NOTE: THESE CONSTRUCTION DOCUMENTS ARE ISSUED TO SHOW DESIGN INTENT AND ESTABLISH A MATERIAL STANDARD FOR PRICING. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AN INDUSTRY STANDARD OF CARE AND EXERCISE COMPETENT CONSTRUCTION INDUSTRY STANDARD BUILDING TECHNIQUES AND PRACTICES IN THE PRICING AND PRODUCTION OF THIS STRUCTURE.
NECESSARY ITEMS NOT SPECIFIED DIRECTLY OR OTHERWISE LISTED AS "NOTE IN CONTRACT" OR "SUPPLIED BY OWNER/OTHERS" ARE TO BE INCLUDED IN THE CONTRACT SUM FOR A COMPLETE "TURN KEY" JOB. THESE ITEMS SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT UPON DISCOVERY.

OCCUPANCY:	MIXED UNSEPARATED; R-2; B; STORAGE S-1
OCCUPANT LOAD:	82 OCCUPANTS
CONSTRUCTION:	TYPE II-B (NON-COMBUSTIBLE)
ALLOWABLE HEIGHT:	55'-0"
ALLOWABLE BUILDING AREA:	17,500 S.F. (UNADJUSTED)
GROSS FLOOR AREA - GROUND FLOOR:	7,380 S.F.
GROSS FLOOR AREA - UPPER FLOOR:	1,430 S.F.
TOTAL GROSS FLOOR AREA:	8,800 S.F.
ZONING:	SEARCY AR - C4
FIRE SPRINKLER:	FIRE SPRINKLER REQUIRED

Searcy Fire Station #2

Searcy, Arkansas

"I do hereby certify that these plans and specifications have been prepared by me, or under my supervision. I further certify that to the best of my knowledge these plans and specifications are as required by law and in compliance with the Arkansas Fire Prevention Code for the State of Arkansas."

Barry Hoffmann, President
Hoffmann Architectural Inc.
Searcy, Arkansas

INDEX OF DRAWINGS

Sheet Number	Sheet Name
T1.0	TITLE SHEET
C1	SITE PLAN
C2	GRADING PLAN
C3	LANDSCAPE PLAN
C4	EROSION CONTROL PLAN
A1.1	FIRST FLOOR PLAN
A1.2	UPPER LEVEL PLAN
A1.3	LOWER LEVEL REFLECTED CEILING PLAN
A1.4	UPPER LEVEL REFLECTED CEILING PLAN
A1.5	ROOF PLAN
A2.1	SOUTH & EAST ELEVATIONS
A2.2	NORTH & WEST ELEVATIONS
A3.1	BUILDING SECTIONS
A3.2	BUILDING SECTIONS
A4.1	EXTERIOR 3D VIEWS
A7.1	WALL SECTIONS
A8.1	SCHEDULES
A8.2	MILLWORK
S0.0	STRUCTURAL NOTES
S1.0	FOUNDATION PLAN
S1.1	FOUNDATION DETAILS
S2.0	2ND FLOOR FRAMING PLAN
S2.1	STRUCTURAL DETAILS
S3.0	ROOF FRAMING PLAN
MP0.1	MECH & PLUMB LEGENDS
MP0.2	MECH & PLUMB NOTES
MP0.3	MECH & PLUMB NOTES
P0.1	PLUMBING SCHEDULES
P1.1	LOWER LEVEL PLUMBING PLAN
P1.2	UPPER LEVEL PLUMBING PLAN
P2.1	RISER DIAGRAMS
P3.1	PLUMBING DETAILS
P3.2	PLUMBING DETAILS
M0.1	MECHANICAL SCHEDULES
M1.1	LOWER LEVEL HVAC PLAN
M1.2	UPPER LEVEL HVAC PLAN
M2.1	MECHANICAL DETAILS
M2.2	MECHANICAL DETAILS
E1.1	ELECTRICAL LEGENDS
E1.2	ELECTRICAL NOTES
E2.1	LOWER LEVEL POWER PLAN
E2.2	UPPER LEVEL POWER PLAN
E3.1	LOWER LEVEL LIGHTING PLAN
E3.2	UPPER LEVEL LIGHTING PLAN
E4.1	ELECTRICAL RISER DIAGRAM
E5.1	ELECTRICAL RISER DIAGRAM
E5.2	ELECTRICAL PANEL SCHEDULES

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE: **10/28/16**

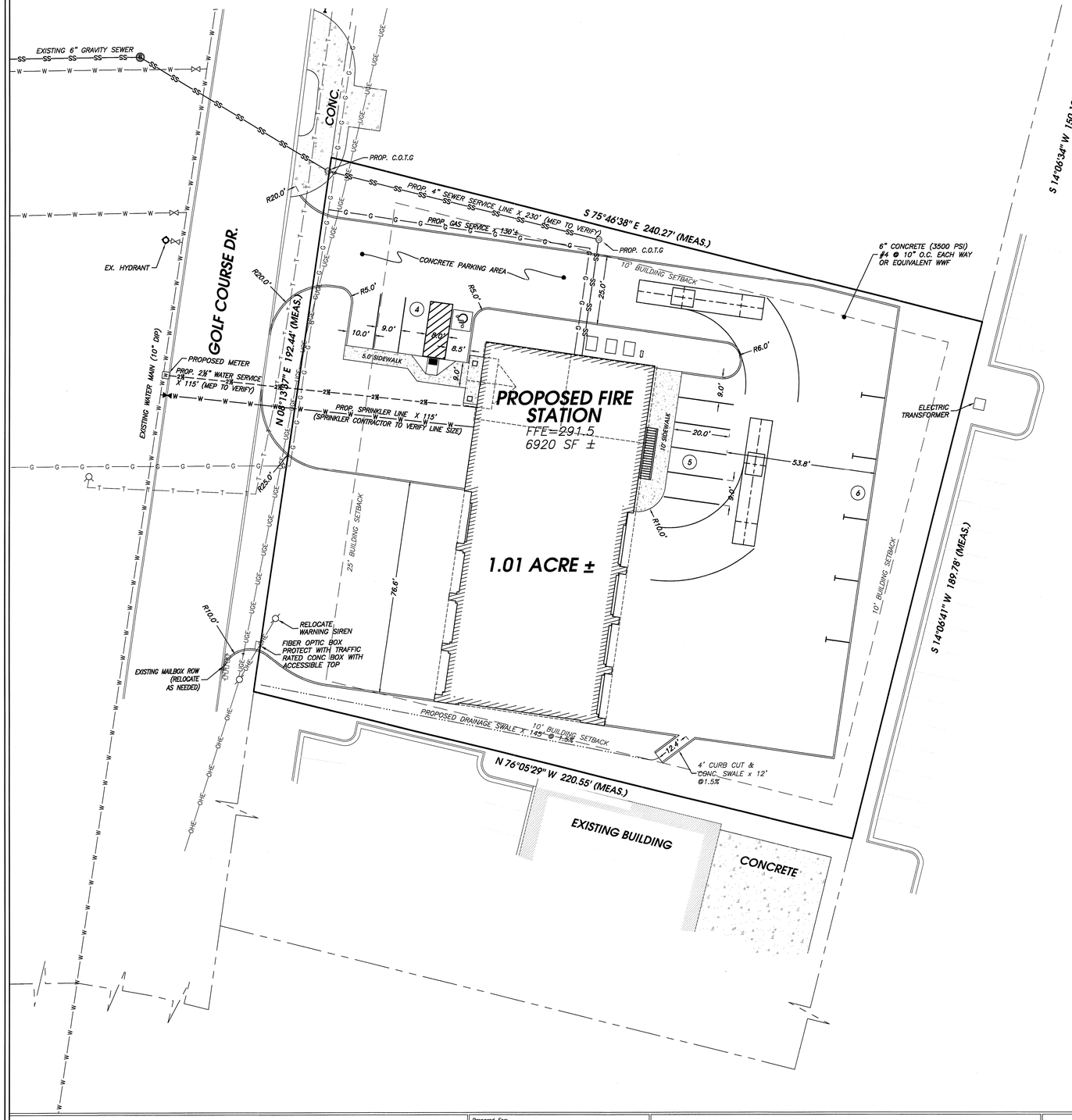
REVISIONS:

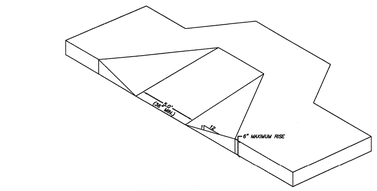
CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

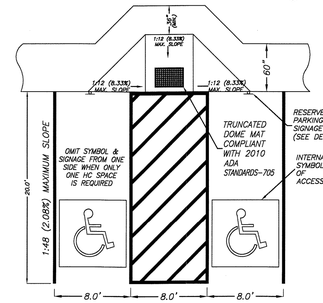
DRAWN BY: **BWH**

TITLE SHEET

SHEET: **T1.0**

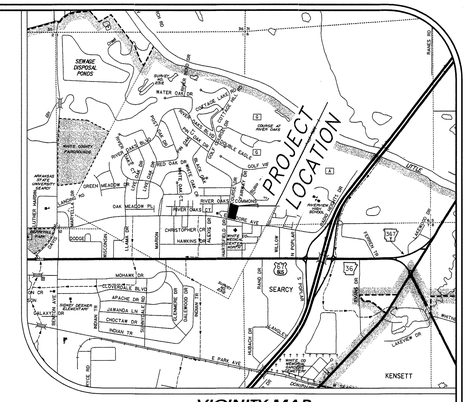




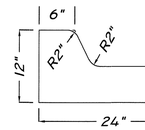


1:48 (2.08%) MAXIMUM CROSS SLOPE

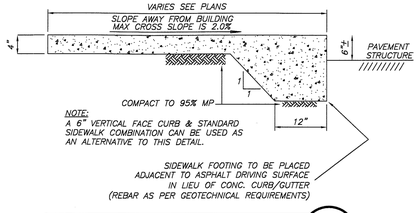
DETAIL - HANDICAP RAMP
SCALE - NTS
1



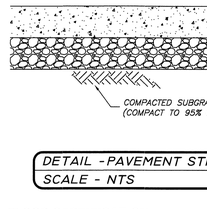
VICINITY MAP
SCALE: 1"=2000'



DETAIL - CONC. CURB & GUTTER
SCALE - 1" = 1'
3



DETAIL - TURN DOWN SIDEWALK
SCALE - NTS
2



DETAIL - PAVEMENT STRUCTURE
SCALE - NTS
4

LEGEND

EXISTING POWERPOLE	EXISTING TELEPHONE LINES
EXISTING SEWER MANHOLE	EXISTING GAS SERVICE
TELEPHONE PEDESTAL	EXISTING SANITARY SEWER
PROPOSED COTG	EXISTING WATERLINE
EXISTING WATER METER	EXISTING OVERHEAD ELECTRIC
EXISTING GUY WIRE	FIBER OPTICS LINES
1" WTR. SERVICE	STREET RIGHT-OF-WAY
PROPOSED SIDEWALK	PROPPOSED CONCRETE PAVEMENT
EXISTING CONCRETE AREA	EXISTING WATER VALVE
PROPOSED BUILDING	PROPOSED 4" SEWER SERVICE
	EXISTING FIRE HYDRANT

UTILITY NOTES:

UN1 *UTILITIES SHOWN ARE NOTED BY VISIBLE OBSERVATION ONLY. UNDERGROUND UTILITIES ARE TAKEN FROM UTILITY MAPS. EXACT LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE, NO EXCAVATION HAS TAKEN PLACE AS OF THIS DATE TO DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS SURVEY.*

FOR UNDERGROUND UTILITY LOCATIONS
CALL: THE ARKANSAS ONE-CALL SYSTEM
GIVE 48 HOURS NOTICE BEFORE CONSTRUCTION BEGINS

CALL BEFORE YOU DIG 811 ARKANSAS ONE CALL SYSTEM

NOTE:
UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE AND LOCATIONS OF WHICH ARE UNKNOWN. THE CONTRACTOR MUST VERIFY THE EXACT LOCATIONS OF UTILITIES WITH THE UTILITY COMPANIES PRIOR TO CONSTRUCTION.

FLOOD CERTIFICATION:

BASED UPON REVIEW OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), FLOOD INSURANCE RATE MAP (FIRM), COMMUNITY-PANEL NUMBER 05145C 0435 E, EFFECTIVE DATE MAY 2, 2012, THE PROPERTY DEPICTED ON THIS PLAT DOES NOT APPEAR TO BE LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.

GENERAL NOTES:

1.) *SEE SURVEY, GRADING PLAN, & ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.*
2.) *BOUNDARY BASED ON SURVEY FIELD WORK BY QUATTLEBAUM SURVEYING BY DIRECTION OF PS #1737 VIA WHITLOW ENGINEERING SERVICES, INC.*
3.) *THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SERVICE CONNECTIONS WITH THE CITY, ENTERGY, CENTERPOINT GAS, OR OTHER GOVERNING AGENCY AS APPROPRIATE.*

SEARCY WATER & SEWER	(501) 268-2481, TIM CLEVELAND
ENTERGY ELECTRIC	(501) 279-3118, MILLARD COOPER
CENTERPOINT GAS	(501) 278-5550, CHRIS MATHEWS
CIVIL ENGINEER (WES)	(501) 279-9200, ADAM WHITLOW
SURVEYOR (QUATTLEBAUM SURVEYING)	(501) 268-2471, ALAN QUATTLEBAUM
SEARCY CITY ENGINEER	(501) 268-2483, MARK LANE
SEARCY PERMIT OFFICE	(501) 279-1085
SEARCY FIRE DEPT. INSPECTOR	(501) 279-1075

4.) *CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING COMPACTION TESTS TO THE ENGINEER, OWNER, & CITY WHERE APPLICABLE PRIOR TO PAVING*
5.) *SEE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.*
6.) *CONTRACTOR SHALL COORDINATE WATER & SEWER CONNECTIONS WITH OWNER & CITY.*
7.) *ALL UTILITIES TO BE LOCATED PRIOR TO CONSTRUCTION (ONE CALL, CITY, ETC.).*
8.) *SIZE AND LOCATION OF WATER AND SEWER SERVICE LINES TO BE VERIFIED BY MEP.*

CERTIFICATE OF AUTHORIZATION — WHITLOW ENGINEERING SERVICES, INC. — No. 1342 — ARKANSAS - ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 11431 — ADAM W. WHITLOW

CERTIFICATE OF ENGINEERING ACCURACY:

I, ADAM W. WHITLOW, HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS A PLAN MADE BY ME, OR UNDER MY SUPERVISION.

10/28/16
DATE

ADAM W. WHITLOW, REGISTERED PROFESSIONAL ENGINEER NO. 11431 ARKANSAS

WHITLOW ENGINEERING SERVICES, INC.
301 EAST LINCOLN AVE #2
SEARCY, ARKANSAS 72143
(501) 279-9200 • (501) 279-9205 FAX

Prepared For:
SEARCY FIRE DEPT.
SEARCY, ARKANSAS 72143

SITE PLAN
SEARCY FIRE DEPT.
Part of the SE¼, Section 1, T-7-N, R-7-W
City of Searcy, White County, Arkansas

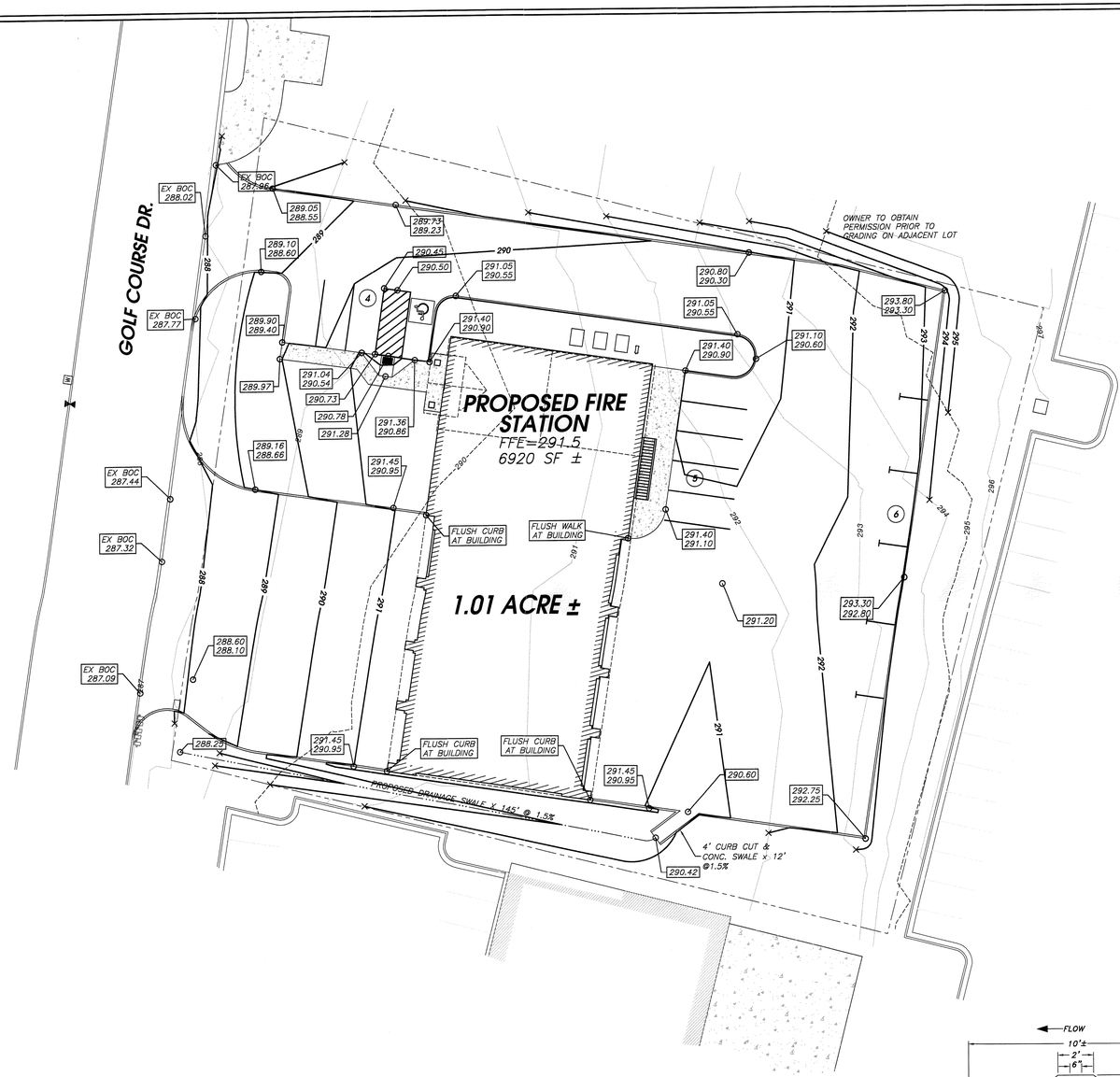
NW¼ NE¼ SW¼ SE¼

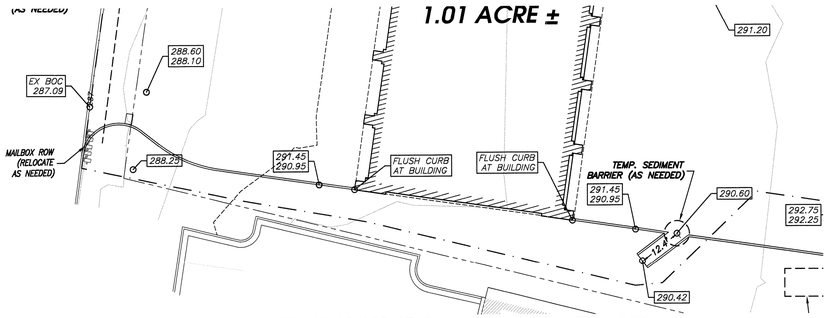
N

0' 20' 40' 60'
SCALE: 1" = 20'

No.	Revisions	Date	By

Date: 10/28/16
Project No.: 15-039
File: Base Drawing-SITE AND GRADING PLAN.dwg
Drawn By: BJW
Sheet: 1 of 4

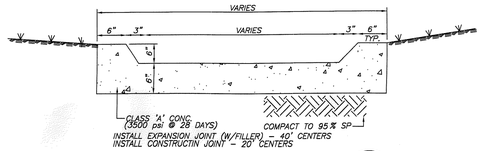




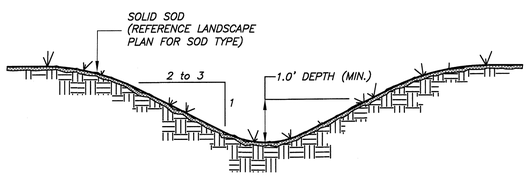
ALTERNATE GRADING IF DETENTION IS REQUIRED

GENERAL NOTES (GRADING):

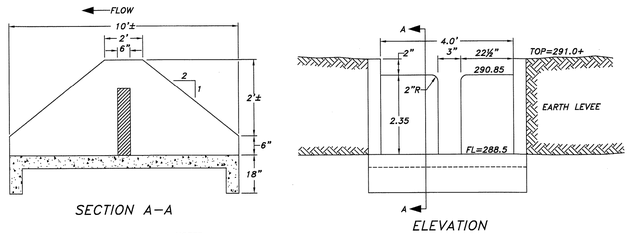
1.) ALL GRADING, FILL, & RELATED EARTHWORK SHALL BE PERFORMED PER GEOTECHNICAL ENGINEER'S RECOMMENDATION.
2.) ALL CONSTRUCTION AND MATERIALS TO BE VERIFIED BY A GEOTECHNICAL CONSULTANT PRIOR TO CONSTRUCTION.
3.) CONTRACTOR TO NOTIFY ENGINEER IF SIGNIFICANT CHANGES ARE MADE TO GRADING PLAN.
4.) SEE SITE PLAN FOR ADDITIONAL INFORMATION.
5.) ALL MATERIALS TO BE COMPACTED TO 95% STANDARD PROCTOR, INSTALLED IN 6"-8" LIFTS, OR AS DIRECTED BY GEOTECHNICAL CONSULTANT.
6.) CONTRACTOR SHALL PROVIDE TEMPORARY EROSION CONTROL MEASURES UNTIL CONSTRUCTION.
7.) ALL UTILITIES TO BE LOCATED PRIOR TO CONSTRUCTION (ONE CALL, CITY, ETC.).
8.) STRAW BALE & SILT FENCE SEDIMENT BARRIERS TO BE USED ON SLOPES AND AT DISCHARGE STRUCTURE TO PREVENT SEDIMENT FROM LEAVING SITE.
9.) ALL SITE IMPROVEMENTS & AREAS ADJACENT TO PROPERTY ARE EXPECTED TO BE NEW CONSTRUCTION OR REPAIRED TO "AS NEW" CONDITION.
10.) SEE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.



DETAIL - CURB CUT & CONC. SWALE
SCALE - NTS
5



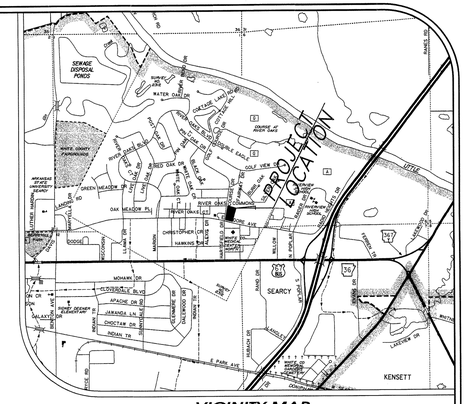
DETAIL - TYPICAL SOD SWALE
SCALE - NTS
6



SECTION A-A
ELEVATION

NOTES:
1.) #4 BARS @ 12" O.C. EACH WAY OR WWF.
2.) CONCRETE SHALL BE 3500 PSI @ 28 DAYS.
3.) SPILLWAY EDGES SHALL HAVE A SMOOTH RADIUS FOR BETTER FLOW CHARACTERISTICS.

DETAIL - DISCHARGE STURCTURE
SCALE - NTS
7



VICINITY MAP
SCALE: 1"=2000'

GRADING LEGEND

----------	EXISTING INDEX CONTOUR (5' INTERVAL)
----------	EXISTING CONTOUR (1' INTERVAL)
————	PROPOSED CONTOUR (1' INTERVAL)
——·——·——	DRAINAGE SWALE
——×——	PROPOSED CONTOUR TIE INTO EX. TOPOGRAPHY
234.34 / 233.84	TOP OF CURB/WALK ELEV. GUTTERLINE/ASPHALT ELEV.

UTILITY NOTES:

UN1 UTILITIES SHOWN ARE NOTED BY VISIBLE OBSERVATION ONLY. UNDERGROUND UTILITIES ARE TAKEN FROM UTILITY MAPS. EXACT LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. NO EXCAVATION HAS TAKEN PLACE AS OF THIS DATE TO DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS SURVEY.

FOR UNDERGROUND UTILITY LOCATIONS
CALL: THE ARKANSAS ONE-CALL SYSTEM
GIVE 48 HOURS NOTICE BEFORE CONSTRUCTION BEGINS

NOTE:
UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE AND LOCATIONS OF WHICH ARE UNKNOWN. THE CONTRACTOR MUST VERIFY THE EXACT LOCATIONS OF UTILITIES WITH THE UTILITY COMPANIES PRIOR TO CONSTRUCTION.

ARKANSAS ONE CALL
811
Know what's below
Call before you dig.
CALL BEFORE YOU DIG ARKANSAS ONE CALL SYSTEM

CERTIFICATE OF AUTHORIZATION — WHITLOW ENGINEERING SERVICES, INC. — No. 1342 — ARKANSAS ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 11431 — ADAM W. WHITLOW

CERTIFICATE OF ENGINEERING ACCURACY:
I, ADAM W. WHITLOW, HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS A PLAN MADE BY ME, OR UNDER MY SUPERVISION.

10/28/16
DATE

ADAM W. WHITLOW, REGISTERED PROFESSIONAL ENGINEER NO. 11431 ARKANSAS

WHITLOW ENGINEERING SERVICES, INC.
301 EAST LINCOLN AVE #2
SEARCY, ARKANSAS 72143
(501) 279-9200 • (501) 279-9205 FAX

Prepared For:
SEARCY FIRE DEPT.
SEARCY, ARKANSAS 72143

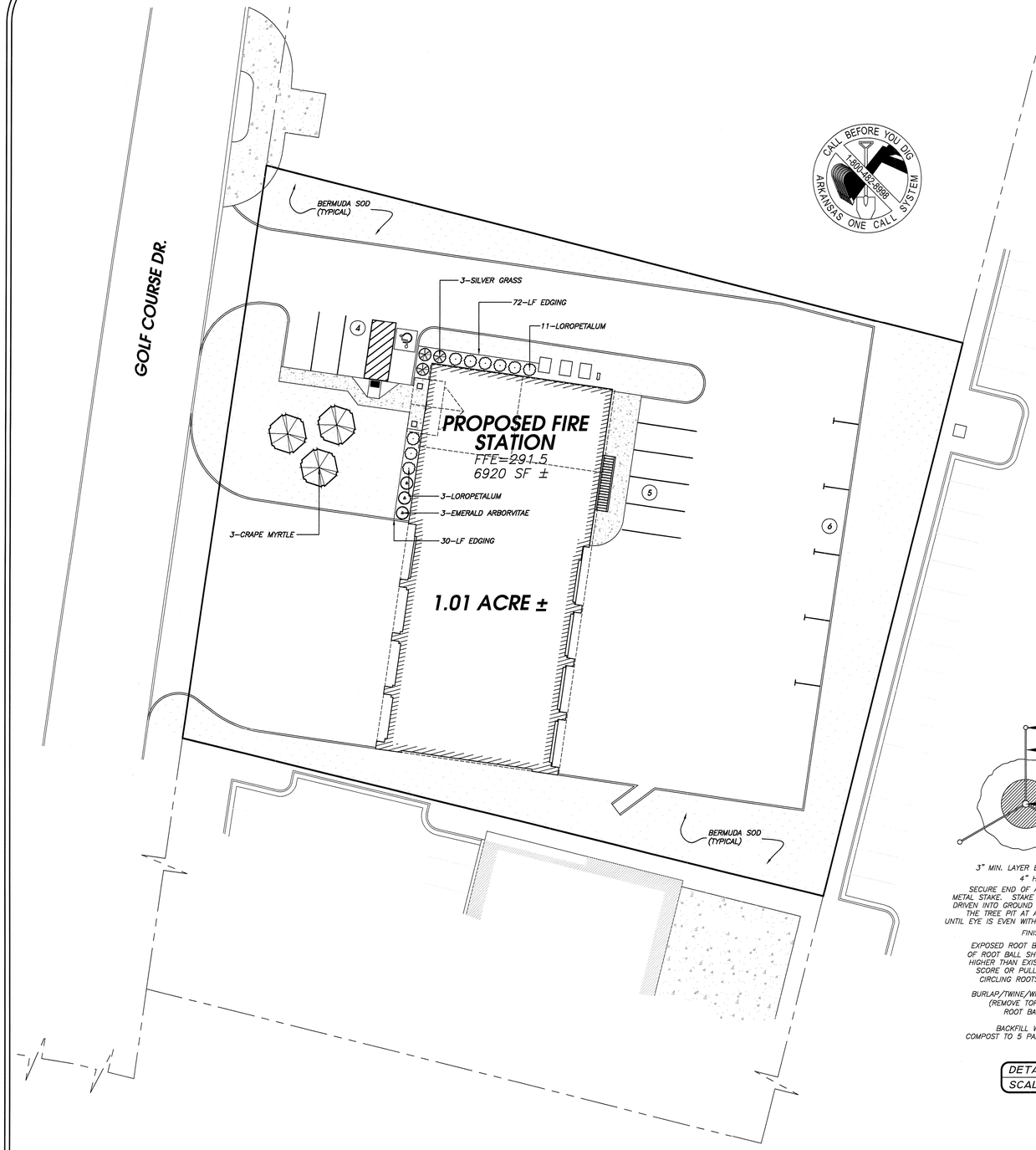
GRADING & DRAINAGE PLAN
SEARCY FIRE STATION
Part of the SE¼, Section 1, T-7-N, R-7-W
City of Searcy, White County, Arkansas

NW¼ NE¼ SW¼ SE¼

0' 20' 40' 60'
SCALE: 1" = 20'

No.	Revisions	Date	By

Date: 10/28/16
Project No. 15-039
File: Base Drawing-SITE AND GRADING PLAN.dwg
Drawn By: jns
Sheet: 2 of 4



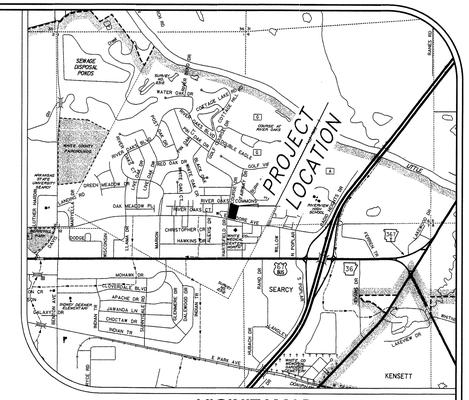
CALL BEFORE YOU DIG
1-800-482-8998
ARKANSAS ONE CALL SYSTEM

PLANT MATERIALS LIST:

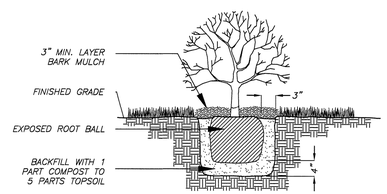
COMMON NAME	SCIENTIFIC NAME	QUAN.	SIZE	REMARKS
	TREES			
Crape Myrtle	Lagerstromeia indica 'Natchez'	3	2" cal	Full, Multi-Trunk, 3-Cane Minimum
	SHRUBS			
Silver Grass	Miscanthus sinensis 'Variegatus'	3	3 gal	Full
Emerald Arborvitae	Arborvitae	3	6' ht.	Speciman, Full, Branched to ground
Loropetalum	Loropetalum chinensis	9	3 gal	Full
	MISC. ITEMS			
Edging		70	l.f.	
Mulch		6	c.y.	3" depth
Topsoil for beds		12	c.y.	Approx: field verify - 6" depth avg.
Bermuda Sod		2,000	s.y.	

WARRANTY:

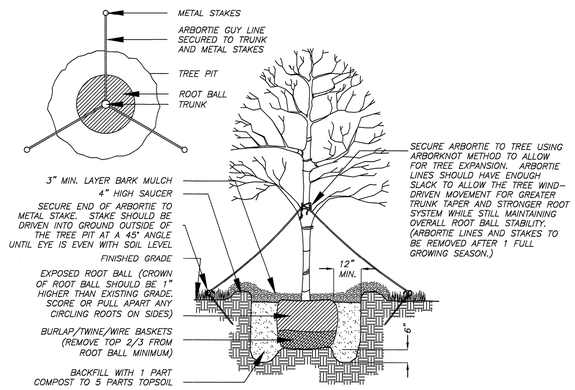
ALL WORK IS WARRANTED FOR (1) FULL YEAR AFTER INITIAL ACCEPTANCE. THE LANDSCAPE CONTRACTOR IS OBLIGATED TO CORRECT ANY WORK FOUND TO BE DEFECTIVE OR NONCONFORMING. UPON NOTICE, REMOVE DEAD MATERIALS AND ALL MATERIALS NOT IN VIGOROUS, THRIVING CONDITION, AS SOON AS WEATHER PERMITS AND ON NOTIFICATION BY THE LANDSCAPE ARCHITECT OR OWNER. PLANTS, INCLUDING TREES, WHICH HAVE PARTIALLY DIED SO THAT SHAPE, SIZE OR SYMMETRY HAS BEEN DAMAGED, SHALL BE CONSIDERED FOR REPLACEMENT. IN SUCH CASES, THE OPINION OF THE LANDSCAPE ARCHITECT WILL BE FINAL. ANNUAL PLANTS WILL BE GUARANTEED FOR A PERIOD COINCIDING WITH THEIR NORMAL SEASON OF GROWTH. PLANTS USED FOR REPLACEMENT SHALL BE OF THE SAME KIND AND SIZE AS THOSE ORIGINALLY PLANTED, AND SHALL BE PLANTED AS ORIGINALLY SPECIFIED. ALL WORK, INCLUDING MATERIALS, LABOR, AND EQUIPMENT USED IN REPLACEMENT, WILL BE AT NO COST TO THE OWNER. REPLACEMENT PLANTS SHALL CARRY A ONE (1) YEAR WARRANTY. ANY DAMAGE, INCLUDING RUTS IN LAWN OR BED AREAS, INCURRED IN MAKING REPLACEMENTS SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER OR LANDSCAPE ARCHITECT BY THE LANDSCAPE CONTRACTOR.



VICINITY MAP
SCALE: 1"=2000'



DETAIL - SHRUB PLANTING
SCALE - NTS
8



DETAIL - TREE PLANTING
SCALE - NTS
9

GENERAL LANDSCAPE NOTES:

1. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL PLANT QUANTITIES.
2. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR CALCULATION OF ALL GRASS AND MULCH AREAS. VERIFY LOCATIONS WITH OWNER.
3. ADJUSTMENTS IN ACTUAL LOCATION OF PLANT MATERIAL MAY BE NECESSARY DUE TO EXISTING FIELD ITEMS (AIR CONDITIONERS, TRANSFORMERS, ETC.).
4. FULL BED PREPARATION TYPICAL. REFERENCE PLANTING DETAILS.
5. LANDSCAPE CONTRACTOR TO PROVIDE A UNIT COST (INCLUDING INSTALLATION) FOR ALL ITEMS.
6. WHEN THE SAME SPECIES OF TREES ARE PAIRED OR GROUPED IN 3 OR MORE, THEY SHOULD BE MATCHED IN SIZE, SHAPE, GROWTH CHARACTERISTICS, ETC.
7. PLANT MATERIAL AVAILABILITY SHALL BE CONFIRMED BY LANDSCAPE CONTRACTOR PRIOR TO BIDDING. SHOULD SPECIFIED MATERIAL NOT BE AVAILABLE, THE OWNER AND LANDSCAPE ARCHITECT SHALL BE NOTIFIED PRIOR TO BID DATE.
8. VERIFY LOCATION OF ALL UTILITY LINES PRIOR TO INSTALLATION. FIELD ADJUST FOR GENERAL INTENT IF CONFLICT EXISTS.
9. THE LANDSCAPE CONTRACTOR SHALL NOT ELIMINATE, SUBSTITUTE, AND/OR DOWNSIZE PLANT MATERIAL WITHOUT PRIOR APPROVAL OF THE OWNER AND LANDSCAPE ARCHITECT. MINIMUM STANDARDS AND REQUIREMENTS OF THE CITY OF SEARCY MUST BE MAINTAINED.
10. ALL PLANTING BEDS AND TREES, UNLESS OTHERWISE NOTED ON THE PLAN, TO RECEIVE 3 INCHES OF HARDWOOD MULCH TYPICAL.
11. ALL PLANT MATERIALS SHALL BE MAINTAINED BY OWNER IN A HEALTHY AND GROWING CONDITION, AND BE REPLACED WITH PLANT MATERIAL OF SIMILAR VARIETY AND SIZE IF DAMAGED, DESTROYED, OR REMOVED (SEE WARRANTY INFORMATION).
12. LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER, WEEDS, AND OTHER MATERIAL OR PLANTS NOT A PART OF THE LANDSCAPING.
13. ALL LANDSCAPE AREAS SHALL BE CONSTRUCTED, INSTALLED, AND MAINTAINED SO AS NOT TO CONSTRUCT VIEW OF MOTORISTS BETWEEN THE STREET AND THE ACCESS DRIVES. VISIBILITY TRIANGLES SHALL ALWAYS REMAIN UNOBSTRUCTED.
14. ALL PERMEABLE SURFACES NOT OCCUPIED BY TREES, SHRUBS, PLANTING BEDS, EXISTING GRASS, SIGNS, AND OTHER PERMITTED ITEMS OR FIXTURES SHALL BE LAWN AREAS. THESE LAWN AREAS, UNLESS SPECIFIED OTHERWISE, SHALL BE BERMUDA SOD.
15. PLANT MATERIAL SHALL BE HEALTHY AND VIGOROUS, FULL BRANCHED ON ALL SIDES, WELL SHAPED SYMMETRICAL AND SHALL BE FREE OF DEFECTS, DECAY, SUN-SCALD INJURIES, ABRASIONS OF THE BARK AND LIMBS, DISEASE, INSECT EGGS AND LARVA.
16. THE OWNER OR LANDSCAPE ARCHITECT HAS THE RIGHT TO INSPECT ALL MATERIALS PRIOR TO AND AFTER DELIVERY TO THE SITE AS WELL AS AFTER INSTALLATION AND SHALL RESERVE THE RIGHT TO ACCEPT OR REJECT SAID MATERIALS AT ANY TIME.
17. CONTRACTOR TO INSTALL AN UNDERGROUND POP-UP TYPE IRRIGATION SYSTEM. IRRIGATION SYSTEM SHALL WATER ALL LANDSCAPE PLANTING AND LAWN AREAS. ADJUSTMENTS TO THE SYSTEM SHALL LIMIT OVERSPRAY ONTO ADJACENT ROADWAYS AND CONSERVE WATER TO THE GREATEST EXTENT POSSIBLE. IRRIGATION CONTRACTOR TO COORDINATE WITH CIVIL ENGINEER AND SITE CONTRACTOR FOR LOCATION OF SLEEVING FOR IRRIGATION SYSTEM.
18. TOPSOIL SHALL BE FERTILE NATURAL SURFACE SOIL, UNIFORM IN COMPOSITION, SIMILAR TO SITE TOPSOIL IF APPROVED, FREE OF STONES LUMPS WEEDS, AND ROOTS. MINIMUM 20 PERCENT ORGANIC MATTER, 50 TO 50 PERCENT SAND, 15-20 PERCENT CLAY.
19. THERE SHALL BE A 3 INCH MINIMUM LAYER OF GOOD TOPSOIL IN ALL GRASS AREAS. GRADE AREAS AROUND SIDEWALKS AND CURBS 1 INCH BELOW TOP OF CONCRETE TO ALLOW FOR SOD THICKNESS.
20. TOPSOIL IN PLANTING BEDS TO BE MOUNDED AND GRADED IN A WAY TO ALLOW POSITIVE DRAINAGE AWAY FROM BUILDING AND TO DETER ANY PONDING.
21. REFERENCE CIVIL ENGINEER PLANS FOR GRADING AND DRAINAGE.

CERTIFICATE OF AUTHORIZATION
WHITLOW ENGINEERING SERVICES, INC.
No. 1342
ARKANSAS ENGINEER

LICENSED LANDSCAPE ARCHITECT
RICHARD S. STAFFORD
License Number 5106
STATE OF ARKANSAS

CERTIFICATE OF ACCURACY:
I, RICHARD S. STAFFORD, HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS A PLAN MADE BY ME, OR UNDER MY SUPERVISION.

10/28/16
DATE

Richard Stafford
RICHARD S. STAFFORD, ASLA
LICENSED LANDSCAPE ARCHITECT
ARKANSAS LICENSE NO. 5106

WHITLOW ENGINEERING SERVICES, INC.
301 EAST LINCOLN AVE #2
SEARCY, ARKANSAS 72143
(501) 279-9200 • (501) 279-9205 FAX

Prepared For:
SEARCY FIRE DEPT.
SEARCY, ARKANSAS 72143

LANDSCAPE PLAN
SEARCY FIRE DEPT.
Part of the SE¼, Section 1, T-7-N, R-7-W
City of Searcy, White County, Arkansas

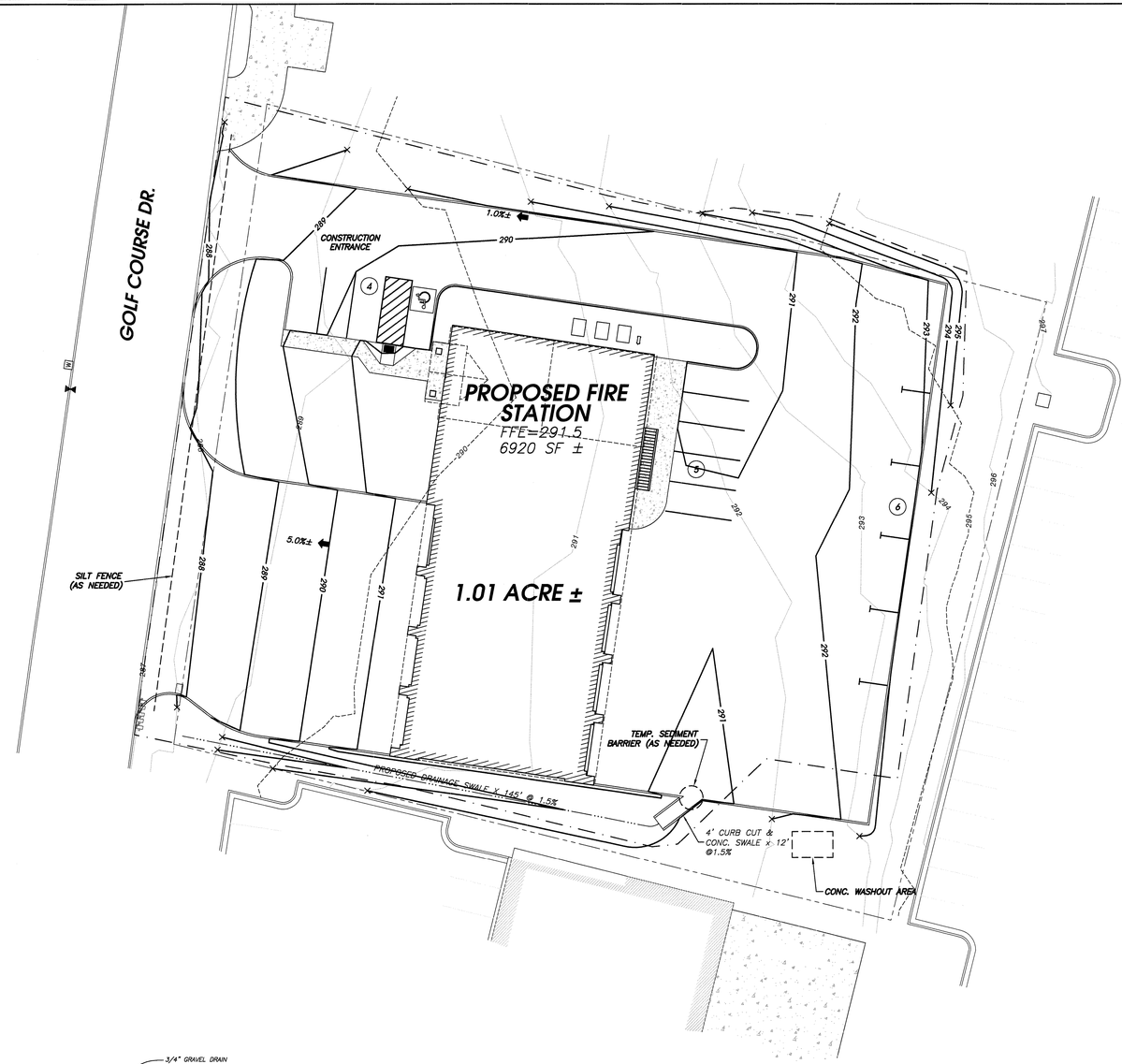
NW¼ NE¼ SW¼ SE¼

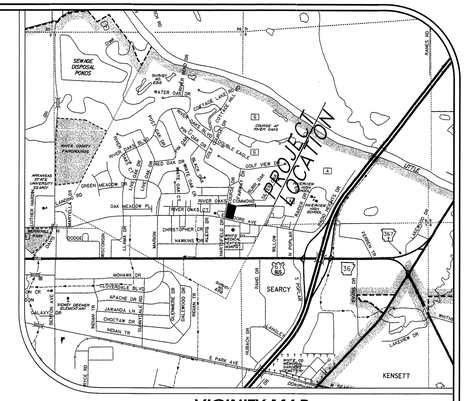
N

0' 20' 40' 60'
SCALE: 1" = 20'

No.	Revisions	Date	By

Date: 10/28/16
Project No. 15-039
File: Base Drawing-SITE AND GRADING PLAN.dwg
Drawn By: RSS
Sheet: 3 of 4





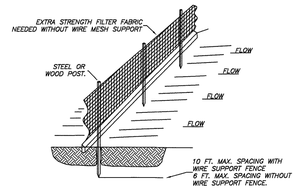
VICINITY MAP
SCALE: 1"=2000'

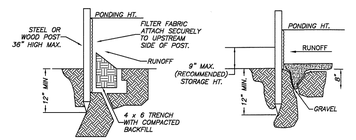
GENERAL NOTES:

1.) SEDIMENT BARRIERS SHALL BE CONSTRUCTED AT EACH INLET UNTIL CONSTRUCTION OF GRADING IS COMPLETED AND TOP SOIL IS STABILIZED.
2.) A SILT FENCE AND STRAW BALE DIKE SHALL BE PLACED AT POTENTIAL LOCATIONS OF HEAVY EROSION.
3.) TEMPORARY STRAW BALE DIKES ARE TO BE CONSTRUCTED NOT TO POND WATER ON ADJACENT PROPERTY.
4.) ALL TEMPORARY EROSION CONTROLS SHALL BE MAINTAINED UNTIL ALL CONSTRUCTION IS COMPLETE & PERMANENT GROUND COVER HAS BEEN ESTABLISHED.
5.) ON OF THE FOLLOWING GROUND COVER METHODS SHALL BE USED AT AREAS OF CLEARING
OTHER THAN FUTURE PAVEMENT SURFACES.
STRAW OR HAY–LOOSE 2.0 TONS/ACRE
STRAW OR HAY–TIED, ANCHORED, OR TACKED 1.5 TONS/ACRE
6.) SOIL EXPOSED FOR MORE THAN 21 DAYS WITH NO CONSTRUCTION ACTIVITY SHALL BE SEEDED, REVEGITATED, OR STABILIZED BY OTHER ACCEPTABLE TEMPORARY MEANS WITHIN 14 DAYS. SITE SHALL ALSO BE PERMANENTLY STABILIZED WITHIN 14 DAYS OF THE END OF CONSTRUCTION.
7.) CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING ON FLOW OF MUD INTO PUBLIC RIGHT–OF–WAY.
8.) ADDITIONAL EROSION CONTROL MEASURES WILL BE EMPLOYED WHERE NECESSARY BY SITE CONDITIONS.
9.) CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES & PROVIDE RAIN FALL MONITORING & WEEKLY INSPECTION REPORTS IN ACCORDANCE WITH THE NPDES PERMIT REQUIREMENTS.
10.) CONTRACTOR SHALL USE "BEST MANAGEMENT PRACTICES" (BMP'S) SPECIFIC TO THIS SITE WHEN IMPLEMENTING & MAINTAINING SEDIMENT & RUN–OFF CONTROLS.
11.) UNDER NO CIRCUMSTANCES SHALL EROSION CONTROL MEASURES BE ALLOWED TO BACKUP WATER ONTO STATE HIGHWAYS OR CITY STREETS.
12.) CONTRACTOR SHALL CONSULT WITH ENGINEER TO AMEND THIS PLAN AS SPECIFIC USES ARE DETERMINED FOR THIS SITE. AS THE PLAN IS AMENDED, IT SHALL BECOME A PERMANENT PART OF THE SWPPP.
13.) PERMANENT STABILIZATION MEASURES SHALL BE ASPHALT, SOD, OR LANDSCAPING AS SHOWN.
14.) CONTRACTOR TO PLACE PORTABLE TOILETS WHERE NEEDED ON THE SITE.

LEGEND

- LIMITS OF DISTURBED AREA (0.95 +/– ACRES TOTAL)
- DRAINAGE SWALE
- EROSION BARRIER
- EXISTING INDEX CONTOUR (5' INTERVAL)
- EXISTING INTERMEDIATE CONTOUR (1' INTERVAL)
- PROPOSED CONTOUR (1' INTERVAL)
- 2.3% APPROXIMATE LAND SLOPE & FLOW DIRECTION
- INLET/FLUME PROTECTION (AFTER INLETS ARE INSTALLED)





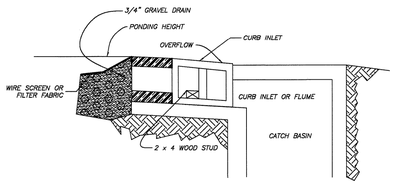
STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

ALTERNATE DETAIL
TRENCH WITH GRAVEL

NOTE:
1.) INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2.) REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF–SITE AND CAN BE PERMANENTLY STABILIZED.
3.) SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

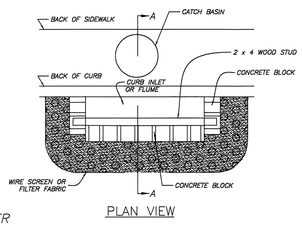
SILT FENCE

DETAIL - SILT FENCE
SCALE - NTS
8



SECTION A – A

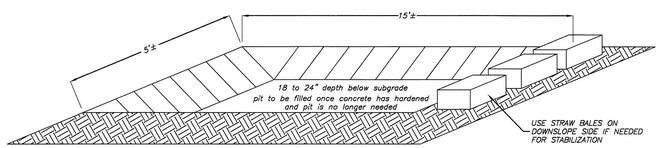
NOTES:
1.) USE BLOCK AND GRAVEL TYPE SEDIMENT BARRIER WHEN CURB INLET IS LOCATED IN GENTLY SLOPING STREET SEGMENT, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2.) BARRIER SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.
3.) INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.



PLAN VIEW

CURB INLET SEDIMENT BARRIER

DETAIL - INLET/FLUME SEDIMENT BARRIER
SCALE - NTS
9



CONCRETE WASHOUT AREA

DETAIL - CONCRETE WASHOUT AREA
SCALE - NTS
7

CERTIFICATE OF AUTHORIZATION
WHITLOW ENGINEERING SERVICES, INC.
No. 1342
ARKANSAS ENGINEER NOW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11431
ADAM W. WHITLOW

CERTIFICATE OF ENGINEERING ACCURACY:
I, ADAM W. WHITLOW, HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS A PLAN MADE BY ME, OR UNDER MY SUPERVISION.

10/28/16
DATE

ADAM W. WHITLOW, REGISTERED PROFESSIONAL ENGINEER NO. 11431 ARKANSAS

WHITLOW ENGINEERING SERVICES, INC.
301 EAST LINCOLN AVE #2
SEARCY, ARKANSAS 72143
(501) 279-9200 • (501) 279-9205 FAX

Prepared For:
SEARCY FIRE DEPT.
SEARCY, ARKANSAS 72143

EROSION CONTROL
SEARCY FIRE STATION
Part of the SE¼, Section 1, T-7-N, R-7-W
City of Searcy, White County, Arkansas

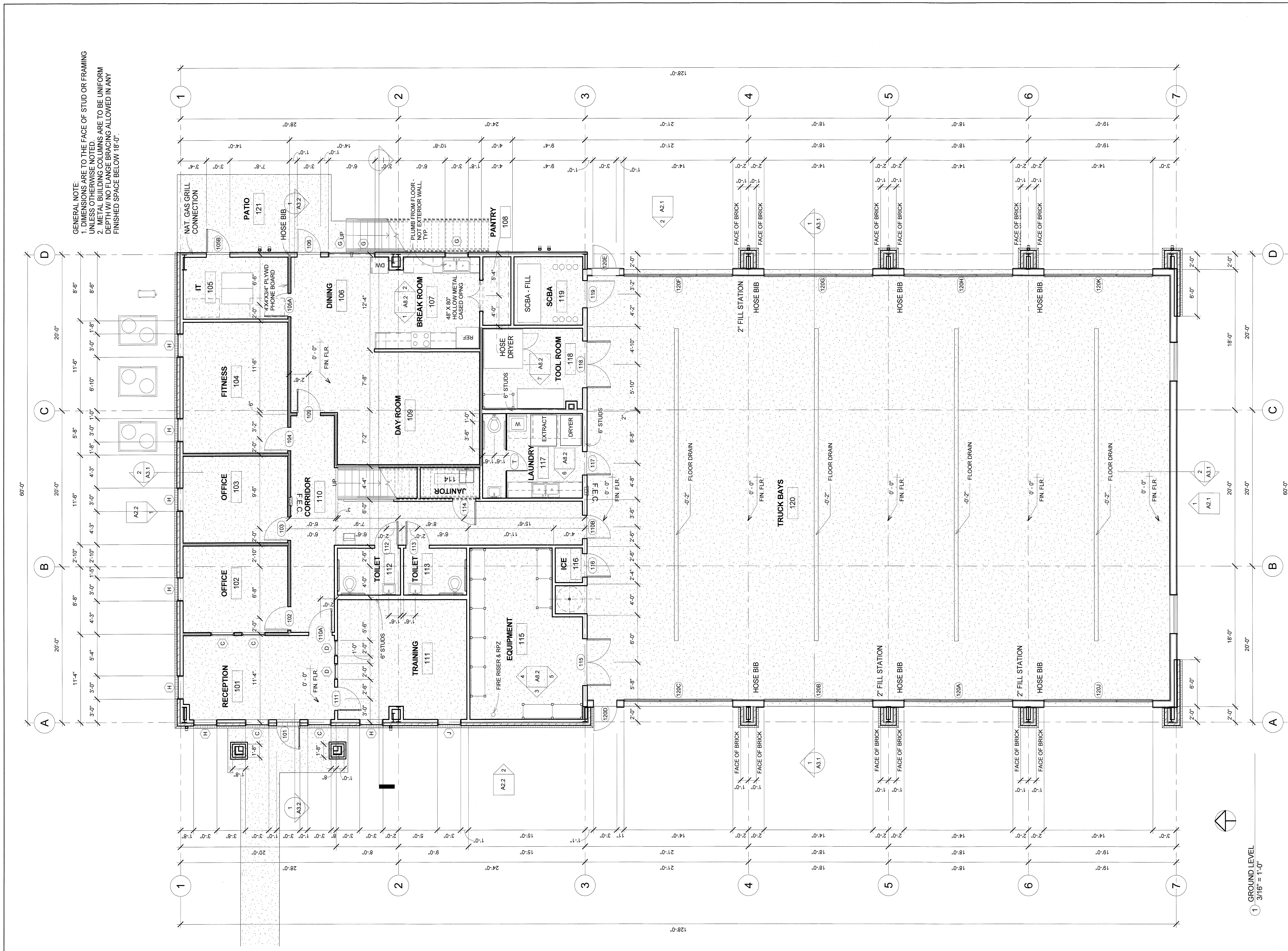
NW¼ NE¼ SW¼ SE¼

N

0' 20' 40' 60'
SCALE: 1" = 20'

No.	Revisions	Date	By

Date: 10/28/16
Project No. 15-039
File: Base Drawing-SITE AND GRADING PLAN.dwg
Drawn By: AWW
Sheet: 4 of 4



A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.

501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC

DATE:
10/28/16

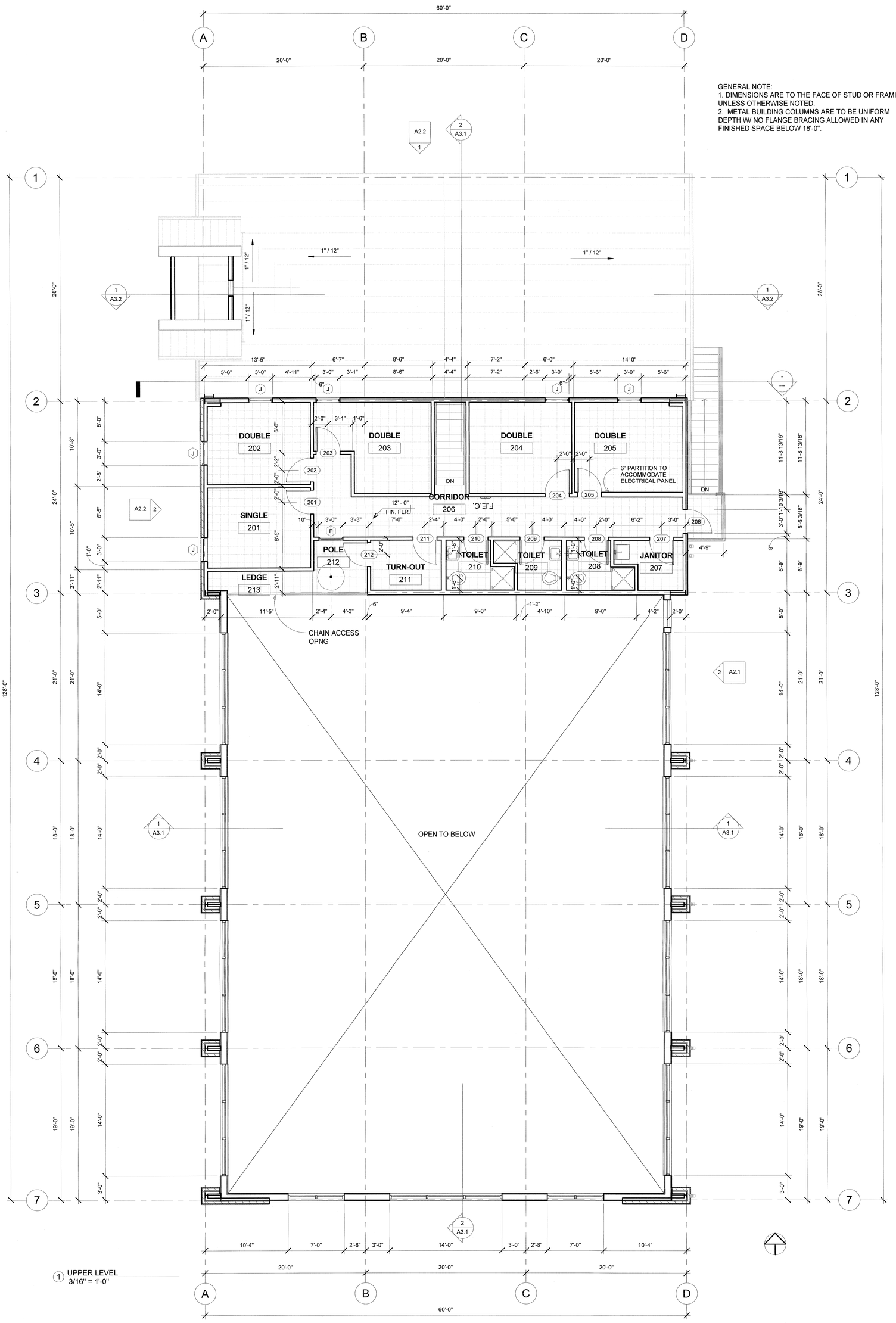
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY:
BWH

FIRST FLOOR PLAN

SHEET:
A1.1



1 UPPER LEVEL
3/16" = 1'-0"

SHEET: A1.2

UPPER LEVEL PLAN

DRAWN BY: BWH

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

REVISIONS:

DATE: 10/28/16

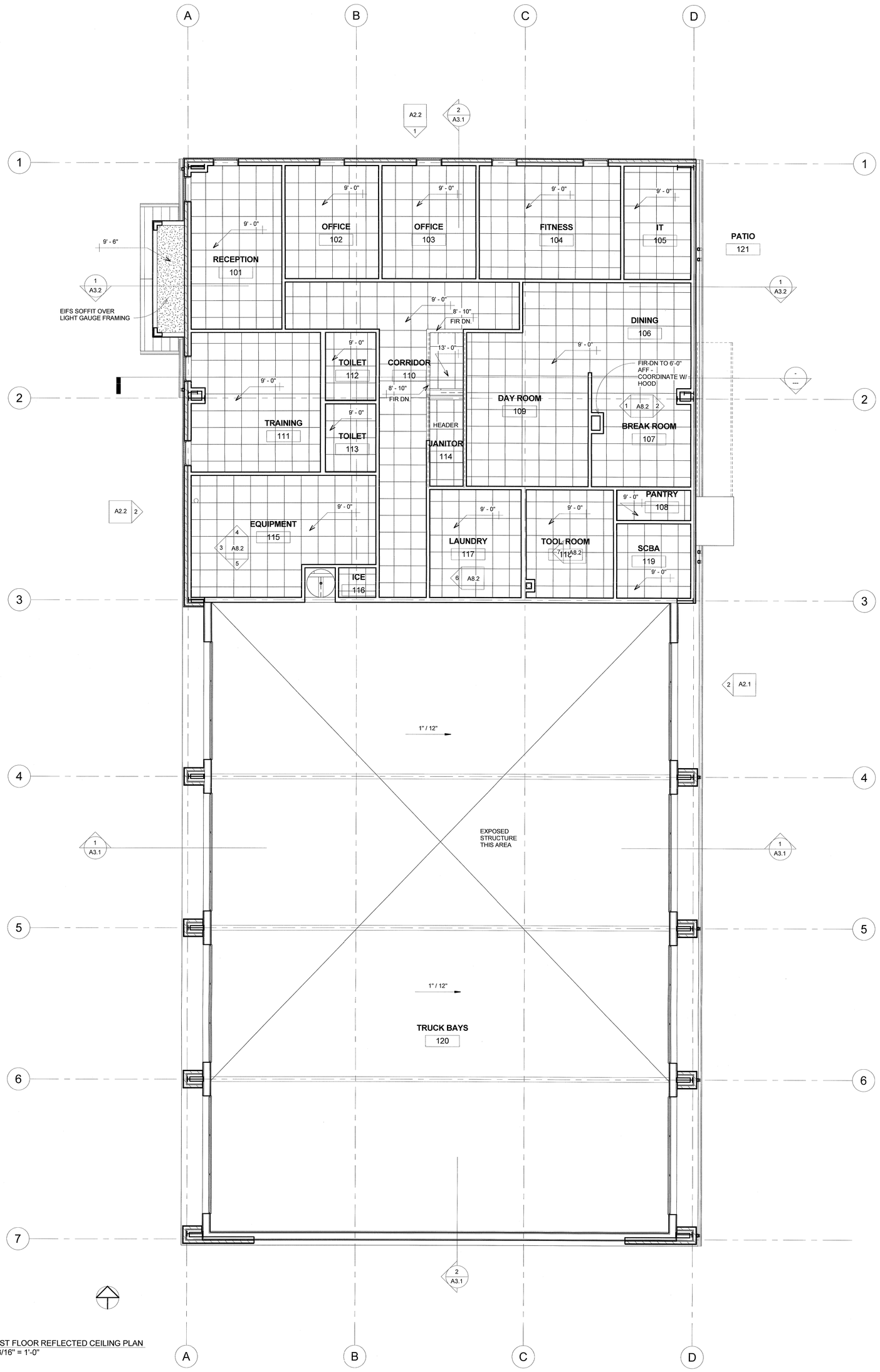
HOFFMANN ARCHITECTURAL INC.

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

A PROJECT FOR:

Golf Course Drive
Searcy, Arkansas

Searcy Fire Station #2



1 1ST FLOOR REFLECTED CEILING PLAN
3/16" = 1'-0"

SHEET: A1.3

LOWER LEVEL REFLECTED CEILING PLAN

DRAWN BY: BWH

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

REVISIONS:

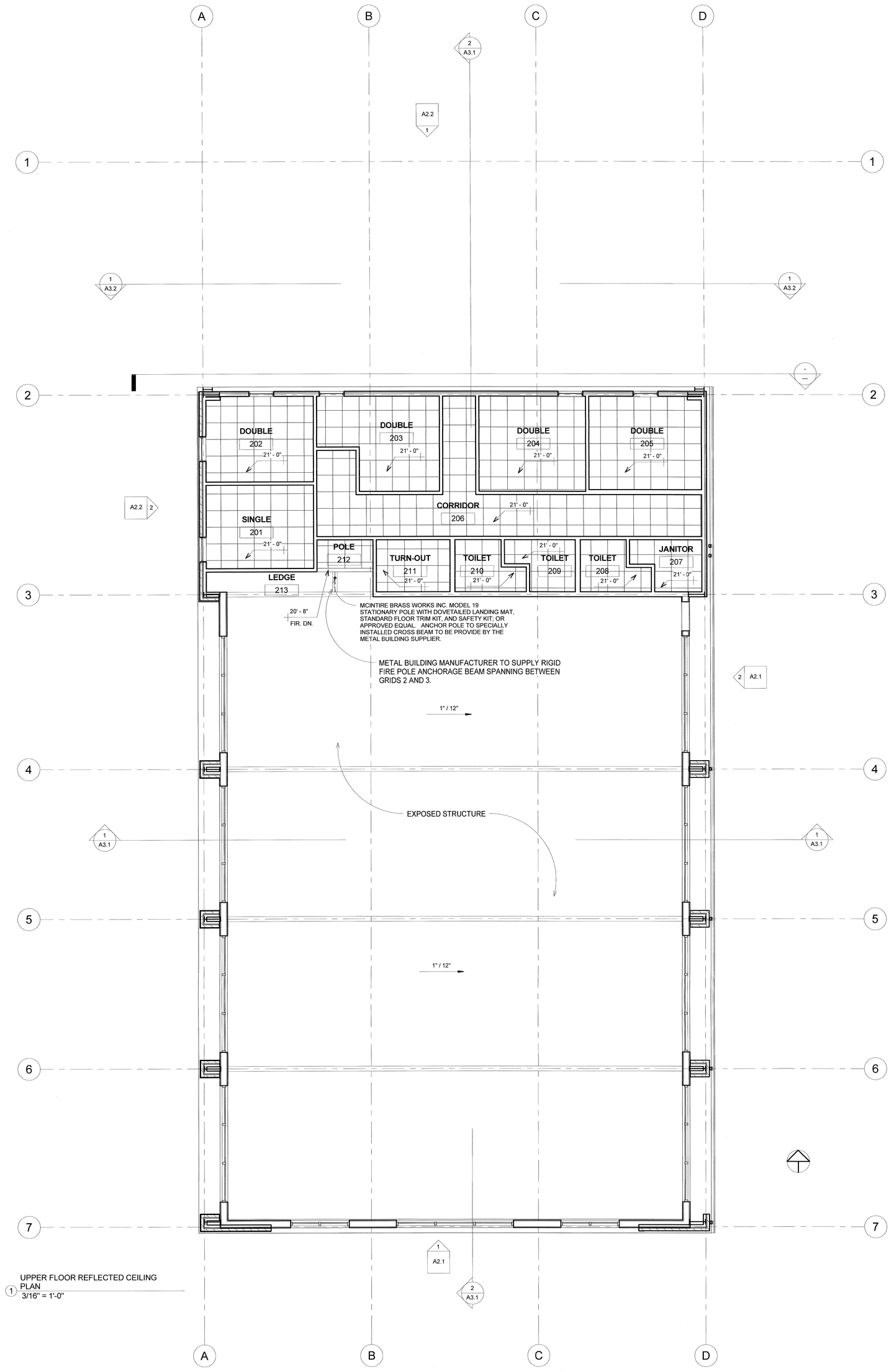
DATE: 10/28/16

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas



1 UPPER FLOOR REFLECTED CEILING PLAN
3/16" = 1'-0"

SHEET: **A1.4**

UPPER LEVEL REFLECTED CEILING PLAN

DRAWN BY: **BWH**

CONTRACTOR MUST CHECK AND VERIFY PLANS AND FIELD CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

REVISIONS:

DATE: **10/28/16**

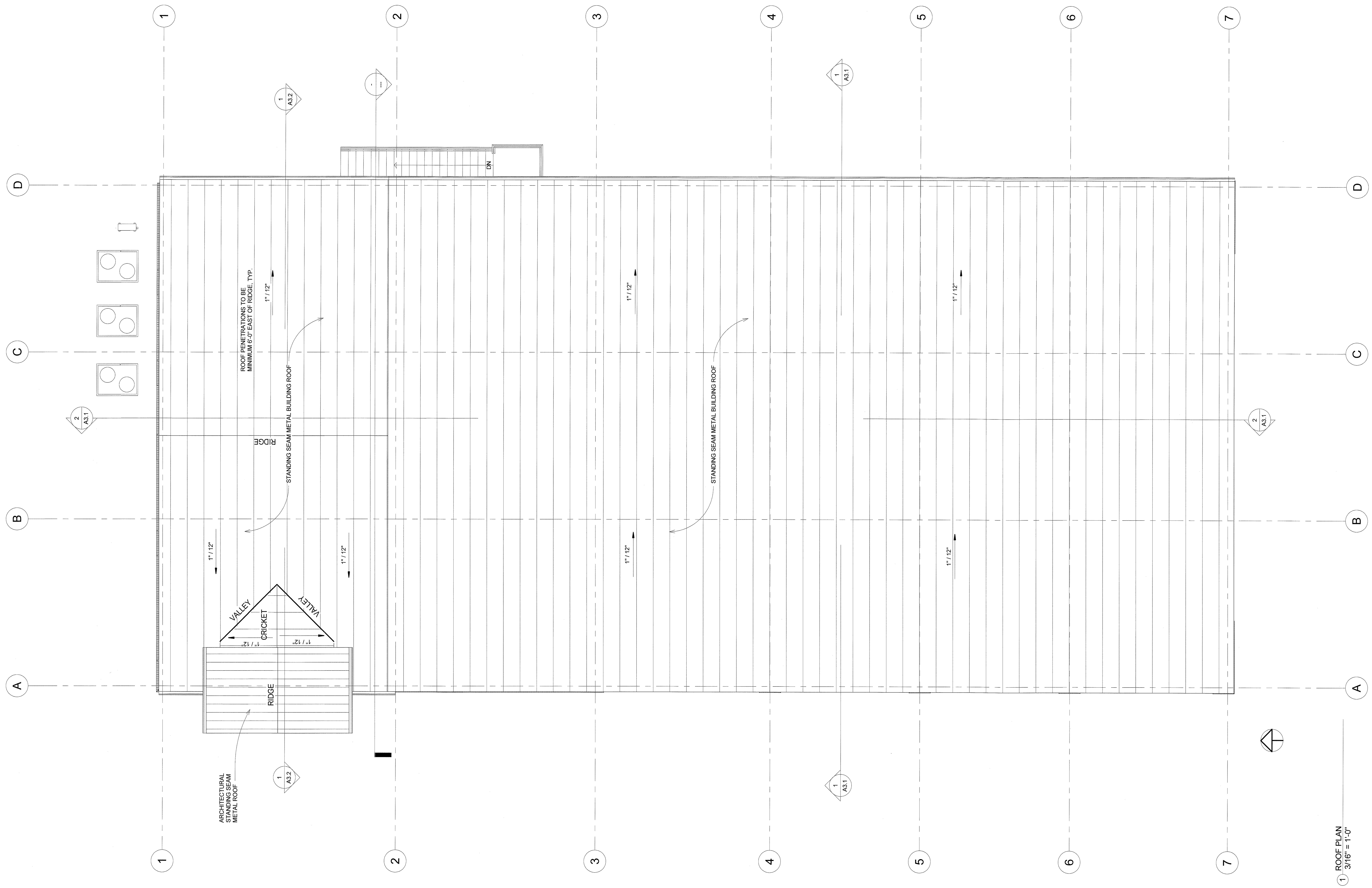
HOFFMANN ARCHITECTURAL INC.

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

A PROJECT FOR:

Golf Course Drive
Searcy, Arkansas

Searcy Fire Station #2



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

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE:
10/28/16

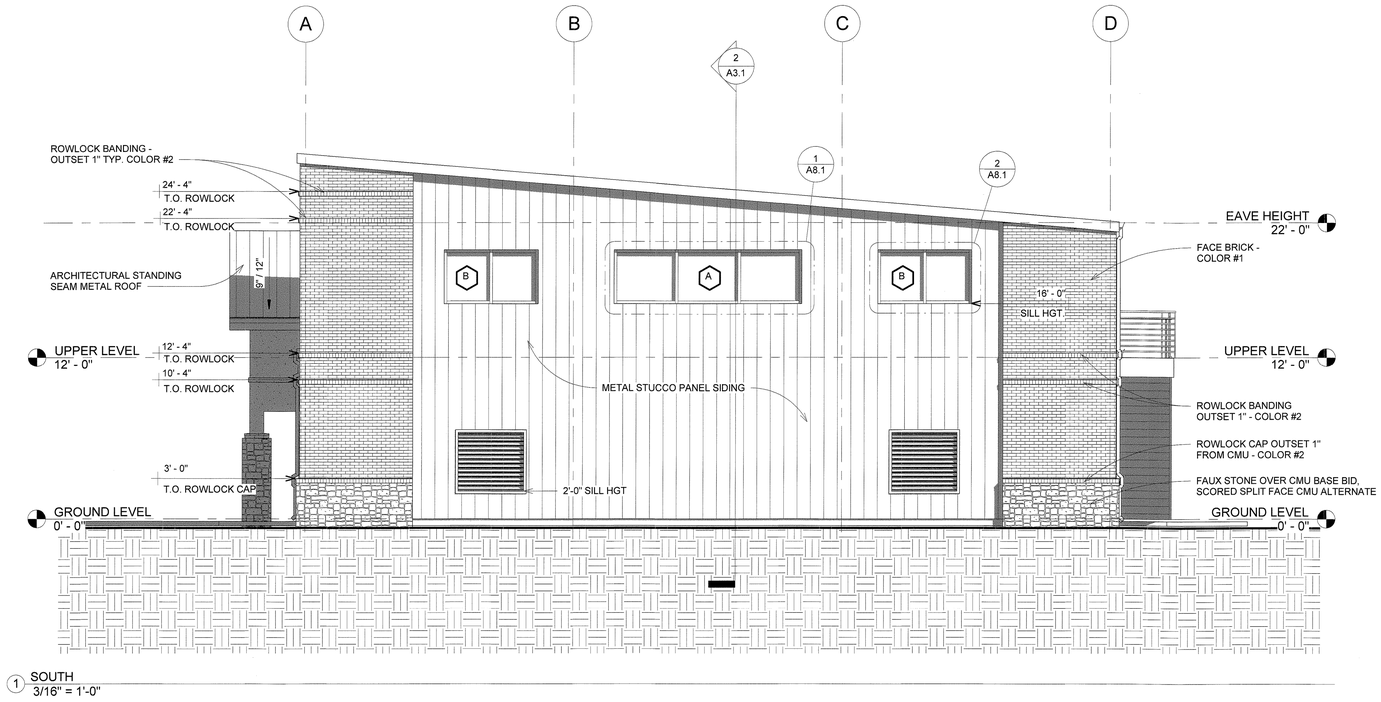
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

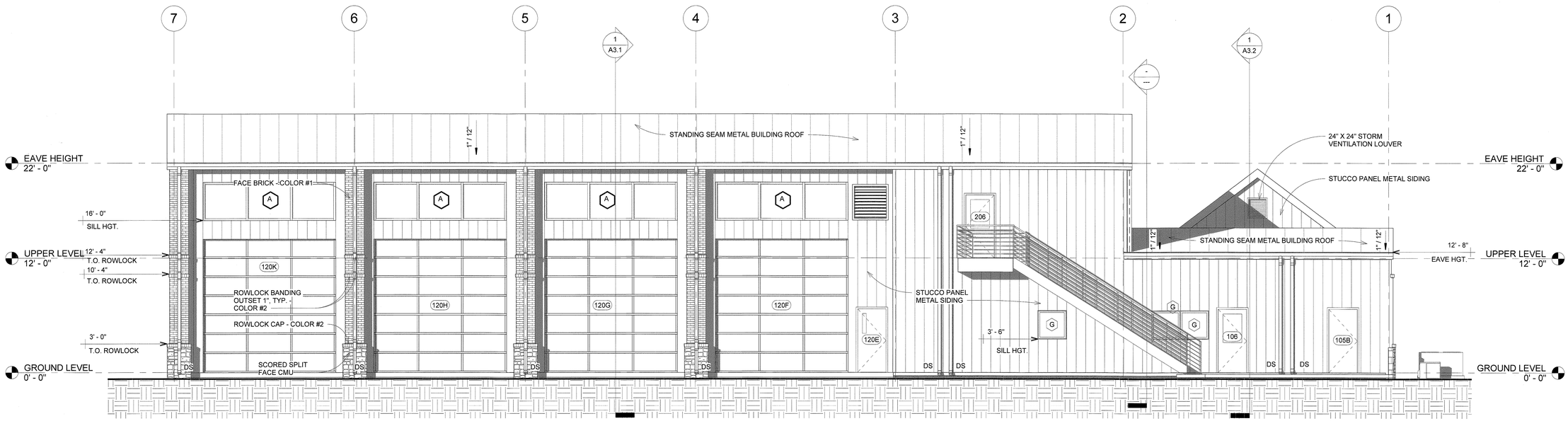
DRAWN BY:
BWH

ROOF PLAN

SHEET:
A1.5



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



2 EAST
3/16" = 1'-0"

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE:
10/28/16

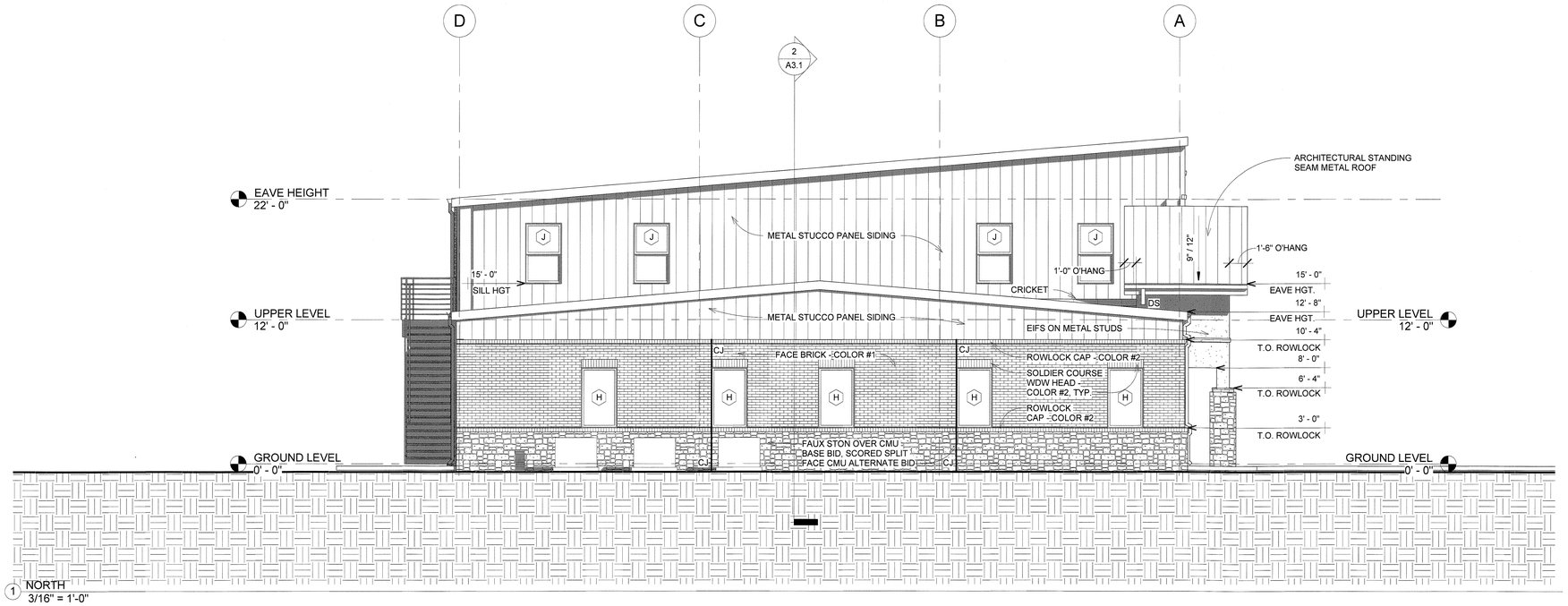
REVISIONS:

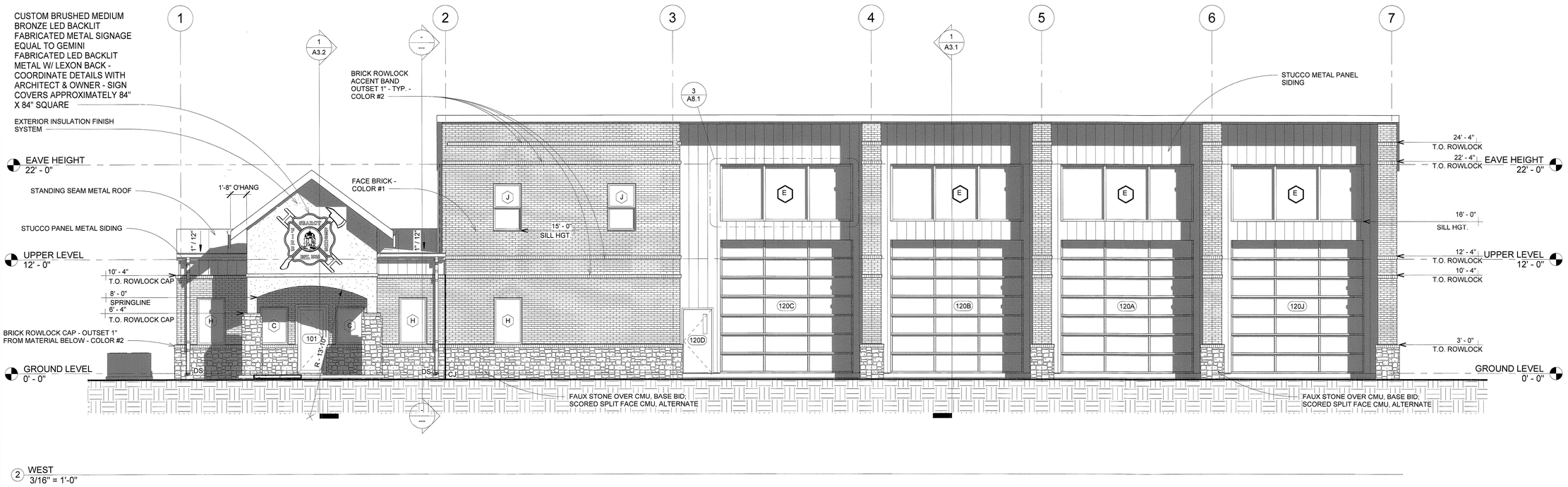
CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY:
BWH

SOUTH & EAST ELEVATIONS

SHEET:
A2.1





A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.

501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE:
10/28/16

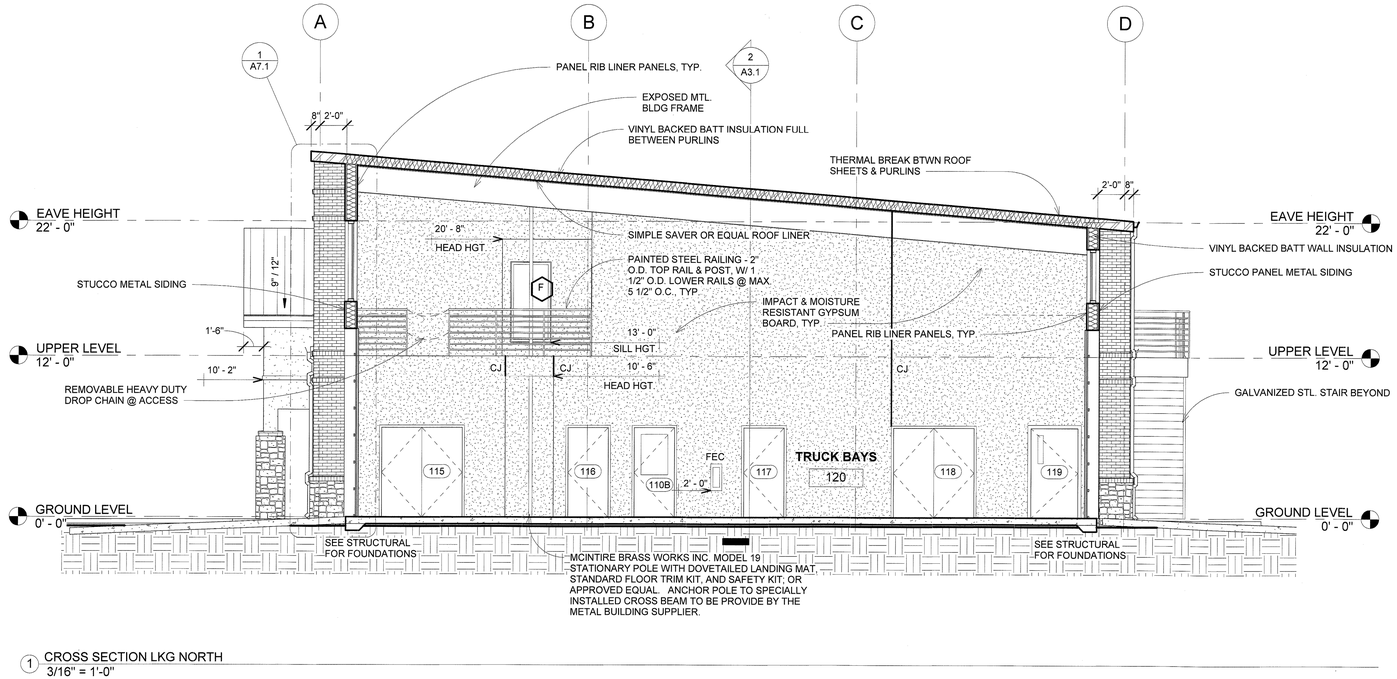
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

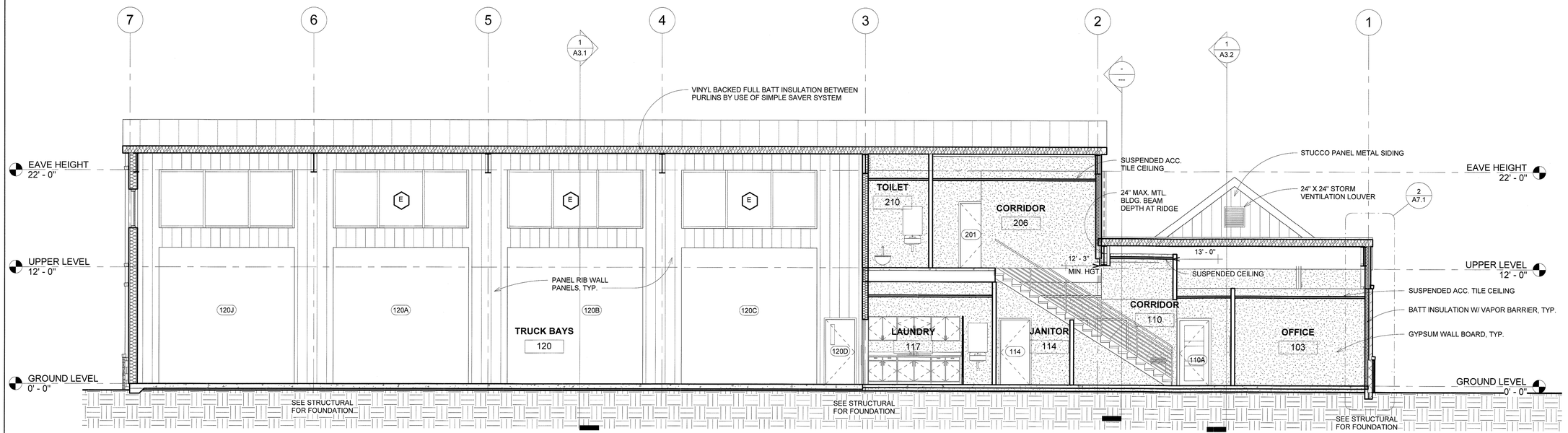
DRAWN BY:
BWH

NORTH & WEST ELEVATIONS

SHEET:
A2.2



1 CROSS SECTION LKG NORTH
3/16" = 1'-0"



2 LONGITUDINAL SECTION LKG WEST
3/16" = 1'-0"

GENERAL NOTE:
FAUX STONE VENEER IS TO BE EQUAL TO ELDORADO BLUFFSTONE, UL CERTIFIED, CE CERTIFIED, ICC-ES CERTIFIED, AND IS TO CARRY A 50 YEAR WARRANTY

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE: **10/28/16**

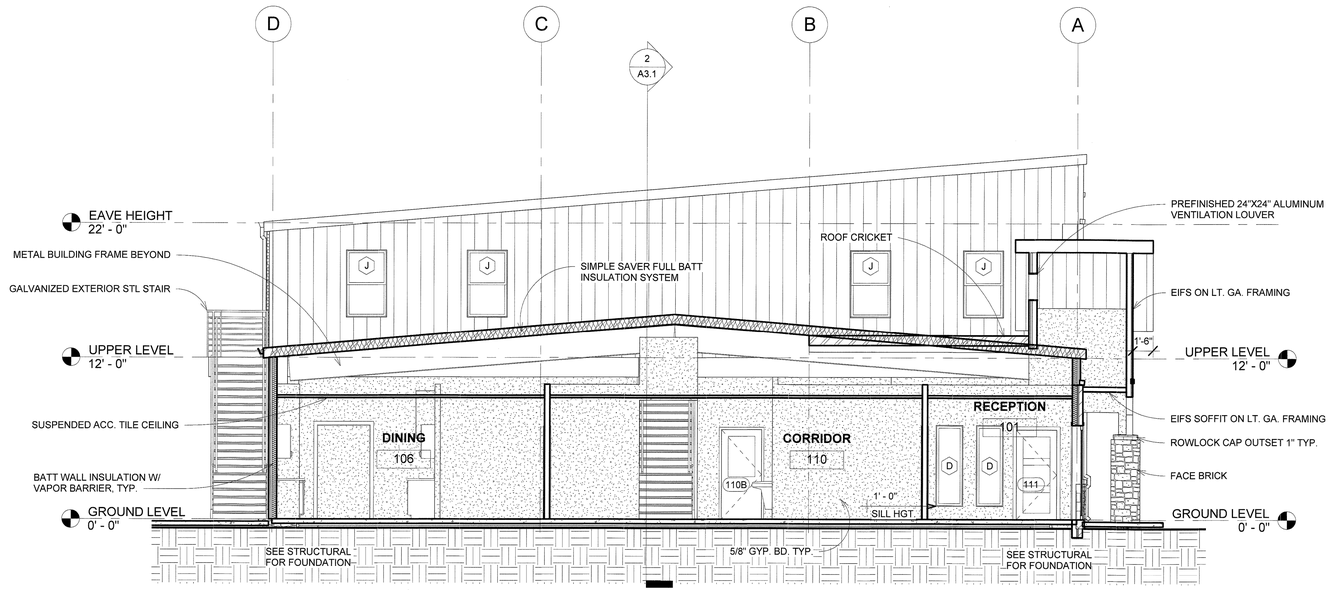
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **BWH**

BUILDING SECTIONS

SHEET: **A3.1**



1 CROSS SECTION LKG SOUTH
3/16" = 1'-0"

GENERAL NOTE:
FAUX STONE VENEER IS TO BE EQUAL TO ELDORADO BLUFFSTONE, UL CERTIFIED, CE CERTIFIED, ICC-ES CERTIFIED, AND IS TO CARRY A 50 YEAR WARRANTY

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE:
10/28/16

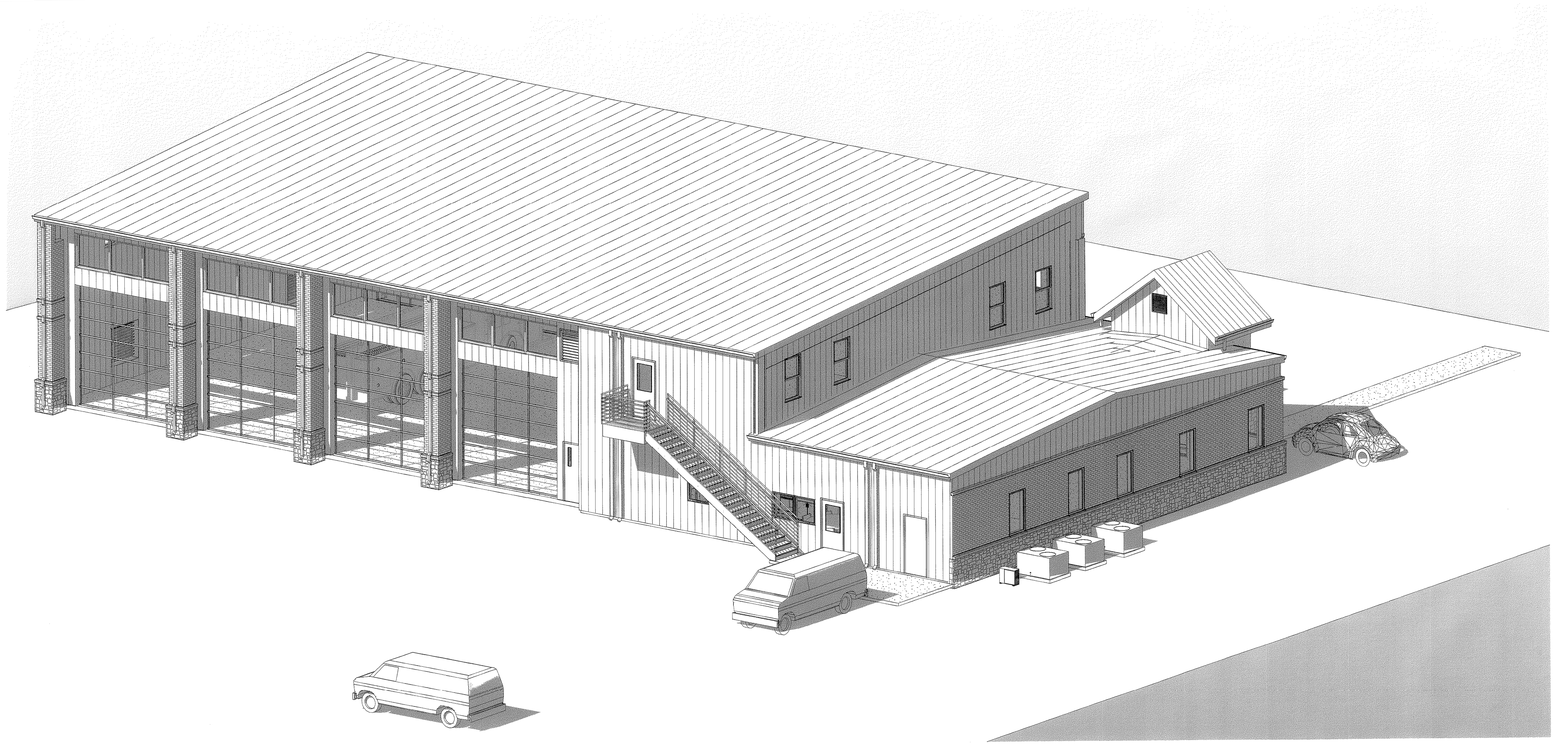
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY:
BWH

BUILDING SECTIONS

SHEET:
A3.2



4 VIEW FROM THE NE

1 VIEW FROM THE NORTHWEST

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.

501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE:
10/28/16

REVISIONS:

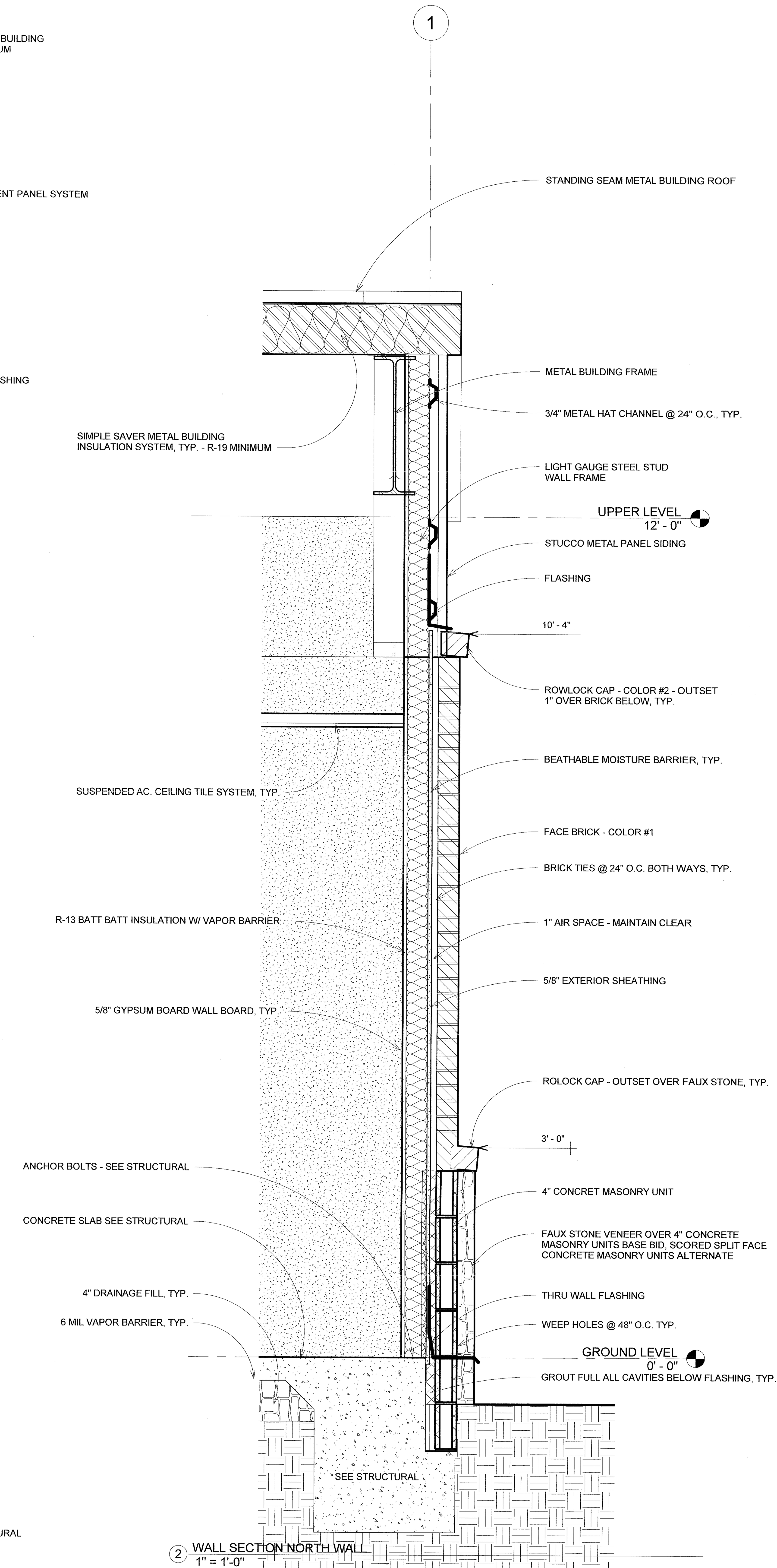
CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY:
BWH

EXTERIOR 3D VIEWS

SHEET:
A4.1

1 WALL SECTION @ TRUCK BAY
1" = 1'-0"



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

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE:
10/28/16

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY:
BWH

WALL SECTIONS

SHEET:
A7.1

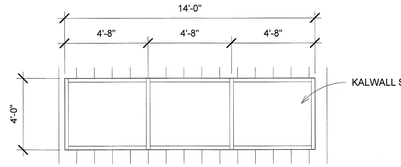
DOOR SCHEDULE

Mark	WDTH	HGT	THKNS	Frame Material	Construction Type	HARDWARE	Comments
101	3' - 0"	7' - 0"	0' - 2"	ALUMINUM STOREFRONT	ALUMINUM STOREFRONT	ENTRY SECURITY W/ CLOSER	
102	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD VISION PANEL - EQUAL TO GRAHAM FNV1	KEYED SECURITY	
103	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD VISION PANEL - EQUAL TO GRAHAM FNV1	KEYED SECURITY	
104	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD VISION PANEL - EQUAL TO GRAHAM FNV1	PASSAGE	
105A	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	KEYED SECURITY	
105B	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	HOLLOW METAL - EQUAL TO CURRIES F	KEYED SECURITY	
106	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	HALF GLASS HOLLOW METAL - EQUAL TO CURRIES HG	ENTRY SECURITY W/ CLOSER	
109	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD TRIPLE GLAZED - EQUAL TO GRAHAM FG3	PASSAGE	
110A	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD TRIPLE GLAZED - EQUAL TO GRAHAM FG3	KEYED SECURITY W/ CLOSER	
110B	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD 1/2 GLASS - EQUAL TO GRAHAM HG	ENTRY SECURITY W/ CLOSER	
111	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD TRIPLE GLAZED - EQUAL TO GRAHAM FG3	KEYED SECURITY	
112	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY W/ CLOSER	
113	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY W/ CLOSER	
114	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	KEYED SECURITY	
115	6' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	KEYED SECURITY W/ CLOSER	
116	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD 1/2 LOUVERED - 24"X28" LOUVER 8" FRM HEAD	PASSAGE	
117	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD 1/2 LOUVERED - 24"X28" LOUVER 8" FRM HEAD	KEYED SECURITY W/ CLOSER	
118	6' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD 1/2 LOUVERED - 24"X28" LOUVER 8" FRM HEAD	KEYED SECURITY W/ CLOSER	
119	3' - 6"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO CURRIES F	KEYED SECURITY W/ CLOSER	
120A	14' - 0"	14' - 0"	0' - 1 1/2"	OVERHEAD VERT. TRACK	ALUMINUM FRAME W/ INSULATED GLAZING	POWER OPERATED	
120B	14' - 0"	14' - 0"	0' - 1 1/2"	OVERHEAD VERT. TRACK	ALUMINUM FRAME W/ INSULATED GLAZING	POWER OPERATED	
120C	14' - 0"	14' - 0"	0' - 1 1/2"	OVERHEAD VERT. TRACK	ALUMINUM FRAME W/ INSULATED GLAZING	POWER OPERATED	
120D	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD VISION PANEL - EQUAL TO GRAHAM FNV1	ENTRY SECURITY W/ CLOSER	
120E	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD VISION PANEL - EQUAL TO GRAHAM FNV1	ENTRY SECURITY W/ CLOSER	
120F	14' - 0"	14' - 0"	0' - 1 1/2"	OVERHEAD VERT. TRACK	ALUMINUM FRAME W/ INSULATED GLAZING	POWER OPERATED	
120G	14' - 0"	14' - 0"	0' - 1 1/2"	OVERHEAD VERT. TRACK	ALUMINUM FRAME W/ INSULATED GLAZING	POWER OPERATED	
120H	14' - 0"	14' - 0"	0' - 1 1/2"	OVERHEAD VERT. TRACK	ALUMINUM FRAME W/ INSULATED GLAZING	POWER OPERATED	
120J	14' - 0"	14' - 0"	0' - 1 1/2"	OVERHEAD VERT. TRACK	ALUMINUM FRAME W/ INSULATED GLAZING	POWER OPERATED	
120K	14' - 0"	14' - 0"	0' - 1 1/2"	OVERHEAD VERT. TRACK	ALUMINUM FRAME W/ INSULATED GLAZING	POWER OPERATED	
201	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY	
202	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY	
203	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY	
204	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY	
205	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY	
206	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	HALF GLASS HOLLOW METAL - EQUAL TO CURRIES HG	ENTRY SECURITY W/ PANIC & CLOSER	
207	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	KEYED SECURITY W/ CLOSER	
208	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY W/ CLOSER	
209	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY W/ CLOSER	
210	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD - EQUAL TO GRAHAM F	PRIVACY W/ CLOSER	
211	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD 1/2 GLASS - EQUAL TO GRAHAM HG	PASSAGE	
212	3' - 0"	6' - 8"	0' - 1 3/4"	HOLLOW METAL	SOLID CORE WOOD 1/2 GLASS - EQUAL TO GRAHAM HG	PASSAGE	

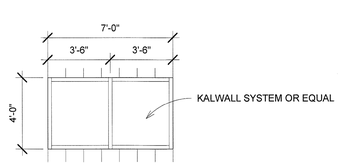
ROOM FINISH SCHEDULE

Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
101	RECEPTION	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
102	OFFICE	CARPET	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
103	OFFICE	CARPET	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
104	FITNESS	CARPET	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
105	IT	SEALED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
106	DINING	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
107	BREAK ROOM	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	WASHABLE CEILING TILE
108	PANTRY	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
109	DAY ROOM	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
110	CORRIDOR	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
111	TRAINING	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
112	TOILET	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	WASHABLE CEILING TILE
113	TOILET	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	WASHABLE CEILING TILE
114	JANITOR	STAINED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	WASHABLE CEILING TILE
115	EQUIPMENT	EPOXY PAINTED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
116	ICE	EPOXY PAINTED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
117	LAUNDRY	EPOXY PAINTED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	WASHABLE CEILING TILE
118	TOOL ROOM	EPOXY PAINTED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
119	SCBA	EPOXY PAINTED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
120	TRUCK BAYS	EPOXY PAINTED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	EXPOSED TO STRUCTURE	BASE & PAINT @ GYP. BD. WALLS ONLY
121	PATIO	NONE				
201	SINGLE	CARPET	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
202	DOUBLE	CARPET	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
203	DOUBLE	CARPET	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
204	DOUBLE	CARPET	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
205	DOUBLE	CARPET	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
206	CORRIDOR	VINYL COMPOSITION TILE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
207	JANITOR	SEALED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	WASHABLE CEILING TILE
208	TOILET	VINYL COMPOSITION TILE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	WASHABLE CEILING TILE
209	TOILET	VINYL COMPOSITION TILE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	WASHABLE CEILING TILE
210	TOILET	VINYL COMPOSITION TILE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	WASHABLE CEILING TILE
211	TURN-OUT	VINYL COMPOSITION TILE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
212	POLE	SEALED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	2 X 2 SUSPENDED ACC. TILE	
213	LEDGE	SEALED CONCRETE	4" RUBBER COVE BASE	GYPSUM BOARD FOR PAINT	EXPOSED TO STRUCTURE	

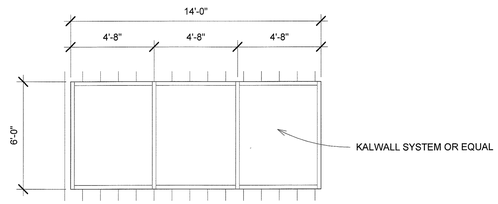
GENERAL NOTE:
FAUX STONE VENEER IS TO BE EQUAL TO ELDORADO BLUFFSTONE, UL CERTIFIED, CE CERTIFIED, ICC-ES CERTIFIED, AND IS TO CARRY A 50 YEAR WARRANTY



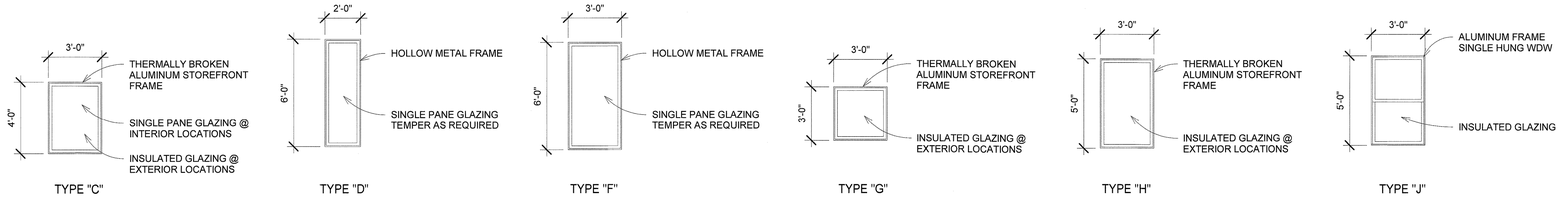
1 WINDOW "A"
1/4" = 1'-0"



2 WINDOW "B"
1/4" = 1'-0"



3 WINDOW "E"
1/4" = 1'-0"



WINDOW SCHEDULE
1/4" = 1'-0"

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.
501.288.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE:
10/28/16

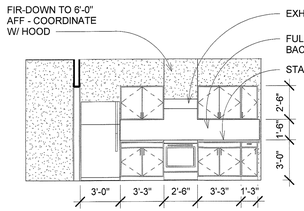
REVISIONS:
07/06/12 REV. #01

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

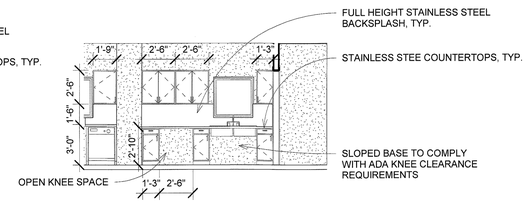
DRAWN BY:
BWH

SCHEDULES

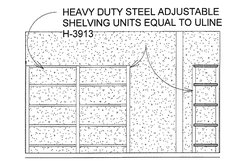
SHEET:
A8.1



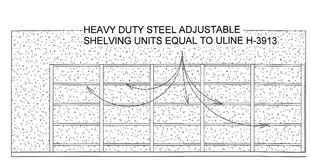
1 BREAKROOM 107 LKG WEST
3/16" = 1'-0"



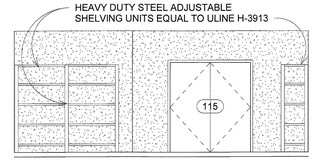
2 BREAKROOM 107 LKG EAST
3/16" = 1'-0"



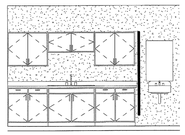
3 EQUIPMENT 115 LKG WEST
3/16" = 1'-0"



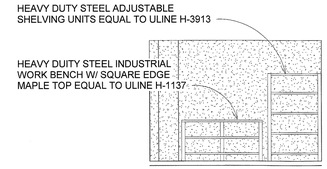
4 EQUIPMENT 115 LKG NORTH
3/16" = 1'-0"



5 EQUIPMENT 115 LKG SOUTH
3/16" = 1'-0"



6 LAUNDRY 117 MILLWORK
3/16" = 1'-0"



7 TOOL ROOM 118 LKG WEST
3/16" = 1'-0"

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

HOFFMANN ARCHITECTURAL INC.

DATE: **10/28/16**

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **BWH**

MILLWORK

SHEET: **A8.2**

GENERAL NOTES:

1. THE CONTRACTOR SHALL THOROUGHLY REVIEW ALL CONTRACT DOCUMENTS AND INFORM THE ARCHITECT OF CONFLICTS OR DISCREPANCIES PRIOR TO BIDDING, FABRICATION, AND CONSTRUCTION.

2. IN CASES OF DISCREPANCIES IN DIMENSIONS AND ELEVATIONS BETWEEN STRUCTURAL AND ARCHITECTURAL DRAWINGS, CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.

3. THE CONTRACTOR SHALL COORDINATE THE FIELD VERIFICATION OF ALL EXISTING SITE CONDITIONS SUCH AS EXISTING FLOOR ELEVATIONS, EXISTING FOOTING ELEVATIONS, EXISTING UTILITIES, ETC, WHETHER NOTED OR NOT IN THE CONTRACT DOCUMENTS AND SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS, DISCREPANCIES OR UNKNOWN CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION.

4. REPRODUCTION OF CONTRACT DRAWINGS, IN ANY FORM, WILL NOT BE ACCEPTED AS SHOP DRAWINGS.

5. REVIEW OF SUBMITTALS AND/OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER-OF-RECORD DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTAL FOR REVIEW. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. CONTRACTOR ALSO SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES, AND PROCEDURES OF CONSTRUCTION.

6. CONTRACTOR SHALL PROVIDE TEMPORARY GUYS AND BRACING AS REQUIRED DURING CONSTRUCTION. STRUCTURE IS NOT STABLE UNTIL ALL STRUCTURAL MEMBERS, CONNECTIONS, AND DECKING IS IN PLACE.

7. ACI, AISC, AITC AND ANS SPECIFICATIONS SHALL GOVERN ALL PHASES OF FABRICATION AND CONSTRUCTION.

FOUNDATION NOTES

1. CONCRETE SHALL BEAR ON FIRM NATURAL SOIL OR PROPERLY COMPACTED SELECT FILL WITH AN ALLOWABLE NET BEARING CAPACITY OF AT LEAST 2500 PSF.

2. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED BY THE SOILS ENGINEER OR HIS REPRESENTATIVE TO VERIFY THAT THE DESIGN NET BEARING CAPACITY IS ATTAINABLE.

3. SOFT SOILS ENCOUNTERED BENEATH THE BUILDING SHALL BE UNDERCUT AND REPLACED WITH PROPERLY COMPACTED, LOW PLASTICITY, SELECT FILL. BACKFILL BOTH SIDES OF ALL WALLS EQUALLY UNTIL LOW SIDE IS UP TO GRADE.

4. ALL FILL SHALL BE COMPACTED TO AT LEAST 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D1557.

5. FOOTING DESIGN SHOWN ON THESE DRAWING ARE FOR ESTIMATING PURPOSES & ARE SUBJECT TO REVISIONS PENDING REVIEW OF METAL BUILDING DESIGN REACTIONS & SOIL ENGINEER'S REPORT. CONTRACTOR TO SUBMIT METAL BUILDING REACTIONS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. FINAL FOOTING SIZES MAY VARY FROM SIZES INDICATED ON THESE DRAWINGS.

CONCRETE:

1. CONCRETE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 3500 PSI.

2. ALL MILD REINFORCEMENT BAR SHALL BE A615 GRADE 60 STEEL. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, GRADE 65. ALL WELDED WIRE FABRIC SHALL BE IN SHEETS AND SHALL BE SUPPORTED ON CHAIRS.

3. BENDING DIMENSIONS & TOLERANCES FOR REINFORCING BAR SHALL CONFORM TO CURRENT CRSI MANUAL OF STANDARD PRACTICE.

4. LAP SPLICES SHALL CONFORM TO THE CURRENT CRSI MANUAL OF STANDARD PRACTICE UNLESS OTHERWISE NOTED.

5. HORIZONTAL CONSTRUCTION JOINTS TO BE SCRUBBED WITH A COARSE WIRE BRUSH AT THE APPROXIMATE TIME OF INITIAL SET TO REMOVE ALL LATINATE AND TO PRODUCE A ROUGHENED SURFACE.

6. CONCRETE WORK SHALL COMPLY WITH THE LATEST ACI "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301) AND APPLICABLE PROVISIONS OF ACI 318, KEEP A COPY OF ACI FIELD REFERENCE MANUAL (ACI SP-15) WHICH INCLUDES ACI 301 AND OTHER ACI AND ASTM REFERENCES ON THE JOB.

7. DETAILING, FABRICATING, AND PLACING OF REINFORCING STEEL AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE STRUCTURES" (ACI 315) AND SHALL COMPLY WITH (ACI 318) AND WITH (ACI 301).

PRE-ENGINEERED LT GAGE METAL FRAMING:

1. ALL METAL FRAMING SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE'S "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS."

2. METAL FRAMING SHALL BE OF THE SIZE, GAGE AND SECTION PROPERTIES INDICATED ON THE DRAWING OR AS REQUIRED FOR THE SPECIFIC LOADING CONDITION. THE DEFLECTION LIMIT OF THE EXTERIOR STUDS SUBJECT TO WIND LOAD IS L/600.

3. ALL WELDING OF METAL FRAMING SHALL BE PERFORMED BY CERTIFIED WELDERS EXPERIENCED IN THE WELDING OF LIGHT GAGE MEMBERS.

4. ALL METAL FRAMING SHALL BE SAW CUT, SQUARE AND TRUE. CUTTING OF METAL FRAMING WITH A TORCH WILL NOT BE PERMITTED.

5. PRIOR TO PROCEEDING W/ ANY METAL FRAMING WORK, THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/ENGINEER, FOR APPROVAL, SHOP DRAWINGS SHOWING THE SIZE, LOCATION & CONNECTION DETAILS OF ALL LOAD BEARING METAL FRAMING AND ALL EXTERIOR FRAMING. SHOP DRAWINGS SHALL INCLUDE A PLAN AND ELEVATION OF ALL WALL OR SOFFIT FRAMING AND CONNECTION DETAILS. THE CONTRACTOR SHALL ALSO SUBMIT CALCULATIONS PREPARED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARKANSAS WHICH DEMONSTRATE THAT ALL APPLIED LOADS WILL BE RESISTED BY THE SUPPLIED FRAMING SYSTEM.

6. ALL METAL STUD WALLS SHALL BE BRACED AND CONNECTED TO RESIST ALL LATERAL LOADS.

7. ALL NON-LOAD BEARING WALL TRACKS CONNECTED TO THE UNDER SIDE OF STEEL BEAMS, STEEL PLATES OR SLABS SHALL BE DEEP TRACK WITH SLOTTED HOLES TO ALLOW VERTICAL MOVEMENT OF 1" MIN.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION

2. STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS PREPARED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARKANSAS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.

3. ALL STRUCTURAL STEEL SHAPES SHALL BE AS FOLLOWS:
   ALL WIDE FLANGE STRUCTURAL STEEL SHAPES SHALL BE ASTM A992.
   SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SECTIONS SHALL BE ASTM A500, GRADE B, FY = 46 KSI
   ROUND HOLLOW STRUCTURAL SECTIONS SHALL BE ASTM A500, GRADE B, FY = 42 KSI
   ROUND STEEL PIPES SHALL BE ASTM A53, GRADE B, FY = 35 KSI.
   ALL OTHER STRUCTURAL STEEL (CHANNELS, ANGLES, PLATES, ETC.) SHALL BE ASTM A36.

4. ALL ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 UNLESS NOTED OTHERWISE.

5. STRUCTURAL BOLTS SHALL BE ASTM A325-N, UNLESS OTHERWISE NOTED.

6. BOLTS THRU WOOD BLOCKING SHALL BE ASTM A307. ALL BOLTS IN CONTACT WITH TREATED WOOD SHALL BE STAINLESS STEEL (TYPE 316L), OR HOT DIPPED GALVANIZED WITH A MINIMUM COATING THICKNESS OF 0.2 OUNCES PER SQUARE FOOT (ASTM A153). USE STAINLESS BOLTS WITH STAINLESS STEEL CONNECTORS AND GALVANIZED BOLTS WITH GALVANIZED CONNECTORS IF ONLY ONE IS SPECIFIED.

7. POST-INSTALLED ADHESIVE ANCHORS SHALL BE STANDARD HAS-E CARBON STEEL ANCHORS (OR APPROVED EQUAL) WITH A MINIMUM STEEL YIELD STRENGTH OF FY=58 KSI OR ASTM F593 STAINLESS STEEL ANCHORS WITH A MINIMUM STEEEL YIELD STRENGTH OF FY=45KSI, UNLESS SHOWN OTHERWISE ON THE DRAWINGS. ADHESIVE SHALL BE HILTI HIT HY150 EPOXY MAX SYSTEM (OR APPROVED EQUAL) IN CONCRETE OR FILLED CMU CELLS AND HILTI HIT HY20 EPOXY SYSTEM (OR APPROVED EQUAL) IN HOLLOW CMU OR CLAY MASONRY.

8. POST-INSTALLED EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT II (OR APPROVED EQUAL) ASTM A510 CARBON STEEL ANCHORS WITH A MINIMUM STEEL YIELD STRENGTH OF FY=41 KSI, OR ASTM A276 (OR ASTM A493) STAINLESS STEEL ANCHORS WITH A MINIMUM YIELD STRENGTH FY=64 KSI. UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

9. CONNECTIONS SHALL BE DESIGNED CONSIDERING BOLT THREADS INCLUDED IN THE SHEAR PLANE (A325-N). ALL BOLTING SHALL BE INSTALLED BY THE TURN-OF-THE-NUT METHOD, REMOVABLE LOAD INDICATOR BOLTS, OR CALIBRATED WRENCH. SNUG TIGHT BOLTING WILL NOT BE PERMITTED UNLESS SPECIFICALLY PETAILED ON CONTRACT DRAWINGS.

10. ALL BOLTED CONNECTIONS (EXCEPT COMPOSITE FLOOR BEAM CONNECTIONS) SHALL BE BEARING TYPE SELECTED TO SUPPORT ONE-HALF (1/2) OF THE TOTAL UNIFORM LOAD CAPACITY OF THE BEAMS AS SHOWN IN THE TABLES OF UNIFORM LOAD CONSTANTS, PART 2 OF THE AISC MANUAL, 8TH EDITION, FOR THE GIVEN BEAM SIZE, SPAN AND GRADE OF STEEL SPECIFIED. THE EFFECTS OF ANY CONCENTRATED LOADS MUST BE TAKEN INTO ACCOUNT. CONNECTIONS SHALL BE DESIGNED CONSIDERING THREADS INCLUDED IN THE SHEAR PLANE (A325-N).

11. ALL WELDS SHALL BE E70XX, MINIMUM AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS, CERTIFIED WITHIN THE PREVIOUS TWELVE (12) MONTHS.

12. DO NOT PRIME PAINT STEEL THAT RECEIVES SPRAYED FIREPROOFING.

13. ALL STEEL LINTELS AND SHELF ANGLES SHALL BE COATED WITH A ZINC RICH PRIMER.

14. ALL STRUCTURAL STEEL EXPOSED TO WEATHER (SUCH AS MECHANICAL FRAMES) SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

PRE-ENGINEERED METAL BUILDING:

1. METAL BUILDING MANUFACTURER SHALL PROVIDE SHOP DRAWINGS SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARKANSAS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.

2. METAL BUILDING SHOP DRAWINGS WILL NOT BE REVIEWED IF THE LAYOUT DOES NOT FOLLOW THE LAYOUT PROPOSED IN THE CONTRACT DRAWINGS AND IF ANY DEVIATIONS FROM THE PROPOSED LAYOUT ARE NOT CLEARLY MARKED ON THE SHOP DRAWINGS OR APPROVED IN WRITING PRIOR TO SUBMITTAL.

3. METAL BUILDING FRAMING LAYOUT AND MEMBERS SHOWN ARE SUGGESTED ONLY. MANUFACTURER IS RESPONSIBLE FOR COORDINATING REQUIREMENTS WITH OWNER AND PROVIDING A COMPLETE STRUCTURAL FRAMING SYSTEM DESIGNED BY THE MANUFACTURER. METAL BUILDING MANUFACTURER SHALL COORDINATE ALL DIMENSIONS, ELEVATIONS, BRACING, AND SIZES AND SHAPES OF MEMBERS WITH OWNER PRIOR TO FABRICATION AND CONSTRUCTION. ALL MEMBERS, CONNECTIONS AND DECKING NOT SPECIFICALLY SIZED ON DRAWINGS SHALL BE DESIGNED AND SUPPLIED BY THE METAL BUILDING MANUFACTURER.

4. METAL BUILDING VERTICAL BRACING SHALL CONSIST OF PORTAL FRAMES OR ROD BRACES AT THE LOCATIONS SHOWN ON THE PLANS. THE METAL BUILDING MANUFACTURER SHALL COORDINATE THE LOCATION OF ALL BRACES TO MINIMIZE INTERFERENCE WITH ARCHITECTURAL FEATURES. ROD OR CABLE BRACES MAY NOT BE SUBSTITUTED WHERE PORTAL FRAMES ARE SHOWN. WHERE X-BRACES ARE USED, THE METAL BUILDING MANUFACTURER SHALL CLEARLY IDENTIFY TO THE ARCHITECT ALL INTERFERENCES WITH ARCHITECTURAL FEATURES. WHERE ARCHITECTURAL FEATURES (COLUMN SURROUNDS, CEILINGS, FURR DOWNS, ETC) ARE PROVIDED TO COVER OR SURROUND THE METAL BUILDING COMPONENTS (COLUMNS, FRAMES, ETC.), THE METAL BUILDING COMPONENTS SHALL BE SIZED TO STAY WITHIN THE LIMITS OF THE ARCHITECTURAL FEATURES UNLESS THE ARCHITECT IS NOTIFIED IN WRITING PRIOR TO SUBMISSION OF THE APPROVAL DRAWINGS AND APPROVAL IS GIVEN FOR AN EXCEPTION.

5. MAXIMUM PURLIN LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/360 OR 1" WHICHEVER IS LESS.

6. FRAME LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/360.

7. MAXIMUM GIRT LATERAL DEFLECTION FROM WIND OR SEISMIC LOADS SHALL NOT EXCEED SPAN/240 FOR GIRTS PROVIDING LATERAL SUPPORT FOR METAL SIDING ONLY. MAXIMUM GIRT LATERAL DEFLECTION FROM WIND OR SEISMIC LOADS SHALL NOT EXCEED SPAN/360 FOR GIRTS PROVIDING LATERAL SUPPORT FOR BRICK.

8. MAXIMUM BUILDING SIDESWAY (DRIFT) FROM WIND OR SEISMIC LOADS SHALL NOT EXCEED WALL HEIGHT/240.

9. THE GENERAL CONTRACTOR AND METAL BUILDING MANUFACTURER SHALL BE RESPONSIBLE FOR OVERALL BUILDING COORDINATION. ALL COORDINATION OF THE INTERFACE AND COMPATIBILITY BETWEEN THE METAL BUILDING AND THE ARCHITECTURAL FEATURES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE METAL BUILDING MANUFACTURER.

10. DESIGN OF THE METAL BUILDING USING DEAD, LIVE, SEISMIC, WIND AND SNOW LOADS IN THE CODE REQUIRED COMBINATIONS SHALL BE PERFORMED BY THE METAL BUILDING MANUFACTURER.

DESIGN LOADS - IBC 2012 & ASCE 7 - 10:

DEAD LOADS:	WEIGHT OF THE STRUCTURE
ROOF LIVE LOAD:	20 PSF
FLOOR LIVE LOADS:	
SLEEPING ROOMS	40 PSF
CLASSROOMS	40 PSF
CELL BLOCKS	40 PSF
OFFICES	50 PSF
PARKING GARAGES	50 PSF
LIBRARY READING ROOMS	60 PSF
CORRIDORS	80 PSF
LOBBIES	100 PSF
ASSEMBLY AREAS	100 PSF
STAIRS	100 PSF
BLEACHERS/GRANDSTANDS	100 PSF
MECH MEZZANINE	60 PSF
STAGES	125 PSF
LIBRARY STACK ROOMS	125 PSF

GROUND SNOW LOAD,

FLAT ROOF SNOW LOAD, Pf:	10 PSF
SNOW EXPOSURE FACTOR, Ce:	1.0
SNOW IMPORTANCE FACTOR, I:	1.2
THERMAL FACTOR, Ct	1.0

WIND:
1. ULTIMATE WIND SPEED, Vult : 120 MPH
   NOMINAL WIND SPEED, Vasd : 93 MPH
2. RISK CATEGORY: IV
3. WIND EXPOSURE : B
4. INTERNAL PRESSURE COEFFICIENT(S): GCpi = +/- 0.18

SEISMIC:
1. RISK CATEGORY: IV
2. SEISMIC IMPORTANCE FACTOR, Ie = 1.5
3. MAPPED SPECTRAL RESPONSE:
   Ss = 0.613
   S1 = 0.226
4. SITE CLASS : D
5. DESIGN SPECTRAL RESPONSE FACTORS:
   Sds = 0.535
   Sd1 = 0.293
6. SEISMIC DESIGN CATEGORY: D

METAL BUILDING:
7. BASIC SEISMIC RESISTING SYSTEM:
   C. MOMENT RESISTING FRAMES
   1. STEEL ORDINARY MOMENT FRAMES
8. DESIGN BASE SHEAR, V=0.229 x W
9. SEISMIC RESPONSE COEF, Cs= 0.229
10. RESPONSE MODIFICATION FACTOR, R = 3½
11. ANALYSIS PROCEDURE : EQUIVALENT LATERAL FORCE PROCEDURE

2ND FLOOR FRAMING:
7. BASIC SEISMIC RESISTING SYSTEM:
   B. BUILDING FRAME SYSTEM
   3. STEEL ORDINARY CONCENTRIC BRACED FRAMES
8. DESIGN BASE SHEAR, V=0.241 x W
9. SEISMIC RESPONSE COEF, Cs= 0.241
10. RESPONSE MODIFICATION FACTOR, R = 3¼
11. ANALYSIS PROCEDURE : EQUIVALENT LATERAL FORCE PROCEDURE

PRE-ENGINEERED METAL BUILDING LOADS:

DEAD LOADS:	WEIGHT OF THE STRUCTURE
ROOF LIVE LOAD:	20 PSF (NO REDUCTIONS ALLOWED)
COLLATERAL LOAD:	HANGING EQUIPT, LIGHTS, CEILINGS, ETC. (7 PSF MINIMUM COLLATERAL LOAD. INCLUDE ACTUAL WT OF SUSPENDED EQT.)

ALSO SEE 'DESIGN LOADS' LISTED ON THIS SHEET FOR ADDITIONAL REQUIREMENTS.

I HEREBY CERTIFY THAT THE STRUCTURAL PLANS SUBMITTED HEREWITH ARE DESIGNED WITH THE STRUCTURAL LOAD CARRYING ELEMENTS TO RESIST THE ANTICIPATED FORCES OF THE DESIGNATED SEISMIC ZONE IN WHICH THE STRUCTURE IS LOCATED IN ACCORDANCE WITH ARKANSAS ACT 1100 OF 1991.

DATE: 10/20/16

JOHN P. CLARK, P.E. # 8654

JOHN P. CLARK, PE
STRUCTURAL ENGINEERING
PO BOX 3
SEARCY, ARKANSAS 72145
PH: (501) 305-3735

PROJECT:
SEARCY FIRE STATION #2
GOLF COURSE DRIVE
SEARCY, ARKANSAS

SHEET TITLE:
STRUCTURAL NOTES

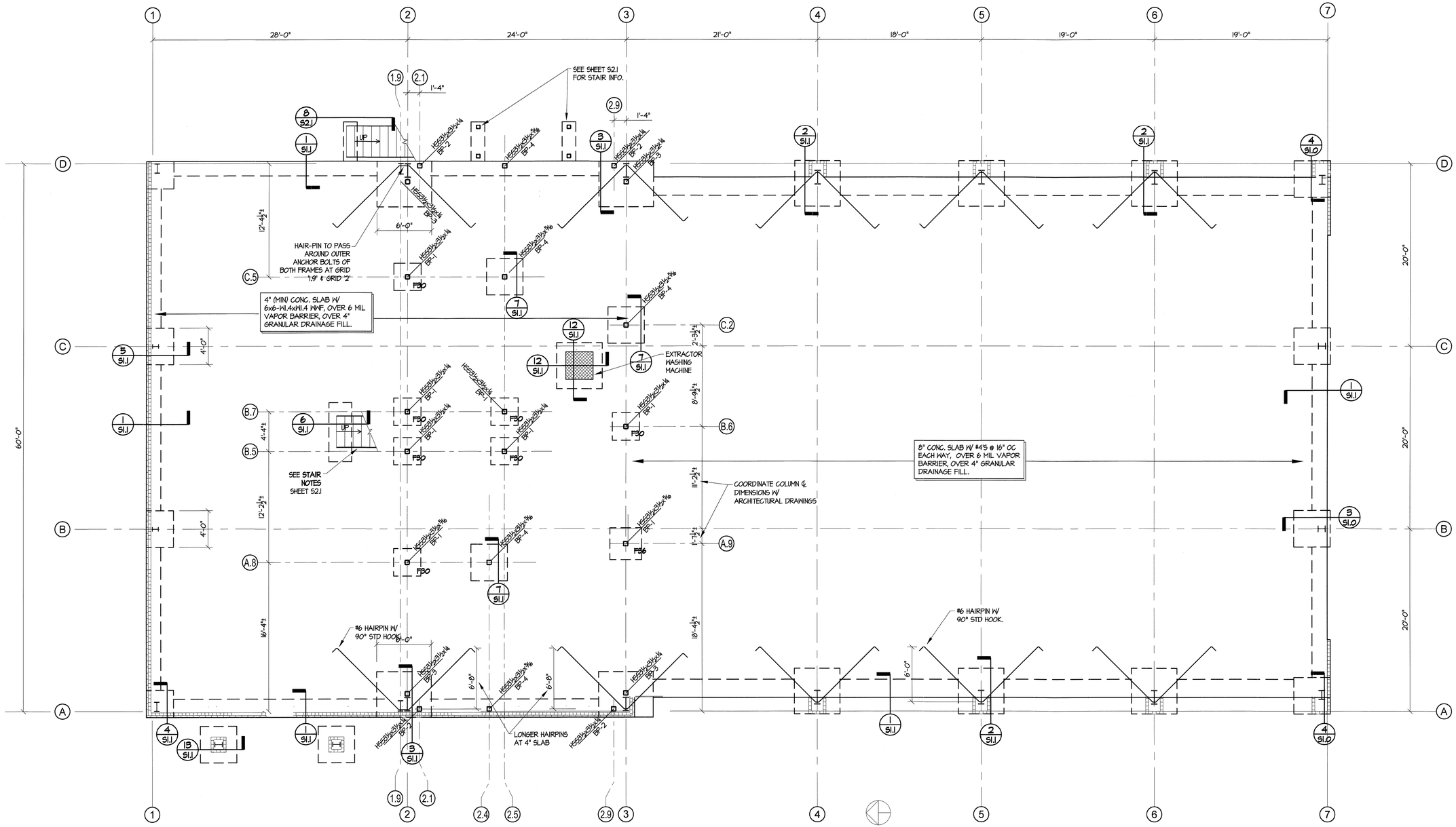
SHEET NO.
S0.0

PROJECT NO.
16-09

DATE
10/28/16

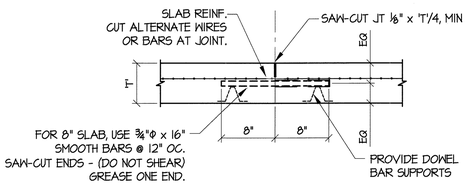
REVISION

STATE OF ARKANSAS
10/20/16
REGISTERED PROFESSIONAL ENGINEER
No. 8654
JOHN P. CLARK



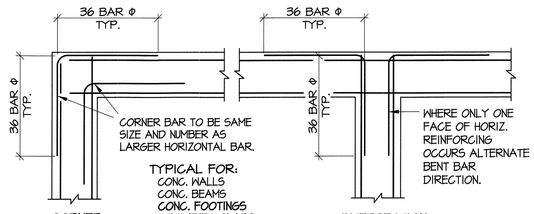
FOUNDATION PLAN

3/16" = 1'-0"



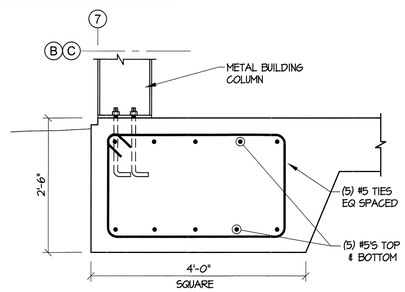
NOTE:
JOINTS TO BE PLACED AT INTERMEDIATE LOCATIONS TO MAINTAIN A MAX. SPACING OF:
18'-0" OC FOR 6" SLABS
24'-0" OC FOR 8" SLABS
ASPECT RATIO NOT TO EXCEED 1.5

1 S1.0 CONTROL JOINT
NTS

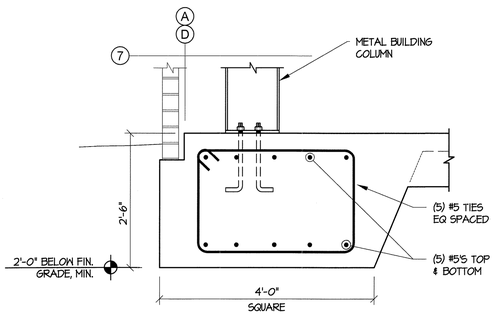


TYPICAL FOR:
CONC. WALLS
CONC. BEAMS
CONC. FOOTINGS
THICKENED SLABS
GRADE BEAMS
CMU BOND BEAMS

2 S1.0 TYPICAL CORNER BAR DETAIL
NTS



3 S1.0 SECTION
3/4"=1'-0"



4 S1.0 SECTION
3/4"=1'-0"

JOHN P. CLARK, PE
STRUCTURAL ENGINEERING
PO Box 3
SEARCY, ARKANSAS 72145
PH: (501) 305-3735

PROJECT:
SEARCY FIRE STATION #2
GOLF COURSE DRIVE
SEARCY, ARKANSAS

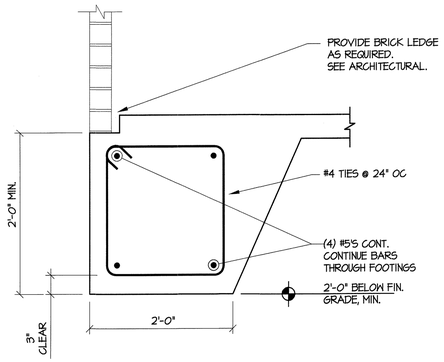
SHEET TITLE:
FOUNDATION PLAN

SHEET NO.
S1.0

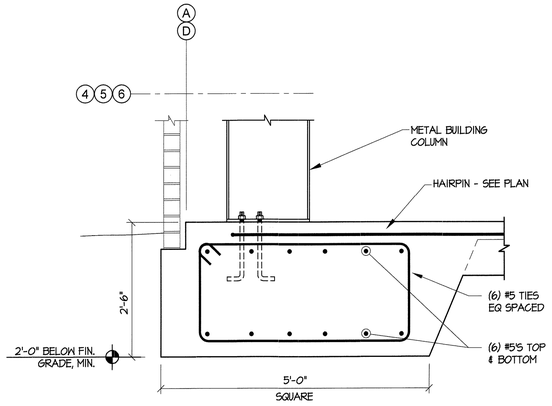
PROJECT NO.
16-09

DATE
10/28/16

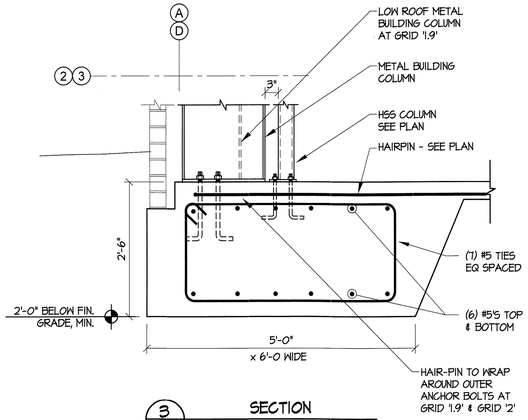
STATE OF ARKANSAS
10/28/16
REGISTERED PROFESSIONAL ENGINEER
No.8654
JOHN P. CLARK



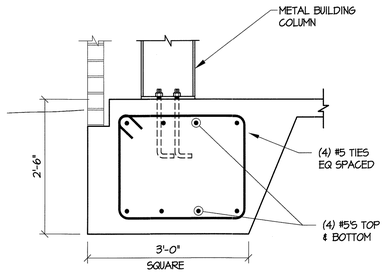
1 / S1.1 SECTION
1"=1'-0"



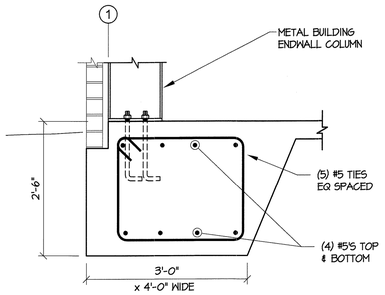
2 / S1.1 SECTION
3/4"=1'-0"



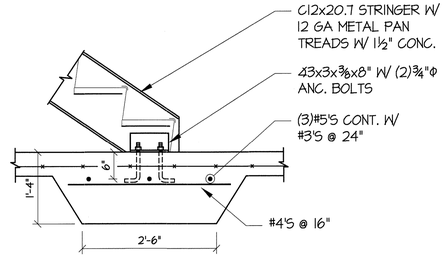
3 / S1.1 SECTION
3/4"=1'-0"



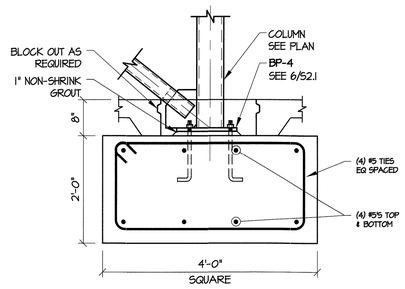
4 / S1.1 SECTION
3/4"=1'-0"



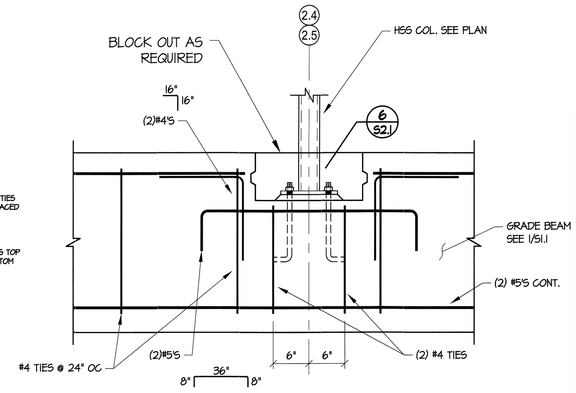
5 / S1.1 SECTION
3/4"=1'-0"



6 / S1.1 SECTION @ STAIRS
3/4"=1'-0"

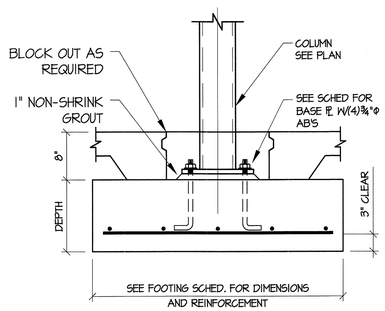


7 / S1.1 SECTION
3/4"=1'-0"

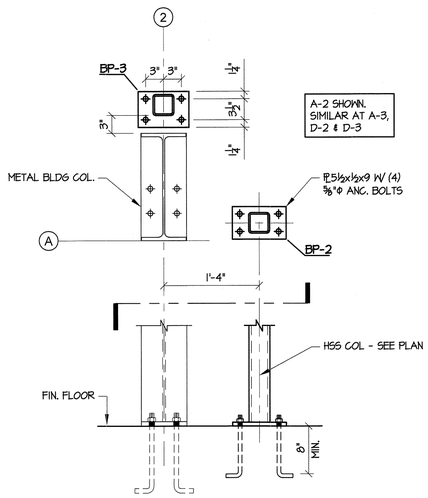


8 / S1.1 SECTION
1"=1'-0"

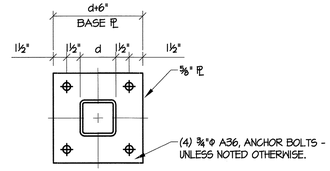
FOOTING SCHEDULE			
MARK NO.	SIZE	DEPTH	REBAR
F26	2'-6" x 2'-6"	12"	(3) #5'S EACH WAY
F30	3'-0" x 3'-0"	12"	(4) #5'S EACH WAY
F36	3'-6" x 3'-6"	12"	(4) #5'S EACH WAY
F40	4'-0" x 4'-0"	12"	(5) #5'S EACH WAY
F46	4'-6" x 4'-6"	12"	(5) #5'S EACH WAY



9 / S1.1 SPREAD FOOTING DETAIL
NTS

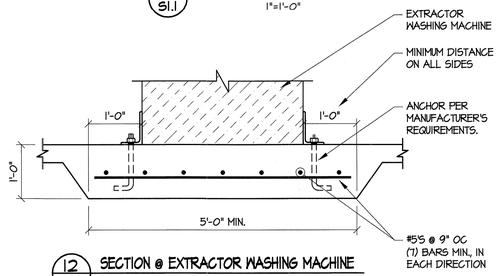


10 / S1.1 DETAIL
3/4"=1'-0"

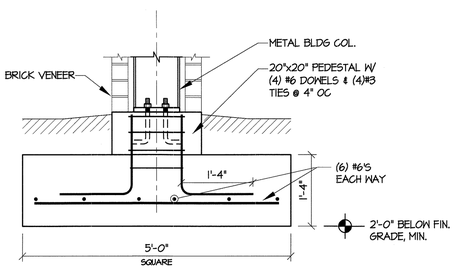


11 / S1.1 BP-1
NTS

HSS COLUMN BASE PLATE SCHEDULE		
MARK	BASE PLATE	COMMENTS
BP-1	PL 9½x⅝x9½	SEE DET 11/S1.1
BP-2	PL 5½x½x9	SEE DET 10/S1.1
BP-3	PL 6x½x6½	SEE DET 10/S1.1
BP-4	PL 9½x⅜x11½	SEE DET 6/S2.1



12 / S1.1 SECTION @ EXTRACTOR WASHING MACHINE
NTS



13 / S1.1 SECTION
3/4"=1'-0"

JOHN P. CLARK, PE
STRUCTURAL ENGINEERING
PO Box 3
SEARCY, ARKANSAS 72145
PH: (501) 305-3735

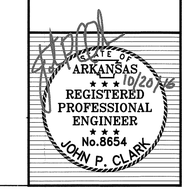
PROJECT:
SEARCY FIRE STATION #2
SEARCY, ARKANSAS

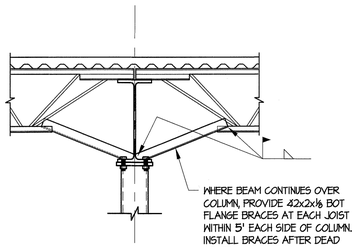
SHEET TITLE:
FOUNDATION DETAILS

SHEET NO.
S1.1

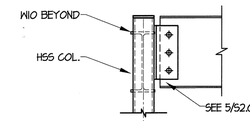
PROJECT NO.
16-09

DATE
10/28/16

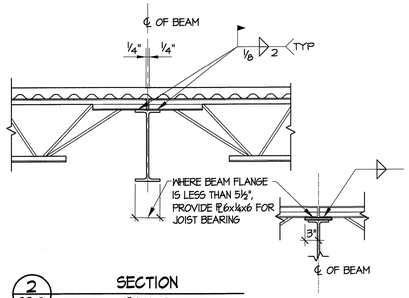




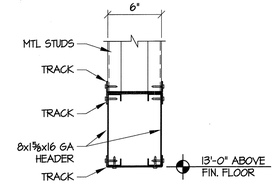
1 / 52.0 SECTION
¾"=1'-0"



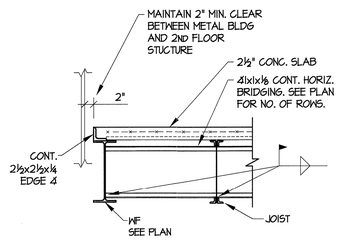
6 / 52.0 SECTION
1"=1'-0"



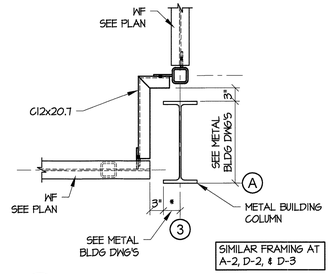
2 / 52.0 SECTION
¾"=1'-0"



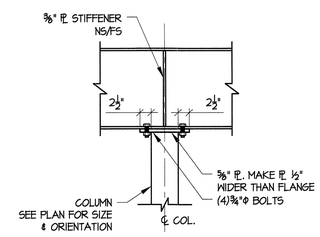
7 / 52.0 SECTION
¾"=1'-0"



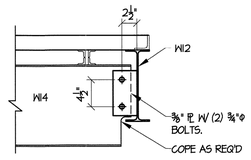
3 / 52.0 SECTION
¾"=1'-0"



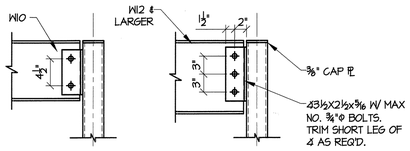
8 / 52.0 DETAIL
¾"=1'-0"



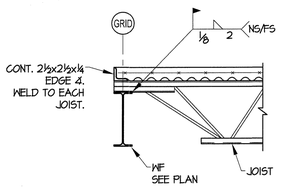
4 / 52.0 SECTION
¾"=1'-0"



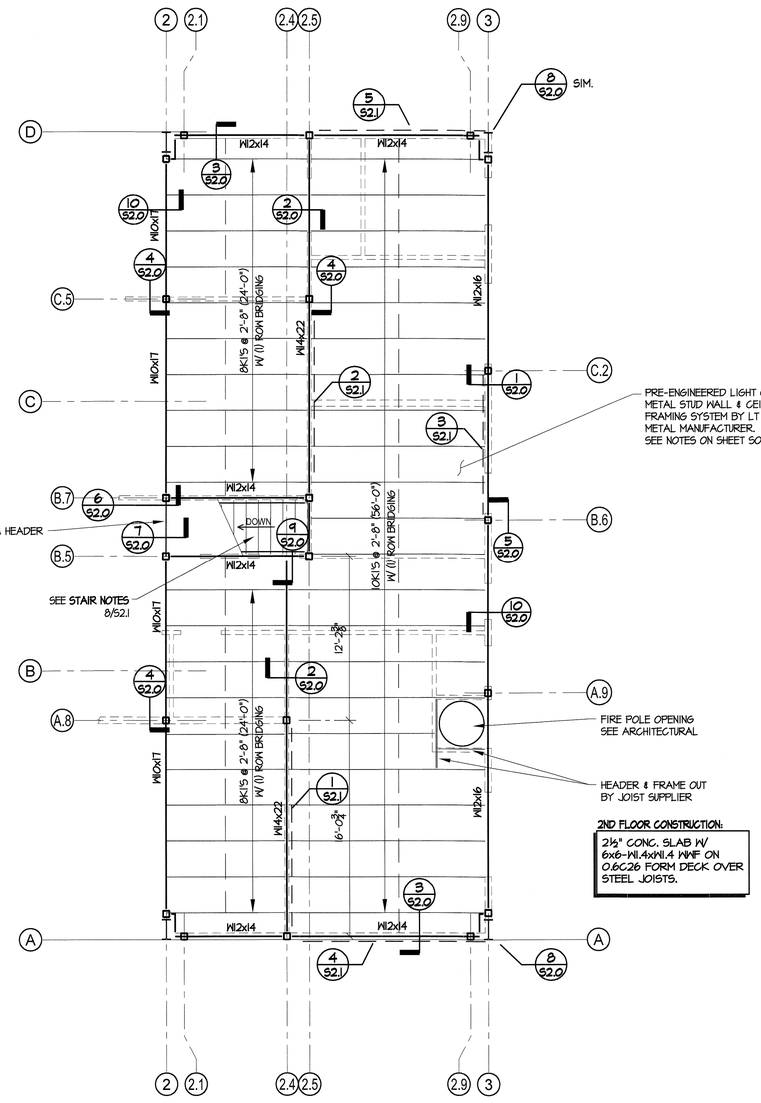
9 / 52.0 SECTION
1"=1'-0"



5 / 52.0 SECTION
1"=1'-0"



10 / 52.0 DETAIL
NTS



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

JOHN P. CLARK, PE
STRUCTURAL ENGINEERING
PO BOX 3
SEARCY, ARKANSAS 72145
PH: (501) 305-3735

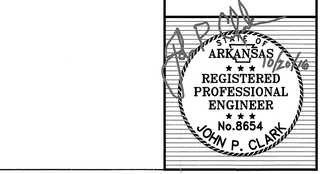
PROJECT:
SEARCY FIRE STATION #2
GOLF COURSE DRIVE
SEARCY, ARKANSAS

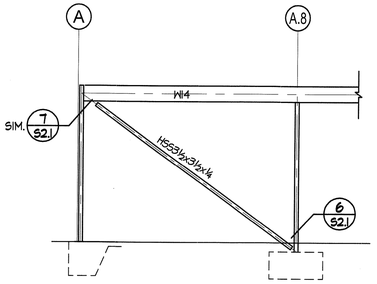
SHEET TITLE:
2nd FLOOR FRAMING

SHEET NO.
S2.0

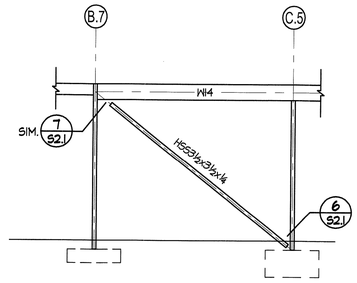
PROJECT NO.
16-09

DATE
10/28/16

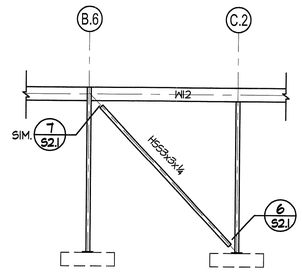




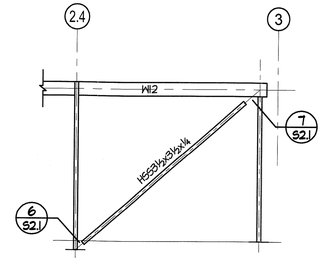
1 S2.1 BRACE @ GRID 2.4
NTS



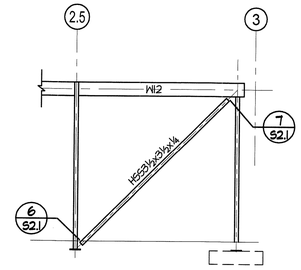
2 S2.1 BRACE @ GRID 2.5
NTS



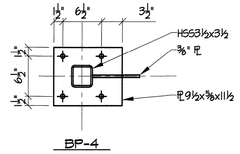
3 S2.1 BRACE @ GRID 3
NTS



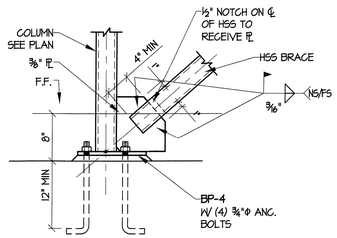
4 S2.1 BRACE @ GRID A
NTS



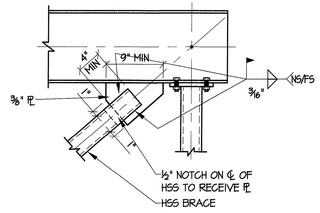
5 S2.1 BRACE @ GRID D
NTS



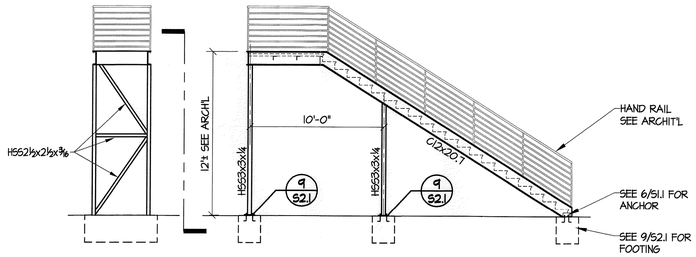
BP-4



6 S2.1 SECTION
1"=1'-0"

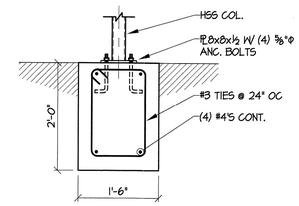


7 S2.1 SECTION
1"=1'-0"



8 S2.1 EXTERIOR STAIR
NTS

STAIR NOTES:
SEE ARCH'L FOR STAIR CONFIGURATION.
PROVIDE PRE-ENGINEERED STAIR SYSTEM DESIGNED & DETAILED BY STAIR SUPPLIER.
SIZES SHOWN ARE FOR ESTIMATING PURPOSES. FINAL DESIGN SIZES MAY VARY.
STAIR SUPPLIER RESPONSIBLE FOR DESIGN & DETAILING OF STEEL, CONCRETE PAN STAIR SYSTEM, INTERMEDIATE LANDINGS & LANDING SUPPORTS.
DETAILING SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER IN THE STATE OF ARKANSAS.



9 S2.1 EXTERIOR STAIR
NTS

JOHN P. CLARK, PE
STRUCTURAL ENGINEERING
PO BOX 3
SEARCY, ARKANSAS 72145
PH: (501) 305-3735

PROJECT:
SEARCY FIRE STATION #2
GOLF COURSE DRIVE
SEARCY, ARKANSAS

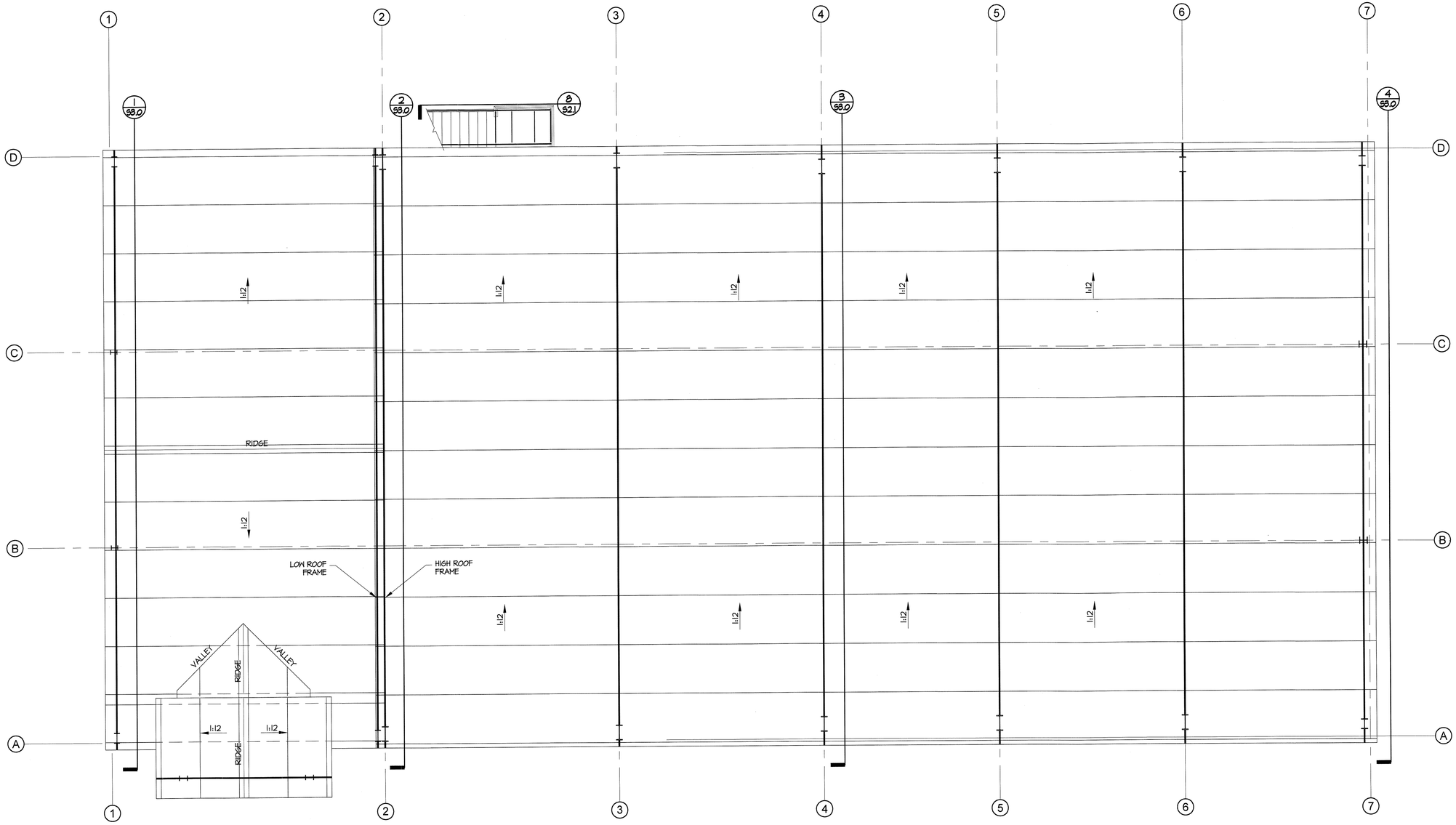
SHEET TITLE:
DETAILS

SHEET NO.
S2.1

PROJECT NO.
16-09

DATE
10/28/16

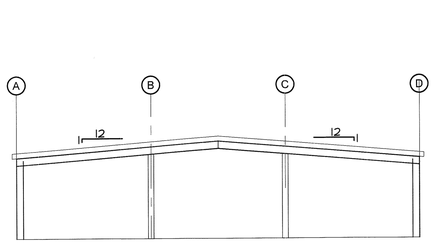
STATE OF ARKANSAS
10/28/16
REGISTERED PROFESSIONAL ENGINEER
No.8654
JOHN P. CLARK



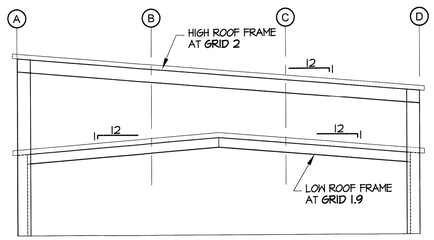
METAL BUILDING ROOF FRAMING PLAN

3/16" = 1'-0"

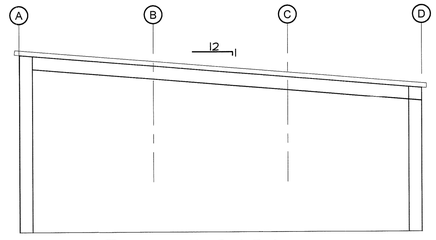
NOTE:
SEE METAL BUILDING NOTES SHEET S0.0



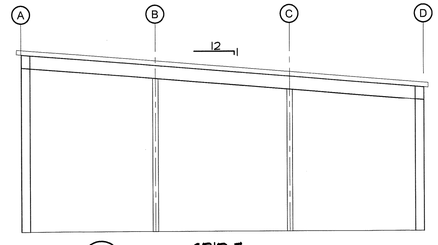
1 / 58.0 GRID 1
NTS



2 / 58.0 GRID 1.9 & 2
NTS



3 / 58.0 GRID 3, 4, 5, 6
NTS



4 / 58.0 GRID 7
NTS

JOHN P. CLARK, PE
STRUCTURAL ENGINEERING
P.O. Box 3
SEARCY, ARKANSAS 72145
PH: (501) 305-3735

PROJECT:
SEARCY FIRE STATION #2

GOLF COURSE DRIVE
SEARCY, ARKANSAS

SHEET TITLE:
METAL BUILDING ROOF FRAMING PLAN

SHEET NO.
S3.0

PROJECT NO.
16-09

DATE
10/28/16

STATE OF ARKANSAS
10/28/16
REGISTERED PROFESSIONAL ENGINEER
No. 8654
JOHN P. CLARK

MECHANICAL ABBREVIATIONS

NOTES:
1. ALL ABBREVIATIONS SHOWN MAY NOT BE APPLICABLE TO THE PROJECT.
2. REFER TO EQUIPMENT SCHEDULES FOR EQUIPMENT DESIGNATIONS.
3. REFER TO SYMBOLS FOR ADDITIONAL ABBREVIATIONS THAT MAY APPLY.

A

ABV	ABOVE
A/C	AIR CONDITIONER, AIR CONDITIONING
ACC	AIR COOLED CHILLER
ACCU	AIR COOLED CONDENSING UNIT
ADJ	ADJUSTABLE
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
AMB	AMBIENT
AMP	AMPERES
ANSI	AMERICAN NAT'L STANDARDS INSTITUTE
APD	AIR PRESSURE DROP (INCHES WC)
ARCH	ARCHITECT, ARCHITECTURAL
ARI	AIR CONDITIONING & REFRIG INSTITUTE
ASHRAE	AMERICAN SOCIETY OF HEATING, REF. & AC ENGINEERS
ASME	AMERICAN SOCIETY OF MECH ENGRS
ASTM	AMERICAN SOCIETY OF TESTING & MATLS
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
AWW	AMERICAN WATER WORKS ASSOC.
ASSY	ASSEMBLY

B

BAS	BUILDING AUTOMATION SYSTEM
BD	BACKDRAFT DAMPER
BFW	BOILER FEED WATER
BKR	BREAKER
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
BTU	BRITISH THERMAL UNIT

C

CAP	CAPACITY
CATV	CABLE TELEVISION SYSTEM
CCTV	CLOSED CIRCUIT TELEVISION
CC	CONCRETE
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHR	CHILLED WATER RETURN
CHW	CHILLED WATER SUPPLY
CIRC	CIRCULATING
CKT	CIRCUIT
℄	CENTERLINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
CONN	CONNECT, CONNECTION
COTG	CLEANOUT TO GRADE
COL	COLUMN
CPVC	CHLORINATED POLYVINYL CHLORIDE
CRD	CEILING RADIATION DAMPER
CU	COPPER
°C	DEGREES CELSIUS
CV	CONSTANT VOLUME
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
CW	COLD WATER

D

D	DEEP, DEPTH
DB	DRY BULB
DBL	DOUBLE
dB	DECIBEL
DEF	DEFLECTION
DEG	DEGREES
DESIG	DESIGNATED, DESIGNATION
DDC	DIRECT DIGITAL CONTROL
DIA,	DIAMETER
ø	DIMENSION
DIM	DISCONNECT
DISC	DOWN
DN	DOUBLE-POLE, DOUBLE-THROW
DPDT	DOUBLE-POLE, SINGLE-THROW
DPST	DOWNSPOUT, DISCONNECT SWITCH
DS	DRAWING
DWG	DRAIN, WASTE, AND VENT
DWV	DIRECT EXPANSION
DX	

E

EA	EXHAUST AIR, EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EDB	ENTERING DRY BULB
ELEV	ELEVATION
ELEC	ELECTRICAL
ENCL	ENCLOSURE
EQP, EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WET BULB
EWC	ELECTRICAL WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST	EXISTING
EXT	EXTRUDED

F

FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FCO	FLOOR CLEANOUT
FL	FLOW LINE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FT	FOOT, FEET
°F	DEGREES FAHRENHEIT

G

GRND	GROUND
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFI, GFIC	GROUND FAULT INTERRUPTER
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE

H

HD	HEAD, HUB DRAIN, HEAVY DUTY
HGBP	HOT GAS BYPASS
HGRH	HOT GAS REHEAT
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HORIZ	HORIZONTAL
HP	HORSEPOWER
HSPF	HEATING SEASON PERFORMANCE FACTOR
HSTAT	HUMIDISTAT
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HVAC	HEATING, VENTILATING & A/C
HW	HOT WATER
HYD	HYDRANT
HZ	HERTZ

I

ID	INSIDE DIAMETER
IDB	INDOOR DRY BULB
IE	INVERT ELEVATION
IN	INCH, INCHES
IN WC	INCHES OF WATER COLUMN

J

J-BOX	JUNCTION BOX

K

KVA	KILOVOLT-AMPS
KW	KILOWATTS
KWH	KILOWATT-HOUR

L

	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS, #	POUNDS
LDB	LEAVING DRY BULB
LF	LINEAR FEET
LP	LOW PRESSURE, LIQUID PETROLEUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE

M

MAX	MAXIMUM
MBTU, MBH	1000 BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MOCP	MAXIMUM OVER CURRENT PROTECTION
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MTD	MOUNTED

N

N/A	NOT APPLICABLE
NC	NOISE CRITERIA, NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MFR'S ASSOC.
NFPA	NATIONAL FIRE PROTECTION ASSOC.
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE

O

OA	OUTSIDE AIR (VENTILATION AIR)
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
ODB	OUTDOOR DRY BULB
OH	OVERHEAD
OPNG	OPENING
OS&Y	OUTSIDE STEM AND YOKE
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMIN.
OF/CI	OWNER FURNISHED/CONTRACTOR INSTALLED

P

PD	PRESSURE DROP
PF	POWER FACTOR
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PNL	PANEL
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PRV	PRESSURE RELIEF VALVE
PVC	POLYVINYL CHLORIDE

Q

QTY	QUANTITY

R

RA	RETURN AIR
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE:	REFERENCE, REFER TO
RECIRC	RECIRCULATE
REINF	REINFORCING, REINFORCED
REQD	REQUIRED
REV	REVISION, REVISE
RH	RELATIVE HUMIDITY, RIGHT-HAND
RHG	REFRIGERANT HOT GAS
RL	REFRIGERANT LIQUID
RLA	RUNNING LOAD AMPS
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION

S

SA	SUPPLY AIR
SD	SMOKE DAMPER, STORM DRAIN, SUPPLY DIFFUSER
SECT	SECTION
SENS	SENSIBLE
SF	SQUARE FEET, SQUARE FOOT
SGL	SINGLE
SHT	SHEET
SM	SHEET METAL
SMACNA	SHEET METAL & A/C CONT NAT'L ASSOC.
SOV	SHUT-OFF VALVE
SP	STATIC PRESSURE
SPEC	SPECIFICATION, SPECIFY
SQ	SQUARE
SS	STAINLESS STEEL, SANITARY SEWER
ST	SOUND TRAP, STEAM TRAP
STD	STANDARD
STL	STEEL
SURF	SURFACE
SUSP	SUSPEND, SUSPENDED

T

TDH	TOTAL DYNAMIC HEAD
TE	TENANT EXHAUST (TOILET)
THRU	THROUGH
TOT	TOTAL
TP	TOTAL PRESSURE
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TWR	TOWER WATER RETURN
TWS	TOWER WATER SUPPLY
TYP	TYPICAL

U

UC	UNDERCUT
U/F	UNDERFLOOR
U/G	UNDERGROUND
U/S	UNDERSLAB
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTABLE POWER SUPPLY

V

	VOLT, VENT, VERTICAL
VA	VOLT-AMPERE
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VERT	VERTICAL
VTR	VENT THROUGH ROOF

W

	WATT, WIDTH
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WPD	WATER PRESSURE DROP
WT	WATERTIGHT, WEIGHT
WWF	WELDED WIRE FABRIC

X

XFRMR	TRANSFORMER

OTHER

12x12	RECTANGULAR DUCT SIZE
12/12	OVAL DUCT SIZE
12ø	ROUND DUCT SIZE

HVAC LEGEND

(NOT ALL MAY APPLY)

T	THERMOSTAT
S	TEMPERATURE SENSOR
M	DAMPER MOTOR
CO	CARBON MONOXIDE SENSOR
D	DUCT SMOKE DETECTOR
	RECT. MANUAL BALANCING DAMPER
	BAROMETRIC DAMPER
	FIRE DAMPER
	SMOKE DAMPER
	COMBINATION FIRE/SMOKE DAMPER
# MARK THROW CFM	SUPPLY AIR DIFFUSER – # INDICATES NUMBER OF SAME AIR DEVICES
# MARK CFM	RETURN OR TRANSFER AIR GRILLE – # INDICATES NUMBER OF SAME AIR DEVICES
# MARK CFM	EXHAUST AIR GRILLE – # INDICATES NUMBER OF SAME AIR DEVICES
	TURNING VANES
	INTERNALLY LINED DUCT
OR	SQUARE-ROUND TRANSITION
	DOUBLE WALL SPIRAL DUCT
	NEW EQUIPMENT
	EXISTING EQUIPMENT
	45 DEG BRANCH TAKE-OFF WITH 2" RAISED QUADRANT DAMPER
	45 DEG BRANCH TAKE-OFF WITHOUT DAMPER
	MANUAL DAMPER WITH 2" RAISED QUADRANT LEVER
UC	UNDERCUT DOOR MIN. 3/4" FOR TRANSFER AIR
EL. 100'	ELEVATION
	POINT OF CONNECTION TO EXISTING
	FLEXIBLE DUCT CONNECTION
	FLEXIBLE BRANCH DUCT (3' MAX.)
R	REFRIGERANT LINE SET (SUCTION AND LIQUID LINES)
C	CONDENSATE LINE

PLUMBING LEGEND

(NOT ALL MAY APPLY)

	COLD WATER
	HOT WATER
	HOT WATER RECIRCULATION
	SANITARY SEWER
	DRAIN/WASTE VENT
G	DRAIN/WASTE VENT
FCO	FLOOR CLEANOUT
WCO	WALL CLEANOUT
COTG	CLEANOUT TO GRADE
2-WAY COTG	2-WAY CLEANOUT TO GRADE
	UNION
OR OR OR	VERTICAL ELBOW, SGL DN, DBL RUNNING, & SGL UP
OR	VERTICAL TEE, DN AND UP
	VERTICAL TEE, DOUBLE
OR OR OR	HORIZONTAL CROSS, VERTICAL LEG UP AND DN
OR OR OR	ELL, TEE, AND CROSS
	BALL VALVE
	GATE VALVE
	CHECK VALVE
	ASME T&P VALVE
	BOILER DRAIN OR HOSE COCK
	PLUG VALVE
	VERTICAL VALVE

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12375
JAMIE L. GUINN

DATE: **10/28/16**

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **JLG**

MECHANICAL ABBREVIATIONS AND LEGEND

SHEET: **MP0.1**

SECTION 01 – GENERAL

1.01 CONTRACT DOCUMENTS AND GENERAL REQUIREMENTS

A. Refer to and comply with all other sections of the project specifications and project plans for the installation of all mechanical work.

B. These plans are diagrammatic in nature and are intended to establish size, general routing and location, and performance and are not intended to show all possible conditions. All work shall be fully coordinated with other trades to insure the installation of a complete, operating system that fits in the space allotted. Provide all labor, equipment, appurtenances and materials necessary, and perform all operations required for the installation of complete, functional mechanical systems as outlined on the drawings and described in the specifications.

C. Because this project is a new installation of several trades, unknown circumstances and interferences may occur. The Contractor shall visit the site prior to any bid submission to familiarize himself with the existing site conditions. The contractor shall coordinate with all other trades and make adjustments in routing and location and, if necessary, in size, in order to achieve the specified performance without incurring additions to the contract. Where actual field conditions differ significantly enough from design to affect pricing, the contractor shall notify the building Owner's Representative prior to bid submission for a resolution. No allowance will be made for lack of knowledge of field conditions.

D. Equipment scheduled or specified on drawings with "equal to", "reference product", or similar designations establish the minimum acceptable quality of equipment required for the project. If alternate manufacturer(s) or model(s) are proposed, they will, as a minimum, have the same availability, features, options, safety devices, capacities, quality of construction, serviceability, and characteristics as those of the scheduled or specified equipment. If a list of "acceptable" or "alternate" manufacturers are listed, only products from those manufacturers, in addition to the "equal to" or "reference product" manufacturer will be considered for approval.

E. Refer to architectural floor plans and reflected ceiling plans to coordinate mechanical equipment with layout of walls and partitions and locations of all ceiling mounted devices. For any items not shown on the reflected ceiling plans, prepare drawings of the proposed locations and present to the Owner's Representative for approval prior to installation.

F. All materials and equipment shall be new except those existing items indicated to be re-used. Any equipment or devices to be re-used shall be thoroughly cleaned and serviced to good working condition. All new equipment shall bear the label of the appropriate testing agency (UL, ETL, FM, CSA, AGA, ASTM, AMCA, PDI, CISPI, etc.). Provide one (1) year parts and labor warranty on all new equipment, systems and components, including workmanship.

G. Provide start-up of all equipment provided under this contract. Start-up will adhere to manufacturer's requirements and recommendations.

H. See notes on drawings for additional information, requirements, and restrictions regarding the mechanical work for this project.

I. The contractor shall maintain a clean set of mechanical 'as-built' record drawings separate from the field construction set. All changes to the original mechanical design shall be noted in the as-built record drawings in a neat, clean and orderly manner, and in colored ink or pencil. At project completion these drawings shall be submitted to the Architect/Engineer for approval prior to submission to the owner.

1.02 CODES, ORDINANCES, INSPECTIONS AND PERMITS

A. All work, materials, methods and equipment furnished and installed for this project is to comply with, be executed, and be inspected in accordance with local and state codes, laws, ordinances, rules and regulations applicable to particular class of work. Any fees or costs in connection therewith are to be paid by the contractor.

B. The contractor shall be responsible for coordination with all respective local utilities to ensure complete and operative systems. All service fees, connection fees, meter fees, etc. required by the local utility shall be paid by the contractor. All utility fees shall be determined prior to bid and included in the contractor's price as part of a turn-key job to the owner.

C. Arrange with Authority Having Jurisdiction (AHJ) for complete inspection, paying all charges and fees pertaining thereto.

D. Any insulation thickness listed in this specification or shown on the drawings is the minimum acceptable thickness, but is not to be used in lieu of minimum thickness required by locally adopted energy codes. Where a thickness shown on plans or in specifications differs from those required by code, the greater of the two thickness dimensions will be used.

E. All motors will comply with the local energy code.

1.03 SHOP DRAWINGS, SUBMITTALS AND SUBSTITUTIONS

A. Where equipment schedules list acceptable alternate manufacturers, only products from those manufacturers listed that equal the reference product's capacity, features, options, electrical characteristics, warranties, quality, etc. will be considered.

B. Submit a minimum of six (6) printed "hard" copies of manufacturer's catalog sheets and/or shop drawings covering all equipment and devices included in this contract. Indicate models, capacities, weights (shipping, installed, operating), finishes, furnished specialties, options, wiring diagrams, control diagrams and sequences, and accessories. Arrange submittals in sets and bind in folders. Information shall not be submitted piecemeal.

C. At the Contractor's option, submittals and shop drawings may be submitted electronically in PDF format. In all cases, both Plumbing and HVAC submittals and shop drawings shall be provided concurrently as a single package.

D. Piecemeal submission in "hard" copy or electronic copy of individual product/system information, unless specifically requested by the Architect and/or Engineer, will be summarily rejected.

E. Submittals are required even though equipment being furnished is exactly as specified.

F. Final decision as to whether or not a specific piece of equipment meets specifications will rest with Architect/Engineer.

1.04 GENERAL EQUIPMENT AND MATERIAL INSTALLATION

A. Mechanical equipment shall be as indicated in the equipment schedule or approved equivalent, and installed per the manufacturer's recommendations. Coordinate with Division 16, Electrical, before ordering equipment requiring electrical connections; coordinate quantity, size, and type of connection(s) and overcurrent protection; and disconnect(s), and starter(s) requirements. Do not mount disconnect switches over unit nameplates. All electrical work shall be done in conformance with these specifications, Division 16 specifications, the National Electric Code, and local codes. Where conflicting requirements may occur, the more stringent shall govern.

B. Support all ductwork, piping and equipment from structure. Do not support from other ductwork, piping, conduit, etc. Support all ductwork with hangers and supports per SMACNA. Support all piping with hangers, supports, anchors and guides per ANSI Code for pressure piping, ANS B31.1 with addenda 31.1 OA-69. Sizing and spacing of hangers shall be per these standards, unless otherwise noted. "C" clamps shall not be used unless tack welded or strapped to structural steel members.

C. Insulation shall be continuous at all wall and floor penetrations (except at fire dampers) and at hanger supports. Hanger supports for insulated piping shall be outside insulation; provide insulated inserts and sleeves at hangers. Insulation vapor barrier shall be sealed at all joints and seams, and at penetrations by appurtenances (damper rods, valve stems, etc.). Repair insulation at existing ductwork which has been reworked. Tears and punctures of vapor barrier shall be repaired and sealed. All piping and ductwork pressure testing shall be performed before insulation is applied.

D. Provide sleeves, clamps for piping at all wall and floor penetrations, and fire proofing at all rated wall and floor penetrations. Provide escutcheon plates at all visible wall and ceiling penetrations. Sleeves through concrete floors, concrete or CMU walls and concrete foundations shall be schedule 40 galvanized steel pipe. Sleeves through non-cementious cavity wall construction shall be minimum 20 gauge galvanized sheet steel with welded longitudinal joint. Sleeves in rated construction shall be provided in accordance with the listing of the particular U.L. design being utilized for the protection of the through-penetration. Sleeves through exterior walls, slabs on grade or foundations shall be sealed weathertight using an engineered sleeve seal equal to Metraseal. Provide riser clamps on all floor-floor pipe risers.

E. Locate new equipment away from walls to structure and rated walls as necessary to provide required clearances for proper operation, maintenance and inspection.

F. Install all new ductwork as high as possible, tight to structure above. Transition ductwork flat on top to maintain maximum bottom of duct elevation. Install all piping above ceiling as high as possible, with sloped piping as high as slope will allow. Raise any existing ductwork and piping as required to avoid conflict with new ceiling features and new light fixtures, field verify height of existing mechanical work.

G. Flexible duct runouts to diffusers shall be sized to match the device neck, unless otherwise noted. Maximum low pressure flex. duct length is 3 ft. Do not install flex duct through walls to structure, install only hard round steel ductwork through non-rated walls to structure (provide FD's at rated wall penetrations). Flexible duct runouts to diffusers shall be adequately supported and installed free of kinks and sags.

H. Locate diffusers and return air grilles as close as possible to positions indicated on drawings and as required to avoid conflict with new light fixtures and other ceiling mounted devices. Adjust length of duct connection to diffusers to the minimum length required to provide smooth, long radius bend connections, free of kinks and sags, and without unnecessary length or bends. Reduce length of connection by removing excess flex duct and reconnecting. Extend connections by adding necessary length of insulated, hard round steel duct at trunk duct tap and reconnecting existing flex duct to end.

I. All 2X2 lay-in diffusers shall have 4-way adjustable throw, unless noted otherwise. Adjust all diffusers in corridors or within 3 feet of a wall to provide 2-way or 3-way blow away from or parallel to walls.

J. Portions of ductwork visible through air distribution devices in finished areas shall be painted flat black.

K. Provide access panels in non-accessible ceilings and in walls to structure to allow adequate room for maintenance of equipment and balancing of system. Access panels shall maintain the fire rating of the wall or ceiling where required. See Architectural drawings.

L. Condensate drain lines shall be sized to match unit connection size (3/4" minimum) and as noted on plans, shall be trapped at the unit with a minimum 2" deep water seal, and shall be routed with a minimum slope of 1/8" per foot. Drain lines shall be terminated turned down above hub drains or floor drains on building interior; at roof drains, splash blocks or dry wells/French drains on building exterior; interior drains may be routed down in walls and below counters and terminated at the tailpiece of any sink or lavatory, should such connection be available (coordinate with Plumbing). At the Contractor's option, or where minimum slope cannot be maintained from the coil to the termination point, condensate drain pumps may be provided. Discharge from pump immediately to a high point and slope down to drain termination point. The Contractor shall be responsible for coordinating all requirements for drain pump installation (electrical connections, drain termination, code compliance for ceiling plenum installations, etc.)

M. Equipment mounted above ceiling shall be suspended from structure above with all-thread hanger rods, sized per equipment weight requirements. Provide combination spring/neoprene vibration isolators for equipment with moving parts (fans, compressors, etc.). Equipment supports (angles, channels, etc.) shall extend sufficiently past footprint of equipment to allow for installation of vibration isolators above supports and within equipment height. Locate equipment to provide adequate room from structure, walls above ceiling, and ceiling features to allow for maintenance of equipment and balancing of system. Provide auxiliary drain pan beneath entire unit for water storing equipment (water heaters) and equipment with cooling coils.

N. Flash all roof and exterior wall penetrations and seal water-tight. Provide wall sleeves for all wall penetrations..

O. Route equipment and piping system auxiliary drains to discharge locations approved by the AHJ. Where drain termination is not specifically noted on the plans, the Engineer shall be notified for direction.

P. All piping below handicap accessible sinks shall be insulated and installed as high as possible and as far back as possible to provide maximum wheelchair access, per ADA requirements.

Q. All waste and vent (DWV) piping 3" and above shall be sloped at 1/8" per foot minimum, piping 2-1/2" and smaller shall be sloped at 1/4" per foot minimum. Provide cleanouts at all changes in directions. Provide additional cleanouts in all DW piping at maximum 75 ft. intervals for 4" piping and above, and at maximum 50 ft. intervals for 3" piping and smaller.

R. All equipment suspended from roof structure shall be mounted on structural steel supports frames (channels or angles) bolted to supports and to equipment at each equipment support point (min. two points each on a min. of two frame members). Support frames shall be suspended by bolted all-thread rods from like sized frame members welded or positively bolted to a minimum of two roof frame members above. Support framing system shall be sized to support 200 percent of the total distributed equipment weight, frame members and all-thread rods shall be sized to support 200 percent of their respective point load weights.

S. Provide pipe supports at all piping changes in direction and at maximum center distances per ANSI Code for pressure piping, with sizing and spacing of hangers per these standards, unless otherwise noted. Mount piping on hangers within 12" of roof support structure above or provide seismic bracing for longer hanger lengths. Support grouped piping on trapeze type channel supports with two hanger rods, anchored to structure above; or rack type channels, supported from floor or grade below with two pipe stands and floor plates bolted to floor; clamp piping to supports. Support individual pipes from above with clevis, adjustable "J", or adjustable band type hangers with hanger rods anchored to structure above; or from wall with wall bracket. Provide riser clamps at floor penetrations and wall support brackets at vertical piping. Vertical risers shall be racked on walls, resiliently mounted to walls with "Unistrut" wall brackets and "Unisorb" clamping, or equivalent. Hanger rods shall be anchored to structure above with concrete anchors, beam clamps, or "C" clamps tack welded or strapped to steel structure. Hangers shall not support insulated piping directly from pipe and shall not crush the insulation system. Hangers shall be mounted outside the insulation with Foam-Glas inserts at all support points. Provide 18 ga. sheet metal saddles at all insulated piping hangers, saddles shall have width equal to 1/2 the pipe circumference and length equal to 4 times the insulation outer diameter. Galvanized pipe support hangers or other metals susceptible to galvanic corrosion are prohibited.

1.05 WARRANTY AND OPERATION INSTRUCTIONS

A. All materials, equipment, and work will carry, as a minimum, a full one (1) year warranty from time Owner accepts building or the date of substantial completion, whichever is earlier, regardless of start-up date of equipment.

B. A minimum of two (2) bound copies of operation and maintenance manuals for the entire mechanical system including controls) will be prepared by the Contractor and provided to the Owner. The Owner will be fully instructed in the operation and maintenance of the entire system by the Contractor.

1.06 EQUIPMENT CONNECTIONS

A. Each equipment item with drain connection will be provided with a properly sized drain run to the nearest floor drain or as directed. Minimum drain size will be equal to connection size or as indicated.

B. Rough-in and make final connection to all equipment provided under other Divisions of these specifications or by the Owner.

C. Contractor will install rough-ins only after he has received approved shop drawings or has obtained drawings and/or specifications for equipment provided by others.

1.07 FLASHINGS

A. Roof flashings are to be furnished and installed under the roofing division of these specifications.

1.08 CUTTING AND PATCHING

A. Provide all cutting and patching required to perform the mechanical work.

B. All cutting, patching and repair work will be done by workmen skilled in the trade required.

C. The contractor shall be responsible for a neat and clean cutting and patching operation. Where cutting of openings are excessive in size or openings in walls, ceilings, or floors are not trimmed, cut, sawcut, coredrilled, etc. in a neat and clean manner, the Contractor shall be responsible for making repairs as directed by the Architect at no additional cost to the owner.

1.09 EXCAVATION, TRENCHING AND BACKFILLING

A. All excavation, trenching and backfilling in connection with the mechanical system is included as part of this Division.

B. All excavation, trenching and backfilling required will be done as part of the contract price regardless of any implied conditions on the drawings or in these specifications.

C. Have all underground utilities located and marked before excavating. Instruct employees on markings and color codes and train employees on excavation and safety procedures for natural gas lines. When excavation approaches gas lines, expose lines by carefully probing and hand digging.

D. Walls of trenches shall be minimum 6" from side of nearest mechanical work. Install pipes with minimum 6" clearance between when located in same trench.

E. Pipe Trenching: Dig trenches to depth, width, configuration, and grade appropriate to piping being installed. Dig trenches to 6" below level of bottom of pipe to be installed. Install 6" bed of pea gravel or fine granular material, mechanically tamp to firm bed for piping, true to line and grade. Provide depressions only at hubs, couplings, flanges, or other normal pipe protrusions.

F. Do not backfill until work has been inspected, tested, approved. Do not bury lumber, metal, or other debris with backfill.

G. Trench Backfill: Backfill to 12" above top of piping with pea gravel or fine granular material. Compact properly and install marker warning tape. Continue backfill to finish grade in 6" layers, each properly moistened and mechanically compacted. Do not compact by hydraulic jetting. Settling shall be refilled, tamped and refinished.

1.10 SUPPORTS AND FOUNDATIONS

A. The Contractor will be responsible for the miscellaneous supporting systems.

B. Provide adequate pipe, equipment foundation and suspension systems in accordance with recognized engineering practices.

C. Pipe hangers will be equal to those manufactured by Grinnell.

D. Maximum allowable piping support intervals (unless reduced by local code):

a. Vertical piping – 15 ft. on center
b. Horizontal ferrous piping through 1" diameter – 6 ft. on center
c. Horizontal ferrous piping 1-1/4" through 2" diameter – 10 ft. on center
d. Horizontal ferrous piping over 2" diameter – 12 ft. on center
e. Horizontal cast iron – support twice in each section of pipe, minimum.
f. Plastic, PVC and CPVC piping – support at half the distance as ferrous pipe.

1.11 ELECTRICAL

A. Furnish and install all electrical interlock and control wiring for proper operation and control of all mechanical equipment.

B. Supervise and coordinate all electrical work in connection with mechanical system.

C. Furnish all motor controllers or contactors for proper operation of all motors.

D. Furnish equipment with factory supplied starters and disconnects where available.

1.12 VALVES

A. Gate Valves: Nibco Scott T-113 or F-619.

B. Globe Valves: Nibco Scott T-211 or F-718 (S) or (W).

C. Check Valves: Nibco Scott T-413 or F-918 (S) or (W).

D. Gas Cock (1" and below): Crane No. 270.

E. Gas Cock (1-1/4" and above): Rockwell No. 114 or No. 116.

F. All valve construction shall not contain 'yellow brass'.

1.13 TESTING – PLUMBING

A. Test all piping systems. Test buried pipe before backfilling.

B. Water piping shall be hydrostatically tested at 100 psi for not less than eight hours with no discernible pressure loss.

C. All gas piping shall be tested at twice the operating pressure or 150 psi, whichever is greater, with dry compressed air or nitrogen for a continuous period of not less than eight hours with no discernible pressure loss.

D. Storm, waste and vent systems shall be tested to a minimum hydrostatic head of ten feet, and this pressure shall be maintained a minimum of three hours and proved tight.

1.14 TESTING, ADJUSTING, AND BALANCING – HVAC

A. Start-up for all mechanical equipment shall be provided under this contract in strict accordance with the equipment manufacturer's start-up instructions. Where factory start-up is required, the manufacturer shall provided certified factory personnel. Factory start-up shall also require manufacturer's documentation of successful start-up to be included in the project closeout documentation.

B. Operate all HVAC equipment for a sufficient period of time to demonstrate that it is operating properly. Contractor will be required to make adjustments as necessary during the first year.

C. HVAC testing, adjusting, and balancing shall be performed by an NEBB certified agency. All mechanical components and air distribution systems will be tested and balanced by to provide flow rates as indicated on the drawings. All testing and balancing services (including those of independent test and balance contractors) will be done as part of the contract price. Provide a minimum of 5 original bound copies of a complete, typewritten test and balance reports for review upon project completion. Test and balance all equipment and air distribution devices to capacities indicated. Adjust drives as required. Report condition and operation of all controls and controlled devices.

D. Test all equipment controls for proper response to all applicable operation sequences: cooling, heating, economizer, and ventilation/exhaust cycles; normal, after hours, night setback, morning warm-up/cool down, and emergency modes.

E. Balance all system components to within –5% or +10% of design quantities indicated. Measure and record entering, leaving, and operating characteristics at all equipment for comparison with design capacities scheduled. Measurements/recordings may include, but are not limited to, the following: entering and leaving temperatures, pressures, velocities, and flow rates for all fluids (air, water, refrigerant, etc.); all electrical operating characteristics (voltage, amps, watts); unit model numbers, component sizes, and operating speeds (both motor and driven equipment rpm's).

F. Where initial measurements indicate equipment to be operating at conditions significantly different from scheduled capacities (greater than –5% or +10%), measure all entering, leaving, and operating conditions for diagnostic purposes; note any discrepancies between design requirements and installed conditions; and report same to the architect/engineer in writing as soon as possible.

1.15 MECHANICAL IDENTIFICATION

A. All piping, valves, and equipment will be appropriately identified with permanent markings. Markings and colors will comply with local requirements, and will indicate: equipment tag number; fluid (and pressures, where applicable) contained in pipe; direction of flow, etc.

B. Provide engraved plastic laminate equipment tags on all new and existing mechanical equipment. Nomenclature shall be proposed by HVAC contractor and approved by owner prior to fabrication.

C. Provide for each new and existing device controlling mechanical equipment (thermostat, sensor, switch, timer, etc.) a permanent label (metal, bakelite, plastic, or equivalent) with the controlled equipment name/tag/mark permanently embossed into the label. Mount label permanently affixed to device cover (or on inside of hinged covers) and located so as not to block device operation or instructions.

1.16 STORAGE, CLEANUP, AND DEBRIS REMOVAL

A. Coordinate storage of all equipment and materials with the owner's representative and general contractor. Continually maintain the construction site to keep areas clear of materials and debris. Additionally, provide cleanup and removal at the end of each daily work period.

*** END OF SECTION 01 SPECIFICATIONS ***

SECTION 22 – PLUMBING

22.01 FIXTURES AND TRIM

A. Fixtures will be equal to those scheduled on drawings, with all necessary support, trim and accessories required for a neat, clean, complete and operative installation provided under this contract.

B. All exposed finished metal parts will be chromium-plated, and all fixtures will be provided with some form of supply stop.

C. All supply angle stop valves shall be chrome plated brass body, wheel handle, and escutcheon plate. Provide angle stop valves at CW and HW supply connections at all fixtures (instantaneous type water heaters, sinks and lavatories, etc.) with flexible risers; and at all appliances (dishwashers, ice makers, coffee makers, vending machines, etc.)

D. All shut-off valves shall be ball valves with bronze body, chrome plated brass ball, and Teflon seat and packing; or Milwaukee "Butterball" with bronze body, stainless steel disk, and Viton disk seat. Provide shut-off valves and unions at all equipment connections (storage type water heaters, pumps, etc.).

E. The exact location and elevation of all plumbing fixtures shall be coordinated with and provided in accordance with the architectural plans. The Contractor shall coordinate the exact location and elevation of all plumbing fixtures prior to any rough-in or top-out of any plumbing piping and services. Where any fixture or fixture group is designated as ADA accessible, the installation of the fixture or fixture groups shall comply with the requirements of the latest revision of ADAAG, whether or not the requirements are indicated specifically on the drawings.

22.02 POTABLE WATER PIPING

A. Below Grade Beyond 5 Feet of Building Footprint:

a. Cast Iron AWWA C151 with ductile or gray iron standard thickness fittings and rubber gasketed joints with 3/4 inch diameter rods.

B. Below Grade Within 5 Feet of Building Footprint:

a. Cast Iron AWWA C151 with ductile or gray iron standard thickness fittings and rubber gasketed joints with 3/4 inch diameter rods.
b. 2" diameter and smaller: Copper tubing ASTM B88 Type K annealed with AWS A5.8 BCuP silver brazed (lead free) joints, no fittings.
c. Over 2" diameter: Copper tubing ASTM B88 Type K hard drawn with ASME A16.18 cast bronze or ASME 16.22 wrought copper or bronze fittings and AWS A5.8 BCuP silver brazed (lead free) joints.
d. No joints allowed below slab or grade. Wrap all below grade copper piping with continuous Armaflex insulation or Polyethylene sleeve.

C. Above Grade:

a. 2-1/2" diameter and smaller: Copper tubing ASTM B88 Type L hard drawn with ASME A16.18 cast bronze or ASME 61.22 wrought copper or bronze fittings and ASTM B32 Grade 95TA solder (lead free) joints.
b. Over 2-1/2" diameter: Copper tubing ASTM B88 Type K hard drawn with ASME A16.18 cast bronze or ASME 16.22 wrought copper or bronze fittings and AWS A5.8 BCuP silver brazed (lead free) joints OR Galvanized Steel pipe ASTM B53 schedule 40 with Cast Iron fittings and grooved mechanical joints.
c. Where exposed at fixtures, use seamless brass pipe, chrome plated.

22.03 STORM, SANITARY WASTE AND VENT PIPING, ROOF DRAIN PIPING

A. Below Grade Beyond 5 Feet of Building Footprint:

a. Cast Iron pipe and fittings ASTM A74 service weight hub and plain end with CISPI 301 or ASTM C564 neoprene elastomeric compression type gaskets.
b. PVC pipe and fittings ASTM D3033, ASTM D3034, or ASTM F679 type SDR 35 hub and plain end with ASTM F477 elastomeric compression type gaskets.

B. Below Grade Within 5 Feet of Building Footprint:

a. Cast Iron pipe and fittings ASTM A74 service weight hub and plain end with ASTM C564 neoprene elastomeric compression type gaskets.
b. PVC pipe and fittings ASTM D3033, ASTM D3034, or ASTM F679 type SDR 35 hub and plain end with ASTM F477 elastomeric compression type gaskets.

C. Above Grade:

a. Cast Iron pipe and fittings CISPI 301 service weight hubless with CISPI 310 neoprene elastomeric gaskets and stainless steel clamp-and-shield assemblies.
b. Cast Iron pipe and fittings ASTM A74 service weight hub and plain end with ASTM C564 neoprene elastomeric compression type gaskets. Copper Tubing and fittings ASTM B306 type DWV with ASME B16.23 cast bronze or ASME B16.29 wrought copper fittings and ASTM B32 grade 50B solder joints.
c. PVC is an acceptable alternate if allowed by local code, but PVC will not be allowed in return air plenums, or in areas exposed to vehicular or forklift traffic. Verify with local code officials prior to bid. If used, PVC sanitary waste lines above grade will be externally insulated with fiberglass insulation for sound attenuation.

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12371
JAMIE L. GUINN

DATE:
10/28/16

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY:
JLG

MECHANICAL SPECIFICATIONS

SHEET:
MP0.2

22.04 NATURAL GAS PIPING

A. Below Grade:

a. Black steel pipe ASTM A 53 Schedule 40 with ASTM A 234/A234M forged steel welding type fittings and ASME B31.1 welded joints. Cover pipe with AWWA C105 polyethylene jacket or double layer, half-loppe 10 mil polyethylene tape.
b. ASTM D2513 fusion welded polyethylene, DR-11.
c. Anodeless rises equal to Central Plastics Company or Willett Manufacturers Products shall be provided for transitions from below grade to above grade natural gas service.

B. Above Grade:

a. Less than 2" diameter: Black steel pipe ASTM A 53 Schedule 40 with ASME B16.3 malleable iron fittings. Joints NFPA 54 threaded.
b. 2" diameter and over: Black steel pipe ASTM A 53 Schedule 40 ASTM A 234/A234M forged steel welding type fittings, welded to ANSI B31.
c. Paint all exposed and exterior gas piping with primer and finish coat of enamel. Exterior piping to have two coats of enamel. Unless otherwise noted, gas piping exposed to view shall be painted 'OSHA safety yellow.'
d. Final connections to equipment located within building interiors only may be made utilizing ASTM A240, type 300 stainless steel corrugated tubing with ASTM E84 compliant 10 mil polyethylene jacketing. Maximum length shall be 24'.

22.05 INSULATION

A. Domestic Cold Water (Above-Grade): Equal to Owens-Corning 1" thick one-piece fiberglass pipe insulation with factory-applied White All-Service (ASJ) Vapor Barrier Jacket. Fittings will be molded or mitered fiberglass for sizes under 3", and molded fiberglass for sizes 3" and larger.

B. Domestic Hot Water and Hot Water Recirculation (Above-Grade): Equal to Owens-Corning 1" thick fiberglass, one-piece, pipe insulation with factory-applied White All-Service (ASJ) Vapor Barrier Jacket. Fittings will be OC-110 cement for sizes under 3", and molded fiberglass for sizes 3" and larger.

C. Domestic Hot and Cold Water (Below-Grade): Insulate piping located below slab or grade with "Foamglas" 3/4" thick and apply asphaltic coating equal to PC Pitcote 300. Insulation will be installed in accordance with manufacturer's instructions.

D. Exposed Hot Water, Cold Water, and Drain Pipes Serving Lavatories: Where hot and cold water pipes serving fixtures are exposed, insulate for ADA compliance with product equal to Handi-Lav-Guard as manufactured by Trueboro, Inc., Ellington, CT.

E. Horizontal Roof Drain and Overflow Piping (including pipe elbow below drain/overflow intake): Equal to Owens-Corning 1" thick one-piece fiberglass pipe insulation with factory-applied White All-Service (ASJ) Vapor Barrier Jacket. Fittings will be molded or mitered fiberglass for sizes under 3", and molded fiberglass for sizes 3" and larger.

F. All insulated piping located exterior to the building will have the exterior of the insulation covered with an aluminum jacket.

G. Where water lines are installed in ventilated attics or above the building insulation envelope, and where another method of freeze protection has not been provided, fiberglass batt type attic insulation equivalent to R-30 will be draped over the water lines. Insulation joints will be taped tight. This insulation requirement is in addition to pipe insulation.

22.06 TREATMENT AND ISOLATION

A. All potable water systems and equipment will be treated and purified in compliance with local health codes and local water jurisdiction requirements. As a minimum, flush entire system, introduce chlorine or hypochlorite to standards required by local utility and health department, but not less than 50 ppm residual chlorine. During sterilization, operate all valves, faucets, etc. so that all portions of the system are reached. Let stand for 24 hours minimum. Flush system with clean water until chlorine content is reduced to 1 ppm at point furthest from where chlorine was introduced. After flushing has been completed provide laboratory report of bacteriological tests on samples taken from system. Repeat sterilization process until satisfactory tests are obtained and approved by Health Department. System shall not be put into service until such approval has been obtained.

B. Furnish and install backflow prevention devices where potable water systems are stubbed out for connection to mechanical make-up water systems, at stub-outs for landscape irrigation systems, and for connections to any other non-potable type systems.

*** END OF SECTION 22 SPECIFICATIONS ***

SECTION 23 - HVAC

23.01 EQUIPMENT

A. All equipment will be equal to the reference products scheduled on the drawings. Minimum standards of quality in construction, manufacturing, performance, testing and certification shall be established by the basis of design equipment.

B. All exposed rotating machinery will be equipped with guards for safety. Guards used on equipment located on the exterior of the building will also serve as weather shields.

C. Warranties: Unless noted otherwise on the plans, minimum equipment warranties shall be as follows:

a. All refrigeration compressors: 5-years.
b. Aluminized-steel heat exhangers: 10-years
c. Stainless steel heat exchangers (primary and/or secondary): 15-years.

23.02 PIPING

A. Refrigerant Piping: ASTM B280, type ACR copper, hard temper, cleaned, dehydrated, and sealed. Fittings shall be wrought copper with cadmium-free solder, 45% silver brazing alloy, and class Bag-5.

B. Condensate Drain Piping:

a. ASTM D1785 schedule 40 PVC pipe and ASTM D2665 fittings.
b. ASTM B88 hard drawn copper with ANSI B16.22 wrought copper fittings.
c. ASTM B306 type DWV copper with ANSI B16.29 wrought copper fittings.
d. Join copper with ASTM B32 lead free solder, grade 95-TA 95-5 tin-antimony.
e. All condensate drain piping routed on building exterior shall be copper.

23.03 PIPE INSULATION, DUCT INSULATION AND DUCT LINER

A. All insulated piping located exterior to the building will have the exterior of the insulation covered with an aluminum jacket.

B. Refrigerant Suction: Elastomer closed-cell flexible equal to Armstrong's Armaflex-22 pipe insulation, 3/4" minimum thickness.

C. Condensate Drain (Overhead Horizontal): Elastomer closed-cell flexible equal to Armstrong's Armaflex-22 pipe insulation, 1/2" minimum thickness.

D. Air Devices: Insulate the top of all air devices exposed to unconditioned plenums or attics with minimum of blanket of 2" thick 3/4 pound density fiberglass faced duct wrap type with factory-applied flame retardant foil-reinforced Kraft facing.

E. Rectangular and Round Ductwork: Equal to ASTM C1290, type 75, flexible blanket, 3/4# density, factory-applied flame retardant foil-reinforced Kraft facing, Knauf Duct Wrap or equal. All ductwork will be wrapped unless indicated otherwise. Supply and return air ducts shall receive 2" thick insulation. Make-up, OSA, and exhaust air ductwork shall receive 1" thick insulation.

F. Duct Liner: Use only where specifically shown or noted. Liner will be ASTM C1071, type 1 flexible duct liner, 1.5# density, 1" thickness, equal to Knauf Duct Liner E-M.

G. Grease Hood Exhaust Duct: Wrap with 3M FireMaster or equal, 2" total thickness.

H. All internally and externally insulated duct sizes, except for double-wall spiral duct, indicated are metal-to-metal dimensions. Double wall spiral duct size indicated is inner wall dimension.

I. All insulation and liner will be UL listed with flame spread/fuel contributed/smoke developed rating of 25/25/50 in accordance with ASTM E 84.

23.04 SHEET METAL

A. Sheet metal ductwork will be installed in accordance with ASHRAE "Guide" and SMACNA "Low Velocity Duct Manual".

B. Dryer duct shall be minimum 26 gauge galvanized steel or aluminum. All joints shall be sealed air tight with sealant approved for dryer applications.

C. All duct dimensions indicate required clear inside duct dimensions. Fabricate duct accordingly to compensate for internal duct liner when applicable.

D. All rigid rectangular and round supply, return and space exhaust ductwork will be galvanized.

E. Grease Hood Exhaust Duct: Grease exhaust duct must be not less than 16 gauge carbon steel. All seams and joints are to have a liquid tight weld with duct sloped toward hood to prevent collection of grease residue. The exhaust duct must have a fire rated access door for cleaning duct at all changes in direction. Access must be at sides of duct. Horizontal ductwork shall pitch to drain back to hood at 1/4" per foot. Duct construction and installation must comply with NFPA 96.

F. Provide flexible connections at each air-handling device with fan.

G. Round-round supply air take-offs shall be equal to Air-Tite CATDRS galvanized saddle fitting with neoprene gasket on flange, integral damper with locking quadrant lever and 2" stand-off bracket.

H. Rectangular-round supply air take-offs shall be equal to Air-Tite HETDQ galvanized high-efficiency 45-degree fitting with neoprene gasket on flange, integral damper with locking quadrant lever and 2" stand-off bracket.

I. Rectangular-round return and exhaust air take-offs shall be equal to Air-Tite CATDQ galvanized high-efficiency flat fitting with neoprene gasket on flange, integral damper with locking quadrant lever and 2" stand-off bracket.

J. Provide adequate dampers so the dampers at the grilles are not required to balance the system. Install in accessible locations or at access panels / doors. Ganging of multiple diffusers onto one balancing damper is not acceptable unless specifically shown.

K. Grilles, diffusers and registers will be equal to those indicated on drawings.

23.05 FLEXIBLE AIR DUCTS

A. Listed under UL-181 standards as Class I Air Duct material. Minimum operating pressure 6" w.c., minimum working velocity 4,000 FPM. Insulated with 1" thick, 3/4 lb. density fiberglass insulation. Material must be acceptable to authority having jurisdiction. Note: Flexible ducts are not allowed on exposed round ducts.

23.06 DAMPERS AND DETECTORS

A. Provide U.L. listed fire, smoke, and combination fire-smoke dampers where indicated and/or noted. Verify the locations of all fire, smoke, and combination fire/smoke rated partitions with the architectural plans and provide rated dampers where required, whether or not they are specifically noted on the mechanical drawings. Rated dampers shall be U.L. Listed (#555 and/or #555S, as applicable) according to the type required. All dampers shall be installed in strict accordance with the manufacturer's instructions according to the damper's listing, rating, service type and installation requirements.

B. Louvers will be Greenheck or equal, size and type as indicated on the drawings. All louvers to be drainable type with insect screens.

C. Balancing dampers will be provided as indicated and where required to allow balancing of supply air to each air device, and to allow balancing of return air and outside air ratios. Rectangular balancing dampers shall be opposed blade configuration, 5-inch deep 20-gauge galvanized hat channel frame, 16 gauge galvanized steel blades, 1/2-inch plated steel axles, oil impregnated bronze bearings, manual hand quadrant with 2" stand-off bracket, Greenheck MBD-15 or equal. Round balancing dampers shall be 6-inch wide 20-gauge galvanized steel frame, 20 gauge galvanized steel blade, 3/8-inch square plated steel axle turning in acetal bearings, manual hand quadrant with 2" stand-off bracket, Greenheck MBDR-50 or equal.

D. Ionization type duct smoke detectors will be provided where indicated, noted and required or as required by code. At a minimum, smoke detectors are required in the return air ducts of air handling systems 2000 cfm or greater. Interlock all detectors for unit shutdown.

23.07 CONTROLS

A. Provide all temperature controls in accordance with recommendations of the equipment manufacturer and as indicated on the drawings.

B. Controls will be electronic.

C. Thermostats and temperature sensors shall not be located on exterior walls. Where it is unavoidable to do so, provide a minimum 1" thick rigid insulation thermal break between the thermostat/sensor base and the wall. The insulation shall be covered with sheet metal or other means to result in a neat, clean and workmanlike appearance.

D. Provide all wiring, etc., required for complete and operating system. Control wiring shall be minimum 18-gauge multi-strand plenum rated wiring. All wiring located in, above, or behind inaccessible cointratuion shall be installed in 3/4" EMT conduit. All wiring shall be routed continuously from the the control device to the controller, thermostat, or interface panel. Splicing shall not be permitted. Wiring connections shall be either crimped or soldered.

E. Furnish complete wiring diagrams showing all interlock wiring in addition to temperature control wiring diagrams. Wiring is to be color-coded and installed in accordance with NEC.

F. The mechanical contractor shall provide training to the owner on all HVAC control systems.

*** END OF SECTION 23 SPECIFICATIONS ***

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER

NES
CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032
LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212
PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
12375
DATE 10-28-16

DATE: 10/28/16

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: JLG

MECHANICAL SPECIFICATIONS

SHEET: MP0.3

PLUMBING GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE PLUMBING SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES AND CONTROLS COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL PARAMETERS GIVEN IN THESE DOCUMENTS SHALL BE STRICTLY CONFORMED TO. ANY ITEMS AND LABOR REQUIRED FOR A COMPLETE PLUMBING SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, LOCAL AUTHORITIES AND THESE CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ANY ADDITIONAL COST TO THE OWNER. THE WORD "PROVIDE" SHALL MEAN FURNISH AND INSTALL. CAREFULLY REVIEW ALL CONTRACT DOCUMENTS AND THE DESIGN OF OTHER TRADES BEFORE PREPARING SHOP DRAWINGS. THE "I WAS HERE FIRST" RULE DOES NOT QUALIFY AS COORDINATION.
2. ANY CONFLICTS OF WORK SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION BY THE PLUMBING CONTRACTOR PRIOR TO PURCHASE OF EQUIPMENT OR COMMENCEMENT OF WORK.
3. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL TRADES. PIPE ROUTING SHOWN IS DIAGRAMMATIC. PROVIDE ALL OFFSETS, ETC. TO AVOID INTERFERENCE'S WITH EQUIPMENT, PIPING, DUCT WORK, LIGHTS, CONDUIT, STRUCTURAL MEMBERS, ETC. ALL INVERTS SHALL BE VERIFIED IMMEDIATELY FOLLOWING AWARD OF CONTRACT. ALL INVERTS SHALL BE COORDINATED WITH STRUCTURAL FOOTINGS.
4. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL DRAWINGS. SET SLEEVES IN FLOORS AND WALLS AND ATTACHMENTS FOR HANGERS AS CONSTRUCTION PROGRESSES. COORDINATE THE EXACT SIZE AND LOCATION OF ALL SLEEVES WITH STRUCTURAL ENGINEER. ALL PENETRATIONS MUST BE SEALED AND HELD AS TIGHT TO COLUMNS OR WALLS AS POSSIBLE.
5. THE WORK SPECIFIED HEREIN SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, SUPPLIES AND SUPERVISION REQUIRED TO INSTALL AND PLACE IN OPERATION THE MECHANICAL SYSTEMS AND APPURTENANCES SPECIFIED HEREIN AND/OR INDICATED ON THE DRAWINGS OR REASONABLY IMPLIED AS NECESSARY FOR COMPLETION OF THE VARIOUS SYSTEMS. ALL WORK SHALL BE COMPLETED IN A NEAT AND CLEAN MANNER IN ACCORDANCE WITH CURRENT INDUSTRY STANDARDS.
6. ALL WORK SPECIFIED HEREIN SHALL BE PERFORMED BY PROPERLY LICENSED, TRAINED, AND EXPERIENCED TRADESMEN. THE CONTRACTOR SHALL PROVIDE A FIELD SUPERVISOR WITH THE AUTHORITY AND EXPERIENCE REQUIRED TO INSTRUCT THE WORK, MAKE JOB DECISIONS, AND ACT ON BEHALF OF THE CONTRACTOR IN MATTERS PERTAINING TO THE CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID.
8. THE CONTRACTOR SHALL REMOVE ALL RESPECTIVE CONSTRUCTION WASTE AND DEBRIS FROM THE SITE AND SHALL BE RESPONSIBLE FOR THE LAWFUL DISCARD OF SUCH WASTE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS. THE COMPLETED WORK AND THE ADJACENT AFFECTED AREAS SHALL BE THOROUGHLY CLEANED TO THE SATISFACTION ON THE OWNER, ARCHITECT, AND ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING, AND PAINTING REQUIRED BY THE RESPECTIVE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFACTORILY REPAIRING EXCESSIVE, UNNECESSARY PENETRATIONS OR OVERSIZED PENETRATIONS THROUGH CONSTRUCTION. IF THE ARCHITECT/ENGINEER DEEMS NECESSARY, ANY CONSTRUCTION DAMAGED FROM CUTTING OR PENETRATION ACTIVITIES SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER. THERE SHALL BE NO CUTTING OR PENETRATING OF CONSTRUCTION THAT WILL COMPROMISE THE STRUCTURAL INTEGRITY OF THE BUILDING SYSTEM. IF THE CONTRACTOR DEEMS IT NECESSARY TO ALTER, CUT, OR PENETRATE A STRUCTURAL MEMBER, EXPRESS PERMISSION SHALL BE GIVEN BY THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING. IT IS PERMISSIBLE FOR BEAMS TO BE PENETRATED WITH SMALL SCREWS WITHOUT PRIOR APPROVAL.
10. WALL/FLOOR PENETRATIONS:
    - A. STAINLESS STEEL PIPE ESCUTCHEONS SHALL BE PROVIDED AT ALL EXPOSED PIPE PENETRATIONS THROUGH WALLS. ESCUTCHEONS SHALL BE SECURED TIGHT TO WALL SURFACES.
    - B. ALL PIPING PENETRATIONS THROUGH EXTERIOR WALLS SHALL BE SLEEVED. THE INTERSTITIAL SPACE BETWEEN THE SLEEVE AND THE PIPE SHALL BE SEALED WEATHERTIGHT. STAINLESS STEEL ESCUTCHEONS SHALL BE PROVIDE ON BOTH SIDES OF THE SLEEVE FOR A NEAT AND CLEAN FINISH.
    - C. ALL PENETRATIONS THROUGH FIRE/SMOKE RATED CONSTRUCTION SHALL BE SEALED UTILIZING U.L. LISTED MATERIALS AND DESIGNS TO MAINTAIN FIRE-RATING. U.L. LISTED DESIGNS FOR EACH PENETRATION TYPE UTILIZED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE ARCHTIECT AND ENGINEER FOR APPROVAL.
11. FUEL-GAS PIPING:
    - A. ALL UNDERGROUND POLYETHYLENE FUEL GAS PIPING SHALL RECEIVE TRACER WIRE.
    - B. PROVIDE A GAS COCK AND A MINIMUM 6" DIRT LEG AT THE CONNECTIONS TO ALL FUEL-FIRED EQUIPMENT.
    - C. ABOVE GRADE EXTERIOR GAS PIPING SHALL BE SUPPORTED MINIMUM 3-1/2" ABOVE ALL HORIZONTAL FINISHED SURFACES INCLUDING, BUT NOT LIMITED TO, MECHANICAL PADS AND ROOFS. PIPE SUPPORTS SHALL BE PERMANENT AND SHALL SECURE PIPING IN PLACE IN A RIGID MANNER.
12. DUE TO THE SMALL SCALE OF THE PLANS, IT IS NOT ALWAYS POSSIBLE TO INCLUDE ALL PLUMBING LINE SIZES ON THE PLANS. REFER TO THE PLUMBING RISERS, DETAILS AND NOTES FOR ALL LINE SIZES NOT INDICATED ON THE PLUMBING PLANS.
13. REFER TO THE ARCHITECTURAL PLANS FOR ALL ROOM NAMES AND NUMBERS.
14. THE CONTRACTOR SHALL COORDINATE AS REQUIRED TO ENSURE NO WATER LINES PASS OVER ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, POWER PANELS, FIRE ALARM CONTROL PANELS, TRANSFORMERS, AND PHONE/DATA BOARDS.
15. ALL PIPING SYSTEMS SHALL BE PROTECTED AGAINST DISSIMILAR METAL GALVANIC CORROSION BY SEPARATION, INSULATION, OR ENGINEERED CONNECTIONS SUCH AS DIELECTRIC UNIONS.
16. ALL WATER PIPING SYSTEMS SHALL BE PROTECTED AGAINST WATER HAMMER AND HYDRAULIC SHOCK. WATER HAMMER ARRESTORS SHALL BE PROVIDED AS SCHEDULED AND IN ACCORDANCE WITH THEIR PDI RATING BASED ON THE NUMBER OF WATER SERVICE FIXTURE UNITS SERVED. WATER HAMMER ARRESTORS SHALL BE INSTALLED AT ALL QUICK CLOSING VALVES, INCLUDING BUT NOT LIMITED TO FLUSH VALVES. WATER HAMMER ARRESTORS SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
17. PIPE INSULATION SHALL BE CONTINUOUS AND UNBROKEN THROUGH ALL HANGERS, SUPPORTS, WALL PENETRATIONS, ETC.
18. PROVIDE SERVICE/SHUT-OFF VALVES ON ALL WATER BRANCH LINES SERVING INDIVIDUAL FIXTURES/EQUIPMENT. VALVES SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION. PROVIDE SHUT-OFF VALVES IN ACCORDANCE WITH AND WHERE REQUIRED BY THE RELEVANT PLUMBING CODE AND THE AUTHORITY HAVING JURISDICTION, WHETHER OR NOT VALVES ARE SPECIFICALLY NOTED ON THE PLANS.
19. PROVIDE ACCESS PANELS FOR SHOCK ABSORBERS, TRAP PRIMERS AND ALL VALVES LOCATED ABOVE NON-ACCESSIBLE CEILINGS AND INSIDE PIPE CHASES. EXACT LOCATION MUST BE COORDINATED WITH ARCHITECTURAL DRAWINGS AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
20. ALL DRAINAGE PIPING AND POTABLE WATER PIPING SHALL BE CONCEALED INSIDE WALLS AND PIPE CHASES OR ABOVE CEILINGS AS HIGH AS POSSIBLE.
21. COORDINATE ALL UNDERGROUND PIPING WITH GRADE BEAMS, WALL FOOTINGS, COLUMN FOUNDATIONS AND OTHER STRUCTURAL CONDITIONS. SEE STRUCTURAL PLANS FOR DETAILS REGARDING ANY PIPING PARALLEL TO, THROUGH OR UNDER FOOTINGS AND PIERS
22. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR LOCATION OF ALL PLUMBING FIXTURES. EXACT LOCATION OF ALL PLUMBING FIXTURES MUST BE VERIFIED IN FIELD PRIOR TO INSTALLATION. FINAL LOCATION SHALL BE AS DIRECTED BY ARCHITECT.
23. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTION TO ALL EQUIPMENT INDICATED ON DRAWINGS. FINAL CONNECTION SHALL INCLUDE ANY ADAPTERS, NIPPLES SHUTOFF VALVES, PRESSURE REGULATING VALVES, SHOCK ABSORBERS, BACKFLOW PREVENTION DEVICES, ETC.
24. PROVIDE A BACKFLOW PREVENTION DEVICE AT ALL CONNECTIONS TO MECHANICAL EQUIPMENT, IRRIGATION, VENDING MACHINES, ETC. AS REQUIRED BY CODE AND LOCAL AUTHORITIES. CONTRACTOR IS TO VERIFY WITH THE LOCAL AUTHORITY THE TYPE OF BACKFLOW PREVENTION DEVICE REQUIRED FOR ALL APPLICATIONS PRIOR TO INSTALLATION.
25. ALL STRUCTURAL PENETRATIONS (SLEEVES, BLOCKOUTS, ETC.) ARE TO BE LOCATED AND COORDINATED IN THE FIELD BY THE CONTRACTOR IN RELATION TO THE REQUIREMENTS OF FINAL EQUIPMENT AND FIXTURES SELECTED.
26. WHEN REQUIRED, COORDINATE ALL FLOOR SINK GRATE ORIENTATIONS AND REQUIRED OPEN SPACES (½ GRATE, 12" INCH GRATE, ETC.) WITH KITCHEN EQUIPMENT CONTRACTOR.
27. CLOSET FLANGES SHALL CAST-IRON. PVC CLOSET FLANGES SHALL NOT BE PERMITTED.
28. PLUMBING CONTRACTOR SHALL VERIFY VOLTAGE, PHASE AND WIRE SIZE OF PLUMBING EQUIPMENT REQUIRING ELECTRICAL CONNECTION WITH ELECTRICAL CONTRACTOR PRIOR TO PURCHASE OF EQUIPMENT
29. SANITARY VENTS MUST TERMINATE A MINIMUM OF 10 FT. FROM OR 2 FT. ABOVE AIR INTAKES, WINDOWS OR VENT SHAFTS.
30. INDIRECT WASTE RECEPTORS MUST BE LOCATED WHERE READILY ACCESSIBLE FOR INSPECTION AND CLEANING.
31. ALL INDIRECT WASTE PIPING SHALL DISCHARGE THROUGH AN AIR GAP OR AIR BREAK INTO A WASTE RECEPTOR. ALL INDIRECT WASTE PIPING THAT EXCEEDS TWO (2) FEET IN DEVELOPED LENGTH MEASURED HORIZONTALLY OR FOUR (4) FEET IN TOTAL DEVELOPED LENGTH, SHALL BE TRAPPED.
32. CONTRACTOR SHALL HANG ALL PIPING FROM THE STRUCTURAL MEMBERS (W-SHAPES, BAR JOISTS). PIPING SHALL NOT BE SUPPORTED FROM THE METAL DECK.
33. PROVIDE FIELD TESTABLE BACKFLOW PREVENTION DEVICE IN LINES SERVING HOSE BIBBS.

PLUMBING FIXTURE SCHEDULE

NOTES:
1. ALL INSTALLATION APPURTENANCES REQUIRED FOR THE COMPLETE AND OPERATIVE INSTALLATION OF ALL PLUMBING FIXTURES SHALL BE PROVIDED, WHETHER OR NOT SPECIFICALLY INDICATED IN THIS SCHEDULE.
2. WHERE THE PLANS INDICATE THE CONNECTION OF A FIXTURE DRAIN TO A COMBINATION WASTE/VENT SYSTEM, THE TRAP SIZE INDICATED IN THIS SCHEDULE SHALL BE INCREASED BY ONE FULL PIPE SIZE.
3. IN ACCORDANCE WITH FEDERAL LAW, WHETHER OR NOT SPECIFICALLY INDICATED IN THE PLUMBING FIXTURE SCHEDULE OR IN THE PLANS, ALL PLUMBING EQUIPMENT AND MATERIALS CONVEYING POTABLE WATER SHALL BE CONSTRUCTED WITH LEAD FREE MATERIALS IN ACCORDANCE WITH REDUCTION OF LEAD IN DRINKING WATER ACT.
4. REFER TO THE ARCHITECTURAL PLANS REGARDING THE MOUNTING HEIGHTS OF ALL FIXTURES. ALL ACCESSIBLE FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH ADAAG, WHETHER OR NOT THE REQUIREMENTS ARE SPECIFICALLY INDICATED ON THE DRAWINGS.
5. WHERE FIXTURE/EQUIPMENT LOCATIONS, MOUNTING HEIGHTS, ETC. ARE IN DOUBT, THE CONTRACTOR SHALL SEEK CLARIFICATION PRIOR TO BID AND ROUGH-IN.

MARK/ DESCRIPTION	MANUFACTURER/MODEL		SERVICES (INCHES) WASTE	VENT	CW	HW	REMARKS
WC-1 WATER CLOSET MANUAL FLUSH VALVE	BOWL	KOHLER #K-4350	4	2	1-1/2	--	WHITE VITREOUS CHINA, ELONGATED BOWL, SIPHON JET FLUSH, 10" OR 12" ROUGH-IN, 1-1/2" TOP SPUD, 14-3/4" HIGH, 1.6 GPF FLUSH VALVE, OPEN FRONT WHITE SEAT, SEAL, BOLT CAPS.
	SEAT	KOHLER #K-4670-C					
	FLUSH VALVE	ZURN Z6000-WS1					
WC-2 WATER CLOSET MANUAL FLUSH VALVE ADA COMPLIANT	BOWL	KOHLER #K-4302	4	2	1-1/2	--	WHITE VITREOUS CHINA, ELONGATED BOWL, SIPHON JET FLUSH, 10" OR 12" ROUGH-IN, 1 1/2" TOP SPUD, 16-1/2" HIGH, 1.6 GPF FLUSH VALVE, HANDLE INSTALLED TO WIDE SIDE OF TOILET ROOM, OPEN FRONT WHITE SEAT, SEAL, BOLT CAPS.
	SEAT	KOHLER #K-4670-C					
	FLUSH VALVE	ZURN Z6000-WS1					
L-1 LAVATORY VITREOUS CHINA WALL HUNG ADA COMPLIANT	BASIN	KOHLER #K-1729	2	1-1/2	1/2	1/2	WHITE VITREOUS CHINA, WALL MOUNTED 20"x18" BASIN W/FRONT OVERFLOW, COMMERCIAL CHROME-PLATED SOLID BRASS 4" CENTER FAUCET, INDEXED LEVER HANDLES, GRID STRAINER W/TAILPIECE, CAST BRASS P-TRAP, ANGLE SUPPLIES W/STOPS, CARRIER, INSULATION ON DRAIN AND SUPPLIES.
	FAUCET	T&S BRASS #B-0871					
	STOPS	BRASSCRAFT #OCR1912AZ C					
	GRID STRAINER	BRASSCRAFT #0701					
	TRAP	BRASSCRAFT #0010					
	CARRIER	ZURN #Z1231 SERIES					
	INSULATION	TRUEBRO LAV-GUARD 2					
SK-1 DOUBLE BASIN STAINLESS STEEL COUNTER MOUNTED ADA COMPLIANT DEPTH	BASIN	ELKAY #LRAD331955-4	2	1-1/2	1/2	1/2	18 GA. TYPE 304 STAINLESS STEEL, 4-HOLE DRILLING, COUNTER MOUNTED, ADA COMPLIANT, 33"x19"x5-1/2" DEEP, 8" COMMERCIAL CHROME-PLATED CENTER FAUCET WITH SIDESPRAY, SOLID BRASS CONSTRUCTION, 8" SWING NOZZLE, INDEXED LEVER HANDLES, BASKET STRAINER W/TAILPIECE, CAST BRASS P-TRAP, ANGLE SUPPLIES W/STOPS. PROVIDE INSULATION ON TRAP AND SUPPLIES WHEN CABINET IS OPEN TO PLUMBING - REFER TO ARCHITECTURAL.
	FAUCET	T&S BRASS #B-1172					
	STOPS	BRASSCRAFT #OCR1912AZ C					
	BASKET STRAINER	BRASSCRAFT #0703					
	TRAP	BRASSCRAFT #0020					
	INSULATION	TRUEBRO LAV-GUARD 2					
SK-2 DOUBLE BASIN STAINLESS STEEL COUNTER MOUNTED DEEP BASIN	BASIN	ELKAY #DLFR191810	2	1-1/2	1/2	1/2	18 GA. TYPE 304 STAINLESS STEEL, COUNTER MOUNTED, 19"x18"x10" DEEP, 8" COMMERCIAL CHROME PLATED CENTER FAUCET WITH SIDESPRAY, SOLID BRASS CONSTRUCTION, 8" SWING NOZZLE, INDEXED LEVER HANDLES, BASKET STRAINER W/TAILPIECE, CAST BRASS P-TRAP, ANGLE SUPPLIES W/STOPS.
	FAUCET	T&S BRASS #B-1172					
	STOPS	BRASSCRAFT #OCR1912AZ C					
	BASKET STRAINER	BRASSCRAFT #0703					
	TRAP	BRASSCRAFT #0020					
SS-1 SERVICE SINK FLOOR BASIN	BASIN	MUSTEE #63M	3	1-1/2	3/4	3/4	WHITE MOLDED FIBERGLASS FLOOR BASIN, 24"x24"x10" DEEP BASIN, REMOVABLE CHROME FLAT STRAINER, WALL FAUCET W/VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK, AND THREADED HOSE END, HOSE AND HOSE BRACKET, 3-CLAMP MOP HANGER, BUMPER GUARDS, AND STAINLESS STEEL WALL GUARDS.
	FAUCET	MUSTEE #63.600A					
	BUMPER GUARDS	MUSTEE #63.401					
	MOP HANGER	MUSTEE #63.600					
	HOSE/CLAMPS	MUSTEE #65.700					
	WALL GUARD	MUSTEE #63.2436					
SH-1 GELCOAT SHOWER 36"x36" BASIN	MODULE	AQUARIUS #G 3679 SH	3	1-1/2	3/4	3/4	GELCOAT FIBERGLASS BASIN WITH SIX-INCH TILE PATTERN, TWO INTEGRAL SOAP LEDGES, 36"x36"x78" TALL WITH OPEN TOP, VERIFY RIGHT OR LEFT HAND UNIT PRIOR TO BID; ASSE 1016 COMPLIANT SOLID BRASS PRESSURE BALANCED MIXING VALVE WITH ADJ. TEMP. LIMIT STOP AND 1/2" NPT CONNECTIONS, HOT/COLD INDEXED CHROME COVER PLATE ASSEMBLY, 2.5 GPM SHOWER HEAD WITH ADJ. SPRAY AND 1/2" NPT CONNECTION; BRASS BODY NO-CAULK DRAIN WITH STAINLESS STEEL STRAINER, WATERTIGHT GASKET AND SECURING NUT; CURVED, ADJUSTABLE STAINLESS STEEL CURTAIN ROD.
	SHOWER VALVE/HEAD	T&S BRASS #B-3301					
	DRAIN	ZURN #FD-2275					
	SHOWER ROD	DELTA #42205-SS					
EWC-1 ELECTRIC WATER COOLER SINGLE UNIT WITH GLASS FILLER	FOUNTAIN	OASIS #PGBAC	2	1-1/2	1/2	--	ELECTRIC WATER COOLER, BARRIER FREE, 120/1/60, 1/4 HP COMPRESSOR, 4.6 FLA, 8.0 GPH OF 50 DEG F WATER AT 90 DEG F AMBIENT AND 80 DEG F INLET. PROVIDE WITH INTEGRAL, FACTORY MOUNTED GLASS FILLER.
	STOPS	BRASSCRAFT #OCR1912AZ C					
	TRAP	BRASSCRAFT #0010					
	CARRIER	ZURN #Z1225 SERIES					
WMB WASHING MACHINE DRAIN/VALVE BOX	GUY GRAY #B200		-	-	1/2	1/2	G90 HOT DIP GALVANIZED 20 GAUGE BOX AND FACEPLATE, CENTER DRAINING, AND HOT AND COLD HOSE BIBBS WITH THREADED HOSE-END CONNECTIONS. WALL BOX IS FOR WATER SUPPLY ONLY - CAP THE DRAIN CONNECTION - WASHER SHALL DRAIN TO THE TRENCH (REFER TO THE PLANS).
IMB ICE MAKER VALVE BOX	GUY GRAY #BIM875		-	-	1/2	-	G90 HOT DIP GALVANIZED 20 GAUGE BOX AND FACEPLATE, 1/2" VALVE WITH 1/4" O.D. COMPRESSION OUTLET.
FD-1 FLOOR DRAIN	ZURN #ZN-415-6S PROSET SYSTEMS TRAP GUARD		2	1-1/2	--	--	COATED CAST-IRON BODY, ADJUSTABLE STRAINER TOP, 6x6 SQUARE NICKEL BRONZE GRATE, AND TRAP GUARD SEAL.
FS-1 FLOOR SINK	ZURN #ZN-1901-2 PROSET SYSTEMS TRAP GUARD		4	2	--	--	CAST-IRON BODY, ENAMEL COATED INTERIOR, 12" SQUARE x 8" DEEP, NICKEL BRONZE 1/2 GRATE, ABS PLASTIC DOME STRAINER IN DRAIN OPENING, AND TRAP GUARD SEAL.
LT-1 LINT TRAP	ROCKFORD #RLS-2824		4	2	--	--	ALL WELDED 10-GAUGE STEEL LINT SEPARATOR, 50 GALLON STATIC HOLDING CAPACITY, 4" TAPPED INLET/OUTLET WITH 2" TAPPED INTERNAL VENT CONNECTION, VISIBLE DOUBLE-WALL OUTSIDE TRAP SEAL, REMOVABLE FILTER, REMOVABLE 3/8" NON-SKID DIAMOND TREAD PLATE COVER FOR FLUSH-WITH-FLOOR INSTALLATION WITH STAINLESS STEEL SCREWS, RECESSED LIFT HANDLES IN COVER, HEAVY DUTY LEAK-PROOF GASKET, AND OPEX SHOP COATING INSIDE/BITUMINOUS COATING OUTSIDE. LINT TRAP SHALL BE MOUNTED FLUSH WITH THE SLAB IN A FULLY ACCESSIBLE LOCATION. PROVIDE INTEGRAL EXTENSION AS REQUIRED TO MAINTAIN FLOW INVERTS.
S/O-1 SAND/OIL SEPARATOR	PETERSON CONCRETE TANK COMPANY 1,000 GALLON CAPACITY		4	2	--	--	PRECAST CONCRETE BASIN, 4500 PSI CONCRETE @ 28 DAYS, TOP/BOTTOM REINFORCEMENT SHALL BE #4 REBAR @ 20" O.C.E.W. WITH 6X6X10 WIRE MESH, SIDE REINFORCEMENT SHALL BE #3 REBAR @ 20" O.C.E.W. WITH #12 TWISTED CABLE, 2 EACH STANDARD MANHOLE RING AND COVERS, KOR-N-SEAL BOOTS.
TD-1 FLOW-THRU TRENCH DRAIN	ZURN #886-HD-DGC		4	--	--	--	MODULAR TRENCH DRAIN SYSTEM, HIGH DENSITY POLYETHYLENE BODY, CLASS C TRAFFIC RATED GRATE, CONTINUOUS 0.75% SLOPE
COTG CLEANOUT TO GRADE	ZURN #Z1400-BP-HD		SEE PLAN	--	--	--	CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, BRONZE PLUG, AND ROUND SCORIATED AND SECURED CAST-IRON COVER. SEE PLUMBING PLAN FOR SEWER LINE CONNECTION SIZES.
FCO FLOOR CLEANOUT	ZURN #Z1400-BP		SEE PLAN	--	--	--	CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, FLANGED FERRULE AND ROUND SECURED NICKEL BRONZE TOP. SEE PLUMBING PLAN FOR SEWER LINE CONNECTION SIZES.
WCO WALL CLEANOUT	ZURN #Z1446		SEE PLAN	--	--	--	CAST IRON CLEANOUT TEE WITH THREADED BRASS COUNTERSUNK PLUG DRILLED AND TAPPED FOR A 1/4-20 SCREW. PROVIDE STAINLESS STEEL ROUND WALL COVER.
WHA WATER HAMMER ARRESTOR	WADE SHOKSTOP		--	--	SEE PLAN	--	PISTON TYPE, TYPE L COPPER CASING, AIR CHAMBER SEALED W/(2) BUNA-N RINGS AND POLY-PISTON - OR - BELLOWS TYPE, NITROGEN PRECHARGED, STAINLESS STEEL BELLOWS AND STAINLESS STEEL CASING. SEE PLANS FOR PDI RATING OF INDIVIDUAL ARRESTORS
HB-1 HOSE BIBB FREEZE PROOF	WOODFORD #B67 NIDEL #37HA		--	--	3/4	--	AUTOMATIC DRAINING, FREEZE PROOF, DOUBLE CHECK VALVES, ANTI-SIPHON VACUUM BREAKER, TEE-KEY OPERATION, AND LOCKING CHROME WALL BOX MARKED "WATER".
HB-2 HOSE BIBB	WOODFORD #24P		--	--	3/4	--	MILD CLIMATE, ANTI-SIPHON WALL FAUCET WITH VACUUM BREAKER.
RPZ REDUCED PRESSURE ZONE BACKFLOW PREVENTER	WATTS #909-NRS-S		--	--	2-1/2	--	USCFCCCHR AND ASSE 1013 APPROVED, U.L. LISTED CONSISTING OF (2) INDEPENDENTLY OPERATING CHECK VALVES WITH INTERMEDIATE RELIEF VALVE, (4) INTEGRAL TEST COCKS, INLET AND OUTLET NON-RISING STEM GATE VALVES, INLET Y-STRAINER, AND AIR GAP FITTING.
IWH-1 INSTANTANEOUS WATER HEATER GAS-FIRED	RHEEM RTGH-95DVLN-1 3.8 GPM @ 100°F TEMP. RISE 140°F SETPOINT		--	--	1	1	INSTANTANEOUS WATER HEATER, NATURAL GAS-FIRED, 199.0 MBTUH INPUT, 94% THERMAL EFFICIENCY, 2-PIPE POWER DIRECT VENT, STAINLESS STEEL CONDENSING HEAT EXCHANGER, MANIFOLD CONTROL FOR PARALLEL PIPING OF MULTIPLE HEATERS, HOT-START PROGRAMMING TO MINIMIZE "COLD WATER SANDWICH EFFECT", 120V POWER CORD, INTEGRAL MANUAL GAS ISOLATION VALVE.
P-1 DOMESTIC HOT WATER CIRCULATOR	TACO 009 4.0 GPM @ 22' TDH		--	--	--	3/4	CAST IRON OR BRONZE BODY, ALUMINUM STATOR HOUSING, STAINLESS STEEL CARTORIDGE, NON-METALLIC IMPELLER, CERAMIC SHAFT, CARBON BEARINGS, EPDM O-RINGS AND GASKETS, AQUASTAT CONTROL SET AT 120°F (ADJUSTABLE).

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER

NES
CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032
LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212
PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JAMIE L. GIVENS
No. 12378

DATE: **10/28/16**

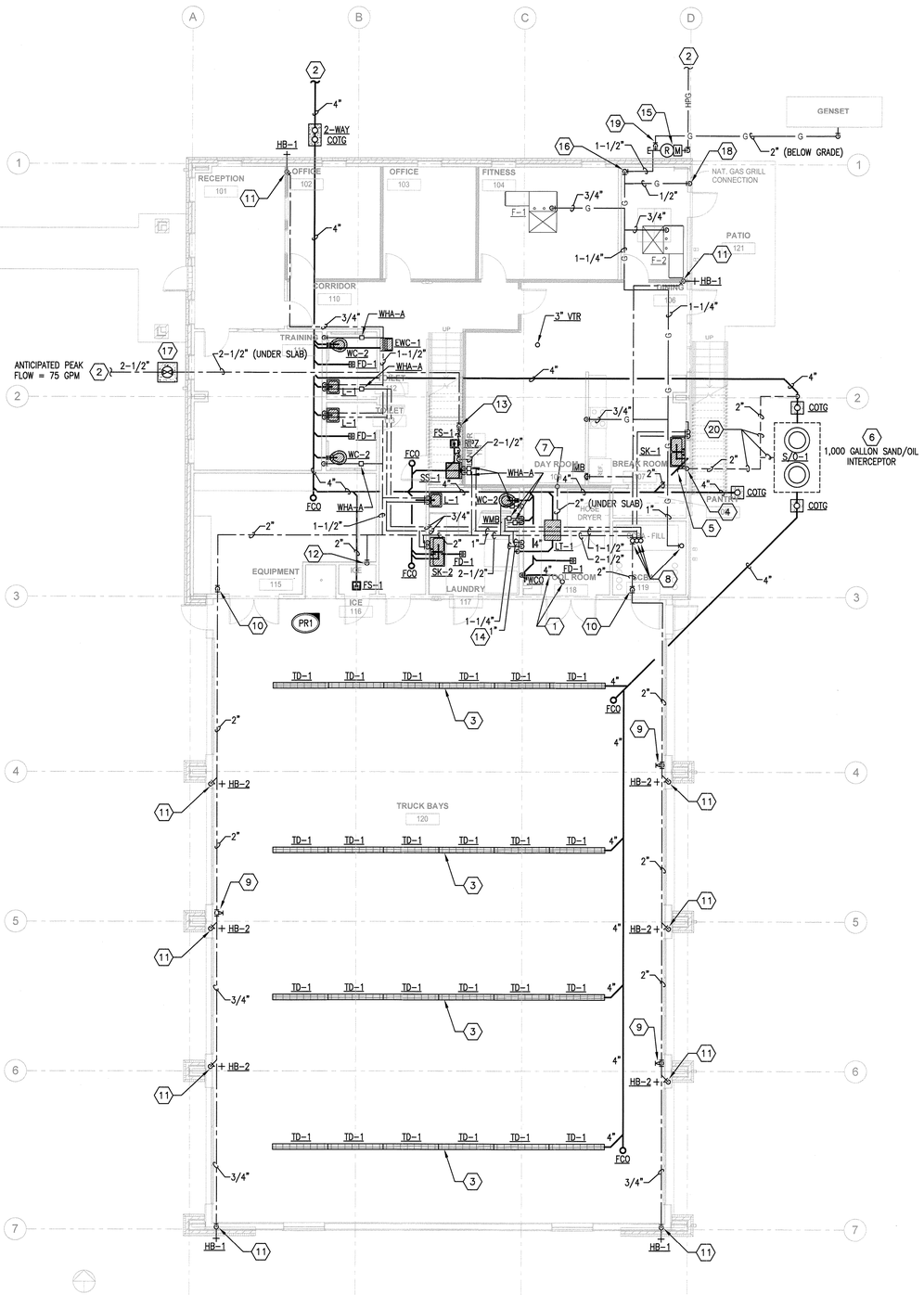
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **JLG**

PLUMBING GENERAL NOTES AND SCHEDULE

SHEET: **P0.1**



PROJECT NORTH

1 P1.1 PLUMBING PLAN - FIRST FLOOR

SCALE: 1/8" = 1'-0"

KEYED NOTES - DENOTED BY

NOTE: REFER TO THE ARCHITECTURAL PLANS FOR ALL ROOM NAMES AND NUMBERS.

1. 4" SEWER FROM ABOVE. OFFSET ABOVE CEILING AS REQUIRED TO DROP IN THE WALL.
2. REFER TO THE SITE UTILITY PLAN FOR CONTINUATION.
3. PROVIDE A MODULAR FLOW-THROUGH TRENCH DRAIN SYSTEM AS SCHEDULED. SECTIONS SHALL BE MANUFACTURED WITH BOTTOMS CONTINUOUSLY PITCHED TO DRAIN TO THE EFFLUENT PIPE.
4. RISE WITH THE 2" TANK VENT UP IN THE WALL TO ABOVE THE CEILING AND CONTINUE AS SHOWN.
5. CONNECT TO THE PLUMBING VENT SYSTEM IN THIS VICINITY. REFER TO THE PLUMBING RISER.
6. VERIFY THE CAPACITY OF THE OIL/SAND INTERCEPTOR WITH THE LOCAL WASTEWATER UTILITY PRIOR TO BID.
7. RISE FROM BELOW SLAB IN THE WALL WITH A 2" TANK VENT AND CONTINUE AS INDICATED IN THE PLUMBING RISERS.
8. 2" CW, 1-1/2" HW, 3/4" HWR AND 1" NG UP THROUGH THE FLOOR.
9. DROP ALONG THE WALL WITH A 2" CW LINE AND TRANSITION AS REQUIRED TO CONNECT TO A 2-1/2" HOSE FILL VALVE AT 48" A.F.F. VALVE SHALL BE EQUAL TO A DIXON #WDGV251F, RESILIENT WEDGE GATE VALVE, FORGED BRASS, WHEEL HANDLE, 2-1/2" MALE NST OUTLET WITH DUST CAP. VERIFY EXACT VALVE TYPE AND HOSE CONNECTION TYPE WITH OWNER PRIOR TO SUBMITTING FOR APPROVAL. PIPE RISER SHALL BE STRAPPED SECURELY TO THE WALL AT 5' O.C.
10. RISE TO MAX. HEIGHT AND CONTINUE IN THE TRUCK BAYS AS CLOSE TO THE BUILDING STRUCTURE AS POSSIBLE.
11. DROP TO A HOSE BIBB AT 24" A.F.G. (EXTERIOR) OR A.F.F. (INTERIOR).
12. DROP WITH A 1/2" CW LINE TO THE ICE MAKER AND CONNECT COMPLETE AND OPERATIVE IN STRICT ACCORDANCE WITH THE ICE MAKER MANUFACTURER'S INSTRUCTIONS INCLUDING FILTER.
13. RISE FROM BELOW SLAB BENEATH THE STAIRS WITH THE 2-1/2" CW LINE TO AN RPZ. RISE TO ABOVE THE FIRST FLOOR CEILING AND CONTINUE AS SHOWN.
14. PROVIDE WATER HAMMER ARRESTORS WHA-B ON THE HOT AND COLD WATER SERVICE LINES TO THE WASHER/EXTRACTOR.
15. COORDINATE WITH THE LOCAL GAS UTILITY TO EXTEND NATURAL GAS SERVICE TO A NEW REGULATOR/METER ASSEMBLY AT THE BUILDING (HPG TO OZ.). THE TOTAL CONNECTED LOAD = 1931.0 MBH. THE REGULATOR SHALL BE LOCATED AS CLOSE TO THE CORNER OF THE BUILDING AS POSSIBLE. PROVIDE A 2-1/2" HEADER DOWNSTREAM OF THE REGULATOR.
16. RISE WITH A 1-1/2" LOW PRESSURE NATURAL GAS LINE UP IN THE MECHANICAL ROOM TO MAX. HEIGHT AND CONTINUE AS SHOWN.
17. PROVIDE A DOMESTIC WATER SHUT-OFF VALVE IN A CAST-IRON VALVE BOX WITH A CAST-IRON DROP COVER MARKED "WATER".
18. DROP IN THE WALL WITH A 1/2" NATURAL GAS LINE AND OUT TO A GAS VALVE AT 24" A.F.F. FOR CONNECTION TO A FUTURE GAS GRILL (BY OWNER). COORDINATE EXACT VALVE REQUIREMENTS WITH THE OWNER PRIOR TO ROUGH-IN.
19. DROP TO BELOW GRADE OFF THE GAS HEADER WITH A 2" GAS LINE AND CONTINUE TO THE GENSET. CONNECT TO THE GENSET COMPLETE AND OPERATIVE IN STRICT ACCORDANCE WITH THE GENSET MANUFACTURER'S INSTRUCTIONS.
20. ROUTE TANK VENTS BELOW GRADE AS SHOWN.

WATER LINE SIZES

UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE PLUMBING FIXTURE SCHEDULE, ALL CW, HW, AND HWR LINE SIZES ARE 3/4"

WATER HAMMER ARRESTORS

PROVIDE WATER HAMMER ARRESTORS AS SCHEDULED ON THE WATER SUPPLIES TO SERVING FIXTURES AND EQUIPMENT WITH FAST-CLOSING VALVES INCLUDING, BUT NOT LIMITED TO WATER CLOSETS, DISHWASHERS, ICE MAKERS, ETC. WATER HAMMER ARRESTORS SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION.

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS ENGINEER

NES
CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032
LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212
PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12375
JAMIE L. GIVENS

DATE: **10/28/16**

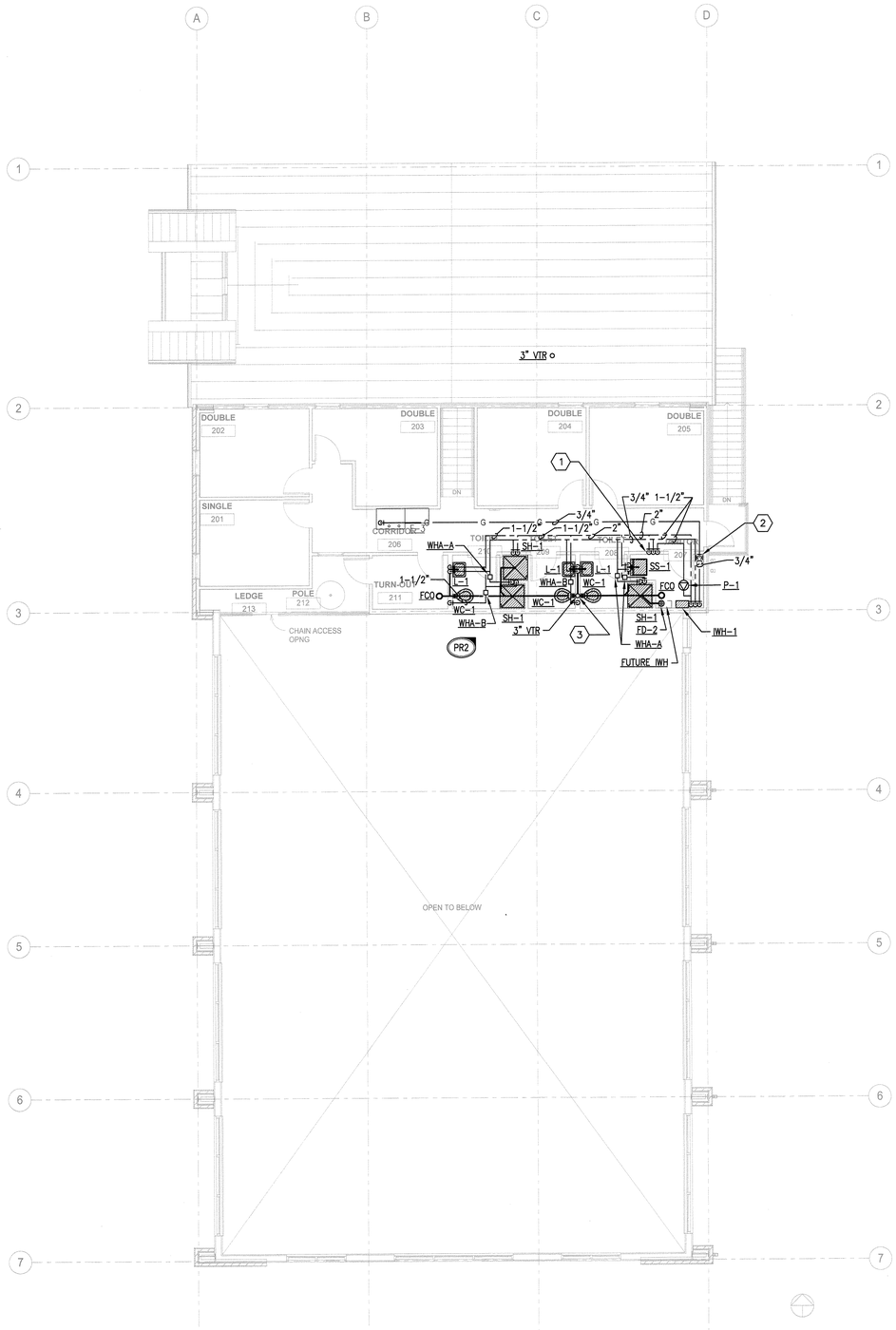
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **JLG**

PLUMBING PLAN - FIRST FLOOR

SHEET: **P1.1**



PROJECT NORTH

1 / P1.2

PLUMBING PLAN - SECOND FLOOR

SCALE: ⅛" = 1'-0"

KEYED NOTES - DENOTED BY (#)

NOTE: REFER TO THE ARCHITECTURAL PLANS FOR ALL ROOM NAMES AND NUMBERS.

1. 2" CW, 1-1/2" HW, AND 3/4" HWR UP IN THE WALL TO ABOVE THE CEILING. CONTINUE AS SHOWN.
2. 1" NATURAL GAS UP IN THE CORNER OF THE ROOM TO ABOVE THE CEILING. CONTINUE AS SHOWN.
3. 4" SEWER DOWN. 3" VENT STACK UP.

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
12575
JAMIE L. GUINN

DATE: **10/28/16**

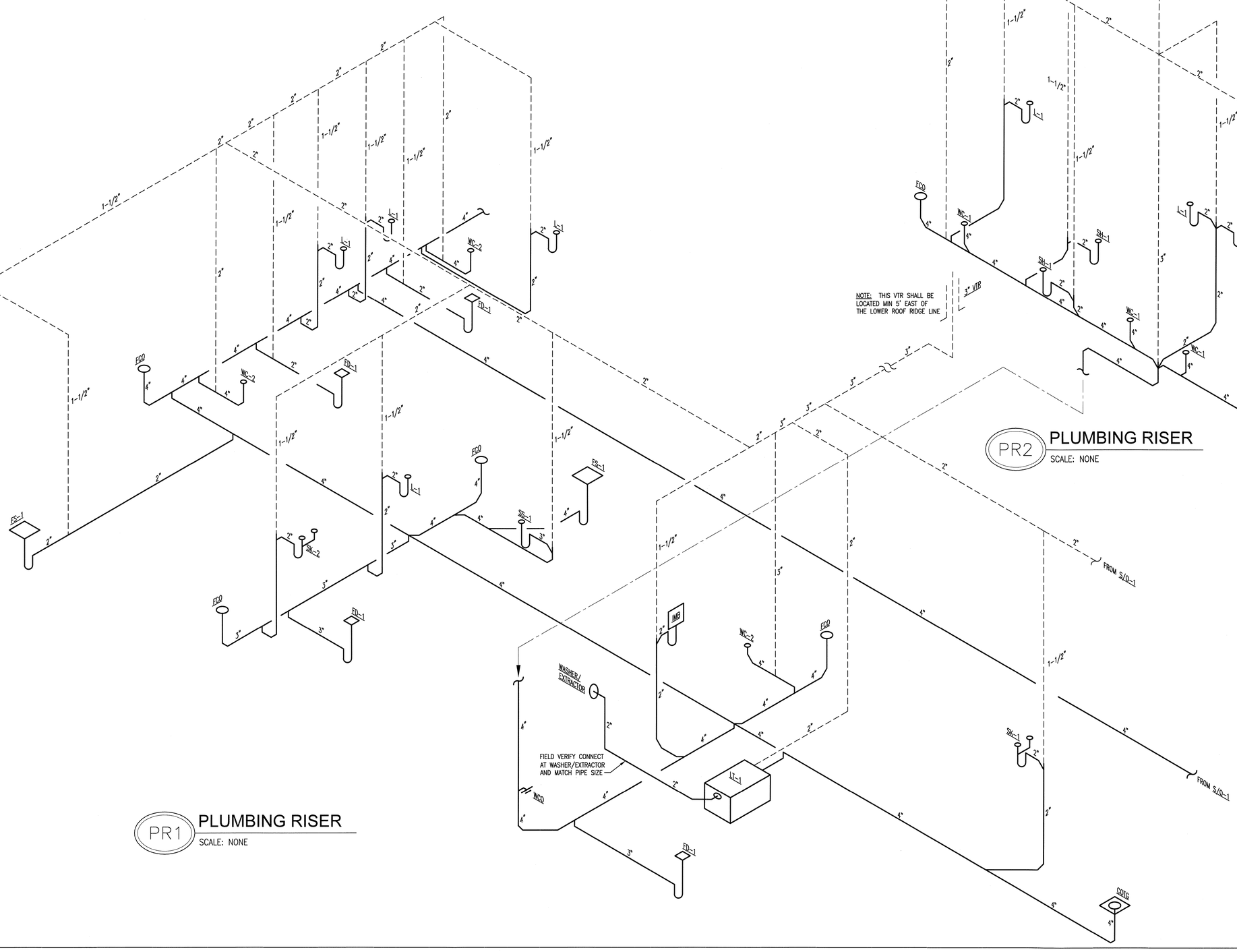
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **JLG**

PLUMBING PLAN - SECOND FLOOR

SHEET: **P1.2**



PR2 PLUMBING RISER

SCALE: NONE

PR1 PLUMBING RISER

SCALE: NONE

NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
CERTIFICATE OF AUTHORIZATION
ARKANSAS - ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12375
JAMIE L. GRAY

DATE: **10/28/16**

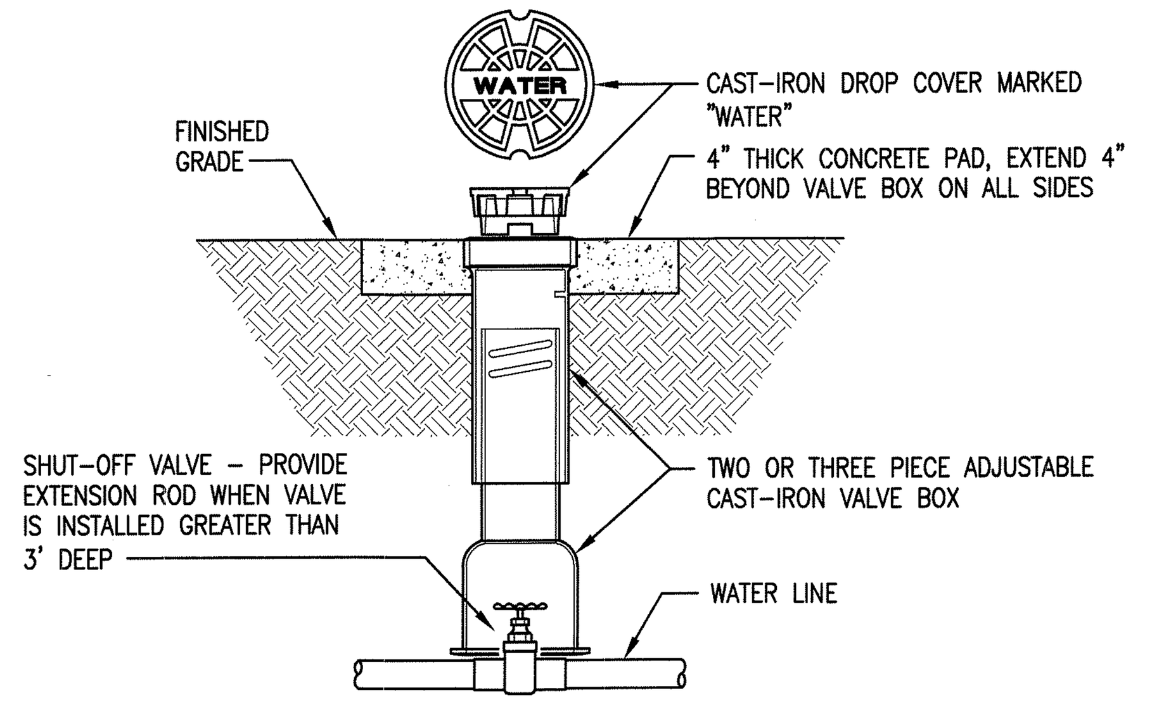
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

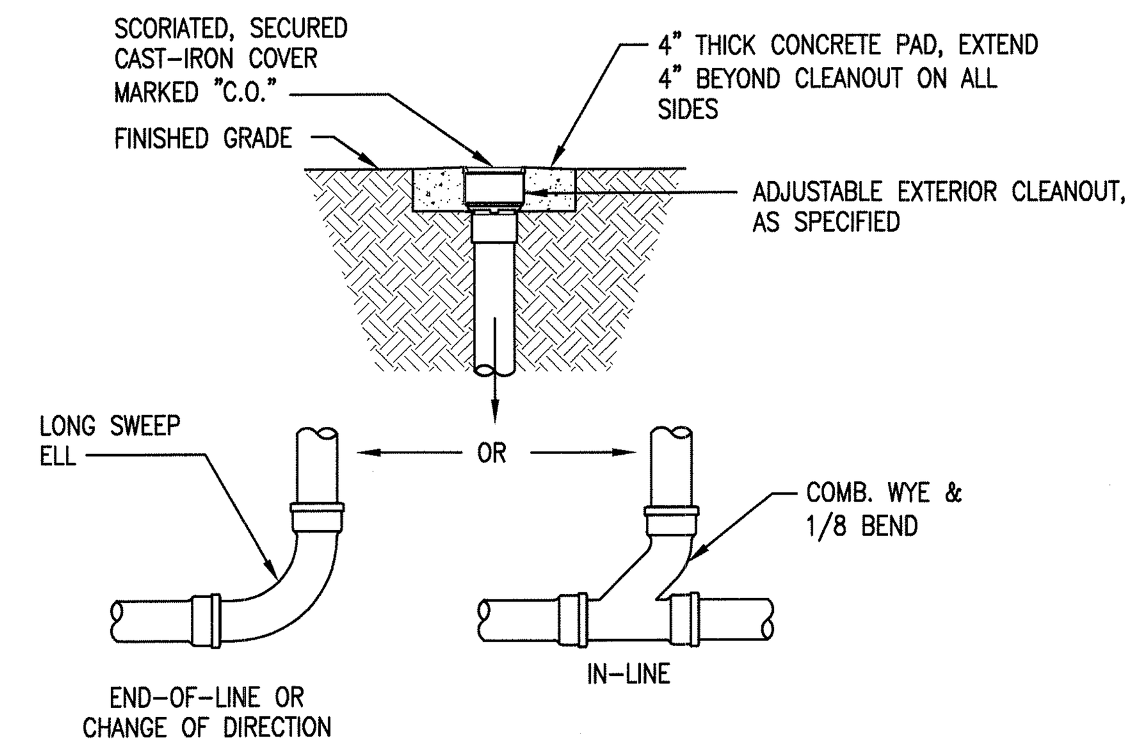
DRAWN BY: **JLG**

PLUMBING RISERS

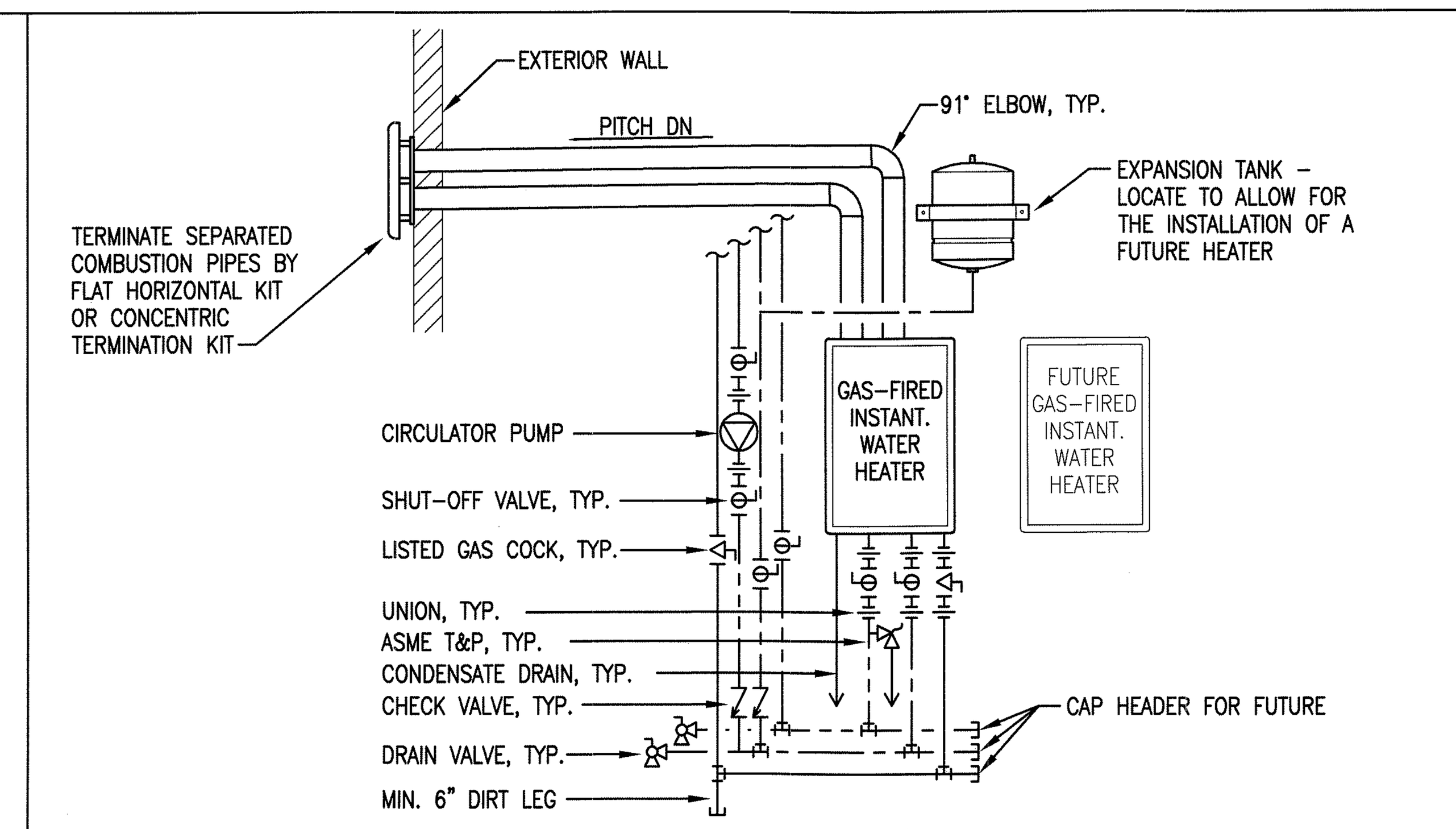
SHEET: **P2.1**



P1
WATER SHUT-OFF VALVE DETAIL
SCALE: N.T.S.

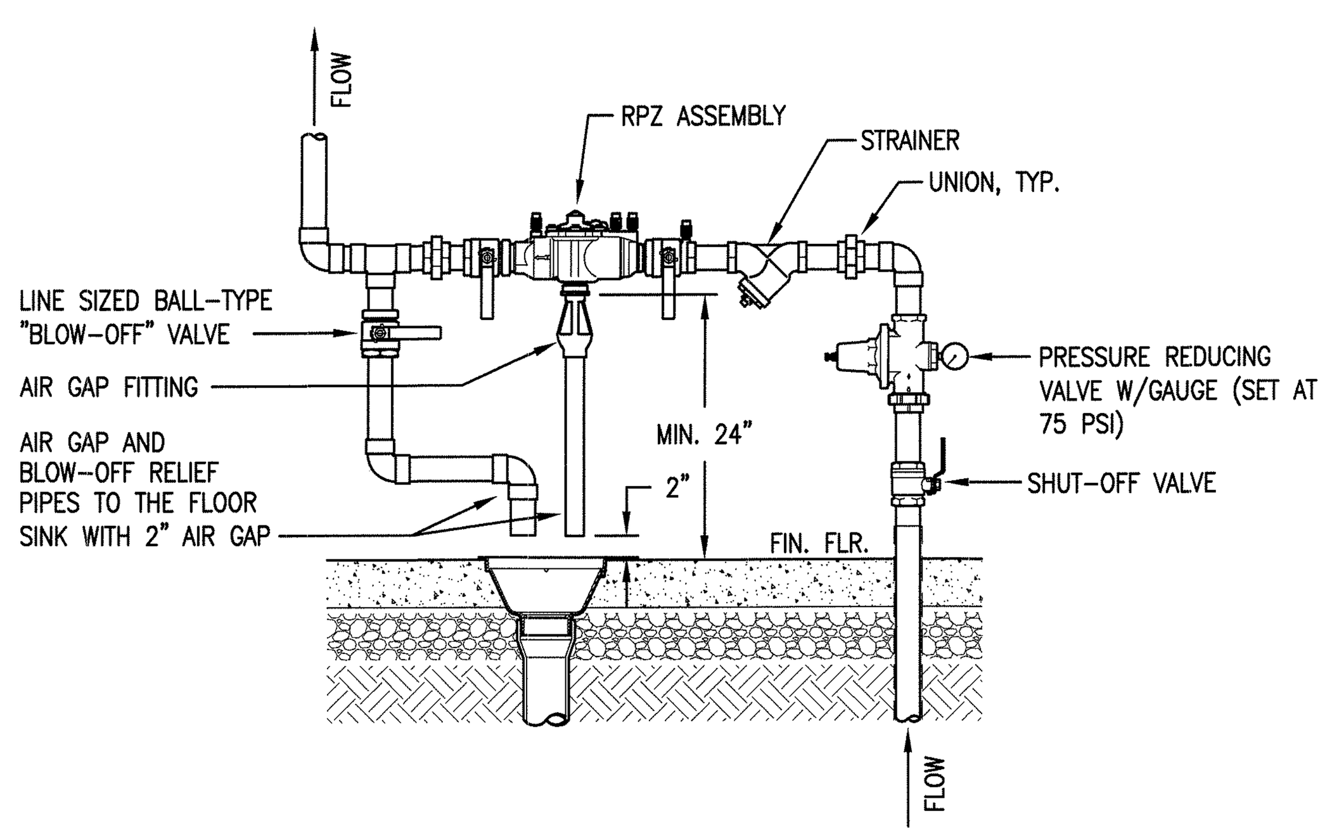


P4
CLEANOUT TO GRADE DETAIL
SCALE: N.T.S.



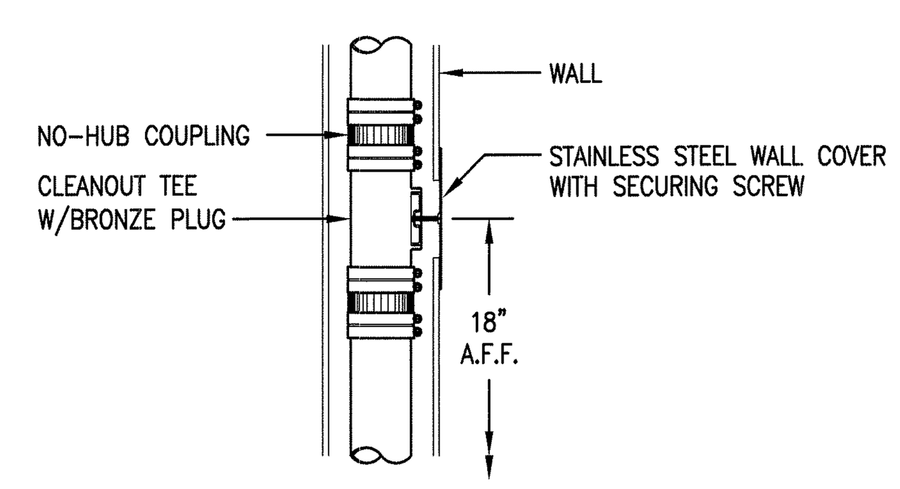
NOTES:
1. INSTALL THE WATER HEATER(S) AND ALL ASSOCIATED PIPING IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
2. CIRCULATION PUMP SHALL BE PROVIDED WITH AQUASTAT AND TIMER.
3. PUMP MAY BE INSTALLED OVERHEAD AS SHOWN ON THE PLANS OR IN THE RISER AS SHOWN IN THIS DETAIL, WHICHEVER RESULTS IN THE GREATEST SERVICE ACCESS FOR THE OWNER.
4. ROUTE THE CONDENSATE DRAIN AND T&P DRAIN LINES TO TERMINATE INDIVIDUALLY AT THE NEAREST DRAIN.

P7
GAS-FIRED INSTATANEOUS WATER HEATER DETAIL
SCALE: N.T.S.

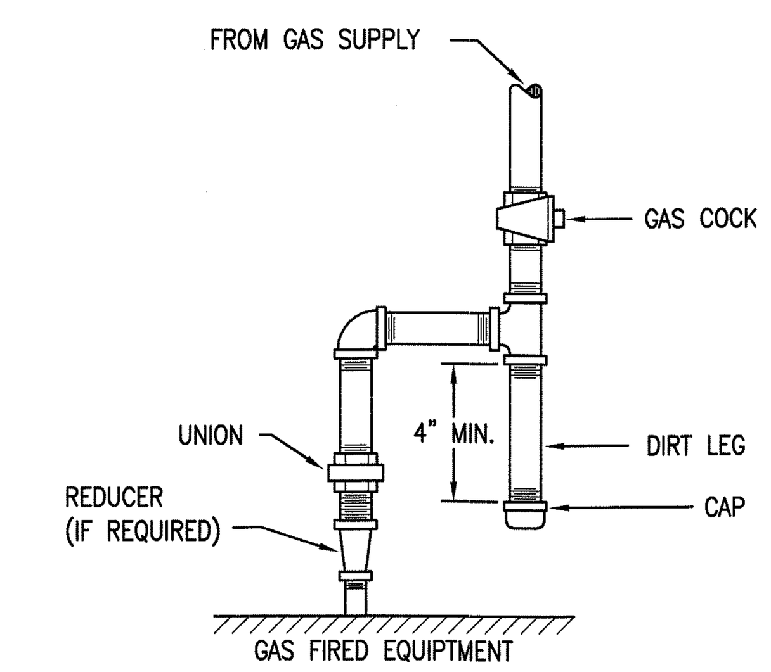


NOTES:
1. PRESSURE REDUCING VALVE IS ONLY REQUIRED WHERE WATER SERVICE PRESSURE IS GREATER THAN 75 PSI.
2. AIR GAP RELIEF AND BLOW-OFF PIPING SHALL BE ROUTE THROUGH THE NEAREST EXTEIOR WALL, TURN DOWN, AND TERMINATE.
3. THE PIPE PENETRATIONS THROUGH THE EXTERIOR WALL SHALL BE SLEEVED WITH THE ANNULAR SPACE SEALED WEATHERTIGHT AND FINISHED NEAT AND CLEAN WITH STAINLESS STEEL ESCUTCHEONS ON BOTH SIDES OF THE WALL.

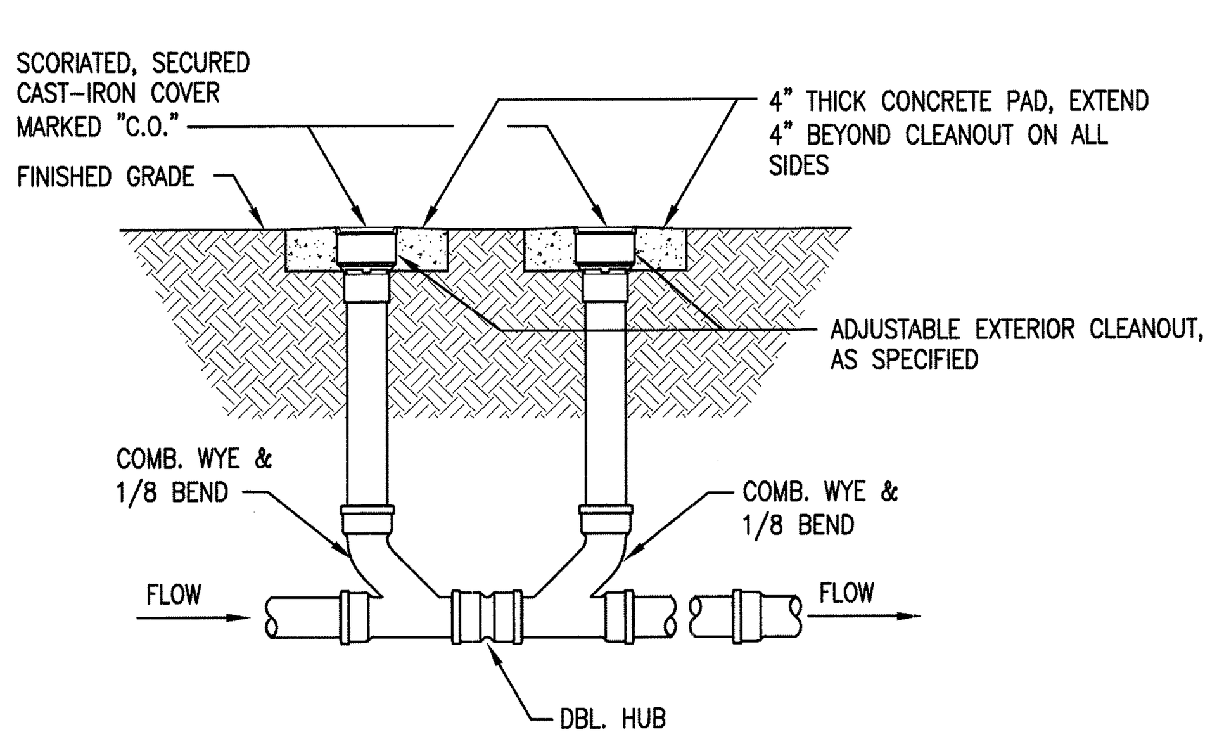
P2
RPZ DETAIL
SCALE: N.T.S.



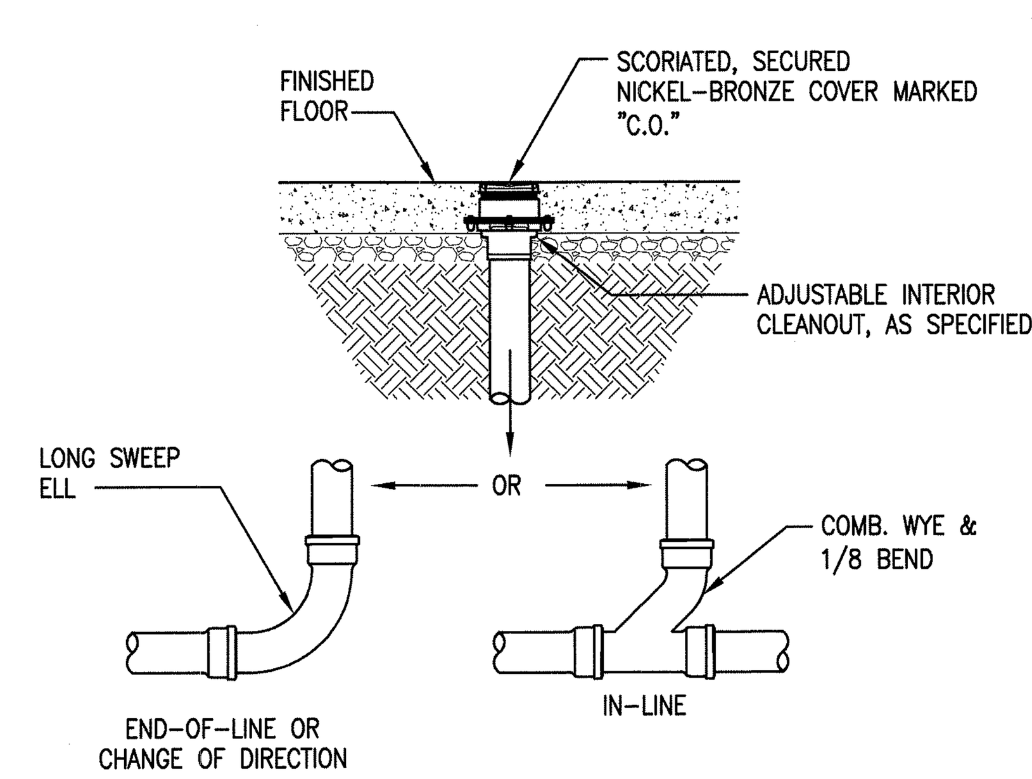
P5
WALL CLEANOUT DETAIL
SCALE: N.T.S.



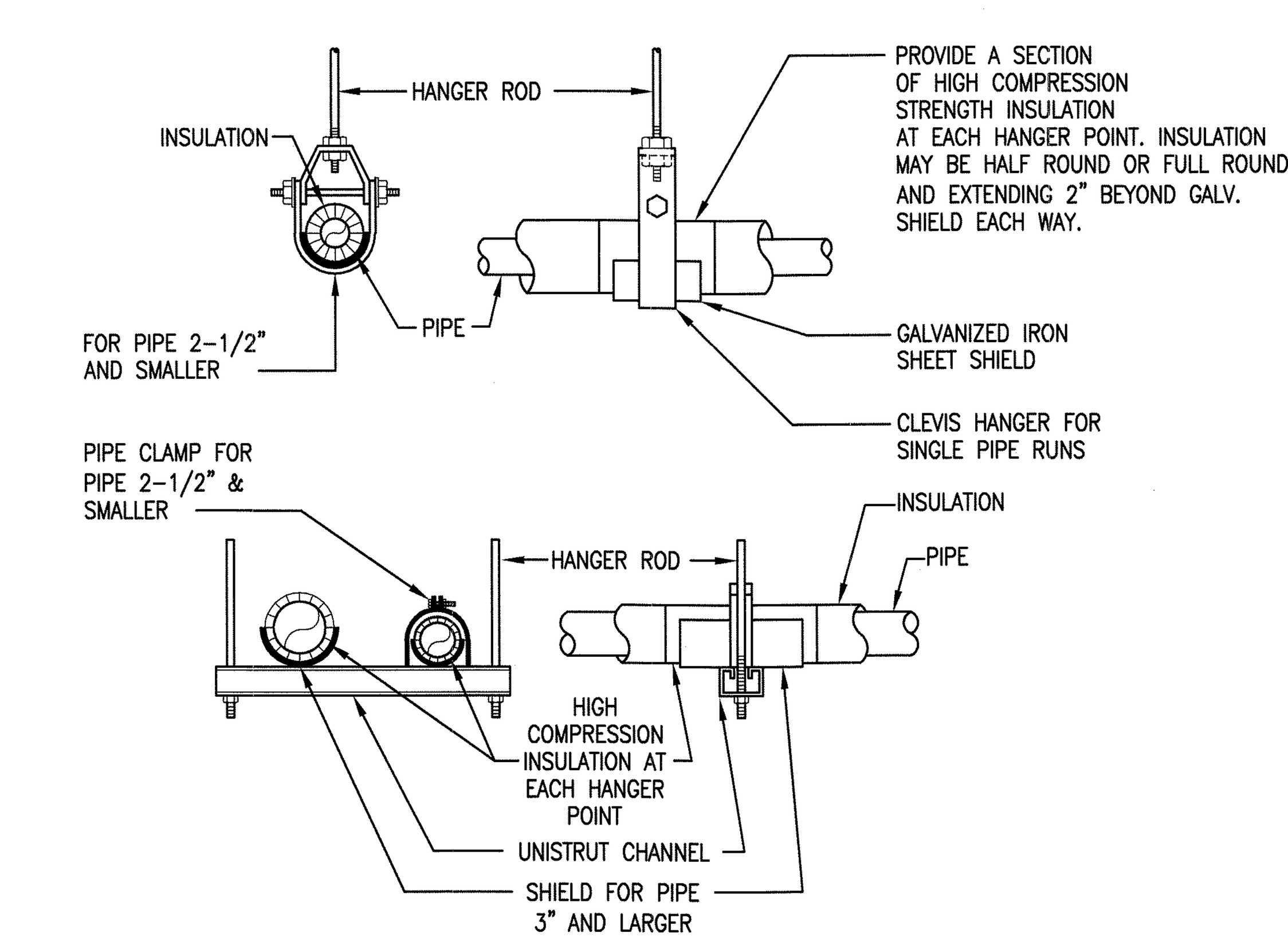
P8
GAS PIPING CONNECTION DETAIL
SCALE: N.T.S.



P3
2-WAY CLEANOUT TO GRADE DETAIL
SCALE: N.T.S.



P6
FLOOR CLEANOUT DETAIL
SCALE: N.T.S.



P9
PIPE HANGER DETAIL
SCALE: N.T.S.

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER
NES
CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032
LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212
PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
12375
JAMIE L. GUIDRY

DATE:
10/28/16

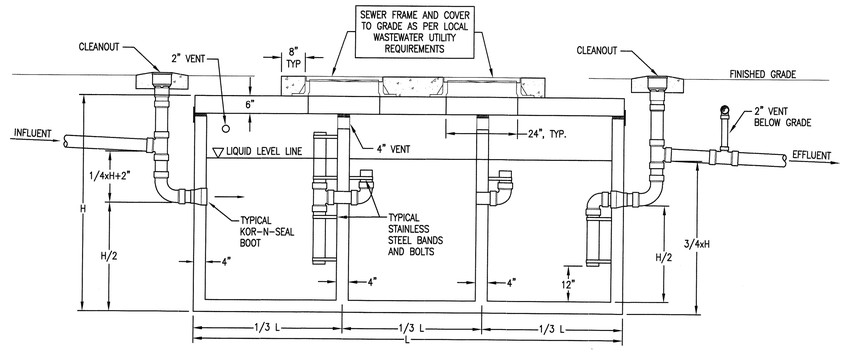
REVISIONS:

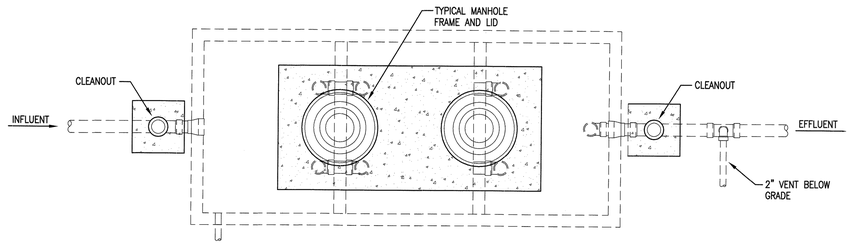
CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY:
JLG

PLUMBING DETAILS

SHEET:
P3.1





NOTES:

1. OIL/SAND INTERCEPTOR SHALL BE A PRECAST CONCRETE TANK WITH TRAFFIC LID AND MANHOLE COVERS EQUAL TO PETERSON CONCRETE TANK CO., 1-800-323-2540.
2. INTERCEPTOR SHALL BE SIZED AND INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL WASTEWATER UTILITY'S REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL INTERCEPTOR REQUIREMENTS WITH THE LOCAL WASTEWATER UTILITY AUTHORITY HAVING JURISDICTION PRIOR TO BID. NO ADDITIONAL COMPENSATION SHALL BE GRANTED FOR LACK OF PRIOR COORDINATION.
3. ALL TANK PIPE AND FITTINGS SHALL BE 4" SCHEDULE 80 PVC.
4. VENT AS PER LOCAL PLUMBING CODE LATEST REVISION.
5. UPSTREAM AND DOWNSTREAM CLEANOUTS-TO-GRADE SHALL BE PROVIDED IN THE TYPE AND SIZE REQUIRED BY THE LOCAL WASTEWATER UTILITY AUTHORITY HAVING JURISDICTION.
6. PROVIDE A DOWNSTREAM SAMPLING MANHOLE IF REQUIRED BY THE LOCAL WASTEWATER UTILITY AUTHORITY HAVING JURISDICTION.

P10

OIL/SAND INTERCEPTOR DETAIL

SCALE: N.T.S.

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER 16337 JAMIE L. GUINN

DATE: **10/28/16**

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **JLG**

PLUMBING DETAILS

SHEET: **P3.2**

HVAC GENERAL NOTES

A. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT COMPLETE HVAC SYSTEMS BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES AND CONTROLS COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL PARAMETERS GIVEN IN THESE DOCUMENTS SHALL BE STRICTLY CONFORMED TO. ANY ITEMS AND LABOR REQUIRED FOR A COMPLETE HVAC SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, LOCAL AUTHORITIES AND THESE CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ANY ADDITIONAL COST TO THE OWNER. THE WORD "PROVIDE" SHALL MEAN FURNISH AND INSTALL. CAREFULLY REVIEW ALL CONTRACT DOCUMENTS AND THE DESIGN OF OTHER TRADES BEFORE PREPARING SHOP DRAWINGS. THE "I WAS HERE FIRST" RULE DOES NOT QUALIFY AS COORDINATION.

B. ANY CONFLICTS OF WORK SHALL BE BROUGHT TO THE ARCHITECT'S/ENGINEER'S ATTENTION BY THE CONTRACTOR PRIOR TO PURCHASE OF EQUIPMENT OR COMMENCEMENT OF WORK.

C. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL TRADES. PIPE ROUTING SHOWN IS DIAGRAMMATIC. PROVIDE ALL OFFSETS, ETC. TO AVOID INTERFERENCE'S WITH EQUIPMENT, PIPING, DUCT WORK, LIGHTS, CONDUIT, STRUCTURAL MEMBERS, ETC. ALL INVERTS SHALL BE VERIFIED IMMEDIATELY FOLLOWING AWARD OF CONTRACT. ALL INVERTS SHALL BE COORDINATED WITH STRUCTURAL FOOTINGS.

D. THE WORK SPECIFIED HEREIN SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, SUPPLIES AND SUPERVISION REQUIRED TO INSTALL AND PLACE IN OPERATION THE MECHANICAL SYSTEMS AND APPURTENANCES SPECIFIED HEREIN AND/OR INDICATED ON THE DRAWINGS OR REASONABLY IMPLIED AS NECESSARY FOR COMPLETION OF THE VARIOUS SYSTEMS. ALL WORK SHALL BE COMPLETED IN A NEAT AND CLEAN MANNER IN ACCORDANCE WITH CURRENT INDUSTRY STANDARDS.

E. ALL WORK SPECIFIED HEREIN SHALL BE PERFORMED BY PROPERLY LICENSED, TRAINED, AND EXPERIENCED TRADESMEN. THE CONTRACTOR SHALL PROVIDE A FIELD SUPERVISOR WITH THE AUTHORITY AND EXPERIENCE REQUIRED TO INSTRUCT THE WORK, MAKE JOB DECISIONS, AND ACT ON BEHALF OF THE CONTRACTOR IN MATTERS PERTAINING TO THE CONTRACT DOCUMENTS.

F. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID.

G. THE CONTRACTOR SHALL REMOVE ALL RESPECTIVE CONSTRUCTION WASTE AND DEBRIS FROM THE SITE AND SHALL BE RESPONSIBLE FOR THE LAWFUL DISCARD OF SUCH WASTE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS. THE COMPLETED WORK AND THE ADJACENT AFFECTED AREAS SHALL BE THOROUGHLY CLEANED TO THE SATISFACTION ON THE OWNER, ARCHITECT, AND ENGINEER.

H. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING, AND PAINTING REQUIRED BY THE RESPECTIVE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFACTORILY REPAIRING EXCESSIVE, UNNECESSARY PENETRATIONS OR OVERSIZED PENETRATIONS THROUGH CONSTRUCTION. IF THE ARCHITECT/ENGINEER DEEMS NECESSARY, ANY CONSTRUCTION DAMAGED FROM CUTTING OR PENETRATION ACTIVITIES SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER. THERE SHALL BE NO CUTTING OR PENETRATING OF CONSTRUCTION THAT WILL COMPROMISE THE STRUCTURAL INTEGRITY OF THE BUILDING SYSTEM. IF THE CONTRACTOR DEEMS IT NECESSARY TO ALTER, CUT, OR PENETRATE A STRUCTURAL MEMBER, EXPRESS PERMISSION SHALL BE GIVEN BY THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING. IT IS PERMISSIBLE FOR BEAMS TO BE PENETRATED WITH SMALL SCREWS WITHOUT PRIOR APPROVAL.

I. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS AS REQUIRED TO CAREFULLY COORDINATE THE REQUIRED MOUNTING HEIGHTS AND LOCATIONS OF ALL DIFFUSERS, REGISTERS, AND GRILLES RELATIVE THE VARIOUS CEILING AND WALL CONDITIONS/TYPES THROUGHOUT THE BUILDING.

J. ALL EQUIPMENT INSTALLED AND CONCEALED ABOVE GYPSUM BOARD CEILINGS SHALL HAVE ACCESS DOORS FOR FULL SERVICE AND REMOVAL. ACCESS DOORS SHALL HAVE CONCEALED HINGES AND SHALL BE LOCKABLE. COORDINATE THE EXACT AND FINAL LOCATION OF THE CONCEALED EQUIPMENT AND THE RESPECTIVE ACCESS DOORS WITH THE ARCHITECT, ENGINEER AND OWNER PRIOR TO ROUGH-IN OF ANY AIR HANDLING SYSTEMS. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL BE RESPONSIBLE FOR AND RELOCATION REQUIRED DUE TO FAILURE TO COORDINATE THE FINAL LOCATIONS OF CONCEALED EQUIPMENT.

K. ALL OUTDOOR EQUIPMENT UNDER 20-TONS SHALL BE INSTALLED ON A 4" THICK CONCRETE MECHANICAL WITH 6x6 W.W.F. ALL OUTDOOR EQUIPMENT OVER 20-TONS SHALL BE INSTALLED ON A 6" THICK CONCRETE MECHANICAL PAD WITH #4 REBAR AT 12" O.C.E.W. MECHANICAL PADS SHALL HAVE 3/4" CHAMFERED EDGES, BE SLOPED AWAY FROM BUILDINGS MIN. 1% AND EXTEND MIN. 6" BEYOND THE EDGES OF THE MECHANICAL UNITS. PADS SHALL ALSO BE SIZED TO MAINTAIN MIN. REQUIRED SERVICE CLEARANCE SEPARATION BETWEEN MECHANICAL UNITS AND SIZED TO MAINTAIN SERVICE CLEARANCES BETWEEN THE MECHANICAL UNIT(S) AND ADJACENT BUILDINGS, SCREEN WALLS AND OTHER OBSTRUCTIONS.

L. MAINTAIN MANUFACTURER'S REQUIRED MINIMUM SERVICE CLEARANCE (BUT NO LESS THAN 30") ON THE SERVICE/CONTROL/DISCONNECT SIDE OF ALL FLOOR MOUNTED AND OVERHEAD MOUNTED EQUIPMENT. FINAL EQUIPMENT LOCATIONS SHALL MAXIMIZE THE AVAILABLE SERVICE CLEARANCE TO ALL EQUIPMENT.

M. PROVIDE REMOTE BOWDEN CABLE CONTROLS EQUAL TO YOUNG REGULATOR 270 SERIES FOR ALL DAMPERS CONCEALED ABOVE GYPSUM BOARD CEILINGS. THE EXACT LOCATION OF THE ACTUATOR CONTROL SHALL BE DETERMINED BY THE ARCHITECT, OWNER AND ENGINEER PRIOR TO ROUGH-IN.

N. REFER TO THE ARCHITECTURAL PLANS FOR ALL ROOM NAMES AND NUMBERS.

O. FIRE/SMOKE DETECTION AND RATED OPENING PROTECTIVES:
1. SMOKE DETECTORS SHALL BE INSTALLED IN RETURN AIR SYSTEMS WITH A DESIGN CAPACITY OF 2,000 CFM OR GREATER. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 AND SHALL BE CONNECTED TO A FIRE ALARM SYSTEM. ACTUATION OF THE DUCT SMOKE DETECTOR SHALL SHUT-DOWN THE AIR DISTRIBUTION SYSTEM AND ACTIVATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL IN A NORMALLY ATTENDED LOCATION. IN OCCUPANCIES WHERE A FIRE ALARM SYSTEM IS NOT REQUIRED, ACTUATION OF THE DUCT SMOKE DETECTOR SHALL SHUT DOWN THE AIR DISTRIBUTION SYSTEM AND ACTIVATE A STAND-ALONE VISIBLE AND AUDIBLE SIGNAL IN AN APPROVED LOCATION. THE STAND-ALONE SIGNAL DEVICE SHALL BE LABELED "AIR DUCT DETECTOR TROUBLE". IN SYSTEMS THAT ARE INCAPABLE OF SPREADING SMOKE BEYOND THE ENCLOSING WALLS, FLOORS NO CEILINGS OF THE ROOM OR SPACE IN WHICH THE SMOKE IS GENERATED, SMOKE DETECTORS SHALL NOT BE REQUIRED.
2. DUCT SMOKE DETECTORS SHALL BE LOCATED AS FOLLOWS:
   (A) AIR HANDLING UNITS – LOCATE THE SMOKE DETECTOR IN THE RETURN AIR DUCT DOWNSTREAM OF THE LAST RETURN AIR BRANCH DUCT CONNECTION AND UPSTREAM OF ANY FRESH AIR DUCT CONNECTION, FILTERS, EXHAUST AIR CONNECTION, OR DECONTAMINATION EQUIPMENT AND APPLIANCES.
   (B) PACKAGED HVAC UNITS – LOCATE THE SMOKE DETECTOR EITHER IN THE RETURN AIR DUCT AS DESCRIBED ABOVE OR IN THE RETURN AIR SECTION OF THE UNIT CASING AS DIRECTED BY THE PACKAGED UNIT MANUFACTURER.
3. ALL PENETRATIONS THROUGH FIRE AND/OR SMOKE RATED CONSTRUCTION SHALL BE SEALED UTILIZING U.L. LISTED MATERIALS AND DESIGNS TO MAINTAIN THE RATING. ALL FIRE, SMOKE AND COMBINATION DAMPERS SHALL BE U.L. LISTED, APPROPRIATE FOR LISTED INSTALLATION TYPE, AND INSTALLED IN STRICT ACCORDANCE WITH THE DAMPER MANUFACTURER'S INSTRUCTIONS AND THE DAMPER'S LISTING. DUCT MOUNTED ACCESS DOORS SHALL BE PROVIDED AT ALL FIRE DAMPERS NOT LOCATED AT AIR DEVICES. ACCESS DOORS SHALL BE SIZED AS APPROPRIATE FOR FULL SERVICE ACCESS TO DAMPER FUSIBLE LINKS, MOTORIZED ACTUATORS, ETC.

P. ALL DUCT SIZES ARE METAL-METAL DIMENSIONS, EXPRESSED IN INCHES. DOUBLE-WALL SPIRAL DUCT SIZES (WHEN SHOWN) INDICATE THE INNER WALL DIAMETER.

Q. ALL CHANGES IN DUCT DIRECTION 45-DEGREES OR GREATER SHALL BE FULL RADIUS TURNS WITH AN INSIDE RADIUS EQUAL TO THE DUCT WIDTH. IN RECTANGULAR DUCTWORK, WHERE SPACE CONSTRAINTS DO NOT PERMIT RADIUS TURNS, OR WHERE THE CONTRACT DOCUMENTS REFLECT OTHERWISE, MITERED ELBOWS WITH SINGLE THICKNESS TURNING VANES SHALL BE PROVIDED. RECTANGULAR 90'S WITH A RADIUS HEEL AND A MITERED THROAT ARE NOT ACCEPTABLE.

R. PROVIDE MINIMUM 3/4" GAP BENEATH THE DOOR FOR R.A. IN SPACES WITH 125 CFM S.A. OR LESS AND WHERE THERE IS NO DEDICATED R.A. DUCT OR TRANSFER DUCT.

S. ALL CEILING MOUNTED AIR DEVICES INSTALLED IN LAY-IN CEILINGS SHALL BE POSITIONED IN THE FULL GRID SPACE NEAREST TO THE LOCATION SHOWN ON THE PLANS.

T. ALL CONDENSATE DRAINS SERVING COOLING COILS SHALL BE TRAPPED AS RECOMMENDED BY THE COIL MANUFACTURER. INDIVIDUAL CONDENSATE DRAIN TRAPS AND LINES SHALL BE FULL SIZE OF CONNECTION TO COIL, BUT IN NO CASE SMALLER THAN 3/4".

U. ALL MECHANICAL PIPING SYSTEMS SHALL BE PROTECTED AGAINST DISSIMILAR METAL GALVANIC CORROSION BY SEPARATION, INSULATION, OR ENGINEERED CONNECTIONS SUCH AS DIELECTRIC UNIONS.

V. THE CONTRACTOR SHALL COORDINATE THE EXACT REFRIGERANT LINE SET LENGTH(S) WITH THE EQUIPMENT MANUFACTURER. THE EQUIPMENT MANUFACTURER SHALL BE RESPONSIBLE FOR ALL REFRIGERANT LINE SET SIZING AND RECOMMENDING ANY ADDITIONAL PIPING APPURTENANCES REQUIRED FOR LONG LINE SET APPLICATIONS TO RESULT IN A COMPLETE, OPERATIVE, AND WARRANTABLE INSTALLATION.

W. WHERE MULTIPLE DX MECHANICAL UNITS ARE LOCATED ON A COMMON PAD, THE REFRIGERANT PIPING SHALL BE GROUPED TOGETHER ON COMMON PIPE STANDS AND SUPPORTS, ROUTED PERPENDICULAR AND PARALLEL WITH BUILDING LINES, AND SHALL PENETRATE EXTERIOR WALLS IN COMMON LOCATIONS. ONLY WHERE SPECIFICALLY INDICATED ON THE PLANS SHALL PIPES FROM EQUIPMENT LOCATED ON A COMMON MECHANICAL PAD ENTER BUILDINGS IN DIFFERING LOCATIONS.

X. PROVIDE ENGRAVED PLASTIC LAMINATE EQUIPMENT TAGS ON ALL HVAC UNITS. NOMENCLATURE SHALL BE PROPOSED BY HVAC CONTRACTOR AND APPROVED BY OWNER PRIOR TO FABRICATION.

Y. HVAC CONTROL WIRING SHALL BE MINIMUM 18 GAUGE MULTI-STRAND PLENUM-RATED WIRING. ALL WIRING LOCATED IN, ABOVE OR BEHIND INACCESSIBLE CONSTRUCTION SHALL BE INSTALLED IN 3/4" EMT CONDUIT. ALL WIRING SHALL BE ROUTED CONTINUOUS FROM THE CONTROL DEVICE TO THE CONTROLLER OR INTERFACE PANEL. SPLICE SHALL NOT BE PERMITTED. WIRING CONNECTIONS SHALL EITHER BE CRIMPED OR SOLDERED.

Z. THE MECHANICAL CONTRACTOR SHALL PROVIDE TRAINING TO THE OWNER ON ALL HVAC CONTROL SYSTEMS.

GAS FIRED FURNACE SCHEDULE

GENERAL			FAN					DX COOLING COIL	HEATING			ELECTRICAL				REMARKS
MARK	MANUF'R./MODEL	SERVES	DRIVE	S.A. (CFM)	O.A. (CFM)	ESP	FAN HP	PERFORMANCE	FUEL	INPUT (MBTUH)	OUTPUT (MBTUH)	AFUE	VOLTAGE	FLA	MCA	BKR	
F-1	CARRIER 58MXB-060-16	FF WEST	DIRECT	1,400	200	0.50"	1/2	MATCH CONDENSING UNIT	NAT. GAS	60.0	56.0	93%	120/1/60	9.5	12.8	15A	SEE NOTES
F-2	CARRIER 58MXB-100-20	FF EAST	DIRECT	2,000	210	0.50"	3/4	MATCH CONDENSING UNIT	NAT. GAS	100.0	94.0	93%	120/1/60	14.8	19.3	20A	SEE NOTES
F-3	CARRIER 58MXB-060-12	SF	DIRECT	1,000	110	0.50"	1/3	MATCH CONDENSING UNIT	NAT. GAS	60.0	56.0	93%	120/1/60	7.1	9.8	15A	SEE NOTES

* OR APPROVED EQUAL IN TRANE OR LENNOX
NOTES:
1. 1" MERV-8 PLEATED MEDIA FILTERS
2. MANUFACTURER'S RECOMMENDED CONCENTRIC COMBUSTION INTAKE/EXHAUST FITTING
3. DX COOLING COIL TO MATCH CONDENSING UNIT
4. FURNACE, COOLING COIL, AND CONDENSING UNIT SHALL ALL BE THE PRODUCTS OF THE SAME MANUFACTURER
5. PROVIDE DIGITAL PROGRAMMABLE THERMOSTAT
6. 1-YEAR PARTS AND LABOR/10-YEAR HEAT EXCHANGER WARRANTY

CONDENSING UNIT SCHEDULE

GENERAL			COOLING				ELECTRICAL					REMARKS
MARK	MANUF'R./MODEL	SERVES	TOT. CAP. (BTUH)	SENS. CAP. (BTUH)	EDB (F)	EWB (F)	AMB (F)	VOLTAGE	FLA	MCA	BKR	SEER	
CU-1	CARRIER 24ACB342	FF WEST	41,000	31,530	80.0	67.0	95.0	208/3/60	14.7	18.1	30A	13.0	SEE NOTES
CU-2	CARRIER 24ACB360	FF EAST	57,000	44,120	80.0	67.0	95.0	208/3/60	18.9	23.3	40A	13.0	SEE NOTES
CU-3	CARRIER 24ACB330	SF	27,800	21,890	80.0	67.0	95.0	208/3/60	10.6	12.9	20A	13.0	SEE NOTES

* OR APPROVED EQUAL IN TRANE, YORK OR LENNOX
NOTES:
1. SCROLL COMPRESSOR
2. CRANKCASE HEATER
3. HIGH AND LOW PRESSURE SWITCHES
4. SOLID STATE TIME OFF DEVICE
5. FIELD INSTALLED FILTER/DRIER AND SITE GLASS
6. LIQUID AND SUCTION LINE SERVICE VALVES
7. LOUVERED HAIL GUARDS
8. LOW AMBIENT CONTROL TO 30 DEGREES F
9. REFRIGERANT SHALL BE R-410A
10. 1-YEAR UNIT PARTS AND LABOR/5-YEAR COMPRESSOR WARRANTY
11. PROVIDE NEOPRENE AND CORK VIBRATION ISOLATORS AT ALL FOUR CORNERS EQUAL TO KINETICS #NPC.

GAS-FIRED UNIT HEATER SCHEDULE

MARK	MANUF'R/MODEL*	SERVES	DRIVE	TYPE	CFM	FUEL	INPUT (MBTUH)	OUTPUT (MBTUH)	AFUE	ELECTRICAL	MOTOR (HP)	CONTROL	WEIGHT	REMARKS
UH-1	REZNOR F200	TRUCK BAYS	DIRECT	PROP.	2,800	NAT. GAS	200.0	160.0	80%	120/1/60	1/20	THERMOSTAT	170#	SEE NOTES
UH-2	REZNOR F200	TRUCK BAYS	DIRECT	PROP.	2,800	NAT. GAS	200.0	160.0	80%	120/1/60	1/20	THERMOSTAT	170#	SEE NOTES

* OR APPROVED EQUAL
NOTES:
1. ALUMINIZED STEEL HEAT EXCHANGER
2. ALUMINIZED STEEL BURNER RACK WITH STAINLESS STEEL INSERT
3. SPARK IGNITED, INTERMITTENT SAFETY PILOT WITH ELECTRONIC FLAME SUPERVISION WITH TIMED LOCKOUT
4. SINGLE-STAGE COMBINATION GAS VALVE
5. INTERNAL OVERLOAD FAN MOTOR PROTECTION
6. FAN AND LIMIT SAFETY CONTROLS
7. BLOCKED VENT SHUT-OFF SAFETY
8. 24V CONTROL TRANSFORMER WITH 24V TERMINAL STRIP
9. INDIVIDUALLY ADJUSTABLE HORIZONTAL LOUVERS
10. FULL FAN SAFETY GUARD
11. BOTTOM BURNER ACCESS
12. HORIZONTAL OR VERTICAL VENT OUTLET
13. 10-YEAR NON-PRORATED WARRANTY ON HEAT EXCHANGERS, BURNERS, AND FLUE COLLECTION BOX
14. 5-YEAR NON-PRORATED WARRANTY ON ALL MECHANICAL AND ELECTRICAL COMPONENTS
15. SUSPEND FROM ROOF STRUCTURE IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS
16. ROUTE A TYPE-B DOUBLE WALL FLUE VENT SIZED AS RECOMMENDED BY THE UNIT HEATER MANUFACTURER THROUGH THE ROOF AND TERMINATE AT A LISTED WEATHERCAP.

DUCTLESS SPLIT-SYSTEM HEAT PUMP SCHEDULE

INDOOR UNIT				OUTDOOR UNIT		COOLING					HEATING			ELECTRICAL				REMARKS
MARK	*MANUF'R./ MODEL	SERVES	FAN CFM (HI/MED/LO)	MARK	*MANUF'R./ MODEL	TOT. CAP. (BTUH)	EDB (F)	EWB (F)	AMB (F)	SEER	TOT. CAP. (BTUH)	AMB (F)	HSPF	VOLTAGE	FLA	MCA	BKR	
DSFC-1	LG LSN122HE	SOUND BOOTH	330/280/230	DSHP-1	LG LSU122HE	11,500	80.0	67.0	95.0	13.0	11,500	47.0	7.8	120/1/60	10.5	15.0	20A	SEE NOTES

* OR APPROVED EQUAL
NOTES:
1. SYSTEM SHALL BE COMPLETE WITH INDOOR AND OUTDOOR UNIT FROM SAME MANUFACTURER
2. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT
3. LCD WIRELESS REMOTE CONTROLLER
4. AUTO RESTART
5. 24-HOUR ON/OFF TIMER
6. LOW AMBIENT TO 0-DEGREES F
7. FIVE YEAR COMPRESSOR WARRANTY
8. TWO YEAR FUNCTIONAL PARTS WARRANTY

EXHAUST FAN SCHEDULE

GENERAL			FAN						ELECTRICAL			REMARKS
MARK	MANUF'R./MODEL	SERVES	DRIVE	TYPE	CFM	ESP	RPM	SONES	VOLTAGE	MOTOR	CONTROL	
EF-1	GREENHECK SP-A90	FF – TOILET	DIRECT	CENT.	70	1/8"	795	0.3	120/1/60	29W	INTERLOCK W/LIGHTS	NOTES 1,2,3
EF-2	GREENHECK SP-A90	FF – TOILET	DIRECT	CENT.	70	1/8"	795	0.3	120/1/60	29W	INTERLOCK W/LIGHTS	NOTES 1,2,3
EF-3	GREENHECK SP-A290	FF – ICE MAKER CLO.	DIRECT	CENT.	250	1/8"	938	1.6	120/1/60	81W	CONTINUOUS OPERATION	NOTES 1,2,3
EF-4	GREENHECK SP-A90	FF – LAUNDRY TLT	DIRECT	CENT.	70	1/8"	795	0.3	120/1/60	29W	INTERLOCK W/LIGHTS	NOTES 1,2,3
EF-5	GREENHECK SP-A290	FF – TOOL ROOM	DIRECT	CENT.	250	1/8"	938	1.6	120/1/60	81W	THERMOSTAT	NOTES 1,2,3,4
EF-6	GREENHECK SP-A290	FF – SCBA	DIRECT	CENT.	250	1/8"	938	1.6	120/1/60	81W	CONTINUOUS OPERATION	NOTES 1,2,3
EF-7	GREENHECK SP-A125	SF – TOILET	DIRECT	CENT.	110	1/8"	1,014	0.8	120/1/60	53W	INTERLOCK W/LIGHTS	NOTES 1,2,3
EF-8	GREENHECK SP-A125	SF – TOILET	DIRECT	CENT.	110	1/8"	1,014	0.8	120/1/60	53W	INTERLOCK W/LIGHTS	NOTES 1,2,3
EF-9	GREENHECK SP-A125	SF – TOILET	DIRECT	CENT.	110	1/8"	1,014	0.8	120/1/60	53W	INTERLOCK W/LIGHTS	NOTES 1,2,3
EF-10	GREENHECK SP-A70	SF- JANITOR	DIRECT	CENT.	50	1/8"	719	0.3	120/1/60	20W	INTERLOCK W/LIGHTS	NOTES 1,2,3
EF-11	GREENHECK SBE-3H42-30	TRUCK BAYS	BELT	PROP.	18,000	1/4"	802	32.0	208/3/60	3 HP	MANUAL STARTER	NOTES 1,2,5,6,7,8

* OR APPROVED EQUAL
1. FACTORY MOUNTED INTEGRAL DISCONNECT
2. INTEGRAL BACKDRAFT DAMPER
3. SOLID STATE SPEED CONTROL FACTORY MOUNTED ON THE FAN HOUSING.
4. LINE VOLTAGE THERMOSTAT PROVIDED BY THE FAN MANUFACTURER.
5. FLUSH INTERIOR WALL HOUSING WITH OSHA FAN GUARD
6. 45° TURNDOWN HOOD FACTORY COATED TO MATCH THE BUILDING EXTERIOR. EXACT COLOR TO BE DETERMINED BY THE ARCHITECT AND OWNER.
7. H-O-A MOTOR STARTER WITH AUXILIARY CONTACTS FOR CONNECTION TO THE CO MONITORING SYSTEM.
8. FAN OPERATION SHALL BE INTERLOCKED WITH COMBINATION LOUVER/DAMPERS L-2A AND L-2B.

HIGH VOLUME LOW SPEED FAN

MARK	MANUF'R./MODEL	FAN DIA.	MOUNTING HEIGHT	DRIVE	MAX. RPM	MOTOR POWER	VOLTAGE	REMARKS
HVLS-1	ENTREMATIC C-CLASS	14'	22'	GEARLESS, DIRECT	60	400 W	120/1/60	SEE NOTES
HVLS-2	ENTREMATIC C-CLASS	14'	22'	GEARLESS, DIRECT	60	400 W	120/1/60	SEE NOTES

* OR APPROVED EQUAL
NOTES:
1. HUB ASSEMBLY – 50,000 LBS. YIELD HIGH TENSILE STEEL
2. BLADE ATTACHMENT RETAINERS – 50,000 LBS. YIELD HIGH TENSILE STEEL
3. MOTOR HOUSING – 0.050 3003 ALUMINUM, POWDER COATED
4. BLADES – 6063-T6 ALUMINUM, POWDER COATED
5. BLADE END WINGLETS – 6061-T6 ALUMINUM, POWDER COATED
6. OPTIMIZED 5-BLADE PROFILE FOR LOW SPEED ROTARY AIRFOIL APPLICATION AND NEAR GROUND EFFECT
7. PROVIDE DIGITAL TOUCHSCREEN NETWORK CONTROLLERS FOR CONTROL OF ALL FINS FROM ONE LOCATION
8. REVERSE CAPABILITY
9. CAPABILITY TO SHUT DOWN WITH THE FIRE SYSTEM
10. LESS THAN 35 DBA
11. ETL TO UL 507 CERTIFICATION
12. NEMA 1 CONTROL MODULE WITH INTEGRAL DISCONNECT. LOCATE AS RECOMMENDED BY THE MANUFACTURER. FINAL LOCATION TO BE APPROVED BY THE OWNER.
13. DESIGN INCLUDES UNIQUE WINGLET AND SNAP ON BLADE ATTACHMENT
14. ANGLED ROOF INSTALLATIONS
15. PROVIDE DROP BAR OF THE LENGTH REQUIRED TO INSTALL THE FAN AT THE HEIGHT SCHEDULED. REFER TO THE ARCHITECTURAL PLANS FOR DETAILS OF THE ROOF CONSTRUCTION.
16. FACTORY POWDER COAT FINISH ON ALL EXPOSED PARTS. COLOR TO BE CHOSEN BY OWNER FROM MANUFACTURER'S STANDARD COLOR RANGE. MINIMUM OF 8 COLORS SHALL BE MADE AVAILABLE TO THE OWNER.
16. 10-YEAR PARTS WARRANTY, 1-YEAR PARTS

LOUVER SCHEDULE

MARK	MANUF'R./MODEL	DESCRIPTION	SIZE	TYPE	CFM	BPWP	MAX. S.P.	MATERIAL	FINISH	REMARKS
L-1	GREENHECK ESJ-401	STATIC BLADE LOUVER	24x12	EXHAUST	360	--	0.05"	EXT. ALUM.	KYNAR	NOTE 1,2,3
L-2A	GREENHECK EACC-601	COMBINATION LOUVER/DAMPER	60x54	INTAKE	9,000	1,020	---	EXT. ALUM.	KYNAR	NOTE 1,2,3,4
L-2B	GREENHECK EACC-601	COMBINATION LOUVER/DAMPER	60x54	INTAKE	9,000	1,020	---	EXT. ALUM.	KYNAR	NOTE 1,2,3,4
L-3	GREENHECK ESJ-401	STATIC BLADE LOUVER	24x12	INTAKE	410	691	---	EXT. ALUM.	KYNAR	NOTE 1,2,3
L-4	GREENHECK ESJ-401	STATIC BLADE LOUVER	12x12	INTAKE	115	691	---	EXT. ALUM.	KYNAR	NOTE 1,2,3
L-5	GREENHECK ESJ-401	STATIC BLADE LOUVER	38x12	EXHAUST	570	--	0.05"	EXT. ALUM.	KYNAR	NOTE 1,2,3
L-6	GREENHECK ESJ-401	STATIC BLADE LOUVER	12x12	EXHAUST	210	--	0.05"	EXT. ALUM.	KYNAR	NOTE 1,2,3

* OR APPROVED EQUAL IN RUSKIN OR ARROW
NOTES:
1. INTEGRAL GALVANIZED BIRD SCREEN.
2. INTAKE LOUVERS SHALL NOT BE SIZED FOR ANY MORE THAN 90% OF THE LOUVER MANUFACTURER'S BPWP RATING.
3. COLOR TO BE SELECTED BY OWNER FROM MANUFACTURER'S STANDARD RANGE – NO LESS THAN 24 STANDARD COLORS.
4. CONCEALED ACTUATOR AND LINKAGE.

DIFFUSER AND GRILLE SCHEDULE

MARK	MANUF'R./MODEL	SIZE	FACE	MOUNTING	MATERIAL	FINISH	REMARKS
A	PRICE SCD	24"x24"	SQUARE CONE	LAY-IN CLG	STEEL	WHITE	NONE
1	PRICE 80	24"x12"	CUBE CORE	LAY-IN CLG	EXT. ALUM.	WHITE	NONE
2	PRICE 80	12"x12"	CUBE CORE	LAY-IN CLG	EXT. ALUM.	WHITE	NOTE 1
3	PRICE 80	18"x18"	CUBE CORE	LAY-IN CLG	EXT. ALUM.	WHITE	NOTE 1

* OR APPROVED EQUAL IN TITUS, METAL-AIRE, OR TUTTLE & BAILEY
NOTES (AS APPLICABLE):
1. FRAMES/BORDERS FOR SQUARE LAY-IN CEILING APPLICATIONS WHERE THE AIR DEVICE CORE IS SMALLER THAN THE GRID SIZE SHALL INCLUDE INTEGRAL SOLID PANELS AROUND THE CORE SO THAT THE AIR DEVICE ASSEMBLY FILLS THE ENTIRE GRID SPACE.

NATIONAL ENGINEERING SERVICES, PLLC
CERTIFICATE OF AUTHORIZATION – ARKANSAS - ENGINEER – No. 2259

NES
CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS – REGISTERED PROFESSIONAL ENGINEER – JAMIE L. GUINN – 12375

DATE: **10/28/16**

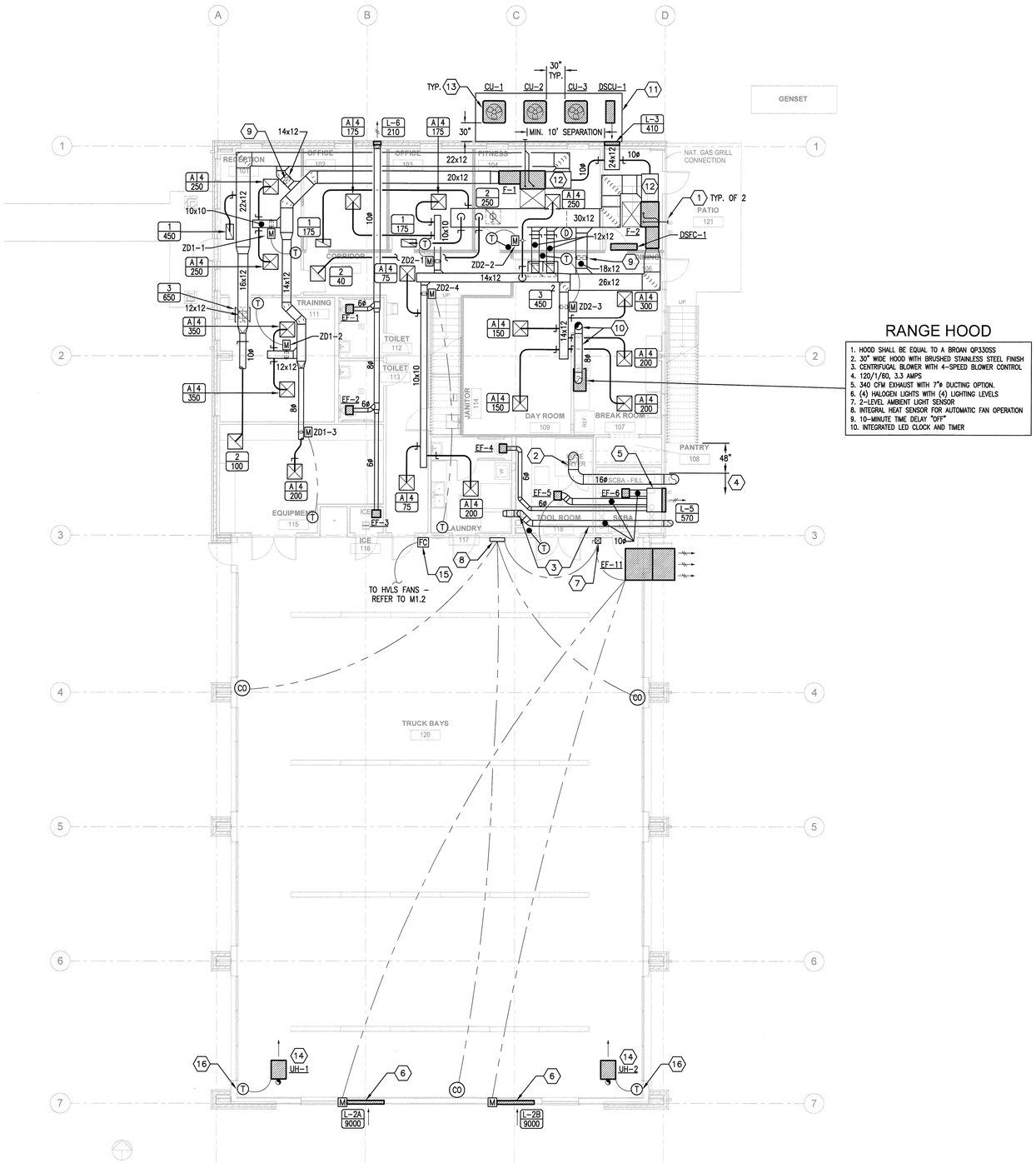
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **JLG**

HVAC GENERAL NOTES AND SCHEDULES

SHEET: **M0.1**



RANGE HOOD

1. HOOD SHALL BE EQUAL TO A BROAN OP330SS
2. 30" WIDE HOOD WITH BRUSHED STAINLESS STEEL FINISH
3. CENTRIFUGAL BLOWER WITH 4-SPEED BLOWER CONTROL
4. 120/1/60, 3.3 AMPS
5. 340 CFM EXHAUST WITH 7"ø DUCTING OPTION.
6. (4) HALOGEN LIGHTS WITH (4) LIGHTING LEVELS
7. 2-LEVEL AMBIENT LIGHT SENSOR
8. INTEGRAL HEAT SENSOR FOR AUTOMATIC FAN OPERATION
9. 10-MINUTE TIME DELAY "OFF"
10. INTEGRATED LED CLOCK AND TIMER

PROJECT NORTH

1 / M1.1 HVAC PLAN - FIRST FLOOR

SCALE: ⅛" = 1'-0"

KEYED NOTES - DENOTED BY (#)

NOTE: REFER TO THE ARCHITECTURAL PLANS FOR ALL ROOM NAMES AND NUMBERS.

1. ROUTE THE SEPARATED COMBUSTION PIPES AS HIGH AS POSSIBLE AND TERMINATE AT A CONCENTRIC ADAPTER AT THE EXTERIOR WALL.
2. ROUTE THE EXHAUST DUCT FOR THE HOSE DRYER TO THE EXTERIOR WALL IN STRICT ACCORDANCE WITH THE HOSE DRYER MANUFACTURER'S RECOMMENDATIONS. HOSE DRYER BY OTHERS.
3. ROUTE THE 10" DRYER EXHAUST DUCT UP IN THE TOOL ROOM TO ABOVE THE FIRST FLOOR CEILING AND TO THE OUTSIDE WALL. TURN DOWN 90° AND TERMINATE.
4. 1-HOUR WALL CONSTRUCTION EXTENDS TO 4' SOUTH OF THE BOTTOM OF THE EXTERIOR EXIT STAIR. ALL WALL PENETRATIONS SHALL BE KEPT SOUTH OF EXTENTS OF THE FIRE RATED CONSTRUCTION.
5. EXTEND A DUCT FULL SIZE OF THE CONNECTION TO THE LOUVER.
6. LOUVERS SHALL BE LOCATED AS LOW ON THE WALL AS POSSIBLE. VERIFY THE LOWEST ACCEPTABLE MOUNTING HEIGHT AND EXACT MOUNTING LOCATION WITH THE OWNER AND ARCHITECT PRIOR TO ROUGH-IN.
7. INSTALL THE MOTOR STARTER FOR EF-11 IN THIS VICINITY. VERIFY THE EXACT LOCATION WITH THE OWNER.
8. PROVIDE A CO MONITORING SYSTEM EQUAL TO TOXALERT GVU-3 COMPLETE WITH (3) REMOTE CO SENSORS. THE CO MONITORING SYSTEM SHALL BE INTERLOCKED WITH EF-11. FIELD VERIFY THE EXACT LOCATION OF THE CONTROL PANEL WITH THE OWNER
9. PROVIDE A BYPASS DAMPER AS PART OF THE BYPASS-CHANGEOVER HVAC CONTROL SYSTEM. BYPASS DAMPER SHALL BE PROVIDED BY THE CONTROL SYSTEM MANUFACTURER AS PART OF A COMPLETE CONTROL SYSTEM.
10. ROUTE A 8" E.A. DUCT FROM THE RANGE AS HIGH AS POSSIBLE AND AS SHOWN. REFER TO 1/M1.2 FOR CONTINUATION.
11. PROVIDE A CONCRETE MECHANICAL PAD.
12. EXTEND A R.A. DUCT FULL SIZE OF THE CONNECTION TO THE FURNACE.
13. ROUTE THE INSULATED REFRIGERANT LINE SET UP IN THE EXTERIOR WALL TO ABOVE THE CEILING AND CONNECT TO THE RESPECTIVE COOLING COIL COMPLETE AND OPERATIVE.
14. PROVIDE A UNIT HEATER AS SCHEDULED AT 14' A.F.F. VERIFY THAT 14' IS AN ACCEPTABLE MOUNTING HEIGHT WITH THE OWNER PRIOR TO ROUGH-IN AND ADJUST AS REQUIRED. EXTEND A LISTED TYPE-B DOUBLE WALL FLUE VENT UP TO THE ROOF AND TERMINATE AT A LISTED WEATHER CAP. B-VENT SHALL BE SIZED PER THE UNIT HEATER MANUFACTURER'S RECOMMENDATIONS.
15. INSTALL THE HVLS FAN CONTROLLER IN THIS VICINITY. VERIFY THE EXACT LOCATION WITH THE OWNER PRIOR TO ROUGH-IN.
16. INSTALL A 1" THICK EPS INSULATION THERMAL BREAK BETWEEN THE WALL AND THE THERMOSTAT BASE. PROVIDE A SHEET PAINTED SHEET METAL COVER OVER THE INSULATION FOR A NEAT, CLEAN AND WORKMANLIKE APPEARANCE.

DRYER DUCT INSTALLATION

THE DRYER SHALL BE VENTED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. DUCT SHALL BE MIN. 0.0195" THICK GALVANIZED SHEET METAL. WHERE THE DUCT PENETRATES ANY WALL, SLEEVE THE OPENING, PROVIDING A MINIMUM 2" ANNULAR SPACE BETWEEN THE DRYER DUCT AND THE SLEEVE. PACK THE ANNULAR SPACE WITH NONCOMBUSTIBLE MATERIAL OR FIRE CAULKING. WHERE THE WALL PENETRATION IS EXPOSED TO VIEW, PROVIDE A PAINTED SHEET METAL COVER OVER THE OPENING OR SIMILAR TO CONCEAL THE SLEEVE AND ANNULAR PACKING AND PROVIDE A NEAT, CLEAN AND WORKMANLIKE INSTALLATION OF THE WALL PENETRATION. PROVIDE A PROPOSED METHOD FOR FINISHING THE WALL PENETRATION TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO ANY ROUGH-IN.

REFRIGERANT LINE ROUTING

REFRIGERANT LINE SETS FROM THE VARIOUS OUTDOOR UNITS SHALL BE ROUTED NEAT AND CLEAN AND CONSOLIDATED INTO COMMON, PARALLEL PATHS AS MUCH AS POSSIBLE. REFRIGERANT PIPE SHALL BE SECURED TO THE MECHANICAL PAD AS DETAILED. GROUPS OF REFRIGERANT LINE SETS SHALL ENTER THE EXTERIOR AT COMMON LOCATIONS, RISE UP IN THE EXTERIOR WALL AND CONTINUE TO EACH RESPECTIVE FAN COIL UNIT. SUBMIT FOR APPROVAL A SHOP DRAWING OF THE PROPOSED REFRIGERANT PIPE ROUTING FROM EACH OUTDOOR UNIT TO THE EXTERIOR WALL AND INTO THE ATTIC.

HVAC CONTROLS

F-1/CU-1 AND F-2/CU-2 SHALL RECEIVE A BYPASS CHANGE-OVER ZONE CONTROL SYSTEM EQUAL TO CARRIER COMFORT ZONE II COMPLETE WITH MASTER CONTROLLER, SLAVE THERMOSTATS, ZONE DAMPERS, BYPASS DAMPERS AND ALL OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND OPERATIVE INSTALLATION. F-3/CU-3 SHALL RECEIVE A STAND-ALONE 7-DAY DIGITAL PROGRAMMABLE THERMOSTAT.

COOLING COIL CONDENSATE DRAINS

CONDENSATE DRAIN FROM THE COOLING COILS SHALL BE A DESIGN-BUILD SCOPE ITEM. TRAPPED, INSULATED CONDENSATE DRAIN LINES SHALL BE ROUTED, PITCHED TO DRAIN TO THE NEAREST EXTERIOR WALL, DOWN IN THE WALL, AND OUT TO THE EXTERIOR AT 6" A.F.G. FIELD VERIFY THE EXACT ROUTING TO MINIMIZE THE PIPING. PIPING SHALL BE CONSOLIDATED WHERE POSSIBLE. PIPING FROM SINGLE COILS SHALL BE NO LESS THAN 3/4". PIPING COMBINED FROM TWO OR THREE COILS SHALL BE NO LESS THAN 1". PIPING COMBINED FROM 4 OR MORE COILS SHALL BE 1-1/2". THE CONTRACTOR SHALL SUBMIT A PROPOSED CONDENSATE PIPING PLAN TO THE ARCHITECT FOR APPROVAL PRIOR TO ROUGH-IN. CONDENSATE SHALL DISCHARGE INTO THE STORM SEWER, DRY WELLS, OR GRASSY AREAS. WHERE CONDENSATE IS PROPOSED TO DISCHARGE INTO GRASSY AREAS A CONCRETE SPLASH BLOCK SHALL BE PROVIDED. CONDENSATE SHALL NOT DISCHARGE INTO SANITARY SEWER.

BRANCH DUCT SCHEDULE

SUPPLY AIR DUCT SIZES ARE FOR 0.08"/100' PRESSURE DROP, EQUAL FRICTION METHODOLOGY. RETURN AIR DUCT SIZES ARE FOR 0.06"/100' PRESSURE DROP, EQUAL FRICTION METHODOLOGY. TRUNK LINES AND BRANCH MAINS MAY BE PROVIDED IN ROUND DUCT ACCORDING TO THIS SCHEDULE, FOLLOWING PRIOR APPROVAL BY THE ENGINEER OF RECORD.

SUPPLY (CFM)	RETURN/EXHAUST (CFM)	DIAMETER (IN)
0-105	0-125	6ø
106-225	126-195	8ø
226-380	196-350	10ø
381-650	351-550	12ø
651-950	551-825	14ø
951-1350	826-1150	16ø
1351-1850	1151-1600	18ø
1851-2450	1601-2100	20ø
2451-3150	2101-2700	22ø
3151-3950	2701-3400	24ø

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER

NES
CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032
LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212
PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12375
JAMIE L. GUINN
10-28-16

DATE: **10/28/16**

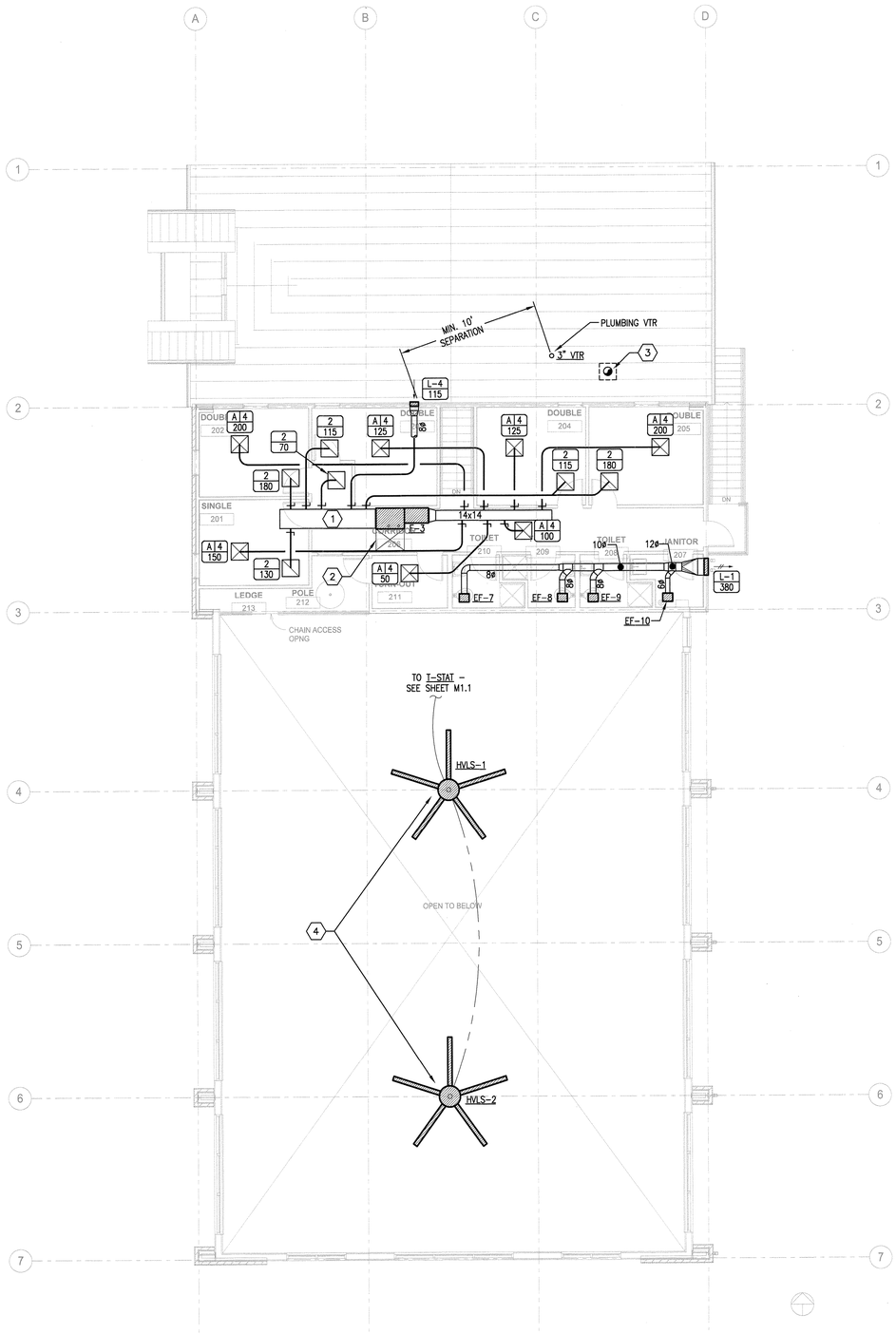
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **JLG**

HVAC PLAN - FIRST FLOOR

SHEET: **M1.1**



PROJECT NORTH

1 / M1.2 HVAC PLAN - SECOND FLOOR

SCALE: 1/8" = 1'-0"

KEYED NOTES - DENOTED BY (#)

NOTE: REFER TO THE ARCHITECTURAL PLANS FOR ALL ROOM NAMES AND NUMBERS.

1. EXTEND A R.A. DUCT FULL SIZE OF THE R.A. CONNECTION TO THE FURNACE.
2. MAINTAIN A 30" WIDE SERVICE CLEARANCE AREA IN FRONT OF THE FURNACE.
3. ROUTE A 8" E.A. DUCT FROM THE RANGE TO A ROOF JACK. ROOF JACK SHALL BE EQUAL TO A BROAN 611CM WITH CURB CAP. PROVIDE ROOF CURB. CURB AND CURB CAP SHALL BE PAINTED TO MATCH THE ROOF. FIELD PAINTING SHALL BE MINIMUM 3-COATS.
4. THE WORK BAYS ARE OPEN TO THE ROOF DECK, APPROXIMATELY 24' HIGH WITH A PITCHED ROOF (REFER TO ARCHITECTURAL PLANS FOR DETAILS OF THE ROOF HEIGHT AND ROOF CONSTRUCTION). PROVIDE HIGH VOLUME, LOW SPEED FANS IN THE WORK BAY AREAS FOR DESTRATIFICATION.

BRANCH DUCT SCHEDULE

SUPPLY AIR DUCT SIZES ARE FOR 0.08"/100' PRESSURE DROP, EQUAL FRICTION METHODOLOGY. RETURN AIR DUCT SIZES ARE FOR 0.06"/100' PRESSURE DROP, EQUAL FRICTION METHODOLOGY. TRUNK LINES AND BRANCH MAINS MAY BE PROVIDED IN ROUND DUCT ACCORDING TO THIS SCHEDULE, FOLLOWING PRIOR APPROVAL BY THE ENGINEER OF RECORD.

SUPPLY (CFM)	RETURN/EXHAUST (CFM)	DIAMETER (IN)
0–105	0–125	6ø
106–225	126–195	8ø
226–380	196–350	10ø
381–650	351–550	12ø
651–950	551–825	14ø
951–1350	826–1150	16ø
1351–1850	1151–1600	18ø
1851–2450	1601–2100	20ø
2451–3150	2101–2700	22ø
3151–3950	2701–3400	24ø

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.5270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER JAMIE L. GUINN 12575

DATE: **10/28/16**

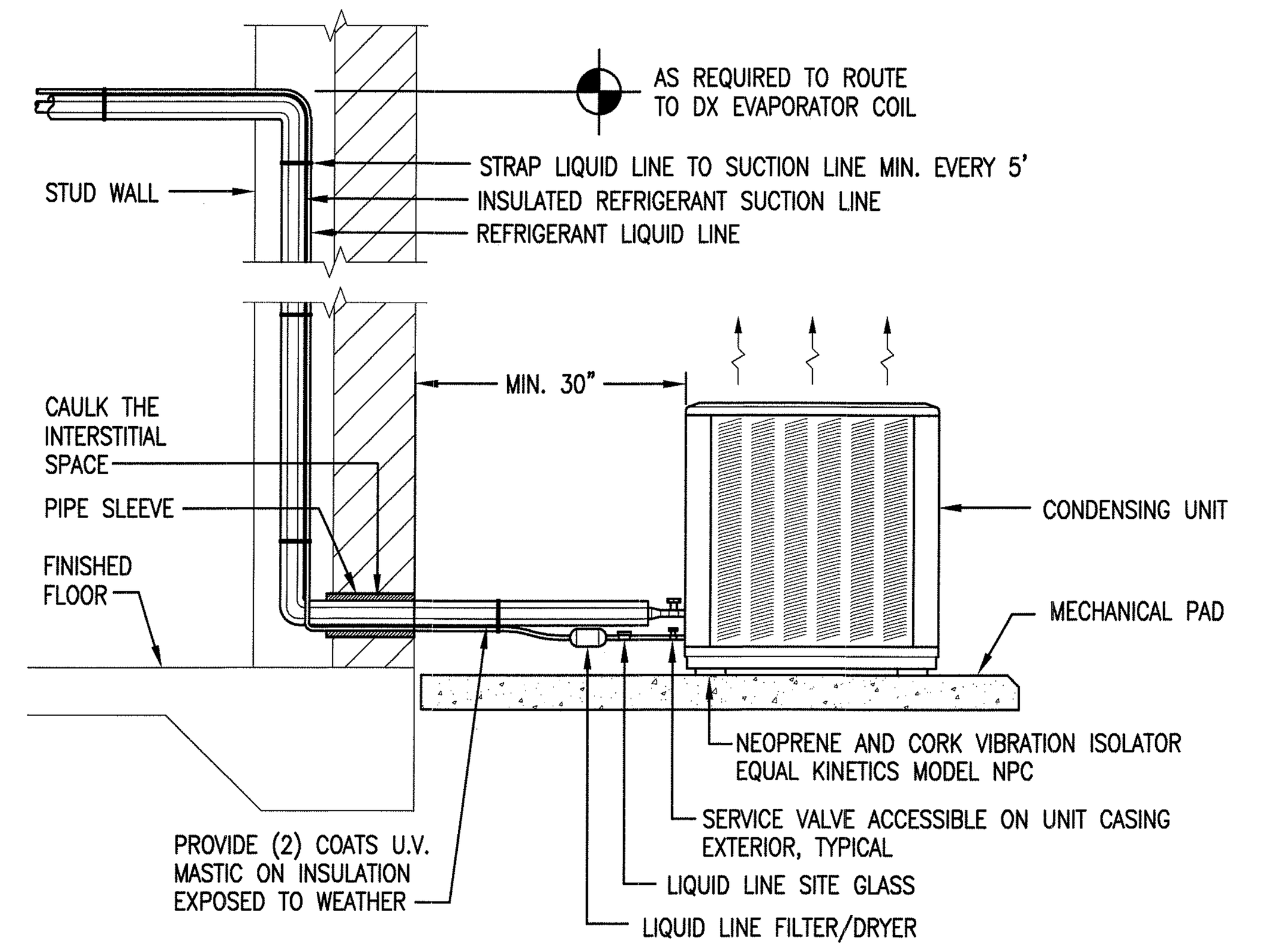
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

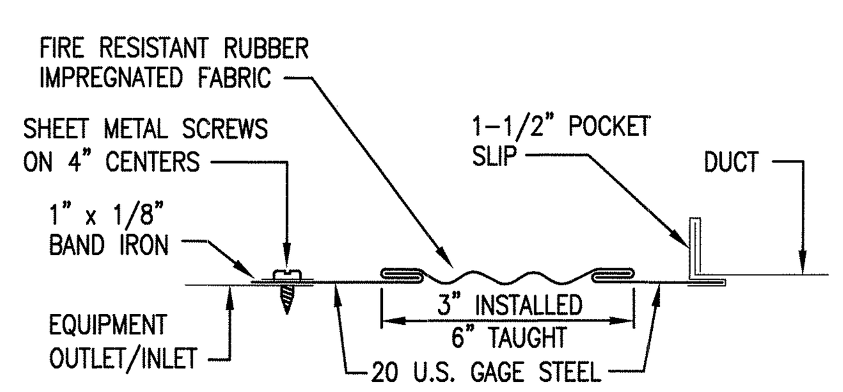
DRAWN BY: **JLG**

HVAC PLAN - SECOND FLOOR

SHEET: **M1.2**

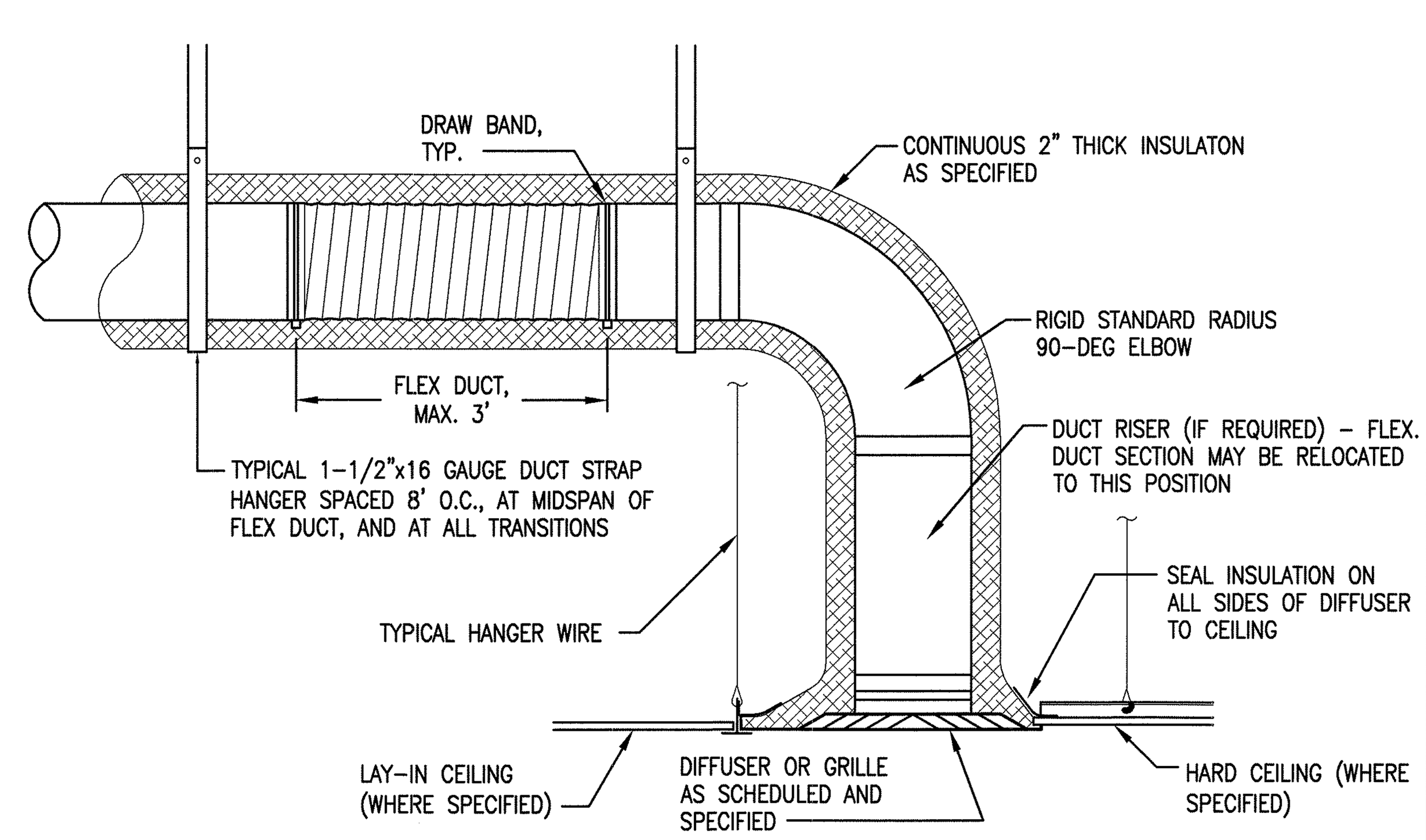


M1 **CONDENSING UNIT DETAIL**
SCALE: N.T.S.



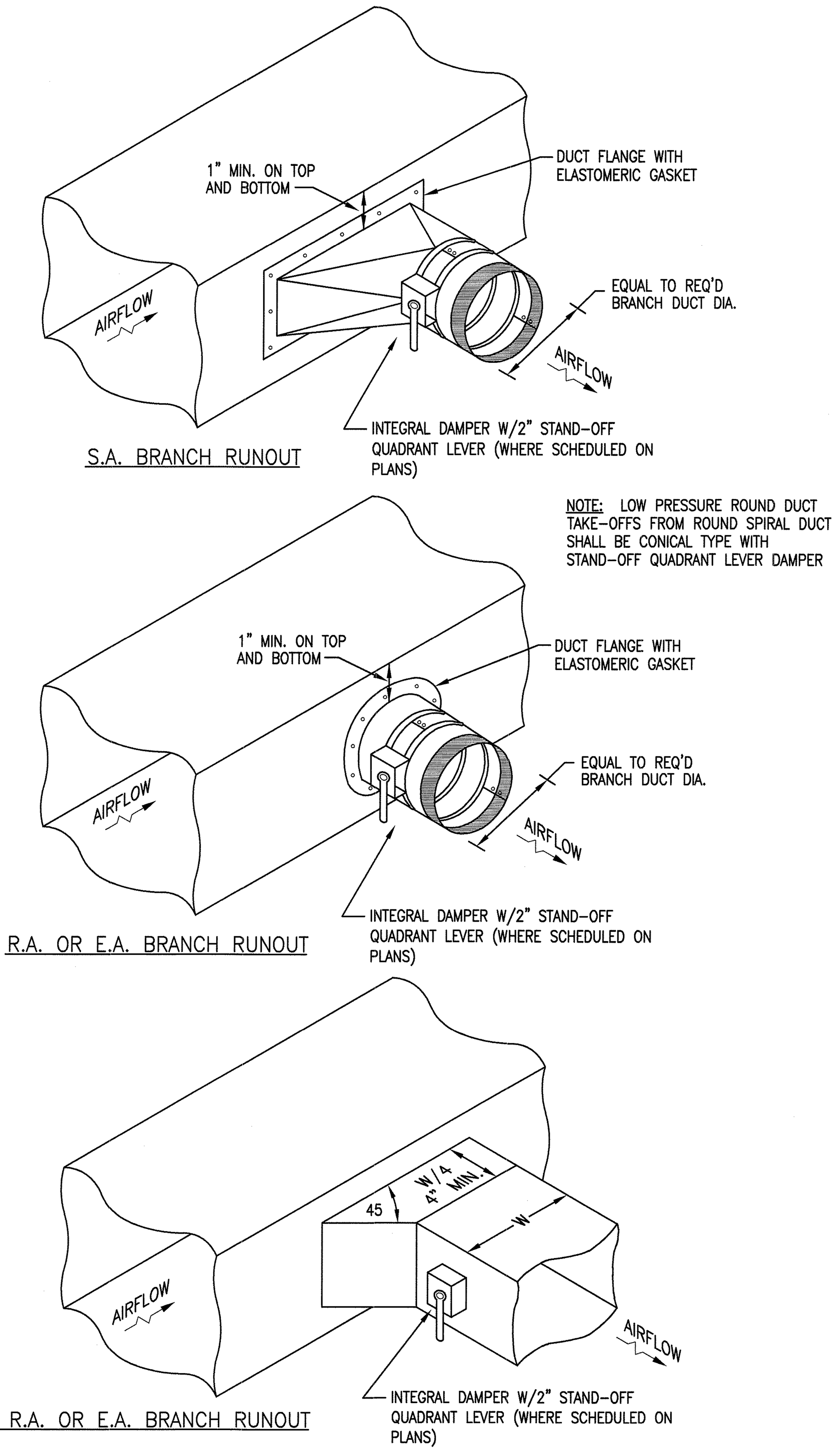
NOTE: PROVIDE FLEXIBLE DUCT CONNECTIONS AT INLETS AND OUTLETS OF ALL AIR HANDLING EQUIPMENT.

M2 **FLEXIBLE DUCT CONNECTION DETAIL**
SCALE: N.T.S.

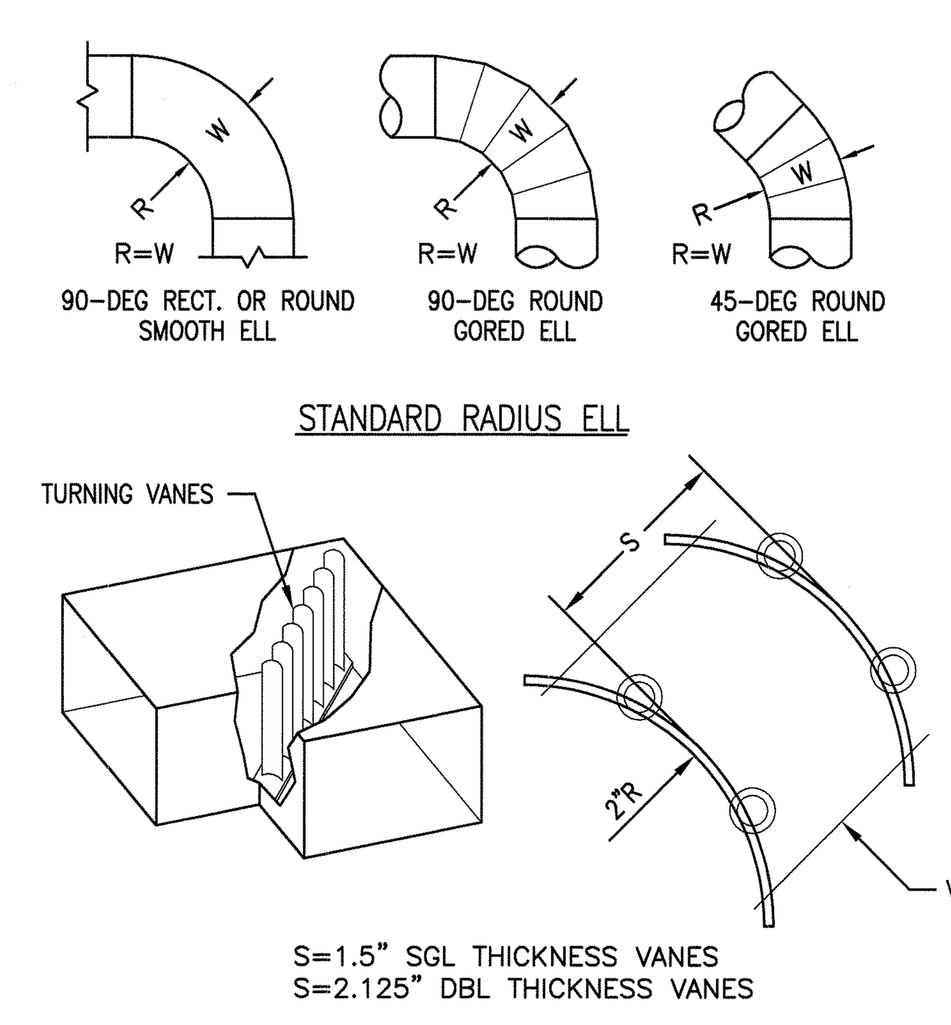


NOTE: FLEXIBLE DUCT SHALL NOT BE PERMITTED ON NEGATIVELY PRESSURIZED DUCT

M3 **AIR DEVICE INSTALLATION DETAIL**
SCALE: N.T.S.

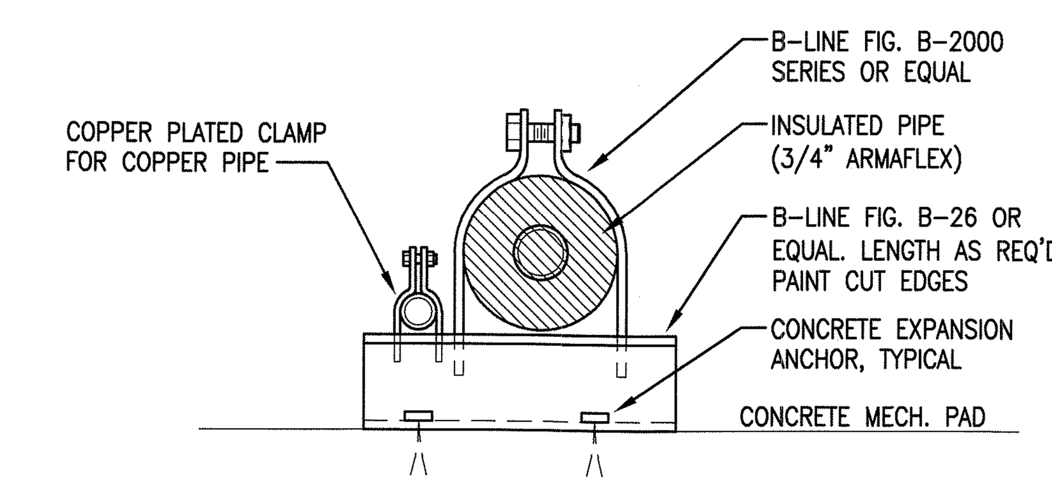


M4 **BRANCH DUCT TAKE-OFF DETAIL**
SCALE: N.T.S.



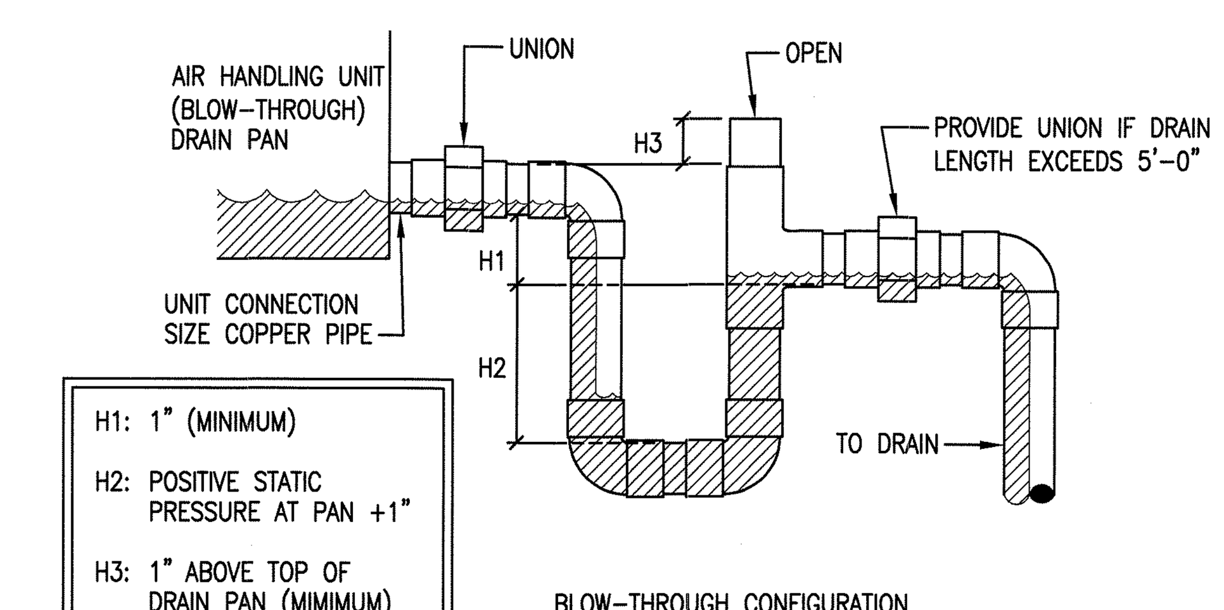
NOTES:
1. WHERE FULL RADIUS TURNS ARE NOT POSSIBLE, MITERED ELL'S WITH TURNING VANES SHALL BE PROVIDED FOR ALL CHANGES IN HORIZONTAL AND VERTICAL DUCT DIRECTION 45-DEGREE OR GREATER.
2. CONSTRUCT ELBOWS IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
3. TURNING VANE ELBOW SHALL BE ASHRAE FITTING CR3-9 WITH SINGLE WIDTH VANES FOR VANE LENGTHS UP TO 24".
4. TURNING VANE ELBOW SHALL BE ASHRAE FITTING CR3-15 WITH DOUBLE WIDTH VANES FOR VANE LENGTHS OVER 24".
5. ROUND ELBOWS SHALL BE SMOOTH OR GORED. 90-DEGREE GORED ELL'S SHALL BE MINIMUM 5-PIECE AND 45-DEGREE GORED ELL'S SHALL BE MINIMUM 3-PIECE.
6. VANES SHALL BE WELDED TO THE VANE RAIL IN DUCT SYSTEMS WITH AIR VELOCITIES 3000 FPM AND HIGHER.
7. SHORT RADIUS ELBOWS, ELBOWS WITH MITERED THROATS/RADIUS HEELS, AND ELBOWS WITH MITERED THROATS/CHAMFERED HEELS ARE NOT ACCEPTABLE.

M5 **DUCT ELL DETAIL**
SCALE: N.T.S.

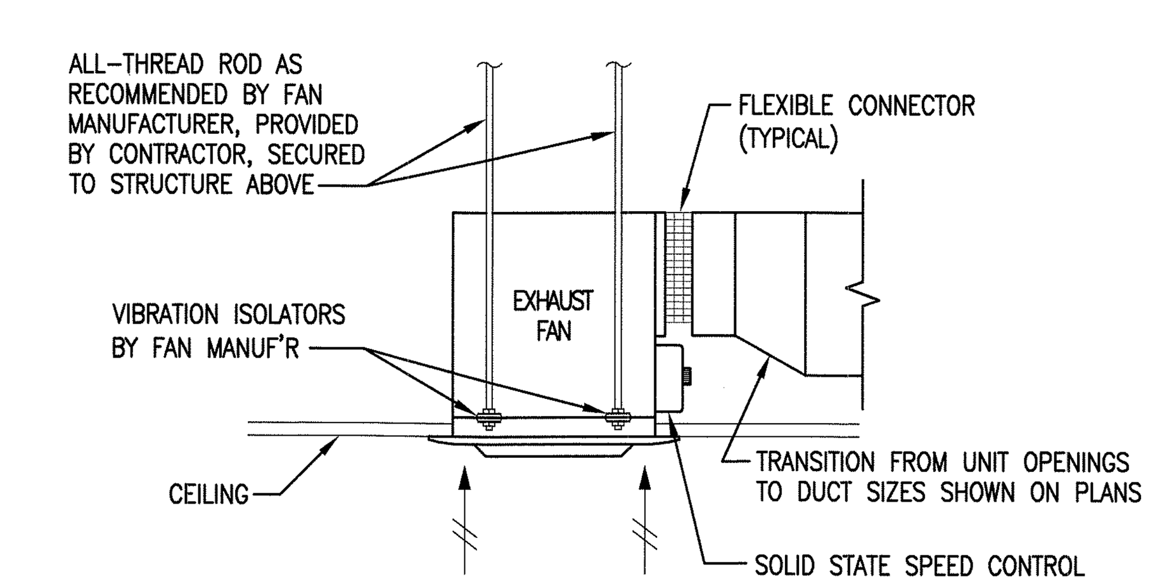


NOTES:
1. SUPPORT VERTICAL PIPING ROUTED ALONG BUILDING EXTERIOR WALLS IN A SIMILAR FASHION.
2. PROVIDE SUPPORTS AT 5' O.C.
3. PROVIDE (2) COATS U.V. MASTIC OVER ALL ARMAFLEX INSULATION LOCATED ON THE BUILDING EXTERIOR.

M6 **REFRIGERANT PIPE CLAMP DETAIL**
SCALE: N.T.S.



M7 **CONDENSATE TRAP DETAIL**
SCALE: N.T.S.



M8 **CEILING EXHAUST FAN DETAIL**
SCALE: N.T.S.

CERTIFICATE OF AUTHORIZATION NATIONAL ENGINEERING SERVICES, PLLC No. 2259 ARKANSAS - ENGINEER

NES
CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032
LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212
PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

DATE:
10/28/16

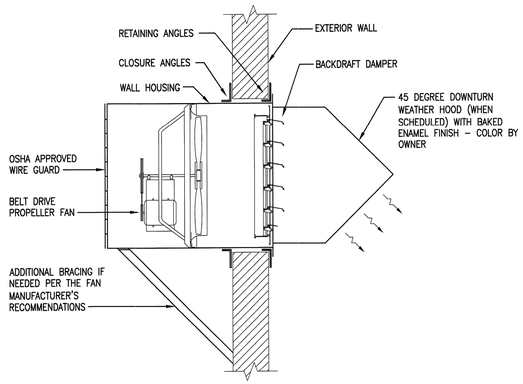
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY:
JLG

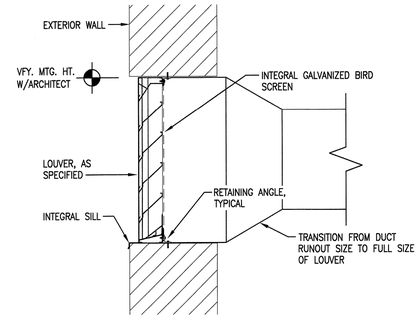
HVAC DETAILS

SHEET:
M2.1



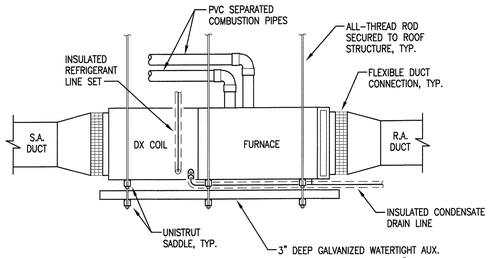
M9 **SIDEWALL PROPELLER EXHAUST FAN DETAIL**

SCALE: N.T.S.



M12 **STATIC LOUVER DETAIL**

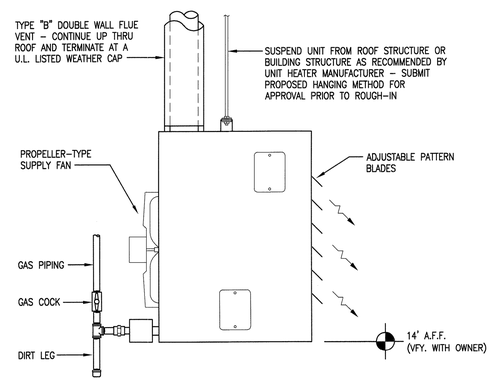
SCALE: N.T.S.



NOTES:
1. INSTALL THE FURNACE COMPLETE AND OPERATIVE IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. THE DETAIL IS INTENDED TO BE GENERIC, THEREFORE THE PIPING CONNECTIONS SHOWN WILL VARY FROM INSTALLATION TO INSTALLATION. PROVIDE REFRIGERANT PIPING, CONDENSATE PIPING, AND FLUE PIPING IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
3. PROVIDE FOR SUFFICIENT HEIGHT TO ALLOW FOR PROPER CONDENSATE TRAP AND DRAIN INSTALLATION.
4. PROVIDE A FLOAT SWITCH IN THE AUXILLARY DRAIN PAN INTERLOCKED WITH THE SYSTEM POWER. THE FLOAT SWITCH SHALL BE EQUAL TO A BECKETT 1500 SERIES, WIRED NORMALLY CLOSED, WITH OPEN CIRCUIT ACTIVATION.

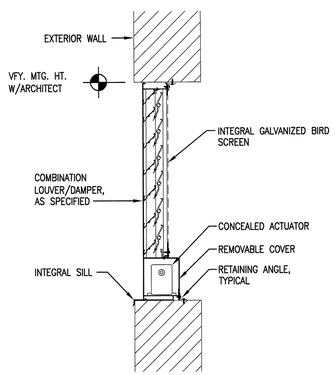
M10 **HORIZONTAL FURNACE DETAIL**

SCALE: N.T.S.



M13 **GAS-FIRED UNIT HEATER DETAIL**

SCALE: N.T.S.



M11 **COMBINATION LOUVER/DAMPER DETAIL**

SCALE: N.T.S.

NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
CERTIFICATE OF AUTHORIZATION
ARKANSAS ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
JAMES L. HOFFMANN
REGISTERED PROFESSIONAL ENGINEER
No. 12375
EXPIRES: 12/31/2016

DATE: **10/28/16**

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **JLG**

HVAC DETAILS

SHEET: **M2.2**

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	FLUORESCENT LIGHT FIXTURE – CEILING MOUNTED
	FLUORESCENT LIGHT FIXTURE EQUIPPED WITH 2–LAMP SELF–CONTAINED EMERGENCY BATTERY PACK
	FLUORESCENT LIGHT FIXTURE – CEILING MOUNTED
	FLUORESCENT LIGHT FIXTURE EQUIPPED WITH 2–LAMP SELF–CONTAINED EMERGENCY BATTERY PACK
	PARABOLIC FLUORESCENT LIGHT FIXTURE – CEILING MOUNTED
	PARABOLIC FLUORESCENT LIGHT FIXTURE – CEILING MOUNTED
	FLUORESCENT STRIP LIGHT – CEILING MOUNTED OR CHAIN HUNG
	FLUORESCENT STRIP LIGHT – EQUIPPED WITH 2–LAMP SELF–CONTAINED EMERGENCY BATTERY PACK
	FLUORESCENT STRIP LIGHT – WALL MOUNTED
	FLUORESCENT LIGHT FIXTURE – WALL MOUNTED
	INCANDESCENT, FLUORESCENT, OR HID DOWNLIGHT FIXTURE – CEILING MOUNTED
	INCANDESCENT, FLUORESCENT, OR HID DOWNLIGHT FIXTURE – CEILING MOUNTED ON EMERGENCY POWER CIRCUIT OR EQUIPPED WITH BATTERY PACK
	INCANDESCENT, FLUORESCENT, OR HID LIGHT FIXTURE – WALL MOUNTED
	RECESSED WALL WASH LIGHT FIXTURE – ARROW INDICATES DIR. OF LIGHT OUTPUT
	AREA LIGHT POLE
	AREA LIGHT POLE
	EMERGENCY LIGHT FIXTURE
	EXIT LIGHTS – WALL MT. & CEILING MT. SHOWN – SHADING INDICATES FACE(S), DIRECTIONAL ARROWS SHALL BE AS SHOWN ON PLANS
S	SINGLE–POLE TOGGLE SWITCH
S_2	TWO–POLE TOGGLE SWITCH
S_3 S_{K3}	THREE–WAY TOGGLE SWITCH (K3–KEYED 3–WAY)
S_4 S_{K4}	FOUR–WAY TOGGLE SWITCH (K4–KEYED 4–WAY)
S_D	DIMMER CONTROL SWITCH OR STATION (AS SPECIFIED ON PLANS AND/OR RISER) RATED FOR LOAD AND LOAD TYPE.
S_M^{GFCI}	MANUAL MOTOR STARTER WITH OVERLOADS, TOGGLE OPERATED
S_K	SINGLE–POLE TOGGLE SWITCH – KEY OPERATED
S_{WP}^{K}	SINGLE–POLE TOGGLE SWITCH – KEY OPERATED AND WEATHERPROOF TYPE
	MULTI–LEVEL SWITCHING: Sa – SWITCHES 2 OUTTER LAMPS Sb – SWITCHES INNER LAMP(S)
	DUPLEX RECEPTACLE – HUBBELL WIRING DEVICE #CR20WHITR W/SS8 COVERPLATE MOUNT WITH GROUND TERMINAL UP 18" TO BOTTOM OF BOX (UNO).
E	DUPLEX RECEPTACLE ON EMERG POWER – HWD #CR20REDTR W/SS8 COVERPLATE MOUNT WITH GROUND TERMINAL UP 18" TO BOTTOM OF BOX (UNO).
	QUADRAPLEX RECEPTACLE – (2) HUBBELL WIRING DEVICE #CR20WHITR W/SS82 COVERPLATE. MOUNT WITH GROUND TERMINAL UP 18" TO BOTTOM OF BOX (UNO).
	DUPLEX RECEPTACLE MOUNTED HORIZONTALLY ABOVE COUNTER TOP – VERIFY MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS AND MILLWORK DETAILS.
GFCI	GROUND FAULT RECEPTACLE – HUBBELL WIRING DEVICE #GFTR20W W/SS26 COVERPLATE.
WP GFCI	WEATHERPROOF IN USE TYPE RECEPTACLE – HWD #GRFT20W W/RW57500 IN USE WEATHERPROOF HOUSING. MOUNT AT 18" TO BOTTOM OF BOX (UNO).
IG	ISOLATED GROUND TYPE RECEPTACLE – HWD #IG5362 W/ SS8 COVERPLATE.
USB	USB CHARGING RECEPTACLE WITH 3 AMPS OF USB POWER – HWD #USB15X2W
	NON–METALIC FLUSH MULTI SERVICE FLOOR BOX WITH UNIVERSAL COVER FOR EITHER CARPET OR TILE AS NECESSARY. COORDINATE WITH ARCHITECT. FLOOR BOX TO ACCOMODATE DUPLEX CONVENIENCE RECEPTACLE AND (4) TELE/DATA PORTS. HWD SYSTEM ONE TYPE.
10–30R	SPECIAL PURPOSE OUTLET – NEMA CONFIGURATION (VOLTAGE, AMPACITY) AS NOTED ON DRAWINGS
	SURFACE MOUNTED DUAL COMPARTMENT RACEWAY WITH DEVICES AS SHOWN HUBBELL #HBL4750 SERIES
	ALUMINUM POWER POLE – HUBBELL WIRING DEVICE #HBLPPOAL W/ATB – (10')

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
4	DATA OUTLET: # INDICATES RJ45 DATA MODULES IN 2 GANG, 3 1/2" DEEP BACKBOX. PROVIDE 1"C. WITH CAT6 CABLING TO PATCH PANEL IN IT ROOM. PROVIDE COMPLETE WITH APPROPRIATE COVERPLATE (2) CAT6 MINIMUM.
	COMBO TELE/DATA OUTLET: # INDICATES RJ45 MODULES IN 2 GANG, 3 1/2" DEEP BOX. PROVIDE 1"C. WITH CAT6 CABLING TO PATCH PANEL IN IT ROOM. PROVIDE COMPLETE WITH APPROPRIATE COVERPLATE. (2) CAT6 MINIMUM
WIFI	CEILING MOUNTED WIFI ACCESS POINT: PROVIDE JBOX WITH CAT6 CABLING BEWTEEN BOX AND IT ROOM PATCH PANEL. COORDINATE LOCATIONS WITH OWNER'S IT DEPT. PROVIDE COMPLETE WITH APPROPRIATE COVERPLATE AND RG45 MODULE.
TV	TELEVISION OUTLET – SINGLE GANG FLUSH OUTLET BOX WITH 3/4"C & PULL STRING TO ACCESSIBLE LOCATION ABOVE CEILING IN CORRIDOR.
J	JUNCTION BOX – SIZED TO ACCOMODATE CONNECTION
	DISCONNECT SWITCH
	COMBINATION MOTOR STARTER / DISCONNECT SWITCH
	MOTOR STARTER
EPO or EPO	EMERGENCY POWER OFF STATION (REMOTE SHUNT TRIP) – REFER TO "POWER RISER DIAGRAM"
#12	BRANCH CIRCUIT IN CONDUIT – SWITCH LEG, PHASE LEG, NEUTRAL, ISOLATED GROUND, AND EQUIPMENT GROUND INDICATED
#12	BRANCH CIRCUIT HOMERUN – PANEL AND CIRCUIT NUMBER INDICATED
	CONDUIT CONCEALED IN OR BELOW FLOOR SLAB OR BELOW GRADE
	EXISTING CONDUIT
	FLEXIBLE CONDUIT
E	EMERGENCY CIRCUIT(S) (SHOWN WITH NON–ARCHED LINES)
	SURFACE MOUNTED PANELBOARD – SEE SCHEDULE
	FLUSH MOUNTED PANELBOARD – SEE SCHEDULE
	TELEPHONE TERMINAL BOARD 4'X8'X3/4" PLYWOOD PAINTED GREY
T	TRANSFORMER
C	CONTACTOR
TC	TIME CLOCK
DH	DOOR HOLD OPEN. POWER AND CONNECT TO SMOKE DETECTORS PER CODE.
S	AUDIO/VISUAL SPEAKER – BOSE FREESPACE OR EQUAL. CONNECT TO TELE. SYSTEM FOR PAGING AS REQUIRED. COODINATE WITH VENDOR.
VC	WALL MOUNTED VOLUMN CONTROL FOR CEILING SPEAKER. MOUNT 44" TO BOTTOM OF OUTLET BOX.
	4"DEEP, 8"WIDE FLEXTRAY WIRE MANAGEMENT SYSTEM – B–LINE #FT4X8X10 WALL HUNG IN CORRIDOR 12" BELOW DECK. #FTB18CS BRACKETS 5' O.C.
T	THERMOSTAT – E.C. TO FURNISH & INSTALL BACKBOX & 1/2" CONDUIT TO ABOVE ACCESSIBLE CEILING & TERMINATE
	CCTV – PROVIDE CAMERA, CONNECTION AND DVR COMPLETE.
K	RECESSED CLOCK RECEPTACLE MOUNTED 12" BELOW CEILING

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
75 F	FIRE ALARM AUDIO/VISUAL DEVICE – NUMBER INDICATES INDICATES MINIMUM CANDELA RATING OF STROBE
75 V	FIRE ALARM VISUAL ONLY ONLY DEVICE – NUMBER INDICATES MINIMUM CANDELA RATING OF STROBE
	FIRE ALARM DOUBLE ACTION PULL STATION
H	HEAT DETECTOR
S	SMOKE DETECTOR
S_D	DUCT MOUNTED SMOKE DETECTOR
FS	FLOW SWITCH – FURNISHED BY OTHERS (VERIFY LOCATION AND QUANTITY)
TS	TAMPER SWITCH – FURNISHED BY OTHERS (VERIFY LOCATION AND QUANTITY)
CR KP	CARD READER or KEYPAD (COORDINATE WITH VENDOR)
M	MAGNETIC DOOR LOCK
ES	ELECTRIC STRIKE – COORDINATE WITH HARDWARE PROVIDER.
EB	EGRESS BUTTON (TO RELEASE MAGNETIC DOOR LOCK)
MD	MOTION DETECTOR – SECURITY SYSTEM
GB	GLASS BREAK DETECTOR – SECURITY SYSTEM
SR	INDOOR SIREN – SECURITY SYSTEM
DC	DOOR CONTACT – SECURITY SYSTEM
SCP	SECURITY CONTROL PANEL – COORDINATE WITH VENDOR.

AC	ABOVE COUNTER
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
BFC	BELOW FINISH CEILING
EP	EXPLOSION PROOF
EPO	EMERGENCY POWER OFF
GFI	GROUND FAULT INTERRUPTING
GRD	GROUND
IG	ISOLATED GROUNDING
MTD	MOUNTED
NFDS	NON–FUSED DISCONNECT SWITCH
OHE	OVERHEAD ELECTRIC
SDBC	SOFT–DRAWN BARE COPPER
SP	SURGE PROTECTION
TC	TIME CLOCK
UGE	UNDERGROUND ELECTRIC
UON	UNLESS OTHERWISE NOTED
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHERPROOF

NOTE:

1. NOT ALL SYMBOLS MAY APPLY TO THIS PROJECT.
2. SYMBOLS SHOWN DASHED ON PLANS INDICATES EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC.

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	VOLTS	LAMPS QTY	LAMPS TYPE	REMARKS
A	METALUX	# HBLED–LD4–24–W–A–UNV–L840–CD2–U	120V	–	203W LED 40K	PENDANT MOUNTED 2X4 HIGH BAY LED WITH LENS AND WIDE DISTRIBUTION. HANG TO 18'.
B	METALUX	# 24FR–LD4–40–UNV–L835–CD1–U	120V	–	36W LED 35K	2X4 RECESSED ARCHITECTURAL LED TROFFER.
C	HALO	# PD615–ED010–PDM6A–935–61VH–WF	120V	–	15W LED 35K	RECESSED LED DOWNLIGHT WITH 35K COLOR AND WHITE FLANGE
D	METALUX	# 4WNLED–LD4–40SL–F–UNV–L835–CD1–U	120V	–	36W LED 35K	SURFACE MOUNTED LED WRAPAROUND FIXTURE.
E	METALUX	# 22CZ–LD4–34–UNV–L835–CD1–U	120V	–	35W LED 35K	2X2 RECESSED ARCHITECTURAL DIRECT/INDIRECT LED TROFFER.
EM	SURE LITES	# CC7	120V	–	INCLUDED	SELF CONTAINED WET LOCATION BATTERY PACK FIXTURE WALL MOUNTED OVER EXIT DOORS.
F	METALUX	# 24CZ–LD4–40–UNV–L835–CD1–U	120V	–	33W LED 35K	2X4 RECESSED ARCHITECTURAL DIRECT/INDIRECT LED TROFFER.
G	McGRAW–EDISON	# GWC–AE–01–LED–E1–SL4–CTBS–*	120V	–	56W LED 40K	SOLID STATE LED TYPE 4 FORWARD THROW LED WALLPACK MOUNTED AT 9'6" AFF
H	HALO	# HU1048D930–CTBS	120V	–	10W LED 35K	4' UNDERCABINET LED FIXTURE. COLOR TO BE DETERMINED BY ARCHITECT.
I	HALO	# HU1024D930–CTBS	120V	–	10W LED 35K	2' UNDERCABINET LED FIXTURE. COLOR TO BE DETERMINED BY ARCHITECT.
J	METALUX	# 2BCLED–LD4–20SL–F–UNV–835–CD1–U	120V	–	23W LED 35K	WALL MOUNTED 2' LED BRACKET FIXTURE MOUNTED OVER MIRROR. VERIFY MTG. HEIGHT
K	BETA CALCO	# 32–5166–CTBS	120V	–	32W LED 40K	51" TALL EXTERIOR RATED LED SCONCE MOUNTED AT 9' AFF TO TOP OF FIXTURE
L	BETA CALCO	# 32–2766–CTBS	120V	–	16W LED 40K	27" TALL EXTERIOR RATED LED SCONCE MOUNTED AT 6' AFF TO TOP OF FIXTURE
M	EUREKA	# 4411–GGC–LED.24.30–120–DV–AC*–RC	120V	–	24W LED 30K	DECORATIVE 20" DIAMETER FABRIC SHADE LED PENDANT. COORD. MTG HEIGHT W/ ARCH.
N	LUMINAIRE LED	# AEL36–15W–4000K–120–DP–EMB310	120V	–	15W LED 40K	ARCHITECTURAL EGRESS LIGHT FIXTURE MOUNTED OVER 3' DOOR WITH EMERG BATTERY.
O	HALO	# SLD606935WH	120V	–	12W LED 35K	RECESSED LED DOWNLIGHT
P	HUNTER	# TBD	120V	–	N/A	42" FOUR BLADE WHITE CEILING FAN WITH LUTRON FAN CONTROL MODULE
Q	HUNTER	# TBD	120V	–	LED	42" FOUR BLADE WHITE CEILING FAN WITH LUTRON FAN CONTROL MODULE AND LIGHT KIT
X	SURE LITES	# EUX7RSD	277V	–	LED	WALL MOUNTED SINGLE FACE EDGE–LIT LED EXIT LIGHT WITH EMERGENCY BATTERY PACK

LIGHT FIXTURE SCHEDULE NOTES:

1. ALL PRODUCTS SPECIFIED HEREIN ARE TO BE PROVIDED THROUGH ARKANSAS BASED ELECTRICAL DISTRIBUTORS ONLY.
2. SUBSTITUTIONS MUST MATCH QUALITIY AND AESTHETICS OF SPECIFIED PRODUCTS AND WILL ONLY BE CONSIDERED WHEN SUBMITTED PRIOR TO BID AS DEDUCTIVE ALTERNATE. CONTRACTOR MUST SECURE WRITTEN APPROVAL FROM ENGINEER NO LATER THAN 10 DAYS PRIOR TO BID.

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2014 EDITION OF THE NATIONAL ELECTRIC CODE (N.E.C.).
2. THE SPECIFICATIONS ARE AS BINDING ON THE CONTRACTOR AS THE DRAWINGS. THE CONTRACTOR SHALL READ THE SPECIFICATIONS AND SHALL INCLUDE ALL ITEMS REQUIRED BY THE SPECIFICATIONS BEFORE SUBMITTING A BID.
3. MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS OTHERWISE NOTED. ALL CONDUIT SHALL BE CONCEALED UNLESS OTHERWISE NOTED. ALL CONDUIT IN OR BELOW FLOOR SLABS AND BELOW GRADE SHALL BE 1" MINIMUM UNLESS OTHERWISE NOTED.
4. EACH CIRCUIT SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR. MULTI–WIRE CIRCUITS FOR SINGLE PHASE LOADS SHALL NOT SHARE NEUTRALS. EACH SINGLE PHASE 120V OR 277V CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR PER PHASE. MINIMUM EQUIPMENT GROUND AND NEUTRAL SHALL BE #12AWG COPPER.
5. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID COPPER, EXCEPT WHERE FLEXIBILITY IS REQUIRED, AND ALL CONDUCTORS #8 AND LARGER SHALL BE STRANDED COPPER USING BOLTED LUGS AT TERMINALS.
6. ALL ELECTRICAL EQUIPMENT (CONDUIT, BOXES, SUPPORTS, ETC.) INSTALLED IN EXPOSED CEILING AREAS SHALL BE PAINTED AS DIRECTED BY THE ARCHITECT.
7. PVC CONDUIT IS NOT ALLOWED EXCEPT FOR UNDERGROUND SERVICE FEEDERS OR PANEL FEEDERS. ELBOWS AND RISERS TO 6" ABOVE FLOOR/GRADE TO BE GRS. UNDERGROUND CONDUITS PENETRATING CONCRETE ARE TO BE NEATLY ORGANIZED.
8. THE ELECTRICAL CONTRACTOR SHALL CLOSELY COORDINATE WITH MECHANICAL & PLUMBING CONTRACTORS FOR EXACT LOCATION AND EQUIPMENT CONNECTIONS OF ALL PLUMBING AND MECHANICAL EQUIPMENT SCHEDULED ELSEWHERE ON DRAWINGS.
9. BRANCH CIRCUITS TO 5 HORSEPOWER AND LARGER THREE PHASE MOTORS SHALL BE PROVIDED WITH PHASE LOSS PROTECTION. PHASE LOSS SHALL BE INTEGRAL TO DRIVES AND/OR STARTERS SERVING MOTOR.

GENERAL NOTES

10. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SIZING OF ALL MOTOR OVERLOAD DEVICES (HEATERS) IN STARTERS BASED ON ACTUAL NAMEPLATE RATINGS ON THE MOTORS BEING INSTALLED PER N.E.C. 430.6(A)(2).
11. ALL LOW VOLTAGE INTERLOCKING OF HVAC EQUIPMENT SHALL BE BY THE CONTROLS CONTRACTOR. ALL OTHER "LINE/LOW VOLTAGE" WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR AND SHALL BE IN CONDUIT. COORD. WITH OTHER TRADES.
12. TELE/DATA OUTLETS AS INDICATED IN LEGEND ARE TO BE INSTALLED AND CONNECTED AS PER INDUSTRY STANDARD AND IN ACCORDANCE WITH OWNERS IT PROTOCOL. COORDINATE ALL EQUIPMENT SELECTION, CABLE ROUTING, CABLE MANAGEMENT AND LABELING WITH IT DEPARTMENT PRIOR TO BEGINNING WORK.
13. ALL WIRING RUN EXPOSED ABOVE CEILING SHALL BE PLENUM RATED.
14. PROVIDE (2) 2"C SLEEVES ABOVE CEILING BETWEEN CORRIDOR AND ANY 2 HOUR RATED BLOCK WALLS FOR FUTURE USE.
15. MOUNTING HEIGHT ABOVE FLOOR TO BOTTOM OF DEVICE OUTLET BOX SHALL BE AS FOLLOWS FOR RECEPTACLES, MICROPHONE OUTLETS, TELEPHONE, TELEVISION AND COMPUTER OUTLETS SHOWN ON PLANS UNLESS NOTED OTHERWISE:

GENERAL THROUGHOUT		18"
MECHANICAL EQUIPMENT ROOMS		48"
ABOVE COUNTER TOPS	30" H	36"
	36" H	44"
	48" H	52"
ABOVE BACKSPLASH TOP		2" MINIMUM
AVOVE RADIATORS		6" MINIMUM
ABOVE OR ADJACENT TO LAVATORIES		44"
BEHIND DOMESTIC REFRIGERATORS		48"
BEHIND DOMESTIC WASHERS/DRYERS		36"
SERVING DOMESTIC DISHWASHERS		18"
WALL MOUNTED TELEPHONES		44"
TOGGLE SWITCHES		48"
PULL STATIONS (FIRE ALARM)		44"
CALL IN STATIONS (INTERCOM)		44"
HORN/STROBES (FIRE ALARM)		80"

16. CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND SECURE A FULL SET OF CONTRACT DOCUMENTS TO ENSURE COMPLETE ELECTRICAL BID PACKAGE.

CERTIFICATE OF AUTHORIZATION – NATIONAL ENGINEERING SERVICES, PLLC – No. 2259 – ARKANSAS – ENGINEER

NES
CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032
LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212
PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive,
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS – REGISTERED PROFESSIONAL ENGINEER – NO. 10218 – STANLEY R. CURTIS

10/28/16

DATE: **10/28/16**

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **SRC**

ELECTRICAL SYMBOLS AND NOTES

SHEET: **E1.1**

SECTION 16000 – ELECTRICAL SPECIFICATIONS

1. GENERAL REQUIREMENTS:

A. GENERAL CONDITIONS: The bidders will examine a complete set of construction documents to avoid omissions, duplications and to ensure complete and working execution of the work for electrical construction.

B. GENERAL: The work under this section shall include labor, materials and equipment and incidental costs necessary to furnish and install electrical work, equipment, lamps, etc. indicated on drawings, as specified herein, or both.

C. SCOPE: Furnish labor, materials, tools, equipment, etc., required for a complete installation of electrical systems and work, in accordance with federal, state, and local codes, and governing bodies having jurisdiction.

2. WORKMANSHIP:

A. Use capable and experienced superintendents, authorized by the contractor to instruct work, make job decisions and act for the contractor in matters pertaining to the contract documents.

3. PERMITS, TESTS AND INSPECTIONS:

A. Apply for, secure and pay for required permits, fees, licenses and royalties to accomplish the work.

B. Apply for, secure and pay for required tests and inspections necessary to accomplish the work in conformance with codes and governing bodies having jurisdiction.

4. CODES, RULES, AND REGULATIONS:

A. The contractor shall furnish, without extra charge, any additional materials and labor that may be required for compliance with governing laws, rules and regulations even though the work is not mentioned in these specifications or shown on the drawings. Nothing in plans or specifications shall be deemed as authority to violate any governing code.

B. Product shall be UL and CSA certified and labeled. Meet listed NEMA standards and be suitable for the intended use/service required for the device.

5. ACCURACY OF DATA:

A. The data given herein and on the drawings are as exact as could be secured, but their absolute accuracy is not guaranteed. The specifications and drawings are for the assistance and guidance of the contractor. Exact locations, distances, levels, etc. will be governed by the site conditions. The contractor shall use the data contained herein with this understanding.

6. CLEAN–UP:

A. Remove surplus material, equipment and debris incidental to this work and leave the premises in a condition acceptable to the owner and tenant (if applicable).

7. GUARANTEE:

A. Furnish a written certified guarantee, in acceptable form to owner, against any defective workmanship, material and operating equipment. This guarantee shall be in force and effective for a period of (1) year after acceptance of the installation.

8. STRUCTURAL CONDITIONS:

A. Notching and boring of structural members will not be permitted unless approved in writing by the structural engineer. Where notches and holes are approved they shall be carefully held to the minimum sizes actually required.

9. BASIC MATERIALS AND METHODS:

A. RACEWAYS AND BOXES

1. Where size of raceway or boxes are not indicated, the electrical sub–contractor shall size these items as required by code.

2. Raceways shall be rigid metal conduit unless otherwise indicated.

3. Intermediate metal conduit may be used wherever rigid conduit is required except for raceways embedded in concrete slabs, in contact with the earth, underground not encased in concrete and in corrosive locations.

4. Electrical metallic tubing may be used for raceways above furred ceilings, within dry wall partitions, in equipment rooms where not subject to physical damage.

5. Schedule 40 PVC may be used underground or in areas indicated on drawings provided elbows and penetrations thru slab are rigid steel.

6. Wiring connections to motors, transformers, or other devices, which are subject to vibration or require adjustment, shall be flexible metallic conduit. The flexible metal conduit shall not exceed 18 inches in length. Where these connections are outdoors, or in damp locations, or are connections to any kitchen or commercial laundry type equipment, liquid tight flexible conduit shall be used.

7. Elbows shall be of the same materials as the conduit except for PVC installations. All PVC conduit systems shall have rigid metal elbows unless otherwise noted. Elbows in EMT and small rigid conduits may be job–fabricated with a bender made specifically for the purpose.

8. Conduits shall be sized as indicated on the drawings and as required to accommodate the wires to be pulled into the conduit. Conduit shall not be less than three–quarters inch (3/4).

9. For each thermostat (by HVAC), provide 4 X 4 outlet box with 3/4" empty conduit. Stubbed up into hung ceiling and bushed. Provide steel drag wire for each location.

10. Provide pull line in all empty raceways.

11. Type NMC wire may be used in lieu of wire/raceway for branch circuit wiring (dwelling units only) where allowed by both the 2005 National Electrical Code and State/Local Codes.

10. GROUNDING:

A. Non–current equipment, including the following items, shall be properly grounded:

1. Secondary feeder conduit and equipment enclosures.
2. Panelboard enclosures, pull and junction boxes, cable troughs.
3. Conduits, metal molding and outlet boxes.
4. Equipment housings exposed on the structure or on grade.

11. MOTOR AND RELATED EQUIPMENT WIRING:

A. Provide required conduit, wiring and safety switches for motors, and other related electrical equipment.

B. Motors shall be furnished and set under other divisions. The work of this division shall include necessary all connections to ensure proper operation and control.

C. Starting devices, motor controllers, float switches, level sensors, alarm devices, remote control pushbuttons, etc., unless specified by others shall be provided under this contract. Contractor shall set these devices and provide all connections.

12. WIRING DEVICES:

A. Devices shall be UL and CSA certified, listed NEMA Standard, and suitable for the service required for the intended use of the device in this installation.

B. Where devices manufactured by Arrow Hart, Bryant, Hubbell, P & S, Leviton, Walker/Wiremold, Thomas & Betts, Square D, or Sierra are named, only equivalent devices by the other of these manufacturers will be acceptable. Unless otherwise indicated, devices shall be as follows:

1. Wall Switches: 15 ampere/20 ampere, 120 volt AC, back or side wired

2. Dimmer Switches: 20 ampere, 120 volt AC, Sized to accomodate load

3. Convenience Outlets: Duplex receptacles, 15 and 20 ampere, 125 volt side and back wired with a pair of NEMA 5–15R Standard 3 contact grounded parallel slot contacts. Devices to be white unless otherwise directed by owner/architect.

4. Isolated Grounded Receptacles: NEMA 5–20R. 3 contact Grounded parallel Slot contacts. Provide stainless steel coverplate.

5. Ground Fault Circuit Interrupter Convenience Outlets: Side wired 20 ampere, 120 volt with appropriate wall plate. (Provide within 6' of sink and/or outdoors)

6. Special equipment outlets shall be furnished and installed to match the connecting plugs as provided by the owner on specialized equipment.

7. Manual Motor Starters: Overload heater sized to the motor nameplate rating.

C. COVERPLATES:

1. General: Opening in Plates shall properly fit the wiring Devices associated with the outlets. Plates shall overlap outlet box edges for installation over finished room surfaces and shall be the non–over hanging type to fit condulet boxes used with exposed conduit runs. All plates shall be type high impact white thermoplastic type coverplates with matching screws unless otherwise noted.

2. All Outlet boxes are to be provided with Coverplate, even those for use by others.

13. WIRE AND CABLES:

A. Branch circuit wiring may be grounded 3 conductor non metallic sheathed Type NM or NMC where allowed by City and Federal codes.

B. No wire shall be smaller than No. 12 AWG except #14 may be used for residential branch circuit wiring for lighting and general purpose receptacles and control wiring. All wire No. 8 and larger shall be stranded type. All wire No. 10 and smaller shall be solid.

C. Wire and cable shall be factory color coded. Colors for each phase and neutral shall be used consistently throughout each system. The following color codes shall be used and maintained throughout the system:

120/208 V SYSTEMS
277/480 V SYSTEMS

Phase A	Phase C	Neutral	Switch Legs
Black	Blue	White	Yellow with Tracer Phase
Brown	Yellow	Grey	
Phase B		Ground	
Red		Green	
Orange		Green	

D. Homeruns more than 100 feet shall be minimum #10 AWG Cu wire unless noted otherwise. Homeruns more than 225 feet shall be minimum #8 AWG Cu wire unless noted otherwise. Contractor shall adjust the wire size accordingly.

14. LIGHTING AND POWER PANELS:

A. Panelboards (commercial projects) shall be circuit breaker type with copper buss installed in code gauge galvanized sheet steel cabinets, flush or surface mounted as indicated on drawings. Each cabinet shall be complete with hinged doors, cylinder lock, directory frame and neatly typed directory charts. All panels shall be keyed alike.

B. Load Centers (residential grade projects only) shall be circuit breaker type with tin plated aluminum buss installed in galvanized steel cabinets, flush or surface mounted as indicated on drawings Each cabinet shall be complete with hinged doors, cylinder lock, directory frame and neatly typed directory charts. All load centers shall be keyed alike.

B. The branch circuit breakers, in general, shall be molded case, bolt–on type, rated 10,000 AIC for 120/240V, 14,000 AIC for 480/277 Volt Systems or larger interrupting capacity as may be indicated on plans. Thermal magnetic trip, single, two or three pole as shown on drawings. Multiple pole breakers for panels where indicated on the drawing schedules. Main breaker characteristics shall be as indicated on the drawings. Main buswork of all panels shall, as a minimum, be designed to carry the full rating of the feeder switch supplying the panel, at a current density of 800 amperes per square inch of cross section. Buswork shall be high conductivity copper.

C. Panel sections shall be such that no live parts are exposed after installation. They shall be so arranged that each breaker is readily removable from the panel without disturbing adjacent breakers.

D. Phase legs shall be alternately bussed to each circuit breaker in a manner to affect balancing the branch circuit connections as nearly as possible over each phase.

E. Branch panelboards on 240/120V systems shall be equipped with GE type THQB; square D type QOB; or Westinghouse type BAB bolt–in circuit breakers with a minimum interrupting capacity of 10,000 amperes symmetrical on 120 VAC, 60 Hertz. Where indicated on panelboard schedules higher interrupting capacities shall be furnished.

F. Provide a neatly, typewritten directory of circuits for each existing panelboard as indicated for additions or modifications.

15. LIGHTING FIXTURES:

A. Lighting fixtures shall be supplied and stored by the contractor. The contractor shall be responsible for the repair or replacement of any defective fixtures.

B. The contractor shall provide the necessary labor and materials for the complete installation of the lighting fixtures as indicated on the drawings.

C. Lamps shall be povided as specified or required for all fixtures. Contractor shall provide burn–in time per the manufacturer's recommendation.

D. See electrical drawings for light fixture description.

16. LIGHTING ACCESSORIES:

A. Furnish and install equipment for lighting control of night and exterior lighting fixtures as indicated on the contract documents.

B. Contactors shall be mounted not higher than 6'–6" above finished floor to top of cabinet and not lower than 4'–0" finished floor to bottom surface of cabinet.

C. Test system to assure satisfactory operation upon completion of installation. Supply manufacturer brochures and manuals to owner's representative.

17. DISCONNECT SWITCHES:

A. Disconnect switches serving motor loads shall be properly NEMA rated. They shall be environmentally rated for the areas where located with NEMA rain–tight construction for units located outdoors.

B. Disconnects shall be heavy duty, quick–make and quick–break. They shall be fused type as indicated in the contract documents.

C. Install disconnects for motors, controllers and other equipment as indicated in the contract documents.

18. FUSES:

A. Furnish and install required fuses in each device furnished under Division 16.

B. Fuse for motor loads shall be time delay.

19. METERING:

A. Metering will be accomplished through equipment furnished by the utility co. and installed by the contractor in accordance with the latest utilities company published standards.

B. Contractor shall obtain standard for the required meter enclosure. Contractor shall obtain meter enclosure together with installation instructions and shall furnish labor, material, and tools to properly install the enclosure as directed by the utility company.

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive,
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10213
STANLEY R. CURTIS

10/28/16

DATE: **10/28/16**

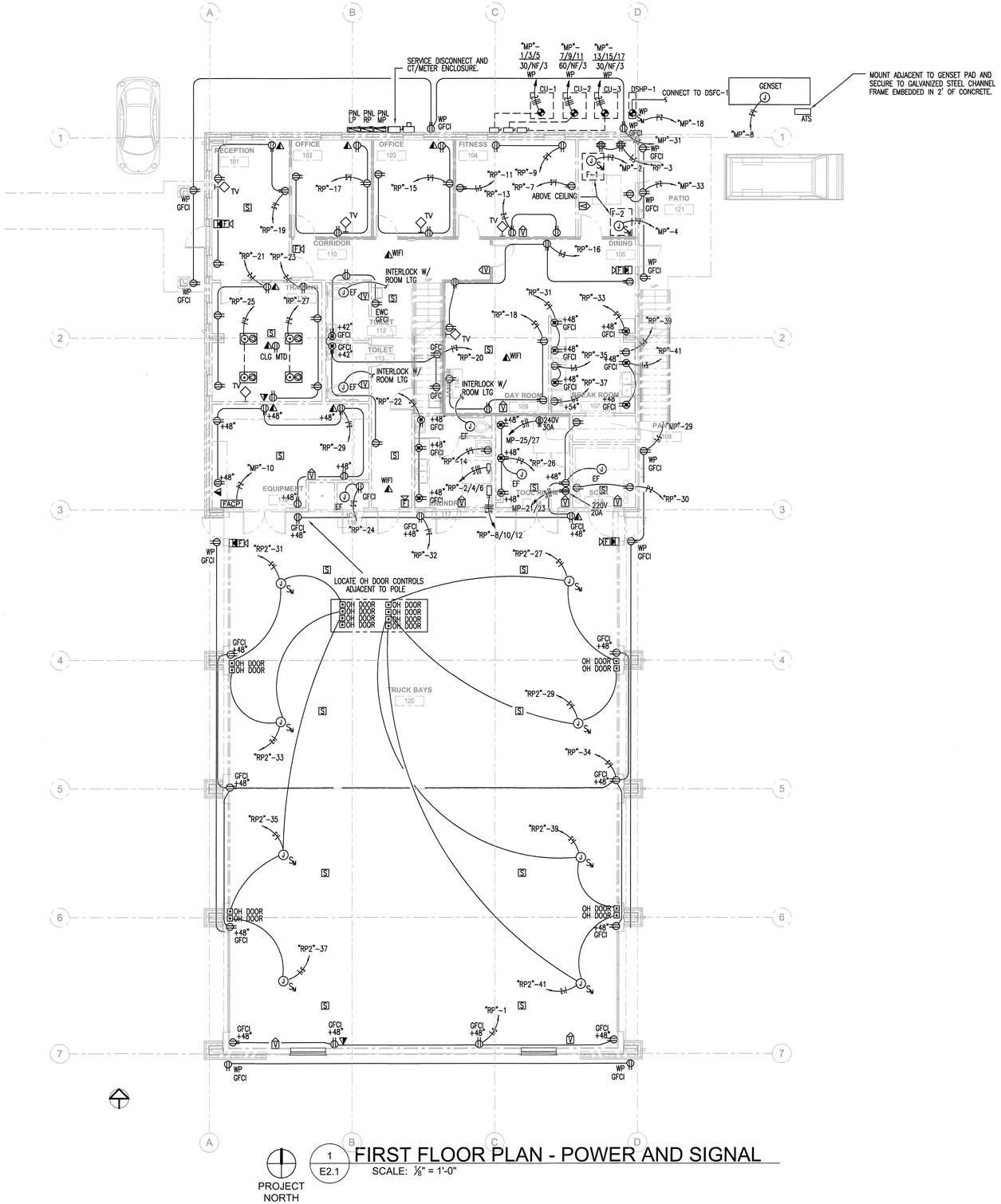
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **SRC**

ELECTRICAL SPECIFICATIONS

SHEET: **E1.2**



PROJECT NORTH

1 / E2.1 FIRST FLOOR PLAN - POWER AND SIGNAL

SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. COORDINATE ALL ABOVE COUNTER RECEPTACLE LOCATIONS WITH MILLWORK PRIOR TO INSTALLING TO ENSURE PROPER PLACEMENT.

B. REFERENCE SHEET E1.1 FOR SYMBOLS LEGEND AND SHEET E5.2 FOR PANELBOARD SCHEDULES.

C. COORDINATE REQUIREMENTS FOR ALL EQUIPMENT PROVIDED BY OTHERS PRIOR TO INSTALLING CIRCUITS TO ENSURE ADEQUATE ELECTRICAL SUPPORT.

D. PROVIDE JBOX AND CONDUIT TO ACCESSIBLE LOCATION ABOVE CEILING FOR T-STAT LOCATIONS INDICATED ON MECHANICAL PLANS.

E. COORDINATE LOCATION OF ALL CONTROL POWER TRANSFORMERS REQUIRING 120V INPUT FROM MECHANICAL CONTRACTOR AND CIRCUIT TO NEAREST 120V OUTLET.

F. PROVIDE MINIMUM CLEARANCE OF 3'6" DEEP AND 30" WIDE IN FRONT OF ALL MECHANICAL EQUIPMENT DISCONNECT SWITCHES.

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive,
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 10213
STANLEY R. CURTIS

10/28/16

DATE: **10/28/16**

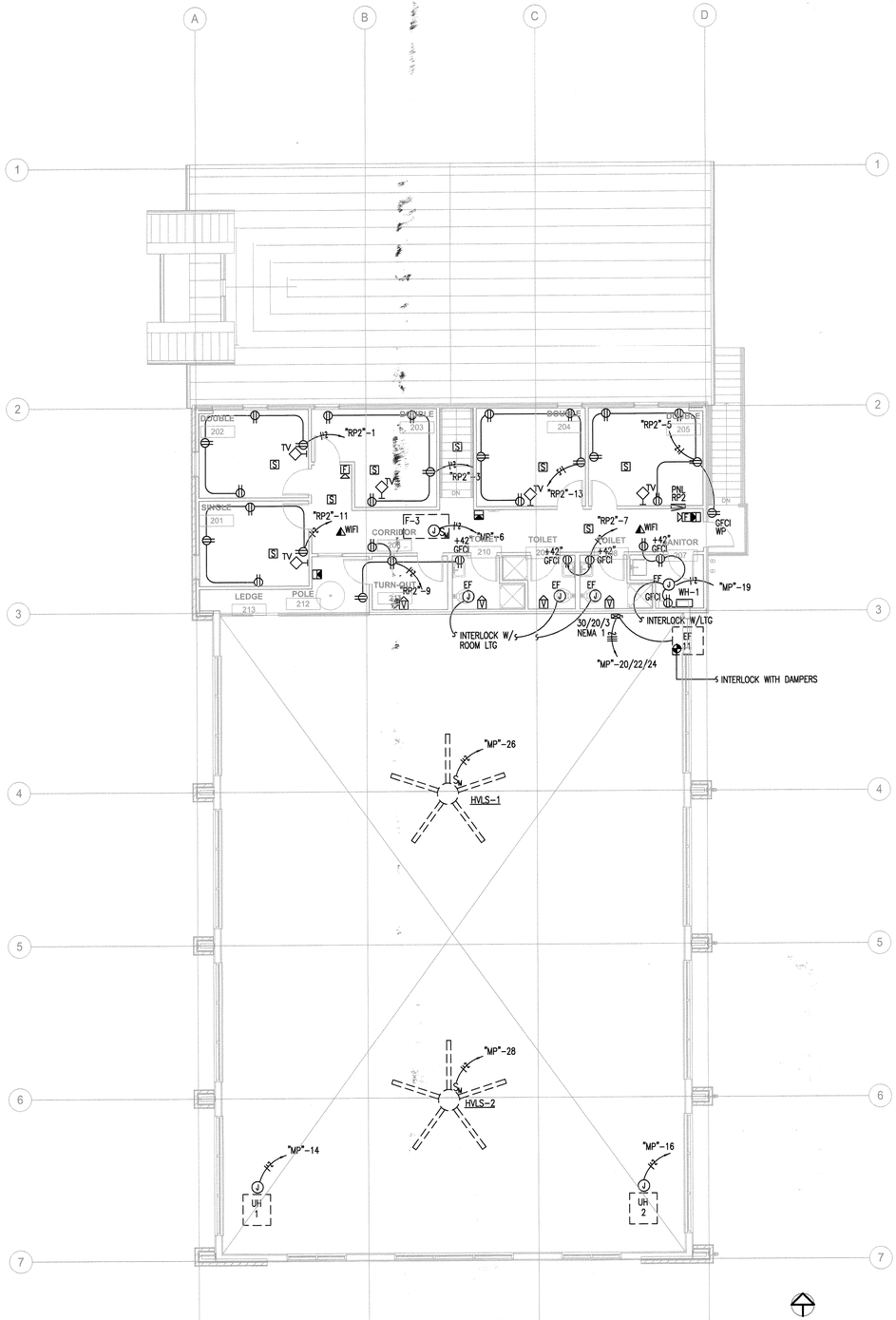
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **SRC**

FIRST FLOOR PLAN - POWER AND SIGNAL

SHEET: **E2.1**



PROJECT NORTH

1 / E2.2

SECOND FLOOR PLAN - POWER AND SIGNAL

SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. COORDINATE ALL ABOVE COUNTER RECEPTACLE LOCATIONS WITH MILLWORK PRIOR TO INSTALLING TO ENSURE PROPER PLACEMENT.

B. REFERENCE SHEET E1.1 FOR SYMBOLS LEGEND AND SHEETS E5.1 AND E5.2 FOR PANELBOARD SCHEDULES.

C. COORDINATE REQUIREMENTS FOR ALL EQUIPMENT PROVIDED BY OTHERS PRIOR TO INSTALLING CIRCUITS TO ENSURE ADEQUATE ELECTRICAL SUPPORT.

D. PROVIDE JBOX AND CONDUIT TO ACCESSIBLE LOCATION ABOVE CEILING FOR T-STAT LOCATIONS INDICATED ON MECHANICAL PLANS.

E. COORDINATE LOCATION OF ALL CONTROL POWER TRANSFORMERS REQUIRING 120V INPUT FROM MECHANICAL CONTRACTOR AND CIRCUIT TO NEAREST 120V OUTLET.

F. PROVIDE MINIMUM CLEARANCE OF 3'6" DEEP AND 30" WIDE IN FRONT OF ALL MECHANICAL EQUIPMENT DISCONNECT SWITCHES.

KEYED NOTES:

(1) INTERLOCK WITH TOILET LIGHTING AND CONTROLS.

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive,
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 10213
STANLEY R. CURTIS

10/28/16

DATE: **10/28/16**

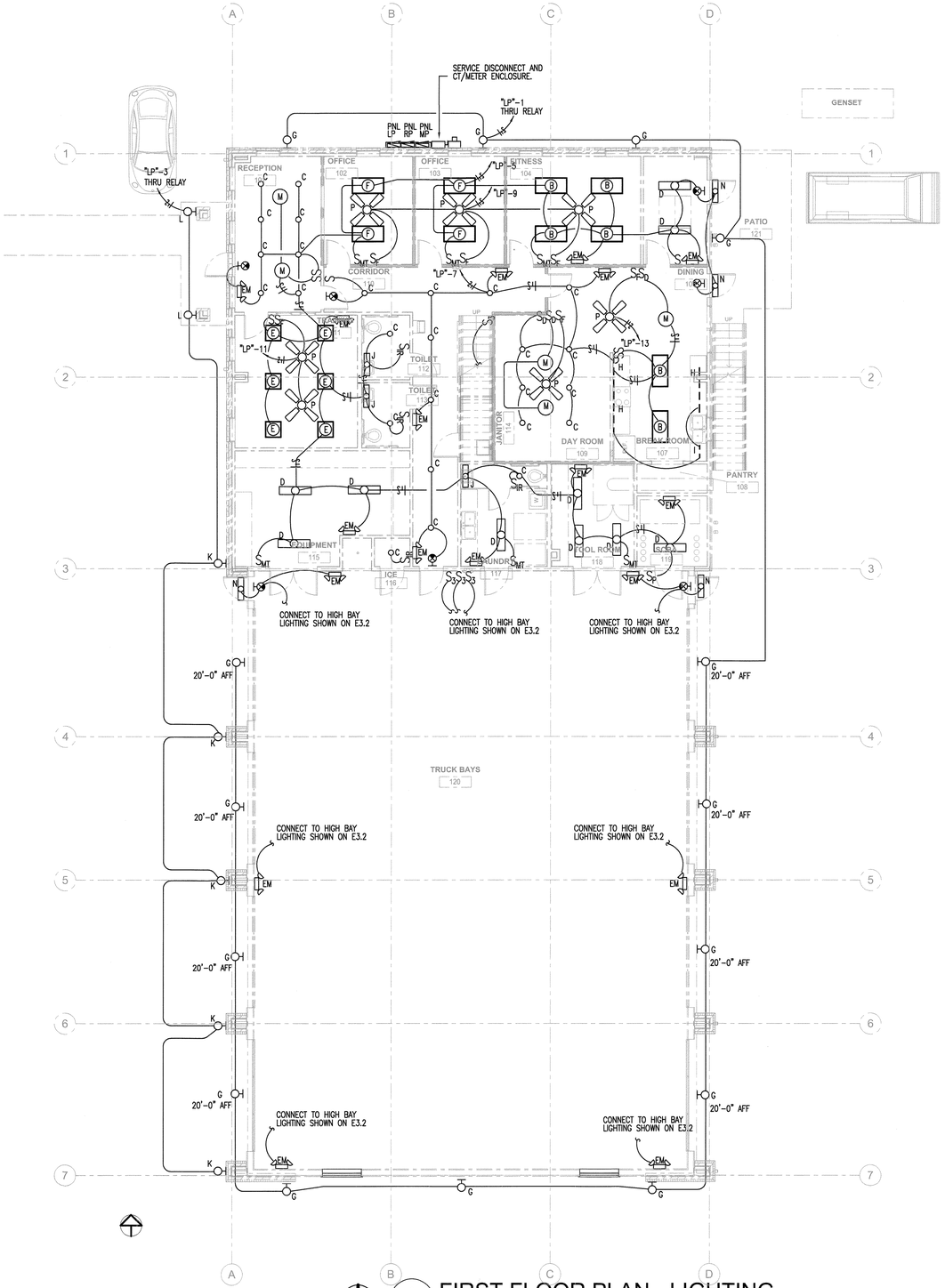
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **SRC**

SECOND FLOOR PLAN - POWER AND SIGNAL

SHEET: **E2.2**



GENERAL NOTES:

A. RUN A SEPARATE HOT CONDUCTOR TO THE CHARGING CIRCUIT OF ALL SWITCHED EMERGENCY LIGHTING FIXTURES.

B. REFERENCE SHEET E1.1 FOR SYMBOLS LEGEND AND SHEET E5.2 FOR PANELBOARD SCHEDULES.

C. EXIT AND NIGHT LIGHTING FIXTURES (NL) ARE TO BE CIRCUITED UNSWITCHED FOR CONTINUOUS OPERATION.

D. COORDINATE LOCATION OF BUILDING MOUNTED AREA LIGHTING WITH ARCHITECTURAL ELEVATIONS PRIOR TO MOUNTING. ALL EXTERIOR LIGHTING TO BE ROUTED THRU RELAY AND PHOTOCELL FOR AUTOMATIC CONTROL.

OCCUPANCY SENSOR LEGEND	
S_{MT}	INFRA RED SWITCH MOUNTED OCCUPANCY SENSOR GREENGATE #ONW-D-1001-MV
S_{DT}	SWITCH MOUNTED DIGITAL TIMER – GREENGATE #TSW-MV-W
US2	CEILING MOUNTED BIDIRECTIONAL ULTRASONIC ONLY OCCUPANCY SENSOR GREENGATE #OAC-U-2000-R
DT2	CEILING MOUNTED BIDIRECTIONAL DUAL TECHNOLOGY OCCUPANCY SENSOR GREENGATE #OAC-DT-2000-R
US1	CEILING MOUNTED ULTRASONIC ONLY OCCUPANCY SENSOR GREENGATE #OAC-U-1000-R
DT1	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR GREENGATE #OAC-DT-1000-R
PP	POWER PACK FOR OCCUPANCY SENSORS (MAX OF 1 PER 3 SENSORS) GREENGATE #SP20MV

PROJECT NORTH

1 / E3.1 FIRST FLOOR PLAN - LIGHTING

SCALE: 1/8" = 1'-0"

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive,
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 10213
STANLEY R. CURTIS

10/28/16

DATE: **10/28/16**

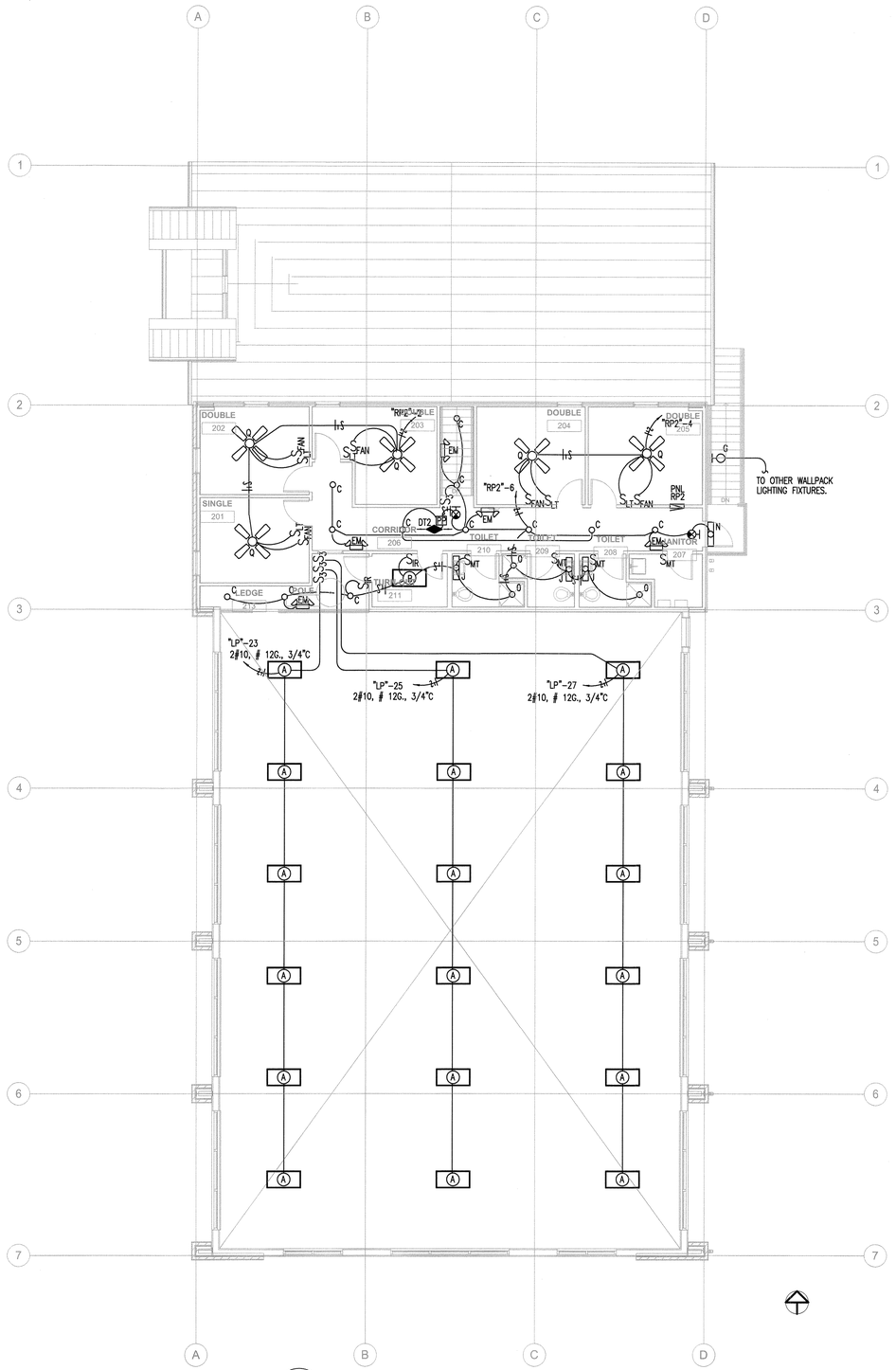
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **SRC**

FIRST FLOOR PLAN - LIGHTING

SHEET: **E3.1**



PROJECT NORTH

1 / E3.2

SECOND FLOOR PLAN - LIGHTING

SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. RUN A SEPARATE HOT CONDUCTOR TO THE CHARGING CIRCUIT OF ALL SWITCHED EMERGENCY LIGHTING FIXTURES.

B. REFERENCE SHEET E1.1 FOR SYMBOLS LEGEND AND SHEET E5.2 FOR PANELBOARD SCHEDULES.

C. EXIT AND NIGHT LIGHTING FIXTURES (NL) ARE TO BE CIRCUITED UNSWITCHED FOR CONTINUOUS OPERATION.

D. COORDINATE LOCATION OF BUILDING MOUNTED AREA LIGHTING WITH ARCHITECTURAL ELEVATIONS PRIOR TO MOUNTING. ALL EXTERIOR LIGHTING TO BE ROUTED THRU RELAY AND PHOTOCELL FOR AUTOMATIC CONTROL.

OCCUPANCY SENSOR LEGEND	
S_{MT}	INFRA RED SWITCH MOUNTED OCCUPANCY SENSOR GREENGATE #ONW-D-1001-MV
S_{DT}	SWITCH MOUNTED DIGITAL TIMER - GREENGATE #TSW-MV-W
US2	CEILING MOUNTED BIDIRECTIONAL ULTRASONIC ONLY OCCUPANCY SENSOR GREENGATE #OAC-U-2000-R
DT2	CEILING MOUNTED BIDIRECTIONAL DUAL TECHNOLOGY OCCUPANCY SENSOR GREENGATE #OAC-DT-2000-R
US1	CEILING MOUNTED ULTRASONIC ONLY OCCUPANCY SENSOR GREENGATE #OAC-U-1000-R
DT1	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR GREENGATE #OAC-DT-1000-R
PP	POWER PACK FOR OCCUPANCY SENSORS (MAX OF 1 PER 3 SENSORS) GREENGATE #SP20MV

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS - ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive,
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 10213
STANLEY R. CURTIS

10/28/16

DATE: **10/28/16**

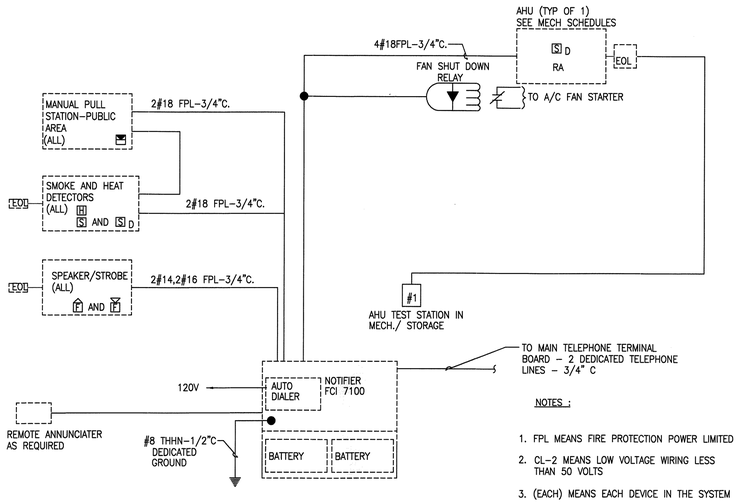
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **SRC**

SECOND FLOOR PLAN - LIGHTING

SHEET: **E3.2**



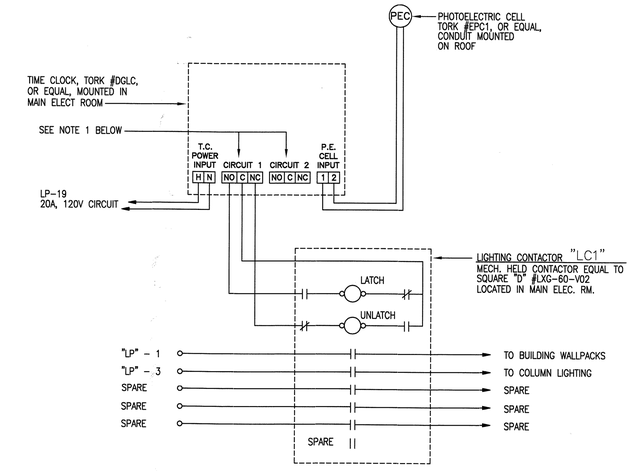
NOTES :

1. FPL MEANS FIRE PROTECTION POWER LIMITED
2. CL-2 MEANS LOW VOLTAGE WIRING LESS THAN 50 VOLTS
3. (EACH) MEANS EACH DEVICE IN THE SYSTEM
4. (ALL) MEANS ALL DEVICES IN THE SYSTEM POWER LIMITED.

3 FIRE ALARM RISER DIAGRAM

N.T.S.

CONTACT TIM CALLIOTTE AT ALARMTEC FOR PRICING AND INSTALLATION OF ALL LOW VOLTAGE SYSTEMS.
(501) 834-2079



NOTE:

1. TIME CLOCK CIRCUIT #1 PROVIDES (PHOTO ON / TIME OFF) OPERATION. CIRCUIT #2 PROVIDES (TIMECLOCK ON / TIMECLOCK OFF) OPERATION. VERIFY DESIRED OPERATION WITH OWNER.

5 EXTERIOR LIGHTING CONTROL DIAGRAM

NOT TO SCALE

CERTIFICATE OF AUTHORIZATION
NATIONAL ENGINEERING SERVICES, PLLC
No. 2259
ARKANSAS ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive,
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 10213
STANLEY R. CURTIS

10/28/16

DATE: **10/28/16**

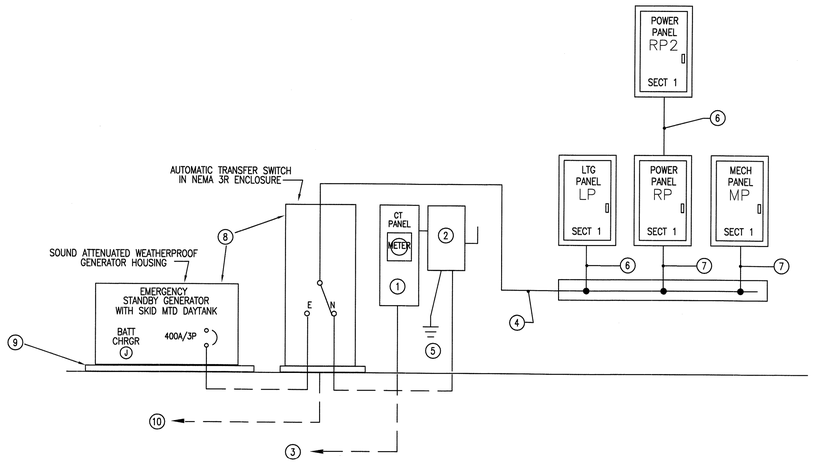
REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **SRC**

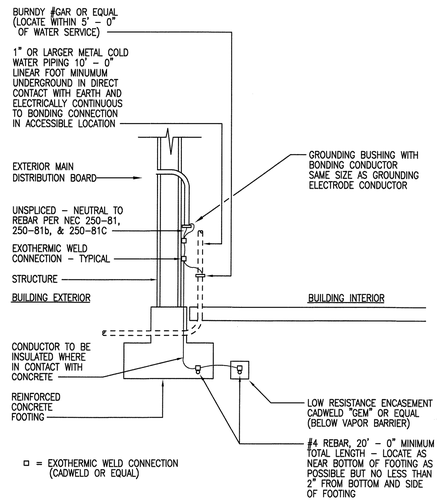
ELECTRICAL DETAILS

SHEET: **E4.1**



1 ELECTRICAL RISER DIAGRAM
NOT TO SCALE

1. CT'S AND CABINET PER UTILITY STANDARDS. COORDINATE WITH PROVIDER.
2. 400A, 208V, 3 PHASE, LOCKABLE SERVICE ENTRANCE RATED FUSED DISCONNECT SWITCH FUSED AT 600A. PROVIDE NEMA 3R ENCLOSURE.
3. 2 SETS: (4) #3/0 KCMIL, 1#1/0G IN 4" CONDUIT EACH. TRENCH PER UTILITY STANDARDS. INCLUDE (1) 4" SPARE CONDUIT. VERIFY ALL REQUIRMENTS. ROUTE TO UTILITY CO. SERVICE POINT.
4. 2 SETS: (4) #3/0 KCMIL, 1#3G IN 2" CONDUIT (EACH).
5. #1/0 SERVICE ENTRANCE GROUND – REFER TO SERVICE ENTRANCE GROUNDING DETAILS THIS SHEET.
6. (4) #1, 1#6G. IN 1-1/2" CONDUIT
7. (4) #3/0, 1#6G. IN 2" CONDUIT
8. KOHLER #125REZGC 125KW-120/208V, 3 PHASE NATURAL GAS/PROPANE GENSET WITH DECISION-MAKER 3000 CONTROLLER, CUSTOM EXHAUST, SILENCER, INLINE CB, FLEXIBLE EXHAUST, SOUND ATTENUATED WEATHERPROOF ENCLOSURE, 400A, 4-POLE AUTO TRANSFER SWITCH, BATTERY, CHARGER. TRANSFER SWITCH TO BE MOUNTED ADJACENT TO GENSET HOUSEKEEPING PAD IN NEMA 3R ENCLOSURE. PROVIDE GENERATOR ANNUNCIATOR PANEL WHERE REQUESTED BY OWNER.
9. 4" TALL CONCRETE HOUSEKEEPING PAD SIZED TO ACCOMODATE GENSET.
10. 1"C WITH CONTROL WIRING TO GENERATOR ANNUNCIATOR PANEL. VERIFY LOCATION WITH OWNER.



2 SERVICE ENTRANCE GROUNDING DETAIL
NOT TO SCALE

NATIONAL ENGINEERING SERVICES, PLLC No. 2259
CERTIFICATE OF AUTHORIZATION ARKANSAS - ENGINEER

NES
CONWAY OFFICE
813 OAK STREET, SUITE 10A #337
CONWAY, AR 72032
LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212
PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive,
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 10213 STANLEY R. CURTIS
10/28/16

DATE: **10/28/16**

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **SRC**

ELECTRICAL RISER AND PANEL SCHEDULES

SHEET: **E5.1**

"RP" Sect 1 of 1

SERVICE: 120/208 VOLTS 3 PHASE 4 WIRE 60 HZ
MOUNTED: SURFACE BRACED: 10 KAIC
REMARKS: W/ SEPERATE GROUND BUS AND NEMA 3R ENCLOSURE

MAINS: 200A MCB
FEED FROM: WIREWAY

CCKT#	SERVES	CONTROL FUNCTION (WHERE REQUIRED)	LOAD (VA) PH A	PH B	PH C	CIRCUIT BRKR. TRIP/ POLES	CIRCUIT BRKR. TRIP/ POLES	LOAD (VA) PH A	PH B	PH C	CONTROL FUNCTION (WHERE REQUIRED)	SERVES	CCKT#
1	RECEPTACLES	–	1080			20/1	35/3	2400			–	EXTRACTOR	2
3	SPARE	–		–		20/1	--		2400		–	3#10, #10G., 3/4"C	4
5	RECEPTACLES	–			1080	20/1	--			2400	–	--	6
7	RECEPTACLES	–	1080			20/1	20/3	1200			–	DRYER	8
9	RECEPTACLES	–		1080		20/1	--		1200		–	3#12, #12G., 3/4"C	10
11	RECEPTACLES	–			1080	20/1	--			1200	–	--	12
13	RECEPTACLES	–	1080			20/1	20/1	1200			–	WASHER	14
15	RECEPTACLES	–		1080		20/1	20/1		1080		–	RECEPTACLES	16
17	RECEPTACLES	–			1080	20/1	20/1			1080	–	RECEPTACLES	18
19	RECEPTACLES	–	1080			20/1	20/1	1080			–	RECEPTACLES	20
21	RECEPTACLES	–		1080		20/1	20/1		1080		–	RECEPTACLES	22
23	RECEPTACLES	–			1080	20/1	20/1			1080	–	RECEPTACLES	24
25	RECEPTACLES	–	1080			20/1	20/1	1080			–	RECEPTACLES	26
27	RECEPTACLES	–		1080		20/1	20/1		1080		–	RECEPTACLES	28
29	RECEPTACLES	–			1080	20/1	20/1			1080	–	RECEPTACLES	30
31	RECEPTACLES	–	1080			20/1	20/1	1080			–	RECEPTACLES	32
33	RECEPTACLES	–		1080		20/1	20/1		1080		–	RECEPTACLES	34
35	RECEPTACLES	–			1080	20/1	20/1			1200	–	DISHWASHER	36
37	RECEPTACLES	–	1080			20/1	100/3	10,000			–	PANEL RP2	38
39	RECEPTACLES	–		1080		20/1	--		10,000		–	--	40
41	RECEPTACLES	–			1080	20/1	--			10,000	–	--	42

"LP" Sect 1 of 1

SERVICE: 120/208 VOLTS 3 PHASE 4 WIRE 60 HZ
MOUNTED: SURFACE BRACED: 10 KAIC
REMARKS: W/ SEPERATE GROUND BUS AND NEMA 3R ENCLOSURE

MAINS: 125A MCB
FEED FROM: WIREWAY

CCKT#	SERVES	CONTROL FUNCTION (WHERE REQUIRED)	LOAD (VA) PH A	PH B	PH C	CIRCUIT BRKR. TRIP/ POLES	CIRCUIT BRKR. TRIP/ POLES	LOAD (VA) PH A	PH B	PH C	CONTROL FUNCTION (WHERE REQUIRED)	SERVES	CCKT#
1	LIGHTING – WALLPACKS	*	900			20/1	20/1	–			–	SPARE	2
3	LIGHTING – EXT COLUMNS	*		200		20/1	20/1		–		–	SPARE	4
5	LIGHTING – OFFICES	–			1200	20/1	20/1			–	–	SPARE	6
7	LIGHTING – CORRIDOR/LR	–	400			20/1	20/1	–			–	SPARE	8
9	CEILING FANS	–		1200		20/1	20/1		–		–	SPARE	10
11	CEILING FANS	–			1200	20/1	20/1			–	–	SPARE	12
13	CEILING FANS	–	1200			20/1	20/1	–			–	SPARE	14
15	SPARE	–		–		20/1	20/1		–		–	SPARE	16
17	SPARE	–			–	20/1	20/1			–	–	SPARE	18
19	RELAY PANEL	–	400			20/1	20/1	–			–	SPARE	20
21	SPARE	–		–		20/1	20/1		–		–	SPARE	22
23	LIGHTING – BAYS	–			1200	20/1	20/1			–	–	SPARE	24
25	LIGHTING – BAYS	–	1200			20/1	20/1	–			–	SPARE	26
27	LIGHTING – BAYS	–		1200		20/1	20/1		–		–	SPARE	28
29	SPARE	–			–	20/1	20/1			–	–	SPARE	30
31	SPARE	–	–			20/1	20/1	–			–	SPARE	32
33	SPARE	–		–		20/1	20/1		–		–	SPARE	34
35	SPARE	–			–	20/1	20/1			–	–	SPARE	36
37	SPARE	–	–			20/1	20/1	–			–	SPARE	38
39	SPARE	–		–		20/1	20/1		–		–	SPARE	40
41	SPARE	–			–	20/1	20/1			–	–	SPARE	42

"RP2" Sect 1 of 1

SERVICE: 120/208 VOLTS 3 PHASE 4 WIRE 60 HZ
MOUNTED: FLUSH BRACED: 10 KAIC
REMARKS: W/ SEPERATE GROUND BUS

MAINS: 100A MCB
FEED FROM: RP1

	CCKT#	SERVES	CONTROL FUNCTION (WHERE REQUIRED)	LOAD (VA) PH A	PH B	PH C	CIRCUIT BRKR. TRIP/ POLES	CIRCUIT BRKR. TRIP/ POLES	LOAD (VA) PH A	PH B	PH C	CONTROL FUNCTION (WHERE REQUIRED)	SERVES	CCKT#	
**	1	RECEPTACLES	–	1080			20/1	20/1	1080			–	CEILING FANS/LTG	2	**
**	3	RECEPTACLES	–		1080		20/1	20/1		1080		–	CEILING FANS/LTG	4	**
**	5	RECEPTACLES	–			1080	20/1	20/1			1080	–	CEILING FANS/LTG	6	**
**	7	RECEPTACLES	–	1080			20/1	20/1	–			–	SPARE	8	**
**	9	RECEPTACLES	–		1080		20/1	20/1		–		–	SPARE	10	**
**	11	RECEPTACLES	–			1080	20/1	20/1			–	–	SPARE	12	
**	13	RECEPTACLES	–	1080			20/1	20/1	–			–	SPARE	14	
	15	SPARE	–		–		20/1	20/1		–		–	SPARE	16	
	17	SPARE	–			–	20/1	20/1			–	–	SPARE	18	
	19	SPARE	–	–			20/1	20/1	–			–	SPARE	20	
	21	SPARE	–		–		20/1	20/1		–		–	SPARE	22	
	23	SPARE	–			–	20/1	20/1			–	–	SPARE	24	
	25	SPARE	–	–			20/1	20/1	–			–	SPARE	26	
	27	OH DOOR	–		1200		20/1	20/1		–		–	SPARE	28	
	29	OH DOOR	–			1200	20/1	20/1			–	–	SPARE	30	
	31	OH DOOR	–	1200			20/1	20/1	–			–	SPARE	32	
	33	OH DOOR	–		1200		20/1	20/1		–		–	SPARE	34	
	35	OH DOOR	–			1200	20/1	20/1			–	–	SPARE	36	
	37	OH DOOR	–	1200			20/1	20/1	–			–	SPARE	38	
	39	OH DOOR	–		1200		20/1	20/1		–		–	SPARE	40	
	41	OH DOOR	–			1200	20/1	20/1			–	–	SPARE	42	

** – REPRESENTS AFCI TYPE CIRCUIT BREAKERS.

"MP" Sect 1 of 1

SERVICE: 120/208 VOLTS 3 PHASE 4 WIRE 60 HZ
MOUNTED: SURFACE BRACED: 10 KAIC
REMARKS: W/ SEPERATE GROUND BUS AND NEMA 3R ENCLOSURE

MAINS: 200A MCB
FEED FROM: WIREWAY

CCKT#	SERVES	CONTROL FUNCTION (WHERE REQUIRED)	LOAD (VA) PH A	PH B	PH C	CIRCUIT BRKR. TRIP/ POLES	CIRCUIT BRKR. TRIP/ POLES	LOAD (VA) PH A	PH B	PH C	CONTROL FUNCTION (WHERE REQUIRED)	SERVES	CCKT#
1	CU-1	–	1500			30/3	20/1	1200			–	F-1	2
3	3#10, #12G., 3/4"C	–		1500		--	20/1		1200		–	F-2	4
5	--	–			1500	--	20/1			1200	–	F-3	6
7	CU-2	–	2300			40/3	20/1	400			–	BATTERY CHARGER	8
9	3#8, #10G., 3/4"C	–		2300		--	20/1		400		–	FIRE ALARM PANEL	10
11	--	–			2300	--	20/1			–	–	SPARE	12
13	CU-3	–	1200			20/3	20/1	1200			–	UH-1	14
15	3#12, #12G., 3/4"C	–		1200		--	20/1		1200		–	UH-2	16
17	--	–			1200	--	20/1			1200	–	DSHP/DSFC-1	18
19	WH-1/P-1	–	1200			20/1	20/3	1500			–	EH-11	20
21	AIR COMPRESSOR	–		1500		20/2	--		1500		–	3#12, #12G., 3/4"C	22
23	2#12, #12G., 3/4"C	–			1500	--	--			1500	–	--	24
25	AIR COMPRESSOR	–	2000			30/2	20/1	1200			–	HVLS-1	26
27	2#10, #12G., 3/4"C	–		2000		--	20/1		1200		–	HVLS-2	28
29	EXTERIOR RECEPTACLES	–			1080	20/1	20/1			–	–	SPARE	30
31	EXTERIOR RECEPTACLES	–	1080			20/1	20/1	–			–	SPARE	32
33	EXTERIOR RECEPTACLES	–		1080		20/1	20/1		–		–	SPARE	34
35	SPARE	–			–	20/1	20/1			–	–	SPARE	36
37	SPARE	–	–			30/3	20/1	–			–	SPARE	38
39	--	–		–		--	20/1		–		–	SPARE	40
41	--	–			–	--	20/1			–	–	SPARE	42

NATIONAL ENGINEERING SERVICES, PLLC No. 2259 – CERTIFICATE OF AUTHORIZATION – ARKANSAS - ENGINEER

NES

CONWAY OFFICE
813 OAK STREET, SUITE 104 #337
CONWAY, AR 72032

LITTLE ROCK OFFICE
3801 WOODLAND HEIGHTS ROAD, SUITE 125-D
LITTLE ROCK, AR 72212

PH: 501.235.3270
FAX: 501.235.3272
WWW.NES-ENG.COM

A PROJECT FOR:

Searcy Fire Station #2

Golf Course Drive,
Searcy, Arkansas

Hoffmann Architectural Inc.
501.268.4743
102 NORTH SPRING STREET
SEARCY, ARKANSAS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 10213 STANLEY R. CURTIS

10/28/16

DATE: **10/28/16**

REVISIONS:

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE PRIOR TO ORDERING MATERIALS OR CONSTRUCTION.

DRAWN BY: **SRC**

ELECTRICAL PANEL SCHEDULES

SHEET: **E5.2**