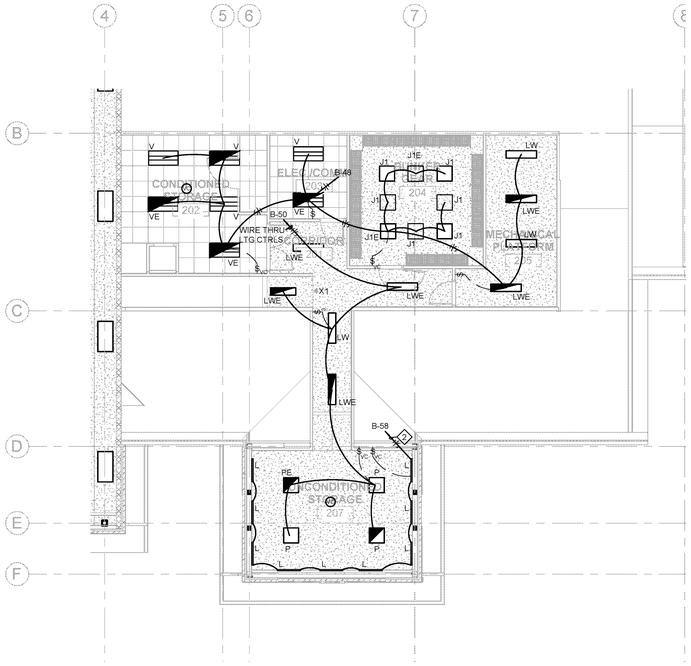
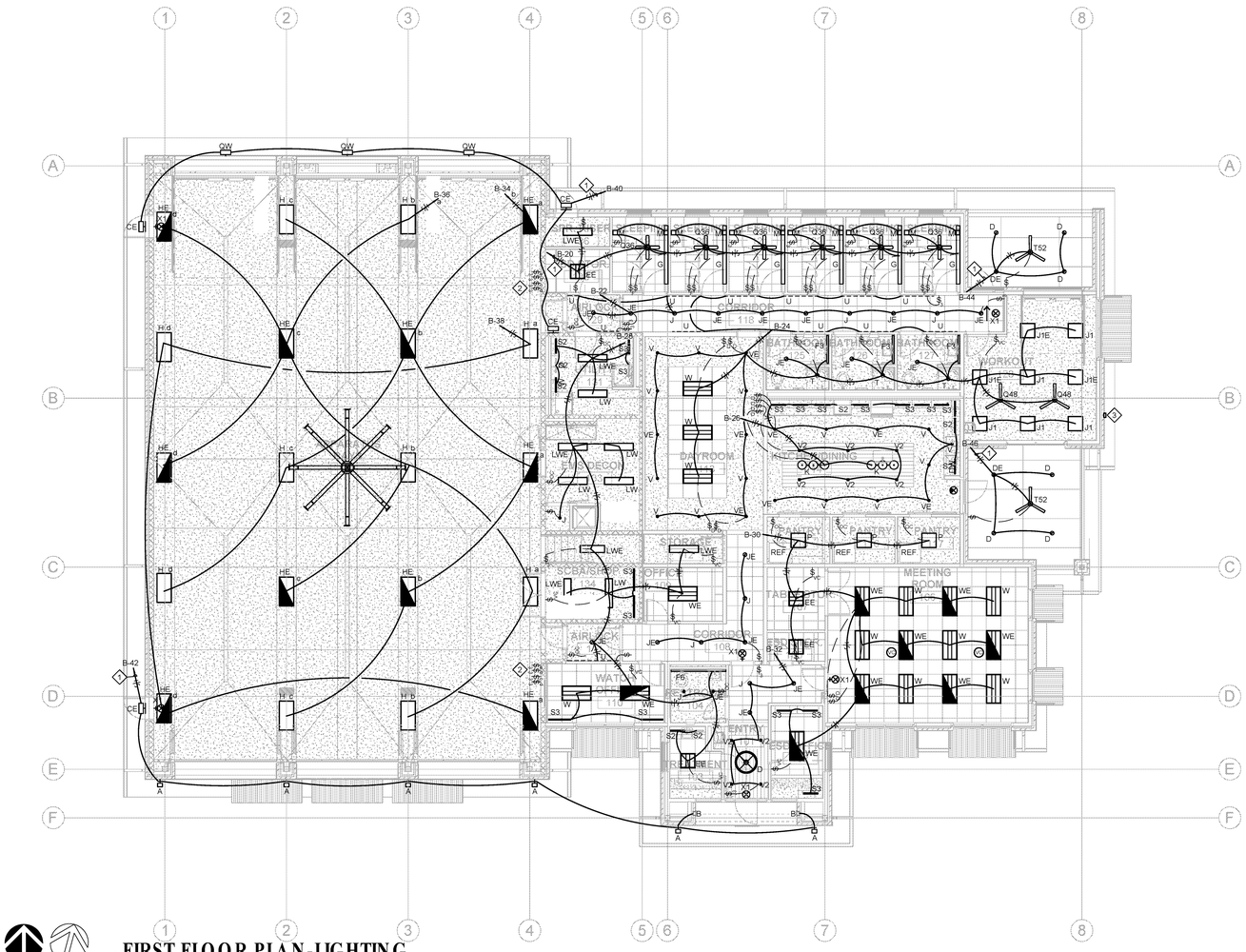
ELECTRICAL SYMBO LS & ABBREVIATIO NS



PLAN NORTH TRUE NORTH

2 SECOND FLOOR PLAN-LIGHTING

1/8" = 1'-0"



PLAN NORTH TRUE NORTH

1 FIRST FLOOR PLAN-LIGHTING

1/8" = 1'-0"

LOCATION	TYPE	MANUFACTURER	MODEL	VOLTAGE	LAMPING INFO	REMARKS
EXTERIOR DECORATIVE WALL LUMINAIRE	A	VISA	OW1295 L35K-L 120 BSIL ACCENT BAR AND END CAP FINISH	120	19W LED	SEE ARCHITECTURAL FOR MOUNTING HEIGHTS
EXTERIOR MAIN ENTRY RECESSED	B	VISA	OW1600 L35K MVOLT BSIL RB (FIXTURE SHALL BE RECESSED IN EXTERIOR WALL) 2' IN LENGTH	120	30W LED	MOUNT AS HIGH AS POSSIBLE ON VERTICAL WALL
EXTERIOR WALL MNTD. LIGHT	C	BEGA	24 374 K3 BLK	120	12.3W LED	WALL MOUNTED WITH INVERTER POWERED LIGHTING
EXTERIOR WALL MNTD. LIGHT FOR EGRESS	CE	BEGA	24 374 K3 BLK POWER WITH INVERTER. CONTRACTOR SHALL PROVIDE INVERTER SYSTEM	120	12.3W LED	WALL MOUNTED WITH INVERTER POWERED LIGHTING
DECORATIVE ENTRY LIGHTING	D	GROSS CHANDELIER CO	ORBIS GL-2736 36LED35 RD-RED CABLE HANGER BLACK CORD	120	76W LED	SEE ARCHITECTURAL FOR MOUNTING HEIGHTS
2X2 DIRECT/INDIRECT	E	LITHONIA	2VTL2 40L ADP LP835 N100 (DGA22 FS/VT IF REQUIRED)	120	35.2W LED	
2X2 DIRECT/INDIRECT W/ BATTERY BACKUP	EE	LITHONIA	2VTL2 40L ADP LP835 N100 EL14L (DGA22 FS/VT IF REQUIRED)	120	35.2W LED	
BATHROOMS 3FT LINEAR FLUSH RECESSED	F3	MARK	SL4L LOP 3FT FLP GB 90CRI 35K 1000LMF NODIM 120 DPL	120	30W LED	INSTALL FLUSH WITH CEILING
BATHROOMS 4FT LINEAR FLUSH RECESSED	F4	MARK	SL4L LOP 4FT FLP GB 80CRI 35K 1000LMF NODIM 120 DPL	120	40W LED	INSTALL FLUSH WITH CEILING
BATHROOMS 6FT LINEAR FLUSH RECESSED	F6	MARK	SL4L LOP 6FT FLP GB 80CRI 35K 1000LMF NODIM 120 DPL	120	60W LED	INSTALL FLUSH WITH CEILING
TRAINING PATIO SOFFIT 60" FAN	FA	BAF	HAIKU SERIES 1 WITH NO EXTENSION	120	NA	STANDARD MOUNT
SLEEPING ROOMS WALL MOUNT	G	FINELITE	S16 LED WM ID DCO 8 3E HO HO 3500 SC 120V FE N100	120	110W LED	(13.78 W PER LINEAR FOOT)
APPARATUS BAY 4' LINEAR LED	H	LITHONIA	IBGN 24000LM HEF AFL ND MVOLT GZ10 35K 80CRI HA SPD BPK DWH THUN	120	136 W LED	SURFACE MOUNT TO CEILING
APPARATUS BAY 4' LINEAR LED W/ BATTERY	HE	LITHONIA	IBGN 24000LM HEF AFL ND MVOLT GZ10 35K 80CRI HA SPD BPK PS10250 T20C DWH THUN	120	136 W LED	SAME AS "H". AND WITH BATTERY BACKUP
RECESSED CAN	J	LITHONIA	LDN6 35/30 L06 AR LS MVOLT	120	34.7W LED	NO DIMMING. ON/OFF ONLY
RECESSED CAN WITH BATTERY BACKUP	JE	LITHONIA	LDN6 35/30 L06 AR LS MVOLT ELR	120	34.7W LED	W/ INTEGRAL BATTERY BACKUP
BUNKER ROOM	JI	FOCAL POINT	FEQ2 11 AC 1500L 35K 1C UNV LD1 U WH	120	19W LED	
BUNKER ROOM WITH BATTERY BACKUP	JIE	FOCAL POINT	FEQ2 11 AC 1500L 35K 1C UNV LD1 U WH WITH POWER SENTRY EAC ISSM 125 BATTERY BACKUP	120	19W LED	WITH POWER SENTRY EAC ISSM 125 BATTERY BACKUP
STEM MOUNT 3-HEAD KITCHEN FIXTURES	K	BARN LIGHT ELECTRIC	S-WHD12-P/ST-HANCOCK 950 METALLIC CHROME ST30" 950 METALLIC CHROME HDSM HDBP FST MED-BASE 120V	120	11W LED	WITH FROSTED GLASS LENS
TOWER UNDER WINDOW & STORAGE AREAS	L	LITHONIA	ZL2N L48 3000LM MDD 120 35K 80CRI PLR WH	120	44 W LED	
TOWER UNDER WINDOW & STORAGE AREAS	LE	LITHONIA	ZL2N L48 3000LM MDD 120 35K 80CRI PLR BSL722 WH (BATTERY BACKUP)	120	44 W LED	SAME AS "L", AND WITH BATTERY BACKUP
1X4 RECESSED	LW	LITHONIA	GTL F 4 48L FW SWL 120 EZ1 LP835 DGA14	120	46.46W LED	
1X4 RECESSED WITH BATTERY BACKUP	LWE	LITHONIA	GTL F 4 48L FW SWL 120 EZ1 LP835 EL14L DGA14	120	46.46W LED	WITH BATTERY BACKUP
2X2 LED TROFFERS	P	LITHONIA	2ACL2 40L MVOLT eldoLED LP835 INCLUDE DGA22 DRYWALL GRID ADAPTER IF REQUIRED	120	35W LED	RECESS MOUNTED
2X2 LED TROFFERS WITH BATTERY BACKUP	PE	LITHONIA	2ACL2 40L MVOLT eldoLED LP835 EL14L INCLUDE DGA22 DRYWALL GRID ADAPTER IF REQUIRED	120	35W LED	RECESS MOUNTED WITH BATTERY BACKUP
SLEEPING ROOMS CEILING FAN NO LIGHT	Q36	CANARM	CP36 WHITE WITH 16" DOWNROD PROVIDE RECESSED WALL MOUNTED 3-SPEED CONTROLS	120	76W (no lights)	
WORKOUT ROOM INTERIOR CEILING FAN	Q48	CANARM	CP48 WHITE WITH 16" DOWNROD PROVIDE RECESSED WALL MOUNTED 3-SPEED CONTROLS	120	86W (no lights)	
EXTERIOR LIGHT BOLLARD	QB	BEGA	77 743-K3 BLK WITH 79 817 ANCHOR KIT	120	19W LED	
EXTERIOR FLAG LUMINAIRE	QF	HYDREL	TPS1 18LED WHT53K MVOLT NSP YM ARTL GS LP BL	120	18W LED	MOUNT CLOSE TO FINISHED GRAGE
EXTERIOR POLE MNTD. LIGHT W/ 14' POLE	QP4	LITHONIA	DSX1 LED P4 30K T4M MVOLT MOUNTING SF DBLBXD + VALMONT POLE: R 13083050614 D1 DBL DART SQUARE 2T	120	125W LED	LENS SHALL BE MOUNTED AT 15' AFG
EXTERIOR WALL MOUNTED WORKLIGHT	QW	LITHONIA	CSXW LED 30C 1000 40K TFTM MVOLT BBW DBLBXD WITH CSXWBBW DDBXD U	120	104W LED	MOUNT AT 17' AFF
2 FT LINEAR UNDERCABINET LIGHTS	S2	JUNO	UPLED22 30K 80CRI WH AND ACCESSORIES AS REQUIRED	120	8.1W LED	CONTROL WITH WALL MOUNTED LIGHT SWITCH
3 FT LINEAR UNDERCABINET LIGHTS	S3	JUNO	UPLED30 30K 80CRI WH AND ACCESSORIES AS REQUIRED	120	10.7W LED	CONTROL WITH WALL MOUNTED LIGHT SWITCH
SHOWER LIGHTS	T	GOTHAM	EVO 35/45 6 DFR MVOLT EZ10	120	9.6W LED	
PATIO 52" CEILING FAN NO LIGHT	T52	HUNTER	CASSIUS OUTDOOR 52 INCH 3 MATTE SILVER/BLACK WILLOW REVERSIBLE BLADES WITH RECESSED SPEED CONTROL	120	96 W (no lights)	
LINEAR ROPE LIGHTS FOR CORRIDOR	U	CONTECH	TLT 24V 2 35K (LENGTH) TLP24VP90 TLCEXT96 TLP24VHW96 TLCIP19HW TLCOP12HW TLP24VHW96-ENC TLCCF TLCCM and TLCCM TLPRPT TLPICB TLPDIM10V TLPDIMWP TLCR6 TLACS6 TLALF6 TLACRE2	12	2W/FT LED	1.78 W/LIN. FT.; MOUNT STRIPS 1 FT. ABOVE FLOOR, & DIMMER ABOVE ACCESSIBLE CEILING ROOM 121
TROPYH CASE LED LIGHTING	UG	JUNO	USTL1	120	3.8W LED	MOUNT ON UNDERSIDE OF TOP OF CABINET
2X4 RECESSED LED TROFFER	V	LITHONIA	2ACL4 60L NO DIMMING LP835 (WITH DGA24 ACCESSORY IF IN GYP CLGS)	120	47W LED	
2X4 RECESSED W/ BATTERY BACKUP	VE	LITHONIA	2ACL4 60L NO DIMMING LP835 EL14L (WITH DGA24 ACCESSORY IF IN GYP CLGS)	120	47W LED	WITH BATTERY BACKUP
2X4 DIRECT/INDIRECT	W	LITHONIA	2VTL4 40L ADP MVOLT EZ1 LP835 N100 2VT4F916 with Nlight WALL POD	120	33.2W LED	
2X4 DIRECT/INDIRECT W/ BATTERY BACKUP	WE	LITHONIA	2VTL4 40L ADP MVOLT EZ1 LP835 N100 EL14L 2VT4F916 with Nlight WALL POD	120	33.2W LED	WITH BATTERY BACKUP
EXIT SIGN WITH BATTERY BACKUP	X1	LITHONIA	LQM S W 3 R 120 ELN	120	LED	ALL PATHS OF EGRESS. WITH BATTERY BACKUP

NOTES:

1 **CONTRACTOR SHALL PROVIDE ALL CABLING, CONDUCTORS, SENSORS, DRIVERS, POWER SUPPLIES, CONTROLS, ETC., FOR A COMPLETE AND FULLY FUNCTIONAL AND CONTROLLABLE LIGHTING PACKAGE.**

2 EXTERIOR LUMINAIRES SHALL MEET 130MPH 1.3 SEC WIND GUSTS.

3 PROVIDE AND INSTALL nLIGHT WALL MOUNTED 1% DIMMING CONTROLS WITH CUSTOM LABELED DIMMER. CAT5 CABLING IS REQUIRED BETWEEN WALL CONTROL AND EACH LUMINAIRE.

4 LIGHT FIXTURE QPH LOCATED ON NORTH SIDE OF TRAINING TOWER SHALL BE CONTROLLED SEPARATELY WITH WEATHER RATED 4-HOUR DIAL TIMER. MOUNT NEAR PANEL FOR TRAINING TOWER.

KEYED NOTES:

1. WIRE THIS CIRCUIT THRU BUILDING LIGHTING CONTROL PANEL.
2. PROVIDE DIGITAL SWITCH THAT TIES INTO RELAY FOR THESE FIXTURES. FIXTURES TO BE MANUALLY CONTROLLED DURING THE DAY AND CONTROLLED BY THE LIGHTING CONTROL PANEL AT NIGHT ON PHOTOCELL.
3. E.C. SHALL COORDINATE EXACT MOUNTING LOCATION OF PHOTOCELL.

GENERAL LIGHTING NOTES:

A. LUMINAIRES SHALL BE FURNISHED AND INSTALLED WITH LAMPS, BALLAST(S), AND MOUNTING HARDWARE. ELECTRICAL CONTRACTOR SHALL SUBMIT FIXTURE CUT SHEETS TO CLIENT AND ARCHITECT FOR THEIR FINAL APPROVAL PRIOR TO ORDERING OF THE LUMINAIRES.

B. ELECTRICAL CONTRACTOR SHALL COORDINATE LIGHTING FIXTURE QUANTITIES, MOUNTING REQUIREMENTS, FINISHES, FIXTURE AVAILABILITY AND LEAD TIME FOR DELIVERY TO SITE.

C. FLUORESCENT AND LED LUMINAIRES THAT CONTAIN BALLAST(S) AND/OR LED DRIVERS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS PER NEC ARTICLE 410.130(G) REQUIREMENTS. DISCONNECTING MEANS IS NOT REQUIRED FOR EMERGENCY ILLUMINATION REQUIRED IN 700.16.

D. COORDINATE LAYOUT AND INSTALLATION OF LUMINAIRES AND MOUNTING MEANS WITH OTHER CONSTRUCTION THAT IS SUPPORTED OR THAT PENETRATES CEILINGS, INCLUDING BUT NOT LIMITED TO HVAC EQUIPMENT, FIRE-SUPPRESSION SYSTEM, AND PARTITION ASSEMBLIES PRIOR TO BEGINNING ANY WORK. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN HVAC EQUIPMENT AND LOCATION OF LUMINAIRES. VERIFY CLEARANCES REQUIRED.

E. ALL LUMINAIRES SHALL BE POSITIVELY ATTACHED TO THE SUSPENDED CEILING SYSTEM BY MECHANICAL MEANS. LISTED SUPPORT CLIPS, LISTED FOR USE WITH THE TYPE OF CEILING GRID MEMBER AND LUMINAIRE, ARE PERMITTED AT EACH FIXTURE CORNER. FIXTURES WEIGHING LESS THAN 50 POUNDS SHALL ALSO HAVE A MINIMUM OF TWO NO. 9 GAUGE WIRES CONNECTED FROM THE OPPOSITE CORNERS OF THE FIXTURE HOUSING TO STRUCTURE. FIXTURES ABOVE 50 POUNDS SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE. FIXTURES OF SIZES LESS THAN CEILING GRID SHALL BE SUPPORTED INDEPENDENTLY WITH AT LEAST TWO 3/4-INCH LISTED METAL CHANNELS SPANNING AND SECURED TO CEILING TEES AND SUPPORTED WITH WIRES OR ROD TO BUILDING STRUCTURE.

F. ALL LUMINAIRES AND FLEXIBLE WIRING WHIPS SHALL BE SUPPORTED INDEPENDENTLY OF THE GRID SUPPORT SYSTEM.

G. ELECTRICAL CONTRACTOR SHALL PURCHASE ANY ADDITIONAL LUMINAIRES REQUIRED, DUE TO DAMAGE OR CLIENT REQUEST. MATCH EXISTING LUMINAIRES IN THE AREA.

H. MOUNT MULTIPLE LIGHT SWITCHES IN A MULTIPLE GANG BOX WITH SINGLE COVER PLATE.

I. MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH A SIMULTANEOUS DISCONNECTING MEANS TO DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT OF ORIGIN. DISCONNECTION CAN BE ACCOMPLISHED THROUGH LISTED HANDLE TIES USED WITH SINGLE-POLE CIRCUIT BREAKERS OR MULTI-POLE DEVICES. BRANCH CIRCUIT(S) SERVING EMERGENCY LIGHTING SHALL NOT BE PART OF A MULTI-WIRE BRANCH CIRCUIT.

J. GROUNDED AND UNGROUNDED CONDUCTORS OF EACH MULTI-WIRE BRANCH CIRCUIT SHALL BE GROUPED WITH WIRE TIES OR SIMILAR MEANS AT A MINIMUM OF ONE LOCATION WITHIN THE PANELBOARD OR OTHER POINT OF ORIGIN.

K. SWITCHES CONTROLLING LIGHTING LOADS: WHERE SWITCHES CONTROL LIGHTING LOADS SUPPLIED BY A GROUNDED GENERAL PURPOSE BRANCH CIRCUIT, THE GROUNDED CIRCUIT CONDUCTOR (NEUTRAL WIRE) FOR THE CONTROLLED LIGHTING CIRCUIT SHALL BE PROVIDED AT THE SWITCH LOCATION. EXISTING SWITCHES IN REMODELED SPACES SHALL NOT BE EXEMPT FROM THIS REQUIREMENT.

L. WHERE DIMMING CONTROL IS SPECIFIED AS A PORTION OF A CIRCUIT THAT ALSO HAS SWITCHED LIGHTING IN ADJACENT SPACES, PROVIDE A SEPARATE, DEDICATED NEUTRAL WIRE FROM THE DIMMING DEVICE BACK TO THE ORIGINATING PANEL.

M. ALL SWITCHES SHALL BE LABELED WITH DESIGNATED PANEL AND CIRCUIT NUMBER(S) ON THE COVER PLATE.

N. PROVIDE AN UNSWITCHED HOT AT EACH EMERGENCY LIGHT FIXTURE AND EMERGENCY LIGHTING UNIT. EMERGENCY LIGHTING SHALL BE SUPPLIED WITH A BATTERY TO SUPPLY AND MAINTAIN EMERGENCY LIGHTING LEVELS FOR A MINIMUM PERIOD OF 90 MINUTES.

O. SHADED LUMINAIRES, EMERGENCY LIGHTING UNITS, AND EXIT SIGNS SHALL BE CONNECTED TO THE THE NORMAL LIGHTING CIRCUIT IN THE AREA AND CONNECTED AHEAD OF ANY CONTROLS.

P. EMERGENCY LUMINAIRES WITH SWITCH LEG SUBSCRIPT LETTER SHOWN SHALL BE CONTROLLED ALONG WITH OTHER LUMINAIRES SHARING SWITCH LEG SUBSCRIPT LETTER. ELECTRICAL CONTRACTOR SHALL CONNECT EMERGENCY LIGHT FIXTURE PER MANUFACTURER'S WIRING DIAGRAMS. SWITCHED EMERGENCY BALLAST WIRING CONFIGURATION REQUIRES CONNECTION TO SWITCHED AND UNSWITCHED CONDUCTORS OF SAME LIGHTING CIRCUIT.

Q. MOUNT NEW WALL SWITCHES AT 46" TO BOX CENTERLINE ABOVE FINISHED FLOOR (A.F.F.) TO COMPLY WITH ADA STANDARDS.

R. ALL DEVICES (OUTLETS, SWITCHES, ETC) TO BE MARKED BY ELECTRICAL CONTRACTOR WITH IDENTIFYING PANEL AND CIRCUIT NUMBER.

S. ALL DEVICES TO BE DECORA STYLE.

T. IN APPARATUS BAY AND SUPPORT AREAS SWITCH AND OUTLET COVER PLATES TO BE STAINLESS STEEL.

U. ALL LIGHTS AND SWITCHING SHALL MEET 2015 IECC.

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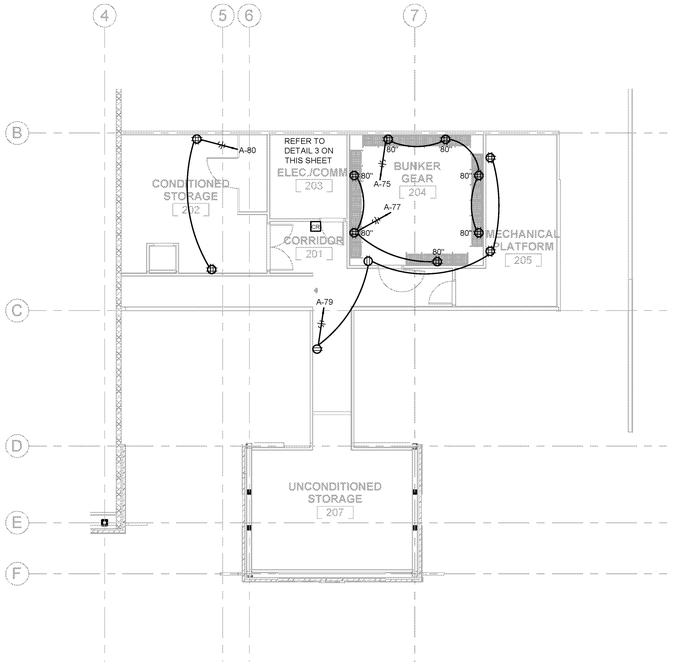
E1.2

LIGHTING FLOOR PLANS



PLAN NORTH TRUE NORTH

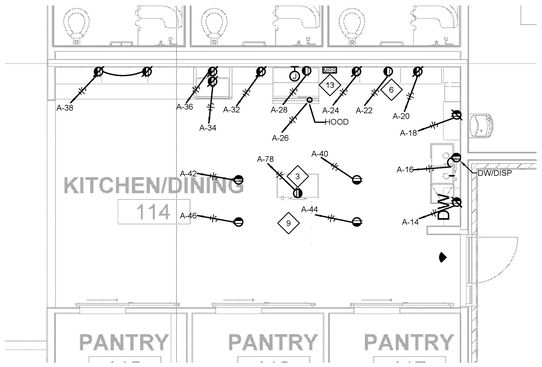
2 SECOND FLOOR PLAN-POWER

1/8" = 1'-0"

PLAN NORTH TRUE NORTH

3 ENLARGED FLOOR PLAN-ELECTRICAL ROOM POWER

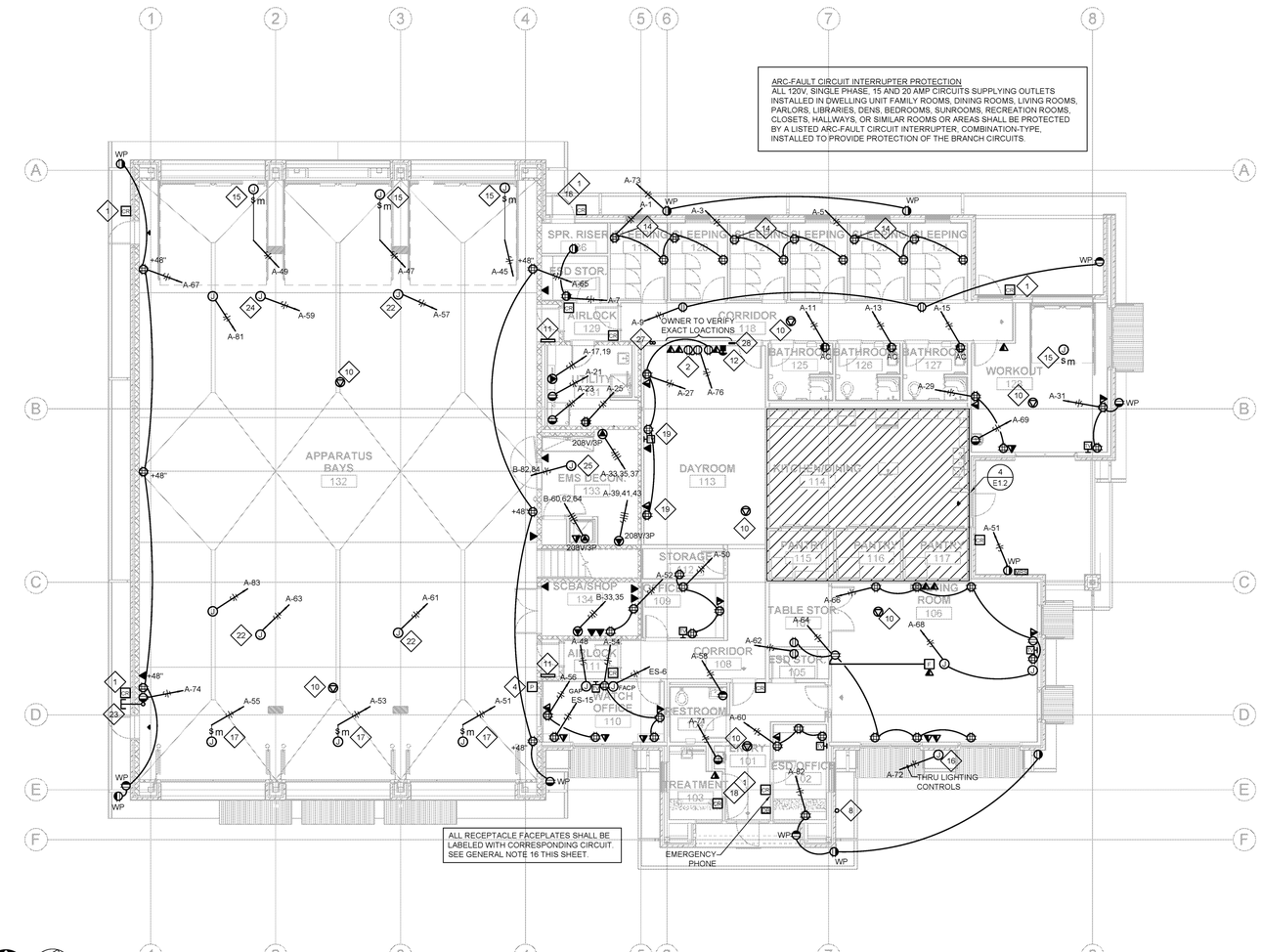
1/4" = 1'-0"



PLAN NORTH TRUE NORTH

4 ENLARGED FLOOR PLAN-KITCHEN POWER

1/4" = 1'-0"



PLAN NORTH TRUE NORTH

1 FIRST FLOOR PLAN-POWER

1/8" = 1'-0"

POWER GENERAL NOTES:

1. EXHAUST FANS IN APPARATUS SUPPORT ROOMS TO BE ON 2 HR DIAL TIMER MOUNTED ON WALL.
2. EXHAUST FAN IN BUNKER GEAR ROOM TO BE CONTROLLED THROUGH WALL MOUNTED DIAL 2 HR TIMER.
3. VERIFY WITH OWNER FOR EXACT LOCATION OF PULL-DOWN ELECTRICAL SPRING REELS IN APPARATUS BAY. SPRING REEL MODEL UNITED EQUIPMENT ACCESSORIES, INC. PART NO. R78J6K3. VERIFY WITH OWNER FOR THE LOCATION OF THE JUNCTION BOX AND REEL, AND ALSO THE PLUG TYPE THAT IS TO BE INSTALLED AT THE TERMINATION POINT OF THE CORD.
4. FOR CONTROL OF APPARATUS BAY FANS, SEE SHEET E2.1, EMERGENCY ALARM SCHEMATIC DETAIL, ALERTING CONTACTOR, & SPEAKER ONE-LINE DETAIL. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL RELAY AND TIMERS FOR BOTH EXHAUST FANS FOR CONTROL OF REMAINING EXHAUST FANS SEE MECHANICAL SHEETS. FOR WIRING CIRCUITS SEE ELECTRICAL SHEETS. INTERLOCK WITH GAS HEATERS IN BAY. IF DOORS "OPEN" HEATERS WILL NOT FUNCTION. ONCE DOORS ARE CLOSED, HEATERS WILL RUN IF THERMOSTAT CALLS FOR HEATING.
5. CONTRACTOR RESPONSIBLE FOR COMPLETE INSTALLATION OF TELEVISION CABLE INCLUDING, BUT NOT LIMITED TO: WALL RECEPTACLES, CABLE, AND ALL OTHER CONNECTORS REQUIRED FOR COMPLETE INSTALLATION.
6. A CERTIFIED NETWORK INSTALLER, MINIMUM 10 YEARS EXPERIENCE, PROVIDED BY CONTRACTOR, SHALL BE RESPONSIBLE FOR PHONE AND DATA INSTALLATION. INSTALLER SHALL PULL ALL CABLING AND MAKE ALL TERMINATIONS FOR DATA/PHONE. CONTRACTOR TO PROVIDE AND INSTALL HOME RUNS TO ELECTRICAL ROOM NEAR PHONE BOARD. CONDUCTORS SHALL ALL BE TAGGED, NEATLY BUNDLED, AND HAVE OPTIMUM LENGTHS FOR OWNER TO MAKE CONNECTIONS TO PHONE BOARD. PRE-INSTALLATION MEETINGS REQUIRED WITH OWNER PRIOR TO INSTALLATION.
7. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL ELECTRICAL BACK BOXES FOR DATA AND PHONE, AND ALL REQUIRED HOME RUNS FOR DATA/PHONE.
8. ISOLATED GROUNDING RECEPTACLES (FED FROM ES PANEL) TO BE ORANGE WITH WHITE COVER PLATES.
9. PROVIDE 120V POWER TO ALL MOTORIZED DAMPERS. COORDINATE WITH MECHANICAL PLANS FOR LOCATIONS.
10. ALL RECEPTACLES CIRCUITED TO PANEL "ES" SHALL BE "ORANGE", FACEPLATES SHALL MATCH ALL OTHER FACEPLATES.
11. ALL FEEDS TO GO TO THE COMMUNICATION ROOM (CENTRAL LOCATION) WHICH CAN BE SPLIT AS REQUIRED WITH THE SERVICE PROVIDER.
12. GENERATOR TO HAVE ENERNOCK, CALL OUT ON ALARM, CLIMATE SENSOR FOR ON, OFF, TRIP OR SWITCH BURN OUT. WHOLE STATION MUST BE ABLE TO RUN AS A FULL SYSTEM UNDER GENERATOR POWER. (PHONE, WIFI, COMPUTER, ALERTING SYSTEM, LIGHTS AND HVAC)
13. COORDINATE WITH ALERTING ON SHEET E3.0 FOR ALL CONDUIT AND BACK BOX LOCATIONS REQUIRED THROUGHOUT BUILDING.
14. ALL CONDUIT IN ELECTRICAL ROOM TO REMAIN UNPAINTED.
15. ALL TIME CLOCKS SHALL BE DIGITAL.
16. ALL DEVICES (OUTLETS, SWITCHES, ETC) TO BE LABELED BY ELECTRICAL CONTRACTORS WITH IDENTIFYING PANEL AND CIRCUIT NUMBERS.

POWER KEYED NOTES: (#)

1. CARD READERS TO CONNECT TO OVERHEAD DOORS: (1) WHEN SECTIONAL DOORS ARE IN CLOSED POSITION - HID IS IN UNLOCK POSITION FOR FREE EGRESS/INGRESS. (2) WHEN SECTIONAL DOORS ARE IN OPEN POSITION - HID IS LOCKED
2. ALERTING SYSTEM: 2-MONITORS, CAD CPU& TOUCH SCREEN. COMPUTER NEED 2-RECEPTACLES & 3-DATA. VERIFY HEIGHT OF CAD CPU BEFORE ROUGH-IN. CONFIRM WITH OWNER EXACT REQUIREMENTS FOR ALERTING SYSTEM. SEE DRAWING SHEET A5.1 DETAIL 25.
3. PROVIDE PUSH BUTTON SWITCH FOR GARBAGE DISPOSAL. COORDINATE ROUGH-IN LOCATION WITH ARCHITECT.
4. LOCATION FOR PRE-EMPTION BUTTON. PROVIDE PELCO #SE-2015-041-X RECTANGULAR PUSH BUTTON COVER ASSEMBLY, ALUM PANEL MOUNT SWITCH AND LED WITH CIRCUIT MODULE. THE FOLLOWING EQUIPMENT NEED TO BE PROVIDED: 1. TIME RELEASE LATCHING RELAY. 2. 24 DC POWER SUPPLY. 3. 15 AMP BREAKER IN SERVICE BOX. 4. BUTTON IN FIRE STATION. PLEASE COORDINATE WITH THE TRAFFIC OPERATION MANAGER DURING INSTALLATION OF THE PREEMPTION DEVICES.
5. EXTEND 1"C COMM 203 TO TOP OF WALL FOR ANTENNA.
6. OUTLET FOR HOOD ANSUL PANEL MOUNTED IN VERY TOP OF UPPER CABINET.
7. CONTRACTOR TO INSTALL CAT6 PATCH PANELS, 2-2 POST RACKS, LADDER RACKS. CITY TO PROVIDE INFO ON PANELS FOR HID READERS.
8. (2) ANTENNA VERIZON, UHF & 700MHZ W/CONDUIT & PULL STRING TO COMM RM 113.
9. CONTRACTOR SHALL VERIFY WITH OWNER ALL MOUNTING HEIGHTS IN KITCHEN PRIOR TO INSTALLATION.
10. J-BOX FOR WIRELESS ACCESS POINT. PROVIDE ETHERNET AT THIS LOCATION.
11. MOUNTING LOCATION OF BAY DOOR CONTROLS.
12. MANUAL RESET BUTTON - INSTALL A PUSH BUTTON MANUAL RESET FOR GAS SOLENOID VALVE. SOLENOID VALVE IS NORMALLY CLOSED UNTIL SIGNAL IS RECEIVED FROM DISPATCH. UPON RECEIVING SIGNAL FROM DISPATCH SOLENOID VALVE OPENS AND REMAINS OPEN UNTIL MANUAL RESET BUTTON IS PUSHED OR DISPATCH TURNS OFF SIGNAL. MANUAL RESET BUTTON SHALL BE LABELED "MANUAL GAS RESET". IN THE EVENT OF A POWER FAILURE TO THE BUILDING THE GAS SOLENOID VALVE SHALL CLOSE. GAS SOLENOID VALVE AND MANUAL RESET BUTTON SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR.
13. REFER TO MRS AND SOLENOID SEQUENCE OF OPERATION, INCLUDED ON THIS SHEET.
14. VERIFY OUTLET MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN. RECEPTACLES IN SLEEPING ROOMS TO HAVE USB PORT POWER.
15. COORDINATE POWER LOCATION FOR OVERHEAD DOOR WITH WALL MOUNTED JACK-SHAFT DOOR MOTOR.
16. J-BOX FOR BACK LIT SIGNAGE. FIELD COORDINATE MOUNTING HEIGHT BEFORE ROUGH-IN.
17. COORDINATE RECESSED MOUNTING LOCATION OF MAIN CONTROL BOXES WITH OWNER PRIOR TO ROUGH-IN.
18. CARD READER MOUNTED 42" AFF. DEDICATED PLAQUE TO BE MOUNTED AT 5'. SEE ARCHITECTURAL DRAWINGS.
19. LOCATION FOR WALL MOUNTED TV SCREEN. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A RECESSED DUAL-GANG BOX FOR POWER AND TELECOMMUNICATIONS CONNECTIONS. COORDINATE EXACT LOCATION, MOUNTING HEIGHT AND ADDITIONAL INSTALLATION REQUIREMENTS WITH ARCHITECT AND CLIENT PRIOR TO INSTALLATION.
20. COMMUNICATION CONDUIT TO BE ROUTED UP THRU SLAB AND TERMINATED IN COMMUNICATION ROOM 113.
21. GROUNDING BAT AT TELEPHONE BOARD. SEE SINGLE POINT GROUNDING DETAIL SHEET E2.1.
22. VERIFY OUTLET MOUNTING HEIGHT AND LOCATION FOR CORD REEL WITH OWNER PRIOR TO ROUGH-IN. SEE GENERAL NOTE 3.
23. 1" CONDUIT PULL STRING FROM 6" ABOVE SLAB, DOWN BENEATH SLAB AND STUB UP 5' OUT FROM BUILDING ALLOW 12" AFG, INSTALL WEATHER PROOF CAP.
24. J-BOX WITH PULL STRING FOR FUTURE CORD REEL.
25. COORDINATE EXACT LOCATION OF AIR COMPRESSOR WITH OWNER PRIOR TO WORK.
26. ACCESS CONTROL CARD READER PANEL. PROVIDE DED POWER FROM PANEL A.
27. ATS CONDUITS ROUTED UP IN WALL TO ATTIC SPACE AND THEN OVER TO ELEC/COMM ROOM.

MRS & SOLENOID SEQUENCE OF OPERATION

ELECTRICAL CONTRACTOR TO PROVIDE, PLUMBING CONTRACTOR TO INSTALL TWO SOLENOID SHUT-OFF VALVES IN GAS LINE SUPPLYING THE GAS RANGE AND OUTDOOR BBQ GRILLE. VALVES SHALL BE EQUAL TO SNAP-TITE MODEL #230FV-BNA-AMG1, 120VAC NORMALLY CLOSED, SHUT-OFF VALVE. INSTALLED BY PLUMBING CONTRACTOR. WIRING CONNECTION BY ELECTRICAL CONTRACTOR TYPICAL FOR 2 MRS AND SOLENOID VALVES. ONE EACH FOR OVEN/RANGE AND ONE EACH FOR OUTDOOR GRILLE.

ELECTRICAL CONTRACTOR SHALL MAKE ALL ELECTRICAL CONNECTIONS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.

INSTALLATION AND OPERATION SHALL BE AS FOLLOWS:

- A PUSH BUTTON MANUAL RESET SWITCH (MRS) SHALL BE INSTALLED AT KITCHEN COUNTER AT LOCATION SHOWN ON THE DRAWINGS.

- A PUSH BUTTON MANUAL RESET SWITCH (MRS) SHALL BE INSTALLED AT PATIO AT LOCATION SHOWN ON THE DRAWINGS.

- A PUSH BUTTON SWITCH SHALL BE EQUAL TO KJD17-SERIES PUSHBUTTON STYLE ELECTROMAGNETIC SWITCH MANUFACTURED BY LAMB INDUSTRIES, INC. SUPPLIED BY ELECTRICAL CONTRACTOR.

- SOLENOID VALVE SHALL REMAIN CLOSED UNTIL MANUAL RESET (GREEN) BUTTON IS PUSHED. VALVE SHALL REMAIN OPEN UNLESS SIGNAL IS RECEIVED FROM DISPATCH, OR, IN ANOTHER EMERGENCY, THE RED BUTTON IS PUSHED.

- UPON RECEIPT OF SIGNAL FROM DISPATCH, SOLENOID VALVE SHALL AUTOMATICALLY CLOSE AND REMAIN CLOSED UNTIL GREEN MANUAL RESET SWITCH BUTTON IS PUSHED.

- LABEL SWITCH AS "MANUAL GAS RESET". IF POWER FAILURE OCCURS, SOLENOID VALVE SHALL CLOSE AND SHALL REMAIN CLOSED UNTIL POWER IS RESTORED AND MANUAL RESET BUTTON IS PUSHED.

- PUSH BUTTON (MRS) SWITCH AND ELECTRICAL WIRING SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL SUPPLY SOLENOID VALVES AND PLUMBING CONTRACTOR SHALL INSTALL.

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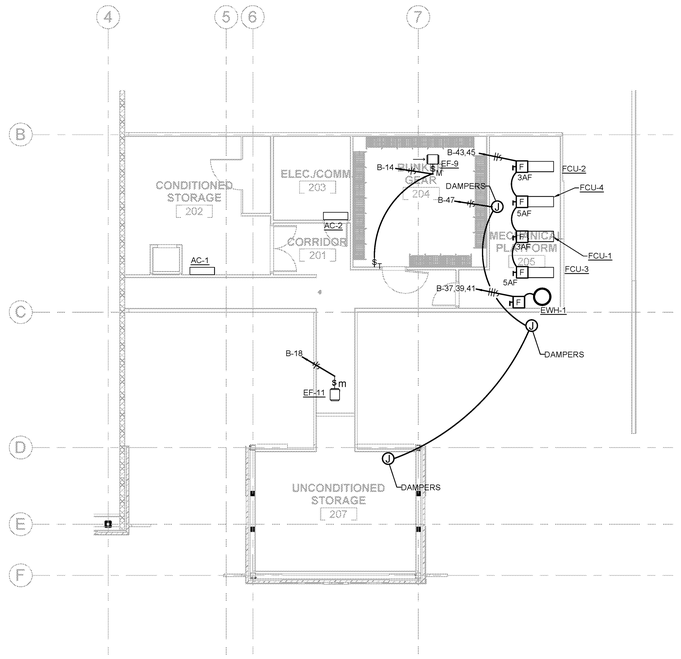
E1.3

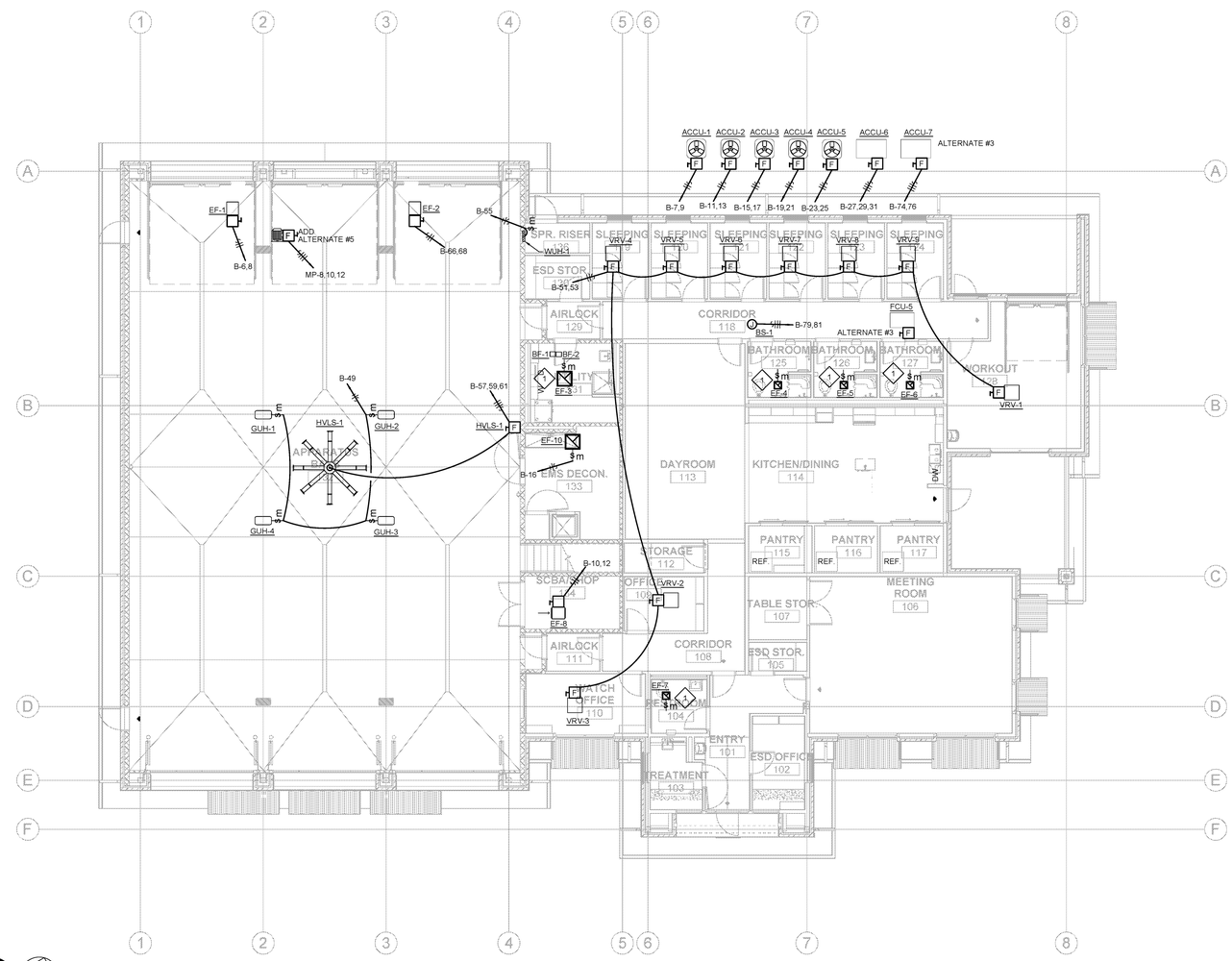
POWER FLOOR PLANS



PLAN NORTH TRUE NORTH

2 SECOND FLOOR PLAN-POWER

1/8" = 1'-0"



PLAN NORTH TRUE NORTH

1 FIRST FLOOR PLAN-POWER

1/8" = 1'-0"

POWER KEYED NOTES:

1. CONTROL THIS FAN WITH LIGHT FIXTURES IN THIS ROOM.
2. PROVIDE 120V CONNECTION FOR OSSF CONNECTION. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.

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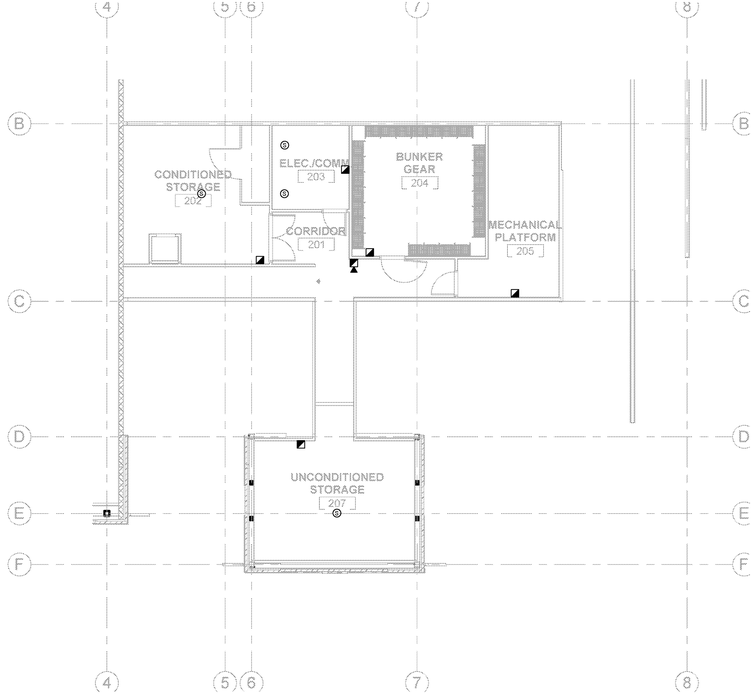
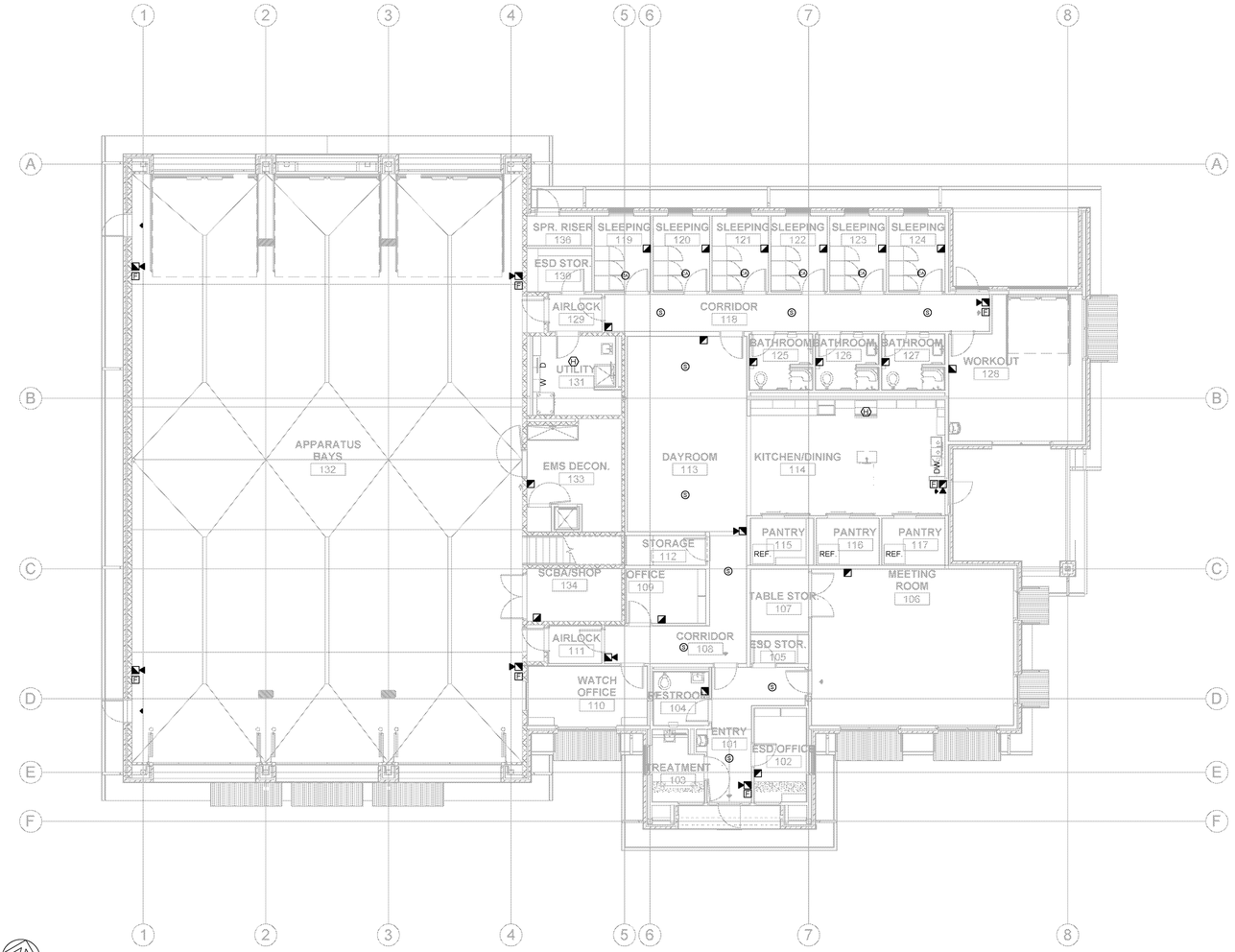
E1.4

FLOOR PLAN
MECHANICAL POWER



PLAN NORTH TRUE NORTH

2 SECOND FLOOR PLAN-FIRE ALARM
1/8" = 1'-0"



PLAN NORTH TRUE NORTH

1 FIRST FLOOR PLAN-FIRE ALARM
1/8" = 1'-0"

FIRE ALARM SYSTEM (ALL OF THESE MAY NOT APPEAR ON DRAWINGS)

SYMBOL	DESCRIPTION		
FACP	FIRE ALARM CONTROL PANEL	EH	EXTERIOR HORN
M	FIRE ALARM MANUAL PULL STATION	M	FIRE ALARM CONTROL MODULE
S	STROBE LIGHT 15CD	M	FIRE ALARM MONITOR MODULE
S2	STROBE LIGHT 75CD	H	MAGNETIC DOOR HOLDER
S	SMOKE DETECTOR	F	FIRE ALARM REMOTE LED
DR	DUCT DETECTOR IN R/A	TS	TAMPER SWITCH
DS	DUCT DETECTOR IN S/A	DACT	DIGITAL ALARM COMMUNICATION
H	HEAT DETECTOR	WFS	WATER FLOW SWITCH
HS	HORN/STROBE LIGHT	PS	REMOTE POWER SUPPLY
FAWC	FIRE ALARM WIRING CABINET	FAAP	FIRE ALARM ANNUNCIATOR PANEL
R	RELAY SWITCH		RING PULL DEVICE
C	120V AUDIBLE COMBINATION SMOKE/CO ALARM W/ BATTERY		

SCOPE OF WORK:
FIRE ALARM SYSTEM.

IT IS THE INTENTION OF THIS PROJECT TO PROVIDE A COMPLETE ANALOG ADDRESSABLE, ELECTRICALLY SUPERVISED FIRE ALARM SYSTEM TO BE INSTALLED, CONNECTED AND LEFT IN FIRST CLASS OPERATING CONDITION. THE ENTIRE INSTALLATION SHALL CONFORM TO ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES. IN PARTICULAR, NFPA 72, NFPA 101 LIFE SAFETY CODE. ADA AND THE NATIONAL ELECTRICAL CODE. ALL EQUIPMENT SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER AND BEAR THE U.L. AND F.M. LABEL. PRODUCTS SHALL BE THOSE MANUFACTURED BY SIMPLEX.

SYSTEM OPERATION:

THE SYSTEM SPECIFIED IS A SUPERVISED, ADDRESSABLE FIRE ALARM SYSTEM. UPON ACTIVATION OF AN ALARM INITIATING DEVICE, THE FOLLOWING SHALL OCCUR:

01 LIGHT THE APPROPRAITE LED AND INDICATE THE LOCATION AT THE FIRE ALARM CONTROL PANEL.
02 SOUND THE ALARM TONE AND ACTIVATE THE ADA STROBE LIGHTS IN THE BUILDING.
03 SHUT DOWN AIR HANDLING UNITS IN THE ZONE IN WHICH THE ALARM HAS OCCURRED.
04 SHUT FIRE/SMOKE DAMPERS IN ZONE WHICH ALARM HAS OCCURRED.
05 SHUT DOORS IN THE ZONE IN ALARM.
06 CLOSE ALL MAGNETICALLY-HELD SMOKE DOORS.

THE SIGNALS MAY BE SILENCED BUT SHALL RESOUND ON A SUBSEQUENT ALARM. THE PANEL SHALL NOT BE CAPABLE OF RESET UNTIL THE INITIATING DEVICES HAVE BEEN CLEARED. ATTEMPTS TO RESET THE SYSTEM AFTER AN ALARM OR TEST SHALL NOT RESOUND THE SIGNALS.

THE SYSTEM SHALL BE PROVIDED WITH 24 HOUR BATTERY STANDBY AND AUTOMATIC CHARGER. REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS OF THE FIRE ALARM SYSTEM.

ALL WIRING FOR FIRE ALARM SYSTEM SHALL BE PER NFPA 72, NEC, LOCAL CODES AND MANUFACTURERS RECOMMENDATIONS. ALL WIRING SHALL RUN IN THE CINDUIT.

ACCEPTABLE MANUFACTURER FOR FIRE ALARM SYSTEM SHALL BE SILENT KNIGHT, EDWARDS, AND/OR FCI GAMEWELL.

FIRE ALARM GENERAL NOTES:

1. FIRE ALARM SYSTEM, ALL COMPONENTS AND ALL ACCESSORIES TO COMPLY WITH ALL APPLICABLE LOCAL, STATE AND NFPA CODES, STANDARDS AND REGULATIONS.
2. SUBMIT TO FIRE MARSHALL FOR PLAN REVIEW FOR FINAL APPROVAL OF LAYOUT AND DESIGN.
3. PROVIDE PULL STATIONS, SMOKE DETECTORS, STROBES, HORN STROBES, ETC... FOR A COMPLETE FUNCTIONAL FIRE ALARM SYSTEM. SYSTEM DESIGN PER LOCAL, STATE AND NFPA STANDARDS AND REGULATIONS.
4. FIRE ALARM SYSTEM SHALL BE DESIGNED AND INSPECTED BY LICENSED FIRE ALARM SPECIALIST. INSPECTION SHALL INCLUDE A 24 HOUR BATTERY TEST AND TOTAL BUILDING FIRE ALARM FINAL INSPECTION AND A BUILDING FIRE FINAL INSPECTION.
5. INSTALLATION OF THE FIRE PROTECTION SYSTEM REQUIRES THAT ALL POWER UNDER HOOD APPLIANCES/EQUIPMENT AND/OR OUTLETS AUTOMATICALLY SHUT OFF IN THE EVENT OF SYSTEM ACTUATION. THE SYSTEMS ARE PROVIDED WITH A SWITCH FOR THIS PURPOSE. THE ELECTRICAL CONTRACTOR IS TO PROVIDE ALL LABOR AND MATERIALS INCLUDING SHUNT TRIP BREAKERS, CONTRACTORS, INTERCONNECTING WIRING, ETC. TO INSURE PROPER SYSTEM OPERATIONS.
6. COORDINATE FIRE ALARM INSTALLATION WITH MECHANICAL, ELECTRICAL AND PLUMBING DISCIPLINES PRIOR TO CONSTRUCTION.

FIRE ALARM KEYED NOTES: ◇#

1. PROVIDE RING - PULL DEVICE, RECESS MOUNTED FOR HOOD SUPPRESSION SYSTEM TO ACTIVATE.
2. ANSUL HOOD PANEL RECESSED IN TOP OF UPPER CABINET.

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Registration No. F-8334

BROWN REYNOLDS WATFORD ARCHITECTS, INC.
DATE 11/16/2018
DRAWN BY KM
CHECKED BY JF
BRW PROJECT NUMBER 217079.00

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX. 78626

NO.	REVISION	DATE
	ISSUE FOR PERMIT	11/16/18

E1.5

POWER FLOOR PLANS

NOTES:

1. SEE ARCHITECTURAL SPECIFICATIONS FOR ALL ROUGH-IN AND INSTALLATION DETAILS.
2. US DIGITAL DESIGNS DOES NOT SUPPLY BACK BOXES, CONDUITS, OR MOUNTING FASTENERS.
3. US DIGITAL DESIGNS FIRE STATION ALERTING PLANS ARE DIAGRAMMATIC AND FOR QUOTING PURPOSES ONLY. DRAWING MAY NOT BE TO SCALE.
4. PHOENIX G2 SYSTEM IS ABLE TO SIGNAL OWNER-FURBISHED SYSTEMS, (EXHAUST, LIGHT, GAS SHUT OFF, ETC.) BUT USDD DOES NOT SUPPLY THESE SYSTEMS AND CANNOT WARRANT OR SUPPORT ANY OF THEIR PERFORMANCE BEYOND THE TRANSMISSION OF RELAY SIGNAL TO THEM.

INSTALLER NOTES:

1. INSTALLER TO INCLUDE CONNECTION BETWEEN ATX STATION CONTROLLER'S LINE-LEVEL AUDIO OUTPUT AND (EXISTING) OWNER-FURBISHED HOUSE AUDIO SYSTEM (AMP).(IF APPLICABLE)
2. INSTALLER TO PROVIDE 1 CAT5/6 CABLE FROM ATX CONTROLLER TO CUSTOMER EXISTING STATION RADIO AND NETWORK SYSTEM FOR BACKUP.
3. INSTALLER TO PROVIDE CONNECTION BETWEEN (EXISTING) OWNER-FURBISHED STATION LIGHTING CONTROL SYSTEM AND RELAY OUTPUT FROM ATX STATION CONTROLLER OR I/O REMOTE. (IF APPLICABLE)
4. INSTALLER TO VERIFY WALL AND CEILING TYPE TO DETERMINE NEED FOR FLUSH OR SURFACE MOUNT INSTALLATION OF EQUIPMENT SPECIFIED.

ALL CONDUITS, CABLING/WIRE, BACKBOXES, ETC., SHALL BE INSTALLED WITHIN WALLS AND CEILINGS. SURFACE MOUNTED SHALL NOT BE ACCEPTED, WITH THE EXCEPTION OF COMMUNICATION ROOM ONLY.

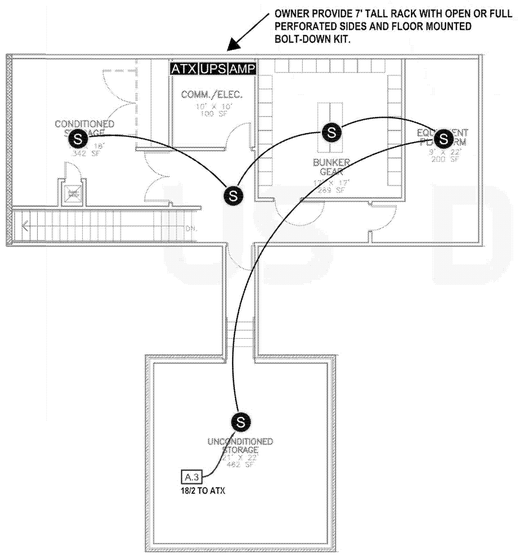
REFER TO SPECIFICATION SECTION 274212 ALERTING SYSTEM FOR ADDITIONAL INFORMATION.

ELECTRICAL CONTRACTOR RESPONSIBLE FOR PROVIDING AND INSTALLATION OF ALL BACKBOXES, AND REQUIRED CONDUITS WITH PULL STRING FOR SYSTEMS INDICATED ON THIS SHEET. SEPARATLY, ELECTRICAL CONTRACTORS SCOPE CONTAINS CONTROL OF AUTOMATED ALERTING DEVICES, INDICATED ON DRAWING SHEET E2.2, AND EXPLAINED ON MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS.

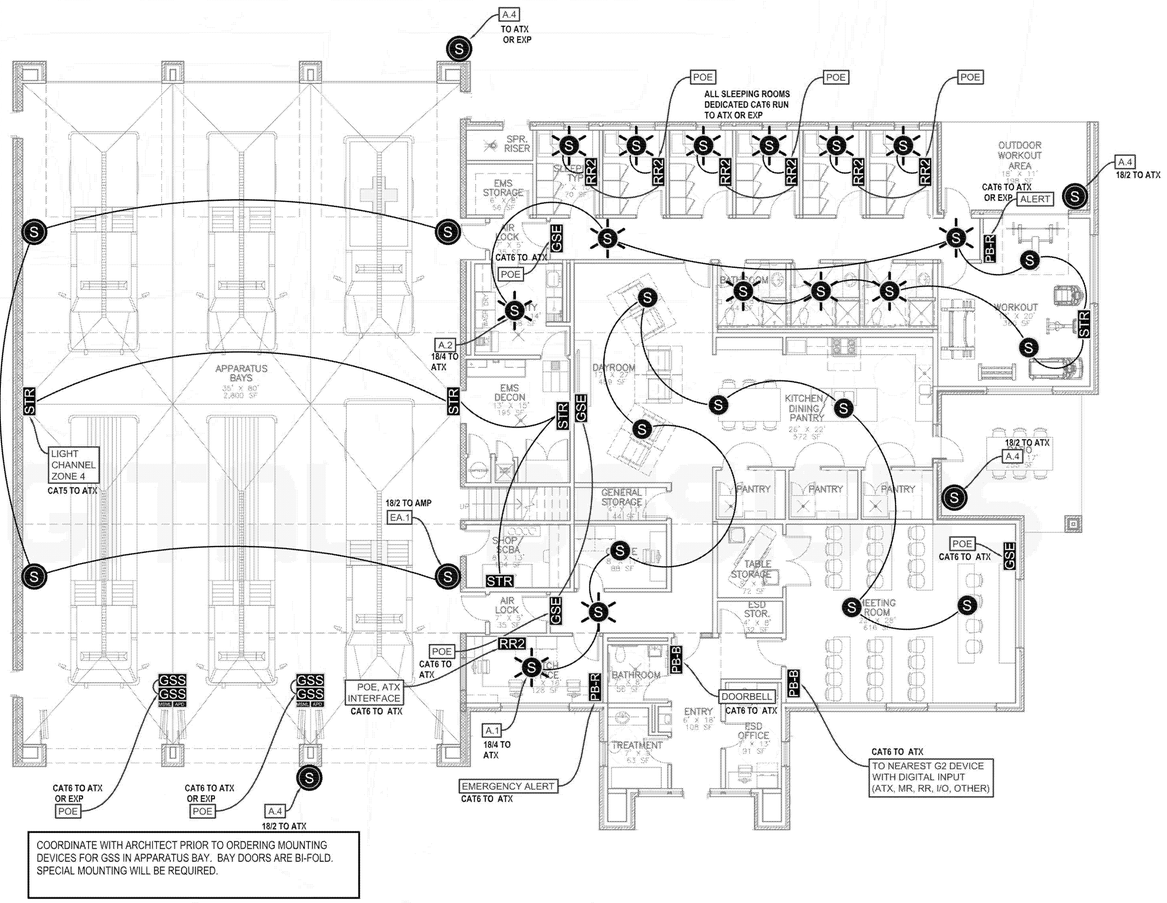
OWNER RESPONSIBLE FOR INSTALLATION OF ALL CABLING, US DIGITAL DESIGN DEVICES INDICATED IN THE COUNT KEY SHOWN ON THIS SHEET, 7' TALL FLOOR MOUNTED RACK, ETC., FOR A COMPLETE AND FULLY FUNCTIONAL ALERTING SYSTEM.

ELECTRICAL CONTRACTOR PROVIDE BACK BOXES, ETC.	US DIGITAL DESIGNS Count	Name
NO	1	EXTERNAL AMPLIFIER (60-100W)
RACK MOUNT = 10-U'S	1	G2 ATX STATION CONTROLLER
BACK BOX FOR GYP CEILINGS ONLY	14	G2 LED SPEAKER (G2-LVL-HC-70)
BACK BOX FOR WIREWAY	4	G2 MESSAGE SIGN EXTENDED (GSE)
BACK BOX FOR WIREWAY	4	G2 MESSAGE SIGN STANDARD (GSS)
NO	2	G2 MS ADAPTOR PLATE DOUBLE (ADP)
NO	5	G2 STROBE LIGHT
RACK MOUNT	1	G2 UPS (G2-UPS)
NO	2	MS-MNT-ART-L (MSML)
SINGLE-GANG BACK BOX	2	PUSH BUTTON (BLACK)
SINGLE-GANG BACK BOX	2	PUSH BUTTON (RED)
4-GANG WALL BACK BOX	7	ROOM REMOTE 2 (RR-2)
GYP CEILINGS ONLY = 4-GANG BACK BOX	14	SPEAKER FLUSH MOUNT
MOUNT ABOVE CEILING	8	SPEAKER WEATHER-PROOF

SYMBOL	DESCRIPTION
ATX	G2 ATX STATION CONTROLLER
RR2	G2 ROOM REMOTE 2
SR	G2 SIGN REMOTE
UPS	G2-UNINTERRUPTIBLE POWER SUPPLY
I/O	G2 I/O REMOTE
PB	OEM PUSH BUTTON PB-B (BLACK) PB-R (RED)
STR	OEM STROBE LIGHT
AMP	OEM AMPLIFIER
S	G2 LED SPEAKER, FLUSH MOUNT
S	G2 LED SPEAKER, METAL BOX
S	SPEAKER, WEATHER-PROOF
S	SPEAKER, FLUSH MOUNT
GSS	G2 MESSAGE SIGN
MSML	ARTICULATING ARM MOUNT FOR GSS
ADP	ADAPTER PLATE FOR MSML/GSS



UPPER LEVEL



COORDINATE WITH ARCHITECT PRIOR TO ORDERING MOUNTING DEVICES FOR GSS IN APPARATUS BAY. BAY DOORS ARE BI-FOLD. SPECIAL MOUNTING WILL BE REQUIRED.

MAIN LEVEL

POE = USDD device connects to G2 ATX Power-Over-Ethernet (POE) port 1 thru 8 or G2 Expansion Module(s) ports 1 thru 12
A.n = G2 ATX Amplifier 1...4
EA.n = G2 External Amplifier 1...n

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US DIGITAL DESIGNS www.stationalerting.com

project: GEORGETOWN FIRE DEPARTMENT, TX
building: FIRE STATION 6
filename: USDD.GTX.FS6.FSA.DWG
date: 23-Oct-2018
design by: JA

BROWN REYNOLDS WATFORD ARCHITECTS
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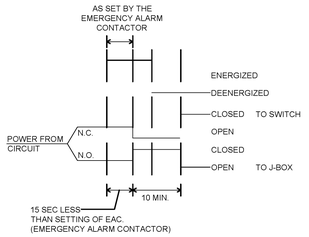
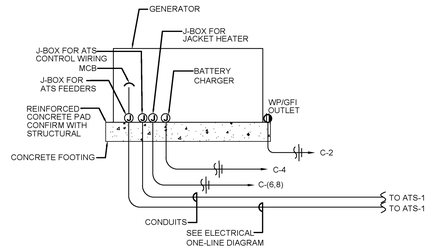
E1.6
ALERTING SYSTEM FLOOR PLANS

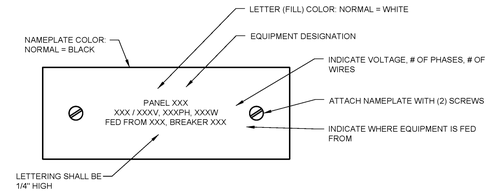


SEQUENCE OF OPERATION:
WHEN SIGNAL IS ACTIVATED, TIMER BEGINS A 3 MINUTE TIME DELAY. AFTER TIME DELAY, EXHAUST FANS RUN FOR 10 MINUTES. IF ADDITIONAL SIGNAL IS ACTIVATED, TIMER RESTARTS AT DELAY.

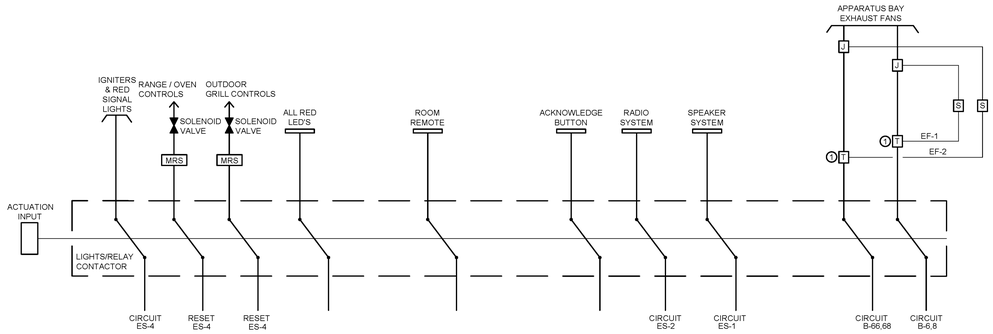
02 FAN TIMER FOR EXHAUST FANS EF-1 & EF-2
NOT TO SCALE



03 GENERATOR DETAIL



04 PANELBOARD NAMEPLATE DETAIL
NOT TO SCALE



KEYED NOTES:

1. ON-DELAY / OFF-DELAY FAN TIMER. SEE FAN TIMER DETAIL FOR SEQUENCE OF OPERATION.

NOTES:

1. SEE KEYED NOTE 10 SHEET E1.1 FOR SEQUENCE OF OPERATION ON GAS SOLENOID VALVE.
2. CONTRACTOR TO PROVIDE AND INSTALL CONTACTOR, FAN TIMER, RELAY CONTROLS TO ENSURE A FULLY FUNCTIONAL SYSTEM.
3. SEE SPEAKER ONE LINE AND FAN TIMER DETAIL THIS SHEET FOR APPARATUS BAY EXHAUST FAN SEQUENCE OF OPERATION AND CONTROLS.
4. SEE DRAWING SHEET E1.6.
5. COORDINATE WITH MECHANICAL, PLUMBING, AND ALERTING SYSTEM SUB CONTRACTORS.

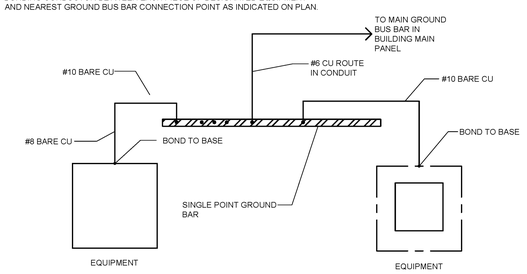
S WALL SWITCHES

J JUNCTION BOX

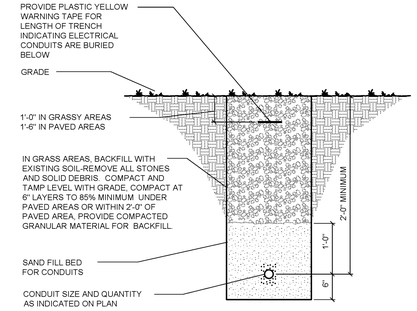
T FAN TIMER
ON DELAY / OFF DELAY

05 EMERGENCY ALARM SCHEMATIC FOR ALERTING SYSTEM
NOT TO SCALE

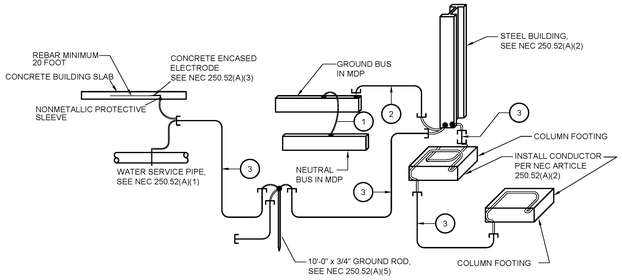
NOTE:
ALL BRANCH WIRING FROM DISTRIBUTION PANELS SHALL BE ROUTED WITH GREEN EQUIPMENT GROUNDING CONDUCTOR. PROVIDE #10 STRANDED CU BONDING CONDUCTOR BETWEEN EACH PIECE OF DESIGNATED EQUIPMENT AND NEAREST GROUND BUS BAR CONNECTION POINT AS INDICATED ON PLAN.



06 SINGLE POINT GROUNDING DIAGRAM
NOT TO SCALE



07 CONDUIT TRENCH DETAIL
NOT TO SCALE



KEYED NOTES:

1. BARE COPPER MAIN BONDING JUMPER PER NEC 250.28.
2. BARE COPPER GROUNDING ELECTRODE CONDUCTOR PER NEC 250.66.
3. BARE COPPER GROUNDING ELECTRODE BONDING JUMPER PER NEC 250.53.

GENERAL NOTES

ALL GROUNDING ELECTRODES AS DESCRIBED IN THE NATIONAL ELECTRICAL CODE, 2014 EDITION, SECTION 250.52(A)(1) THROUGH (A)(6), THAT ARE PRESENT AT EACH BUILDING OR STRUCTURE SERVED SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM. GROUNDING ELECTRODES AS DESCRIBED IN THE NATIONAL ELECTRICAL CODE, 2014 EDITION, SECTIONS 250.52 (A)(1), (A)(2), (A)(3), AND (A)(7), SHALL BE SUPPLEMENTED WITH A ROD ELECTRODE AS DESCRIBED IN SECTION 250.52 (A)(5)(b). WHERE NO OTHER GROUNDING ELECTRODE IS PRESENT A ROD ELECTRODE SHALL BE PERMITTED TO BE THE SOLE GROUNDING ELECTRODE.

EXCEPTION: CONCRETE-ENCASED ELECTRODES OF EXISTING BUILDINGS OR STRUCTURES SHALL NOT BE REQUIRED TO BE PART OF THE GROUNDING ELECTRODE SYSTEM WHERE THE STEEL REINFORCED BARS OR RODS ARE NOT ACCESSIBLE FOR USE WITHOUT DISTURBING THE CONCRETE.

08 GROUNDING ELECTRODE SYSTEM DETAIL
NOT TO SCALE

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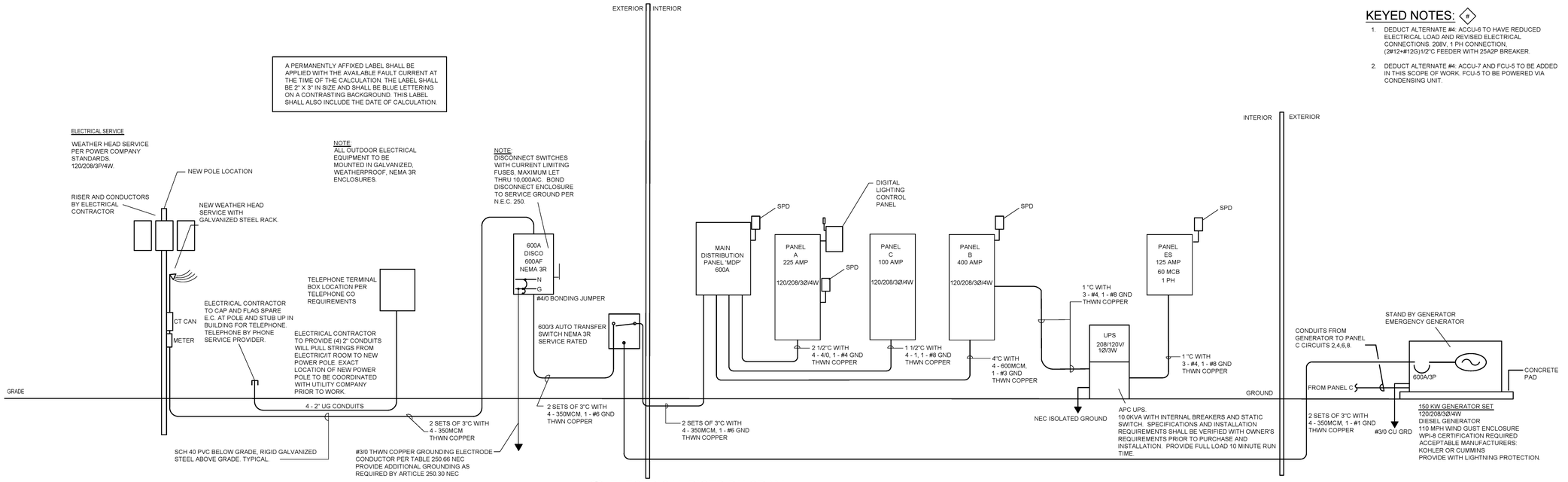
E2.1

ELECTRICAL
SCHEDULES & DETAILS

KEYED NOTES: ⟨#⟩

1. DEDUCT ALTERNATE #4: ACCU-6 TO HAVE REDUCED ELECTRICAL LOAD AND REVISED ELECTRICAL CONNECTIONS: 208V, 1 PH CONNECTION. (2#12+#12G)1/2"C FEEDER WITH 25A2P BREAKER.
2. DEDUCT ALTERNATE #4: ACCU-7 AND FCU-5 TO BE ADDED IN THIS SCOPE OF WORK. FCU-5 TO BE POWERED VIA CONDENSING UNIT.



06 ELECTRICAL RISER DIAGRAM
NOT TO SCALE

ELECTRICAL LOAD ANALYSIS — **NEW**
GEORGETOWN FIRE STATION — 6700 R.M. 2338
DAWSON VAN ORDEN ENGINEERING — GEORGETOWN, TX, 78626
SUBMITTAL DATE

USE	SQFT	SERVICE VOLTAGE
FIRE STATION	12876	120/208V/3P/4W

ADDED LOAD	DESIGN INFO	LOAD	NOTES AND CODE REFERENCES
LIGHTING			
INTERIOR LIGHTING	2.00 W/SF	32.2 KVA	220.12
CODE +25% CONT	32 KVA		
ACTUAL +25% CONT	KVA		
EXTERIOR LIGHTING		3.0 KVA	(ACTUAL LOAD)
+25% CONTINUOUS		0.8 KVA	
HVAC			220.60
ELECTRIC HEAT	KW	0.0 KVA	HEAT LOAD WITH .8 POWER FACTOR
COOLING	60 KW	75.0	(NONCOINCIDENT LOAD)
RECEPTACLES	18.00 KVA		1 W/SF (OFFICE BLDG ONLY)
< 10KVA AT 100%		10.0 KVA	
REMAINDER AT 50%		4.0 KVA	
MOTORS			430.24
PUMPS AND FANS	17.50 HP	20.7 KVA	(ACTUAL LOAD)
+25% LARGEST MOTOR		2.9 KVA	
MISCELLANEOUS			
WATER HEATING	5 KW	6.3 KVA	HEAT LOAD WITH .8 POWER FACTOR
EQUIPMENT		34.7 KVA	MISCELLANEOUS LOADS
IT EQUIPMENT		5.0 KVA	
TOTAL		194.4 KVA	
REQUIRED CAPACITY		540 AMP	
SERVICE CAPACITY		600 AMP	
SPARE CAPACITY		60 AMP	

PANEL C — VOLTAGE: 120/208V/3P4W — 100 AMPS MLO — ENCLOSURE: NEMA 1 — SHORT CIRCUIT: 10K A/C — MOUNTING: SURFACE — FEED-THRU LUGS: NO — COPPER GROUND BUS — SOLID COPPER NEUTRAL — BOLT ON BREAKERS

VOLT AMPS	SERVING	WIRE SIZE	BRKR	POLE	CCT	A	B	C	CCT	POLE	BRKR	WIRE SIZE	SERVING	VOLT AMPS
	SURGE PROTECTOR	#10	30	3	1	180			2	1	20	#10	GEN RECEP	180
		#10			3		300		4	1	20	#10	GEN BATT CHARGE	300
		#10			5			1500	6	2	20	#10	GEN JACKET HEATER	1500
1200	MONUMENT SIGN	#12	20	1	7	2700			8				Spare	
	Spare				9				10				Spare	
	Spare				11				12				Spare	
	Spare				13				14				Spare	
	Spare				15				16				Spare	
	Spare				17				18				Spare	
	Spare				19				20				Spare	
	Spare				21				22				Spare	
	Spare				23				24				Spare	
	Spare				25				26				Spare	
	Spare				27				28				Spare	
	Spare				29				30				Spare	
	Spare				31				32				Spare	
	Spare				33				34				Spare	
	Spare				35				36				Spare	
	Spare				37				38				Spare	
	Spare				39				40				Spare	
	Spare				41				42				Spare	

CONNECTED LOAD (VA)	2880	300	1500
+25% CONTINUOUS (VA)	0	0	0
+25% LARGEST MOTOR (VA)		0	0
FEED-THRU LOAD (VA)			
DEMAND LOAD (VA)	2880	300	1500
FEEDER DEMAND LOAD (AMPS)	24	3	13

TOTAL PANEL DEMAND LOAD (VA) 4680
FEEDER DEMAND LOAD (AMPS) 13

NOTES:
1. BRANCH CIRCUIT VOLTAGE DROP NOT TO EXCEED 3% AT FARTHEST OUTLET. TOTAL VOLTAGE DROP INCLUDING FEEDERS AND BRANCH CIRCUITS NOT TO EXCEED 5%.
2. FIELD VERIFY EQUIPMENT LOADS.
3. ALL CONDUCTORS SHALL BE COPPER.
4. BREAKERS LABELED WITH AN ASTERISK ARE TO BE ARC FAULT RATED.

NOTE: ELECTRICAL PANEL PANEL BASIS OF DESIGN IS SIEMENS TYPE "P3" PANELBOARD

PANEL MDP — VOLTAGE: 120/208V/3P4W — BUS MCB 600 AMPS — ENCLOSURE: NEMA 3R — SHORT CIRCUIT: 18K A/C — MOUNTING: SURFACE — FEED-THRU LUGS: NO — COPPER GROUND BUS — SOLID COPPER NEUTRAL — BOLT ON BREAKERS

VOLT AMPS	SERVING	WIRE SIZE	BRKR	POLE	CCT	A	B	C	CCT	POLE	BRKR	WIRE SIZE	SERVING	VOLT AMPS
	SURGE	#10			1	27834			2			#600		27834
	PROTECTOR	#10	30	3	3		37110		4	3	400	#600	PANEL B	37110
		#10			5			30626	6			#600		30626
23083		#4/0			7	26119			8			#6	7.5 HP MOTOR	3036
26037	PANEL A	#4/0	225	3	9		29073		10	3	50	#6	ADD ALTERNATE	3036
29434		#4/0			11			32470	12			#6	EXHAUST FAN	3036
					13	2680			14			#1		2680
					15		300		16	3	100	#1	PANEL C	300
					17			1500	18			#1		1500
					19				20					
					21				22					
					23				24					

CONNECTED LOAD (VA)	56833	66483	64796
+25% CONTINUOUS (VA)			
+25% LARGEST MOTOR (VA)	759	759	759
NON-COINCIDENTAL LOAD (VA)			
FEED-THRU LOAD (VA)			
DEMAND LOAD (VA)	57592	67242	65555
FEEDER DEMAND LOAD (AMPS)	480	560	546

TOTAL PANEL DEMAND LOAD (VA) 190389
FEEDER DEMAND LOAD (AMPS) 528

NOTES:
1. BRANCH CIRCUIT VOLTAGE DROP NOT TO EXCEED 3% AT FARTHEST OUTLET. TOTAL VOLTAGE DROP INCLUDING FEEDERS AND BRANCH CIRCUITS NOT TO EXCEED 5%.
2. FIELD VERIFY EQUIPMENT LOADS.
3. ALL CONDUCTORS SHALL BE COPPER.

LOAD CENTER BS — VOLTAGE: 120/208/1P3W — BUS 60 AMPS — MCB 60 AMPS — ENCLOSURE: NEMA 1 — SHORT CIRCUIT: 10K A/C — MOUNTING: SURFACE — FEED-THRU LUGS: NO — ALUMINUM GROUND BUS — SOLID ALUMINUM NEUTRAL — BOLT ON BREAKERS

VOLT AMPS	SERVING	WIRE SIZE	BRKR	POLE	CCT	A	B	CCT	POLE	BRKR	WIRE SIZE	SERVING	VOLT AMPS
500	SPEAKER SYSTEM	#12	20	1	1	1000		2	1	20	#12	RADIO SYSTEM	500
160	ISO GND RECEP	#12	20	1	3		680	4	1	20	#12	IGNITERS / MRS	500
720	RECEP COM ROOM	#12	20	1	5	1220		6	1	20	#12	FIRE ALARM PNL 110	500
720	RECEPTELE (BR2)	#12	20	1	7		1720	8	1	20	#12	KR LIGHT FIXTURE	1000
2000	COM RACK	#10	30	2	9	2000		10	1	20		SPARE	
2000		#10			11		2000	12	1	20		SPARE	
180	RECEP COM RACK	#12	20	1	13	180		14	1	20		SPARE	
180	UPS 110	#12	20	1	15		180	16	1	20		SPARE	
	SPARE		20	1	17			18	1	20		SPARE	
	SPARE		20	1	19			20			#10	SURGE	
	SPARE		20	1	21			22	3	30	#10	PROTECTOR	
	SPARE		20	1	23			24			#10		

CONNECTED LOAD (VA)	4400	4580
+25% CONTINUOUS (VA)		
+25% LARGEST MOTOR (VA)		
NON-COINCIDENTAL LOAD (VA)		
FEED-THRU LOAD (VA)		
DEMAND LOAD (VA)	4400	4580
FEEDER DEMAND LOAD (AMPS)	37	38

TOTAL PANEL DEMAND LOAD (VA) 8980
FEEDER DEMAND LOAD (AMPS) 43

NOTES:
1. BRANCH CIRCUIT VOLTAGE DROP NOT TO EXCEED 3% AT FARTHEST OUTLET. TOTAL VOLTAGE DROP INCLUDING FEEDERS AND BRANCH CIRCUITS NOT TO EXCEED 5%.
2. FIELD VERIFY EQUIPMENT LOADS.
3. ALL CONDUCTORS SHALL BE COPPER.

PANEL A — VOLTAGE: 120/208V/3P4W — BUS 225 AMPS MLO — ENCLOSURE: NEMA 1 — SHORT CIRCUIT: 18K A/C — MOUNTING: SURFACE — FEED-THRU LUGS: NO — COPPER GROUND BUS — SOLID COPPER NEUTRAL — BOLT ON BREAKERS

	VOLT AMPS	SERVING	WIRE SIZE	BRKR	POLE	CCT	A	B	C	CCT	POLE	BRKR	WIRE SIZE	SERVING	VOLT AMPS	
*	1440	RECEP SLEEP 119,120	#12	20	1	1	1440			2			#10			
*	1440	RECEP SLEEP 121,122	#12	20	1	3		1440		4	3	30	#10	SURGE PROTECTOR		
*	1440	RECEP SLEEP 123,124	#12	20	1	5			1440	6			#10			
	540	RECEP 130, 126	#12	20	1	7	1260			8	1	20	#12	REFRIGERATOR 115	720	*
*	360	RECEP COOR 118	#12	20	1	9		900		10	1	20	#12	REFRIGERATOR 116	540	*
*	360	RECEP RR	#12	20	1	11			1080	12	1	20	#12	REFRIGERATOR 117	720	*
*	360	RECEP RR	#12	20	1	13	540			14	1	20	#12	KITCHEN RECEPT	180	*
*	360	RECEP RR	#12	20	1	15		1560		16	1	20	#12	DISH WASHER	1200	*
*	2500	DRYER 112	#10	30	2	17			2680	18	1	20	#12	KITCHEN RECEPT	180	*
	2500		#10			19	2680			20	1	20	#12	KITCHEN RECEPT	180	*
*	1200	WASHER 112	#12	20	1	21			2800	22	1	20	#12	ANSUL PANEL	1600	*
*	1000	EQUIPMENT	#12	20	1	23				24	1	20	#12	KITCHEN RECEPT	180	*
*	360	RECEPTACLE	#12	20	1	25	960			26	1	20	#12	HOOD	600	*
*	720	RECEP 113	#12	20	1	27			1920	28	1	20	#12	STOVE	1200	*
	720	RECEP 128	#12	20	1	29		720		30				SHUNT TRIP		*
	900	RECEP 128	#12	20	1	31	1080			32	1	20	#12	KITCHEN RECEPT	180	*
	4000		#10			33			5500	34	1	20	#12	MICROWAVE	1500	*
	4000	UNIMAC	#10	30	3	35				36	1	20	#12	MICROWAVE	1500	*
	4000		#10			37	4360			38	1	20	#12	KITCHEN RECEPT	360	*
	4000		#8			39		4180		40	1	20	#12	REC ISLAND	180	*
	4000	GEAR DRYER	#8	35	3	41			4180	42	1	20	#12	REC ISLAND	180	*
	4000		#8			43	4180			44	1	20	#12	REC ISLAND	180	*
	500	NORTH CH DOOR 132	#10	20	1	45		680		46	1	20	#12	REC ISLAND	180	*
	500	NORTH CH DOOR 132	#10	20	1	47			1000	48	1	20	#12	GEN ALARM PNL 110	500	
	500	NORTH CH DOOR 132	#10	20	1	49	1940			50	1	20	#12	RECEPT 109,112	1440	
	500	SOUTH CH DOOR 132	#10	20	1	51		1220		52	1	20	#10	RECEPT 134	720	
	500	SOUTH CH DOOR 132	#10	20	1	53			1580	54	1	20	#10	RECEPT 110	1080	
	500	SOUTH CH DOOR 132	#10	20	1	55	1220			56	1	20	#10	RECEPT 110	720	
	1000	N CORD REEL 132	#10	20	1	57		1180		58	1	20	#10	GFCI RRESTROOM	180	
	1000	N CORD REEL 132	#10	20	1	59			2080	60	1	20	#10	RECEPT 102, GFI EXT	1080	
	1000	S CORD REEL 132	#10	20	1	61	1180			62	1	20	#10	RECEPT 105	180	
	1000	S CORD REEL 132	#10	20	1	63		2080		64	1	20	#10	RECEPT 106	1080	
	1260	RECEPT 132	#10	20	1	65			2880	66	1	20	#10	RECEPT 106, GFI EXT	1620	
	1620	RECEPT 132	#10	20	1	67	1920			68	1	20	#10	PROJECTOR	300	
	800	FOUNTAIN	#12	20	1	69		980		70	1	20	#12	GFCI EXT	180	
	800	FOUNTAIN	#12	20	1	71			1800	72	1	20	#12	BACK LIT SIGN	1000	
	360	GFCI RECEPT	#12	20	1	73	560			74	1	20	#12	IRRIGATION	200	
	1080	RECEPT 204	#12	20	1	75		1440		76	1	20	#12	ALERTING SYSTEM	360	
	1440	RECEPT 204	#12	20	1	77			2640	78	1	20	#12	DISPOSAL	1200	*
	1080	RECEPTACLES	#12	20	1	79	1800			80	1	20	#12	RECEPTACLES	720	
	1000	EQUIPMENT	#12	20	1	81		1900		82	1	20	#12	RECEPTACLES	900	
	1000	EQUIPMENT	#12	20	1	83			1500	84	1	20	#10	CH DOOR 128	500	

CONNECTED LOAD (VA)	25120	27780	30260
+25% CONTINUOUS (VA)			
+25% LARGEST MOTOR (VA)			
NON-COINCIDENTAL LOAD (VA)	-2037	-1743	-826
FEED-THRU LOAD (VA)			
DEMAND LOAD (VA)	23083	26037	29434
FEEDER DEMAND LOAD (AMPS)	192	217	245

TOTAL PANEL DEMAND LOAD (VA) 78554
FEEDER DEMAND LOAD (AMPS) 216

NOTES:
1. BRANCH CIRCUIT VOLTAGE DROP NOT TO EXCEED 3% AT FARTHEST OUTLET. TOTAL VOLTAGE DROP INCLUDING FEEDERS AND BRANCH CIRCUITS NOT TO EXCEED 5%.
2. FIELD VERIFY EQUIPMENT LOADS.
3. ALL CONDUCTORS SHALL BE COPPER.
4. BREAKERS LABELED WITH AN ASTERISK ARE TO BE ARC FAULT RATED.

PANEL B — VOLTAGE: 120/208V/3P4W — BUS 400 AMPS MLO — ENCLOSURE: NEMA 1 — SHORT CIRCUIT: 18K A/C — MOUNTING: SURFACE — FEED-THRU LUGS: NO — COPPER GROUND BUS — SOLID COPPER NEUTRAL — BOLT ON BREAKERS

VOLT AMPS	SERVING	WIRE SIZE	BRKR	POLE	CCT	A	B	C	CCT	POLE	BRKR	WIRE SIZE	SERVING	VOLT AMPS
		#10			1	4400			2	2	60	#4	UPS	4400
	SURGE PROTECTOR	#10	30	3	3		4580		4			#4		4580
		#10			5			794	6	2	15	#12	EF-1	794
1736	ACCU-1	#10	25	2	7	2530			8			#12		794
1736		#10			9		3116		10	2	25	#10	EF-8	1380
1736	ACCU-2	#10	25	2	11			3116	12			#10		1380
1736		#12			13	1785			14	1	15	#12	EF-9	49
2464	ACCU-3	#8	40	2	15		3160		16	1	15	#12	EF-10	696
2464		#8			17			2752	18	1	15	#12	EF-11	288
1955	ACCU-4	#10	30	2	19	3843			20	1	20	#12	LIGHTS	1888
1955		#10			21		2437		22	1	20	#12	LIGHTS	482
2350	ACCU-5	#10	25	2	23			3518	24	1	20	#12	LIGHTS	1168
2350		#10			25	3323			26	1	20	#12	LIGHTS	973
3624	ACCU-6	#8	35	3	27		5128		28	1	20	#12	LIGHTS	1504
3624		#8			29			4944	30	1	20	#12	LIGHTS	1320
3624		#8			31	5038			32	1	20	#12	LIGHTS	1414
3200	WELDER/COMP 128	#6	40	2	33		5600		34	1	30	#8	BAY LIGHTS	2400
3200		#6			35			5600	36	1	30	#8	BAY LIGHTS	2400
6000	EWH-1	#4	70	3	37	6980			38	1	20	#10	BAY LIGHTS	980
6000		#4			39		6351		40	1	20	#12	EXT LIGHTS	351
6000		#4			41			6157	42	1	20	#12	EXT LIGHTS	157
1269	FCU-1,2,3,4	#10	20	2	43	1669			44	1	20	#12	EXT LIGHTS	400
1269		#10			45		1769		46	1	20	#12	EXT LIGHTS	500
500	DAMPERS	#12	15	1	47			1189	48	1	20	#12	LIGHTS 2ND FLOOR	689
400	GUH-1,2,3,4	#12	15	1	49	728			50	1	20	#12	LIGHTS 2ND FLOOR	328
333	VRV - 1-9	#10	15	2	51		333		52	1	20		Spare	
333		#10			53			333	54	1	20		Spare	
1500	WUH-1	#12	20	1	55	1500			56	1	20		Spare	
1200		#12			57		1596		58	1	20	#12	LIGHTS	396
1200	HVLS-1	#12	15	3	59			2136	60			#12	DUMB WAITER	936
1200		#12			61	2136			62	3	20	#12		936
3000	HK-1	#10	30	2	63		3936		64			#12		936
3000		#10			65			3794	66	2	15	#12	EF-2	794
3000	HK-2	#10	30	2	67	3794			68			#12		794
3000		#10			69		4500		70	2	20	#8	POLE LIGHTS	1500
3000	HK-3	#10	30	2	71			4500	72			#8		1500
3000		#10			73	5129			74	1	15	#12	ACCU-7	2129
3000	HK-4	#10	30	2	75		5129		76	1		#12		2129
3000		#10			77			3500	78	1	20	#12	OSSF	500
300	BS-1	#12	15	2	79	800			80	1	20	#12	OSSF	500
300		#12			81		1704		82	1	20	#12	AIR COMPRESSOR	1404
			20	1	83			1404	84	1	20	#12		1404

CONNECTED LOAD (VA)	43655	49339	43716
+25% CONTINUOUS (VA)	699	813	639
+25% LARGEST MOTOR (VA)		800	800
NON-COINCIDENTAL LOAD (VA)	-16519	-13841	-14330
FEED-THRU LOAD (VA)			
DEMAND LOAD (VA)	27834	37110	30826
FEEDER DEMAND LOAD (AMPS)	232	309	257

TOTAL PANEL DEMAND LOAD (VA) 95770
FEEDER DEMAND LOAD (AMPS) 266

NOTES:
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3. ALL CONDUCTORS SHALL BE COPPER.
4. BREAKERS LABELED WITH AN ASTERISK ARE TO BE ARC FAULT RATED.

BROWN REYNOLDS WATFORD ARCHITECTS
2700 EARL RUDDER FRWY SOUTH
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COLLEGE STATION, TEXAS 77845
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Registration No. F-8334

CITY OF GEORGETOWN
GEORGETOWN FIRE STATION No. 6
6700 R.M. 2338
GEORGETOWN, TX, 78626

NO.	REVISION / ISSUE FOR PERMIT	DATE
		11/16/18

BRW PROJECT NUMBER 2170700
CHECKED BY JF
DRAWN BY KM
DATE 11/16/2018
BROWN REYNOLDS WATFORD ARCHITECTS, INC.
2700 EARL RUDDER FREEWAY SOUTH, SUITE 4000, COLLEGE STATION, TEXAS 77845

E3.1
ELECTRICAL SCHEDULES & DETAILS