

ADDENDUM #3 - July 22, 2016

**CITY OF MATTOON
PUBLIC WORKS BUILDING
401 DEWITT AVE EAST**

Please incorporate the following changes into the bid documents for the project:

Specification 01010 Project Summary

Revised Specification Page 01010-1 attached.

Expanded the list of fill material sources for the embankment under the building to include; the east City stockpile on Old State Road, the City stockpile at 2521 N6th Street, or Contractor furnished clean yellow clay.

Specification 16050 Electrical

Revised Specification Page 16050-5 attached.

Identified the conduit requirements for the shop area.

Specification 10500

Revised Specification Page 10500-1 attached.

Changed the locker dimensions to 12"W x 15"D x 72"H.

Plan Sheets A2.03 & A4.01

Revised Plan Sheets A2.03 & A4.01 attached.

Modified the locker dimensions.

Added ADA compliant benches in the locker rooms.

Plan Sheet S0.01

Revised Plan Sheet S0.01 attached.

Separated the roof dead loads and the collateral loads.

Modified the snow loads and the wind importance factor.

The General Conditions, Supplementary Conditions and Division 1, General Requirements are hereby made a part of each division and section of the project specifications.

1. GENERAL.

1.01 REQUIREMENTS INCLUDE.

Contractor to strip and stockpile the upper 12" of topsoil under the proposed building. Contractor to strip and stockpile the upper 6" of topsoil in all other areas in advance of excavation or embankment. Contractor to place 6" of topsoil in all areas to be seeded. Excess topsoil to remain stockpiled on site. Addendum #1

- A. Work covered by contract documents is delineated on the Drawings and specified in the Project Manual, consisting generally of the following:

Construction of a new pre-engineered metal building having a footprint of approximately 33,800 square feet including spaces finished for offices as well as spaces for equipment maintenance and storage on a previously undeveloped site.

The City of Mattoon will complete the following items in advance of the start of construction for this contract:

1. Construct the entrance on Dewitt Avenue East. (Done.)
2. All demolition work shown on Plan Sheet C1.01. (July 15 estimated completion.)
3. Relocation of the existing ditch and 12" field tile. (Done.)
4. Removal of the existing field tile under the proposed building. (July 15 estimated completion.)
5. Removal and replacement of the compressible soil under the proposed building foundations. (July 15 estimated completion.) ~~the upper layers of the existing soil.~~ Addendum #1
6. The sanitary sewer crossing at the relocated ditch shown on Note 9 on Plan Sheet C1.03. (Done.)

The City of Mattoon will complete all of the exterior concrete work, except as noted below, after completion of this project. The Contractor shall complete the following items:

1. The Concrete Stoops shown on Plans Sheet C1.02 and the Structural Drawings.
2. The concrete Sidewalk and Curb shown on Plan Sheet C1.02 and the Architectural Drawings.

The Contractor shall complete all of the remaining earthwork for the site. This includes the embankment under the proposed building, parking areas, and roadways, as well as the excavation and embankment for the detention basin. Embankment material may be obtained from City stockpiles located on the site, City stockpiles located on Old State Road ½ mile west of 9th Street, and/or from City stockpiles located at 2521 N. 6th Dstreet (CSO Satellite Treatment Facility currently under construction). All of the embankment material under the building shall be taken from the east City stockpile on Old State Road. The Contractor shall load, haul, place, and compact the embankment material.

OR THE STOCKPILE AT 2521 N6TH STREET OR CLEAN YELLOW CLAY FURNISHED BY THE CONTRACTOR. ADDENDUM#3

Earthwork shall be completed to +/- 0.10 feet of the proposed elevations shown in the plans. A total pavement and subbase thickness of 11" shall be assumed for all paving work to be performed by the City.

The Contractor is not required to perform any grading, shaping, or seeding in the relocated ditch, or on that portion of the site east of the relocated ditch.

The Contractor shall complete all of the remaining work in the plans and specifications in order to complete the proposed site improvements and building.

1.02 DEFINITIONS. The following terms are used throughout the contract documents. The work will be governed in accord with the definitions.

- A. Fabricated: Fabricated pertains to items specifically assembled or made of selected materials or components to meet individual design requirements.
- B. Manufactured: Manufactured means standard units, usually mass produced by an established manufacturer of the respective item.

3. EXECUTION

3.01 INSTALLATION

EXPOSED CONDUIT SHALL BE GRS. EMT CONDUIT MAY BE USED FOR ABOVE GRADE CONCEALED CONDUIT. CONDUIT BEHIND METAL LINER PANELS SHALL BE CONSIDERED CONCEALED. CONDUIT BEHIND THE FABRIC CEILING IN THE SHOP AREA, OR THE EXPOSED WALL INSULATION ABOVE THE LINER PANELS SHALL NOT BE CONSIDERED CONCEALED.
ADDENDUM #3.

- A. Cooperate with other contractors engaged in project. Execute work in a manner not to interfere with other contractors.
- B. Coordinate work with other contractors regarding location and size of pipes, raceways, ducts, openings, switches, outlets, so there is no interference between installation or of progress of any contractor.
- C. Install all equipment with ample space allowed for removal, repair, or changes to equipment. Provide ready accessibility to removable parts of equipment and to all wiring without moving equipment installed or already in place.
- D. Where cutting is required to facilitate construction, patch and repair, cut items to original state. Do not cut structural work without prior written approval of Architect/Engineer.
- E. Cut holes through concrete and masonry with a diamond core drill or concrete saw. Pneumatic hammer, impact, electric, hand or manual hammer type drills not allowed, except where permitted by Architect/Engineer because of limited working space.
- F. Make floor, exterior wall and roof seals watertight. Sleeve walls and floors which are cored for installation of conduit with steel tubing, grouted and space between the conduit and sleeve fill as specified herein.
- G. At project completion, clean all equipment to the original finish. Remove all shipping labels.

CONDUIT

- A. Conduit Schedule. Minimum Conduit Size: 3/4" unless otherwise specified. Install switch legs in 1/2" conduit where in accordance with NEC.
- B. Install conduit as follows:
 - 1. Use EMT conduit for branch circuits in partitions and drop ceiling areas and telephone and data systems.
 - 2. Use flexible conduit as herein specified.
 - 3. Use Sch. 40 PVC conduit for underground applications.
 - 4. Use rigid steel for all conduit larger than 2" trade size in floor slabs. All conduit in slabs larger than 2" diameter shall be rigid steel, rigid schedule 40 PVC may be used beneath slabs. Sch. 40 PVC conduit may be used for conduit smaller than 2" trade size in floor slabs.
 - 5. EMT with steel compression fittings is acceptable in masonry walls.
 - 6. Sch. 40 PVC conduit may be used for conduit below floor slabs.
- C. Conduit Runs:
 - 1. Size all conduit as indicated on Drawings; where not shown, in accordance with National Electrical Code. Make all conduit systems mechanically and electrically continuous from source of current to all outlets, and ground in accordance with the National Electric Code.
 - 2. Conceal conduit wherever possible, or expose as shown or noted on the drawings and as specified herein. Run all exposed conduit parallel to building walls using right angle bends. Exposed diagonal runs of conduit will not be permitted. Do not install conduit on roof surfaces unless specifically indicated on drawings.
 - 3. Ream conduit after threads are cut. Cut ends square and butt solidly into couplings.
 - 4. Prevent the accumulation of water, foreign matter or concrete in the conduits during execution of work. Temporarily plug conduit, blowout and swab before wires are pulled.

1. GENERAL

1.01 SUMMARY

- A. Section Includes:
1. Heavy duty metal locker units with hinged doors.
 2. Sloped tops.

1.02 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Procedures for submittals.
1. Product Data: Data on locker types, sizes, and accessories.
 2. Shop Drawings: Indicate layout, dimensions, details of fabrication and installation. Include plans, elevations, sections, and attachments to other Work.
 3. Assurance/Control Submittals:
 - a. Certificates: Manufacturer's certificate that Products meet or exceed specified requirements.
 - b. Manufacturer's Instructions: Indicate component installation assembly, and installation instructions.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Section 01600 - Product Requirements: Transport, handle, store, and protect Products.
- B. Deliver materials to project site in manufacturer's original unopened protective packaging.
- C. Identify contents, manufacturer, brand name, thermal values, and applicable standards.
- D. Store materials in area protected from weather and construction operations.
- E. Protect Work from damaged during transportation, storage at Project Site, and throughout tenure of work. Protect adjacent Work and materials from damage during progress of specified Work. Damaged Work shall be repaired or replaced at no additional cost to the Owner. Furnish receipts of all loose or detachable parts.

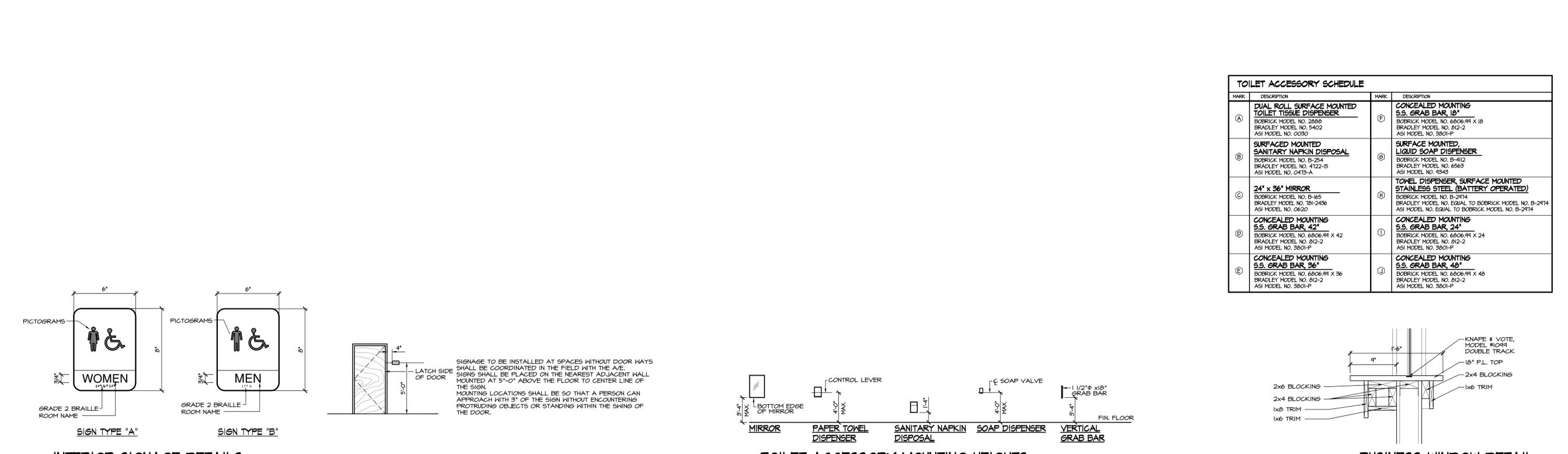
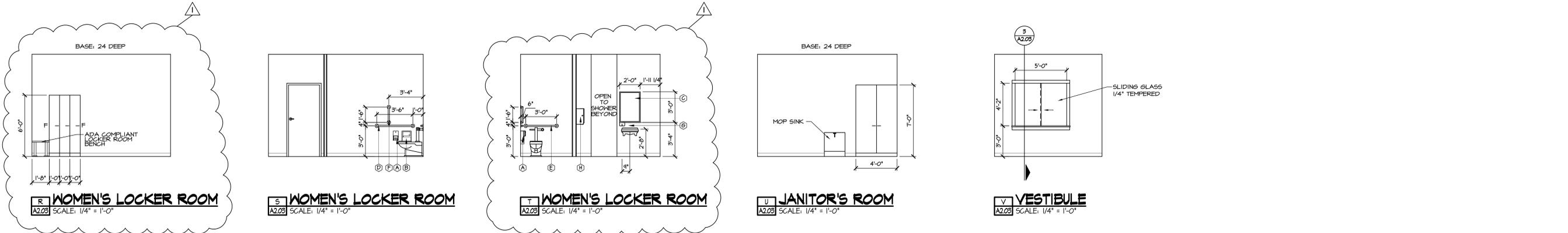
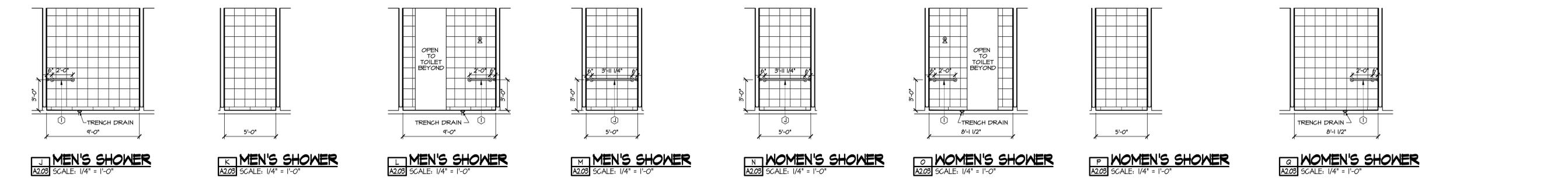
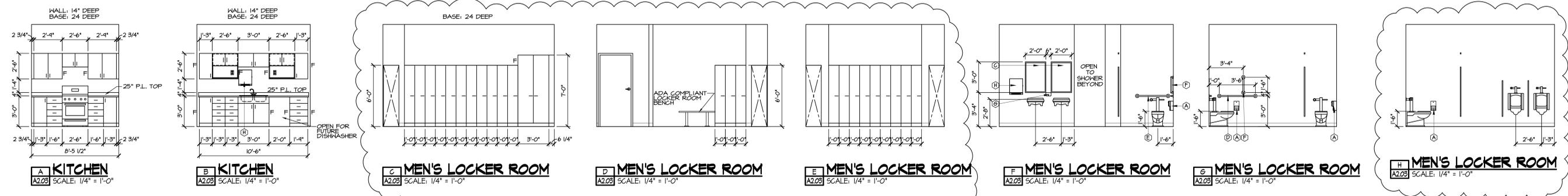
2. PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with project requirements, manufacturer's offering. Products which may be incorporated in the Work include the following:
1. Lyon Workspace Products
 2. ASI Storage Solutions
 3. Republic Storage Systems, LLC
- B. Section 01600 - Product Requirements: Product options and substitutions. Substitutions: Permitted.

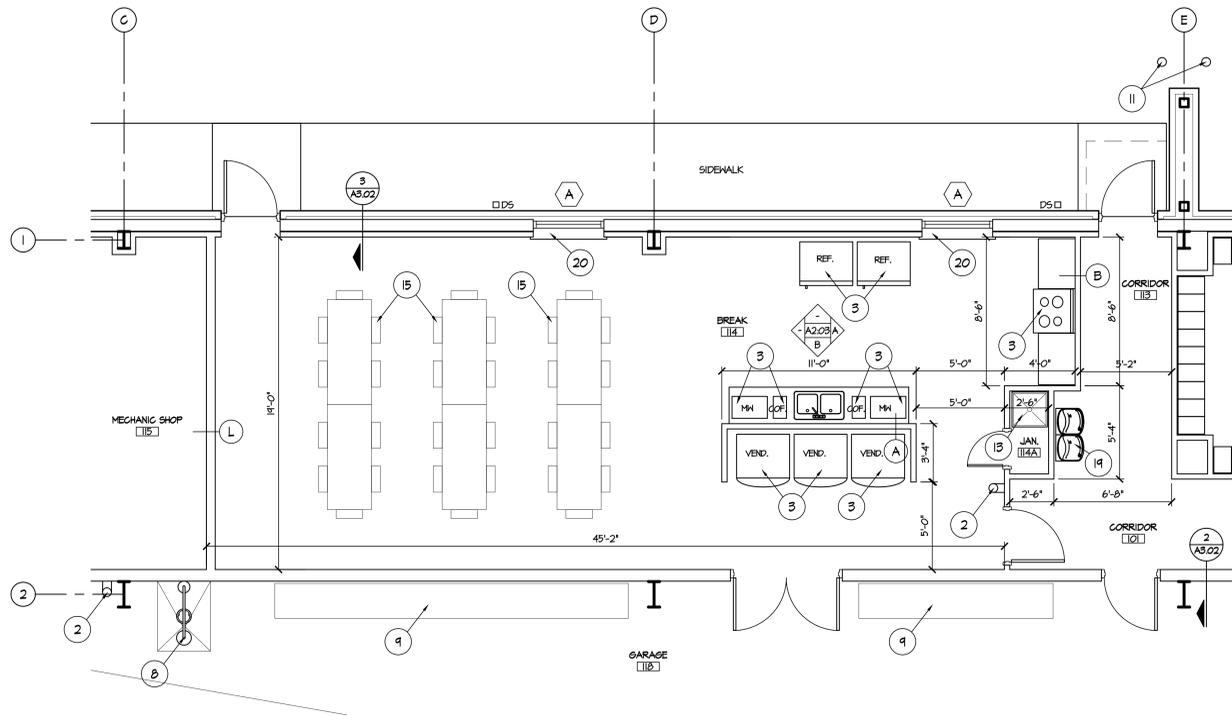
2.02 MATERIALS - LOCKERS

- A. Type: Single Tier lockers with sloped tops.
- B. Locker Size: 12 inches wide by ~~12~~^{15" ADDENDUM#3} inches deep by 72 inches high per opening
- C. Material. Sheet Steel: ASTM A 1008, Class I, mild annealed, cold rolled steel, free from surface imperfections. Bolts: Zinc plated or other comparable rust-retardant treatment.
- D. Body: 16-gauge steel except backs may be 18-gauge steel.



TOILET ACCESSORY SCHEDULE			
MARK	DESCRIPTION	MARK	DESCRIPTION
A	DUAL ROLL SURFACE MOUNTED TOILET TISSUE DISPENSER BOBRICK MODEL NO. 2886 BRADLEY MODEL NO. 5402 ASI MODEL NO. 0030	F	CONCEALED MOUNTING S.S. GRAB BAR, 18" BOBRICK MODEL NO. 6806-99 X 18 BRADLEY MODEL NO. 812-2 ASI MODEL NO. 3801-P
B	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL BOBRICK MODEL NO. B-412 BRADLEY MODEL NO. 4122-15 ASI MODEL NO. 0473-A	G	SURFACE MOUNTED LIQUID SOAP DISPENSER BOBRICK MODEL NO. B-412 BRADLEY MODEL NO. 6563 ASI MODEL NO. 0473-A
C	24" x 36" MIRROR BOBRICK MODEL NO. B-254 BRADLEY MODEL NO. 181-2436 ASI MODEL NO. 0620	H	TOWEL DISPENSER, SURFACE MOUNTED STAINLESS STEEL (BATTERY OPERATED) BOBRICK MODEL NO. B-2474 BRADLEY MODEL NO. EQUAL TO BOBRICK MODEL NO. B-2474 ASI MODEL NO. EQUAL TO BOBRICK MODEL NO. B-2474
D	CONCEALED MOUNTING S.S. GRAB BAR, 42" BOBRICK MODEL NO. 6806-99 X 42 BRADLEY MODEL NO. 812-2 ASI MODEL NO. 3801-P	I	CONCEALED MOUNTING S.S. GRAB BAR, 24" BOBRICK MODEL NO. 6806-99 X 24 BRADLEY MODEL NO. 812-2 ASI MODEL NO. 3801-P
E	CONCEALED MOUNTING S.S. GRAB BAR, 36" BOBRICK MODEL NO. 6806-99 X 36 BRADLEY MODEL NO. 812-2 ASI MODEL NO. 3801-P	J	CONCEALED MOUNTING S.S. GRAB BAR, 48" BOBRICK MODEL NO. 6806-99 X 48 BRADLEY MODEL NO. 812-2 ASI MODEL NO. 3801-P

The Contractor shall obtain and verify all dimensions and conditions at job site and be fully responsible for same.



A ENLARGED BREAK PLAN
AS.01 SCALE: 1/4" = 1'-0"

LEGEND:

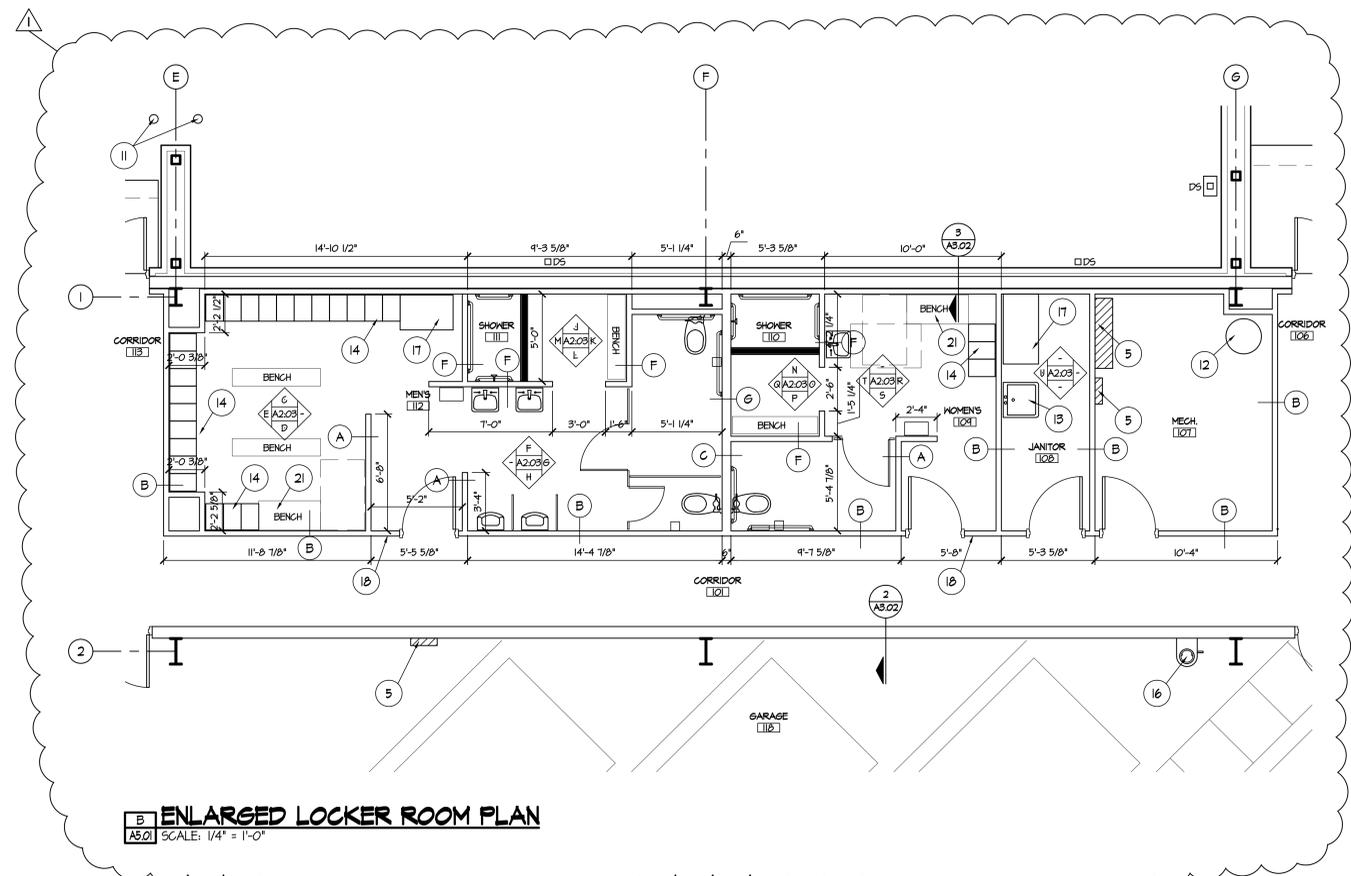
- (P) PARTITION WALL TYPE, SEE SHEET A6.02
- (XXX) DOOR NUMBER, SEE DOOR SCHEDULE SHEET A6.01
- (A) WINDOW TYPE, SEE SCHEDULE A6.01
- (H) F.E. WALL MOUNTED FIRE EXTINGUISHER
- (DS) DOWNSPOUT
- (ELEVATION SYMBOL) INTERIOR ELEVATIONS

GENERAL NOTES

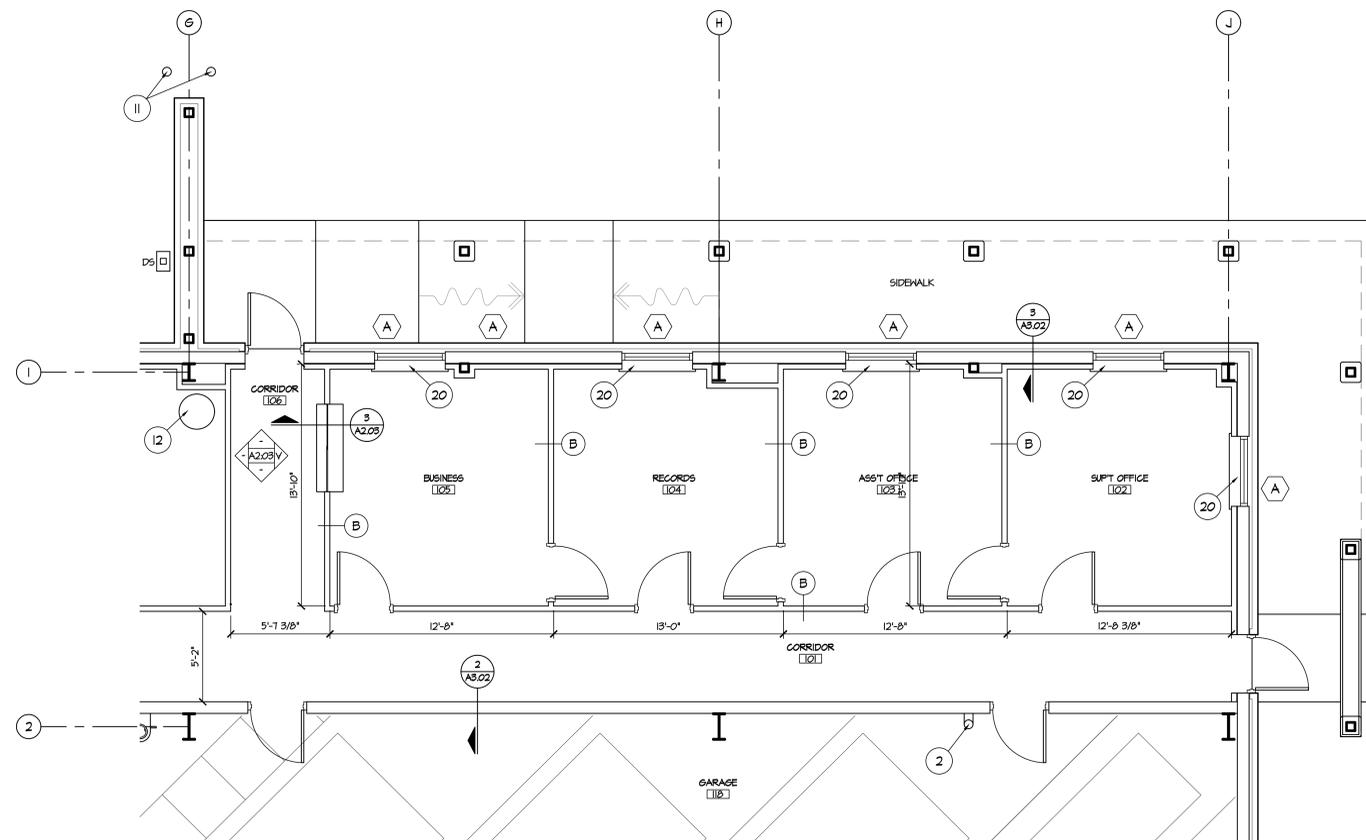
1. ALL DIMENSIONS AT BRICK OR BLOCK WALLS ARE TO FACE OF MASONRY. ALL DIMENSIONS AT STUD WALLS ARE TO FACE OF STUD.
2. ALL OFFICE PARTITIONS SHALL BE 12'-0" A.F.F.

KEYED PLAN NOTES

- 1 NOT USED
- 2 FIRE EXTINGUISHER, DRY CHEMICAL TYPE, 10 POUND CAPACITY, WITH PRESSURE GAUGE, UL RATING: 4A 60BC
- 3 APPLIANCES, NOT IN CONTRACT
- 4 NOT USED
- 5 ELECTRIC PANELS, SEE ELECTRIC DRAWINGS
- 6 NOT USED
- 7 NOT USED
- 8 EMERGENCY SHOWER/EYE WASH STATION, SEE PLUMBING DRAWINGS
- 9 WORK BENCH, BY OWNER
- 10 NOT USED
- 11 PIPE BOLLARD, SEE CIVIL DRAWINGS
- 12 WATER HEATER, SEE PLUMBING DRAWINGS
- 13 MOP SINK
- 14 LOCKERS, SEE INTERIOR ELEVATIONS, SHEET A2.03
- 15 TABLES AND CHAIRS, BY OWNER
- 16 EMERGENCY EYE WASH STATION, SEE PLUMBING DRAWINGS
- 17 TALL STORAGE, SEE INTERIOR ELEVATIONS, SHEET A2.03
- 18 HANDICAP SIGNAGE, SEE DETAIL 1/A2.03
- 19 HI-LOH DRINKING FOUNTAIN
- 20 SOLID PLASTIC WINDOW SILL
- 21 ADA COMPLIANT LOCKER ROOM BENCH



B ENLARGED LOCKER ROOM PLAN
AS.01 SCALE: 1/4" = 1'-0"



C ENLARGED OFFICE PLAN
AS.01 SCALE: 1/4" = 1'-0"

GENERAL:

THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, BRACING, SHORING FOR LATERAL LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURE OF CONSTRUCTION OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENTAL THERE TO (NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS). TEMPORARY SUPPORT FOR EXISTING STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR.

CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA.

ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. RESOLVE ANY DISCREPANCIES WITH THE ARCHITECT.

TYPICAL DETAILS MAY NOT NECESSARILY BE SHOWN ON PLANS, BUT APPLY UNLESS NOTED OTHERWISE.

ANY STRUCTURAL ENGINEERING DESIGN, PROVIDED BY OTHER AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ILLINOIS.

THE STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY BRACING AS REQUIRED FOR VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE OR PORTION THEREOF DURING CONSTRUCTION.

DESIGN CODE

THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE

DESIGN LOADS

FLOOR LIVE LOAD
OFFICE AREA LIVE LOAD = 40 PSF
GARAGE AREA LIVE LOAD = 250 PSF
ROOF DEAD LOAD = 20 PSF 10PSF. COLLATERAL LOAD=10PSF. ADDENDUM#3
ROOF LIVE LOAD = 20 PSF NO REDUCTION ALLOWED. ADDENDUM#3
ROOF SNOW LOAD
Pg = 20 PSF
Pf = 22-PSF 20PSF. ADDENDUM#3
Ce = 1.0
I = 1.1

WIND DESIGN DATA

Basic Wind Speed = 90 mph
Wind Importance Factor, Iw = +1.5 1.0 ADDENDUM#3
Building Category C
Wind Exposure C
Internal Pressure Coefficient, GCpi = ± 0.18
Roof Joist Negative Pressure = -22.02 psf
Roof Joist Positive Pressure = 6.54 psf
Roof Deck Positive Pressure = 8.26 psf
Roof Deck, Fastener Negative Pressure (Zone 1) = -20.3 psf
Roof Deck, Fastener Negative Pressure (Zone 2) = -34.07 psf
Roof Deck, Fastener Negative Pressure (Zone 3) = -51.28 psf

EARTHQUAKE DESIGN DATA

Seismic Importance Factor, Ie = 1.5
Mapped Spectral Response Acceration, Ss = 0.679
Mapped Spectral Response Acceration, Si = 0.424
Site Class E
Spectral Response Coefficient, Sm = 0.453g
Spectral Response Coefficient, Sni = 0.282g

STANDARDS:

Table with 2 columns: Standard Code (ACI, AISC, ANSI, ASTM, AWS, CRSI, UL) and Standard Name (AMERICAN CONCRETE INSTITUTE, AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMERICAN NATIONAL STANDARDS INSTITUTE, AMERICAN SOCIETY OF TESTING AND MATERIALS, AMERICAN WELDING SOCIETY, CONCRETE REINFORCING STEEL INSTITUTE, UNDERWRITER'S LABORATORY)

DRYPACK:

DRYPACK SHALL BE 5,000 PSI NON-SHRINK GROUT. INSTALL DRYPACK UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL DRYPACK UNDER BASEPLATES AFTER COLUMN HAS BEEN PLUMBED BUT PRIOR TO FLOOR OR ROOF INSTALLATION.

CONCRETE:

MINIMUM 28 DAY STRENGTH (F'c) = 3,500 PSI. ALL EXTERIOR CONCRETE, I.E. WALKS, CURBS AND GUTTERS, ETC.

MINIMUM 28 DAY STRENGTH (F'c) = 3,500 PSI. ALL BUILDING FOOTINGS, FOUNDATION WALL AND BUILDING FLOOR SLAB.

NECESSARY INSERTS, TIES, CLIPS, ANCHORS AND OTHER FASTENING DEVICES SHALL BE PROVIDED AS REQUIRED.

MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDER-FLOOR DUCTS, ETC. MAXIMUM SLUMP 4" FOR CONCRETE WITHOUT PLASTICIZER. IF PLASTICIZER IS USED, A HIGHER FINAL SLUMP MAY BE ALLOWED UPON STRUCTURAL ENGINEER'S APPROVAL. CAST CLOSURE POUR AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED. UNLESS OTHERWISE APPROVED IN WRITING BY THE ARCHITECT, ALL CONCRETE SLABS ON GRADE SHALL BE BOUND BY CONTROL JOINTS (KEYED OR SAW CUT), AS SHOWN ON THE FOUNDATION PLAN, OR AS SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 400 SQUARE FEET. KEYED CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING; ALL OTHER JOINTS MAY BE SAW CUT. SAW CUTS MUST OCCUR WITHIN 12 HOURS OF CONCRETE PLACEMENT.

REINFORCING:

ASTM A615 (Fy - 60 KSI) DEFORMED BARS FOR ALL REINF. ALL GRADE 60 REINF. TO BE WELDED SHALL BE ASTM A706. WELDED WIRE FABRIC PER ASTM A185, WIRE PER ASTM A82. NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE STRUCTURAL ENGINEER. LATEST ACI CODE AND DETAILING MANUAL APPLY. CLEAR CONCRETE COVERAGES AS FOLLOWS:

Table with 2 columns: Location (CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH, EXPOSED TO EARTH OR WEATHER, FLAT SLAB INTERIOR, FLAT SLAB EXTERIOR, ALL OTHER PER LATEST EDITION OF ACI 318) and Spacing (3", 2", 1 1/2", 3/4", 1 1/2")

SLAB ON GRADE, UNLESS OTHERWISE NOTED ON DRAWING, TO HAVE REINFORCEMENT 2 INCHES FROM TOP OF SLAB

LAP SPLICES IN CONCRETE:

SEE LAP SPLICE SCHEDULE FOR REBAR. LAPS IN WELDED WIRE FABRIC SHALL BE MADE SO THAT THE OVERLAP, MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET, IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES. ALL WELDED WIRE FABRIC SHALL BE CHAIRED TO ENSURE PROPER CLEARANCES.

ALL SPLICE LOCATIONS SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90 DEGREE HOOKS UNLESS NOTED OTHERWISE. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

MIN. LAP SPLICE LENGTH SCHEDULE table with columns for BAR TYPE, BAR SIZE (#3 to #11), and Splice Length (16" to 130")

COLD FORMED STRUCTURAL STEEL FRAMING:

ALL COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" BY THE AMERICAN IRON AND STEEL INSTITUTE. STEEL FOR 14 AND 16 GAGE STUDS SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI. STEEL FOR ALL 18 AND 20 GAGE STUDS AND JOISTS, AND FOR ALL GAGE OF TRACK, ACCESSORIES AND BRIDGING SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI. STEEL SHALL BE GALVANIZED WITH A MINIMUM G-60 COATING.

ALL STUDS SHALL BE SECURELY SEATED FOR FULL END BEARING ON TOP AND BOTTOM TRACK. UNLESS NOTED OTHERWISE, PROVIDE DOUBLE STUDS AT ALL JAMBS, CORNERS AND INTERSECTIONS. BRIDGING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION WITH THE FOLLOWING MINIMUM REQUIREMENTS.

PROVIDE BRIDGING AT MID-HEIGHT FOR WALLS LESS THAN OR EQUAL TO 10'-0" HIGH, AND 4'-0" O.C. MAXIMUM FOR WALLS GREATER THAN 10'-0" HIGH. IN ADDITION, BRIDGING SHALL BE PROVIDED AT ROOF LINES AND ELSEWHERE AS NOTED ON THE DRAWINGS. SOLID BLOCKING SHALL BE INSTALLED IN LIEU OF BRIDGING WHERE NOTED ON THE DRAWINGS.

ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAGE STRUCTURAL STEEL FRAMING WORK. DO NOT NOTCH FLANGES OF STUDS.

FOUNDATION AND EARTH WORK

EXTERIOR SPREAD FOOTINGS SHALL BE FOUNDED AT A MINIMUM DEPTH OF 36" INTERIOR FOOTINGS MAY BE FOUNDED AT A DEPTH OF 1' BELOW THE FINAL SUBGRADE ELEVATION. DESIGN SOIL BEARING PRESSURE = 2200 PSF.

SOILS SHALL BE INSPECTED BY SOILS ENGINEER PRIOR TO PLACEMENT OF CONCRETE. ALL FOUNDATION AND EARTHWORK SHALL BE CARRIED OUT IN STRICT ACCORDANCE WITH ARCHITECT/ENGINEER AND SHALL BE INSPECTED AND APPROVED BY A SOILS ENGINEER PRIOR TO ANY TYPE OF CONSTRUCTION.

STEEL JOISTS OR PURLINS:

ALL JOISTS SHALL BE DESIGNED, FABRICATED, WELDED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS" OF THE STEEL JOIST INSTITUTE.

JOIST MANUFACTURER SHALL DESIGN AND SUBMIT CALCULATIONS BY A REGISTERED ENGINEER FOR ALL JOISTS, EXCEPT PARALLEL CHORD JOISTS WITH UNIFORM LOADS AND CONTINUOUSLY SUPPORTED COMPRESSION CHORDS PER SJI STANDARD LOAD TABLES. CALCULATIONS SHALL INCLUDE DEFLECTION AND CAMBER REQUIREMENTS. LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO SPAN/360. TOTAL LOAD DEFLECTIONS SHALL BE LIMITED TO 240. ALL JOISTS SHALL BE CAMBERED FOR THE DESIGN DEAD LOAD. MANUFACTURER SHALL ADD ADDITIONAL WEB MEMBERS AS REQUIRED AND ADJUST CHORD AND WEB SIZES ACCORDINGLY, BUT SHALL NOT ALTER THE DEPTH OF THE JOISTS. DESIGN CALCULATIONS SHALL INCLUDE SUPERIMPOSED LOADS FOR FRAMING SUPPORTED EQUIPMENT. VERIFY SIZE, WEIGHT AND LOCATION OF EQUIPMENT WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER IN THE STATE OF ILLINOIS FOR REVIEW PRIOR TO MANUFACTURE. SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE DETAILS OF ANY OPTIONAL FIELD SPLICES, AND IF HIGH STRENGTH BOLTS OR FULL PENETRATION WELDS ARE UTILIZED. CONTRACTOR SHALL RETAIN AN INDEPENDENT TESTING LABORATORY TO CERTIFY COMPLIANCE WITH AISC AND AWS SPECIFICATIONS RESPECTIVELY.

JOISTS OR BEAMS TO BE EQUALLY SPACED BETWEEN COLUMN LINES - TYPICAL UNLESS NOTED OTHERWISE. PROVIDE BRIDGING AS REQUIRED PER SJI SPECIFICATIONS. WHERE BOTTOM CHORD WELDING IS INDICATED, DO NOT WELD BOTTOM CHORD TO SUPPORT UNTIL FULL DEAD LOAD IS IN PLACE. PROVIDE JOIST BEARING PLATES AND ANCHORS.

ALL JOISTS 40' AND LONGER ARE REQUIRED TO HAVE A ROW OF BOLTED BRIDGING TO BE IN PLACE BEFORE SLACKENING OF HOISTING LINES. WHERE COLUMNS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS, A BAR JOIST SHALL BE FIELD-BOLTED AT COLUMNS TO PROVIDE LATERAL STABILITY DURING CONSTRUCTION. ONLY DIAGONAL BRIDGING SHALL BE USED FOR LH SERIES JOISTS.

WHERE CROSS BRIDGING INTERFERES WITH MECHANICAL INSTALLATIONS, REMOVE THIS CROSS BRIDGING AFTER TOTAL DEAD LOAD IS APPLIED AND REPLACE WITH HORIZONTAL ANGLES 2"x2"x3/16" AT TOP AND BOTTOM CHORDS.

MANUFACTURER SHALL DESIGN JOIST SHOES WHERE BEARING LENGTH IS LESS THAN 4" AT LH SERIES JOIST AND LESS THAN 2 1/2" AT K SERIES JOIST ON STEEL. THE CONTRACTOR HAS THE OPTION OF PROVIDING ADDITIONAL JOIST SUPPORT.

ALL CONCENTRATED LOADS ON STEEL JOISTS EXCEEDING 150 LBS. SHALL BE LOCATED AT PANEL (NODE) POINTS. LOAD IN EXCESS OF 500 LBS. SHALL BE SUBMITTED TO THE JOIST MANUFACTURER FOR APPROVAL.

DESIGN EACH JOIST SEAT FOR A 1 KIP LATERAL LOAD PERPENDICULAR TO THE SEAT DUE TO DIAPHRAGM ACTION.

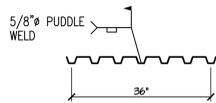
THE JOIST MANUFACTURER SHALL BE A MEMBER OF THE STEEL JOIST INSTITUTE.

ROOF DECK AT PORCHES:

METAL ROOF DECK SHALL CONFORM TO THE AISI "SPECIFICATION FOR THE LIGHT GAUGE COLD FORMED STRUCTURAL STEEL MEMBERS" AND STEEL DECK INSTITUTE SPECIFICATIONS FOR STEEL ROOF DECK AND STEEL DECK INSTITUTE SPECIFICATIONS FOR RECOMMENDED STANDARD PRACTICE. ATTACHMENT OF FASTENERS TO THE DECK SHALL CONFORM TO THE MAXIMUM REQUIREMENTS OF THE DESIGN LOADS, SDI SPECIFICATIONS SECTION 4.4, AND THE MINIMUM DIAPHRAGM ATTACHMENT REQUIREMENTS AS SHOWN BELOW.

DECK OVER MAIN BUILDING SHALL BE 1 1/2" DEEP, 36" WIDE 20 GAUGE, TYPE "B" GALVANIZED STEEL WITH MINIMUM YIELD STRESS OF 33 KSI, WITH MINIMUM S = 0.234 IN3 AND I = 0.212 IN4 PER FOOT OF WIDTH.

DECK SHALL BE ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AS 2 SPAN MINIMUM AND SHALL BE ATTACHED FOR A MINIMUM DIAPHRAGM SHEAR CAPACITY OF 299 PLF USING THE FOLLOWING MINIMUM ATTACHMENTS:



TYP. WELD PATTERN FOR ROOF DECK ATTACHMENT NOTES

- 1. ATTACHMENTS AT SUPPORTS SHALL BE WELDS.
2. ATTACHMENTS AT SIDE LAPS SHALL BE #10 TEK SCREWS TYP.
3. ATTACHMENTS AROUND OPENINGS SHALL BE WELDS @ 6" O.C.
4. ATTACHMENTS AT SIDE SUPPORTS AROUND PERIMETER SHALL BE WELDS AT 6" O.C.
5. MINIMUM END LAP 3" TYP.
6. THERE SHALL BE 3 SIDELAP FASTENERS PER SPAN.
7. DECK TO BE ATTACHED TO BAR JOISTS WITH A 36/3 PATTERN.

STANDING SEAM ROOF

STANDING SEAM ROOF SHALL BE IN ACCORDANCE WITH SECTION 13340 OF THE SPECIFICATIONS.

STRUCTURAL STEEL

STRUCTURAL STEEL W-SHAPES SHALL BE ASTM A992 (Fy = 50 KSI). STRUCTURAL STEEL ANGLES, PLATES, AND BARS SHALL BE ASTM A36 (Fy = 36 KSI). ALL TUBE STEEL SHALL BE ASTM A500 (Fy = 46 KSI). ALL STRUCTURAL STEEL SHALL BE DETAIL FABRICATED, AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. ENDS OF ALL STEEL TUBE COLUMNS SHALL BE SEALED WITH 1/4" COVER PLATES.

ALL EXPANSION AND EPOXY BOLTS TO HAVE I.C.B.O. RATING FOR MATERIAL INTO WHICH INSTALLATION TAKES PLACE. ANCHOR BOLTS SHALL BE ASTM A307.

ALL WELDING SHALL BE DONE BY CERTIFIED WELDER IN ACCORDANCE WITH AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS SHALL USE E70 ELECTRODES. ALL SURFACES WITH WELDING INDICATED ON THE STRUCTURAL DRAWING SHALL BE FREE OF PAINT. WELDING FOR MATERIAL INDICATED ON ARCHITECTURAL DRAWINGS AND METAL ROOF DECK MAY BE TO SURFACES WITH A THIN COAT OF SHOP PRIMER.

CONTRACTOR IS RESPONSIBLE FOR ALL MISCELLANEOUS STEEL. THIS INCLUDES, BUT IS NOT LIMITED TO, PERIMETER ANGLES AROUND ENTIRE BUILDING AT FLOOR AND ROOF LEVELS, BEARING PLATES FOR ALL COLUMNS, BEAMS, LINTELS, AND JOISTS; ANCHORS FOR BEAMS, LINTELS, AND JOISTS; AND REINFORCING PLATES AND ANGLES FOR ALL FLOOR AND ROOF OPENINGS.

HIGH STRENGTH BOLTS:

ALL HIGH STRENGTH BOLTS SHALL BE ASTM A325 AND SHALL BE INSTALLED AS BEARING-TYPE CONNECTION WITH THREADS INCLUDED IN SHEAR PLANE (I.E. A TYPE "N" CONNECTOR) EXCEPT THOSE NOTED TO BE SLIP CRITICAL (S.C.) BOLTS MAY BE TIGHTENED USING AISC APPROVED METHOD ALL HIGH STRENGTH BOLTING SHALL BE INSPECTED BY AN INDEPENDENT TESTING LABORATORY TO ENSURE BOLT TENSION.

MASONRY:

HOLLOW MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N, TYPE II, WITH A MINIMUM ULTIMATE COMPRESSIVE STRENGTH (fm) OF 2,150 PSI OF THE NET SECTION. MASONRY GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI. MORTAR AND UNIT MASONRY SUCH THAT fm = 1,500 PSI MINIMUM FOR THE ASSEMBLY. MAXIMUM GROUT LIFT SHALL BE 4'-0", UNLESS NOTED OTHERWISE ON THE PLANS. GROUT SHALL BE CONSOLIDATED BY METHODS WHICH ENSURE COMPLETE FILLING OF THE CELLS. ALL CELLS CONTAINING REINFORCING BARS AND/OR ANCHOR BOLTS SHALL BE FULLY GROUTED. BEARING ZONES FOR LINTELS, ETC. SHALL BE OVER A MINIMUM OF TWO COURSES OF HOLLOW MASONRY UNITS GROUTED SOLID OR 100% SOLID BRICK OR BLOCK. ALL WALLS SHALL HAVE HORIZONTAL REINFORCEMENT AT 16" ON CENTER VERTICALLY. ALL BARS SHALL BE COMPLETELY EMBEDDED IN GROUT. ALL BARS SHALL BE PLACED AT THE MID POINT OF THE MASONRY WIDTH. BEARING PLATES AND ANCHOR BOLTS FOR ALL JOISTS, BEAMS, AND LINTELS BEARING ON MASONRY SHALL BE PROVIDED AS REQUIRED.

VERTICAL REINFORCING:

(1) #5 IN CENTER OF GROUT AT CENTER OF WALL, CONTINUOUS FULL HEIGHT OF WALL AT ALL CORNERS, INTERSECTIONS, WALL ENDS, BEAM BEARINGS, JAMBS, EACH SIDE OF CONTROL JOINTS AND AT INTERVALS NOT TO EXCEED 48" O.C. UNLESS NOTED OTHERWISE. TIE AT 8'-0" VERTICALLY, WITH SINGLE WIRE LOOP TIE. LAP SPLICES SHALL BE 48 BAR DIAMETERS FOR GRADE 60 BARS. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION WITH DOWELS TO MATCH VERTICAL REINFORCING. MECHANICAL CONNECTORS MAY BE USED IN LIEU OF LAPS. MECHANICAL CONNECTORS MUST BE ABLE TO DEVELOP 125 PERCENT OF THE BAR YIELD STRENGTH.

HORIZONTAL REINFORCING:

(2) #5 IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT ROOF LINE. (1) #5 IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT TOP OF PARAPET OR TOP OF A FREESTANDING WALL. PLACE THESE BARS CONTINUOUS THRU CONTROL JOINTS PER TYPICAL DETAIL. PROVIDE BENT BARS PER TYPICAL DETAILS, TO MATCH HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND WALL INTERSECTION TO MAINTAIN BOND BEAM CONTINUITY. LAP SPLICES SHALL BE 48 BAR DIAMETERS FOR GRADE 60 BARS. STAGGER SPLICES A MINIMUM OF 40 BAR DIAMETERS. DO NOT SPLICE WITHIN 8'-0" OF CONTROL JOINTS. STANDARD WEIGHT (NO. 9 GAGE WIRE) LADDER TYPE JOINT REINFORCEMENT AT 16" O.C. IN MASONRY WALLS. PROVIDE HORIZONTAL REINFORCEMENT EVERY COURSE AT 8" O.C. BELOW GRADE.

SHOP DRAWINGS:

SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON HIS REVIEW. ALL SHOP DRAWINGS SHALL BE REVIEW STAMPED BY THE CONTRACTOR PRIOR TO SUBMITTAL.

ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE CLOUDED BY THE MANUFACTURER OR FABRICATOR. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES SHALL NOT BE CONSIDERED APPROVED AFTER A/E REVIEW, UNLESS NOTED ACCORDINGLY.

THE A/E MAY DISAPPROVE CHANGES TO THE SHOP DRAWINGS IDENTIFIED AND SUBMITTED BY THE CONTRACTOR DURING SHOP DRAWING REVIEW.

THE SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER OR ARCHITECT ARE NOT TO BE CONSIDERED CHANGES TO CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE ITEMS ARE CONSTRUCTED TO CONTRACT DOCUMENTS.

THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY.

REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR.

THE CONTRACTOR SHALL NOT REPRODUCE ANY PORTION OF CONTRACT DOCUMENTS AS SHOP DRAWINGS.

THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR STRUCTURAL STEEL FRAMING. BRACING SHALL BE ABLE TO PROVIDE LATERAL STABILITY FOR FULL DESIGN STRENGTH OF FRAMING MEMBERS.

