# **PROJECT:**

## **OWNER:**

## **ARCHITECT:**

CIVIL **ENGINEER:** 

MECHANICAL/ ELECTRICAL **ENGINEER:** 

## STRUCTURAL **ENGINEER:**

FIRE STATION #2 303 S. 16TH STREET MURRAY, KENTUCKY 42071 CITY OF MURRAY 500 MAIN STREET MURRAY, KENTUCKY 42071

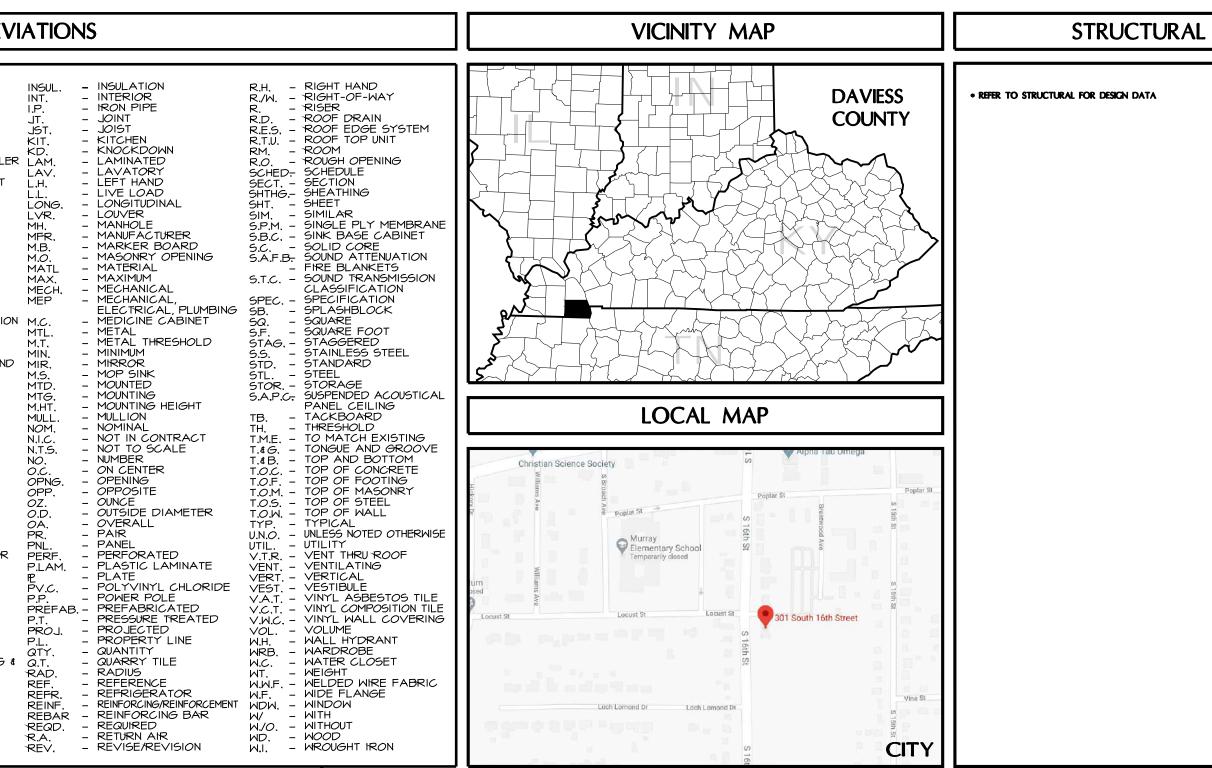
R.B.S. DESIGN GROUP, P.S.C. 723 HARVARD DRIVE OWENSBORO, KENTUCKY 42301 (F)270-683-2446 270-683-1158

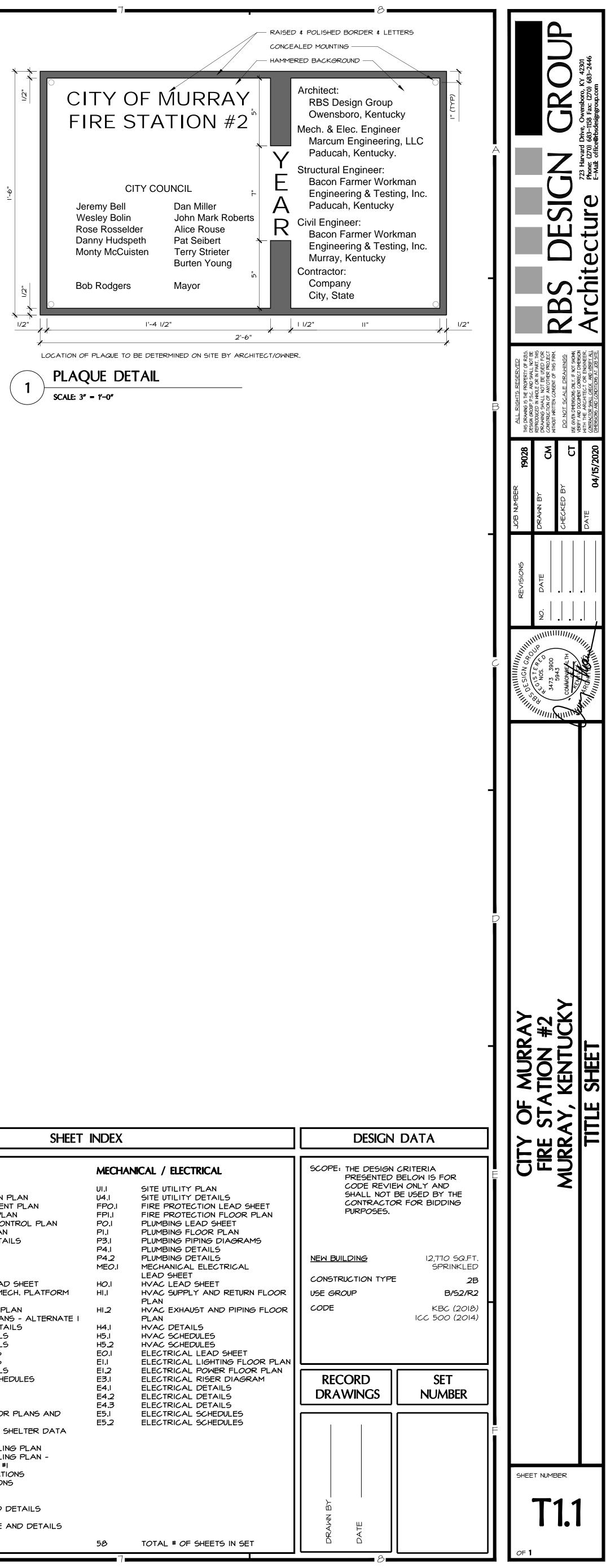
BACON FARMER WORKMAN ENGINEERING & TESTING, INC. 1215 DUIGUID DRIVE MURRAY, KENTUCKY 42071 270-753-7307 (F)270-759-4950

MARCUM ENGINEERING, LLC 500 SOUTH 17TH STREET PADUCAH, KENTUCKY 42003 270-444-9274 (F)270-443-1904

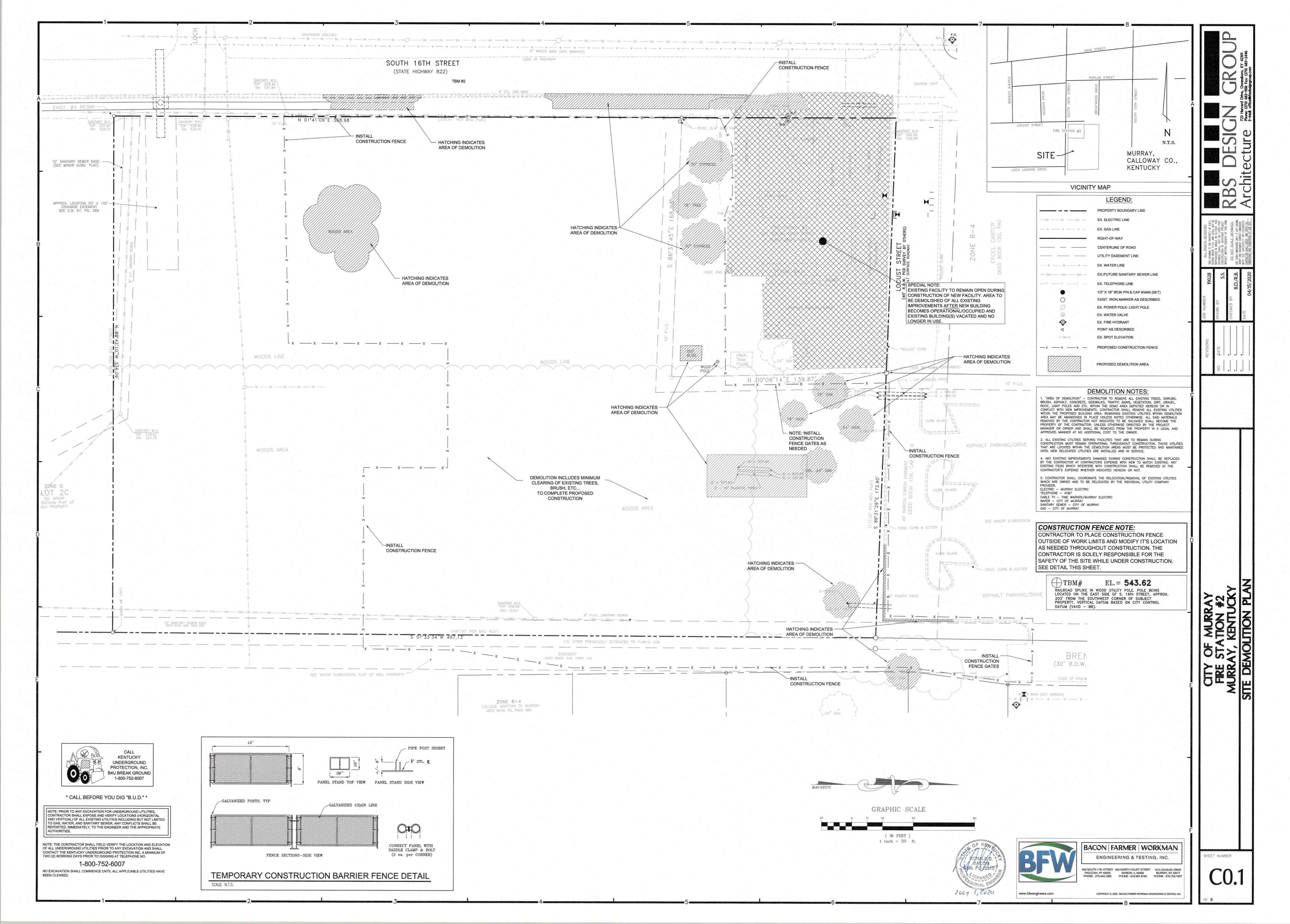
BACON FARMER WORKMAN ENGINEERING & TESTING, INC. 500 SOUTH 17TH STREET PADUCAH, KENTUCKY 42003 270-443-1995 (F)270-443-1904

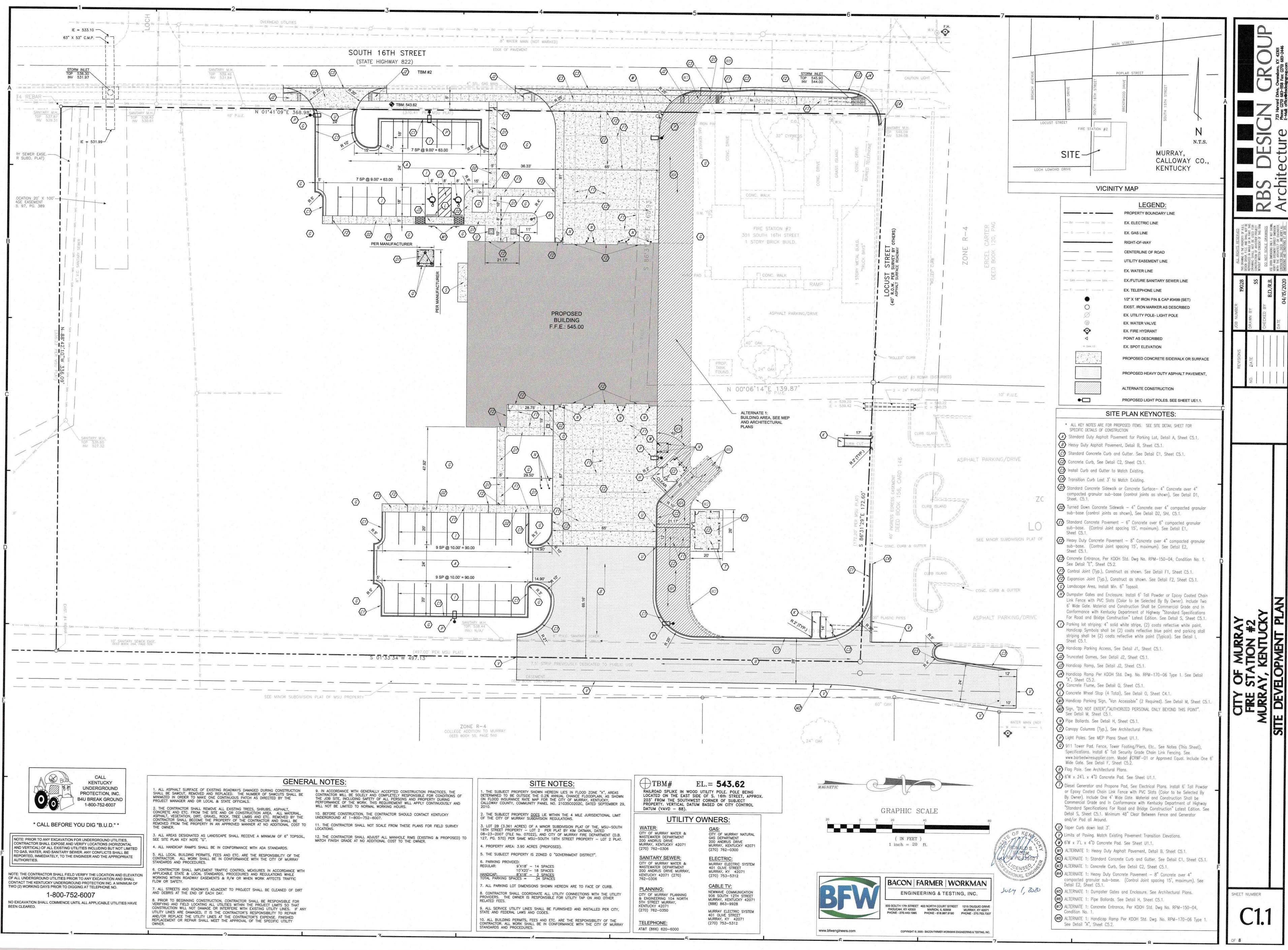
MATERI	ALS & GRAPHIC SY	'MBOLS		ABBREV
		DGA	A.F.F. – ABOVE FINISH FLOOR ACOUS. – ACOUSTICAL	DN. – DOWN DS. – DOWNSPOUT
	COMPACT FILL/BACKFILL	CEMENTITIOUS DECKS	ADJ. – ADJØTABLE A.C. – AIR CONDITIONER A.H.U. – AIR HANDLING UNIT ALUM. – ALUMINUM	DRN. – DRAIN DWG. – DRAWING D.F. – DRINKING FOUNTAIN EA. – EACH
CAST-IN-PLACE CONCRETE	GROUT	BRICK (SECT., PLAN)	A.B. – ANCHOR BOLT APPROX- APPOXIMATE A/E – ARCHITECT/ENGINEER ARCH. – ARCHITECTURAL/ARCHITECT	E.M EACH WAY E.M.C ELECTRIC WATER COOLER ELEC ELECTRICAL E.C ELECTRICAL CLOSET
СМU (PLAN)	CMU (ELEV.)	FIRE BRICK (SECT., PLAN)	A.D. – AREA DRAIN AVG. – AVERAGE B.C. – BASE CABINET BSMT. – BASEMENT	EL. – ELEVATION ELEV. – ELEVATOR EQ. – EQUAL EQUIP. – EQUIPMENT
	CUT STONE (SECT.)	MARBLE	BM, – BEAM BRG, – BEARING B.M. – BENCH MARK BLK, – BLOCK BLKG, – BLOCKING	EXH. – EXHAUST EXIST. – EXISTING EXP. – EXPANSION E.J. – EXPANSION JOINT E.J. – EXPENSION JOINT
METAL	STEEL (SECT.)		BLKG BLOCKING BD BOARD BOT BOTTOM B.O.F BOTTOM OF FOOTING	EXT. – EXTERIOR F.V. – FIELD VERIFY FIN. – FINISH FIN. FL. – FINISH FLOOR
WOOD FINISH WOOD (SECT.)	CONT. WOOD FRAMING	WOOD BLOCKING	B.T.U. – BRITISH THERMAL UNIT BLDG. – BUILDING B.U.R. – BUILT-UP ROOFING B.N. – BULL NOSE B.B. – BULLETIN BOARD CAB. – CABINET	F.F.E. – FINISH FLOOR ELEVATION FIN. GRD: FINISH GRADE FR.D. – FIRE DAMPER F.E. – FIRE EXTINGUISHER F.E.&C. – FIRE EXTINGUISHER AND CABINET
GLAZING	GLASS (PLAN)	// // // // GLASS BLOCK (ELEV.)	C.I. – CAST IRON C.I.P. – CAST IRON PIPE CLG. – CEILING CLG. HT.– CEILING HEIGHT ÇTR. – CENTER	F.H. – FIRE HYDRANT F.TD. – FIRE TREATED FIX. – FIXTURE F.G. – FIXED GLASS
	E.I.F.S. (ELEV.)	E.I.F.S. (SECT.)		FLEX FLEXIBLE FLR FLOOR F.D FLOOR DRAIN FLUOR FLVORESCENT FT FOOT/FEET
FINISHES			CO CLEANOUT CLR CLEAR C.N COLD WATER COL COLUMN COMB COMBINATION CONC CONCRETE C.M.U CONCRETE MASONRY UNIT	FTG FOOTING FDN FOUNDATION FRM FRAME GA GAGE GALV GALVANIZED G.I GALVANIZED IRON G.C GENERAL CONTRACTOR
PARTITIONS	CMU METAL STUD		CONF CONFERENCE CONF CONFERENCE CONN CONNECTION CONSTR CONSTRUCTION CONT CONTINUOUS CONTR CONTRACTOR	G.B. – GRAB BAR GRD. – GRADE GRD. BM <del>.</del> GRADE BEAM GYP. – GYPSUM
SYMBOLS       ROOM       028     B     8'-0"       ROOM TAG	C WINDOW TYPE 31 DOOR NUMBER	DETAIL	C.J CONTROL JOINT CORR CORRIDOR CT5K COUNTERSINK C.F.M CUBIC FEET PER MINUTE D.L DEAD LOAD	HC. – HANDICAPPED HDBD. – HARDBOARD HDW. – HARDWARE HTR. – HEATER HVAC. – HEATING VENTILATING &
	^		DTL. – DETAIL DIAG. – DIAGONAL DIA. – DIAMETER DIM. – DIMEMSION DW. – DISHWASHER DIV. – DIVISION	AIR CONDITIONING HT HEIGHT H.M HOLLOW METAL H.B HOSE BIBB HORIZ HORIZONTAL HR hour
NEW CONTOUR	Z TOILET ACCESSORY	SECTION/ELEVATION	DIV DIVISION DR DOOR DBL DOUBLE	I.D INSIDE DIAMETER INSUL INSULATED PANEL PNL.

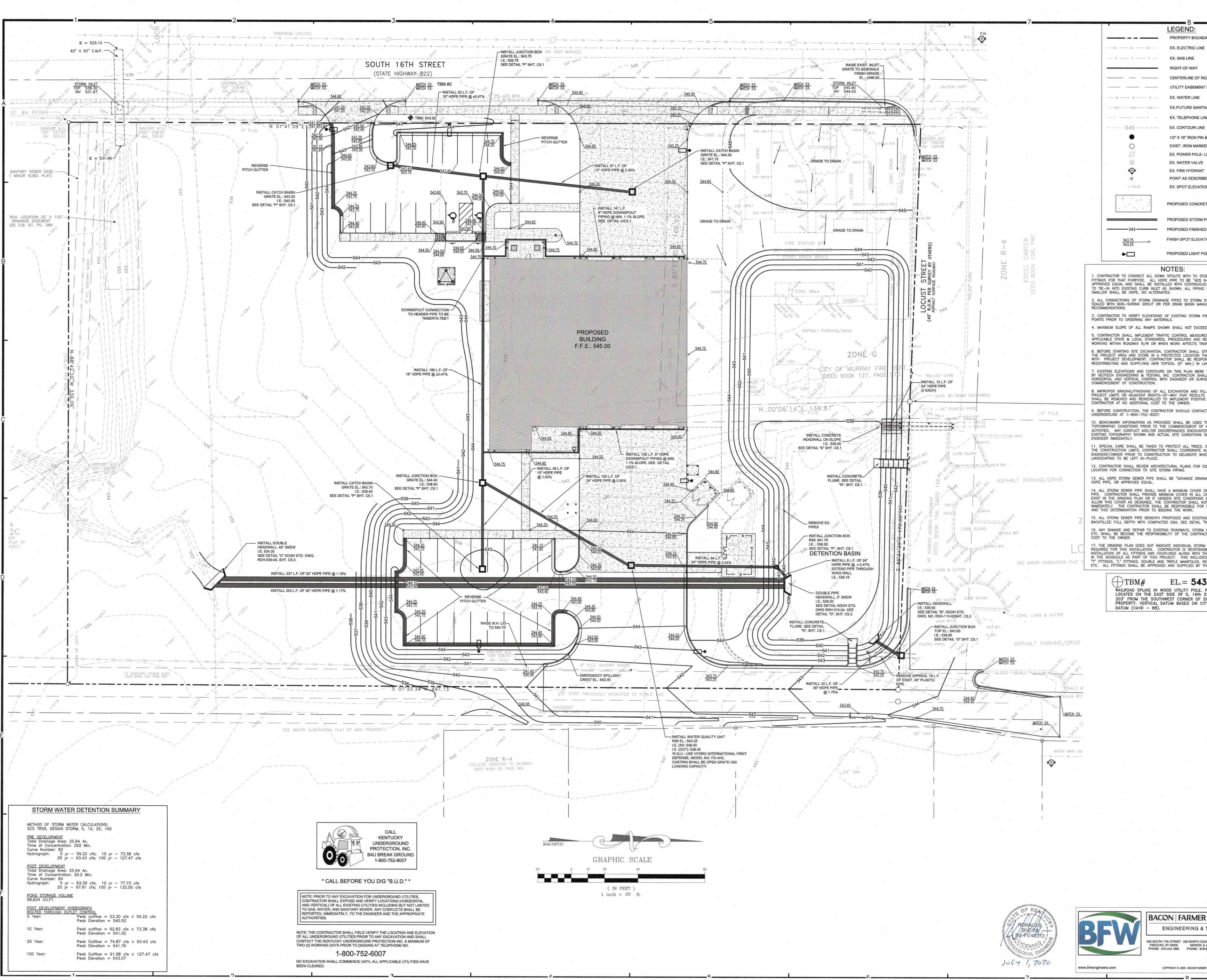




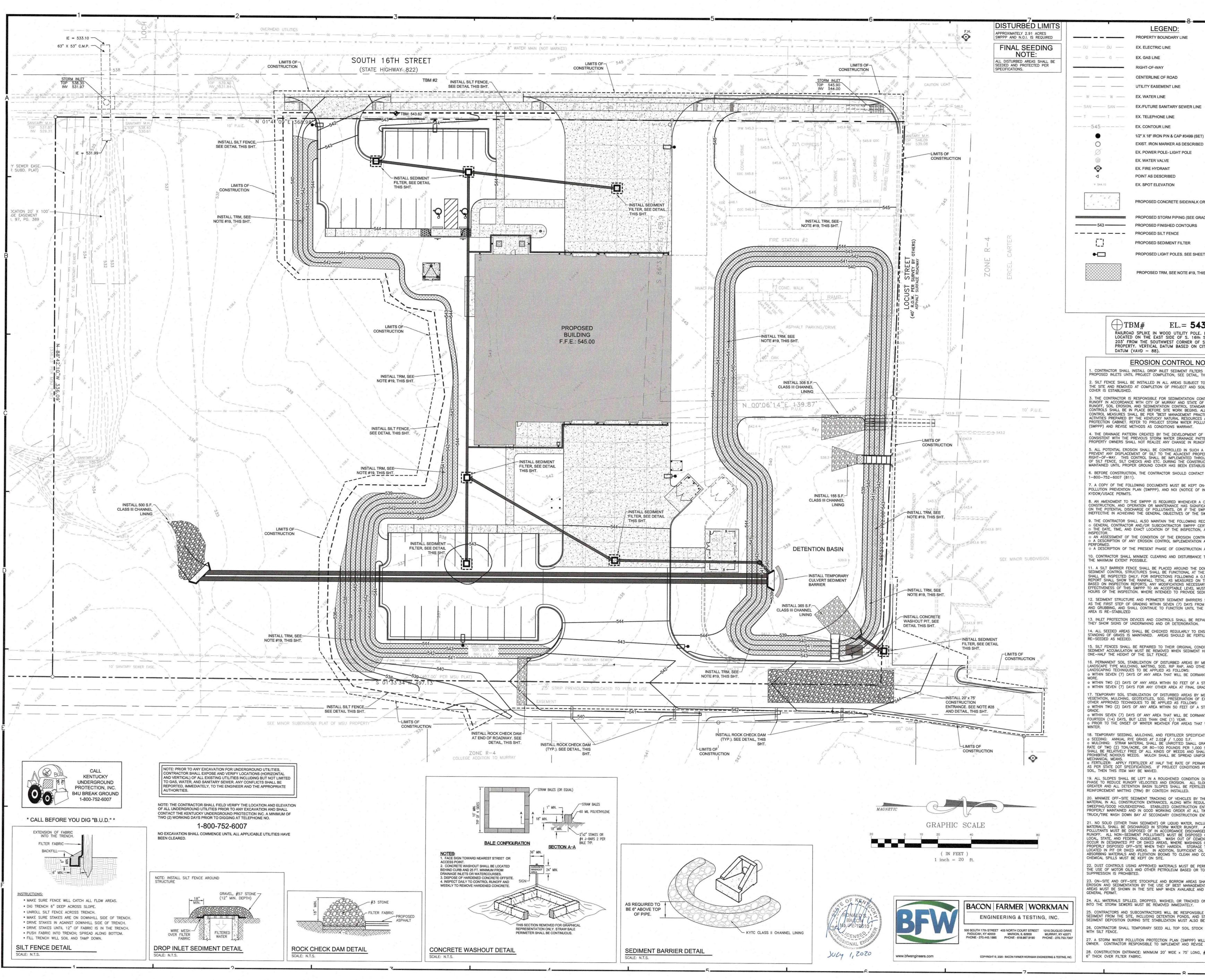
N DATA		SHEET	INDEX		DESIGN
	TI,I	TITLE SHEET	MECHA	NICAL / ELECTRICAL	SCOPE: THE DESIGN C PRESENTED B
			UI.I	SITE UTILITY PLAN	CODE REVIEW
	CO.I	SITE DEMOLITION PLAN	U4,I	SITE UTILITY DETAILS	SHALL NOT B
	CI,I	SITE DEVELOPMENT PLAN	FPO,I	FIRE PROTECTION LEAD SHEET	CONTRACTOR
	C2.I	SITE GRADING PLAN	FPI,I	FIRE PROTECTION FLOOR PLAN	PURPOSES.
	C3.I	SITE EROSION CONTROL PLAN	PO,1	PLUMBING LEAD SHEET	
	C4.1	SITE UTILITY PLAN	PI,I	PLUMBING FLOOR PLAN	
	C4.2	SITE UTILITY DETAILS	P3.I	PLUMBING PIPING DIAGRAMS	
	C5.I	SITE DETAILS	P4,1	PLUMBING DETAILS	
	C5.2	SITE DETAILS	P4.2	PLUMBING DETAILS	NEW BUILDING
			MEO.I	MECHANICAL ELECTRICAL	
	STRUC			LEAD SHEET	CONSTRUCTION TYPE
	50.1	STRUCTURAL LEAD SHEET	HO,I	HVAC LEAD SHEET	
	SI,I	FOUNDATION & MECH, PLATFORM FRAMING PLAN	HI,I	HVAC SUPPLY AND RETURN FLOOR PLAN	USE GROUP
	51,2	ROOF FRAMING PLAN	HI,2	HVAC EXHAUST AND PIPING FLOOR	CODE
	51,2A	STRUCTURAL PLANS - ALTERNATE I	<b>□1</b> , <b>∠</b>	PLAN	
	52.I	FOUNDATION DETAILS	H4.I		
	53.1	FRAMING DETAILS	H5.I	HVAC SCHEDULES	
	53.2	FRAMING DETAILS	H5,2	HVAC SCHEDULES	
	53.3	TRUSS PROFILES	EO,I	ELECTRICAL LEAD SHEET	
	53.4	TRUSS PROFILES	EI,I	ELECTRICAL LIGHTING FLOOR PLAN	
	53.5	FRAMING DETAILS	EI.2	ELECTRICAL POWER FLOOR PLAN	
	54,1	STRUCTURAL SCHEDULES	E3.I E4.I	ELECTRICAL RISER DIAGRAM	RECORD
		TECTURAL	E4.1 E4.2	ELECTRICAL DETAILS ELECTRICAL DETAILS	DRAWINGS
	AI,I	FLOOR PLAN	E4.3	ELECTRICAL DETAILS	
	AI.2	ENLARGED FLOOR PLANS AND	E5.I	ELECTRICAL SCHEDULES	
		DETAILS	E5.2	ELECTRICAL SCHEDULES	
	AI,3	ICC 500 STORM SHELTER DATA SHEET			
	AI,4	REFLECTED CIELING PLAN			
	AI.5	REFLECTED CEILING PLAN -			
		ALTERNATE BID #I			
	A2,I	BUILDING ELEVATIONS			
	A3,I	BUILDING SECTIONS			
	A3.2	WALL SECTIONS			
	A3.3	WALL SECTIONS			
	A4,I	ROOF PLAN AND DETAILS			
	A4.2	ROOF DETAILS			
	A5.I	DOOR SCHEDULE AND DETAILS			
	A6.I	CASEWORK			DRAMN
			58	TOTAL # OF SHEETS IN SET	
	L				



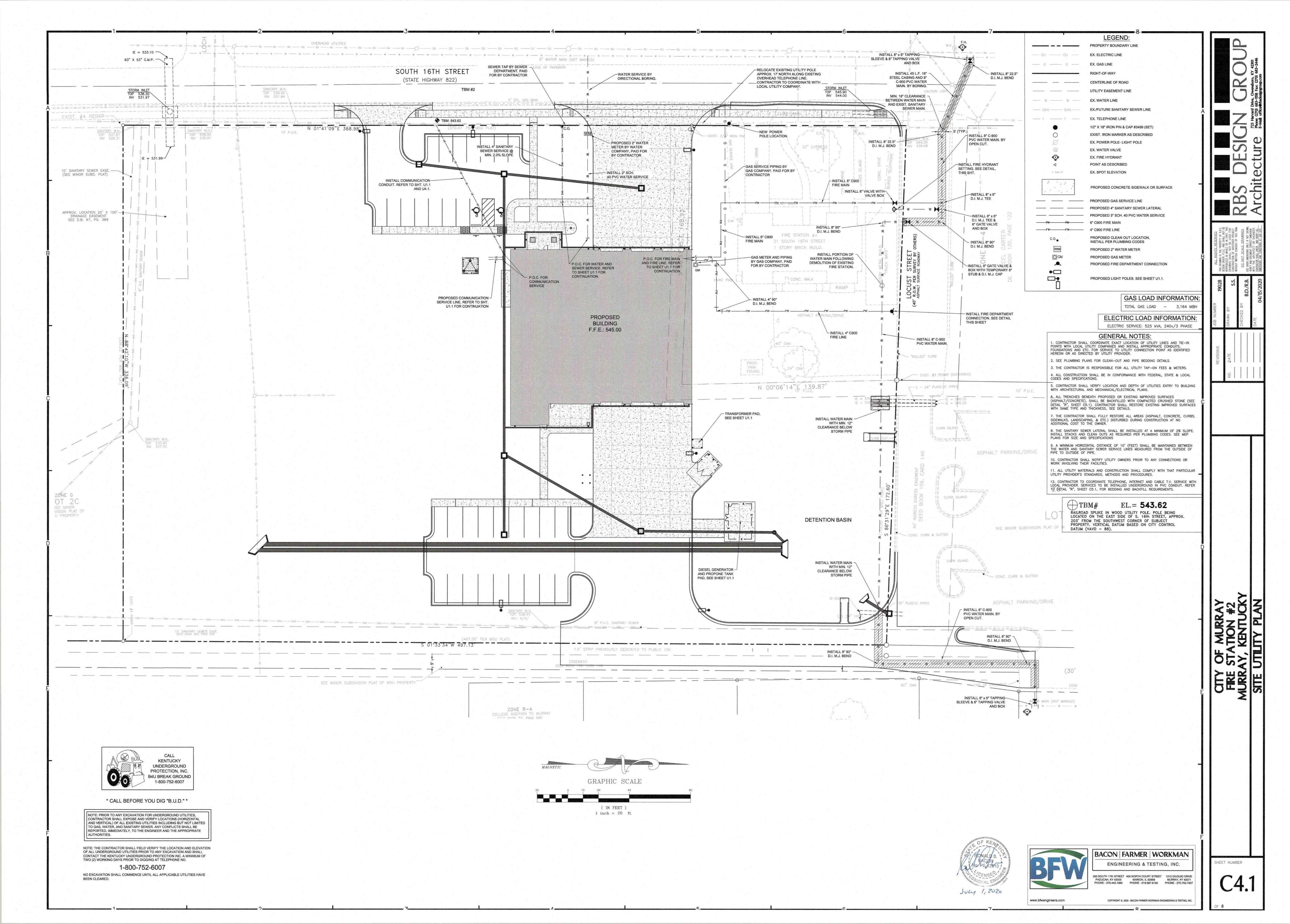


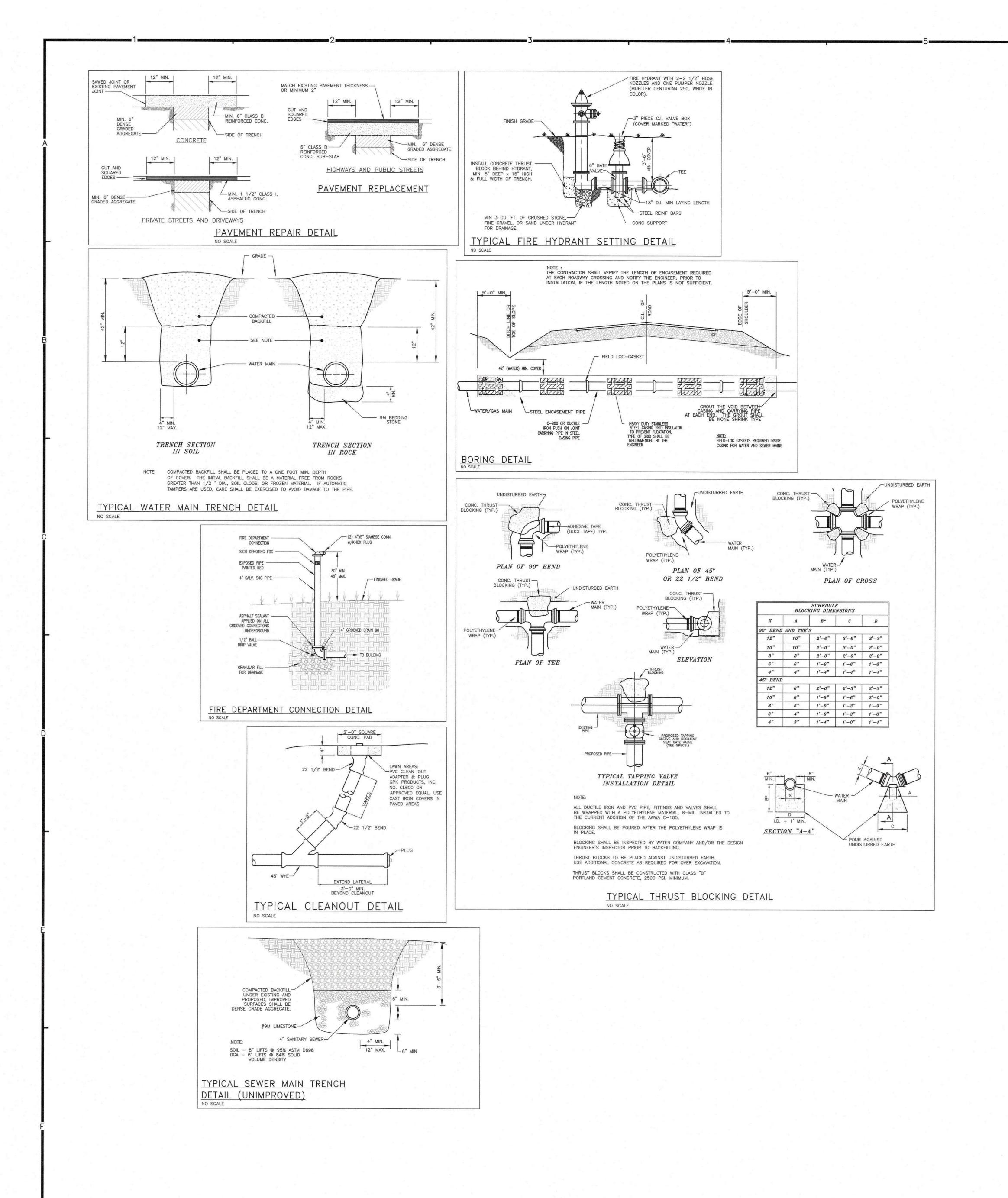


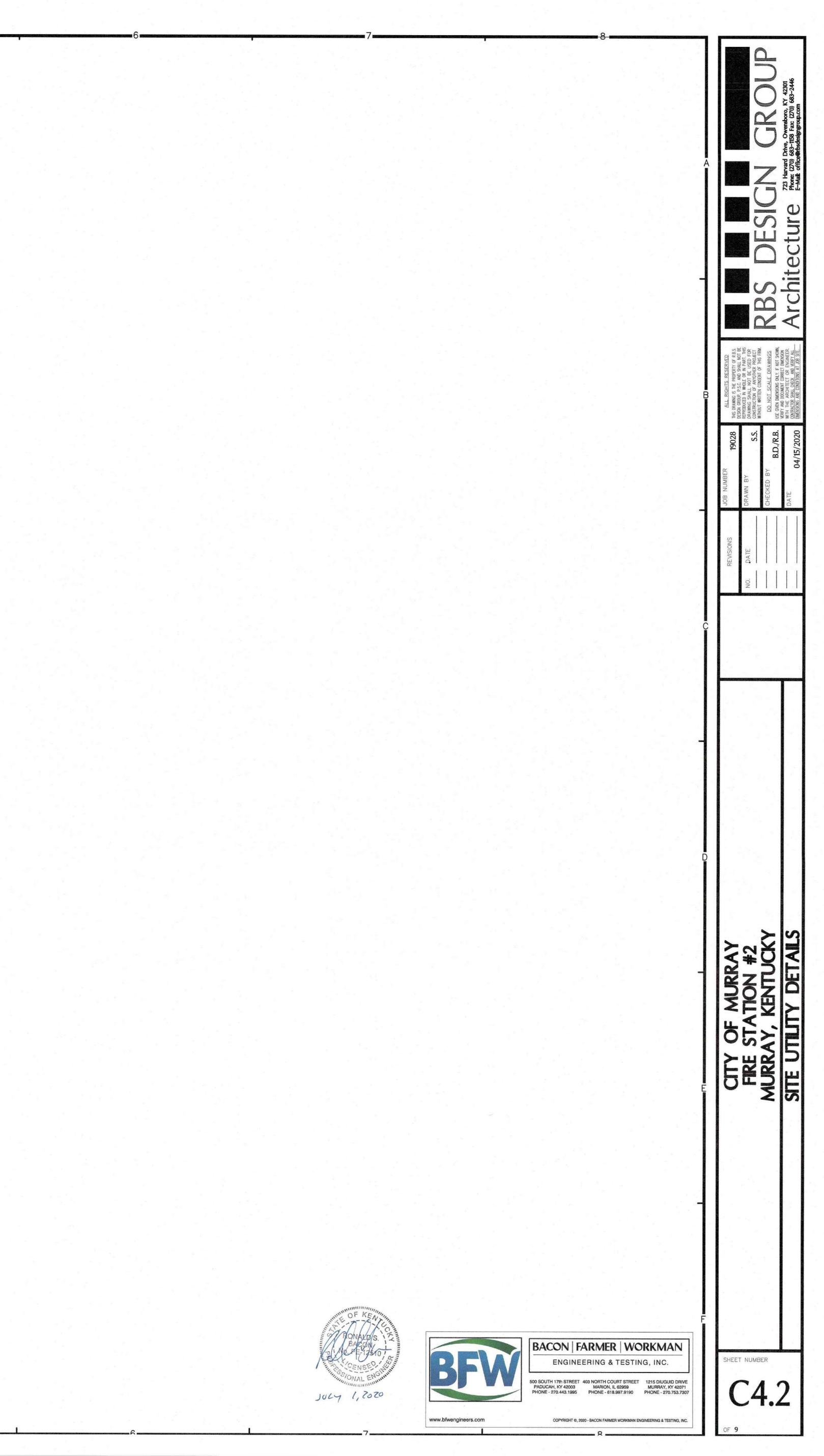
DARY LINE DARY LINE DOAD T LINE DARY SEWER LINE ARY SEWER	JOB NUMER       1903         1904 NUMER       1903         Raws is reperting registered in some site reperting registered in some some some registered in some some some registered in some some registered in some some registered in some some registered in some registered in some registered in some some registered in some som
REGULATIONS WHILE RAFFIC FLOW OR SAFETY. STRIP ALL TOPSOIL FROM THAT SHALL NOT INTERFERE IONSIBLE FOR LANDSCAPE AREAS. E TAKEN FROM A SURVEY REVOR PRIOR TO ALL PLACEMENT WITHIN THE S IN DRAINAGE PROBLEMS WE DRAINAGE BY THE CT KENTUCKY TO CONFIRM EXISTING FANUES, ETC. OUTSIDE ALL TREE REMOVAL WITH HICH TREES AND DOWN SPOUT PIPING INAGE SYSTEMS", ADS-N-12 OF 12" OVER THE TOP OF CASES. IF DISCREPANCIES SENST THAT WILL NOT OTTY THE ENGINEER R SITE RECONNAISSANCE ING PAVEMENT SHALL BE "R", SHI C5.1. M WATER FITTINGS SIBLE FOR OBTAINING AND THE PIPE MANUFACTURER. <b>3.622</b> POLE BEING STREET, APPROX. SUBJECT TY CONTROL	CTY OF MURAY FIRE STATION #2 MURAY, KENTUCKY     Image: CTY OF MURAY FIRE STATION #2       MURAY, KENTUCKY       SITE GRADING PLAN
R WORKMAN ENGINEERING & TESTING, INC.	SHEET NUMBER C2.1 OF 8

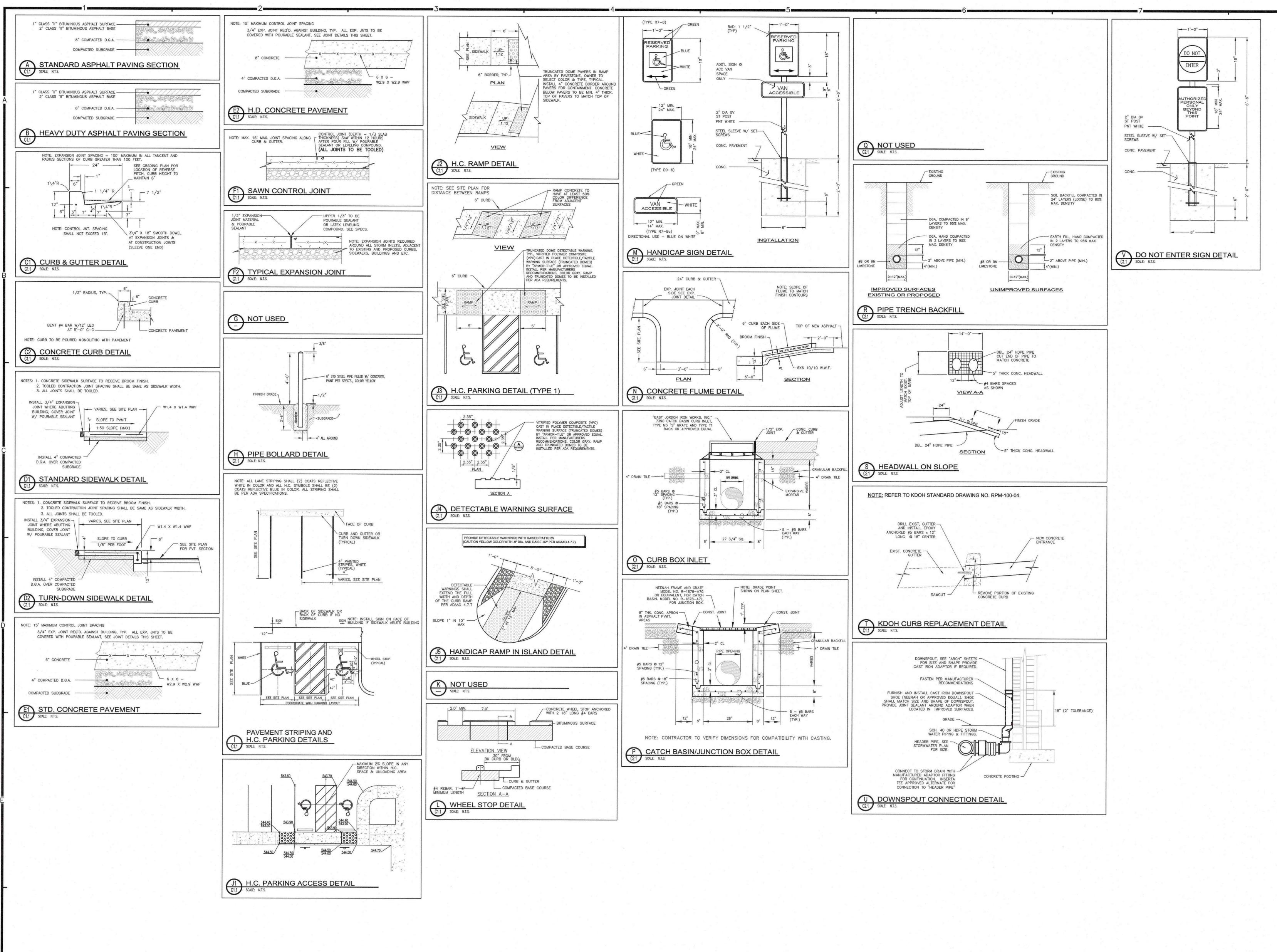


E T) ED OR SURFACE RADING PLAN) ET UE1.1.	AL RICHTS RESERVE THE INFORMERTY OF REAL STATE AND
3.62	19028 S.S. B.D./R.B.
STREET, APPROX. SUBJECT CITY CONTROL	JOB NUMBER
OTES S OVER ALL EXISTING AND THIS SHEET. TO SEDIMENT RUNOFF FROM OIL STABILIZATION/GROUND ONTROL OF ON-SITE DF KENTUCKY STORM WATER ARDS. ALL EROSION ALL EROSION AND SEDIMENT CTICE FOR CONSTRUCTION	REVISIONS NO. DATE
A MANNER SO AS TO PERTY OWNERS STREAMS OR OUT BUTCH OWNERS STREAMS OR OUGH PROPER INSTALLATION UCTION DURATION AND LISHED.	
DN-SITE: STORM WATER INTENT), AND ANY CHANGE IN DESIGN, ICANT NEGATIVE EFFECT WPPP PROVES TO BE SWPPP. RECORDS ON-SITE: ERTIFICATIONS. , AND THE NAME OF THE TROLS. AND THE NAME OF THE TROLS. AND MAINTENANCE N AT THE SITE. TO THE ENVIRONMENT TO DOWNSTREAM STRUCTURES. HE END OF EACH DAY AND O.5" OR HIGHE EVENT, THE ON-SITE RAIN GAGE. ARY TO INCREASE THE ST BE MADE WITHIN 48 EDIMENT CONTROL. S SHALL BE IMPLEMENTED DM THE START OF CLEARING HE SLOPE DEVELOPMENT PAIRED OR REPLACED WHEN NSURE THAT A GOOD TILIZED, WATERED, AND NUTION IF DAMAGED. HEIGHT REACHES MEANS OF VEGETATION, HER APPROVED ANT FOR ONE (1) YEAR OR STREAM AT FINAL GRADE. MEANS OF VEGETATION, AND STREAM AT FINAL GRADE. MEANS OF TEMPORARY EXISTING VEGETATION, AND STREAM NOT AT FINAL ANT FOR MORE THAN T WILL BE IDLE OVER CATIONS: CRAIN STRAW APPLIED AT A D.S.F. MULCH MATERIALS ALL BE FRELO FERADING LOPES OF 3:1 OR IZED, SEEDED, AND TURF THE USE OF GRANULAR ULARLY SCHEDUED STRIAM. STRAW APPLIED AT A D.S.F. MULCH MATERIALS ALL DIN STRAW APPLIED AT A D.S.F. MULCH MATERIALS ALL DIN STORM WATER DURING THE GRADING DOF IN ACCORDANCE WITH ENTRANCES TO BE TIMES. INSTALL ENTRANCES TO BE TIMES. INSTALL ENTRANCES TO BE TIMES. INSTALL ENTRANCES TO BE TIMES. INSTALL ENTRANCES TO BE TIMES. INSTALL ENTRANCE SHOULD ALSO BE DICT IN ACCORDANCE WITH ENTRANCES TO BE TIMES. INSTALL ENTRANCE SHOULD ALSO BE DICT IN ACCORDANCE WITH ENTRANCES TO BE TIMES. INSTALL ENTRANCE SHOULD ALSO BE DICT IN ACCORDANCE WITH ENTRANCES TO BE TIMES. INSTALL ENTRANCE SHOULD ALSO BE DICT IN ACCORDANCE WITH ENTRANCES TO BE TIMES. INSTALL ENTRANCE SHOULD ALSO BE DICT AN BE REMOVED ALSO BE DICT IN ACCORDANCE WITH ENTRANCES TO BE TIMES. INSTALL ENTRANCE SHOULD ALSO BE DICT IN ACCORDANCE WITH ENTRANCES TO BE TIMES. INSTALL ENTRANCE SHOULD ALSO BE DICT IN ACCORDANCE WITH ENTRANCES TO BE TIMES. INSTALL ENTRANCES TO BE TIM	CITY OF MURRAY FIRE STATION #2 MURRAY, KENTUCKY SITE EROSION CONTROL PLAN
LE FOR REMOVING ALL STORM SEWER SYSTEMS. BE REMOVED. IK PILES AND SURROUND ILL BE PROVIDED BY THE IE AS NEEDED. , #2 (4-8 INCH ROCK).	SHEET NUMBER
	OF 8

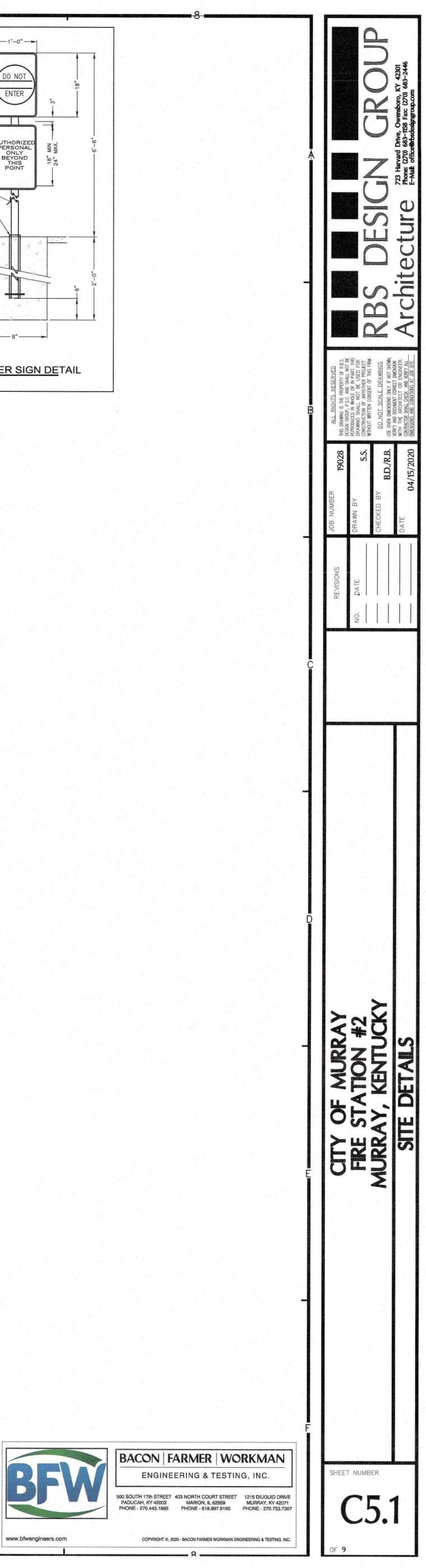


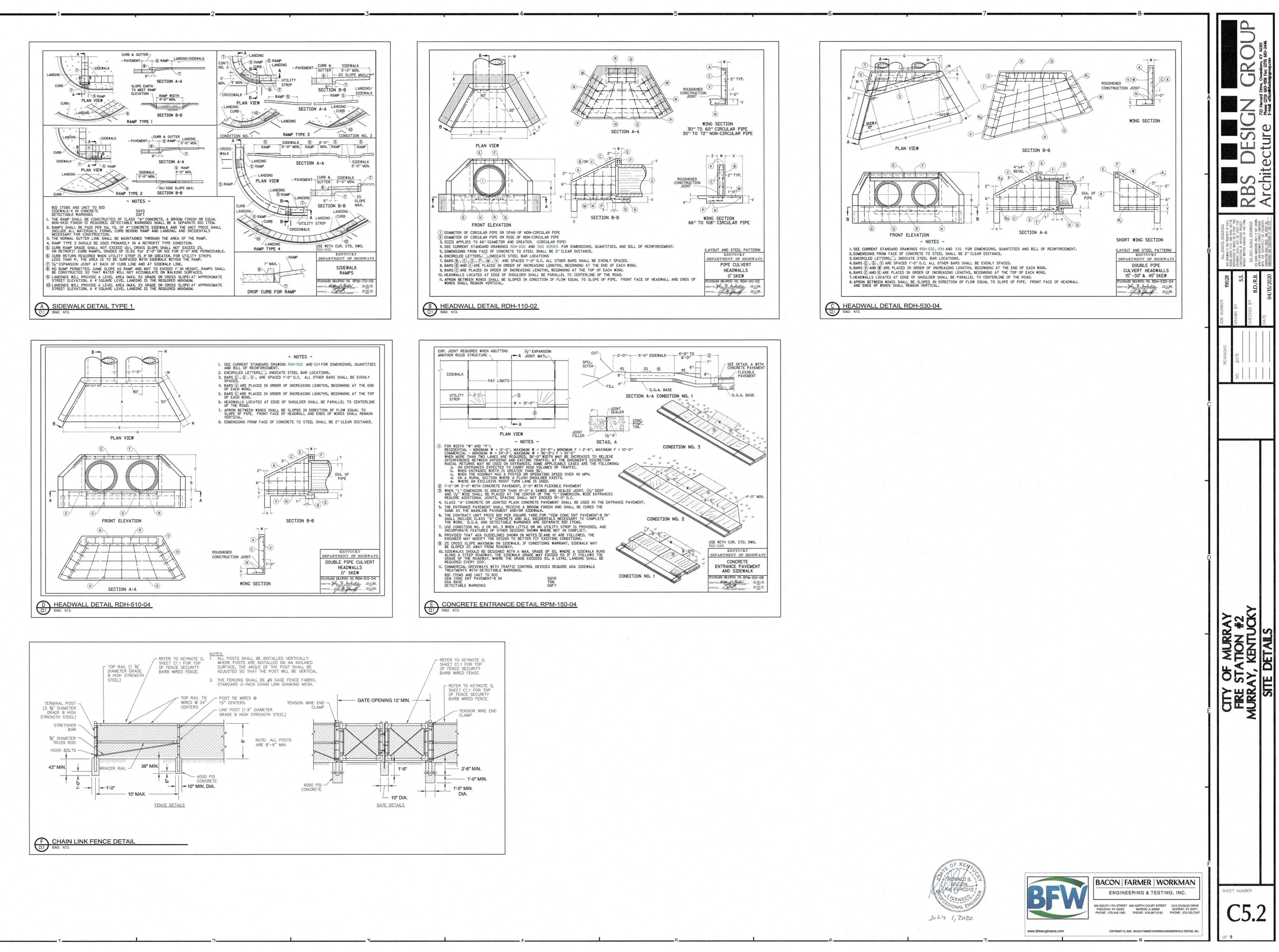


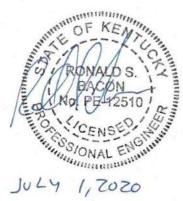


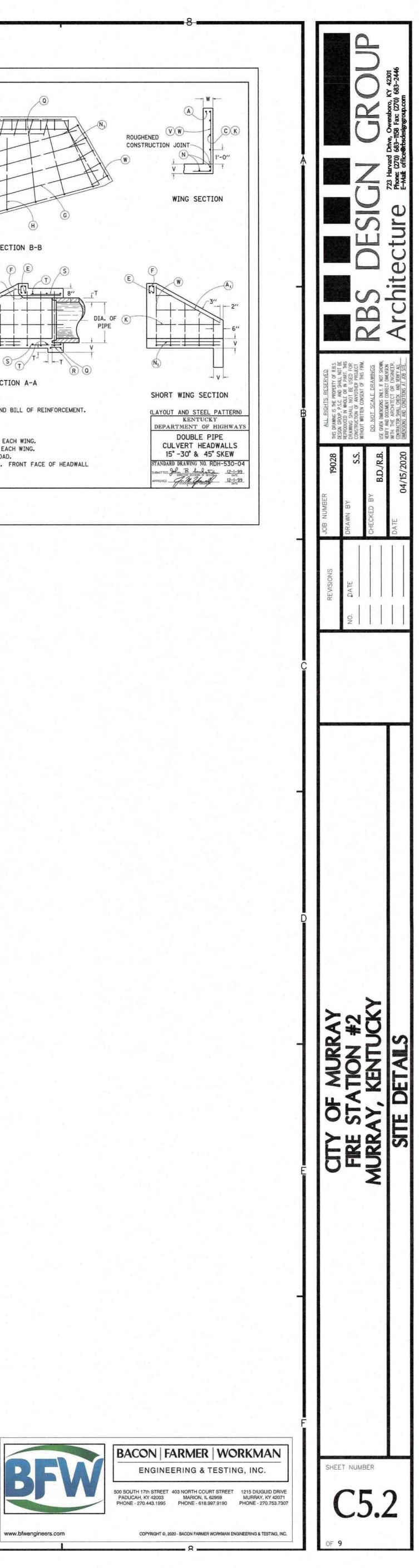


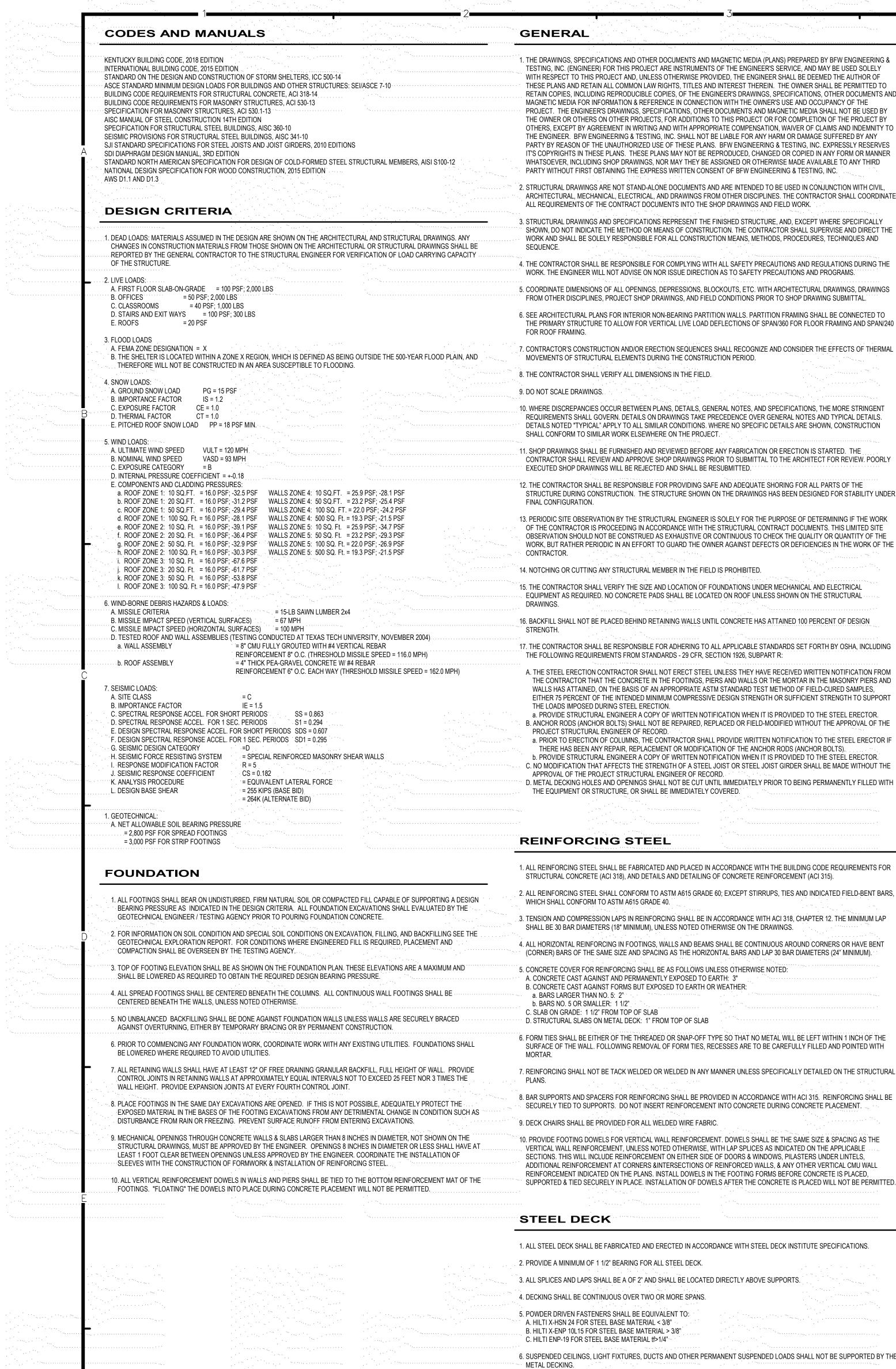












METAL DECKING.

### TESTING, INC. (ENGINEER) FOR THIS PROJECT ARE INSTRUMENTS OF THE ENGINEER'S SERVICE, AND MAY BE USED SOLELY WITH RESPECT TO THIS PROJECT AND, UNLESS OTHERWISE PROVIDED, THE ENGINEER SHALL BE DEEMED THE AUTHOR OF THESE PLANS AND RETAIN ALL COMMON LAW RIGHTS. TITLES AND INTEREST THEREIN. THE OWNER SHALL BE PERMITTED TO RETAIN COPIES, INCLUDING REPRODUCIBLE COPIES, OF THE ENGINEER'S DRAWINGS, SPECIFICATIONS, OTHER DOCUMENTS AND MAGNETIC MEDIA FOR INFORMATION & REFERENCE IN CONNECTION WITH THE OWNER'S USE AND OCCUPANCY OF THE PROJECT. THE ENGINEER'S DRAWINGS. SPECIFICATIONS. OTHER DOCUMENTS AND MAGNETIC MEDIA SHALL NOT BE USED BY THE OWNER OR OTHERS ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS, EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION, WAIVER OF CLAIMS AND INDEMNITY TO THE ENGINEER. BFW ENGINEERING & TESTING, INC. SHALL NOT BE LIABLE FOR ANY HARM OR DAMAGE SUFFERED BY ANY PARTY BY REASON OF THE UNAUTHORIZED USE OF THESE PLANS. BFW ENGINEERING & TESTING, INC, EXPRESSLY RESERVES IT'S COPYRIGHTS IN THESE PLANS. THESE PLANS MAY NOT BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, INCLUDING SHOP DRAWINGS, NOR MAY THEY BE ASSIGNED OR OTHERWISE MADE AVAILABLE TO ANY THIRD

ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE 3. STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS. 5. COORDINATE DIMENSIONS OF ALL OPENINGS, DEPRESSIONS, BLOCKOUTS, ETC. WITH ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER DISCIPLINES, PROJECT SHOP DRAWINGS, AND FIELD CONDITIONS PRIOR TO SHOP DRAWING SUBMITTAL. 6. SEE ARCHITECTURAL PLANS FOR INTERIOR NON-BEARING PARTITION WALLS. PARTITION FRAMING SHALL BE CONNECTED TO THE PRIMARY STRUCTURE TO ALLOW FOR VERTICAL LIVE LOAD DEFLECTIONS OF SPAN/360 FOR FLOOR FRAMING AND SPAN/240

7. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL

10. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DETAILS NOTED "TYPICAL" APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION

CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ARCHITECT FOR REVIEW. POORLY

13. PERIODIC SITE OBSERVATION BY THE STRUCTURAL ENGINEER IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK

OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK. BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE

15. THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF FOUNDATIONS UNDER MECHANICAL AND ELECTRICAL EQUIPMENT AS REQUIRED. NO CONCRETE PADS SHALL BE LOCATED ON ROOF UNLESS SHOWN ON THE STRUCTURAL

16. BACKFILL SHALL NOT BE PLACED BEHIND RETAINING WALLS UNTIL CONCRETE HAS ATTAINED 100 PERCENT OF DESIGN

A. THE STEEL ERECTION CONTRACTOR SHALL NOT ERECT STEEL UNLESS THEY HAVE RECEIVED WRITTEN NOTIFICATION FROM THE CONTRACTOR THAT THE CONCRETE IN THE FOOTINGS, PIERS AND WALLS OR THE MORTAR IN THE MASONRY PIERS AND WALLS HAS ATTAINED, ON THE BASIS OF AN APPROPRIATE ASTM STANDARD TEST METHOD OF FIELD-CURED SAMPLES,

a. PROVIDE STRUCTURAL ENGINEER A COPY OF WRITTEN NOTIFICATION WHEN IT IS PROVIDED TO THE STEEL ERECTOR. B. ANCHOR RODS (ANCHOR BOLTS) SHALL NOT BE REPAIRED, REPLACED OR FIELD-MODIFIED WITHOUT THE APPROVAL OF THE a. PRIOR TO ERECTION OF COLUMNS, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE STEEL ERECTOR IF

b. PROVIDE STRUCTURAL ENGINEER A COPY OF WRITTEN NOTIFICATION WHEN IT IS PROVIDED TO THE STEEL ERECTOR. C. NO MODIFICATION THAT AFFECTS THE STRENGTH OF A STEEL JOIST OR STEEL JOIST GIRDER SHALL BE MADE WITHOUT THE D. METAL DECKING HOLES AND OPENINGS SHALL NOT BE CUT UNTIL IMMEDIATELY PRIOR TO BEING PERMANENTLY FILLED WITH

1. ALL REINFORCING STEEL SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR

. 3. TENSION AND COMPRESSION LAPS IN REINFORCING SHALL BE IN ACCORDANCE WITH ACI 318, CHAPTER 12. THE MINIMUM LAP 4. ALL HORIZONTAL REINFORCING IN FOOTINGS, WALLS AND BEAMS SHALL BE CONTINUOUS AROUND CORNERS OR HAVE BENT (CORNER) BARS OF THE SAME SIZE AND SPACING AS THE HORIZONTAL BARS AND LAP 30 BAR DIAMETERS (24" MINIMUM).

6. FORM TIES SHALL BE EITHER OF THE THREADED OR SNAP-OFF TYPE SO THAT NO METAL WILL BE LEFT WITHIN 1 INCH OF THE SURFACE OF THE WALL. FOLLOWING REMOVAL OF FORM TIES, RECESSES ARE TO BE CAREFULLY FILLED AND POINTED WITH

7. REINFORCING SHALL NOT BE TACK WELDED OR WELDED IN ANY MANNER UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL

10. PROVIDE FOOTING DOWELS FOR VERTICAL WALL REINFORCEMENT. DOWELS SHALL BE THE SAME SIZE & SPACING AS THE VERTICAL WALL REINFORCEMENT, UNLESS NOTED OTHERWISE, WITH LAP SPLICES AS INDICATED ON THE APPLICABLE SECTIONS. THIS WILL INCLUDE REINFORCEMENT ON EITHER SIDE OF DOORS & WINDOWS, PILASTERS UNDER LINTELS,

REINFORCEMENT INDICATED ON THE PLANS. INSTALL DOWELS IN THE FOOTING FORMS BEFORE CONCRETE IS PLACED. SUPPORTED & TIED SECURELY IN PLACE. INSTALLATION OF DOWELS AFTER THE CONCRETE IS PLACED WILL NOT BE PERMITTED

1. ALL STEEL DECK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH STEEL DECK INSTITUTE SPECIFICATIONS.

6. SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS AND OTHER PERMANENT SUSPENDED LOADS SHALL NOT BE SUPPORTED BY THE

7. SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS AND OTHER PERMANENT SUSPENDED LOADS SHALL NOT BE SUPPORTED BY THE

**POST INSTALLED ANCHORS** 

1. ALL ADHESIVE (EPOXY) FOR POST INSTALLED ANCHORS AND/OR REBAR INTO CONCRETE SHALL BE HILTI HIT-HY 200 SAFE SET SYSTEM, SIMPSON SET-XP EPOXY-TIE ANCHORING SYSTEM, ITW RED HEAD EPCON G5 ADHESIVE ANCHORING SYSTEM, OR APPROVED EQUAL. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. 2. ALL ADHESIVE (EPOXY) FOR POST INSTALLED ANCHORS AND/OR REBAR INTO GROUT FILLED MASONRY SHALL BE HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM, SIMPSON SET EPOXY-TIE ANCHORING SYSTEM, ITW REDHEAD EPCON C6 ADHESIVE ANCHORING SYSTEM, OR APPROVED EQUAL. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

3. ALL ADHESIVE (EPOXY) FOR POST INSTALLED ANCHORS AND/OR REBAR INTO HOLLOW MASONRY AND/OR BRICK SHALL BE HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM, SIMPSON SET EPOXY-TIE ANCHORING SYSTEM, ITW REDHEAD EPCON C6 ADHESIVE ANCHORING SYSTEM, OR APPROVED EQUAL. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. 4. ALL POST INSTALLED MECHANICAL ANCHORS INTO CONCRETE SHALL BE HILTI KWIK BOLT TZ EXPANSION ANCHOR, SIMPSON STRONG BOLT WEDGE ANCHOR, ITW RED HEAD TRUBOLT + WEDGE ANCHOR, OR APPROVED EQUAL. INSTALLATION SHALL BE

PER MANUFACTURER'S RECOMMENDATIONS. 5. ALL POST INSTALLED MECHANICAL ANCHORS INTO GROUT FILLED MASONRY SHALL BE HILTI KWIK BOLT 3 EXPANSION ANCHORS, SIMPSON WEDGE-ALL WEDGE ANCHORS, OR APPROVED EQUAL. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

6. ANCHOR LENGTHS SHOWN FOR ATTACHMENT TO CONCRETE AND/OR MASONRY ARE REQUIRED EMBEDMENT LENGTHS. THE CONTRACTOR SHALL PROVIDE ANCHORS WITH ADDITIONAL LENGTH TO FACILITATE THE REQUIRED CONNECTION. 7. SUBMIT ALL PROPOSED ANCHORING SYSTEMS INCLUDING ICC-ES REPORTS TO STRUCTURAL ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

### **CAST-IN-PLACE CONCRETE**

1. ALL CONCRETE SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL CONCRETE, ACI 301.

2. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" CHAMFER UNLESS NOTED OTHERWISE.

3. NORMAL WEIGHT CONCRETE: A. F'C = 4500 PSI @ 28 DAYS - ALL EXPOSED EXTERIOR CONCRETE FLAT WORK (I.E., SLABS, EQUIPMENT PADS, ETC.). B. F'C = 3500 PSI @ 28 DAYS - ALL INTERIOR CONCRETE (I.E. FOOTINGS, PEDESTALS, RETAINING WALLS, ETC.). C. F'C = 4000 PSI @ 28 DAYS - ALL INTERIOR SLABS ON GRADE. D. F'C = 4000 PSI @ 28 DAYS - ALL CONCRETE FILL OVER METAL DECK.

4. USE AIR-ENTRAINING ADMIXTURE IN ALL CONCRETE, EXCEPT AIR ENTRAINMENT SHALL BE OMITTED FROM CONCRETE SLABS TO RECEIVE A STEEL TROWEL FINISH.

5. THE CONTRACTOR SHALL NOT CAST STEM WALLS OR RETAINING WALLS AGAINST EXCAVATED VERTICAL SIDE SURFACES. 6. ALL CONCRETE EXPOSED TO GROUND SHALL BE MANUFACTURED WITH PORTLAND CEMENT TYPE II.

7. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS". HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 305. COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 306.

8. UNLESS OTHERWISE NOTED, ALL ONE WAY SLABS SHALL BE REINFORCED AS FOLLOWS: A. BOTTOM REINFORCING #4 @ 16" O.C. (BETWEEN SUPPORTS) B. TOP REINFORCING #4 @ 12" O.C. (CENTERED ON SUPPORTS) C. TEMP. REINFORCING #4 @ 18" O.C. (TRANSVERSE BOTTOM)

9. IN ORDER TO AVOID CONCRETE SHRINKAGE CRACKING, PLACE CONCRETE SLABS IN AN ALTERNATING LANE PATTERN. THE MAXIMUM LENGTH OF SLAB CAST IN ANY ONE CONTINUOUS POUR SHALL BE LIMITED TO 80 FEET.

10. FORMWORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED AT LEAST 90% OF ITS 28 DAY COMPRESSIVE STRENGTH. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND RESHORING.

**SLAB-ON-GRADE - OFFICE AREA** 

1. THE SLAB-ON-GRADE CONSTRUCTION SHALL BE 4", NORMAL WEIGHT CONCRETE ON PLASTIC VAPOR RETARDER ON 4" OF COMPACTED POROUS AGGREGATE FILL. REINFORCE THE SLAB WITH WWF 6x6-W2.9XW2.9 (FLAT SHEETS ONLY). WWF SHALL BE ADEQUATELY SUPPORTED BY AND TIED TO WIRE SLAB BOLSTERS. THE USE OF MASONRY BLOCKS TO SUPPORT THE WWF IS PROHIBITED.

2. PROVIDE CONTROL JOINTS (AND CONSTRUCTION JOINTS IF NEEDED) IN THE SLAB-ON-GRADE PER THE TYP. SLAB-ON-GRADE JOINT CONSTRUCTION DETAIL. CONTROL JOINTS SHALL BE LOCATED AT COLUMN CENTERLINES AND SPACED AT 12'-0" MAXIMUM IN BETWEEN. FOR SLABS 6" AND THICKER THE MAXIMUM SPACING OF CONTROL JOINTS MAY BE INCREASED TO 15'-0".

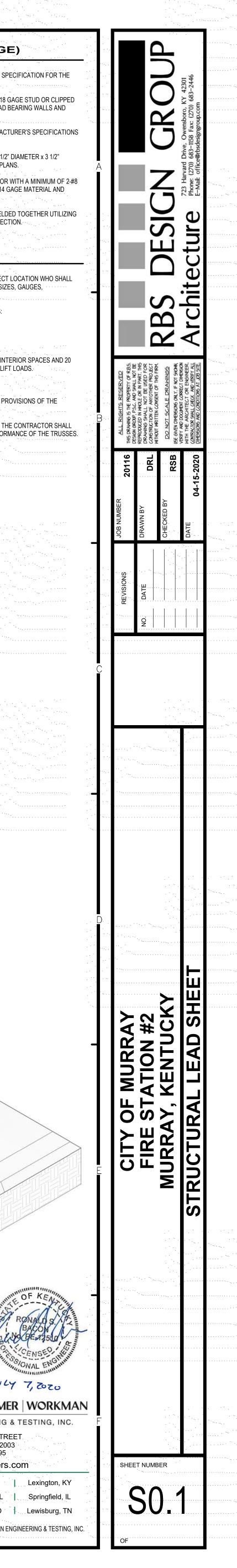
3. ALL WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A-185. LAP ADJOINING PIECES AT LEAST ONE FULL MESH. 4. SLAB JOINTS SHALL BE FILLED WITH APPROVED MATERIAL. THIS SHOULD TAKE PLACE AS LATE AS POSSIBLE, PREFERABLY 4 TO 6 WEEKS AFTER THE SLAB HAS BEEN CAST. PRIOR TO FILLING, REMOVE ALL DEBRIS FROM THE SLAB JOINTS, THEN FILL IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AS FOLLOWS: A. 6" SLABS - FILL WITH EPOXY RESIN B. OTHER SLABS - FILL WITH FIELD MOLDED OR ELECTROMETRIC SEALANT

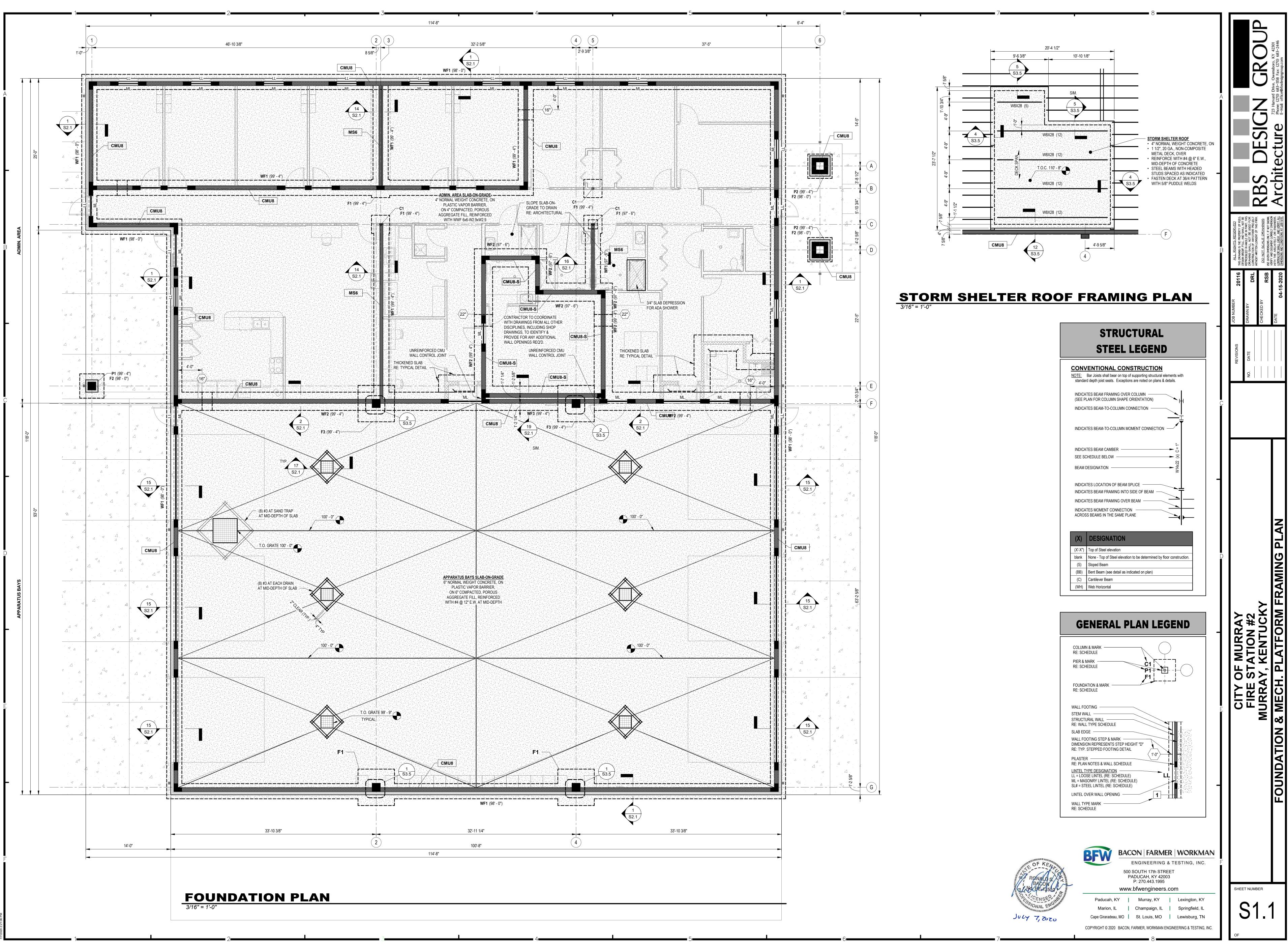
5. WALKWAYS AND OTHER EXTERIOR SLABS ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS. SEE THE SITE PLAN AND ARCHITECTURAL DRAWINGS FOR LOCATIONS, DIMENSIONS, ELEVATIONS, JOINTING DETAILS AND FINISH DETAILS. 6. SEE THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF DEPRESSED SLAB AREAS AND DRAINS, SLOPE SLABS TO DRAINS.

7. ALL GROUND LEVEL. NON-LOAD BEARING CMU WALLS SHALL BEAR ON A THICKENED SLAB WHETHER THEY ARE NOTED ON PLAN OR NOT. SEE THE "THICKENED SLAB-ON-GRADE AT STAIR / NON-BEARING CMU WALL" FOR REQUIRED CONSTRUCTION OF THE THICKENED SLAB.

8. SEE PLANS FOR APPARATUS BAY SLAB-ON-GRADE

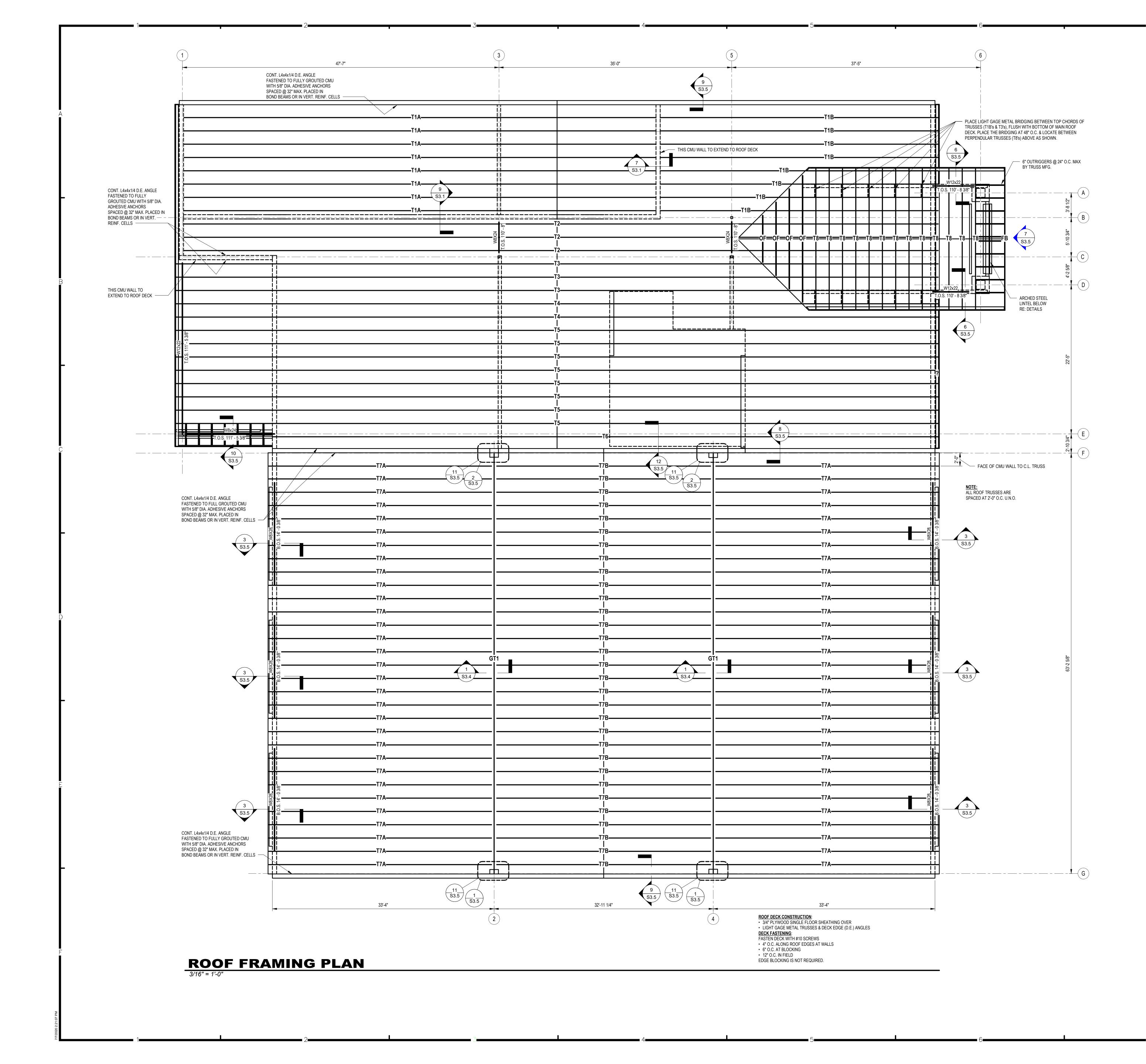
			<pre>interior and interior an and and and and and and and and and and</pre>		
MASONRY				TAL FRAMING	(>18 GAGE
3,250 PSI. MORTAR SHALL BE TYPE S. G	COMPLY WITH ASTM C90, NORMAL-WEIGHT WITH A M GROUT F'C = 2,500 PSI, MINIMUM. F'M = 2,500 PSI. ROUTED SOLID FROM THE BOTTOM TO THE TOP OF T		1. ALL COLD-FORMED METAL FRAMING SHALL C DESIGN OF COLD-FORMED STEEL STRUCTUR	AL MEMBERS"	
SHALL BE GROUTED SOLID UP TO GRAD	E. CELLS CONTAINING EXPANSION ANCHORS SHALL AND SECURED WITH REBAR POSITIONERS PRIOR T	BE GROUTED SOLID.	2. WALLS SHALL BE PROVIDED WITH MANUFACT COLD-ROLLED CHANNEL 1 1/2" x 16 GAGE). PR EXTERIOR WALLS.	ROVIDE BRIDGING AT 4'-0" ON CÈNT	ER MAXIMUM FOR LOAD B
(MAXIMUM 5 FOOT GROUT LIFTS).	CELLS SHALL BE GROUTED IN ACCORDANCE WITH TH	E INTERNATIONAL BUILDING CODE	<ol> <li>PROVIDE ALL MISCELLANEOUS ACCESSORIES AND RECOMMENDATIONS UNLESS NOTED OT</li> <li>ALL TRACK SHALL BE DEEP LEG, 18 GAGE MIN</li> </ol>	HERWISE. NIMUM. TRACK SHALL BE ANCHORE	ED TO THE SLAB WITH 1/2"
	IMUM) UNLESS NOTED OTHERWISE. D BEAMS SHALL BE CONTINUOUS AROUND CORNERS BOVE. VERTICAL STEEL SHALL CONTINUE THROUGH E		EMBED EXPANSION SLEEVE ANCHORS SPACE 5. SECURE STUDS TO TOP AND BOTTOM TRACK TEK SCREWS PER LOCATION UP TO 16 GAGE	S BY WELDING AT BOTH INSIDE AN	ID OUTSIDE FLANGES OR
	LL BE CONSTRUCTED FULL HEIGHT IN ALL CMU WALLS CORNER AND TEE INTERSECTIONS. PILASTERS SHAL CELL UNLESS NOTED OTHERWISE.		THICKER UNLESS NOTED OTHERWISE. 6. ALL COMPONENTS OF BUILT-UP STUD SECTIO 1/8" FILLET WELDS, 1" LONG AT 12" OC, ALONO		
CORNERS AND TEES AT ALL WALL CORN	REINFORCING AT 16" ON CENTER (ALTERNATE COUP VERS AND INTERSECTIONS RESPECTIVELY.		COLD-FORMED ME	TAL TRUSSES	
CONNECTION. 10. SEE ARCHITECTURAL DRAWINGS AND S	N FOR STEEL BEAMS BEARING ON MASONRY WALLS.	and the second secon	1. THE CONTRACTOR SHALL EMPLOY A STRUCT BE RESPONSIBLE FOR THE ACTUAL DESIGN C	OF ALL ASPECTS OF THE TRUSSES	
ETC. AT ALL EXPOSED MASONRY WALLS 11. ALL MASONRY WALL CONFIGURATIONS PLUMBING, ELECTRICAL AND DRAWINGS	SINCLUDING WALL OPENINGS SHALL BE COORDINATE	D WITH CIVIL, MECHANICAL,	2. METAL TRUSSES SHALL BE DESIGNED BY THE A. TOP CHORD DEAD LOAD = 15 PSF		E FOLLOWING LOADS:
DAMAGE TO THE WALLS.			B. TOP CHORD LIVE LOAD = 20 PSF C. BOTTOM CHORD DEAD LOAD = 15 PSF D. BOTTOM CHORD LIVE LOAD = 10 PSF E. SEE THE DESIGN CRITERIA SECTION FOR A		
OF 8" AT BOTH ENDS OF THE LINTELS. L ALLOWED ON ONE SIDE OF THE MASONF A. FOR OPENING WIDTHS OF 6'-6" OR LES	SS USE A 4" x 3 1/2" x 5/16" ANGLE.		F. ALL ROOF TRUSSES SHALL BE DESIGNED F PSF OVER EXTERIOR SPACES UNLESS THE G. ALL ROOF TRUSSES SHALL BE DESIGNED F H. OTHER LIVE LOADS SHOWN ON THE DRAW	E BUILDING CODE REQUIREMENTS S FOR DRIFTING SNOW AND UNBALAN	SPECIFY GREATER UPLIFT NCED SNOW LOADS.
	" AND 8'-6" USE A 6" x 3 1/2" x 5/16" ANGLE.		3. METAL TRUSSES SHALL BE DESIGNED BY THE LATEST EDITION OF A.I.S.I.		
	AILED AND FABRICATED IN ACCORDANCE WITH THE A		4. METAL TRUSSES SHALL BE ERECTED IN ACCO PROVIDE ALL TEMPORARY AND PERMANENT		
A. WIDE FLANGE SHAPES SHALL CONFO			· · · · · · · · · · · · · · · · · · ·		
C. RECTANGULAR AND SQUARE STRUCT D. ROUND STRUCTURAL TUBING SHALL (	UCH AS CHANNELS, ANGLES, FLAT BARS, AND PLATES TURAL TUBING SHALL CONFORM TO ASTM A500, GRAD CONFORM TO ASTM A500, GRADE B. FY = 42 KSI.	DE B. FY = 46 KSI.			
DRAWINGS. WHERE CLEARANCE WITHIN	TENSION CONTROL BOLTS UNLESS NOTED OTHERWI A CONNECTION DOES NOT PERMIT THE USE OF TEN CTED IN ACCORDANCE WITH THE AISC "SPECIFICATIO	SION CONTROL BOLTS, STANDARD			
	IUG TIGHT CONDITION EXCEPT AT MOMENT CONNEC DETAILED WITH A325SC BOLTS. AT THESE LOCATIONS BOLT.				
WASHERS BETWEEN NUTS AND BASEPL/ AND/OR MASONRY ARE REQUIRED EMBE	TE SHALL BE ASTM F1554 GRADE 36 THREADED RODS ATE SURFACES. ANCHOR BOLT LENGTHS SHOWN FO EDMENT LENGTHS. THE CONTRACTOR SHALL PROVID	R ATTACHMENT TO CONCRETE		۳ 	
BOLT LENGTH TO FACILITATE THE REQU 6. ANCHOR BOLT FLAT WASHERS SHALL BE CONSTRUCTION.	JIRED CONNECTION. E PROVIDED IN ACCORDANCE WITH TABLE 14-2 OF AIS	SC 390, AISC MANUAL OF STEEL		·······	
NONMETALLIC AGGREGATE GROUT, NON APPLICATION AND A 30-MINUTE WORKIN	NMETALLIC, SHRINKAGE-RESISTANT GROUT: ASTM C NCORROSIVE AND NONSTAINING, MIXED WITH WATEF IG TIME. GROUT SHALL ALSO CONFORM TO CORPS OI	R TO CONSISTENCY SUITABLE FOR			
a. 6,000 PSI FOR SUPPORTING CONCR	ETE GREATER THAN 3000 PSI AND LESS THAN OR EQ				
	TO BE FIELD DRILLED SHALL BE DRILLED WITH A MAG	DRILL. FLAME CUTTING OF HOLES			
THE MECHANICAL PROPERTIES OF TYPE	EAR CONNECTORS SHALL BE MADE FROM STEEL CON E B, AS REQUIRED BY CHAPTER 7 OF AWS D1.1 "STRU R CONNECTORS SHALL BE FREE OF PAINT. WELDING	CTURAL WELDING CODE-STEEL".			
CONNECTION.	ON FOR STEEL BEAMS BEARING ON MASONRY WALLS				
JOINT. THE GAP SHALL NOT BE WELDED.	ARCHITECT'S DRAWINGS FOR CONTROL JOINT LOCA PROVIDE SUPPORT FOR SHELF ANGLE NOT MORE T S. SHELF ANGLES SHALL BE CONTINUOUS AROUND C	HAN 1'-0" FROM EACH END AND IN	· ·		
12. THE FABRICATOR SHALL BE RESPONSIE AND FOR THE CORRECT FITTING OF STR	BLE FOR ALL ERRORS OF DETAILING ON THE SHOP D	RAWINGS, ERRORS IN FABRICATION,			
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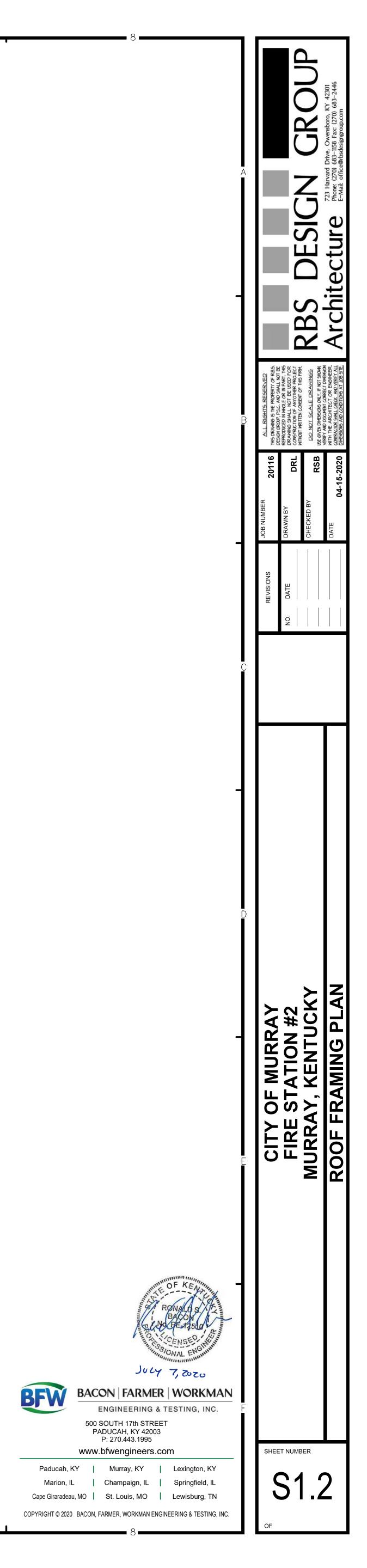


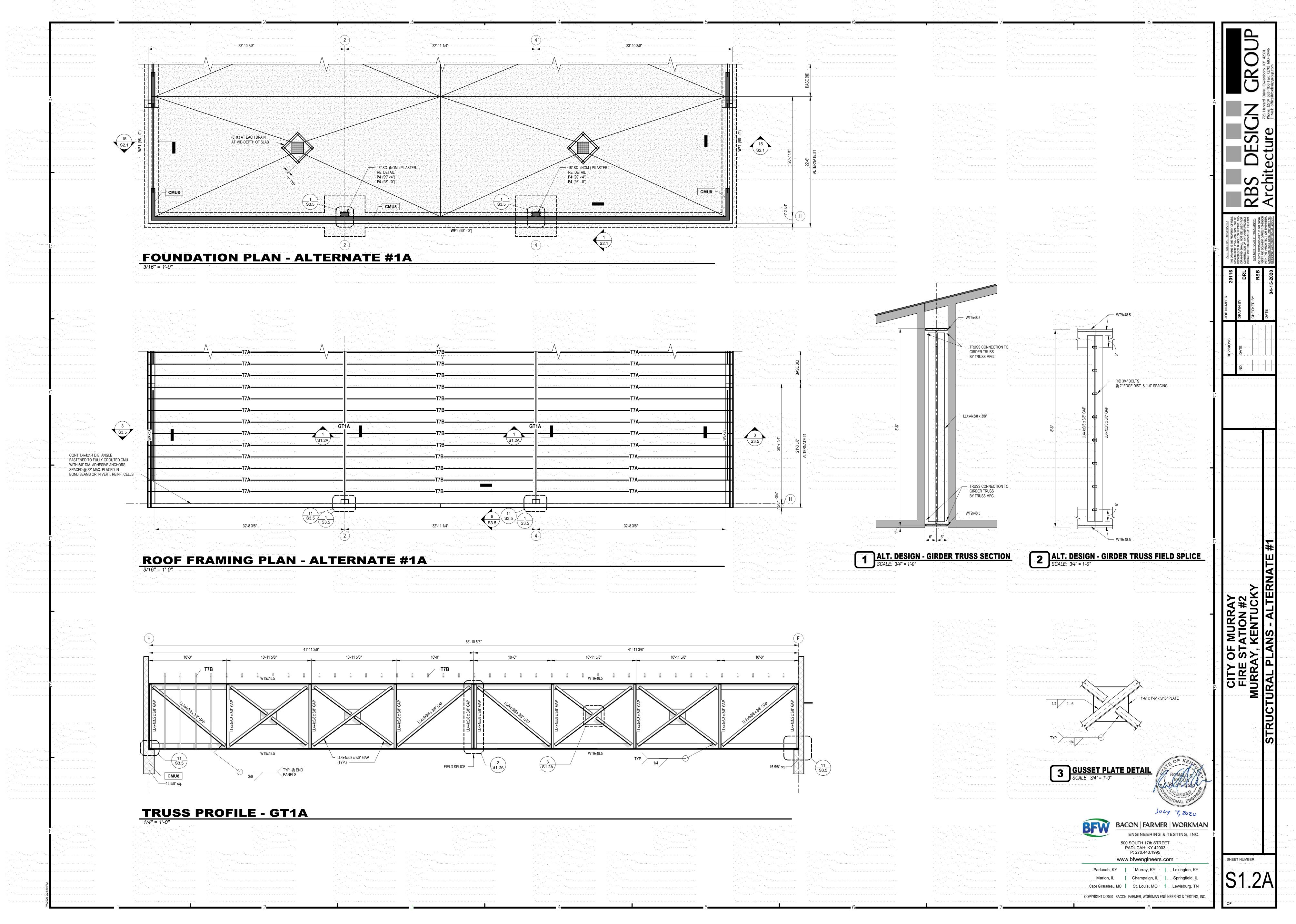


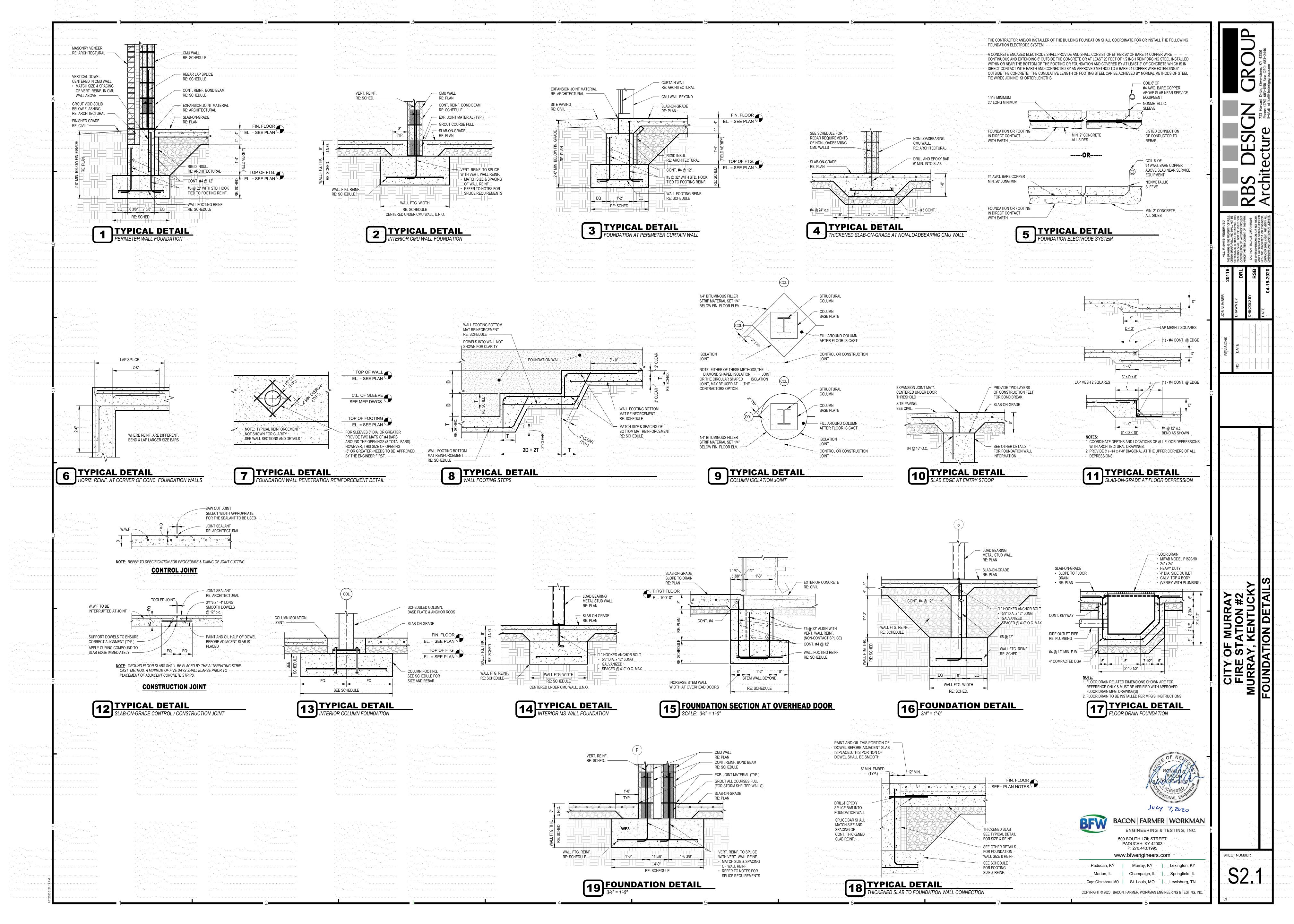
	STRUCTURAL
	STEEL LEGEND
	ENTIONAL CONSTRUCTION
	Bar Joists shall bear on top of supporting structural ele d depth joist seats. Exceptions are noted on plans & c
	TES BEAM FRAMING OVER COLUMN
NDICA	TES BEAM-TO-COLUMN CONNECTION
NDICA	TES BEAM-TO-COLUMN MOMENT CONNECTION
	TES BEAM CAMBER
SEE SC	
BEAM D	DESIGNATION
NDICA <sup>.</sup>	TES LOCATION OF BEAM SPLICE
NDICA	TES BEAM FRAMING INTO SIDE OF BEAM
NDICA	TES BEAM FRAMING OVER BEAM
	TES MOMENT CONNECTION
(X)	DESIGNATION
X'-X")	Top of Steel elevation
olank	None - Top of Steel elevation to be determined by flo
(0)	Clanad Daam

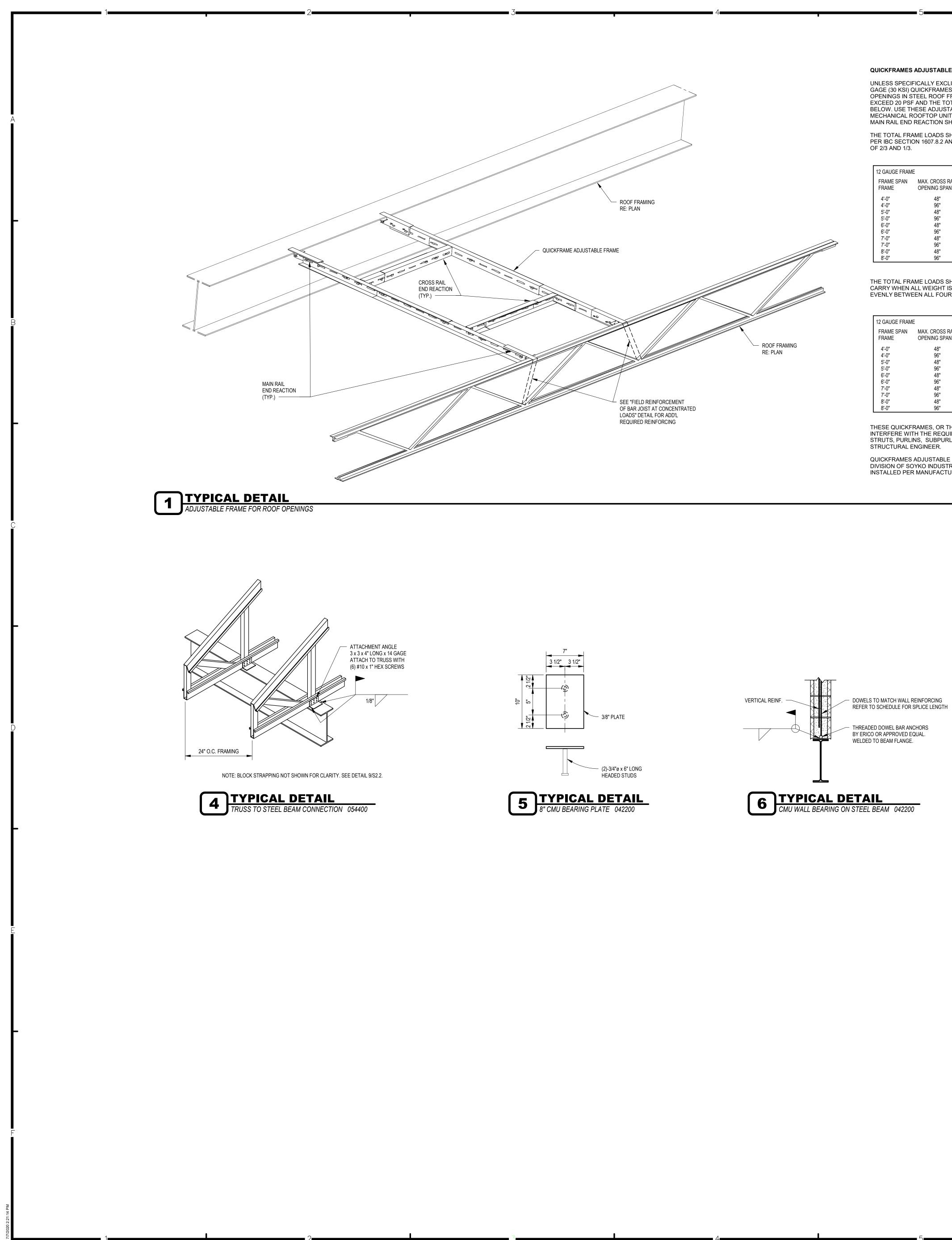
GENERAL PLAN LE
COLUMN & MARK
PIER & MARK RE: SCHEDULE
FOUNDATION & MARK
WALL FOOTING
SLAB EDGE
RE: TYP. STEPPED FOOTING DETAIL PILASTER RE: PLAN NOTES & WALL SCHEDULE
LINTEL TYPE DESIGNATION LL = LOOSE LINTEL (RE: SCHEDULE) ML = MASONRY LINTEL (RE: SCHEDULE) SL# = STEEL LINTEL (RE: SCHEDULE)
LINTEL OVER WALL OPENING
WALL TYPE MARK

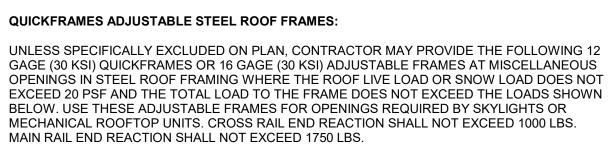












THE TOTAL FRAME LOADS SHOWN BELOW INCLUDE A 20% INCREASE FOR MECHANICAL UNITS PER IBC SECTION 1607.8.2 AND AN INDUSTRY STANDARD UNBALANCED MECHANICAL LOADING

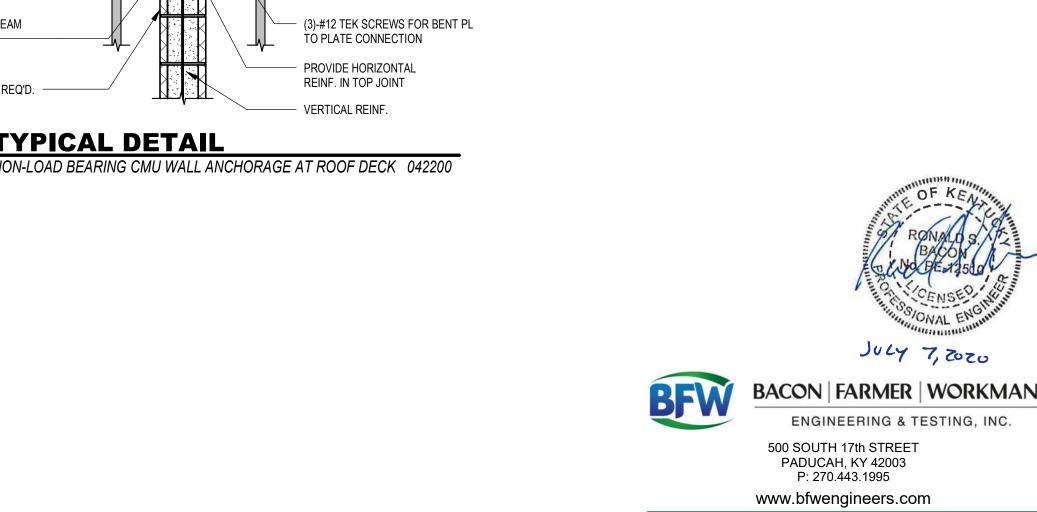
		MECHAN	ICAL
12 GAUGE FRAM	E		16 (
FRAME SPAN FRAME	MAX. CROSS RAIL OPENING SPAN	TOTAL LOAD(LBS)	F F
4'-0" 4'-0" 5'-0" 6'-0" 6'-0" 7'-0" 7'-0" 8'-0"	48" 96" 48" 96" 48" 96" 48" 96" 48"	2250 2000 2175 1850 2100 1700 2025 1550 1530	
8'-0" 8'-0"	48" 96"	1530 1200	

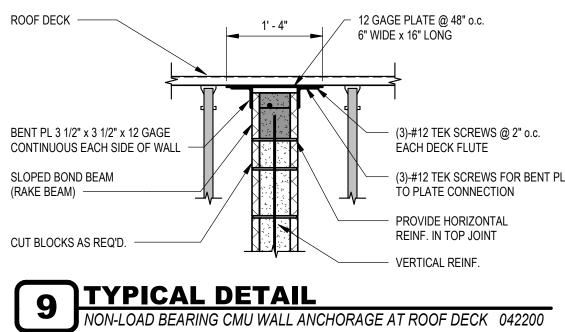
THE TOTAL FRAME LOADS SHOWN BELOW REFLECT THE MAXIMUM LOAD THE FRAME CAN CARRY WHEN ALL WEIGHT IS PLACED EVENLY ON THE MAIN RAILS AND DISTRIBUTED EVENLY BETWEEN ALL FOUR SUPPORT RAILS

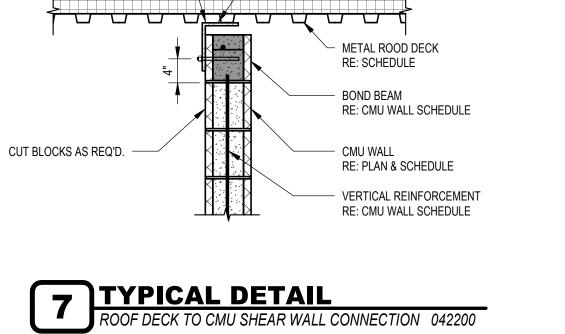
12 GAUGE FRAM	E		16 GAUGE FRAM	E	
FRAME SPAN FRAME	MAX. CROSS RAIL OPENING SPAN	TOTAL LOAD(LBS)	FRAME SPAN FRAME	MAX. CROSS RAIL OPENING SPAN	TOTAL LOAD(LBS)
4'-0"	48"	3600	4'-0"	48"	4788
4'-0"	96"	3200	4'-0"	96"	4508
5'-0"	48"	3480	5'-0"	48"	4728
5'-0"	96"	2960	5'-0"	96"	1388
6'-0"	48"	3360	6'-0"	48"	1668
6'-0"	96"	2720	6'-0"	96"	1268
7'-0"	48"	3240	7'-0"	48"	1600
7'-0"	96"	2480	7'-0"	96"	1170
8'-0"	48"	3120	8'-0"	48"	1548
8'-0"	96"	2240	8'-0"	96"	1028

THESE QUICKFRAMES, OR THE OPENING THEY SPAN, SHALL NOT BE PLACED SO AS TO INTERFERE WITH THE REQUIREMENTS OF OTHER STRUCTURAL ELEMENTS (I.E. DRAG STRUTS, PURLINS, SUBPURLINS, ANGLES, ETC.) WITHOUT THE PRIOR APPROVAL OF THE

QUICKFRAMES ADJUSTABLE FRAMES SHALL BE AS MANUFACTURED BY QUICKFRAMES, A DIVISION OF SOYKO INDUSTRIES 480-464-1500 WWW.QUICKFRAMES.COM AND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

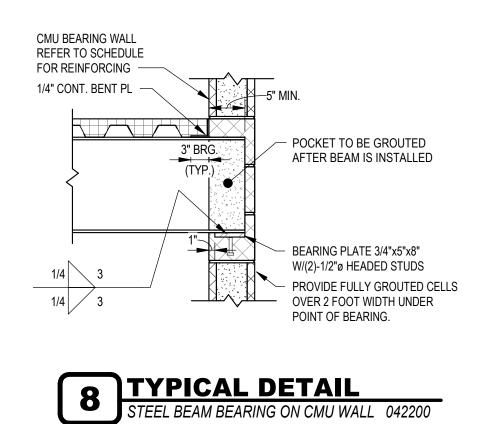






ATTACH ROOF DECK TO STEEL PLATE PER

METAL DECK SCHEDULE



SEE TYPICAL TRUSS

TO STEEL CONNECTION

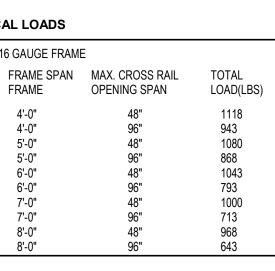
- (COL. WIDTH +1") x (COL. WIDTH +1")

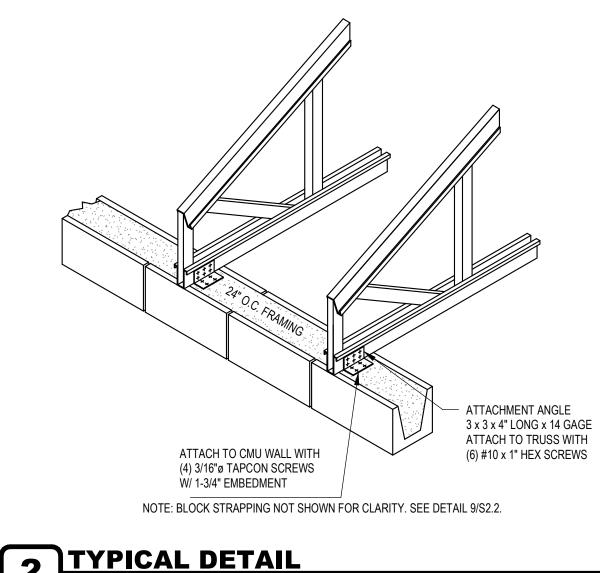
x3/4" THICK STEEL PLATE

CONT. 8x6x7/16 (LLV) WITH 3/4" DIA HAS-E THREADED RODS @

24" o.c. WITH 6 3/4"EMBED. AND

HIT-HY 50 MAS ADHESIVE -----





CMU WALL CONNECTION 054400

NOTE: STEEL CONTRACTOR MUST COORDINATE WITH TRUSS MANUFACTURER TO PICK UP

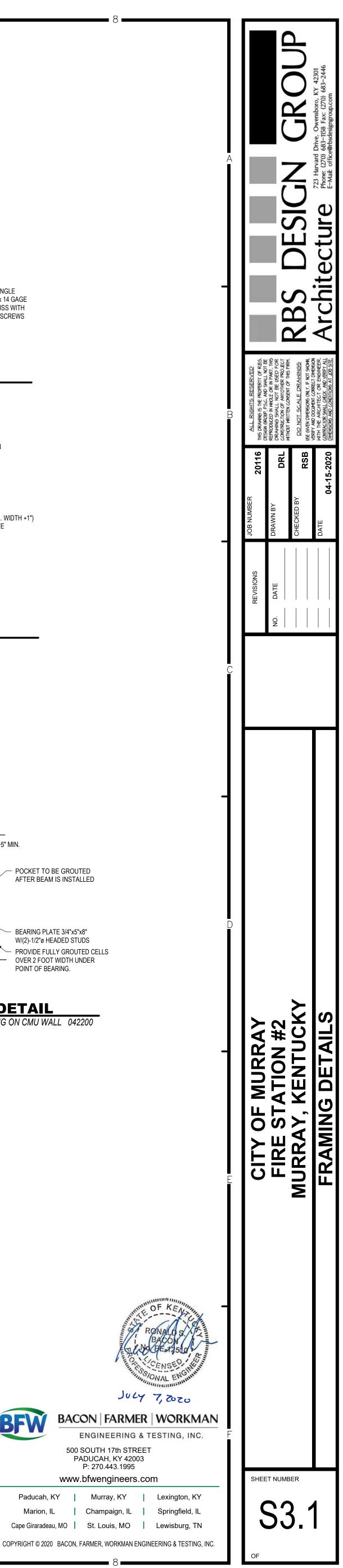
ALL LOCATIONS WHERE TRUSS BEARING ON TOP OF STEEL COLUMN

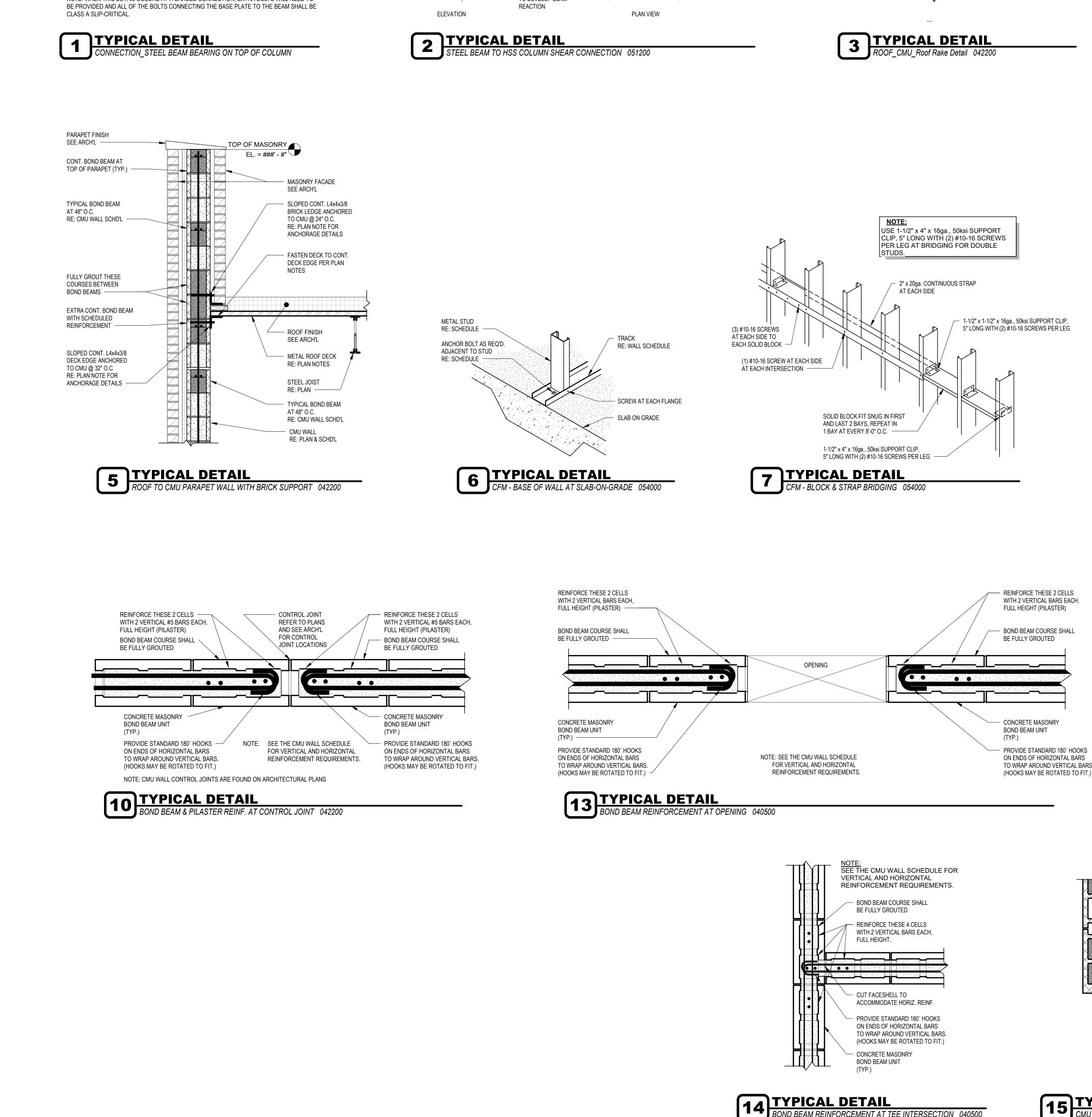
TRUSS BEARING AT STEEL COLUMN 054400

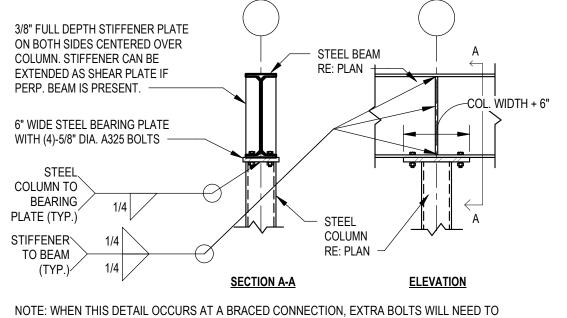
METAL TRUSS

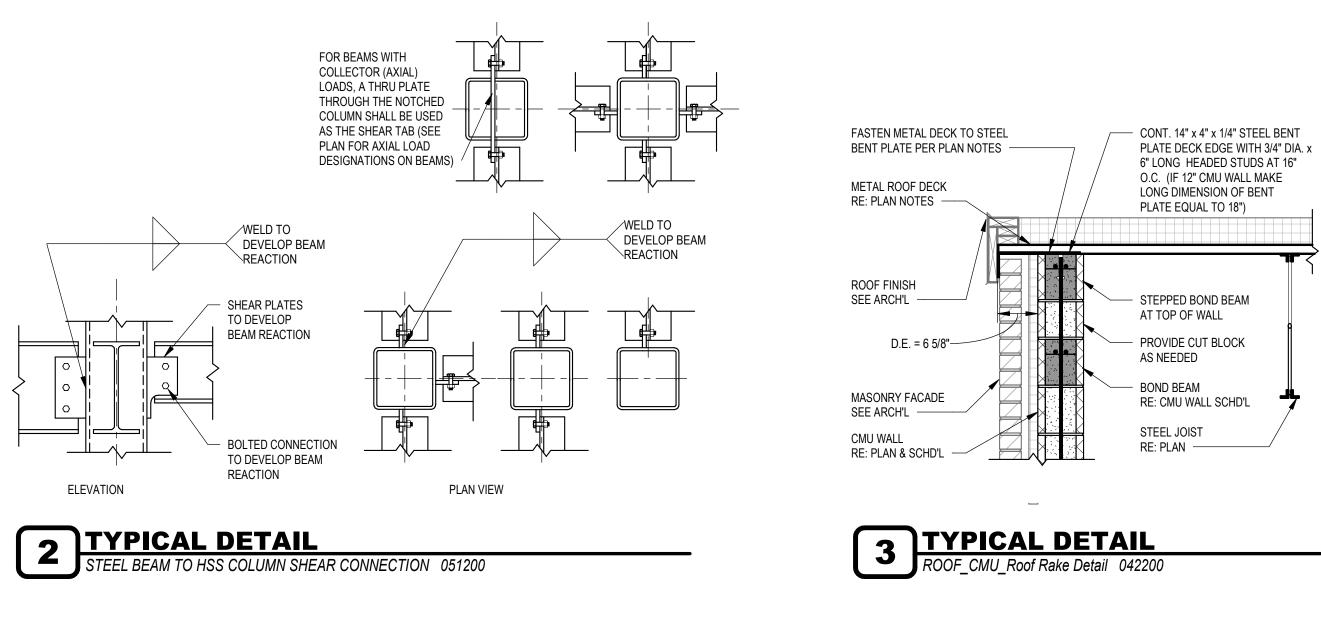
STEEL COLUMN RE: PLAN -----

3 TYPICAL DETAIL

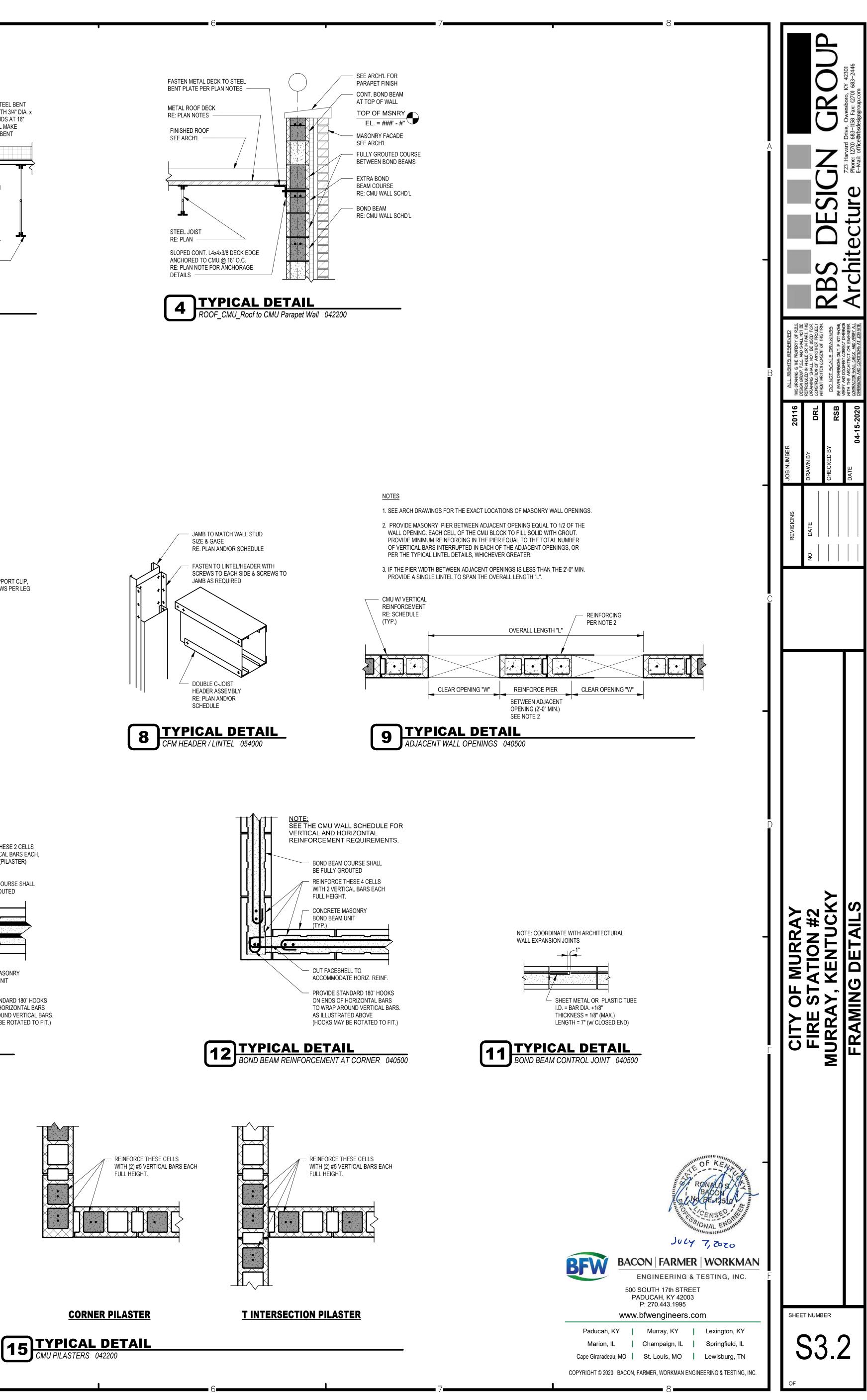


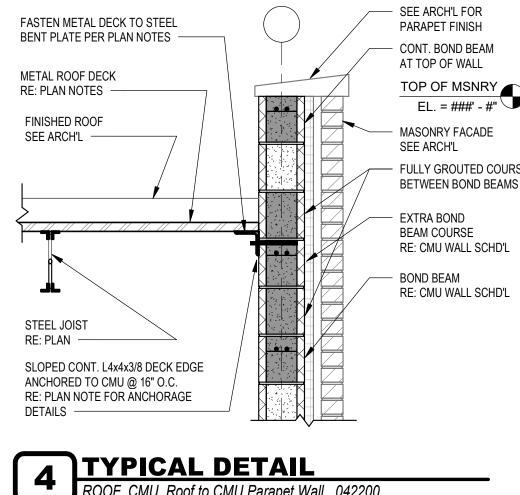


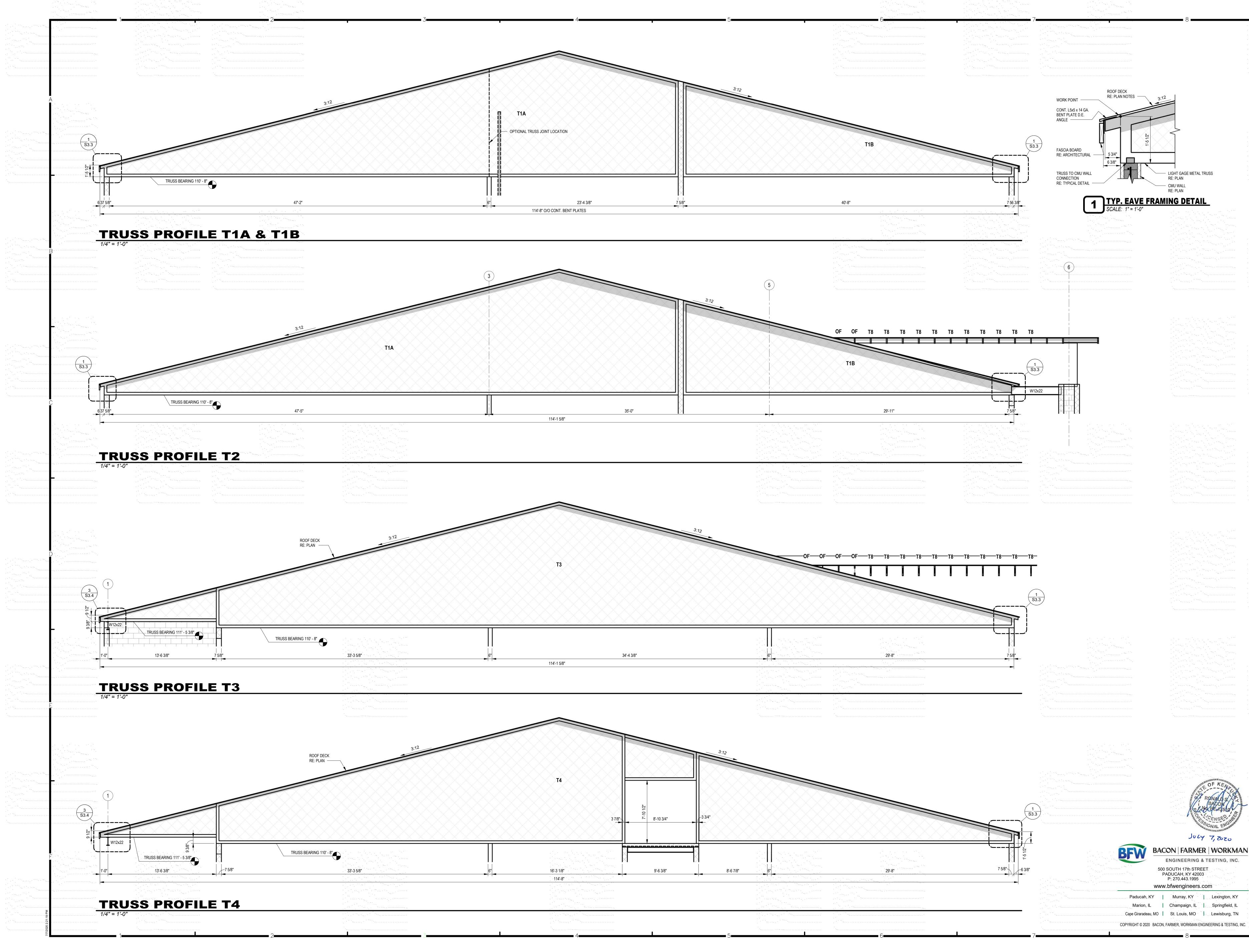




BOND BEAM REINFORCEMENT AT TEE INTERSECTION 040500

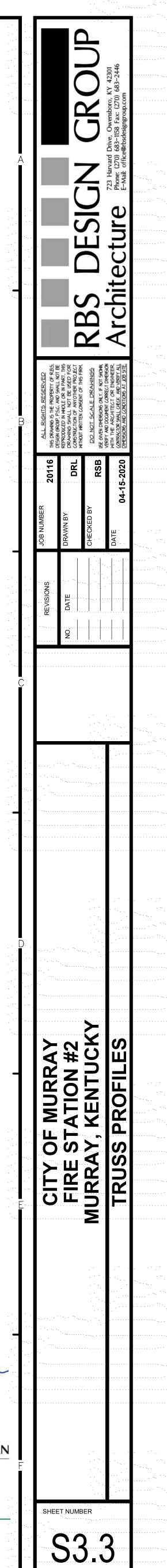


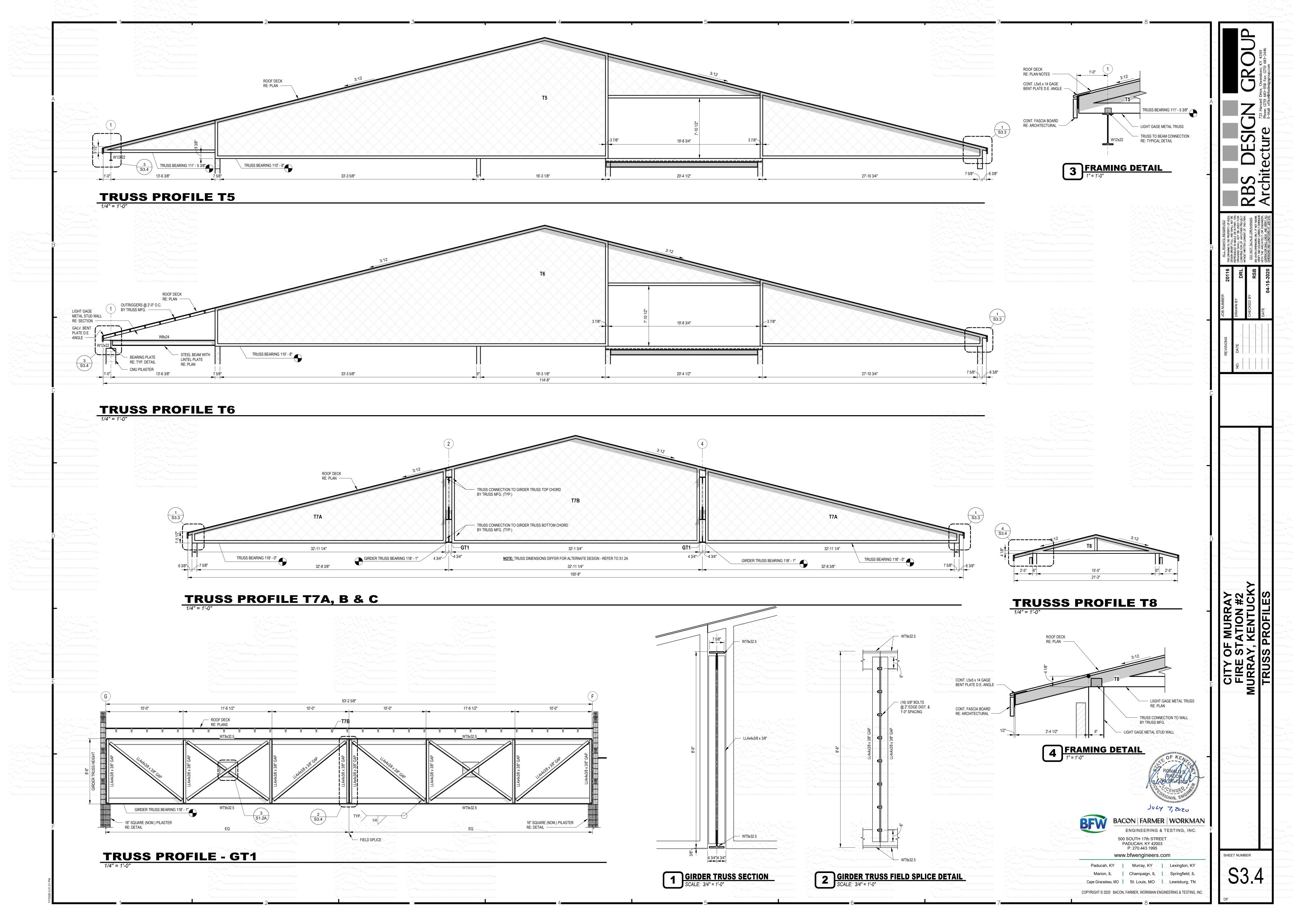


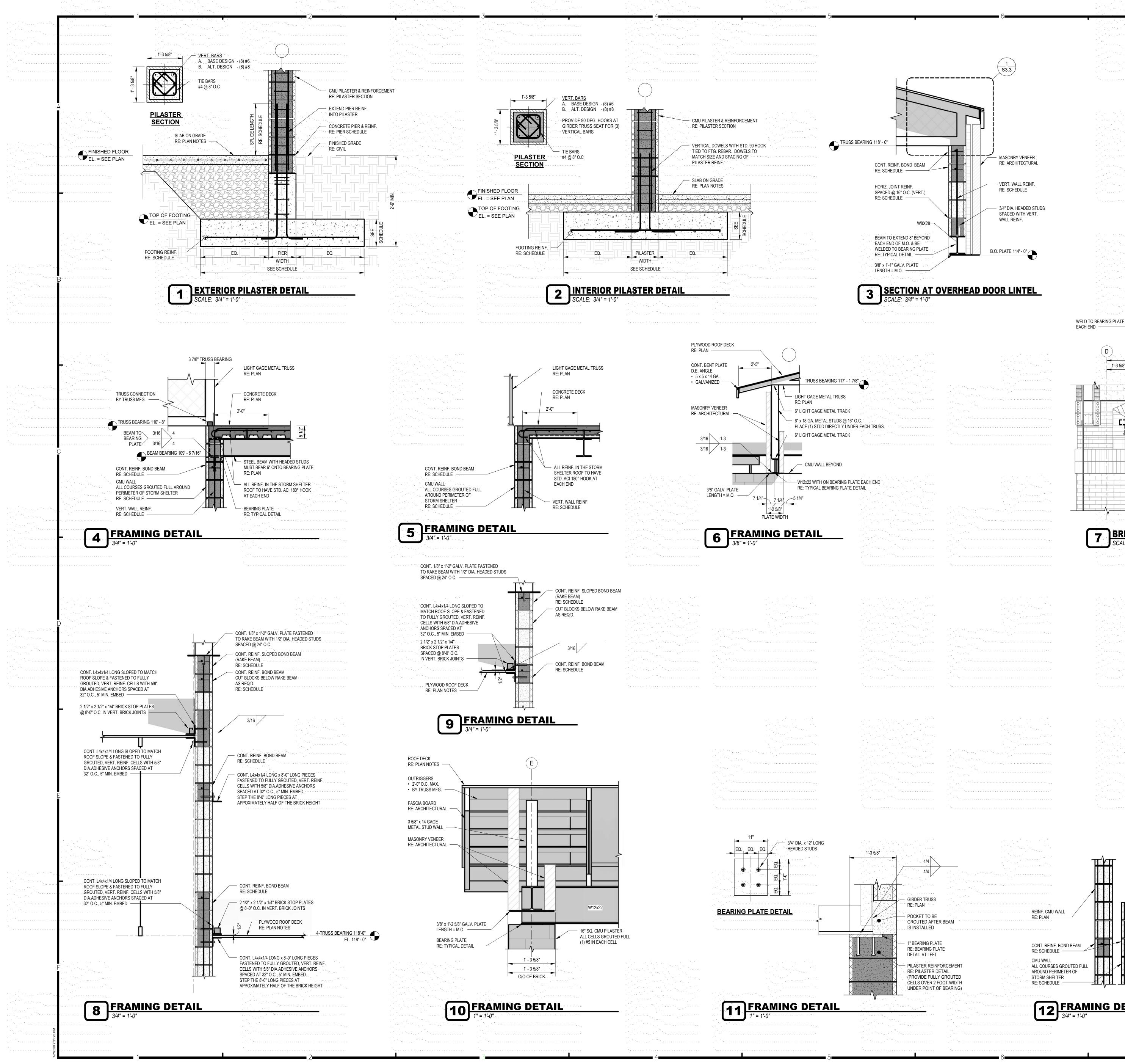


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JULY 7, 2020 ENGINEERING & TESTING, INC.







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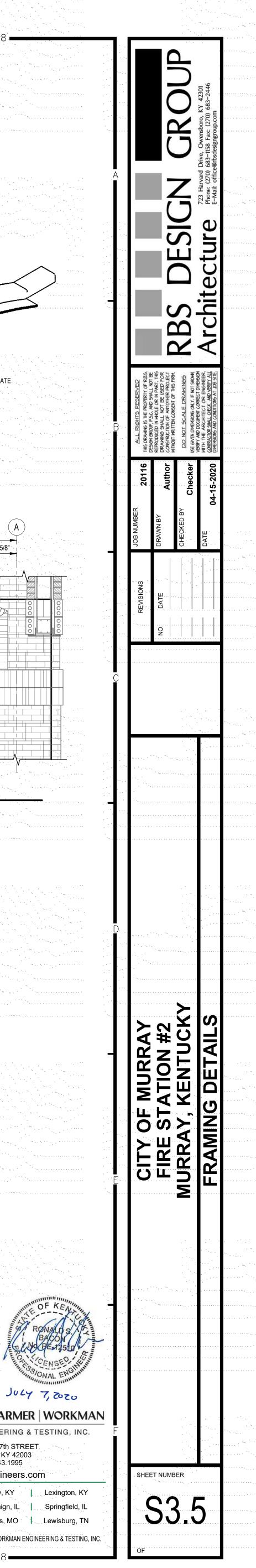
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	3/8" x 1'-3" WIDE GALV. LINTEL PLATE CURVED TO MATCH RADIUS OF BRICK ARCH	
	3/8" x 1'-3" WIDE GALV. LINTEL PLATE	
Image: Contract of the second seco	3/8" x 1'-3" WIDE GALV. LINTEL PLATE         CURVED TO MATCH RADIUS OF BRICK ARCH         TYP.         BEARING PLATE (EACH END)         RE: TYPICAL DETAIL	
	3/8" x 1'-3" WIDE GALV. LINTEL PLATE         CURVED TO MATCH RADIUS OF BRICK ARCH         TYP.         BEARING PLATE (EACH END)         RE: TYPICAL DETAIL	
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Image: Contract of the second sec	3/8" x 1'-3" WIDE GALV. LINTEL PLATE         CURVED TO MATCH RADIUS OF BRICK ARCH         TYP.         BEARING PLATE (EACH END)         RE: TYPICAL DETAIL	
Image: Constraint of the second s	RADIUS OF BRICK ARCH         3/8" x 1'-3" WIDE GALV. LINTEL PLATE         CURVED TO MATCH RADIUS OF BRICK ARCH         TYP.         BEARING PLATE (EACH END)         RE: TYPICAL DETAIL	
Image: Constraint of the second s	RADIUS OF BRICK ARCH         3/8" x 1'-3" WIDE GALV. LINTEL PLATE         CURVED TO MATCH RADIUS OF BRICK ARCH         TYP.         BEARING PLATE (EACH END)         RE: TYPICAL DETAIL	
Image: Contract of the second seco	RADIUS OF BRICK ARCH         3/8" x 1'-3" WIDE GALV. LINTEL PLATE         CURVED TO MATCH RADIUS OF BRICK ARCH         TYP.         BEARING PLATE (EACH END)         RE: TYPICAL DETAIL	

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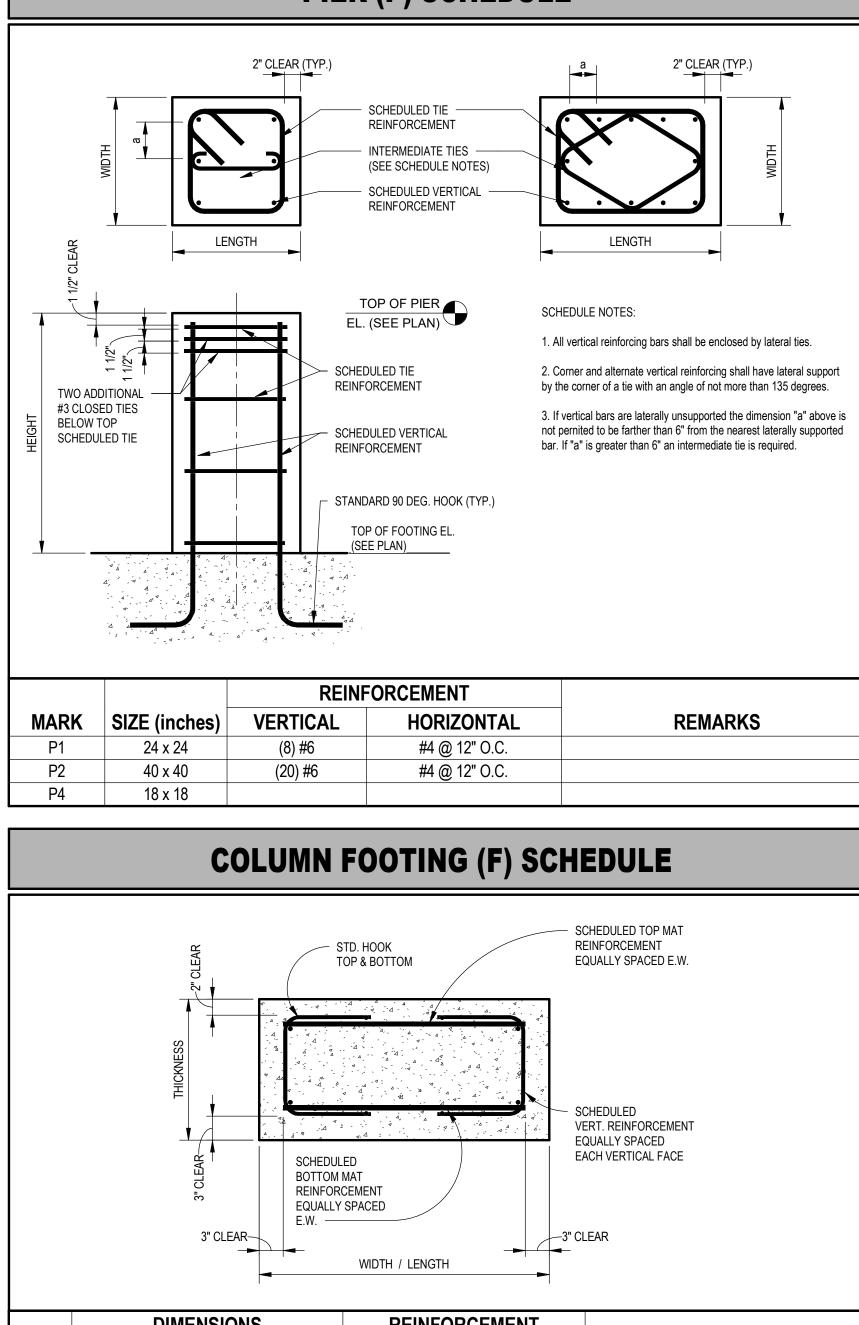
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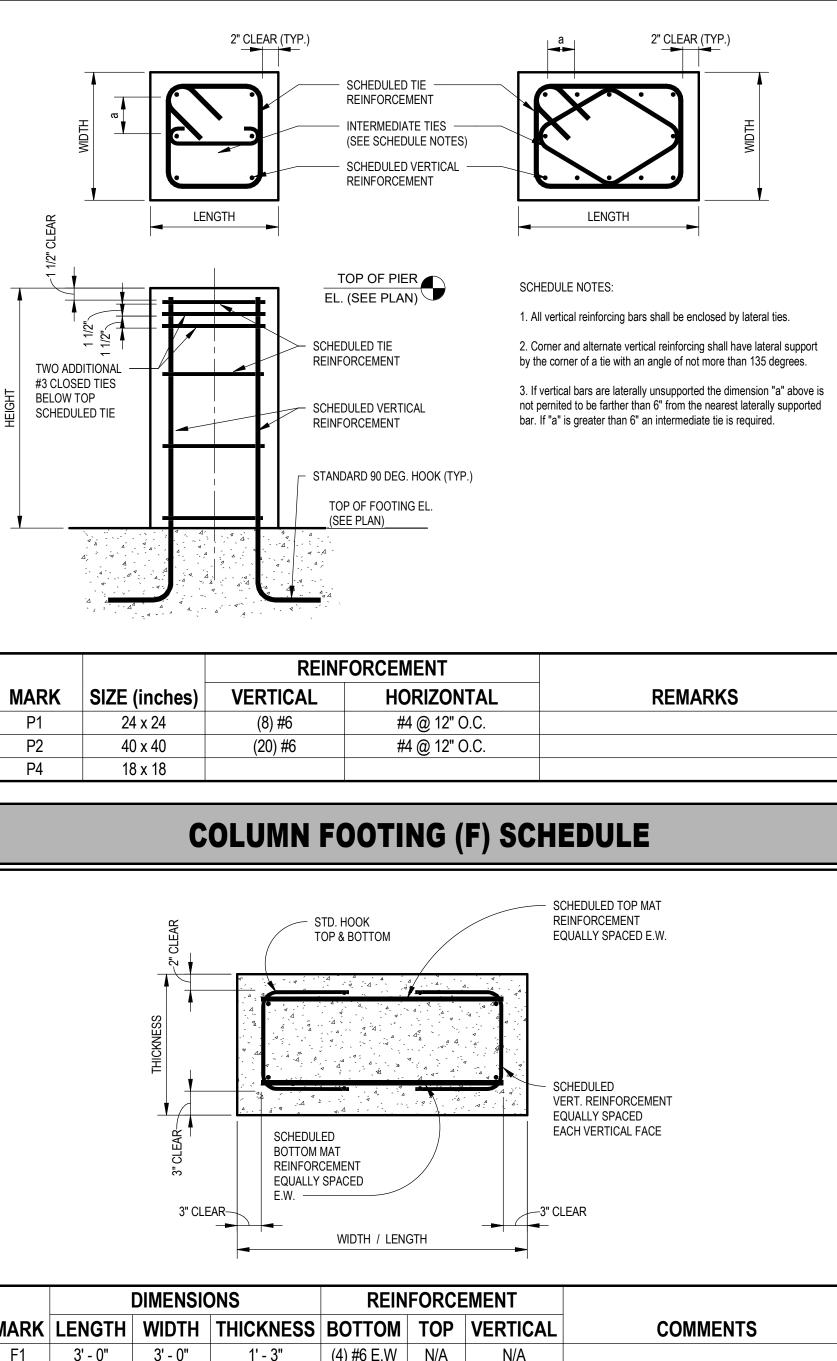
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			CONCRETE DECK     RE: PLAN		
	· · · · · · · · · · · · · · · · · · ·		2'-0"		
DER TRUSS PLAN					under the second se
CKET TO BE OUTED AFTER BEAM NSTALLED	RE: PLAN				
BEARING PLATE BEARING PLATE FAIL AT LEFT	CONT. REINF. BOND BEAM RE: SCHEDULE				٦
ASTER REINFORCEMENT	CMU WALL ALL COURSES GROUTED FU		EACH END	BFW BA	ACON   FARM
PILASTER DETAIL ROVIDE FULLY GROUTED	AROUND PERIMETER OF STORM SHELTER				ENGINEERIN
LLS OVER 2 FOOT WIDTH DER POINT OF BEARING)	RE: SCHEDULE		<ul> <li>VERT. WALL REINF.</li> <li>RE: SCHEDULE</li> </ul>	5 5 5	00 SOUTH 17th S PADUCAH, KY 4 P: 270,443.199
				· · · · · · · · · · · · · · · · · · ·	vw.bfwenginee
	$12 \frac{FRA}{3/4" = 1-0}$	MING DETAIL	n an	Paducah, KY	Murray, KY
	<b>0 1 - 1 - 1</b>			Marion, IL	Champaign, I
				Cape Giraradeau, MO	
				COPYRIGHT © 2020 BACC	ON, FARMER, WORKMA
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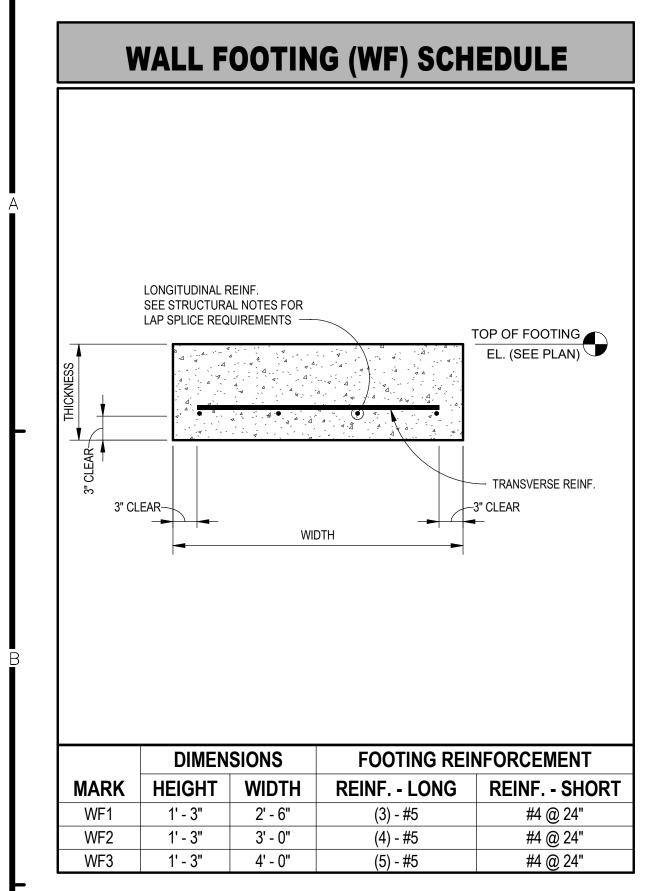






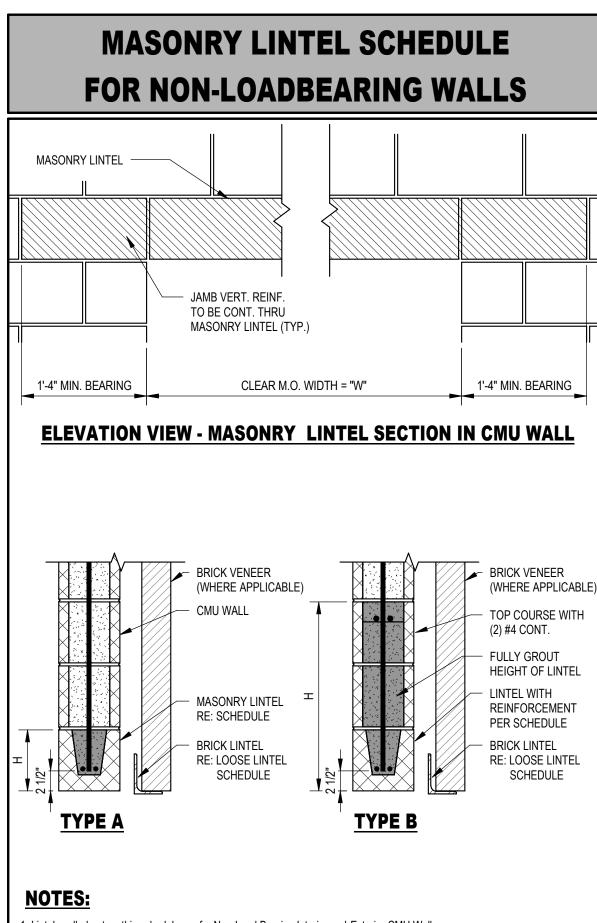


MARK	LENGTH	WIDTH	THICKNESS	BOT		
F1	3' - 0"	3' - 0"	1' - 3"	(4) #6		
F2	4' - 0"	4' - 0"	1' - 3"	(5) #6		
F3	6' - 0"	6' - 0"	1' - 3"	(7) #6		
F4	7' - 0"	7' - 0"	1' - 3"	(8) #6		



### PIER (P) SCHEDULE

	KEINFORGEINIENT		
COMMENTS	VERTICAL	TOP	ТОМ
	N/A	N/A	6 E.W
	N/A	N/A	6 E.W
BASE DESIGN	N/A	N/A	6 E.W
ALTERNATE DESIGN	N/A	N/A	6 E.W

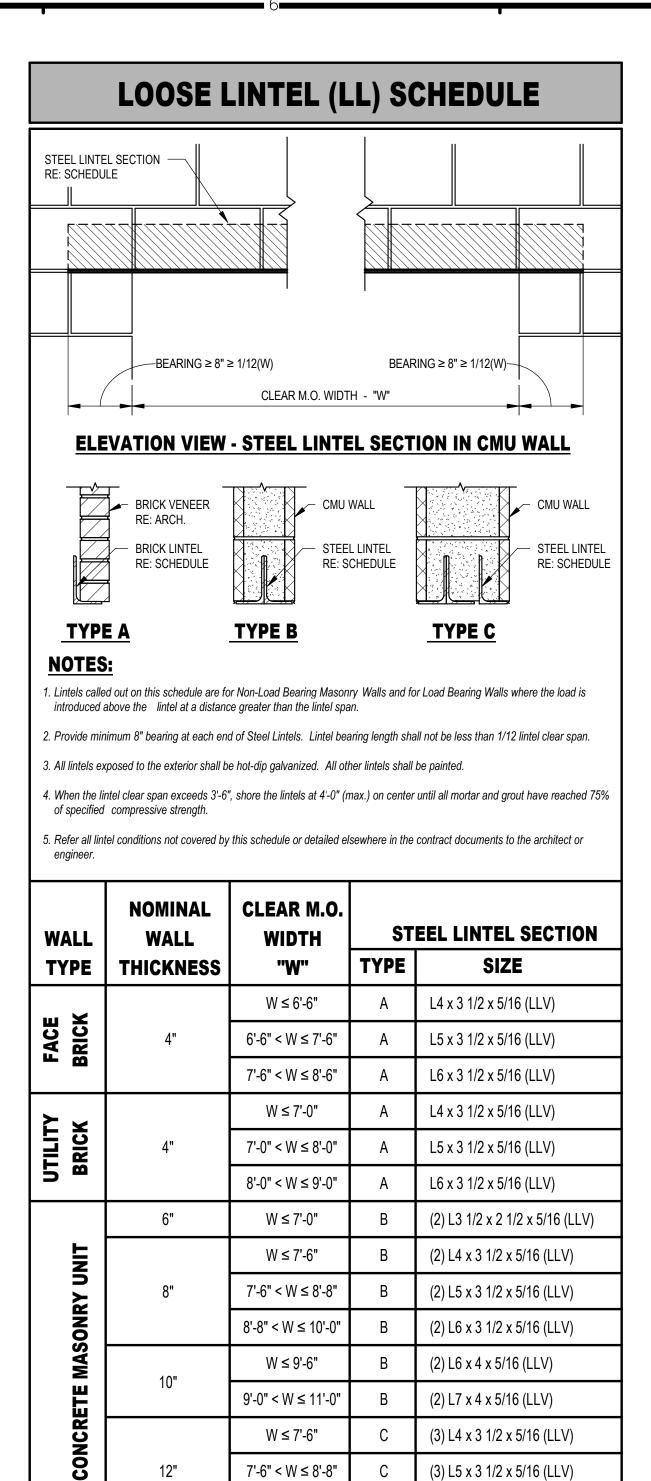


1. Lintels called out on this schedule are for Non-Load Bearing Interior and Exterior CMU Walls.

2. Provide minimum 16" bearing at each end of Masonry Lintels. Lintel bearing length shall not be less than 1/12 lintel clear span. . When the lintel clear span exceeds 3'-6", shore the lintels at 4'-0" (max.) on center until all mortar and grout have reached 75% of specified compressive strength.

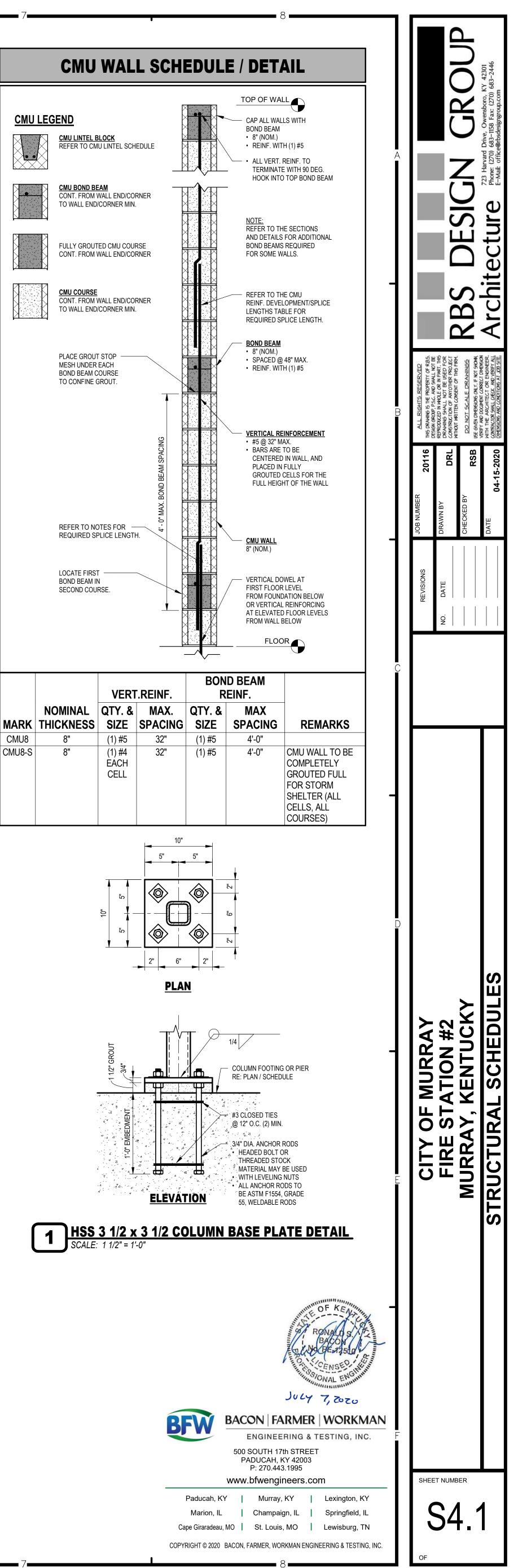
4. Refer all lintel conditions not covered by this schedule or detailed elsewhere in the contract documents to the architect or engineer.

WALL Type	NOMINAL WALL THICKNESS	CLEAR M.O. WIDTH "W"	MASONF TYPE	Y LINTEL	SECTION REINF.
LIN	6"	W ≤ 6'-8"	A	8"	(1)-#4
6" 8"	W ≤ 7'-4"	А	8"	(2)-#5	
ONR	8"	7'-4" < W ≤ 11'-4"	В	16"	(2)-#5
	10"	W ≤ 7'-4"	A	8"	(2)-#5
ETE	10"	7'-4" < W ≤ 11'-4"	В	16"	(2)-#5
CONCRETE	4.011	W ≤ 7'-4"	A	8"	(2)-#6
CO	12"	7'-4" < W ≤ 11'-4"	В	16"	(2)-#6

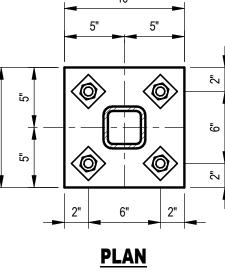


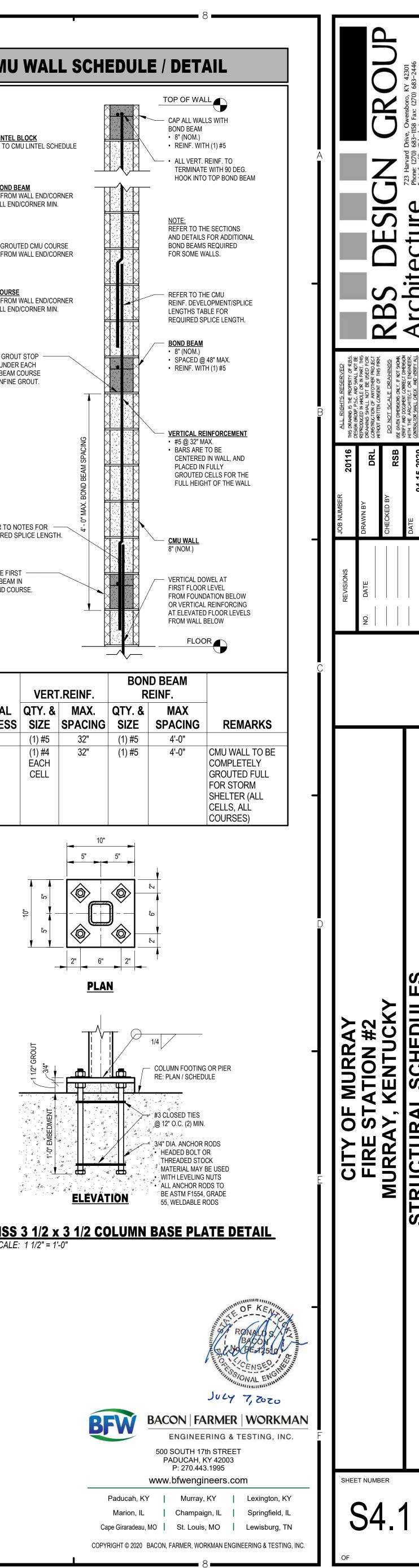
8'-8" < W ≤ 10'-0"

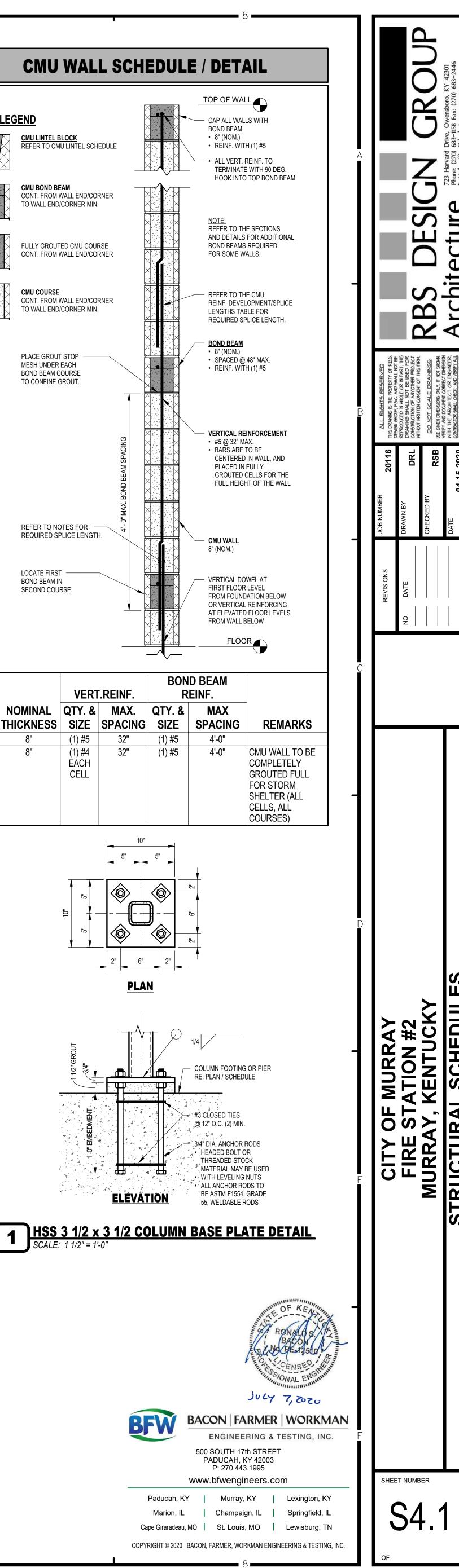
(3) L6 x 3 1/2 x 5/16 (LLV)

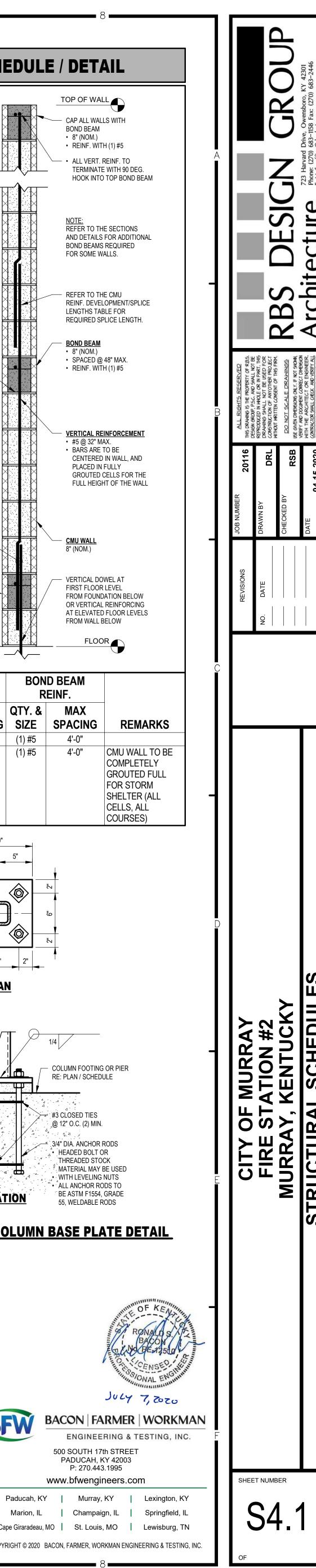


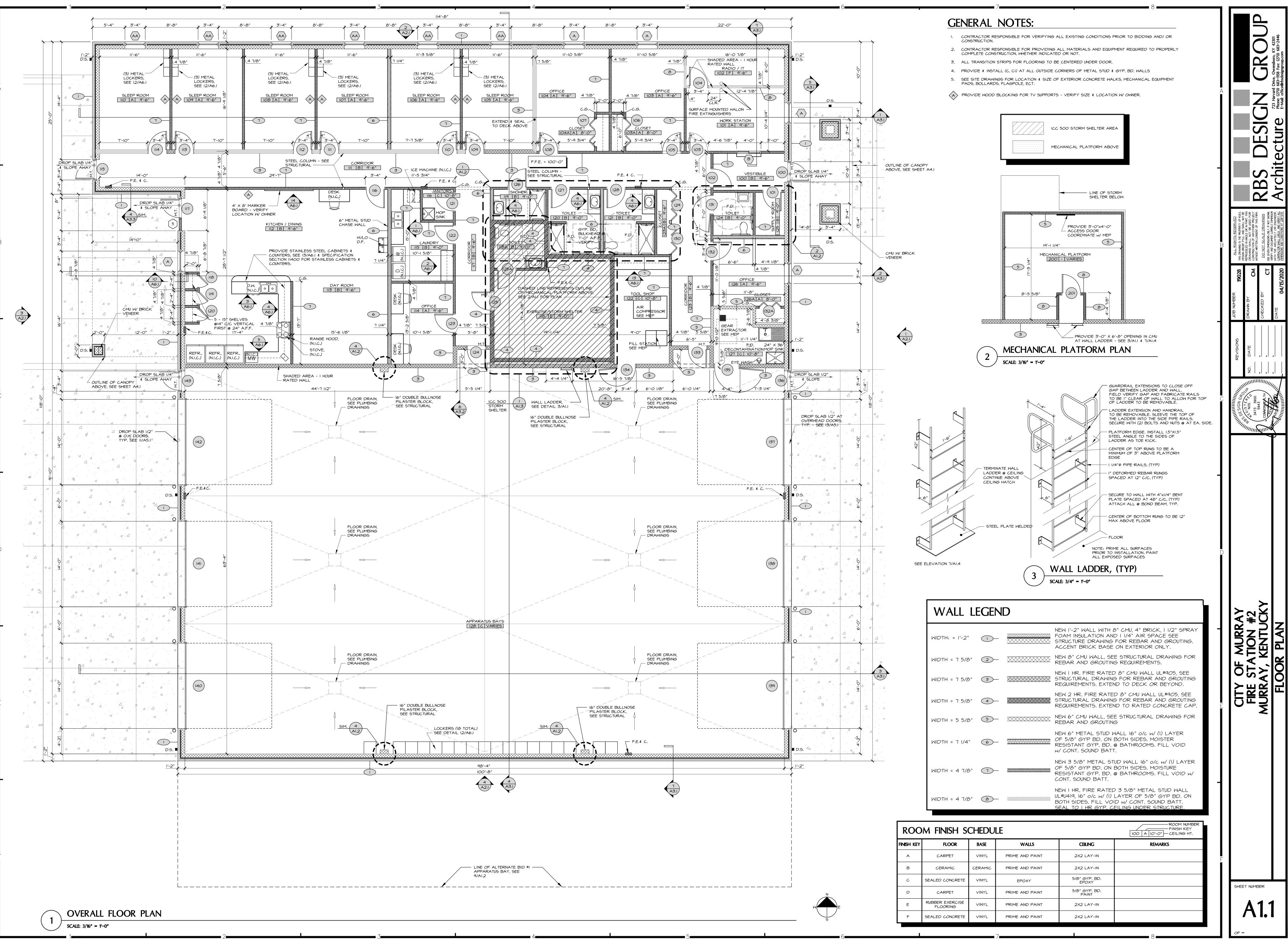
		VERT.REINF.		BOND BEAM REINF.		
MARK	NOMINAL THICKNESS	QTY. & SIZE	MAX. SPACING	QTY. & SIZE	MAX SPACING	F
CMU8	8"	(1) #5	32"	(1) #5	4'-0"	
CMU8-S	8"	(1) #4 EACH CELL	32"	(1) #5	4'-0"	CMU COM GRC FOR SHE CELI COU



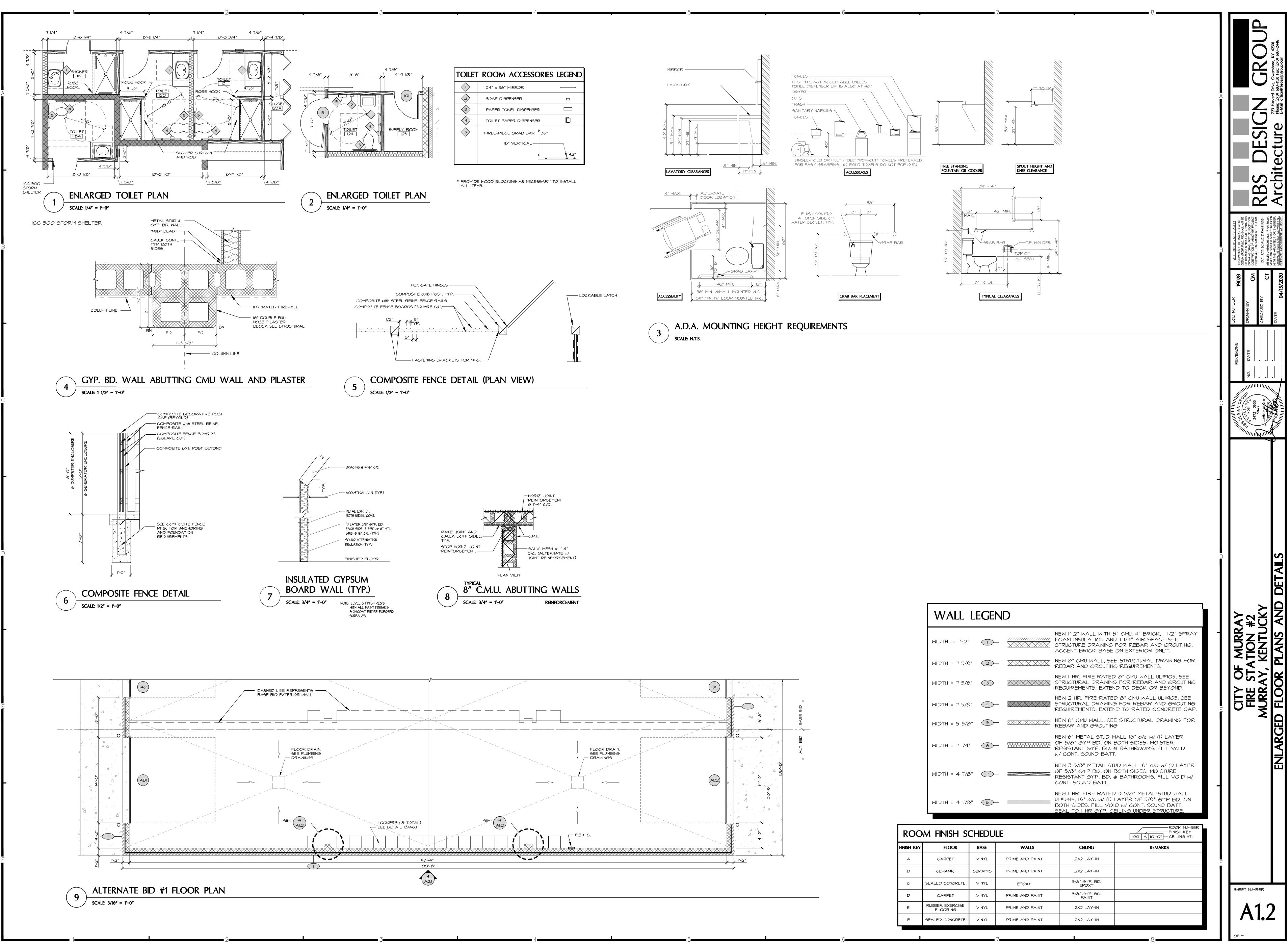


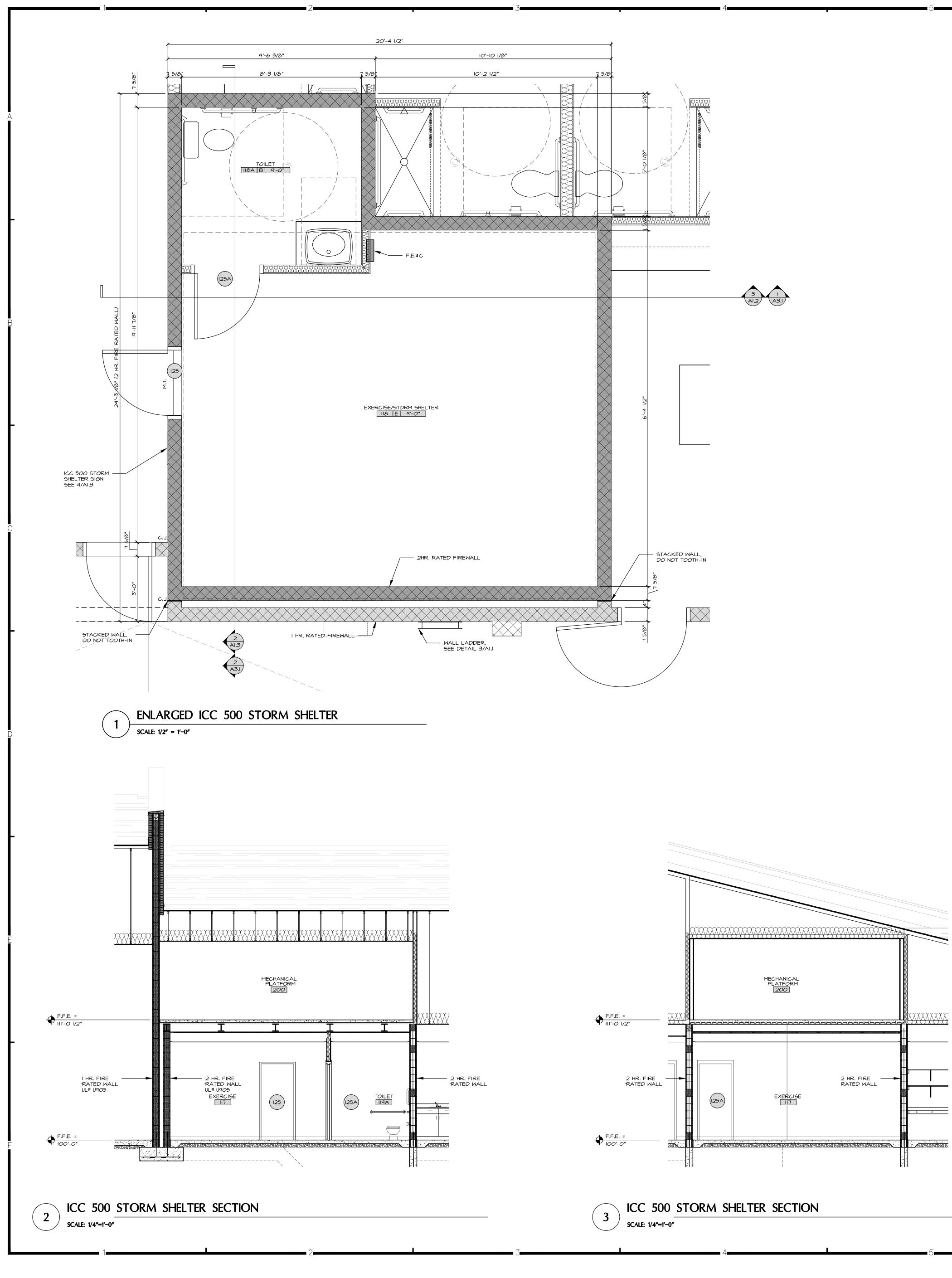






ROO	ROOM FINISH SCHEDULE							
FINISH KEY	FLOOR	BASE	WALLS	CEILING	REMARK			
A	CARPET	VINYL	PRIME AND PAINT	2X2 LAY-IN				
В	CERAMIC	CERAMIC	PRIME AND PAINT	2X2 LAY-IN				
С	SEALED CONCRETE	VINYL	EPOXY	5/8" GYP. BD. EPOXY				
D	CARPET	VINYL	PRIME AND PAINT	5/8" GYP. BD. PAINT				
E	RUBBER EXERCISE FL <i>OO</i> RING	VINYL	PRIME AND PAINT	2X2 LAY-IN				
F	SEALED CONCRETE	VINYL	PRIME AND PAINT	2X2 LAY-IN				





## GENERAL ICC 500 STORM SHELTER NOTES:

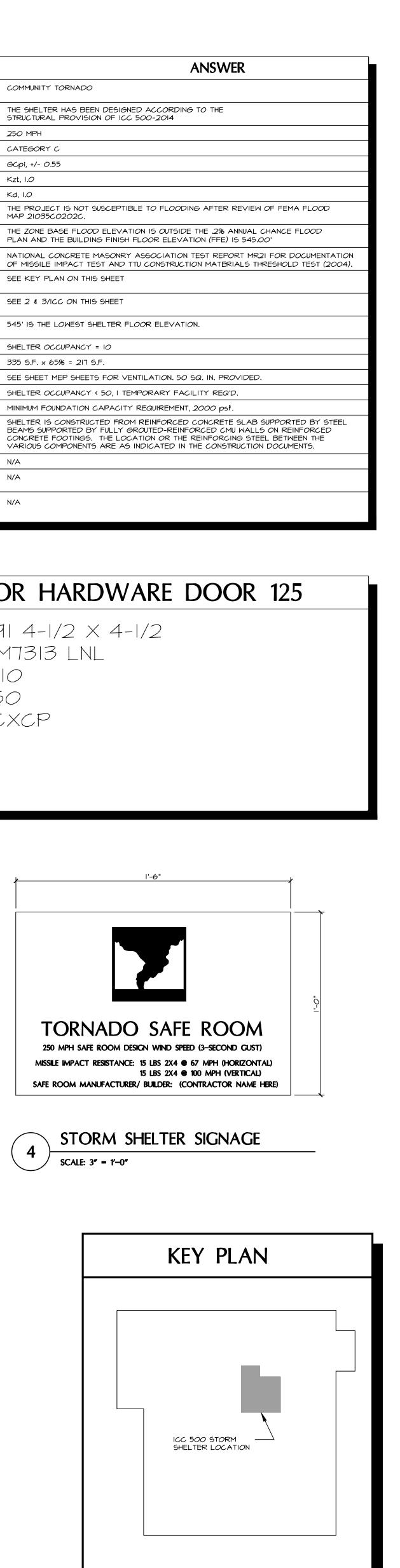
A. THE CONTRACTORS ARE BIDDING ON AND BUILDING AN ICC 500 STORM SHELTER. THE CONTRACTOR AND SUBCONTRACTOR ARE RESPONSIBLE FOR BIDDING AND BUILDING THE SHELTER TO ICC 500 COMPLIANT STORM SHELTER. INCLUDING ALL ASSEMBLY AND DOCUMENTATION WETHER SPECIFIED OR NOT.

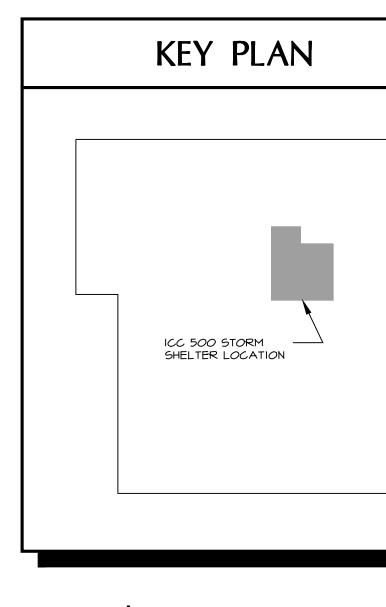
#	DESIGN FOR ICC 500 CHECHLIST	ANSWER
١.	TYPE OF SHELTER: (RESIDENTIAL OR COMMUNITY TORNADO, HURRICANE OR A COMBINATION OF BOTH)	COMMUNITY TORNADO
2.	A STATEMENT THAT THE WIND DESIGN CONFORMS TO THE PROVISIONS OF THE ICC/NSSA STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS, WITH THE EDITION YEAR SPECIFIED.	THE SHELTER HAS BEEN DESIGNED ACCORDING TO THE STRUCTURAL PROVISION OF ICC 500-2014
З.	THE SHELTER WIND SPEED, MPH.	250 MPH
4.	THE WIND EXPOSURE CATEGORY (INDICATE ALL IF MORE THAN ONE IS USED)	CATEGORY C
5.	THE INTERNAL PRESSURE COEFFICIENT, GCpi.	<i>G</i> Срі, +/- 0.55
6.	THE TOPOGRAPHIC FACTOR, Kzt.	Kzt, I.O
٦.	THE DIRECTIONALITY FACTOR, Fd	Kd, I.O
8.	A STATEMENT THAT THE SHELTER HAS/HAS NOT BEEN CONSTRUCTED WITHIN AN AREA SUSCEPTIBLE TO FLOODING IN ACCORDANCE WITH CHAPTER 4 OF THIS STANDARD.	THE PROJECT IS NOT SUSCEPTIBLE TO FLOODING AFTER REVIEW OF FEMA FLOO MAP 21035C0202C.
٩.	THE DESIGN FLOOD ELEVATION AND BASE FLOOD ELEVATION FOR THE SITE (IF APPLICABLE).	THE ZONE BASE FLOOD ELEVATION IS OUTSIDE THE .2% ANNUAL CHANCE FLOOD PLAN AND THE BUILDING FINISH FLOOR ELEVATION (FFE) IS 545.00'
10.	DOCUMENTATION SHOWING THAT COMPONENTS OF THE SHELTER ENVELOPE WILL MEET THE PRESSURE AND MISSILE IMPACT TEST REQUIREMENTS IDENTIFIED IN CHAPTER 3 AND 8 OF THIS STANDARD	NATIONAL CONCRETE MASONRY ASSOCIATION TEST REPORT MR21 FOR DOCUMEN OF MISSILE IMPACT TEST AND TTU CONSTRUCTION MATERIALS THRESHOLD TEST
н.	A FLOOR PLAN DRAWING OR IMAGE INDICATED LOCATION OF THE STORM SHELTER ON A SITE OR WITHIN A BUILDING OR FACILITY; INCLUDING A DRAWING OR IMAGE INDICATING THE ENTIRE FACILITY.	SEE KEY PLAN ON THIS SHEET
12.	A STORM SHELTER SECTION OR ELEVATION INDICATING THE HEIGHT OF THE STORM SHELTER RELATIVE TO THE FINISHED GRADE, FINISHED FLOOR AND THE HOST BUILDING, WHERE APPLICABLE.	SEE 2 & 3/ICC ON THIS SHEET
13.	THE LOWEST SHELTER FLOOR ELEVATION AND CORRESPONDING DATUM, EXCEPT FOR RESIDENTIAL SHELTER OUTSIDE OF SPECIAL FLOOD HAZARD AREAS.	545' IS THE LOWEST SHELTER FLOOR ELEVATION.
14.	THE OCCUPANT LOAD OF THE STORM SHELTER.	SHELTER OCCUPANCY = $10$
15.	THE USABLE STORM SHELTER FLOOR AREA.	335 S.F. x 65% = 217 S.F.
16.	VENTING AREA (SQUARE INCHES) PROVIDED AND LOCATIONS IN THE SHELTER.	SEE SHEET MEP SHEETS FOR VENTILATION. 50 SQ. IN. PROVIDED.
17.	CALCULATIONS FOR THE NUMBER OF SANITATION FACILITIES OF COMMUNITY SHELTERS.	SHELTER OCCUPANCY < 50, I TEMPORARY FACILITY REQ'D.
18.	MINIMUM FOUNDATION CAPACITY REQUIREMENT.	MINIMUM FOUNDATION CAPACITY REQUIREMENT, 2000 pst.
19.	SHELTER INSTALLATION REQUIREMENTS, INCLUDING ANCHOR LOCATION AND MINIMUM REQUIRED CAPACITY EACH ANCHOR	SHELTER IS CONSTRUCTED FROM REINFORCED CONCRETE SLAB SUPPORTED BY BEAMS SUPPORTED BY FULLY GROUTED-REINFORCED CMU WALLS ON REINFORCE CONCRETE FOOTINGS. THE LOCATION OR THE REINFORCING STEEL BETWEEN THE VARIOUS COMPONENTS ARE AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
20.	FOR HURRICANE SHELTERS, THE RAINFALL RATE OF THE ROOF PRIMARY DRAINAGE SYSTEM.	N/A
21.	FOR HURRICANE SHELTERS, THE RAIN FALL RATE OF THE ROOF SECONDARY (OVERFLOW) DRAIN SYSTEM WHERE REQUIRED.	N/A
22.	FOR HURRICANE SHELTERS, THE RAINWATER DRAINAGE DESIGN RAINFALL RATE FOR FACILITIES SUBJECT TO RAINWATER IMPOUNDMENT.	N/A

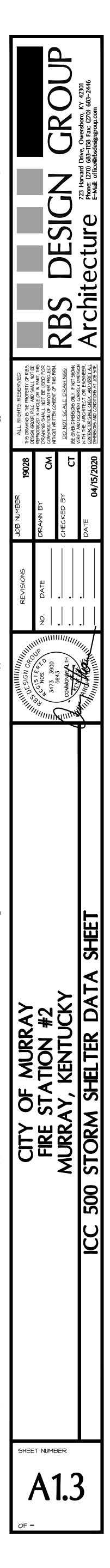
### ICC 500 STORM SHELTER DOOR HARDWARE DOOR 125

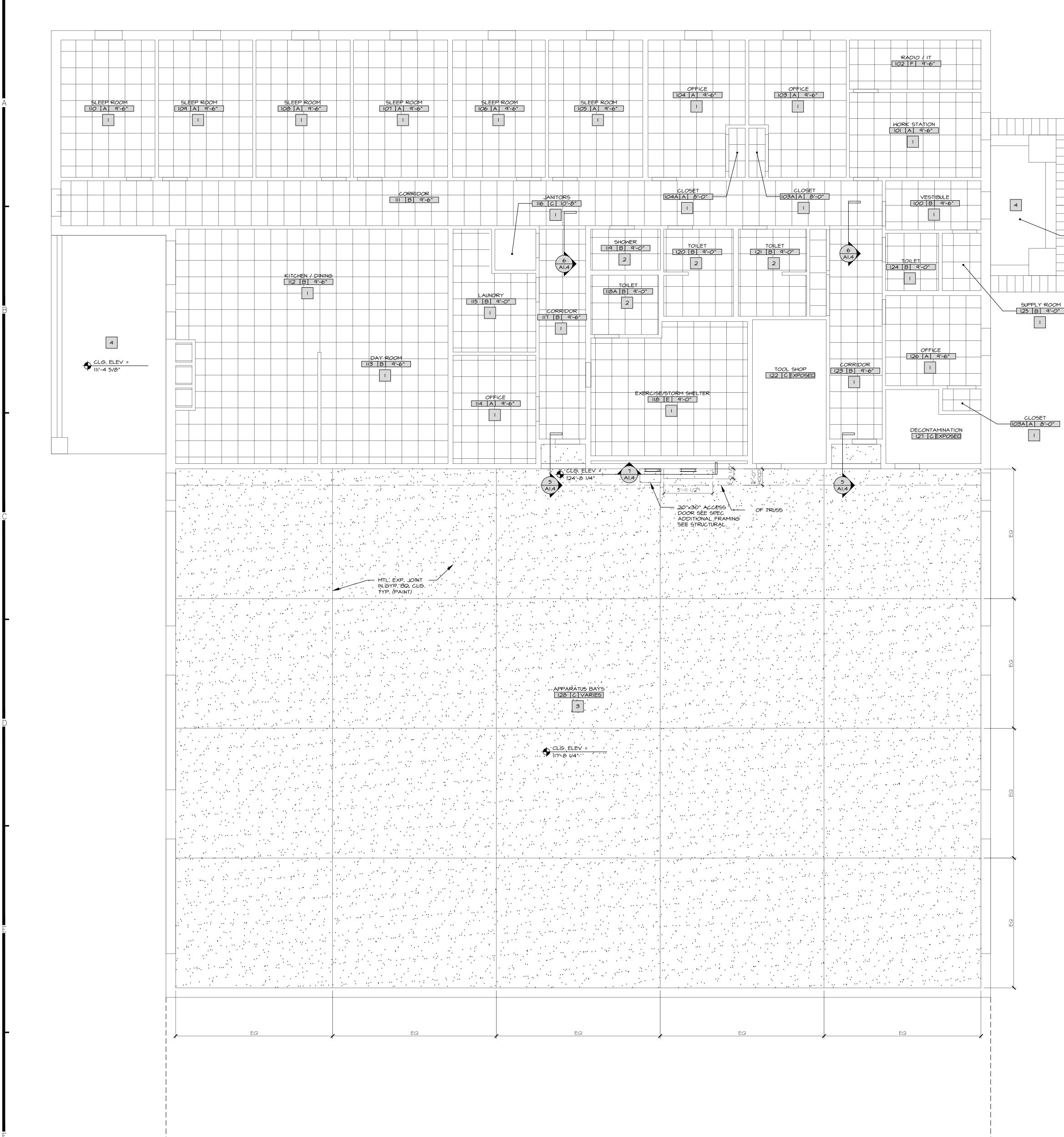
3EA. HINGES IEA. FEMA 361 LOCK IEA. CLOSER IEA. KICKPLATE IEA. WALL STOP IEA. GASKETING IEA. DOOR BOTTOM IEA. MTL. SADDLE THRESHOLD

FBB191 4-1/2 X 4-1/2 63-FM7313 LNL 351 PIO K*0050* 1270CXCP 797B 772A





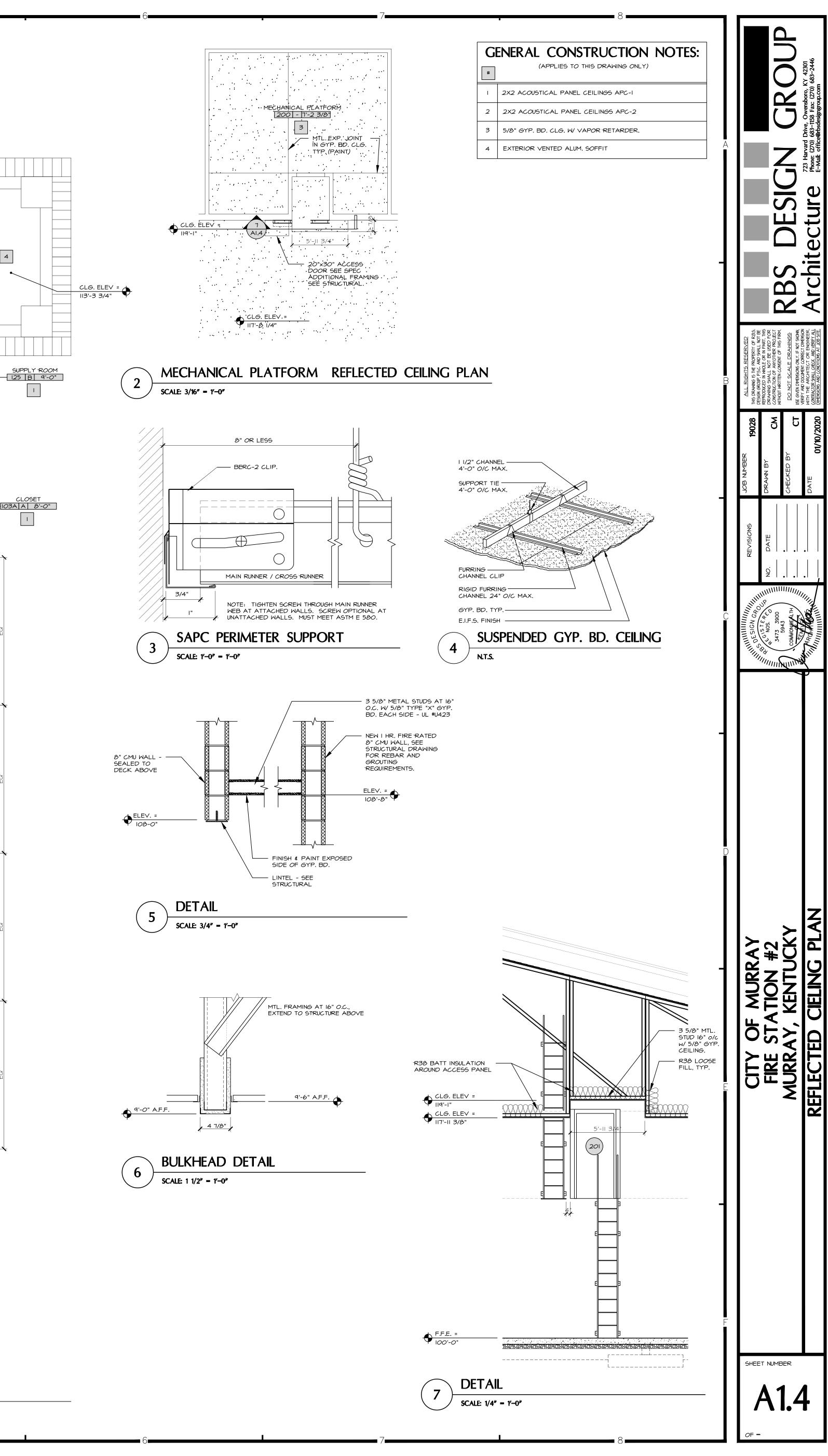




SCALE: 3/16" = 1'-0"

— ALT. BID SEE AI.5 —

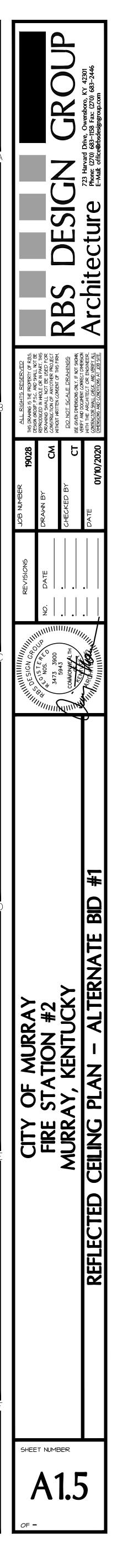
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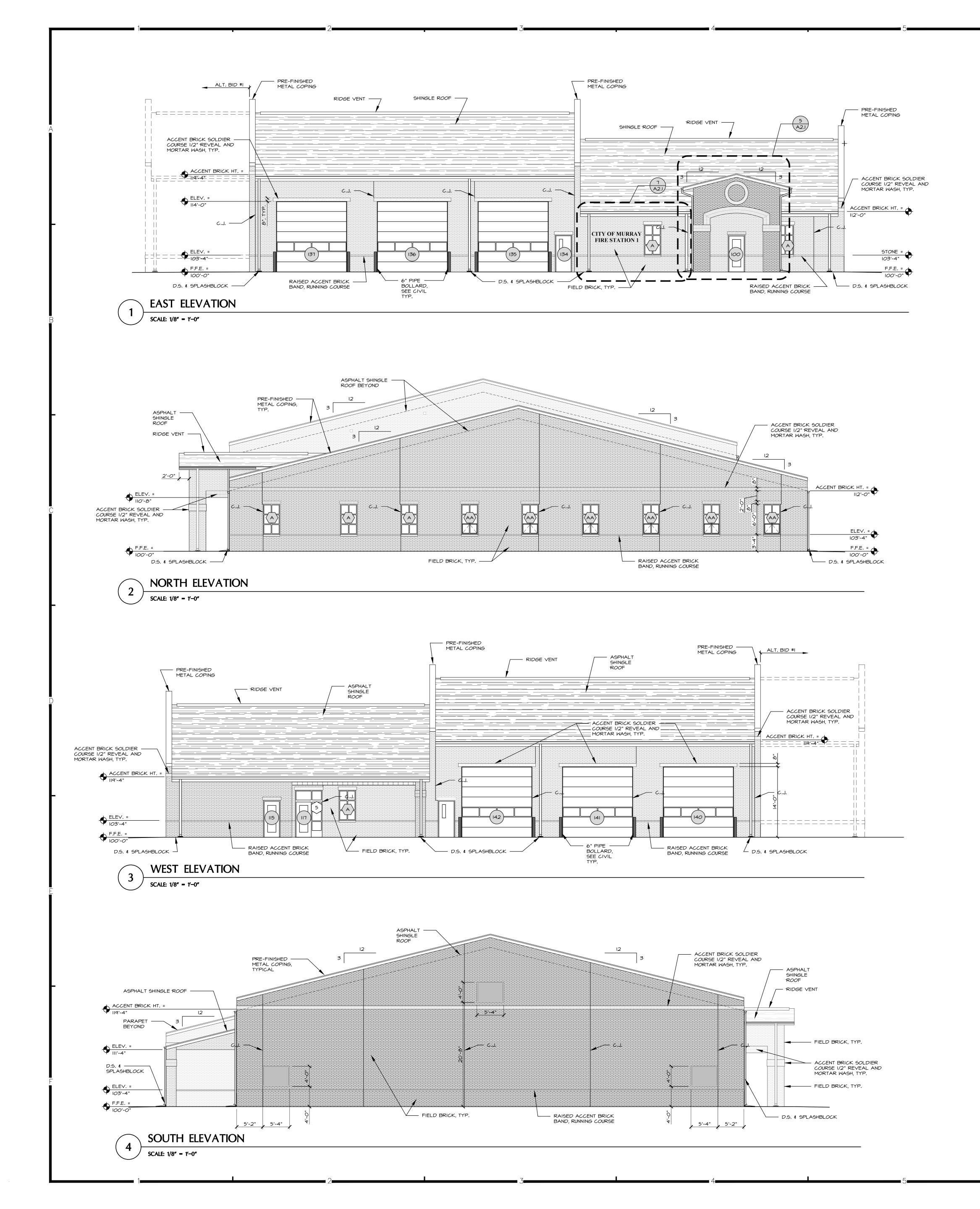


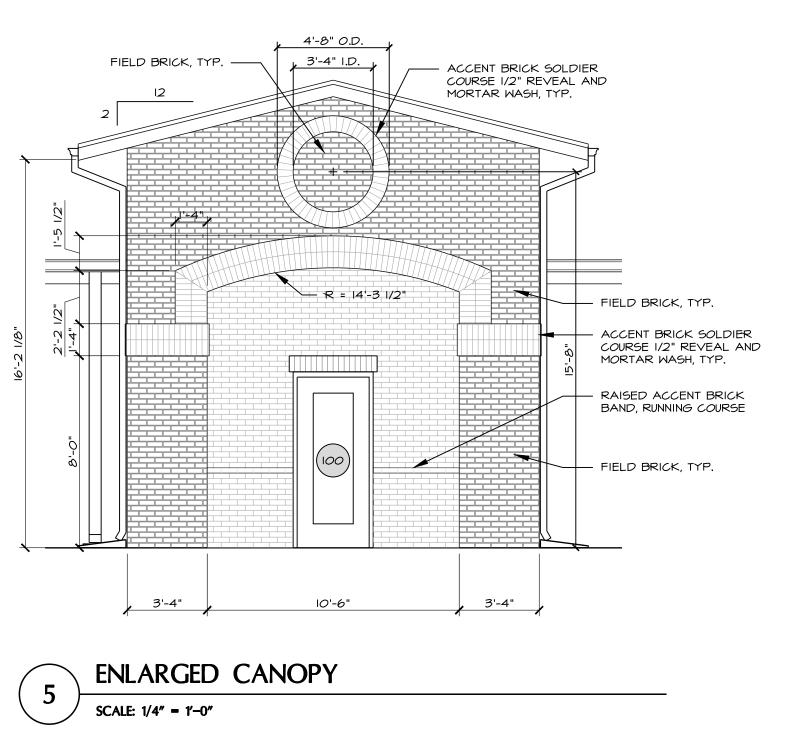
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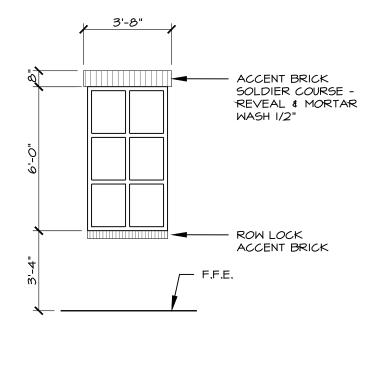
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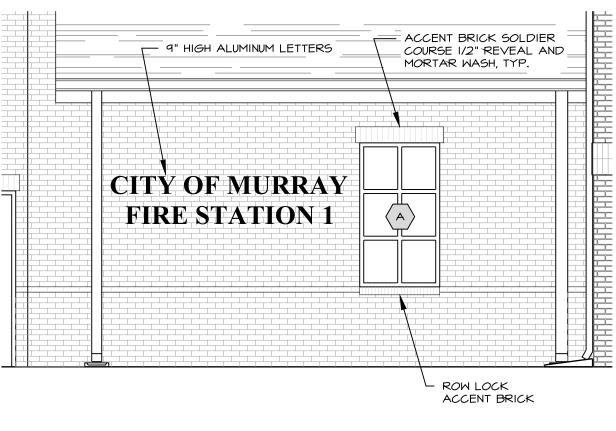




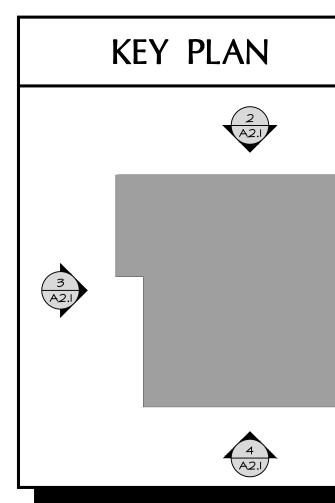


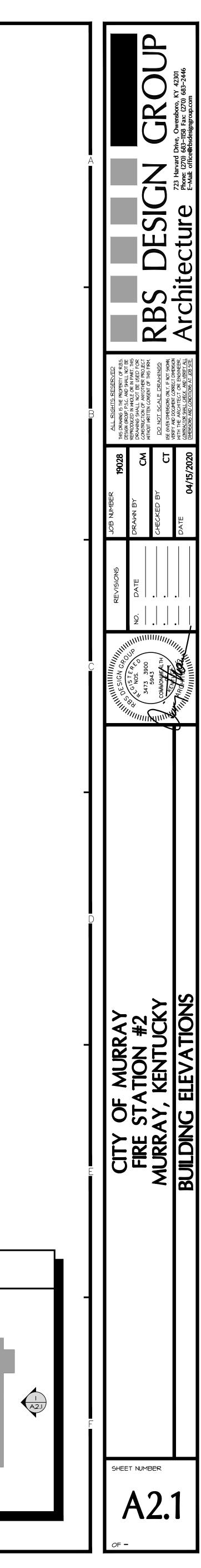


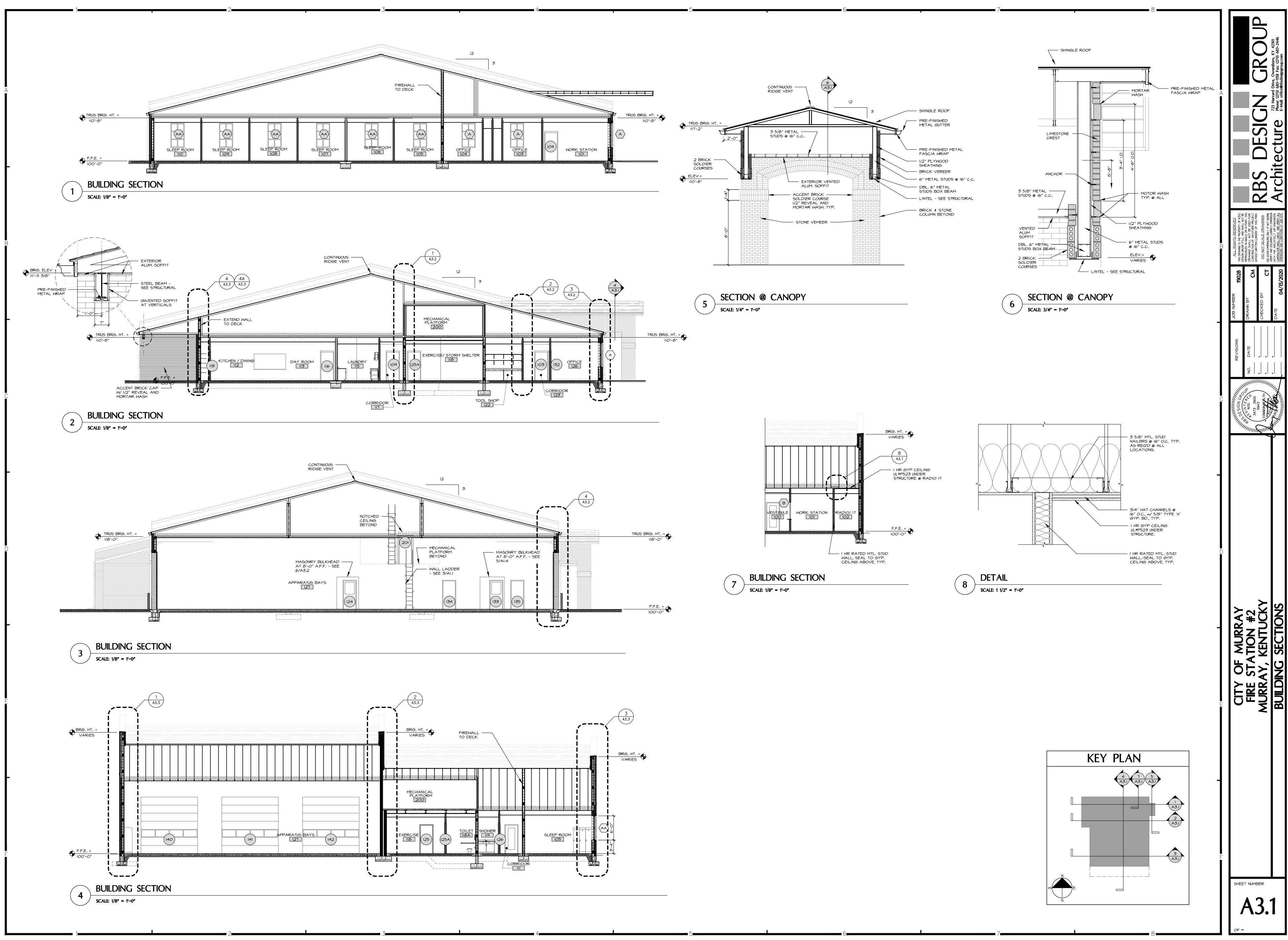


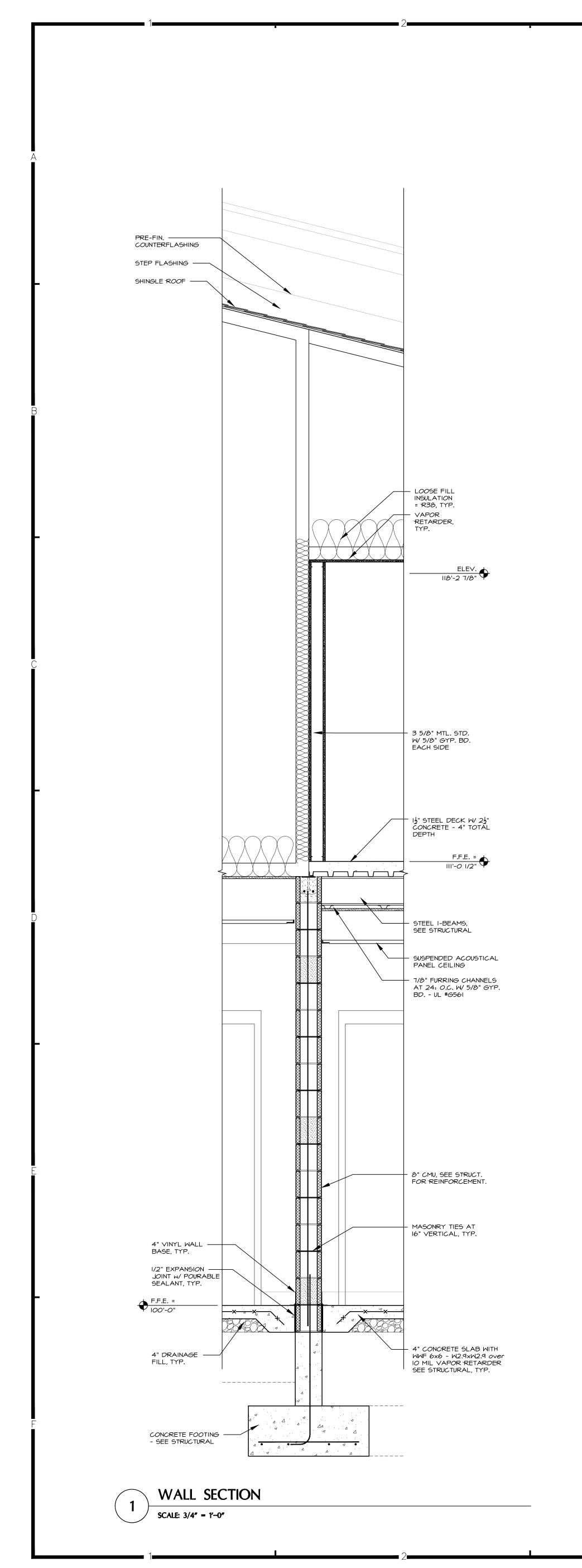




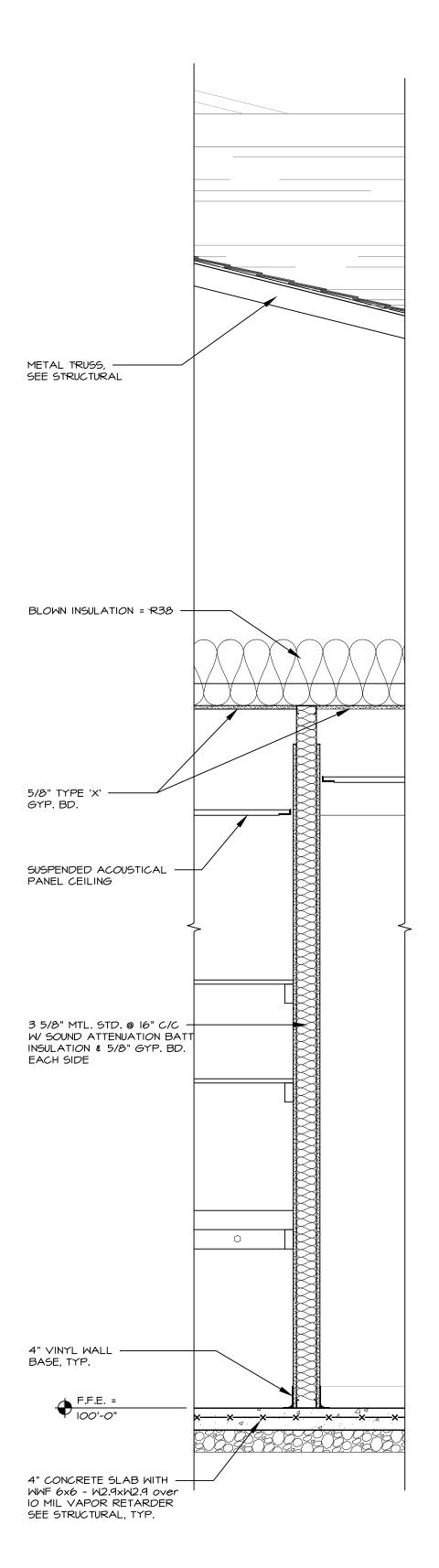


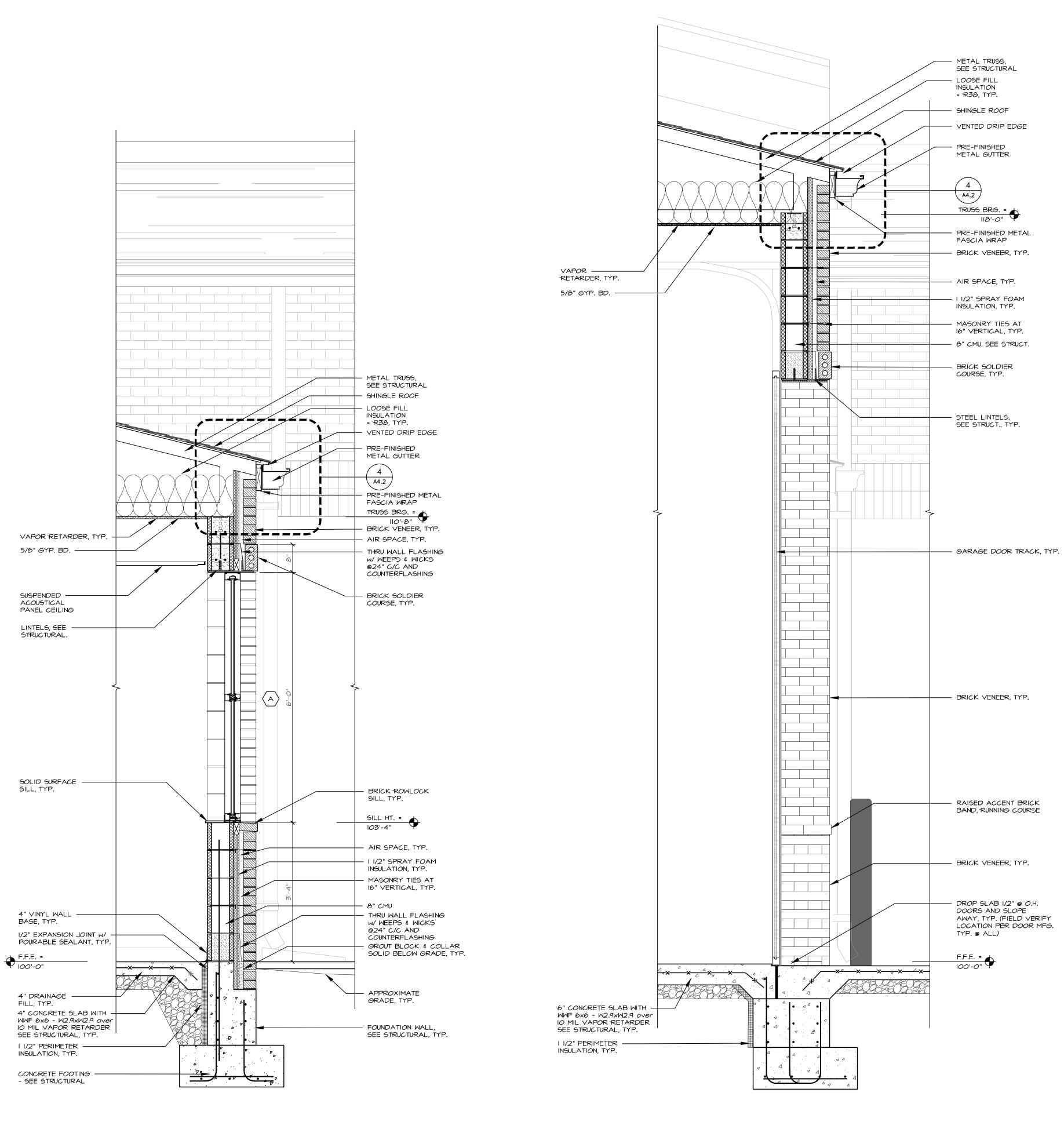






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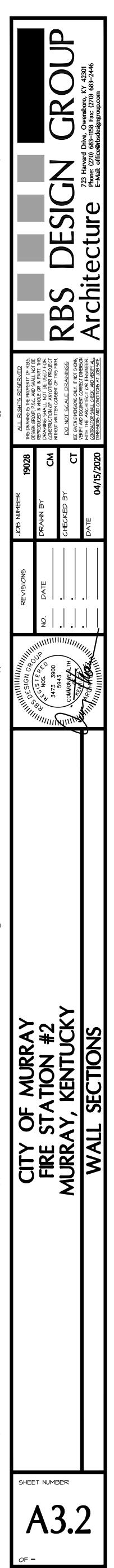


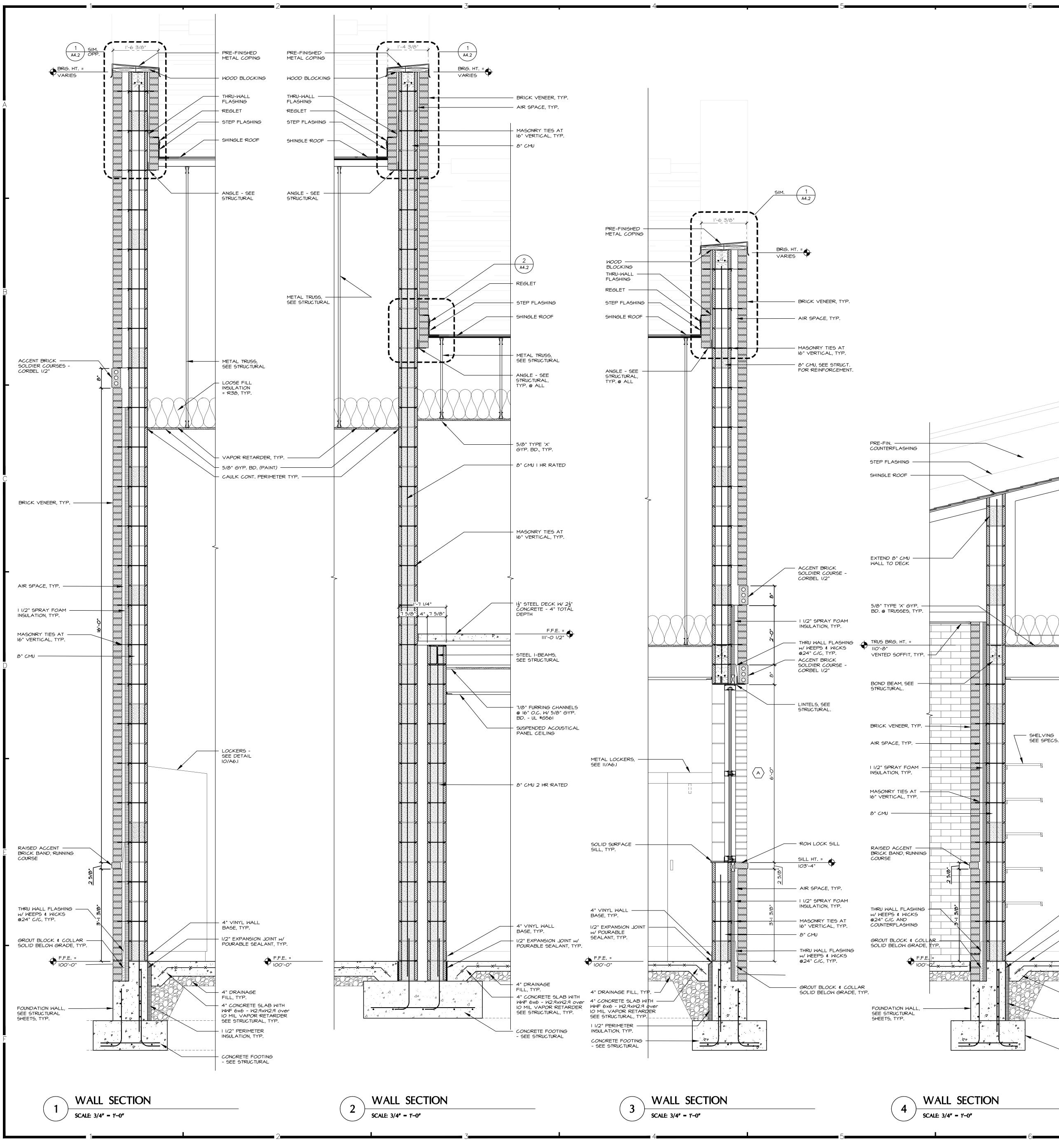


WALL SECTION 3 SCALE: 3/4'' = 1'-0''

WALL SECTION 4

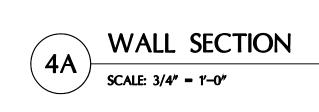
<sup>/</sup> SCALE: 3/4" = 1'-0"



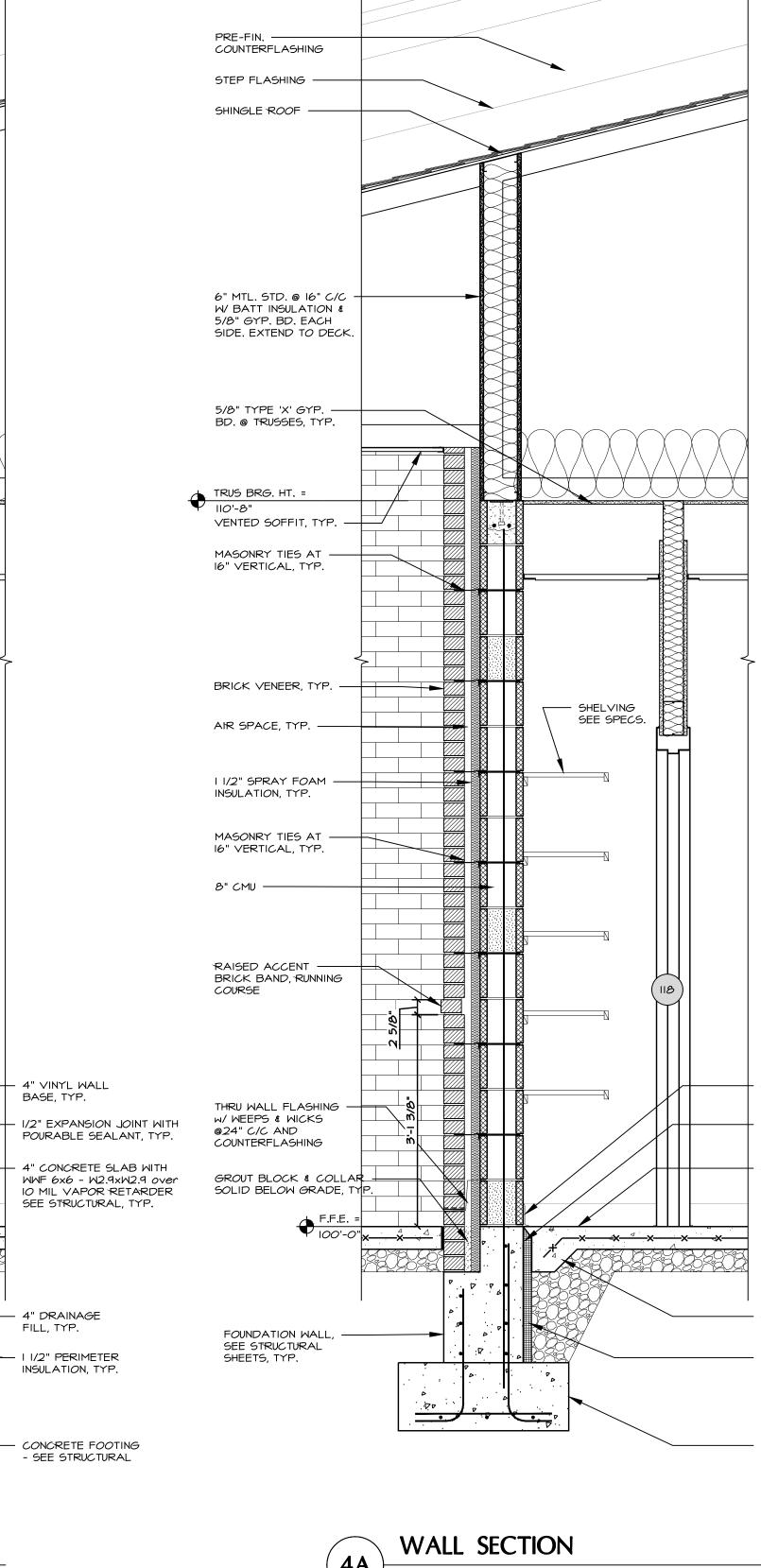


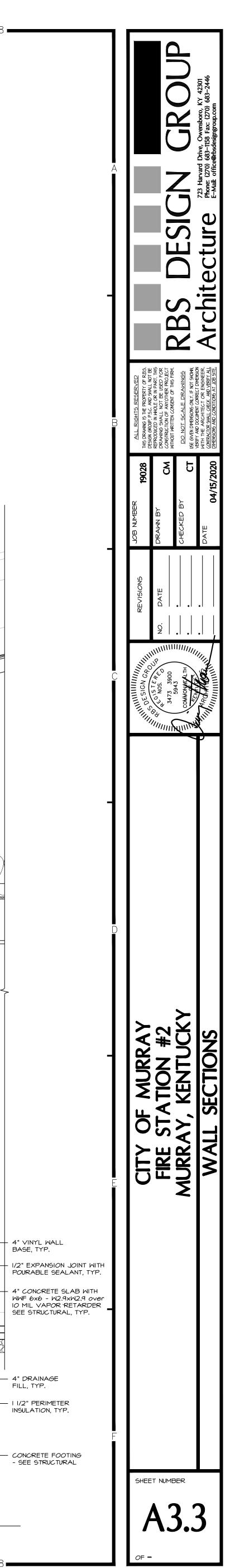
- 4" VINYL WALL BASE, TYP.

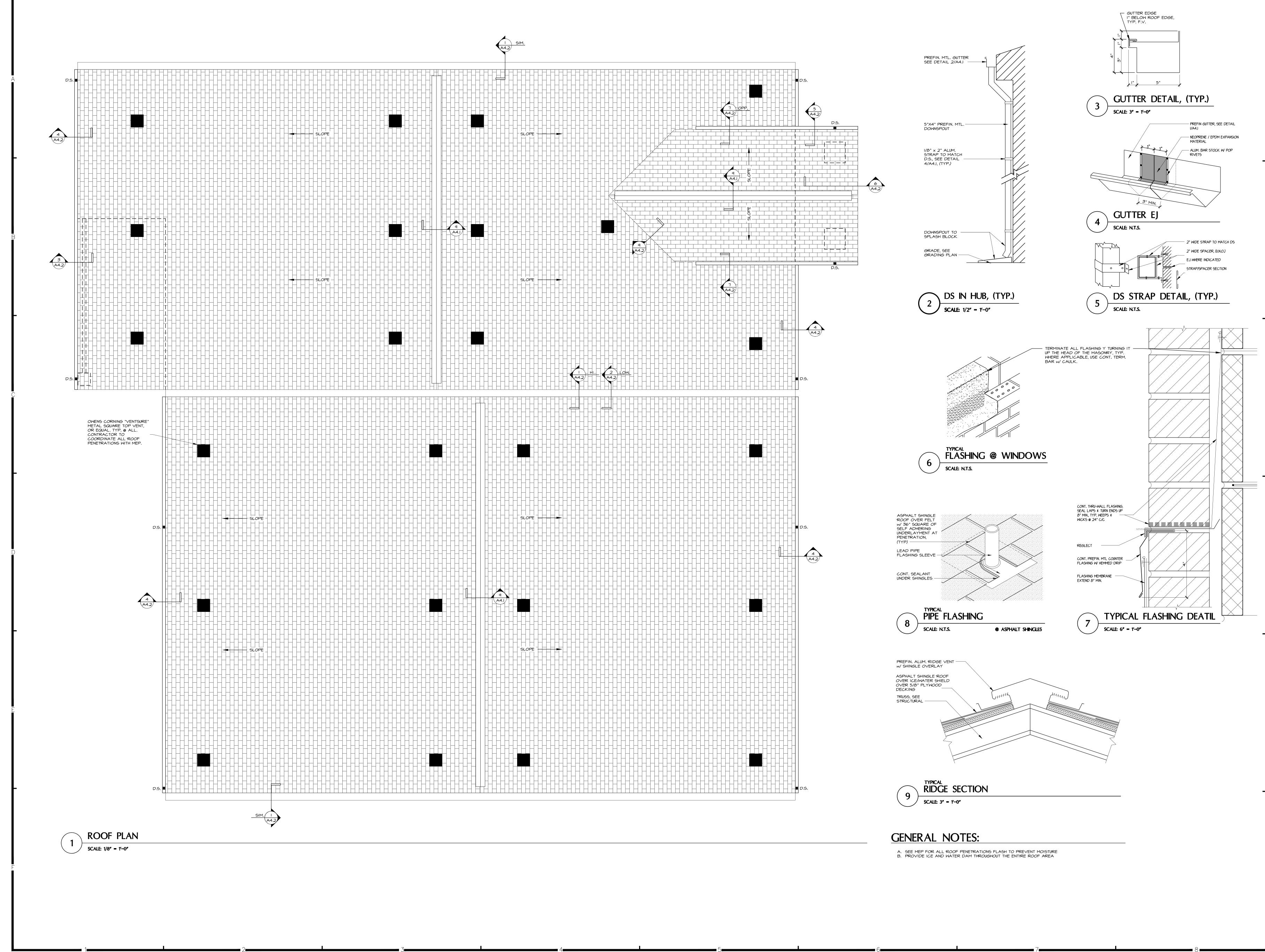
— 4" DRAINAGE FILL, TYP.

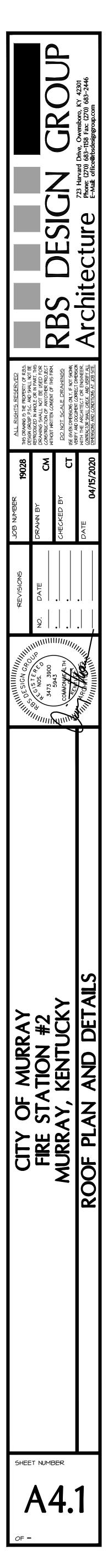


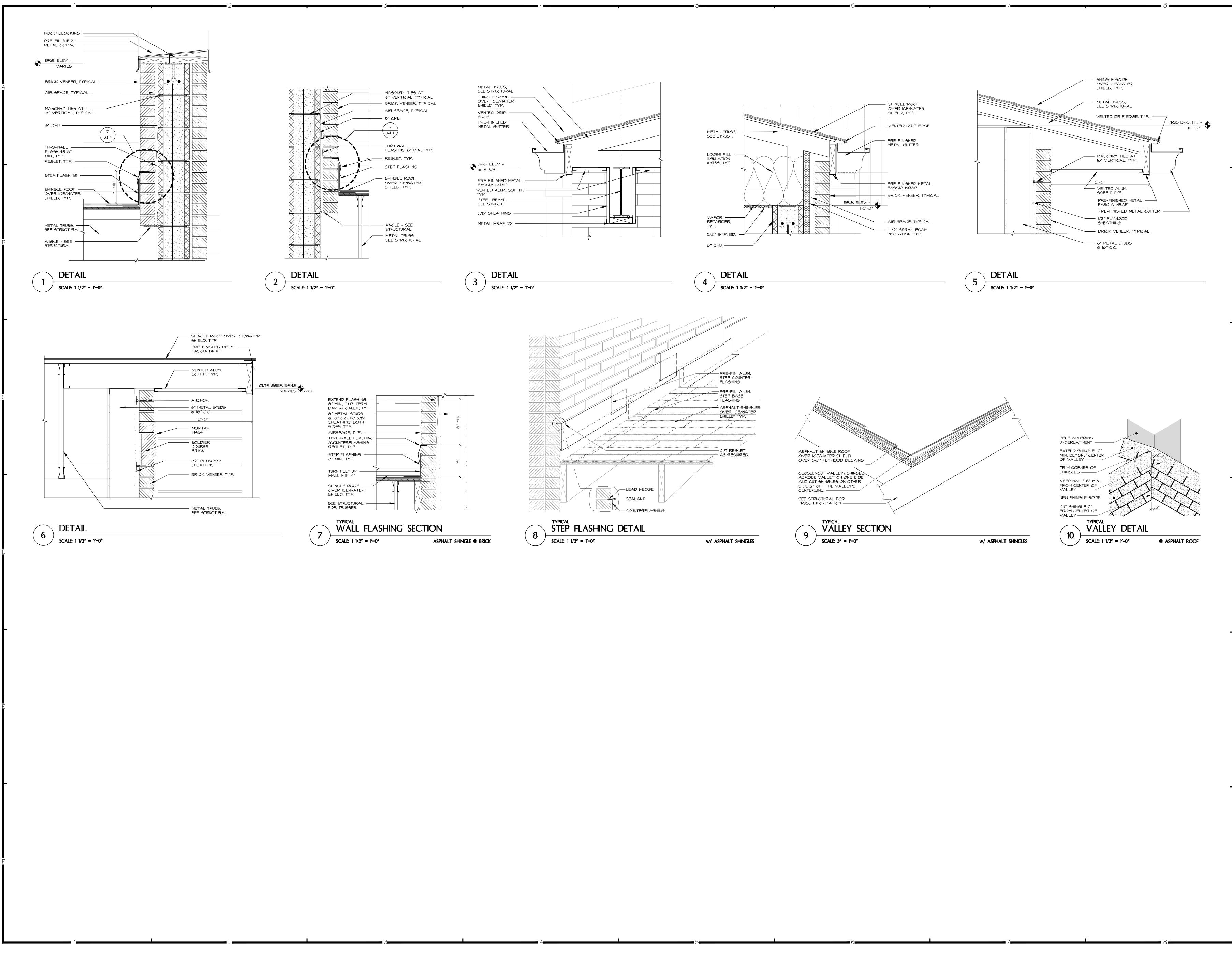


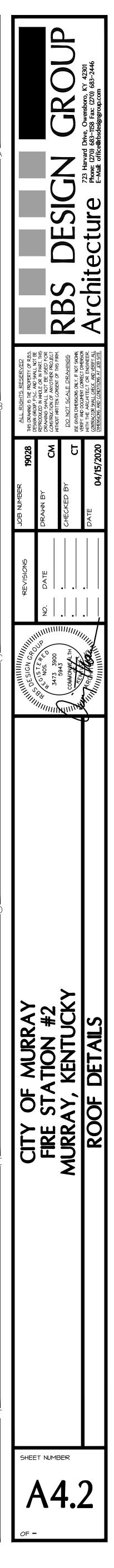








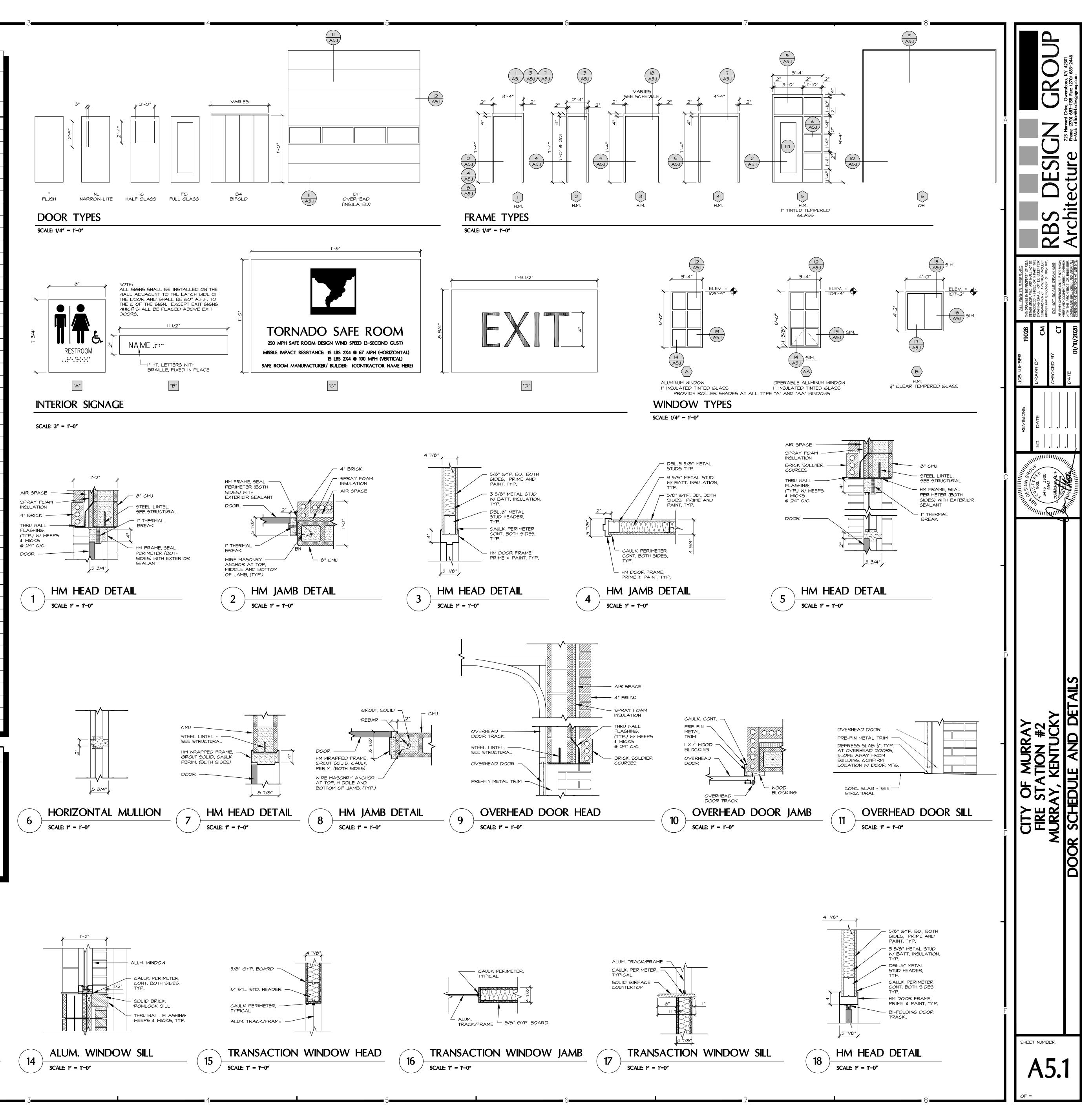


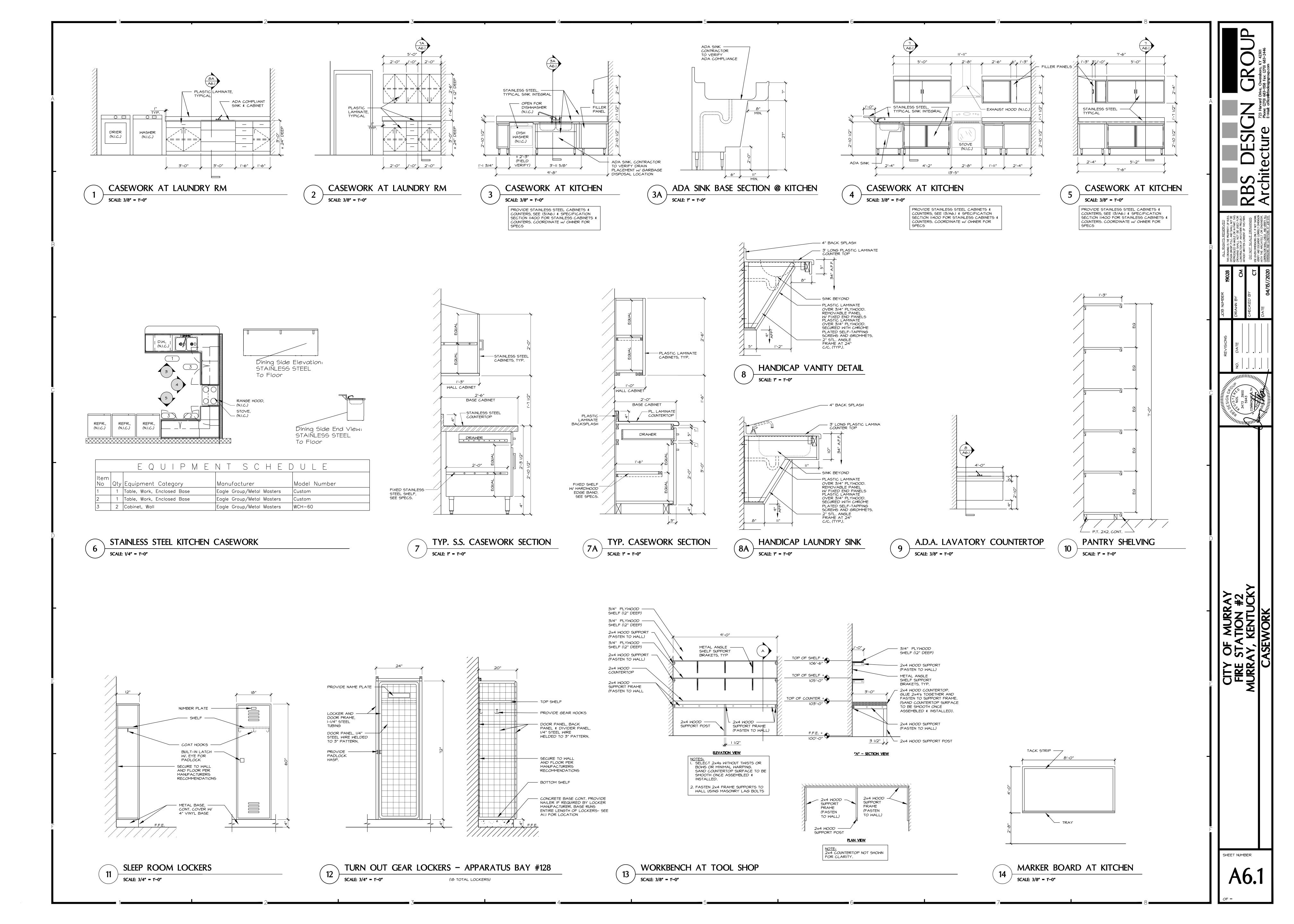


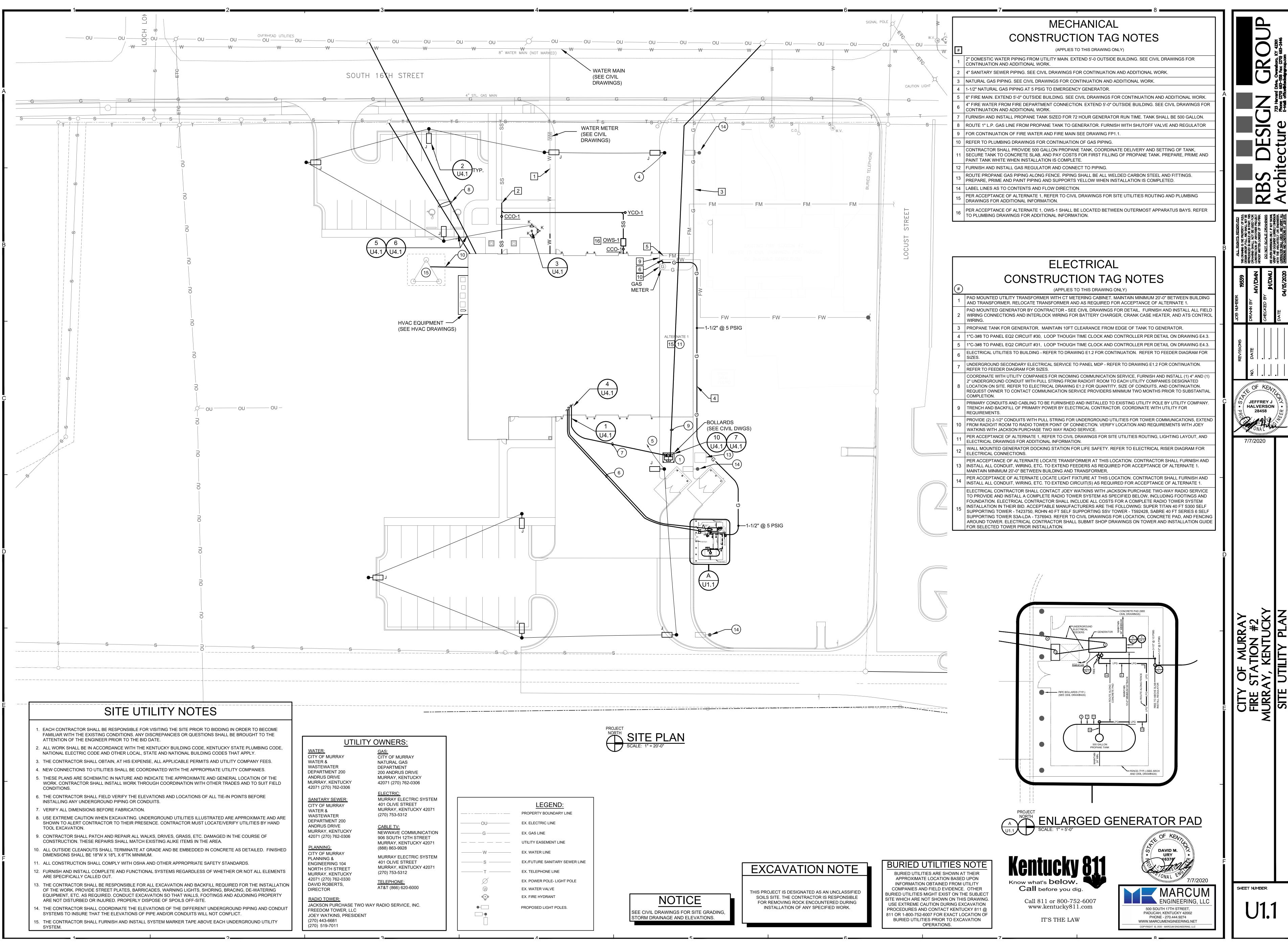
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	SN	FR	WD	HGT	THK	TYPE	MATL	TYPE	HEAD	JAMB	SET NO	AN
100	"D"		3'-0"	7'-0"	3/4"	FG	НМ	I	SEE I/A5.I	SEE 2/A5.I	3	Fð
101	"B"		3'-0"	7'-0"	3/4"	F	НМ	I	SEE 3/A5.I	SEE 3/A5.I	٩	F7.
102			3'-0"	7'-0"	3/4"	HG	НМ		SEE 3/A5.I	SEE 4/A5.I	2	F8
103	"B"		3'-0"	ר'-0"	3/4"	NL	НМ	I	SEE 3/A5.I	SEE 4/A5.I	4	FØ
104	"B"	I HOUR	3'-0"	7'-0"	3/4"	NL	нм	I	SEE 3/A5.I	SEE 4/A5.I	٩	F8
105	"B"		3'-0"	7'-0"	3/4"	NL	НМ	I	SEE 3/A5.I	SEE 4/A5.I	٩	F8
106			4'-6"	7'-0"		B4			SEE 18/A5.1	SEE 4/A5.I		
107			4'-6"	7'-0"		B4			SEE 18/A5.1	SEE 4/A5.I		
108	"B"		3'-0"	7'-0"	3/4"	F	HM	I	SEE 3/A5.I	SEE 4/A5.I	٩	F8
109	"B"	I HOUR	3'-0"	7'-0"	3/4"	F	HM	1	SEE 7/A5.I	SEE 8/A5.I	4	F8
110	"B"	I HOUR	3'-0"	7'-0"	3/4"	F	HM	1	SEE 7/A5.I	SEE 8/A5.I	4	F8
	"B"		3'-0"	7'-0"	3/4"	F	HM		SEE 7/A5.I	SEE 8/A5.1	4	F8
II2	"B"	I HOUR	3'-0"	7'-0"	3/4"	F	HM		SEE 7/A5.I	SEE 8/A5.1	4	F8
3   4	"B" "B"	I HOUR	3'-0"	7'-0" 7'-0"	3/4"	F	нм		SEE 7/A5.1	SEE 8/A5.1	4	F8 
4 	"B" "D"	I HOUR	3'-0" 3'-0"	ר'-0" ד'-0"	3/4"	F	HM HM		SEE 7/A5.1	SEE 8/A5.1	4	F8 
5   6	"D" "B"		3'-0" 3'-0"	-'ר" -'ר"	3/4"	FG F	HM HM		SEE 1/A5.1 SEE 3/A5.1	SEE 2/A5.1	3	F8; 
116	"D"		3'-0"	7'-0"	3/4"		HM HM	5	SEE 3/A5.1 SEE 5/A5.1	SEE 4/A5.1	3	F8
			3'-0"		3/4"	FG F			SEE 5/A5.1 SEE 3/A5.1	SEE 2/A5.1		F8]
118 			3'-0" 3'-0"	יד-0" ד'-0"	3/4"	F	HM HM	2	SEE 3/A5.I	SEE 4/A5.1	Г Т	F86 
119 120			3'-0"	7'-0"	3/4"	F	HM HM	2	SEE 3/A5.1	SEE 4/A5.1	л Т	F86
120	"B"		3'-0"	Т-О" 7'-0"	3/4"	F	HM HM	1	SEE 3/A5.1	SEE 4/A5.1	4	F86
121	"B"		3'-0"	7'-0"	3/4"	HG	HM HM		SEE 3/A5.1	SEE 4/A5.1	4	F86
122	"B"		3'-0"	7'-0"	3/4"	NL HG	нм		SEE 3/A5.1	SEE 4/A5.1	2 9	F8
123	"B"	I HOUR	3'-0"	-'ר" -0"	3/4"	NL NL	нм		SEE 3/A5.1 SEE 7/A5.1	SEE 4/A5.1	9 5	F8 
124		2 HOUR	3'-0"	7'-0"	3/4"	F NL	нм		SEE 1/A5.1 SEE 7/A5.1	SEE 8/A5.1	8	F8 FEM
125 125A	"A"		3'-0"	7'-0"	3/4"	F	HM HM		SEE 1/A5.1	SEE 8/A5.1	2	FEM F76
125A	"B"		3'-0"	7'-0"	3/4"	F	HM HM	'   I	SEE 3/A5.1	SEE 4/A5.1	2	F76
126	- Р "А"		3'-0"	7'-0"	3/4"	F	HM HM		SEE 3/A5.I	SEE 4/A5.1	2	F 76
121	"A"		3'-0"	T-0"	3/4"	F	НМ		SEE 3/A5.1	SEE 4/A5.1	2	F 16
128			5-0	7'-0"		B4		5		SEE 4/A5.1	<u> </u>	ı- 18
130			5'-0"	7'-0"		B4		5	SEE 18/A5.1	SEE 4/A5.I		
131	"A"		3'-0"	7'-0"	3/4"	F	НМ		SEE 3/A5.I	SEE 4/A5.I	2	F76
132	"B"		3'-0"	7'-0"	3/4"	NL	НМ		SEE 3/A5.I	SEE 4/A5.I	4	F8e
132A			3'-6"	7'-0"		B4		3	SEE II/A5.I	SEE 4/A5.I		
133	"B"	I HOUR	3'-0"	7'-0"	3/4"	NL	НМ	1	SEE 7/A5.I	SEE 8/A5.I	5	F8
134	"B"	I HOUR	3'-0"	7'-0"	3/4"	NL	НМ	1	SEE 7/A5.I	SEE 8/A5.I	2	F8
135	"B"	I HOUR	4'-0"	7'-0"	3/4"	NL	нм	4	SEE 7/A5.I	SEE 8/A5.I	6	Fð
136	"D"		3'-0"	7'-0"	3/4"	NL	НМ	1	SEE 1/A5.1	SEE 2/A5.I	3	F8
137			14'-0"	14'-0"		ОН			SEE 9/A5.1	SEE 10/A5.1	I	
138			4'-0"	14'-0"		ОН			SEE 9/A5.1	SEE 10/A5.1	I	
139			14'-0"	14'-0"		ОН			SEE 9/A5.1	SEE 10/A5.1	I	
140			14'-0"	14'-0"		ОН			SEE 9/A5.1	SEE 10/A5.1	I	
4			14'-0"	14'-0"		ОН			SEE 9/A5.1	SEE 10/A5.1	I	
142			14'-0"	14'-0"		ОН			SEE 9/A5.1	SEE 10/A5.1	I	
143	"D"		3'-0"	7'-0"	3/4"	NL	НМ	I	SEE 1/A5.1	SEE 2/A5.1	3	F8
201		I HOUR	3'-0"	6'-8"	3/4"	F	НМ	2	SEE 3/A5.I	SEE 4/A5.I	4	F8e
						ALTE	RNATE	BID 1				
ABI			14'-0"	14'-0"		ОН			SEE 9/A5.1	SEE 10/A5.1	I	
AB2			14'-0"	14'-0"		ОН			SEE 9/A5.1	SEE 10/A5.1	I	
					H/	ARDW	ARE SO	CHEDU	ЛЕ			
<u>SET #I</u> I <i>G</i> AR		OR OPENE	ER II/	<u>T #2:</u> 2 PR HINGE OCKSET		<u>#3:</u> PR HINGES CKSET		<u>SET #4:</u> 				
				TOP	CLC   KIC:	)SER (ROF, D KPLATE	•	I CLOSER I STOP	(R <i>O</i> F, DA)			
					I THR I KIC	OF WEATHER ESHOLD KPLATE		I KICKPLA				
					OWNE CONT	R TO PROVI ROL UNIT, PR DER, MAG LO	ROX CARD					
<u>SET #5</u>		-	<u>SET #6</u>		ELEC	TRONIC DOC		<u>SET #8</u> :	NGEC	<u>SET</u>		
I LOCK	ER (ROF	-	2 PR H   LOCK   STOP	SET	11/2	<u>r #7:</u> 2 PR HINGES OCKSET		I I/2 PR HI I FEMA 36 I CLOSER	I LOCK		PR HINGES XKSET XSER (ROF, DA)	
I STOP								I KICKPLA I WALL STO I GASKETI	OP	1 STC 1 KIC		CCFGG
								I DOOR BO		CON LD REAL	TROL UNIT, PROX C DER, MAG LOCK, A TRONIC DOOR STI	ARD
										LLEC		
NOTE:	SEE DE	ETAIL 7/A	45.1 F <i>o</i> r A	LL MAN D	OORS. FOR	R ALL OVE	SLOPE AWAN RHEAD AND F	OUR FOLD	DOORS			
			ΓΟ VERIFY R ENTRY.	CLEARAN	ICE OF DOG	OR SEAL AI	ND RECESS S	LAB ACCOF	RDINGLY TO			
			/	 ۸	1/2"				BULLNOSE, T	YP. –		
									ALUMINUM -		#4 BAR, CONT. FUL HT. GROUT CELL S	
					3	THRU WALL F WEEPS & WIG	CKS, TYP.					
	I	_INTEL, TY	'P			BRICK SOLD COURSES						_
						CAULK PERIN		<				
		ROLLER - SHADE			=	CON1, BOTH TYP, ALUM, WINDC				<b>F</b>	5666	
				⊐₩Ē	╡						<u></u>	
										CENT BRICK		
						ALUM, WINDC	M					

12 SCALE: 1" = 1'-0"

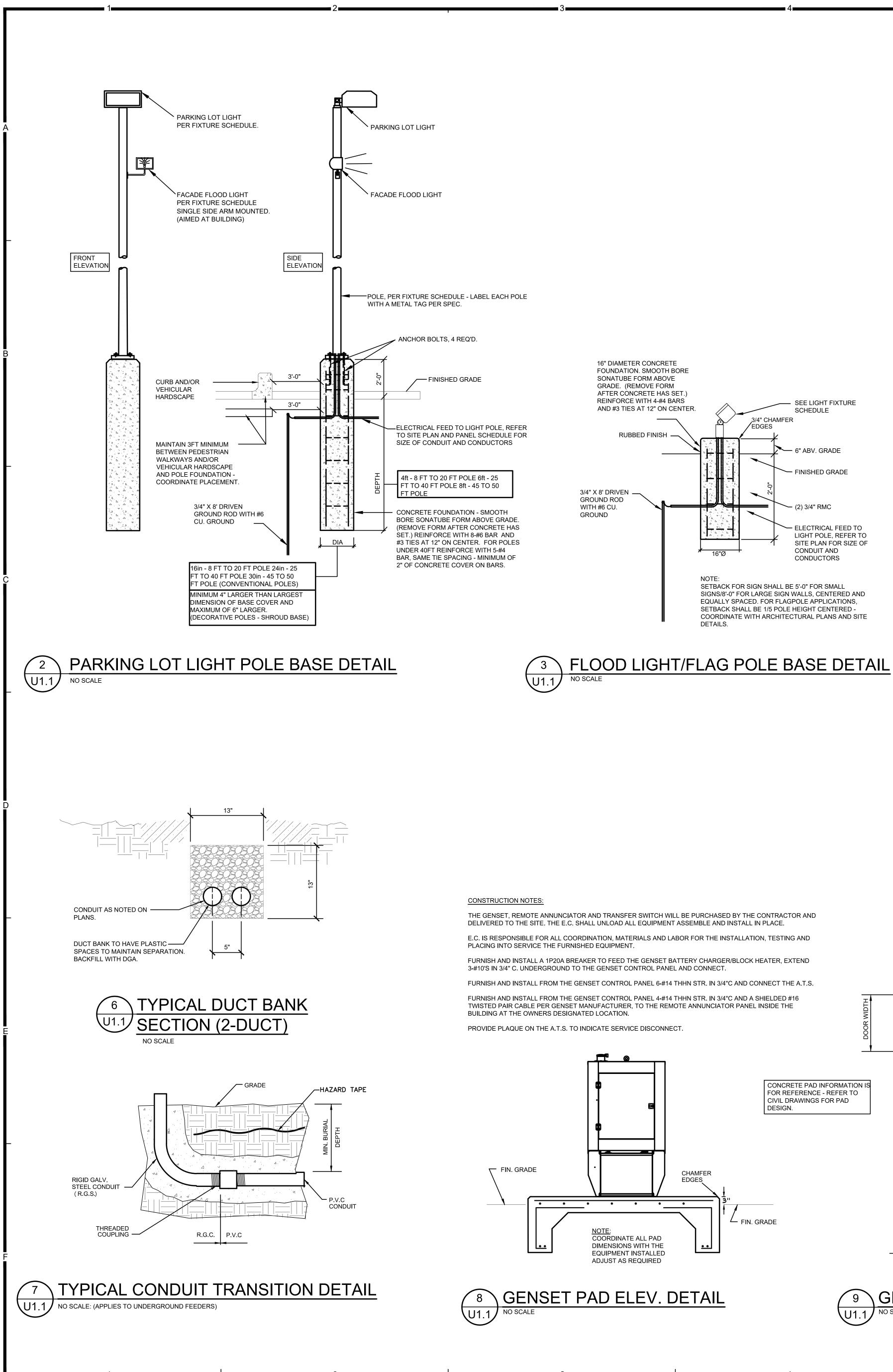
**SCALE:** 1" = 1'-0"

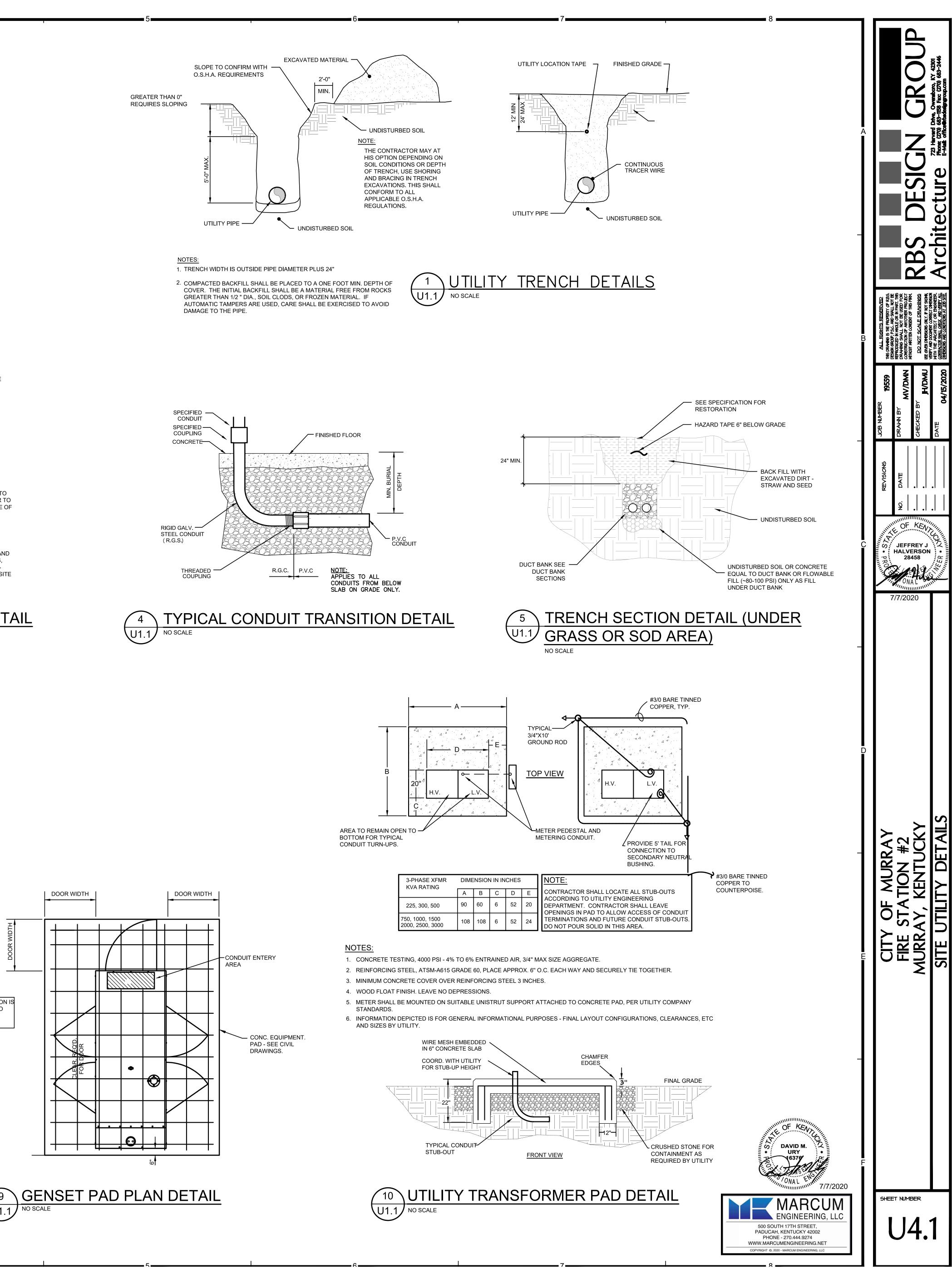


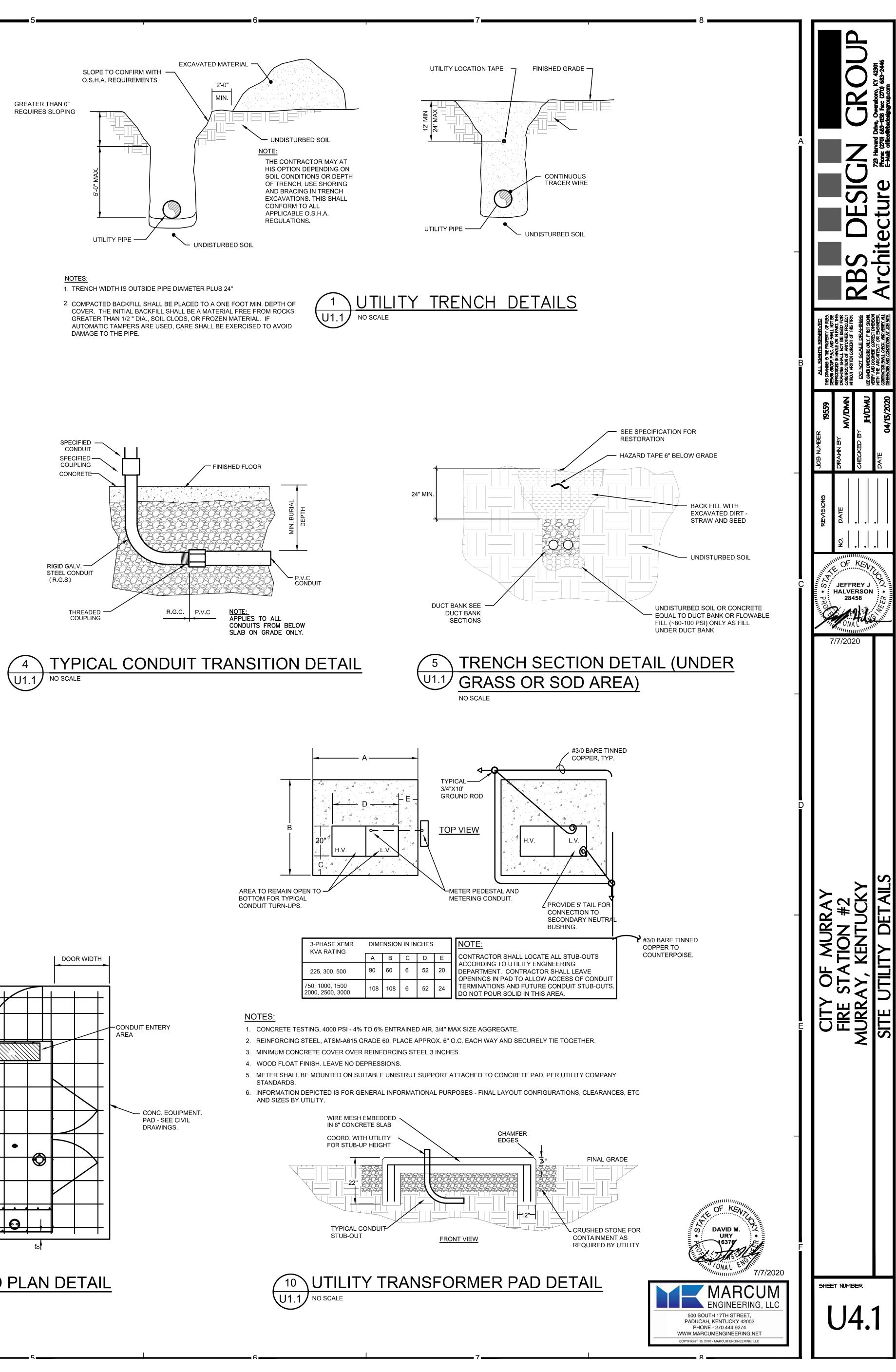


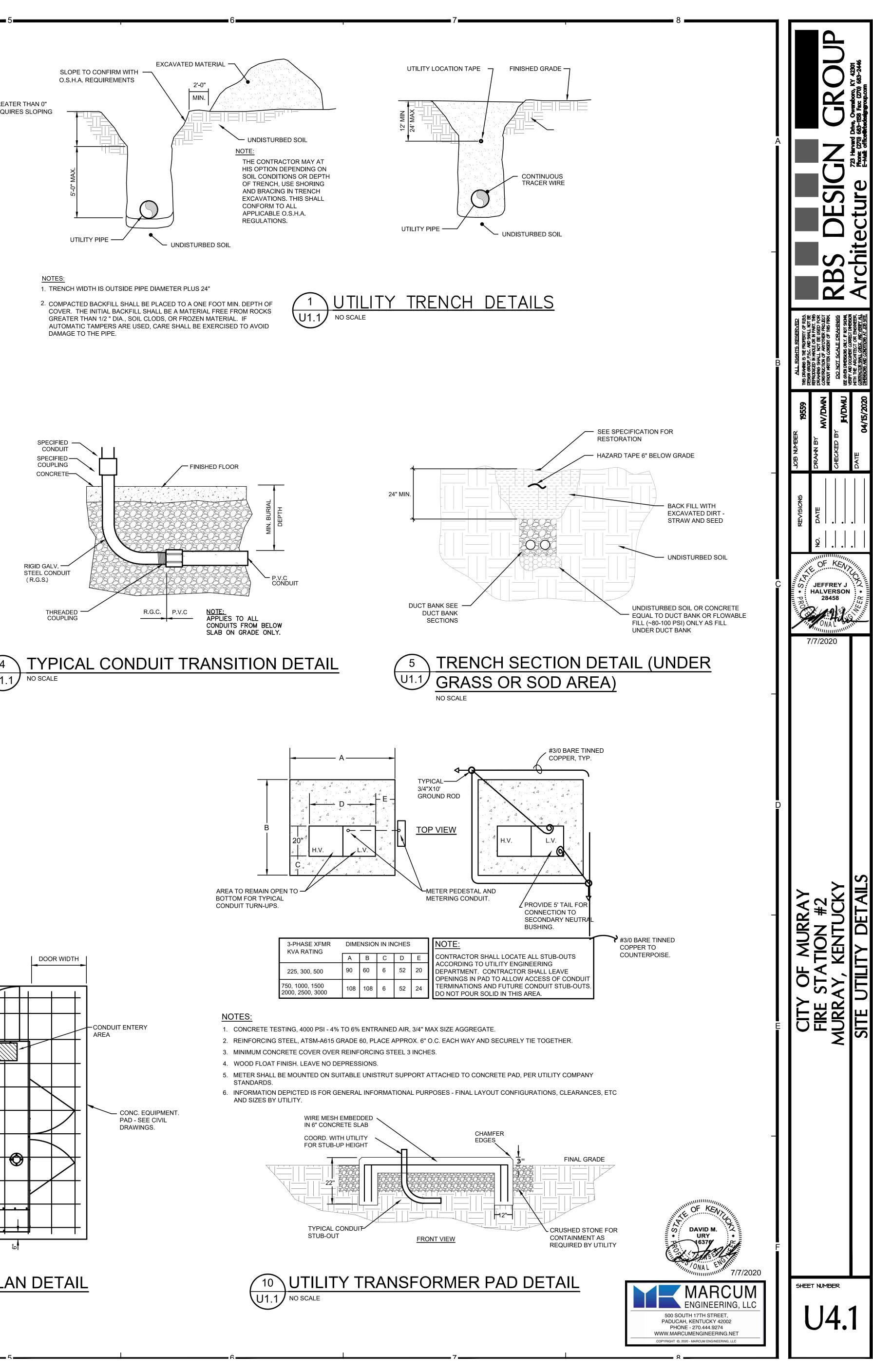


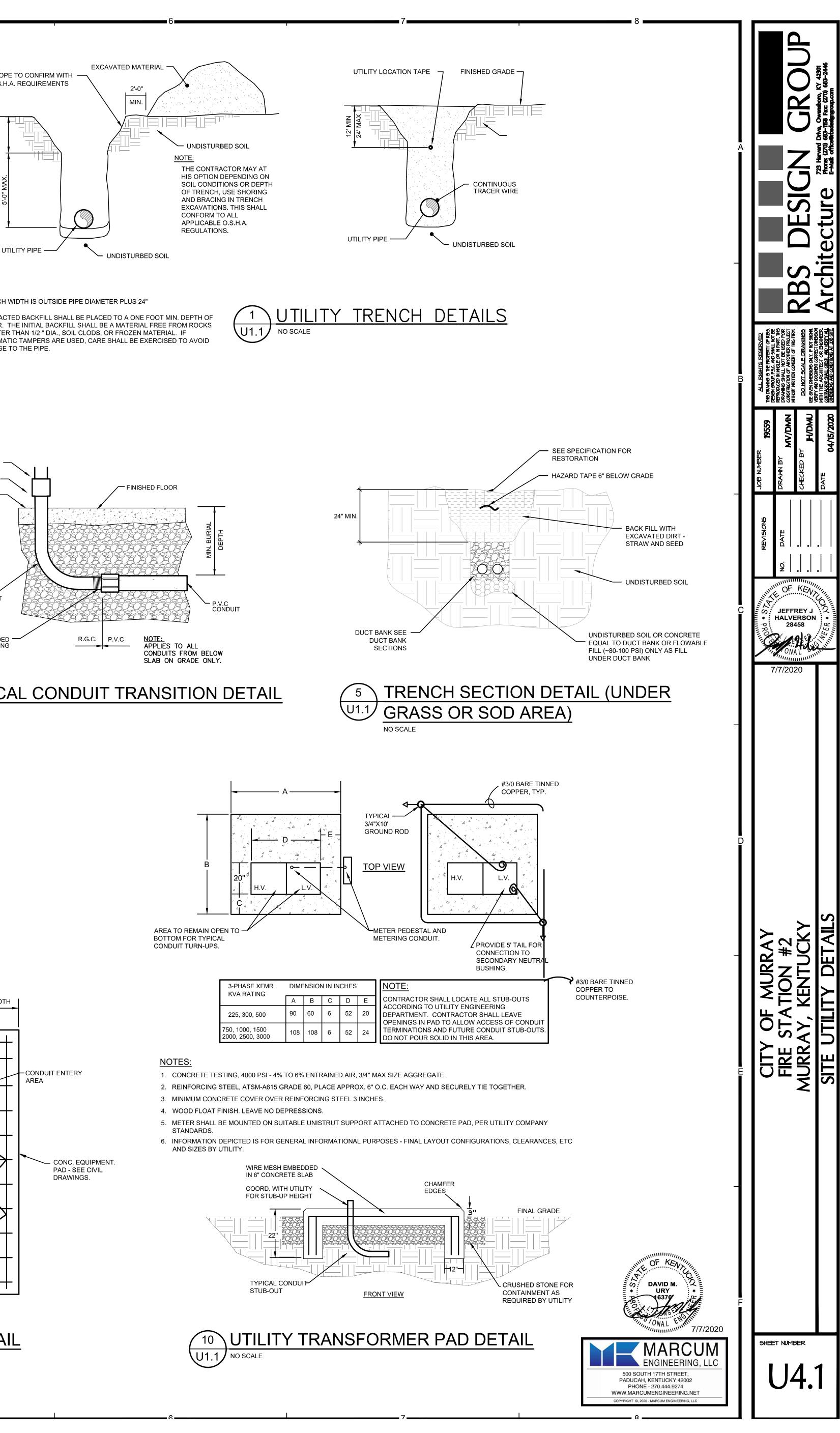
WO WAY RADIO SERVICE, INC
ENT

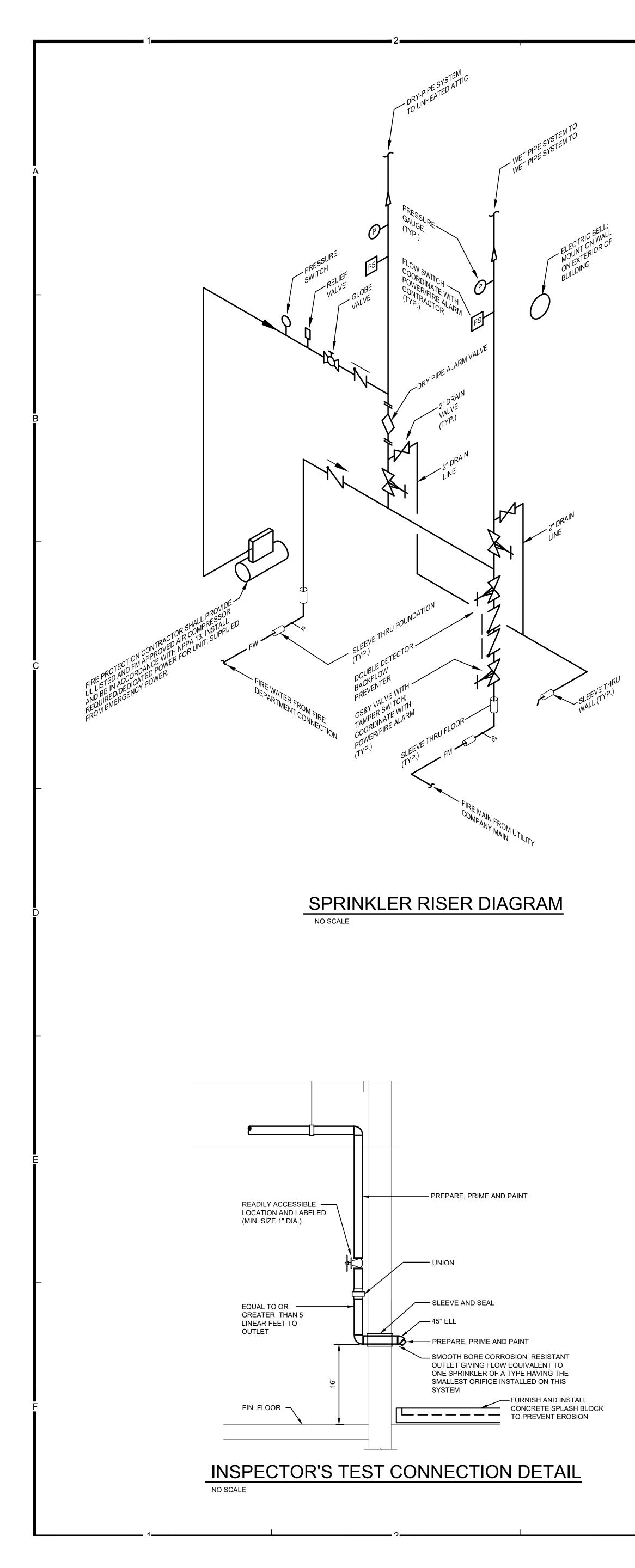












THREADED SLIP NUT AND - SPRINKLER SYSTEM PIPE NIPPLE. BRANCH LINE OR MAIN. - BRAIDED STAINLESS STEEL FLEXIBLE SPRINKLER DROP/HOSE IN ACCORDANCE WITH NFPA. SECURE SPRINKLER WITH MANUFACTURER SUPPLIED ADJUSTABLE SUPPORT SYSTEM. SEMI-RECESSED, WHITE SPRINKLER. SUSPENDED CEILING. REFER TO CENTER SPRINKLER IN CEILING TILE. ARCHITECTURAL DRAWINGS. SPRINKLER DROP DETAIL NO SCALE (REQUIRED AT ALL SUSPENDED CEILINGS)

5	I	0		7
FIRE SL	IPPRESSION	DESIGN CRITERIA	]	FIRE
STATIC: RESIDUAL:	46 42	PSI PSI	1.	EACH CONTRACTOR SHALL BE BECOME FAMILIAR WITH THE BROUGHT TO THE ATTENTION
WATER FLOW: DURATION: SOURCE OF WATER SUPPLY:	980 90 WATER	GPM MINS. TOWER	2.	ALL WORK SHALL BE IN ACCO "INSTALLATION OF UNDERGRO BUILDING CODES/REQUIREME
SOURCE OF WATER FLOW DA		RKS, CITY OF MURRAY WATER DIVISION 20 AT 10:40 A.M. D.S.T	3.	WORK SHALL BE ACCEPTABLE CORRECTING ANY WORK TO F
ANTICIPATED WATER DEMANI		PSI	4.	THE CONTRACTOR SHALL OB
	450	GPM	5.	WORK SHALL BE PERFORMED
CLASSIFICATION OF HAZARD( OCCUPANCY OF BUILDING:	S): LIGHT F FIRE ST	HAZARD AND ORDINARY HAZARD GROUP 1 TATION	6.	CONTRACTOR SHALL BE RESP DRAWINGS.
SPECIFIC TYPES OF SUPPRES	SSION SYSTEM(S): AUTOM	ATIC WET PIPE AND DRY PIPE	7.	THE SYSTEM TYPE SHALL BE:
NFPA STANDARD(S) FOLLOWE	ED IN DESIGN: NFPA 13	3 AND 24	8.	SPRINKLERS SHALL BE PEND/ OCCUPIED SPACES SHALL BE BRONZE.
			9.	THE FIRE PROTECTION SYSTE
	SPRINKLI	ER SYSTEM LEGEND	4	SEE FIRE SUPPRE
			10.	. NEW CONNECTIONS TO UTILIT
	A LH	IIMUM CLASSIFICATION OF OCCUPANCY	11.	. THESE PLANS ARE SCHEMATI WORK. CONTRACTOR SHALL I FIELD CONDITIONS.
		CUPIED SPACE SPRINKLER	12	UNLESS OTHERWISE NOTED,
	TAG DESCRIPT	<u>-ION</u>	13.	. COORDINATE ENTIRE PIPING REQUIRED CLEARANCES.
		ESSED PENDANT SPRINKLERS REQUIRED	14.	VERIFY ALL DIMENSIONS BEF
	C DRY-TYPE	SPRINKLERS REQUIRED	15.	USE EXTREME CAUTION WHE ARE SHOWN TO ALERT CONTI HAND TOOL EXCAVATION.
		E PENDANT SPRINKLERS REQUIRED	- 16.	THE CONTRACTOR SHALL BE NEW EQUIPMENT.
		Y HAZARD GROUP 1 OCCUPANCY	17.	. CONTRACTOR SHALL REPAIR/ OF CONSTRUCTION.
		ONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ESSARY ADDITIONAL FIRE PROTECTION SPRINKLERS TO	18.	CONTRACTOR SHALL PATCH A COURSE OF CONSTRUCTION. AIRTIGHT, AND FINISHED TO M
	ARCHITECTURAL CEILING	E PER NFPA 13. TE THE COMPLEX CEILING TYPES AND SOFFITS. REFER TO PLANS. CONTRACTOR SHALL INSTALL ADDITIONAL TD TO AVOID SPRAY OBSTRUCTIONS.	19.	. WHERE PIPING PASSES THRO SMOKE STOPPED WITH AN U.I HILTI, OR APPROVED EQUAL.
			20.	. CONTRACTOR SHALL SLOPE A CONTRACTOR IS RESPONSIBL DRAINED.
	FIRE PR	OTECTION LEGEND	21.	SPRINKLERS SHALL BE CENTE
	SYMBOL	DESCRIPTION	22.	SPRINKLERS IN MECHANICAL,
	FM	FIRE PROTECTION MAIN		SHALL BE RATED HIGH TEMPE
	FW		- 1	MECHANICAL, ELECTRICAL AN
	FS	FIRE SPRINKLER PIPING	-	DO NOT INSTALL PIPING OR SI ELECTRICAL CONTRACTOR.
		SIDEWALL SPRINKLER GATE VALVE	25.	. TAMPER AND FLOW SWITCHE WORK WITH ELECTRICAL CON
	Å	OS&Y VALVE W/ TAMPER SWITCH	26	. PROVIDE INSPECTOR'S TEST ( ROUTED TO EXTERIOR OF BUI
			7 1	

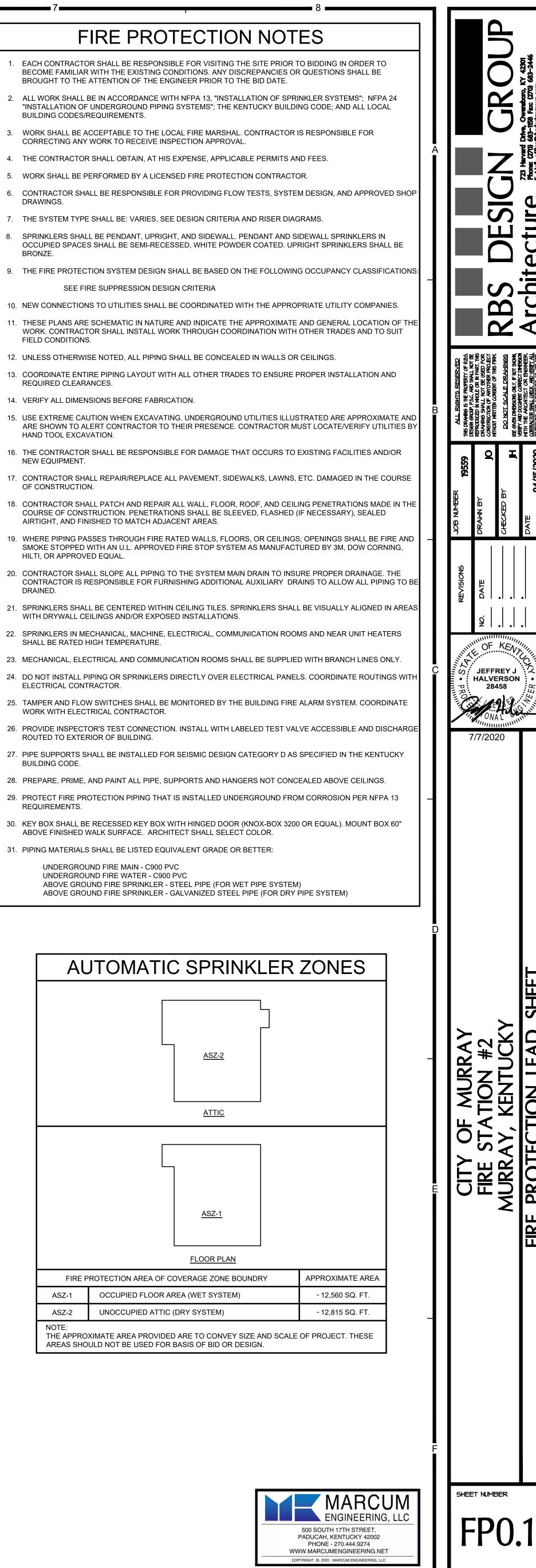
- ION OF THE ENGINEER PRIOR TO THE BID DATE.
- MENTS.
- O RECEIVE INSPECTION APPROVAL.

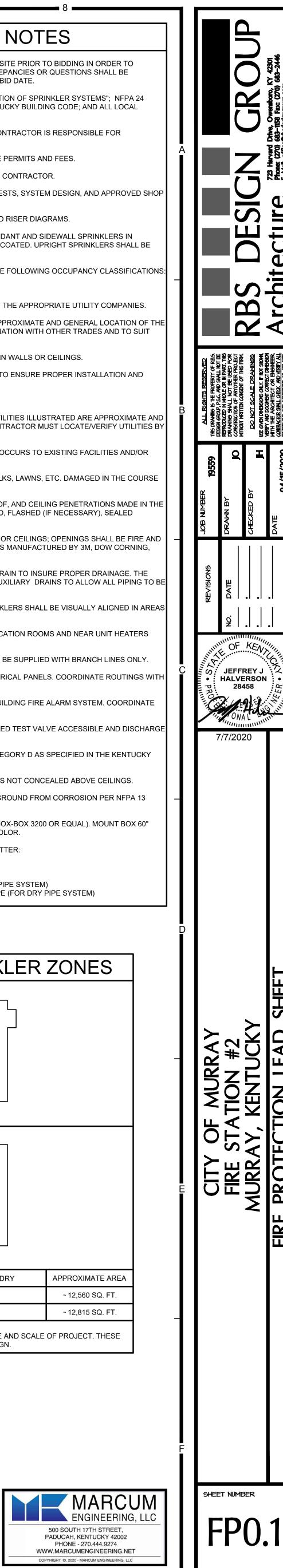
- RESSION DESIGN CRITERIA

- D MATCH ADJACENT AREAS.

- AND/OR EXPOSED INSTALLATIONS.
- IPERATURE.

- ONTRACTOR.
- BUILDING CODE.
- REQUIREMENTS.
- 31. PIPING MATERIALS SHALL BE LISTED EQUIVALENT GRADE OR BETTER:



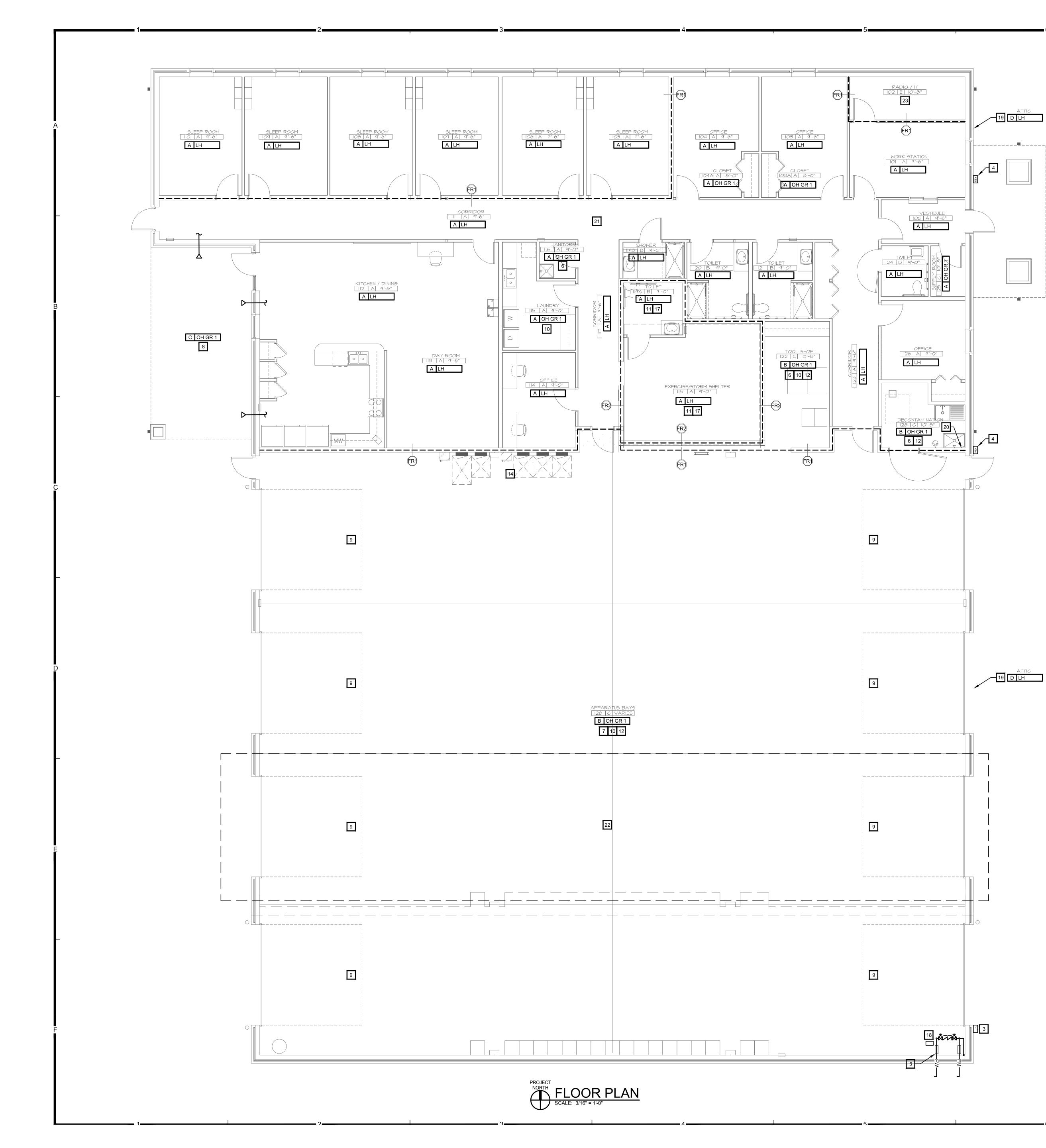


	FIRE WATER SERVICE
	FIRE SPRINKLER PIPING
Δ	SIDEWALL SPRINKLER
——⋈——	GATE VALVE
&	OS&Y VALVE W/ TAMPER SWITCH
N	CHECK VALVE
	DOUBLE DETECTOR BACKFLOW PREVENTOR
FS I	FLOW SWITCH
P	PRESSURE GAUGE
$\frown$	

FD MASTER KEY BOX (KNOX-BOX MODEL 3200 OR EQUAL)

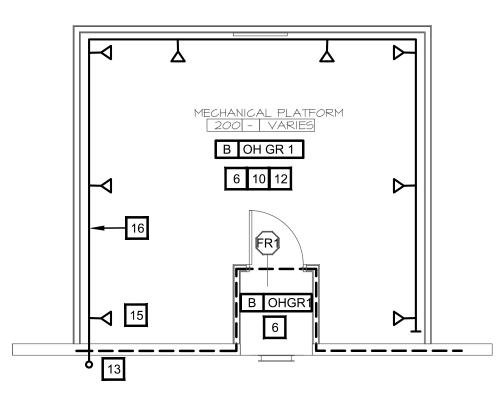
ELECTRIC BELL

KEY



	MECHANICAL
	CONSTRUCTION TAG N
#	(APPLIES TO THIS DRAWING ONLY)
1	6" FIRE MAIN. SEE CIVIL DRAWINGS FOR CONTINUATION AND
2	4" FIRE WATER PIPING FROM FIRE DEPARTMENT CONNECTION DRAWINGS FOR CONTINUATION AND ADDITIONAL WORK.
3	INSTALL ELECTRIC ALARM BELL AS SPECIFIED. EXTERIOR GRA
4	INSTALL FIRE DEPARTMENT KEY BOX RECESSED-MOUNTED A TOP OF THE BOX. COORDINATE FINAL BOX LOCATION WITH AF DRAWINGS. SEE FIRE PROTECTION NOTES ON DRAWING FP0.
5	SLEEVE PIPING THRU OR BELOW FOUNDATION WALL (TYP.). C GENERAL CONTRACTOR PRIOR TO POURING OF FOOTINGS AN REFER TO STRUCTURAL DRAWINGS.
6	INSTALL WIRE GUARDS IN THIS AREA. GUARDS SHOULD BE SU ACCIDENTAL DAMAGE TO SPRINKLERS.
7	ROUTE FIRE SPRINKLER PIPING EXPOSED AS HIGH AS POSSIE BAYS 127. COORDINATE ROUTING OF PIPING WITH OTHER TRA CONFLICT.
8	DRY TYPE SIDEWALL SPRINKLERS REQUIRED.
9	COORDINATE SPRINKLER LOCATIONS WITH OVERHEAD DOOR PRODUCE A SPRAY OBSTRUCTION WHEN DOOR IS OPEN.
10	INSTALL HIGH TEMPERATURE RATED SPRINKLERS SUITABLE F
11	ONLY BRANCH LINES MAY BE INSTALLED IN THIS AREA. DO NO THRU THIS AREA.
12	PREPARE, PRIME AND PAINT ALL EXPOSED PIPING, SUPPORTS SHALL BE SELECTED BY ARCHITECT.
13	FIRE SPRINKLER PIPING SHALL DROP TO MECHANICAL PLATE APPARATUS BAY CEILING.
14	DO NOT ROUTE SPRINKLER PIPING OVER ELECTRICAL EQUIPI
15	INSTALL SIDEWALL SPRINKLERS IN MECHANICAL PLATFORM 2 SPRINKLER COVERAGE.
16	ROUTE SPRINKLER PIPING HIGH AS POSSIBLE AROUND PERIM MECHANICAL PLATFORM. COORDINATE ROUTING WITH OTHER CONFLICTS.
17	AREA IS DESIGNATED AS A STORM SHELTER PER ICC 500. ALL SHALL MEET ICC 500 REQUIREMENTS. REFER TO ARCHITECTU ME0.1 FOR ADDITIONAL INFORMATION.
18	DRY PIPE SYSTEM AIR COMPRESSOR.
19	PROVIDE DRY TYPE FIRE PROTECTION SYSTEM FOR ATTIC SP
20	ROUTE DRY PIPE AUXILIARY DRAIN TO MOP BASIN. WHERE PIP PAINT TO MATCH WALL COLOR.
21	ROUTE WET PIPE AUXILIARY DRAIN TO UNOCCUPIED SPACE. EXPOSED, PAINT TO MATCH WALL COLOR.
22	PROVIDE FIRE PROTECTION IN THIS AREA PER ACCEPTANCE REFER TO ARCHITECTURAL AND CIVIL DRAWINGS FOR ADDITI
23	OMIT FIRE PROTECTION IN THIS ROOM PER 2015 IBC 903.2, EX TELECOMMUNICATIONS ROOM. ROOM SHALL BE RATED WITH DETECTORS INTERFACED WITH THE FIRE ALARM SYSTEM PRO SMOKE DETECTION SYSTEM

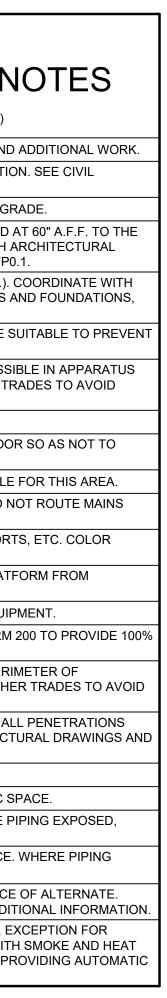
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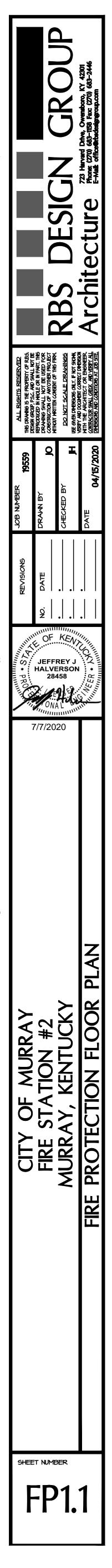


# MECHANICAL PLATFORM PLAN SCALE: 3/16" = 1'-0"

CLA	SSIFIED ASSE	MBLY LEGEND
SYMBOL	DESCRIPTION	REQUIRED WORK
	1 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712
	2 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712
AFD = AUTOMATIC FIR F-R-R = FIRE-RESISTAN FS = FIRE STOP		·







			PIPE	SIZE					PIPE	E SIZE					PIPE	SIZE				PIPE SIZE	
ARK	FIXTURE	TRAP	WASTE	C.W.	H.W.	MARK	FIXTURE	TRAP	WASTE		H.W.	MARK	FIXTURE	TRAP	WASTE	C.W. H.W.	MARK	FIXTURE	+ +	VASTE C.W	
	WATER CLOSET	3" or 4"		1"		P-2	LAVATORY	1-1/2"	2"	1/2"	1/2"	P-3		1-1/2"	2"	1/2" 1/2"	P-4		1-1/2"	2" 1/2"	
	AMERICAN STANE VITREOUS CHINA CONSUMPTION, 1 MOUNTED RIM A M FINISHED FLOOR. AMERICAN STANE PISTON TYPE FLU CHROME PLATED BREAKER FLUSH PREVENTION AND SOLID PLASTIC, W ANTI-MICROBIAL F EXTENDED BACK	, ELONG .6 GPF, MAXIMUI DARD MC ISHOME , HIGH B CONNEC VANDA VHITE, EI PROTEC	ATED, SIPH I-1/2" TOP S M HEIGHT C DDEL # 6047 TER, 1.6 GP ACK PRESS CTION WITH L-RESISTAN LONGATED TION, OPEN	ION ACTIC SPUD, FLC DF 17" ABC 7.161.002 I F, EXPOS SURE VAC I BACKFLC NT CAP. SEAT WIT N FRONT,	DN, LÓW DOR DVE MANUAL EED, CUUM DW		AMERICAN STA 20"x17", 4" CENT SELF-RIMMING FRONT OVERFL AMERICAN STA "MONTERREY" L SINGLE CONTRE COMPENSATING FINISH. AMERICAN STA CHROME GRID 3/8" CHROME PLATE INSTALL WASTE LAV GUARD 2 O ICC/ANSI A117.1	TER SET, VIT LAVATORY, Y OW. NDARD MOD LEAD FREE, Y OL, 4" CENTE S AERATOR Y NDARD MOD STRAINER W LATED SUPP ED KENTUCK E AND SUPPL R EQUAL) IN	REOUS ( WITH FA DEL # 611 CAST BR ERSET, 1 AND POL DEL # 772 /ITH TAIL DEL # 772 /ITH TAIL DEL WIT CIES WIT	CHINA, UCET LED 4.111.002 RASS BODY 1.5 GPM PF LISHED CH 23.018 POL PIECE. TH STOP. 'P' TRAP. G COVER (	OGE AND Y, RESSURE IROME ISHED		COUNTERTOP, A AMERICAN STAN LEAD FREE, CAS METAL ESCUTCI HANDLE, 2.2 GPI CARTRIDGE, AN ELKAY MODEL # REMOVABLE CO METAL STEM AN 3/8" CHROME PL CHROME PLATE INSTALL WASTE (TRUBRO LAV G WITH ICC/ANSI A	NDARD MOI ST BRASS E HEON PLAT M FLOW RA D SEPARA <sup>T</sup> LK35 STAII NICAL BAS ID RUBBER ATED SUPI D KENTUCI AND SUPP UARD 2 OR	DEL # 443 ODY, SW E AND ME TE, CERA TE HAND S NLESS ST KET STRA STOPPEF PLIES WIT CY CODE LY PIPINC EQUAL) I	IVEL SPOUT, ETAL LEVER MIC DISC VALVE SPRAY. EEL BODY AND NINER WITH R. 'H STOP. 'P" TRAP. G COVER		ACCESSIBLE. ELKAY MODEL # SELF-RIMMING, FURNISH WITH 3 SINK. CENTER F AMERICAN STAI "MONTERREY" L 8" RIGID/SWIVEL TWO HANDLE, F 1.5 GPM PRESSI VANDAL-RESIST ELKAY MODEL # REMOVABLE CO METAL STEM AN 3/8" CHROME PL CHROME PLATE	18 GAUGE, S 3 HOLES ON 4 2 EAR DRAINS NDARD MODE EAD FREE, S 4, GOOSENEC RIGID/SWIVEL JRE COMPEN ANT METAL DRICAL BASKI ID RUBBER S ATED SUPPL	TAINLESS STE " CENTERS F EL # 6409.170 OLID CAST BF K SPOUT, 8" ( 8" GOOSENE ISATING AERA WRIST BLADE ESS STEEL B ESS STEEL B ESS STEEL B TOPPER. IES WITH STC CODE "P" TR	EL SIN OR EAC CENTER CK SPO TOR AN HANDL ODY AN WITH
	0.111/		0"	4/01	4 (0)				0"	4/01	4 (0)		5000	4 4 (0)	0"	4/01		(TRUBRO LAV G WITH ICC/ANSI A	4117.1-2003.		
P-5 EMARKS	SINK	1-1/2" TMENT \$		1/2" SINK ON L	1/2" EGS	P-6 REMARKS	SHOWER	2" REGULAR.	2"	1/2"	1/2"	P-7 REMARKS	EWC	1-1/2" R COOLER	2" - DUAL H	1/2" EIGHT, ADA	P-8 REMARKS	MOP SINK : MOLDED HIGH D	3" ENSITY COM	3" 1/2' POSITE MOP \$	
	DEEP, 16 GAUGE, WITH 18" RIGHT S STAINLESS STEE FEET. CENTER DF ELKAY MODEL # L BRASS BODY, DU FAUCET, QUARTE 1/2" ADJUSTABLE VANDAL RESISTA WITH SWING RES HANDLES. ELKAY MODEL # L DRAIN OUTLET FI BRONZE WASTE FLANGE AND PEF BRASS 1-1/2" X 4" LEVER ARM. 3/8" CHROME PLATED	SIDE DRA L LEGS \ RAIN OU LK940AT VAL HANE ER TURN INLETS ANT AER STRICTIC LK24RT F BODY W FORATE TAILPIE	AINBOARD, WITH ADJUS TLET. 12T6H, LEA DLE, WALL I CERAMIC I ON 8" CENT ATOR 12" R ON PIN AND ROTARY LE OR 3-1/2" O (ITH STAINL ED GRID. CH CE AND ST. PPLIES WIT	9" BACKS STABLE B D FREE, S MOUNTED DISC CAR TERS, 2.2 EACH SPC 6" WRIST VER OPEI PENING, I LESS STEE HROME PL AINLESS S H STOP.	OULLET SOLID TRIDGE, GPM OUT BLADE RATED NICKEL EL FACE LATED STEEL		OPEN TOP, 3/4" BARS, TEXTURE WITH ANTI-MICF CONTRACTOR S VALVE. AMERICAN STA SOFT SHOWER HEAD, 2.5 GPM. KIT WITH R120 F BODY, CERAMIC CHROME PLATE LIMIT SAFETY S JAY R. SMITH M DRAIN WITH 2" ( SHOWER VALVE MAXIMUM TEMF	ED BOTTOM, ROBIAL SHOY SHALL DETEI NDARD MOD TRIM KIT WI T675.500 CC PRESSURE B DISC VALVI ED FINISH, AI TOP. ODEL # 2005 DUTLET. E SHALL BE F	CHROMI WER CUI RMINE O DEL # T67 TH SHOV DLONY SO BALANCE E CARTR ND ADJU SY 3" ADJ	E CURTAIN RTAIN. PRIENTATIO 75.501 COL WER ARM / OFT VALVE ROUGH V RIDGE, POL ISTABLE H JUSTABLE	N ROD ON OF -ONY AND E TRIM /ALVE LISHED IOT FLOOR		BARRIER-FREE, AND STAINLESS JAY R. SMITH MC COOLER SUPPO PLATES. FLOOR UPRIGHTS. MOUNT LOWEST 30" ABOVE FINIS MOUNT HIGHEST 36" ABOVE FINIS 3/8" CHROME PL CHROME PLATED FURNISH WITH C	STEEL FIN DDEL # 0832 RT SYSTEM MOUNTED SPOUT AT HED FLOOI T SPOUT AT HED FLOOI ATED SUPF D KENTUCF	ISH. 2 ELECTR 4 WITH TC AND FURI A MAXIM R. - A MAXIM R. - A MAXIM R. - LIES WIT (Y CODE '	PP AND BOTTOM NISHED WITH 48" UM HEIGHT OF UM HEIGHT OF H STOP. P' TRAP.		24"x24"x10" WITH / LINT BASKET A CAULKING NUT / OPTIONS TO INC - STAINLESS STE - HOSE AND HOS - MOP HANGER - STAINLESS STE - WALL GUARD # STEEL (2 PANEL T&S BRASS MOE FAUCET, POLISH HANDLES, WALL ETERNA CARTRI VACUUM BREAK THREAD SPOUT	ND A PVC DR AND GASKET EEL BUMPER EEL BRACKET EEL DRAIN 20 GAUGE TN S FOR 24"x24 DEL # B-0660- IED CHROME BRACE ASSE DGES WITH S ER, INTEGRA	AIN WITH ADJ GUARD "PE 304 STAIN " BASIN). POL SERVICE FINISH, LEVE EMBLY, HOT A SPRING CHEC	USTABI ILESS SINK R ND COL KS,
P-9	MOP SINK	3"	3"	1/2"	1/2"	P-10	SAFETY STATION			1"	1"	P-11	SHOWER	2"	2"	1/2" 1/2"	P-12	LAVATORY	1-1/2"	2" 1/2'	1
EMARKS	MOLDED HIGH DE BASIN. FIAT MODEL # MS 36"x24"x10" WITH 3 / LINT BASKET AN CAULKING NUT AN OPTIONS TO INCL - STAINLESS STEE - HOSE AND HOSE - MOP HANGER - STAINLESS STEE - WALL GUARD #2 STEEL (2 PANELS T&S BRASS MODE FAUCET, POLISHE HANDLES, WALL E ETERNA CARTRID VACUUM BREAKE THREAD SPOUT.	B 3624 M STAINLE ID A PVC ND GASH LUDE: EL BUMF E BRACK EL DRAIN 0 GAUGI FOR 36" EL # B-06 ED CHRC 3RACE A 0 GES WI	IOLDED STO SS STEEL I DRAIN WIT ET ER GUARD ET STYPE 304 x24" BASIN 60-POL SEP ME FINISH, SSEMBLY, 1 FH SPRING	ONE MOP DOME STF TH ADJUS TH ADJUS STAINLES ). RVICE SIN LEVER HOT AND CHECKS,	BASIN, RAINER TABLE SS IK COLD	REMARKS	COMBINATION S GUARDIAN MOD PLASTIC SHOWN BRASS STAY-OF STEEL ACTUATI ROD. HEAD ASSEMBL ON CHROME PL STAINLESS STE IPS CHROME PL WITH EPOXY- C HANDLE. GUARDIAN MOD VALVE WITH LO REGULATOR, BL ADJUSTABLE TE F. DELIVER 30 G GUARDIAN MOD SURFACE MOUN	DEL # G1902 ER HEAD, 1" DEN BALL VA NG ARM AND Y: 2 GS PLUS ATED BRASS EL BOWL. 1/2 ATED BRASS OATED CAST DEL # G3800 CKING TYPE JILT-IN COLE EMPERATUR IPM AT 10 PS DEL # G3802 S	10" SAFE IPS CHR LVE WIT D STAIN S SPRAY S SUPPL 2" EYE W S STAY-O T ALUMIN THERMO E TEMPER D WATER E LIMIT S SI. FURNI STAINLE	TY ORANG COME PLAT TH STAINLE LESS STEE Y HEADS M Y ARMS. 1 VASH VALV OPEN BALL NUM FLAG OSTATIC MI RATURE & BYPASS / STOP SET ISH WITH	GE ABS TED ESS EL PULL IOUNTED 1-1/2" VE: 1/2" L VALVE IXING AND FOR 90°	REMARKS	S: SHOWER UNIT, F AQUABATH MOD ACRYLIC SHOWE O.D., OPEN TOP, GRAB BARS, TE> ROD WITH ANTI-I WHITE SEAT. CC ORIENTATION OI AMERICAN STAN SYSTEM, PRESS SHOWER HEAD, 36" STAINLESS S WITH CERAMIC I CHROME PLATEI HANDLE, ADA CC AND ADJUSTABL JAY R. SMITH MC DRAIN WITH 2" O SHOWER VALVE MAXIMUM TEMPI	EL # C6536 ER ENCLOS 3/4" THRES (TURED BC MICROBIAL DITRACTOF F VALVE. IDARD MOE URE BALAN HAND SHO DISC VALVE D FINISH, A DMPLIANT L E HOT LIMI DDEL # 2009 DUTLET. SHALL BE	BF-OT-FU SURE 65"V SHOLD, S TTTOM, CF SHOWER SHALL D DEL # 1662 NCE VALV WER, DIV E BAR, 2.5 E CARTRIE DA COMP EVER VO IT SAFETY SY 3" ADJU FIELD AD.	S 3/4" WHITE / X 37"D x 82-3/4"H FAINLESS STEEL ROME CURTAIN CURTAIN, DETERMINE 2.223 SHOWER E AND TRIM, ERTER VALVE, GPM. FURNISH DGE, POLISHED LIANT DIVERTER LUME CONTROL, Y STOP. JSTABLE FLOOR	1	LAVATORY, WAL AMERICAN STAN "LUCERNE" 15" x CHINA, WALL HU OVERFLOW. JAY R. SMITH MC CONCEALED AR MOUNT LIP AT A AMERICAN STAN "MONTERREY" L SINGLE CONTRO PRESSURE COM POLISHED CHRO AMERICAN STAN CHROME GRID S 3/8" CHROME PLATE INSTALL WASTE (TRUBRO LAV GI WITH ICC/ANSI A	NDARD MODE 10", 4" CENT ING LAVATOF DDEL # 0700 F M 'PRO-SET' I MAXIMUM HI NDARD MODE EAD FREE, C DL, 4" CENTEF IPENSATING DME FINISH. NDARD MODE STRAINER WI ATED SUPPL D KENTUCKY AND SUPPLY JARD 2 OR E	L # 0356.028.0 ER SET, VITRE Y WITH FROM LOOR MOUN AVATORY SU EIGHT OF 34" / L # 6114.111.0 AST BRASS BO RSET, 1.5 GPW AERATOR AND L # 7723.018 F TH TAILPIECE. ES WITH STO CODE 'P' TRA	20 EOUS IT PPORT A.F.F. 02 DDY, DOLISHE P. P.

		SPECIALTY ITEMS
		JECIALI I TENIS
MARK	DESCRIPTION	REMARKS
FD-1	FLOOR DRAIN	JAY R. SMITH MODEL 2005Y 3" ADJUSTABLE FLOOR DRAIN (ROUND TOP) WITH 5" DIA. STAINLESS STEEL STRAINER, VANDAL PROOF SECURED GRATE AND TRAP PRIMER CONNECTION.
FD-2	FLOOR DRAIN	JAY R. SMITH MODEL 2005Y 4" ADJUSTABLE FLOOR DRAIN (ROUND TOP) WITH 6" DIA. NICKEL BRONZE STRAINER, VANDAL PROOF SECURED GRATE AND TRAP PRIMER CONNECTION.
FD-3	FLOOR DRAIN	MIFAB MODEL F1590-90 24"x24" HEAVY DUTY PARKING AREA DRAIN WITH 4" DIA. SIDE OUTLET. PROVIDE WITH GALVANIZED TOP ASSEMBLY AND GALVANIZED BODY. RATED FOR HEAVY DUTY COMMERCIAL TRAFFIC.
FS-1	FLOOR SINK	JAY R. SMITH MODEL 3410Y SANI-CEPTOR ACID RESISTANT COATED FLOOR AND INDIRECT WASTE DRAIN. 8"x8"x6"DEEP CAST IRON FLANGED RECEPTOR, 6" SUMP DEPTH, NICKEL BRONZE RIM WITH HALF GRATE, VANDAL PROOF SCREWS, AND ALUMINUM SEDIMENT BUCKET. 4" DIA. OUTLET.
GD-1	GARBAGE DISPOSER	IN-SINK-ERATOR MODEL 333 1/2 H.P. GARBAGE DISPOSER 120V/1PH. WITH OFFSET CHUTE.
HB-1	3/4" HOSE BIBB	WOODFORD MODEL 24 WALL FAUCET WITH METAL WHEEL HANDLE AND CHROME FINISH. INSTALL HOSE BIBB 48" ABOVE FINISHED FLOOR.
IMB-1	ICE MAKER OUTLET BOX	IPS MODEL 9700 WATER TITE ICE MAKER OUTLET BOX. CHROME 1/4 TURN ADAPTER BALL VALVE WITH 1/2" COPPER SWEAT CONNECTION. FURNISH WITH WATER FILTER.
OR-1	OPEN RECEPTACLE	4" DIA. HUB TO EXTEND 4" ABOVE FINISHED FLOOR.
WB-1	WASHER OUTLET BOX	GUY GRAY MODEL NWFBED2004 RECESSED WASHING MACHINE OUTLET BOX WITH 120V AND 220V ELECTRICAL OUTLETS. FURNISH WITH 1/2" SWEAT VALVES AND A 2" THREADED DRAIN FITTING. COORDINATE LOCATION WITH ELECTRICAL CONTRACTOR.
ET-1	THERMAL EXPANSION TANK	AMTROL MODEL ST-5 THERMAL EXPANSION TANK.
FWH-1	FREEZEPROOF WALL HYDRANT	WOODFORD MODEL 67 AUTOMATIC DRAINING WALL HYDRANT WITH LOOSE TEE KEY OPERATION AND CHROME FINISH. MOUNT AT 18" ABOVE FINISHED GRADE.
TP-1	TRAP PRIMER	PR-500 PRIME-RITE TRAP PRIMER.
CO-1	FLOOR CLEANOUT	JAY R. SMITH 4000 SERIES MODEL 4020Y04 FINISHED FLOOR CLEAN OUT WITH ADJUSTABLE, ROUND, NICKEL BRONZE, VANDAL PROOF TOP.
CCO-1	COMBINATION CLEAN OUT/TEST TEE	JAY R. SMITH MODEL 4283 DUCO CAST IRON CLEAN OUT FERRULE WITH BRONZE TAPER CLOSURE PLUG.
WCO-1	WALL CLEAN OUT	JAY R. SMITH MODEL 4532 CLEAN OUT TEE, DUCO-COATED CAST IRON BODY, BRONZE TAPERED THREAD PLUG, STAINLESS STEEL ROUND COVER WITH VANDAL PROOF SCREW.
YCO-1	YARD CLEAN OUT	ZURN Z-1406-BP-VP ADJUSTABLE CLEAN OUT WITH SPIGOT CONNECTION FOR CAULKING INTO HUB. DURA-COATED CAST IRON BODY WITH GAS AND WATERTIGHT BRONZE PLUG WITH POLISHED BRONZE TOP.
SI-1	SAND INTERCEPTOR	JAY R. SMITH MODEL 8811-50-SHD SAND INTERCEPTOR 50 GPM FLOW RATE 48-5/8"X48-5/8"X26"DEEP WITH 4" OUTLET AND SOLID HEAVY DUTY DIAMOND PLATE COVER WITH TRAFFIC RATED LID.
OWS-1	OIL/WATER SEPARATOR	JAY R. SMITH MODEL 8560-E ALL STEEL OIL INTERCEPTOR AND EXTENSION WITH GRAY DUCO COATING INSIDE AND OUTSIDE AND FLOW CONTROL FITTING, FLANGE AND FLASHING CLAMP, TRAFFIC RATED COVER, 100 GPM FLOW RATE., 4" INLET AND OUTLET.
TMV-1	THERMOSTATIC MIXING VALVE	LEONARD HIGH LOW THERMOSTATIC MIXING VALVE MODEL XL-82-LF-BDT, 1 MIN. TO 61 MAX. GPM WITH BALL VALVE AND DIAL THERMOMETER WITH ROUGH BRONZE FINISH. SET AT 110 DEGREES F.
CP-1	CIRCULATING PUMP	BELL AND GOSSETT MODEL NBF-36 FOR OPEN POTABLE WATER SYSTEM, LEAD FREE, ALL BRONZE CONSTRUCTION, 115VOLTS, SINGLE PHASE. FURNISHED WITH AQUA STAT TO CONTROL UNIT OPERATION
BFP-1	BACKFLOW PREVENTER	WATTS SERIES 007 MODEL 007M1QT-S, 2" DOUBLE CHECK VALVE BACKFLOW PREVENTER WITH BRONZE BODY CONSTRUCTION AND BRONZE STRAINER.

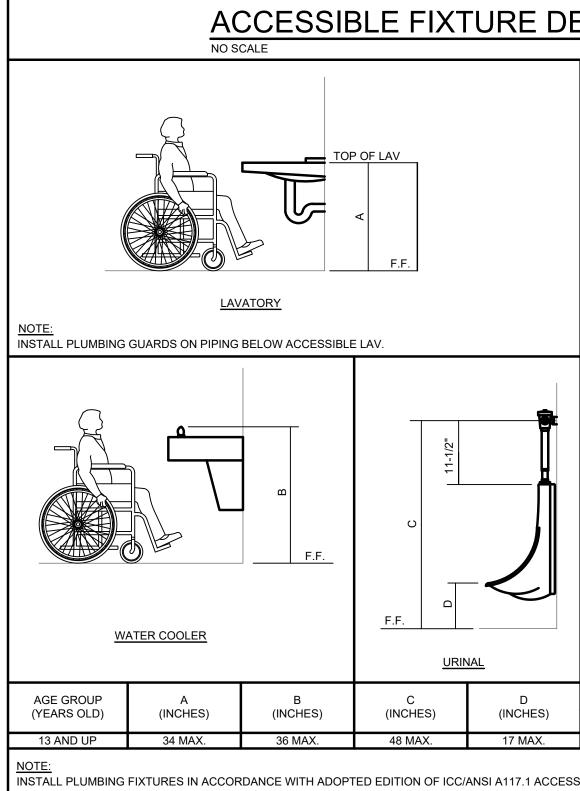
					Ċ	GAS W	ATER HEATER	SCHE	EDUL	.E						
MARK	MFG.	MODEL	TYPE		DIMENSIONS		SERVICE	TEMP.	TEMP.	RECO	OVERY	STORAGE		NATURAL GA	AS	REMARKS AND
				DIAMETER (IN.)	WIDTH (IN.)	HEIGHT (IN.)	OR LOCATION	SETTING (DEG. F)	RISE (DEG. F)	(GPH)	(GPM)	CAPACITY (GALLONS)	INPUT (MBH)	OUTPUT (MBH)	THERMAL EFF.	ACCESSORIES
WH-1	LOCHINVAR	SNR126-065	TANK	28		60.25	MECHANICAL PLATFORM 200	120	100	138		65	125,000	120,000	96	SEE BELOW
WH-2	LOCHINVAR	SNR126-065	TANK	28		60.25	MECHANICAL PLATFORM 200	120	100	138		65	125,000	120,000	96	SEE BELOW

REMARKS AND ACCESSORIES:

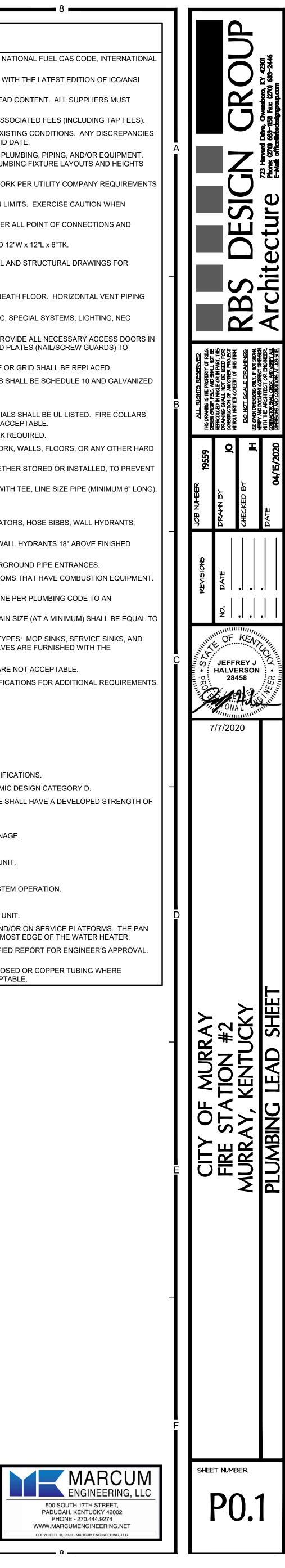
A. SEISMICALLY RESTRAIN WATER HEATER TO ACCEPTABLE SUBSTRATE.

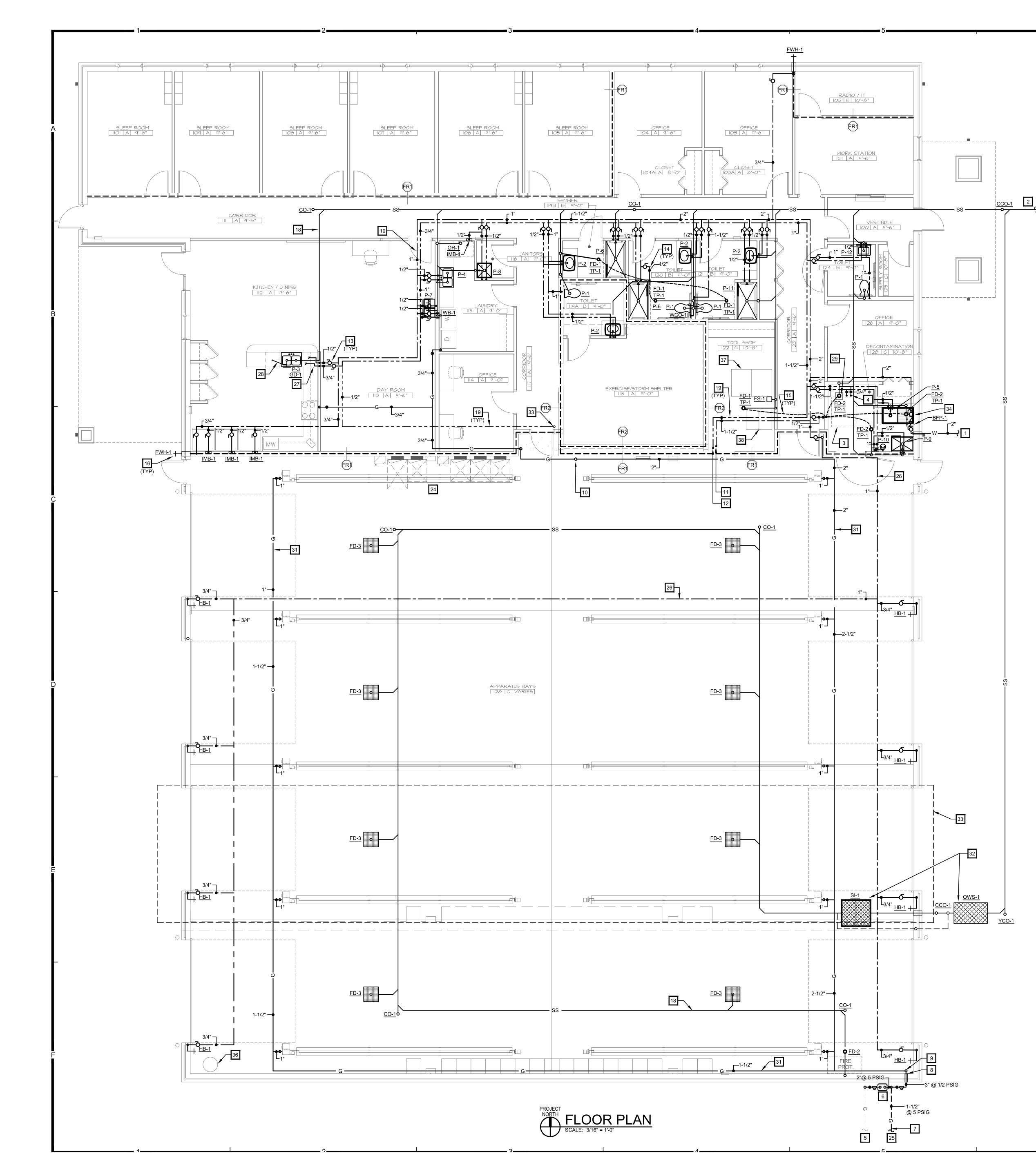
B. DIRECT VENTING (SEALED COMBUSTION) REQUIRED.C. A.O. SMITH, BRADFORD WHITE, LOCHINVAR, OR APPROVED EQUAL.

D. PROVIDE UNIT WITH MANUFACTURER'S VERTICAL CONCENTRIC VENT KIT.



URE DE	ETAILS	PLUMBING NOTES
		1 ALL WORK SHALL BE IN ACCORDANCE WITH THE STATE BUILDING CODE, STATE PLUMBING CODE, NFPA 54 NATIONAL FUE
		MECHANICAL CODE, AND OTHER LOCAL/STATE/ NATIONAL CODES OR STANDARDS THAT APPLY. ACCESSIBLE PLUMBING FIXTURES SHALL BE INSTALLED PER THE STATE BUILDING CODE IN ACCORDANCE WITH THE LAT
		A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES.
		3 ALL WETTED PLUMBING ITEMS SHALL COMPLY WITH NSF 372 DRINKING WATER SYSTEM COMPONENTS - LEAD CONTENT. ASSURE COMPLIANCE REGARDLESS OF PRODUCTS SPECIFIED WITHIN THE CONSTRUCTION DOCUMENTS.
		4 THE CONTRACTOR SHALL ACQUIRE PLUMBING PERMIT(S), COORDINATE ALL INSPECTIONS, AND PAY ALL ASSOCIATED FE
		5 EACH CONTRACTOR MUST VISIT THE SITE PRIOR TO BIDDING IN ORDER TO BECOME FAMILIAR WITH THE EXISTING COND OR QUESTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER NINE (9) DAYS PRIOR TO THE BID DATE.
		6 THESE PLANS ARE SCHEMATIC IN NATURE AND INDICATE THE APPROXIMATE AND GENERAL LOCATION OF PLUMBING, PIF
	F.F.	COORDINATE INSTALLATION OF WORK WITH OTHER DRAWINGS AND TRADES. PRECISELY LOCATE ALL PLUMBING FIXTUR PER ARCHITECTURAL DRAWINGS IN LIEU OF PLUMBING DRAWINGS.
		7 COORDINATE NEW CONNECTIONS TO UTILITIES WITH THE APPROPRIATE UTILITY COMPANY(S). INSTALL WORK PER UTILI AND OBTAIN NECESSARY UTILITY COMPANY APPROVALS.
	ELEVATION	<ul> <li>BE AWARE THAT SEVERAL UTILITIES ARE LOCATED IN THE GROUND BELOW THE PROJECT CONSTRUCTION LIMITS. EXER</li> </ul>
		EXCAVATING. UTILIZE HAND TOOLS TO LOCATE EXISTING UTILITIES PRIOR TO MACHINE EXCAVATION.
		9 VERIFY ALL INVERT ELEVATIONS AND DIMENSIONS BEFORE FABRICATION AND/OR INSTALLATION. DISCOVER ALL POINT ESTABLISH ELEVATIONS AND PITCH PRIOR TO BEGINNING ANY INSTALLATION.
-		10 OUTDOOR CLEANOUTS SHALL TERMINATE FLUSH WITH GRADE AND BE EMBEDDED IN CONCRETE FINISHED 12"W x 12"L x
<b></b>	GRAB BAR FOR PROPER ACCESS	11 COORDINATE SANITARY SEWER PIPING WITH STRUCTURAL MEMBERS AS REQUIRED. SEE ARCHITECTURAL AND STRUCT
		RESTRICTIONS. 12 PROTECT ALL EQUIPMENT AND/OR SYSTEMS FROM DAMAGE.
Ă	F	13 ILLUSTRATED HORIZONTAL SANITARY SEWER DRAIN LINES SHALL BE UNDERSTOOD TO BE INSTALLED BENEATH FLOOR.
		AND WATER PIPING SHALL BE INSTALLED ABOVE CEILINGS, UNLESS NOTED OTHERWISE. 14 COORDINATE PLUMBING ROUTING IN CEILING SPACES TO AVOID CONFLICTS WITH FIRE PROTECTION. HVAC. SPECIAL SY
)		CLEARANCES, ETC. DO NOT INSTALL PIPING DIRECTLY OVER ELECTRICAL PANELS OR SWITCHGEAR.
	PLAN VIEW	15 CONCEAL ALL PLUMBING, PIPING, ETC. IN CEILING AND/OR WALL SPACES (UNLESS NOTED OTHERWISE). PROVIDE ALL NE INACCESSIBLE CEILINGS OR WALLS TO ALLOW ACCESS FOR VALVES, TRAP PRIMERS, ETC. INSTALL SHIELD PLATES (NAI
		PROTECT PIPING INSTALLED WITHIN WOOD FRAMING.
	WATER CLOSET STYLE MAY VARY	<ul> <li>16 REMOVE AND REPLACE CEILING TILES AND/OR GRID AS REQUIRED TO INSTALL WORK. ANY DAMAGED TILE OR GRID SHA</li> <li>17 SLEEVE ALL PLUMBING, PIPING, VENTS, ETC. THROUGH NEW ROOF, FLOOR, AND/OR WALLS. PIPE SLEEVES SHALL BE SC</li> </ul>
	FLOOR MOUNT WATER CLOSET	STEEL. SLEEVES ARE NOT REQUIRED FOR CORE DRILLED HOLES.
		18 FLASH AND SEAL ALL ROOF, FLOOR, AND WALL PENETRATIONS.
) HES)	E (INCHES) F (INCHES)	19 FIRE STOP ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. FIRE STOPPING METHOD AND MATERIALS SHALL BE WILL BE REQUIRED IF PIPING IS COMBUSTIBLE. CHANGING PIPE MATERIAL TO METAL AT PENETRATION IS ACCEPTABLE.
	MINIMUM MAXIMUM MINIMUM MAXIMUM 17 19 16 18	20 PATCH ALL WALLS, FLOORS, CEILINGS, PAVEMENTS, GRADES, ETC. THAT ARE ALTERED BECAUSE OF WORK REQUIRED.
		21 PLACE MILDEW RESISTANT SILICONE SEALANT AROUND ALL PLUMBING FIXTURES THAT CONTACT CASEWORK, WALLS, FI SURFACES. COLOR SHALL MATCH ADJACENT SURFACE.
CCESS	BIBLE AND USABLE BUILDINGS AND FACILITIES.	22 COVER ALL OPENINGS ON WATER CONVEYANCE ITEMS (PIPING, COMPONENTS, AND/OR EQUIPMENT), WHETHER STORED
		ACCUMULATION OF CONSTRUCTION DEBRIS. 23 INSTALL ARRESTORS AT ALL FIXTURE SUPPLIES. ARRESTORS SHALL BE FABRICATED DURING ROUGH-IN WITH TEE, LINE
UN	/IBING LEGEND	AND PIPE CAP.
	DESCRIPTION	<ul> <li>24 INSTALL MANUFACTURED HAMMER ARRESTORS ON ALL PIPES SUPPLYING QUICK ACTING VALVES.</li> <li>25 SECURE PLUMBING ROUGH-IN TO BUILDING STRUCTURE TO PROHIBIT MOVEMENT OF FLUSH VALVE ACTUATORS, HOSE E</li> </ul>
L	- SANITARY SEWER PIPING	FIXTURE SUPPLY STOP VALVES, ETC.
	- GAS PIPING	26 INSTALL HOSE BIBBS 18" ABOVE FINISHED FLOOR, UNLESS NOTED OTHERWISE. INSTALL FREEZE PROOF WALL HYDRANT GRADE, UNLESS NOTED OTHERWISE.
	- COLD WATER PIPING	27 INSTALL DIELECTRIC CONNECTIONS AT ALL DISSIMILAR MATERIAL PIPING JOINTS AND AT SLAB FOR UNDERGROUND PIPE
·		28 AT A MINIMUM, INSTALL TRAP PRIMERS FOR ALL FLOOR DRAINS AND OPEN RECEPTACLES LOCATED IN ROOMS THAT HAV REFER TO DRAWINGS FOR OTHER TRAP PRIMER LOCATIONS.
	HOT WATER RECIRCULATION     VENT PIPING	29 INSTALL A PRESSURE RELIEF VALVE ON EACH WATER HEATING UNIT AND/OR TANK. ROUTE DISCHARGE LINE PER PLUME
	BACKFLOW PREVENTER	ACCEPTABLE DRAIN OR OUTDOORS AS LAST OPTION. 30 INSTALL A DRAIN LINE FOR ALL EQUIPMENT (WATER HEATERS, TANKS, ETC.) REQUIRING A DRAIN. THE DRAIN SIZE (AT A
<u>0</u>	CLEAN OUT	THE UNIT'S CONNECTION SIZE BUT IN NO CASE SHALL BE LESS THAN 3/4" DIAMETER.
<u>0</u>	COMBINATION TEST TEE / CLEAN OUT	31 INSTALL SUPPLY CHECK VALVES ON COLD AND HOT WATER CONNECTIONS TO THE FOLLOWING FIXTURE TYPES: MOP SI ANY OTHER FIXTURE WHERE CROSSOVER IS POSSIBLE. THESE MAY BE OMITTED IF INTEGRAL CHECK VALVES ARE FURN
	FLOOR DRAIN	FIXTURE/FAUCET(S).
	FREEZE PROOF WALL HYDRANT	32 DOMESTIC WATER ISOLATION VALVES SHALL BE ONE PIECE BRONZE BALL TYPE. PLASTIC BODY VALVES ARE NOT ACCER 33 EOR THIS PROJECT, MINIMUM DIDING MATERIALS SHALL BE AS LISTED BELOW. REFER TO WRITTEN SPECIFICATIONS FOR
_	GARBAGE DISPOSER	33 FOR THIS PROJECT, MINIMUM PIPING MATERIALS SHALL BE AS LISTED BELOW. REFER TO WRITTEN SPECIFICATIONS FOR WATER INDOOR: TYPE L RIGID COPPER PIPE WITH SOLDERED FITTINGS
		WATER INDOOR, UNDER SLAB: PEX TUBING OR ANNEALED COPPER TUBING (NO JOINTS UNDER SLAB)
	ICE MAKER OUTLET BOX OPEN RECEPTACLE	SEWER INDOOR: SCH 40 PVC PIPE WITH DWV FITTINGS OR COPPER DWV PIPING
	OIL / WATER SEPARATOR	FUEL GAS OUTDOOR, BURIED: SDR 11 POLYETYLENE TUBING
	POINT OF CONNECTION	FUEL GAS OUTDOOR, ABOVE GRADE: SCH 40 CARBON STEEL PIPE WITH SCRWD FITTINGS
		<ul> <li>FUEL GAS INDOOR: SCH 40 CARBON STEEL PIPE (FITTINGS PER NFPA)</li> <li>INSULATE COLD WATER PIPING AND HOT WATER (INCLUDING RECIRCULATION) PIPING PER WRITTEN SPECIFICATIONS.</li> </ul>
	THERMOSTATIC MIXING VALVE	<ul> <li>34 INSULATE COLD WATER PIPING AND HOT WATER (INCLUDING RECIRCULATION) PIPING PER WRITTEN SPECIFICATIONS.</li> <li>35 SEISMICALLY SUPPORT ALL EQUIPMENT, PIPE, PLUMBING, ETC. PER THE STATE BUILDING CODE AND SEISMIC DESIGN CA</li> </ul>
	VENT THRU ROOF	36 PLACE REINFORCED CONCRETE PADS FOR ALL FLOOR AND/OR GRADE MOUNTED EQUIPMENT. CONCRETE SHALL HAVE
	WASHER OUTLET BOX	4,000 PSI AT 28 DAYS. CHAMFER ALL EXPOSED EDGES AT 1". INDOOR PAD INSTALLATIONS:
<u>)</u>		A. PAD SHALL BE 4" THICK (MINIMUM) BUT SUITABLE HEIGHT FOR SYSTEM OPERATION AND PROPER DRAINAGE.
<u>)</u>		B. STEEL REINFORCEMENT SHALL BE 6" WWF, DOWELED TO FLOOR TO PREVENT LATERAL MOVEMENT.
) 	BALL VALVE	C. AT A MINIMUM, PAD DIMENSIONS SHALL GENERALLY EXTEND 4" PAST THE OUTER MOST EDGE OF THE UNIT.
<u> </u>	PRESSURE REGULATOR	OUTDOOR PAD INSTALLATIONS:
<u> </u>	GAS COCK	A. PAD SHALL BE 6" THICK (MINIMUM) BUT SUITABLE HEIGHT FOR GRADE/DRAINAGE CONDITIONS AND SYSTEM OPERATIONS AND SYSTEM
-	CHECK VALVE	<ul> <li>B. STEEL REINFORCEMENT SHALL BE 6" WWF.</li> <li>C. AT A MINIMUM, PAD DIMENSIONS SHALL GENERALLY EXTEND 12" PAST THE OUTER MOST EDGE OF THE UNIT.</li> </ul>
	UNION	37 INSTALL AUXILIARY DRAIN PAN(S) FOR ALL WATER HEATERS AND/OR TANKS LOCATED ABOVE CEILINGS AND/OR ON SER
		SHALL BE CORROSION RESISTANT METAL, 1 1/2" DEEP, AND SHALL EXTEND 3" (MINIMUM) BEYOND OUTER MOST EDGE O
_	DOUBLE CHECK BACKFLOW PREVENTER	38 PROVIDE ALL WATER HEATERS 199,000 BTUH AND LARGER WITH MANUFACTURER'S START-UP AND CERTIFIED REPORT F INSTALLING CONTRACTOR START-UP IS NOT ACCEPTABLE.





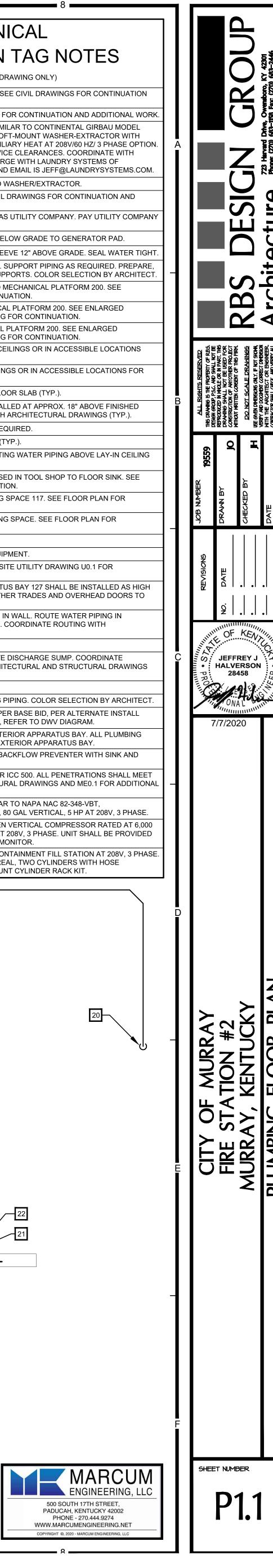
	۶ <b></b> 7		
			MECHANICAL
			CONSTRUCTION TAG NOTE
		#	(APPLIES TO THIS DRAWING ONLY) DOMESTIC WATER PIPING FROM UTILITY MAIN. SEE CIVIL DRAWINGS FOR CO AND ADDITIONAL WORK.
		2 3	SANITARY SEWER PIPING. SEE CIVIL DRAWINGS FOR CONTINUATION AND AD PROVIDE AND INSTALL WASHER-EXTRACTOR SIMILAR TO CONTINENTAL GIRE EH060 ON-PREMISE LAUNDRY (OPL) E-SERIES SOFT-MOUNT WASHER-EXTRA- INTELI CONTROL. PROVIDE WITH ELECTRIC AUXILIARY HEAT AT 208V/60 HZ/ 3 MAINTAIN ALL REQUIRED OPERATING AND SERVICE CLEARANCES. COORDIN ARCHITECTURAL DRAWINGS. CONTACT JEFF LARGE WITH LAUNDRY SYSTEM
		4	TENNESSEE. PHONE NUMBER IS 888-427-5743 AND EMAIL IS JEFF@LAUNDRY: DROP 3/4" HOT AND 3/4" COLD WATER PIPING TO WASHER/EXTRACTOR. NATURAL GAS PIPING FROM GAS MAIN. SEE CIVIL DRAWINGS FOR CONTINUA ADDITIONAL WORK.
		6 7	NEW GAS METER AND REGULATOR BY LOCAL GAS UTILITY COMPANY. PAY U COSTS. ROUTE POLYETHYLENE GAS PIPING AT 5 PSIG BELOW GRADE TO GENERATO
		8	SLEEVE GAS PIPING AT THRU WALL. INSTALL SLEEVE 12" ABOVE GRADE. SEA GAS PIPING SHALL RISE EXPOSED ALONG WALL. SUPPORT PIPING AS REQUI
		9 10	PRIME, AND PAINT ALL EXPOSED PIPING AND SUPPORTS. COLOR SELECTION ROUTE GAS PIPING HIGH IN APPARATUS BAY TO MECHANICAL PLATFORM 200 ENLARGED PLAN ON THIS DRAWING FOR CONTINUATION.
		11	DOMESTIC HOT WATER PIPING FROM MECHANICAL PLATFORM 200. SEE ENLA MECHANICAL PLATFORM PLAN ON THIS DRAWING FOR CONTINUATION.
		12	DOMESTIC COLD WATER PIPING TO MECHANICAL PLATFORM 200. SEE ENLAR MECHANICAL PLATFORM PLAN ON THIS DRAWING FOR CONTINUATION. INSTALL ALL ISOLATION VALVES ABOVE LAY-IN CEILINGS OR IN ACCESSIBLE
		13 14	(TYP.). INSTALL ALL TRAP PRIMERS ABOVE LAY-IN CEILINGS OR IN ACCESSIBLE LOC
		14	MAINTENANCE PURPOSES. (TYP.). SEAMLESS NO-JOINT COPPER PIPING BELOW FLOOR SLAB (TYP.).
		16	FREEZE-PROOF WALL HYDRANT SHALL BE INSTALLED AT APPROX. 18" ABOVE GRADE. COORDINATE FINAL BOX LOCATION WITH ARCHITECTURAL DRAWING
		17 18	SLOPE WATER HEATER DRAIN PAN PIPING AS REQUIRED. ROUTE SANITARY SEWER PIPING BELOW SLAB (TYP.). ROUTE DOMESTIC HOT, COLD, AND RECIRCULATING WATER PIPING ABOVE L
		19 20	UNLESS NOTED OTHERWISE (TYP.). DROP WATER HEATER DRAIN PAN PIPING EXPOSED IN TOOL SHOP TO FLOOP
		20	FLOOR PLAN ON THIS DRAWING FOR CONTINUATION. DROP DOMESTIC HOT WATER PIPING TO CEILING SPACE 117. SEE FLOOR PLA CONTINUATION.
		22	DROP DOMESTIC COLD WATER PIPING TO CEILING SPACE. SEE FLOOR PLAN CONTINUATION.
		23 24	GAS PIPING TO MECHANICAL EQUIPMENT.DO NOT ROUTE PIPING ABOVE ELECTRICAL EQUIPMENT.
		25	GAS PIPING TO EMERGENCY GENERATOR. SEE SITE UTILITY DRAWING U0.1 F CONTINUATION AND ADDITIONAL WORK. ALL DOMESTIC COLD WATER PIPING IN APPARATUS BAY 127 SHALL BE INSTA
		26	
		27	CASEWORK TO SUPPLY SINK AND DISHWASHER. COORDINATE ROUTING WIT ARCHITECTURAL DRAWINGS.
		28 29	AIR GAP FROM DISHWASHER. INSTALL FLOOR DRAIN IN BOTTOM OF CONCRETE DISCHARGE SUMP. COORD SANITARY WASTE PIPE ELEVATIONS WITH ARCHITECTURAL AND STRUCTURA
			FOR CONNECTIONS. RISE AS CLOSE TO CEILING AS POSSIBLE.
		31 32	PREPARE, PRIME, AND PAINT ALL EXPOSED GAS PIPING. COLOR SELECTION INSTALL SI-1 AND OWS-1 AT LOCATION SHOWN PER BASE BID, PER ALTERNATION BETWEEN THIRD AND FOURTH APPARATUS BAY, REFER TO DWV DIAGRAM.
		33	PER ALTERNATE BID, DUPLICATE LAYOUT OF INTERIOR APPARATUS BAY. ALL SYSTEMS IN EXTERIOR BAY SHALL REMAIN AT EXTERIOR APPARATUS BAY.
		34	COORDINATE LOCATION OF FLOOR DRAIN AND BACKFLOW PREVENTER WITH DRAINBOARD. AREA IS DESIGNATED AS A STORM SHELTER PER ICC 500. ALL PENETRATION
		35	ICC 500 REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS AND ME0.1 INFORMATION. PROVIDE AND INSTALL AIR COMPRESSOR SIMILAR TO NAPA NAC 82-348-VBT.
		36	RECIPROCATING, 2 CYLINDER, 2 STAGE, 175 PSI, 80 GAL VERTICAL, 5 HP AT 2 PROVIDE AND INSTALL BAUER LEGACY 2-13 OPEN VERTICAL COMPRESSOR F
		37	WITH BAUER ELECTRONIC CARBON MONOXIDE MONITOR. PROVIDE AND INSTALL BAUER CFS5.5-2SX4X4 CONTAINMENT FILL STATION A
		38	UNIT SHALL BE PROVIDED WITH COX100 HOSE REAL, TWO CYLINDERS WITH I CONNECTIONS TO FILL STATION, AND WALL MOUNT CYLINDER RACK KIT.
	G		<u> </u>
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17—	MECHANICAL PLATE	ORM	3/4" ¬
		-	
	$G \longrightarrow G \longrightarrow$		
	<u>WH-1</u> <u>FT-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u> <u>H-1</u>		- LADDER

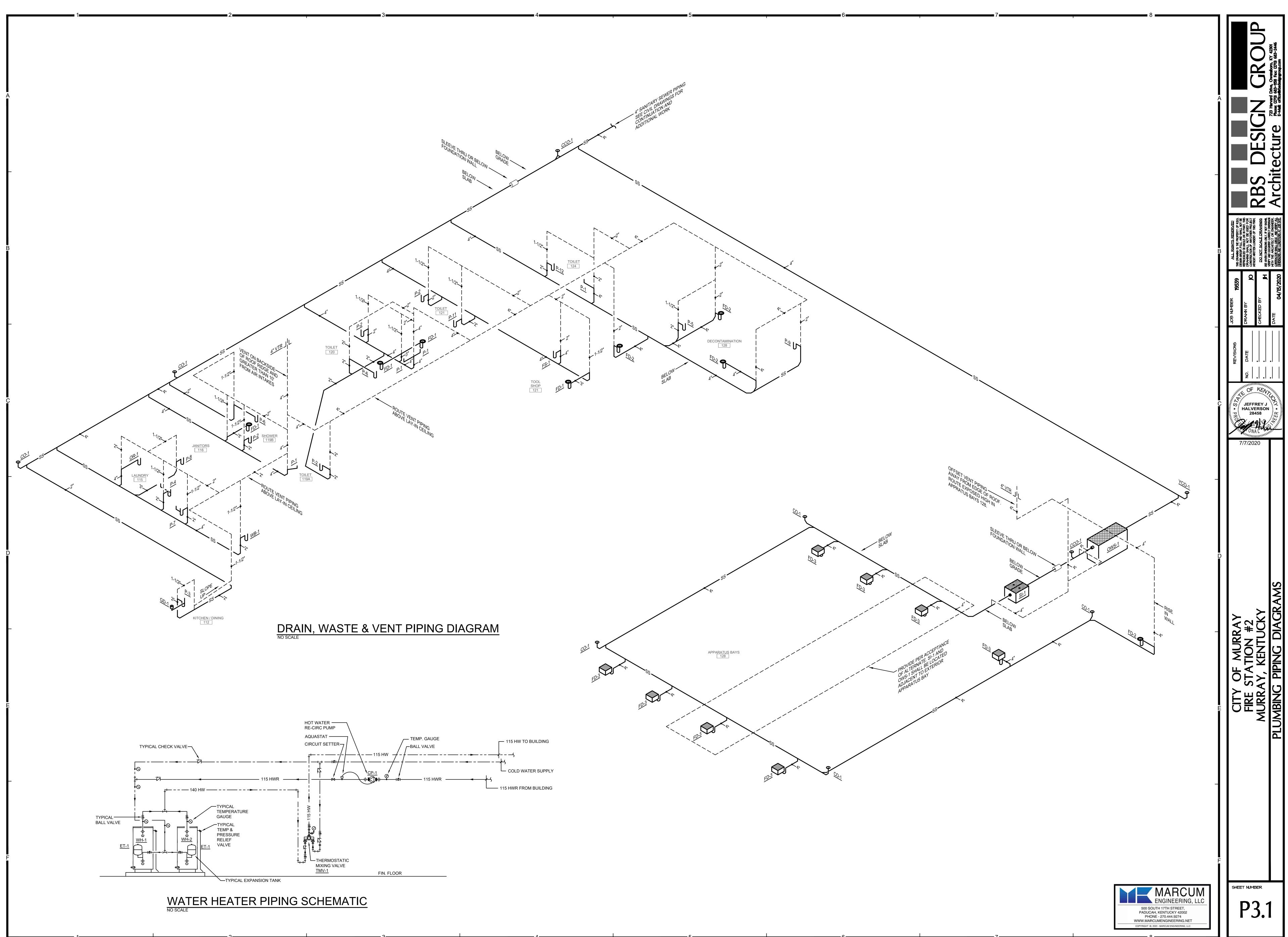
### MECHANICAL PLATFORM PLAN SCALE: 3/16" = 1'-0"

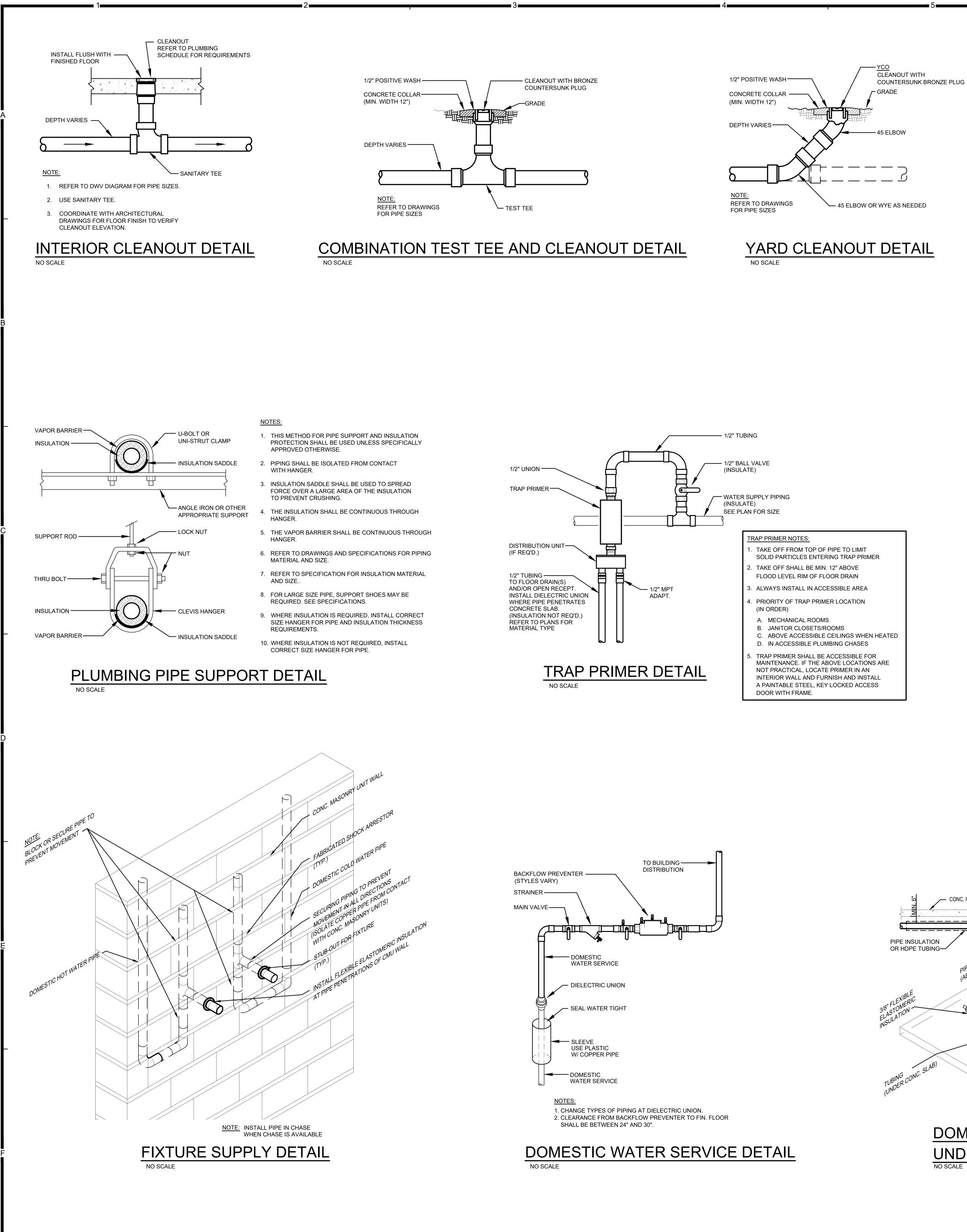
CLA	SSIFIED ASSE	EMBLY LEGEND
SYMBOL	DESCRIPTION	REQUIRED WORK
	1 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712
FR2	2 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712
AFD = AUTOMATIC FIRI F-R-R = FIRE-RESISTAN FS = FIRE STOP		

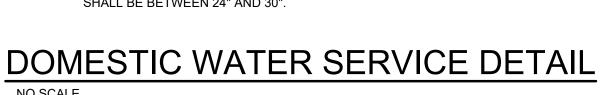
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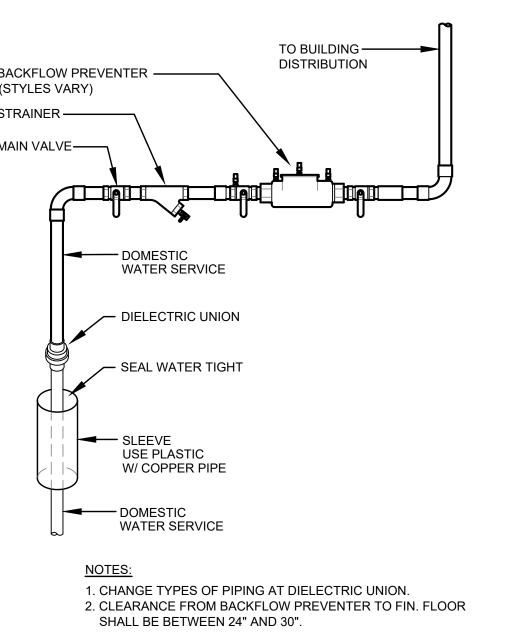
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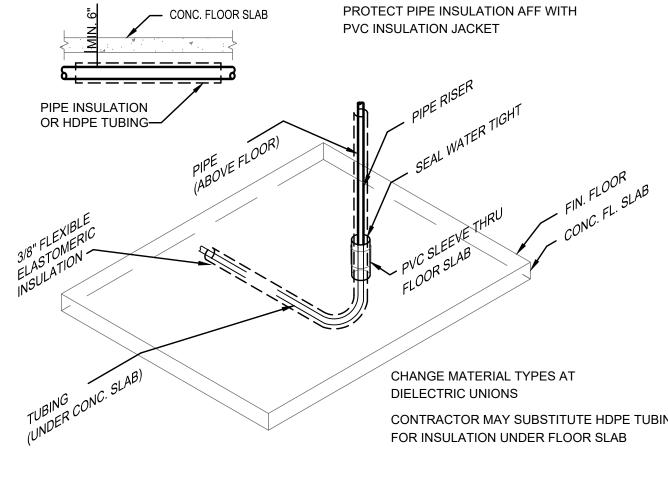


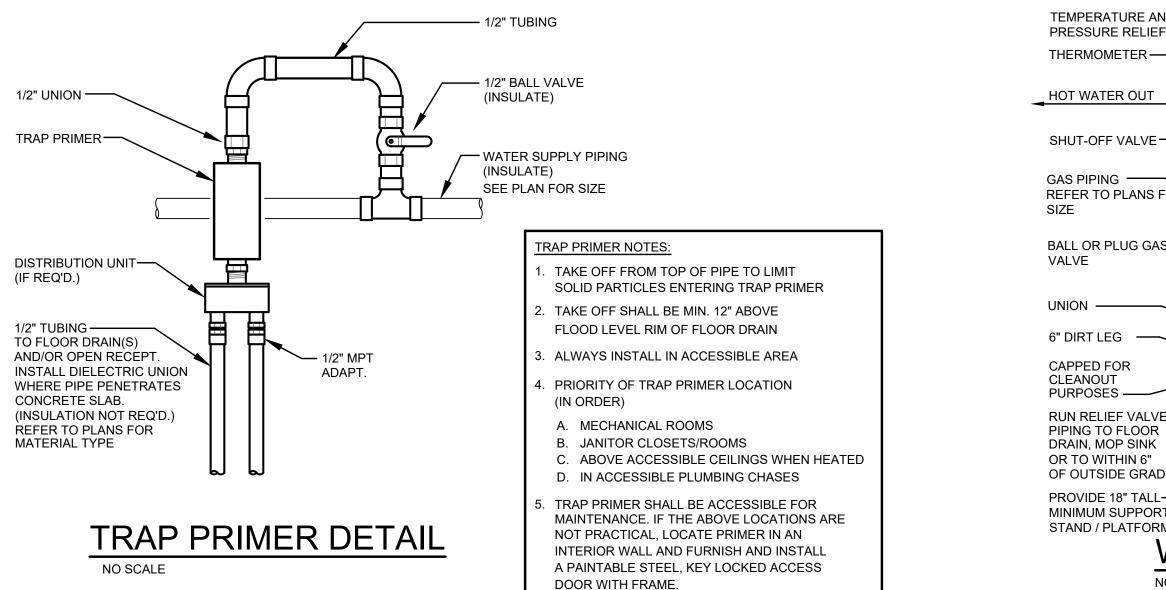




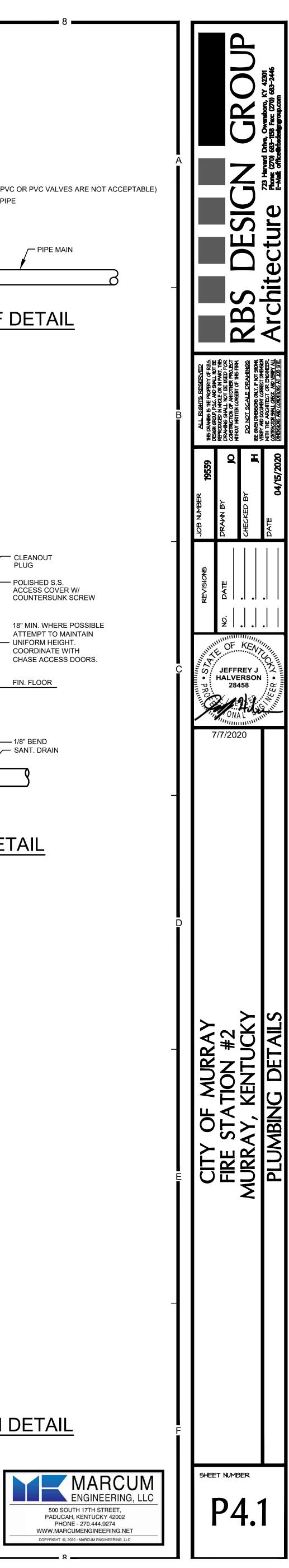












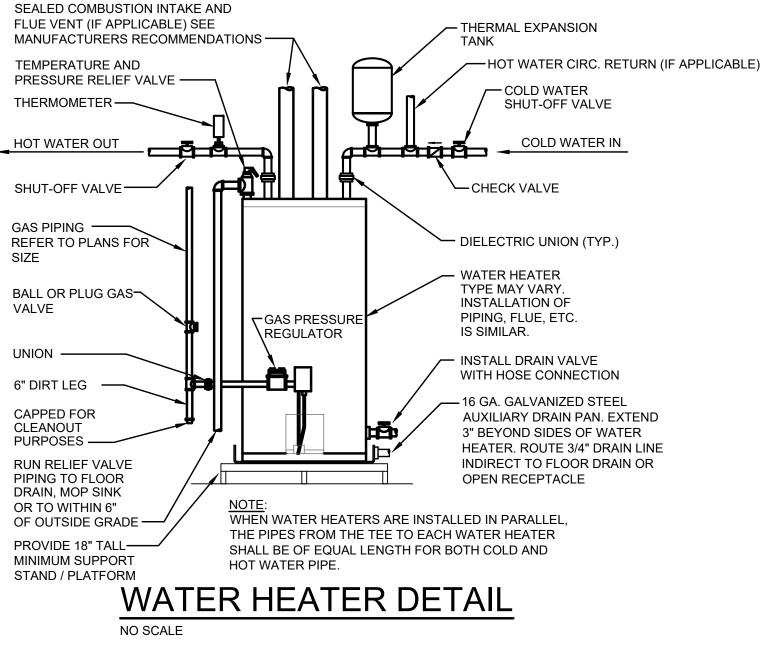
# DOMESTIC WATER PIPE UNDER FLOOR SLAB DETAIL

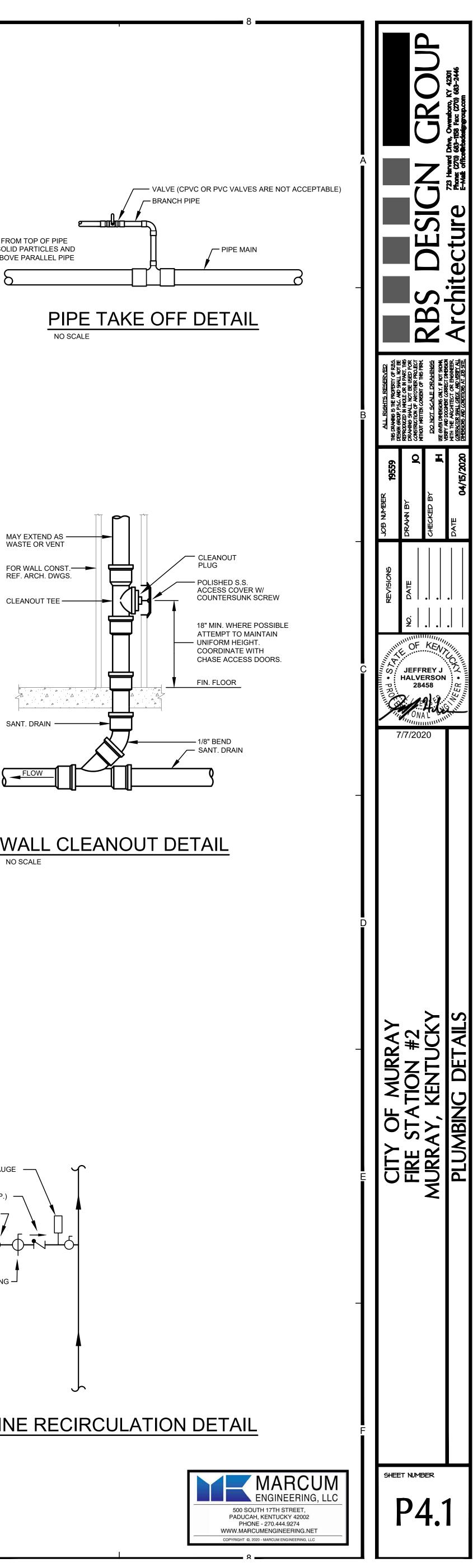
CONTRACTOR MAY SUBSTITUTE HDPE TUBING

# WATER BALANCING -VALVE (TYP.)

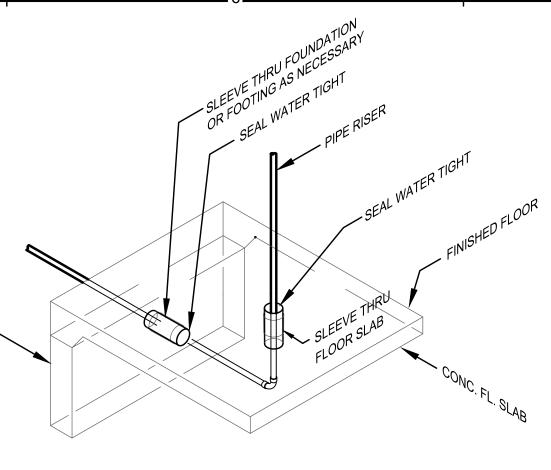
(TYP.)

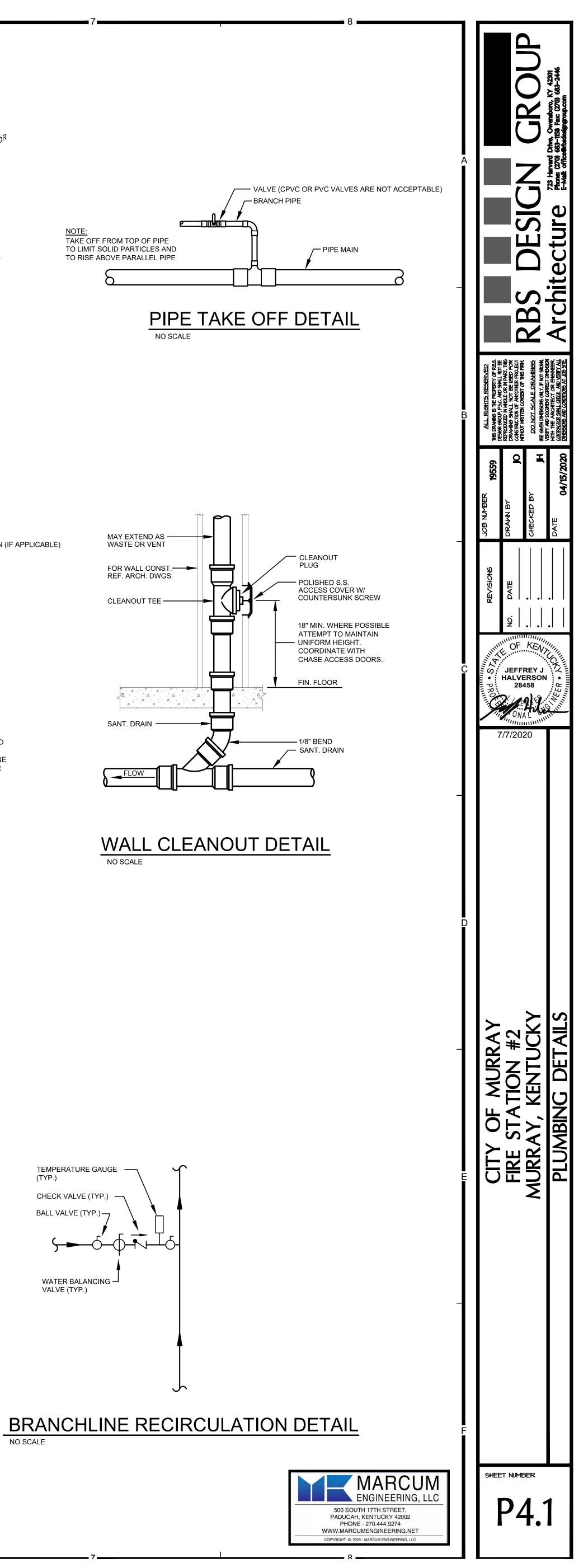
NO SCALE

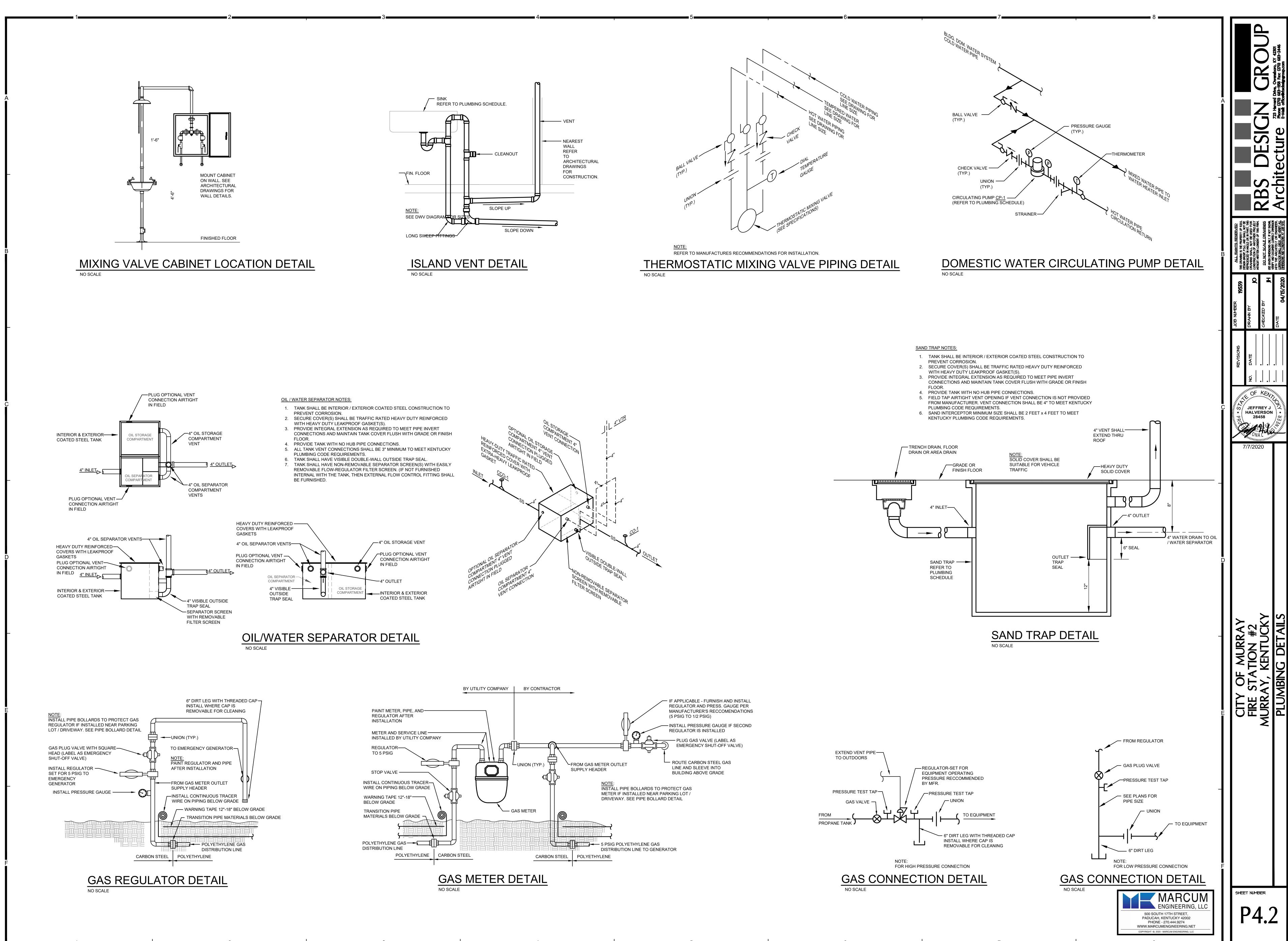


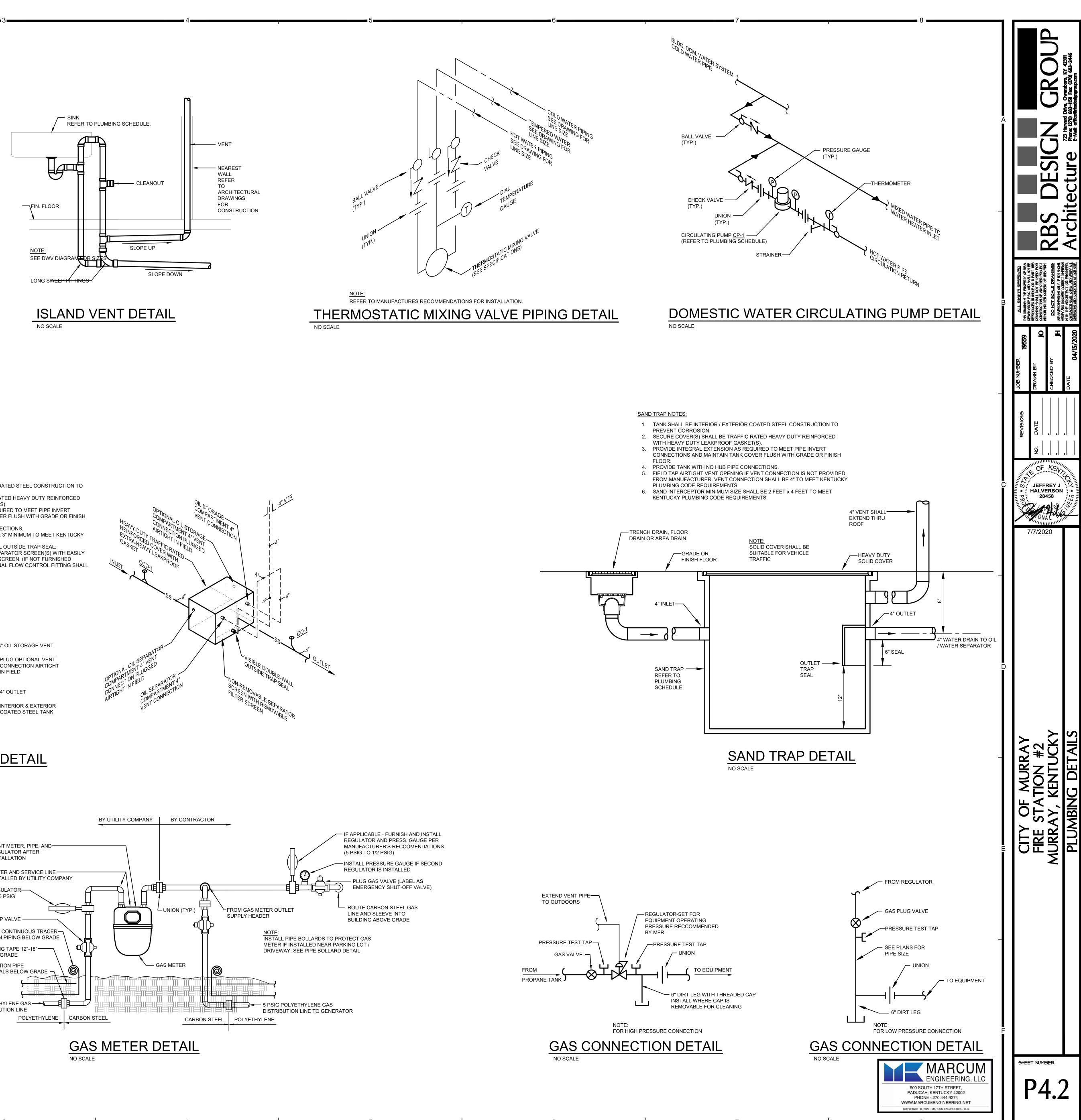


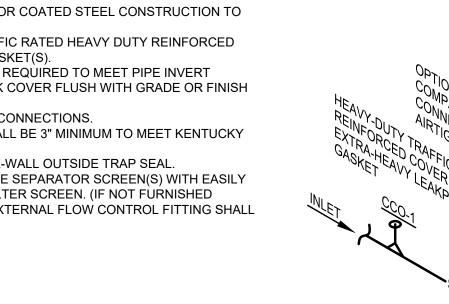
# PIPE PENETRATION DETAIL NO SCALE

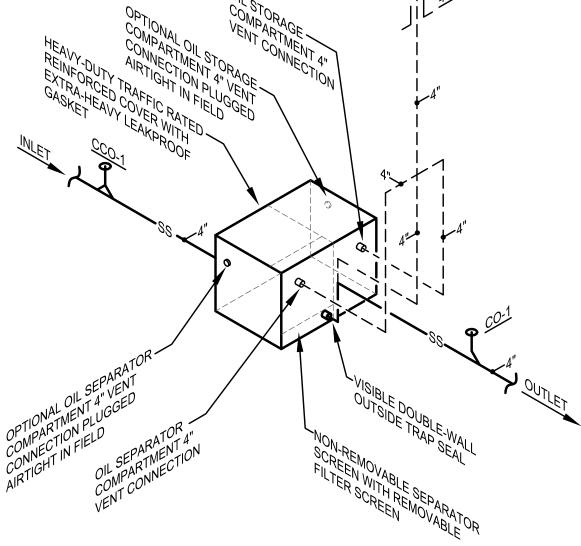


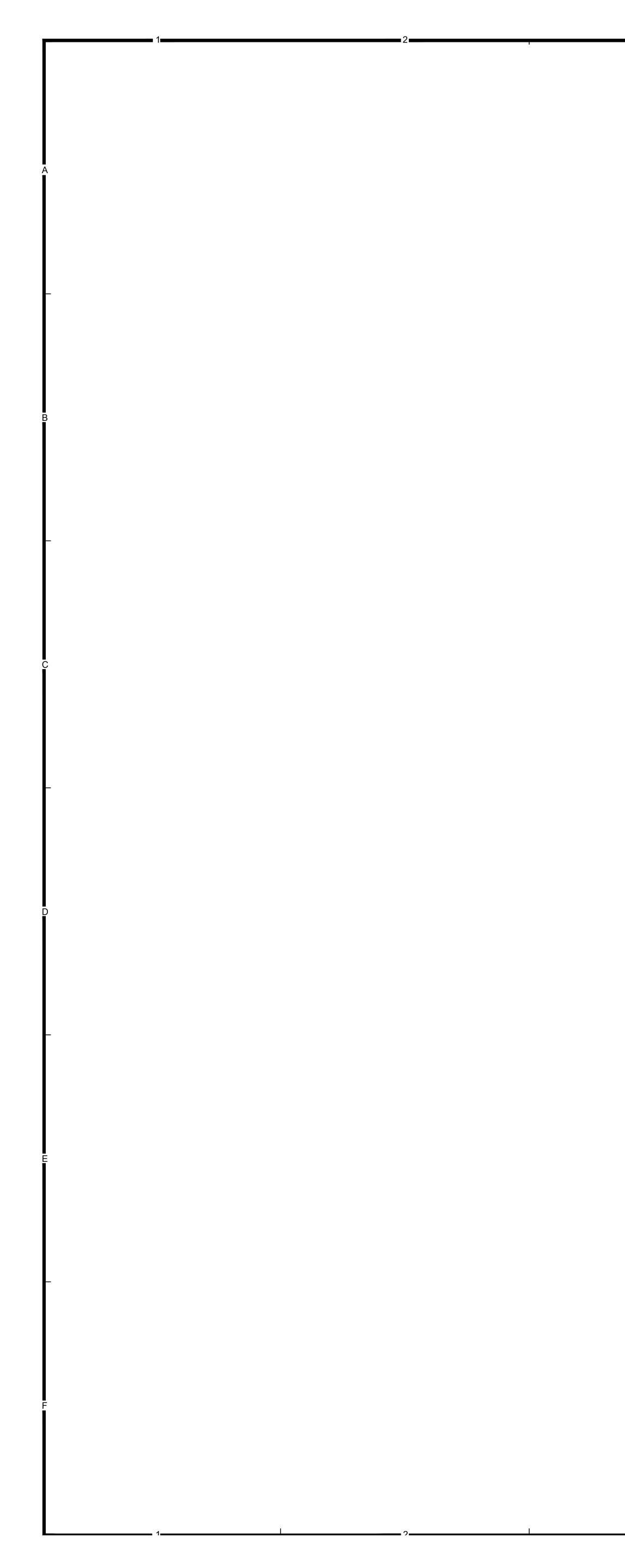


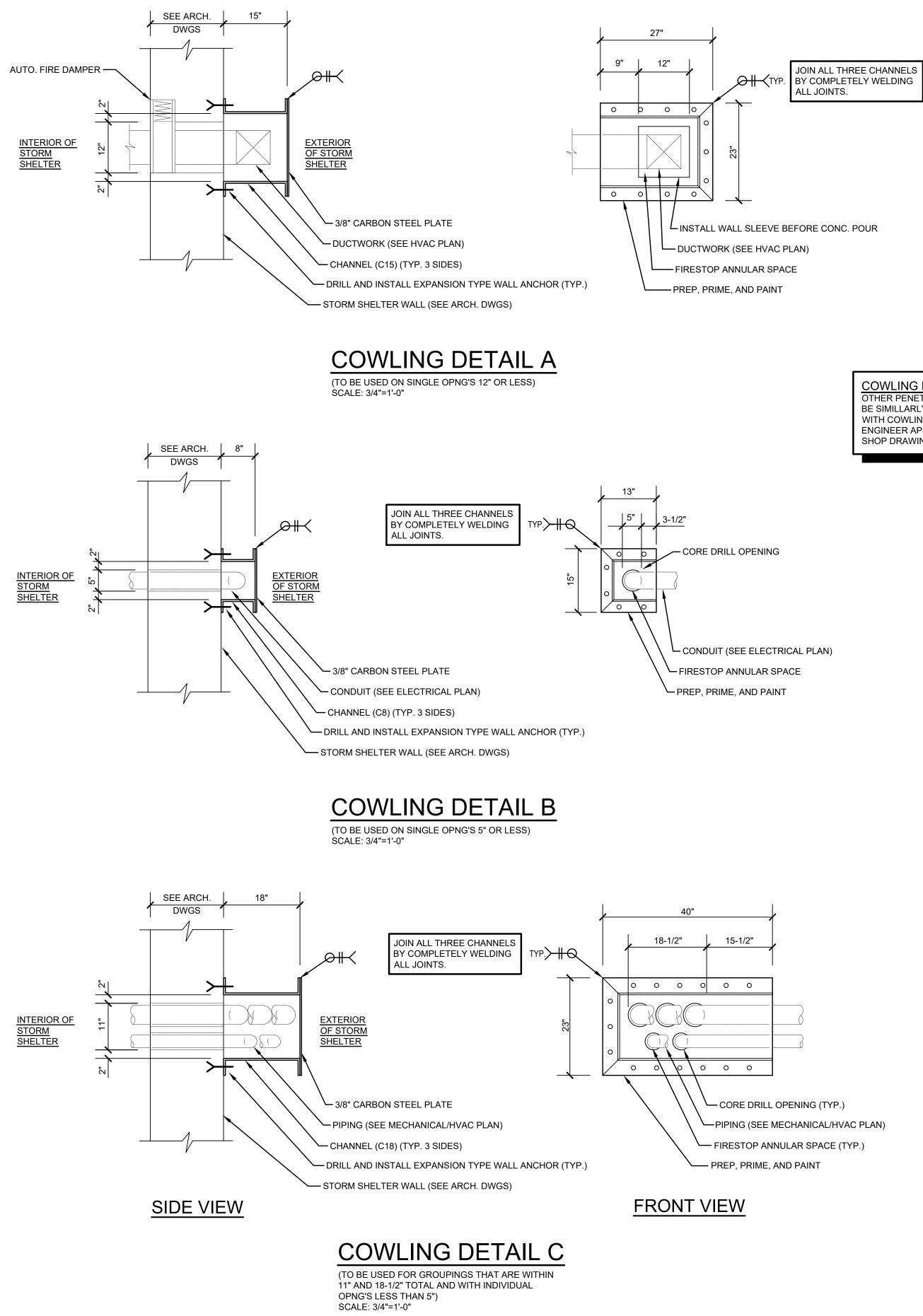










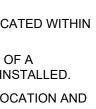


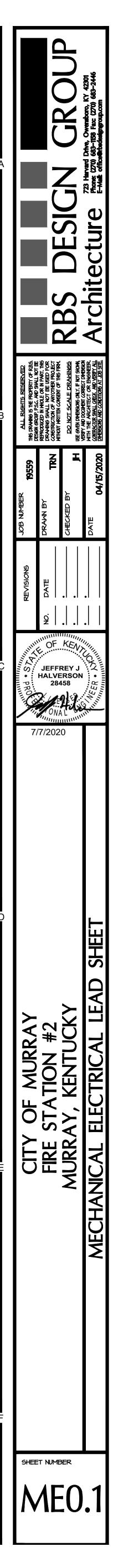
### STORM SHELTER RESTRICTION NOTES

- PENETRATIONS OF THE STORM SHELTER CAN ONLY BE MADE AT THE SHELTER'S VERTICAL WALLS LOCATED WITHIN THE HOST BUILDING.
- PENETRATIONS OF THE STORM SHELTER THAT EXCEED EITHER 2" DIAMETER OR 3-1/2" (FOR ANY SIDE OF A RECTANGULAR PENETRATION) MUST RECEIVE COWLING (SEE DETAILS) AFTER PENETRATING ITEM IS INSTALLED.
- 3. REFER TO STRUCTURAL AND ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION. COORDINATE LOCATION AND SIZE OF ALL PENETRATIONS WITH ALL TRADES PRIOR TO INSTALLATION.

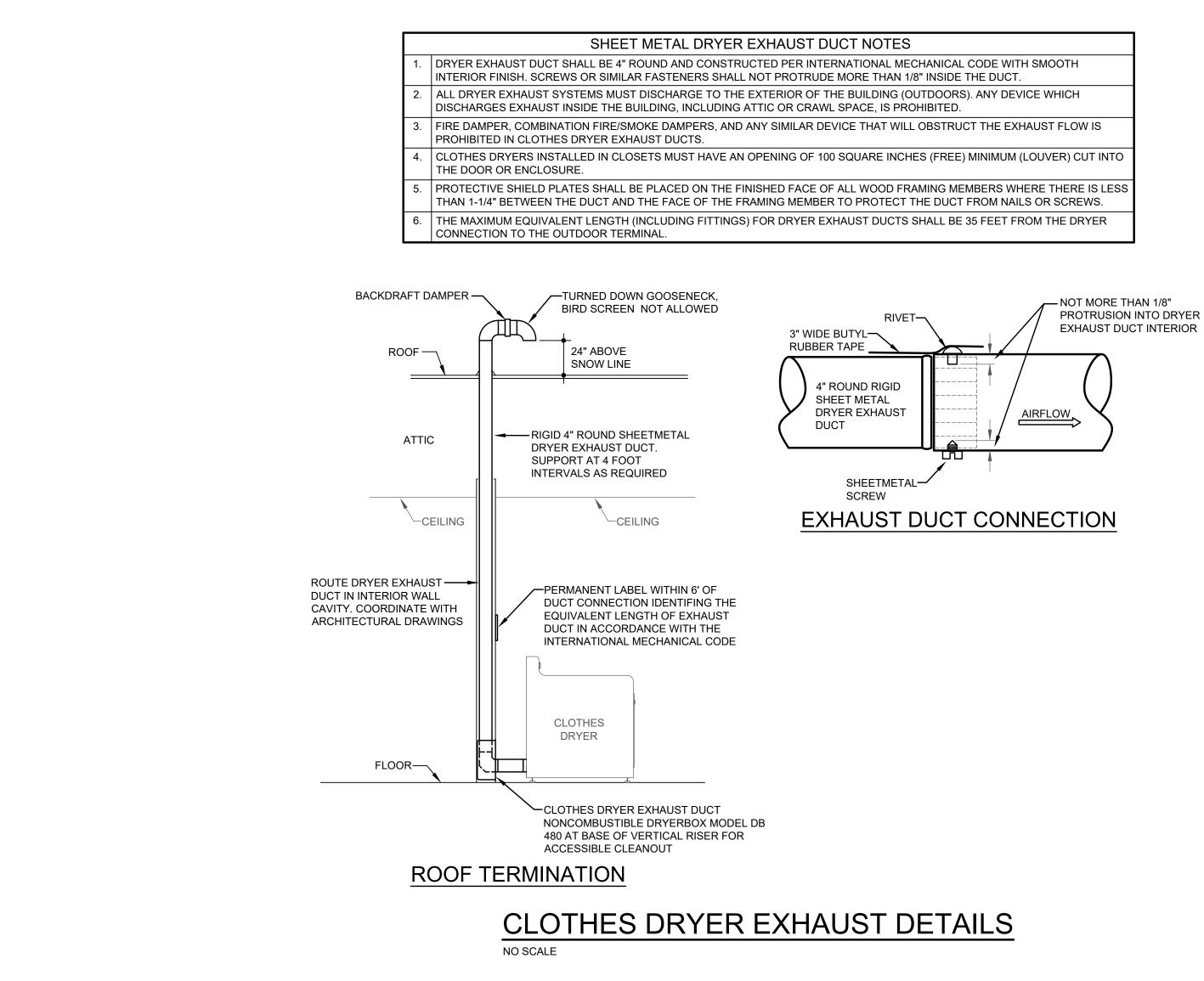
COWLING NOTE: OTHER PENETRATIONS SHALL BE SIMILLARLY PROTECTED WITH COWLINGS AND REQUIRE ENGINEER APPROVAL VIA SHOP DRAWING SUBMITTAL







ENGINEERING, LLC



### F-1, 2, AND 4 CONTROL:

- UNOCCUPIED OPERATION IN THE UNOCCUPIED MODE, THE UNIT SHALL BE SHUT OFF, AND OUTSIDE AIR DAMPER SHALL CLOSE. IF THE SPACE TEMPERATURE AS SENSED BY THE LOCAL ZONE SENSOR RISES ABOVE OR FALLS BELOW THE UNOCCUPIED SET POINT, THE COMPRESSOR, FAN, OR GAS HEATING SECTION SHALL BE ENERGIZED BASED ON THE NEED FOR EITHER COOLING OR HEATING UNTIL THE UNOCCUPIED SET POINT IS REACHED. IF OVERRIDE BUTTON DEPRESSED, UNIT SHALL SWITCH TO OCCUPIED MODE FOR 1 HR (ADJ.).
- OCCUPIED OPERATION IN THE OCCUPIED MODE, WHEN THERE IS A CALL FOR HEATING OR COOLING THE UNIT FAN SHALL RUN AND THE OUTSIDE AIR DAMPER SHALL OPEN. IF THE SPACE TEMPERATURE AS SENSED BY THE LOCAL ZONE SENSOR RISES OR FALLS BELOW THE OCCUPIED SET POINT, THE COMPRESSOR. OR GAS HEATING SECTION SHALL BE ENERGIZED BASED ON THE NEED FOR EITHER COOLING OR HEATING UNTIL THE OCCUPIED SET POINT IS REACHED. WHEN THE SET POINT IS SATISFIED, THE UNIT FAN SHALL TURN OFF AND THE OUTSIDE AIR DAMPER SHALL CLOSE.
- HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT AND WIRING BETWEEN THERMOSTAT, FURNACE, AND OUTSIDE AIR DAMPER. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.

### F-3 AND ERV-1 CONTROL:

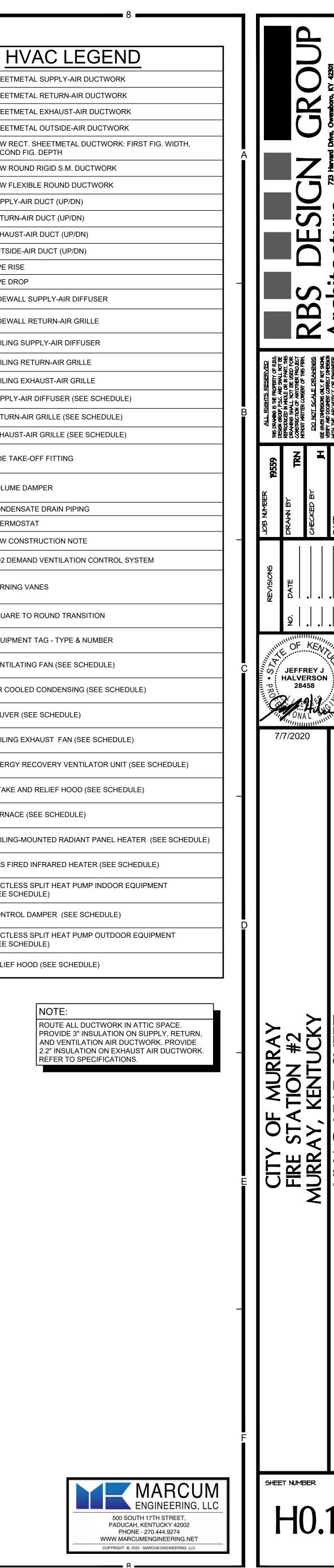
- UNOCCUPIED OPERATION IN THE UNOCCUPIED MODE, ERV-1 SHALL BE OFF, OUTSIDE AIR DAMPER AND EXHAUST DAMPER SHALL BE CLOSED, AND FURNACE SHALL BE OFF. IF THE SPACE TEMPERATURE AS SENSED BY THE LOCAL ZONE SENSOR RISES ABOVE OR FALLS BELOW THE UNOCCUPIED SET POINT, THE FURNACE COMPRESSOR, FAN, OR GAS HEATING SECTION SHALL BE ENERGIZED BASED ON THE NEED FOR EITHER COOLING OR HEATING UNTIL THE UNOCCUPIED SET POINT IS REACHED. IF OVERRIDE BUTTON DEPRESSED, ERV-1 AND FURNACE SHALL SWITCH TO OCCUPIED MODE FOR 1 HR (ADJ.).
- OCCUPIED OPERATION IN THE OCCUPIED MODE, WHEN THERE IS A CALL FOR HEATING OR COOLING THE UNIT FAN SHALL RUN. WHEN THE OCCUPANCY SENSOR SENSES THE SPACE IS OCCUPIED, THE OUTSIDE AIR DAMPER AND EXHAUST DAMPER SHALL BE OPEN, AND ERV-1 SHALL TURN ON. IF THE SPACE TEMPERATURE AS SENSED BY THE LOCAL ZONE SENSOR RISES OR FALLS BELOW THE OCCUPIED SET POINT, THE FURNACE COMPRESSOR, OR GAS HEATING SECTION SHALL BE ENERGIZED BASED ON THE NEED FOR EITHER COOLING OR HEATING UNTIL THE OCCUPIED SET POINT IS REACHED. WHEN THE SET POINT IS SATISFIED, THE FURNACE FAN SHALL TURN OFF. WHEN THE OCCUPANCY SENSOR TIMES OUT AFTER 5 MINUTES, THE OUTSIDE AIR DAMPER AND EXHAUST AIR DAMPER SHALL CLOSE, AND ERV-1 SHALL TURN OFF.
- HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT AND WIRING BETWEEN ERV-1, THERMOSTAT, FURNACE, OUTSIDE AIR DAMPER, AND EXHAUST AIR DAMPER. OUTSIDE AIR DAMPER AND EXHAUST AIR DAMPER SHALL OPEN AND CLOSE BASED ON ERV-1 OPERATION. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.

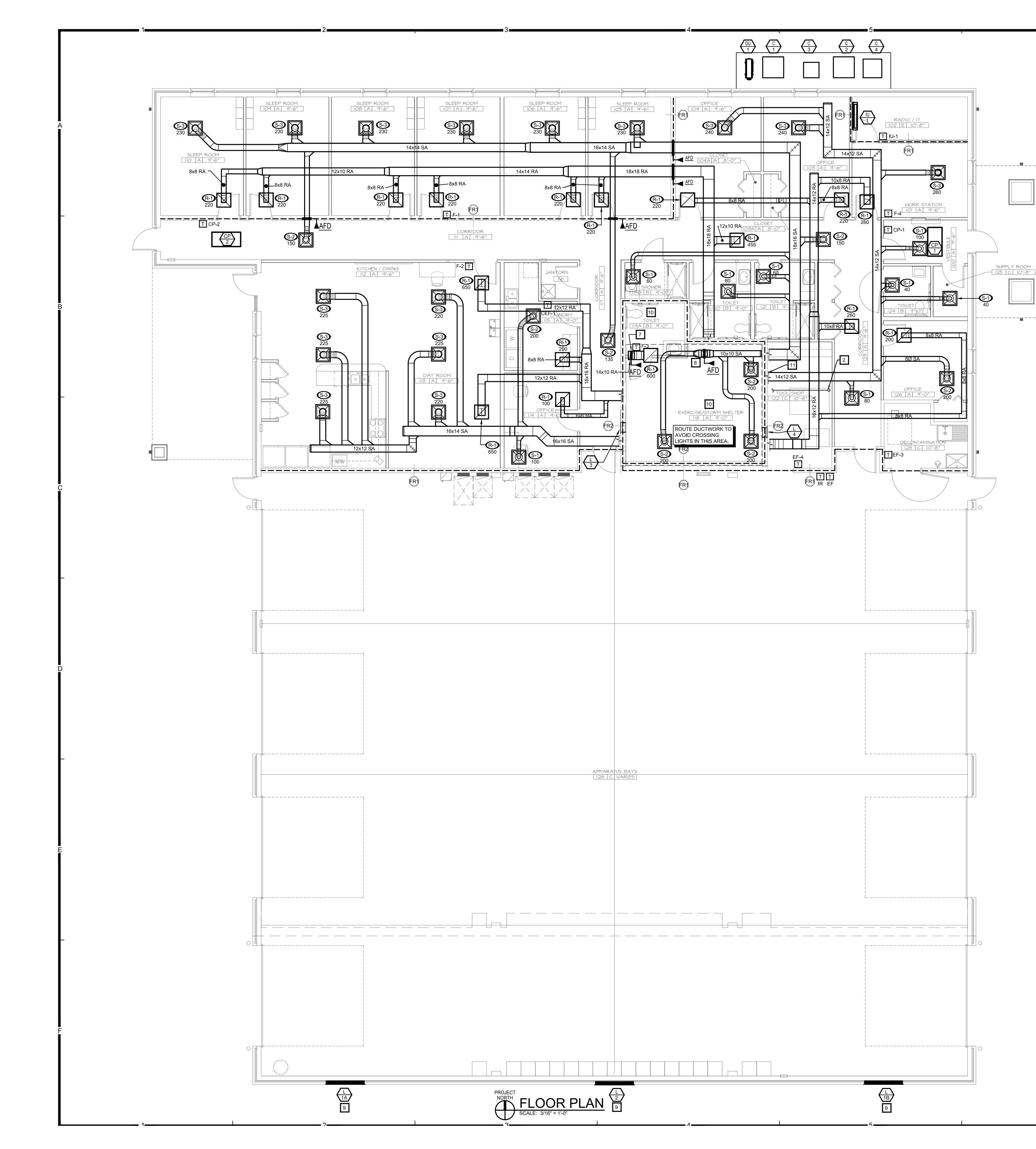
### **HVAC NOTES**

- 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE KENTUCKY BUILDING CODE, INTERNATIONAL MECHANICAL CODE, AND OTHER LOCAL, STATE, NATIONAL CODES/STANDARDS THAT APPLY.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING A HVAC PERMIT, COORDINATING ALL
- INSPECTIONS, AND PAYING ALL ASSOCIATED FEES. 3. EACH CONTRACTOR MUST VISIT THE SITE PRIOR OT BIDDING IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS. ANY DISCREPANCIES OR QUESTIONS SHALL BE BROUGHT TO THE
- ATTENTION OF THE ENGINEER NINE (9) DAYS PRIOR TO THE BID DATE 4. THESE PLANS ARE SCHEMATIC IN NATURE AND INDICATE THE APPROXIMATE AND GENERAL LOCATION OF DUCTWORK, EQUIPMENT, AND/OR PIPING. COORDINATE INSTALLATION OF WORK
- WITH OTHER DRAWINGS AND TRADES. 5. VERIFY ALL DIMENSIONS BEFORE FABRICATION AND/OR INSTALLATION.
- 6. BE AWARE THAT SEVERAL UTILITIES ARE LOCATED IN THE GROUND BELOW THE PROJECT CONSTRUCTION LIMITS. EXERCISE CAUTION WHEN EXCAVATING. UTILIZE HAND TOOLS TO LOCATE EXISTING UTILITIES.
- 7. CONCEAL ALL DUCTWORK, PIPING, ETC. IN CEILING AND/OR WALL SPACES (UNLESS NOTED OTHERWISE). PROVIDE ALL NECESSARY ACCESS DOORS IN INACCESSIBLE CEILINGS TO ALLOW ACCESS FOR MANUAL VOLUME DAMPERS, VALVES, CONTROL COMPONENTS, ETC. 8. REMOVE AND REPLACE CEILING TILES AND/OR GRID AS REQUIRED TO INSTALL WORK. ANY DAMAGED TILE OR GRID SHALL BE REPLACED.
- 9. SLEEVE ALL DUCTWORK, PIPING, VENTS, ETC. THROUGH NEW ROOF, FLOOR, AND/OR WALLS. 10. FLASH AND SEAL ALL ROOF, FLOOR, AND WALL PENETRATIONS.
- 11. FIRE STOP ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. FIRE STOPPING METHOD AND MATERIALS SHALL BE UL LISTED.
- 12. PATCH ALL WALLS, FLOORS, CEILINGS, PAVEMENTS, GRADES, ETC. THAT ARE ALTERED BECAUSE OF WORK REQUIRED.
- 13. SEISMICALLY SUPPORT ALL EQUIPMENT, PIPE, DUCTWORK, ETC. PER THE KENTUCKY BUILDING CODE AND SEISMIC DESIGN CATEGORY D. 14. PLACE REINFORCED CONCRETE PADS FOR ALL FLOOR AND/OR GRADE MOUNTED EQUIPMENT. CONCRETE SHALL HAVE A DEVELOPED STRENGTH OF 4,000 PSI AT 28 DAYS. CHAMFER ALL
- EXPOSED EDGES AT 1". OUTDOOR PAD INSTALLATIONS: A. PAD SHALL BE 6" THICK (MINIMUM) BUT SUITABLE HEIGHT FOR GRADE/DRAINAGE CONDITIONS AND SYSTEM OPERATION.
- B. FOR RELATIVELY LIGHT EQUIPMENT (CONDENSING UNITS, HEAT PUMPS, ETC.), STEEL REINFORCEMENT SHALL BE 6" WWF. C. PAD DIMENSIONS SHALL GENERALLY EXTEND 12" PAST THE OUTER MOST EDGE OF THE UNIT.
- 15. PROVIDE ALL HVAC UNITS WITH MANUFACTURER'S START-UP AND CERTIFIED REPORT FOR ENGINEER'S APPROVAL. INSTALLING CONTRACTOR START-UP IS NOT ACCEPTABLE.
- 16. COVER ALL OPENINGS ON AIR CONVEYANCE COMPONENTS (DUCTWORK AND/OR EQUIPMENT), WHETHER STORED OR INSTALLED, TO PREVENT ACCUMULATION OF CONSTRUCTION DUST. AIR CONVEYANCE SYSTEMS FOUND TO BE DUSTY SHALL BE PROFESSIONALLY CLEANED AND CERTIFIED BY A NADCA CONTRACTOR AT THE HVAC CONTRACTOR'S EXPENSE.
- 17. STORE AND INSTALL DUCTWORK AND/OR EQUIPMENT ONLY WHERE PROTECTED FROM DIRECT CONTACT WITH RAIN OR CONSTRUCTION WATER.
- 18. COORDINATE DUCTWORK ROUTING IN CEILING SPACES TO AVOID CONFLICTS WITH FIRE PROTECTION, PLUMBING, SPECIAL SYSTEMS, LIGHTING, NEC CLEARANCES, ETC.
- 19. DUCTWORK SHALL BE GALVANIZED STEEL (UNLESS SPECIFIED OTHERWISE) AND SHALL BE FABRICATED/INSTALLED IN ACCORDANCE WITH THE APPLICABLE MANUAL OR HANDBOOK OF THE SHEETMETAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA), LATEST ISSUE.
- 20. PROVIDE 4" FLEXIBLE CONNECTIONS BETWEEN ALL HVAC UNITS AND RIGID SHEETMETAL DUCTWORK TO STOP VIBRATION TRANSMISSION.
- 21. INSTALL DUAL WALL TURNING VANES IN ALL ELBOWS LOCATED DOWNSTREAM OF SUPPLY FANS (EXAMPLES ARE SUPPLY AIR, DEDICATED OUTSIDE AIR, EXHAUST AIR BETWEEN FAN AND EXIT, ETC.). RADIUSED ELBOWS IN RECTANGULAR DUCT ARE NOT ACCEPTABLE.
- 22. FURNISH AND INSTALL AUTOMATIC FIRE DAMPERS WITH APPROPRIATELY SIZED ACCESS
- PANELS/DOORS AT ALL FIRE RATED ASSEMBLIES. 23. INSTALL A BEAD OF SEALANT BETWEEN THE BASE OF HVAC EQUIPMENT AND ROOF CURBS.
- 24. CONTINUOUSLY SEAL ALL DUCT JOINTS WITH MONECO, DUCTMATE, HARDCAST, OR APPROVED
- EQUAL DUCT SEALER. ASSURE THAT DUCT SEALER IS A WATER-BASED, LOW VOC COMPOUND. 25. FABRICATE AND INSTALL AN AUXILIARY DRAIN PAN FOR ALL EQUIPMENT LOCATED ABOVE CEILINGS AND/OR ON SERVICE PLATFORMS THAT CONTAIN COOLING/EVAPORATOR COILS. THE PAN SHALL BE FABRICATED FROM 16 GAUGE GALVANIZED STEEL WITH CONTINUOUSLY WELDED JOINTS. PAN SHALL BE 1 1/2" DEEP AND SHALL EXTEND 3" (MINIMUM) BEYOND OUTER MOST EDGE OF EQUPMENT.
- 26. INSTALL A CONDENSATE TRAP AND DRAIN LINE FOR ALL EQUIPMENT REQUIRING A DRAIN. THE DRAIN SIZE (AT A MINIMUM) SHALL BE EQUAL TO THE UNIT'S CONNECTION SIZE BUT IN NO CASE SHALL BE LESS THAN 1" DIAMETER. FABRICATE TRAP TO MAINTAIN TOTAL FAN STATIC PRESSURE PLUS 1 IN WC.
- 27. INTERNALLY INSULATE DUCTWORK (ONLY WHERE SPECIFIED) WITH FIBERGLASS, ANTI-MICROBIAL DUCT LINER. IN ADDITION TO INTERNAL INSULATION, ALL DUCTWORK IN UNCONDITIONED ATTIC SPACES SHALL ALSO BE EXTERNALLY INSULATED WITH FIBERGLASS INSULATION AND VAPOR BARRIER.
- 28. DUCT DIMENSIONS ARE ACTUAL SHEETMETAL SIZES AND ALLOWANCES FOR INTERNAL INSULATION HAVE BEEN ACCOUNTED FOR. 29. EXTERNALLY INSULATE ALL SHEETMETAL DUCTWORK, TRANSITIONS, TAKE-OFFS, DUCT MOUNTED
- COILS, VOLUME DAMPERS, FIRE DAMPERS, DIFFUSER BACKS, ETC. WITH FIBERGLASS INSULATION AND VAPOR BARRIER AS SPECIFIED. SEAL ALL VAPOR BARRIER JOINTS. 30. INSULATE INDOOR CONDENSATE DRAIN PIPING WITH FLEXIBLE ELASTOMERIC THERMAL INSULATION.
- 31. INSULATE ALL REFRIGERANT PIPING WITH FLEXIBLE ELASTOMERIC THERMAL INSULATION. LINES LOCATED OUTDOORS SHALL BE INSULATED AND JACKETED WITH ALUMAGUARD 60 BY POLYGUARD PRODUCTS (OR EQUAL). PROPERLY SUPPORT PIPING WITH UNISTRUT SYSTEMS.
- 32. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE AND PROPER INSTALLATION OF THERMOSTATS AND ALL OTHER FIELD MOUNTED CONTROL COMPONENTS. THE HVAC EQUIPMENT MANUFACTURER SHALL FURNISH COMPLETE WIRING DIAGRAMS TO THE INSTALLER FOR USE IN WIRING CONTROLS. ALL CONTROL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE CONTROL AND/OR ELECTRICAL SPECIFICATIONS AND THE LATEST NEC (NATIONAL ELECTRICAL CODE) EDITION.
- 33. PER ADA STANDARDS, TOP OF THERMOSTATS AND SIMILAR CONTROLS SHALL BE MOUNTED AT 48" (MAXIMUM) ABOVE THE FINISHED FLOOR.
- 34. BALANCE AIR FLOWS AND SUBMIT REPORTS FOR ENGINEER'S APPROVAL. TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED BY A CERTIFIED AABC CONTRACTOR. 35. THE CONTRACTOR SHALL FURNISH AND INSTALL ADDITIONAL SHEAVES, PULLEYS, BELTS AND/OR
- SPEED CONTROLLERS AS REQUIRED TO BRING AIR SYSTEM TO WITHIN 10% (OR AS OTHERWISE SPECIFIED) OF DESIGN.

SHEETMETAL SUPPLY-AIR DUCTWORK SHEETMETAL RETURN-AIR DUCTWORK SHEETMETAL EXHAUST-AIR DUCTWORK
SHEETMETAL EXHAUST-AIR DUCTWORK
SHEETMETAL OUTSIDE-AIR DUCTWORK
NEW RECT. SHEETMETAL DUCTWORK: FIRST I SECOND FIG. DEPTH
NEW ROUND RIGID S.M. DUCTWORK
NEW FLEXIBLE ROUND DUCTWORK
SUPPLY-AIR DUCT (UP/DN)
RETURN-AIR DUCT (UP/DN)
EXHAUST-AIR DUCT (UP/DN)
OUTSIDE-AIR DUCT (UP/DN)
PIPE RISE
SIDEWALL SUPPLY-AIR DIFFUSER
SIDEWALL RETURN-AIR GRILLE
CEILING SUPPLY-AIR DIFFUSER
RETURN-AIR GRILLE (SEE SCHEDULE)
EXHAUST-AIR GRILLE (SEE SCHEDULE)
SIDE TAKE-OFF FITTING
VOLUME DAMPER
CONDENSATE DRAIN PIPING
NEW CONSTRUCTION NOTE
CO2 DEMAND VENTILATION CONTROL SYSTEM
TURNING VANES
SQUARE TO ROUND TRANSITION
EQUIPMENT TAG - TYPE & NUMBER
VENTILATING FAN (SEE SCHEDULE)
AIR COOLED CONDENSING (SEE SCHEDULE)
LOUVER (SEE SCHEDULE)
CEILING EXHAUST FAN (SEE SCHEDULE)
ENERGY RECOVERY VENTILATOR UNIT (SEE S
INTAKE AND RELIEF HOOD (SEE SCHEDULE)
FURNACE (SEE SCHEDULE)
CEILING-MOUNTED RADIANT PANEL HEATER
GAS FIRED INFRARED HEATER (SEE SCHEDUL
DUCTLESS SPLIT HEAT PUMP INDOOR EQUIPM (SEE SCHEDULE)
CONTROL DAMPER (SEE SCHEDULE)
DUCTLESS SPLIT HEAT PUMP OUTDOOR EQUI
1

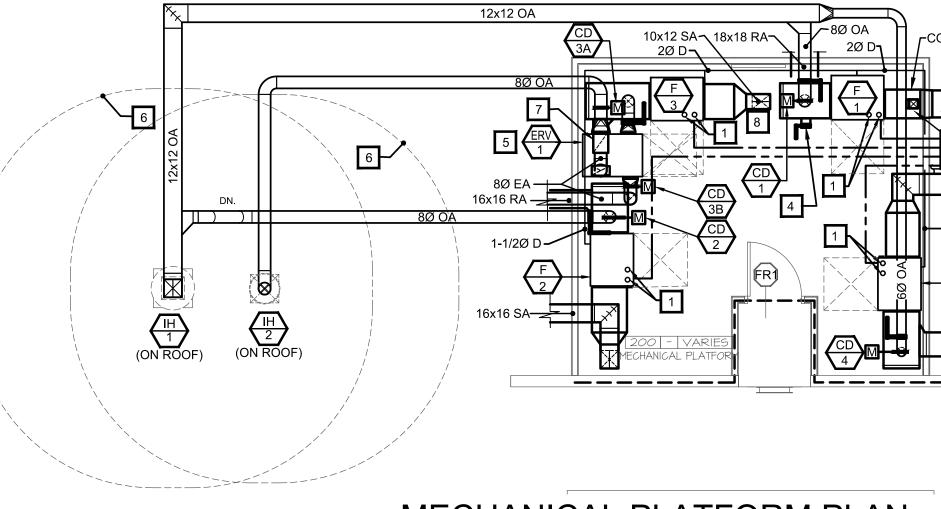
NOTE: REFER TO SPECIFICATIONS.



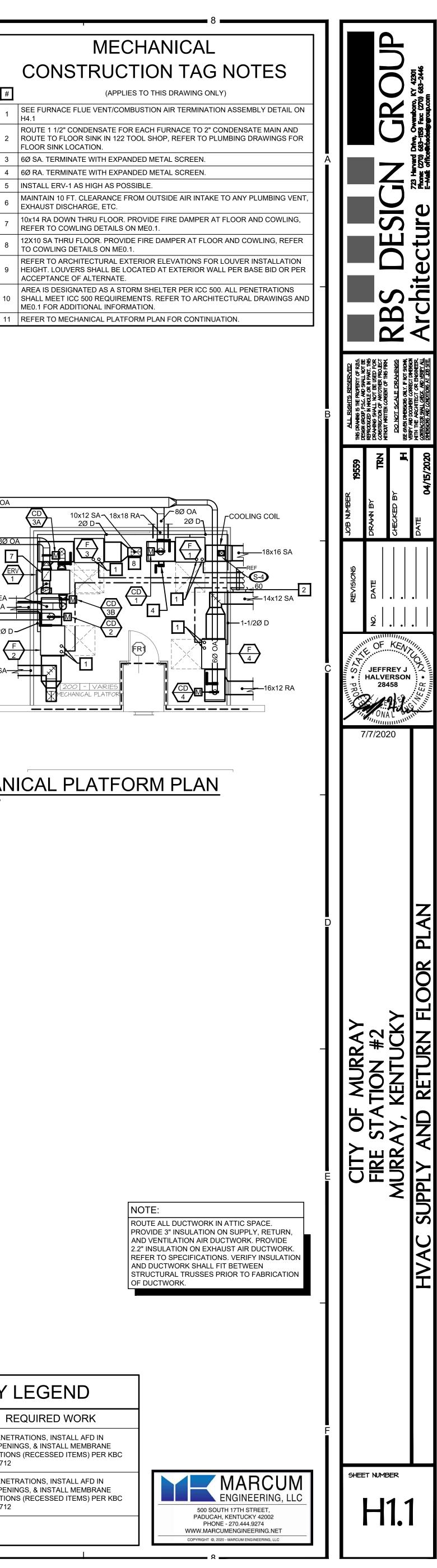


	RUN-OUT EDULE	
1   r	SIZE	CFM RANGE
1	6"Ø	0 - 100
	8"Ø	101 - 200
1		201 - 325

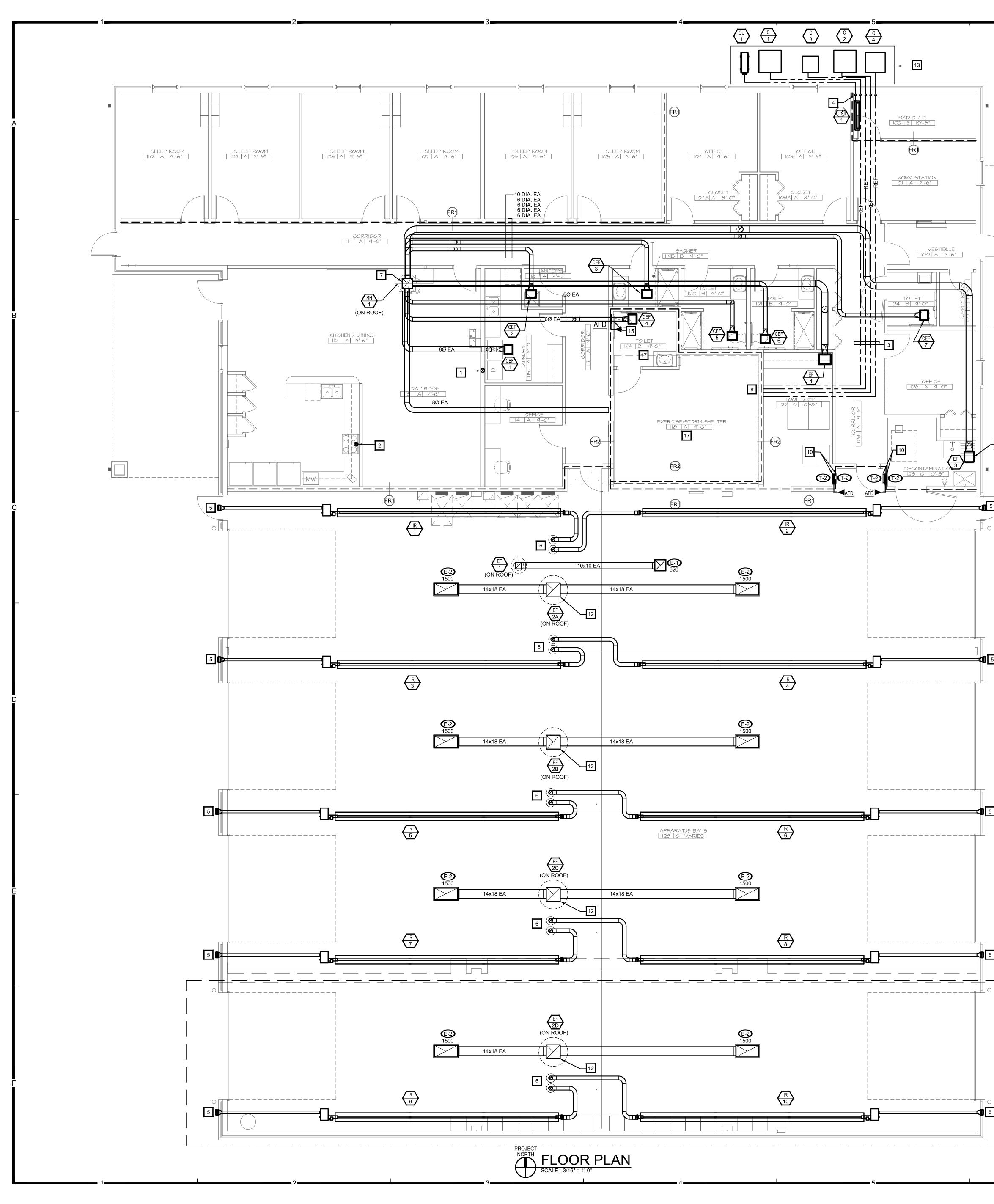
	L. L
	MECHANICAL
	CONSTRUCTION TAG NO
#	(APPLIES TO THIS DRAWING ONLY)
1	SEE FURNACE FLUE VENT/COMBUSTION AIR TERMINATION ASS H4.1
2	ROUTE 1 1/2" CONDENSATE FOR EACH FURNACE TO 2" CONDE ROUTE TO FLOOR SINK IN 122 TOOL SHOP, REFER TO PLUMBIN FLOOR SINK LOCATION.
3	6Ø SA. TERMINATE WITH EXPANDED METAL SCREEN.
4	6Ø RA. TERMINATE WITH EXPANDED METAL SCREEN.
5	INSTALL ERV-1 AS HIGH AS POSSIBLE.
6	MAINTAIN 10 FT. CLEARANCE FROM OUTSIDE AIR INTAKE TO AI EXHAUST DISCHARGE, ETC.
7	10x14 RA DOWN THRU FLOOR. PROVIDE FIRE DAMPER AT FLOOR REFER TO COWLING DETAILS ON ME0.1.
8	12X10 SA THRU FLOOR. PROVIDE FIRE DAMPER AT FLOOR AND TO COWLING DETAILS ON ME0.1.
9	REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR LOUV HEIGHT. LOUVERS SHALL BE LOCATED AT EXTERIOR WALL PER ACCEPTANCE OF ALTERNATE.
10	AREA IS DESIGNATED AS A STORM SHELTER PER ICC 500. ALL SHALL MEET ICC 500 REQUIREMENTS. REFER TO ARCHITECTU ME0.1 FOR ADDITIONAL INFORMATION.
11	REFER TO MECHANICAL PLATEORM PLAN FOR CONTINUATION



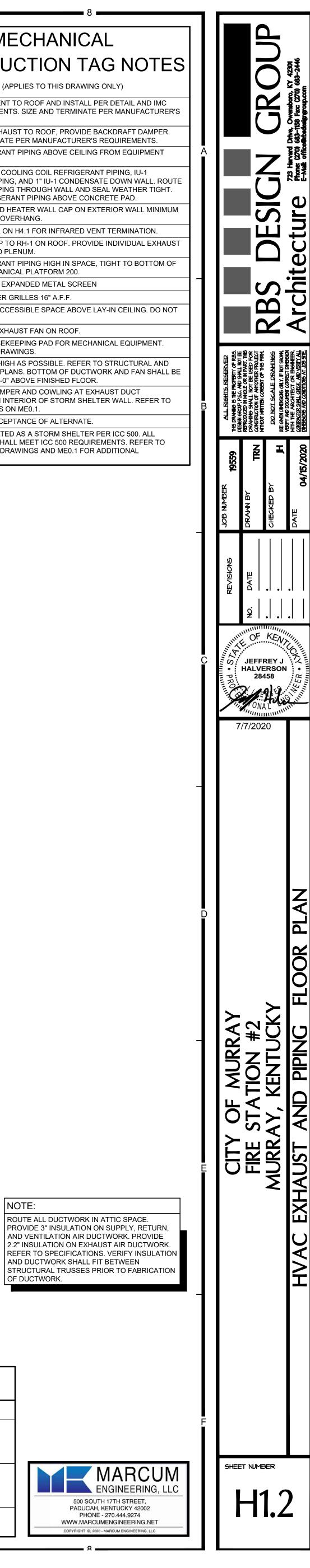
# MECHANICAL PLATFORM PLAN SCALE: 3/16" = 1'-0"



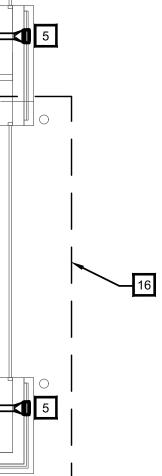
CLASSIFIED ASSEMBLY LEGEND								
SYMBOL	DESCRIPTION	REQUIRED WORK						
	1 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712						
FR2	2 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712						



	8
	MECHANICAL
	ONSTRUCTION TAG
#	(APPLIES TO THIS DRAWING ON
1	ROUTE DRYER VENT TO ROOF AND INSTALL PER I CODE REQUIREMENTS. SIZE AND TERMINATE PER REQUIREMENTS.
2	RANGE HOOD EXHAUST TO ROOF, PROVIDE BACK SIZE AND TERMINATE PER MANUFACTURER'S REC
3	ROUTE REFRIGERANT PIPING ABOVE CEILING FRO PLATFORM.
4	ROUTE FURNACE COOLING COIL REFRIGERANT P REFRIGERANT PIPING, AND 1" IU-1 CONDENSATE I REFRIGERANT PIPING THROUGH WALL AND SEAL SUPPORT REFRIGERANT PIPING ABOVE CONCRET
5	INSTALL INFRARED HEATER WALL CAP ON EXTER 18" BELOW ROOF OVERHANG.
6	REFER TO DETAIL ON H4.1 FOR INFRARED VENT T
7	16X16 EA DUCT UP TO RH-1 ON ROOF. PROVIDE IN CONNECTIONS TO PLENUM.
8	ROUTE REFRIGERANT PIPING HIGH IN SPACE, TIG CEILING IN MECHANICAL PLATFORM 200.
9	TERMINATE WITH EXPANDED METAL SCREEN
10	INSTALL TRANSFER GRILLES 16" A.F.F.
11	INSTALL EF-3 IN ACCESSIBLE SPACE ABOVE LAY-I INSTALL IN ATTIC.
12	28x16 EA UP TO EXHAUST FAN ON ROOF.
13	PROVIDE 6" HOUSEKEEPING PAD FOR MECHANIC/ REFER TO CIVIL DRAWINGS.
14	INSTALL EF-2 AS HIGH AS POSSIBLE. REFER TO STARCHITECTURAL PLANS. BOTTOM OF DUCTWORK A MINIMUM OF 18'-0" ABOVE FINISHED FLOOR.
15	PROVIDE FIRE DAMPER AND COWLING AT EXHAUS PENETRATION ON INTERIOR OF STORM SHELTER COWLING DETAILS ON ME0.1.
16	PROVIDE PER ACCEPTANCE OF ALTERNATE.
17	AREA IS DESIGNATED AS A STORM SHELTER PER PENETRATIONS SHALL MEET ICC 500 REQUIREME ARCHITECTURAL DRAWINGS AND ME0.1 FOR ADD INFORMATION.



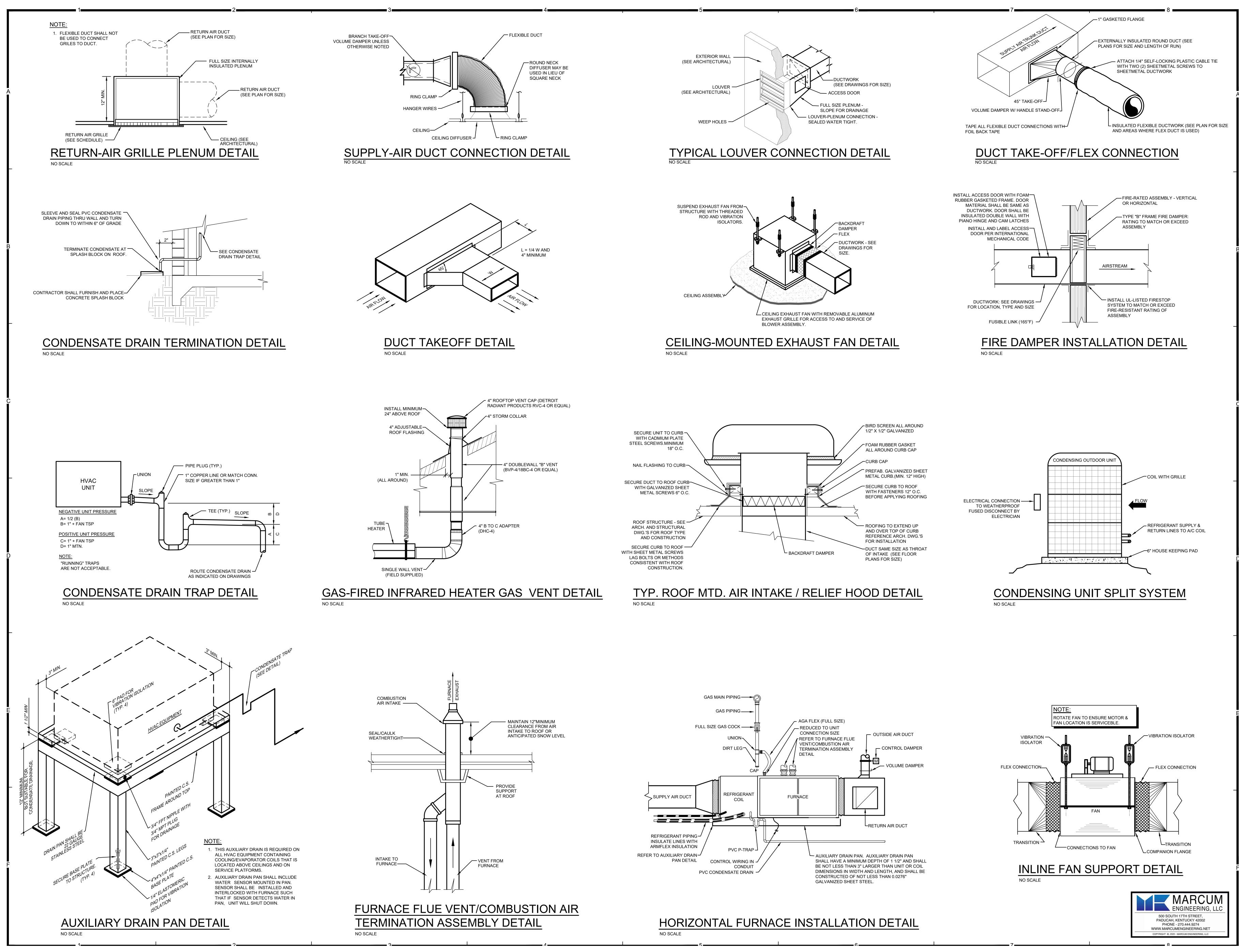
CLA	SSIFIED ASSE	MBLY LEGEND
SYMBOL	DESCRIPTION	REQUIRED WORK
	1 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712
	2 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712
AFD = AUTOMATIC FIRI F-R-R = FIRE-RESISTAN FS = FIRE STOP		

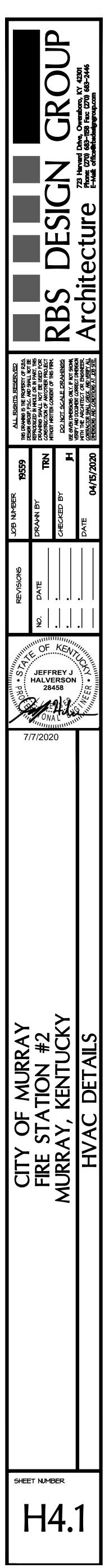


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			UNIT P	HYSICAL	DATA			ROX.	SUPPLY	FAN DATA				ST FAN DA
MARK		MFR.	N	10DEL	SIZE	CONFIC	UU WEI		A ESP (IN. H20)	MOTOR POWER (HP)	RPM	CFM	ESP (IN. H20)	MOTOR POWER (HP)
ERV-1	GF	REENHEC	СК МІІ	NIVENT	450	HORIZON	AL 1	60 125	0.4	3/8	1,082	125	0.4	3/8
									GY RECOVER					
<ol> <li>HEAT</li> <li>PROV</li> <li< td=""><td>TING CAPAC /IDE UNIT W /IDE UNIT W</td><td>ITIES AR</td><td>E BASED ST INIMUM 1/2' INIMUM 1" 1 ERNAL VIBRA OPRENE ISOL TWORK ADA AL ENERGY ED EXHAUST T-MOUNTED RMAL OVER ATE SPEED ( GED ACCESS APPROVED E</td><td>TANDARD "INSULA" THICK, MI ATION ISC LATOR H, APTERS C RECOVE TFOR FR NON-FUS CONTROI S DOOR. NS ON H S DOOR. EQUAL</td><td>D AHRI/ASH TED DOUE ERV 8, PLE OLATORS ANGING S ON ALL FC ERY WHEE COST CON SED ELEC ROTECTION LLER FOR</td><td>IRAE CONDIT BLE WALL HOU EATED FILTEF ON ALL FANS YSTEM. OUR CONNECT L. TRICAL DISCON. EACH SUPPL</td><td>ONS ON 0°F o JSING. S. TONS. ONNECT SWIT Y AND EXHAL</td><td>b AMBIENT A</td><td>MBIENT AIR T IR TEMPERAT GLE-POINT EL HANICAL CON</td><td>URE, 68°F di</td><td>b/57°F wb</td><td>INDOOF ION. OVIDE 4'</td><td>R AIR TEN ' X 4" HAI</td><td>IPERATUR</td></li<></ol>	TING CAPAC /IDE UNIT W /IDE UNIT W	ITIES AR	E BASED ST INIMUM 1/2' INIMUM 1" 1 ERNAL VIBRA OPRENE ISOL TWORK ADA AL ENERGY ED EXHAUST T-MOUNTED RMAL OVER ATE SPEED ( GED ACCESS APPROVED E	TANDARD "INSULA" THICK, MI ATION ISC LATOR H, APTERS C RECOVE TFOR FR NON-FUS CONTROI S DOOR. NS ON H S DOOR. EQUAL	D AHRI/ASH TED DOUE ERV 8, PLE OLATORS ANGING S ON ALL FC ERY WHEE COST CON SED ELEC ROTECTION LLER FOR	IRAE CONDIT BLE WALL HOU EATED FILTEF ON ALL FANS YSTEM. OUR CONNECT L. TRICAL DISCON. EACH SUPPL	ONS ON 0°F o JSING. S. TONS. ONNECT SWIT Y AND EXHAL	b AMBIENT A	MBIENT AIR T IR TEMPERAT GLE-POINT EL HANICAL CON	URE, 68°F di	b/57°F wb	INDOOF ION. OVIDE 4'	R AIR TEN ' X 4" HAI	IPERATUR
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MARK	MFC	Э.	MODEL	SIZE	REFRIG	. TOTAL (MBH)	SENSIBLE (MBH)	AHRI COOLING	SEER		elect. Char.	MCA	а мс	СР
C-1	CARR	IER	24ACC6	60	R-410A		(MBH) 39.5	(MBH) 57.5	(AHRI) (. 15.0	,	208V / 1Ø	32.4	L 5	0
C-2	CARR	IER	24ACC6	48	R-410A	43.2	30.7	44.0	15.0	12.5 2	208V / 1Ø	26.7	1 4	0
C-3 C-4	CARR CARR		24ACC6 24ACC6	18 36	R-410A		15.0 23.5	18.0 30.0	15.0 15.0		208V / 1Ø 208V / 1Ø	11.8		0 0
EMARKS A	ND ACCESS	ORIES:												
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4. COOLI 5. MAINT 6. PROVI 7. PROVI 9. PROVI 10. PROVI 11. PROVI 12. PROVI 13. FURNI 14. ELECT ARRIER, DA MARK CD-1 CD-2 CD-3A CD-3B CD-4 MARK CD-1 CD-2 CD-3A CD-3B CD-4 MARK S.1 3. PROVII 3. PROVII 3. PROVII 3. PROVII 3. PROVII 5. PROVII 5. PROVII 6. CONTF 8. CONTF 7. CONTF 8. CONTF 8	ENSING UNI ING CAPACI AIN MINIMU IDE UNIT WI IDE UNIT WI SH AND INS RICAL CON AIKIN, TRAN HONEYW	ATURE S ATURE S ATURE S ATURE S ATURE S ADD	SENSOR, AN       IATCHING IN       IATCHING IN       E BASED ON       FACTURERS       (RED PANE       (RED PANE       (RED PANE       (RED PANE       (RESSOR SC       CT DRIVE CO       AMIENT COC       FIRST FIGERANT       Y8150       Y81	ID FIELD IDOOR D IS RECOM EL/HAIL G OAD PRO ESSOR. DUND BL DNDENSE DUND BL DNDENSE DUND ENSE OVIDE NO VED EQU VED EQU VED EQU RE-WIDTH RUCTION R. OPERA NORK SIZ STALL CO DCKED W DCKED W	INSTALLE X COIL SH AND 67°FW IMENDED O DUARD FOF DTECTION ANKET. ER FAN. D 0°Fdb. SIZED AND ON-FUSED JAL CCC MPER HAND SEC JAL ANNSFORM ZE. ONTROL D INTH THERI TTH OCCU DVED EQU USE PLAQUE PLAQUE PLAQUE PLAQUE PLAQUE CUBE	PILTER DRI   ALL BE FURN   ENTERNING   ENTERNING   CLEARANCES   CONDENSE   POUTED PE   DISCONNEC   DISCONNEC   F-1 OA   F-2 OA   ERV-1 OA   F-2 OA   ERV-1 CA   F-4 OA   ORMALLY CL   MORT.   AMPER.   MOSTAT. REF   PANCY SENS   AL   NOM.   TYPE   NOM.   TYPE   AL   118   2,000   LA   30   SIDE   2,000   LA   1,716   SIDE	ER. SHED BY FUF AIR TEMPER AIR TEMPER AIR TEMPER COIL. COIL	ACTURER'S F	ACTURER. 5°F AMBIENT. 5°F AMBIE	TIONS. TY OPEN / OPEN / OP	DUL PE CLOSE CLOSE CLOSE CLOSE	PERATIC VOLUM DAMPE YES YES YES YES		AME AND I JCTWORK

REMARKS AND ACCESSORIES:

1. FURNISH DIFFUSERS WITH SQUARE-TO-ROUND NECK TRANSITIONS AS REQUIRED.

2. FURNISH ALL DIFFUSERS AND GRILLES WITH POWDER-COATED FINISH IN COLOR AS SELECTED BY ARCHITECT FROM ALL AVAILABLE OPTIONS.

3. FURNISH WITH FIRE DAMPER BETWEEN TRANSFER GRILLES. REFER TO DRAWINGS.

4. FURNISH WITH BLADES PARALLEL TO SHORT DIMENSION.

METAL-AIRE, TITUS OR APPROVED EQUAL.

N	TILA	TOF	R UN	IT SC		JLE							
HAU	ST FAN DAT	4		ENERGY F	RECOVERY WH	IEEL PERFO	RMANC	E	ELE	CTRICAL CH	IAR.		
D	MOTOR	FAN	COOLING				HEATIN	IG		MCA	MOCD	REMARKS AND	
))	POWER (HP)	FAN RPM	EFF.	EAT (°F)	LAT (°F)	EFF.	EAT (ºF)	LAT (°F)	VOLTAGE/ PHASE	MCA (AMPS)	MOCP (AMPS)	ACCESSORIES	
	3/8	1,082	80.1%	95 / 78	79.0 / 66.4	80.1%	0.0	56.1 / 46.4	120 V / 1Ø	7.1	15	SEE BELOW	

### DED FOUR (4) YEAR PARTS WARRANTY.

OOR AIR TEMPERATUR. EMPERATURE.

INTAKE AND RELIEF HOOD SCHEDULE													
MARK	MFG.	DESCRIPTION	MODEL/T YPE	SIZE	THROAT SIZE (INCHES)	CFM	THROAT AREA (SQ. FT.)	THROAT VELOCITY (FPM)	PRESSURE DROP (IN. H2O)	TYPE OF FRAME AND MOUNTING	SERVICE		
IH-1	GREENHECK	GRAVITY VENTILATOR	GRSI	16	16.25000	411	1.45	283	0.02	ROOF	F-1, F-2, F-4		
IH-2	GREENHECK	GRAVITY VENTILATOR	GRSI	10	10.25000	125	0.57	219	0.02	ROOF	F-3 / ERV-1		
RH-1	GREENHECK	GRAVITY VENTILATOR	GRSR	16	16.25000	1,230	1.45	1,098	0.14	ROOF	CEF-1 THROUGH CEF-7 , EF-3, EF-4, ERV-1		

REMARKS AND ACCESSORIES: 1. PROVIDE UNIT WITH AT MINIMUM 1" THICK INSULATED HOUSING.

3. THROAT SIZES ARE SPECIFIED AS THROAT DIAMETER.

- 4. PROVIDE UNIT IN ALUMINUM CONSTRUCTION.

8. PROVIDE UNIT WITH AT MINIMUM 1" THICK INSULATED HOUSING. GREENHECK, NCA, RUSKIN, UNITED ENERTECH, OR APPROVED EQUAL

MARK	MFG.	MODEL TYPE	CONFIGURATION	SIZE
F-1	CARRIER	59TP6B	HORIZONTAL	080-20
F-2	CARRIER	59TP6B	HORIZONTAL	080-16
F-3	CARRIER	59TP6B	HORIZONTAL	040-10
F-4	CARRIER	59TP6B	HORIZONTAL	060-14

### REMARKS AND ACCESSORIES

1. FURNISH UNIT WITH A TWENTY (10) YEAR LIMITED HEAT EXCHANGER WARRANTY, AND ONE (1) YEAR PARTS AND LABOR WARRANTY.

2. PROVIDE UNIT WITH MATCHING CASED DX COOLING COIL AND CONDESNING UNIT BY FURNACE MANUFACTURER.

3. PROVIDE UNIT WITH THERMOSTATIC EXPANSION VALVE.

- 5. MAINTAIN MANUFACTURER'S MINIMUM CLEARANCES.
- 6. PROVIDE UNIT WITH VARIABLE SPEED, CONSTANT TORQUE, ECM BLOWER MOTOR.
- 7. PROVIDE UNIT WITH AT MINIMUM TWO (2) STAGE NATURAL GAS HEAT.
- 8. PROVIDE UNIT WITH SEALED COMBUSTION. 9. PROVIDE UNIT WITH MANUFACTURER'S CONCENTRIC ROOF VENT KIT. ALL ELBOWS SHALL BE LONG RADIUS.
- 10. PROVIDE UNIT WITH 1/2" THICK FULLY INSULATED CASING INCLUDING BLOWER SECTION.
- 11. PROVIDE UNIT WITH ALUMINIZIED STEEL PRIMARY HEAT EXCHANGER AND STAINLESS STEEL SECONDARY HEAT EXCHANGER.

14. REFER TO SEQUNECE OF OPERATIONS FOR ADDITIONAL INFORMATION.

CARRIER, DAIKIN, TRANE, YORK, OR APPROVED EQUAL

						APPROX. UNIT	RATED	ESP					ELECT	RICAL DATA			UNIT OPERATI	ON CONTROL		
MARK	MFG.	AREA SERVED	MODEL / TYPE	SIZE	MOUNTING	WEIGHT (LBS.)	CFM	(IN. H20)	DRIVE	FRPM	SONES	WATTS	HP	AMPS	VOLTAGE / PHASE	CONTINUOUS	OCCUPANCY	SWITCH	T-STAT	
EF-1	GREENHECK	APPARATUS BAYS 128	G	103-VG	ROOF	45	620	0.3	DIRECT	1017	4.4		1/4	3.5	115V / 1	Х				
EF-2A	GREENHECK	APPARATUS BAYS 128	G	183-VG	ROOF	85	3000	0.4	DIRECT	899	10.4		3/4	8.8	115V / 1				X, 10	;
EF-2B	GREENHECK	APPARATUS BAYS 128	G	183-VG	ROOF	85	3000	0.4	DIRECT	899	10.4		3/4	8.8	115V / 1				X, 10	:
EF-2C	GREENHECK	APPARATUS BAYS 128	G	183-VG	ROOF	85	3000	0.4	DIRECT	899	10.4		3/4	8.8	115V / 1				X, 10	;
EF-2D	GREENHECK	APPARATUS BAYS 128	G	183-VG	ROOF	85	3000	0.4	DIRECT	899	10.4		3/4	8.8	115V / 1				X, 10	;
EF-3	GREENHECK	DECONTAMINATION 128	SQ	85-VG	INLINE	59	210	0.5	DIRECT	899	7.7		1/6	3.4	115V / 1			Х	Х	
EF-4	GREENHECK	TOOL SHOP 122	SQ		CEILING	32	340	0.3	DIRECT	842	1.5	240			115V / 1			Х	Х	
CEF-1	GREENHECK	LAUNDRY 115	SP	A200	CEILING	35	140	0.3	DIRECT	729	1.5	27			115V / 1			Х	Х	
CEF-2	GREENHECK	JANITOR 116	SP	A90	CEILING	20	40	0.3	DIRECT	801	0.5	10			115V / 1			Х		
CEF-3	GREENHECK	TOILET 119B	SP	A200	CEILING	30	75	0.3	DIRECT	625	1.4	16			115V / 1		Х			
CEF-4	GREENHECK	SHOWER 119A	SP	A200	CEILING	30	75	0.3	DIRECT	625	1.4	16			115V / 1		Х			
CEF-5	GREENHECK	TOILET 120	SP	A200	CEILING	30	75	0.3	DIRECT	625	1.4	16			115V / 1		Х			
CEF-6	GREENHECK	TOILET 121	SP	A200	CEILING	30	75	0.3	DIRECT	625	1.4	16			115V / 1		Х			
CEF-7	GREENHECK	TOILET 124	SP	A200	CEILING	30	75	0.3	DIRECT	625	1.4	16			115V / 1		Х			1

### REMARKS AND ACCESSORIES:

- 1. PROVIDE UNIT WITH VIBRATION ISOLATORS.
- 2. PROVIDE UNIT WITH FACTORY WIRED, PLUG-TYPE DISCONNECT.
- 4. PROVIDE UNIT WITH THERMAL OVERLOAD PROTECTION.
- 5. PROVIDE UNIT WITH GRAVITY BACKDRAFT DAMPER.
- 6. PROVIDE UNIT WITH BIRD SCREEN. 7. PROVIDE UNIT WITH ALUMINUM INTAKE GRILLE WITH WHITE ENAMEL FINISH.
- 8. PROVIDE UNIT WITH ROUND DUCT CONNECTION.
- 9. PROVIDE UNIT WITH SCREEN INLET.
- 10. PROVIDE UNIT WITH MINIMUM 18" TALL, INSULATED ROOF CURB SUITABLE FOR LOW-SLOPE ROOF. INSULATION SHALL BE MINIMUM 1" THICK.
- 11. PROVIDE UNIT WITH MOTION DETECTOR, GRILLE MOUNTED.
- 12. PROVIDE UNIT WITH LINE VOLTAGE PILOT LIT SWITCH (ON/OFF). 13. PROVIDE UNIT WITH LINE VOLTAGE THERMOSTAT FOR COOLING. FAN SHALL OPERATE WHEN ROOM ABOVE 80°F (ADJ.)
- 14. THERMOSTAT AND ON/OFF/AUTO (COOLING) SWITCH SHALL BE WIRED IN PARALLEL.
- 15. INTERLOCK WITH (6) OVERHEAD GARAGE DOORS SUCH FAN SHALL RUN FOR 10 MINUTES (ADJ.) UPON ACTIVATION OF GARAGE DOOR OPENING OR CLOSING. PROVIDE TIME CLOCK AND WIRE IN PARALLEL WITH THERMOSTAT.
- 16. PROVIDE UNIT WITH 120V ACTUATOR. OPERATION IS NORMALLY CLOSED, FAIL CLOSED.
- 17. PROVIDE UNIT WITH DISCONNECT SWITCH.
- 18. PROVIDE UNIT PER ACCEPTANCE OF ALTERANTE 1.

UNIT OPERATION CONTROL:

- SWITCH UNIT SHALL BE ELECTRICALLY INTERLOCKED WITH AND CONTROLLED BY INDEPENDENT PILOT LIT SWITCH. CONTINUOUS - UNIT SHALL OPERATE CONTINUOUSLY AND BE SWITCHED BY SWITCH DUTY BREAKER.
- OCCUPANCY UNIT SHALL BE ELECTRICALLY INTERLOCKED WITH AND CONTROLLED BY ZONE LIGHT CONTROL. T-STAT - UNIT SHALL CONTROLLED BY TEMPERATURE SENSOR MOUNTED IN AREA SERVED.
- AEROVENT, COOK, GREENHECK, PENNBARRY, OR APPROVED EQUAL

LE	
MOCP	REMARKS AND ACCESSORIES
50	SEE BELOW
40	SEE BELOW
20	SEE BELOW
30	SEE BELOW

### ISCHARGE TEMPERATURE SENSOR,

FRAME AND MOUNTING	REMARKS AND ACCESSORIES
DUCTWORK	1 - 8
DUCTWORK	1 - 8
DUCTWORK	1 - 7, 9
DUCTWORK	1 - 7, 9
DUCTWORK	1 - 8

REMARKS 1-2 1-2 1-2 2 2 2 2,4 2,3

2. PROVIDE UNIT WITH GALVANIZED BIRD SCREEN.

5. PROVIDE UNIT WITH RUBBER CURB CAP STRIPPING FOR SEALING UNIT TO ROOF CURB.

6. PROVIDE UNIT WITH AT MINIMUM 18" TALL, INSULATED, ROOF CURB SUITABLE FOR ROOF TYPE AND SLOPE.

7. PROVIDE INTAKE HOOD AND ROOF CURB WITH BAKED ENAMEL FINISH IN CUSTOM COLOR TO BE SELECTED BY ARCHITECT.

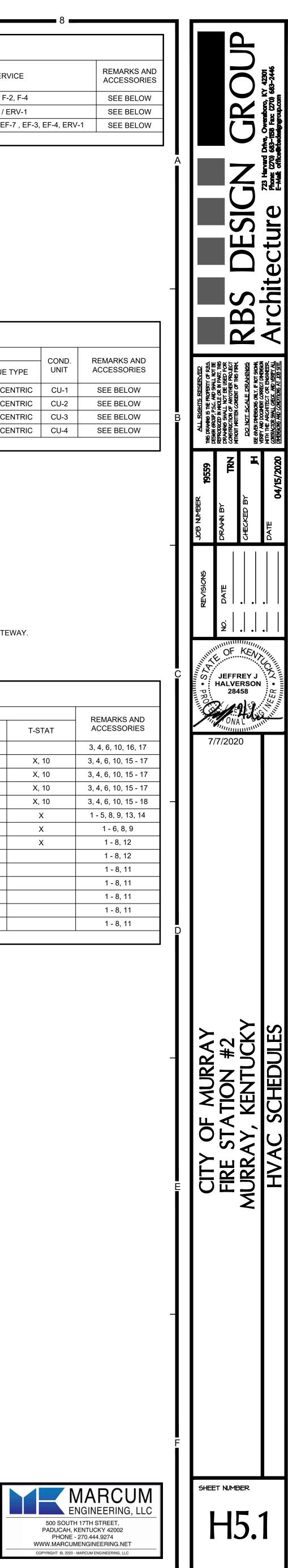
	F													
	•		IACE	E SCH	IEDU	LE								
	ГУТ			FAN MO	TOR DATA			NATUR	AL GAS FIR	ED FURNAC	CE DATA			
OA CFM	S.P.	DRIVE	H.P.	ELECT.	MCA	MOCP	INPUT (MBH)	OUTPUT (MBH)	AFUE	INTAKE SIZE	FLUE SIZE	FLUE TYPE	UNIT	
178	0.5	DIRECT	1	115V / 1Ø	19.3	20	80 / 52	78 / 51	96.5%	3"	3"	CONCENTRIC	CU-1	
149	0.5	DIRECT	3/4	115V / 1Ø	13.4	15	80 / 52	78 / 50	96.2%	3"	3"	CONCENTRIC	CU-2	
125	0.5	DIRECT	1/2	115V / 1Ø	9.7	15	40 / 26	39 / 25	96.0%	3"	3"	CONCENTRIC	CU-3	
100	0.5	DIRECT	3/4	115V / 1Ø	14.6	15	60 / 39	58 / 38	96.3%	3"	3"	CONCENTRIC	CU-4	
178 149 125	0.5 0.5 0.5	DIRECT DIRECT DIRECT	1 3/4 1/2	ELECT. 115V / 1Ø 115V / 1Ø 115V / 1Ø	MCA 19.3 13.4 9.7	20 15 15	(MBH) 80 / 52 80 / 52 40 / 26	OUTPUT (MBH) 78 / 51 78 / 50 39 / 25	AFUE 96.5% 96.2% 96.0%	INTAKE SIZE 3" 3" 3"	FL	UE IZE 3" 3" 3"	LUE IZE FLUE TYPE 3" CONCENTRIC 3" CONCENTRIC 3" CONCENTRIC	LUE IZEFLUE TYPECOND. UNIT3"CONCENTRICCU-13"CONCENTRICCU-23"CONCENTRICCU-3

4. PROVIDE UNIT WITH FIELD INSTALLED, HINGED FILTER RACK TO ACCEPT STANDARD NOMINAL SIZE FILTRATION MEDIA, MERV 8, 1" THICK AIR FILTERS. UNITS SHALL HAVE GASKETED DOORS AND RAILS FOR EASY FILTER CHANGING.

12. PROVIDE UNIT WITH DRAIN SENSOR THAT SHUTS DOWN THE INDOOR UNIT ANY TIME A CLOGGED CONDENSATE DRAIN IS DETECTED IN THE DRAIN PAN. MECHANICAL CONTRACTOR SHALL PROVIDE LOW VOLTATGE WIRING.

13. PROVIDE UNIT WITH LARGE SCREEN DIGITAL PROGRAMMABLE THERMOSTAT WITH BATTERY BACKUP, PASSCODE PROTECTED, AT MINIMUM FIVE (5) YEAR WARRANTY, SIMILAR TO HONEYWELL YTHX9421R5085 AND REDLINK INTERNET GATEWAY.

3. PROVIDE UNIT WITH FACTORY MOUNTED, FAN MOTOR SPEED CONTROL AND WIRED ON FAN HOUSING OR SOLID-STATE FAN SPEED CONTROL. COORDINATE INSTALLATION OF FIELD INSTALLED SPEED CONTROLLERS WITH ELECTRICAL CONTRACTOR.



## DUCTLE

### APPF INDOOR MODEL UNIT MFR. DESCRIPTION AREA SERVED NUMBER WEIG MARK (LE 40MHHQ WALL MOUNT CARRIER RADIO / IT 102 IU-1

### REMARKS AND ACCESSORIES:

- 1. PROVIDE UNIT WITH AT MINIMUM FIVE (5) YEAR PARTS WARRANTY, ONE (1) YEAR LIMITED-LABOR WARRANTY AND SEVEN (7) YEAR COMPRESSOR WARRANTY.
- 3. MAINTAIN MANUFACTURER'S MINIMUM RECOMMENDED CLEARANCES.
- 4. PROVIDE UNIT WITH LINESET COVER SYSTEM.
- 5. FURNISH AND INSTALL REFRIGERANT PIPING SIZED AND ROUTED PER THE MANUFACTURER'S RECOMMENDATIONS.
- 6. PROVIDE UNIT WITH WASHABLE, ANTI-MICROBIAL, LONG-LIFE AIR FILTER.
- 7. PROVIDE UNIT WITH FULL R-410A REFRIGERANT CHARGE. 8. INDOOR UNIT SHALL BE POWERED BY OUTDOOR UNIT.
- 9. PROVIDE UNIT WITH LOW AMBIENT KIT CAPABLE OF OPERATION TO 0° Fdb AND CRANKCASE HEATER.
- 11. UNIT SHALL BE EQUIPPED WITH REVERSING VALVE FOR HEAT PUMP OPERATION.
- 12. INDOOR UNIT SHALL BE POWERED BY THE OUTDOOR UNIT.

13. ELECTRICAL CONTRACTOR SHALL PROVIDE NON-FUSED DISCONNECT. DAIKIN. LG. CARRIER. MITSUBISHI. PANOSONIC. TRANE OR APPROVED EQUAL.

DAIKIN, LG, CARRIER	, MITSUBISHI,	PANOSONIC,	IRANE O	R APPROVED	EQUAL

	LOUVER SCHEDULE													
MARK	MARK MFG. DESCRIPTION MODEL/TYPE SIZE (INCHES) CFM													
L-1A	GREENHECK	COMBINATION LOUVER/DAMPER	EAC-601	64 X 48 X 6	4,500	9.66	466	0.03	CHANNEL	4'-0"	EF-2A/2B/2C/2D	1 -12		
L-1B	GREENHECK	COMBINATION LOUVER/DAMPER	EAC-601	64 X 48 X 6	4,500	9.66	466	0.03	CHANNEL	4'-0"	EF-2A/2B/2C/2D	1 -12		
L-2	GREENHECK	COMBINATION LOUVER/DAMPER	EAC-601	64 X 48 X 6	4,500	9.66	466	0.03	CHANNEL	20'-8"	EF-2A/2B/2C/2D	1 -12		
L-3	GREENHECK	FEMA LOUVER	AFH-501	16 X 12 X 8	-	0.35	-	-	EXTERIOR FLANGE	1'-0"	EF-2A/2B/2C/2D	1 - 2, 4 - 6, 8 - 9, 13 - 15		
L-4	GREENHECK	FEMA LOUVER	AFH-501	16 X 12 X 8	-	0.35	-	-	EXTERIOR FLANGE	7'-6"	EF-2A/2B/2C/2D	1 - 2, 4 - 6, 8 - 9, 13 - 15		

### **REMARKS AND ACCESSORIES:**

- 3. PROVIDE UNIT WITH EXTENDED SILL.
- 4. PROVIDE UNIT IN ALUMINUM CONSTRUCTION.
- 5. PROVIDE UNIT WITH ALUMINUM BIRD SCREEN.
- 7. INSTALL UNIT IN 18 GAUGE SHEETMETAL WALL SLEEVE.
- 8. REFER TO STRUCTURAL DRAWINGS FOR LINTEL TYPE DETAILS AND NOTES.
- 9. MOUNTING HEIGHT IS MEASURED FROM FINISHED FLOOR TO THE BOTTOM OF THE UNIT.
- 10. PROVIDE SECURITY BARS 1/2" IN DIAMETER AND 6" ON CENTER.
- 11. PROVIDE UNIT WITH 120V ACTUATOR FOR INTERLOCK WITH WITH EXHAUST FAN EF-2A, EF-2B, EF-2C, AND EF-2D.

PROVIDE UNIT THAT IS A UL CLASSIFIED WIND-STORM RATED ASSEMBLY IN ACCORANDACE WITH FEMA GUIDELINES P-320 (2014), P-361 (2015), AND ICC 500 (2014) TO STATIC AND CYCLICAL DESIGN PRESSURES OF POSITIVE/NEGATIVE 250 15. PSF AND DEBRIS IMPACT OF A 15 LB 2 INCH X 4 INCH TRAVELING AT 100 MPH.

GREENHECK, NCA, RUSKIN, OR APPROVED EQUAL

ESS	SPLIT	HEA	T PU	MP EQU	IIPME	NT SC	CHEDUI	E				
PROX. UNIT EIGHT LBS.)	MAX. AIRFLOW (CFM)	SEER	TOTAL NOMINAL COOLING CAPACITY (BTUH)	TOTAL NOMINAL HEATING CAPACITY (BTUH)	OUTDOOR UNIT MARK	MFR.	MODEL NUMBER	APPROX. UNIT WEIGHT (LBS.)	VOLTAGE/P HASE	MCA (AMPS)	MOCP (AMPS)	REMARKS AND ACCESSORIES
18	300	13.0	9,000	6,000	OU-1	CARRIER	38MHRBQ	70	208V / 1Ø	8	15	SEE BELOW

2. COOLING CAPACITIES BASED ON 95° F AMBIENT AIR TEMPERATURE AND 80° F db/67° F wb INDOOR AIR TEMPERATURE. HEATING CAPACITIES BASED ON 47° F db AMBIENT AIR TEMPERATURE AND 70° F db/60° F wb INDOOR AIR TEMPERATURE.

10. PROVIDE UNIT WITH MANUFACTURER'S WIRED PROGRAMMABLE THERMOSTAT WITH REMOTE MOUNTED TEMPERATURE SENSOR CAPABLE OF CONTROLLING ALL UNIT FUNCTIONS.

1. REFER TO ARCHITECTURAL PLANS FOR FINISHED MOUNTING HEIGHT AND LOCATION.

2. SIZES ARE SPECIFIED AS: FIRST FIGURE-WIDTH, SECOND FIGURE-HEIGHT, AND THIRD FIGURE- DEPTH.

6. PROVIDE UNIT WITH FACTORY APPLIED 3-COAT, 70% KYNAR FINISH. CUSTOM COLOR SHALL MATCH EXISTING.

12. COORDINATE INSTALLATION OF CONDUIT TO ACTUATOR WITH ELECTRICAL CONTRACTOR DURING INSTALLATION OF CMU BLOCK.

13. PROVIDE UNIT FOR INSTALLATION IN 8" CONCRETE INTERIOR WALL, COORDINATE OPENING SIZE WITH WALL CONSTRUCTION.

14. PROVIDE UNIT WITH MINIMUM 50 SQUARE INCHES FREE AREA FOR 10 OCCUPANTS PER ICC 500 - 2014, TABLE 702.2.

### GAS FIRED INFRARED HEATER SCHEDULE WEIGHTOVERALLOVERALLMOUNTINGGAS INPUT(LBS.)LENGTHWIDTHHEIGHT(MBH) MODEL SIZE ELEC. CHAR MCA MOCP MARK MFG. STERLING RSS 75 200 31' - 2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15 IR-1 IR-2 STERLING RSS 75 200 31' - 2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15 IR-3 STERLING RSS 75 200 31' - 2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15 IR-4 STERLING RSS 75 200 31' - 2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15 RSS IR-5 75 200 31' - 2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15 STERLING IR-6 STERLING RSS | 75 | 200 31' - 2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15 IR-7 STERLING RSS 75 200 31' - 2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15 IR-8 STERLING RSS | 75 | 200 31' - 2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15 IR-9 STERLING RSS 75 200 31' - 2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15 IR-10 STERLING RSS 75 200 31'-2" 18" NOTE 3 50 / 75 120V / 1Ø 6.0 15

### REMARKS AND ACCESSORIES:

1. PROVIDE UNIT WITH AT MINIMUM ONE (1) YEAR PARTS WARRANTY, FIVE (5) YEAR WARRANTY ON COMBUSTION AND RADIANT TUBES, AND TEN (10) YEAR BURNER WARRANTY. 2. GAS INPUT SPECIFIED AS: FIRST STAGE GAS INPUT / SECOND STAGE GAS INPUT.

3. MOUNTING HEIGHT SHALL BE 6" FROM BOTTOM OF CEILING, REFER TO MANUFACTURERS MIMIMUM CLEARANCES.

4. PROVIDE UNIT WITH HANGING HARDWARE.

5. UNIT SHALL BE EQUIPPED FOR NATURAL GAS HEAT. 6. PROVIDE UNIT WITH TWO-STAGE GAS VALVE.

7. PROVIDE UNIT WITH SIGHT GLASS FOR BURNER INSPECTION.

8. PROVIDE UNIT WITH AIR PROVING SAFETY SWITCH.

9. PROVIDE UNIT WITH STAINLESS STEEL TUBE CLAMP AS REQUIRED BY MANUFACTURER FOR EACH TUBING JOINT.

10. PROVIDE UNIT WITH PROTECTIVE GUARD AS REQUIRED TO PROTECT ENTIRE LENGTH OF UNIT. 11. PROVIDE UNIT WITH 4" SIDEWALL COMBUSTION AIR INTAKE WALL CAP.

12. PROVIDE UNITS WITH 4" ROOF VENT CAP. PROVIDE STORM COLLAR, ROOF FLASHING AND FIRE STOP SPACER AS REQUIRED FOR COMPLETE INSTALLATION.

13. PROVIDE UNIT WITH ANGLE MOUNTING FOR 45 DEGREES.

14. PROVIDE UNIT WITH RELAY BOARD FOR A COMMON THERMOSTAT.

15. PROVIDE UNIT WITH COMMON 120V THERMOSTAT FOR ALL HEATERS.

16. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL NON-FUSED ELECTRICAL DISCONNECT SWITCH.

17. PROVIDE UNIT PER ACCEPTANCE OF ALTERANTE 1 AND REMOVE REMARK 13 FROM IR-5 AND IR-6.

AMBIRAD, DETROIT RADIANT, SCHWANK, STERLING, OR APPROVED EQUAL

## CEILING-MOUNTED RADIANT PANEL HEATER SCHEDULE

	<b>V —</b> · <b>—</b> · ·					/	••••			
MARK	MFG.	MOUNTING LOCATION	MODEL	SIZE	WATTS	VOLTAGE / PHASE	MCA (AMPS)	MOCP (AMPS)	MOUNTING CONFIGURATI ON	REMARI ACCESS
CP-1	QMARK	VESTIBULE 100	CP751	24" x 48"	750	120V / 1Ø			LAY-IN	1-
CP-2	QMARK	CORRIDOR 111	CP751	24" x 48"	750	120V / 1Ø			LAY-IN	1-

### **REMARKS AND ACCESSORIES:**

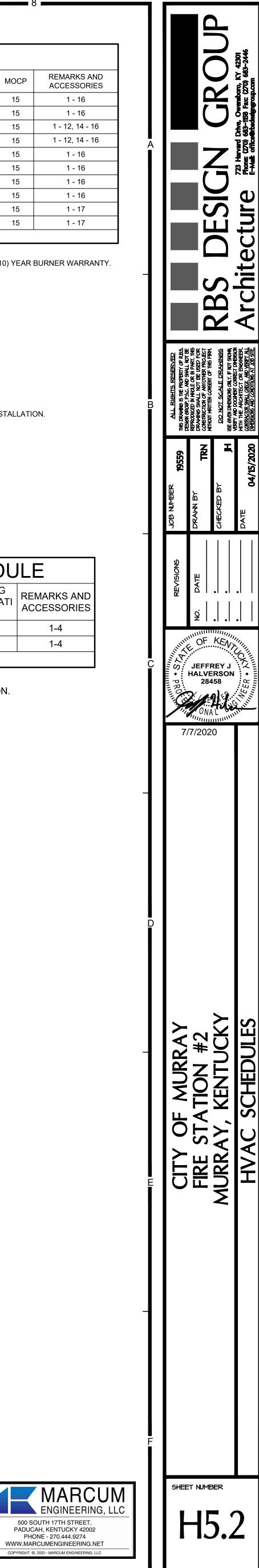
1. PROVIDE UNIT WITH AT MINIMUM 1" OF 1 POUND DENSITY HIGH TEMPERATURE FIBERGLASS THERMAL INSULATION.

2. PROVIDE UNIT WITH THERMAL OVERLOAD PROTECTION.

3. FINISH UNIT IN HIGH TEMPERATURE SILICONE PAINT. CUSTOM COLOR SHALL BE SELECTED BY ARCHITECT.

4. PROVIDE UNIT WITH LINE VOLTAGE THERMOSTAT. CHROMALOX, MARKEL, QMARK, OR APPROVED EQUAL

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FIRE ALARM NARRATIVE
<ul> <li>1.0 GENERAL:</li> <li>THE CONTRACTOR SHALL FURNISH ALL LABOR, SERVICES, HANDHELD PROGRAMMERS, SOFTWARE AND MATERIALS NECESSARY TO FURNISH AND INSTALL A COMPLETE, FUNCTIONAL FIRE ALARM SYSTEM (SYSTEM). THE SYSTEM SHALL COMPLY IN RESPECTS WITH ALL PERTINENT CODES, RULES REGULATIONS AND LAWS OF THE AUTHORITY HAVING JURISDICTION. THE SYSTEM SHALL COMPLY IN ALL RESPECTS WITH THE REQUIREMENTS OF THE SPECIFICATIONS, MANUFACTURER'S RECOMMENDATIONS AND UNDERWRITERS LABORATORIES INC. (UL) LISTINGS. FIELD COORDINATE EXACT PLACEMENT OF ALL DEVICES TO PREVENT CONFLICTS - RELOCATE AS REQUIRED. SYSTEM SHALL BE MONITORED BY AN APPROVED CENTRAL STATION. FURNISH AND INSTALL ALL POWER AND FIRE ALARM INTERFACE CONNECTIONS INDICATED BY THE ARCHITECTURAL HARDWARE PACKAGES AS APPLICABLE. FURNISH AND INSTALL A DEDICATED 120 VOLT POWER CIRCUIT FOR EACH POWER SUPPLY CABINET AS REQUIRED - EMERGENCY SOURCE IF AVAILABLE.</li> <li>IT IS FURTHER INTENDED THAT UPON COMPLETION OF THIS WORK, THE OWNER BE PROVIDED WITH:</li> </ul>
<ul> <li>1.0.1 COMPLETE INFORMATION AND DRAWINGS DESCRIBING AND DEPICTING THE ENTIRE SYSTEM AS INSTALLED, INCLUDING ALL INFORMATION NECESSARY FOR MAINTAINING, TROUBLESHOOTING AND/OR EXPANDING THE SYSTEM AT A FUTURE DATE.</li> <li>1.0.2 COMPLETE DOCUMENTATION OF SYSTEM TESTING.</li> </ul>
1.0.3 CERTIFICATION THAT THE ENTIRE SYSTEM HAS BEEN INSPECTED AND TESTED, IS INSTALLED ENTIRELY IN ACCORDANCE WITH THE APPLICABLE CODES, STANDARDS, MANUFACTURER'S RECOMMENDATIONS AND UL LISTINGS AND IS IN PROPER WORKING ORDER. CONTRACTOR SHALL USE "FIRE ALARM SYSTEM CERTIFICATION AND DESCRIPTION" AS REQUIRED BY NFPA 72.
NOTE: THE INFORMATION CONTAINED ON THESE DRAWINGS IS DIAGRAMMATIC AND IS INTENDED TO INDICATE AREAS AND TYPE OF COVERAGE. ALL SYSTEM COMPONENTS AND INITIATION/NOTIFICATION APPLIANCE LAYOUTS ARE NOT INDICATED ON DRAWINGS - <u>THE DESIGN AND APPROVAL OF</u> <u>THIS SYSTEM SHALL BE THE FIRE ALARM CONTRACTOR'S RESPONSIBILITY</u> AND SHALL BE BASED ON STANDARD PRODUCTS OF FARENHYT IFP300/IFP2000 SYSTEM COMPONENTS TO MEET OR EXCEED ALL REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION (AHJ). FINAL APPROVAL OF OVERALL SYSTEM LAYOUT SHALL BE RESERVED BY THE ENGINEER. NOTIFIER, GE VIGILANT, EST AND SIEMENS ARE ACCEPTABLE EQUALS.
NOTE: THERE ARE 2 VERSIONS OF SPEC 283111 (2) THAT WE USE. MASTERSPEC'S 283111 DOES NOT INCLUDE FARENHYT (ABOVE), EST AND IT MAY BE GE VIGILANT IS NO LONGER VALID. THE OTHER VERSION OF SPEC 283111 ONLY LISTS "FCI". QUESTION: DO WE EVEN REALLY NEED TO INCLUDE THIS TYPE LANGUAGE HERE AND LEAVE THIS DRIVEN BY THE SPEC ALONE?
ALTERNATE MANUFACTURERS WILL BE CONSIDERED. BASIS FOR CONSIDERATION WILL INCLUDE, BUT NOT BE LIMITED TO COMPLETE EQUIPMENT SUBMITTALS AND NARRATIVE DESCRIPTION OF THE PROPOSED SYSTEM, TEN (10) DAYS PRIOR TO BIDDING. <u>PRIOR TO CONSTRUCTION</u> , CONTRACTOR SHALL SUBMIT FOR SHOP DRAWING APPROVALS, COMPLETE INFORMATION AND LAYOUT DRAWINGS DESCRIBING AND DEPICTING THE ENTIRE SYSTEM TO BE INSTALLED. 1.1 SYSTEM OVERVIEW
1.1.1 THE NEW FIRE ALARM SYSTEM IS TO BE DESIGNED TO REPORT TO THE SUPERVISORY SERVICE THROUGH A DIGITAL ALARM COMMUNICATOR
TRANSMITTER (DACT).1.1.2ALL INITIATING CIRCUITS ARE TO BE ARRANGED AS STYLE C IN ACCORDANCE WITH NFPA 72.
1.1.3 ALL NOTIFICATION APPLIANCE CIRCUITS ARE TO BE ARRANGED AS STYLE 7 IN ACCORDANCE WITH NEPA 72.
<ul><li>1.1.4 ALL SIGNALING LINE CIRCUITS ARE TO BE ARRANGED AS STYLE 4 IN ACCORDANCE WITH NFPA 72.</li><li>1.2 FIRE ALARM CONTROL SYSTEM:</li></ul>
1.2.1 THE FIRE ALARM SYSTEM IS TO BE A MICROPROCESSOR-BASED SYSTEM CAPABLE OF TWO-WAY COMMUNICATION OVER A NETWORK OF SIGNALING LINE CIRCUITS. INTELLIGENT/ANALOG ADDRESSABLE INITIATING DEVICES SHALL COMMUNICATE WITH THE FACP AND THE FACF SHALL COMMUNICATE THROUGH THE DACT. CONTROL PANEL SHALL BE EQUAL TO FARENHYT IFP300/IFP2000, NOTIFIER OR EQUAL AND SHALL BE LOCATED AT WORK AREA. FURNISH AND INSTALL ALL POWER SUPPLY CONNECTIONS TO FACP AND ELECTRIC BELLS ASSOCIATED WITH SPRINKLER SYSTEM. SUPERVISE ALL FLOW, TAMPER AND LOW PRESSURE SWITCHES ASSOCIATED WITH THE SPRINKLER SYSTEM AND OR FIRE PUMP AS APPLICABLE. SUPERVISE CONNECTIONS TO HIGH VOLUME LOW SPEED FAN ASSEMBLIES WHICH ARE EQUIPPED WITH A FIRE ALARM RELAY - INTERLOCK WITH SPRINKLER FOR WATER FLOW SIGNAL. SUPERVISE ALL TAMPER VALVES, AND ETC. ASSOCIATED WITH THE ELEVATOR SYSTEM AS APPLICABLE. THE SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO MAIN CONTROL PANEL, REMOTE ANNUNCIATOR AND INITIATION/NOTIFICATION APPLIANCES.
1.3 INITIATING FUNCTIONS 1.3.1 MANUAL PULL STATIONS ARE TO BE LOCATED AT EXITS OF THE BUILDING ON ALL ELOORS PER APPLICABLE CODE - ADDITIONAL PULL
<ul> <li>1.3.1 MANUAL PULL STATIONS ARE TO BE LOCATED AT EXITS OF THE BUILDING ON ALL FLOORS PER APPLICABLE CODE. ADDITIONAL PULL STATIONS ARE TO BE PROVIDED SO THE TRAVEL DISTANCE TO A PULL STATION DOES NOT EXCEED 200 FT. MANUAL PULL STATIONS ARE TO BE INSTALLED AT EXTERIOR EGRESS DOORS FROM MECHANICAL, ELECTRICAL AND OR SPRINKLER ROOMS AS APPLICABLE.</li> <li>1.3.2 AREA (SPOT) SMOKE DETECTORS GENERALLY ARE TO BE LOCATED IN VARIOUS AREAS OF THE BUILDING AS REQUIRED TO PROVIDE PROTECTION OF THE SPACES INDICATED, SPECIFICALLY STORAGE ROOMS, MECHANICAL AND ELECTRICAL ROOMS. ALSO, THERE SHALL BE SMOKE DETECTORS LOCATED ON EACH SIDE OF DOORS WITH MAGNETIC HOLD-OPENS AT SMOKE BARRIERS, THAT RELEASE UPON DETECTION OF SMOKE. A SMOKE DETECTOR SHALL BE INSTALLED FOR COVERAGE OF TO SYSTEM AUXILIARY AND CONTROL PANELS.</li> <li>1.3.3 HEAT DETECTORS GENERALLY ARE TO BE LOCATED AS REQUIRED TO PROVIDE PROTECTION OF THE SPACES INDICATED IN CRITICAL AREAS THAT ARE NOT SUITABLE FOR SMOKE DETECTORS, SUCH AS DUSTY OR HIGH HUMIDITY AREAS.</li> <li>1.3.4 ANALOG/ADDRESSABLE TYPE DUCT DETECTORS MUST BE LOCATED DOWNSTREAM OF AIR FILTERS AND AHEAD OF ANY BRANCH</li> </ul>
CONNECTIONS IN RETURN AIR DUCT OF HVAC UNITS HAVING A RATED CAPACITY GREATER THAN 2,000 CFM OR IN BOTH THE RETURN AND SUPPLY AIR DUCT OF UNITS RATED GREATER THAN 15,000 CFM. THESE DETECTORS WILL SHUT DOWN THEIR RESPECTIVE HVAC UNIT UPON DETECTION OF SMOKE, AND SHALL SOUND THE GENERAL BUILDING ALARM. 1.3.5 COMMERCIAL COOKING APPLIANCES HAVE SUPPRESSION SYSTEMS INSTALLED WITHIN THE HOOD AND SHALL BE ARRANGED TO SOUND AN
<ul> <li>1.3.5 COMMERCIAL COOKING APPLIANCES HAVE SUPPRESSION SYSTEMS INSTALLED WITHIN THE HOOD AND SHALL BE ARRANGED TO SOUND AN ALARM AT THE FACP AND BE SUPERVISED.</li> <li>1.3.6 WATER FLOW SWITCHES ARE GENERALLY INSTALLED ON SPRINKLER RISERS. SWITCHES SHALL BE ARRANGED TO INITIATE AN ALARM CONDITION.</li> </ul>
1.3.7 TAMPER SWITCHES ARE GENERALLY INSTALLED ON SPRINKLER SYSTEM WATER CONTROL VALVES AT EACH FLOOR. SWITCHES SHALL BE ARRANGED TO ANNUNCIATE AN OFF-NORMAL CONDITION.
<ul> <li>1.4 NOTIFICATION FUNCTIONS</li> <li>1.4.1 VISUAL SIGNAL APPLIANCES (STROBES) MUST BE INSTALLED, AS A MINIMUM, TO CONFORM TO THE AMERICANS WITH DISABILITIES ACT (ADA) CRITERIA AND NFPA 72. SOME OF THE ADA CRITERIA ARE:</li> </ul>
<ul><li>1.4.1.1 THE LAMP SHALL BE A NEON STROBE TYPE OR EQUIVALENT.</li><li>1.4.1.2 THE COLOR SHALL BE CLEAR OR NOMINAL WHITE (I.E., UNFILTERED OR CLEAR FILTERED WHITE LIGHT).</li></ul>
1.4.1.3 THE MAXIMUM PULSE DURATION SHALL BE 2/10TH OF ONE SECOND (0.2 SECONDS) WITH A MAXIMUM DUTY CYCLE OF 40 PERCENT. THE PULSE DURATION IS DEFINED AS THE TIME INTERVAL BETWEEN INITIAL AND FINAL POINTS OF 10 PERCENT OF MAXIMUM SIGNAL.
<ul> <li>1.4.1.4 THE INTENSITY SHALL BE A MINIMUM OF 75 CANDELA IN ACCORDANCE WITH UL 1971.</li> <li>1.4.1.5 THE FLASH RATE SHALL BE A MINIMUM OF 1 HERTZ AND A MAXIMUM OF 3 HERTZ.</li> </ul>
1.4.1.6 THE STROBES AND OR HORN STROBES SHALL BE PLACED AT 80" TO 96" ABOVE THE HIGHEST FLOOR LEVEL WITHIN THE SPACE OR
6" BELOW THE CEILING, WHICHEVER IS LOWER, IN COMPLIANCE WITH CODE. 1.4.1.7 IN GENERAL, NO PLACE IN ANY ROOM OR SPACE REQUIRED TO HAVE A VISUAL SIGNALING APPLIANCE SHALL BE MORE THAN 50 FT FROM THE SIGNAL (IN A HORIZONTAL PLANE). IN LARGE ROOMS AND SPACES EXCEEDING 100 FT. ACROSS WITHOUT OBSTRUCTION 6 FT. ABOVE THE FINISHED FLOOR SUCH AS AUDITORIUMS, DEVICES MAY BE PLACED AROUND THE PERIMETER, SPACED A MAXIMUM OF 100 FT. APART IN LIEU OF SUSPENDING APPLIANCES FROM THE CEILING.
<ul> <li>1.4.1.8 NO PLACE IN COMMON CORRIDORS OR HALLWAYS IN WHICH VISUAL ALARM SIGNALING APPLIANCES ARE REQUIRED SHALL BE MORE THAN 50 FT. FROM THE SIGNAL.</li> <li>1.4.1.9 VISUAL SIGNALING (STROBE) APPLIANCES SHALL BE LOCATED WITHIN 15 FT. OF THE END OF A CORRIDOR.</li> </ul>
<ul><li>1.4.1.10 WHEN TWO OR MORE VISUAL SIGNALING APPLIANCES MAY BE VIEWED AT ONE TIME, THEY SHALL FLASH IN SYNCHRONIZATION.</li><li>1.4.1.11 AREAS REQUIRED TO HAVE VISUAL SIGNALING APPLIANCES INCLUDE BUT ARE NOT LIMITED TO: CORRIDORS, RESTROOMS,</li></ul>
CONFERENCE AND MEETING ROOMS, FILING, BREAK ROOMS AND SIMILAR SPACES.
<ul> <li>1.5 AUXILIART FUNCTIONS</li> <li>1.5.1 EMERGENCY EXIT DOORS WITH SECURITY MAGNETIC LOCKS SHALL RELEASE PER NFPA 72.</li> <li>1.5.2 DOORS IN RATED WALLS IN THE MEANS OF EGRESS SHALL BE HELD OPEN MAGNETICALLY. UPON ACTIVATION, THE FIRE ALARM SYSTEM</li> </ul>
MUST BE ARRANGED TO RELEASE THE MAGNET, CAUSING THESE DOORS TO CLOSE AUTOMATICALLY. 1.5.3 THE FIRE ALARM SYSTEM OPERATION FOLLOWING THE ACTIVATION OF A MANUAL PULL STATION, AREA SMOKE DETECTOR, THERMAL
DETECTOR OR DUCT TYPE SMOKE DETECTOR SHALL ACTIVATE THE FOLLOWING SEQUENCE: 1.5.3.1 ALL INTENDED ALARM NOTIFICATION APPLIANCES SHALL SOUND CONTINUOUSLY UNTIL THE FIRE ALARM CONTROL PANEL IS SILENCED BY THE ALARM SILENCE KEY.
<ul> <li>1.5.3.2 ALL VISUAL NOTIFICATION APPLIANCES SHALL FLASH CONTINUOUSLY UNTIL THE FIRE ALARM PANEL IS SILENCED, ALARM CONDITION IS CLEARED AND THE CONTROL PANEL IS RESET.</li> <li>1.5.3.3 A SUBSEQUENT ALARM SHALL CAUSE IT'S PROGRAMMED OR INTENDED OUTPUTS TO ACTIVATE/REACTIVATE.</li> </ul>
<ul><li>1.5.3.3 A SUBSEQUENT ALARM SHALL CAUSE IT'S PROGRAMMED OR INTENDED OUTPUTS TO ACTIVATE/REACTIVATE.</li><li>1.5.3.4 INITIATE TRANSMISSION OF THE ALARM SIGNAL TO REMOTE CENTRAL STATION.</li></ul>
1.5.3.5 ACTIVATE A SUPERVISED SIGNAL TO THE LOCAL FIRE DEPARTMENT PER NFPA 72.
<ul> <li>1.5.3.6 ALL SYSTEM EVENTS SHALL BE DISPLAYED ON A FACP DISPLAY AND REMOTE ANNUNCIATOR.</li> <li>1.5.3.7 MECHANICAL CONTROLS SHALL ACTIVATE AIR-HANDLING SYSTEMS IN ACCORDANCE WITH NFPA 90.</li> </ul>
<ul> <li>1.5.3.8 THE CONTROL PANEL SHALL ALARM CONTINUOUSLY UNTIL SILENCED.</li> <li>1.5.3.9 AN ALARM FROM A ZONE OR DEVICE SELECTED FOR ALARM VERIFICATION SHALL CAUSE A VISUAL SIGNAL AT THE FACP AND</li> </ul>
ANNUNCIATOR DURING THE VERIFICATION SEQUENCE. AN ALARM FROM ANY OTHER DEVICE SUCH AS A PULL STATION, SHALL OVERRIDE ALARM VERIFICATION AND CAUSE AN IMMEDIATE ALARM. 1.5.3.10 SUPERVISE CONTROL SOURCE OF ELEVATOR SHUNT TRIP CIRCUIT BREAKER BY FIRE ALARM SYSTEM.
1.5.3.11 ACTIVATE NOTIFICATION APPLIANCES ASSOCIATED WITH AND REQUIRED BY THE SPRINKLER SYSTEM UPON SYSTEM WATER FLOW.
1.6 FIRE DOCUMENT BOX THE FIRE DOCUMENT BOX (FDB) SHALL BE CONSTRUCTED OF 16 GAUGE COLD ROLLED STEEL (CRS); IT SHALL BE PAINTED WITH A DURABLE RED POWDER COAT PAINT. THE FRONT DOOR SHALL BE LETTERED WITH THE WORDS "FIRE ALARM DOCUMENTS" IN WHITE INDELIBLE LETTERS 1" IN HEIGHT. THE DOOR OF THE FDB SHALL BE LOCKED WITH A KEYED LOCK, 3/4" BARREL. THE CABINET SHALL CONTAIN A 16 GAUGE GALVANIZED CRS SLEEVE. THIS SLEEVE SHALL ALLOW FOR THE STORAGE OF 1" OF PAPER, TEST AND INSPECTION RECORDS, MANUALS AND OTHER IMPORTANT DOCUMENTS. THE SLEEVE SHALL ALSO FACILITATE THE HANGING OF KEY RINGS AND THUMB DRIVES (FOR DATA STORAGE) ALONG WITH BUSINESS CARDS AND SPACE FOR A CD "JEWEL" CASE. THE UNIT SHALL ALSO CONTAIN A 1.40Z CAN OF SMOKE DETECTOR TEST GAS. ADHERED INSIDE THE DOOR SHALL BE A "NOTES" LABEL FOR THE RECORDING OF VALUABLE INFORMATION SUCH AS
AHJ APPROVALS, VARIOUS SYSTEM CODES AND THE LOCATION OF HARD TO FIND DEVICES.

IARRATIVE		GENERAL ELECTRICAL NOTES
GRAMMERS, SOFTWARE AND MATERIALS NECESSARY TO FURNISH AND (STEM SHALL COMPLY IN RESPECTS WITH ALL PERTINENT CODES, RULES, SYSTEM SHALL COMPLY IN ALL RESPECTS WITH THE REQUIREMENTS OF WRITERS LABORATORIES INC. (UL) LISTINGS. FIELD COORDINATE EXACT	1	CONTRACTOR SHALL REFERENCE THE PROJECT SITE PLANS FOR ALL UTILITIES. COORDINATE ALL REQUIRED WORK WIT ASSOCIATED UTILITIES BEFORE BIDDING AND INCLUDE ALL MATERIAL AND LABOR REQUIRED BY THE RESPECTIVE UTILITY DEEMED "THE OWNERS RESPONSIBILITY" BY THAT UTILITY COMPANY. IN CASE OF DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND UTILITY COMPANY REQUIREMENTS, THE REQUIREMENTS OF THE UTILITY COMPANY SH BE FOLLOWED AND THE COST THERE OF SHALL BE INCLUDED IN THE BID (IF REQUIRED).
RED. SYSTEM SHALL BE MONITORED BY AN APPROVED CENTRAL NNECTIONS INDICATED BY THE ARCHITECTURAL HARDWARE		BE AWARE THAT SEVERAL UTILITIES ARE LOCATED IN THE GROUND BELOW THE PROJECT CONSTRUCTION LIMITS. USE CAUTION WHEN EXCAVATING. UTILIZE HAND TOOLS TO LOCATE EXISTING UTILITIES PRIOR TO MACHINE EXCAVATION.
POWER CIRCUIT FOR EACH POWER SUPPLY CABINET AS REQUIRED -	3	COORDINATE NEW CONNECTIONS TO UTILITIES WITH THE APPROPRIATE UTILITY COMPANY(S). INSTALL WORK PER UTILITING COMPANY REQUIREMENTS AND OBTAIN NECESSARY UTILITY COMPANY APPROVALS.
ING THE ENTIRE SYSTEM AS INSTALLED, INCLUDING ALL INFORMATION	4	THE ELECTRICAL DRAWINGS ARE SCHEMATIC IN NATURE AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT. THE DRAWINGS SHALL NOT BE SCALED FROM TO DETERMINE DEVICE OR EQUIPMENT PLACEMENT.
DING THE SYSTEM AT A FUTURE DATE.	5	ALL WORK IS TO BE COORDINATED WITH ALL OTHER TRADES ON THIS PROJECT AND ELECTRICAL WORK SHALL BE INSTA IN A NEAT AND ORDERLY FASHION.
ND TESTED, IS INSTALLED ENTIRELY IN ACCORDANCE WITH THE ATIONS AND UL LISTINGS AND IS IN PROPER WORKING ORDER. D DESCRIPTION" AS REQUIRED BY NFPA 72.	6	ALL NEW ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTR CODE AND ALL OTHER LOCAL, STATE, AND NATIONAL CODES WHICH APPLY AS INTERPRETED BY THE AHJ (AUTHORITY HA JURISDICTION).
TIC AND IS INTENDED TO INDICATE AREAS AND TYPE OF COVERAGE. ALL	7	THE CONTRACTOR SHALL ACOURRE ELECTRICAL PERMIT(S) COORDINATE ALL INSPECTIONS AND PAY ALL ASSOCIATED F

- THE CONTRACTOR SHALL ACQUIRE ELECTRICAL PERMIT(S), COORDINATE ALL INSPECTIONS, AND PAY ALL ASSOCIATED ATED ON DRAWINGS - THE DESIGN AND APPROVAL OF (IF REQUIRED). CONTRACTOR SHALL CUT AND PATCH AS REQUIRED DURING THE COURSE OF INSTALLATION OR AS SPECIFIED ON THE AUTHORITY HAVING JURISDICTION (AHJ). FINAL APPROVAL
  - DRAWINGS. THE GENERAL CONTRACTOR SHALL BE RETAINED TO PERFORM PATCHING AND THE COSTS BORNE BY THE CONTRACTOR REQUIRING THE PATCH. REMOVE AND REPLACE CEILING TILES AND/OR GRID AS REQUIRED TO INSTALL WORK. ANY DAMAGED TILE OR GRID SHAL REPLACED.
  - WIRING METHODS IN CEILING CAVITIES SHALL NOT BE SECURED TO OR SUPPORTED BY THE CEILING ASSEMBLY OR CEILI SUPPORT WIRES. INDEPENDENT GALVANIZED SUPPORT WIRES SHALL BE FURNISHED AND INSTALLED TO SUPPORT WIRI METHODS AND SHALL BE SECURED TO THE STRUCTURE. THESE SUPPORT WIRES SHALL BE DISTINGUISHED BY COLOR, TAGGING, OR PERMANENT EFFECTIVE MEANS ACCEPTABLE TO THE AHJ - REFER TO NEC 300.11(A)(2).
  - COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR ALL FIRE AND SMOKE RATED BARRIERS. E.C SHALL FURNISH AI INSTALL APPROPRIATE AND LISTED SEALS FOR ALL PENETRATIONS MADE IN THESE BARRIERS FOR THE INSTALLATION OF ELECTRICAL AND SPECIAL SYSTEMS. CONTRACTOR SHALL NOTE THAT LIGHT FIXTURE LOCATED IN MECHANICAL ROOMS SHALL BE FIELD COORDINATED WITH
  - OTHER TRADES. CONTRACTOR SHALL TEST, IN A MANNER DEEMED APPROPRIATE BY THE AHJ, THE GROUND FAULT PROTECTION OF SERV DISCONNECTS AND SUBMIT A REPORT FOR APPROVAL TO THE AUTHORITY HAVING JURISDICTION AND ENGINEER. FOLLC NEC 230.95.

CONDUCTORS

- ALL CONDUCTORS OF THE ELECTRICAL SYSTEM SHALL BE COPPER, 600V, THW/THWN AND SIZED AS REQUIRED PER CODI ALL UNDERGROUND CONDUCTORS AND SPLICES MUST BE LISTED AS SUITABLE FOR WET LOCATIONS. (SPLICES ARE NOT RECOMMENDED AND SHALL BE APPROVED BY ENGINEER.)
- IDENTIFICATION OF CONDUCTORS SHALL BE IN COMPLIANCE WITH NEC 210.5.
- NEUTRAL CONDUCTORS SHALL NOT BE SHARED FOR BETWEEN MULTIPLE SINGLE PHASE CIRCUITS OF A 3-PHASE, 4-WIRE HOME RUN - NEUTRALS SHALL BE DEDICATED PER CIRCUIT - REFER TO NEC ARTICLE 200.4. RACEWAY FILL, WHEN RACEWAY SIZE IS NOT SPECIFICALLY INDICATED, THE SIZE SHALL BE BASED ON APPLICABLE ARTIC
- OF THE NEC. CIRCUIT ROUTING, IN GENERAL, IS NOT SPECIFIED. CONTRACTOR SHALL COORDINATE ROUTING LENGTH WITH CONNEC LOAD AND ADJUST CONDUCTOR SIZE FOR A VOLTAGE DROP LESS THAN 3%.

CONDUIT (UNLESS OTHERWISED NOTED)

- ALL CONDUIT SHALL BE EMT AND FMC. (UNLESS SPECIFICALLY OTHERWISE INDICATED)
- WHEN INSTALLED INDOORS IN DRY LOCATIONS, EMT. WHEN INSTALLED OUTDOOR OR INDOORS IN DAMP/WET LOCATIONS, RMC AND LFMC.
- WHEN EXPOSED OUTDOORS ABOVE SLAB USE RMC UNLESS OTHERWISE NOTED, OR RNC-40 WHEN BURIED.
- ALL CONDUITS SHALL BE CONCEALED IN SPACES OF NEW CONSTRUCTION, WHICH ARE TYPICALLY OCCUPIED.
- CONDUIT TURNING UP FROM BELOW GRADE OR FROM WITHIN CONCRETE SHALL BE RMC. USAGE OF MC CABLE SHALL B LIMITED TO A MAXIMUM LENGTH OF 72 INCHES, INSTALLED IN ACCESSIBLE SPACES ONLY - SPECIFIC APPROVAL BY THE ENGINEER IS REQUIRED.

EQUIPMENT CONNECTIONS

- CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL EQUIPMENT TO MAINTAIN ACCESS REQUIRED BY THE NEC AND EQUIPMENT MANUFACTURERS. CONTRACTOR SHALL FIELD VERIFY ALL FIELD WIRING CONNECTIONS WITH NAMEPLATE DATA OF EQUIPMENT AND COORD
- REQUIREMENTS WITH SHOP DRAWING SUBMITTALS, PRIOR TO INSTALLATION OF FIELD CONNECTIONS. CONTRACTOR IS RESPONSIBLE FOR VARIATIONS THAT ARE A RESULT OF EQUIPMENT SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO RESIZING OF CONDUIT, WIRING, CIRCUIT BREAKERS AND ADDITION OF NEUTRAL CONDUCTORS.
- REFER TO EQUIPMENT CUT-SHEETS FOR COORDINATION OF OUTLETS. COORDINATE PLACEMENT OF ROUGH-INS FOR BAIL BOXES TO AVOID BACK-TO-BACK INSTALLATIONS, CABINETRY SHOWN ON ARCHITECTURAL DRAWINGS. BOXES MAY BE SH SLIGHTLY AS REQUIRED TO COORDINATE THE INSTALLATION.
- CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL TO CONNECT EQUIPMENT SPECIFIED AS PART OF THIS PROJEC SHALL REVIEW ALL PARTS OF THE CONSTRUCTION DOCUMENTS FOR LOCATION AND QUANTITIES. CONTRACTOR SHALL BE REQUIRED TO FABRICATE AND INSTALL ANY NECESSARY STANCHION MOUNTS FOR ALL ELECTRI
- EQUIPMENT THAT IS NECESSARY TO COMPLETE THEIR WORK. SERVICE VOLTAGE AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR PRIO ELECTRICAL ROUGH-IN. DISCREPANCIES BETWEEN THE ELECTRICAL DRAWINGS AND EQUIPMENT REQUIREMENTS SHALL
- REPORTED TO THE ENGINEER BEFORE ANY ASSOCIATED WORK IS INSTALLED. FINAL CONNECTIONS TO ALL EQUIPMENT WHICH PRODUCE VIBRATION SHALL BE WITH FLEXIBLE METAL CONDUIT SUITABI FOR THE SURROUNDING ENVIRONMENT.

### LABELING

- THE CONTRACTOR SHALL FURNISH AND INSTALL LABELING ON ELECTRICAL DISTRIBUTION EQUIPMENT TO INDICATE MAX AVAILABLE FAULT CURRENT AS REQUIRED BY NEC 110.24. EACH WIRING DEVICE (RECEPTACLES, LIGHTING CONTROLS, PANELS, MCC, STARTERS, DISCONNECT SWITCHES, ECT) SH
- LABELED AT THE FACEPLATE. TO INCLUDE PANEL NAME AND CIRCUIT NUMBER. THE CHARACTERS SHALL BE A MINIMUM 3/16" HIGH INDEXES OF ELECTRICAL PANELS SHALL BE COMPLETED FOR EACH CIRCUIT. DESCRIPTION SHALL INCLUDE ROOM NUME TO MATCH SIGNAGE AND SHALL BE APPROVED BY ARCHITECT AND OWNER. ARC-FLASH WARNING LABELS SHALL BE APP ON ALL EQUIPMENT PER NEC 110.24. LABELS AND TAGS AS DETAILED SHALL BE PLACED ON ALL PANELS, STARTERS,

RECEPTACLES

DISCONNECTS, ETC.

- CONTRACTOR SHALL BE RESPONSIBLE FOR RECEPTACLE HEIGHTS LOCATED IN CASEWORK. REFERENCE ARCHITECTUR DRAWINGS FOR CASEWORK DETAILS - FIELD COORDINATE ALL ROUGH-INS. ALL GFCI RECEPTACLES SHALL BE INSTALLED IN READILY ACCESSIBLE LOCATIONS. ALL 120V RECEPTACLES INSTALLED I
- KITCHEN AREAS SHALL BE GFCI PROTECTED. RECEPTACLES INSTALLED AT EXTERIOR BUILDING LOCATIONS SHALL BE WEATHER-RESISTANT RATED PER REQUIREMENTS OF NEC ARTICLE 406.9 AND SHALL HAVE A CAST ALUMINUM WEATHER-RESISTANT "WHILE-IN-USE" PROTECTIVE COVER. ALL RECEPTACLES SHALL BE TAMPER RESISTANT PER NEC.

ELECTRICAL SPECIAL SYSTEMS OUTLINE							
CONTRACT DOCUMENT SYSTEMS - GENERAL DESCRIPTION	RACEWAYS/BOXES WITH PULL STRING	CABLING INFRASTRUCTURE	DISTRIBUTION EQUI				
GENERA	AL BUILDING OPERATIONAL	SYSTEMS					
ZETRON AUTOMATED FIRE STATION ALERTING SYSTEM	CFCI	CFCI	(6) OFOI				
LOCALIZED AUTOMATED LIGHTING CONTROLS - OCCUPANCY SENSOR BASED	CFCI	CFCI	CFCI				
NG/LP STANDBY EMERGENCY GENERATOR SYSTEM (FOR E-LTG, FIRE ALARM, DEMARC, NETWORK/RADIO ROOM, OVERHEAD DOORS, CHANGING STATION,COMPUTERS, SELECTED HVAC SYSTEMS, ONE RECEPTACLE/BUNK ROOM - SEE PANEL SCHEDULE ELS AND EQ)	CFCI	CFCI	CFCI				
SURGE PROTECTION DEVICES (SPDs)	CFCI	CFCI	CFCI				
DIGITAL ADDRESSABLE FIRE ALARM SYSTEM	CFCI	CFCI	CFCI				
INFORM	IATION AND TECHNOLOGY	SYSTEMS					
VOICE OVER IP SYSTEM (VOIP) - CAT 5e	CFCI	CFCI	(3) CFCI				
DATA SYSTEM - CAT 5e	CFCI	CFCI	(3) CFCI				
ACCESS CONTROL (ARCHITECTURAL DOOR HARDWARE PACKAGE - FUTURE)	CFCI	-	-				
VIDEO SURVEILLANCE SYSTEM (CCTV SECURITY IP BASED)- CAT 5e	CFCI	CFCI	(5) OFOI				
WAP (WIRELESS ACCESS POINT) - CAT 5e POE	CFCI	CFCI	(4) OFOI				
VIDEO DISTRIBUTION SYSTEM (TRADITIONAL RG6)	CFCI	CFCI	(2) OFOI				
BUILDING INTERCOM SYSTEM	CFCI	CFCI	(7) OFOI				

### ARE NOT LIMITED TO: CORRIDORS, RESTROOMS, R SPACES.

### TION.

# CORDANCE WITH NFPA 90.

# BY THE SPRINKLER SYSTEM UPON SYSTEM WATER

		6	<b></b> 7
	EI	LECTRICAL SYMBOL LEGE	ND
ITH TY AND	SYMBOL	ITEM DESCRIPTION AND REMARKS	MOUNTING
SHALL		LIGHTING SYSTEM	
		RECESSED LIGHT FIXTURE AS SCHEDULED	AS NOTED
_ITY		SURFACE MOUNTED LIGHT FIXTURE AS SCHEDULED	AS NOTED
IE	<b>•</b> •	PENDANT STRIP LIGHT FIXTURE AS SCHEDULED	AS NOTED
ALLED		WALL MOUNTED LIGHT FIXTURE AS SCHEDULED	AS NOTED
TRICAL	0	RECESSED DOWN LIGHT FIXTURE AS SCHEDULED	AS NOTED
IAVING	-⊂	INDICATES EGRESS PATH DIRECTION	PER DETAIL
FEES	nPPD	DIMMING RELAY/POWER PACK. nPP16-D 120/277VAC	ABV CEILING
ALL BE		UL-924 EMERGENCY RELAY PACK. nPP16-ER 120/277VAC	ABV CEILING
LING RING	nECY	ECLYPSE IP AND MANAGEMENT INTERFACE WITH SITE VIEW SOFTWARE. nECY-120-BAC-SVS	WALL
R, AND OF THE	nGFX PS 150	GRAPHIC LIGHTING CONTROL POD. nGATEWAY2 GFX WITH PS 150 POWER SUPPLY	WALL
н		CATEGORY 5e CABALLING	ABV CEILING
RVICE _OW	S C1	SWITCH CONTROL 1-ZONE. nPODM-(COLOR OPTIONS) MANUAL ON OPERATION.	PER DETAIL
	S DC1	SWITCH DIMMING CONTROL 1-ZONE. nPODM-DX-(COLOR OPTIONS) MANUAL ON OPERATION.	PER DETAIL
DE.	©\$	OCCUPANCY DUAL TECHNOLOGY SENSOR. nCM-PDT-9/nCM-PDT-10 FOR APPROPRIATE COVERAGE.	CEILING
от	OS	OCCUPANCY OPERATION DUAL TECHNOLOGY SENSOR. nWSX-PDT-LV-(COLOR OPTIONS)	WALL
RE	VS LIGHT FIXTU	VACANCY OPERATION DUAL TECHNOLOGY SENSOR. nWSX-PDT-LV-(COLOR OPTIONS)	WALL
TICLES	LIGHT FIXTU PACKS OR C	JRE SHOWN WITH HALF SHADING INDICATES FIXTURE WITH INTEGRA CONNECTED TO EMERGENCY POWER SYSTEM AS SPECIFIED - REFER	R TO LIGHT
TED		HEDULE FOR ADDITIONAL INFORMATION. SUBSCRIPTS INDICATE CIENTS OF ADDITIONS.	RCUIT NUMBER
	MANUF. REC MANUFACTU SENSITIVITY ON SENSOR MANUFACTU CONTRACTO	AND SHALL PROVIDE 100% COVERAGE OF THE SPACE - FIELD COOR COMMENDATIONS. ALL SYSTEM COMPONENTS SHALL BE WIRED PER JRER'S RECOMMENDATIONS. CONTRACTOR SHALL COORDINATE TIN ( SETTINGS OF EQUIPMENT WITH OWNER'S PREFERENCES. INFO AB & SWITCH OCCUPANCY SENSORS AND PERFORMANCE AND MAY VAR JRER. MANUFACTURER SHALL PROVIDE A GUARANTEED LAYOUT TO OR AND SHALL ALSO SUBMIT LAYOUT IN SHOP DRAWINGS. WHERE A CH IS SHOWN IN THE SPACE, THE SENSOR SHALL OPERATE AS A VAC	R THE ME AND OVE IS BASED Y, PENDING O THE N MOMENTARY
BE		POWER SYSTEM	
	ф	120V, 20 AMP DUPLEX RECEPTACLE MOUNTED PERPENDICULAR TO FLOOR.	16" TO BTM AFF UON
	<b>+</b>	120V, 20 AMP QUADRUPLEX RECEPTACLE (DOUBLE DUPLEX)	16" TO BTM AFF UON
	4	120V, 20 AMP DUPLEX RECEPTACLE AT SPECIAL MOUNTING HEIGHT - REFER TO ARCHITECTURAL MILLWORK DRAWINGS	44" TO BTM AFF UON
RDINATE S	<b>+</b>	120V, 20 AMP DUPLEX RECEPTACLE AT SPECIAL MOUNTING HEIGHT - REFER TO ARCHITECTURAL MILLWORK DRAWINGS	44" TO BTM AFF UON
ACK	•	125/250V RECEPTACLE FOR APPLIANCE USE - NEMA 14-50R, UON	16" TO BTM AFF UON
SHIFTED	Ð	POWER CONNECTION TO EQUIPMENT	FIELD COORDINATE
ECT AND	۲	120 VOLT CORD DROP REEL	UNISTRUT SUPPORT
RICAL	J	JUNCTION BOX FOR CONNECTIONS TO EQUIPMENT	FIELD COORDINATE
IOR TO LL BE	D	HEAVY DUTY NON-FUSED DISCONNECT SWITCH - SIZE AS NOTED ON EQUIPMENT SCHEDULE	AS NOTED, PER CODE
BLE	Q	HEAVY DUTY FUSED DISCONNECT SWITCH - SIZE AS NOTED ON EQUIPMENT SCHEDULE	AS NOTED, PER CODE
	T	ROUGH-IN FOR THERMOSTAT WITH 3/4"C FROM SINGLE GANG BOX TO CEILING SPACE.	COORD WITH TCC/MC
	<u>C02</u>	ROUGH-IN FOR CARBON DIOXIDE SENSOR WITH 3/4"C FROM SINGLE GANG BOX TO CEILING SPACE.	COORD WITH TCC/MC
	Ê	MUSHROOM HEAD MASTER KILL SWITCH FOR ROOM CONTACTOR - RED IN COLOR - LOOP CONTROL CIRCUIT OF CONTACTOR THROUGH SWITCH PER MANUFACTURER'S RECOMMENDATIONS	48" TO TOP AFF UON
HALL BE M OF	S	MANUAL MOTOR STARTER SWITCH W/O OVERLOADS, SUITABLY SIZED AND RATED FOR RESISTIVE TYPE LOADS, TO SERVE AS	COORDINATE WITH
MBER PPLIED	S <sub>P</sub>	LOCAL DISCONNECT PILOT LIT SWITCH	EQUIPMENT COORDINATE WITH
	P	SPECIAL SYSTEMS - DOOR ACCESS/SECURITY	EQUIPMENT
			72" TO TOP
IRAL D IN		DOOR ACCESS CONTROL SYSTEM PANEL DOOR ACCESS ELECTRIC LATCH RETRACTION - REFER TO	A.F.F.
		ARCHITECTURAL ELEVATIONS/HARDWARE SPEC.	COORD. WITH
			CASEWORK
JIPMENT		ROUGH-IN LOCATION FOR OWNER PROVIDE CAMERA. PROVIDE ONE DATA.	WALL/ CEILING/ COORDINATE

El	LEC	<b>FRICAL SYMB</b>	OL LEG				
SYMBOL		ITEM DESCRIPTION AND REM	IARKS				
		FIRE ALARM SYST	EM				
FACP	FIRE ALAR	M CONTROL PANEL					
EQ	FIRE ALAR	M HORN UNIT - AUDIBLE/VISUAL					
- <b>(</b> -	FIRE ALAR	M STROBE UNIT - VISUAL ONLY					
F	FIRE ALAR	M BREAKGLASS STATION					
(H)	HEAT DET	ECTOR, FIXED TEMPERATURE					
Ś	SYSTEM S	MOKE DETECTOR					
0	CARBONM	ONOXIDE DETECTOR					
FS	-	R TREE FLOW SWITCH - REFER TO ROTECTION DRAWINGS FOR QUAN					
TS	-	R TREE TAMPER SWITCH - REFER TROTECTION DRAWINGS FOR QUAN					
A	SPRINKLEI	R TREE ELECTRIC BELL - SUPERVIS	SE				
(		IICATIONS SYSTEMS - VOI	CE/DATA/INTE				
abla	DETAIL. D	DGY VOICE/DATA OUTLETS - SEE C #-INDICATES NUMBER OF DATA PO FER TO PERSPECTIVE VIEW AND (	RTS AND CABLES				
V	DETAIL. D# DROPS. R	OGY VOICE/DATA OUTLETS - SEE C -INDICATES NUMBER OF DATA POI EFER TO PERSPECTIVE VIEW AND	RTS AND CABLES OUTLET DETAIL.				
	HOUSING '	E CABLE IN A SURFACE MOUNTED BISCUIT BOX" ABOVE THE CEILING F DATA PORTS AND CABLE DROPS F COAX CABLE COILS OF 10'.	6. D#-INDICATES				
S	CEILING SI	PEAKER					
S		NTED PA SPEAKER INTERFACED V - REFER TO SPECIFICATIONS.	VITH BUILDING				
GEN	GENERAT	OR ANNUNCIATOR PANEL					
	1	ABBREVIATION	S				
AFF	-	IISHED FLOOR					
BTM DW	BOTTOM DISHWASH	IFR					
EC		AL CONTRACTOR					
FDS	FUSED DIS	CONNECT SWITCH					
GFI	GROUND I	FAULT INTERRUPTING DEVICE					
IG	ISOLATED	GROUND DEVICE					
LOC							
MC MCB		CAL CONTRACTOR					
MLO							
MW	MICROWA						
NFDS	NON-FUSE	D DISCONNECT SWITCH					
NL	FIXTURE I	S DESIGNATED NIGHT LIGHT 24 HC	UR CONTINUOUS				
OHP	-						
ST TCC	SHUNT TR	IP DEVICE					
TV TELEVISIO							
UG	UNDERGR	OUND					
UON	UNLESS O	THERWISE NOTED					
VR		DEVICE IS VANDAL RESISTANT					
WG WP		OR DEVICE SHALL HAVE A FACTOR PROOF DEVICE - WEATHER RESIS					
VVF	WEATHER	ELECTRICAL NOTES AND					
	<u>→</u>	ELECTRICAL DETAIL NUMBER					
		ELECTRICAL DETAIL TAG DRAWING WHERE DETAIL IS ILLUS	STRATED				
	)	ELECTRICAL CONSTRUCTION NO	ΓE				
		WIRING HOME RUNS	\$				
		WIRING AND RACEWAY HOME RU SLAB. (SEE PLAN VIEW FOR CIRCI					
		WIRING AND RACEWAY HOME RU SLAB. (SEE PLAN VIEW FOR CIRCI					

ABBREVIATION - DESCRIPTION:

CFCI - CONTRACTOR FURNISHED, CONTRACTOR INSTALLED - PER SPECIFICATIONS.

OFCI - OWNER FURNISHED, CONTRACTOR INSTALLED - PER SPECIFICATIONS.

OFOI - OWNER FURNISHED, OWNER INSTALLED.

NIC - NOT IN CONTRACT.

(1) - INTERFACE OF "OFOI" ITEM TO "CFCI" EQUIPMENT - CONTRACTOR TO COORDINATE.

(2) - <u>"OFOI"</u> ITEM CONTRACTOR TO COORDINATE.

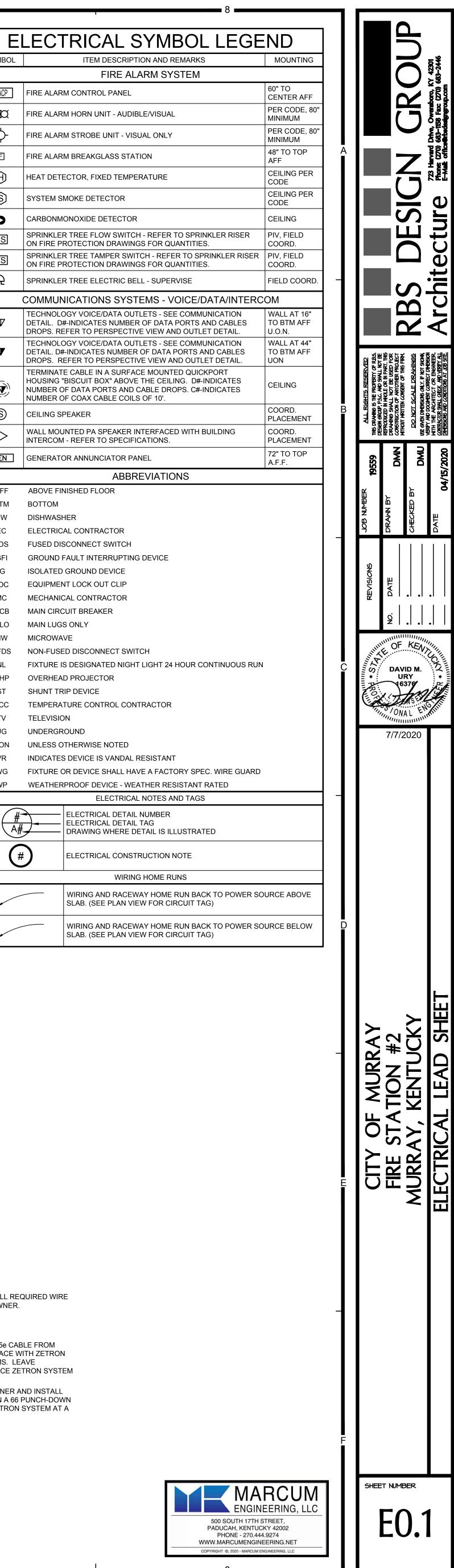
(3) - LIMITED TO CONNECTIVITY. CONTRACTOR SHALL FURNISH AND INSTALL RACK, PATCH PANELS AND ALL REQUIRED WIRE MANAGEMENT. RACK MOUNTED SWITCHES, ROUTERS, ELECTRONICS - FURNISHED AND INSTALLED BY OWNER. (4) - LIMITED TO CABLE TERMINATION IN OUTLET. TRANSMITTER/HUB BY OWNER.

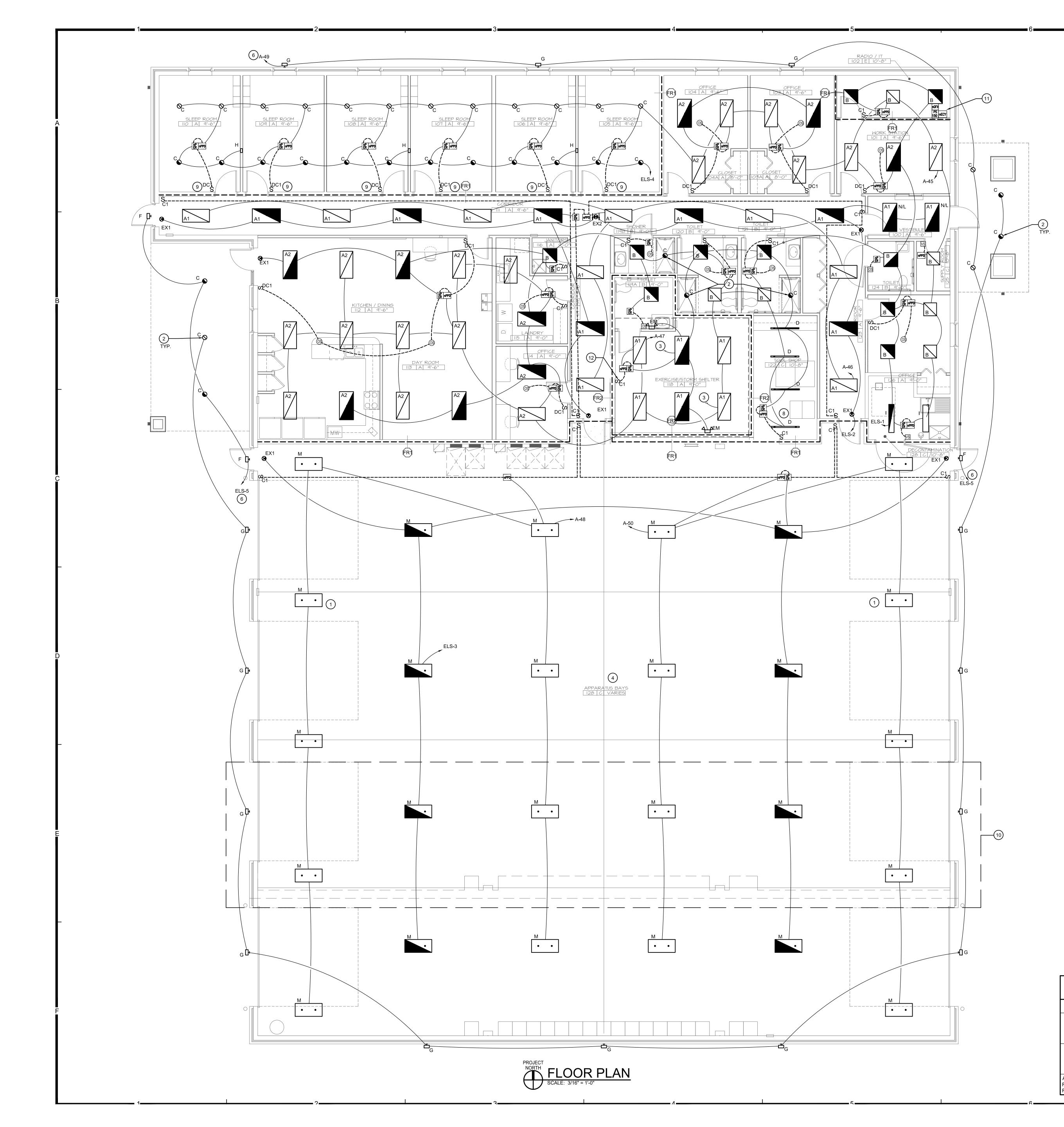
(5) - CAMERAS AND HEADEND EQUIPMENT FURNISHED AND INSTALLED BY OWNER

(6) - SYSTEM TO BE FURNISHED AND INSTALLED BY OWNER. CONTRACTOR SHALL EXTEND A 25 PAIR CAT 5e CABLE FROM ZETRON UNIT LOCATION TO RADIO/IT AND TERMINATE ON A 66 PUNCH-DOWN BLOCK FOR OWNER INTERFACE WITH ZETRON SYSTEM AT A LATER DATE. ZETRON SYSTEM SHALL ALSO INTERFACE WITH LIGHTING IN THE SLEEP ROOMS. LEAVE ACCESSIBLE J-BOX IN CEILING SPACE, TO ALLOW OWNER TO INTERCEPT SWITCH LEG DROP AND INTERFACE ZETRON SYSTEM

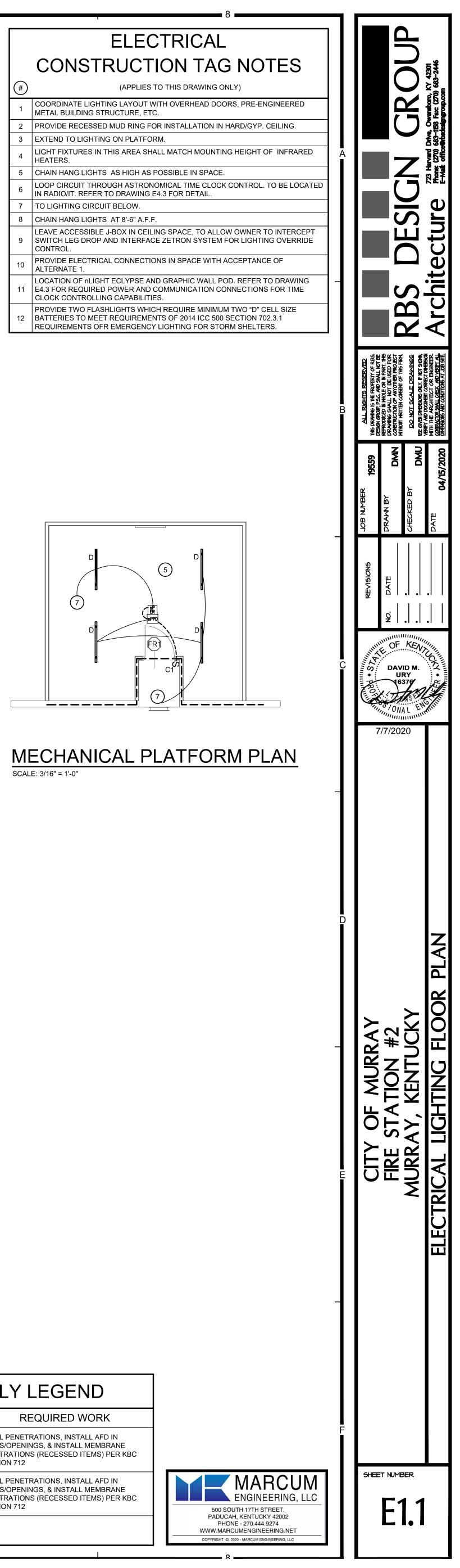
FOR LIGHTING OVERRIDE CONTROL AT A FUTURE DATE. (7) - SYSTEM TO BE FURNISHED BY OWNER. CONTRACTOR SHALL RECEIVE THE SPEAKERS FROM THE OWNER AND INSTALL SPEAKERS AND CABLING. HOMERUN ALL SPEAKER CABLING BACK TO RADIO/IT ROOM AND TERMINATE ON A 66 PUNCH-DOWN

BLOCK FOR OWNER INTERFACE. OWNER SHALL INSTALL HEAD-END EQUIPMENT AND INTERFACE WITH ZETRON SYSTEM AT A LATER DATE.

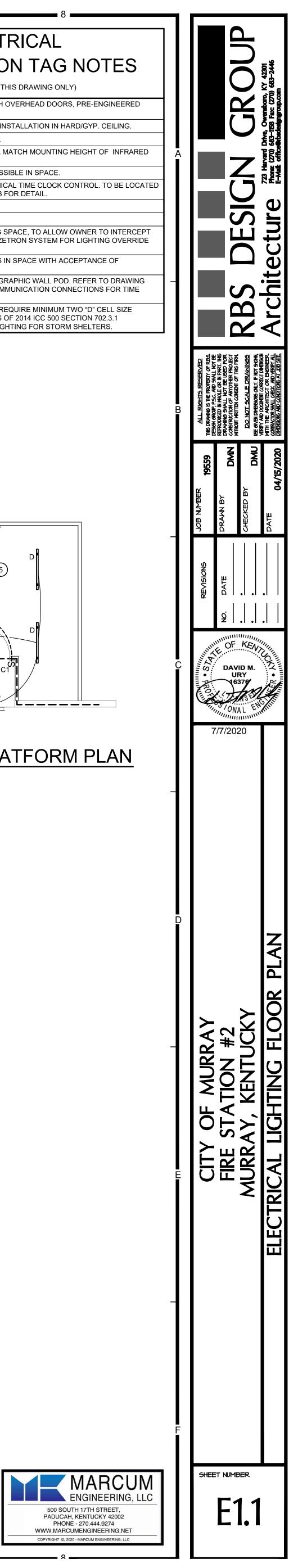


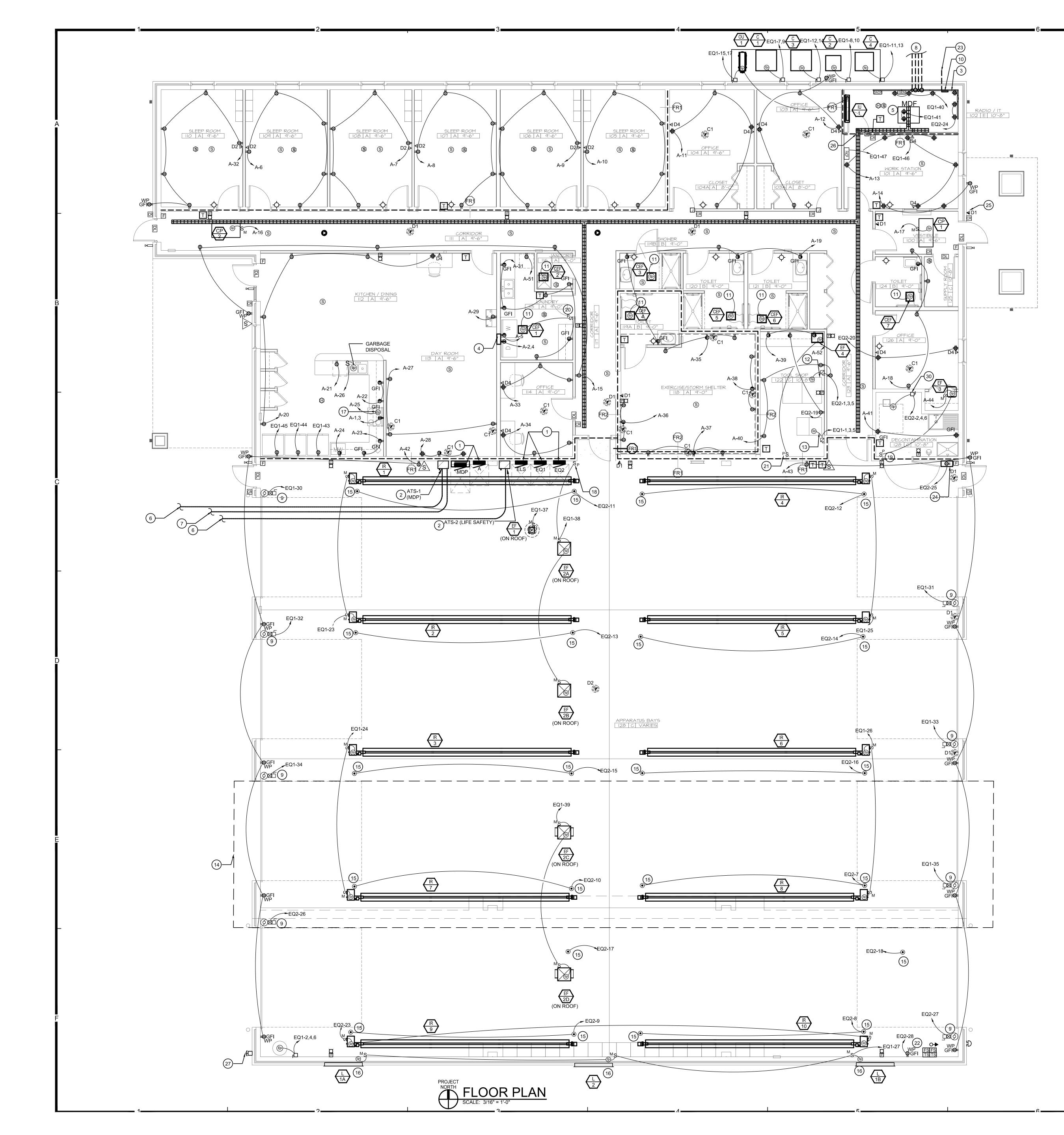


	ELECTRICAL
	CONSTRUCTION TAG N
#	(APPLIES TO THIS DRAWING ONLY)
1	COORDINATE LIGHTING LAYOUT WITH OVERHEAD DOORS, PRI METAL BUILDING STRUCTURE, ETC.
2	PROVIDE RECESSED MUD RING FOR INSTALLATION IN HARD/G
3	EXTEND TO LIGHTING ON PLATFORM.
4	LIGHT FIXTURES IN THIS AREA SHALL MATCH MOUNTING HEIG HEATERS.
5	CHAIN HANG LIGHTS AS HIGH AS POSSIBLE IN SPACE.
6	LOOP CIRCUIT THROUGH ASTRONOMICAL TIME CLOCK CONTR IN RADIO/IT. REFER TO DRAWING E4.3 FOR DETAIL.
7	TO LIGHTING CIRCUIT BELOW.
8	CHAIN HANG LIGHTS AT 8'-6" A.F.F.
9	LEAVE ACCESSIBLE J-BOX IN CEILING SPACE, TO ALLOW OWN SWITCH LEG DROP AND INTERFACE ZETRON SYSTEM FOR LIG CONTROL.
10	PROVIDE ELECTRICAL CONNECTIONS IN SPACE WITH ACCEPT ALTERNATE 1.
11	LOCATION OF nLIGHT ECLYPSE AND GRAPHIC WALL POD. REF E4.3 FOR REQUIRED POWER AND COMMUNICATION CONNECT CLOCK CONTROLLING CAPABILITIES.
12	PROVIDE TWO FLASHLIGHTS WHICH REQUIRE MINIMUM TWO " BATTERIES TO MEET REQUIREMENTS OF 2014 ICC 500 SECTIO

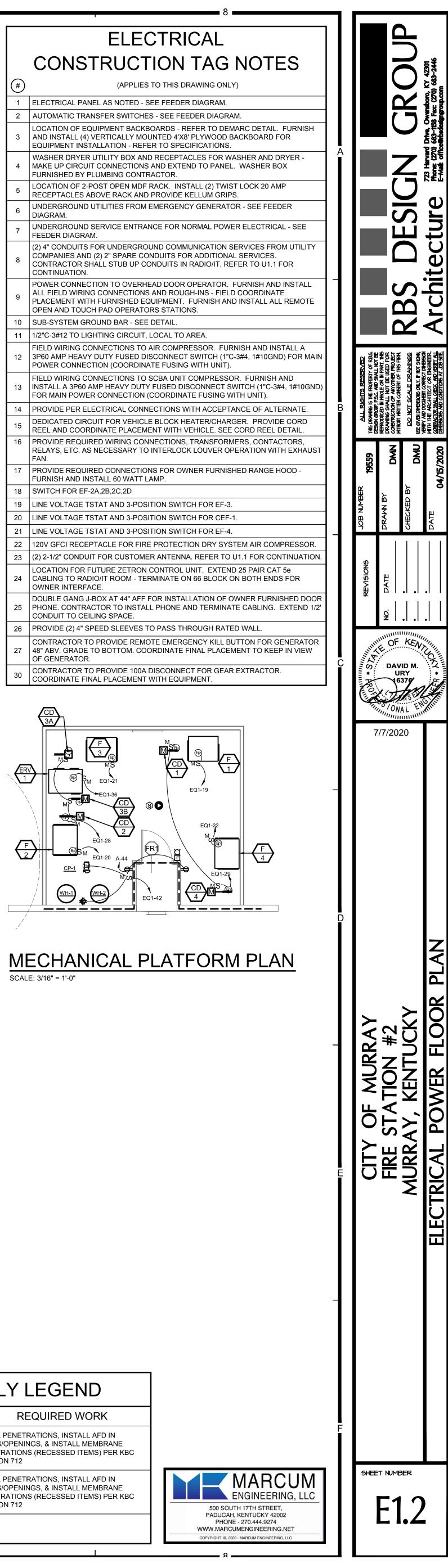


CLASSIFIED ASSEMBLY LEGEND							
SYMBOL	DESCRIPTION	REQUIRED WORK					
	1 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712					
	2 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712					
AFD = AUTOMATIC FIRE F-R-R = FIRE-RESISTAN FS = FIRE STOP							

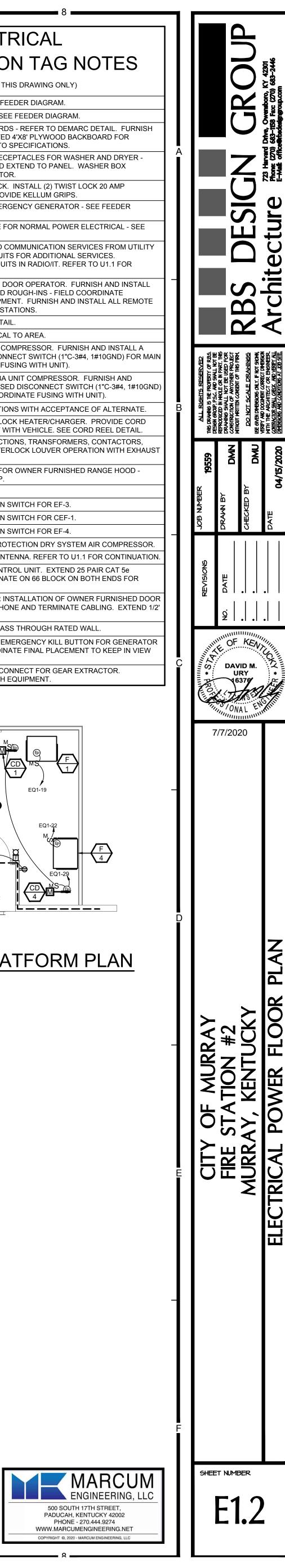


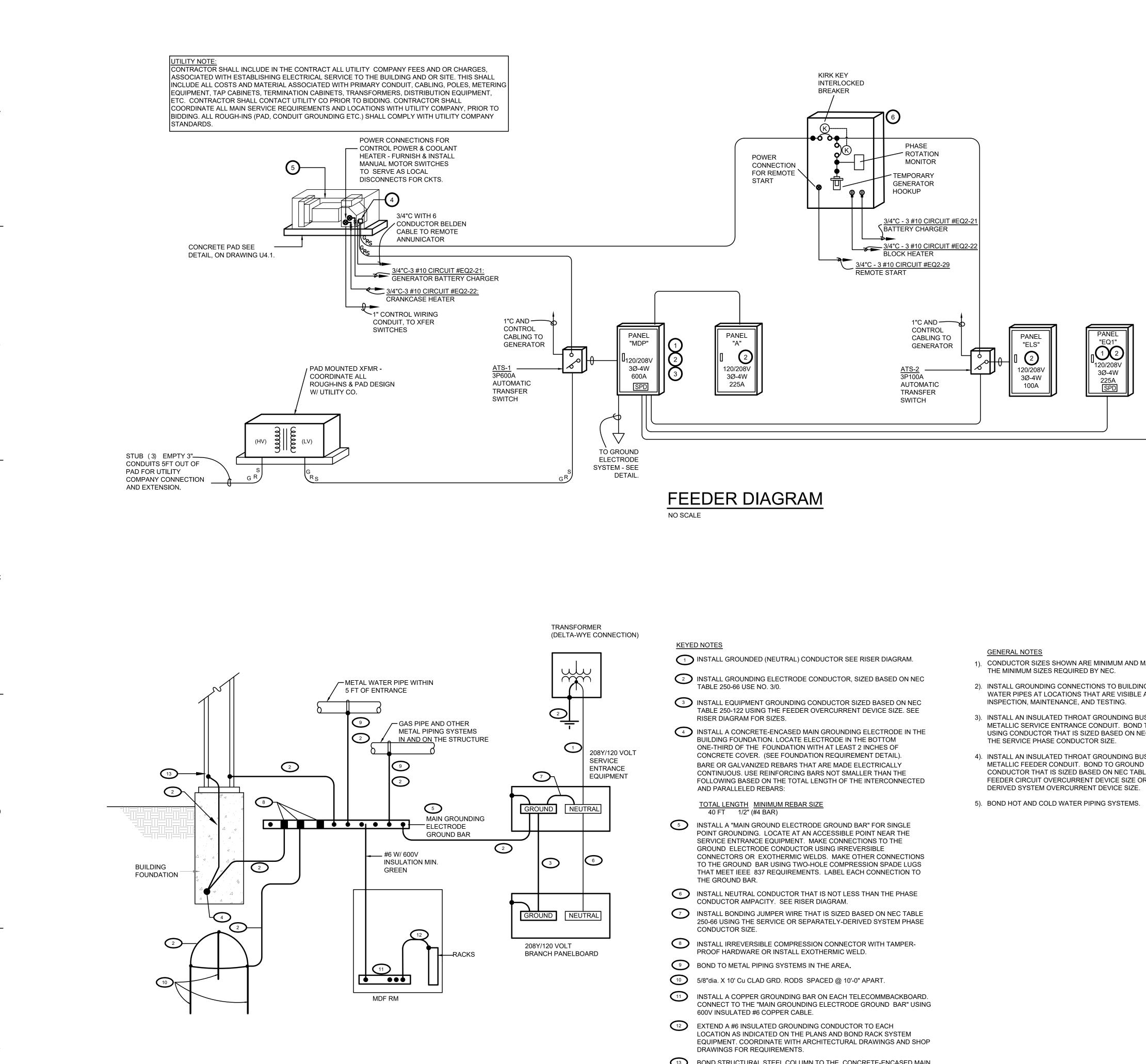


	ELECTRICAL
	CONSTRUCTION TAG N
#	(APPLIES TO THIS DRAWING ONLY)
1	ELECTRICAL PANEL AS NOTED - SEE FEEDER DIAGRAM.
2	AUTOMATIC TRANSFER SWITCHES - SEE FEEDER DIAGRAM.
3	LOCATION OF EQUIPMENT BACKBOARDS - REFER TO DEMARC AND INSTALL (4) VERTICALLY MOUNTED 4'X8' PLYWOOD BACK EQUIPMENT INSTALLATION - REFER TO SPECIFICATIONS.
4	WASHER DRYER UTILITY BOX AND RECEPTACLES FOR WASHE MAKE UP CIRCUIT CONNECTIONS AND EXTEND TO PANEL. WA FURNISHED BY PLUMBING CONTRACTOR.
5	LOCATION OF 2-POST OPEN MDF RACK. INSTALL (2) TWIST LO RECEPTACLES ABOVE RACK AND PROVIDE KELLUM GRIPS.
6	UNDERGROUND UTILITIES FROM EMERGENCY GENERATOR - S DIAGRAM.
7	UNDERGROUND SERVICE ENTRANCE FOR NORMAL POWER EI FEEDER DIAGRAM.
8	(2) 4" CONDUITS FOR UNDERGROUND COMMUNICATION SERV COMPANIES AND (2) 2" SPARE CONDUITS FOR ADDITIONAL SE CONTRACTOR SHALL STUB UP CONDUITS IN RADIO/IT. REFER CONTINUATION.
9	POWER CONNECTION TO OVERHEAD DOOR OPERATOR. FURI ALL FIELD WIRING CONNECTIONS AND ROUGH-INS - FIELD CO PLACEMENT WITH FURNISHED EQUIPMENT. FURNISH AND INS OPEN AND TOUCH PAD OPERATORS STATIONS.
10	SUB-SYSTEM GROUND BAR - SEE DETAIL.
11	1/2"C-3#12 TO LIGHTING CIRCUIT, LOCAL TO AREA.
12	FIELD WIRING CONNECTIONS TO AIR COMPRESSOR. FURNISH 3P60 AMP HEAVY DUTY FUSED DISCONNECT SWITCH (1"C-3#4 POWER CONNECTION (COORDINATE FUSING WITH UNIT).
13	FIELD WIRING CONNECTIONS TO SCBA UNIT COMPRESSOR. F INSTALL A 3P60 AMP HEAVY DUTY FUSED DISCONNECT SWITC FOR MAIN POWER CONNECTION (COORDINATE FUSING WITH I
14	PROVIDE PER ELECTRICAL CONNECTIONS WITH ACCEPTANCE
15	DEDICATED CIRCUIT FOR VEHICLE BLOCK HEATER/CHARGER. REEL AND COORDINATE PLACEMENT WITH VEHICLE. SEE COR
16	PROVIDE REQUIRED WIRING CONNECTIONS, TRANSFORMERS RELAYS, ETC. AS NECESSARY TO INTERLOCK LOUVER OPERA FAN.
17	PROVIDE REQUIRED CONNECTIONS FOR OWNER FURNISHED FURNISH AND INSTALL 60 WATT LAMP.
18	SWITCH FOR EF-2A,2B,2C,2D
19	LINE VOLTAGE TSTAT AND 3-POSITION SWITCH FOR EF-3.
20	LINE VOLTAGE TSTAT AND 3-POSITION SWITCH FOR CEF-1.
21	LINE VOLTAGE TSTAT AND 3-POSITION SWITCH FOR EF-4.
22	120V GFCI RECEPTACLE FOR FIRE PROTECTION DRY SYSTEM
23	(2) 2-1/2" CONDUIT FOR CUSTOMER ANTENNA. REFER TO U1.1
24	LOCATION FOR FUTURE ZETRON CONTROL UNIT. EXTEND 25 CABLING TO RADIO/IT ROOM - TERMINATE ON 66 BLOCK ON BO OWNER INTERFACE.
25	DOUBLE GANG J-BOX AT 44" AFF FOR INSTALLATION OF OWNE PHONE. CONTRACTOR TO INSTALL PHONE AND TERMINATE C. CONDUIT TO CEILING SPACE.
26	PROVIDE (2) 4" SPEED SLEEVES TO PASS THROUGH RATED W
27	CONTRACTOR TO PROVIDE REMOTE EMERGENCY KILL BUTTO 48" ABV. GRADE TO BOTTOM. COORDINATE FINAL PLACEMENT OF GENERATOR.
30	CONTRACTOR TO PROVIDE 100A DISCONNECT FOR GEAR EXT COORDINATE FINAL PLACEMENT WITH EQUIPMENT.



CLASSIFIED ASSEMBLY LEGEND							
SYMBOL	DESCRIPTION	REQUIRED WORK					
	1 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712					
<b>F</b> R2	2 HR. F-R-R ASSEMBLY	FS ALL PENETRATIONS, INSTALL AFD IN DUCTS/OPENINGS, & INSTALL MEMBRANE PENETRATIONS (RECESSED ITEMS) PER KBC SECTION 712					
AFD = AUTOMATIC FIRI F-R-R = FIRE-RESISTAN FS = FIRE STOP		·					





### **GROUNDING SYSTEM DIAGRAM** NO SCALE

- BOND STRUCTURAL STEEL COLUMN TO THE CONCRETE-ENCASED MAIN GROUNDING ELECTRODE AT SERVICE ENTRANCE. USE COMPRESSION CONNECTORS THAT MEET IEEE 837 REQUIREMENTS OR USE EXOTHERMIC WELDS.

- 1). CONDUCTOR SIZES SHOWN ARE MINIMUM AND MAY BE LARGER THAN
- 2). INSTALL GROUNDING CONNECTIONS TO BUILDING STRUCTURE AND WATER PIPES AT LOCATIONS THAT ARE VISIBLE AND ACCESSIBLE FOR
- 3). INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC SERVICE ENTRANCE CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-66 USING
- 4). INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC FEEDER CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-122 USING THE FEEDER CIRCUIT OVERCURRENT DEVICE SIZE OR THE SEPARATELY

### ELECTRICAL (# **CONSTRUCTION NOTES** (APPLIES TO THIS DRAWING ONLY) PANEL WITH INTERNAL SURGE PROTECTIVE DEVICE DIRECTLY CONNECTED TO PANEL BOARD BUSBAR ASSEMBLY, RATINGS PER SPECIFICATIONS - EXTERNAL ADD ON UNITS WILL NOT BE ACCEPTABLE ALL BRANCH CIRCUITRY ASSOCIATED WITH PANEL SHALL HAVE DEDICATED NEUTRAL CONDUCTOR PER CIRCUIT - DO NOT SHARE NEUTRALS. PANEL "MDP" SHALL BE SERVICE ENTRANCE RATED. 3P100A AND 3P600A OUTPUT BREAKERS FOR ATS-1 AND 2. 219KVA/175 KW, 120/208V, DUAL FUEL LP/NATURAL GAS FIRED EMERGENCY GENERATOR WITH OUTPUT BREAKERS AND WEATHER-PROOF HOUSING. CONTRACTOR SHALL FURNISH AND INSTALL GENERATOR DOCKING STATION EQUIPPED WITH TWO (2) 100A KIRK KEY BREAKERS. CONTRACTOR SHALL PROVIDE POWER FOR BLOCK HEATER, BLOCK CHARGER, AND REMOTE START FOR TEMPORAR GENERATOR CONNECTION.

W-G F	FEEDER CODE SYMBOL - REFER	₹ TO FE	EDER DIAGRAM	ELECTRICAL FE	ED	ER SC	HEDULE (CU)
FEEDER CODE	CONDUIT/WIRE DESCRIPTION			CONDUIT/WIRE DESCRIPTION	TEMP RATIN	G FEEDER CODE	CONDUIT/WIRE DESCRIPTION
*20-2W-G	1/2"C-3#12	*60°	C 200-3W	2-1/2"C-3#3/0	75°C	800-4W	(2) SETS EA OF 4"C-4#600MCM
*20-3W-G	1/2"C-4#12		200-4W	2-1/2"C-4#3/0		800-3W-G	(2) SETS EA OF 4"C-3#600MCM, #1/0 GND
*30-2W-G	1/2"C-3#10		200-3W-G	2-1/2"C-3#3/0, #6 GND		800-4W-G	(2) SETS EA OF 4"C-4#600MCM, #1/0 GND
*30-3W-G	1/2"C-4#10		200-4W-G	2-1/2"C-4#3/0, #6 GND		1000-4W	(3) SETS EA OF 3"C-4#350MCM
*30-4W-G	1/2"C-4#10, #10 GND		225-3W	2-1/2"C-3#4/0,		1000-3W-G	(3) SETS EA OF 3"C-3#350MCM, #2/0 GND
<b>*</b> 40-2W-G	1/2"C-2#8, #10 GND		225-4W	2-1/2"C-4#4/0,		1000-4W-G	(3) SETS EA OF 3"C-4#350MCM, #2/0 GND
<b>*4</b> 0-3W-G	3/4"C-3#8, #10 GND		225-3W-G	2-1/2"C-3#4/0, #4 GND		1200-4W	(3) SETS EA OF 4"C-4#600MCM
*40-4W-G	3/4"C-4#8, #10 GND		225-4W-G	2-1/2"C-4#4/0, #4 GND		1200-3W-G	(3) SETS EA OF 4"C-3#600MCM, #3/0 GND
*50-2W-G	3/4"C-2#6, #10 GND		250-4W	3"C-4#250MCM		1200-4W-G	(3) SETS EA OF 4"C-4#600MCM, #3/0 GND
*50-3W-G	3/4"C-3#6, #10 GND		250-3W-G	3"C-3#250MCM, #4 GND		1600-4W	(4) SETS EA OF 4"C-4#600MCM
*50-4W-G	1"C-4#6, #10 GND		250-4W-G	3"C-4#250MCM, #4 GND		1600-3W-G	(4) SETS EA OF 4"C-3#600MCM, #4/0 GND
*60-2W-G	1"C-2#4, #8 GND		300-3W-G	3"C-3#350MCM, #4 GND		1600-4W-G	(4) SETS EA OF 4"C-4#600MCM, #4/0 GND
*60-3W-G	1"C-3#4, #8 GND		300-4W-G	3"C-4#350MCM, #4 GND		2000-4W	(5) SETS EA OF 4"C-4#600MCM
*60-4W-G	1"C-4#4, #8 GND		400-3W	4"C-3#600MCM		2000-3W-G	(5) SETS EA OF 4"C-3#600MCM, #250 MCM GND
*80-2W-G	1"C-2#3, #8 GND		400-3W-G	4"C-3#600MCM, #3 GND		2000-4W-G	(5) SETS EA OF 4"C-4#600MCM, #250 MCM GND
*80-3W-G	1-1/4"C-3#3, #8 GND		400-4W	4"C-4#600MCM		2500-4W	(7) SETS EA OF 4"C-4#600MCM
*80-4W-G	1-1/4"C-4#3, #8 GND		400-4W-G	4"C-4#600MCM, #3 GND		2500-3W-G	(7) SETS EA OF 4"C-3#600MCM, #350 MCM GND
*100-3W	1-1/2"C-3#1		500-3W-G	(2) SETS EA OF 3"C-3#250MCM, #2 GND		2500-4W-G	(7) SETS EA OF 4"C-4#600MCM, #350 MCM GND
<b>*1</b> 00-4W	1-1/2"C-4#1		500-4W	(2) SETS EA OF 3"C-4#250MCM		3000-4W	(8) SETS EA OF 4"C-4#600MCM
*100-3W-G	1-1/2"C-3#1, #6 GND		500-4W-G	(2) SETS EA OF 3"C-4#250MCM, #2 GND		3000-3W-G	(8) SETS EA OF 4"C-3#600MCM, #400 MCM GND
<b>*</b> 100-4W-G	1-1/2"C-4#1, #6 GND		600-3W-G	(2) SETS EA OF 3-1/2"C-3#350MCM, #2 GND		3000-4W-G	(8) SETS EA OF 4"C-4#600MCM, #400 MCM GND
125-3W-G	1-1/2"C-3#1, #6 GND	75°(	C 600-4W	(2) SETS EA OF 3-1/2"C-4#350MCM		4000-4W	(10) SETS EA OF 4"C-4#600MCM
125-4W-G	1-1/2"C-4#1, #6 GND		600-4W-G	(2) SETS EA OF 3-1/2"C-4#350MCM, #1 GND		4000-3W-G	(10) SETS EA OF 4"C-3#600MCM, #500 MCM GND
150-3W-G	1-1/2"C-3#1/0, #6 GND		700-4W	(2) SETS EA OF 4"C-4#500MCM		4000-4W-G	(10) SETS EA OF 4"C-4#600MCM, #500 MCM GND
150-4W-G	1-1/2"C-4#1/0, #6 GND		700-3W-G	(2) SETS EA OF 4"C-3#500MCM, #1 GND			
175-3W-G	2"C-3#2/0, #6 GND		700-4W-G	(2) SETS EA OF 4"C-4#500MCM, #1 GND			
175-4W-G	2"C-4#2/0, #6 GND						

\* EQUIPMENT PROVISIONS FOR ELECTRICAL CONNECTIONS - TEMPERATURE LIMITIONS SHALL COMPLY WITH NEC ARTICLE 110.14 FOR CIRCUITS RATED 100A OR LESS. WIRE SIZES ARE BASED ON TYPE "THHN" COPPER CONDUCTORS, WITH NOT MORE THAN THREE CURRENT CARRYING CONDUCTORS IN RACEWAY - DERATE PER TABLE 310.15 AS APPLICABLE.

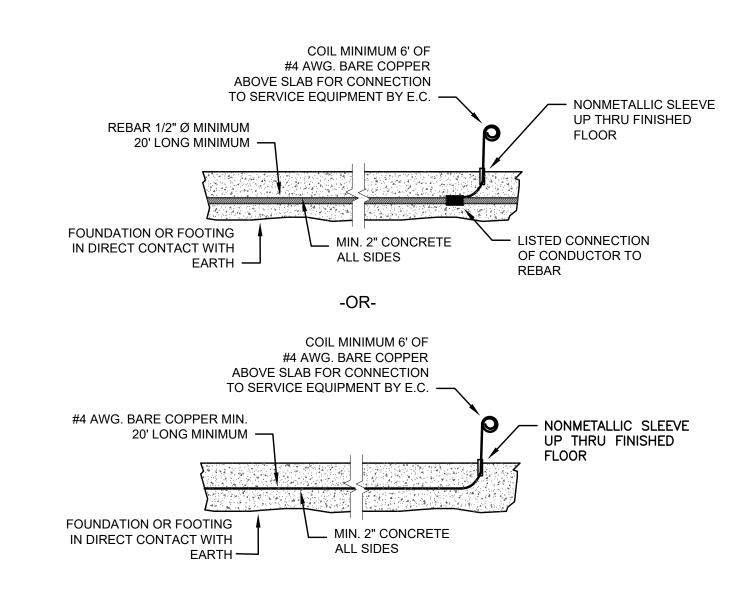
"EQ2" 120/208V

3Ø-4W

225A SPD

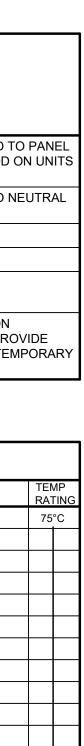
ELECTRICAL GROUNDING ELECTRODE SYSTEM: (FOUNDATION REQUIREMENTS) THE GENERAL CONTRACTOR AND/OR INSTALLER OF THE BUILDINGS FOUNDATION SHALL COORDINATE FOR OR INSTALL THE

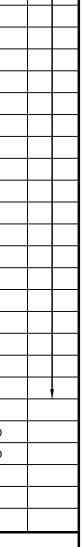
FOLLOWING FOUNDATION ELECTRODE SYSTEM. A CONCRETE ENCASED ELECTRODE SHALL BE PROVIDED AND SHALL CONSIST OF EITHER 20' OF BARE #4 COPPER WIRE CONTINUOUS AND EXTENDING 6' OUTSIDE THE CONCRETE OR AT LEAST 20 FEET OF ½ INCH REINFORCING STEEL INSTALLED WITHIN OR NEAR THE BOTTOM OF THE FOOTING OR FOUNDATION AND COVERED BY AT LEAST 2" OF CONCRETE WHICH IS IN DIRECT CONTACT WITH EARTH AND CONNECTED BY AN APPROVED METHOD TO A BARE #4 COPPER WIRE EXTENDING 6' OUTSIDE THE CONCRETE. THE CUMULATIVE LENGTH OF FOOTING STEEL CAN BE ACHIEVED BY NORMAL METHODS OF STEEL TIE WIRES JOINING SHORTER LENGTHS. SEE DETAILS BELOW.

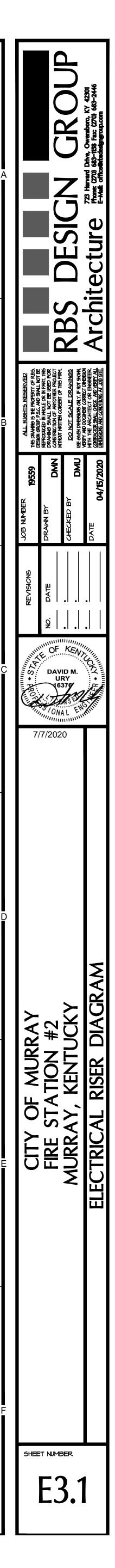


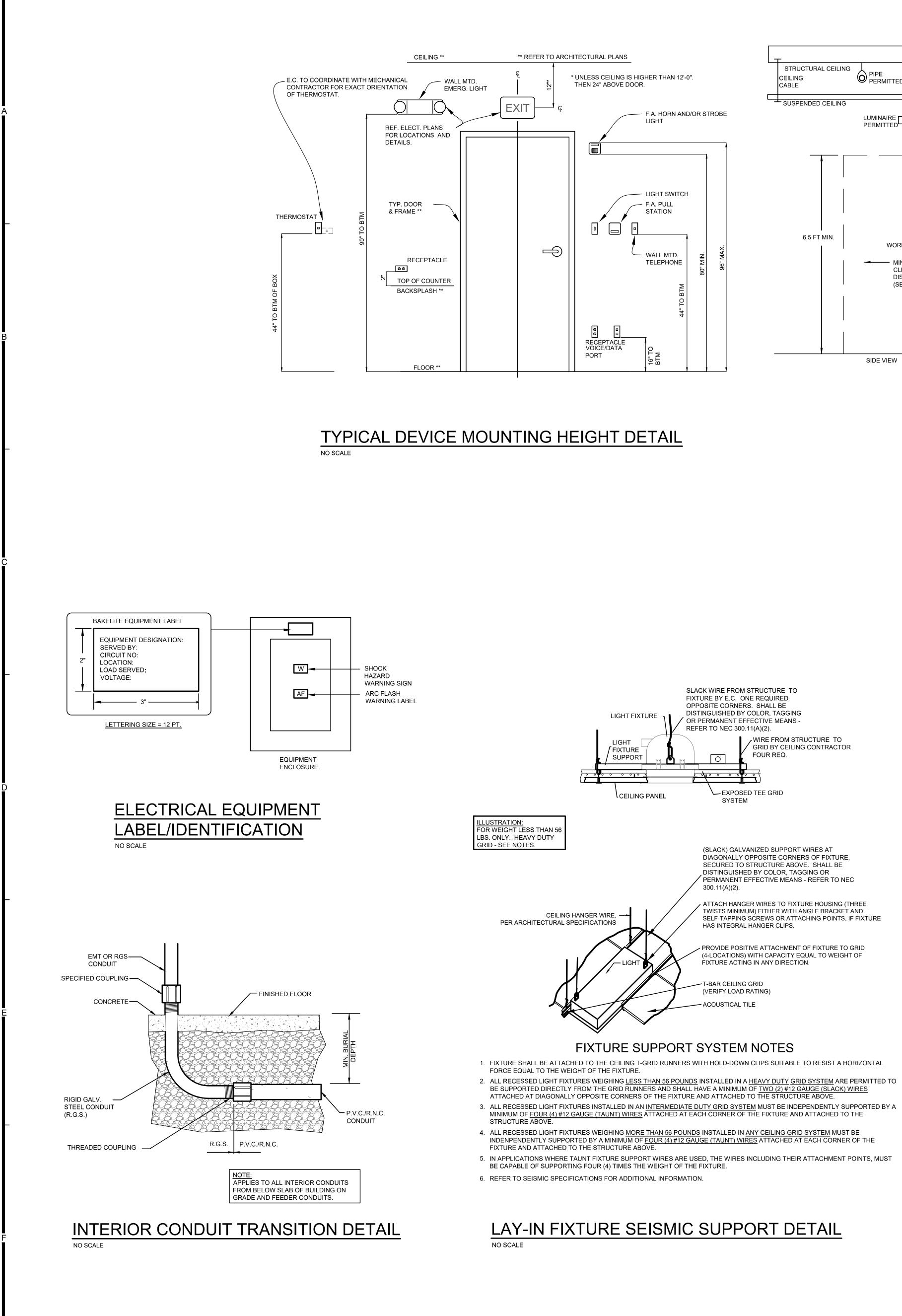
## **GROUNDING ELECTRODE FOUNDATION CONNECTION** NO SCALE

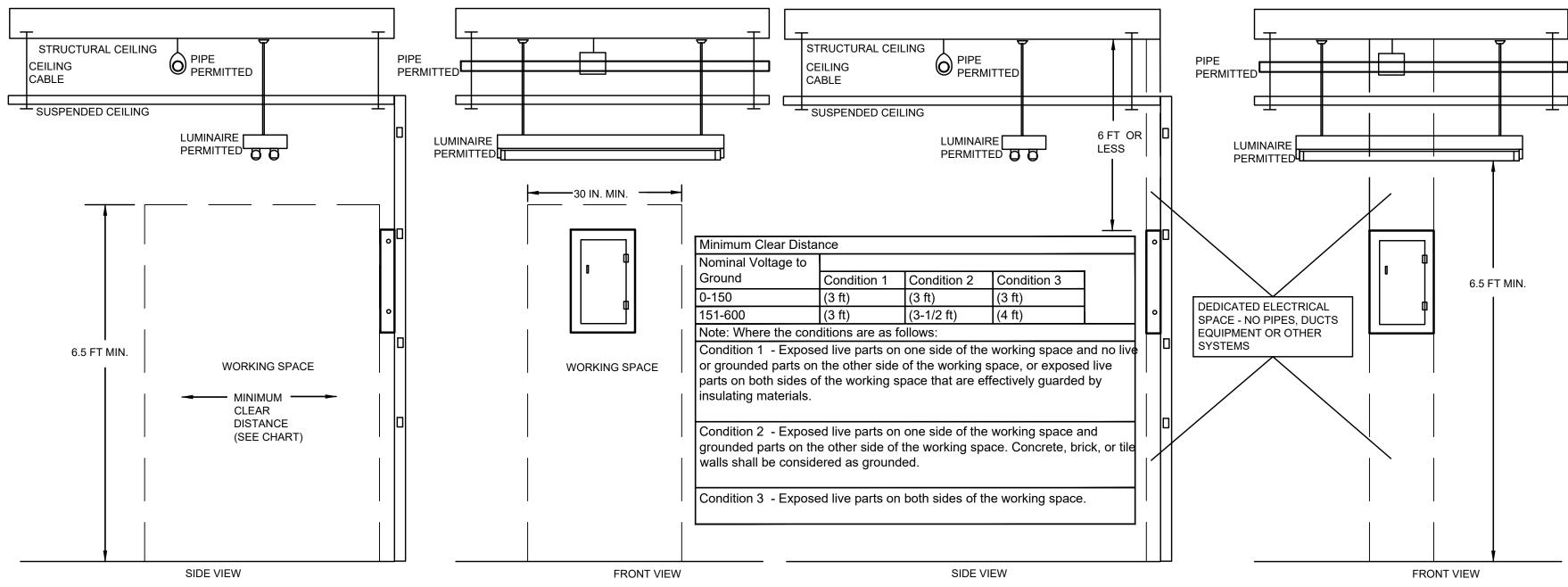






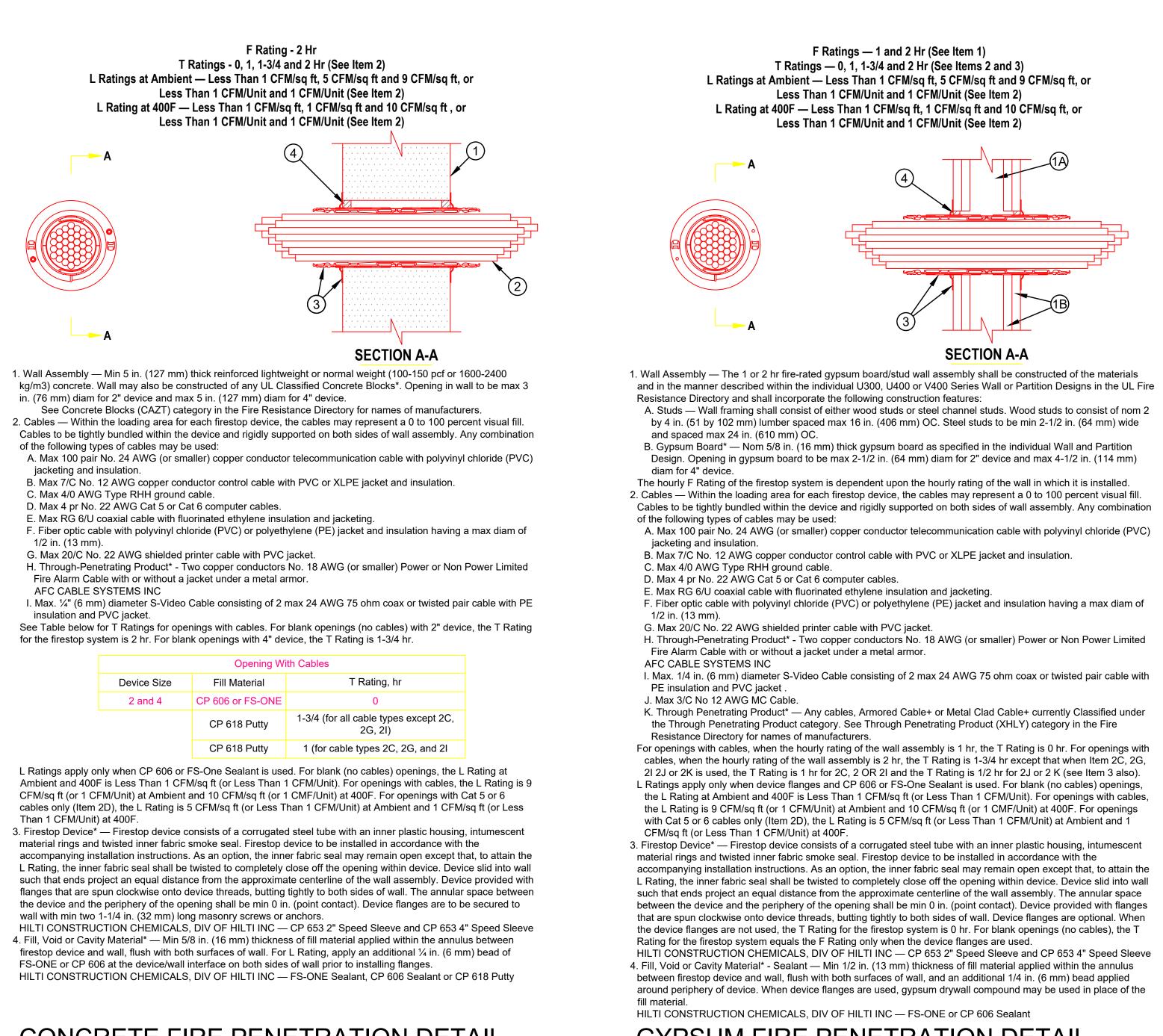






PANEL BOARD WORKING CLEARANCES

NO SCALE



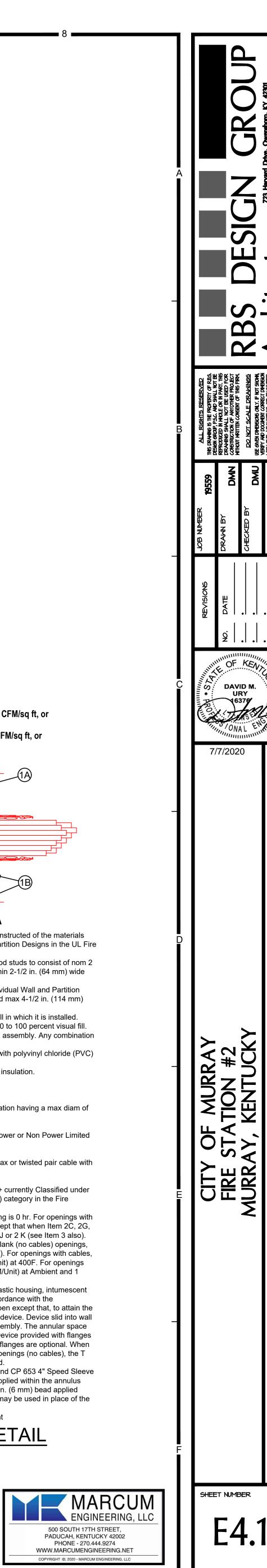
	Ope
Device Size	Fill Mate
2 and 4	CP 606 or F
	CP 618 F
	CP 618 F

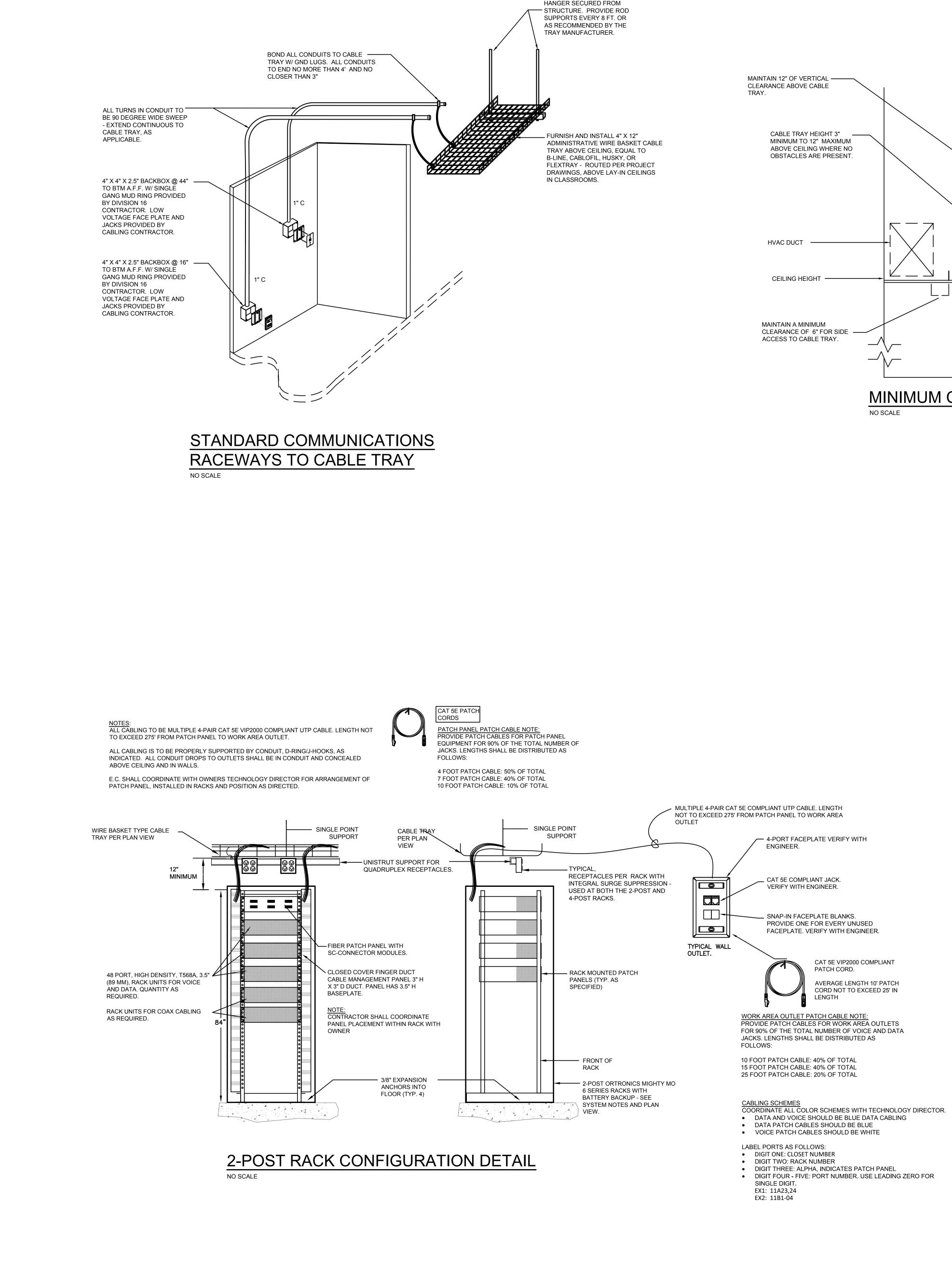
## CONCRETE FIRE PENETRATION DETAIL NO SCALE

PANEL BOARD CONDUIT ACCESS SPACE

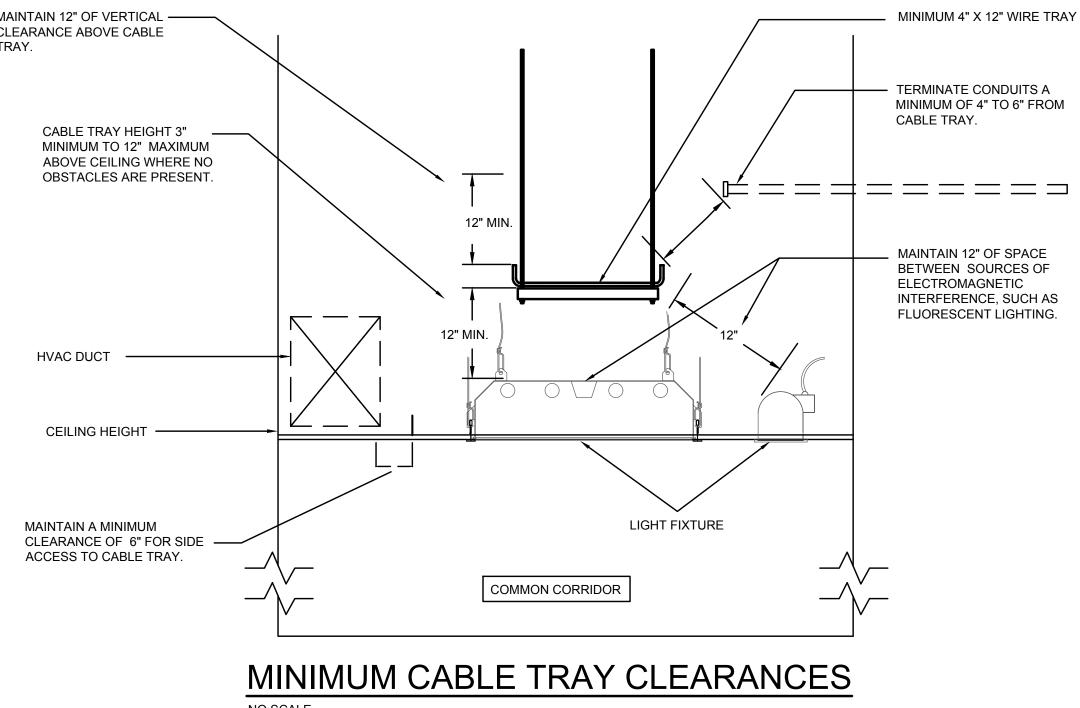
# PANEL BOARD NEC CLEARANCES

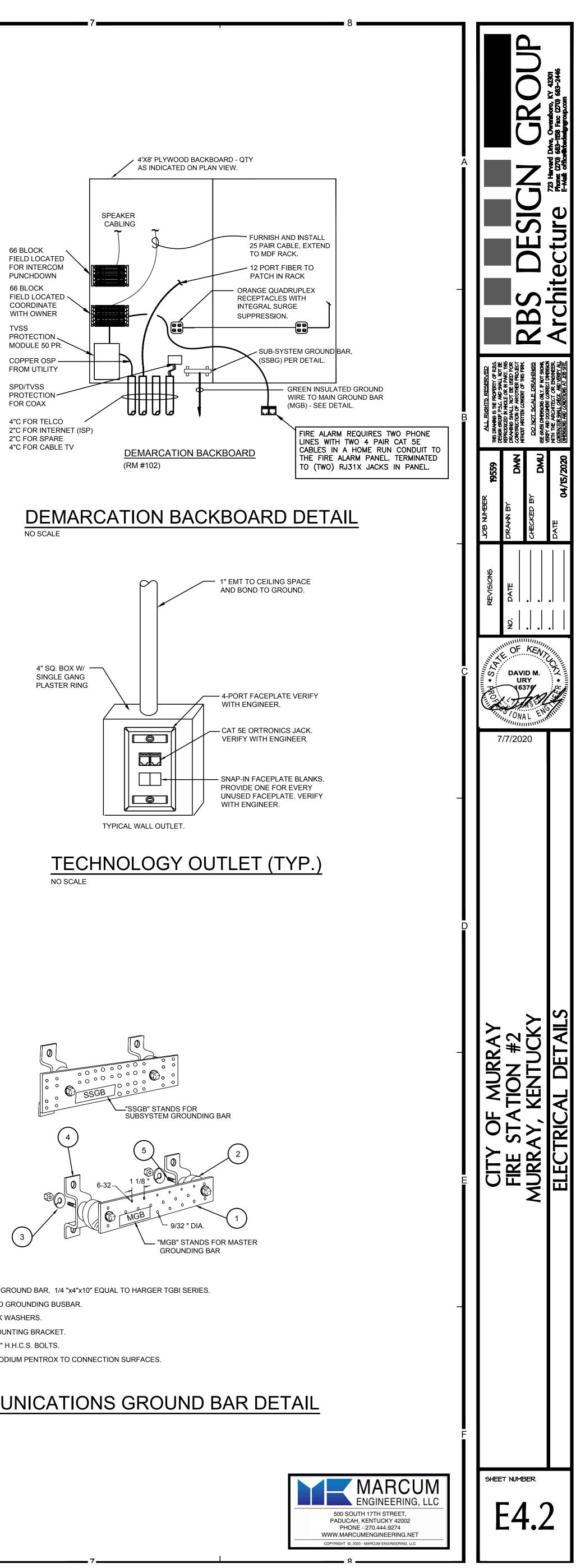
### **GYPSUM FIRE PENETRATION DETAIL** NO SCALE

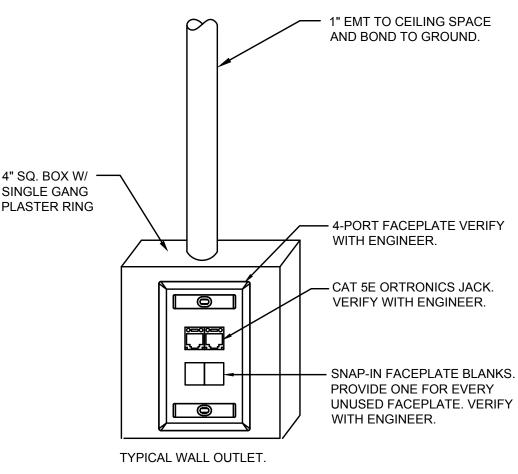


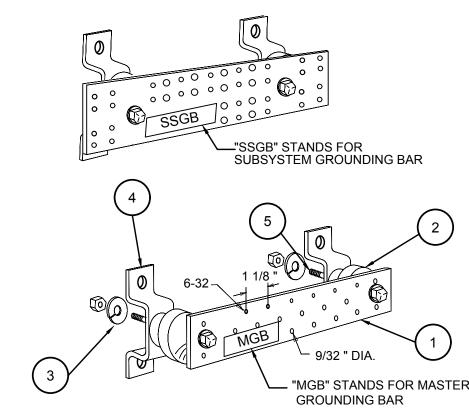


1/2" THREADED ROD HANGER SECURED FROM





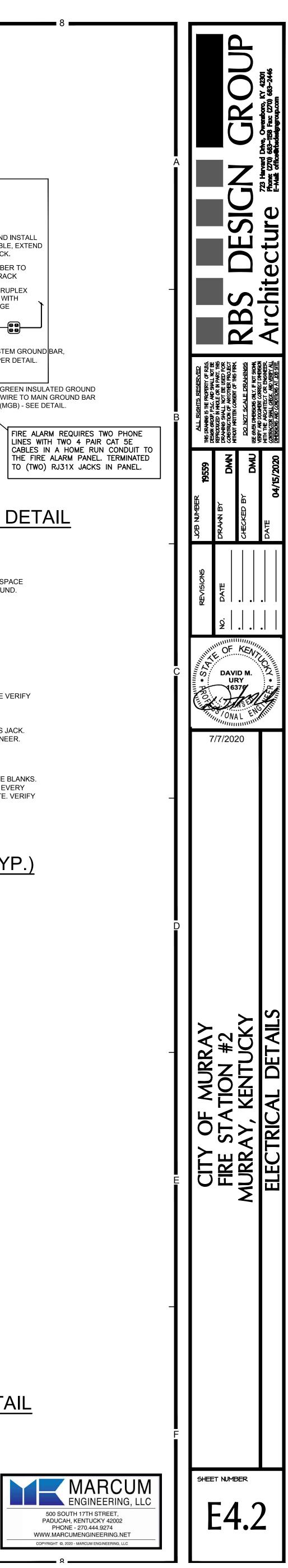


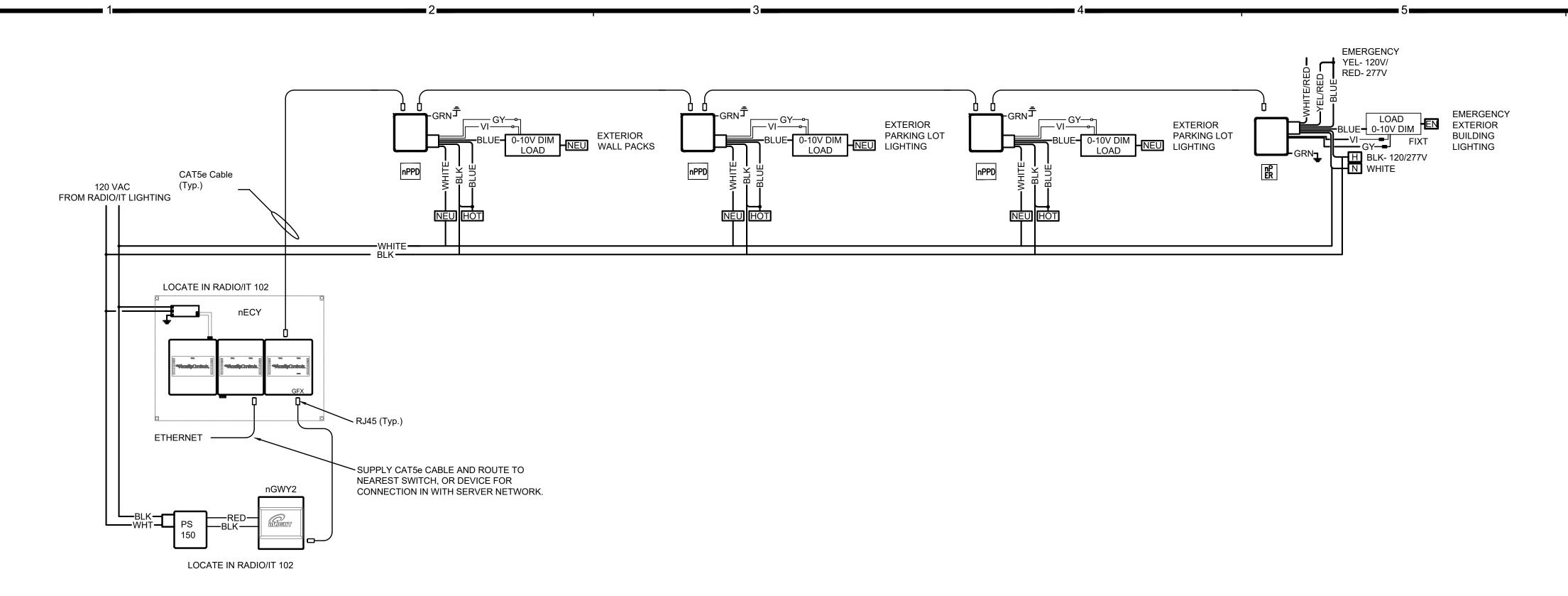




- . COPPER GROUND BAR, 1/4 "x4"x10" EQUAL TO HARGER TGBI SERIES.
- 2. ISOLATED GROUNDING BUSBAR. 3. 5/8" LOCK WASHERS.
- 4. WALL MOUNTING BRACKET
- 5. 5/8-11 x 1" H.H.C.S. BOLTS.
- 6. APPLY SODIUM PENTROX TO CONNECTION SURFACES.







### NOTES : GENERAL

1.1. DETAIL IS PURELY DIAGRAMMATIC AND FOR REFERENCE ONLY. E.C. SHALL COORDINATE WITH MANUFACTURER AND MANUFACTURER'S REP., FURNISH AND INSTALL ALL COMPONENTS FOR A FULLY FUNCTIONAL SYSTEM.

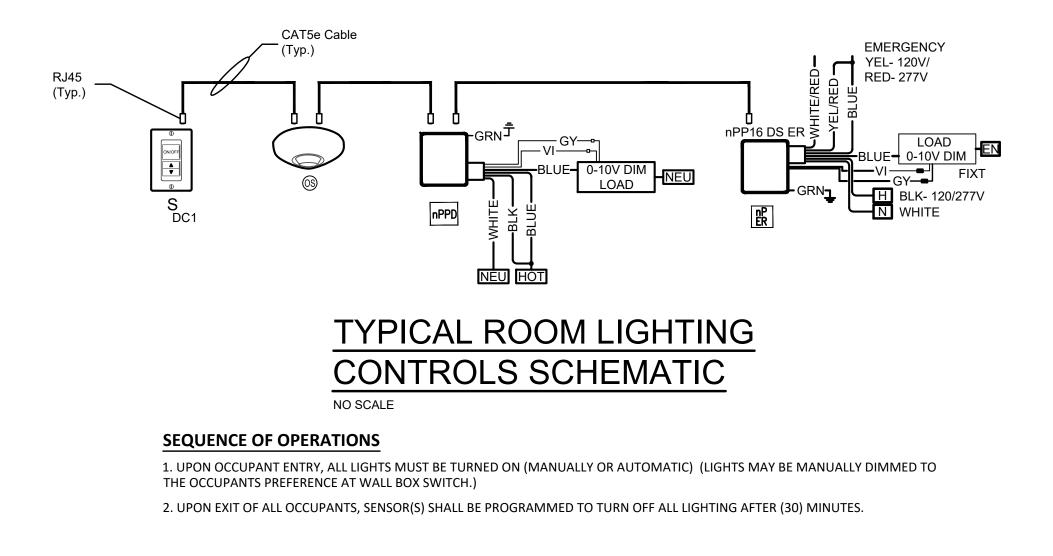
1.2. VERIFY IN FIELD ALL RUNS PRIOR TO COMMISSIONING & PROGRAMMING. CONTACT YOUR REPRESENTATIVE WITH ANY QUESTIONS PRIOR TO INSTALLATION.

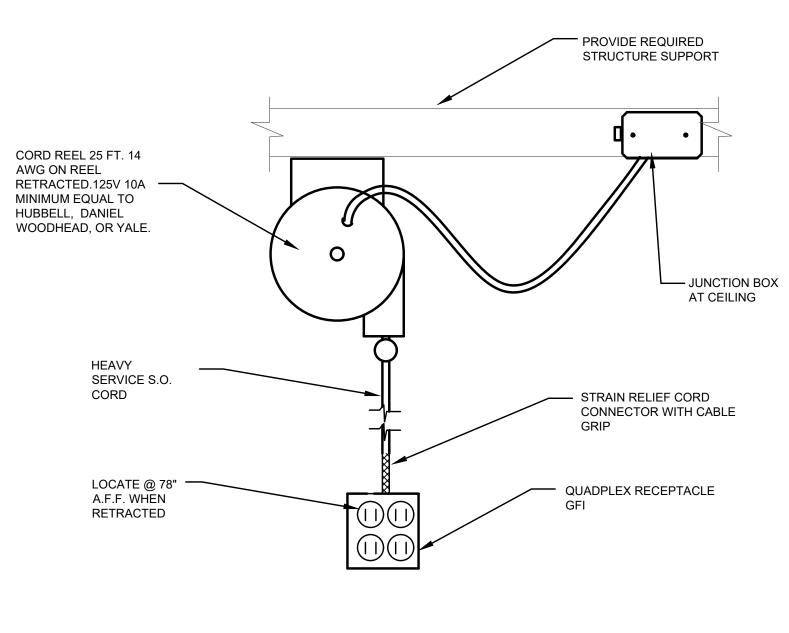
COMMISSIONING 2.1 E.C. SHALL INCLUDE IN BID ALL COSTS ASSOCIATED WITH START UP COMMISSIONING OF SYSTEM AND OWNER TRAINING ON UTILIZATION OF SYSTEM. COORDINATE WITH MANUFACTURER AND MANUFACTURER'S REP FOR SOLICITATION OF FIELD COMMISSIONING AGENT FOR SYSTEM PROGRAMMING AND TRAINING.

SEQUENCE OF OPERATIONS 3.1 TIME CLOCK ON (EXTERIOR LIGHTING): LIGHTS AUTOMATICALLY TURN ON ONE HOUR PRIOR TO DUSK. TIME CLOCK OFF: LIGHTS AUTOMATICALLY TURN OFF ONE HOUR AFTER DAWN. THESE SHALL BE ASTRONOMIC FUNCTIONS AND SCHEDULES SHALL ADJUST ACCORDINGLY TO TIMES OF YEAR.

## EXTERIOR LIGHTING CONTROLS SCHEMATIC

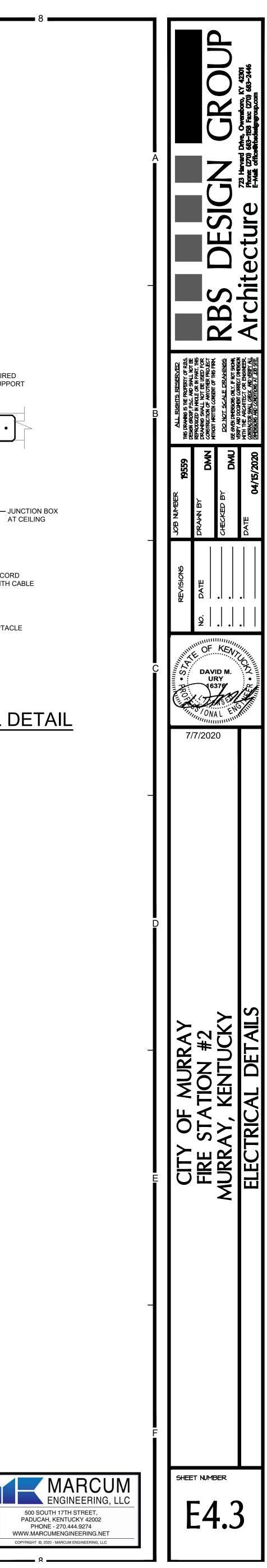
NO SCALE





# CEILING MOUNTED POWER REEL DETAIL NO SCALE





					URE S				
								DEMARKO	NOTEO
TYPE	MANUFACTURER	CATALOG NO.	LAMP	VOLTAGE	INPUT WATTS	MOUNTING	FINISH	REMARKS	NOTES
A1	LITHONIA	2BLT4 40L ADPT LP840	LED	120	32	LAY-IN	STANDARD	2' X 4' LAY-IN VOLUMETRIC TROFFER	
	OR EQUAL								
A2	LITHONIA	2BLT4 48L ADPT LP840	LED	120	38	LAY-IN	STANDARD	2' X 4' LAY-IN VOLUMETRIC TROFFER	
	OR EQUAL								
В	LITHONIA	2BLT2 34L ADPT LP840	LED	120	32	LAY-IN	STANDARD	2' X 2 LAY-IN VOLUMETRIC TROFFER	
	OR EQUAL								
С	LITHONIA	LDN6 40/15	LED	120	21	LAY-IN	STANDARD	6' LED CAN LIGHT	
	OR EQUAL								
D	LITHONIA	CDS L48 DM 40K	LED	120	41	CHAIN HUNG AS	STANDARD	4' LED STRIP LIGHT	
	OR EQUAL					NOTED			
EX1	LITHONIA	LQC 1 R EL N	LED	120	4	MULTI	STANDARD	EMERGENCY EXIT SIGN	
	OR EQUAL					MOUNT			
EX2	LITHONIA	LQC 2 R EL N	LED	120	4	MULTI	STANDARD	EMERGENCY EXIT SIGN DOUBLE FACE	
	OR EQUAL					MOUNT			
F	LITHONIA	DSXW2 LED 20C 530 40K T2M MVOLT DBLXD	LED	120	36	WALL @ 9'	STANDARD	LED WALL PACK	
	OR EQUAL					ABOVE GRADE			
G	LITHONIA	DSXW2 LED 30C 700 40K TFTM MVOLT DBLXD	LED	120	74	WALL @ 16'	STANDARD	LED WALL PACK	
	OR EQUAL	-				ABOVE GRADE			
	LITHONIA	DMW 2 32 MVOLT GEB10IS	LED	120	57	SURFACE	STANDARD	8"X4' WET LOCATION SURFACE MOUNT	
-	OR EQUAL					MOUNT		FIXTURE	
J	LITHONIA	KAD LED 1 49B350/40K SR2 MVOLT SPD04	LED	208	59	CONCRETE	STANDARD	LED AREA LIGHT MOUNTED ON 25FT	
-	OR EQUAL	25FT BLXD				BASE		SQUARE STRAIGHT STEEL POLE	
K	LITHONIA	DSXF2 LED 3 A530/40K MFL MVOLT DBLXD	LED	120	59	PER DETAIL	STANDARD	LED FLOOD LIGHT FOR FLAG POLE	
-	OR EQUAL							LIGHTING	
М	LITHONIA	IBH 18000LM WD MVOLT 80CRI	LED	120	136	SEE NOTE	STANDARD	LED HIGHBAY	
	OR EQUAL	-							

### GENERAL NOTES:

1 ALL LAMPS SHALL BE 4100K, 85 CRI UNLESS NOTED OTHERWISE.

- 2 WHEN APPLICABLE ALL BALLAST SHALL BE ELECTRONIC TYPE <10% THD
- 3 ALL LAY-IN FIXTURES SHALL BE SUPPORTED PER SEISMIC STANDARD AND DETAIL.
- 4 "N/L" INDICATES NON-SWITCHED NIGHT LIGHT (24/7 OPERATION).
- MANUFACTURER SHALL FURNISH 10% SPARES FOR OWNER STOCK OF ALL BALLAST AND LAMP TYPES USED FOR THE INTERIOR LIGHTING PACKAGE, WITH A MINIMUM OF (3) FOR EACH TYPE. 5 6 PRIOR APPROVAL REQUIRED A MINIMUM OF 10 DAYS PRIOR TO BID - EQUALS TO BE LISTED BY ADDENDA.
- 7 OTHER LIGHT FIXTURES MANUFACTURERS THAT ARE CONSIDERED AS EQUALS FOR GENERAL LIGHTING REQUIREMENTS ARE: A. COOPER LIGHTING AND SUB-PRODUCT LINES AS SUPPLIED BY ENGINEERED LIGHTING SALES B. HUBBELL LIGHTING AND SUB-PRODUCT LINES AS SUPPLIED BY LUMENATION C. ACUITY BRAND AND SUB-PRODUCT LINES AS SUPPLIED BY LHI LIGHTING SALES

ALL LIGHT FIXTURES SHALL BE SUBJECT TO SHOP DRAWING REVIEW BY ARCHITECT AND ENGINEER FOR ACCEPTANCE AS TO ENERGY EFFICIENCY, APPEARANCE, STYLE, PERFORMANCE, AND OVER ALL SERVICEABILITY.

SPECIAL NOTES:

- A ALL DIMMERS SHALL BE ELECTRONIC, PRE-SET, SLIDER TYPE SUITABLE FOR THE CONNECTED LOAD AND SHALL BE SUITABLE FOR PROPER OPERATION WITH FIXTURES WITH DIMMING BALLASTS. FURNISH AND INSTALL REMOTE DIMMER MODULE AS NECESSARY FOR CIRCUIT LOADING AND CONTROL SCHEMES INDICATED. B FINISH TO BE SELECTED BY ARCHITECT DURING SHOP DRAWINGS PROCESS. FURNISH COLOR BROCHURE FOR SELECTIONS, AS APPLICABLE.

C CONTRACTOR SHALL FIELD COORDINATE DIRECTION ARROWS OF ALL EXIT SIGNS, AS APPLICABLE TO PATH OF EGRESS FOR PUNCH-OUT TYPE ARROWS.

D EMERGENCY SWITCHING UNIT SHALL FAIL TO "ON" POSITION FOR FAIL SAFE. FURNISH AND INSTALL ALL FIELD WIRING AND CONNECTIONS TO INTERFACE WITH FIRE ALARM SYSTEM.

					.EC. DATA		NT CON				<u> </u>				IFANS	
ITEM #	DESCRIPTION	VOLTAGE/F				МОСР	PANEL DESIGNATION	CONDUIT	LINE	NEU	GND	N.F.D.S. SIZE	F.D.S. SIZE	FUSE	ENCL NEMA	REMARKS/NOTES
C-1	CONDENSING UNIT	208/1			28	40	EQ1	1/2	8		10	2P60			3R	С
C-2	CONDENSING UNIT	208/1			26.1	40	EQ1	1/2	8		10	2P60			3R	С
C-3	CONDENSING UNIT	208/1			11.8	20	EQ1	1/2	12		12	2P30			3R	С
C-4	CONDENSING UNIT	208/1			17.6	25	EQ1	1/2	10		10	2P30			3R	С
F-1	FURNACE	120/1			17.2	20	EQ1	1/2	12	12	12					E
F-2	FURNACE	120/1			13.5	20	EQ1	1/2	12	12	12					E
F-3	FURNACE	120/1			10.3	20	EQ1	1/2	12	12	12			_		E
F-4	FURNACE	120/1			10.3	20	EQ1	1/2	12	12	12					E
OU-1	DUCTLESS SPLIT OUTDOOR	208/1			8	15	EQ1	1/2	12		20	2P30			3R	с
IU-1	DUCTLESS SPLIT INDOOR UNI	Г 208/1			-	-	-	1/2	12		12					F
CP-1	RADIANT PANEL	120/1		750 W	4	15	A	1/2"	12	12	12					E
CP-2	RADIANT PANEL	120/1		750 W	4	15	A	1/2"	12	12	12					E
IR-1-10	GAS FIRED INFRARED HEATER	120/1			6 (EA)	15 (EA)	EQ1 & EQ2	1/2" (EA)	12 (EA)	12 (EA)	12 (EA)					E (EA)
ERV-1	ENERGY RECOVERY VENTILATOR	120/1			7.1	15	EQ1	1/2"	12	12	12					A,P
L-1A, 1B	MOTORIZED LOUVER	120/1			6 (EA)	15 (EA)	EQ1	1/2" (EA)	12 (EA)	12 (EA)	12 (EA)					D
CD-1,2,4	CONTROL DAMPER	120/1			5	20	EQ1	1/2"	12	12	12					E,M
CD-3A,3B	CONTROL DAMPER	120/1			5	20	EQ1	1/2"	12	12	12					E,M,O
WH-1,2	GAS WATER HEATER					_		_	-	-	-					-
			ΙΛΤ				NT CON			י ואר						
				EC. DATA							501			201		
ITEM #		TAGE/			МОСР	PANEL DESIGNAT				GND	CONTINU			SWITCH	T-STAT	REMARKS/NOTES
EF-1	VENTILATING FAN 1	20/1 1/4		3.5	15	EQ1	1/2	12 1	12	12	Х					E
EF-2A	VENTILATING FAN 1	20/1 3/4		3.8	15	EQ1	1/2	12 1	12	12				Х		G,N
	VENTILATING FAN 1			3.8	15	EQ1	1/2	12 1	12	12				Х		G,N
EF-2B		20/1 3/4		5.0										Х		G,N
EF-2B EF-2C	VENTILATING FAN 1	20/1         3/4           20/1         3/4		3.8	15	EQ1	1/2	12 1	12	12						G,N
					15 15	EQ1 EQ1	1/2 1/2		12 12	12 12				х		
EF-2C EF-2D EF-3	VENTILATING FAN1VENTILATING FAN1	20/1         3/4           20/1         3/4           20/1         1/6		3.8 3.8 3.5	15 15	EQ1 A	1/2 1/2	12 1 12 1	12	12 12				X X	Х	J,K
EF-2C EF-2D EF-3 EF-4	VENTILATING FAN     1       VENTILATING FAN     1       VENTILATING FAN     1	20/1         3/4           20/1         3/4           20/1         1/6           240		3.8	15 15 15	EQ1 A A	1/2 1/2 1/2	12     1       12     1       12     1       12     1	12 12 12	12 12 12					X	
EF-2C EF-2D EF-3 EF-4 CEF-1	VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1	20/1         3/4           20/1         3/4           20/1         1/6           240           20/1         27		3.8 3.8 3.5	15 15 15 20	EQ1 A A A	1/2           1/2           1/2           1/2           1/2	12     1       12     1       12     1       12     1       12     1	12 12 12 12	12 12 12 12 12			X		X	H,K
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2	VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1	20/1         3/4           20/1         3/4           20/1         1/6           20/1         240           20/1         27           20/1         10	W	3.8 3.8 3.5	15 15 15 20 20	EQ1 A A A A	1/2           1/2           1/2           1/2           1/2           1/2           1/2	12     1       12     1       12     1       12     1       12     1       12     1	12 12 12 12 12	12 12 12 12 12 12 12			x		X	Н,К Н,К
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2 CEF-2	VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1	20/1         3/4           20/1         3/4           20/1         1/6           20/1         240           20/1         27           20/1         10           20/1         16		3.8 3.8 3.5	15 15 15 20 20 20 20	EQ1 A A A	1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2	12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1	12 12 12 12 12 12 12 12	12 12 12 12 12 12 12 12	 X				X	H,K
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2	VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1	20/1         3/4           20/1         3/4           20/1         1/6           20/1         240           20/1         27           20/1         10	W W	3.8 3.8 3.5	15 15 15 20 20	EQ1 A A A A A	1/2           1/2           1/2           1/2           1/2           1/2           1/2	12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1	12 12 12 12 12	12 12 12 12 12 12 12	X		x		X	Н,К Н,К Н,К
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2 CEF-3 CEF-3 CEF-5	VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1VENTILATING FAN1	20/1     3/4       20/1     3/4       20/1     1/6       20/1     240       20/1     27       20/1     10       20/1     16       20/1     16	W W W	3.8 3.8 3.5	15 15 15 20 20 20 20 20 20	EQ1 A A A A A A A	1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2	12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1	12   12   12   12   12   12   12   12	12 12 12 12 12 12 12 12 12 12	X		X X		X	Н,К Н,К Н,К Е
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2 CEF-3 CEF-3 CEF-4 CEF-5	VENTILATING FAN1VENTILATING FAN1	20/1     3/4       20/1     3/4       20/1     1/6       20/1     240       20/1     27       20/1     10       20/1     16       20/1     16       20/1     16	W W W W	3.8 3.8 3.5	15 15 20 20 20 20 20 20 20 20	EQ1 A A A A A A A	1/2       1/2       1/2       1/2       1/2       1/2       1/2       1/2       1/2       1/2       1/2       1/2       1/2       1/2	12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1	12       12       12       12       12       12       12       12       12       12       12       12	12 12 12 12 12 12 12 12 12 12 12	X		X X	X		Н,К Н,К Н,К Е Н,К
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2 CEF-3 CEF-3 CEF-5 CEF-6 CEF-6	VENTILATING FAN1VENTILATING FAN1	20/1     3/4       20/1     3/4       20/1     1/6       20/1     240       20/1     27       20/1     10       20/1     16       20/1     16       20/1     16       20/1     16       20/1     16       20/1     16	W W W W	3.8 3.8 3.5	15 15 20 20 20 20 20 20 20 20 20 20	EQ1 A A A A A A A A A	1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2           1/2	12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1       12     1	12       12       12       12       12       12       12       12       12       12       12       12       12       12       12       12       12	12       12       12       12       12       12       12       12       12       12       12       12       12       12       12       12       12       12       12	X		X X	X	X	Н,К Н,К Н,К Е Н,К Ј,К
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2 CEF-3 CEF-3 CEF-4 CEF-5 CEF-6 CEF-7	VENTILATING FAN1VENTILATING FAN1CONTRACTOR SHALL FURNISH CONNECTIONS DUE TO EQUIPMENTION ABOVE SHALL	20/1         3/4           20/1         3/4           20/1         1/6           20/1         1/6           20/1         240           20/1         27           20/1         10           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16           20/1         16	W W W W W W NATED WI ALL EQUIF JTIONS - M	3.8 3.8 3.5 240 	15 15 20 20 20 20 20 20 20 20 20 20 20 20 20	EQ1 A A A A A A A A A JIPMENT AS CE EQUIPMI DISC. SW, W	1/2           1/2	12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         EQUIPMENT MECESSARY.	12       13       14       15       16       17       18       19       19       10       11       12       12       12       14       15       16       17       18       19       19       110       111       12       12       132       140       150       160       17       18       19       19       10       10       10	12 12 12 12 12 12 12 12 12 12	S SHALL T SHALL B	TAKE PRESI E RESPONS	X X X DENCE O BIBLE FOR	X X X X VER THE L	X X ISTED INFO NS IN ELEC	H,K H,K H,K E H,K J,K J,K DRMATION. CTRICAL FIELD
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2 CEF-3 CEF-3 CEF-4 CEF-5 CEF-6 CEF-7 1 2 2	VENTILATING FAN       1         VENTI	20/1         3/4           20/1         3/4           20/1         3/4           20/1         1/6           20/1         240           20/1         27           20/1         10           20/1         16           20/1<	W W W W W W W W W NATED WI ALL EQUIF JTIONS - N ED TO, TH OT TO IM	3.8 3.8 3.5 240 	15 15 20 20 20 20 20 20 20 20 20 20 20 20 20	EQ1 A A A A A A A A A A JIPMENT AS CE EQUIPMI DISC. SW, W I THIS PROJI MENT, REFE	1/2           1/2	12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         EQUIPMENT M         ECESSARY.         WITH ALL TF	12       13       14       15       16       17       18       19       19       10       12       12       12       12       12       12       12       12       12       13       14       15       16       17       18       19       19       10       10       11       12       13       14       15       16       17       18 <td>12 12 12 12 12 12 12 12 12 12</td> <td>S SHALL T SHALL B VIDE MA</td> <td>TAKE PRESI E RESPONS NUFACTURI</td> <td>X X X DENCE O BIBLE FOR</td> <td>X X X X VER THE L VARIATIO</td> <td>X X ISTED INFO NS IN ELEC IREMENTS</td> <td>H,K H,K H,K E H,K J,K J,K DRMATION. CTRICAL FIELD</td>	12 12 12 12 12 12 12 12 12 12	S SHALL T SHALL B VIDE MA	TAKE PRESI E RESPONS NUFACTURI	X X X DENCE O BIBLE FOR	X X X X VER THE L VARIATIO	X X ISTED INFO NS IN ELEC IREMENTS	H,K H,K H,K E H,K J,K J,K DRMATION. CTRICAL FIELD
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2 CEF-3 CEF-3 CEF-4 CEF-5 CEF-6 CEF-7 <b>ENEF</b> 1	VENTILATING FAN       1         VENTI	20/1         3/4           20/1         3/4           20/1         3/4           20/1         1/6           20/1         240           20/1         27           20/1         27           20/1         10           20/1         16           20/1<	W W W W W W W W NATED WI ALL EQUIP JTIONS - M ED TO, TH OT TO IM	3.8 3.8 3.5 240 	15 15 20 20 20 20 20 20 20 20 20 20 20 4ANICAL EQU RED TO PLA CURRENT, E T FOUND ON Y OF EQUIPT BREAKER S	EQ1 A A A A A A A A A A A CE EQUIPMI DISC. SW, W I THIS PROJI MENT, REFE	1/2           1/2	12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         EQUIPMENT M         ECESSARY.         WITH ALL TH         ON DOCUME	12       13       14       15       16       17       18       19       19       10       10       11       12       12       12       12       12       12       12       12       12       12       13       14       15       16       17       18       19       10       10       10       11       12       12       13 <td>12 12 12 12 12 12 12 12 12 12</td> <td>S SHALL <sup>–</sup> SHALL B VIDE MA CTIVE TR</td> <td>TAKE PRESI E RESPONS NUFACTURI ADE FOR LO</td> <td>X X X DENCE O BIBLE FOR ERS MININ</td> <td>X X X X VER THE L VARIATIO MUM REQU AND QUAN</td> <td>X X ISTED INFO NS IN ELEC IREMENTS</td> <td>H,K H,K H,K E H,K J,K J,K DRMATION. CTRICAL FIELD</td>	12 12 12 12 12 12 12 12 12 12	S SHALL <sup>–</sup> SHALL B VIDE MA CTIVE TR	TAKE PRESI E RESPONS NUFACTURI ADE FOR LO	X X X DENCE O BIBLE FOR ERS MININ	X X X X VER THE L VARIATIO MUM REQU AND QUAN	X X ISTED INFO NS IN ELEC IREMENTS	H,K H,K H,K E H,K J,K J,K DRMATION. CTRICAL FIELD
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2 CEF-3 CEF-3 CEF-4 CEF-5 CEF-6 CEF-7 <b>CEF-7</b> <b>CEF-7</b> <b>2</b> 1 2 3 4	VENTILATING FAN       1         VENTI	20/1         3/4           20/1         3/4           20/1         3/4           20/1         1/6           20/1         27           20/1         27           20/1         10           20/1         16           20/1         20           20/1         20           20/1 </td <td>W W W W W W W W W W W W W W W W W W W</td> <td>3.8         3.8         3.5         240        </td> <td>15 15 20 20 20 20 20 20 20 20 20 20 20 20 20</td> <td>EQ1 A A A A A A A A A A A A A A S JIPMENT AS CE EQUIPMI DISC. SW, W I THIS PROJI MENT, REFE SIZES.</td> <td>1/2           1/2      1/2</td> <td>12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         EQUIPMENT M         ECESSARY.         WITH ALL TF         ON DOCUME         ARTICLE #11</td> <td>12       13       14       15       16       17       18       19       19       10       10       10       12       12       14       15       16       17       18       19       19       10       10       10       10       10       10       10       10       10       10       10       11       12       12       13       14       15   <td>12 12 12 12 12 12 12 12 12 12</td><td>S SHALL T SHALL B VIDE MA CTIVE TR</td><td>TAKE PRESI E RESPONS NUFACTURI ADE FOR LO RKING CLEA</td><td>X X X DENCE O BIBLE FOR ERS MININ DCATION</td><td>X X X X X VER THE L VARIATIO</td><td>X X X ISTED INFO NS IN ELEC IREMENTS TITIES.</td><td>H,K H,K H,K E H,K J,K J,K DRMATION. CTRICAL FIELD TO ALL</td></td>	W W W W W W W W W W W W W W W W W W W	3.8         3.8         3.5         240	15 15 20 20 20 20 20 20 20 20 20 20 20 20 20	EQ1 A A A A A A A A A A A A A A S JIPMENT AS CE EQUIPMI DISC. SW, W I THIS PROJI MENT, REFE SIZES.	1/2           1/2      1/2	12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         12       1         EQUIPMENT M         ECESSARY.         WITH ALL TF         ON DOCUME         ARTICLE #11	12       13       14       15       16       17       18       19       19       10       10       10       12       12       14       15       16       17       18       19       19       10       10       10       10       10       10       10       10       10       10       10       11       12       12       13       14       15 <td>12 12 12 12 12 12 12 12 12 12</td> <td>S SHALL T SHALL B VIDE MA CTIVE TR</td> <td>TAKE PRESI E RESPONS NUFACTURI ADE FOR LO RKING CLEA</td> <td>X X X DENCE O BIBLE FOR ERS MININ DCATION</td> <td>X X X X X VER THE L VARIATIO</td> <td>X X X ISTED INFO NS IN ELEC IREMENTS TITIES.</td> <td>H,K H,K H,K E H,K J,K J,K DRMATION. CTRICAL FIELD TO ALL</td>	12 12 12 12 12 12 12 12 12 12	S SHALL T SHALL B VIDE MA CTIVE TR	TAKE PRESI E RESPONS NUFACTURI ADE FOR LO RKING CLEA	X X X DENCE O BIBLE FOR ERS MININ DCATION	X X X X X VER THE L VARIATIO	X X X ISTED INFO NS IN ELEC IREMENTS TITIES.	H,K H,K H,K E H,K J,K J,K DRMATION. CTRICAL FIELD TO ALL
EF-2C EF-2D EF-3 EF-4 CEF-1 CEF-2 CEF-3 CEF-4 CEF-5 CEF-6 CEF-7 <b>CEF-6</b> CEF-7 1 2 3	VENTILATING FAN       1         VENTI	20/1         3/4           20/1         3/4           20/1         3/4           20/1         1/6           20/1         240           20/1         27           20/1         10           20/1         16           20/1         20           10         20           20	W W W W W W W W W W W W W W W W W W W	3.8 3.8 3.5 240 	15 15 20 20 20 20 20 20 20 20 20 20 20 20 20	EQ1 A A A A A A A A A A A A A A S CE EQUIPMENT AS CE EQUIPMENT, REFE SIZES. TIN ACCORD NCLOSURES	1/2           1/2	12       1         EQUIPMENT M         ECESSARY.         WITH ALL TROUCOME         ARTICLE #11         RLY RATED F	12         13         14         15         16         17         18         19         12         12         12         12         12         12         12         12         12         12         13         14         15         16         17         18         19         19         10         10	12 12 12 12 12 12 12 12 12 12	S SHALL T SHALL B VIDE MA CTIVE TR FAIN WOF LATION (	TAKE PRESI E RESPONS NUFACTURI ADE FOR LO RKING CLEA	X X X DENCE O BIBLE FOR ERS MININ DCATION	X X X X X VER THE L VARIATIO	X X X ISTED INFO NS IN ELEC IREMENTS TITIES.	H,K H,K H,K E H,K J,K J,K DRMATION. CTRICAL FIELD TO ALL

	AL INUTES.
A	FURNISHED WITH UNIT N
В	FIRE ALARM CONTRACT
С	CONTRACTOR TO MOUN
D	UNIT PROVIDED WITH 12
E	FURNISH AND INSTALL M
F	INDOOR UNIT SHALL BE
G	UNIT SHALL BE ELECTRI
Н	UNIT SHALL BE ELECTRI
I	UNIT SHALL BE ELECTRI
J	UNIT SHALL BE CONTRO "OFF" AND UP FOR OVER

S

CABLE.
MAKE 120V POWER CONN
FURNISH AND INSTALL A S WHEN OVERHEAD DOORS
CONTRACTOR SHALL PRO
CONTRACTOR SHALL PRO

CTOR TO FURNISH AND SUPERVISE DUCT DETECTOR. INSTALLATION WITHIN DUCTWORK BY MECHANICAL CONTRACTOR.

UNT DISCONNECT SWITCH LOCAL TO UNIT ON SUITABLE SUPPORT. 120 VOLT ACTUATOR. EC TO FURNISH AND INSTALL ALL FIELD WIRING AND CONNECTIONS TO INTERLOCK WITH EF-2A,2B,2C,2D

MANUAL MOTOR STARTER SWITCH, SUITABLY SIZED AND RATED FOR LOAD, TO SERVE AS LOCAL DISCONNECT - MOUNT ADJACENT TO UNIT.

E POWERED FROM CONNECTION ON OUTDOOR UNIT - FURNISH AND INSTALL ALL FIELD WIRING.

RICALLY INTERLOCKED WITH AND CONTROLLED BY INDEPENDENT SWITCH WITH PILOT LIGHT.

RICALLY INTERLOCKED WITH AND CONTROLLED BY ZONE LIGHT CONTROL.

RICALLY INTERLOCKED WITH AND CONTROLLED BY THERMOSTAT-EC.

ROLLED BY THERMOSTAT FOR AUTOMATIC OPERATION AND A 3-POSTION SWITCH TO SERVE AS A LOCAL OVERRIDE "ON". DOWN POSITION WILL BE FOR "T-STAT" FUNCTION, CENTER ERRIDE "ON". MOUNT DEVICES ADJACENT TO EACH OTHER AND LABEL BOTH TO IDENTIFY OPERATION METHODS AND LOADS SERVED. K E.C. TO FURNISH AND INSTALL FAN SPEED CONTROLLER SHIPPED WITH UNIT.

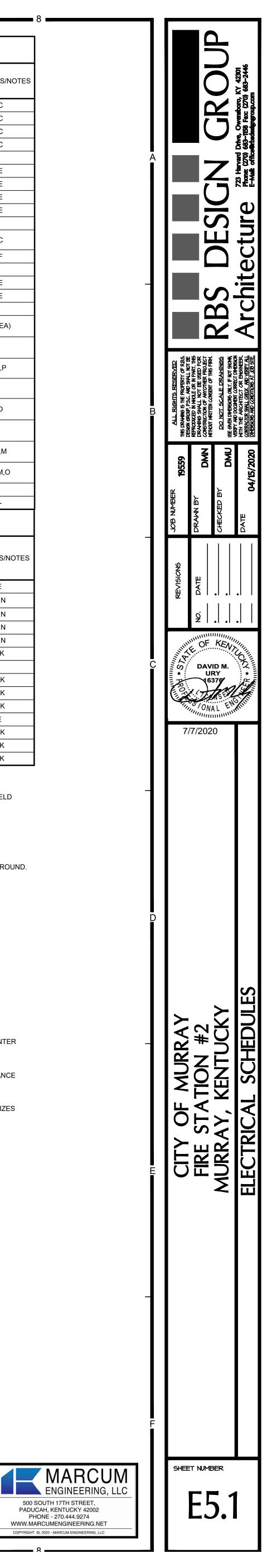
FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR - 2P15A, 30ma EGFCI REQUIRED. REFER TO DETAIL FOR SPECIFICATION AND PLUMBING DRAWINGS FOR LINES REQUIRING HEAT MAINTENANCE

INECTION TO 24 VOLT TRANSFORMER ON UNIT. A SUITABLY SIZED MAGNETIC MOTOR STARTER AND NON-FUSED DISCONNECT SWITCH. INTERLOCK CONTACTS WITH OVERHEAD DOOR OPERATORS, SUCH THAT UNIT ENERGIZES RS ARE ACTIVATED. FURNISH AND INSTALL CONTACTS/RELAYS ETC AS REQUIRED.

ROVIDE 3/4" CONDUIT BETWEEN CONTROL DAMPER AND ASSOCIATED THERMOSTAT.

ROVIDE CORNER MOUNTED OCCUPANCY SENSOR IN EXERCISE/STORM SHELTER 118. ROUTE CONDUIT FROM SENSOR TO ERV-1 AND ASSOCIATED CONTROL DAMPERS TO BE SWITCHED BY OCCUPANCY SENSOR. COORDINATE LOW VOLTAGE WIRING WITH HVAC CONTRACTOR.





VOLTS/PHASE/WIRE: 120/208/3/4					MAIN TYPE 8		CABINET:	CABINET:		FED FROM:		
					600 A MCB				22000			
CIRCUIT NO.	AREA SER	VED	TRIP	NO.	Р	HASE LOAD V	Ά	NO.	TRIP	ARFA	SERVED	
			AMPS	POLES	A	В	С	POLES	AMPS	,	<u>SERVEB</u>	
1,3,5	PANEL A		225	3	19192	14303	14971					
					26062	24381	18519	3	225	PANEL EQ		2,4,6
7,9,11	PANEL EQ2		225	3	19733	22303	20683					
					0	0	0	3	100	SPARE		8,10,12
13,15,17	PANEL ELS		100	3	1192	1309	221					
					0	0	0	3	60	SPARE		14,16,18
19,21	SPARE		30	2	0	0	0					
					0	0	0	2	30	SPARE		20,22
	•		CONNEC	TED LOAD	66179	62296	54394	160.8 KVA	A			
					1							
LOA	D CATEGORY	CONN. LOAD	DEMAND	FACTOR	EST.	LOAD						
Standard		2.5	1.	00	2	2.5						
Cooling and	Heating (Over 0 KVA)	17.2	1.	.00	1	7.2						
Equipment		72.6	1.	00	7	2.6						

Cooling and Heating (Over 0 KVA)	17.2	1.00	17.2
Equipment	72.6	1.00	72.6
Heating	6.4	1.00	6.4
Kitchen Equipment - Non-Dwelling Unit	5.0	1.00	5.0
Lighting	4.9	1.25	6.2
Motors	9.8	1.00	9.8
Motors (Largest)	1.4	1.25	1.8
Receptacles (0 - 10 KVA)	10.0	1.00	10.0
Receptacles (Over 10 KVA)	30.9	0.50	15.4
ΤΟΤΑΙ	160.8		146 9

VOLTS/PHAS 120/208/3/4	E/WIRE:		PANEL SIZ 225 A	ZE:	MAIN TYPE 8 225 A MLO	SIZE:		CABINET:			FED FROM: MDP	
CIRCUIT NO.	AREA SERVE	D	TRIP AMPS	NO. POLES		HASE LOAD V		NO. POLES	TRIP AMPS	AREA SE	RVED	CIRCUIT NC
1,3	RANGE		50	2	A 2500	В 2500	C 0	T OLLO				
					2500	0	0	2	40	DRYER		2,4
5	WASHER		20	1	0	0	1000 900	- 1	20	RECEPTACLES		6
7	RECEPTACLES		20	1	900	0	0					
9	RECEPTACLES		20	1	900 0	0 900	0	1	20	RECEPTACLES		8
11	RECEPTACLES		20	1	0	900 0	0 1080	1	20	RECEPTACLES		10
10					0	0	1260	1	20	RECEPTACLES		12
13	RECEPTACLES		20	1	1080 720	0	0	1	20	RECEPTACLES		14
15	RECEPTACLES		20	1	0	720	0					10
17	CP-1		20	1	0	750 0	0 750	1	20	CP-2		16
19	RECEPTACLES		20	1	0 720	0	900 0	1	20	RECEPTACLES		18
21	WASHER (GFI BREAKEF		20	1	1080 0	0 600	0	1	20	RECEPTACLES		20
21	WASHER (GFI BREARER	()	20		0	1200	0	- 1	20	APPLIANCE		22
23	APPLIANCE		20	1	0	0	1200 1200	- 1	20	MICROWAVE		24
25	RANGE HOOD		20	1	600	0	0		20	MICROVAVE		24
27	RECEPTACLES		20	1	1000 0	0 540	0 0	1	20	GARBAGE DISPO	AL	26
29	WATER COOLER (GFI B	REAKER)	20	1	0	900 0	0 600	1	20	RECEPTACLES		28
					0	0	1200	1	20	RECEPTACLES		30
31	RECEPTACLES		20	1	1080 1080	0	0	- 1	20	RECEPTACLES		32
33	RECEPTACLES		20	1	0	720	0					
35	RECEPTACLES		20	1	0	720 0	0 540	1	20	RECEPTACLES		34
37	RECEPTACLES		20	1	0 540	0	540 0	1	20	RECEPTACLES		36
					540	0	0	1	20	RECEPTACLES		38
39	TOOL SHOP APPLIANCE	<u>.</u>	20	1	0	1200 540	0	1	20	RECEPTACLES		40
41	RECEPTACLES		20	1	0	0	720					
43	RECEPTACLES		20	1	0 1080	0	1080 0		20	RECEPTACLES		42
45	LIGHTING		20	1	600 0	0 585	0 0	1	20	EF-3		44
47	LIGHTING		20	1	0	288 0	0 777	1	20	LIGHTING		46
					0	0	1224	1	20	LIGHTING BAY		48
49	LIGHTING		20	1	1048 1224	0	0	- 1	20	LIGHTING BAY		50
51	ICE MACHINE (GFI BREA	KER)	20	1	0	1000	0					
53	SPARE		20	1	0	240 0	0 0	1	20	EF-4		52
					0	0	0	1	20	SPARE		54
LOA			CONNEC	TED LOAD	19192	14303	14971	34.2 KVA				

Standard	2.5	1.00	2.5
Equipment	5.1	1.00	5.1
Kitchen Equipment - Non-Dwelling Unit	5.0	1.00	5.0
Lighting	3.6	1.25	4.5
Receptacles (0 - 10 KVA)	10.0	1.00	10.0
Receptacles (Over 10 KVA)	7.9	0.50	4.0
TOTAL	34.2		31.1

					Jouroar	ELS So	, including	0				
VOLTS/PHAS 120/208/3/4	E/WIRE:				MAIN TYPE & 100 A MCB	MAIN TYPE & SIZE: 100 A MCB				MIN SCC: 14000	FED FROM: MDP	
CIRCUIT NO.	AREA SE	RVED	TRIP	NO.	F	PHASE LOAD V	Ά	NO.	TRIP	AREA SI	AREA SERVED	
			AMPS	POLES	A	В	С	POLES	AMPS			
1	EMERGENCY LIGHT	ING	20	1	888	0	0					
					304	0	0	1	20	EMERGENCY LIC	GHTING	2
3	EMERGENCY LIGHT	ING	20	1	0	1096	0			SLEEPING ROOM LIGHTS (ZETRON)		
	APPARATUS BAY				0	213	0	1	20			4
5	EMERGENCY EXTE	RIOR	20	1	0	0	180					
					0	0	41	1	20	SPARE		6
7	SPARE		20	1	0	0	0					
					0	0	0	1	20	SPARE		8
9	SPACE ONLY		20	1	0	0	0					
					0	0	0	1	20	SPACE ONLY		10
11	SPACE ONLY		20	1	0	0	0					
					0	0	0	1	20	SPACE ONLY		12
			CONNEC	TED LOAD	1192	1309	221	1.3 KVA				
		CONN. LOAD			БОТ							
LUA	D CATEGORY	CONN. LOAD		FACTOR	EST.	LOAD						
Lighting		1.3	1.	25	· ·	1.7						
	TOTAL	1.3				.7						

VOLTS/PHAS 120/208/3/4	SE/WIRE:		PANEL SI 300 A	ZE:	MAIN TYPE 300 A MLO	& SIZE:		CABINET:		MIN SCC: 0	FED FROM: MDP	
CIRCUIT NO.	AREA SEI	RVED	TRIP AMPS	NO. POLES		PHASE LOAD \		NO. POLES	TRIP AMPS	AREA	SERVED	CIF
1,3,5	AIR COMPRESSOR		60	3	A 3837	B 3837	C 3837		7			_
					6766	6766	6766	3	100	GEAR EXTRAC	TOR	
7	VEHICLE BLOCK HE	ATER	20	1	1500 1500	0	0		20			
9	VEHICLE BLOCK HE	ATER	20	1	0	1500	0		20	VEHICLE BLOO		
		ATED			0	1500	0	1	20	VEHICLE BLOO	K HEATER	
11	VEHICLE BLOCK HE	ATER	20	1	0	0	1500		00			
13	VEHICLE BLOCK HE	ATER	20	1	0 1500	0	1500 0	1	20	VEHICLE BLOO	KHEATER	+
					1500	0	0	1	20	VEHICLE BLOO	CK HEATER	
15	VEHICLE BLOCK HE	ATER	20	1	0	1500	0	-				
17	VEHICLE BLOCK HE	ATER	20	1	0	1500 0	0 1500	1	20	VEHICLE BLOO	CK HEATER	_
					0	0	1500	1	20	VEHICLE BLOO	K HEATER	
19	TOOL SHOP RECEP		20	1	360	0	0	_				
21	GENERATOR CHAR	GER	20	1	720 0	0 1000	0	1	20	OFFICE 126 RE	ECEP.	
					0	1500	0	1	20	GENERATOR H	IEATER	
23	FUTURE IR 9,10		20	1	0	0	1200					
25	ZETRON SYSTEM		20	1	0 650	0	1080 0	1	20	RADIO/IT RECE	P	_
20			20		1400	0	0		20	OVERHEAD DO		2
27	OVERHEAD DOOR C	DPERATOR	20	1	0	1400	0					<u>`</u>
29	GENERATOR DOCK		20	1	0	1800	0	1	20	AIR COMPRES	SOR	
29	REMOTE START	ING STATION	20	1	0	0	1800 0		20	SITE LIGHTING	<b>x</b>	
31	SITE LIGHTING		20	1	0	0	0		20		,	
					0	0	0	1	20	SPARE		$\bot$
33	SPARE		20	1	0	0	0	-		00405		
35	SPARE		20	1	0	0	0	1	20	SPARE		
					0	0	0	1	20	SPARE		
37	SPARE		20	1	0	0	0	4				
39	SPARE		20	1	0	0	0	1	20	SPARE		—
					0	0	0	1	20	SPARE		
41	SPARE		20	1	0	0	0	_				
					0	0	0	1	20	SPARE		
			CONNEC	TED LOAD	19733	22303	20683	59.9 KVA				
LOA	D CATEGORY	CONN. LOAD	DEMAND	FACTOR	EST.	LOAD						
Equipment		35.8	1.	00	3	35.8						
Heating		1.5	1.	00		1.5	1					
Motors		1.4		00		1.4	1					
Motors (Larg	•	1.4		25		1.8	4					
-	(0 - 10 KVA)	10.0		.00		10.0	4					
Receptacles	(Over 10 KVA)	9.8	0	.50	· · · ·	4.9	4					

55.4

59.9

TOTAL

		1
FROM:		
)	CIRCUIT NO.	
	2,4,6	
ER	8	
ER	10	
ER	12	
ER	14	
ER	16	
ER	18	
	20	
	22	
	24	
ERATOR	26	
	28	
	30	
	32	
	34	
	36	
	38	
	40	
	42	

VOLTS/PHASE/WIRE: 120/208/3/4			PANEL SIZE: 300 A		MAIN TYPE & SIZE: 300 A MLO			CABINET:		MIN SCC: 14000	FED FROM: MDP	
CIRCUIT NO. AREA SERVE		VED	TRIP AMPS	NO. POLES	PHASE LOAD VA			NO.	TRIP AMPS	AREA SERVED		CIRCUIT NO
1,3,5	SCBA UNIT		60	POLES	A 3837	В 3837	C 3837	POLES	AMPS			
					2102	2102	2102	3 35	35	AIR COMPRESSOR		2,4,6
7,9	CONDENSING UNIT C	-1	40	2	2688	2688	0					
					2506	2506	0	2	40	CONDENSING UNIT C-2		8,10
11,13	CONDENSING UNIT C	-4	25	2	1690	0	1690					
45.47			45		1132	0	1132	2	20	CONDENSING UNIT C-3		12,14
15,17	5,17 OUTDOOR UNIT OU-1		15	2	0	1152 0	0	2	15	SPARE		16,18
19	FURNACE F-1		20	1	1651	0	0		10			,
21	FURNACE F-3	JRNACE F-3		1	1296 0	0 988	0	1	20	FURNACE F-2		20
			20		0	988	0	1	20	FURNACE F-4		22
23 INFRARED HEATER I-1.2		1.2	20	1	0	0	1200 1200	1	20	INFRARED HEAT		24
25	INFRARED HEATER I-5,6		20	1	1200	0	0		20			24
27	MOTORIZED LOUVERS		20	1	1200 0	0 1800	0	1	20	INFRARED HEAT	ER I-7,8	26
					0	1200	0	1	20	CONTROL DAMP	PER C-2,3A,3B	28
29	CONTROL DAMPER C	D-1,4	20	1	0	0	880 1400	1	20	OVERHEAD DOC		30
31	OVERHEAD DOOR OPERATOR		20	1	1400	0	0	_	20			
33	OVERHEAD DOOR OPERATOR		20	1	1400 0	0 1400	0	1	20	OVERHEAD DOC	OR OPERATOR	32
35	OVERHEAD DOOR OPERATOR		20	1	0	1400 0	0 1400	1	20	OVERHEAD DOC	OR OPERATOR	34
35	OVERHEAD DOOR OPERATOR		20		0	0	778	1	15	ERV-1		36
37	EF-1		15	1	600	0	0					
39	EF-2C,2D		15	1	960 0	0 960	0	1	15	EF-2A,2B		38
41	MDF RACK RECEP.		20	1	0	1080 0	0 1000	1	20	RADIO DEMARC	RECEP	40
					0	0	900	1	20	CP-1		42
43	FRIG. (GFI RECEP.)		20	1	1200 1200	0	0	1	20	FRIG. (GFI RECE	P)	44
45	FRIG. (GFI RECEP.)		20	1	0	1200	0		20		••••)	44
47	FIRE ALARM	ALARM		1	0	1080 0	0 1000	1	20	WORK STATION	RECEP.	46
49	SPARE		20	1	0	0	0	1	20	SPARE		48
49			20	1	0	0	0	1	20	SPARE		50
51	SPARE		20	1	0	0	0		00			50
53	SPARE		20	1	0	0	0	1	20	SPARE		52
					0	0	0	1 65.4 KVA	20	SPARE		54
				TED LOAD		24381	18519	05.4 KVA				
LOAD CATEGORY CONN. LOAD		DEMAND FACTOR		EST. LOAD		-						
		17.2	1.00		17.2		-					
Equipment 31.7 Heating 4.9			1.00		31.7 4.9		4					
Motors 7.0			1.00		4.9 7.0		-					
Motors (Largest) 1.4			1.00		1.8		-					
Receptacles (0 - 10 KVA) 3.2			1.00		3.2		1					



