

## **ADDENDUM NO. 2**

Issued: October 25, 2016

Project: Joplin Early Childhood Center  
Site Legal Description:  
JOP MISC  
BEG 1360.93' S & 50' E NW  
COR SE E 456.91' N 318.78'  
W 456.91' S 318.78' TO POB

Project No. 16054

Owner: Joplin Schools  
310 West 8th Street  
Joplin, MO 64801

Bidding Documents Issued: September 30, 2016

This Addendum includes these 13 pages and the following attachments:

### **Project Manual:**

Re-issued Section 000110 "Table of Contents" consisting of 6 pages  
Section 008100 – Prevailing Wage Determination modification sheets consisting of 6 pages.  
New Section 072419 "Exterior Insulation and Finish System (EIFS)" consisting of 8 pages.  
Re-issued Section 087100 "Door Hardware" consisting of 26 pages.  
New Section 313200 "Subsoil Stabilization" consisting of 8 pages.  
Pre-Construction Conference Notes consisting of 5 pages.  
Civil Engineers Addendum 2 - Anderson Engineering consisting 3 pages, 7 drawings and 1 Detail Revisions  
Landscape Engineers Addendum 2 – Land3Studio consisting of 1 page and 11 drawings  
MEP Engineers Addendum 2 – Smith & Boucher consisting of 2 pages, Sections 271323 and 282300 and 5 drawings.

### **Drawings:**

Revised Sheets: G001, G101, A101A, A101B, A101C, A121C, A141, A201, A202, A203, A361, A362, A363, A364, A501, A504, A601C, A621, A622, A623, A624, A625, A661, A681, A682 and A811

## **GENERAL – BIDDER'S QUESTIONS**

**G1 QUESTION: THE SPECIFICATIONS STATE A "LEAK DETECTION SYSTEM INSTALLER" IN SPEC SECTION 075423-1. IS THIS PROJECT NEEDING A PERMANENTLY EMBEDDED LEAK DETECTION SYSTEM OR A MEMBRANE INTEGRITY TEST?**

G1.1 Answer: This requirement is deleted from the project in Addendum 2. Reference spec section 075423-1.

**G2 QUESTION: WHERE IS THE FLAGPOLE LOCATION INDICATED?**

G2.1 Answer: Refer to sheet L100 for flag pole location. Addendum 1 contained information for the base detail on sheet G101. (Also included in Addendum 2)

**G3 QUESTION: WHERE ARE THE SPECIFICATIONS FOR THE SIGNAGE?**

G3.1 Answer: They were issued in Addendum 1.

- G4 QUESTION: WHERE IS FRAME TYPE 25 LOCATED?**
- G4.1 Answer: Frame type 25 has been removed from the project. To clarify all clearstory frame locations, clearstory plans have been issued on the floor plan sheets in Addendum 2. Additionally, sheet A504 has been re-issued with a number of clarifications to correct inconsistencies.
- G5 QUESTION: CLARIFY HM FRAME PAINT COLOR NOTES ON DETAIL A4/A622.**
- G5.1 Answer: Clarified in Addendum 2.
- G6 QUESTION: CLARIFY WHAT APPEAR TO BE ALUMINUM FRAMES IN ELEVATION E4/A622 AND OTHER ELEVATIONS.**
- G6.1 Answer. These are HM frame type 31 at stud walls and 32 at masonry walls. They have been tagged on the plans in and elevated on sheet A504 in Addendum 2.
- G7 QUESTION: CLARIFY FRAME TYPES IN DETAIL N13/A624.**
- G7.1 Answer: These frame types have been clarified in Addendum 2. Reference the floor plans and sheet A504.
- G8 QUESTION: DOOR A101B IS LISTED ON THE DOOR SCHEDULE AS A TYPE "B" DOOR, IS THIS COORECT?**
- G8.1 Answer: This error has been corrected. Reference revised door schedule in Addendum 2.
- G9 QUESTION: CONCERNING GLAZING DESIGN, PLEASE CLARIFY THE REQUIREMENT FOR SIGNED AND SEALED CALCULATIONS FOR DELEGATED DESIGN.**
- G9.1 Answer: Signed and sealed engineering calculations are required for the framing systems, not by glass manufactures. Reference the revised relevant sections in Addendum 2.
- G10 QUESTION: WHAT IS ACTUALLY REQUIRED FOR THE MOCK UP AND FILD TESTING WHERE LISTED IN SECTION 084113-1.7?**
- G10.1 Answer: Refer to revised section 084113-1.7 and the revised curtain wall sections in Addendum 2 for clarification.
- G11 QUESTION: ARE NFRC PERFORMANCE LABELS REQUIRED?**
- G11.1 Answer: No, show product performance in the shop drawings. Refer to revised relevant sections in Addendum 2.
- G12 QUESTION: FOR THE CURTIAN WALL, THE SPECIFICATIONS INDICATION A 6" DEPTH, BUT THE DRAWINGS SHOW LARGER, PLEASE CLARIFY.**
- G12.1 Answer: The curtain wall depth is expected to be 7 ¼" to 7 ½" deep. No support steel is desired. Refer to revised details and specifications in Addendum 2.
- G13 QUESTION: THE METAL ROOFING SPEC SECTION 074113 DOES NOT LIST INSULATION. FROM THE PLANS, THE INSULATION APPEARS TO BE 5.5", MATCHING THAT OF THE MEMBRANE ROOFING. IS THIS THE CASE?**
- G13.1 Answer: Roofing insulation under the metal roof is called out as 072100.A04. Refer to that section for requirements.



- G14 QUESTION: WHAT KIND AND THICKNESS OF COVER BOARD IS WANTED AT THE METAL ROOFING?**
- G14.1 Answer: Refer to revised details provided in Addendum 2 – overboard is clarified and ties back to section 061600.A06.
- G15 QUESTION: THE METAL ROOFING SPEC CALLS FOR CURVED ROOFING. THE ROOF DOES NOT APPEAR TO BE CURVED. ARE THE REGULAR BERRIDGE ZEE-LOCK ROOF PANELS APPROPRIATE?**
- G15.1 Answer: Refer to revised metal roofing section in Addendum 2 for clarifications. There is no curved metal roof on this project.
- G16 QUESTION: THE PRICE FOR EACH ITEM WILL NEED TO BE 'DELIVERED' MEANING THAT THE PRICE OF EACH ITEM WILL BE AS IF IT IS PACKAGED AND SHIPPED INDIVIDUALLY? SHOULD I PROVIDE A 'PACKAGE' PRICE AS WELL BECAUSE IT WILL SAVE HUNDREDS IF NOT WELL OVER \$1,000 TO PACKAGE AND SHIP AS A PACKAGE?**
- G16.1 Answer: Provide each unit price as if it will be shipped individually.
- G17 QUESTION: THE PLAY AREA FOR THE JOPLIN EARLY CHILDHOOD CENTER BID. SHEET L102 SHOWS THE BERLINER/UDP ORBIT.01 BALANCE BEAM IN THE LAYOUT BUT IT IS NOT LISTED IN THE SPECIFICATIONS. CAN YOU CLARIFY IF I SHOULD INCLUDE IT IN PRICING TO GC'S OR NOT?**
- G17.1 Answer: This has been clarified in Addendum 1
- G18 QUESTION: SECTION 07 54 23 PAGE 4 PARAGRAPH 2.3.A STATES ASTM 6878 (THIS IS NORMALLY AS STANDARD TPO SHEET) THEN THE PARAGRAPH GOES ON TO SAY FLEXIBLE FABRIC-BACKED TPO SHEET. STANDARD .060 TPO IS NOT FABRIC-BACKED. BUT THERE IS A SHEET CALLED FLEECE BACK. THIS SHEET IS NORMALLY 115 MIL.**
- G18.1 Answer: Refer to revised section 075423 in Addendum 2 for clarification. The TOP roof will be a standard TPO thickness .060 and will not be fabric backed.
- G19 QUESTION: WHAT ARE THE SPECIFICATIONS OF THE "DIVIDERS" SEPARATING THE URINAL AND TOILET? IS THIS A SINGLE PANEL SUPPORTED BY A POST/PILASTER, AND WHAT ARE THE DIMENSIONS OF THE PANEL?**
- G19.1 Answer: This screen is to be the same as the urinal screen in materiality and size as in room C108. It will be wall mounted lower as directed by the Architect in the field,
- G20 QUESTION: SIGN TYPE DIMENSIONS APPEAR TO BE INACCURATE AND NOT IN COMPLIANCE WITH ADA.**
- G20.1 Answer: Refer to the revised signage type sheet in Addendum 2 for revisions.
- G21 QUESTION: IN AREA B CLARIFY ALUMINUM FRAMES 12 AND 32.**
- G21.1 Answer: Refer to the revised floor plans and sheet A504 in Addendum 2.
- G22 QUESTION: IN AREA B CLARIFY FRAME TYPES AT DOORS B115A, B125A, AND B130A.**
- G22.1 Answer: Refer to the revised door schedule in Addendum 2.
- G23 QUESTION: IN AREA C CLARIFY FRAME TYPES AT DOORS C122A, C123A, C130A, C131A.**
- G23.1 Answer: Refer to the revised door schedule in Addendum 2.
- G24 QUESTION: WHAT ARE THE FRAME TYPES ON THE NORTH WALL OF C132?**
- G24.1 Answer: Refer to the revised floor plan in Addendum 2.

**G25 QUESTION: WHAT ARE THE DIMENSIONS OF THE SKYLIGHTS? IS THE REQUIRED WOOD BLOCKING BY THE ROOFER OR THE SKYLIGHT SUPPLIER? WHO WILL CUT THE HOLE FOR THE SKYLIGHT?**

G25.1 Answer: The dimensions of the skylight are determined by the skylight specification. The wood blocking is by the skylight supplier. The responsibility for who will cut the hole for the skylight will be determined by the General Contractor.

**G26 QUESTION: THERE WERE A NUMBER OF STRUCTURAL CLARIFICATIONS IN ADDENDUM 1. WILL SHEETS BE ISSUED TO SHOW THE CHANGES?**

G26.1 Answer: Revisions are shown in re-issued sheets in Addendum 2.

**G27 QUESTION: ON ADDENDUM SHEET C104 NOTE D17 CALLS OUT HDPE PIPE BUT SAYS 4X4? D15 SAYS IT'S HDPE 18". IS D17 24" PER THE NOTE ABOUT THE DOWNSPOUT DRAINS ON THE NORTH SIDE OF THE BUILDING?**

G27.1 Answer: D17 should be a 18" HDPE Pipe. The note for the downspout collectors will be changed to say dive pipe into 18" storm pipe.

**G28 QUESTION: THE WOOD PANELING SPECS SAY THE SHOP/INSTALLER NEEDS TO BE AWI CERTIFIED. I'M NOT SEEING ANYTHING ABOUT THE MANUFACTURED CASEWORK OR INTERIOR ARCHITECTURAL WOODWORK BEING AWI CERTIFIED. IS EVERYTHING GOING TO BE AWI CERTIFIED? IF NOT, CAN WE WAIVE THE AWI CERTIFICATION ON THE WOOD PANELING?**

G28.1 Answer: Addendum 2 removes the requirement for AWI certification from the project.

**G29 QUESTION: ALTERNATE 7 – THE WAY I UNDERSTAND IT IS THE MODULAR BLOCK RETAINING WALL IS THE BASE BID, THE CAST-IN-PLACE RETAINING WALL IS THE ALTERNATE. IS THIS CORRECT?**

G29.1 Answer: The base bid is the modular block retaining wall. Alternate 7 is contractor's option to provide a wall per the performance specifications. Clarification is added via Addendum 2.

**G30 QUESTION: WILL YOU REQUIRE EXPANSION JOINT BETWEEN THE SIDEWALK AND THE CURB & GUTTER**

G30.1 Answer: Yes, refer to revised elevation sheets and their sheet notes in Addendum 2.

**G31 QUESTION: ARE THERE ANY SPECIFICATIONS FOR THE 072413.A01 MATERIAL CALLED OUT ON A201?**

G31.1 Answer: These notes have been updated in Addendum 2 to read 072419.A01. Section 072419.A01 has been issued as part of Addendum 2.

**G32 QUESTION: REFERRING TO SHEET G001, CAN DIMENSIONS BE PROVIDED FOR THE TRASH ENCLOSURE FOR ITS OVERALL SIZE.**

G32.1 Answer: The trash enclosure is 12' – 0" wide (inside face of block to inside face of block. It is 12' – 8" deep to the inside face of block.

**G33 QUESTION: REFERRING TO A203 DETAIL – J8, CAN MORE INFORMATION BE PROVIDED FOR THE CUSTOM 3/8" ALUMINUM SILHOUETTES?**

G33.1 Answer: The silhouettes will be of children playing and will not exceed the sizes shown on the elevations. Vector art will be provided by the architect. The information has been added to the building elevations in Addendum 2.

**G34 QUESTION: THE CEILING CLOUDS SHOWN ON A121C ARE DIFFERENT THAT THOSE SHOWN ON THE ENLARGED PLAN OF THIS SAME AREA L7/A434. A121C SHOWS (14) CLOUDS. A434 SHOWS 11 CLOUDS. WHICH ONE IS CORRECT?**

G34.1 Answer: A434 is correct. Sheet A121C is corrected in Addendum 2.

**G35 QUESTION: REFERENCE SHEET A101A. THE EXTERIOR WINDOW REFERENCES FRAME TYPE 2. I WONDER IF THIS IS CORRECT BECAUSE FRAME 2 ON SHEET A504 IS MUCH LARGER AND HAS A DOOR IN IT.**

G35.1 Answer: Frame 02 is correctly tagged in plan and elevated on sheet A504. The door is omitted on the frame elevation for clarity.

**G36 QUESTION: REFERENCE SHEET A902. PLEASE TAKE A LOOK AT THE EXTERIOR WINDOW TAGS ON H9/A902. I'M WONDERING IF THEY ARE CORRECT. TYPE 14 DOESN'T SEEM TO JIVE WITH WHAT I'M SEEING. ALSO, I'M NOT EVEN FINDING TYPES 32 AND 35 ON SHEET A504. I'M THINKING IT SHOULD PROBABLY BE 3 GROUPS OF THE 6,9,8,13 SEQUENCE SIMILAR TO ADJACENT CLASSROOMS A121, A125, A129.**

G36.1 Answer: Refer to revised sheet A902 in Addendum 2 for clarifications.

**G37 QUESTION: THE BERLINER WHITEWATER IS LISTED AS THE .03 (3 RAILS) ON THE BID FORM BUT IT IS SHOWN ON THE DRAWINGS AND LISTED IN THE SPECIFICATIONS AS THE .04 (4 RAILS). CAN YOU CLARIFY WHICH ONE IS TO BE USED.**

G37.1 Answer: Addressed in Addendum 1.

**G38 QUESTION: I'VE ASKED BERLINER AND BURKE DESIGNERS TO REVIEW PLANS AND INSURE THAT ALL PLAY PIECES FIT AS SHOWN ON THE PLANS. BURKE HAS NOT GOTTEN THIS DONE YET BUT A DESIGNER FROM BERLINER REPLIED: "ALL LOOKS GOOD EXCEPT THE PALMETTO SAUCER. EDGE OF SAFETY ZONE FALLS A LITTLE OUTSIDE OF WHERE THEY ARE SHOWING ARTIFICIAL TURF. CHECK OUT THE PDF I ATTACHED SHOWING THE OVERLAP. IF YOU WANT TO HAVE THE LA ADJUST THEIR PLAN ACCORDINGLY, I HAVE ALSO ATTACHED THE PALMETTO SAUCER CAD FILE FOR THEM TO USE FOR DESIGN."**

G38.1 Answer: Addressed in Addendum 2.

**G39 QUESTION: TO ENSURE THAT ALL PLAY EQUIPMENT FITS CORRECTLY, BURKE IS REQUESTING A CAD FILE TO MATCH THE PLAY AREA AS SHOWN ON SHEET L102. IS THIS SOMETHING YOU CAN PROVIDE? IF NOT, THEY CAN TRACE THE PLAN BUT THEY WON'T BE ABLE TO ENSURE THAT THE SCALE IS EXACT. PLEASE ADVISE.**

G39.1 Answer: We do not provide CAD files for the Landscape Drawings. The PDF files are to scale.

**G40 QUESTION: IS IT PERMISSIBLE TO USE DOUBLE T'S AND PRECAST WALLS IN LIEU OF THE HOLLOW CORE PLANKS AND MASONRY WALLS FOR THE HIGH WIND AREAS?**

G40.1 Answer: No. Please bid as shown in the documents and specifications.

**G41 QUESTION: REGARDING PL-1 THROUGH PL-7 ON SHEET A681, NONE OF THE COLORS EXIST ON THE WILSONART WEBSITE. PLEASE CLARIFY INTENT.**

G41.1 Answer: These are a recoloring of Wilsonart's verdigris crown laminate (7 different colors total).

**G42 QUESTION: PL-1 THRU PL-7 ALL REFERENCE THE SAME VENDOR COLOR CODE Z4271. PLEASE CLARIFY INTENT.**

G42.1 Answer: The pattern is identical for all (7) colors. Only the color changes.

**G43 QUESTION: HAVING TROUBLE FINDING PL- 1 THRU PL-7. PLEASE CLARIFY.**

G43.1 Answer: REF: J11/A621, which has a note that directs you to the finish plans for countertop plastic laminates. These are also found on some of the doors. REF: sheet A1/A501 and the Door Schedule.

**G44 QUESTION: IF HIGH LEVELS OF LEAD ARE ENCOUNTERED ON THE SITE WHO IS RESPONSIBLE FOR REMEDIATION?**

G44.1 Answer: In the event of any toxic materials on site, the owner is responsible for it's safe removal.

**G45 QUESTION: ARE HIGH LEVELS OF LEAD ANTICIPTED ON THE SITE?**

G45.1 Answer: Refer to section 008400 – 1.2.C. The HUD Environmental Assessment – Appendix F- Site Contamination Report is available upon request from the City of Joplin for Contractor's use and reference.

**G46 QUESTION: THERE IS A GREASE TRAP INDICATED ON SHEET C106. THE PLANS SAY REFER TO MECHANICAL PLANS FOR SIZE REQUIREMENTS, BUT MECHANICAL PLANS DO NOT HAVE SIZE REQUIREMENTS FOR GREASE TRAP. WHAT IS THE SIZE OF THE GREASE TRAP?**

G46.1 Answer: The grease trap is no longer included in the project and has been removed from sheet C106. The grease trap will be installed at a later date when a commercial dishwasher is added to the kitchen/receiving area.

**G47 QUESTIONS: IT APPEARS HARDWARE SCHEDULE IS NOT FOLLOWING DISTRICT STANDARDS. PLEASE CLARIFY.**

G47.1 Answer: The hardware schedule has been revised in Addendum 2 to reflect the district standards accurately.

**G48 QUESTION: WHERE IS THE IMPACT RESISTANT GYP LOCATED?**

E1.2 Answer: Impact resistant gyp is not required and has been removed from the specifications in Addendum 2.

**PROJECT MANUAL REVISIONS**

**A1 SECTION 000110 - TABLE OF CONTENTS**

A1.1 REPLACE existing Table of Contents with the attached revised Table of Contents dated October 25, 2016.

**A2 SECTION 008100 – PREVAILING WAGE DETERMINATION**

A2.1 DELETE previously issued Federal Wage Determination document "General Decision Number MO160046 08/19/2016 MO46", and REPLACE with "General Decision Number MO160046 09/30/2106 MO46."

**A3 SECTION 012200 – UNIT PRICES**

A3.1 DELETE Paragraphs 3.1 P, 3.1 Q, 3.1 R and 3.1 S.

**A4 SECTION 033000 – CAST-IN-PLACE CONCRETE**

A4.1 INSERT Clause 1.4 B.1.a as follows: a. Batch delivery tickets shall indicate batch weights as well as amount of available water to add on each delivery ticket.

A4.2 DELETE Paragraph 2.5 G and associated subparagraph

A4.3 DELETE Paragraph 2.8 A and INSERT the following:

- A. Granular Drainage Fill (033000.A15): Provide 2 inches of limestone fines and 4 inches of clean crushed stone or crushed or uncrushed gravel conforming to ASTM C 33, Size 57. Total thickness of 6 inches.

A4.4 Subparagraph 2.14 D.1; CHANGE to read: Use waterproofing (capillary break) admixture in concrete mixtures for all slabs on grade.

A4.5 Subparagraph 2.15 C.2; DELETE: 0.42 and INSERT: 0.45.

A4.6 DELETE Paragraph 2.15 E and associated subparagraphs, and INSERT the following:

- E. Concrete Toppings: Normal-weight concrete.
  - 1. Minimum Compressive Strength: 5000 psi at 28 days.
  - 2. Minimum Cementitious Materials Content: 520 lb/cu. yd.
  - 3. Slump Limit: 4 inches, plus or minus 1 inch.
  - 4. Air Content: Do not allow air content of trowel-finished toppings to exceed 3 percent.

A4.7 Subparagraph 2.17 A.2; in the first line after the word “jobsite”, INSERT: or batch plant as recommended by admixture manufacturer,.

A4.8 Subparagraph 2.17 A.2; in the last sentence, DELETE: and elevated slabs.

A4.9 Subparagraph 2.17 B.4; in the last sentence, DELETE: and elevated slabs.

#### **A5 SECTION 061600 – SHEATHING**

A5.1 Paragraph 2.5 A; DELETE: Grade A-B, and INSERT: Grade A-C...

#### **A6 SECTION 064200 – WOOD PANELING**

A6.1 DELETE Subparagraph 1.6 A.1. Note that AWI Certification is not required.

#### **A7 SECTION 072419 – EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)**

A7.1 INSERT new Section 072419 “Exterior Insulation and Finish System (EIFS)” dated October 25, 2016, attached.

#### **A8 SECTION 074113 – STANDING-SEAM METAL ROOF PANELS**

A8.1 INSERT Subparagraph 1.1 B.3 as follows: 3. Section 061600 “Sheathing” for roof sheathing.

A8.2 INSERT Subparagraph 1.1 B.4 as follows: 4. Section 072100 “Thermal Insulation” for roof insulation.

A8.3 Paragraph 2.2 B; DELETE: snapping panels together, and INSERT: mechanically seaming panels together.

A8.4 Subparagraph 2.2 B.1; DELETE: Curved, and INSERT: Double-Lock.

A8.5 Clause 2.2 B.2.a; DELETE: 0.031 inch, and INSERT: 0.028 inch (24 gauge).

A8.6 Subparagraph 2.2 B.6; DELETE: Curved and INSERT: Double-Lock.

A8.7 Subparagraph 3.4 E.3; DELETE: Snap Joint: Nest standing seams and fasten together by interlocking and completely engaging factory-applied sealant., and INSERT: Seamed Joint: Double-crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.

**A9 SECTION 075213 – MODIFIED BITUMINOUS ROOFING**

- A9.1 Paragraph 2.3 A; DELETE: and light weight insulated concrete...
- A9.2 ADD new Paragraph 2.3 Q as follows: Q. Asphalt: Asphalt shall meet requirements of ASTM D 312, Type IV.
- A9.3 ADD new Paragraph 3.3 I as follows: I. Install vented base sheet at locations where concrete deck occurs in accordance with membrane manufacturer's written instructions.
- A9.4 ADD new Subclause 3.4 A.1.a 2) as follows: 2) Set second layer of insulation in full mop of Type IV asphalt or low-rise foam adhesive as recommended by membrane manufacturer to meet performance requirements specified and offset joints 12 inches each way from first insulation layer.
- A9.5 ADD new Subparagraph 3.4 A.5 as follows: 5. Over Concrete Decking: Install insulation in 2 layers, excluding tapered insulation and coverboard. Set first layer of insulation in full mop of Type IV asphalt as recommended by membrane manufacturer. Run long joints of insulation in continuous straight line, perpendicular to roof slope with ends joints staggered at least 12" between rows. Adhere first layer of insulation over entire area of roofing to meet FM for Windstorm Resistance Classification specified and per applicable requirements of FM Loss Prevention Data Sheet 1-28. Set second layer of insulation in full mop of Type IV asphalt as recommended by membrane manufacturer and offset joints 12" each way from first insulation layer.

**A10 SECTION 075423 – THERMOPLASTIC POLYOLEFIN (TPO) ROOFING**

- A10.1 Paragraph 2.1 A; INSERT Clause "e" as follows: e. Mule-Hide Products Co., Inc.
- A10.2 Paragraph 2.3 A; DELETE: fabric-backed...
- A10.3 Subparagraph 2.3 A.1; INSERT Clause "e" as follows: e. Mule-Hide Products Co., Inc.
- A10.4 Paragraph 2.6 D; INSERT Subparagraph 3 as follows:
  - 3. High Density Polyisocyanurate Coverboard: Provide one of the following:
    - a. Carlisle SynTec; SecurShield HD Plus, ½ inch thickness.
    - b. GAF; EnergyGuard HD Plus, ½ inch thickness.
    - c. Johns Manville (JM); Invinsa, ¼ inch thickness.
    - d. Stevens: Comparable product.
    - e. Mule-Hide Products Co., Inc.; Comparable product.

**A11 SECTION 084113 – ALUMINUM ENTRANCES AND STOREFRONTS**

- A11.1 DELETE Paragraphs 1.4 A and 1.4 C.
- A11.2 DELETE Article 1.7 in its entirety.
- A11.3 CHANGE Subclause 3.5 B.1.a 1) to read: For punched openings, test 25 percent of installation, in each type of exterior finish substrate.
- A11.4 CHANGE Subclause 3.5 B.1.a 2) to read: For storefront and clerestories; test each installation.

**A12 SECTION 084413 – GLAZED ALUMINUM CURTAIN WALLS**

- A12.1 DELETE Article 1.9 in its entirety.
- A12.2 Subparagraph 2.3 A.5; CHANGE frames depth to: 7-1/4 to 7-1/2 inches.
- A12.3 Clause 3.5 C.1.a; CHANGE to read: Perform test at each area of curtain wall.

**A13 SECTION 087100 - DOOR HARDWARE**

A13.1 REPLACE existing Section 087100 – “Door Hardware” with the attached revised Section 087100 – “Door Hardware”, dated October 25, 2016.

**A14 SECTION 092900 – GYPSUM BOARD**

A14.1 DELETE Clause 1.1 A.1.c.

A14.2 DELETE Paragraph 2.3 D and associated subparagraphs and clauses.

A14.3 DELETE Subparagraph 3.3 A.3.

**A15 SECTION 313200 – SUBSOIL STABILIZATION**

A15.1 INSERT new Section 313200 “Subsoil Stabilization” dated October 25, 2016, attached.

**C1 REFER TO CIVIL ADDENDUM NO. 2 ATTACHED**

**M1 REFER TO ATTACHED MEP ADDENDUM NO 2**

**DRAWINGS REVISIONS**

**A16 SHEET G001 – GENERAL PROJECT INFORMATION**

A16.1 REPLACE previously issued Sheet G001, with attached sheet G001 dated 10.25.2016. (Added a general note).

**A17 SHEET G101 – OVERALL CODE FLOOR PLANS**

A17.1 REPLACE previously issued Sheet G101, with attached sheet G101 dated 10.25.2016. (Added a general note and flag pole base).

**A18 SHEET A101A – FLOOR PLAN – AREA A**

A18.1 REPLACE previously issued Sheet A101A, with attached sheet A101A dated 10.25.2016. (Clarify clear story window locations and types and ADD elevation tags E7/E10/A101A to room A107 SLP Center).

**A19 SHEET A101B – FLOOR PLAN – AREA B**

A19.1 REPLACE previously issued Sheet A101B in Addendum 1, with attached sheet A101B dated 10.25.2016. (Clarify clear story window locations and types).

**A20 SHEET A101C – FLOOR PLAN – AREA C**

A20.1 REPLACE previously issued Sheet A101C in Addendum 1, with attached sheet A101C dated 10.25.2016. (Clarify clear story window locations and types).).

**A21 SHEET A121C REFLECTED CEILING PLAN – AREA C**

A21.1 REMOVE (3) PS1s to match enlarged plan on L7/A434.

A21.2 C101 Multi-Purpose – ADD ‘P9’ tag to gyp soffits

**A22 SHEET A141 – OVERALL ROOF PLAN**

A22.1 REPLACE previously issued Sheet A141 in Addendum 1, with attached sheet A141 dated 10.15.2016. (Clarify walkway pads location and quantity).

**A23 SHEET A201 – EXTERIOR OVERALL BUILDING ELEVATIONS**

A23.1 REPLACE previously issued Sheet A201 in Addendum 1, with attached sheet A201 dated 10.25.2016. (Clarify EIFS system notes and custom aluminum sheet signage).

**A24 SHEET A202 – ENLARGED EXTERIOR BUILDING ELEVATIONS**

A24.1 REPLACE previously issued Sheet A202 in Addendum 1, with attached sheet A202 dated 10.25.2016. (Clarify EIFS system notes and custom aluminum sheet signage).).

**A25 SHEET A203 – ENLARGED EXTERIOR BUILDING ELEVATIONS**

A25.1 REPLACE previously issued Sheet A203 in Addendum 1, with attached sheet A203 dated 10.25.2016. (Clarify EIFS system notes and custom aluminum sheet signage).).

**A26 SHEET A361 – WALL SECTIONS**

A26.1 REPLACE previously issued Sheet A361 in Addendum 1, with attached sheet A361 dated 10.25.2016. (Clarify details L1, K6, A6).

**A27 SHEET A362 – WALL SECTIONS**

A27.1 REPLACE previously issued Sheet A362 in Addendum 1, with attached sheet A362 dated 10.25.2016. (Clarify details L5, L9, L13, A5, and A13).

**A28 SHEET A363 – WALL SECTIONS**

A28.1 REPLACE previously issued Sheet A363 in Addendum 1, with attached sheet A363 dated 10.25.2016. (Clarify detail P13).

**A29 SHEET A364 – EXTERIOR DETAILS**

A29.1 REPLACE previously issued Sheet A364 in Addendum 1, with attached sheet A364 dated 10.25.2016. (Add details N6, A11, E15. Clarify Detail E11).

**A30 SHEET A501 – DOOR SCHEDULE**

A30.1 REPLACE previously issued Sheet A501, with attached sheet A501 dated 10.25.2016. (Clarify door schedule).

**A31 SHEET A504 – FRAME ELEVATIONS**

A31.1 REPLACE previously issued Sheet A504 ALUMINUM FRAME TYPES, with attached sheet A504 FRAME TYPES dated 10.25.2016. (Clarify frame type dimensions, referencing details, and tags).

**A32 SHEET A601C FINISH FLOOR PLAN – AREA C**

A32.1 REPLACE previously issued Sheet A601C, with attached sheet A601C dated 10.25.2016. (ADD dimensions and callout for solid surface countertop and ADD callout for tile 'T3' behind water fountains on the east wall).

**A33 SHEET A621 INTERIOR ELEVATIONS**

A33.1 REPLACE previously issued Sheet A621, with attached sheet A621 dated 10.25.2016. (Sheet Note: Hollow Metal Frame Paint Colors: REPLACE note 6 with paint color Marine Blue #88GG 32/346 and note 7 with paint color Indian Bead #70BG 31/332 and Elevation A1: Replace keynote 12 32 00.A01 for keynote 12 32 00.A20 Pre-Manufactured Casework).



**A34 SHEET A622 INTERIOR ELEVATIONS**

A34.1 REPLACE previously issued Sheet A622, with attached sheet A622 dated 10.25.2016. (Elevation A4 – REMOVE Hollow Metal Frame Paint color tags for exterior windows, Sheet Note: Hollow Metal Frame Paint Colors: REPLACE note 6 with paint color Marine Blue #88GG 32/346 and note 7 with paint color Indian Bead #70BG 31/332 and Elevation E4 – ADD text “PAINTED WOOD FRAMES – PROFILES AND SIZES TBD. ATTACHED CABLES & HOOKS” under keynote 06 40 23.A02).

**A35 SHEET A623 INTERIOR ELEVATIONS**

REPLACE previously issued Sheet A623, with attached sheet A623 dated 10.25.2016. (Sheet Note: Hollow Metal Frame Paint Colors: REPLACE note 6 with paint color Marine Blue #88GG 32/346 and note 7 with paint color Indian Bead #70BG 31/332. Elevation J1 – ADD Hollow Metal Frame Paint Color tags to (3) windows: ADD text “PAINTED WOOD FRAMES – PROFILES AND SIZES TBD. ATTACHED CABLES & HOOKS” under keynote 06 40 23.A02 and Elevation N10 – ADD plastic laminate designations under associated keynotes).

**A36 SHEET A624 INTERIOR ELEVATIONS**

REPLACE previously issued Sheet A624, with attached sheet A624 dated 10.25.2016. (Sheet Note: Hollow Metal Frame Paint Colors: REPLACE note 6 with paint color Marine Blue #88GG 32/346 and note 7 with paint color Indian Bead #70BG 31/332, Elevation A9: ADD Hollow Metal Frame Paint color tags to (2) windows, Elevation A9: ADD door tags: ADD text “PAINTED WOOD FRAMES – PROFILE AND SIZES TBD. ATTACHED CABLES & HOOKS” under keynote 06 40 23.A02, Elevation A1: ADD Hollow Metal Frame Paint Color tags to (2) windows, ADD door tags to (2) doors, Add dimensions to WP3 panels and ADD text “PAINTED WOOD FRAMES – PROFILE AND SIZES TBD. ATTACHED CABLES & HOOKS” under keynote 06 40 23.A02)

**A37 SHEET A625 INTERIOR ELEVATIONS**

A37.1 REPLACE previously issued Sheet A625, with attached sheet A625 dated 10.25.2016. (Sheet Note: Hollow Metal Frame Paint Colors: REPLACE note 6 with paint color Marine Blue #88GG 32/346 and note 7 with paint color Indian Bead #70BG 31/332, Elevation A10: ADD text “PAINTED WOOD FRAMES – PROFILE AND SIZES TBD. ATTACHED CABLES & HOOKS” under keynote 06 40 23.A02, ADD elevations E7 and E10, Elevation A1 - ADD plastic laminate designation under associated keynotes, Elevation A6 – ADD plastic laminate designation under associated keynotes. CHANGE casework dimensions and Elevation E13 – ADD plastic laminate designation under associated keynote).

**A38 SHEET A661 INTERIOR DETAILS**

A38.1 REPLACE previously issued Sheet A661, with attached sheet A661 dated 10.25.2016. (Detail A11 – ADD 06 40 23.A22 Grommets, 06 40 23.A19 and 06 40 23.A18 and REPLACE Details: A1, A6, F10, F13)

**A39 SHEET A681 MATERIAL FINISH LEGEND**

A39.1 REPLACE previously issued Sheet A681, with attached sheet A681 dated 10.25.2016. (General Finish Notes: ADD note “13. SOLID SURFACE WINDOW SILLS TO BE SS1.”)

**A40 SHEET A682 ROOM FINISH SCHEDULE**

A40.1 REPLACE previously issued Sheet A682, with attached sheet A682 dated 10.25.2016. (Room A104 Director’s Office – CHANGE floor finish to C9, CHANGE south wall finish to P10 and Room C101 Multi-Purpose – ADD finishes to floor, base, walls, ceiling).

**A41 SHEET A811 – SIGNAGE TYPES**

A41.1 REPLACE previously issued Sheet A811, with attached sheet A811 dated 10.25.2016.

**S1 ISSUED STRUCTURAL SHEETS**

S1.1 Issued structural sheets that show the modifications made to the sheets where only verbiage was issued in Addendum No. 1: S000, S002, S100, S101, S102, S200, S201, S202 and S300

**C1 REFER TO CIVIL ADDENDUM NO. 2 ATTACHED**

**L1 REFER TO LANDSCAPE ADDENDUM NO. 2 ATTACHED**

**M2 REFER TO MEP ADDENDUM NO. 2 ATTACHED**

**SUBSTITUTION REQUEST APPROVALS**

This portion of the addendum designates those materials, products and equipment approved prior to submission of bids, as set forth in the contract documents. Items added to the proposed contract documents by this addendum are the only proposed substitutions received and approved by the architect in accordance with those provisions. No other items shall be substituted or bid as "equals".

It is understood that all items allowed by this addendum are subject to the full provisions of the original proposed contract documents and all modifications thereto and, as such, shall match standards of the original specified items with respect to materials, workmanship, design, size, capacity, type, function, finish, performance, quality, warranty, etc. Nothing in this addendum shall be construed as altering those original standards or modifications thereto.

Approvals are based upon the opinion, knowledge, information and belief of the architect at time of issuance of this addendum and reliance upon data submitted. Approvals are therefore interim in nature and subject to reconsideration as additional data, materials, workmanship and coordination with other work are observed and reviewed. In proposing items allowed by this addendum, bidder assumes all risk, costs and responsibility for item's final acceptance, integration into the work and performance.

**SECTION 033000**

SPEC HARD BY SPEC CHEM Is acceptable.

**SECTION 072100**

PROSEAL BY ICYNENE Is acceptable.

**SECTION 072729**

AIR-SHIELD BY W.R. MEADOWS INC. Is acceptable

**SECTION 072729**

RGUARD VAPOR BARRIER BY PROSOCO Is acceptable.

**SECTION 075423**

MULE-HIDE PROUCTS are acceptable. Note the basis of design has been clarified in Addendum 2.

**SECTION 123200**

FADCO SUPPLIERS Is acceptable

**SECTION 283111**

SIEMENS CERBERUS PRO Is acceptable

**SECTION 321313**

PAVE CURE REZ WHITE BY SPEC CHEM Is acceptable.

SPEC FILM RTU BY SPEC CHEM Is acceptable.

CURE & SEAL WB BY SPEC CHEM Is acceptable.

**SECTION 321820**

NO FAULT SAFETY SURFACE Is acceptable provided the stone base and geotextile fabric as specified in 321820 is acceptable base and will not require increase in cost due to differing stone gradation.

**RETAINING WALL**

BIG BLOCK Is acceptable.

**END OF ADDENDUM NO. 2**



## DOCUMENT 000110 - TABLE OF CONTENTS

Joplin Early Childhood Center

Site Legal Description:

JOP MISC BEG 1360.93' S & 50' E NW COR SE E 456.91' N 318.78' W 456.91' S 318.78' TO POB

Project No. 16054

	CURRENT ISSUE <u>DATE</u>	ORIGINAL ISSUE <u>DATE</u>
INTRODUCTORY INFORMATION		
000101 Project Team Directory	09.30.16	09.30.16
000105 Certifications and Seals	09.30.16	09.30.16
<b>000110 Table of Contents</b>	<b>10.25.16</b>	09.30.16
BIDDING REQUIREMENTS		
001100 Invitation to Bid	09.30.16	09.30.16
002100 Information for Bidders	09.30.16	09.30.16
002200 Supplementary Information for Bidders	09.30.16	09.30.16
003132 Geotechnical Data	09.30.16	09.30.16
004200 Proposal Form	09.30.16	09.30.16
004313 Bid Security Form	09.30.16	09.30.16
004513 Bidder's Qualifications	09.30.16	09.30.16
CONTRACTING REQUIREMENTS		
005200 Agreement Form	09.30.16	09.30.16
006113 Performance and Payment Bond	09.30.16	09.30.16
006273 Application and Certification for Payment	09.30.16	09.30.16
006275 Partial Lien Waiver	09.30.16	09.30.16
006276 Bailment Receipt	09.30.16	09.30.16
007200 General Conditions	09.30.16	09.30.16
007300 Supplementary Conditions	09.30.16	09.30.16
008100 Prevailing Wage Determination	09.30.16	09.30.16
008400 Attachments	09.30.16	09.30.16
DIVISION 1 - GENERAL REQUIREMENTS		
011000 Summary	09.30.16	09.30.16
012200 Units Prices	09.30.16	09.30.16
012300 Alternates	09.30.16	09.30.16
012500 Substitution Procedures	09.30.16	09.30.16
012600 Contract Modification Procedures	09.30.16	09.30.16
012900 Payment Procedures	09.30.16	09.30.16
013100 Project Management and Coordination	09.30.16	09.30.16
013200 Construction Progress Documentation	09.30.16	09.30.16
013300 Submittal Procedures	09.30.16	09.30.16
014000 Quality Requirements	09.30.16	09.30.16
014200 References	09.30.16	09.30.16
014529 Testing and Laboratory Services	09.30.16	09.30.16
015000 Temporary Facilities and Controls	09.30.16	09.30.16
016000 Product Requirements	09.30.16	09.30.16
017300 Execution	09.30.16	09.30.16
017419 Construction Waste Management & Disposal	09.30.16	09.30.16
017700 Closeout Procedures	09.30.16	09.30.16
017823 Operation and Maintenance Data	09.30.16	09.30.16
017839 Project Record Documents	09.30.16	09.30.16
017900 Demonstration and Training	09.30.16	09.30.16

	CURRENT ISSUE <u>DATE</u>	ORIGINAL ISSUE <u>DATE</u>
DIVISION 2 – EXISTING CONDITIONS		
024119 Selective Demolition	09.30.16	09.30.16
DIVISION 3 - CONCRETE		
033000 Cast-in-Place Concrete	09.30.16	09.30.16
034100 Precast Structural Concrete	09.30.16	09.30.16
DIVISION 4 - MASONRY		
042000 Unit Masonry	09.30.16	09.30.16
DIVISION 5 - METALS		
051200 Structural Metal Framing	09.30.16	09.30.16
053100 Steel Decking	09.30.16	09.30.16
054000 Cold-Formed Metal Framing	09.30.16	09.30.16
054400 Cold-Formed Metal Trusses	09.30.16	09.30.16
055000 Metal Fabrications	09.30.16	09.30.16
DIVISION 6 - WOOD AND PLASTICS		
061000 Rough Carpentry	09.30.16	09.30.16
061600 Sheathing	09.30.16	09.30.16
062013 Exterior Finish Carpentry	09.30.16	09.30.16
062023 Interior Finish Carpentry	09.30.16	09.30.16
064200 Wood Paneling	10.14.16	10.14.16
064023 Interior Architectural Woodwork	10.14.16	10.14.16
066400 Plastic Paneling	09.30.16	09.30.16
DIVISION 7 - THERMAL AND MOISTURE PROTECTION		
071113 Bituminous Dampproofing	09.30.16	09.30.16
072100 Thermal Insulation	09.30.16	09.30.16
<b>072419 Exterior Insulation and Finish System (EIFS)</b>	<b>10.25.16</b>	<b>10.25.16</b>
072500 Weather Barriers	09.30.16	09.30.16
072729 Air Barrier Coatings	09.30.16	09.30.16
074113 Standing Seam Metal Roofing	09.30.16	09.30.16
074213 Formed Metal Wall Panels	09.30.16	09.30.16
075213 Modified Bituminous Membrane Roofing	09.30.16	09.30.16
075423 Thermoplastic Membrane Roofing (TPO)	09.30.16	09.30.16
076200 Sheet Metal Flashing and Trim	09.30.16	09.30.16
078413 Penetration Firestopping	10.14.16	10.14.16
078446 Fire Resistive Joint Systems	10.14.16	10.14.16
079200 Joint Sealants	09.30.16	09.30.16
079500 Expansion Control	10.14.16	10.14.16
DIVISION 8 - DOORS AND WINDOWS		
081113 Hollow Metal Doors and Frames	09.30.16	09.30.16
081416 Flush Wood Doors	09.30.16	09.30.16
083113 Access Doors and Panels	09.30.16	09.30.16
083323 Overhead Coiling Doors	09.30.16	09.30.16
084113 Aluminum Entrances and Storefronts	09.30.16	09.30.16
084413 Glazed Aluminum Curtain Walls	09.30.16	09.30.16
086200 Unit Skylights	09.30.16	09.30.16
087100 Door Hardware	09.30.16	09.30.16
088000 Glazing	09.30.16	09.30.16
088113 Decorative Glass Glazing	09.30.16	09.30.16

		CURRENT ISSUE <u>DATE</u>	ORIGINAL ISSUE <u>DATE</u>
DIVISION 9 - FINISHES			
092116	Non-Structural Metal Framing	09.30.16	09.30.16
092900	Gypsum Board	09.30.16	09.30.16
093000	Tiling	09.30.16	09.30.16
095113	Acoustical Panel Ceilings	09.30.16	09.30.16
096513	Resilient Base and Accessories	09.30.16	09.30.16
096516	Resilient Sheet Flooring	09.30.16	09.30.16
096519	Resilient Tile Flooring	09.30.16	09.30.16
096813	Tile Carpeting	09.30.16	09.30.16
097200	Wallcoverings	09.30.16	09.30.16
097253	Custom Digital Wall Covering Murals	09.30.16	09.30.16
097723	Fabric-Wrapped Panels	09.30.16	09.30.16
099113	Exterior Painting	09.30.16	09.30.16
099123	Interior Painting	09.30.16	09.30.16
099300	Staining and Transparent Finishing	09.30.16	09.30.16
099600	High-Performance Coatings	09.30.16	09.30.16
DIVISION 10 - SPECIALTIES			
101100	Visual Display Surfaces	09.30.16	09.30.16
101400	Signage	10.14.16	10.14.16
102113	Toilet Compartments	09.30.16	09.30.16
102123	Cubicle Curtains	09.30.16	09.30.16
102600	Wall and Door Protection	09.30.16	09.30.16
102800	Toilet, Bath & Laundry Accessories	09.30.16	09.30.16
104413	Fire Extinguisher Cabinets	09.30.16	09.30.16
104416	Fire Extinguishers	09.30.16	09.30.16
107500	Flagpoles	09.30.16	09.30.16
DIVISION 11 - EQUIPMENT			
116816	Play Area Equipment	09.30.16	09.30.16
DIVISION 12 - FURNISHINGS			
122113	Horizontal Louver Blinds	09.30.16	09.30.16
123200	Manufactured Wood Casework	10.14.16	10.14.16
129300	Site Furnishings	09.30.16	09.30.16
DIVISION 21 – FIRE SUPPRESSION			
210500	Common Work Results for Fire Suppression	09.30.16	09.30.16
211313	Wet-Pipe Sprinkler System	09.30.16	09.30.16

		CURRENT ISSUE <u>DATE</u>	ORIGINAL ISSUE <u>DATE</u>
DIVISION 22 - PLUMBING			
220500	Common Work Results for Plumbing	09.30.16	09.30.16
220513	Common Motor Requirements for Plumbing Equipment	09.30.16	09.30.16
220516	Expansion Fittings and Loops for Plumbing Piping	09.30.16	09.30.16
220519	Meters and Gauges for Plumbing Piping	09.30.16	09.30.16
220523	Valves - Plumbing	09.30.16	09.30.16
220529	Hangers and Supports for Plumbing Piping and Equipment	09.30.16	09.30.16
220548	Vibration Controls for Plumbing Piping and Equipment	09.30.16	09.30.16
220553	Identification for Plumbing Piping and Equipment	09.30.16	09.30.16
220719	Plumbing Piping Identification	09.30.16	09.30.16
221116	Domestic Water Piping	09.30.16	09.30.16
221119	Domestic Water Piping Specialties	09.30.16	09.30.16
221316	Sanitary Waste and Vent Piping	09.30.16	09.30.16
221319	Sanitary Waste Piping Specialties	09.30.16	09.30.16
221413	Storm Drainage Piping	09.30.16	09.30.16
223100	Domestic Water Softeners	09.30.16	09.30.16
223400	Fuel-Fired, Domestic-Water Heaters	09.30.16	09.30.16
224000	Plumbing Fixtures	09.30.16	09.30.16
DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING			
230500	Common Work Results for HVAC	09.30.16	09.30.16
230513	Motors for HVAC Equipment	09.30.16	09.30.16
230517	Sleeves and Sleeve Seals for HVAC Piping	09.30.16	09.30.16
230518	Escutcheons for HVAC Piping	09.30.16	09.30.16
230519	Meters & Gages - HVAC	09.30.16	09.30.16
230523	Valves - HVAC	09.30.16	09.30.16
230529	Hangers & Supports – HVAC	09.30.16	09.30.16
230548	Vibration Controls for HVAC Piping and Equipment	09.30.16	09.30.16
230553	HVAC System Identification	09.30.16	09.30.16
230593	Testing, Adjusting, and Balancing for HVAC	09.30.16	09.30.16
230713	Duct Insulation	09.30.16	09.30.16
230716	HVAC Equipment Insulation	09.30.16	09.30.16
230719	HVAC Piping Insulation	09.30.16	09.30.16
230923	Direct Digital Control System for HVAC	09.30.16	09.30.16
231123	Facility Natural-Gas Piping	09.30.16	09.30.16
233113	Metal Ducts	09.30.16	09.30.16
233300	Duct Accessories	09.30.16	09.30.16
233600	Air Terminal Units	09.30.16	09.30.16
233713	Diffusers, Registers, and Grilles	09.30.16	09.30.16
237413	Packaged, Outdoor, Central-Station Air-Handling Units	09.30.16	09.30.16
237413.13	Rooftop Equipment Screens	09.30.16	09.30.16
238239	Unit Heaters	09.30.16	09.30.16



	CURRENT ISSUE <u>DATE</u>	ORIGINAL ISSUE <u>DATE</u>
DIVISION 26 - ELECTRICAL		
260500 Common Work Results for Electrical	09.30.16	09.30.16
260519 Low-Voltage Electrical Power Conductors and Cables	09.30.16	09.30.16
260523 Control-Voltage Electrical Power Cables	09.30.16	09.30.16
260526 Grounding and Bonding for Electrical Systems	09.30.16	09.30.16
260529 Hangers and Supports for Electrical Systems	09.30.16	09.30.16
260533 Raceway and Boxes for Electrical Systems	09.30.16	09.30.16
260536 Cable Trays for Electrical Systems	09.30.16	09.30.16
260553 Identification for Electrical Systems	09.30.16	09.30.16
260923 Lighting Control Devices	09.30.16	09.30.16
262200 Low Voltage Transformers	09.30.16	09.30.16
262413 Switchboards	09.30.16	09.30.16
262416 Panelboards	09.30.16	09.30.16
262726 Wiring Devices	09.30.16	09.30.16
262813 Fuses	09.30.16	09.30.16
262816 Enclosed Switches and Circuit Breakers	09.30.16	09.30.16
262913 Enclosed Controllers	09.30.16	09.30.16
262923 Variable-Frequency Motor Controllers	09.30.16	09.30.16
264113 Lightning Protection for Structures	09.30.16	09.30.16
264313 Transient-Voltage Suppression for Low-Voltage Electrical Power Circuits	09.30.16	09.30.16
265119 LED Interior Lighting	09.30.16	09.30.16
265219 Emergency and Exit Lighting	09.30.16	09.30.16
265600 Exterior Lighting	09.30.16	09.30.16
DIVISION 27 – COMMUNICATIONS		
270000 Communications	09.30.16	09.30.16
270100 Fire Stops	09.30.16	09.30.16
270526 Grounding and Bonding for Communications Systems	09.30.16	09.30.16
270800 Commissioning of Communications	09.30.16	09.30.16
270810 Testing Copper UTP Cables	09.30.16	09.30.16
270820 Testing Optical Fiber Cables	09.30.16	09.30.16
271113 Communications Entrance Protection	09.30.16	09.30.16
271116 Communications Cabinets, Racks, Frames, and Enclosures	09.30.16	09.30.16
271119 Communications Termination Blocks and Patch Panels	09.30.16	09.30.16
271123 Communications Cable Management and Ladder Rack	09.30.16	09.30.16
271500 Communications Horizontal Cabling	09.30.16	09.30.16
271513 Communications Copper Horizontal Cabling	09.30.16	09.30.16
271543 Communications Faceplates and Connectors	09.30.16	09.30.16
275123.50 Educational Intercommunications and Program Systems	09.30.16	09.30.16
DIVISION 28 - ELECTRONIC ACCESS CONTROL AND INTRUSION DETECTION		
280500 Common Work Results for Electronic Safety and Security	09.30.16	09.30.16
280513 Conductors and Cables for Electronic Safety and Security	09.30.16	09.30.16
283111 Digital, Addressable Fire-Alarm System	09.30.16	09.30.16
DIVISION 31 - EARTHWORK		
311000 Site Clearing	09.30.16	09.30.16
312000 Earth Moving	09.30.16	09.30.16
312319 Dewatering	09.30.16	09.30.16
312333 Excavation and Trenching	09.30.16	09.30.16
313116 Termite Control	09.30.16	09.30.16
<b>313200 Soil Stabilization</b>	<b>10.25.16</b>	<b>10.25.16</b>

DIVISION 32 - EXTERIOR IMPROVEMENTS

321123	Aggregate for Base	09.30.16	09.30.16
321216	Asphalt Paving	09.30.16	09.30.16
321313	Concrete Paving	09.30.16	09.30.16
323113	Chain Link Fencing	09.30.16	09.30.16
321820	Play Surface Construction	09.30.16	09.30.16
328400	Irrigation System	09.30.16	09.30.16
329300	Landscape Plantings	09.30.16	09.30.16

DIVISION 33 - UTILITIES

330600	Common Work Results for Utilities	09.30.16	09.30.16
334100	Storm Utility Drainage Piping	09.30.16	09.30.16
334600	Subdrainage	09.30.16	09.30.16

END OF TABLE OF CONTENTS

General Decision Number: MO160046 09/30/2016 MO46

Superseded General Decision Number: MO20150046

State: Missouri

Construction Type: Building

County: Jasper County in Missouri.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/08/2016
1	03/04/2016
2	05/20/2016
3	06/10/2016
4	08/19/2016
5	09/30/2016

ASBE0063-002 11/01/2015

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 25.47	11.25

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BOIL0083-005 01/01/2015

	Rates	Fringes
BOILERMAKER.....	\$ 34.76	27.06

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BRMO0015-014 04/01/2016

	Rates	Fringes
BRICKLAYER.....	\$ 27.73	15.86

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BRMO0015-017 06/01/2016

Rates	Fringes
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TILE SETTER.....	\$ 22.08	12.86
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CARP0311-006 05/01/2015

	Rates	Fringes
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CARPENTER (Including Acoustical Ceiling Installation, Drywall Hanging & Metal Stud Installation).....	\$ 22.95	15.10
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ELEC0095-004 06/01/2015

	Rates	Fringes
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ELECTRICIAN (Including Low Voltage Wiring for Alarms & Phones).....	\$ 26.46	14.12
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ENGI0101-024 04/01/2016

	Rates	Fringes
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POWER EQUIPMENT OPERATOR:

Bobcat/Skid Loader.....	\$ 23.89	12.64
Crane.....	\$ 26.34	12.64
Forklift.....	\$ 24.60	12.64
Grader/Blade.....	\$ 26.34	12.64
Loader.....	\$ 24.60	12.64
Paver.....	\$ 26.34	12.64
Roller.....	\$ 23.89	12.64

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IRON0584-001 06/01/2015

BARRY COUNTY

	Rates	Fringes
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IRONWORKER (REINFORCING AND STRUCTURAL).....	\$ 24.00	13.53
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LABO0319-001 05/01/2016

	Rates	Fringes
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LABORER

Brick & Cement/Concrete Mason Tender.....	\$ 20.98	11.53
Common or General; Asphalt Shoveler; Pipelayer.....	\$ 20.98	11.53

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PLAS0518-022 03/01/2016

	Rates	Fringes
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CEMENT MASON/CONCRETE FINISHER....	\$ 23.54	10.30
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PLUM0178-001 11/01/2015

	Rates	Fringes
PIPEFITTER, Includes HVAC Pipe Installation		
Projects \$750,000 & under...	\$ 25.98	14.77
Projects over \$750,000.....	\$ 28.95	14.77
PLUMBER, Excludes HVAC Pipe Installation		
Projects \$750,000 & under...	\$ 25.98	14.77
Projects over \$750,000.....	\$ 28.95	14.77

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\* ROOF0020-003 04/01/2016

	Rates	Fringes
ROOFER.....	\$ 22.75	10.88

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SHEE0036-003 07/01/2011

	Rates	Fringes
SHEET METAL WORKER, Includes HVAC Duct and Unit Installation.....		
	\$ 25.91	12.73

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SUMO2010-045 06/14/2010

	Rates	Fringes
GLAZIER.....	\$ 20.23	0.42
INSTALLER - OVERHEAD DOOR.....	\$ 26.07	4.62
OPERATOR: Backhoe/Excavator.....	\$ 20.16	11.36
OPERATOR: Hoist.....	\$ 26.02	13.01
PAINTER: Brush and Roller.....	\$ 15.34	0.00
PAINTER: Spray.....	\$ 17.78	0.00

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WELDERS - Receive rate prescribed for craft performing  
operation to which welding is incidental.

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Unlisted classifications needed for work not included within  
the scope of the classifications listed may be added after  
award only as provided in the labor standards contract clauses  
(29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the

classifications was union data. EXAMPLE: UAVG-OH-0010  
08/29/2014. UAVG indicates that the rate is a weighted union  
average rate. OH indicates the state. The next number, 0010 in  
the example, is an internal number used in producing the wage  
determination. 08/29/2014 indicates the survey completion date  
for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of  
each year, to reflect a weighted average of the current  
negotiated/CBA rate of the union locals from which the rate is  
based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can  
be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on  
a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests  
for summaries of surveys, should be with the Wage and Hour  
Regional Office for the area in which the survey was conducted  
because those Regional Offices have responsibility for the  
Davis-Bacon survey program. If the response from this initial  
contact is not satisfactory, then the process described in 2.)  
and 3.) should be followed.

With regard to any other matter not yet ripe for the formal  
process described here, initial contact should be with the  
Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an  
interested party (those affected by the action) can request  
review and reconsideration from the Wage and Hour Administrator  
(See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the  
interested party's position and by any information (wage

payment data, project description, area practice material,  
etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an  
interested party may appeal directly to the Administrative  
Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION



## SECTION 072419 - EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes:
  - 1. Drainage-type exterior insulation and finish system (EIFS) (072419.A01).
- B. Related Sections:
  - 1. Section 061600 "Sheathing" for sheathing.

#### 1.2 DEFINITIONS

- A. Definitions in ASTM E 2110 apply to Work of this Section.
- B. EIFS: Exterior insulation and finish system(s).
- C. IBC: International Building Code.
- D. Polymer-Based Exterior Insulation and Finish System: Class PB EIFS, as defined in ASTM E 2568.

#### 1.3 SYSTEM DESCRIPTION

- A. Class PB EIFS: A non-load-bearing, exterior wall cladding system that consists of an insulation board attached adhesively, mechanically, or both to the substrate; an integrally reinforced base coat; and a textured protective finish coat.

#### 1.4 PERFORMANCE REQUIREMENTS

- A. EIFS Performance: Comply with the following:
  - 1. Bond Integrity: Free from bond failure within EIFS components or between system and supporting wall construction, resulting from exposure to fire, wind loads, weather, or other in-service conditions.
  - 2. Weather Tightness: Resistant to water penetration from exterior into water-drainage EIFS and assemblies behind it or through them into interior of building that results in deterioration of thermal-insulating effectiveness or other degradation of EIFS and assemblies behind it, including substrates, supporting wall construction, and interior finish, and including a means that allows water entering into an EIFS assembly to drain to the exterior.
- B. Class PB EIFS: Provide EIFS having physical properties and structural performance that comply with the following:
  - 1. Abrasion Resistance: Sample consisting of 1-inch- thick EIFS mounted on 1/2-inch- thick gypsum board; cured for a minimum of 28 days; and showing no cracking, checking, or loss of film integrity after exposure to 528 quarts of sand when tested per ASTM D 968, Method A.
  - 2. Absorption-Freeze Resistance: No visible deleterious effects and negligible weight loss after 60 cycles per EIMA 101.01.
  - 3. Accelerated Weathering: Five samples per ICC-ES AC235 showing no cracking, checking, crazing, erosion, rusting, blistering, peeling, delamination, or other characteristics that might affect performance as a wall cladding after testing for 2000 hours when viewed under 5 times magnification per ASTM G 153 or ASTM G 155.
  - 4. Freeze-Thaw: No surface changes, cracking, checking, crazing, erosion, rusting, blistering, peeling, or delamination, or indications of delamination between components when viewed under 5 times magnification after 10 cycles per ICC-ES AC235.
  - 5. Mildew Resistance of Finish Coat: Sample applied to 2-by-2-inch clean glass substrate, cured for 28 days, and showing no growth when tested per ASTM D 3273 and evaluated according to ASTM D 3274.
  - 6. Salt-Spray Resistance: No deleterious affects when tested according to ICC-ES AC235.
  - 7. Tensile Adhesion: No failure in the EIFS, adhesive, base coat, or finish coat when tested per ICC-ES AC235.
  - 8. Water Penetration: Sample consisting of 1-inch- thick EIFS mounted on 1/2-inch- thick gypsum board, cured for 28 days, and showing no water penetration into the plane of the base coat to expanded polystyrene board interface of the test specimen after 15 minutes at 6.24 lbf/sq. ft. of air pressure difference or 20 percent of positive design wind pressure, whichever is greater, across the specimen during a test period when tested per EIMA 101.02.

9. Water Resistance: Three samples, each consisting of 1-inch- thick EIFS mounted on 1/2-inch- thick gypsum board; cured for 28 days; and showing no cracking, checking, crazing, erosion, rusting, blistering, peeling, or delamination after testing for 14 days per ASTM D 2247.
10. Impact Resistance: Sample consisting of 1-inch- thick EIFS when constructed, conditioned, and tested per EIMA 101.86; and meeting or exceeding the following:
  - a. Standard Impact Resistance: 25 to 49 inch-lb, where system is 8 feet above adjacent finished grade.
  - b. Medium Impact Resistance: 50 to 89 inch-lb, where system is 8 feet or less above adjacent finished grade.
11. Structural Performance Testing: EIFS assembly and components shall comply with ICC-ES AC235 when tested per ASTM E 330.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type and component of EIFS indicated.
- B. Shop Drawings: Include plans, elevations, sections, details of components, details of penetration and termination, flashing details, joint locations and configurations, fastening and anchorage details including mechanical fasteners, and connections and attachments to other work.
- C. Samples for Initial Selection: For each type of finish-coat color and texture indicated.
- D. Samples for Verification: 12-inch- square panels for each type of finish-coat color and texture indicated, prepared using same tools and techniques intended for actual work including an aesthetic reveal and a typical control joint filled with sealant of color selected.
  1. Include sealants Samples to verify color selected.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and testing agency.
- B. Manufacturer Certificates: Signed by manufacturers certifying that EIFS comply with requirements.
  1. Accessory products installed with EIFS, including joint sealants, flashing, water-resistive coatings, and trim, whether or not furnished by EIFS manufacturer and whether or not specified in this Section, are acceptable to EIFS manufacturer.
- C. Field quality-control reports and special inspection reports.

#### 1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For EIFS to include in maintenance manuals.

#### 1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An installer who is certified in writing by EIFS manufacturer as qualified to install manufacturer's system using trained workers.
- B. Source Limitations: Obtain EIFS from single source from single EIFS manufacturer and from sources approved by EIFS manufacturer as compatible with system components.
- C. Mockups/Field Sample: Build mockup/field sample to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution and set quality standards for fabrication and installation.
  1. Approved mockups/field samples may become part of the completed Work if undisturbed at time of Substantial Completion.
- D. Preinstallation Conference: Conduct conference at Project site.

#### 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original, unopened packages with manufacturers' labels intact and clearly identifying products.

- B. Store materials inside and under cover; keep them dry and protected from weather, direct sunlight, surface contamination, aging, corrosion, damaging temperatures, construction traffic, and other causes.
  - 1. Stack insulation board flat and off the ground.
  - 2. Protect plastic insulation against ignition at all times. Do not deliver plastic insulating materials to Project site before installation time.
  - 3. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

#### 1.10 PROJECT CONDITIONS

- A. Weather Limitations: Maintain ambient temperatures above 40 deg F for a minimum of 24 hours before, during, and after adhesives or coatings are applied. Do not apply EIFS adhesives or coatings during rainfall. Proceed with installation only when existing and forecasted weather conditions and ambient outdoor air, humidity, and substrate temperatures permit EIFS to be applied, dried, and cured according to manufacturers' written instructions and warranty requirements.

#### 1.11 COORDINATION

- A. Coordinate installation of EIFS with related Work specified in other Sections to ensure that wall assemblies, including sheathing, weather-resistant sheathing paper, flashing, trim, joint sealants, windows, and doors, are protected against damage from the effects of weather, age, corrosion, moisture, and other causes. Do not allow water to penetrate behind flashing that is behind water-drainage EIFS.

#### 1.12 WARRANTY

- A. Manufacturer's Special Warranty for EIFS: Manufacturer agrees to repair or replace components of EIFS-clad wall and soffit assemblies that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Bond integrity and weather tightness.
    - b. Deterioration of EIFS finishes and other EIFS materials beyond normal weathering.
  - 2. Warranty coverage includes the following components of EIFS-clad drainage-wall assemblies:
    - a. EIFS finish, including base coats, finish coats, and reinforcing mesh.
    - b. Insulation installed as part of EIFS including foam build-outs.
    - c. Insulation adhesive.
    - d. EIFS accessories, including trim components and flashing.
  - 3. Warranty Period: Ten (10) years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide EIFS systems by one of the following:
  - 1. Dryvit Systems, Inc.
  - 2. Parex, Inc.; a brand of ParexLahabra, Inc.
  - 3. Senergy; Degussa Wall Systems, Inc.
  - 4. Sto Corp.

#### 2.2 MATERIALS

- A. Compatibility: Provide water-resistive coating, adhesive, fasteners, board insulation, reinforcing meshes, base- and finish-coat systems, sealants, and accessories that are compatible with one another and with substrates and approved for use by EIFS manufacturer for Project.
- B. Water-Resistive Coatings: EIFS manufacturer's standard formulation and accessories for use as water-resistive barriers; compatible with substrate and complying with physical and performance criteria of ASTM E 2570.
  - 1. Water-resistive coatings shall be compatible with air barrier coating system specified in Section 072729.
- C. Flexible-Membrane Flashing: Cold-applied, self-adhering, self-healing, rubberized-asphalt and polyethylene-film composite sheet or tape and primer; EIFS manufacturer's standard or product recommended in writing by EIFS manufacturer.

- D. Liquid Flashing: Manufacturer's standard.
- E. Primer/Sealer: EIFS manufacturer's standard substrate conditioner designed to seal substrates from moisture penetration and to improve the bond between substrate of type indicated and adhesive used for application of insulation.
- F. Insulation Adhesive: EIFS manufacturer's standard formulation designed for indicated use; compatible with substrate; and complying with one of the following:
  - 1. Job-mixed formulation of portland cement complying with ASTM C 150, Type I, and polymer-based adhesive specified for base coat.
  - 2. Factory-mixed non-cementitious formulation designed for adhesive attachment of insulation to substrates of type indicated, as recommended by EIFS manufacturer.
- G. Molded, Rigid Cellular Polystyrene Board Insulation: Comply with ASTM C 578, Type I; EIFS manufacturer's requirements; and EIMA's "EIMA Guideline Specification for Expanded Polystyrene (EPS) Insulation Board" for most stringent requirements for material performance and qualities of insulation, including dimensions and permissible variations, and the following:
  - 1. Aging: Before cutting and shipping, age insulation in block form by air drying for not less than six weeks or by another method approved by EIMA that produces equivalent results.
  - 2. Flame-Spread and Smoke-Developed Indexes: 25 and 450 or less, respectively, per ASTM E 84.
  - 3. Dimensions: Provide insulation boards not more than 24 by 48 inches and in thickness indicated but not more than 4 inches thick or less than thickness allowed by ASTM C 1397.
  - 4. Foam Shapes: Provide with profiles and dimensions indicated on Drawings.
  - 5. At Contractor's option, pre-manufactured insulation starter strips may be used. Starter strips shall have 3 to 4 inch high pre-wrapped and reinforced edges. Starter strips shall not be less than 8 inches tall. Provide in manufacturer's standard lengths.
- H. Reinforcing Mesh: Balanced, alkali-resistant, open-weave, glass-fiber mesh treated for compatibility with other EIFS materials, made from continuous multi-end strands with retained mesh tensile strength of not less than 120 lbf/in. per EIMA 105.01; complying with ASTM D 578 and the following:
  - 1. Standard-Impact Reinforcing Mesh: Not less than 4.0 oz./sq. yd.
  - 2. Intermediate-Impact Reinforcing Mesh: Not less than 12.0 oz./sq. yd.
  - 3. Strip Reinforcing Mesh: Not less than 3.75 oz./sq. yd.
  - 4. Detail Reinforcing Mesh: Not less than 4.0 oz./sq. yd.
  - 5. Corner Reinforcing Mesh: Not less than 7.2 oz./sq. yd.
- I. Base-Coat Materials: EIFS manufacturer's standard mixture complying with one of the following requirements:
  - 1. Factory-blended dry formulation of portland cement, dry polymer admixture, and inert fillers to which only water is added at Project site.
  - 2. Factory-mixed non-cementitious formulation of polymer-emulsion adhesive and inert fillers that is ready to use without adding other materials.
- J. Primer: EIFS manufacturer's standard factory-mixed, elastomeric-polymer primer for preparing base-coat surface for application of finish coat.
- K. Finish-Coat Materials: EIFS manufacturer's standard acrylic-based coating with enhanced mildew resistance complying with the following:
  - 1. Factory-mixed formulation of polymer-emulsion binder, colorfast mineral pigments, sound stone particles, and fillers.
  - 2. Textures: As selected by Architect from manufacturer's full range.
  - 3. Colors: As selected by Architect from manufacturer's full range.
- L. Water: Potable.
- M. Mechanical Fasteners: When recommended by manufacturer to supplement adhesive, provide EIFS manufacturer's standard corrosion-resistant fasteners consisting of thermal cap, standard washer and shaft attachments, and fastener indicated below; selected for properties of pullout, tensile, and shear strength required to resist design loads of application indicated; capable of pulling fastener head below surface of insulation board; and of the following description:
  - 1. For attachment to masonry and concrete substrates, provide sheathing dowel in form of a plastic wing-tipped fastener with thermal cap, sized to fit insulation thickness indicated and to penetrate substrate to depth required to secure anchorage.
  - 2. For attachment, provide manufacturer's standard fasteners suitable for substrate.

- N. Trim Accessories: Type as designated or required to suit conditions indicated and to comply with EIFS manufacturer's written instructions; manufactured from UV-stabilized PVC; and complying with ASTM D 1784, manufacturer's standard Cell Class for use intended, and ASTM C 1063.
1. Casing Bead: Prefabricated, one-piece type for attachment behind insulation, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg.
  2. Weep Screed/Track: Prefabricated, one-piece type for attachment behind insulation with perforated face leg extended to form a drip and weep holes in track bottom, of depth required to suit thickness of coating and insulation, with face leg perforated for bonding to coating and back leg; designed to drain incidental moisture that gets into wall construction to the exterior at terminations of EIFS with drainage.
    - a. Omit weep screed/starter track where pre-wrapped reinforced starter strips are used.
  3. Expansion Joint: Prefabricated, one-piece V profile; designed to relieve stress of movement.
  4. Window Sill Flashing: Prefabricated type for both flashing and sloping sill over framing beneath windows; with end and back dams; designed to direct water to exterior.

## 2.3 MIXING

- A. General: Comply with EIFS manufacturer's requirements for combining and mixing materials. Do not introduce admixtures, water, or other materials except as recommended by EIFS manufacturer. Mix materials in clean containers. Use materials within time period specified by EIFS manufacturer or discard.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of EIFS.
- B. Examine roof edges, wall framing, flashings, openings, substrates, and junctures at other construction for suitable conditions where EIFS will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
1. Begin coating application only after surfaces are dry.
  2. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Protect contiguous work from moisture deterioration and soiling caused by application of EIFS. Provide temporary covering and other protection needed to prevent spattering of exterior finish coats on other work.
- B. Protect EIFS, substrates, and wall construction behind them from inclement weather during installation. Prevent penetration of moisture behind drainage plane of EIFS and deterioration of substrates.
- C. Prepare and clean substrates to comply with EIFS manufacturer's written instructions to obtain optimum bond between substrate and adhesive for insulation.

### 3.3 EIFS INSTALLATION, GENERAL

- A. Comply with EIFS manufacturer's written instructions for installation of EIFS as applicable to each type of substrate indicated.

### 3.4 SUBSTRATE PROTECTION APPLICATION

- A. Primer/Sealer: Apply over each type of substrate encountered and where required by EIFS manufacturer for improving adhesion of insulation to substrate.
- B. Water-Resistive Coating: Apply over sheathing to provide a water-resistive barrier.
1. Tape and seal joints, exposed edges, terminations, and inside and outside corners of sheathing unless otherwise indicated by EIFS manufacturer's written instructions.

- C. Flexible-Membrane Flashing: Install over weather-resistive barrier, applied and lapped to shed water; seal at openings, penetrations, terminations, and where required by EIFS manufacturer. Prime substrates if required and install flashing to comply with EIFS manufacturer's written instructions and details.
- D. Liquid Flashing: Install over weather-resistive barrier, applied and lapped to shed water; seal at openings, penetrations, terminations, and where required by EIFS manufacturer. Prime substrates if required and install flashing to comply with EIFS manufacturer's written instructions and details.

### 3.5 TRIM INSTALLATION

- A. Trim: Apply trim accessories at perimeter of EIFS, at expansion joints, at window sills, and elsewhere as indicated, according to EIFS manufacturer's written instructions. Coordinate with installation of insulation.
  - 1. Weep Screed/Track: Use at bottom termination edges, at window and door heads of water-drainage EIFS unless otherwise indicated.
    - a. Omit weep screed when pre-manufactured starter strips are used.
  - 2. Window Sill Flashing: Use at windows unless otherwise indicated.
  - 3. Expansion Joint: Use where indicated on Drawings.
  - 4. Casing Bead: Use at other locations.

### 3.6 INSULATION INSTALLATION

- A. Board Insulation: Adhesively attach insulation to substrate in compliance with ASTM C 1397, EIFS manufacturer's written instructions to accommodate water drainage installation, and the following:
  - 1. Where vertical ribbons of adhesive are used, apply adhesive to insulation or to air barrier coating according to EIFS manufacturer's written instructions. Apply adhesive to a thickness recommended by EIFS manufacturer.
  - 2. Press insulation into place. Apply pressure over the entire surface of insulation to accomplish uniform contact, high initial grab, and overall level surface.
  - 3. Allow adhered insulation to remain undisturbed for period recommended by EIFS manufacturer, but not less than 24 hours, before beginning rasping and sanding insulation, or applying base coat and reinforcing mesh.
  - 4. Apply insulation over air barrier coating and dry substrates in courses with long edges of boards oriented horizontally.
  - 5. Begin first course of insulation from screed/track and work upward. Work from perimeter casing beads toward interior of panels if possible.
  - 6. Stagger vertical joints of insulation boards in successive courses to produce running bond pattern. Locate joints so no piece of insulation is less than 12 inches wide or 6 inches high. Offset joints not less than 6 inches from corners of window and door openings and not less than 4 inches from aesthetic reveals.
    - a. Adhesive Attachment: Offset joints of insulation not less than 6 inches from horizontal and 4 inches from vertical joints in sheathing.
  - 7. Place insulation with adhesive strips and channels, slots, or waves aligned in the vertical position for drainage
  - 8. Interlock ends at internal and external corners.
  - 9. Abut insulation tightly at joints within and between each course to produce flush, continuously even surfaces without gaps or raised edges between boards. If gaps greater than 1/16 inch occur, fill with insulation cut to fit gaps exactly; insert insulation without using adhesive or other material.
  - 10. Cut insulation to fit openings, corners, and projections precisely and to produce edges and shapes complying with details indicated.
  - 11. Rasp or sand flush entire surface of insulation to remove irregularities projecting more than 1/16 inch from surface of insulation and to remove yellowed areas due to sun exposure; do not create depressions deeper than 1/16 inch.
  - 12. Cut aesthetic reveals in outside face of insulation with high-speed router and bit configured to produce grooves, rabbets, and other features that comply with profiles and locations indicated. Do not reduce insulation thickness at aesthetic reveals to less than 3/4 inch.
  - 13. Interrupt insulation for expansion joints where indicated.
  - 14. Form joints for sealant application by leaving gaps between adjoining insulation edges and between insulation edges and dissimilar adjoining surfaces. Make gaps wide enough to produce joint widths indicated after encapsulating joint substrates with base coat and reinforcing mesh.
  - 15. After installing insulation and before applying field-applied reinforcing mesh, fully wrap board edges. Cover edges of board and extend encapsulating mesh not less than 2-1/2 inches over front and back face unless otherwise indicated on Drawings.

16. Treat exposed edges of insulation as follows:
    - a. Except for edges forming substrates of sealant joints, encapsulate with base coat, reinforcing mesh, and finish coat.
    - b. Encapsulate edges forming substrates of sealant joints within EIFS or between EIFS and other work with base coat and reinforcing mesh.
    - c. At edges trimmed by accessories, extend base coat, reinforcing mesh, and finish coat over face leg of accessories.
  17. Coordinate installation of flashing and insulation to produce wall assembly that does not allow water to penetrate behind flashing and water-/weather-resistive barrier.
- B. Expansion Joints: Install at locations indicated, where required by EIFS manufacturer, and as follows:
1. At expansion joints in substrates behind EIFS.
  2. Where EIFS adjoin dissimilar substrates, materials, and construction, including other EIFS.
  3. Where wall height or building shape changes.
  4. Where EIFS manufacturer requires joints in long continuous elevations.

### 3.7 BASE-COAT INSTALLATION

- A. Base Coat: Apply to exposed surfaces of insulation in minimum thickness recommended in writing by EIFS manufacturer, but not less than 1/16-inch dry-coat thickness.
- B. Reinforcing Mesh: Embed type indicated below in wet base coat to produce wrinkle-free installation with mesh continuous at corners and overlapped not less than 2-1/2 inches or otherwise treated at joints to comply with ASTM C 1397 and EIFS manufacturer's written instructions. Do not lap reinforcing mesh within 8 inches of corners. Completely embed mesh, applying additional base-coat material if necessary, so reinforcing-mesh color and pattern are not visible.
1. Standard-impact reinforcing mesh for installations 8 feet above adjacent finished grade.
  2. Intermediate-impact reinforcing mesh for installations 8 feet or less above adjacent finished grade.
- C. Double-Layer Reinforcing Mesh Application: Where indicated, apply second base coat and second layer of standard or intermediate-impact reinforcing mesh, overlapped not less than 2-1/2 inches or otherwise treated at joints to comply with ASTM C 1397 and EIFS manufacturer's written instructions in same manner as first application. Do not apply until first base coat has cured.
- D. Additional Reinforcing Mesh: Apply strip reinforcing mesh around openings extending 4 inches beyond perimeter. Apply additional 9-by-12-inch strip reinforcing mesh diagonally at corners of openings (re-entrant corners). Apply 8-inch-wide strip reinforcing mesh at both inside and outside corners unless base layer of mesh is lapped not less than 4 inches on each side of corners.
1. At aesthetic reveals, apply strip reinforcing mesh not less than 8 inches wide.
  2. Embed strip reinforcing mesh in base coat before applying first layer of reinforcing mesh.

### 3.8 FINISH-COAT INSTALLATION

- A. Primer: When recommended by EIFS manufacturer, apply over dry base coat according to EIFS manufacturer's written instructions.
- B. Finish Coat: Apply over dry base coat, maintaining a wet edge at all times for uniform appearance, in thickness required by EIFS manufacturer to produce a uniform finish of color and texture matching approved sample and free of cold joints, shadow lines, and texture variations.
1. Textures: Match approved sample.
  2. Colors: Match approved sample.

### 3.9 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:
1. According to ICC-ES AC24 or ICC-ES AC235 as applicable.
- B. Testing Agency: Engage a qualified testing agency to perform tests and inspections other than "Special Inspections" when required by EIFS manufacturer and authority having jurisdiction.

C. EIFS Tests and Inspections: For the following:

1. According to requirements of authority having jurisdiction and EIFS manufacturer.

D. Remove and replace EIFS where test results indicate that EIFS do not comply with specified requirements.

E. Prepare test and inspection reports.

### 3.10 CLEANING AND PROTECTION

A. Remove temporary covering and protection of other work. Promptly remove coating materials from window and door frames and other surfaces outside areas indicated to receive EIFS coatings.

**END OF SECTION 072419**



## SECTION 087100 – DOOR HARDWARE

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Intent: The intent of this Section is to provide finish hardware for the proper operation and control of all wood, hollow metal and aluminum doors in the Project. Prior to bidding, notify the Architect of any doors that do not have hardware meeting this intention.
- B. This Section includes items known commercially as finish or door hardware that are required for swinging doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed. This Section includes, but is not necessarily limited to furnishing and installing complete, the following:
  - 1. Finish hardware for proper operation and control of all wood, aluminum and hollow metal doors, including hinges, locks and latch sets, closers, panic devices, autoflushbolts, electric strikes, magnetic holders, removable mullions, cylinders, keys, miscellaneous stops, flat goods, weatherstripping and thresholds as required.
  - 2. Cylinder for access doors where specified.
- C. Related work in other sections:
  - 1. Hollow metal doors, frames and silencers: Section 081113.
  - 2. Wood doors: Section 081416.
  - 3. Aluminum doors: Section 084113.

#### 1.2 DEFINITIONS

- A. "Finish Hardware" includes items known commercially as finish hardware which are required for swing, and folding doors, except special types of unique and non-matching hardware specified in the same section as the door and door frame.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data for each hardware item. Include information necessary to show compliance with requirements, and include instructions for installation and for maintenance of operating parts and finishes.
  - 1. Manufacturer shall submit written certification confirming closers compliance with U.L. 10C.
- B. Hardware Schedule: Submit a hardware schedule in a vertical format (horizontal format not acceptable), organized into sets, including the information below. Designations for door numbers and hardware sets in the schedule shall match those used in the Construction Documents for each opening.
  - 1. Hardware Schedule shall be coordinated with doors, frames, and related work to ensure proper size, thickness, hand function, and finish of door hardware.
  - 2. Catalog cuts of each type of exposed hardware unit, highlighted in color to indicate compliance with the Hardware Schedule.
  - 3. Type, style, function, size and finish of each hardware item.
  - 4. Name and manufacturer of each item.
  - 5. Fastenings and other pertinent information.
  - 6. Explanation of all abbreviations, symbols, codes, etc., contained in schedule.
  - 7. Mounting locations for hardware.
  - 8. Door and frame sizes and materials.
  - 9. Deviations from Specifications shall be noted in cover letter.

- C. Submittal Sequence: Submit schedule at earliest possible date particularly where acceptance of hardware schedule must precede fabrication of other work (e.g., hollow metal frames) which is critical in the project construction schedule. Include with schedule the product data, samples, shop drawings of other work affected by finish hardware, and other information essential to the coordinated review of hardware schedule.
- D. Keying Schedule: Submit separate detailed schedule, at the same time as the Hardware Schedule, indicating keying for all locks and how Owner's instructions, on keying of locks has been fulfilled. Keying schedule must be approved before ordering any locks.
- E. Pinning Transcript: Submit detailed schedule indicating each lock cylinder and core.
- F. Templates: Furnish hardware templates to each fabricator of doors, frames and other work to be factory-prepared for the installation of hardware. Upon request, check shop drawings of such other work, to confirm that adequate provisions are made for proper location and installation of hardware.

#### 1.4 QUALITY ASSURANCE

- A. Manufacturer: Obtain each type of hardware (latch and lock sets, hinges, closers, etc.) from a single manufacturer, although several may be indicated as offering products complying with requirements.
- B. Product/Material Qualifications: Manufacturer's product numbers are indicated for convenience in identifying finish hardware items. Unless otherwise indicated, manufacturer's description for indicated product number constitutes minimum standards of quality, design, function and performance required for each item to be incorporated into the Project.
  - 1. It will be the responsibility of the Bidder to furnish with his Bid a list clarifying any deviations from these specifications written or implied, in order that a fair and proper evaluation be made. Those Bidders not submitting a list of deviations will be presumed to have Bid as specified.
- C. Supplier Qualifications: A recognized Architectural Finish Hardware Supplier, with warehousing facilities, who has been furnishing hardware in the project's vicinity for a period of not less than 2 years. Supplier shall be or employ an experienced Architectural Hardware Consultant (AHC) who is certified by and member of the Door and Hardware Institute. The Architectural Hardware Consultant shall be available, at reasonable times during the course of the work, for consultation about project's hardware requirements, to Owner, Architect and Contractor.
  - 1. Supplier shall meet with the Owner to finalize keying requirements and obtain final instructions in writing.
- D. Fire-Rated Openings: Provide hardware for fire-rated openings in compliance with NFPA Pamphlets No. 80, No. 101 and of authorities having jurisdiction requirements. Provide only hardware which has been tested and listed by UL, FM or Warnock Hersey for types and sizes of doors required and complies with requirements of door and door frame labels.
  - 1. Where emergency exit devices are required on fire-rated doors, (with supplementary marking on doors' UL or FM labels indicating "Fire Door to be Equipped with Fire Exit Hardware") provide UL or FM label on exit devices indicating "Fire Exit Hardware".
- E. Standards: Comply with the requirements of the latest edition of the following standards, unless indicated otherwise:
  - 1. American National Standards Institute (ANSI) Publications:
    - a. A115 Series - Door and Frame Preparation.
    - b. A156 Series - Hardware.
  - 2. Builders Hardware Manufacturers Association (BHMA) Publications:
    - a. 1201 - Auxiliary Hardware.
    - b. 1301 - Materials and Finishes.
  - 3. Door and Hardware Institute (DHI) Publications:

- a. Keying - Procedures, Systems, and Nomenclature.
    - b. Abbreviations and Symbols.
    - c. Hardware for Labeled Fire Doors.
    - d. Recommended Locations for Builder's Hardware for Standard and Custom Steel Doors and Frames.
    - e. Wood Door Standards W1, W2, WDHS-2, WDHS-3.
  - 4. National Fire Protection Association (NFPA) Publications:
    - a. NFPA Pamphlet No. 80 - Standards for Fire Doors and Windows.
  - 5. International Building Code - current edition as adopted and amended by the authority having jurisdiction.
  - 6. Americans with Disabilities Act (ADA).
- F. Keying Conference: Conduct conference in accordance with Section 013100. In addition to Owner, Construction Manager, and Architect, conference participants shall also include Installer's Architectural Hardware Consultant. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
- 1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
  - 2. Preliminary key system schematic diagram.
  - 3. Requirements for key control system.
  - 4. Address and timeframe for delivery of keys and cores.
- G. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Section 013100 as follows:
- 1. Architectural Finish Hardware supplier (AFHS) shall conduct the preinstallation conference at the site. The AFHS shall instruct finish hardware installer on proper installation, adjustment and troubleshooting for each operable item of finish hardware specified. The AFHS shall observe the installation and adjustment of the first three locksets, closers and exit devices.

## 1.5 DELIVERY, STORAGE AND HANDLING

- A. Package each hardware item in separate containers with all screws, wrenches, installation instructions and installation templates. Mark or tag each box with hardware heading and door number according to approved hardware schedule.
- B. Packaging of door hardware is responsibility of supplier. As material is received by hardware supplier from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packed in same container.
- C. Deliver individually packaged hardware items at the proper times to the proper locations (shop or project site) for installation. Provide a complete packing list showing items, door numbers and hardware headings with each shipment.
- D. Store hardware in shipping cartons above ground and under cover to prevent damage.
  - 1. Provide secure lockup for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.
- E. Aluminum Door Hardware - Deliver hardware for aluminum doors as directed by the door supplier for factory installation by the aluminum door manufacturer.
- F. Deliver keys and permanent cores to Owner by registered mail or overnight package service.

## 1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- B. Electrical System Roughing-in: Coordinate layout and installation of electrified door hardware with connections to power supplies, fire alarm system and detection devices, access control system, security system, and building control system, as applicable.

## 1.7 MAINTENANCE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- B. Maintenance Service: If there are any products listed hereinafter that normally require a maintenance or service contract, provide the Owner and Architect with details and costs of standard maintenance or service contract.

## PART 2 - PRODUCTS

### 2.1 HARDWARE - GENERAL

- A. Provide the materials or products indicated by trade names, manufacturer's name, or catalog number.
- B. Provide manufacturer's standard products meeting the design intent of this Specifications, free of imperfections affecting appearance or serviceability.
  - 1. Base Metals: Produce hardware units of basic metal and forming method indicated using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units for finish designations indicated.
  - 2. Provide hardware complete with all fasteners, anchors, instructions, layout templates, and any specialized tools as required for satisfactory installation and adjustment.
  - 3. Hand of door: Drawings show direction of slide, swing or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
  - 4. Furnish screws for installation, with each hardware item. Provide Phillips flat-head screws except as otherwise indicated or approved. Finish screws exposed under any condition to match hardware finish or, if exposed in surfaces of other work, to match finish of such other work as closely as
  - 5. Finish all other hardware in accordance with the BHMA finish as follows, unless otherwise indicated in manufacturers screws to secure hardware.
  - 6. Provide concealed fasteners for hardware units which are exposed when door is closed, except to extent no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work, except where indicated otherwise or where it is not feasible to adequately reinforce the work. In such cases, provide sleeves for each thru-bolt or use sex bolt fasteners.
  - 7. Provide factory pinned cylinders and cores.
- C. Hardware is specified in the hardware schedule by set, type, and functions which have been selected as best meeting the application requirements. Acceptable products for each category are specified under PART 2 of this Specification.

### 2.2 SPECIAL REQUIREMENTS

- A. Hinges:

1. Provide non-removable pins for all exterior doors and out-swinging corridor doors. Use nonrising pins for all other doors.
  2. Pre-drill pilot holes for hinge fasteners at factory to suit hinge type.
  3. Provide pivots or continuous hinges where specified.
- B. Locksets:
1. Locksets shall meet or exceed ANSI Grade 1 requirements.
  2. Classroom locks shall have the ability to lock outside trim from the inside via a key.
  3. Provide vandle resistant levers where specified.
- C. Panic Devices:
1. Non-rated panic devices are to incorporate cylinder dogging.
  2. Exit devices are to incorporate a flush and tapered end cap.
  3. Hardware mullions are to be of the same manufacturer as the panic device. Provide keyed mullions unless otherwise specified. Provide mullion storage kits where specified.
  4. Provide electrical options as specified.
- D. Closers:
1. Comply with manufacturer's recommendations for unit size based on door size, weather exposure and usage.
  2. Provide parallel arms for all overhead closers, except as otherwise indicated.
  3. Through-bolt all closer units, using sex bolt fasteners.
  4. All surface closers shall exceed ANSI A156.4 Grade 1 requirements in all aspects as called for below. All closers shall have certification by an independent testing laboratory of 10,000,000 cycles without failure. Provide special rust inhibitive primer (SRI) where specified.
  5. Closers shall maintain control of the door in all conditions. Closers shall have 3 non critical adjusting valves: latch, main and backcheck. Where specified backcheck shall take affect at 45 (AVB) degrees of opening for parallel arm closers and 70 degrees for regular arm closers. Closers with pressure relief valves are not acceptable.
  6. Closer cylinders shall be cast iron. Closer pinions shall be dual heat treated. Pinion and piston shall be steel alloy. Piston diameter shall be minimum 1-1/2".
  7. Furnish all brackets, drop plates and any other necessary hardware required to insure proper installation.
- E. Stops
1. Provide heavy duty and concealed or surface mounted overhead stop or holder for interior doors as specified. Provide overhead stop at any door that swings more than 140 degrees before striking wall, opens against equipment, casework, sidelights, and where conditions do not allow wall stop.
  2. Provide floor stops only where specified.

## 2.3 KEYING

- A. All keying shall be accomplished at hardware manufacturer's plant where adequate records are maintained in order to avoid duplication of changes.
- B. All cylinders to be keyed to the districts existing Schlage Primus masterkey system. Hardware supplier to verify proper key system. Keying schedule must be approved by the Owner prior to ordering locks.
1. Locks and cylinders are to accept a Schlage large format interchangeable core.
  2. Provide construction cylinders for all keyed exterior doors and all aluminum doors during construction. Provide 20 additional temporary cylinders for locking interior doors.
  3. Provide the correct type of cylinder for each hardware application, and supply cylinder with correct tailpiece and/or cam.
- C. Key all locks separately, or alike, as directed by the Owner's representative and Architect.

- D. Provide keys as follows:
  - 1. Change Keys: Three (3) per lock.
  - 2. Master Keys: Three (3) required (per system).
  - 3. Grand Master Keys: Five.
- E. Identification: Stamp all (master-type) keys with the following:
  - 1. Do Not Duplicate.
  - 2. Key change number (all keys).

## 2.4 KEY CONTROL SYSTEM

- A. Key Control System Manufacturers:
  - 1. Acceptable Manufacturers: Telkee, Lund
- B. Requirements:
  - 1. Provide a key control system, including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150% of the number of locks required for the Project.
  - 2. Provide complete cross index system set up by the hardware supplier, and place keys on markers and hooks in the cabinet as determined by the final key schedule.

## 2.5 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

- A. Requirements:
  - 1. Provide thresholds, weatherstripping (including door sweeps, seals, astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
  - 2. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
  - 3. Gasketing and astragals on aluminum frames by door manufacturer.

## 2.6 SILENCERS

- A. Requirements:
  - 1. Provide "push-in" type silencers for hollow metal or wood frames.
  - 2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
  - 3. Omit where gasketing is specified.

## 2.7 HARDWARE FINISHES

- A. Provide matching finishes for hardware units at each door to the greatest extent possible, unless otherwise indicated. In general, match items to the finish for the latch, lock or push-pull unit for color and texture.
- B. Thresholds (087100.A01): Clear, anodized aluminum.
  - 1. Handicap accessible threshold (087100, A02).
    - a. Product description or schedule:
      - 1) 626 satin chrome-plated.
      - 2) 630 satin stainless steel.

## 2.8 HARDWARE PRODUCTS

- A. Hinges:
  - 1. Specified manufacturer: IVES Hardware; an Allegion Company.
  - 2. Acceptable substitutions:
    - a. Hager Companies.
    - b. McKinney Products Company; an ASSA ABLOY Group company.
    - c. Stanley Commercial Hardware; Div. of The Stanley Works.
- B. Continuous Gear-Type Hinges:
  - 1. Specified manufacturer: IVES Hardware; an Allegion Company.
  - 2. Acceptable substitutions:
    - a. Hager Companies.
    - b. Select Products Limited.
- C. Locksets:
  - 1. Specified manufacturer: Schlage Commercial Lock Division; an Allegion Company.
  - 2. Substitutions: Not allowed. Products to match District standard.
- D. Electronic Strikes:
  - 1. Specified manufacturer: Von Duprin; an Allegion Company.
  - 2. Acceptable Substitutions: HES; an ASSA Abloy Company.
- E. Exit Devices:
  - 1. Specified manufacturer: Von Duprin; an Allegion Company
  - 2. Substitutions: Not allowed. Products to match District standard.
- F. Closers:
  - 1. Specified manufacturer: LCN Closers; an Allegion Company.
  - 2. Substitutions: Not allowed. Products to match District standard.
- G. Flatgoods:
  - 1. Specified manufacturer: Ives Hardware; an Allegion Company.
  - 2. Acceptable substitutions:
    - a. Burns Manufacturing Incorporated.
    - b. Rockwood; an ASSA Abloy Company.
- H. Stops:
  - 1. Specified manufacturer: Ives Hardware; an Allegion Company.
  - 2. Acceptable substitutions:
    - a. Burns Manufacturing Incorporated.
    - b. Rockwood; an ASSA Abloy Company.
    - c. Trimco
- I. Overhead stops:
  - 1. Specified manufacturer: Glynn-Johnson; an Allegion Company.
  - 2. Acceptable substitutions:
    - a. Architectural Builders Hardware Mfg., Inc.
    - b. Door Controls International.
    - c. Ives Hardware; an Allegion Company.
    - d. Rixson Specialty Door Controls; an ASSA ABLOY Group.
    - e. Trimco.
- J. Electronic components:
  - 1. Specified manufacturer: Schlage Electronics; an Allegion Company.
  - 2. Acceptable substitutions:
    - a. GE-Interlogix.
    - b. Security Door Controls.
    - c. Camden Door Controls.
- K. Thresholds:
  - 1. Specified manufacturer: Zero International.

2. Acceptable substitutions:
  - a. Pemko Manufacturing Co. ; an ASSA Abloy Company.
  - b. Reese Enterprises.
  - c. National Guard Products.
- L. Door Gasketing:
  1. Specified manufacturer: Zero International.
  2. Acceptable substitutions:
    - a. Pemko Manufacturing Co. ; an ASSA Abloy Company.
    - b. Reese Enterprises.
    - c. National Guard Products.
- M. Weatherstripping:
  1. Specified manufacturer: Zero International.
  2. Acceptable substitutions:
    - a. Pemko Manufacturing Co. ; an ASSA Abloy Company.
    - b. Reese Enterprises.
    - c. National Guard Products.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Carefully inspect doors, frames, and conditions under which hardware will be installed. Notify the Architect of any conditions that would adversely affect the installation or subsequent door operations. Do not proceed until unsatisfactory conditions are corrected.
  1. Frames shall be verified, inspected, and confirmed by General Contractor as being plumb and true.
- B. Refer to Sections 081113, 081416, and 084113 for additional installation requirements.
- C. Prior to hardware installation, the Hardware Supplier shall meet with the Owner's Representative, Architect, and Hardware Installer to ensure the Installer has and understands the manufacturers' installation requirements for all hardware items.
  1. The Supplier shall observe the installation of the first lockset, closer and panic device.

### 3.2 INSTALLATION

- A. Mount Hardware units at heights indicated in respective DHI Standards, except as specifically indicated or required to comply with governing regulations, and except as may be otherwise directed by Architect.
- B. Install each hardware item in compliance with the manufacturer's instructions and written recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be field finished, coordinate removal, storage and reinstallation or application of surface protections with finishing work. Do not install surface-mounted items until finishes have been completed on the substrate.
- C. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
  1. Special care shall be taken to avoid damaging surrounding surfaces.
- D. Provide fasteners and anchoring devices of suitable size, quantity, and type to secure hardware in proper position for heavy use and long life.
  1. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.



- E. Adjust door closers immediately upon installation. Adjust in exact conformance with manufacturer's printed instructions. Advance backcheck to eliminate shock at dead stop. Set latching speed to assure unassisted positive latching.
  - 1. Degrees of swing of doors for self-limiting closers shall be maximum available.
- F. Install each protection plate with a thinly-spread spot of mastic at its center to assure even contact before fastening with screws. Install all such plates on visual centers of closed doors. Set bottom edges of all such plates flush with door bottom.
- G. Cut and fit thresholds to door frame profiles. Prepare thresholds for the attachment of strikes and clearance for spindles as required. Set thresholds in a continuously laid bed of polyisobutylene mastic sealant to completely fill voids and exclude moisture from every source.
- H. Seal weather protection components attached to the exterior sides of doors and frames, such as drip caps and weatherstripping, in place with clear silicone caulk in such a manner as to ensure a continuously filled seam throughout the joinery.
- I. Cut and fit weatherstripping accurately to provide the greatest possible continuity of the contact element. Adjust closer templating as required.
- J. At exterior doors, obtain satisfactory operation of the installation, then apply a thin layer of clear silicone caulk under hinge leaves, and outside lock trim. Remove excess caulk after torquing fasteners.

### 3.3 ADJUST AND CLEAN

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.
  - 1. Clean adjacent surfaces soiled by hardware installation.
- B. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work during the week prior to acceptance or occupancy, and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

### 3.4 INSTRUCTION AND INSPECTION

- A. Instruct Owner's Personnel in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.
- B. After hardware is installed and adjusted, the Supplier shall inspect the job with the Architect and the Contractor to determine if the hardware is functioning properly.
  - 1. Maintain the instruction sheets, layout templates, and any supplementary literature regarding hardware in a readable condition. Transmit all such items to the Owner's Representative, together with all spare parts, specialized tools, other accessories supplied with the hardware, and a copy of the approved hardware schedule at the time of instruction.
- C. Continued Maintenance Service: Approximately six months after the acceptance of hardware in each area, the Installer, accompanied by the representative of the latch and lock manufacturer, shall return to the project and re-adjust every item of hardware to restore proper function of doors and hardware. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures. Replace hardware items which have deteriorated or failed due to faulty design, materials or installation of hardware units at no cost to the Owner. Prepare a written report of current and predictable problems (of substantial nature) in the performance of the hardware.

### 3.5 DOOR HARDWARE SCHEDULE

- A. The hardware sets listed below represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process.
- B. Hardware Sets

#### HARDWARE SET 01

##### DOOR NUMBER:

C100A

##### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112HD	628	IVE
1	EA	CONT. HINGE	112HD EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	KEYED REMOVABLE MULLION	KR4954-MT54	689	VON
1	EA	PANIC HARDWARE	CD-99-DT	626	VON
1	EA	ELEC PANIC HARDWARE	LX-CD-99-NL	626	VON
2	EA	MORTISE CYLINDER	20-059	626	SCH
1	EA	RIM HOUSING	20-079	626	SCH
3	EA	FSIC CONST. CORE	23-030-ICX		SCH
3	EA	PRIMUS CORE	20-740	626	SCH
1	EA	OH STOP	100S	630	GLY
		(AT LEAF WITH AUTO OPERATOR)			
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642	689	LCN
1	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
1	EA	BLADE STOP SPACER	4110-61	689	LCN
1	EA	ACTUATOR, JAMB MOUNT	8310-818T	630	LCN
1	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN
1	EA	BOLLARD POST	8310-866	AL	LCN
2	EA	DOOR SWEEP	39A	A	ZER
2	EA	DOOR SWEEP	8198AA	AA	ZER
1	EA	THRESHOLD	65A-MSLA-10	A	ZER
1	EA	RAIN DRIP	142A	A	ZER
	EA	NOTE	WEATHERSTRIP BY DOOR SUPPLIER		
			ASTRAGAL BY DOOR SUPPLIER		

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. PANICS MAY BE DOGGED (MADE PUSH/PULL) WITH KEY. ACTUATORS ONLY OPERABLE WHEN PANIC IS DOGGED. ALWAYS FREE EGRESS.

# HARDWARE SET 01A

## DOOR NUMBER:

A101A

## EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112HD	628	IVE
1	EA	CONT. HINGE	112HD EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	KEYED REMOVABLE MULLION	KR4954-MT54	689	VON
1	EA	PANIC HARDWARE	CD-99-DT	626	VON
1	EA	ELEC PANIC HARDWARE	LX-QEL+-SD-99-NL	626	VON
2	EA	MORTISE CYLINDER	20-059	626	SCH
1	EA	RIM HOUSING	20-079	626	SCH
3	EA	FSIC CONST. CORE	23-030-ICX		SCH
3	EA	PRIMUS CORE	20-740	626	SCH
1	EA	OH STOP	100S	630	GLY
			(AT LEAF WITH AUTO OPERATOR)		
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642	689	LCN
1	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
1	EA	BLADE STOP SPACER	4110-61	689	LCN
1	EA	ACTUATOR, JAMB MOUNT	8310-818T	630	LCN
1	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN
2	EA	DOOR SWEEP	39A	A	ZER
2	EA	DOOR SWEEP	8198AA	AA	ZER
1	EA	THRESHOLD	65A-MSLA-10	A	ZER
1	EA	RAIN DRIP	142A	A	ZER
1	EA	DESK MOUNT BUTTON	660-PB	628	SCE
1	EA	POWER SUPPLY	PS902 900-4RL-FA	LGR	VON
	EA	NOTE	WEATHERSTRIP BY DOOR SUPPLIER		
			ASTRAGAL BY DOOR SUPPLIER		

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. PANICS MAY BE DOGGED (MADE PUSH/PULL) WITH KEY. PUSH BUTTON UNLOCKS ACTIVE LEAF FROM DESK. ACTUATORS ONLY OPERABLE WHEN PANIC IS DOGGED. ALWAYS FREE EGRESS.

## HARDWARE SET 02

### DOOR NUMBER:

A101B

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112HD	628	IVE
1	EA	CONT. HINGE	112HD EPT	628	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	KEYED REMOVABLE MULLION	KR4954-MT54	689	VON
1	EA	PANIC HARDWARE	CD-99-DT	626	VON
1	EA	ELEC PANIC HARDWARE	LX-CD-99-NL	626	VON
2	EA	MORTISE CYLINDER	20-059	626	SCH
1	EA	RIM HOUSING	20-079	626	SCH
3	EA	FSIC CONST. CORE	23-030-ICX		SCH
3	EA	PRIMUS CORE	20-740	626	SCH
1	EA	OH STOP	100S	630	GLY
			(AT LEAF WITH AUTO OPERATOR)		
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642	689	LCN
1	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
1	EA	BLADE STOP SPACER	4110-61	689	LCN
2	EA	ACTUATOR, JAMB MOUNT	8310-818T	630	LCN
	EA	NOTE	WEATHERSTRIP BY DOOR SUPPLIER		

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. PANICS MAY BE DOGGED (MADE PUSH/PULL) WITH KEY. ACTUATORS ONLY OPERABLE WHEN PANIC IS DOGGED. ALWAYS FREE EGRESS.

# HARDWARE SET 03

## DOOR NUMBER:

B101A                      B101B                      C101

## EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112HD	628	IVE
1	EA	KEYED REMOVABLE MULLION	KR4954-MT54	689	VON
1	EA	PANIC HARDWARE	CD-99-DT	626	VON
1	EA	PANIC HARDWARE	CD-99-NL	626	VON
2	EA	MORTISE CYLINDER	20-059	626	SCH
1	EA	RIM HOUSING	20-079	626	SCH
3	EA	FSIC CONST. CORE	23-030-ICX		SCH
3	EA	PRIMUS CORE	20-740	626	SCH
2	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
2	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
2	EA	BLADE STOP SPACER	4110-61	689	LCN
2	EA	DOOR SWEEP	39A	A	ZER
2	EA	DOOR SWEEP	8198AA	AA	ZER
1	EA	THRESHOLD	65A-MSLA-10	A	ZER
1	EA	RAIN DRIP	142A	A	ZER
	EA	NOTE	WEATHERSTRIP BY DOOR SUPPLIER		
			ASTRAGAL BY DOOR SUPPLIER		

# HARDWARE SET 04

## DOOR NUMBER:

A121B                      A125B                      A129B                      A132B                      A136B                      B121B  
 B125B                      B131B                      B135B                      B140B                      C118B                      C122B  
 C123B                      C127B                      C131B                      C132B

## EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112HD	628	IVE
1	EA	VANDL STOREROOM LOCK	ND96TD RHO	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
1	EA	BLADE STOP SPACER	4110-61	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	DOOR SWEEP	8198AA	AA	ZER
1	EA	THRESHOLD	65A-MSLA-10	A	ZER
1	EA	RAIN DRIP	142A	A	ZER
	EA	NOTE	WEATHERSTRIP BY DOOR SUPPLIER		

## HARDWARE SET 05

### DOOR NUMBER:

C107B                      C110B

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112HD	628	IVE
1	EA	VANDL STOREROOM LOCK	ND96TD RHO	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	LOCK GUARD	LG10	630	IVE
1	EA	SURFACE CLOSER	4111 SHCUSH	689	LCN
1	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
1	EA	BLADE STOP SPACER	4110-61	689	LCN
1	EA	ARMOR PLATE	8400 36" X 2" LDW B-CS	630	IVE
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	DOOR SWEEP	8198AA	AA	ZER
1	EA	THRESHOLD	65A-MSLA-10	A	ZER
1	EA	RAIN DRIP	142A	A	ZER
1	EA	DOOR VIEWER	U698	626	IVE
	EA	NOTE	WEATHERSTRIP BY DOOR SUPPLIER		

## HARDWARE SET 06

### DOOR NUMBER:

B111B                      B115B                      B126B                      B130B

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	224HD	628	IVE
1	EA	MULT PT STOREROOM	LMV9380T 06A	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	GASKETING	429A	A	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	DOOR SWEEP	8198AA	AA	ZER
1	EA	THRESHOLD	65A-MSLA-10	A	ZER
1	EA	RAIN DRIP	142A	A	ZER

## HARDWARE SET 07

### DOOR NUMBER:

A102A

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112HD	628	IVE
1	EA	VANDL CLASSROOM SEC	ND95TD RHO XN12-035	626	SCH
1	EA	MORTISE CYLINDER	20-059	626	SCH
3	EA	PRIMUS CORE	20-740	626	SCH
1	EA	ELECTRIC STRIKE	6211AL FSE	630	VON
1	EA	OH STOP	100S	630	GLY
1	EA	SURF. AUTO OPERATOR	4642	689	LCN
2	EA	ACTUATOR, JAMB MOUNT	8310-818T	630	LCN
1	EA	KEYSWITCH	653-1414 NS L2	630	SCE
1	EA	POWER SUPPLY	PS902 900-4RL-FA	LGR	VON

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. LOCK CAN BE LOCKED/UNLOCKED VIA KEY. AUTO OPERATOR AND ELECTRIC STRIKE MAY BE TURNED ON/OFF VIA KEYSWITCH. ACTUATORS ONLY OPERABLE WHEN AUTO OPERATOR IS ON. ALWAYS FREE EGRESS.

## HARDWARE SET 08

### DOOR NUMBER:

A102B

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	112HD	628	IVE
1	EA	VANDL CLASSROOM SEC	ND95TD RHO XN12-035	626	SCH
2	EA	PRIMUS CORE	20-740	626	SCH
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	WALL STOP	WS406/407CCV	630	IVE

# HARDWARE SET 09

## DOOR NUMBER:

C113

## EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	224HD	628	IVE
1	EA	PANIC HARDWARE	CD-9927-DT-LBR	626	VON
1	EA	PANIC HARDWARE	CD-9927-NL-LBR	626	VON
2	EA	MORTISE CYLINDER	20-059	626	SCH
1	EA	RIM HOUSING	20-079	626	SCH
3	EA	PRIMUS CORE	20-740	626	SCH
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	WALL STOP	WS406/407CCV	630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850	689	LCN
2	EA	SILENCER	SR64	GRY	IVE

# HARDWARE SET 10

## DOOR NUMBER:

C100B

## EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112HD	628	IVE
2	EA	DUMMY PUSH BAR	330	626	VON
2	EA	TRIM	990-DT	626	VON
1	EA	OH STOP	100S	630	GLY
			(AT DOOR WITH AUTO OPERATOR)		
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642	689	LCN
1	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
1	EA	BLADE STOP SPACER	4110-61	689	LCN
1	EA	ACTUATOR, JAMB MOUNT	8310-818T	630	LCN
1	EA	ACTUATOR, WALL MOUNT	8310-853T	630	LCN



## HARDWARE SET 11

### DOOR NUMBER:

C107A

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	ND80JD RHO	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	OH STOP & HOLDER	90H	630	GLY
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	ARMOR PLATE	8400 36" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

## HARDWARE SET 11A

### DOOR NUMBER:

C110A

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	ND80JD RHO	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	SURFACE CLOSER	4011 DEL	689	LCN
1	EA	ARMOR PLATE	8400 36" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488S-BK	S-BK	ZER

## HARDWARE SET 12

### DOOR NUMBER:

C111                      C112

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	ND80JD RHO	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	ARMOR PLATE	8400 36" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

## HARDWARE SET 13

### DOOR NUMBER:

A111                      A119                      C102

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	ND80JD RHO	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	OH STOP	90S	630	GLY
			(AT C102 ONLY)		
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

## HARDWARE SET 14

### DOOR NUMBER:

B110A

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	224HD	628	IVE
1	EA	PANIC HARDWARE	WS-CD-9927-DT	626	VON
1	EA	PANIC HARDWARE	WS-CD-9927-TL-374T-990DT	626	VON
3	EA	MORTISE CYLINDER	20-059	626	SCH
3	EA	PRIMUS CORE	20-740	626	SCH
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	WALL STOP	WS406/407CCV	630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850	689	LCN
1	EA	GASKETING	488S-BK	S-BK	ZER
1	EA	ASTRAGAL SET	328AA	AA	ZER

#### HARDWARE SET 14A

##### DOOR NUMBER:

B110B

##### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	224HD	628	IVE
2	EA	PANIC HARDWARE	WS-LD-9927-L-BE-06	626	VON
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	WALL STOP/HOLDER	FS495	626	IVE
2	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488S-BK	S-BK	ZER
1	EA	ASTRAGAL SET	328AA	AA	ZER

#### HARDWARE SET 15

##### DOOR NUMBER:

A120

##### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	ND70JD RHO	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	OH STOP	90S	630	GLY
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

## HARDWARE SET 16

### DOOR NUMBER:

A116A	A121A	A125A	A129A	A132A	A136A
A140A	B104	B106	B111A	B115A	B121A
B125A	B126A	B130A	B131A	B135A	C103
C118A	C122A	C123A	C127A	C131A	C132A

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	224HD	628	IVE
1	EA	VANDL CLASSROOM SEC	ND95JD RHO XN12-035	626	SCH
2	EA	PRIMUS CORE	20-740	626	SCH
1	EA	SURFACE CLOSER	4011 H	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS436	626	IVE
		(WHERE WALL STOP IS NOT COMPATIBLE WITH WALL CONDITION)			
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	FINGER GUARD	51A-120	A	ZER
3	EA	SILENCER	SR64	GRY	IVE

## HARDWARE SET 17

### DOOR NUMBER:

A109

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	224HD	628	IVE
1	EA	VANDL CLASSROOM SEC	ND95JD RHO XN12-035	626	SCH
2	EA	PRIMUS CORE	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	FINGER GUARD	51A-120	A	ZER
3	EA	SILENCER	SR64	GRY	IVE

#### HARDWARE SET 18

##### DOOR NUMBER:

A103	A104	A105	A106	A107	A114
A115	A116B	B108	C104	C105	C106

##### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	ENTRANCE LOCK	ND53JD RHO	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

#### HARDWARE SET 19

##### DOOR NUMBER:

A112	A113
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##### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	PRIVACY LOCK	ND40S RHO	626	SCH
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

#### HARDWARE SET 20

##### DOOR NUMBER:

A117
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##### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	PRIVACY LOCK	ND40S RHO	626	SCH
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

## HARDWARE SET 21

### DOOR NUMBER:

A123A	A123B	A127	A134A	A134B	A138
B107	B113A	B113B	B123A	B123B	B128A
B128B	B133A	B133B	C120A	C120B	C125
C129A	C129B	C134			

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	224HD	628	IVE
1	EA	CLASSROOM LOCK	ND70JD RHO	626	SCH
1	EA	PRIMUS CORE	20-740	626	SCH
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	FINGER GUARD	51A-120	A	ZER
3	EA	SILENCER	SR64	GRY	IVE

## HARDWARE SET 22

### DOOR NUMBER:

A124A	A124B	A128	A135A	A135B	A139
B114A	B114B	B124A	B124B	B129A	B129B
B134A	B134B	C121A	C121B	C126	C130A
C130B	C135				

### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	224HD	628	IVE
			(CUT FOR DUTCH DOOR)		
1	EA	PASSAGE SET	ND10S RHO	626	SCH
1	EA	WALL STOP/HOLDER	FS495	626	IVE
1	EA	FINGER GUARD	51A-120	A	ZER
3	EA	SILENCER	SR64	GRY	IVE

#### HARDWARE SET 23

##### DOOR NUMBER:

A122A	A122B	A126	A133A	A133B	A137
B112A	B112B	B122A	B122B	B127A	B127B
B132A	B132B	C119A	C119B	C124	C128A
C128B	C133				

##### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	224HD	628	IVE
1	EA	PASSAGE SET	ND10S RHO	626	SCH
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	FINGER GUARD	51A-120	A	ZER
3	EA	SILENCER	SR64	GRY	IVE

#### HARDWARE SET 24

##### DOOR NUMBER:

C108	C109
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##### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	PUSH PLATE	8200 4" X 16"	630	IVE
1	EA	PULL PLATE	8303 10" 4"X16"	630	IVE
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

#### HARDWARE SET 25

##### DOOR NUMBER:

B111C	B115C	B126C	B130C
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##### EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
			HARDWARE BY DOOR / FRAME		
			MANUFACTURER		

HARDWARE SET 26

DOOR NUMBER:

GATE1                      GATE2

EACH TO HAVE:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	PANIC HARDWARE	98-NL-OP-110MD-WH	630	VON
1	EA	RIM HOUSING	20-079	626	SCH
1	EA	FSIC CONST. CORE	23-030-ICX		SCH
1	EA	PRIMUS CORE	20-740	626	SCH
	EA	NOTE	REMAINDER OF HARDWARE BY DOOR SUPPLIER		

NOTE: COORDINATE HARDWARE REQUIREMENTS WITH GATE SUPPLIER.



## Door/Hardware Index

Door #	HWSet #	Door #	HWSet #	Door #	HWSet #
A101A	01A	B111A	16	C103	16
A101B	02	B111C	25	C104	18
A102A	07	B112A	23	C105	18
A102B	08	B112B	23	C106	18
A103	18	B113A	21	C107A	11
A104	18	B113B	21	C107B	05
A105	18	B114A	22	C108	24
A106	18	B114B	22	C109	24
A107	18	B115A	16	C110A	11A
A109	17	B115C	25	C110B	05
A111	13	B121A	16	C111	12
A112	19	B122A	23	C112	12
A113	19	B122B	23	C113	09
A114	18	B123A	21	C118A	16
A115	18	B123B	21	C119A	23
A116A	16	B124A	22	C119B	23
A116B	18	B124B	22	C120A	21
A117	20	B125A	16	C120B	21
A119	13	B126A	16	C121A	22
A120	15	B126C	25	C121B	22
A121A	16	B127A	23	C122A	16
A122A	23	B127B	23	C123A	16
A122B	23	B128A	21	C124	23
A123A	21	B128B	21	C125	21
A123B	21	B129A	22	C126	22
A124A	22	B129B	22	C127A	16
A124B	22	B130A	16	C128A	23
A125A	16	B130C	25	C128B	23
A126	23	B131A	16	C129A	21
A127	21	B132A	23	C129B	21
A128	22	B132B	23	C130A	22
A129A	16	B133A	21	C130B	22
B101A	03	B133B	21	C131A	16
B101B	03	B134A	22	C132A	16
B104	16	B134B	22	C133	23
B106	16	B135A	16	C134	21
B107	21	C100A	01	C135	22
B108	18	C100B	10	GATE1	26
B110A	14	C101	03	GATE2	26
B110B	14A	C102	13		

ALT 1

Door #	HWSet #
A121B	04
A125B	04
A129B	04
B111B	06
B115B	06
B121B	04
B125B	04
B126B	06
B130B	06
B131B	04
B135B	04
C118B	04
C122B	04
C123B	04
C127B	04
C131B	04
C132B	04

ALT 2

Door #	HWSet #
A132A	16
A132B	04
A133A	23
A133B	23
A134A	21
A134B	21
A135A	22
A135B	22
A136A	16
A136B	04
A137	23
A138	21
A139	22
A140A	16
B140B	04

END OF SECTION

## Pre-Bid Conference

## Joplin Early Childhood

## Project No.:16054

Date: Oct 13, 2016

By: Ryan Walters

### INTRODUCTIONS

#### Owner Representatives:

Dr. Kerry Sachetta, Assistant Superintendent of Operations  
David Pettit, Project Manager  
Mark Barlass, Executive Director of Student Services  
Amanda Boyer, Director of Early Childhood

#### Architects/ Structural: Hollis + Miller Architects

John Brown, Partner in Charge  
Ryan Walters, Project Architect  
David Hackney, Structural  
Phone: 816-525-5600  
[rwalters@hollisandmiller.com](mailto:rwalters@hollisandmiller.com)

#### Grant Consultant to Hollis + Miller Architects

Ashley Micklethwaite  
[ashleymickle@outlook.com](mailto:ashleymickle@outlook.com)

#### Civil Engineer/ Geotechnical Engineer: Anderson Engineering

Wayne Stephenson, Project Manager  
Cody White, Laboratory Manager  
Joshua Oathout, Design Engineer  
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#### Landscape Architect: Land3 Studio

Bob Bushyhead, Principal  
Michael Killeen, Landscape Architect  
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#### Mechanical/ Electrical: Smith & Boucher Eng.

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Deloitte Associate  
Travis Green  
[travgreen@deloitte.com](mailto:travgreen@deloitte.com)

Bidders:

### **PROPOSAL FORM**

1. Examine all Construction Documents, Project Site, and all conditions affecting the work.
2. Provide Base Bid Sum.
3. Provide Unit Prices as indicated.
4. Provide Alternate Prices (additions and deducts) as indicated.
5. Provide list of major subcontractors as indicated. (by 4:00 one day after Bid)
6. Owner reserves right to waive any informalities and to reject any or all Bids.
7. Owner, Architect, and other Bidders released from any claims relating to acceptance, non-acceptance or rejection of any Bidders.
8. The following documents must accompany all bids per CDBG Requirements (refer to Section 008400 in Project Manual)
  - a. Certification of Bidder Regarding Equal Employment Opportunity
  - b. Certification of Contemplated Minority, Women, and Section 3 Business Utilization
  - c. Certification by Proposed Subcontractor Regarding Equal Employment Opportunity. (by 4:00 one day after Bid)

### **INVITATION TO BID**

1. Construction Documents distributed from Springfield Blueprint Company.
2. Bid opening will be held at **November 1<sup>th</sup> at 2pm, Joplin School District Offices.**
3. Bids valid for sixty (60) days.
4. Corporations require corporate seal.
5. Each Bid is to be accompanied by a Bid Bond (or Cashier's check, or Certified check) in the amount of 5% of the total bid submitted. Check is to be made payable to Owner.
  - a. Bidders discovering any discrepancies, omissions, etc., shall advise the Architect who will issue any necessary clarifications by Addendum to all listed plan holders.
  - b. Faxed bids will not be accepted.

- c. Bids submitted after deadline will be returned unopened.
- d. Within three (3) days after selection, selected Bidders to submit:
  - i. Statement of costs of major portions of Work (schedule of values).
  - ii. Description of Work to be performed by Bidders own forces.
  - iii. List of Job Superintendent and all Subcontractors.

#### **SUPPLEMENTARY INFORMATION FOR BIDDERS**

- 1. Basis for Instructions – CDBG Information For Bidders – Section 002100 and 002200 in the project manual.
- 2. Substitutions to follow guidelines per Section 012500. Substitutions Request form must be completed and submitted by October 21<sup>st</sup>. Must include form. Approval of substitutions will be part of final addendum on October 25<sup>th</sup>. please email substitution requests to [rwalters@hollisandmiller.com](mailto:rwalters@hollisandmiller.com)

#### **SUPPLEMENTARY GENERAL CONDITIONS**

- 1. Basis for General Conditions – CDBG Contract – Section 007200 and 007300 in the project manual.
- 2. Contractor guarantees all work for one (1) year from Date of Substantial Completion.
- 3. Contractor shall keep up-to-date Record Drawings.
- 4. Weather day delays are allotted (Section – 007300).
- 5. Substitutions after execution of Contract constitute Changes in the Work and must be incorporated into Project by Change Order.
- 6. Contractor agrees to pay \$1500 per day to Owner for every calendar day that the Project is not completed beyond the Contract Time until work is substantially complete, and until Contractor delivers to Owner Certificate of Occupancy.
- 7. Contractor shall submit three (3) notarized copies each of AIA Documents G702 and G703 - Application for Payment. Applications for Payment must be received by the Architect by the 25<sup>th</sup> of the month for submittal to Owner by last day of the month. Payment will be issued by Owner within 14 days following receipt of Architect's Certification.
- 8. Five percent (5%) of Sum of Application for Payment retained until Project is Substantially Complete. No further retainage will be withheld provided work and performance have been satisfactory.
- 9. Required insurance listed Section 007200 and 007300.

#### **ADDITIONAL INFORMATION**

- 1. Important dates:
  - a. Substitution requests: October 21 – COB to H+M
  - b. Final Addendum Release: October 25
  - c. Bid Opening: November 1, 2016
  - d. Start of Construction: December 1<sup>st</sup>, 2016

- e. Substantial Completion: July 1<sup>st</sup> , 2018
- f. Final Completion: August 1<sup>st</sup> , 2018
- 2. Scope
  - a. Approx. 38,000 sq ft, 1 story school.
  - b. Load bearing structural stud walls, metal stud roof trusses, outboard continuous insulation, metal panel, EIFS and brick.
  - c. All roof drainage is conductor head, gutter, downspout.
  - d. Roof is mechanically fastened TPO and standing seam metal panel.
  - e. High Wind Shelter – 250 mph – (4) classrooms and corridor, CMU walls, precast hollow core roof slab.
  - f. Site:
    - i. Roads, parking, playgrounds, play equipment
    - ii. Retaining wall along north, east, and west property lines.
    - iii. Known mines below portions of the site. Building sited to avoid mines and associated geology.
  - g. Mech/ Plumb/Elec:
    - i. Sprinkler system.
    - ii. VAV Roof Top Units serving fan powered VAV boxes with electric reheat.
    - iii. LED Lighting.
    - iv. Instantaneous gas water heaters.
- 3. Alternates – see attached list
- 4. Unit Prices – see attached list
- 5. Temporary construction plan
  - a. Parking lot to the east of the site is owned by the district.
  - b. Electrical service will have to be relocated. Power to Irving Elementary must remain undisturbed.

### QUESTIONS???

- 1. Will the general contractor be performing all special inspections / testing?
  - a. Answer: All special inspections and testing will be handled by the owner.
- 2. On sheet C102 of the civil documents, there is an alternate listed for concrete paving instead of asphalt paving. Which is the base bid and how do you bid the two types of paving?
  - a. Answer: The concrete paving alternate will be removed from the civil documents. The only bid will be for asphalt paving, plus the alternate asphalt pavement.
- 3. Will the general contractor be responsible for filing a land disturbance permit and who will responsible for the associated filling fee?
  - a. Answer: The design team's civil engineers will prepare the land disturbance permit documents and will require the general contractor's signatures. The owner will be responsible for the filling fee and executing permit through DNR with engineers help.
- 4. What constitutes unsuitable soil?
  - a. Refer to the Site Development section beginning on page 30 of the

Geotech Report.

5. Who will pay the temporary utility company fees etc.?
  - a. Answer: Reference Article 10 of Community Development Block Grant Program General Conditions for temporary licenses and permits.
6. What is the magnitude of the project?
  - a. Answer: \$7,000,000.00 to \$8,000,000.00.
7. Will material escalation be allowed?
  - a. Answer: No material escalation will be allowed. Note, although there is a generous construction schedule, there is no need for the contractor to stretch out the construction process. Given the size and simplicity of the building a shorter construction period is anticipated but not required.
8. Where is the telecommunication information on the drawings?
  - a. Refer to the power floor plans and associated notes and schedules.
9. Will non-set accelerating corrosion inhibiting admixture be used?
  - a. This is deleted from the project in Addendum #2.
10. Will capillary break admixtures be used? If used, can it be added at the batch plant?
  - a. Answer: Yes, capillary break admixtures will be used at all interior slabs. Refer to revised section 033000 2.17 A.2 – the admixture will be added at the jobsite or batch plant in accordance with the admixture's manufacturer's written instructions.
11. Can we use an air entrained footing mix if it meets the slump, and water / cement ratio requirements?
  - a. Answer: Yes, as long as it meets slump, water / cement ratio and strength.
12. How will the verification of the 0.42 water / cement ratio be enforced?
  - a. Refer to new spec information 033000 1.4.B.1.a.
13. Is super-plasticizer allowed on interior slabs on grade?
  - a. Yes, as long as the water / cement ratio and strength requirements are met.
14. For the lightweight concrete topping, would we be allowed to use 18% fly ash and 5-8% air entrainment?
  - a. Refer to the revised section 033000 2.15 E. Light weight concrete has been removed from the project. Normal weight concrete topping is required.



## ADDENDUM 002

October 25, 2016

### JOPLIN EARLY CHILDHOOD CENTER ADDENDUM #2

#### SPECIFICATIONS

**DRAWINGS** – The following plan sheets have been modified as follows. Replace entire sheet(s) with provided addenda.

#### **Sheet L100 – PLAY AREA & FURNISHING PLAN**

- A. **REVISE** play area surfaces

#### **Sheet L101 – PLAY AREA ENLARGEMENT - SURFACING**

- A. **REVISE** edge of artificial turf play surface
- B. **ADD** rubber surfacing within daycare play area

#### **Sheet L102 – PLAY AREA ENLARGEMENT - LAYOUT**

- A. **REVISE** layout of swings.
- B. **REVISE** layout of concrete band at artificial turf
- C. **ADD** concrete curb within daycare play area

#### **Sheet L103 – PLAY AREA ENLARGEMENT – GRADING & DRAINAGE**

- A. **REVISE** subdrain line within artificial turf area
- B. **ADD** subdrain line within rubber surface area

#### **Sheet L104 – PLAY AREA ENLARGEMENT – PLAYGROUND EQUIPMENT**

- C. **REVISE** layout of swings.

#### **Sheet L110 – PLAY AREA DETAILS**

- A. **REVISE** detail #6
- B. **REVISE** detail #11

#### **Sheet L200 – LANDSCAPE PLAN (BASE BID)**

- A. **REVISE** plants in northwest play area
- B. **REMOVE** plants within daycare play area

#### **Sheet L202 – LANDSCAPE PLAN ALTERNATES**

- A. **REVISE** plants in northwest play area

#### **Sheet L210 – PLAY AREA DETAILS**

- A. **REVISE** detail #8

#### **Sheet L300 – IRRIGATION PLAN (BASE BID)**

- A. **REVISE** irrigation layout in northwest play area
- B. **REMOVE** irrigation within daycare play area
- C. **REVISE** irrigation schedule

#### **Sheet L301 – IRRIGATION PLAN ALTERNATE**

- A. **REVISE** irrigation layout in northwest play area





**ADDENDUM NO. 2**

Issued: October 25, 2016

Project: Joplin Early Childhood, Package No. 2  
2810 South McClelland Blvd  
Joplin, Missouri 64804

Project No. 50040-16

Owner: Board of Education  
Joplin Schools  
3901 E. 32<sup>nd</sup> Street  
Joplin, Missouri 64801

Bidding Documents Issued: September 30, 2016

This Addendum is hereby made a part of the Contract Documents to the same extent as if it were originally included therein. Receipt of this Addendum shall be acknowledged on the Proposal Form.

Any Specification Sections and Drawings attached herein shall hereby be made a part of the Contract Documents.

This Addendum includes these 3 page[s] and the following attachments:

Drawings:

Civil: C100, C102, C103, C104, C105, C106, and C109 consisting of 7 pages.

Added Details:

Civil: Typ. Mining Feature Structural Cap consisting of 1 page.

**GENERAL – BIDDER'S QUESTIONS**

**G1 QUESTION:** Is alternate seven contractor's choice of retaining wall? We choose if we want to construct it of modular block or cast in place concrete?

**G1.1 Answer:** Yes, alternate 7 will be contractor's choice between modular block and cast in place. The big difference between the base bid and the alternate bid is the

amount of traffic the retaining walls will be seeing. The base bid is for a retaining wall that is emergency vehicle traffic rated only. The base bid retaining wall is expected to possibly see on average 1 emergency vehicle every couple years on the gravel road above the retaining wall. This base bid retaining wall is under the assumption that the City of Joplin can keep regular Vehicular traffic other than emergency vehicles off the gravel road. The alternate bid is for a retaining wall which will receive constant vehicular traffic loads. The alternate retaining wall will allow the owner in the future to build a paved road over the currently existing gravel drive which will result in the alternate retaining wall to receive constant traffic loads.

**G2 QUESTION:** On addendum sheet C104 note D17 calls out HDPE pipe but says 4'x4'? D15 says its 18". Is D17 24" per the note about the downspout drains on the North side of the building?

**G2.1 Answer:** D17 should be an 18" HDPE pipe. The note about the downspout drains will be changed to dive 8" HDPE pipes into 18" stormpipe.

#### **PROJECT MANUAL REVISIONS**

#### **DRAWINGS REVISIONS**

##### **C1 SHEET C100 – OVERALL SITE PLAN**

C1.1 Removed the planting beds w/in the daycare alternate footprint and replaced w/ concrete.

##### **C2 SHEET C102 – SITE GEOMETRY PLAN**

C2.1 Removed the planting beds w/in the daycare alternate footprint and replaced w/ concrete.

##### **C3 SHEET C103 – SITE GRADING PLAN**

C3.1 Removed the planting beds w/in the daycare alternate footprint and replaced w/ concrete.

##### **C4 SHEET C104 – STORMWATER PLAN - SITE**

C4.1 Removed the planting beds w/in the daycare alternate footprint and replaced w/ concrete. Downspout note changed to dive 8" HDPE pipes into 18" stormpipe instead of 24". D17 size changed in Drainage Structures Index to show 18" instead of 4'x4' and Top elevation was changed to N/A. Area inlets were updated in the drainage structure table to show top elevation. Drainage structure table item D2 was updated and no longer shows top elevation. Water quality swale in drainage structures updated to show N/A for size. Water quality swale size shown with contours on sheet C103.

##### **C5 SHEET C105 – STORMWATER POLLUTION PREVENTION PLAN**

C5.1 Removed the planting beds w/in the daycare alternate footprint and replaced w/ concrete.

**C6 SHEET C106 – UTILITY PLAN**

- C6.1 Removed the planting beds w/in the daycare alternate footprint and replaced w/ concrete. Grease trap removed from the plan sheet.

**C7 SHEET C109 – ADD ALTERNATES**

- C7.1 Add Alternate 7 note changed to provide cost for poured retaining wall OR block wall alternate. This will be contractor's choice between a poured wall or modular block wall. Add Alternate Modular Block Retaining Wall Detail has been added to the sheet. Refer to Question G1 for more information regarding base bid and add alternate retaining walls.

**DETAIL REVISIONS**

**D1 TYP. MINING FEATURE STRUCTURAL CAP**

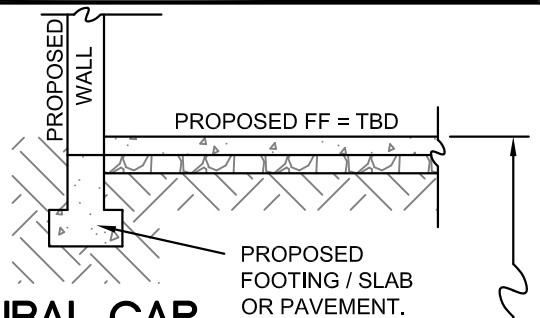
- D1.1 This detail has been added as a typical detail only for use of bidding purposes. This item should be a unit rate bid item due to the uncertainty of the amount of structural caps needed at the site. Typical installations of structural caps require 1 to 2 boulder truck loads. Any mine features discovered will need to be evaluated on a case by case basis to verify this design applies. It is likely during excavation that mine features will be discovered which will require a structural cap. All earthwork excavation should be done according to the civil drawings and geotech report. Refer to the geotech report for additional information regarding mining on site. Anderson Engineering must be notified of any suspected or possible mine features encountered prior to beginning excavation of suspected mine feature. Anderson Engineering must be present during excavation of any suspected mine feature.

**END OF ADDENDUM NO. 2**



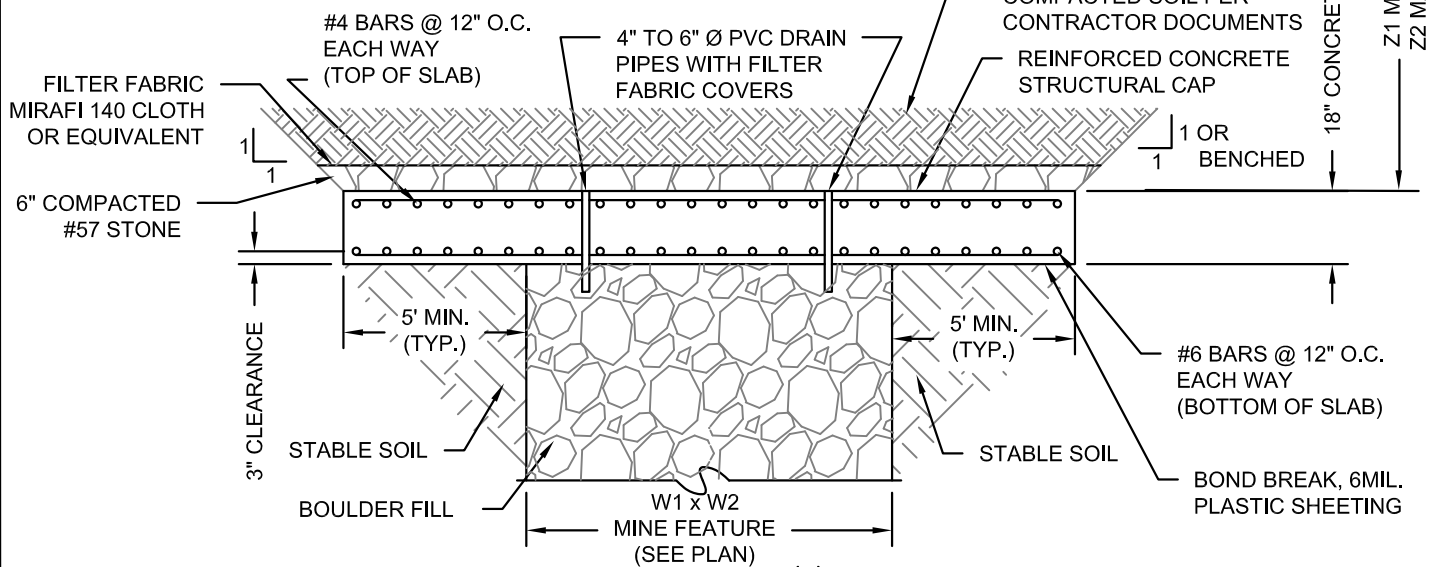
	POINT COORDINATES		
	NORTHING	EASTING	ELEVATION
1	-- <sup>(6)</sup>	-- <sup>(6)</sup>	-- <sup>(6)</sup>
2	--	--	--
3	--	--	--
4	--	--	--

DIMENSIONS	
B1	18'
B2	18'
W1	8'
W2	8'
Z1	8'
Z2	14'



## MINING FEATURE STRUCTURAL CAP

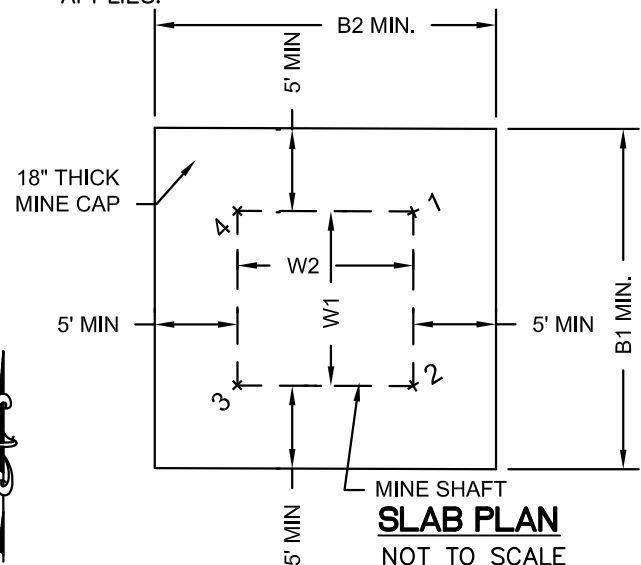
NOT TO SCALE



### NOTE:

- CLEAN LOOSE SOIL AND DEBRIS FROM BOTTOM OF EXCAVATION PRIOR TO PLACING BOULDER FILL.
- THE FIRST LAYER OF BOULDER FILL SHOULD BE NESTLED INTO THE SOILS AT THE BOTTOM OF THE EXCAVATION. SUCCESSIVE LAYERS OF BOULDER FILL SHOULD BE PLACED AND CONSOLIDATED WITH THE EXCAVATION BUCKET UNTIL A DENSE CONDITION IS ACHIEVED.
- ANDERSON ENGINEERING SHOULD BE PRESENT DURING MINE FEATURE EXCAVATION, DURING PLACEMENT OF BOULDER FILL AND TO VERIFY SOIL BEARING FOR STRUCTURAL CAP AND DIMENSIONS.
- MINIMUM COMPRESSIVE CONCRETE STRENGTH:  
 $f'_c = 4000\text{PSI} @ 28 \text{ DAYS}$   
 (3000PSI MINIMUM FOR PLACEMENT OF FILL ON STRUCTURAL CAP)
- REINFORCING STEEL  $f_y = 60,000\text{PSI}$
- POINT COORDINATES ARE UNAVAILABLE. ENGINEER OF RECORD OR THEIR REPRESENTATIVE MUST BE PRESENT DURING EXCAVATION TO FIELD VERIFY DESIGN DEPTHS AND DIMENSIONS AND TO VERIFY SOIL BEARING CAPACITY.
- SURVEY POINTS FOR AS-BUILT CONDITIONS.
- MINING FEATURE STRUCTURAL CAP IS DESIGNED TO ADDRESS ONLY THE MINE FEATURE OBSERVED AT THE SURFACE. IT DOES NOT ADDRESS ANY DEEPER MINE FEATURES OR OPENINGS THAT MAY BE PRESENT.

- CONTRACTOR IS RESPONSIBLE FOR DESIGNING THE EXCAVATION SLOPES AND OR TEMPORARY SHORING AND BRACING. CARE MUST BE TAKEN NOT TO REMOVE REQUIRED SUPPORT FOR EXISTING FOUNDATIONS.
- THIS IS A TYPICAL DETAIL ONLY FOR USE OF BIDDING PURPOSES. ANY MINE FEATURES DISCOVERED WILL NEED TO BE EVALUATED ON A CASE BY CASE BASIS TO VERIFY THIS DESIGN APPLIES.



**ANDERSON  
ENGINEERING**

ENGINEERS • SURVEYORS • LABORATORIES • DRILLING  
811 E. 3RD STREET • JOPLIN, MISSOURI 64801 • PHONE (417) 782-7399

JOPLIN EARLY CHILDHOOD CENTER

**TYP. MINING FEATURE STRUCTURAL CAP**  
JOPLIN, JASPER COUNTY, MISSOURI

DRAWN BY:

JCO

DATE:

10/20/2016

CLIENT NO:

50040-16

Project: Joplin Early Childhood Center  
Smith & Boucher Project Numbers 1617200

The information included herein represents mechanical, electrical, and plumbing (MEP) modifications to the Bid Documents dated 09-30-16 and shall be incorporated into the overall information for "ADDENDUM #2" dated 10-24-2016 as issued by the Architect.

#### **PROJECT MANUAL:**

1. **Section 271323 – Communications Optical Fiber Backbone**
  - Add entire section.
2. **Section 282300 – Video Surveillance**
  - Add entire section.

#### **DRAWINGS:**

1. **ME201 – SITE PLAN**
  - A. See full size drawing for added flagpole lighting.
2. **E201A – FLOOR PLAN - AREA A - POWER**
  - A. See full size drawing for added security camera locations.
  - B. See full size drawing for added intercom push button locations.
  - C. See full size drawing for revised vestibule and lobby layouts.
3. **E202B – FLOOR PLAN - AREA B - POWER**
  - A. See full size drawing for added security camera locations.
  - B. See full size drawing for added intercom push button locations.
4. **E203C – FLOOR PLAN - AREA C - POWER**
  - A. See full size drawing for added security camera locations.
  - B. See full size drawing for added intercom push button locations.
  - C. See full size drawing for location of secondary IT switch and revised cable tray routing.
5. **E301 – SCHEDULES - ELECTRICAL**
  - A. See full size drawing for added in-grade lighting for flagpole.

**GENERAL NOTES:**

1. **CLARIFICATION OF ELECTRICAL SPECIAL SYSTEMS.**

- A. Intercom system includes talk back speakers in classrooms with intercom push buttons near classroom entrances.
- B. Secured entrance system includes door contacts at indicated exterior doors. Cabling to be routed back to a central security station where each door can be individually scheduled for arming and duration that door is able to be opened before triggering the alarm. Manual remote system arm/disarm keypads are near the secured exterior doors.
- C. Main entrance to include a pushbutton request to enter with audio intercom connection with front desk. When main entrance doors are scheduled to be locked (during school hours), remote pushbutton at front desk shall temporarily unlock the exterior vestibule door to allow entrance.
- D. Video surveillance system to be standalone for the Early Childhood Center with functionality similar to other district systems. Coordinate requirements with owner.

**END OF MEP ITEMS FOR "ADDENDUM #2"**



## **SECTION 271323 - COMMUNICATIONS OPTICAL FIBER BACKBONE CABLING**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. Provide a complete intra-building (premises) and inter-building (campus) optical fiber backbone cabling system in accordance with these Contract Documents. Including but not limited to, the following:
  - 1. Optical fiber cables.
  - 2. Splices (where required by these Contract Documents).
  - 3. Necessary installation and supporting hardware.

#### **1.2 RELATED SECTIONS INCLUDE THE FOLLOWING**

- A. Except as modified by governing codes and by the Contract Documents, comply with the applicable provisions, requirements, and recommendations in Sections 27 00 00 - "Communications" and 27 13 00 - "Communications Backbone Cabling."

#### **1.3 CODES, REFERENCES, AND STANDARDS**

- A. Follow all applicable codes, references, and standards listed in Sections 27 00 00 - "Communications" and 27 13 00 - "Communications Backbone Cabling."

#### **1.4 WARRANTIES**

- A. As required by Section 27 13 00 - "Communications Backbone Cabling."

#### **1.5 SUBMITTALS**

- A. Follow the requirements for submittals in Sections 27 00 00 - "Communications" and 27 13 00 - "Communications Backbone Cabling."
- B. The following submittals are due at the "pre-construction" phase submission:
  - 1. Shop Drawings: As required by Section 27 13 00 - "Communications Backbone Cabling"
  - 2. Provide a typed list indicating part name, manufacturer, part number, and color (if applicable) for products specifically identified herein by the exact and complete part number (no wild-card characters)
  - 3. Submit manufacturers' cut sheets or catalog cut sheets for all parts not specifically identified by its exact part number and for any product the installer is seeking to use as an equivalent replacement for a specified product.
  - 4. Required warranty information as indicated herein and elsewhere in this Division.
- C. The following submittals are due at the "Project Completion" phase submission:
  - 1. As-built Drawings: As required by Section 27 13 00 - "Communications Backbone Cabling."
  - 2. Warranty Certificate.
  - 3. Full test results sorted numerically by fiber strand ID.

### **PART 2 - PRODUCTS**

#### **2.1 OPTICAL FIBER CABLE SPECIFICATIONS**

- A. General Optical Fiber Cable Requirements:
  - 1. See Division 27 and backbone (riser) diagram(s) on the Drawings for required fiber counts.
  - 2. Cable shall meet the transformation performance and physical specifications of ANSI/TIA-568 latest standard revision.
  - 3. Cable jacket marking: Must be legible and shall contain the following information:
    - a. Manufacturer's name and trade mark
    - b. Fiber size
    - c. Fiber Grade
    - d. UL listing (MUST be suitable for the application)
    - e. Sequential length markings
  - 4. Cable jacket color shall be:

- a. ORANGE for standard multi-mode fiber optic cable
  - b. AQUA for laser optimized 50/125 um multi-mode fiber optic cable
  - c. YELLOW for single-mode fiber optic cables
- B. Multi-mode Inter-building/OSP Optical Fiber Backbone Cable Requirements:
  - 1. Optical fiber specifications:
    - a. Cable jacket must be outside plant only, distribution loose tube and suitable for installation such environments; do not use the indoor/outdoor rated fiber
    - b. Cable jacket rating must be consistent with manufacturer's requirements to be covered under warranty specified in Section 27 13 00 – "Communications Backbone Cabling".
    - c. Maximum allowable attenuation (db/km) is 1.0 at 1310nm and 1.0 at 1550nm
    - d. Low water peak
    - e. Dispersion shifted fiber optic construction.
    - f. Manufacturer shall be:
      - 1) Superior Essex, 110123T01 or pre-approved equal
      - 2) 12-strands, 250um jacketed Yellow jacket
- C. Multi-mode Intra-building; Optical Fiber Backbone Cable Requirements.
  - 1. Cabling does not leave foot print of interior building wall assemblies
  - 2. Plenum rated Optical fiber specifications:
    - a. Cable jacket must be plenum rated (OFNP), multi-mode 50/125um laser optimized, OM3 fiber
    - b. Number of strands as indicated on the drawings
    - c. With a modal bandwidth of 2000Mhz•km @ 850 nm 500Mhz•km @ 1300 nm for laser optimized 50/125 µm
    - d. Maximum allowable attenuation (db/km) is 3.5 at 850nm and 1.5 at 1300nm.
    - e. Manufacturer shall be:
      - 1) Superior Essex, 44012BG01 or pre-approved equal
      - 2) 12-strands, 900 um buffer Aqua jacket
  - 3. Non-plenum riser rated Optical fiber specifications:
    - a. Cable jacket must be non-plenum, riser rated (OFNR), multi-mode 50/125um laser optimized, OM3 fiber
    - b. Number of strands as indicated on the drawings
    - c. With a modal bandwidth of 2000Mhz•km @ 850 nm 500Mhz•km @ 1300 nm for laser optimized 50/125 µm
    - d. Maximum allowable attenuation (db/km) is 3.5 at 850nm and 1.5 at 1300nm.
    - e. Manufacturer shall be:
      - 1) Superior Essex, 43012BG01 or pre-approved equal
      - 2) 12-strands, 900 um buffer Aqua jacket

## 2.2 SPLICES

- A. In general, optical fiber cables are not to be spliced except where indicated otherwise in the Drawings and Specifications.
- B. Where splicing is indicated in the Drawings and Specifications, multi-mode and single-mode optical fiber cable splicing shall be fusion splicing.
- C. Factory pre-terminated optical fiber pig-tails (Contractor's option): Instead of field terminating the optical fiber backbone cables onto appropriate type connectors, the Contractor may choose to splice the optical fiber cables near their termination points in the Telecommunications rooms to connectors that have been factory pre-terminated with optical fiber pig-tails. The following requirements apply to the use of this termination approach:
  - 1. Rack mounted splice tray enclosures shall be by the same manufacturer as the optical fiber connector panels.
  - 2. Trays shall be used to hold all splices.
  - 3. Splice trays shall be stored in a rack mountable splice enclosure that allocates space for fiber trays and storage of excess fiber. Splice Trays are not to be located within the same fiber enclosure where the fiber connectors are mounted unless the enclosure was designed to do so.
  - 4. Optical fiber cables shall be labeled at the splice trays.
- D. Maximum allowable loss for splices is 0.3 db.

## PART 3 - EXECUTION

### 3.1 CABLE INSTALLATION

#### A. General:

1. Place all optical fiber backbone cabling in accordance with these specifications, and as indicated on the cable schedules and the Drawings.
2. Splices between riser rated optical fiber cables and factory connectorized pigtails are permitted, but not required at each fiber termination location indicated on the Drawings. Pre-terminated riser cables meeting the material specifications may be utilized.
3. Comply with all referenced standards and guidelines.

#### B. Pre-installation testing:

1. Optical fiber cables: Perform visible light continuity check on each fiber before installing the fiber trunk cable in the backbone pathway. If one end is not accessible: perform OTDR test to assure fiber continuity; this test should be performed soon after receiving the product so as to not delay the project should the reel have to be replaced.

#### C. Optical Fiber Backbone Cables:

1. Place optical fiber between the telecommunications rooms as noted in the cable schedules and the Drawings.
2. Optical fiber cable is to be installed within inner duct at all locations where it is within nominal 4-inch conduit and supported by cable tray.-see Telecommunications drawings for details
3. Support optical fiber riser cables with suitable support grips. After being supported, the optical fiber cables will be routed over to the optical fiber patch panel in that particular Telecommunications room

### 3.2 OPTICAL FIBER MAIN DISTRIBUTION FRAME

- A. Optical fiber cables shall be routed to each of the Telecommunications Rooms via conduits, trays and riser sleeves. See the Drawings.
- B. Optical fiber cables shall enter the Fiber Distribution Frame from the top of the frame and then routed to the connector and splice modules/shelves.
- C. The Fiber Distribution Frame shall be attached to the structural concrete floor, to the cable ladder above and adjacent racks, frames or cabinets. See Specification Section 27 11 16 – "Communications Cabinets, Racks, Frames and Enclosures"

### 3.3 ACCEPTANCE

- A. Upon receipt of the Contractor's documentation of cable testing, the General Contractor and/or Engineer will review/observe the installation and randomly request tests of the cables/wires installed.

## END OF SECTION 271323



## **SECTION 282300 - VIDEO SURVEILLANCE**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. This Section includes video surveillance system equipment consisting of
  1. Cameras.
  2. Video Management System.
  3. Video Servers and Storage.
  4. Wiring.

#### **1.3 DEFINITIONS**

- A. AGC: Automatic gain control.
- B. B/W: Black and white.
- C. CCD: Charge-coupled device.
- D. VMS: Video Management System.
- E. LED: Light Emitting Diode
- F. MPEG: Moving picture experts group.
- G. NTSC: National Television System Committee.
- H. UPS: Uninterruptible power supply.

#### **1.4 FUNCTIONAL DESCRIPTION OF SYSTEM**

- A. Video surveillance system shall consist of Video Management Software (VMS). Video of security events occurring within areas having video surveillance areas shall be "pushed" to VMS client stations for observation by responsible control station.
- B. The VMS shall provide video surveillance of persons desiring passage through security barriers, remote monitoring of areas not under continuous staff supervision, and other areas of security concern.
- C. Video surveillance system monitors may display full screen video images, or up to 32 camera images on a single screen. Monitor locations are shown on the contract drawings with video content originating from VMS client stations having multiple DVI or HDMI monitor outputs.
- D. Video surveillance system shall consist of IP cameras, Powered Over Ethernet (POE), connected to a 1000T based Ethernet security network having multiple network switches.
- E. Video Recording will be provided for all cameras.
  1. Capacity for recording of cameras shall be provided to allow a minimum of 21 days of recording at 10 frames per second, using highest camera resolution with mild (10% or less) H.264 compression.
  2. Video recording shall be by rack mounted video servers running video management software.
  3. Servers shall have fault tolerant RAID 1 or better fault tolerant operating system drives.
  4. Video servers shall have an onboard DVD burner for archiving selected video files.
  5. Video storage shall be by direct-attached, hot swappable RAID 6 configured hard drives.
  6. A monitor, keyboard, and KVM switch shall be provided within the Equipment Rack in Tel Rm G121 for direct access and management of each video sever, and storage within the equipment rack. The monitor

and keyboard shall have access to all management features of each sever, as well as the ability to view any of the connected cameras in the facility.

7. Program camera titles and on-screen placement as coordinated with the Owner.
8. Develop and program camera tours or views as coordinated with the Owner. At the Owner's discretion, tours/views may or may not include the use of the quad displays. Adjust sequence and dwell of each tour as requested by the Owner.

#### 1.5 SURGE AND TAMPER PROTECTION

- A. Refer to Division 28 Section "General Requirements Electronic Safety and Security".
- B. Interference Protection: Component function shall be unaffected by radiated-radio-frequency interference and electrical induction of 15 V/m over a frequency range of 10 to 10,000 MHz, or by conducted interference signals up to 0.25-V RMS injected into power supply lines at 10 to 10,000 MHz.

#### 1.6 SUBMITTALS

- A. The following submittals are due at the "Bid" phase submission:
  1. Provide unit prices for the following:
    - a. Camera Pricing:
      - 1) Supply unit pricing for the addition/deletion of each type of camera.
- B. The following submittals are due at the "Pre-construction" phase submission:
  1. Product Data: For each type of product indicated, including dimensions and data on features, performance, electrical characteristics, ratings, and finishes.
    - a. Network Video Storage: Sizing calculations.
      - 1) Storage size estimate for each type of camera per location type (hallway, gymnasium, cafeteria, etc.)
      - 2) Schedule with all cameras listed and total storage required for video management system.
  2. Shop Drawings: Detail assemblies of standard components that are custom assembled for specific application on this Project.
    - a. Conduit routing and cable fill data for each conduit run.
    - b. Diagrams for cable management system within equipment rooms.
    - c. System labeling schedules, including electronic copy of labeling schedules.
    - d. Wiring Diagrams.
      - 1) Functional Block diagram of system component connections identifying cable numbers and types.
      - 2) Typical wiring schematics.
      - 3) Power, signal, and control wiring, and grounding.
      - 4) Point-to-point wiring schedules or diagrams.
    - e. Dimensioned plan and elevations of equipment racks, control panels, and consoles. Show access and workspace requirements.
    - f. Camera title sheets for coordination of camera titles with Owner.
    - g. Camera tour sheets for Owner coordination pre-populate with tours identified by these specifications with adequate space for required additional Owner designated tours. Note that Owner retains the right to differ tour assignment selections until after substantial completion, but before final completion.
  3. Equipment List: Include every piece of equipment by model number, manufacturer, serial number, location, and date of original installation. Add pretesting record of each piece of equipment, listing name of person testing, date of test, set points of adjustments, name and description of the view of preset positions, description of alarms, and description of unit output responses to an alarm.
  4. Field quality-control test reports.
  5. Operation and Maintenance Data: For cameras, power supplies, monitors, digital video recorders, video switches, and control-station components to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data" include the following:
    - a. Lists of spare parts and replacement components recommended to be stored at the site for ready access.
  6. Warranty: Special warranty specified in this Section.

#### 1.7 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NECA 1.

C. Comply with NFPA 70.

## 1.8 PROJECT CONDITIONS

A. Environmental Conditions: Capable of withstanding the following environmental conditions without mechanical or electrical damage or degradation of operating capability:

1. Central Equipment: Rated for continuous operation in ambient temperatures of 60 to 85 deg F (16 to 29 deg C) and a relative humidity of 20 to 80 percent, noncondensing.
2. Interior, Controlled Environment: System components, except central equipment, installed in air-conditioned interior environments shall be rated for continuous operation in ambient temperatures of 36 to 122 deg F (2 to 50 deg C) dry bulb and 20 to 90 percent relative humidity, noncondensing. NEMA 250, Type 1 enclosures.
3. Exterior Environment: System components installed in locations exposed to weather shall be rated for continuous operation in ambient temperatures of minus 30 to plus 122 deg F (minus 34 to plus 50 deg C) dry bulb and 20 to 90 percent relative humidity, condensing.
4. Security Environment: Camera housings for use in high-risk areas where surveillance equipment may be subject to physical violence.

## 1.9 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of cameras, equipment related to camera operation, and control-station equipment that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two year from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

### 2.2 IP CAMERAS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Axis.
2. Sony.
3. Pre-approved equal.

B. Refer to Contract Drawing's camera legend for performance specifics and allowable models meeting performance requirements.

### 2.3 LENSES

A. Description: Optical-quality coated optics, designed specifically for video surveillance applications, and matched to specified camera. Provide color-corrected lenses with color cameras.

1. Auto-Iris Lens: Electrically controlled iris with circuit set to maintain a constant video level in varying lighting conditions.
2. Fixed Lenses: Auto remote focus.
3. Zoom Lenses: Motorized, remote-controlled units, rated as "quiet operating." Features include the following:
  - a. Electrical Leads: Filtered to minimize video signal interference.
  - b. Motor Speed: Variable.
  - c. Lens shall be available with preset positioning capability to recall the position of specific scenes.

### 2.4 POWER SUPPLIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Altronix.
2. Bosch.

3. Pelco.
4. Pre-approved equal.

- B. Power Supplies: Low-voltage power supplies matched for voltage and current requirements of cameras and accessories, type as recommended by camera manufacturer.
1. Power supplies shall be UL and CSA certified, and NEC compliant for Class 2 circuits.
  2. Provide fused outputs for each camera for 24VAC service.
  3. No more than one camera supplied per output termination where POE is insufficient.
  4. Provide power limiting.
  5. Do not exceed 80VA per power supply.
  6. Enclosure: Type 1.

## 2.5 CAMERA SUPPORTING EQUIPMENT

- A. Minimum Load Rating: Rated for load in excess of the total weight supported times a minimum safety factor of two.
- B. Mounting Brackets for Fixed Cameras: Type matched to items supported and mounting conditions. Include manual pan and-tilt adjustment.
- C. Secure mounting equipment with expansion anchors rated for the load, independent of other anchors.

## 2.6 VIDEO MANAGEMENT SYSTEM

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. ExacqVision.
  2. Pre-approved equal.
- B. The video management system (VMS) shall be an enterprise-class client/server based IP video security solution that provides seamless management of digital video, audio and data across an IP network. The video management system shall work with CCTV products as part of a total video security management system to provide full virtual matrix switching and control capability. Cameras, recorders, and viewing stations may be placed anywhere in the CCTV system IP network.
- C. The system's server components shall run on Windows 7 Pro or Windows 2008 Server.
- D. The system's clients shall run on Windows XP Pro, Windows 7 or Windows 8 Pro and Apple/ Intel based Macintosh with OS X package.
- E. The VMS shall not charge for the number of concurrent clients.
- F. The VMS software shall provide at no additional charge a purpose built mobile application capable of viewing multiple simultaneous live video streams and playing a recorded video stream. Application shall be provided for both iOS and Android operating systems (including Kindle Fire).
- G. Provide a web client interface
- a. Internet Explorer 6.0 or Later
  - b. Safari
  - c. Firefox
  - d. Opera
  - e. Chrome
- H. Support for all standard and high definition H.264 and MPEG-4 Encoders, decoders, IP Cameras, IP PTZs.
- I. The VMS shall not require the manufacturer to be contacted when a camera fails.
- J. The VMS shall allow the use of maps. The maps will be accessible to users with the appropriate permission levels and display video sources and their status.
- K. The VMS shall not require a database when recording video.
- L. Recording Time: 21 days at full resolution.



- M. Frame Rate: 10 frames per second.
- N. Provide at least 10 different and independent programmable recording schedules. The schedules may be programmed to provide different record frame rates for day, night, and weekend periods as well as special days. Advanced task schedules may also be programmed that could specify allowed logon times for user groups, when events may trigger alarms, and when data backups should occur.
- O. VMS and workstation software must have the ability to digitally zoom on live video and playback video. The encrypted video player must also have the ability to digitally zoom on video.
- P. Allow the establishment of user groups that have access rights to specific cameras, rights for exporting video, and access rights to system event log files. Access to live, playback, auxiliary commands shall be programmable on an individual camera basis.
- Q. Auto discover all cameras and IP video devices.

## 2.7 VIDEO SERVERS

- A. Network Video Servers
  - 1. Provided by owner.
- B. System Health Monitoring
  - 1. Client-server monitoring system required for the video surveillance deployment.
    - a. Connection loss on any IP camera
    - b. Hard drive failure
    - c. System temperature alerts
    - d. Loss of server connection
  - 2. Central monitoring of the status of all servers is needed.
- C. Client stations shall be connected to the ESN for remote viewing of camera video, both real-time and recorded. Software client must be capable of running natively on Windows XP Pro, Windows 7 or Windows 8 Pro and Apple/Intel based Macintosh with OS X package.

## PART 3 - EXECUTION

### 3.1 WIRING

- A. Comply with requirements in Division 28 Section "General Requirements for Electronic Safety and Security" for conduit requirements.
- B. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.
- C. Splices, Taps, and Terminations: For power and control wiring, use numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- D. Grounding: Provide independent-signal circuit grounding recommended in writing by manufacturer.

### 3.2 VIDEO SURVEILLANCE SYSTEM INSTALLATION

- A. Set pan unit and pan-and-tilt unit stops to suit final camera position and to obtain the field of view required for camera. Connect all controls and alarms, and adjust.
- B. Install power supplies and other auxiliary components at control stations, unless otherwise indicated.
- C. Install tamper switches on components indicated to receive tamper switches, arranged to detect unauthorized entry into system component enclosures, and mounted in self-protected, inconspicuous positions.
- D. Identify system components, wiring, cabling, and terminals according to Division 26 Section "Identification of Electrical Systems."

- E. Perfect all fixed camera views with respect to aiming, field of view, and focus at the Owner's direction.

### 3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect field-assembled components and equipment installation and supervise pretesting, testing, and adjusting of video surveillance equipment.
- B. Inspection: Verify that units and controls are properly installed, connected, and labeled, and that interconnecting wires and terminals are identified.
- C. Pretesting: Align and adjust system and pretest components, wiring, and functions to verify that they comply with specified requirements. Conduct tests at varying lighting levels, including day and night scenes as applicable. Prepare video surveillance equipment for acceptance and operational testing as follows:
  - 1. Prepare equipment list described in Part 1 "Submittals" Article.
  - 2. Verify operation of auto-iris lenses.
  - 3. Set back-focus of fixed focal length lenses. At focus set to infinity, simulate nighttime lighting conditions by using a dark glass filter of a density that produces a clear image. Adjust until image is in focus with and without the filter.
  - 4. Set back-focus of zoom lenses. At focus set to infinity, simulate nighttime lighting conditions by using a dark glass filter of a density that produces a clear image. Additionally, set zoom to full wide angle and aim camera at an object 50 to 75 feet (17 to 23 m) away. Adjust until image is in focus from full wide angle to full telephoto, with the filter in place.
  - 5. Set and name all preset positions; consult Owner's personnel.
  - 6. Set sensitivity of motion detection.
  - 7. Connect and verify responses to alarms.
  - 8. Verify operation of control-station equipment.
- D. Test Schedule: Schedule tests after pretesting has been successfully completed and system has been in normal functional operation for at least 14 days. Provide a minimum of 10 days' notice of test schedule.
- E. Operational Tests: Perform operational system tests to verify that system complies with Specifications. Include all modes of system operation. Test equipment for proper operation in all functional modes.
- F. Remove and replace malfunctioning items and retest as specified above.
- G. Record test results for each piece of equipment.
- H. Retest: Correct deficiencies identified by tests and observations and retest until specified requirements are met.

### 3.4 ADJUSTING

- A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions and to optimize performance of the installed equipment. Tasks shall include, but are not limited to, the following:
  - 1. Check cable connections.
  - 2. Check proper operation of cameras and lenses. Verify operation of auto-iris lenses and adjust back-focus as needed.
  - 3. Adjust all preset positions; consult Owner's personnel.
  - 4. Recommend changes to cameras, lenses, and associated equipment to improve Owner' utilization of video surveillance system.
  - 5. Provide a written report of adjustments and recommendations.

### 3.5 CLEANING

- A. Clean installed items using methods and materials recommended in writing by manufacturer.
- B. Clean video surveillance system components, including camera-housing windows, lenses, and monitor screens.

### 3.6 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain video surveillance equipment.
  - 1. Train Owner's maintenance personnel on procedures and schedules for troubleshooting, servicing, and maintaining equipment.
  - 2. Demonstrate methods of determining optimum alignment and adjustment of components and settings for system controls.
  - 3. Review equipment list and data in maintenance manuals. Refer to Division 01 Section "Operation and Maintenance Data."
  - 4. Conduct a minimum of four hours' training as specified in instructions to Owner's employees in Division 01 Section "Demonstration and Training."

### 3.7 SUPPORT AND MAINTANENCE

- A. Response Time
  - 1. Emergency Service – maximum of 8 hour service response required if the following should happen:
    - a. Server Failure
    - b. Multi-camera outage
  - 2. Standard Service – maximum of 24 hour response required for any other malfunction in the system.

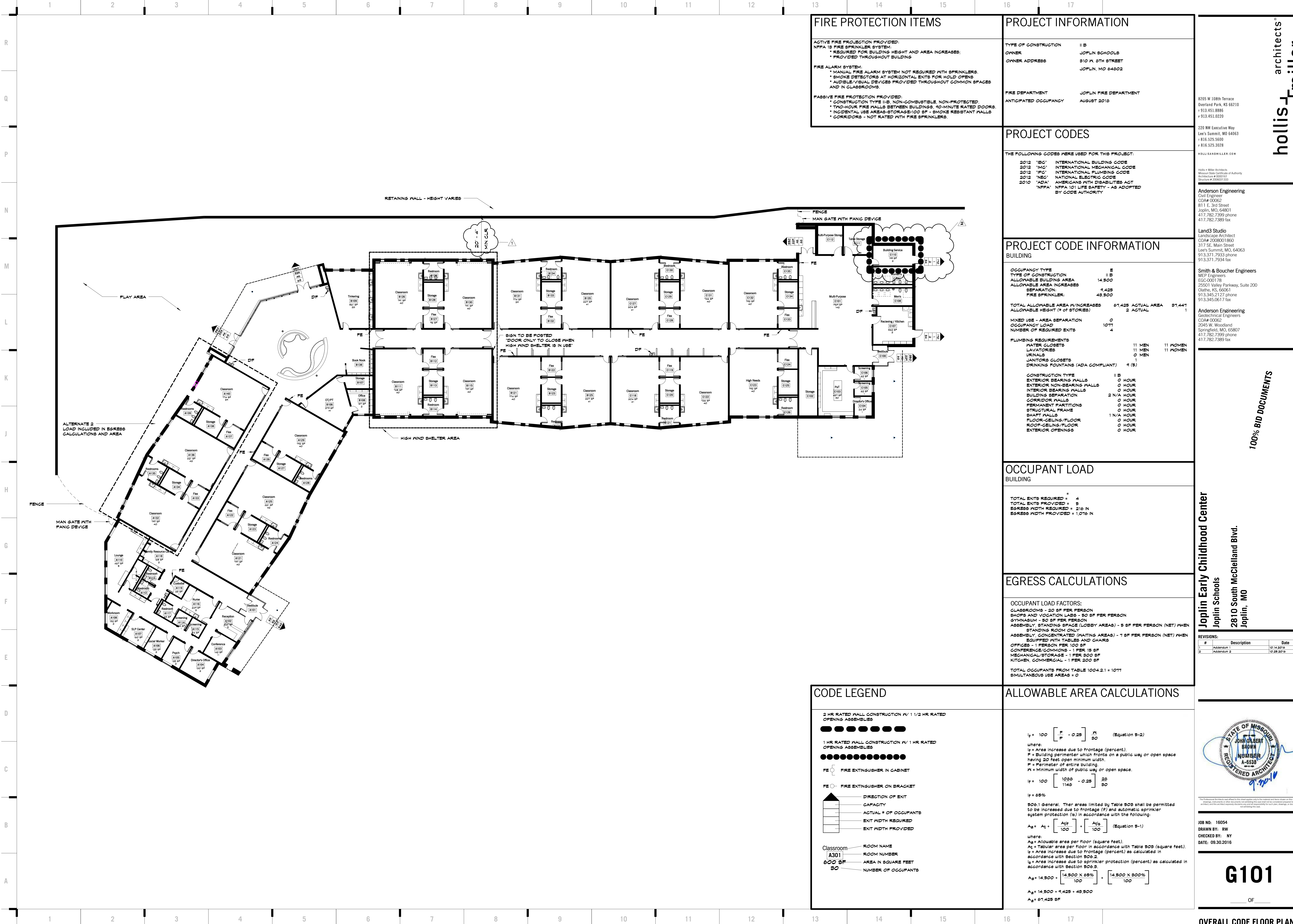
**END OF SECTION 282300**











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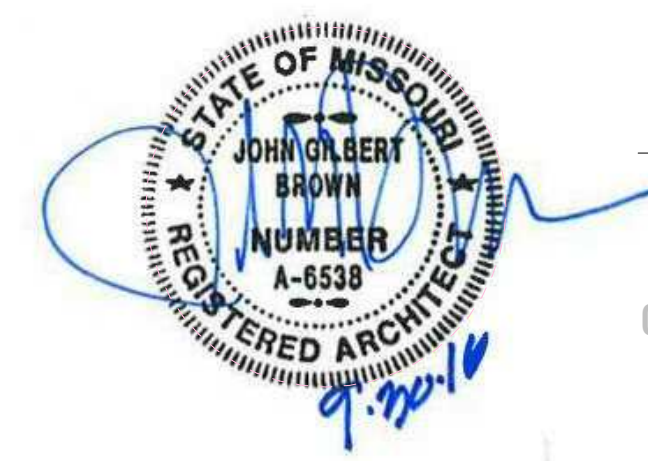
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Joplin Early Childhood Center  
Joplin Schools  
2810 South McClelland Blvd.  
Joplin, MO

REVISIONS:

#	Description	Date
1	Addendum 1	10/14/2016
2	Addendum 2	10/28/2016

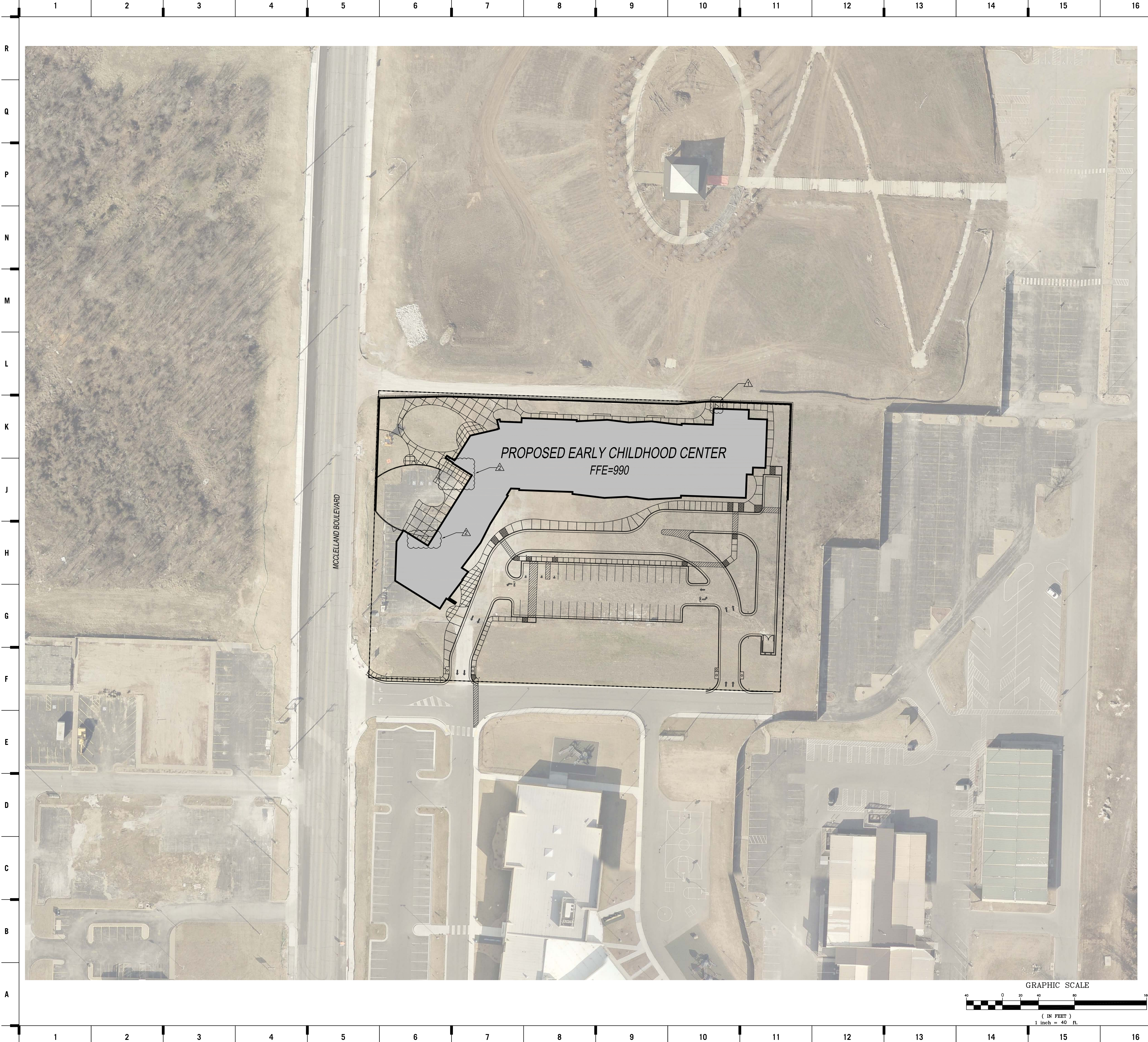


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CHECKED BY: NY  
DATE: 09.30.2016

G101

OVERALL CODE FLOOR PLANS





SHEET KEYNOTE LEGEND

- CP CONTROL POINT
  - FND FOUND IRON PIN
  - SET SET IRON PIN
  - RWM RIGHT-OF-WAY MARKER
  - GP POWER POLE W/ GUY
  - MH MANHOLE
  - SDO SEWER CLEANOUT
  - GCM GAS METER
  - LPM LIGHT POLE
  - SIGN
  - WATER METER
  - WV WATER VALVE
  - GV GAS VALVE
  - FH FIRE HYDRANT
  - TR TELEPHONE RISER
  - BUMPER POST
  - GRATE INLET
  - ER ELECTRICAL RISER
  - EM ELECTRICAL METER
  - TS TRAFFIC SIGNAL BOX
  - MB MAIL BOX
  - SPOT LIGHT
  - PAY PHONE
  - TREE LINE
  - BUSH
  - PROPERTY LINE
  - SS SANITARY SEWER
  - SW STORM SEWER
  - TEL TELEPHONE LINE
  - UT UNDERGROUND TELEPHONE
  - G GAS LINE
  - W WATER LINE
  - OHE ELECTRIC LINE
  - UE UNDERGROUND ELECTRIC
  - FENCE LINE
  - RETAINING WALL
  - LINE LABELS
- |          |        |
|----------|--------|
| PLAT     | 100' P |
| DEED     | 100' D |
| MEASURED | 100' M |

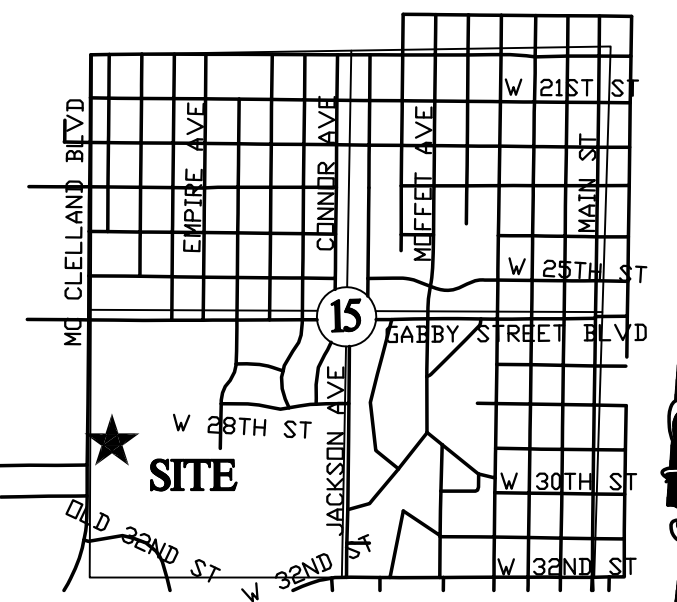


PARKING TOTALS:

- VISITOR = 19 SPACES
- STAFF = 20 SPACES
- TOTAL = 39 SPACES
- TOTAL HANDICAP = 3 SPACES

CIVIL SHEET INDEX:

NO.	DESCRIPTION
C100	OVERALL SITE PLAN
C101	DEMOLITION PLAN
C102	SITE GEOMETRY PLAN
C103	SITE GRADING PLAN
C104	STORMWATER PLAN - SITE
C105	STORMWATER POLLUTION PREVENTION PLAN
C106	UTILITY PLAN
C107	DETAILS
C108	DETAILS
C109	ADD ALTERNATES



LOCATION SKETCH

SECTION 15  
T 27 N, R 33 W  
SCALE: 1"=2000'

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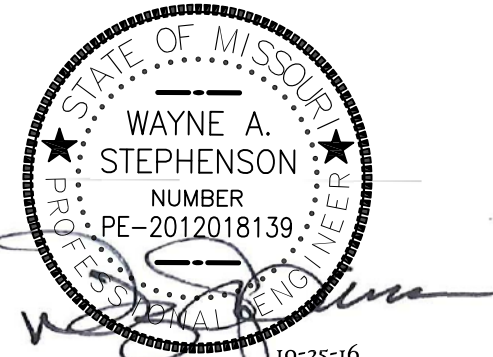
CONSTRUCTION DOCUMENTS  
PKG #2

Joplin Early Childhood Center  
Joplin Schools



REVISIONS:

ADDENDUM #1	10/14/2016
ADDENDUM #2	10/25/2016



The Professional Engineer seal affixed to this sheet certifies that the design shown on this sheet, its drawings, and details, and other documents that accompany this sheet, and that the design complies with the requirements of the Missouri State Board of Professional Engineers, and that the engineer is duly licensed and qualified to perform the services shown on this sheet, and that the engineer is not providing any other services to the client that would constitute a conflict of interest.

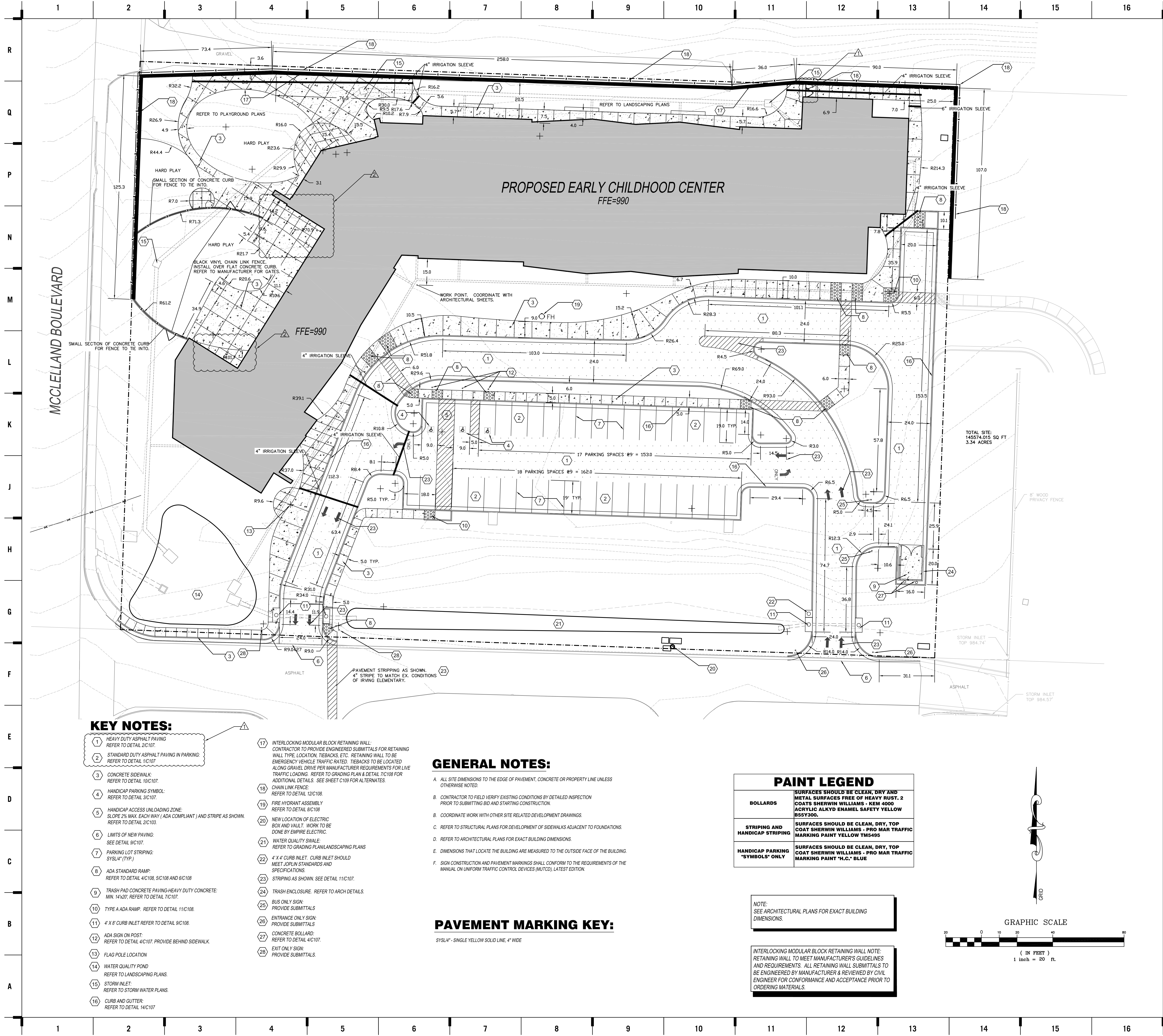
JOB NO: 50040-16  
DRAWN BY: JOSHUA OATHOUT, EI  
CHECKED BY: WAYNE STEPHENSON, PE  
DATE: 10.25.2016

C100

OF

OVERALL SITE PLAN





KEY NOTES:

- HEAVY DUTY ASPHALT PAVING  
REFER TO DETAIL 2/C107.
- STANDARD DUTY ASPHALT PAVING IN PARKING  
REFER TO DETAIL 1/C107.
- CONCRETE SIDEWALK:  
REFER TO DETAIL 10/C107.
- HANDICAP PARKING SYMBOL:  
REFER TO DETAIL 3/C107.
- HANDICAP ACCESS UNLOADING ZONE:  
SLOPE 2% MAX. EACH WAY (ADA COMPLIANT) AND STRIPE AS SHOWN.  
REFER TO DETAIL 2/C103.
- LIMITS OF NEW PAVING:  
SEE DETAIL 9/C107.
- PARKING LOT STRIPING:  
SYSL4" (TYP.)
- ADA STANDARD RAMP:  
REFER TO DETAIL 4/C108, 5/C108 AND 6/C108.
- TRASH PAD CONCRETE PAVING-HEAVY DUTY CONCRETE:  
MIN. 14x20'; REFER TO DETAIL 7/C107.
- TYPE A ADA RAMP: REFER TO DETAIL 11/C108.
- 4' X 8' CURB INLET REFER TO DETAIL 9/C108.
- ADA SIGN ON POST:  
REFER TO DETAIL 4/C107. PROVIDE BEHIND SIDEWALK.
- FLAG POLE LOCATION
- WATER QUALITY POND  
REFER TO LANDSCAPING PLANS.
- STORM INLET:  
REFER TO STORM WATER PLANS.
- CURB AND GUTTER:  
REFER TO DETAIL 14/C107.
- INTERLOCKING MODULAR BLOCK RETAINING WALL:  
CONTRACTOR TO PROVIDE ENGINEERED SUBMITTALS FOR RETAINING  
WALL TYPE, LOCATION, TIEBACKS, ETC. RETAINING WALL TO BE  
EMERGENCY VEHICLE TRAFFIC RATED. TIEBACKS TO BE LOCATED  
ALONG GRAVEL DRIVE PER MANUFACTURER REQUIREMENTS FOR LIVE  
TRAFFIC LOADING. REFER TO GRADING PLAN & DETAIL 7/C108 FOR  
ADDITIONAL DETAILS. SEE SHEET C108 FOR ALTERNATES.
- CHAIN LINK FENCE:  
REFER TO DETAIL 12/C108.
- FIRE HYDRANT ASSEMBLY  
REFER TO DETAIL 8/C108.
- NEW LOCATION OF ELECTRIC  
BOX AND VAULT. WORK TO BE  
DONE BY EMPIRE ELECTRIC.
- WATER QUALITY SWALE:  
REFER TO GRADING PLAN/LANDSCAPING PLANS
- 4' X 4' CURB INLET. CURB INLET SHOULD  
MEET JOPLIN STANDARDS AND  
SPECIFICATIONS.
- STRIPING AS SHOWN. SEE DETAIL 11/C107.
- TRASH ENCLOSURE. REFER TO ARCH DETAILS.
- BUS ONLY SIGN:  
PROVIDE SUBMITTALS
- ENTRANCE ONLY SIGN:  
PROVIDE SUBMITTALS
- CONCRETE BOLLARD:  
REFER TO DETAIL 4/C107.
- EXIT ONLY SIGN:  
PROVIDE SUBMITTALS.

GENERAL NOTES:

- ALL SITE DIMENSIONS TO THE EDGE OF PAVEMENT, CONCRETE OR PROPERTY LINE UNLESS OTHERWISE NOTED.
- CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS BY DETAILED INSPECTION PRIOR TO SUBMITTING BID AND STARTING CONSTRUCTION.
- COORDINATE WORK WITH OTHER SITE RELATED DEVELOPMENT DRAWINGS.
- REFER TO STRUCTURAL PLANS FOR DEVELOPMENT OF SIDEWALKS ADJACENT TO FOUNDATIONS.
- REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
- DIMENSIONS THAT LOCATE THE BUILDING ARE MEASURED TO THE OUTSIDE FACE OF THE BUILDING.
- SIGN CONSTRUCTION AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.

PAVEMENT MARKING KEY:

SYSL4" - SINGLE YELLOW SOLID LINE, 4" WIDE

PAINT LEGEND

BOLLARDS	SURFACES SHOULD BE CLEAN, DRY AND METAL SURFACES FREE OF HEAVY RUST. 2 COATS SHERWIN WILLIAMS - KEM 4000 ACRYLIC ALKYD ENAMEL SAFETY YELLOW B55Y300.
STRIPING AND HANDICAP STRIPING	SURFACES SHOULD BE CLEAN, DRY, TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT YELLOW TMS495
HANDICAP PARKING "SYMBOLS" ONLY	SURFACES SHOULD BE CLEAN, DRY, TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT "H.C." BLUE

NOTE:  
SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.

INTERLOCKING MODULAR BLOCK RETAINING WALL NOTE:  
RETAINING WALL TO MEET MANUFACTURER'S GUIDELINES AND REQUIREMENTS. ALL RETAINING WALL SUBMITTALS TO BE ENGINEERED BY MANUFACTURER & REVIEWED BY CIVIL ENGINEER FOR CONFORMANCE AND ACCEPTANCE PRIOR TO ORDERING MATERIALS.

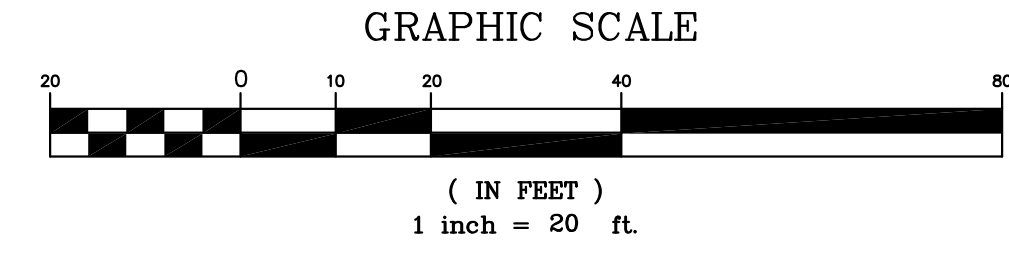
SHEET KEYNOTE LEGEND

- CP CONTROL POINT
  - FOUND IRON PIN
  - SET IRON PIN
  - RIGHT-OF-WAY MARKER
  - POWER POLE W/ GUY
  - MANHOLE
  - SEWER CLEANOUT
  - GAS METER
  - LIGHT POLE
  - SIGN
  - WATER METER
  - WATER VALVE
  - GAS VALVE
  - FIRE HYDRANT
  - TELEPHONE RISER
  - BUMPER POST
  - GRATE INLET
  - ELECTRICAL RISER
  - ELECTRICAL BOX
  - TRAFFIC SIGNAL BOX
  - MAIL BOX
  - SPOT LIGHT
  - PAY PHONE
  - TREELINE
  - BUSH
  - PROPERTY LINE
  - SANITARY SEWER
  - STORM SEWER
  - TELEPHONE LINE
  - UNDERGROUND TELEPHONE
  - GAS LINE
  - WATER LINE
  - ELECTRIC LINE
  - UNDERGROUND ELECTRIC
  - FENCE LINE
  - RETAINING WALL
  - LINE LABELS
- PLAT 100' P  
DEED 100' D  
MEASURED 100' M



LEGEND FOR PAVEMENT TYPES

- HEAVY DUTY PAVEMENT
- STANDARD DUTY PAVEMENT
- CONCRETE PAVING



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Joplin Early Childhood Center  
Joplin Schools

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REVISIONS:		
ADDENDUM #1	10/14/2016	
ADDENDUM #2	10/25/2016	

STATE OF MISSOURI  
WAYNE A. STEPHENSON  
NUMBER  
PE-2012018139  
10-23-16

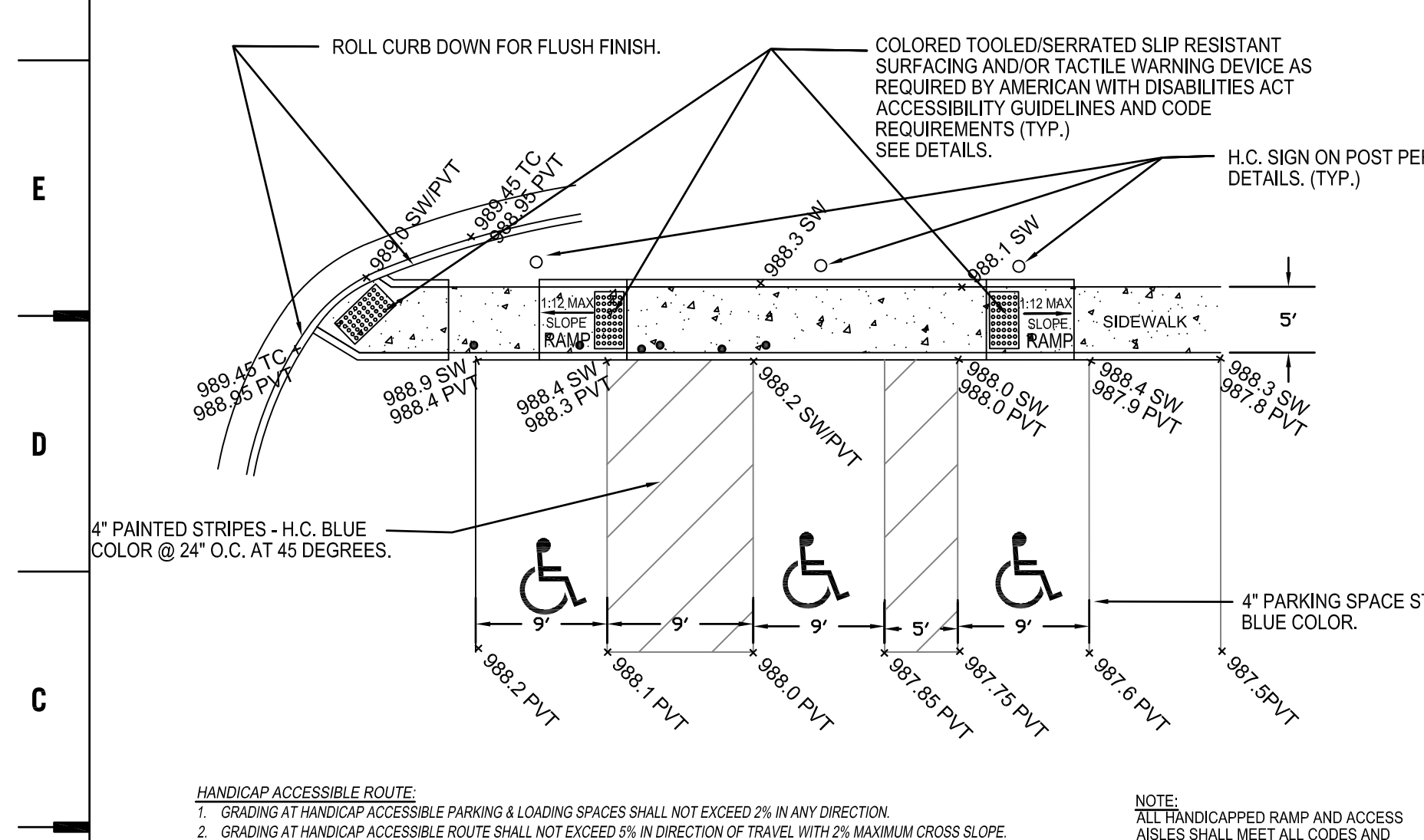
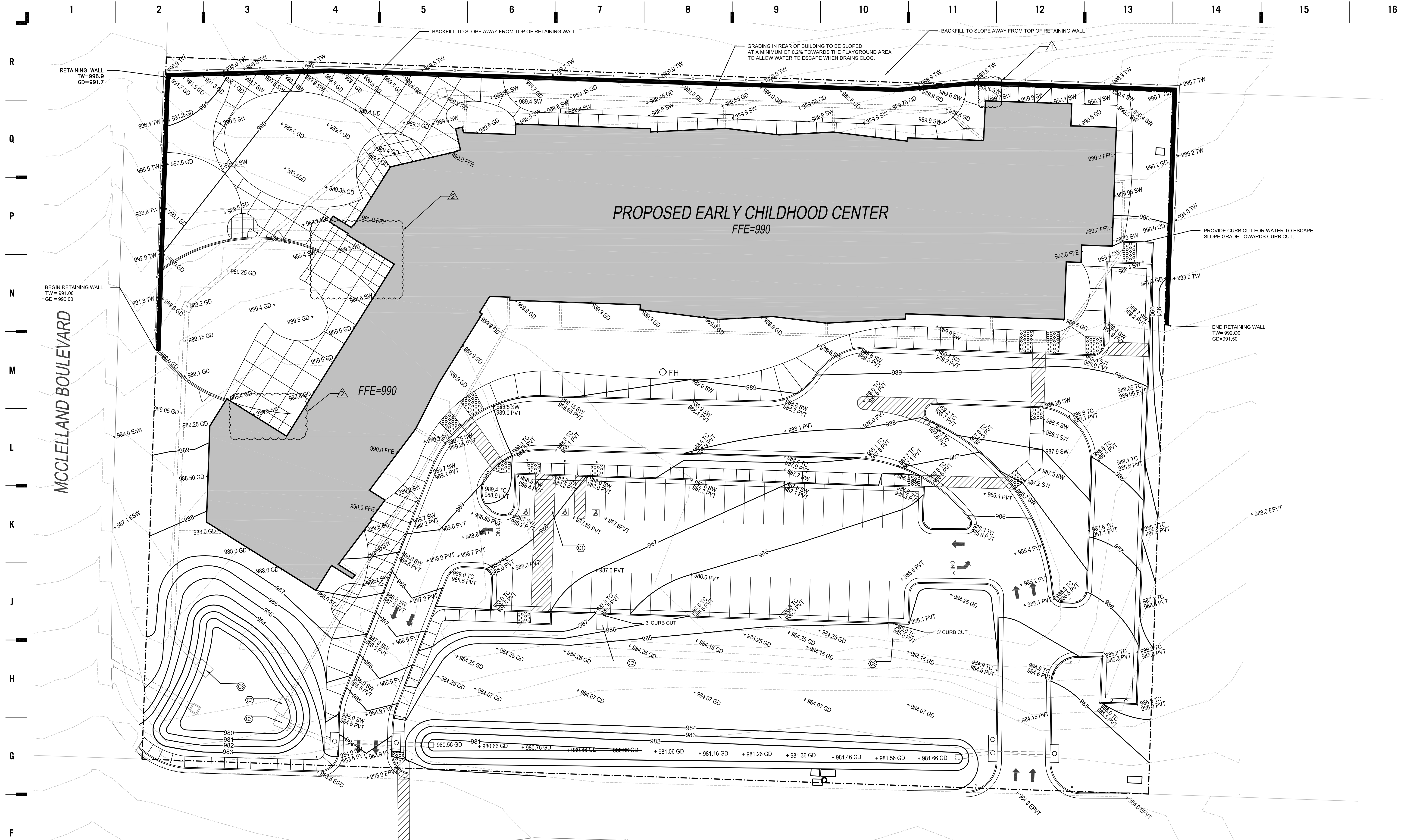
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DRAWN BY: JOSHUA OATHOUT, EI  
CHECKED BY: WAYNE STEPHENSON, PE  
DATE: 10.25.2016

C102

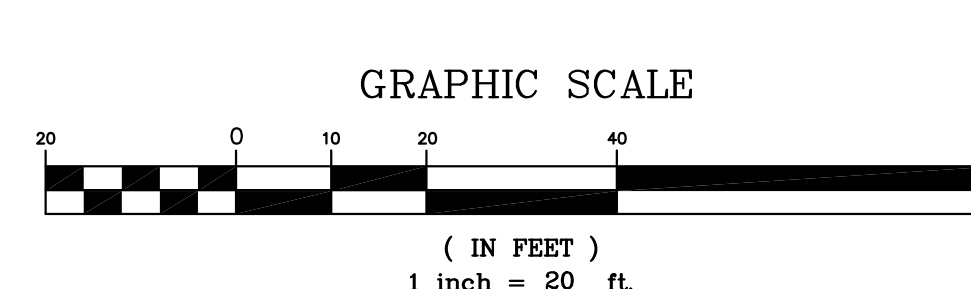
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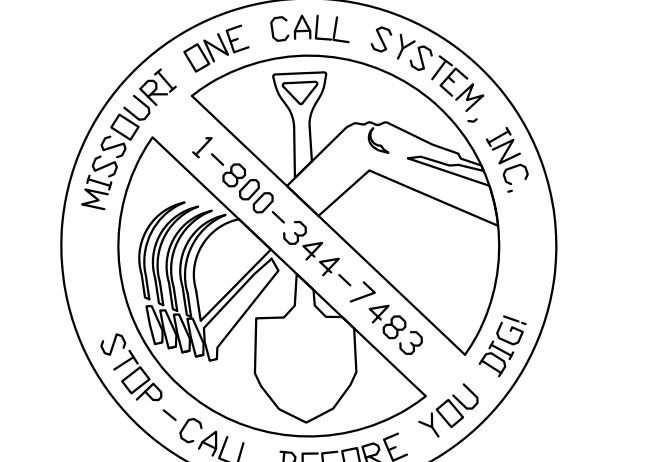
**2 HANDICAP PARKING DETAIL**  
C103 SCALE: NOT TO SCALE

SYMBOLS LEGEND			
REFER TO SURVEY (SV1) FOR EXISTING CONDITION SYMBOLS LEGEND AND SITE CONTROL.			
---	EXISTING GRADE LINES	NEW SPOT ELEVATIONS LIST	ABBREVIATION
---	PROPOSED NEW GRADE LINES		NONE
---	NEW BUILDING CONSTRUCTION		SW
---	RIGHT OF WAY		TW
+	TEMPORARY BENCHMARK:	+ 999.27 TC	TC
+	SQUARE CUT ON CURB ON WEST SIDE OF MCCLELLAND BOULEVARD.		PVT
+	ELEV = 998.7		GO
+	(REFER TO SURVEY FOR VERTICAL CONTROL)		CONC
+			ETC
+			EGD
+			EPVT
+			ESW
+			FL
+			TOP



**SHEET KEYNOTE LEGEND**

- CP CONTROL POINT
- FD IP FOUND IRON PIN
- SET IP SET IRON PIN
- RWM RIGHT-OF-WAY MARKER
- CA POWER POLE W/ GUY
- MH MANHOLE
- SCO SEWER CLEANOUT
- GM GAS METER
- LP LIGHT POLE
- WATER METER
- WATER VALVE
- GV GAS VALVE
- FH FIRE HYDRANT
- TR TELEPHONE RISER
- BUMPER POST
- GRATE INLET
- ER ELECTRICAL RISER
- TS TRAFFIC SIGNAL BOX
- MB MAIL BOX
- SPOT LIGHT
- PAY PHONE
- TREELINE
- BUSH
- PROPERTY LINE
- SANITARY SEWER
- STORM SEWER
- TELEPHONE LINE
- UNDERGROUND TELEPHONE
- GAS LINE
- WATER LINE
- ELECTRIC LINE
- UNDERGROUND ELECTRIC
- FENCE LINE
- RETAINING WALL
- LINE LABELS



**KEY NOTES:**

- HANDICAP PARKING AREA. REFER TO DETAIL 2/C103.
- 10" HDPE DOWNSPOUT COLLECTION PIPE. MINIMUM SLOPE = 1%.
- INSTALL 5/8" RIPRAP PAD. REFER TO DETAIL 3/C104.

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WAYNE A. STEPHENSON  
NUMBER  
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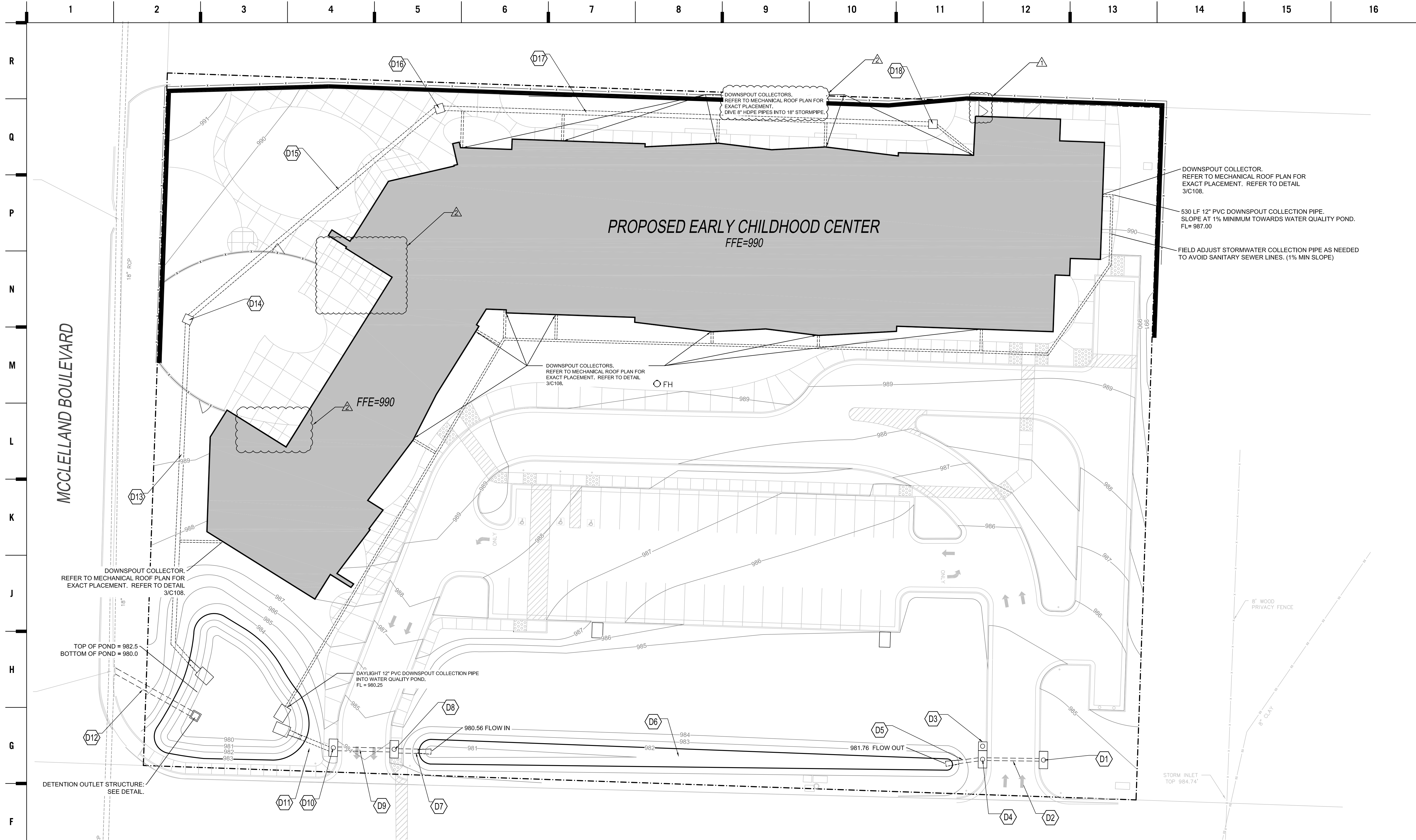
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DRAWN BY: JOSHUA OATHOUT, EI  
CHECKED BY: WAYNE STEPHENSON, PE  
DATE: 10.25.2016

C103

OF

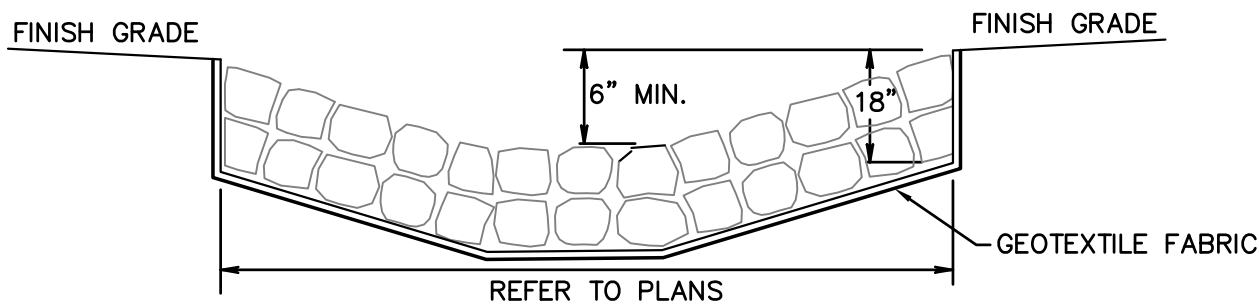
SITE GRADING PLAN





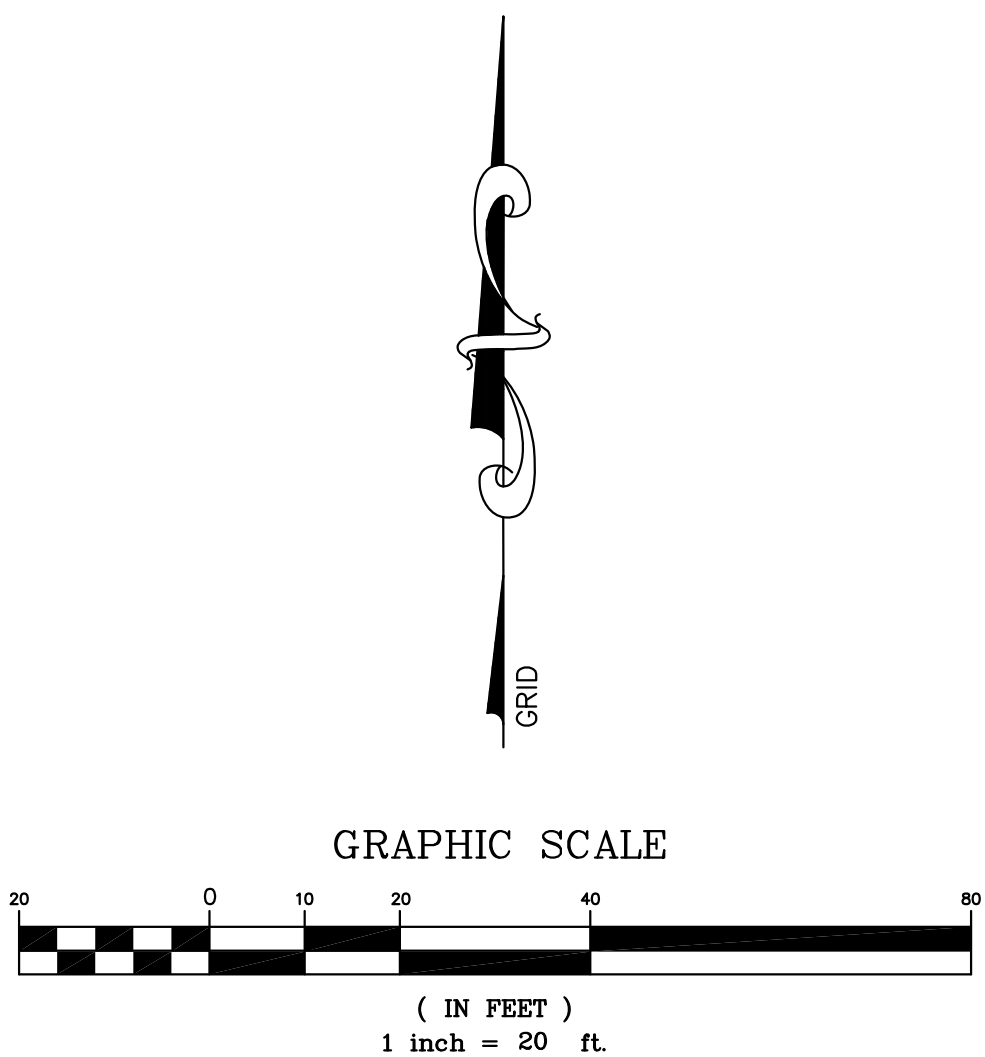
DRAINAGE STRUCTURE INDEX:

STRUCTURE #	STRUCTURE TYPE	FL IN (FT)	FL OUT (FT)	TOP (FT)	SIZE	LENGTH (FT)	SLOPE (%)
D1	CURB INLET	N/A	981.97	985.8	4' X 8'	N/A	N/A
D2	RCP PIPE	981.97	981.85	N/A	15"	24	0.5
D3	CURB INLET	N/A	N/A	984.7	4' X 4'	N/A	N/A
D4	CURB INLET	981.85	981.83	984.7	4' X 8'	N/A	N/A
D5	HDPE PIPE W/FLARED END SECTION	981.83	981.76	N/A	18"	15	0.5
D6	WATER QUALITY SWALE	981.76	980.56	983	N/A	240	0.5
D7	HDPE PIPE W/FLARED END SECTION	980.56	980.49	N/A	21"	15	0.5
D8	CURB INLET	980.49	980.47	984.5	4' X 8'	N/A	N/A
D9	RCP PIPE	980.47	980.35	N/A	24"	24	0.5
D10	CURB INLET	980.35	980.33	984.5	4' X 8'	N/A	0.5
D11	HDPE PIPE W/FLARED END SECTION	980.33	980.24	N/A	24"	19.5	0.5
D12	RCP PIPE	980.00	979.79	N/A	30"	41	0.51
D13	HDPE PIPE W/FLARED END SECTION	981.05	980.25	N/A	24"	160	0.50
D14	AREA INLET	981.15	981.05	989.2	4' X 4'	N/A	N/A
D15	HDPE PIPE	981.89	981.15	N/A	18"	148	0.5
D16	AREA INLET	981.99	981.89	989.2	4' X 4'	N/A	N/A
D17	HDPE PIPE	983.1	981.99	N/A	18"	223	N/A
D18	AREA INLET	N/A	N/A	989.5	4' X 4'	N/A	N/A



- NOTES:
- HAND PLACE RIP-RAP IN ALL PLACES AS INDICATED ON THE PLAN.
  - THE STONE FOR RIP-RAP SHALL CONSIST OF FIELD STONE OR ROUGH UNHEWN QUARRY STONE AS NEARLY AS UNIFORM, IN SECTION AS PRACTICAL.
  - THE STONES SHALL BE DENSE, RESISTANT TO THE ACTION OF AIR AND WATER, AND SUITABLE IN ALL ASPECTS FOR THE PURPOSE INTENDED UNLESS OTHERWISE SPECIFIED.
  - STONES SHALL BE A MINIMUM OF 6" IN DIAMETER AND PLACED A MINIMUM OF 18" BELOW FINISH GRADE.
  - RIPRAP PAD SHALL HAVE NO SLOPE FOR THE LENGTH OF THE RIPRAP PAD.
  - FINISHED GRADE ADJACENT TO THE RIPRAP PAD SHALL BE A MINIMUM OF 6" ABOVE THE RIPRAP PAD BOTTOM.

2 RIPRAP PAD DETAIL  
C104 SCALE: NOT TO SCALE



SHEET KEYNOTE LEGEND

- CP CONTROL POINT
  - FND IP FOUND IRON PIN
  - SET IP SET IRON PIN
  - RM RIGHT-OF-WAY MARKER
  - PP POWER POLE W/ GUY
  - MH MANHOLE
  - SCO SEWER CLEANOUT
  - GM GAS METER
  - LP LIGHT POLE
  - SG SIGN
  - WM WATER METER
  - WV WATER VALVE
  - GV GAS VALVE
  - FH FIRE HYDRANT
  - TR TELEPHONE RISER
  - BUMPER POST
  - GRATE INLET
  - ER ELECTRICAL RISER
  - EM ELECTRICAL METER
  - TB TRAFFIC SIGNAL BOX
  - MB MAIL BOX
  - SL SPOT LIGHT
  - PP PAY PHONE
  - TREELINE
  - BUSH
  - PROPERTY LINE
  - SS SANITARY SEWER
  - SW STORM SEWER
  - TEL TELEPHONE LINE
  - UT UNDERGROUND TELEPHONE
  - W WATER LINE
  - OE ELECTRIC LINE
  - UE UNDERGROUND ELECTRIC
  - FENCE LINE
  - RETAINING WALL
  - LINE LABELS
- PLAT 100' P  
DEED 100' D  
MEASURED 100' M



RIP-RAP NOTE:

PLACE RIP-RAP IN ALL PLACES AS INDICATED ON THE PLAN. THE STONE FOR RIP-RAP SHALL CONSIST OF FIELD STONE OR ROUGH UNHEWN QUARRY STONE AS NEARLY AS UNIFORM, IN SECTION AS PRACTICAL. THE STONES SHALL BE DENSE, RESISTANT TO THE ACTION OF AIR AND WATER, AND SUITABLE IN ALL ASPECTS FOR THE PURPOSE INTENDED UNLESS OTHERWISE SPECIFIED. RIP-RAP SHALL CONSIST OF MATERIAL WITH A PREDOMINANT ROCK SIZE OF 6", A MAXIMUM ROCK SIZE OF 10", AND A GRADATION SUCH THAT NO MORE THAN 15% WILL BE LESS 3". STONES SHALL BE PLACED A MINIMUM OF 12" BELOW FINISH GRADE. ALL RIP-RAP SHALL BE PLACED OVER GEOTEXTILE FILTER FABRIC.

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Structure # 2006011333

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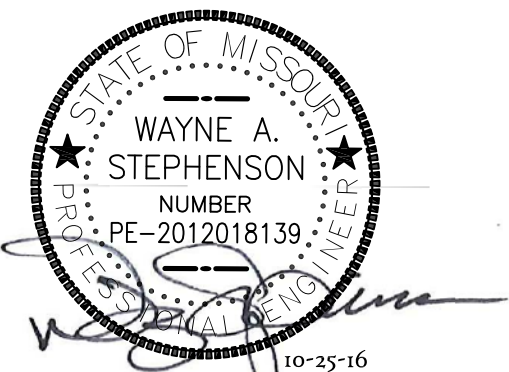
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CONSTRUCTION DOCUMENTS  
PKG #2

Joplin Early Childhood Center  
Joplin Schools



REVISIONS:		
ADDENDUM #1	10/14/2016	
ADDENDUM #2	10/25/2016	

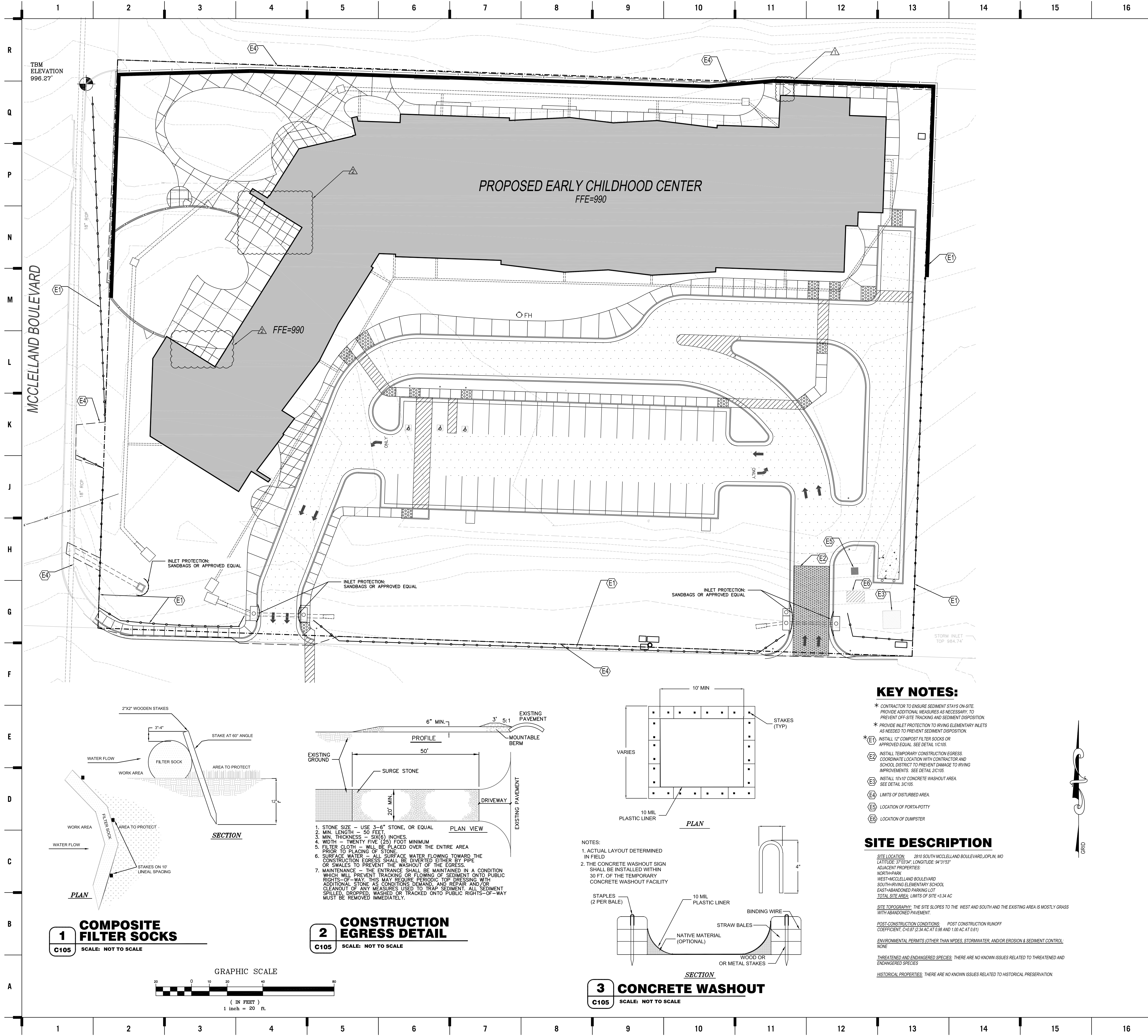


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CHECKED BY: WAYNE STEPHENSON, PE  
DATE: 10.25.2016

C104  
OF





SHEET KEYNOTE LEGEND

- CP CONTROL POINT
  - FOUND FOUND IRON PIN
  - SET SET IRON PIN
  - RM RIGHT-OF-WAY MARKER
  - SP POWER POLE W/ GUY
  - MH MANHOLE
  - SCO SEWER CLEANOUT
  - GM GAS METER
  - LP LIGHT POLE
  - SG SIGN
  - WM WATER METER
  - WV WATER VALVE
  - GV GAS VALVE
  - FH FIRE HYDRANT
  - TR TELEPHONE RISER
  - BU BUMPER POST
  - GI GRATE INLET
  - ER ELECTRICAL RISER
  - EM ELECTRICAL METER
  - TS TRAFFIC SIGNAL BOX
  - MB MAIL BOX
  - SL SPOT LIGHT
  - PP PAY PHONE
  - TR TREETRUNK
  - BUSH
  - PROPERTY LINE
  - SS SANITARY SEWER
  - SW STORM SEWER
  - TEL TELEPHONE LINE
  - UT UNDERGROUND TELEPHONE
  - W GAS LINE
  - W WATER LINE
  - UE ELECTRIC LINE
  - UE UNDERGROUND ELECTRIC
  - FENCE LINE
  - RETAINING WALL
  - LINE LABELS
- PLAT 100' P  
GRID 100' D  
MEASURED 100' M



**DRY DETENTION POND**  
DRY DETENTION POND TO BE CONSTRUCTED AT COMMENCEMENT OF SITE GRADING TO TEMPORARILY ACT AS SEDIMENT SETTLING POND. POND SHALL BE CLEANED OF SEDIMENT AS NEEDED AND UPON SITE STABILIZATION.

**RIP-RAP NOTE:**  
PLACE RIP-RAP IN ALL PLACES AS INDICATED ON THE PLAN. THE STONE FOR RIP-RAP SHALL CONSIST OF FIELD STONE OR ROUGH UNHEWN QUARRY STONE AS NEARLY AS UNIFORM, IN SECTION AS PRACTICAL. THE STONES SHALL BE DENSE, RESISTANT TO THE ACTION OF AIR AND WATER, AND SUITABLE IN ALL ASPECTS FOR THE PURPOSE INTENDED UNLESS OTHERWISE SPECIFIED. RIP-RAP SHALL CONSIST OF MATERIAL WITH A PREDOMINANT ROCK SIZE OF 6". A MAXIMUM ROCK SIZE OF 10", AND A GRADATION SUCH THAT NO MORE THAN 15% WILL BE LESS 3". STONES SHALL BE PLACED A MINIMUM OF 12" BELOW FINISH GRADE. ALL RIP-RAP SHALL BE PLACED OVER GEOTEXTILE FILTER FABRIC.

**EROSION CONTROL**

1. RETAIN FLOATABLE WIND BLOWN MATERIALS ON SITE BY STORING ALL TRASH AND BUILDING MATERIAL WASTE IN ENCLOSURES UNTIL PROPER DISPOSAL AT OFF-SITE FACILITIES. CHECK ADJACENT AREAS DAILY AND PICK UP CONSTRUCTION WASTE MATERIALS AND DEBRIS THAT HAVE BLOWN OR WASHED OFF SITE.
2. PERMANENTLY STABILIZE ALL SURFACE AREA WITHIN AND ADJACENT TO THIS SITE THAT IS DISTURBED BY VEHICLES, GRADING AND OTHER CONSTRUCTION FOR THE PROPOSED FACILITY. STABILIZATION IS OBTAINED WHEN THE DISTURBED SURFACE IS COVERED WITH STRUCTURES, PAVING AND OR PERENNIAL VEGETATION HAVING A UNIFORM COVERAGE DENSITY OF AT LEAST 70%. STABILIZATION OF ALL DISTURBED AREA IS REQUIRED BEFORE TERMINATING MAINTENANCE AND REMOVAL OF EROSION CONTROL MEASURES.
3. CONTRACTORS SHALL INSPECT POLLUTION CONTROL MEASURES AT LEAST ONCE EVERY 14 DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT OF 1/2 INCH OR GREATER. DAMAGED MEASURES THAT PROVE TO BE INEFFECTIVE SHALL BE REPLACED WITH MORE EFFECTIVE MEASURES OR ADDITIONAL MEASURES WITHIN SEVEN DAYS. REPEATED FAILURE OF A CONTROL MEASURE REQUIRES INSTALLATION OF A MORE SUITABLE DEVICE TO PREVENT DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE.
4. INSTALLATION OF ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY GOVERNING AUTHORITY. CONTRACTOR TO VERIFY REQUIREMENTS PRIOR TO BEGINNING ANY WORK ON PROJECT SITE.
5. CARE SHALL BE TAKEN TO MINIMIZE THE ENCROACHMENT OF SEDIMENT INTO ALL STORM DRAIN APPURTENANCES, PUBLIC STREETS, AND ONTO PRIVATE PROPERTY UNTIL IMPROVEMENTS MATERIAL (ROAD/PARKING AREA SURFACE) IS APPLIED OR UNTIL PROPOSED LANDSCAPE HAS BEEN ESTABLISHED.
6. ALL GRASS AREAS WHERE SLOPES EXCEED 3:1 (H:V) SHALL BE STABILIZED WITH TEMPORARY TURF REINFORCEMENT MATS. INSTALLATION OF TEMPORARY TURF REINFORCEMENT MATS SHALL BE TO MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL CONTACT MANUFACTURER TO COORDINATE PROPER INSTALLATION OF TEMPORARY TURF REINFORCEMENT MATS TO PREVENT SLOPE FAILURES AND EROSION.
7. SEE SWPP BOOKLET FOR ADDITIONAL INSTRUCTIONS.

**STAGES OF CONSTRUCTION:**

1. CONTRACTOR TO PERFORM DETAILED SITE INSPECTION TO LOCATE ALL EXISTING UTILITIES AND VERIFY ANY POSSIBLE CONFLICTS WITH PROPOSED IMPROVEMENTS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTACT ENGINEER WITH ANY CONFLICTS.
2. INSTALLATION OF EROSION CONTROL MEASURES.
3. INSTALLATION OF ALL STORM WATER DRAINAGE IMPROVEMENTS.
4. FINAL GRADING.
5. PLACEMENT OF FINAL LANDSCAPING ITEMS AND SOD.
6. REMOVAL OF EROSION CONTROL MEASURES.

**KEY NOTES:**

- \* CONTRACTOR TO ENSURE SEDIMENT STAYS ON-SITE. PROVIDE ADDITIONAL MEASURES AS NECESSARY, TO PREVENT OFF-SITE TRACKING AND SEDIMENT DISPOSITION.
- \* PROVIDE INLET PROTECTION TO IRVING ELEMENTARY INLETS AS NEEDED TO PREVENT SEDIMENT DISPOSITION.
- \* E1 INSTALL 1" COMPOST FILTER SOCKS OR APPROVED EQUAL. SEE DETAIL VC105.
- E2 INSTALL TEMPORARY CONSTRUCTION EGRESS. COORDINATE LOCATION WITH CONTRACTOR AND SCHOOL DISTRICT TO PREVENT DAMAGE TO IRVING IMPROVEMENTS. SEE DETAIL VC105.
- E3 INSTALL 10'x10' CONCRETE WASHOUT AREA. SEE DETAIL VC105.
- E4 LIMITS OF DISTURBED AREA.
- E5 LOCATION OF PORTA-POTTY.
- E6 LOCATION OF DUMPSTER.

**SITE DESCRIPTION**

**SITE LOCATION:** 2810 SOUTH MCCLELLAND BOULEVARD, JOPLIN, MO  
LATITUDE: 37°33'41" LONGITUDE: 94°31'53"  
ADJACENT PROPERTIES:  
NORTH-PARK  
WEST-MCCLELLAND BOULEVARD  
SOUTH-IRVING ELEMENTARY SCHOOL  
EAST-ABANDONED PARKING LOT  
**TOTAL SITE AREA:** LIMITS OF SITE = 3.34 AC

**SITE TOPOGRAPHY:** THE SITE SLOPES TO THE WEST AND SOUTH AND THE EXISTING AREA IS MOSTLY GRASS WITH ABANDONED PAVEMENT.

**POST-CONSTRUCTION CONDITIONS:** POST CONSTRUCTION RUNOFF COEFFICIENT: C=0.87 (2.34 AC AT 0.88 AND 1.00 AC AT 0.61)

**ENVIRONMENTAL PERMITS (OTHER THAN NPDES, STORMWATER, AND/OR EROSION & SEDIMENT CONTROL):** NONE

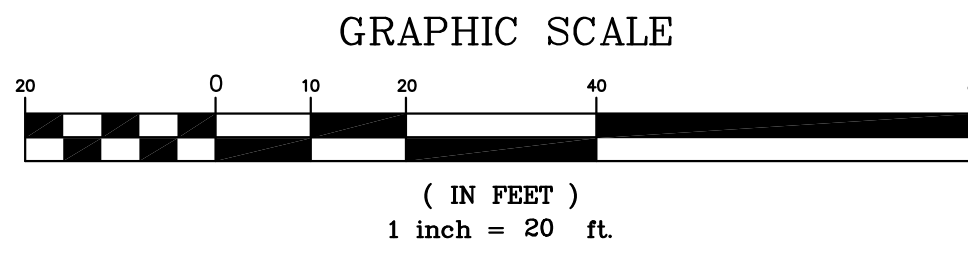
**THREATENED AND ENDANGERED SPECIES:** THERE ARE NO KNOWN ISSUES RELATED TO THREATENED AND ENDANGERED SPECIES

**HISTORICAL PROPERTIES:** THERE ARE NO KNOWN ISSUES RELATED TO HISTORICAL PRESERVATION.

**1 COMPOSITE FILTER SOCKS**  
C105 SCALE: NOT TO SCALE

**2 CONSTRUCTION EGRESS DETAIL**  
C105 SCALE: NOT TO SCALE

**3 CONCRETE WASHOUT**  
C105 SCALE: NOT TO SCALE



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Structure # 2006011331

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**CONSTRUCTION DOCUMENTS**  
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**Revisions:**

ADDENDUM #1	10/14/2016
ADDENDUM #2	10/25/2016

**Wayne A. Stephenson**  
Professional Engineer  
PE-2012018139  
10/23/16

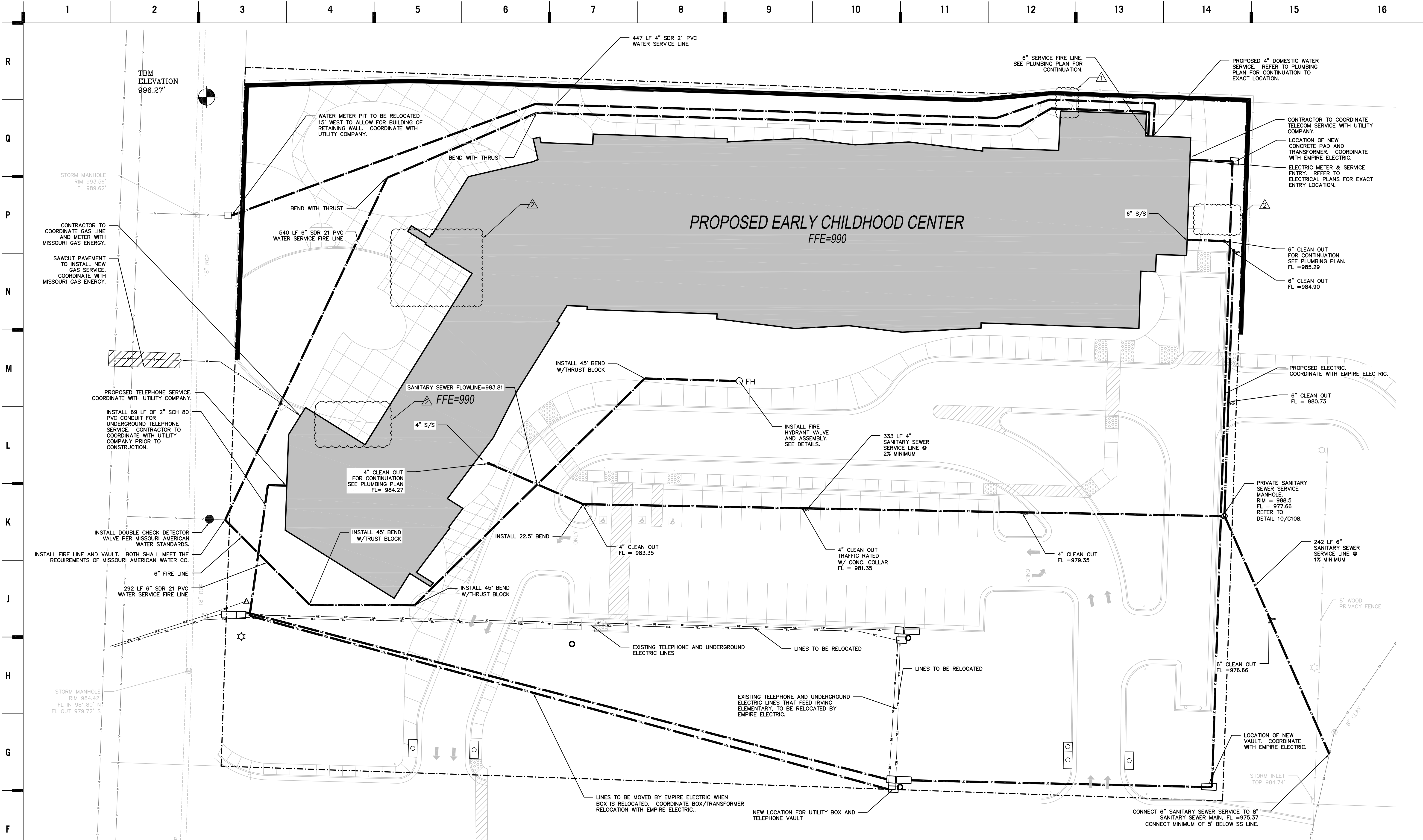
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JOB NO: 50040-16  
DRAWN BY: JOSHUA OATHOUT, EI  
CHECKED BY: WAYNE STEPHENSON, PE  
DATE: 10.25.2016

**C105**  
OF

**STORMWATER POLLUTION PREVENTION PLAN**





### GENERAL NOTES:

1. ALL WORK, MATERIALS, AND DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF JOPLIN STANDARD SPECIFICATIONS, DATED MAY 31, 2016. CONTRACTORS SHALL OBTAIN A COPY OF THESE STANDARDS TO ENSURE COMPLIANCE.
2. EXISTING UTILITIES AND UNDERGROUND INSTALLATIONS HAVE BEEN LOCATED TO THE GREATEST EXTENT PRACTICAL THROUGH REVIEW OF CONSTRUCTION PLANS AND SURFACE OBSERVATIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL HORIZONTAL AND VERTICAL LINES AND GRADES OF EXISTING UTILITIES PRIOR TO THE CONSTRUCTION OF IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERING A DISCREPANCY BETWEEN THE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS. CONTACT ONE CALL: 1-800-344-7483.
3. THE CONTRACTOR MUST COORDINATE CONSTRUCTION WITH THE NECESSARY AUTHORITIES.
4. NO WORK SHALL COMMENCE UNTIL ALL NECESSARY PERMITS ARE OBTAINED BY THE OWNER.
5. PROVIDE POSITIVE DRAINAGE AWAY FROM ANY BUILDINGS WITHOUT PONDING ON PARKING LOTS OR SIDEWALKS. ALL IMPROVED RUNOFF TO DRAIN TO DRAINWAYS.
6. ALL CONTOURS AND SPOT ELEVATIONS SHOWN ARE FINISH GRADE.
7. THE REMOVAL OF ANY TREES GREATER THAN 7 INCHES IN DIAMETER AT BREAST HEIGHT (DBH) ARE TO BE CLEARED WITH THE CITY PRIOR TO REMOVAL.
8. ANY DAMAGE TO EXISTING STRUCTURES, VEGETATION, OR IMPROVEMENTS RESULTING FROM NEW CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

### SANITARY SEWER NOTES:

ALL 4" AND 6" SANITARY SEWER SERVICE LINES SHALL BE SCHEDULE 40 PVC. ALL 4" SANITARY SEWER SERVICE LINES SHALL HAVE A 2% MINIMUM SLOPE AND 6" SANITARY SEWER SERVICE LINES SHALL HAVE A 1% MINIMUM SLOPE. INSTALL CLEAN OUTS AT ALL CHANGES IN SLOPE AND/OR GEOMETRY AND @ EVERY 100'.

### AT&T CONDUIT NOTES:

PRIOR TO PURCHASING AND INSTALLING, CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION WITH AT&T.

### FIRE LINE NOTES:

INSTALL ALL BENDS FOR 6" WATER LINE WITH NECESSARY MECHANICAL RESTRAINED JOINT AND MECHANICAL RESTRAINED FITTINGS PER THE STANDARD SPECIFICATIONS FOR THE CITY OF JOPLIN.

INSTALL DOUBLE CHECK DETECTOR VALVE ASSEMBLY AT WEST CONNECTION OF 6" FIRE LINE TO WATER MAIN ON MCCLELLAND STREET PER ALL MISSOURI DEPARTMENT OF NATURAL RESOURCES AND MISSOURI AMERICAN WATER REQUIREMENTS. CONTRACTOR MAY REUSE ANY EXISTING DOUBLE CHECK DETECTOR VALVE ASSEMBLY IF INSPECTION AND TESTING IS APPROVED BY A QUALIFIED INSTALLER.

FIRE DEPARTMENT SHALL APPROVE EXACT LOCATION OF HYDRANTS PRIOR TO INSTALLATION.

**SPECIAL NOTE:**  
CONTRACTOR IS RESPONSIBLE FOR ALL PUBLIC UTILITY CONNECTIONS (ELECTRIC, WATER, GAS, SEPTIC, SEWER) AS WELL AS PROVIDING ALL INFRASTRUCTURE REQUIRED BY UTILITY COMPANIES.

**WATER VAULT NOTE:**  
WATER VAULT TO BE RELOCATED 15' WEST TO ALLOW FOR BUILDING OF RETAINING WALL. COORDINATE WITH UTILITY COMPANY FOR RELOCATION AND LINE PLACEMENTS.

### 2 UNDERGROUND ELECTRICAL CONDUITS

SCALE: NOT TO SCALE

### 3 PIPE INSTALLATION DETAIL

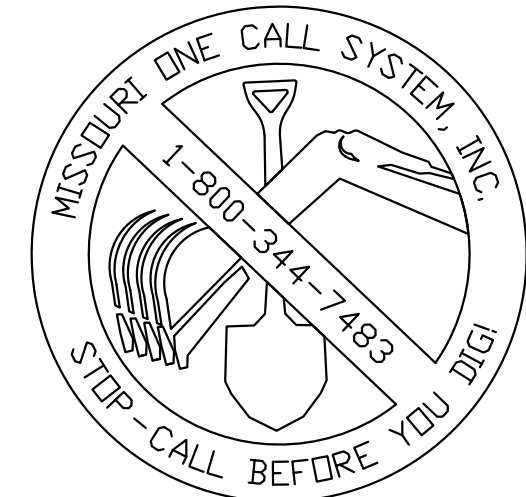
SCALE: NOT TO SCALE

### STAGES OF CONSTRUCTION:

1. CONTRACTOR TO PERFORM DETAILED SITE INSPECTION TO LOCATE ALL EXISTING UTILITIES AND VERIFY ANY POSSIBLE CONFLICTS WITH PROPOSED IMPROVEMENTS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTACT ENGINEER WITH ANY CONFLICTS.
2. INSTALLATION OF EROSION CONTROL MEASURES.
3. INSTALLATION OF ALL STORM WATER DRAINAGE IMPROVEMENTS.
4. FINAL GRADING.
5. PLACEMENT OF FINAL LANDSCAPING ITEMS AND SOD.
6. REMOVAL OF EROSION CONTROL MEASURES.

### SHEET KEYNOTE LEGEND

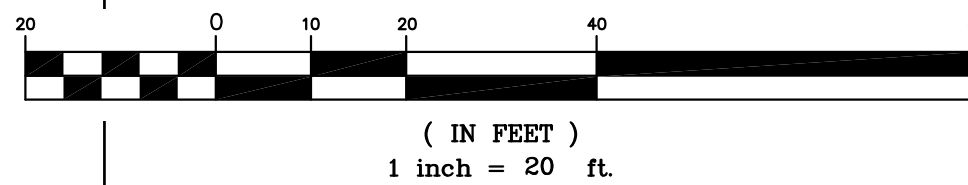
- CP CONTROL POINT
  - FND IP FOUND IRON PIN
  - SET IP SET IRON PIN
  - RWM RIGHT-OF-WAY MARKER
  - S/S SANITARY SEWER SERVICE LINE
  - MH MANHOLE
  - SCO SEWER CLEANOUT
  - GM GAS METER
  - LP LIGHT POLE
  - SIGN
  - WM WATER METER
  - GV GAS VALVE
  - FH FIRE HYDRANT
  - TR TELEPHONE RISER
  - BUMPER POST
  - GRATE INLET
  - ER ELECTRICAL RISER
  - EM ELECTRICAL METER
  - TS TRAFFIC SIGNAL BOX
  - MB MAIL BOX
  - SPOT LIGHT
  - PAY PHONE
  - TREELINE
  - BUSH
  - PROPERTY LINE
  - SS SANITARY SEWER
  - SW STORM SEWER
  - TEL TELEPHONE LINE
  - UT UNDERGROUND TELEPHONE
  - GAS LINE
  - W WATER LINE
  - OHE OVERHEAD ELECTRIC
  - UE UNDERGROUND ELECTRIC
  - FENCE LINE
  - RETAINING WALL
  - LINE LABELS
- 1" = 100' P  
1" = 100' D  
1" = 100' M



### NEW UTILITIES SYMBOLS

(SYMBOLS APPLY ONLY WHEN USED ON DRAWINGS)	
WS	WATER SERVICE
SS	SANITARY SEWER SERVICE
UGE	UG ELECTRIC
TEL	UG PHONE
T	UG PHONE (BY PHONE CO.)
OHE	OVERHEAD ELECTRIC
OHT	OVERHEAD PHONE
FO	FIBER OPTIC CABLE
SAW CUT	SAW CUT
BORE	BORE

### GRAPHIC SCALE



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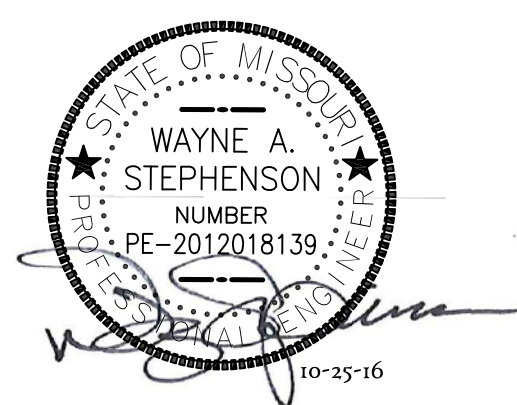
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CONSTRUCTION DOCUMENTS  
PKG #2

Joplin Early Childhood Center  
Joplin Schools

**ANDERSON**  
ENGINEERING  
EMPLOYEE OWNED

REVISIONS:  
ADDENDUM #1 10/14/2016  
ADDENDUM #2 10/25/2016



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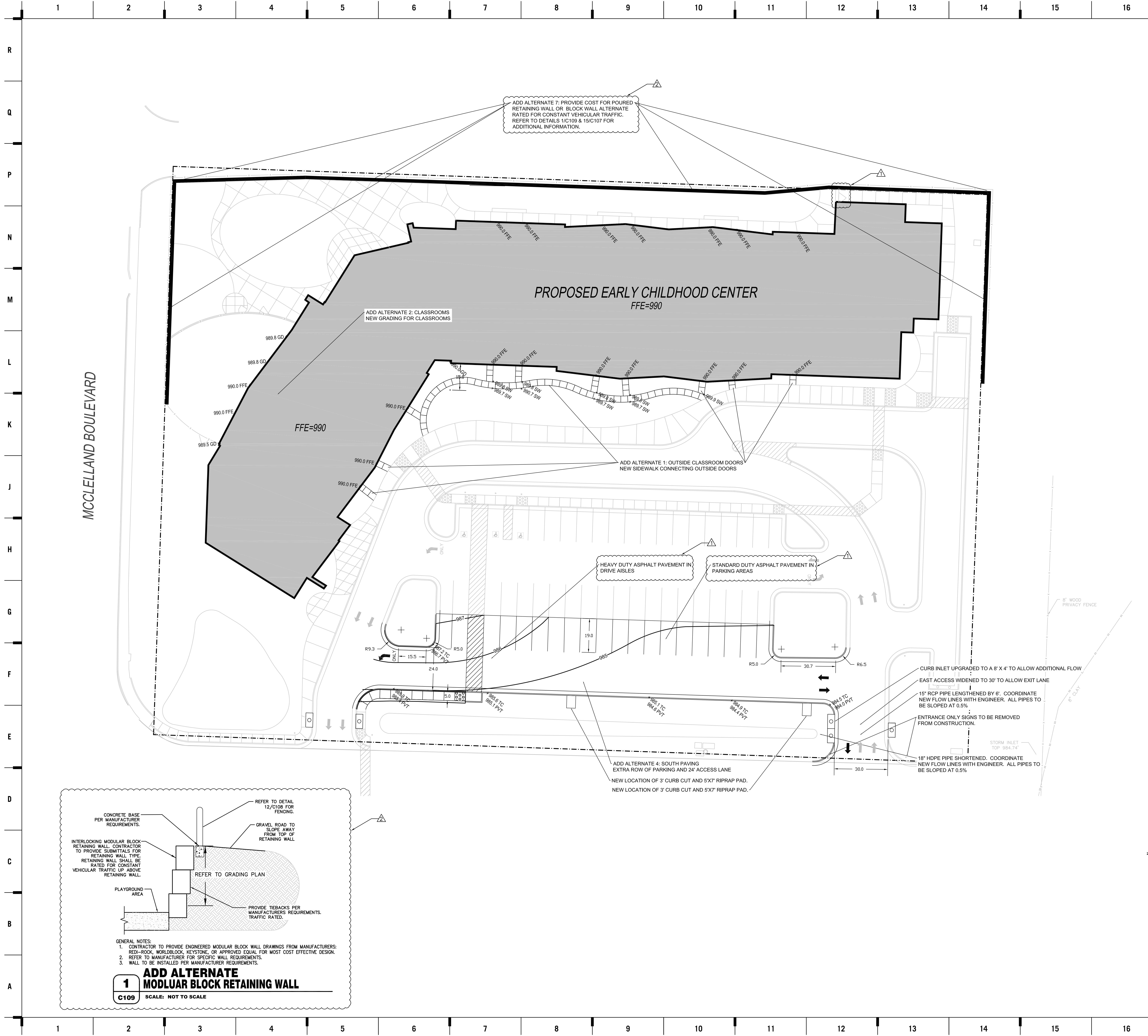
JOB NO: 50004-16  
DRAWN BY: JOSHUA OATHOUT, EI  
CHECKED BY: WAYNE STEPHENSON, PE  
DATE: 10.25.2016

**C106**

OF

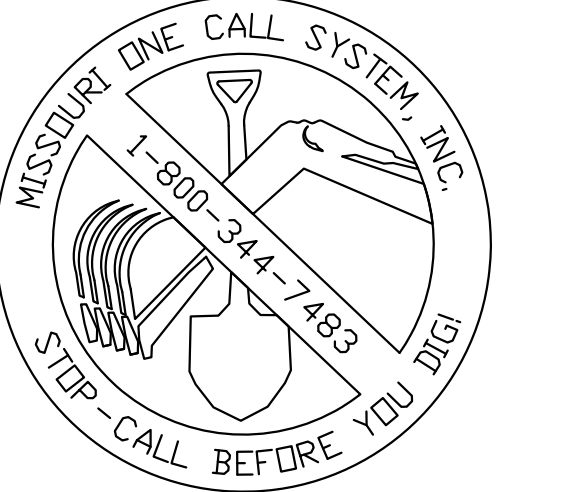
UTILITY PLAN





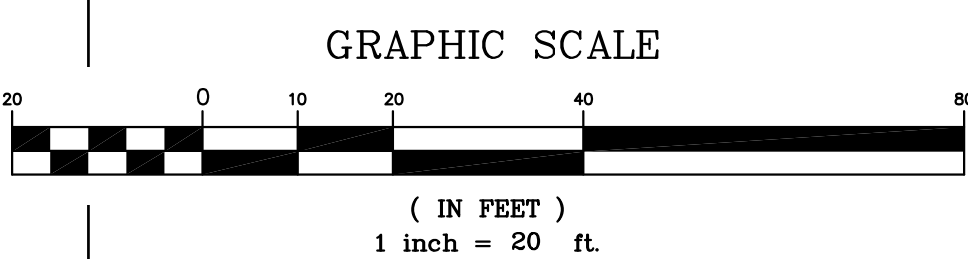
SHEET KEYNOTE LEGEND

- CP CONTROL POINT
  - FI FOUND IRON PIN
  - SI SET IRON PIN
  - RWM RIGHT-OF-WAY MARKER
  - PP POWER POLE W/ GUY
  - MH MANHOLE
  - SCO SEWER CLEANOUT
  - GM GAS METER
  - LP LIGHT POLE
  - SIGN
  - WM WATER METER
  - WV WATER VALVE
  - GV GAS VALVE
  - FH FIRE HYDRANT
  - TR TELEPHONE RISER
  - TR BUMPER POST
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  - TS TRAFFIC SIGNAL BOX
  - MB MAIL BOX
  - SL SPOT LIGHT
  - PP PAY PHONE
  - TR TREETRUNK
  - BUSH
  - PROPERTY LINE
  - SS SANITARY SEWER
  - SW STORM SEWER
  - TEL TELEPHONE LINE
  - UT UNDERGROUND TELEPHONE
  - G GAS LINE
  - W WATER LINE
  - OHE OVERHEAD ELECTRIC
  - UE UNDERGROUND ELECTRIC
  - FENCE LINE
  - RETAINING WALL
  - LINE LABELS
- PLAT 100' P  
DEED 100' D  
MEASURED 100' M



ADD ALTERNATE PARKING TOTALS:

- VISITOR = 19 SPACES
- STAFF = 40 SPACES
- TOTAL = 59 SPACES
- TOTAL HANDICAP = 3 SPACES



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**CONSTRUCTION DOCUMENTS**  
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**Joplin Early Childhood Center**  
Joplin Schools

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STATE OF MISSOURI  
WAYNE A. STEPHENSON  
NUMBER PE-2012018139  
10-23-16

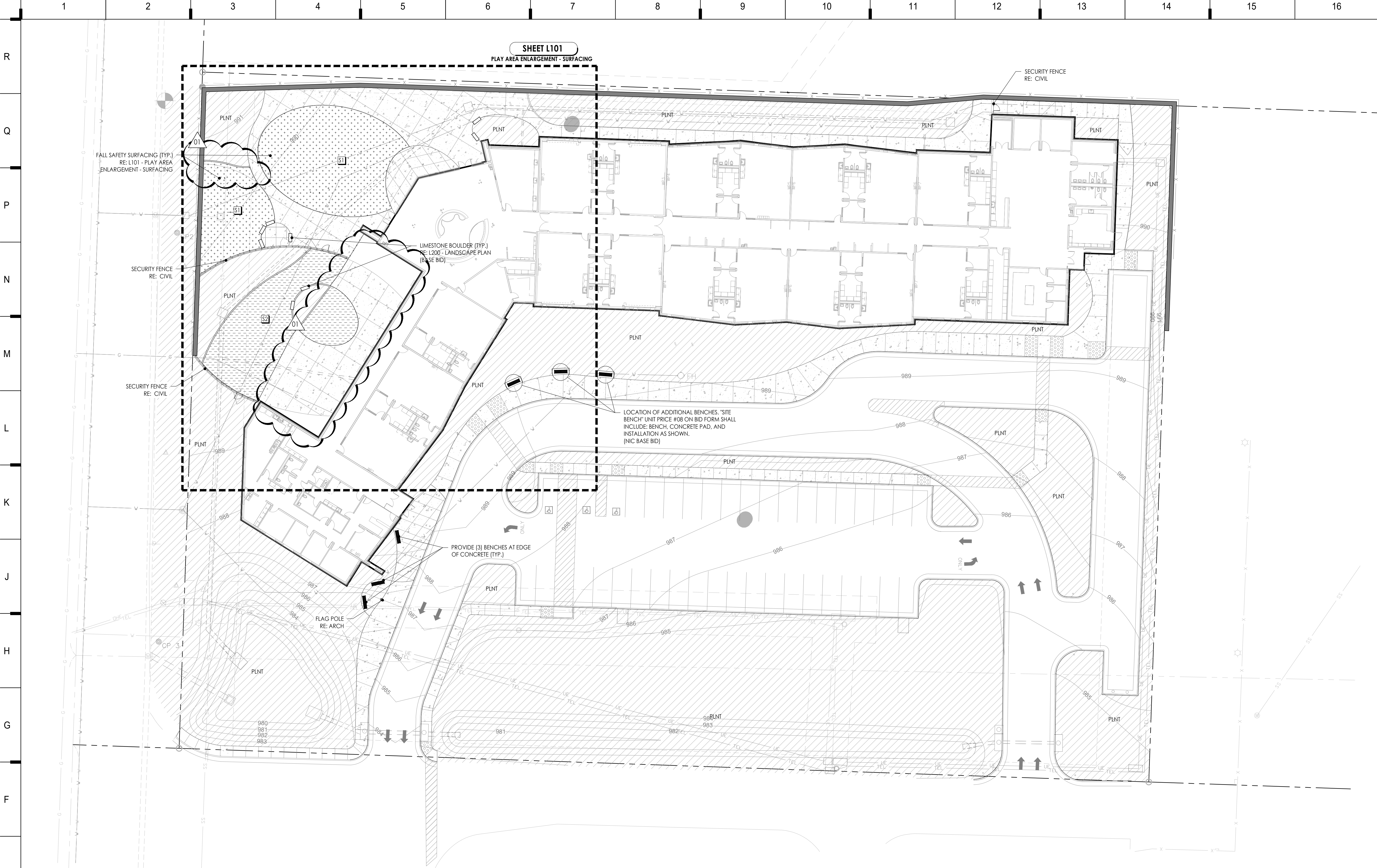
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CHECKED BY: WAYNE STEPHENSON, PE  
DATE: 10.25.2016

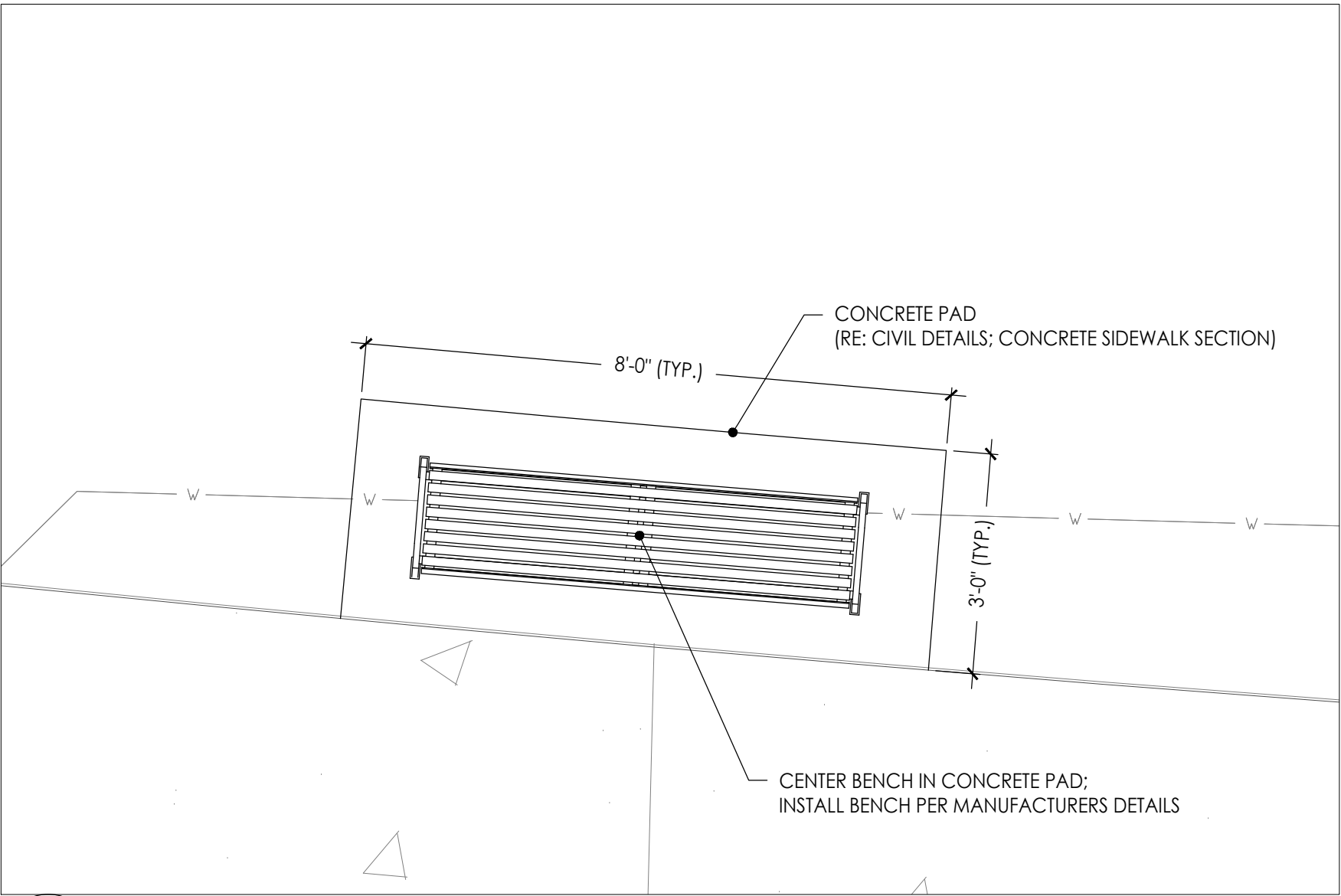
**C109**  
OF

ADD ALTERNATES





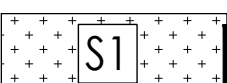
**1 SURFACING & FURNISHINGS PLAN**  
Scale: 1" = 20'



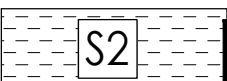
**2 "SITE BENCH" UNIT PRICE ENLARGEMENT**  
Scale: 1/2" = 1'-0"

**SHEET KEYNOTE  
LEGEND**

**SURFACING PLAN LEGEND**



PLAYGROUND ARTIFICIAL TURF SURFACING  
• SYNTHETIC TURF SURFACING W/ SHOCK ABSORBING PAD MEETING FALL HEIGHT REQUIREMENTS OF PLAY EQUIPMENT  
RE: SECTION #1321820 - PLAYGROUND PROTECTIVE SURFACING



PLAYGROUND RUBBER SURFACING  
• POURED-IN-PLACE RUBBERIZED SURFACING TO MEET SHOCK ABSORBING FALL HEIGHT REQUIREMENTS OF PLAY EQUIPMENT  
RE: SECTION #1321820 - PLAYGROUND PROTECTIVE SURFACING



PLANTING BEDS:  
RE: L200 - LANDSCAPE PLAN (BASE BID)



CONCRETE SIDEWALK; RE: CIVIL PLANS

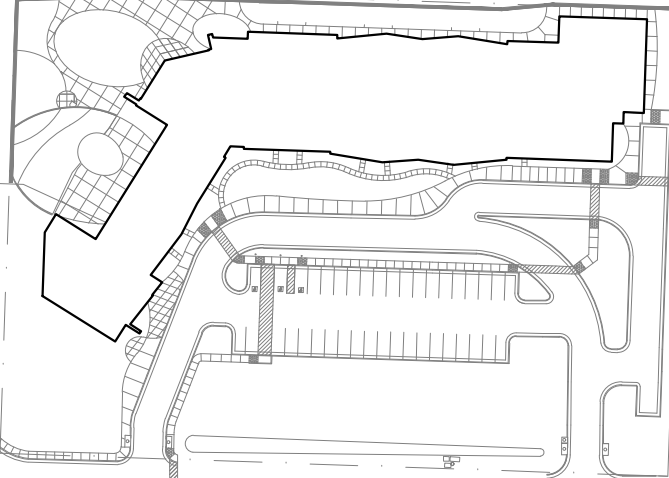


PROVIDE BENCH; RE: SPEC #129300  
LAYOUT AND INSTALL BENCH PER MANUFACTURERS DETAILS.

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STUDIO

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**KEY PLAN**



Joplin Early Childhood Center  
Joplin Schools

REVISIONS:		
#	Description	Date
1	ADDENDUM 002	10.25.2016



JOB 1175  
NO: BYMRK  
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BY: 09.30.2016

**L100**

OF

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**1 PLAY AREA SURFACING PLAN**  
Scale: 1" = 10'

**SHEET KEYNOTE  
LEGEND**

**SURFACING PLAN LEGEND**

- S1** PLAYGROUND ARTIFICIAL TURF SURFACING
  - SYNTHETIC TURF SURFACING W/ SHOCK ABSORBING PAD MEETING FALL HEIGHT REQUIREMENTS OF PLAY EQUIPMENT
  - RE: SECTION #321820 - PLAYGROUND PROTECTIVE SURFACING
- S2** PLAYGROUND RUBBER SURFACING
  - POURED-IN-PLACE RUBBERIZED SURFACING TO MEET SHOCK ABSORBING FALL HEIGHT REQUIREMENTS OF PLAY EQUIPMENT
  - RE: SECTION #321820 - PLAYGROUND PROTECTIVE SURFACING
- PLNT** PLANTING BEDS:  
RE: L200 - LANDSCAPE PLAN (BASE BID)
- CONCRETE SIDEWALK**: RE: CIVIL PLANS
- PROVIDE BENCH**: RE: SPEC #129300  
LAYOUT AND INSTALL BENCH PER MANUFACTURERS DETAILS.

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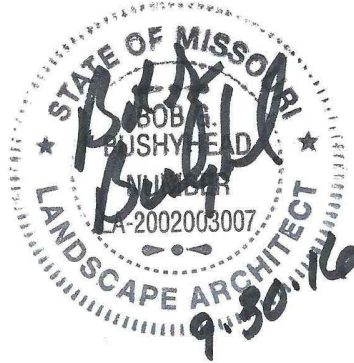
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Joplin Schools

REVISIONS:		
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1	ADDENDUM 002	10.25.2016

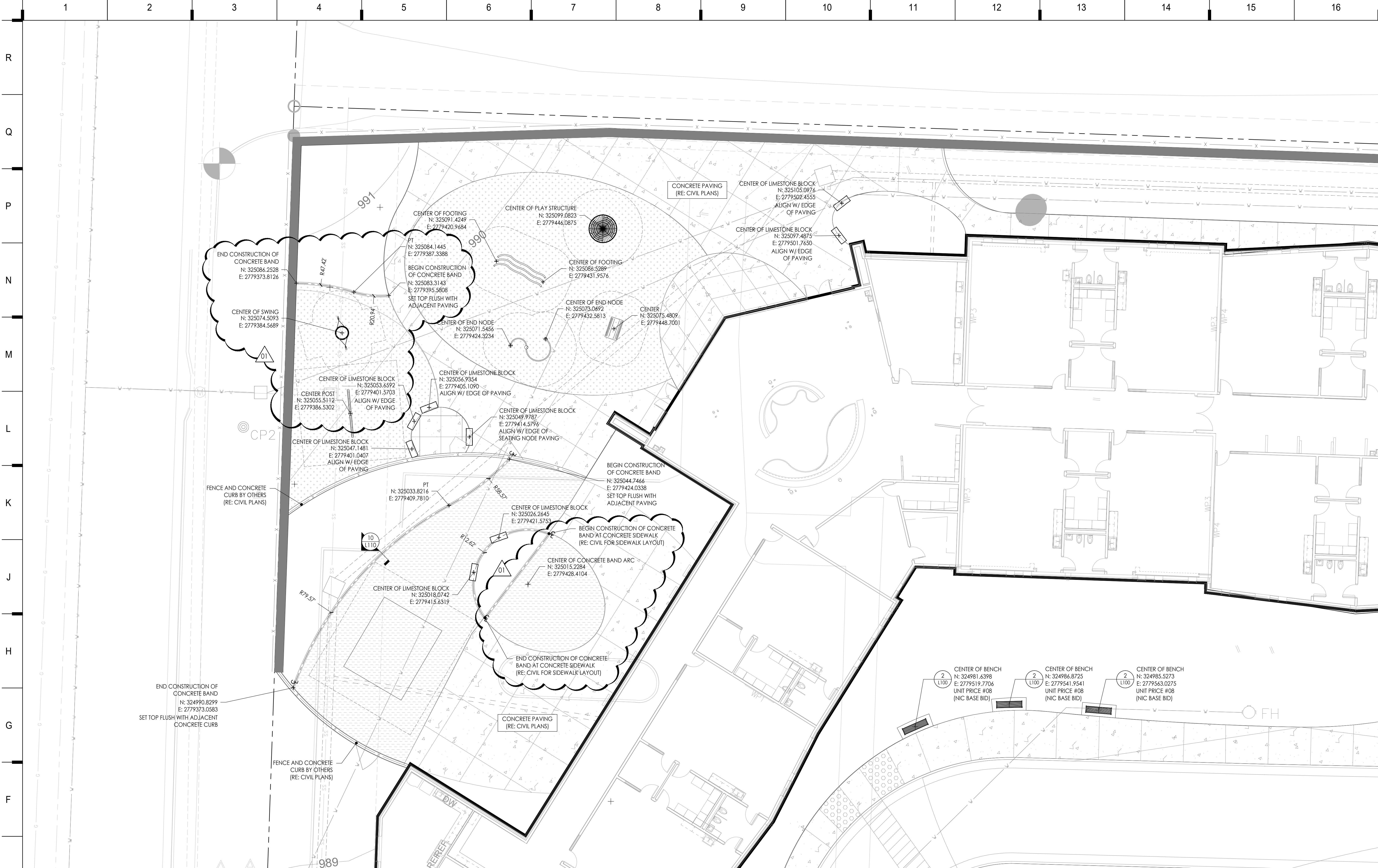


JOB 1175  
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CHECKED Checker  
BY: 16

**L101**

OF





# 1 PLAY AREA LAYOUT PLAN

Scale: 1" = 10'

## LAYOUT NOTES

1. WRITTEN DIMENSIONS SHALL PREVAIL OVER SCALED DIMENSION
2. CONTRACTOR SHALL ESTABLISH AND MAINTAIN LOCAL HORIZONTAL AND VERTICAL CONTROL BASED ON BENCHMARKS DESCRIBED BY CIVIL REFER TO C103 FOR TEMPORARY AND PERMANENT BENCHMARKS, AND VERTICAL CONTROL.
3. CONTRACTOR TO PROVIDE SHOP DRAWING OF PLAYGROUND EQUIPMENT LAYOUT FOR APPROVAL. CONFIRM EQUIPMENT LAYOUT AND FALL ZONE LAYOUT IN THE FIELD PRIOR TO INSTALL.
4. ADHERE TO NATIONAL PLAYGROUND SAFETY STANDARDS. REFER TO CPSC HANDBOOK FOR DETAILS.
5. CONCRETE PLATWORK: REFER TO CIVIL PLANS.

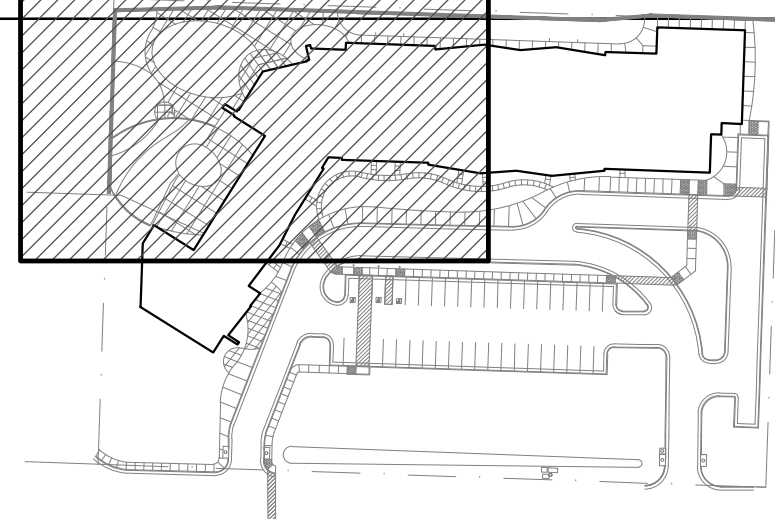
## SHEET KEYNOTE LEGEND

### SITE LAYOUT LEGEND

SYM	ITEM/DESCRIPTION
+	COORDINATE POINT
N: XXXXXXXX E: XXXXXXXX	COORDINATES
---	CENTERLINE
○	POINT OF BEGINNING

CONCRETE SIDEWALK BY OTHERS  
RE: CIVIL PLANS

## KEY PLAN



## Joplin Early Childhood Center Joplin Schools

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1	ADDENDUM 002	10.25.2016



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CHECKED	BGB
BY:	09.30.2016

# L102

OF

PLAY AREA ENLARGEMENT - LAYOUT

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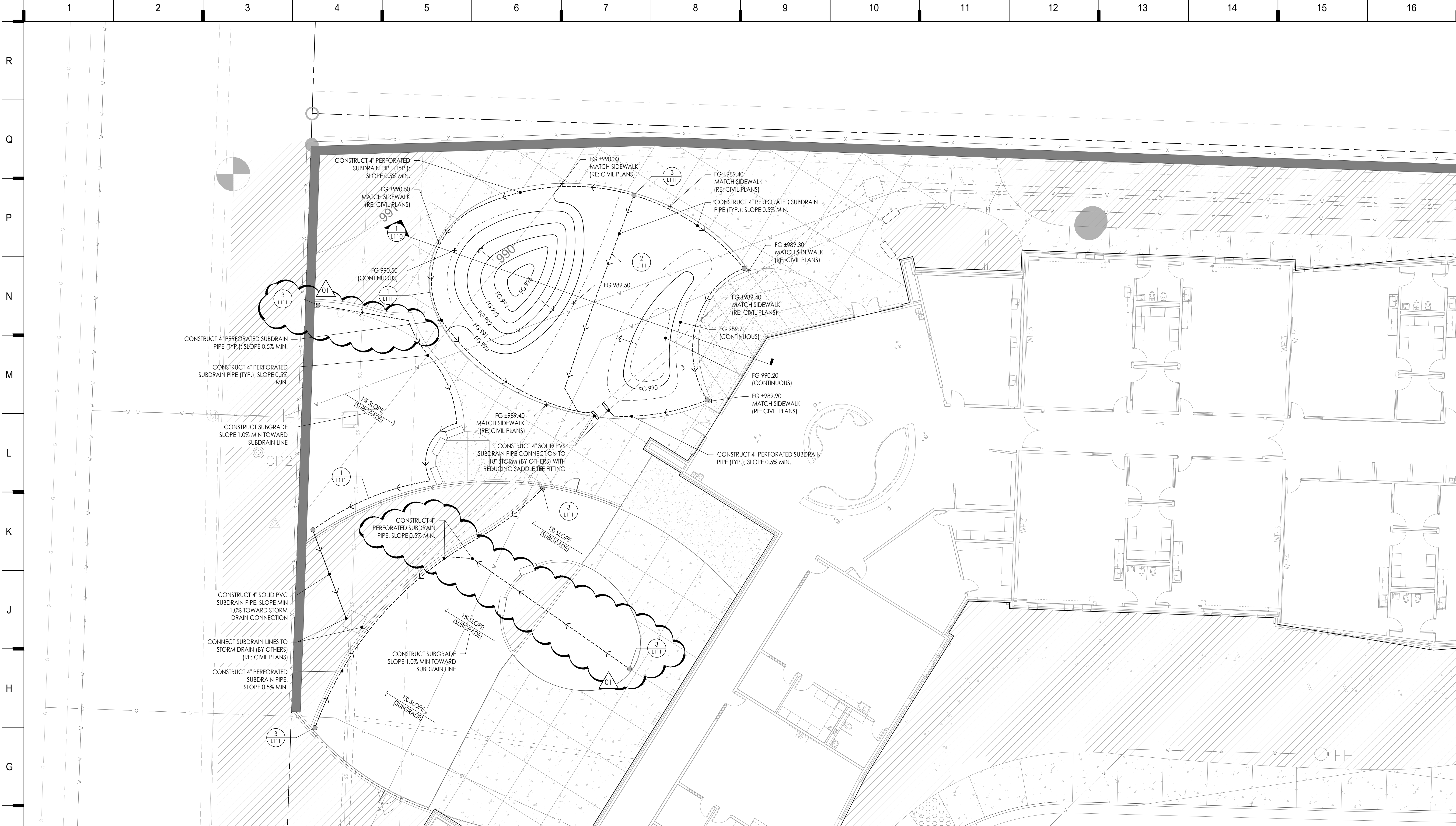
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100% BID DOCUMENTS





**1 PLAY AREA GRADING AND DRAINAGE PLAN**  
Scale: 1" = 10'

**GENERAL NOTES**

1. ALL SITE AND UTILITY INFORMATION SHOWN IS BASED UPON INFORMATION AVAILABLE AT THE TIME OF DESIGN. VERIFY ALL SITE CONDITIONS, ELEVATIONS, UTILITY LOCATIONS AND DIMENSIONS INCLUDING NEW IMPROVEMENTS PRIOR TO COMMENCEMENT OF WORK. NOTIFY OWNER REPRESENTATIVE OF ANY DISCREPANCIES OR IRREGULAR CONDITIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES BY CONTACTING ALL OF THE RESPECTIVE UTILITY COMPANIES AND/ OR THE LOCAL "ONE-CALL"/"CALL-BEFORE-YOU-DIG" SYSTEM AND BY EXCAVATING TEST PITS IF NECESSARY.
3. CONTRACTOR SHALL PROTECT ALL SITE IMPROVEMENTS AND UTILITIES. DAMAGE OCCURRING DURING AND AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED BY THE CONTRACTOR AT NO INCREASE IN CONTRACT PRICE.
4. ALL DIMENSIONS SHOWN ARE REPRESENTED USING U.S. SURVEY DIMENSION STANDARDS.

**GRADING NOTES**

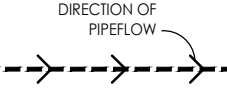
1. CONTOUR INTERVAL IS ONE FOOT UNLESS OTHERWISE NOTED.
2. PROTECT UTILITIES, DRAINAGE STRUCTURES, AND OTHER SITE IMPROVEMENTS FROM DAMAGE DURING GRADING ACTIVITIES.
3. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT OF ANY EXISTING GRADE DISCREPANCIES ON SITE.

**SUBDRAINAGE NOTES**

1. ALL SUBDRAINAGE COLLECTOR PIPE SHALL BE INSTALLED AT A MINIMUM 0.5% SLOPE UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL RESTORE SUBGRADE TO MEET GRADING AND COMPACTION REQUIREMENTS PER DRAWINGS AND SPECIFICATIONS.
3. CONTRACTOR TO PROTECT DRAIN LINES DURING CONSTRUCTION FROM DEBRIS (INCLUDING SOIL OR GRAVEL MATERIAL OR OTHER TRASH) FROM ENTERING OR BLOCKING LINES.
4. CONTRACTOR TO AVOID TRAFFIC OVER INSTALLED DRAINAGE TRENCHES TO PREVENT CRUSHING OF PIPE.
5. COORDINATE DRAINAGE CONNECTION AND INVERTS STORM DRAIN CONSTRUCTION.
6. SUBDRAINAGE LOCATION, LAYOUT, AND SITE CONDITIONS TO BE VERIFIED PRIOR TO CONSTRUCTION BY THE CONTRACTOR. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR IRREGULAR CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
7. CONTRACTOR TO COORDINATE DRAINAGE LINES WITH ALL UNDERGROUND UTILITIES OUT IN THE FIELD.

**SHEET KEYNOTE  
LEGEND**

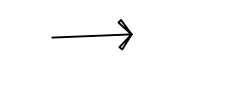
**SUBDRAINAGE PLAN LEGEND**



PROVIDE 4" PERFORATED HDPE SUBDRAINAGE PER DETAILS: SEE L111 - PLAY AREA - GRADING & DRAINAGE DETAILS (RE: SPEC #321820)



PROVIDE 4" SOLID PVC SUBDRAINAGE PER DETAILS: SEE L111 - PLAY AREA - GRADING & DRAINAGE DETAILS (RE: SPEC #321820)



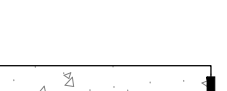
SUBGRADE SLOPE TO DRAIN LINES



CONSTRUCT CLEANOUT (RE: DETAIL 3/L111)

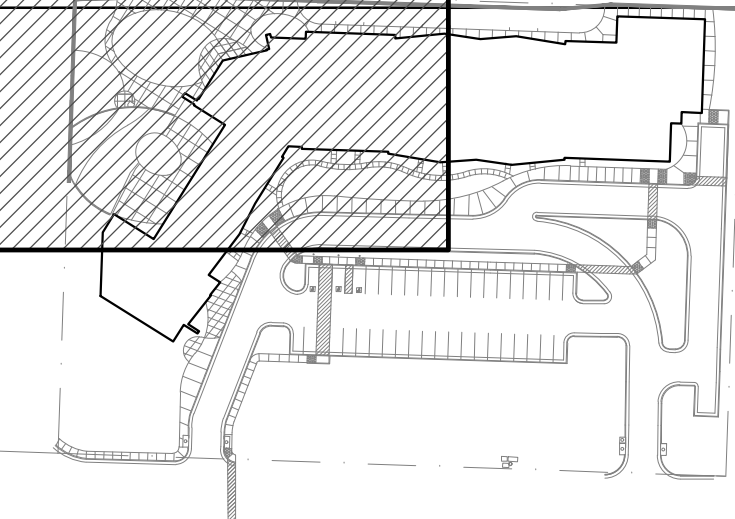


PLANTING BEDS:  
RE: L200 - LANDSCAPE PLAN (BASE BID)



CONCRETE SIDEWALK BY OTHERS (RE: CIVIL PLANS)

**KEY PLAN**



PLAY AREA ENLARGEMENT - GRADING & DRAINAGE

Joplin Early Childhood Center  
Joplin Schools

REVISIONS:		
#	Description	Date
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F 816.525.3028

HOLLISANDMILLER.COM

Holla + Miller Architects  
Missouri State Certificate of Authority  
Architecture # 0000181  
Structure # 200001333

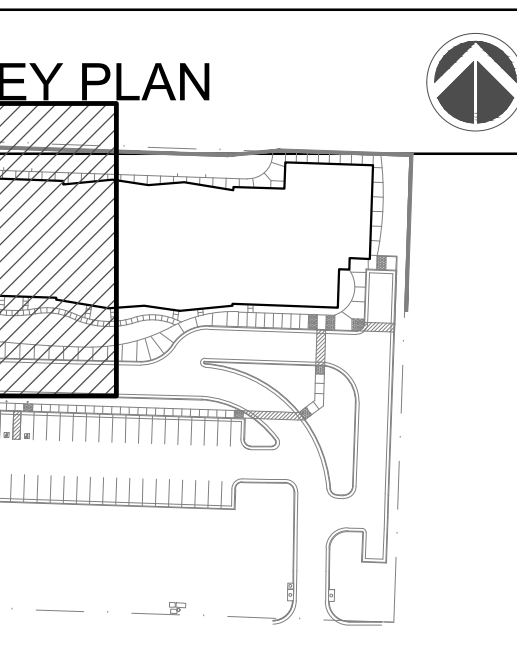
**Anderson Engineering**  
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811 E. 3rd Street  
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417.782.7399 phone  
417.782.7389 fax

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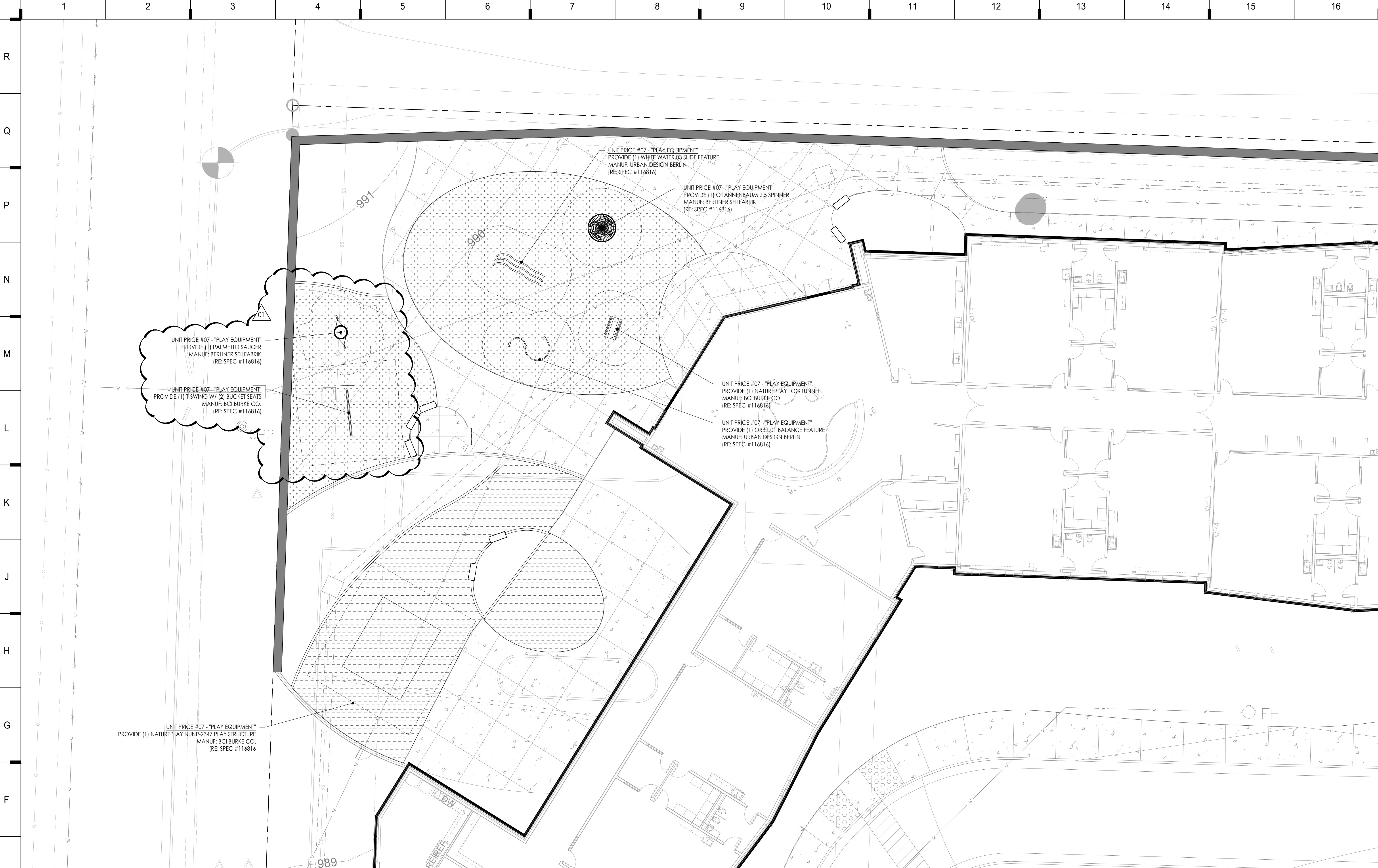
**LAND3  
STUDIO**  
317 SE MAIN  
LEE'S SUMMIT, MO 64063  
913.371.7933  
4436 STATE LINE ROAD  
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913.371.7933



PLAY AREA ENLARGEMENT - GRADING & DRAINAGE

Please consider the environment before printing this.



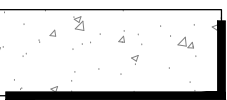


**1 PLAY AREA FURNISHINGS PLAN**  
Scale: 1" = 10'

**PLAYGROUND EQUIPMENT NOTES**

- 1. CONTRACTOR TO PROVIDE SHOP DRAWING OF PLAYGROUND EQUIPMENT AND FALL ZONE LAYOUT FOR APPROVAL.
- 2. CONTRACTOR TO PROVIDE FURNISHINGS AND REQUIRED FOOTINGS AS INDICATED ON THE PLAN AND DETAILS.
- 3. ALL PLAYGROUND EQUIPMENT TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND DETAILS.
- 4. FINAL LAYOUT TO BE INSPECTED BY CERTIFIED CPSI INSPECTOR.
- 5. **ALL PLAY EQUIPMENT SHOWN TO BE PROVIDED AS UNIT PRICE. "PLAY EQUIPMENT" UNIT PRICE #07 TO INCLUDE: EQUIPMENT, FOOTINGS, AND INSTALLATION PER MANUFACTURERS DETAILS. (NIC BASE BID).**

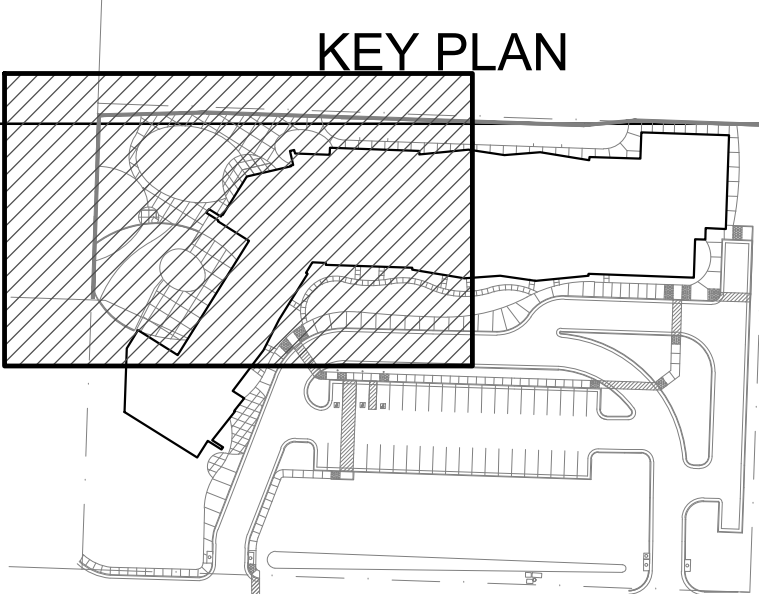
**SHEET KEYNOTE  
LEGEND**



CONCRETE SIDEWALK BY OTHERS  
RE: CIVIL PLANS



**KEY PLAN**



Joplin Early Childhood Center  
Joplin Schools

REVISIONS:		
#	Description	Date
1	ADDENDUM 002	10.25.2016



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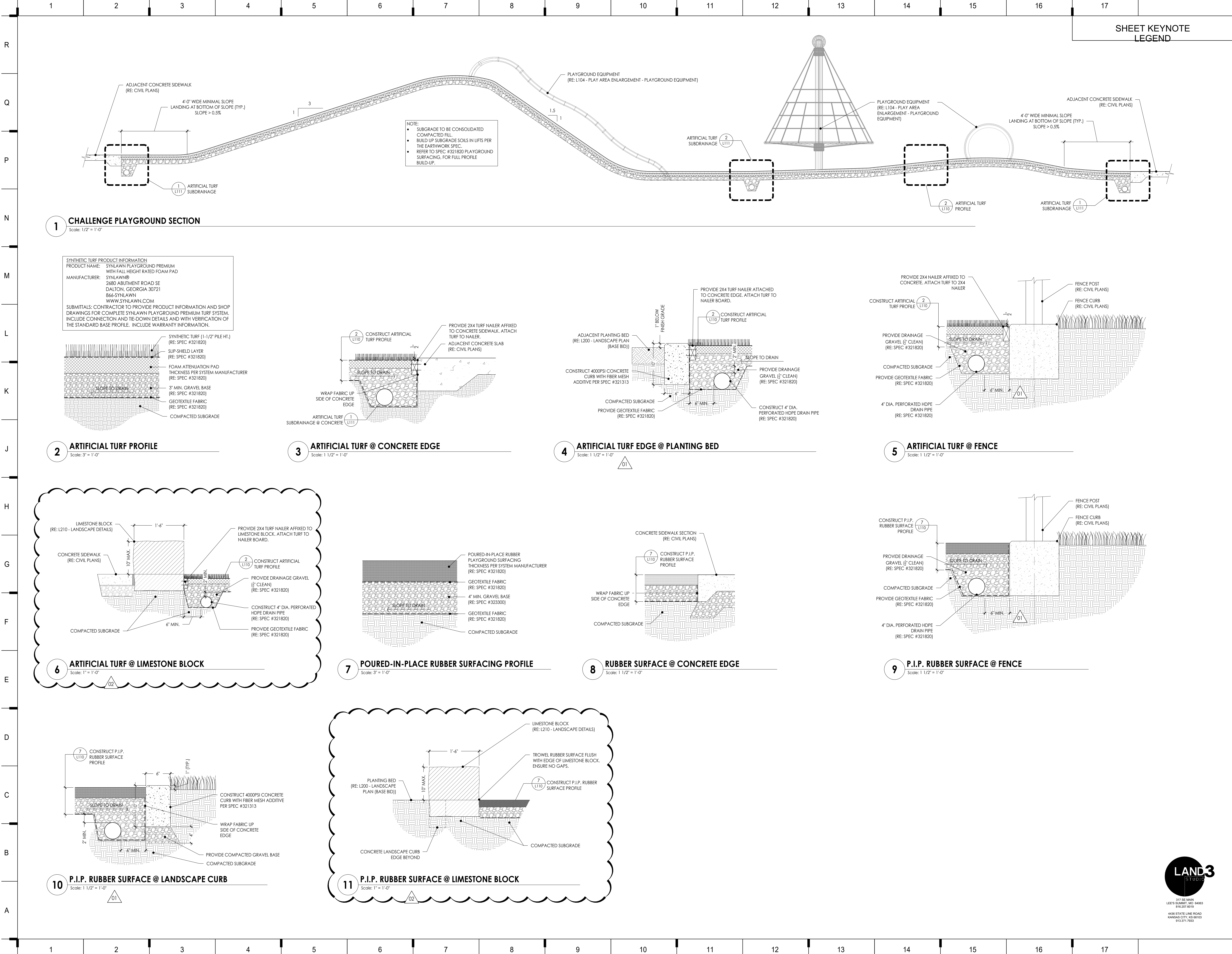
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**Joplin Early Childhood Center**  
Joplin Schools

#	Description	Date
01	ADDENDUM 001	10.14.2016
02	ADDENDUM 002	10.25.2016
...	...	...

STATE OF MISSOURI  
Joplin Early Childhood Center  
LANDSCAPE ARCHITECT  
9-30-16

**LAND3**  
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317 SE MAIN  
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4430 STATE LINE ROAD  
KANANIS CITY, MO 64093  
913.371.7933

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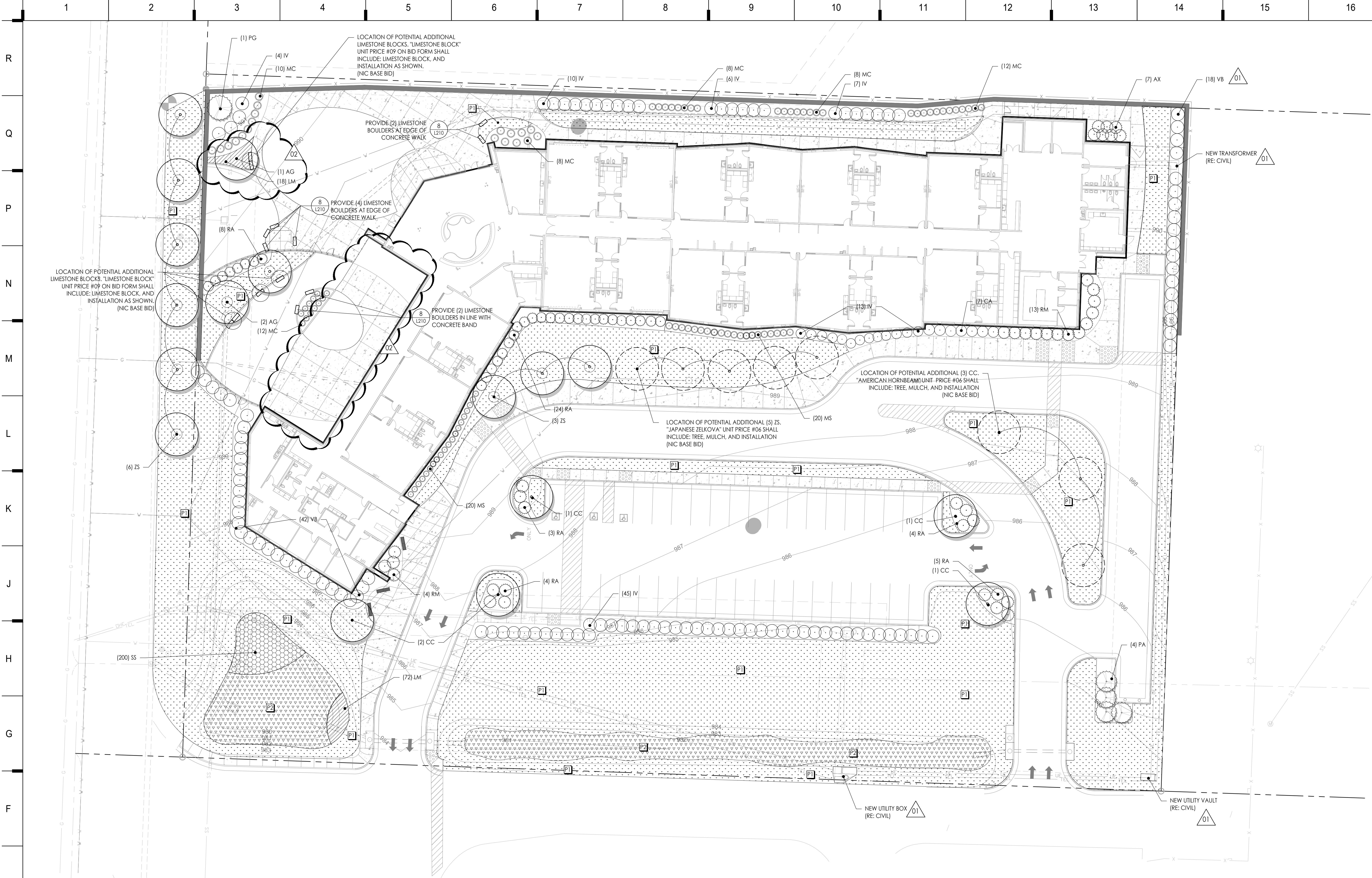
**L110**

OF

PLAY AREA DETAILS

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1 PLANTING PLAN - BASE BID



2 SITE TREES



3 SITE SHRUBS & GRASSES

SHEET KEYNOTE LEGEND			
PLANTING SCHEDULE			
SYM.	KEY	COMMON NAME BOTANICAL NAME	SIZE & REMARKS
SHADE/STREET TREES			
CC	American Hornbeam	<i>Cornus caroliniana</i>	2' cal.
ZS	Japanese Zelkova	<i>Zelkova serrata</i>	2' cal.
ORNAMENTAL TREE			
AG	Lacebark Elm	<i>Ulmus parvifolia</i>	1.5' cal.
AR	Robin Hill Serviceberry	<i>Amelanchier x grandiflora</i> 'Robin Hill'	1.5' cal.
SR	Japanese Tree Lilac	<i>Syringa reticulata</i>	1.5' cal.
EVERGREEN TREE			
PA	Columnar Norway Spruce	<i>Picea abies</i> 'Cupressina'	5-6' ht.
PG	Bakeri Blue Spruce	<i>Picea pungens</i> 'Bachen'	5-6' ht.
EVERGREEN SHRUB			
AX	Azalea		3 gal. @ 48" o.c.
RM	Nova Zembla Rhododendron	<i>Rhododendron x Nova Zembla</i>	3 gal. @ 60" o.c.
DECIDUOUS SHRUB			
CA	Ruby Spice Summersweet	<i>Clethra alnifolia</i> 'Ruby Spice'	3 gal. @ 60" o.c.
IV	Henry's Garnet Sweetpire	<i>Ilex virginica</i> 'Henry's Garnet'	3 gal. @ 48" o.c.
RA	Gro-Low Sumac	<i>Rhus aromatica</i> 'Gro-Low'	3 gal. @ 48" o.c.
VB	Mohawk Viburnum	<i>Viburnum x burkwoodii</i> 'Mohawk'	3 gal. @ 60" o.c.
ORNAMENTAL GRASS			
CM	Palm Sedge	<i>Carex muskingumensis</i>	1 gal. @ 24" o.c.
MS	Morning Light Maiden Grass	<i>Miscanthus sinensis</i> 'Morning Light'	1 gal. @ 36" o.c.
MC	Muhly Grass	<i>Muhlenbergia capillaris</i>	1 gal. @ 36" o.c.
PERENNIAL/GROUNDCOVER			
		33% Baptisia	4" pot @ 18" o.c.
		33% Coneflower	4" pot @ 18" o.c.
		33% Blue Flag Iris	4" pot @ 18" o.c.
		HH Hosta	1 gal. @ 36" o.c.
		LM Big Blue Liriope	1 gal. @ 18" o.c.
		SS Autumn Joy Sedum	1 gal. @ 18" o.c.
		Turfgrass	Sod

LANDSCAPE PLAN SCOPE OF WORK

1. THIS PLAN PROVIDES LAYOUT, QUANTITY & SIZES OF ALL PLANT MATERIAL TO BE INSTALLED BY THE LANDSCAPE CONTRACTOR. REFER TO SPEC 329300 - LANDSCAPE FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS & EXECUTION OF WORK.

2. PLANTING BEDS TO RECEIVE 12" DEPTH TOPSOIL PREP, PRE AND POST-PLANT FERTILIZER APPLICATION, 3" OF MULCH AND EDGES OF BEDS TO BE CULTIVATED.

3. TURF AREAS TO RECEIVE 6" TOPSOIL PREP, PRE AND POST-PLANT FERTILIZER APPLICATIONS.

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913.371.7933

4436 STATE LINE ROAD  
KANSAAS CITY, KS 66103  
913.371.7933

KEY PLAN

REVISIONS:

#	Description	Date
01	ADDENDUM 001	10.14.2016
02	ADDENDUM 002	10.25.2016

Joplin Early Childhood Center  
Joplin Schools

1175  
BY: ARK  
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BY: 16

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L200

OF

LANDSCAPE PLAN (BASE BID)

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**ALTERNATE #6**  
FOR ALTERNATE #6, THE FOLLOWING PLAN IS TO  
REPLACE THE BASE BID PLANTING PLAN. (L200)  
  
ALTERNATE #6 ALSO TO INCLUDE ADDITIONAL  
IRRIGATION PER SHEET L301.

**1 ALTERNATE #6 - PLANTING PLAN**

Scale: 1" = 20'



AMERICAN HORNBEAM



LACEBARK ELM



JAPANESE TREE LILAC



JAPANESE ZELKOVA



ROBIN HILL SERVICEBERRY



COLUMNAR NORWAY SPRUCE



BAKERI BLUE SPRUCE



NORTHERN LIGHTS AZALEA



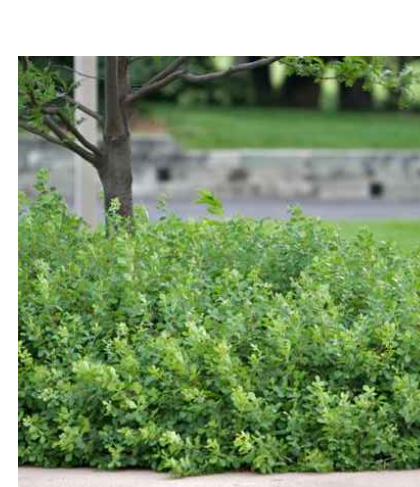
RUBY SPICE SUMMERSWEET



RHODODENDRON



HENRY'S GARNET SWEETSPIRE



GRO-LOW SUMAC



MOHAWK VIBURNUM



PALEM SEDGE



MAIDEN GRASS



MUHLI GRASS

**3 SITE SHRUBS & GRASSES**

Scale:

**SHEET KEYNOTE  
LEGEND**

**PLANTING SCHEDULE**

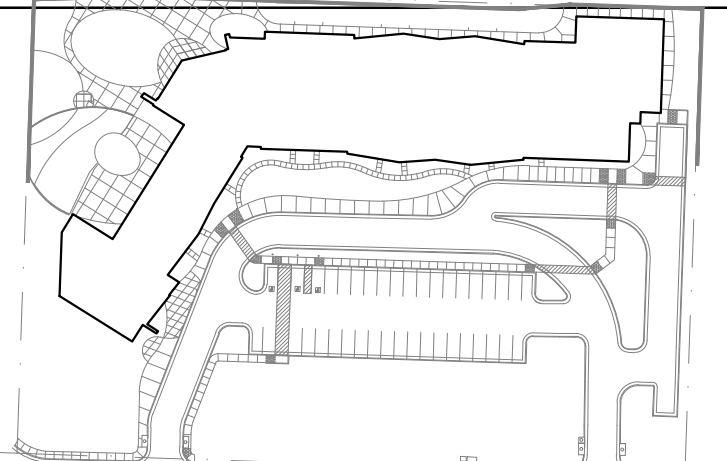
SYM.	KEY	COMMON NAME BOTANICAL NAME	SIZE & REMARKS
<b>SHADE/STREET TREES</b>			
CC		American Hornbeam <i>Carpinus caroliniana</i>	2' cal.
ZS		Japanese Zelkova <i>Zelkova serrata</i>	2' cal.
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AR		Robin Hill Serviceberry <i>Amelanchier x grandiflora 'Robin Hill'</i>	1.5' cal.
SR		Japanese Tree Lilac <i>Syringa reticulata</i>	1.5' cal.
<b>EVERGREEN TREE</b>			
PA		Columnar Norway Spruce <i>Picea abies 'Cupressina'</i>	5-6' ht.
PG		Bakeri Blue Spruce <i>Picea pungens 'Bachen'</i>	5-6' ht.
<b>EVERGREEN SHRUB</b>			
AX		Azalea	3 gal. @ 48" o.c.
RM		Nova Zembla Rhododendron <i>Rhododendron x 'Nova Zembla'</i>	3 gal. @ 60" o.c.
<b>DECIDUOUS SHRUB</b>			
CA		Ruby Spice Summersweet <i>Clethra alnifolia 'Ruby Spice'</i>	3 gal. @ 60" o.c.
IV		Henry's Garnet Sweetspire <i>Hebe virginica 'Henry's Garnet'</i>	3 gal. @ 48" o.c.
RA		Gro-Low Sumac <i>Rhus aromatica 'Gro-Low'</i>	3 gal. @ 48" o.c.
VB		Mohawk Viburnum <i>Viburnum x burkwoodii 'Mohawk'</i>	3 gal. @ 60" o.c.
<b>ORNAMENTAL GRASS</b>			
CM		Palm Sedge <i>Carex muskingumensis</i>	1 gal. @ 24" o.c.
MS		Morning Light Maiden Grass <i>Miscanthus sinensis 'Morning Light'</i>	1 gal. @ 36" o.c.
MC		Muhly Grass <i>Muhlenbergia capillaris</i>	1 gal. @ 36" o.c.
<b>PERENNIAL/GROUNDCOVER</b>			
		33% Baptisia	4" pot @ 18" o.c.
		33% Coneflower	4" pot @ 18" o.c.
		33% Blue Flag Iris	4" pot @ 18" o.c.
		HH Hosta	1 gal. @ 36" o.c.
		LM Big Blue Liriope <i>Liriope muscari 'Big Blue'</i>	1 gal. @ 18" o.c.
		SS Autumn Joy Sedum <i>Sedum spectabile 'Autumn Joy'</i>	1 gal. @ 18" o.c.
		Turfgrass	Sod

**LANDSCAPE PLAN SCOPE OF WORK**

1. THIS PLAN PROVIDES LAYOUT, QUANTITY & SIZES OF ALL PLANT MATERIAL TO BE INSTALLED BY THE LANDSCAPE CONTRACTOR. REFER TO **SPEC 329300 - LANDSCAPE** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS & EXECUTION OF WORK.
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3. TURF AREAS TO RECEIVE 6" TOPSOIL PREP, PRE AND POST-PLANT FERTILIZER APPLICATIONS.



**KEY PLAN**



Joplin Early Childhood Center  
Joplin Schools

REVISIONS:		
#	Description	Date
01	ADDENDUM 001	10.14.2016
02	ADDENDUM 002	10.25.2016



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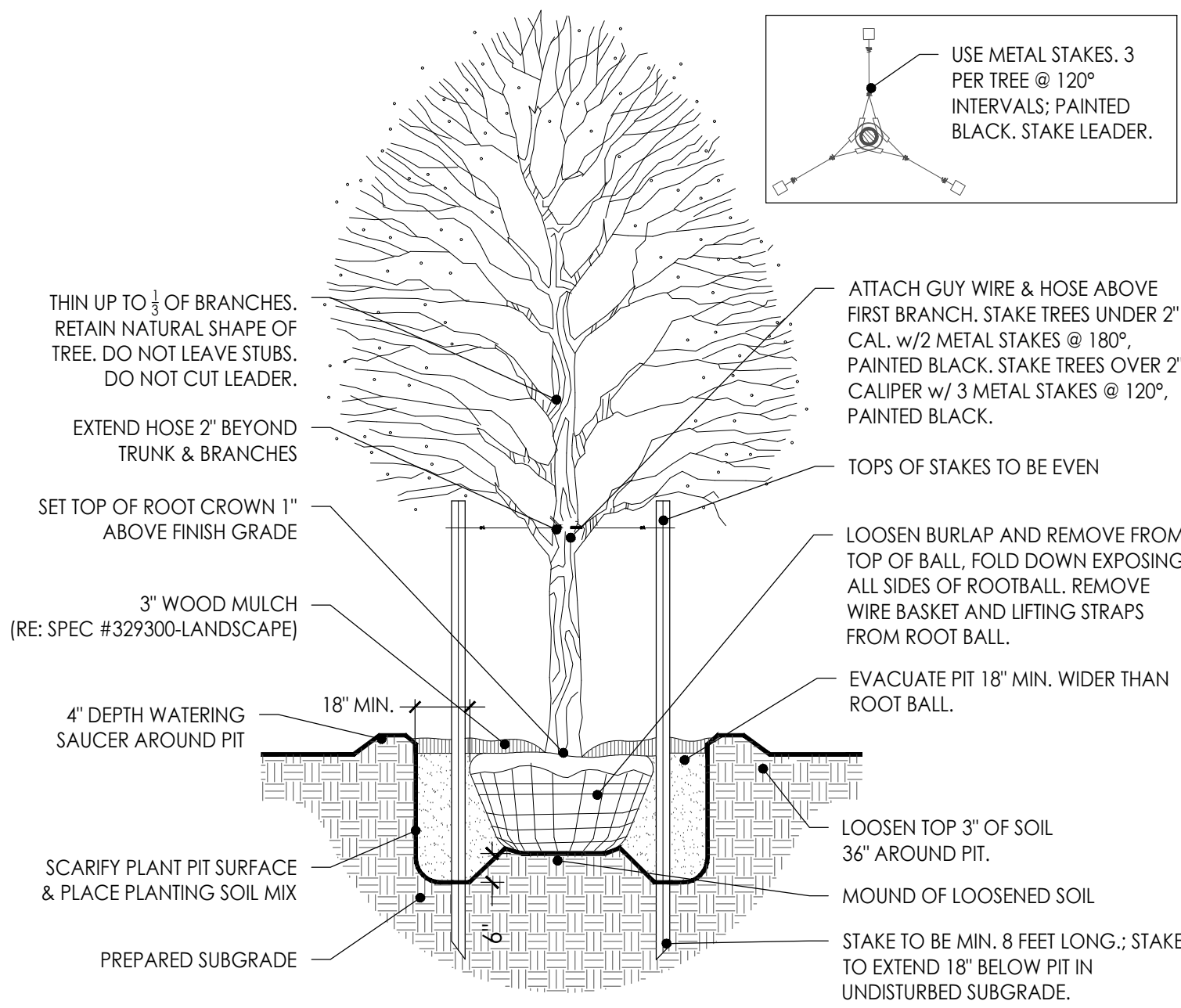
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OF



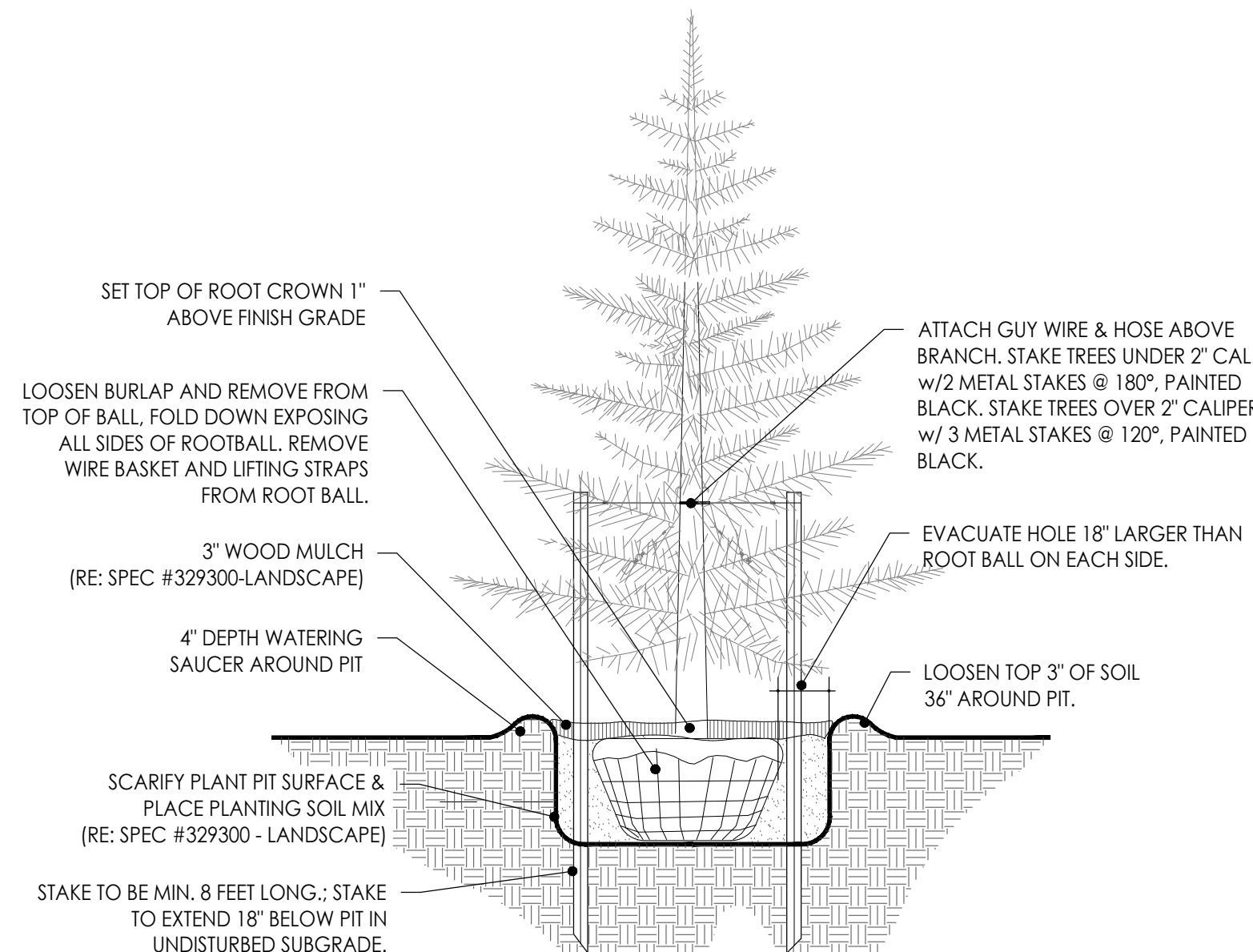
1 DECIDUOUS TREE PLANTING DETAIL (TYP.)

Scale: 3/8" = 1'-0"



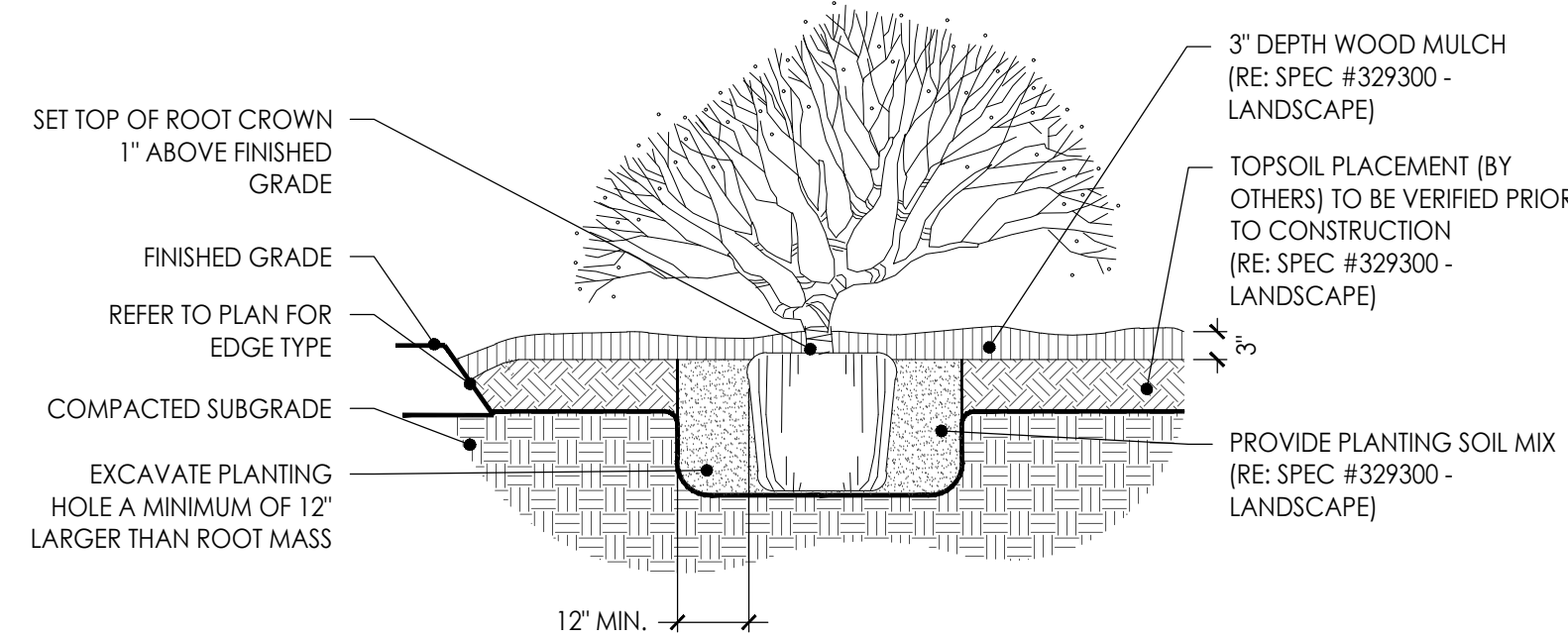
2 EVERGREEN TREE PLANTING DETAIL (TYP.)

Scale: 3/8" = 1'-0"



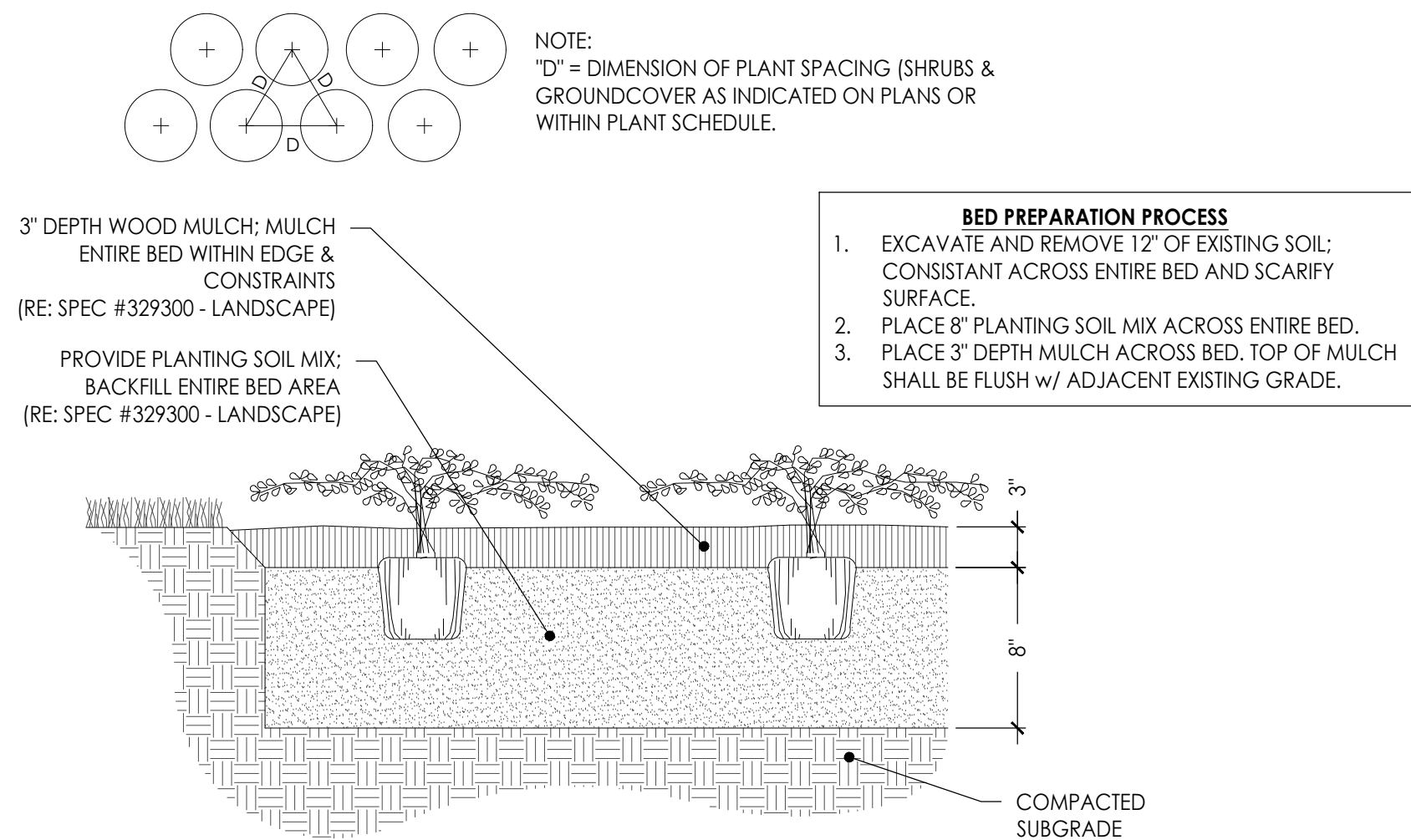
3 SHRUB PLANTING DETAIL (TYP.)

Scale: 3/4" = 1'-0"



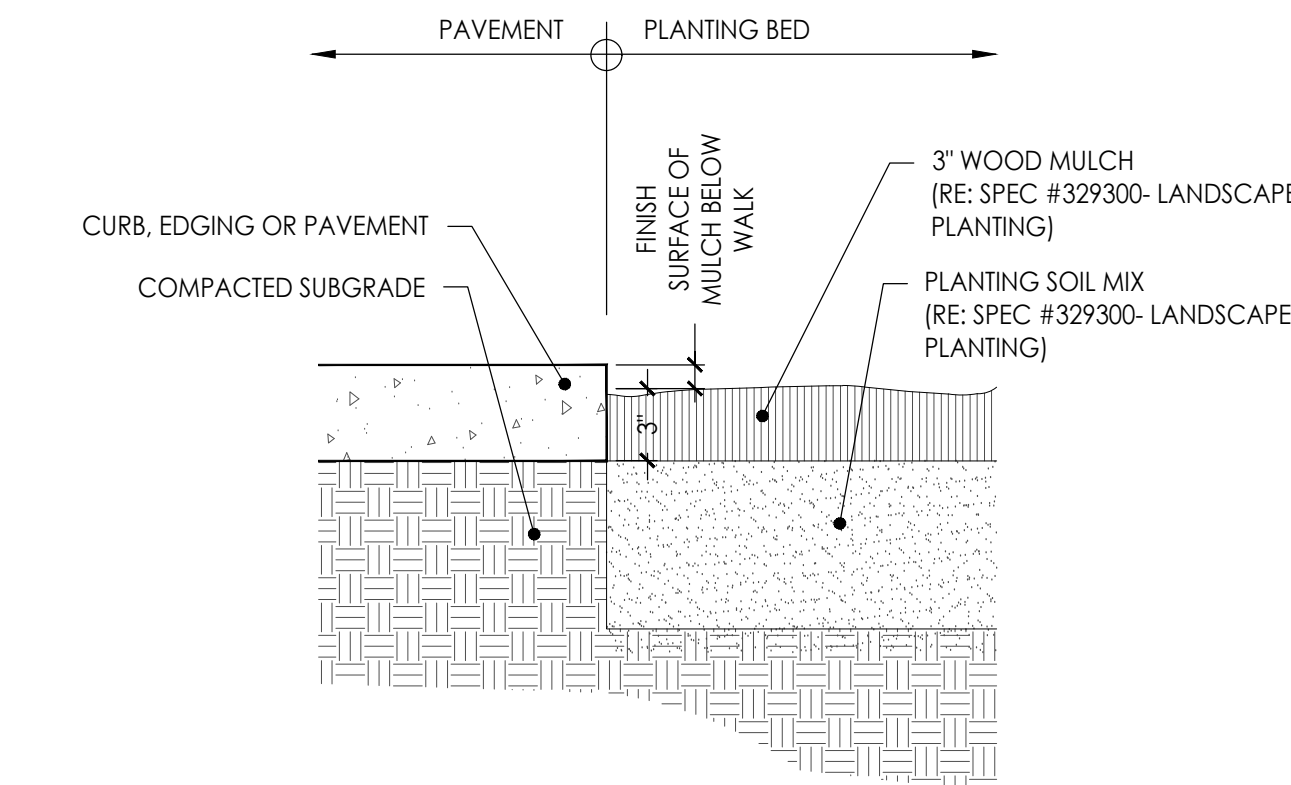
4 GROUNDCOVER PLANTING DETAIL (TYP.)

Scale: 1 1/2" = 1'-0"



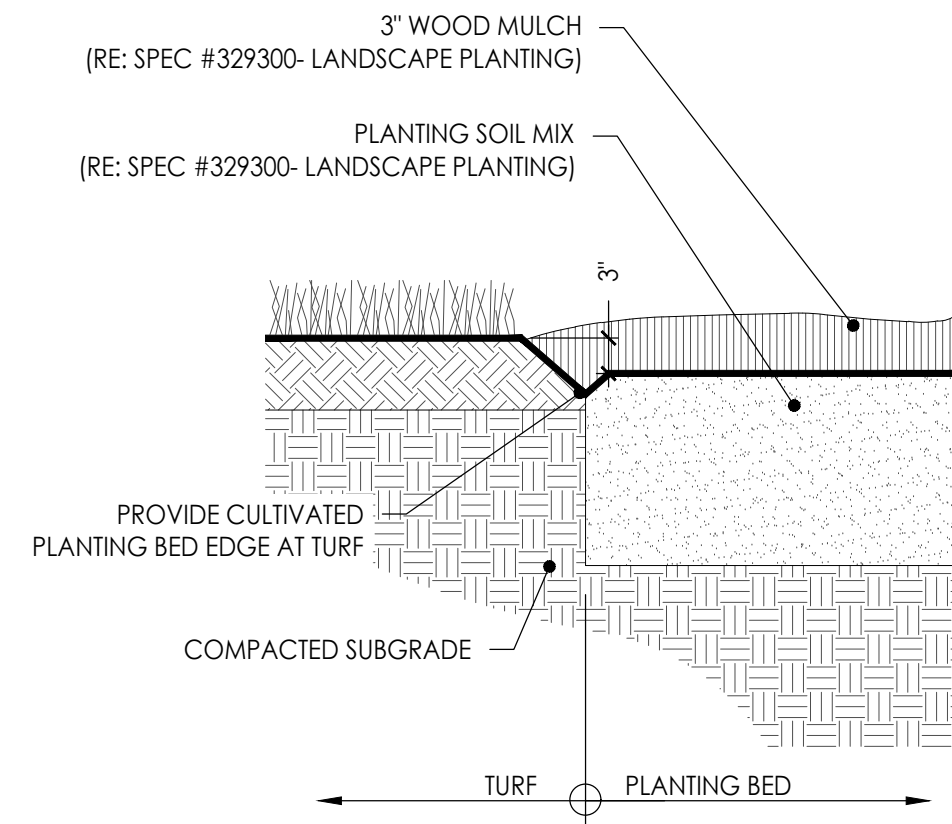
5 PLANTING BED @ CONCRETE (TYP.)

Scale: 1 1/2" = 1'-0"



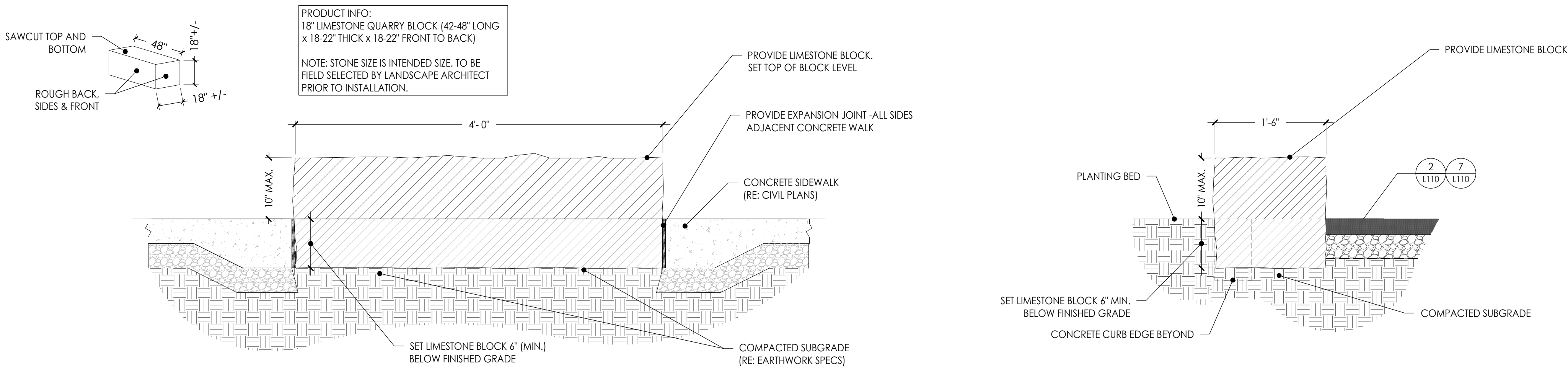
6 PLANTING BED CULTIVATED EDGE

Scale: 1 1/2" = 1'-0"



8 LIMESTONE BLOCK DETAILS

Scale: 1" = 1'-0"



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Joplin Schools

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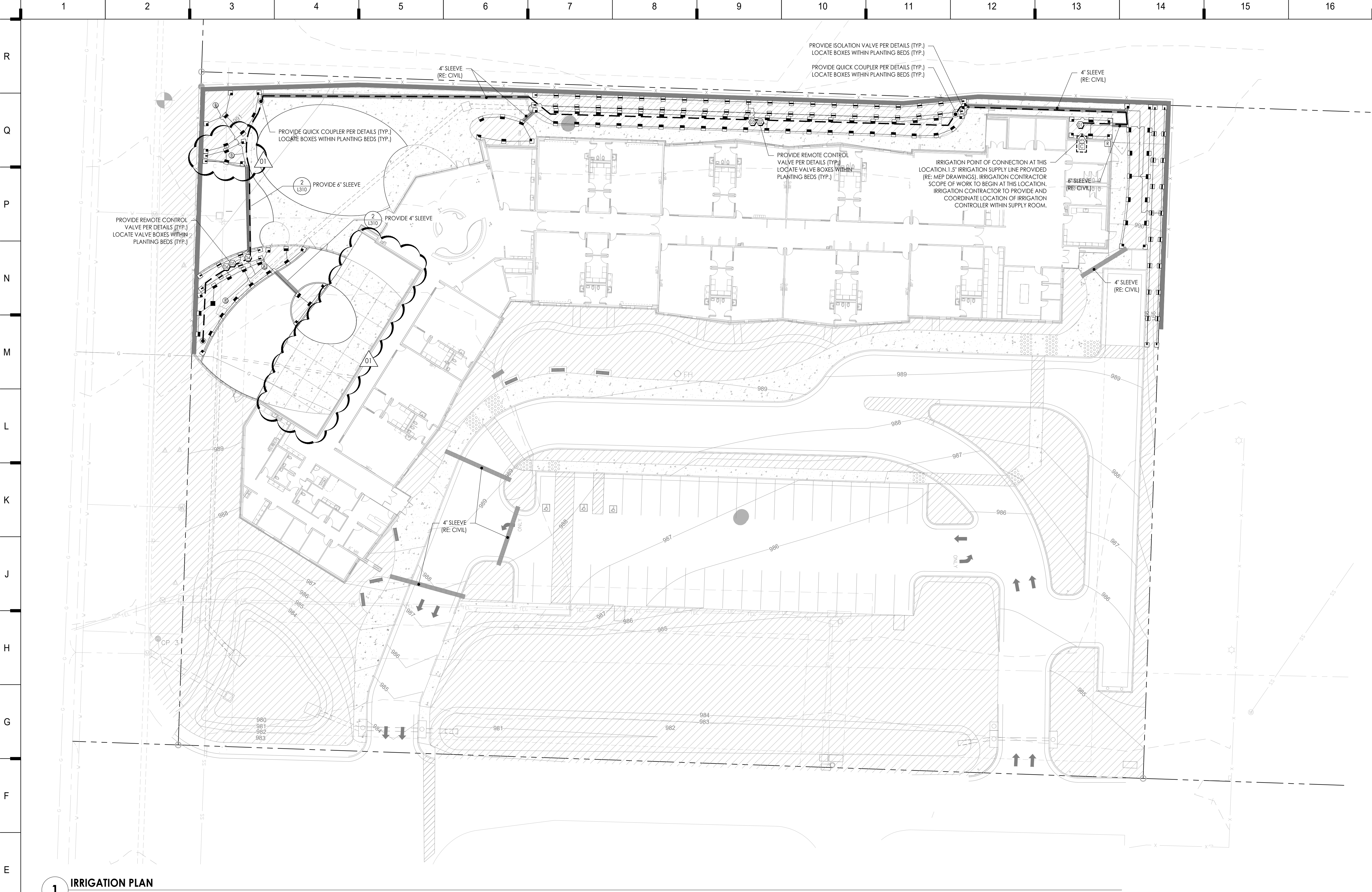
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L210

OF





1 IRRIGATION PLAN  
Scale: 1" = 20'

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	DETAIL
C	AUTOMATIC CONTROLLER	RE: DETAIL 1/L310
R	RAIN SENSOR	RE: SPEC 328400
MV	MASTER VALVE	RE: DETAIL 4/L310
BP	BACKFLOW PREVENTER (N.I.C.)	RE: MEP DRAWINGS
WM	WATER METER (N.I.C.)	RE: MEP DRAWINGS
IV	ISOLATION VALVE	RE: DETAIL 6/L310
QC	QUICK COUPLER	RE: DETAIL 7/L310
RT	ROOT WATERING TUBES	RE: DETAIL 9/L310

IRRIGATION NOTES

- THIS PLAN PROVIDES LAYOUT AND DISTRIBUTION TYPES FOR A COMPLETE AUTOMATIC IRRIGATION SYSTEM TO BE PROVIDED & INSTALLED BY THE LANDSCAPE CONTRACTOR. REFER TO **SPEC 328400 - IRRIGATION SYSTEM** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK.
- ALL PLANTING BEDS AND TURF AREAS TO BE POP-UP SPRAY HEADS.
- THE FINAL LOCATION AND EXACT POSITIONING OF AUTOMATIC CONTROLLERS AND RAIN SENSOR SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- 120-VOLT ELECTRICAL POWER SERVICE TO CONTROLLER ROOMS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. SEE ENGINEER'S PLANS AND SPECIFICATIONS FOR MORE INFORMATION REGARDING ELECTRICAL SERVICE. COORDINATE WITH ELECTRICAL.
- CONTRACTOR SHALL RUN TWO-WIRE PATH IN SAME TRENCH AS IRRIGATION MAINLINE.
- INSTALL TRACER WIRE (#14 WITH PVC JACKET) ALONG ALL MAINLINE WHERE CONTROL WIRES OR TWO-WIRE PATH IS NOT PRESENT.
- INSTALL ALL MAINLINES WITH A 1% MINIMUM SLOPE TO MANUAL DRAIN VALVES LOCATED AT LOW POINTS OF MAIN SYSTEM.
- COORDINATE AND SEQUENCE SLEEVING, PIPE LOCATION, AND MECHANICAL IMPROVEMENTS WITH OTHER TRADES AS NECESSARY.
- CONTRACTOR RESPONSIBLE FOR ENSURING THE FUNCTIONALITY OF ALL IRRIGATION EQUIPMENT AND ZONES BEFORE WORK WILL BE COMPLETE. ANY DAMAGE TO ADJACENT IRRIGATION EQUIPMENT MUST BE REPAIRED BY THE CONTRACTOR.
- IMPORTANT: WINTERIZATION WATER BLOW-OUT PROCESS WARNING — THE IRRIGATION SYSTEM IS DESIGNED TO BE COMPLETELY DRAINED BY THE USE OF AN AIR COMPRESSOR TO PROTECT PIPES FROM BURSTING PRIOR TO FREEZING TEMPERATURES.

IRRIGATION SCHEDULE

ZONE	HEAD/LINE INFO								FLOW (GPM)	OPERATING PRESSURE (PSI)	VALVE SIZE
	360°	270°	180°	90°	SS	L/R	C				
1	0	0	2	4	16	4	0	HUNTER: MP ROTATOR 10000.37gpm	10.30	30	1"
2	0	0	4	6	0	0	0	HUNTER: MP ROTATOR 10000.37gpm	19.27	30	1.5"
3	0	0	5	1	38	4	0	HUNTER: MP ROTATOR 10000.37gpm	20.52	30	1.5"
4	DRIP: 4 ROWS: ROOT ZONE WATERING @ 0.01 GPM								0.04	30	1"
5	0	0	6	9	4	4	0	HUNTER: MP ROTATOR 10000.37gpm	8.88	30	1"
6	1	0	13	4	0	0	0	HUNTER: MP ROTATOR 10000.37gpm	6.70	30	1"

HEAD TRAJECTORIES: (L/R) - LEFT/RIGHT CORNER; (SS) - SIDE STRIP; (C) - CORNER

SHEET KEYNOTE  
LEGEND



KEY PLAN



Joplin Early Childhood Center  
Joplin Schools

REVISIONS:		
#	Description	Date
01	ADDENDUM 002	10.25.2016

JOB 1175  
NO. BYMRK  
CHECKED BGB  
BY: 09.30.2016

L300

OF

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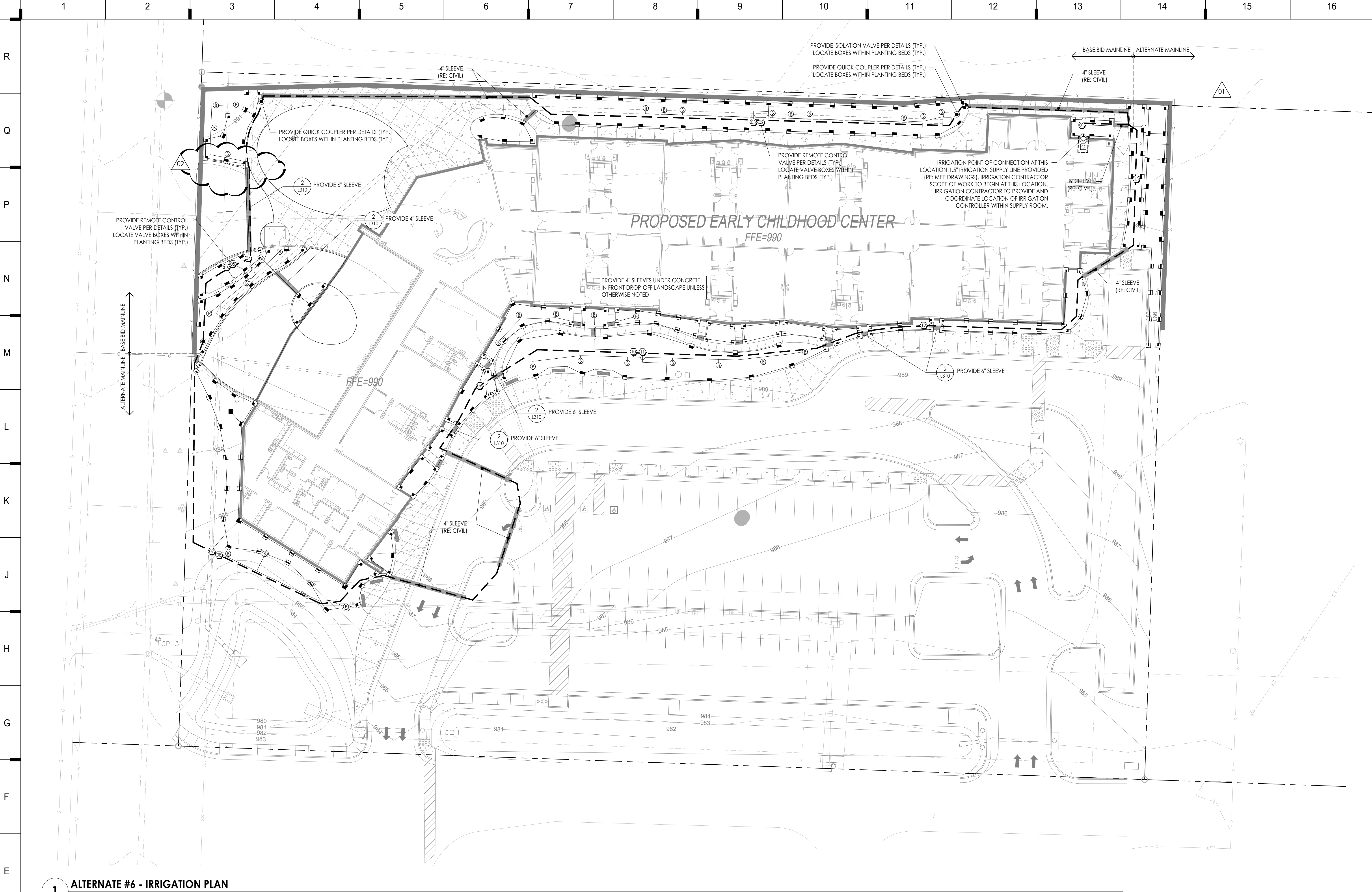
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**1 ALTERNATE #6 - IRRIGATION PLAN**  
Scale: 1" = 20'

**IRRIGATION LEGEND**

SYMBOL	DESCRIPTION	DETAIL
	AUTOMATIC CONTROLLER	RE: DETAIL 1/L310
	RAIN SENSOR	RE: SPEC 328400
	MASTER VALVE	RE: DETAIL 4/L310
	BACKFLOW PREVENTER (N.I.C.)	RE: MEP DRAWINGS
	WATER METER (N.I.C.)	RE: MEP DRAWINGS
	ISOLATION VALVE	RE: DETAIL 6/L310
	QUICK COUPLER	RE: DETAIL 7/L310
	ROOT WATERING TUBES	RE: DETAIL 9/L310

**IRRIGATION NOTES**

- THIS PLAN PROVIDES LAYOUT AND DISTRIBUTION TYPES FOR A COMPLETE AUTOMATIC IRRIGATION SYSTEM TO BE PROVIDED & INSTALLED BY THE LANDSCAPE CONTRACTOR. REFER TO **SPEC 328400 - IRRIGATION SYSTEM** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK.
  - ALL PLANTING BEDS AND TURF AREAS TO BE POP-UP SPRAY HEADS.
  - THE FINAL LOCATION AND EXACT POSITIONING OF AUTOMATIC CONTROLLERS AND RAIN SENSOR SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
  - 120-VOLT ELECTRICAL POWER SERVICE TO CONTROLLER ROOMS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. SEE ENGINEER'S PLANS AND SPECIFICATIONS FOR MORE INFORMATION REGARDING ELECTRICAL SERVICE. COORDINATE WITH ELECTRICAL.
  - CONTRACTOR SHALL RUN TWO-WIRE PATH IN SAME TRENCH AS IRRIGATION MAINLINE.
  - INSTALL TRACER WIRE (#14 WITH PVC JACKET) ALONG ALL MAINLINE WHERE CONTROL WIRES OR TWO-WIRE PATH IS NOT PRESENT.
  - INSTALL ALL MAINLINES WITH A 1% MINIMUM SLOPE TO MANUAL DRAIN VALVES LOCATED AT LOW POINTS OF MAIN SYSTEM.
  - COORDINATE AND SEQUENCE SLEEVING, PIPE LOCATION, AND MECHANICAL IMPROVEMENTS WITH OTHER TRADES AS NECESSARY.
  - CONTRACTOR RESPONSIBLE FOR ENSURING THE FUNCTIONALITY OF ALL IRRIGATION EQUIPMENT AND ZONES BEFORE WORK WILL BE COMPLETE. ANY DAMAGE TO ADJACENT IRRIGATION EQUIPMENT MUST BE REPAIRED BY THE CONTRACTOR.
- IMPORTANT:**  
WINTERIZATION WATER BLOW-OUT PROCESS WARNING — THE IRRIGATION SYSTEM IS DESIGNED TO BE COMPLETELY DRAINED BY THE USE OF AN AIR COMPRESSOR TO PROTECT PIPES FROM BURSTING PRIOR TO FREEZING TEMPERATURES.

**IRRIGATION ALTERNATE SCHEDULE**

ZONE	HEAD/LINE INFO							FLOW (GPM)	OPERATING PRESSURE (PSI)	VALVE SIZE
	360°	270°	180°	90°	SS	L/R	C			
1	HUNTER: MP ROTATOR 10000.37gpm							8.73	30	1"
2	DRIP: 9 RZWS; ROOT ZONE WATERING @ 0.01 GPM							2.25	30	1"
3	HUNTER: MP ROTATOR 10000.37gpm							16.85	30	1.5"
4	DRIP: 7 RZWS; ROOT ZONE WATERING @ 0.01 GPM							1.75	30	1"
5	HUNTER: MP ROTATOR 10000.37gpm							6.85	30	1"
6	HUNTER: MP ROTATOR 10000.37gpm							5.20	30	1"
7	HUNTER: MP ROTATOR 10000.37gpm							12.27	30	1"
8	DRIP: 3 RZWS; ROOT ZONE WATERING @ 0.01 GPM							0.75	30	1"
9	HUNTER: MP ROTATOR 10000.37gpm							17.39	30	1.5"
10	DRIP: 12 RZWS; ROOT ZONE WATERING @ 0.01 GPM							3.00	30	1"
11	HUNTER: MP ROTATOR 10000.37gpm							7.57	30	1"
12	HUNTER: MP ROTATOR 10000.37gpm							13.64	30	1"
13	HUNTER: MP ROTATOR 10000.37gpm							4.46	30	1"

HEAD TRAJECTORIES: (L/R) - LEFT/RIGHT CORNER; (SS) - SIDE STRIP; (C) - CORNER

**SHEET KEYNOTE  
LEGEND**

**ALTERNATE #6**

FOR ALTERNATE #6, THE FOLLOWING PLAN IS TO REPLACE THE BASE BID IRRIGATION PLAN (L300) IN ITS ENTIRETY.

SEE L202 - LANDSCAPE PLAN ALTERNATES FOR THE PLANTING PLAN OF ALTERNATE #6

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**KEY PLAN**

**Joplin Early Childhood Center**  
Joplin Schools

REVISIONS:

#	Description	Date
01	ADDENDUM 001	10.14.2016
02	ADDENDUM 002	10.25.2016

JOB NO: 1175  
BY: ARK  
CHECKED: BGB  
BY: 16

**L301**

OF

IRRIGATION PLAN ALTERNATE

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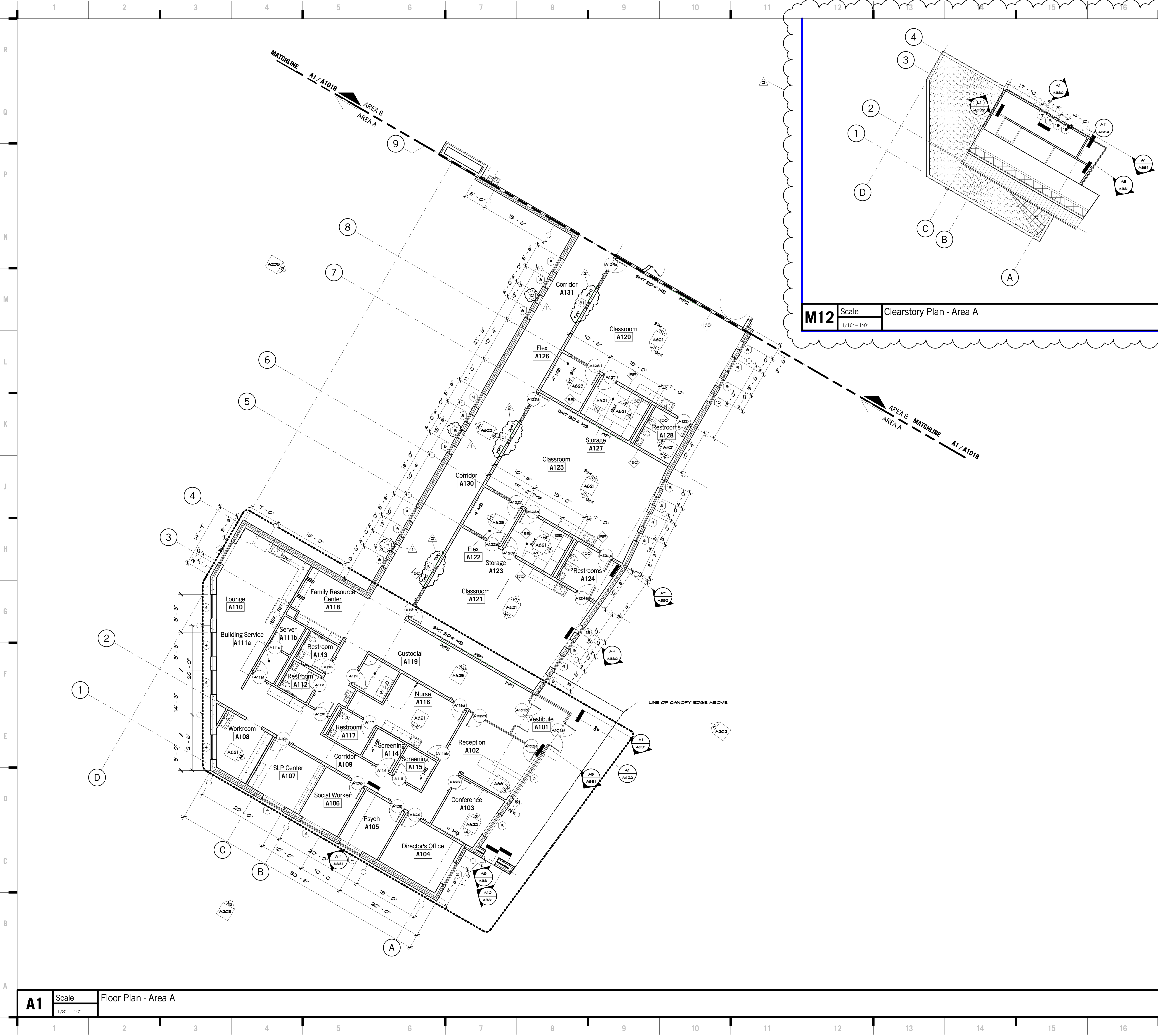
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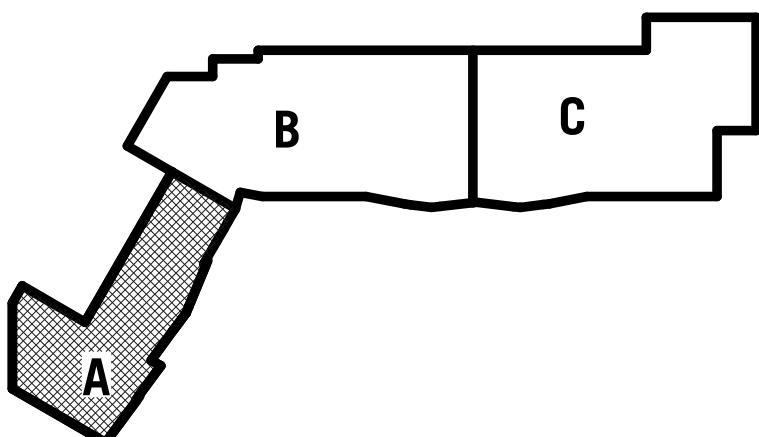




SHEET KEYNOTE LEGEND

M12 Scale 1/16" = 1'-0" Clearstory Plan - Area A

KEY PLAN



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REVISIONS:		
#	Description	Date
1	Addendum 1	10/14/2016
2	Addendum 2	10/28/2016



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DATE: 09.30.2016

A101A

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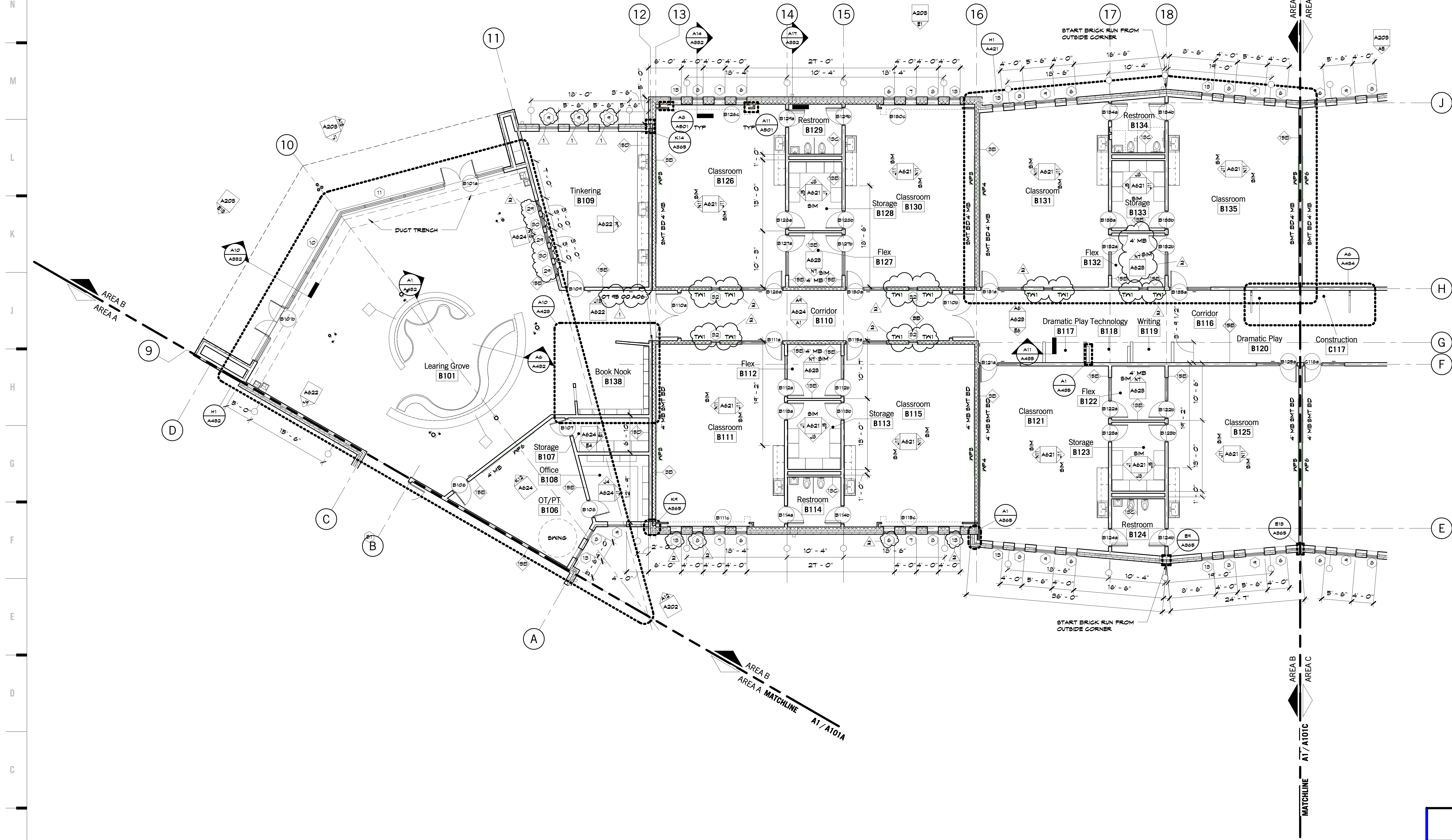
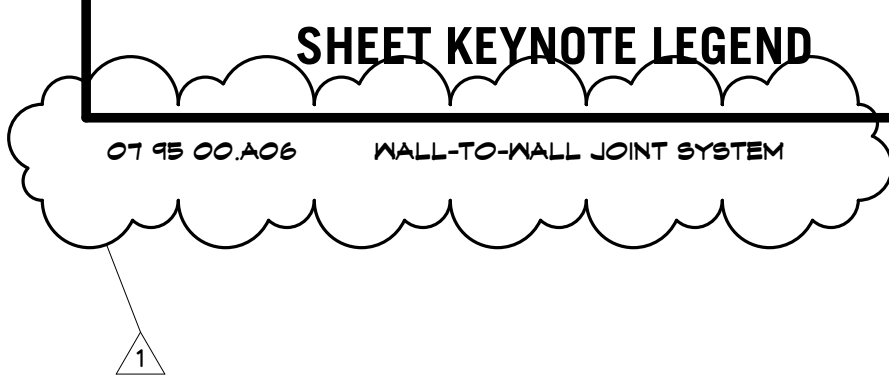
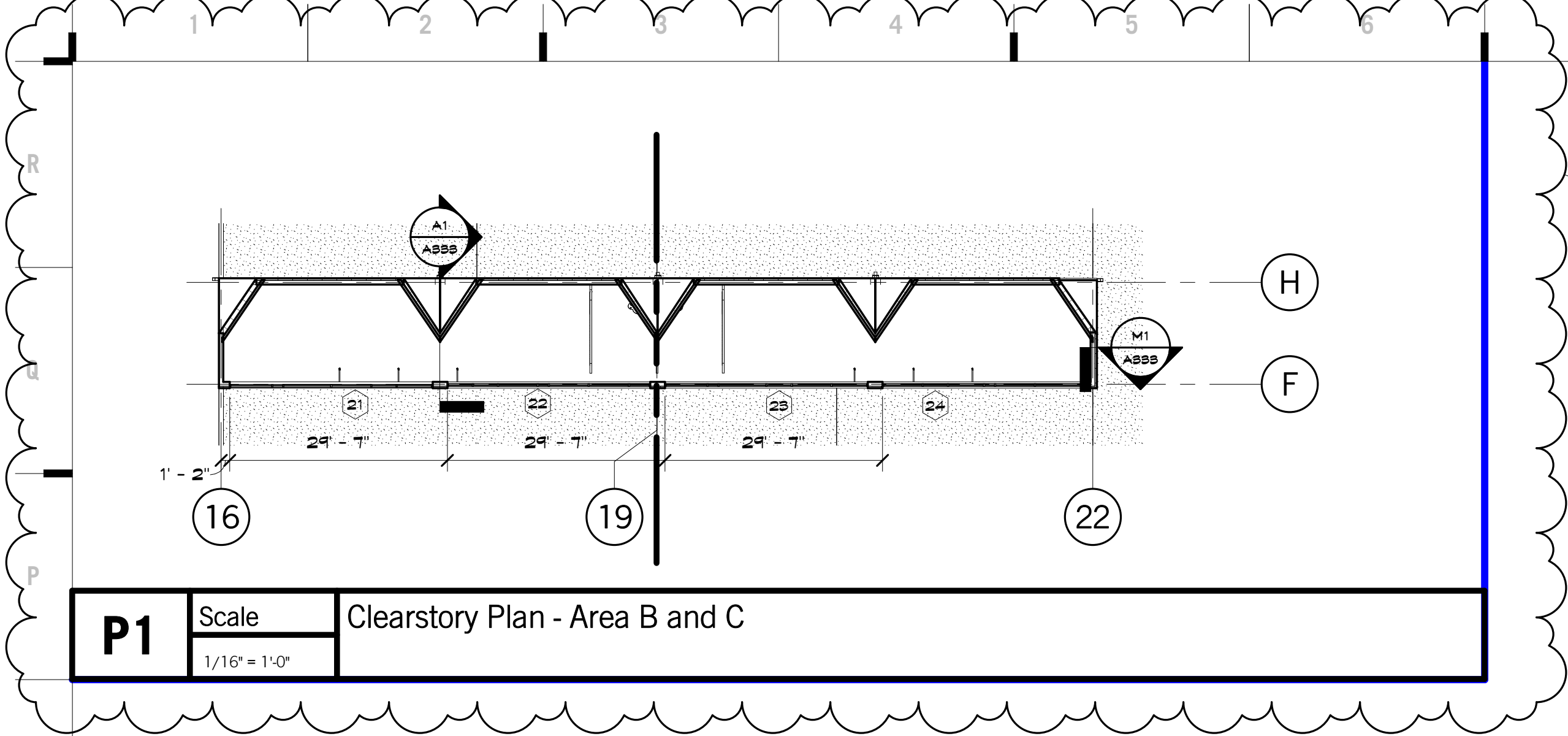
FLOOR PLAN - AREA A

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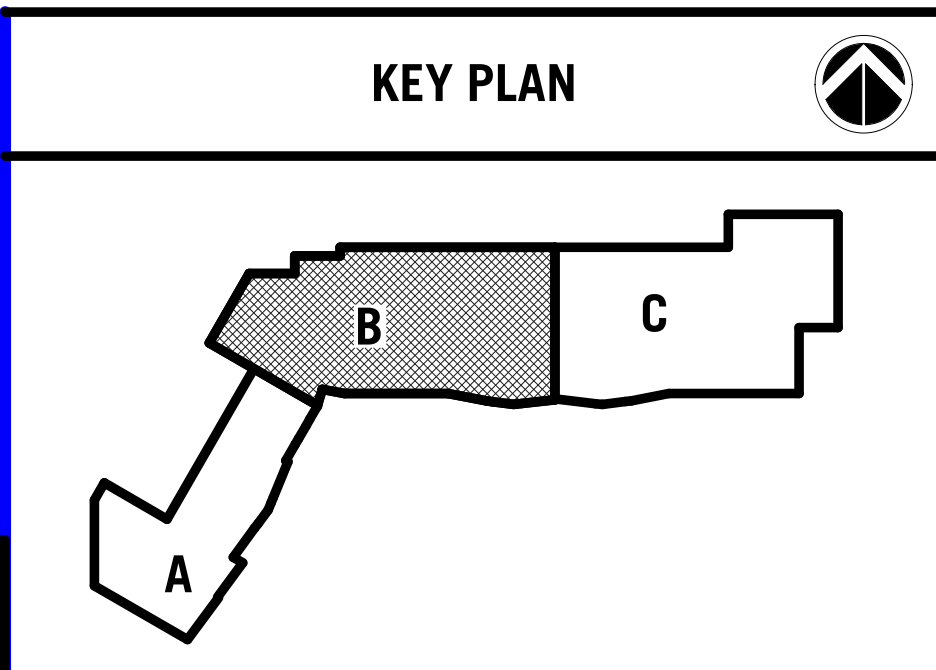
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**A1** Scale Floor Plan - Area B  
1/8" = 1'-0"



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1	Addendum 1	10/14/2016
2	Addendum 2	10/28/2016



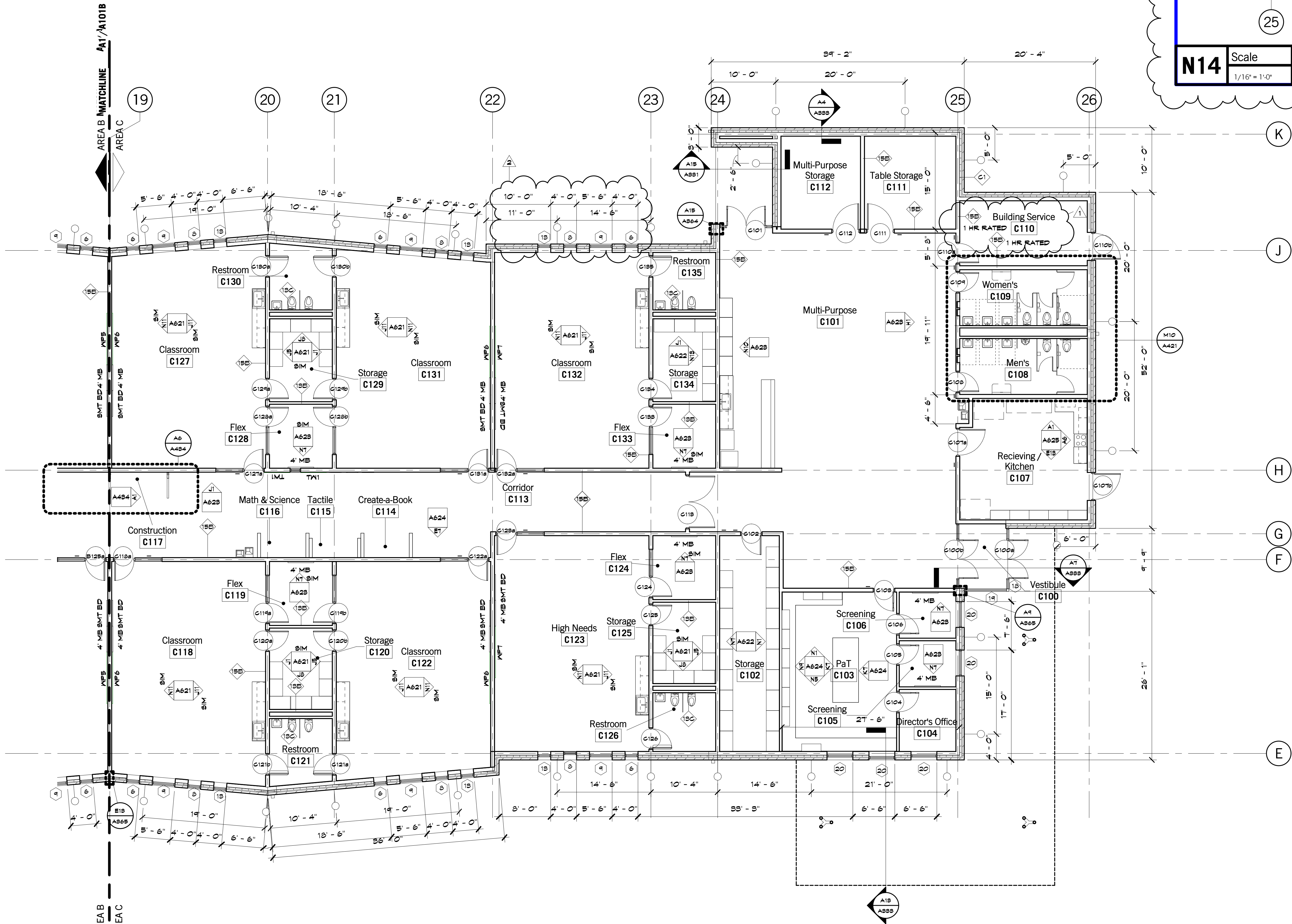
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**A101B**  
OF

FLOOR PLAN - AREA B

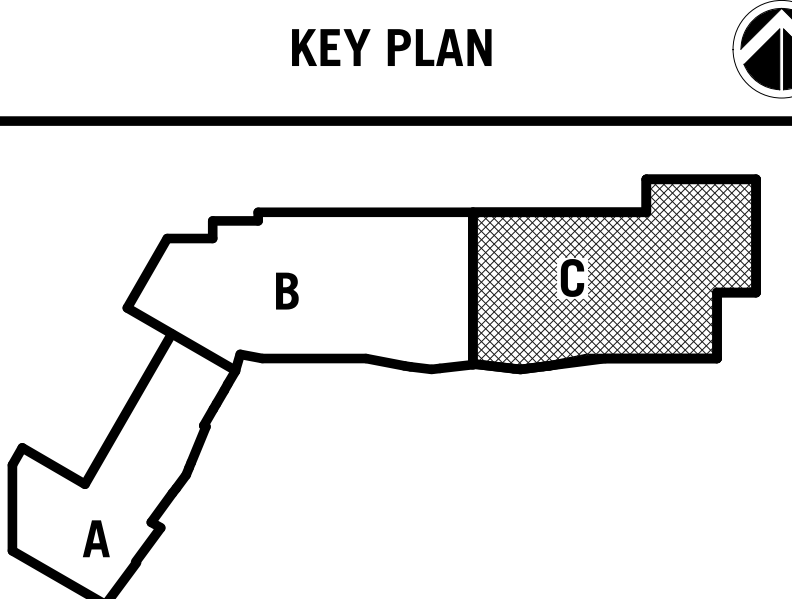
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N14 Scale 1/16" = 1'-0" Clearstory Plan - Area C

SHEET KEYNOTE LEGEND



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REVISIONS:		
#	Description	Date
1	Addendum 1	10/14/2016
2	Addendum 2	10/28/2016



JOB NO: 16054  
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A101C

OF

FLOOR PLAN - AREA C

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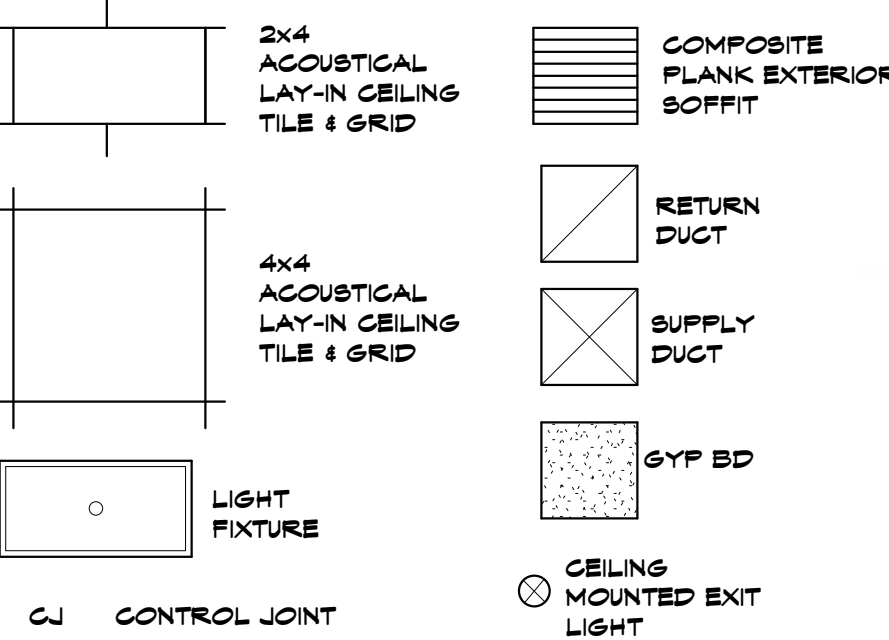
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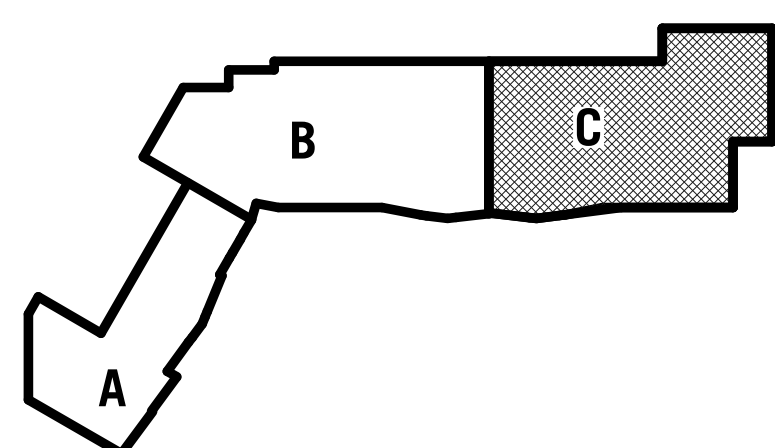
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#	Description	Date
2	Addendum 2	10.29.2016

### RCP LEGEND



## KEY PLAN

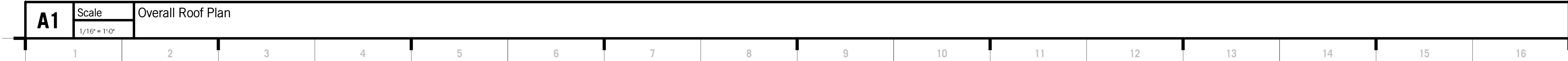
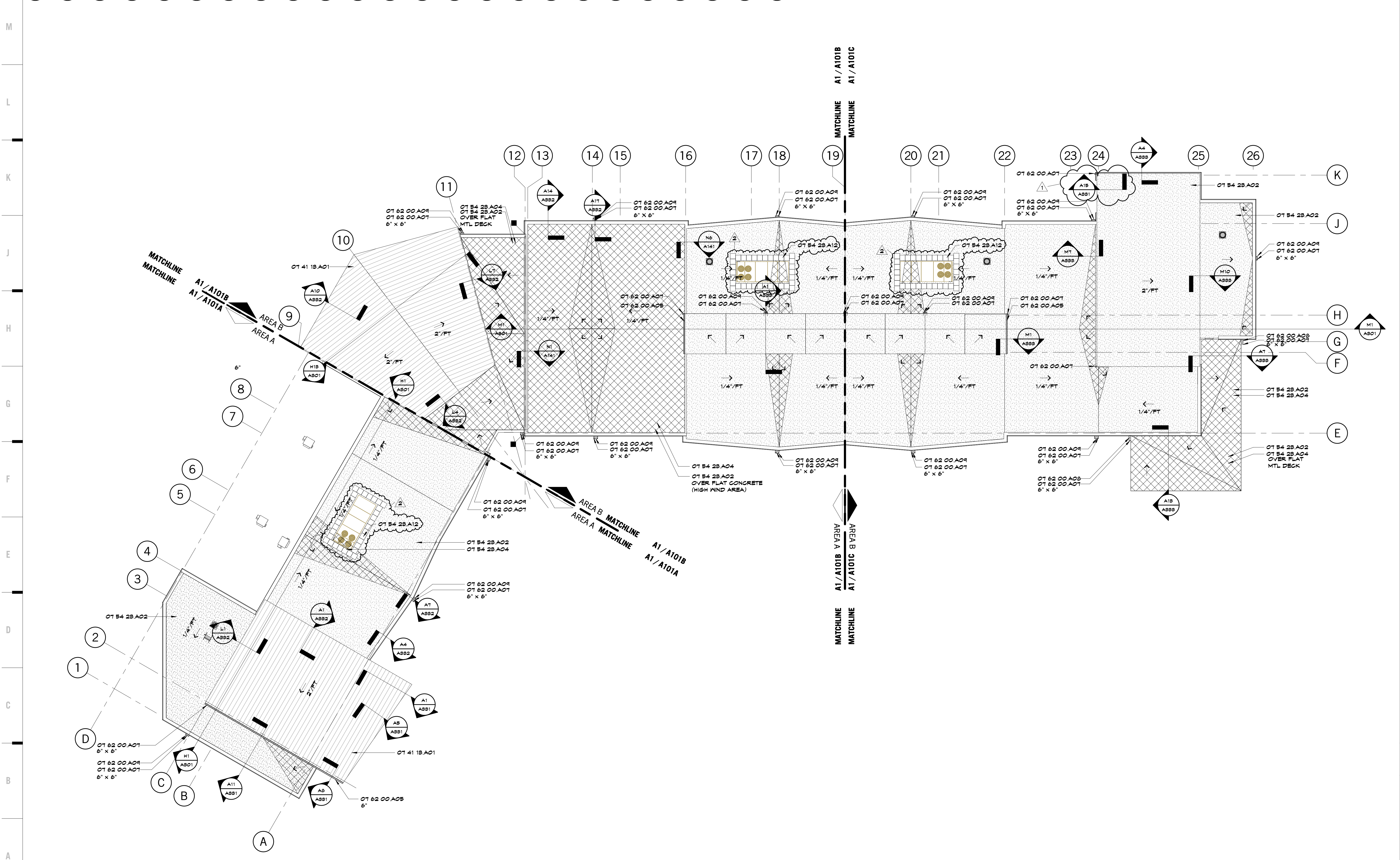
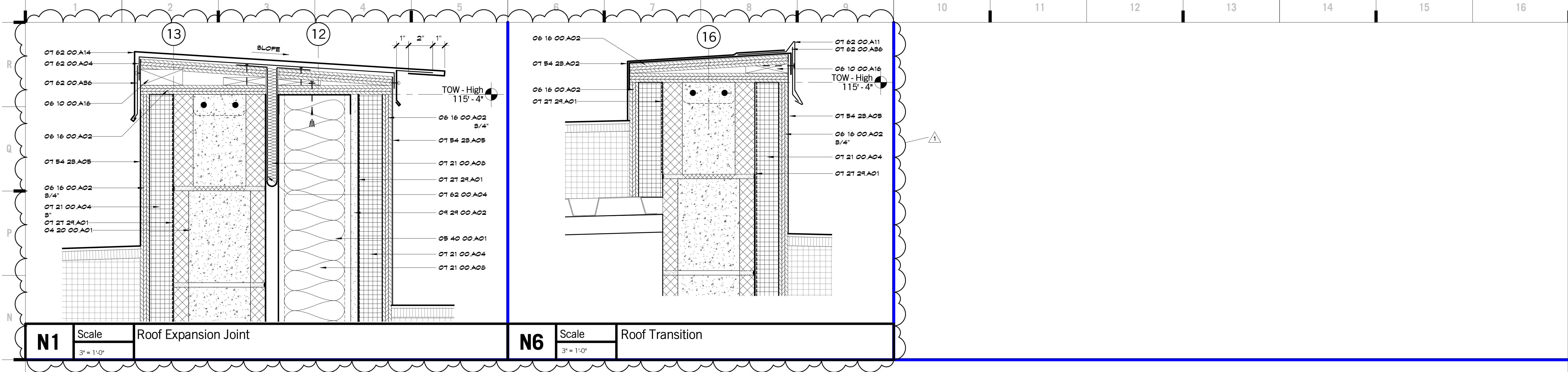


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# A121C

**REFLECTED CEILING PLAN - AREA C**





SHEET KEYNOTE LEGEND

04 20 00 A01	CONCRETE MASONRY UNITS
05 40 00 A01	GOLD-FORMED METAL FRAMING
06 10 00 A16	FIRE-RETARDANT TREATED WOOD
06 16 00 A02	BLOCKING & NAILERS
06 16 00 A02	FIRE-RETARDANT TREATED PLYWOOD
07 21 00 A04	POLYISOCYANURATE INSULATION
07 21 00 A05	UNFACED GLASS FIBER BLANKET INSULATION
07 21 24 A01	VAPOR RETARDING AIR BARRIER COATING
07 41 18 A01	METAL ROOF PANELS
07 54 28 A02	MECHANICALLY-FASTENED TPO MEMBRANE
07 54 28 A04	ROOFING SYSTEM
07 54 28 A05	TAPERED ROOF INSULATION
07 54 28 A08	SHEET FLASHING
07 54 28 A12	WALKWAYS
07 62 00 A04	FLEXIBLE MEMBRANE CLOSURE
07 62 00 A05	HANGING GUTTERS
07 62 00 A07	DOWNSPOUTS
07 62 00 A08	SCUFFERS
07 62 00 A09	CONDUCTOR HEADS
07 62 00 A11	GRAVEL STOP
07 62 00 A14	ROOF TO ROOF EXPANSION JOINT COVER
07 62 00 A16	GLEAT
07 62 00 A22	GYPSUM BOARD - TYPE X

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#	Description	Date
1	Addendum 1	10/14/2016
2	Addendum 2	10/28/2016



JOB NO: 16054  
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DATE: 09.30.2016

A141

OVERALL ROOF PLAN





SHEET KEYNOTE LEGEND

- 04 20 00 A12 FACE BRICK
- 05 12 00 A06 GOLD-FORMED HSB
- 06 20 19 A04 POLYASH-SYNTHETIC TRIM
- 07 24 19 A01 DRAINABLE EXTERIOR INSULATION AND FINISH SYSTEM
- 07 41 19 A01 METAL ROOF PANELS
- 07 42 19 A05 CONCEALED FASTENER METAL WALL PANELS
- 07 54 29 A02 MECHANICALLY-FASTENED TPO MEMBRANE ROOFING SYSTEM
- 07 62 00 A09 CONDUCTOR HEADS
- 07 62 00 A11 GRAVEL STOP

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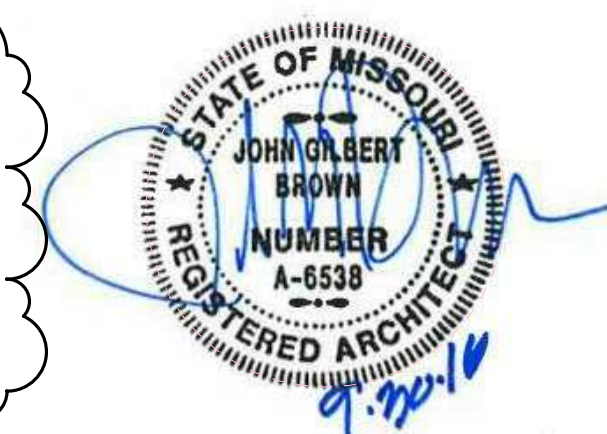
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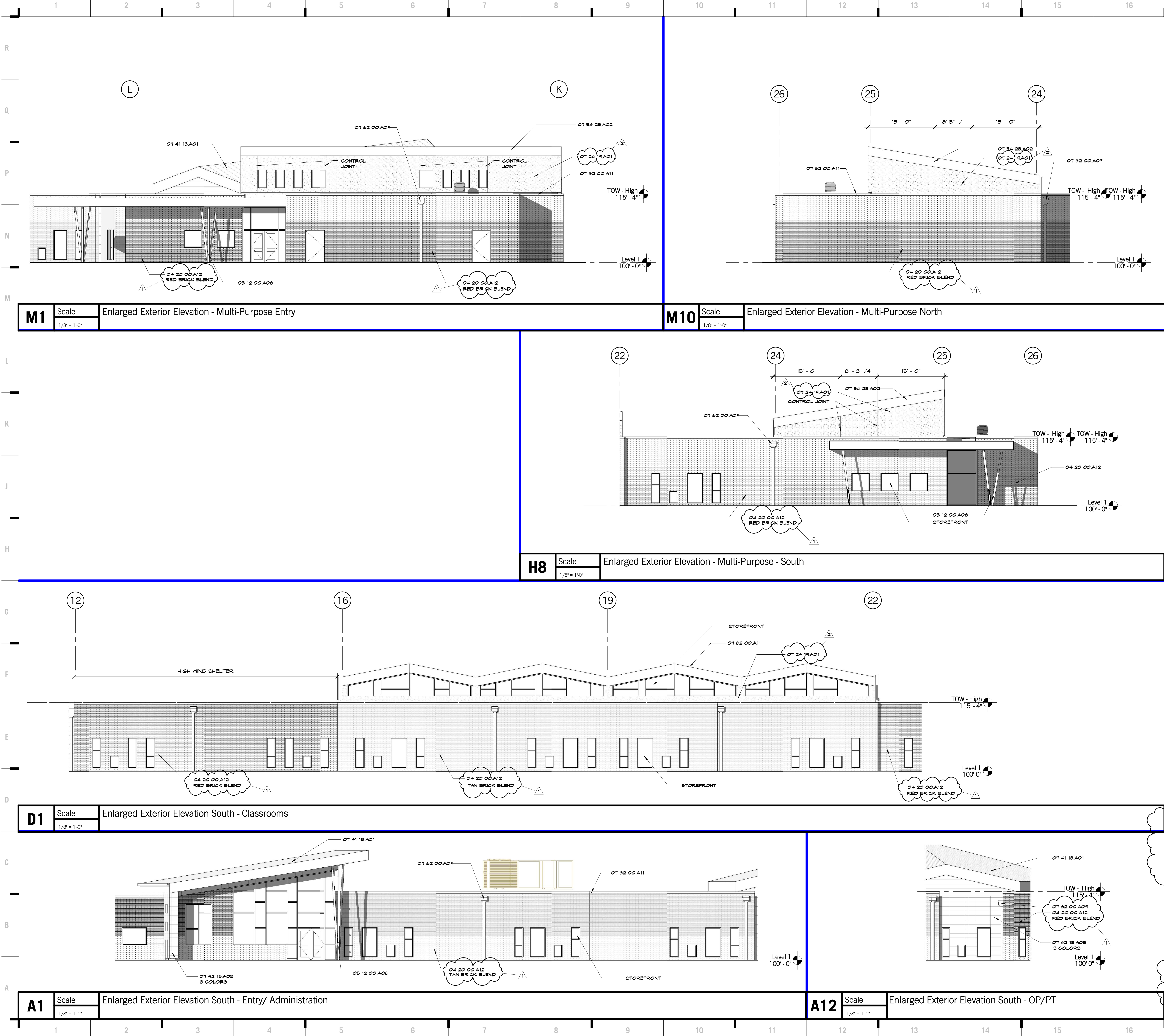
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#	Description	Date
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2	Addendum 2	10/28/2016



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DATE: 09.30.2016

A201





**SHEET KEYNOTE LEGEND**

04 20 00 A12	FACE BRICK
05 12 00 A06	COLD-FORMED HBS
07 24 19 A01	DRAINABLE EXTERIOR INSULATION AND FINISH SYSTEM
07 41 19 A01	METAL ROOF PANELS
07 42 19 A03	CONCEALED FASTENER METAL WALL PANELS
07 54 25 A02	MECHANICALLY-FASTENED TPO MEMBRANE
07 62 00 A09	ROOFING SYSTEM
07 62 00 A11	CONDUCTOR HEADS
	GRAVEL STOP

**SHEET NOTES**

1. PROVIDE EXPAN JOINT 085000 A15 AND SEALANT 075000 A01 AROUND ALL DOWN SPOUTS THAT GO THROUGH CONCRETE

**EXTERIOR ELEVATION LEGEND**

	STANDING BEAM METAL ROOF
	EXTERIOR METAL PANEL - SIM TO CENTRIA CS200 - 3 COLORS
	RED BRICK BLEND - SIM TO : 65% CHICKADEE BLEND / 35% OLD ROSE VELVET - CLOUD CERAMICS
	TAN BRICK BLEND - SIM TO : 50% DRIFTWOOD GREY / 50% SAHARA LT. BUFF VELVET - CLOUD CERAMICS

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**Joplin Early Childhood Center**  
Joplin Schools  
2810 South McClelland Blvd.  
Joplin, MO

**REVISIONS:**

#	Description	Date
1	Addendum 1	10/14/2016
2	Addendum 2	10/28/2016

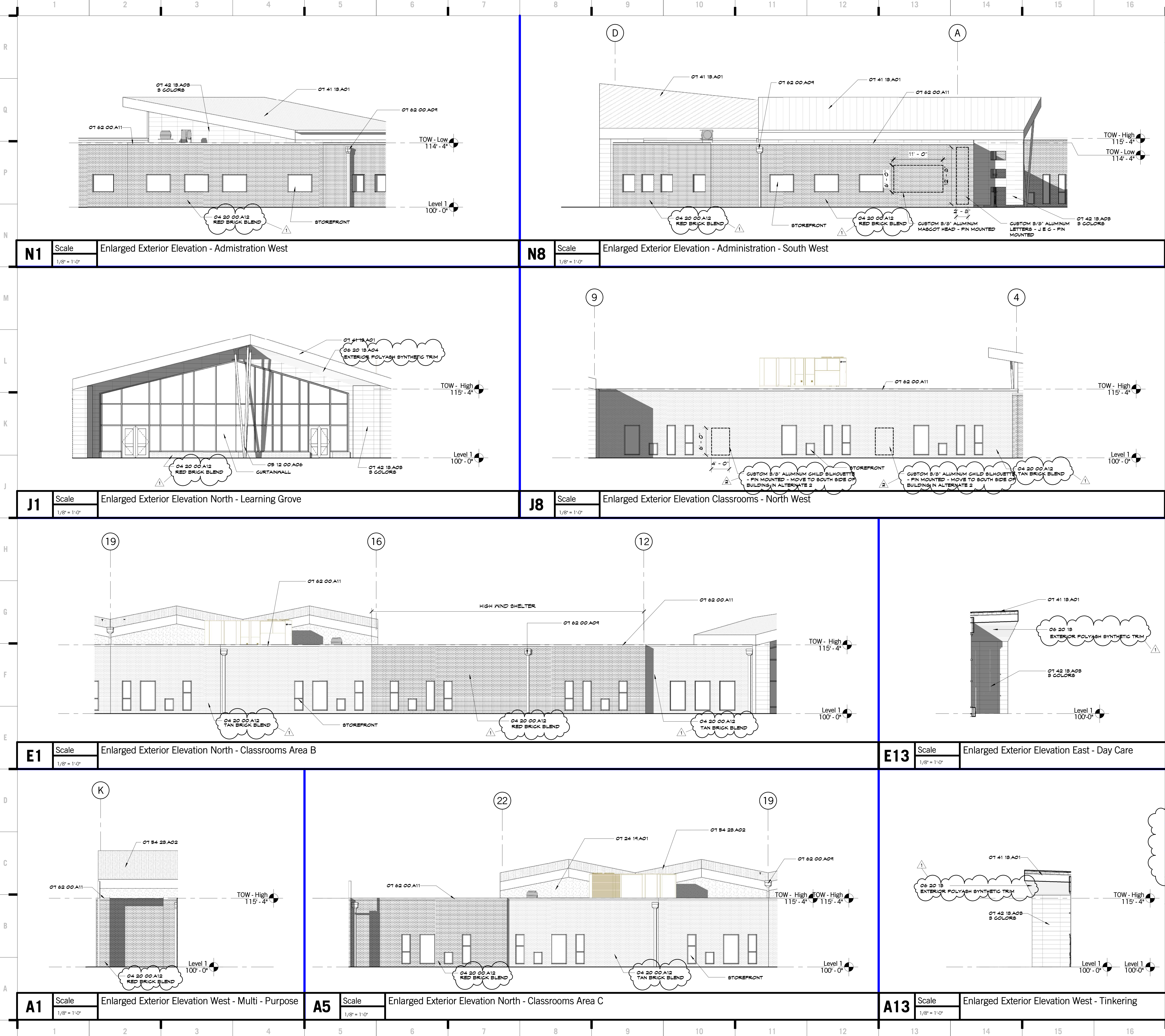
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### SHEET KEYNOTE LEGEND

04 20 00 A12	FACE BRICK
06 12 00 A06	COLD-FORMED HSS
06 20 19	EXTERIOR FINISH CARPENTRY
06 20 19 A04	POLYASH SYNTHETIC TRIM
07 24 19 A01	DRAINABLE EXTERIOR INSULATION AND FINISH SYSTEM
07 41 19 A01	METAL ROOF PANELS
07 42 19 A03	CONCEALED FASTENER METAL WALL PANELS
07 54 25 A02	MECHANICALLY-FASTENED TPO MEMBRANE ROOFING SYSTEM
07 62 00 A09	CONDUCTOR HEADS
07 62 00 A11	GRAVEL STOP

### SHEET NOTES

1. PROVIDE EXPAN JOINT OSB000A19 AND SEALANT OSB000A01 AROUND ALL DOWN SPOUTS THAT GO THROUGH CONCRETE

### EXTERIOR ELEVATION LEGEND

	STANDING BEAM METAL ROOF
	EXTERIOR METAL PANEL - SIM TO CENTRIA CS200 - 3 COLORS
	RED BRICK BLEND - SIM TO : 65% CHEROKEE BLEND / 35% OLD ROSE VELVET - CLOUD CERAMICS
	TAN BRICK BLEND - SIM TO : 50% DRIFTWOOD GREY / 50% SAHARA LT. BUFF VELVET - CLOUD CERAMICS

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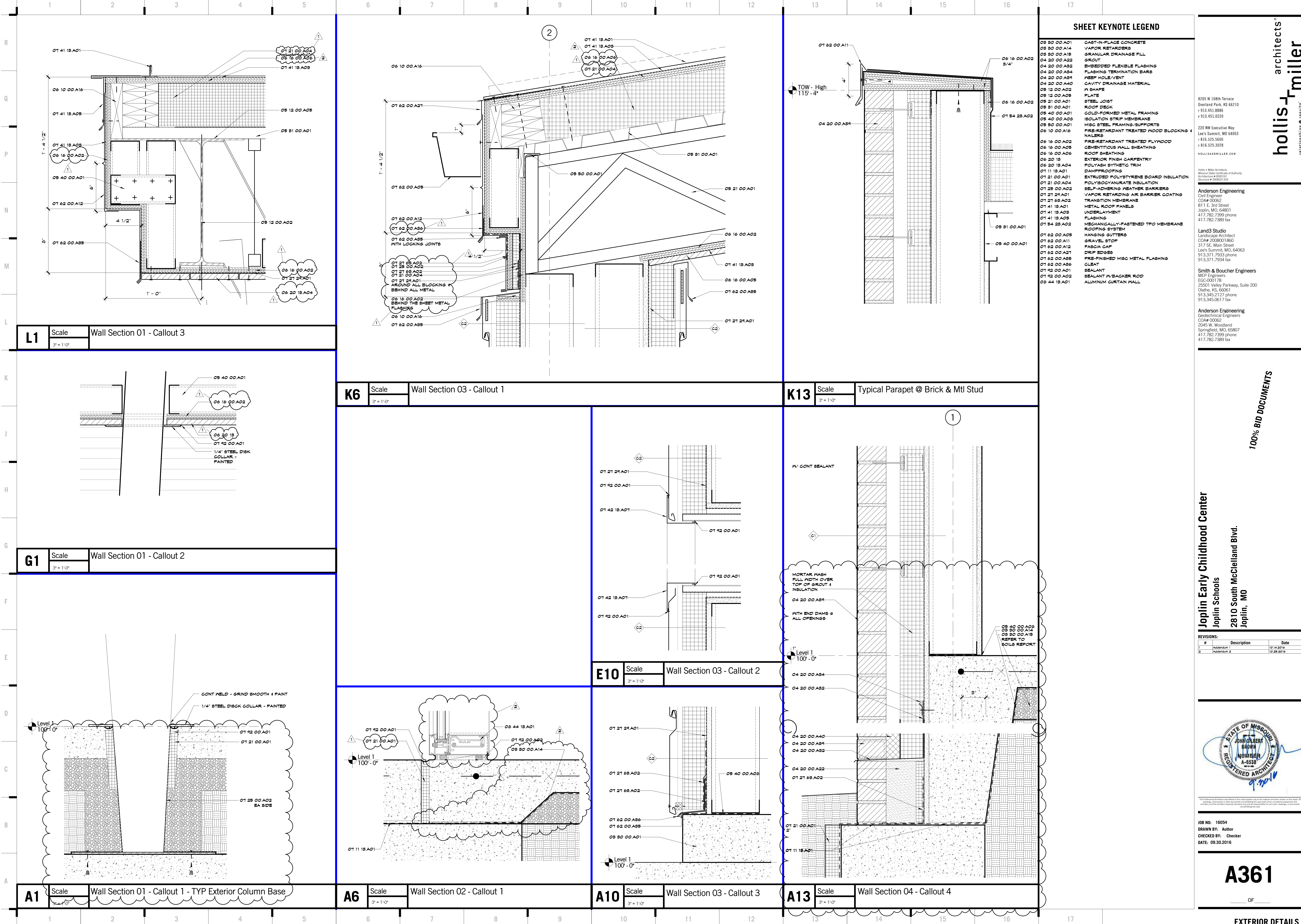
#	Description	Date
1	Addendum 1	10/14/2016
2	Addendum 2	10/28/2016

**JOHN ALBERT BROWN**  
REGISTERED ARCHITECT  
NUMBER A-6538  
9.2016

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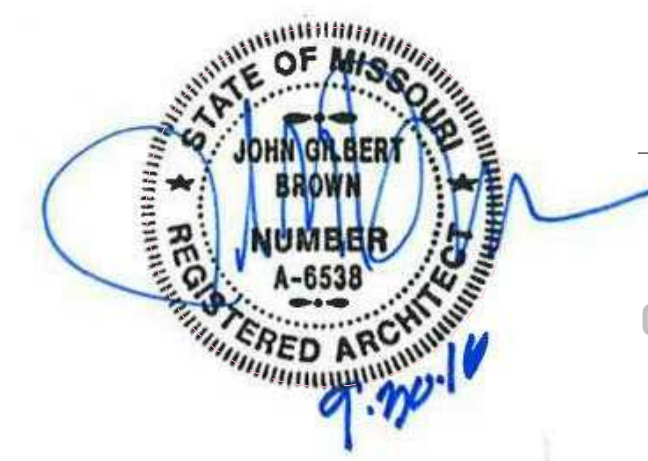
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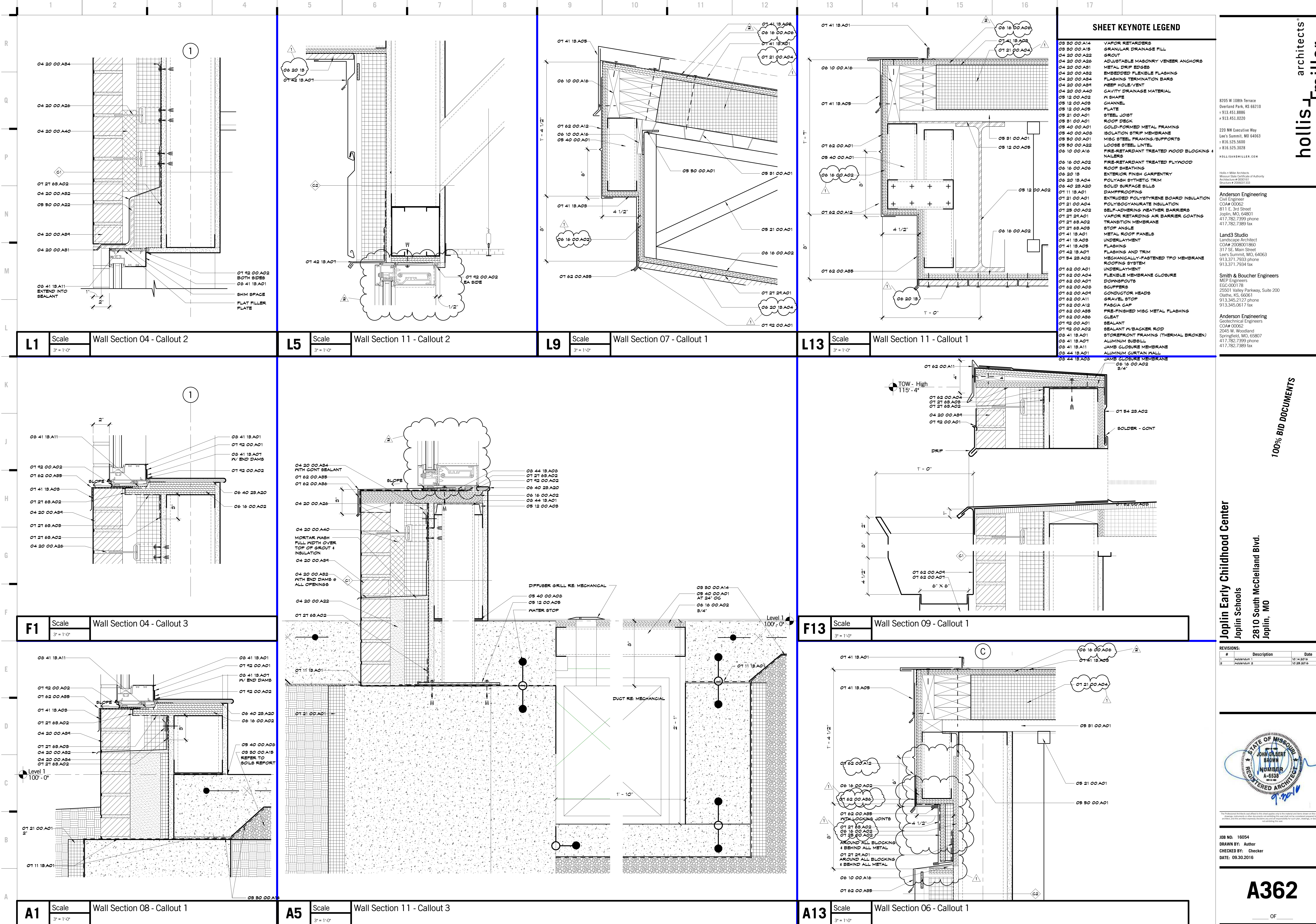
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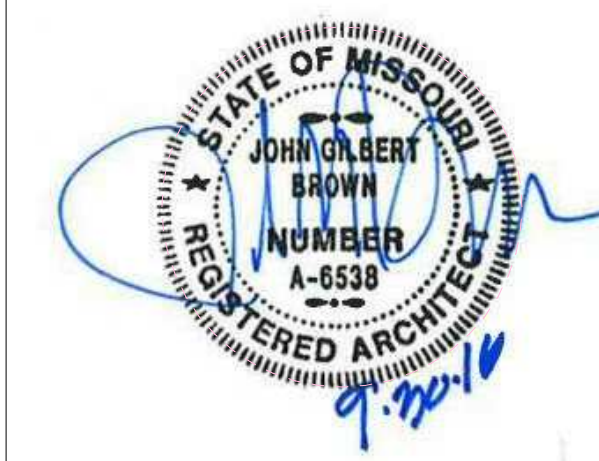
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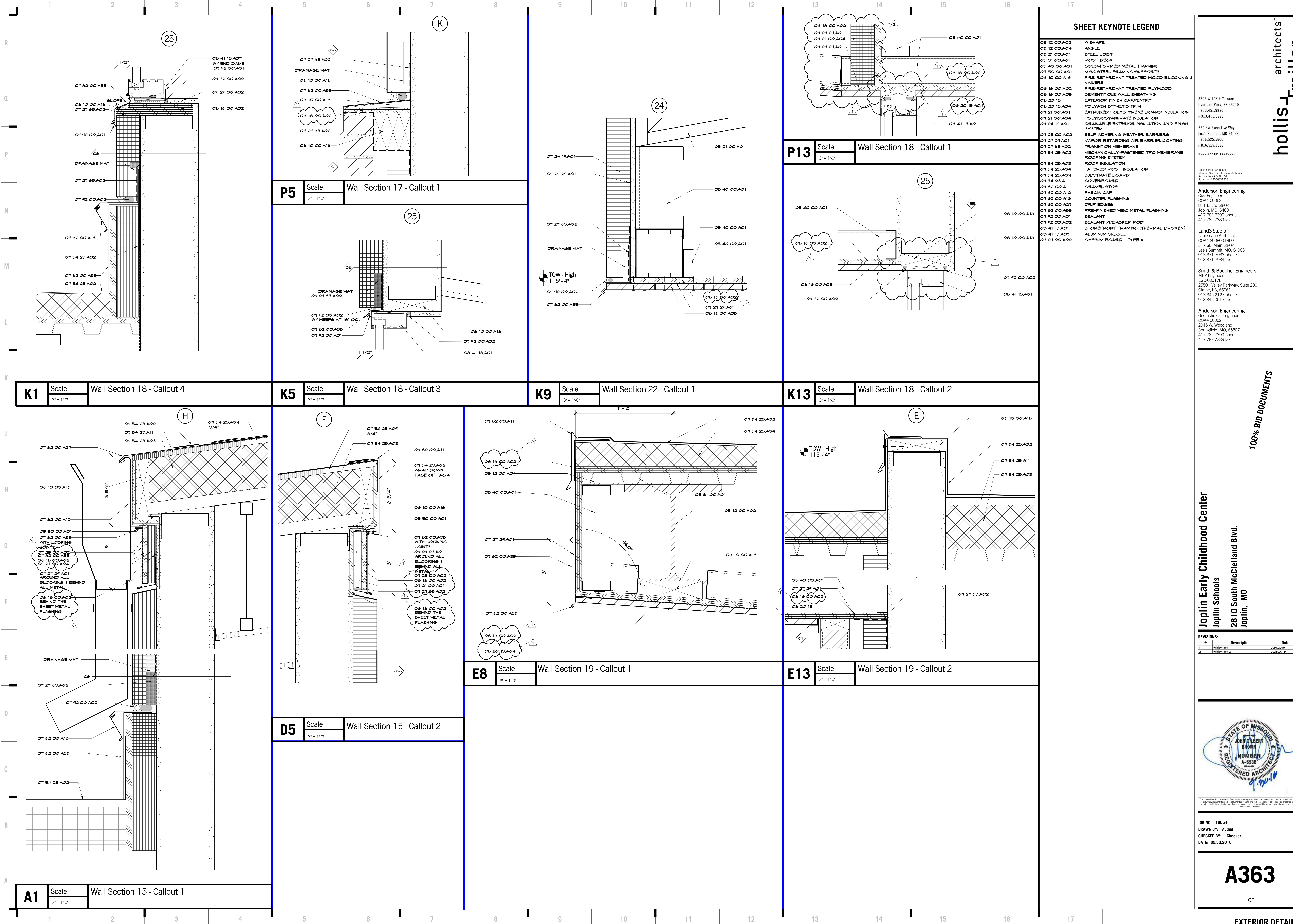
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EXTERIOR DETAILS

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EXTERIOR DETAILS

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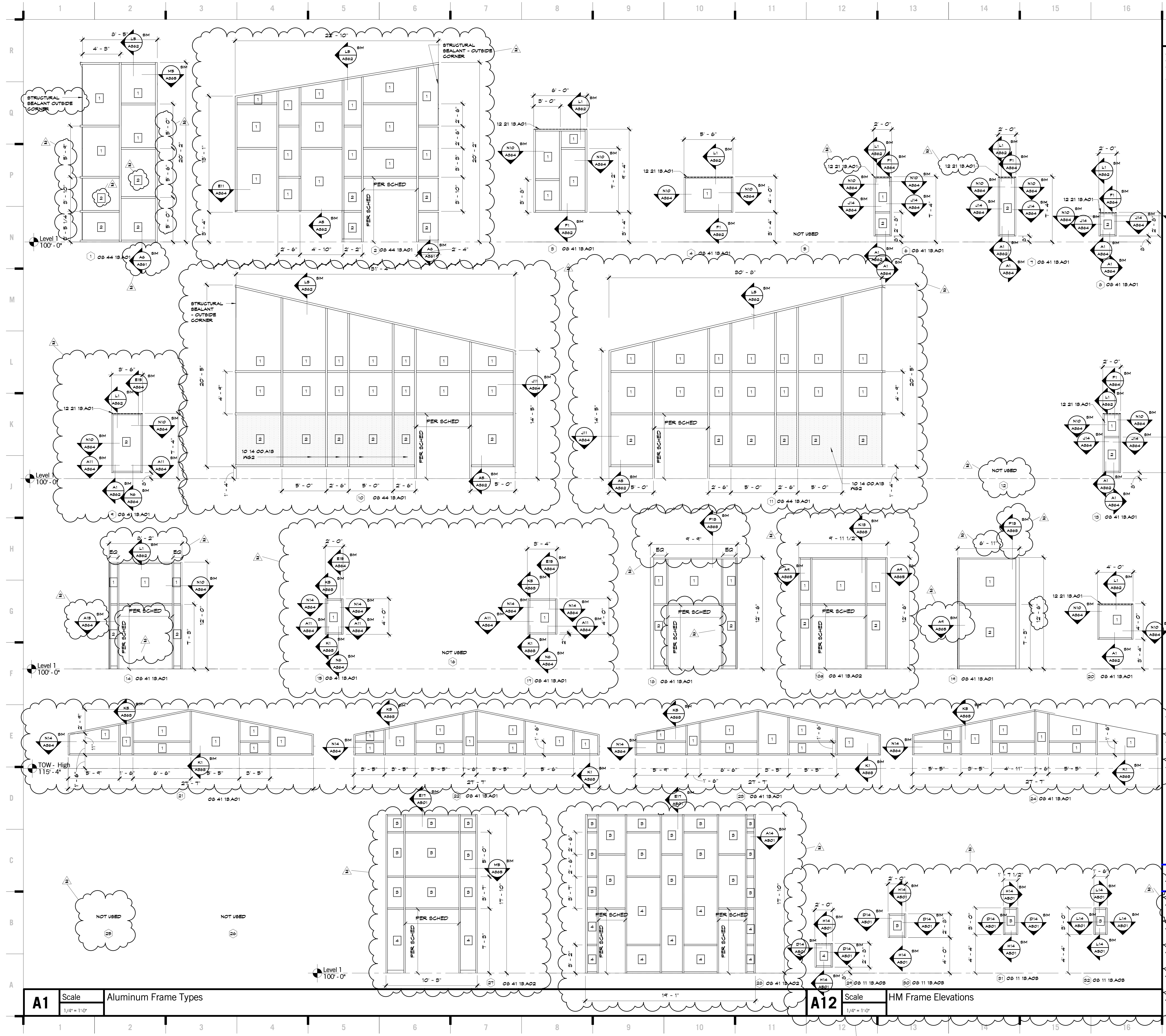












SHEET KEYNOTE LEGEND

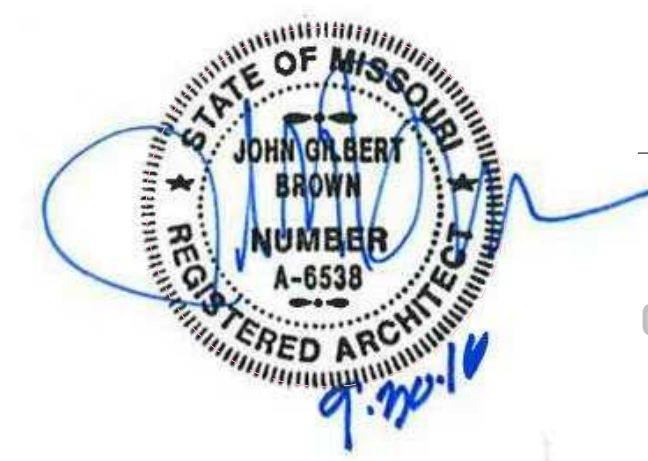
- OB 11 18 AO3 HOLLOW METAL FRAME
- OB 41 18 AO1 STOREFRONT FRAMING (THERMAL BROKEN)
- OB 41 18 AO2 STOREFRONT FRAMING (NON-THERMAL BROKEN)
- OB 44 18 AO1 ALUMINUM CURTAIN WALL
- 10 14 00 A1B INTERIOR VINYL GRAPHICS (GLASS SUBSTRATE)
- 12 21 18 AO1 HORIZONTAL LOUVER BLINDS (MANUAL)

GLASS LEGEND

- 1 LOW-E INSULATED GLASS - OB 80 00 A17
- 2 LOW-E FULLY-TEMPERED GLASS - OB 80 00 A18
- 3 CLEAR MONOLITHIC FLOAT GLASS - OB 80 00 A01
- 4 CLEAR FULLY-TEMPERED MONOLITHIC FLOAT GLASS - OB 80 00 A02

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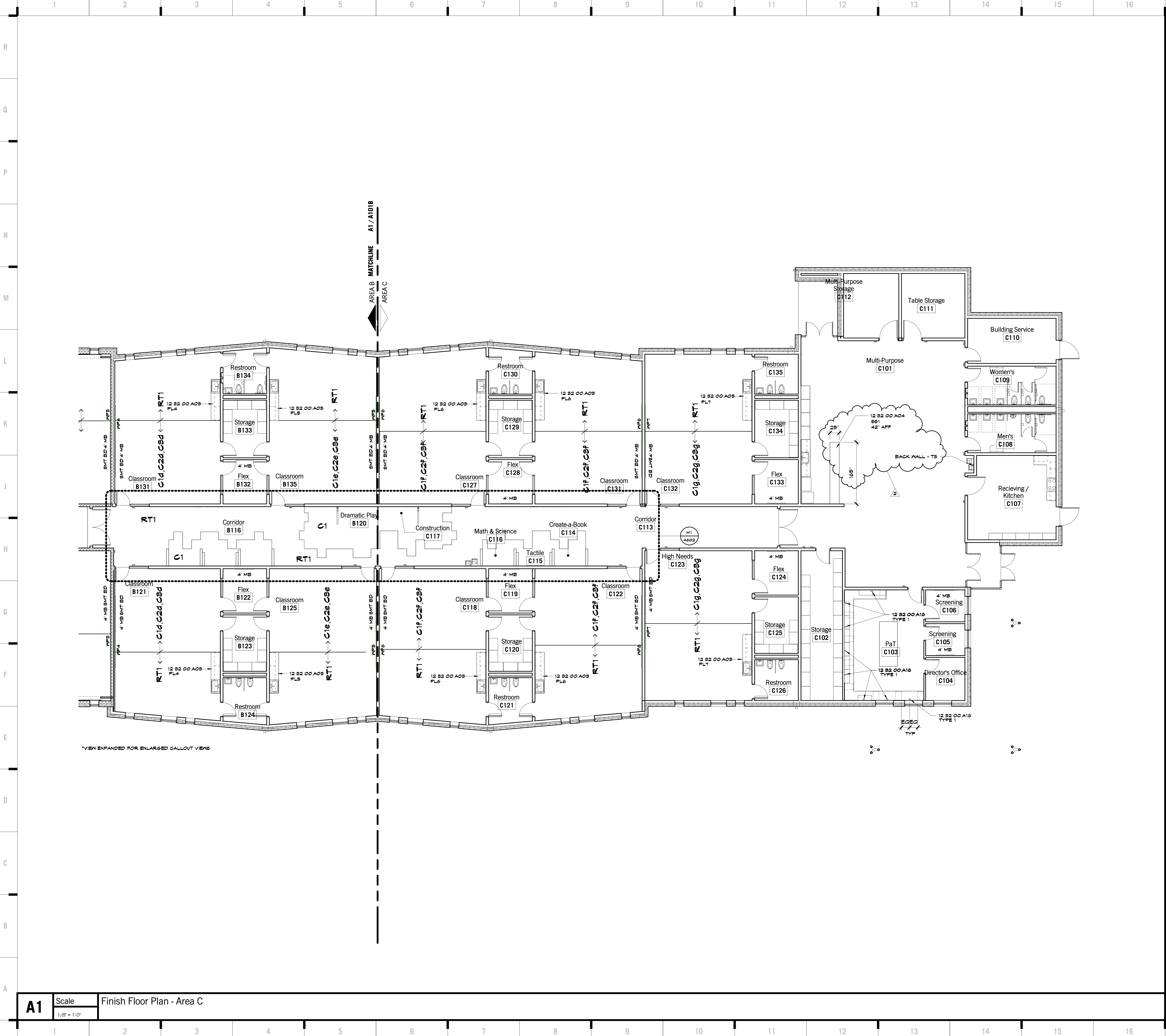
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SHEET KEYNOTE LEGEND

12 32 00 A03	PLASTIC LAMINATE COUNTERTOPS
12 32 00 A04	SOLID SURFACING COUNTERTOPS
12 32 00 A18	GROMMETS

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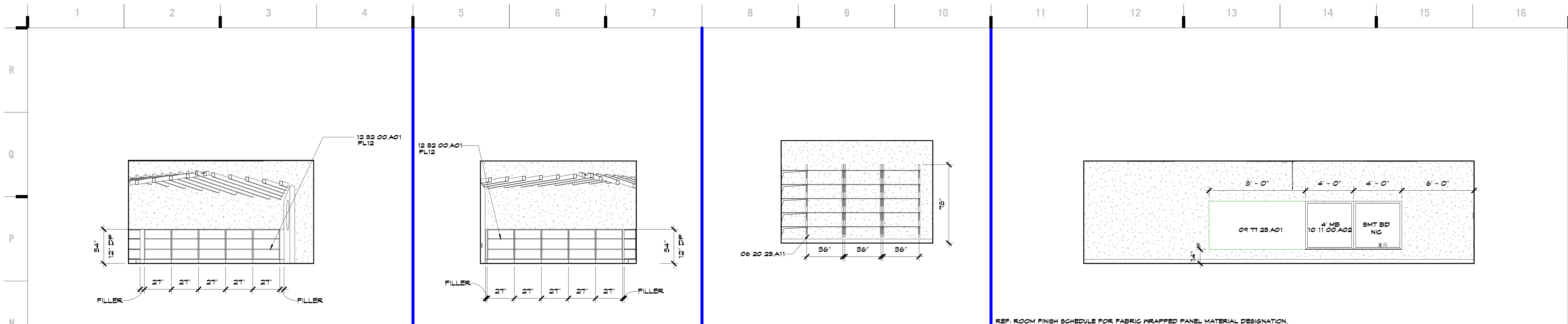
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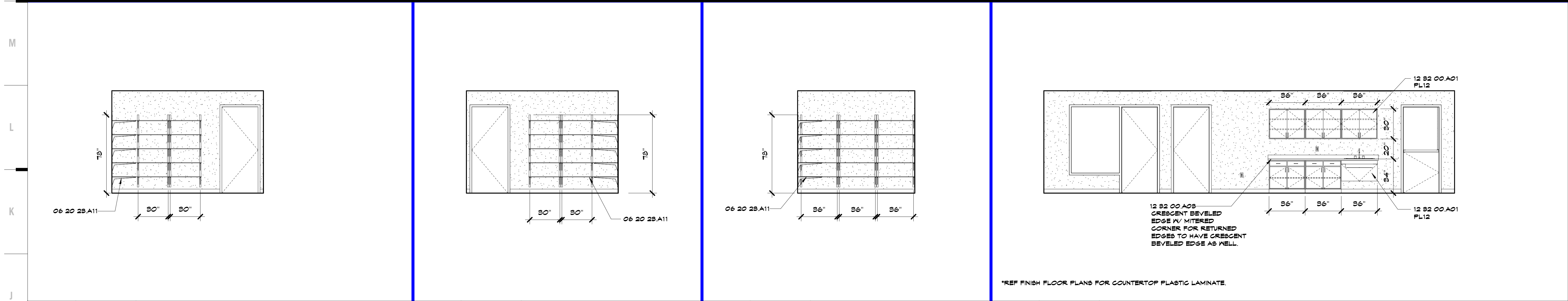
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FINISH FLOOR PLAN - AREA C

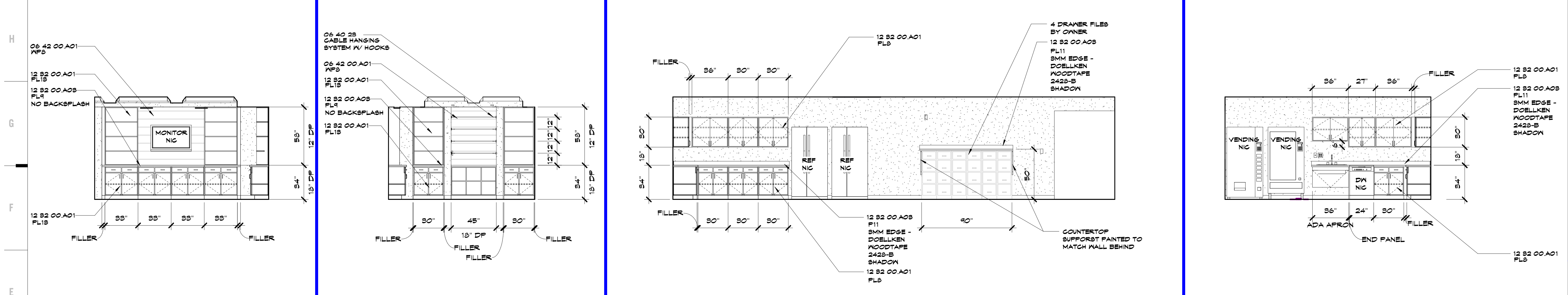




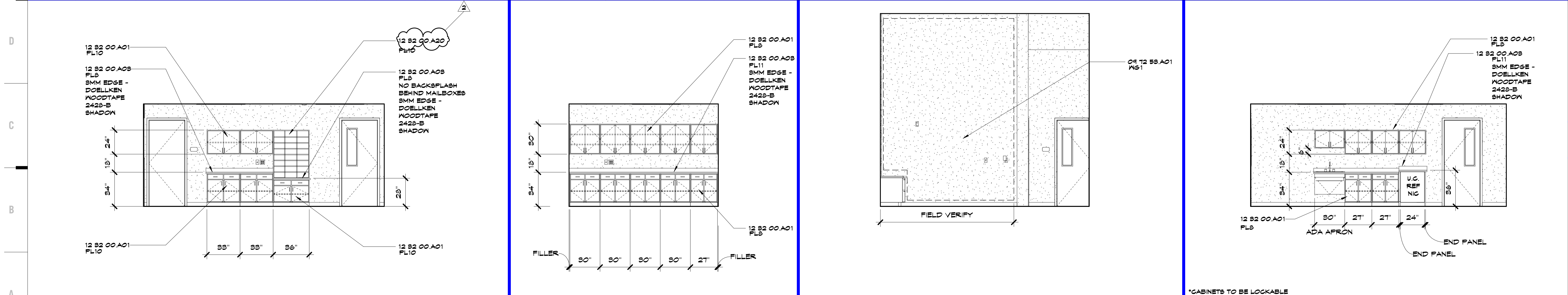
N1	Scale	Casework Elevation - B105 Book Nook - S	N5	Scale	Casework Elevation - Book Nook - E	N8	Scale	Casework Elevation - A127 Storage - S	N11	Scale	TYP Classroom Learning Wall
	1/4" = 1'-0"			1/4" = 1'-0"			1/4" = 1'-0"			1/4" = 1'-0"	



J1	Scale	TYP Storage - South	J5	Scale	TYP Storage - North	J8	Scale	TYP Storage - East	J11	Scale	Casework Elevation - TYP Classroom Sink
	1/4" = 1'-0"			1/4" = 1'-0"			1/4" = 1'-0"			1/4" = 1'-0"	



E1	Scale	Casework Elevation - A117 Family Resource Center - S	E4	Scale	Casework Elevation - A117 Family Resource Center - W	E7	Scale	Casework Elevation - A110 Lounge - E	E13	Scale	Casework Elevation - A110 Lounge - N
	1/4" = 1'-0"			1/4" = 1'-0"			1/4" = 1'-0"			1/4" = 1'-0"	



A1	Scale	Casework Elevation - A109 Corridor - N	A6	Scale	Casework Elevation - A108 Workroom - E	A9	Scale	Interior Elevation - A102 Reception - S	A13	Scale	Casework Elevation - A116 Nurse - S
	1/4" = 1'-0"			1/4" = 1'-0"			1/4" = 1'-0"			1/4" = 1'-0"	

SHEET KEYNOTE LEGEND	
06 20 2B A11	SHELVING
06 40 2B	INTERIOR ARCHITECTURAL WOODWORK
06 42 00 A01	BOARD PANELING
09 12 2B A01	DIGITAL WALL COVERING
09 11 2B A01	FABRIC-WRAPPED PANELS
10 11 00 A02	MARKERBOARDS
12 32 00 A01	PLASTIC LAMINATE FACED CABINETS
12 32 00 A05	PLASTIC LAMINATE COUNTERTOPS
12 32 00 A20	PRE-MANUFACTURED MAIL SLOTS

ID	MATERIAL
EP1	PANT SEMI-GLOSS, SATIN SERENADE #10RR 26/24B
EP2	PANT SEMI-GLOSS, SATIN SERENADE #10RR 26/24B
EP3	PANT SEMI-GLOSS, FRESH SALMON #2BYR 45/36F
EP4	PANT SEMI-GLOSS, EGYPTIAN SUN #04YY 51/58B
EP5	PANT SEMI-GLOSS, SUN RAYS #2RY 66/5B1
EP6	PANT SEMI-GLOSS, SWEET LEAF #32GY 51/4B2
EP7	PANT SEMI-GLOSS, SOUTH BEAS #51GG 51/241
EP8	PANT SEMI-GLOSS, BESIDE THE OCEAN #10BG 40/2B4
P1	PANT EGG-SHELL, SATOPO ANDEN GRAY
P2	PANT EGG-SHELL, SATIN SERENADE #10RR 26/24B
P3	PANT EGG-SHELL, FRESH SALMON #2BYR 45/36F
P4	PANT EGG-SHELL, EGYPTIAN SUN #04YY 51/58B
P5	PANT EGG-SHELL, SUN RAYS #2RY 66/5B1
P6	PANT EGG-SHELL, SWEET LEAF #32GY 51/4B2
P7	PANT EGG-SHELL, SOUTH BEAS #51GG 51/241
P8	PANT EGG-SHELL, BESIDE THE OCEAN #10BG 40/2B4
P9	PANT FLAT, BN 1006 EXTRA WHITE
P10	PANT EGG-SHELL, BN 649B EBBTIDE
P11	PANT EGG-SHELL, CHALKBOARD PAINT 50B - BLACK
FL1	PLASTIC LAMINATE, SATIN SERENADE 242T1
FL2	PLASTIC LAMINATE, FRESH SALMON 242T1
FL3	PLASTIC LAMINATE, EGYPTIAN SUN 242T1
FL4	PLASTIC LAMINATE, SUN RAYS 242T1
FL5	PLASTIC LAMINATE, SWEET LEAF 242T1
FL6	PLASTIC LAMINATE, SOUTH BEAS 242T1
FL7	PLASTIC LAMINATE, BESIDE THE OCEAN 242T1
FL8	PLASTIC LAMINATE, DPE-60 SHADOW
FL9	PLASTIC LAMINATE - 4442-BB CRISE LINEN
FL10	PLASTIC LAMINATE, 1911K-12 UPTOWN WALNUT
FL11	PLASTIC LAMINATE, 4444-BB CASUAL LINEN
FL12	PLASTIC LAMINATE, 4448-BB GLASSIC LINEN
FL13	PLASTIC LAMINATE, 8211K-2B PHANTOM PEARL
SS1	SOLID SURFACE, M10B FIRENZE
SS2	SOLID SURFACE, #209CM MOON SEYSER
T1	GLAZED CERAMIC WALL TILE - BRIGHT 4 MATTE PROFILES COLOR - DESIGNER WHITE 60x18x10
T2	1'x1' GLASS WALL TILE, CUSTOM BLEND: 50% 60B9, 20% 60B1, 15% 6101, 15% 60B4
T3	1'x1' GLASS WALL TILE, CUSTOM BLEND: 50% 6014, 20% 6016, 15% 6022, 15% 6032
T4	1'x1' GLASS WALL TILE, CUSTOM BLEND: 50% 6004, 20% 6010, 15% 6001, 15% 6062
AC1	WALL COVERING - TWINKLE BR4642 - 002
AC2	WALL COVERING - DANCING ARCHITECTURAL FINISHES - PURE COLOR - PB-1456
AG1	WALL GRAPHIC/VINYL -
WP1	FABRIC WRAPPED PANEL, 642T METEOR, #1B4
WP2	FABRIC WRAPPED PANEL, 642T METEOR, #1H1
WP3	FABRIC WRAPPED PANEL, 642T METEOR, #1H2
WP4	FABRIC WRAPPED PANEL, 642T METEOR, #1H3
WP5	FABRIC WRAPPED PANEL, 642T METEOR, #1B1
WP6	FABRIC WRAPPED PANEL, 642T METEOR, #1B1
WP7	FABRIC WRAPPED PANEL, 642T METEOR, #1B1
WP8	BOARD PANELING - 8" HORIZONTAL SLATS - PAINTED TO MATCH FPS 1151-2 EMBELLISHMENT

HOLLOW METAL FRAME PAINT COLORS		
1	PANT TO MATCH ICI PAINTS BELLA ROSA #10RR 14/21F	
2	PANT TO MATCH ICI PAINTS CELEBRATION #2BYR 34/47B	
3	PANT TO MATCH ICI PAINTS CAROTENE #4TYR 44/642	
4	PANT TO MATCH ICI PAINTS DANDELION #3TY 64/6B3	
5	PANT TO MATCH ICI PAINTS KIVI FUN #5GY 40/5B1	
6	PANT TO MATCH ICI PAINTS MARNE BLUE #59GG 52/84D	
7	PANT TO MATCH INDIAN BEAD #10BG 51/5B2	

CASEWORK NOTES		
1.	ALL EXPOSED SURFACES TO RECEIVE PLASTIC LAMINATES.	
2.	PROVIDE 4" BACKSLASH UNO.	
3.	PROVIDE 1" OVERHANGS AT ALL COUNTERTOPS UNO.	
4.	DIMENSIONS SHOWN ON FLOOR PLANS ARE TO FACE OF STUD OR MAS BLOCK. FIELD VERIFY ALL DIMENSIONS TO FACE OF FINISH PRIOR TO CONSTRUCTION.	
5.	CASEWORK CONTRACTOR TO COORDINATE WITH PLUMBING CONTRACTOR ON PIPING LOCATIONS.	
6.	ALL BASE CABINETS ARE 24" DP UNO.	
7.	ALL UPPER CABINETS ARE 16" DP UNO.	
8.	ALL TALL STORAGE CABINETS ARE 24" DP UNO.	

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JOB NO: 16054  
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DATE: 09.30.2016

A621

OF

INTERIOR ELEVATIONS







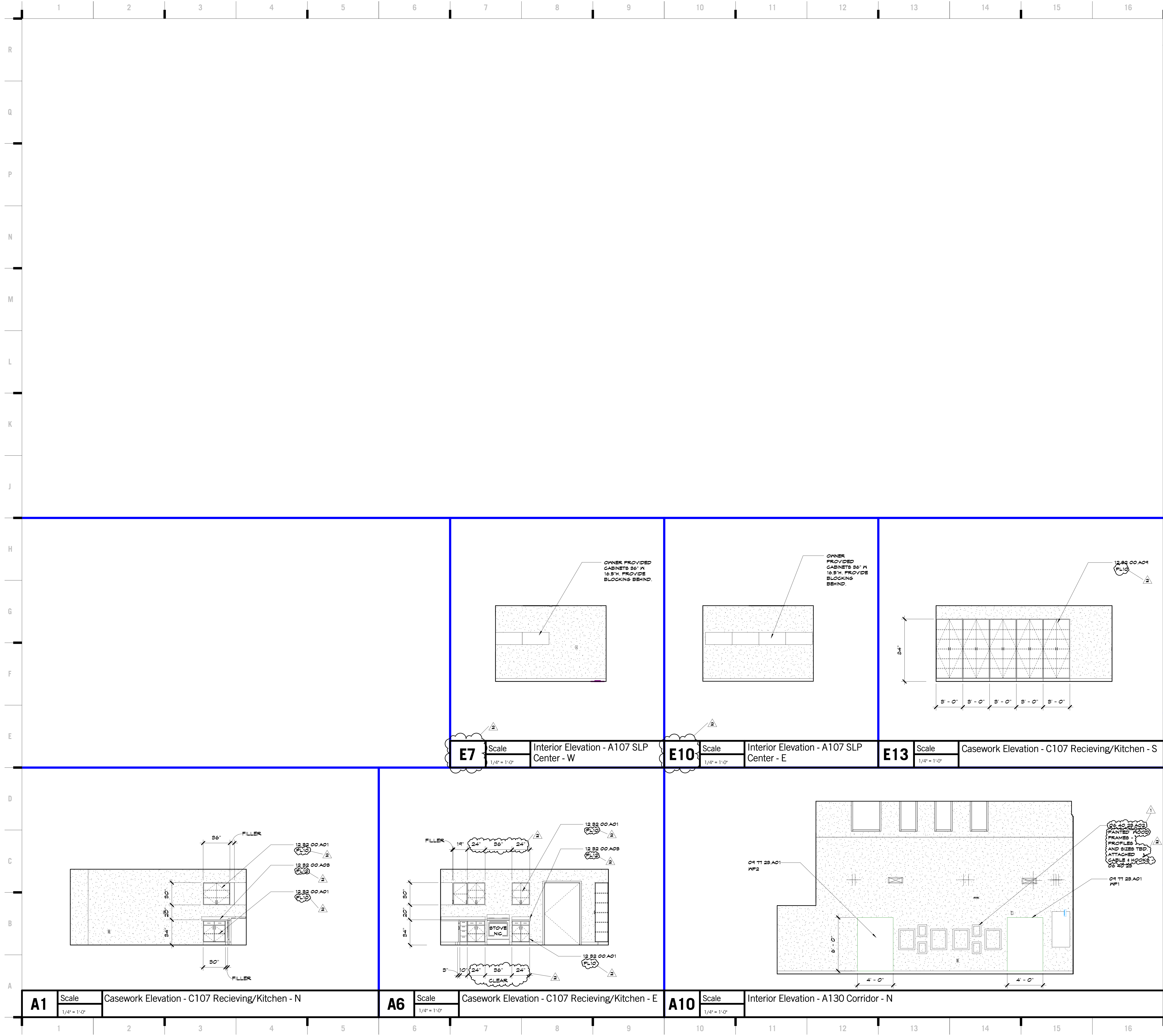








10/25/2016 11:35:14 AM



### SHEET KEYNOTE LEGEND

06 40 28	INTERIOR ARCHITECTURAL WOODWORK
06 40 28 A02	ORNAMENTAL TRIM - OPAQUE
09 TT 28 A01	FABRIC-WRAPPED PANELS
12 B2 00 A01	PLASTIC LAMINATE FACED CABINETS
12 B2 00 A03	PLASTIC LAMINATE COUNTERTOPS
12 B2 00 A04	TALL CABINET WITH ADJUSTABLE SHELVES

ID	MATERIAL
EP1	PANT SEMI-GLOSS, SATIN OCEAN ANEM GRAY
EP2	PANT SEMI-GLOSS, SATIN SERENADE #10RR 26/243
EP3	PANT SEMI-GLOSS, FRESH SALMON #2BYR 45/364
EP4	PANT SEMI-GLOSS, EGYPTIAN SUN #04YY 51/553
EP5	PANT SEMI-GLOSS, SUN RAYS #2YY 66/531
EP6	PANT SEMI-GLOSS, SWEET LEAF #32GY 51/452
EP7	PANT SEMI-GLOSS, SOUTH BEAS #51GG 51/241
EP8	PANT SEMI-GLOSS, BESIDE THE OCEAN #10BG 40/254
P1	PANT EGGSHELL, SATOCC ANEM GRAY
P2	PANT EGGSHELL, SATN SERENADE #10RR 26/243
P3	PANT EGGSHELL, FRESH SALMON #2BYR 45/364
P4	PANT EGGSHELL, EGYPTIAN SUN #04YY 51/553
P5	PANT EGGSHELL, SUN RAYS #2YY 66/531
P6	PANT EGGSHELL, SWEET LEAF #32GY 51/452
P7	PANT EGGSHELL, SOUTH BEAS #51GG 51/241
P8	PANT EGGSHELL, BESIDE THE OCEAN #10BG 40/254
P9	PANT FLAT, BN 1006 EXTRA WHITE
P10	PANT EGGSHELL, BN 649B EBBTIDE
P11	PANT EGGSHELL, CHALKBOARD PAINT 503 - BLACK
PL1	PLASTIC LAMINATE, SATN SERENADE 242T1
PL2	PLASTIC LAMINATE, FRESH SALMON 242T1
PL3	PLASTIC LAMINATE, EGYPTIAN SUN 242T1
PL4	PLASTIC LAMINATE, SUN RAYS 242T1
PL5	PLASTIC LAMINATE, SWEET LEAF 242T1
PL6	PLASTIC LAMINATE, SOUTH BEAS 242T1
PL7	PLASTIC LAMINATE, BESIDE THE OCEAN 242T1
PL8	PLASTIC LAMINATE, D36-60 SHADOW
PL9	PLASTIC LAMINATE - 4442-33 CRISP LINEN
PL10	PLASTIC LAMINATE, 1911K-12 UPTOWN WALNUT
PL11	PLASTIC LAMINATE, 4444-33 CASUAL LINEN
PL12	PLASTIC LAMINATE, 4443-33 GLASSIC LINEN
PL13	PLASTIC LAMINATE, 3211K-23 PHANTOM PEARL
SS1	SOLID SURFACE, M103 FIRENZE
SS2	SOLID SURFACE, #209CM MOON SEYSER
T1	GLAZED CERAMIC WALL TILE - BRIGHT 4 MATTE PROFILES COLOR, DESIGNER WHITE 6031 8"x8"
T2	1"x1" GLASS WALL TILE, CUSTOM BLEND: 50% 6033, 20% 6031, 15% 6101, 15% 6034
T3	1"x1" GLASS WALL TILE, CUSTOM BLEND: 50% 6014, 20% 6016, 15% 6022, 15% 6020
T4	1"x1" GLASS WALL TILE, CUSTOM BLEND: 50% 6004, 20% 6010, 15% 6001, 15% 6062
AG1	WALL COVERING - TWINKLE B99642 - 002
AG2	WALL COVERING - DANCING ARCHITECTURAL FINISHES - PURE COLOR - PB-1456
AG3	WALL GRAPHIC/VINYL -
WP1	FABRIC WRAPPED PANEL, 642T METEOR, #T54
WP2	FABRIC WRAPPED PANEL, 642T METEOR, #T14
WP3	FABRIC WRAPPED PANEL, 642T METEOR, #T12
WP4	FABRIC WRAPPED PANEL, 642T METEOR, #T20
WP5	FABRIC WRAPPED PANEL, 642T METEOR, #T1
WP6	FABRIC WRAPPED PANEL, 642T METEOR, #T1
WP7	FABRIC WRAPPED PANEL, 642T METEOR, #T1
WP8	BOARD FINISHING - 8" HORIZONTAL SLATS - PAINTED TO MATCH FPS 1151-2 EMBELLISHMENT

### HOLLOW METAL FRAME PAINT COLORS

1	PANT TO MATCH ICI PAINTS BELLA ROSA #10RR 14/214
2	PANT TO MATCH ICI PAINTS CELEBRATION #2BYR 34/473
3	PANT TO MATCH ICI PAINTS CAROTENE #4TYR 44/642
4	PANT TO MATCH ICI PAINTS DANDELION #3TYT 64/633
5	PANT TO MATCH ICI PAINTS KIW FUN #30GY 40/531
6	PANT TO MATCH ICI PAINTS MARINE BLUE #33GG 32/346
7	PANT TO MATCH INDIAN BEAD #10BG 51/552

### CASEWORK NOTES

- ALL EXPOSED SURFACES TO RECEIVE PLASTIC LAMINATES.
- PROVIDE 4" BACKSPLASH UNO.
- PROVIDE 1" OVERHANGS AT ALL COUNTERTOPS UNO.
- DEIMENSIONS SHOWN ON FLOOR PLANS ARE TO FACE OF STUD OR MAB BLOCK. FIELD VERIFY ALL DIMENSIONS TO FACE OF FINISH PRIOR TO CONSTRUCTION.
- CASEWORK CONTRACTOR TO COORDINATE WITH PLUMBING CONTRACTOR ON PIPING LOCATIONS.
- ALL BASE CABINETS ARE 24" DP UNO.
- ALL UPPER CABINETS ARE 16" DP UNO.
- ALL TALL STORAGE CABINETS ARE 24" DP UNO.

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**Joplin Early Childhood Center**  
Joplin Schools  
2810 South McClelland Blvd.  
Joplin, MO

REVISIONS:

#	Description	Date
1	Addendum 1	10/14/2016
2	Addendum 2	10/28/2016

STATE OF MISSOURI  
JOHN GILBERT BROWN  
NUMBER A-5538  
REGISTERED ARCHITECT  
9.7.2016

The Professional Architect Seal reflects this sheet applies only to the project and items shown on this sheet. All drawings, specifications and other documents comprising this project shall be the responsibility of the architect, and the architect assumes no responsibility for such drawings, omissions, or omissions not shown on this sheet.

JOB NO: 16054  
DRAWN BY: AH  
CHECKED BY: NY  
DATE: 09.30.2016

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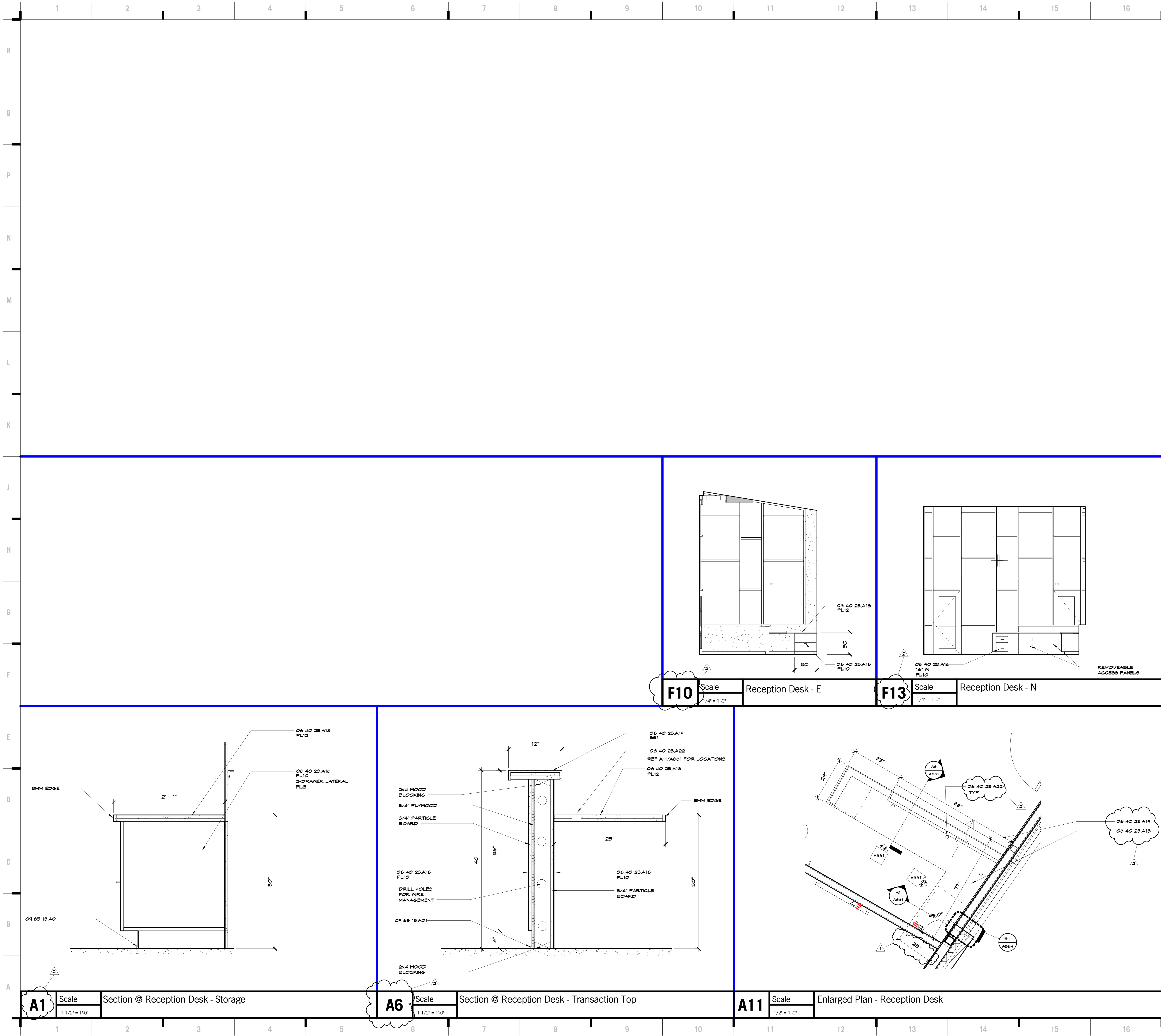
INTERIOR ELEVATIONS

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# SHEET KEYNOTE LEGEND

06 40 2B A16  
06 40 2B A16  
06 40 2B A16  
06 40 2B A22  
04 6B 1B A01

FLASTIC LAMINATE CABINETS - CUSTOM  
FLASTIC LAMINATE COUNTERTOPS - CUSTOM  
SOLID SURFACE COUNTERTOPS  
GROMMETS  
RESILIENT BASE

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## REVISIONS:

#	Description	Date
1	Addendum 1	10/14/2016
2	Addendum 2	10/28/2016



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CHECKED BY: NY  
DATE: 09.30.2016

A661

OF

INTERIOR DETAILS

Please consider the environment before printing this.

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[illegible]



ROOM FINISH SCHEDULE

	ROOM		FLOOR		WALLS				CEILING	Finish Remarks
	NO	Name	Finish	Base	North	East	South	West	Finish	
Q	A101	Vestibule	C2a	--	--	--	--	--	P9	
	A102	Reception	C9	RB1	P1	P1	P1/WG	WC1	ACT1	1
	A103	Conference	C9	RB1	P1	P10	R1	P1	ACT1	
	A104	Director's Office	C9	RB1	P1	P1	P10	P1	ACT1	
	A105	Psych	C9	RB1	P1	P1	P10	P1	ACT1	
P	A106	Social Worker	C9	RB1	P1	P1	P10	P1	ACT1	
	A107	SLP Center	C9	RB1	P1	P1	P10	P1	ACT1	
	A108	Workroom	RT1	RB1	P1	P1	P10	P1	ACT1	
	A109	Corridor	C9	RB1	WC1	P1	P1	P1/WG1	ACT1	
	A110	Lounge	RT1	RB1	P1	P1	P1	P10	ACT1	
N	A111a	Building Service	SC	RB1	--	--	--	--	--	
	A111b	Server	SC	RB1	--	--	--	--	--	
	A112	Restroom	RS1	RS1	P10/T1	P10/T1	T1	P10/T1	ACT1	
	A113	Restroom	RS1	RS1	P10/T1	P10/T1	P10/T1	T1	ACT1	
	A114	Screening	RT1	RB1	P10	P1	P1	P1	ACT1	
M	A115	Screening	RT1	RB1	P10	P1	P1	P1	ACT1	
	A116	Nurse	RT1	RB1	P1	P1	P3	P1	ACT1	
	A117	Restroom	RS1	RS1	P3/T1	P3/T1	P3/T1	P3/T1	ACT1	
	A118	Family Resource Center	RT1	RB1	P1	P1	P1/WP3	P1/WP3	REF RCP	
	A119	Custodial	SC	RB1	P1	P1	P1	P1	--	
L	A121	Classroom	C1a/C2a/ C3a/RT1	RB1	P1	P2	P1/WP1	P1/WP1	ACT1	PURPLE ACCENT
	A122	Flex	C2a	RB1	P2	P2	P2	P2	ACT1	PURPLE ACCENT
	A123	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
	A124	Restrooms	RS1	RS1	T1/EP2	T1/EP2	T1/EP2	T1	ACT1	PURPLE ACCENT
	A125	Classroom	C1a/C2a/ C3a/RT1	RB1	P1/WP1	P2	P1	P1/WP1	ACT1	PURPLE ACCENT
K	A126	Flex	C2b	RB1	P3	P3	P3	P3	ACT1	SALMON ACCENT
	A127	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
	A128	Restrooms	RS1	RS1	T1/EP3	T1/EP3	T1/EP3	T1	ACT1	SALMON ACCENT
	A129	Classroom	C1b/C2b/ C3b/RT1	RB1	P1/WP2	P3	P1	P1/WP2	ACT1	SALMON ACCENT
	A130	Corridor	RT1	RB1	--	REF ELEV	--	REF ELEV	REF RCP	
J	A131	Corridor	Cy Category	RB1	--	P1/WP1	--	P1/WP1	ACT1	
	B101	Learning Grove	REF FFP	RB1	REF ELEV	WP3/P9/T3	WP3/P9	WP3/P9/ T3	REF RCP	REF FFP/ELEV/RCP FOR EXTENT OF FINISHES
	B106	OT/PT	C3f	RB1	P1/WP6	P1	P1	P1	ACT1	
	B107	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
	B108	Office	C3f	RB1	P1	P1	P1	P1	ACT1	
I	B109	Tinkering	RT1	RB1	P1	P1	P1	P1	ACT1	
	B110	Corridor	RT1	RB1	REF ELEV	P1	REF ELEV	P1	ACT1	
	B111	Classroom	C1c/C2c/ C3c/RT1	RB1	P1/WP3	P1	P4	P1/WP3	ACT1	ORANGE ACCENT
	B112	Flex	C2c	RB1	P4	P4	P4	P4	ACT1	ORANGE ACCENT
	B113	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
H	B114	Restroom	RS1	RS1	T1/EP4	T1/EP4	T1/EP4	T1	ACT1	ORANGE ACCENT
	B115	Classroom	C1c/C2c/ C3c/RT1	RB1	P1/WP3	P1/WP3	P4	P1	ACT1	ORANGE ACCENT
	B116	Corridor	REF FFP	RB1	REF ELEV	P1	REF ELEV	P1	ACT2	
	B117	Dramatic Play	C4-C7	RB1	--	REF ELEV	REF ELEV	REF FFP	REF RCP	NO BASE ON HOUSES
	B118	Technology	C4-C7	RB1	--	REF ELEV	REF ELEV	REF ELEV	REF RCP	NO BASE ON HOUSES
G	B119	Writing	C4-C7	RB1	--	REF ELEV	REF ELEV	REF ELEV	REF RCP	NO BASE ON HOUSES
	B120	Dramatic Play	P11	RB1	REF ELEV	REF ELEV	--	REF ELEV	REF RCP	NO BASE ON TREE BLADES
	B121	Classroom	C1d/C2d/ C3d/RT1	RB1	P1/WP4	P1	P5	P1/WP4	ACT1	YELLOW ACCENT
	B122	Flex	C2d	RB1	P5	P5	P5	P5	ACT1	YELLOW ACCENT
	B123	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
F	B124	Restroom	RS1	RS1	T1	T1/EP5	T1/EP5	T1/EP5	ACT1	YELLOW ACCENT
	B125	Classroom	C1/RT1	RB1	P1/WP5	P1/WP5	P6	P1	ACT1	GREEN ACCENT
	B126	Classroom	C1c/C2c/ C3c/RT1	RB1	P4	P1	P1/WP3	P1/WP3	ACT1	ORANGE ACCENT
	B127	Flex	C2c	RB1	P4	P4	P4	P4	ACT1	ORANGE ACCENT
	B128	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
E	B129	Restroom	RS1	RS1	T1/EP4	T1/EP4	T1	T1/EP4	ACT1	ORANGE ACCENT
	B130	Classroom	C1c/C2c/ C3c/RT1	RB1	P4	P1/WP3	P1/WP3	P1	ACT1	ORANGE ACCENT
	B131	Classroom	C1d/C2d/ C3d/RT1	RB1	P5	P1	P1/WP4	P1/WP4	ACT1	YELLOW ACCENT
	B132	Flex	C2d	RB1	P5	P5	P5	P5	ACT1	YELLOW ACCENT
	B133	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
D	B134	Restroom	RS1	RS1	T1/EP5	T1/EP5	T1	T1/EP5	ACT1	YELLOW ACCENT
	B135	Classroom	C1e/C2e/ C3e/RT1	RB1	P6	P1/WP5	P1/WP5	P1	ACT1	GREEN ACCENT
	B136	Book Nook	C4-C7	RB1	REF ELEV	WP3/P9	WP3/P9	REF ELEV	REF RCP	
	C100	Vestibule	C3	RB1	P1	--	--	--	REF RCP	
	C101	Multi-Purpose	RT1	RB1	P1	P1/T3/WG3	P1	P1	ACT2/P9	1
C	C102	Storage	SC	RB1	P1	P1	P1	P1	ACT1	
	C103	Pat	C9	RB1	P1	P1	P1	P1	ACT1	
	C104	Director's Office	C9	RB1	P1	P1	P1	P1	ACT1	
	C105	Screening	C9	RB1	P1	P1	P1	P1	ACT1	
	C106	Screening	C9	RB1	P1	P1	P1	P1	ACT1	
B	C107	Receiving / Kitchen	RS1	RS1	EP1	EP1	EP1	EP1	ACT3	
	C108	Men's	RS1	RS1	T1	T1/EP3	T1/EP3	T1/EP3	ACT1	
	C109	Women's	RS1	RS1	T1/EP3	T1/EP3	T1	T1/EP3	ACT1	
	C110	Building Service	SC	RB1	P1	P1	P1	P1	--	
	C111	Table Storage	SC	RB1	P1	P1	P1	P1	ACT1	
A	C112	Multi-Purpose Storage	SC	RB1	P1	P1	P1	P1	--	
	C113	Corridor	REF FFP	RB1	REF ELEV	P1	REF ELEV	P1	REF ELEV	

ROOM FINISH SCHEDULE

ROOM		FLOOR		WALLS				CEILING	Finish Remarks
NO	Name	Finish	Base	North	East	South	West	Finish	
C114	Create-a-Book	C4-C7	RB1	--	REF ELEV	REF ELEV	REF ELEV	REF RCP	
C115	Tactile	C4-C7	RB1	--	REF ELEV	REF ELEV	REF ELEV	REF RCP	
C116	Math & Science	C4-C7	RB1	--	REF ELEV	REF ELEV	REF ELEV	REF RCP	NO BASE ON HOUSES
C117	Construction	C4-C7	RB1	REF ELEV	REF ELEV	REF ELEV	REF ELEV	REF RCP	NO BASE ON TREE BLADES
C118	Classroom	C1f/C2f/ C3f/RT1	RB1	P1/WP6	P1	P1	P1/WP6	ACT1	TEAL ACCENT
C119	Flex	C2f	RB1	P1	P1	P1	P1	ACT1	TEAL ACCENT
C120	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
C121	Restroom	RS1	RS1	T1	T1/EP7	T1/EP7	T1/EP7	ACT1	
C122	Classroom	C1f/C2f/ C3f/RT1	RB1	P1/WP6	P1/WP6	P1	P1	ACT1	TEAL ACCENT
C123	High Needs	C1g/C2g/ C3g/RT1	RB1	P1/WP7	P1	P3	P1/WP7	ACT1	BLUE ACCENT
C124	Flex	C2g	RB1	P3	P3	P3	P3	ACT1	
C125	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
C126	Restroom	RS1	RS1	T1	T1/EP3	T1/EP3	T1/EP3	ACT1	BLUE ACCENT
C127	Classroom	C1f/C2f/ C3f/RT1	RB1	P1	P1	P1/WP6	P1/WP6	ACT1	TEAL ACCENT
C128	Flex	C2f	RB1	P1	P1	P1	P1	ACT1	TEAL ACCENT
C129	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
C130	Restroom	RS1	RS1	T1/EP7	T1/EP7	T1	T1/EP7	ACT1	TEAL ACCENT
C131	Classroom	C1f/C2f/ C3f/RT1	RB1	P1	P1/WP6	P1/WP6	P1	ACT1	TEAL ACCENT
C132	Classroom	C1g/C2g/ C3g/RT1	RB1	P3	P1	P1/WP7	P1/WP7	ACT1	BLUE ACCENT
C133	Flex	C2g	RB1	P3	P3	P3	P3	ACT1	
C134	Storage	RT1	RB1	P1	P1	P1	P1	ACT1	
C135	Restroom	RS1	RS1	T1/EP3	T1/EP3	T1	T1/EP3	ACT1	BLUE ACCENT

ALTERNATE 2 ROOM FINISH SCHEDULE

ROOM			FLOOR		WALLS				CEILING	Finish Remarks
NO	Name	Finish	Base	North	East	South	West	Finish		
A132	Classroom	C1a/C2a/ C3a/RT1	RB1	P1	P1/WP1	P1/WP1	P2	ACT1	PURPLE ACCENT	
A133	Flex	C2a	RB1	P2	P2	P2	P2	ACT1	PURPLE ACCENT	
A134	Storage	RT1	RB1	P1	P1	P1	P1	ACT1		
A135	Restrooms	RS1	RS1	T1/EP2	T1	T1/EP2	T1/EP2	ACT1	PURPLE ACCENT	
A136	Classroom	C1a/C2a/ C3a/RT1	RB1	P1/WP1	P1/WP1	P1	P2	ACT1	PURPLE ACCENT	
A137	Flex	C2b	RB1	P3	P3	P3	P3	ACT1	SALMON ACCENT	
A138	Storage	RT1	RB1	P1	P1	P1	P1	ACT1		
A139	Restrooms	RS1	RS1	T1/EP3	T1	T1/EP3	T1/EP3	ACT1	SALMON ACCENT	
A140	Classroom	C1b/C2b/ C3b/RT1	RB1	P1/WP2	P3	P1	P1/WP2	ACT1	SALMON ACCENT	

SHEET MATERIAL FINISH LEGEND

ID	MATERIAL
ACT1	24x48 ACOUSTICAL CEILING TILE - DUNE 1051 SQUARE EDGE - 15/16" GRID
ACT2	48x48 ACOUSTICAL CEILING TILE - OPTIMA TRIANGULAR - 9/16" BILHOETTE 1/8" REVEAL
ACT3	24x48 HUMIDITY CONTROL - SCOPHON HYGIENE PERFORMANCE
C1a	CARPET TILE - COLORFIELD - 00728962 P25
C1b	CARPET TILE - COLORFIELD - 00728963 P25
C1c	CARPET TILE - COLORFIELD - 00728961 P25
C1d	CARPET TILE - COLORFIELD - 00728960 P25
C1e	CARPET TILE - COLORFIELD - 00728966 P25
C1f	CARPET TILE - COLORFIELD - 00728968 P25
C1g	CARPET TILE - COLORFIELD - 00728964 P25
C2a	CARPET TILE - COLORFIELD - COL110-54-174 NIGHT HORIZON
C2b	CARPET TILE - COLORFIELD - COL111-146-143 FIRETHORN
C2c	CARPET TILE - COLORFIELD - COL118-155-161 BUCKTHORN
C2d	CARPET TILE - COLORFIELD - COL65-155-105 TAN AURA
C2e	CARPET TILE - COLORFIELD - COL195-75-141 COLBALT GREEN
C2f	CARPET TILE - COLORFIELD - COL120-202-65 SULPHUR SPRING
C2g	CARPET TILE - COLORFIELD - COL196-201-191 BLUE AGAVE
C2h	CARPET TILE - COLORFIELD - COL110 LOSANBERRY
C2i	CARPET TILE - COLORFIELD - COL147 GARMINE
C2j	CARPET TILE - COLORFIELD - COL103 GOLD LEAF
C2k	CARPET TILE - COLORFIELD - COL134 FLAXEN
C2l	CARPET TILE - COLORFIELD - COL141 CELANDINE
C2m	CARPET TILE - COLORFIELD - COL201 MALLARD
C2n	CARPET TILE - COLORFIELD - COL126 OCEAN MIST
C2o	CARPET TILE PLANE LOW KT235, 656 GREEN
C2p	CARPET TILE PLANE HIGH KT235, 656 GREEN
C2q	CARPET TILE DIAGONAL RELIEF KT231, 656 GREEN
C2r	CARPET TILE FADE RELIEF KT235, 656 GREEN
C2s	CARPET TILE GUARRUS - ORBIT BRUSH, ORB 144-21 BOUNDARY
C2t	CARPET TILE CHANGE II 09747 - PLASTIC INEVITABLE 10213 - 4"x8" PLANK
EP1	PAINT SEMI-GLOSS, SNT020 ANEM GRAY
EP2	PAINT SEMI-GLOSS, SATN SERENADE #10RR 26/243
EP3	PAINT SEMI-GLOSS, FRESH SALMON #2BYR 45/364
EP4	PAINT SEMI-GLOSS, EGYPTIAN SUN #24YY 51/533
EP5	PAINT SEMI-GLOSS, SUN RAYS #24YY 66/597
EP6	PAINT SEMI-GLOSS, SWEET LEAF #32GY 51/482
EP7	PAINT SEMI-GLOSS, SOUTH SEAS #07GG 51/291
EP8	PAINT SEMI-GLOSS, BESIDE THE OCEAN #70B3 40/234
F1	PAINT EGGSHELL, SNT020 ANEM GRAY
F2	PAINT EGGSHELL, SATN SERENADE #10RR 26/243
F3	PAINT EGGSHELL, FRESH SALMON #2BYR 45/364
F4	PAINT EGGSHELL, EGYPTIAN SUN #24YY 51/533
F5	PAINT EGGSHELL, SUN RAYS #24YY 66/597
F6	PAINT EGGSHELL, SWEET LEAF #32GY 51/482
F7	PAINT EGGSHELL, SOUTH SEAS #07GG 51/291
F8	PAINT EGGSHELL, BESIDE THE OCEAN #70B3 40/234
F9	PAINT FLAT, SN 1006 EXTRA WHITE
F10	PAINT EGGSHELL, SN 6445 EBBTIDE
F11	PAINT EGGSHELL, CHALKBOARD PAINT 203 - BLACK
F12	PLASTIC LAMINATE, SATN SERENADE 242T1
F13	PLASTIC LAMINATE, FRESH SALMON 242T1
F14	PLASTIC LAMINATE, EGYPTIAN SUN 242T1
F15	PLASTIC LAMINATE, SUN RAYS 242T1
F16	PLASTIC LAMINATE, SWEET LEAF 242T1
F17	PLASTIC LAMINATE, SOUTH SEAS 242T1
F18	PLASTIC LAMINATE, BESIDE THE OCEAN 242T1
F19	PLASTIC LAMINATE, D16-60 SHADOW
F20	PLASTIC LAMINATE - 4442-35 CRISP LINEN
F21	PLASTIC LAMINATE, 1071K-12 UPTOWN MALIBU
F22	PLASTIC LAMINATE, 4444-35 CASUAL LINEN
F23	PLASTIC LAMINATE, 4448-35 CLASSIC LINEN
F24	PLASTIC LAMINATE, 8211K-25 PHANTOM PEARL
F25	MDF PANELS - 1/2" THICK - PAINTED ON ALL SIDES - ROUT OUT CUSTOM DESIGN
F26	NOT USED
F27	NOT USED
F28	NOT USED



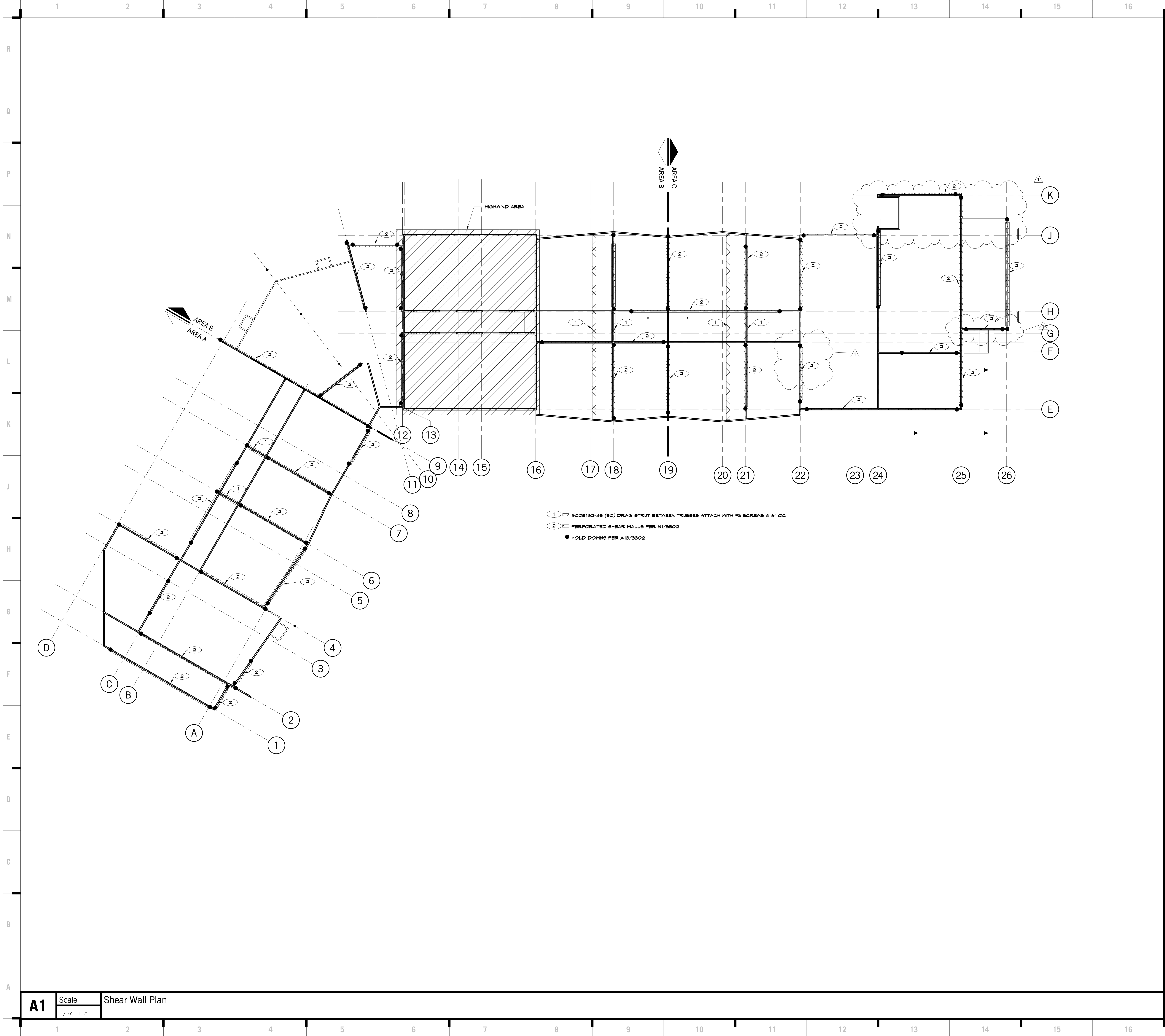




	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A	Building Code				Pre-Cast Concrete				Steel Deck				Miscellaneous				
R	1. The design and construction shall conform to the 2012 International Building Code (IBC) as amended by the City of Joplin, Missouri.				1. All pre-cast design, detailing and connections shall be in accordance with the recommendations of PCI.				1. Steel roof and floor deck shall be designed, fabricated and erected in accordance with the recommendations of the latest edition of Steel Deck Institute (SDI) Manual.				1. Site visits will be made by representatives of Hollis and Miller Architects in order to establish the general conformance of the construction to the contract documents. Observations by the Engineer shall not be considered inspections and in no way relieves the Contractor of any requirements of the contract documents.				
	B. Design Loads				2. All pre-cast members shall have a minimum concrete strength of 5000 psi at 28 days.				2. Roof diaphragm shear connections shall be minimum X-EPN-14 3/4 with 5-10 screw in nested side laps. The Contractor shall verify the diaphragm shear connection design with the diaphragm shear loads provided on the plans.				2. Stability of the structure during construction, including load bearing and non-load bearing masonry wall, is the responsibility of the Contractor. The Engineer is responsible for the stability of the completed structure only.				
	1. This project is designed to resist the most critical loads resulting from the basic load combinations outlined in section 1605 of the code.				3. Post tensioning strands shall be 270 ksi low relaxation strands.				3. Crimped or button punched side lap fastening is not allowed for any roof deck or floor deck.				3. Conflict between the Architectural and Structural Drawings shall be brought to the attention of the Architect and Engineer immediately. When conflicts occur between the drawings and the specifications, the strictest interpretation shall govern.				
	2. Dead Loads				4. All pre-cast design, including panel to panel connections and connections to the structure shall be the responsibility of the Contractor. Calculations shall be prepared and submitted along with shop drawings for review. All calculations shall be signed and sealed by a registered, professional engineer licensed in the State of the project. It is preferable that the calculations be well organized and indexed for ease of review.				4. All roof deck shall be designed for a net uplift of 4ipsf in the corners, 25psf at the edges and 10 psf in the field of the building. Edge zone = 6 feet				4. The Engineer shall not be in control of, have charge of, or be responsible for the construction means and methods. The Contractor is solely responsible for all construction means, methods, procedures, techniques and job sequence.				
Q	a. The roof mounted equipment weights used for design are indicated on the contract documents. The Contractor shall submit actual weights for all roof mounted equipment for review by the Engineer.								J. Post installed Anchors				5. Typical details are intended to represent typical conditions for the entire project. Typical details may or may not be indicated on plans.				
	b. Total service roof dead load: 25 psf.								1. All post installed anchors shall be installed per the manufactures recommendations.				6. All existing field and building conditions shall be verified by the Contractor before any other work shall begin. Coordinate with Engineer of Record regarding any discrepancy with existing building dimensions.				
	5. Live Loads				F. Masonry				K. Cold Formed Steel				7. Submittals				
	a. Code Loads				1. All masonry design and detailing shall be in accordance with the recommendations of TMS 402/ACI 530.				1. All cold formed steel framing shall be designed, fabricated and erected in accordance with the recommendations of latest edition of the American Iron and Steel Institute (AIS) Specification.				a. Submittals are to be based upon the latest submitted contract documents. This includes all addendums, Architectural Supplemental Instructions (ASIs) and Structural Supplemental Drawings (SSDs) and Requests for Information (RFIs).				
	1. Roof 30 psf				2. Materials				2. All expansion anchors shall perform to a minimum load capacity of the Hilti HiKwik Bolt 3 or approved equal.				b. Submittals shall be original documents. Shop drawings shall not be a duplication, in any way of the contract documents. This includes, but is not limited to, photocopies, electronic drawing copying or electronic scanning. Any submitted shop drawing that is not original will be rejected and returned without review.				
	2. Hollow Core 100 psf				a. Design strength Fm = 2000 psi				3. All adhesive anchors embedded in concrete shall perform to a minimum load capacity of the Hilti HIT HY-200 MAX Adhesive Anchors.				c. Prior to submission of the submittals to the Architect, the Contractor shall review the shop drawings for conformance to the means, methods, techniques, sequences and operations of construction. The Contractor's review stamp shall be affixed to all shop drawings prior to Architect or Structural Engineer review. Shop drawings not bearing the Contractor's review stamp will be returned without review.				
	Live load reduction has not been utilized.				5. Minimum reinforcing for 8" and 12" non-load bearing masonry shall be (1)#4 at 48" on center minimum. Reference the Architectural drawings for location of all non-load bearing walls.				4. All anchors shall be stainless steel at exterior exposed conditions.				d. Design Calculations - All calculations shall be signed and sealed by a professional engineer licensed in the State of the project. Provide the following design calculations for review:				
	4. Wind - The wind load is in accordance with ASCE 7-10 with the following criteria:				4. Control joints in all masonry shall be at 20 feet maximum on center unless indicated elsewhere in the drawings and specifications. All horizontal joint reinforcement shall be discontinuous at vertical control joints. All horizontal reinforcement in bond beams shall be continuous through vertical control joints. Reference Architectural plans and elevations for joint location and typical details.				1. All cold formed steel indicated in these contract documents have been referenced by the Steel Stud Manufacturers Association (SSMA) nomenclature.				1. Structural Steel connections				
	a. Basic wind speed VS=120 mph				5. All CMU shall be running bond unless otherwise noted in the contract documents.				2. Top and bottom tracks shall match the wall stud thickness and depth.				2. Steel Stairs Framing				
	b. Risk Category III				6. When stacked bond is used for wall framing, the Contractor shall provide a continuous bond beam at 4'-0" on center vertically, reinforced with 1-#4 continuous.				3. All welding shall conform to latest AWS D1.3.				3. Structural and Architectural Pre-Cast Concrete.				
	c. Exposure Factor C				7. Reinforcement Details				6. Pre-drill holes for all screws which are not self-tapping.				4. Prefabricated cold formed steel trusses				
	d. Internal Pressure Coefficient 1.18				a. Rebar positioners shall be used for all reinforcing and all vertical cells should be free of debris and excess mortar such that a minimum space of 8" by 8" is maintained to ease the placement of grout.				7. All lapped, screwed connections shall be made with a minimum of 4-#12 screws or the equivalent weld unless noted otherwise.				Submittals - Provide the following submittals for review:				
	e. Components & Cladding Force per code				b. Lap splices shall be 48 bar diameters minimum unless indicated elsewhere in the drawings and specifications.				10. Joist bridging shall be spaced at 3'-0" maximum; use Simpson TB21 or equivalent.				1. Concrete Mix Design and Materials				
	5. High wind area - The wind load is in accordance with ICC 500-09 with the following criteria:				c. Locate wall reinforcing at Jambes, ends of walls and each side of control joints. Reference typical details for additional reinforcing information.				11. All framing members shall be cut square such that they fit tight at all perpendicular connections.				2. Concrete Reinforcing				
	a. Basic wind speed VS=120 mph				d. Reinforcing shall be placed prior to grouting.				12. Field splices of structural cold formed members are not allowed.				Embedded items (pipes, angles, etc.)				
	b. Building Category III				5. Grout shall be consolidated by means of mechanical vibration unless self-consolidating grout is used.								4. Structural Pre-Cast Concrete				
	c. Exposure Factor 10.55				9. Grout solid all units below grade and below Finish Floor.								Masonry Products and Materials				
	d. Internal Pressure Coefficient 1.0				1. All steel fabrication and erection shall be in accordance with the requirements and recommendations of the American Institute of Steel Construction (AISC) Manual of Steel Construction, 14th edition								T. Structural Steel				
	e. Topographic Factor 1.0				a. Steel design shall be per Allowable Stress Design or Load and Resistance Factor Design as outlined by AISC.								5. Miscellaneous Steel including lintels, stairs, etc.				
	f. Directionality Factor 1.0				2. Grade								6. Metal Deck				
	g. Missile Impact Protection is Required				b. Channels, angles and plates ASTM A36								10. Prefabricated cold formed steel Trusses				
	6. Snow - The snow load is in accordance with ASCE 7-10 with the following criteria:				c. Square hollow structural shapes ASTM A500, Grade B (46 ksi)								f. Substitutions are allowed prior to bid only. Reference the specifications for timing of submission				
	a. Ground snow load ps=50 psf				d. Round hollow structural shapes ASTM A500, Grade B (42 ksi)												
	b. Exposure Factor C=0.9				e. Connection material ASTM A506												
	c. Importance Factor 1.0																
	d. Thermal Factor 0.1																
	7. Seismic - The seismic design is in accordance with the general building code with the following criteria:				5. Connections												
	a. Importance Factor II=1.25				a. Connection design shall be based on reactions listed on the drawings and specifications. Minimum connection design shall be 15 Kips unless noted otherwise.												
	b. Risk Category III				All gravity and lateral loads noted in the drawings are service level loads.												
	c. 0.2 sec Spectral Response Acceleration Ss=12.4%				All connection design calculations shall be signed and sealed by a licensed, professional engineer licensed in the State of the project.												
	d. 1.0 sec Spectral Response Acceleration S1=1.7%				All bolted lateral bracing connections (beams, columns, and bracing) shall be designed as slip critical connections.												
	e. Soil Site Class D				It is the preference of the Engineer of record to have shop welded, field bolted connections unless shown otherwise on the drawings.												
	f. Design 0.2sec Spectral Response Acceleration Sds=19.9%				4. Anchor Rods												
	g. Design 1.0sec Spectral Response Acceleration Sd1=12.1%				a. Anchor rods shall conform to ASTM F1554, Grade 55.												
	h. Seismic Design Category B				b. Steel or plywood templates shall be used for all anchor rod placement in concrete and masonry.												
	i. Basic Seismic Force Resisting System Light frame walls with shear panels of all other materials				5. Thermal cutting is not allowed in the field.												
	j. Design Base Shear 90 kips																
	k. Seismic Response Coefficient C=0.056																
	l. Response Modification Coefficient R=2.0																
	m. Analysis Procedure Equivalent Lateral Force																
L	C. Foundations																
	1. Geotechnical Report																
	a. Read and be familiar with all aspects of the geotechnical Engineering report which was prepared by Anderson Engineering, June 22, 2016, work order #0040-16.																
	b. If any existing field conditions vary from the geotechnical report, it is the responsibility of the contractor to notify the geotechnical Engineer, Architect and Engineer of Record.																
	2. Spread Footings, Trench Footing and Grade Beams																
	a. All shallow foundations have been designed to bear on undisturbed soil or engineered fill for a net allowable bearing pressure of 2000 psf.																
	3. All structural concrete utilized for the purpose of retaining soil shall attain full design strength prior to any backfill being placed against the concrete.																
	4. Slide forms for braced foundations are not required.																
J	D. Concrete																
	1. All concrete and reinforcing details shall conform to ACI 318-11 and CRSI Manual of Standard Practice.																
	2. Strength - The following areas shall have a minimum 28 day compressive strength:																
	a. Interior flatwork concrete: 4000 psi																
	b. Exterior flatwork concrete: 4000 psi																
	c. Footing and grade beams: 5000 psi																
	d. Walls: 4000 psi																
	5. No water may be added to the concrete mix on the job site unless specifically withheld at the batch plant. The workability should be attained through the use of water-reducing agents and/or super-plasticizing chemical admixtures.																
	4. Reinforcing																
	a. Grade																
	1. Typical reinforcing ASTM A615, Grade 60																
	2. Welded reinforcing ASTM A706																
	b. Lap splices and development lengths in reinforcing shall be 48 bar diameters unless indicated elsewhere in the drawings and specifications. Lap welded wire reinforcing one full mesh space plus 2 inches.																
	c. Welded Wire Reinforcing ASTM A195																
	1. All welded wire reinforcing for slab on grade shall be supported on metal chairs specifically designed for soil bearing conditions. Pulling reinforcing up during concrete placement is not allowed.																
	d. All concrete shall be reinforced unless specifically identified on the drawings as unreinforced. Reinforce sections with similar conditions located elsewhere on the project.																
	e. All synthetic and steel fiber reinforcement shall be considered secondary reinforcing only.																
	5. Concrete cover shall be the following:																
	a. Concrete cast against and exposed to earth 3"																
	b. Concrete exposed to weather #5 and smaller 1 1/2"																
	c. Concrete exposed to weather #6 and larger 2"																
	d. Concrete not exposed to weather or earth 3/4"																
	1. Slabs, wall and joist																
	6. All openings in slabs, walls, foundations, etc. shall have an additional 2-#5's on each side, in each corner of the opening and each face of the member. Extend reinforcing 2'-6" beyond edge of opening.																
	7. Aluminum items shall not be embedded in concrete.																
	8. House keeping pads and toppings slabs shall be reinforced with #4's 6x6-2,1x2,1, unless indicated elsewhere in the drawings and specifications.																
E																	



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SHEET KEYNOTE LEGEND

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Joplin Early Childhood Center  
Joplin Schools

REVISIONS:		
#	Description	Date
1	Issued for 1	10/14/2016

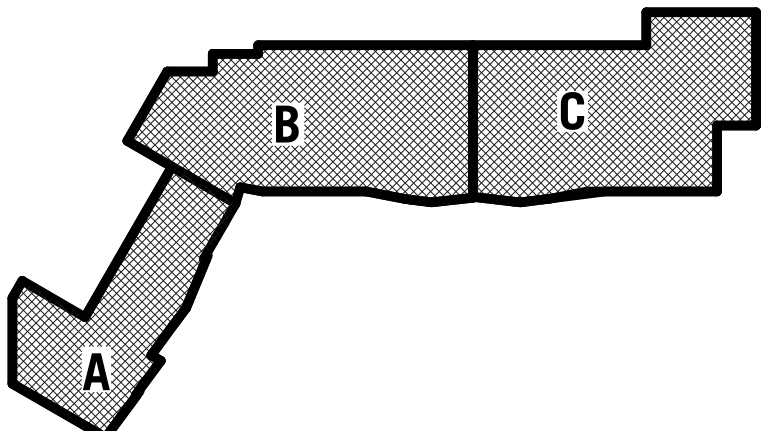


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DATE: 09.30.2016

S002

OF

SHEAR WALL PLAN



KEY PLAN





Structural Column Schedule			
Type	Size	Anchor Rods	Base Plate
C4.4	H804x44x1/4	AR-2	5/4X11X11
C5.4	H804x58x1/4	AR-2	1X12X12
C5.6	H804x58x3/8	AR-2	1X12X12
C5.6	H804x58x3/8	AR-2	1X1'-0"X1'-4"
C5.5	H804x62x1/4	AR-1	1'-5"X1'-5"
C5.5	H804x62x1/4	AR-1	1X1'-7"X1'-7"

Hollis + Miller Architects  
Missouri State Certificate of Authority  
Architecture # 0000161  
Structure # 2006031333

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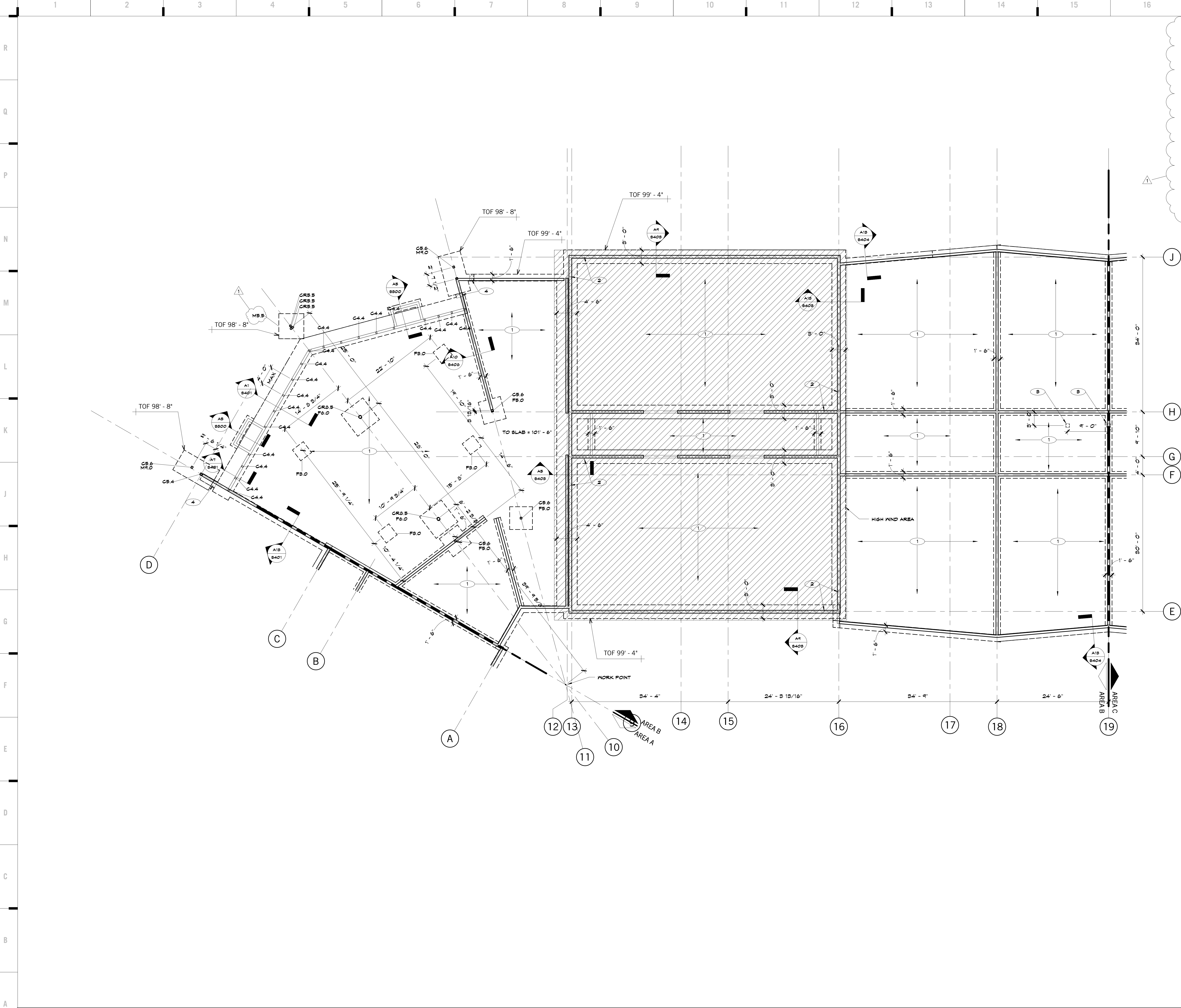
**Joplin Early Childhood Center**  
**Joplin Schools**

The Professional Engineers seal affixed to this sheet applies only to the material and items shown on this sheet. All drawings, instruments or other documents not exhibiting this seal shall not be considered prepared by this engineer, and this engineer expressly disclaims any and all responsibility for such plan, drawings, or documents not exhibiting this seal.

**\$100**

## FOUNDATION PLAN





Structural Foundation Schedule			
Type	Size	Reinforcement	
		Size	Placement
FB.0	5'-0" x 5'-0" x 1'-6"	5-#5	BOT EA
FB.0	5'-0" x 5'-0" x 1'-6"	5-#6	TOP & BOT EA
FB.0	5'-0" x 5'-0" x 1'-6"	6-#6	TOP & BOT EA
M4.0	4'-0" x 4'-0" x 2'-6"	4-#5	TOP & BOT
MB.5	5'-0" x 5'-0" x 2'-6"	5-#6	TOP & BOT EA
MB.5	5'-0" x 5'-0" x 2'-6"	5-#6	TOP & BOT EA
M4.0	4'-0" x 5'-0" x 2'-6"	6-#6	TOP & BOT EA @ 12" OC

Structural Column Schedule			
Type	Size	Anchor Rods	
		Size	Base Plate
C4.4	HSS44x44x1/4	AR-2	3/4x11x11
C5.4	HSS54x54x1/4	AR-2	1x12x12
C5.6	HSS56x56x3/8	AR-2	1x12x12
C15.6	HSS156x156x3/8	AR-2	1x1'-0"x1'-4"
CR5.5	HSS55x55/16	AR-2	1x1'-8"x1'-8"
CR5.5	HSS55x55/16	AR-1	1x1'-7"x1'-7"

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Yells + Miller Architects  
Missouri State Certificate of Authority  
Architecture # 00001501  
Interior # 000001335

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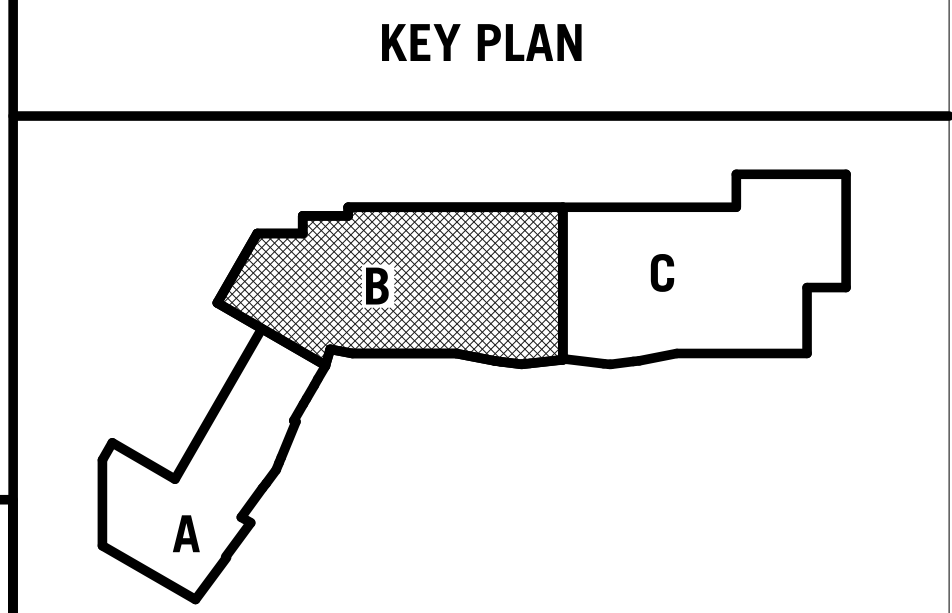
Land3 Studio  
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- PLAN REFERENCE NOTES**
- 1 4" CONCRETE SLAB ON GRADE WITH 10 MIL VAPOR RETARDER AND 4" CRUSHED ROCK DRAINAGE FILL PER SPECIFICATION. REINFORCE PER TYPICAL DETAILS. TOP OF CONCRETE ELEVATION = 100'-0" UNO
  - 2 8" CMU WALL. REINFORCE WITH 1 #6 VERTICAL AT 16" ON CENTER IN FULLY GROUTED CELLS
  - 3 3/4x10"x10" BASE PLATE WITH (4) 3/4"x6 HSA; BASE PLATE FLUSH WITH TOP OF SLAB
  - 4 FOOTING STEP PER J1/BS200

- FOUNDATION NOTES**
- A TOP OF FOOTING ELEVATION = 99'-4" UNO
  - B PROVIDE SLAB BLOCK OUT AT CONTRACTORS OPTION PER A1/BS200
  - C GRIPS INDICATE CENTER LINE OF METAL STUD
  - D ALL GRADE BEAMS ARE CENTERED ON INTERIOR CMU WALLS UNO



REVISIONS:		
#	Description	Date
1	Issued for 1	10/14/2016



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**S101**

OF

**FOUNDATION PLAN**

hollis + miller architects  
relationships & results

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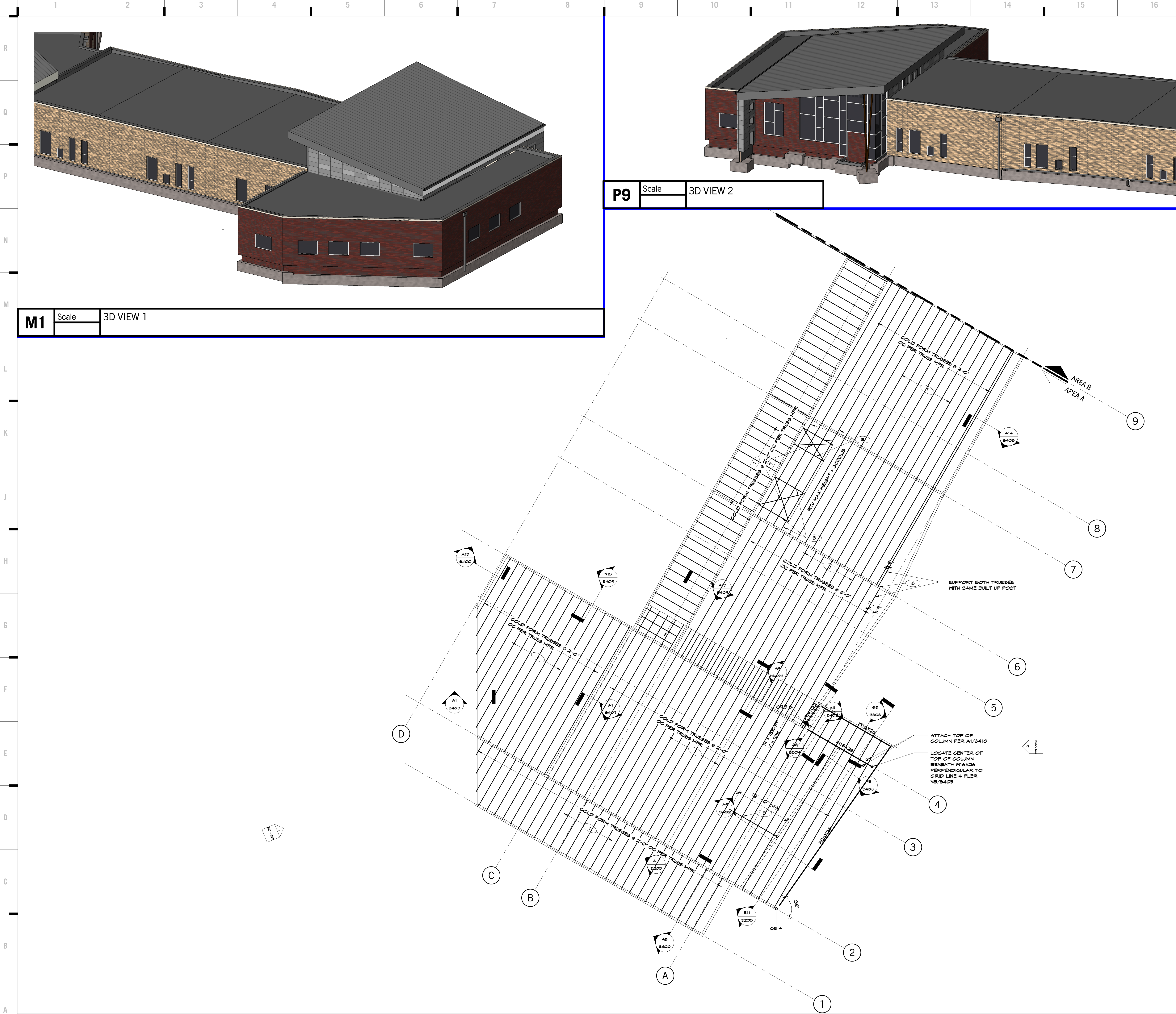
B

A









Structural Column Schedule			
Type	Size	Anchor Rods	Base Plate
C4.4	HSS4x4x1/4	AR-2	8/4X11X11
C5.4	HSS5x5x1/4	AR-2	1X12X12
C5.6	HSS5x5x3/8	AR-2	1X12X12
C4.5.6	HSS4x5x3/8	AR-2	1X1'-0"X1'-4"
C4.5.5	HSS5x5x3/8	AR-2	1X1'-0"X1'-8"
C4.5.5	HSS5x5x3/8	AR-1	1X1'-7"X1'-7"

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Structural # 000001335

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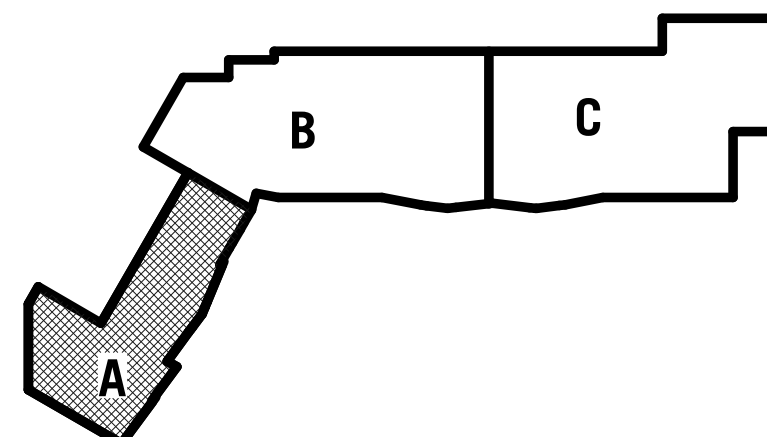
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#### PLAN REFERENCE NOTES

- METAL DECK 1 1/2" DEEP 22 GAGE WIDE RIB PAINTED METAL ROOF DECK, ATTACH TO SUPPORTING COLD FORMED METAL STUDS OR TRUSSES IN S6/4 PATTERN WITH #12 TEK-SCREWS AT SUPPORTS WITH 1" SIDELAP FASTENER PER SPAN TO TRANSFER 4000' OF MINIMUM HORIZONTAL DIAPHRAGM SHEAR
- GIRDER POST (S) 600S165-65 (S2)
- GIRDER TRUSS PER TRUSS MANUFACTURER
- 12" HOLLOW CORE SLAB WITH 4" COMPOSITE TOPPING. SLAB REINFORCED WITH #4 AT 12" ON CENTER EACH WAY
- ATTACH 600S162-54 (S2) BLOCKING BETWEEN ROOF SUPPORTING MEMBERS TO METAL DECK WITH #10 SCREWS AT 18" OC
- (2) 600S250-65 POST
- COORDINATE ROOF TRUSS FRAMING WITH MECHANICAL CONTRACTOR AT ROOF TOP UNIT PENETRATION LOCATIONS
- SPRING LOCATION, REFERENCE ARCH FOR LOCATION, REFERENCE N4/S80S FOR TRUSS ATTACHMENT
- ADDITIONAL LOAD FROM SUPPORTED PANELS, REFERENCE ARCH FOR LOCATION, COORDINATE WITH CONTRACTOR FOR HEIGHT OF PANELS AND ATTACHMENT LOCATIONS

#### KEY PLAN



JOB NO: 16054  
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DATE: 09.30.2016

S200

OF

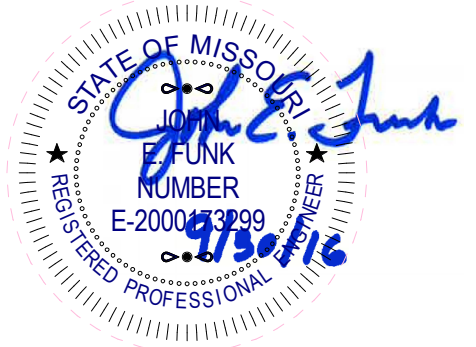
FRAMING PLAN

hollis + miller architects  
relationships & results

Joplin Early Childhood Center  
Joplin Schools

#### REVISIONS:

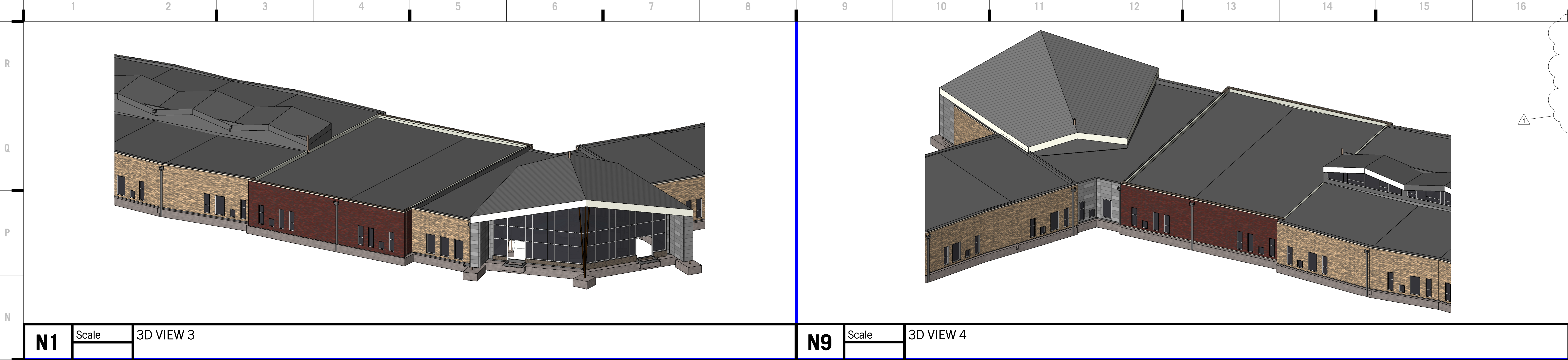
#	Description	Date
1	Issued	10/14/2016



John E. Funk  
E-2000173299

The Professional Engineer used effects this stamp applies only to the subject and items shown on this stamp. All drawings, specifications and other documents incorporated by reference and the completed contract by the engineer, and this engineer's responsibility and of all responsibility for such plans, drawings or documents not including this seal.





Structural Column Schedule			
Type	Size	Anchor Rods	Base Plate
C4.4	HB54x4x1/4	AR-2	B/4X11X11
C5.4	HB55x5x1/4	AR-2	1X12X12
C5.6	HB55x5x3/8	AR-2	1X12X12
C4.5.6	HB55x5x3/8	AR-2	1X1'-0"X1'-4"
CR3.5	HB55x3/16	AR-2	1X1'-8"X1'-8"
CR3.5	HB55x3/16	AR-1	1X1'-7"X1'-7"

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HOLLISANDMILLER.COM

Holls + Miller Architects  
Missouri State Certificate of Authority  
Architecture # 0000101  
Structure # 255001133

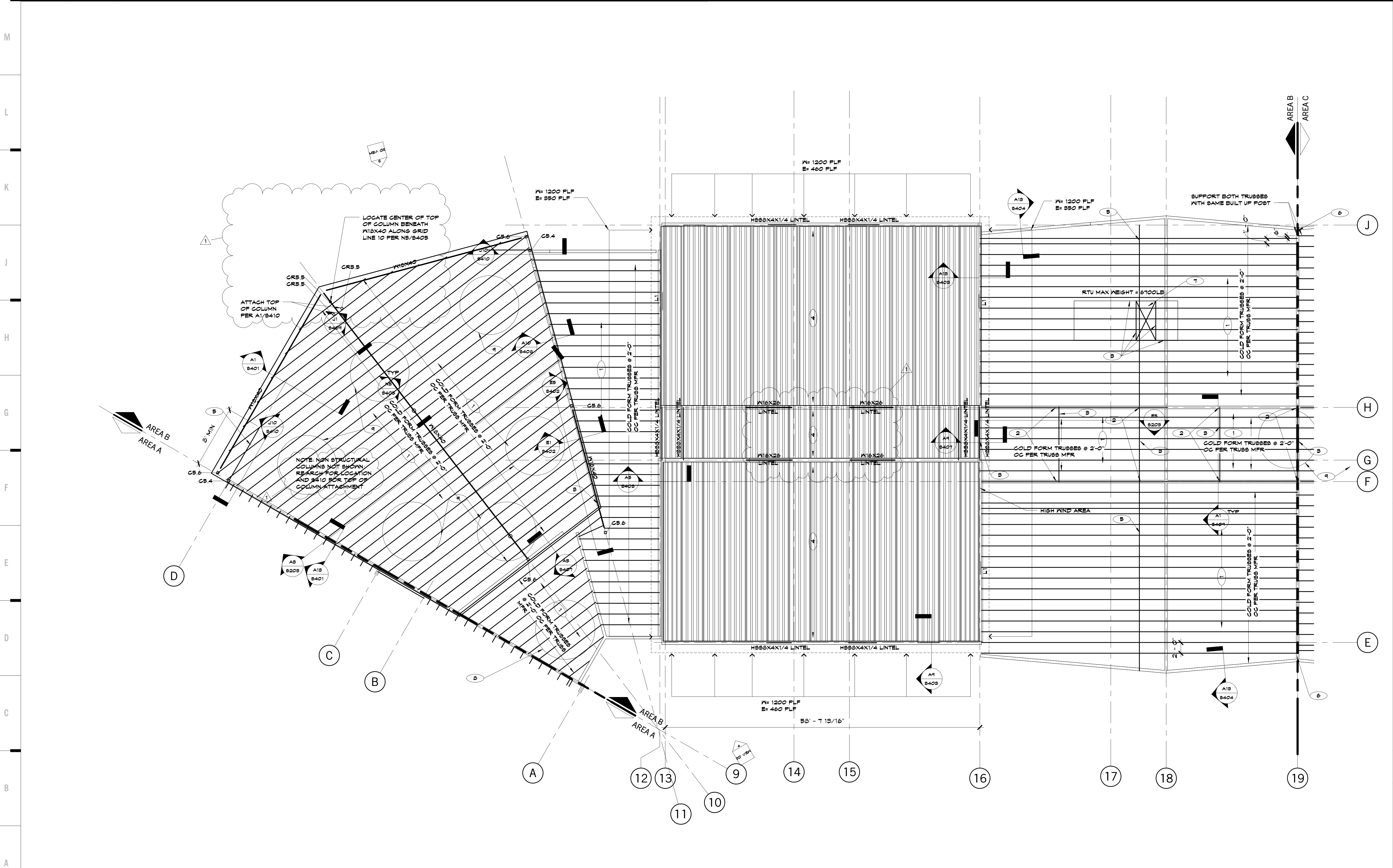
**Anderson Engineering**  
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relationships & results



- ### PLAN REFERENCE NOTES
- METAL DECK 1 1/2" DEEP 22 GAGE WIDE RIB PAINTED METAL ROOF DECK. ATTACH TO SUPPORTING COLD FORMED METAL STUDS OR TRUSSES IN S6/4 PATTERN WITH #12 TEK SCREWS AT SUPPORTS WITH 1 SIDELAP FASTENER PER SPAN TO TRANSFER 400PIF OF MINIMUM HORIZONTAL DIAPHRAGM SHEAR.
  - GIRDER POST (S) 600S165-65 (50)
  - GIRDER TRUSS PER TRUSS MANUFACTURER
  - 12" HOLLOW CORE SLAB WITH 4" COMPOSITE TOPPING SLAB REINFORCED WITH #4 AT 12" ON CENTER EACH WAY
  - ATTACH 600S165-54 (50) BLOCKING BETWEEN ROOF SUPPORTING MEMBERS TO METAL DECK WITH #10 SCREWS AT 18" OC
  - (2) 600S250-65 POST
  - COORDINATE ROOF TRUSS FRAMING WITH MECHANICAL CONTRACTOR AT ROOF TOP UNIT PENETRATION LOCATIONS
  - SWING LOCATION. REFERENCE ARCH FOR LOCATION. REFERENCE N4/SB03 FOR TRUSS ATTACHMENT
  - ADDITIONAL LOAD FROM SUPPORTED PANELS. REFERENCE ARCH FOR LOCATION. COORDINATE WITH CONTRACTOR FOR HEIGHT OF PANELS AND ATTACHMENT LOCATIONS

**KEY PLAN**

**JOPLIN EARLY CHILDHOOD CENTER**  
Joplin Schools

REVISIONS:

#	Description	Date
1	Addendum 1	10/14/2016

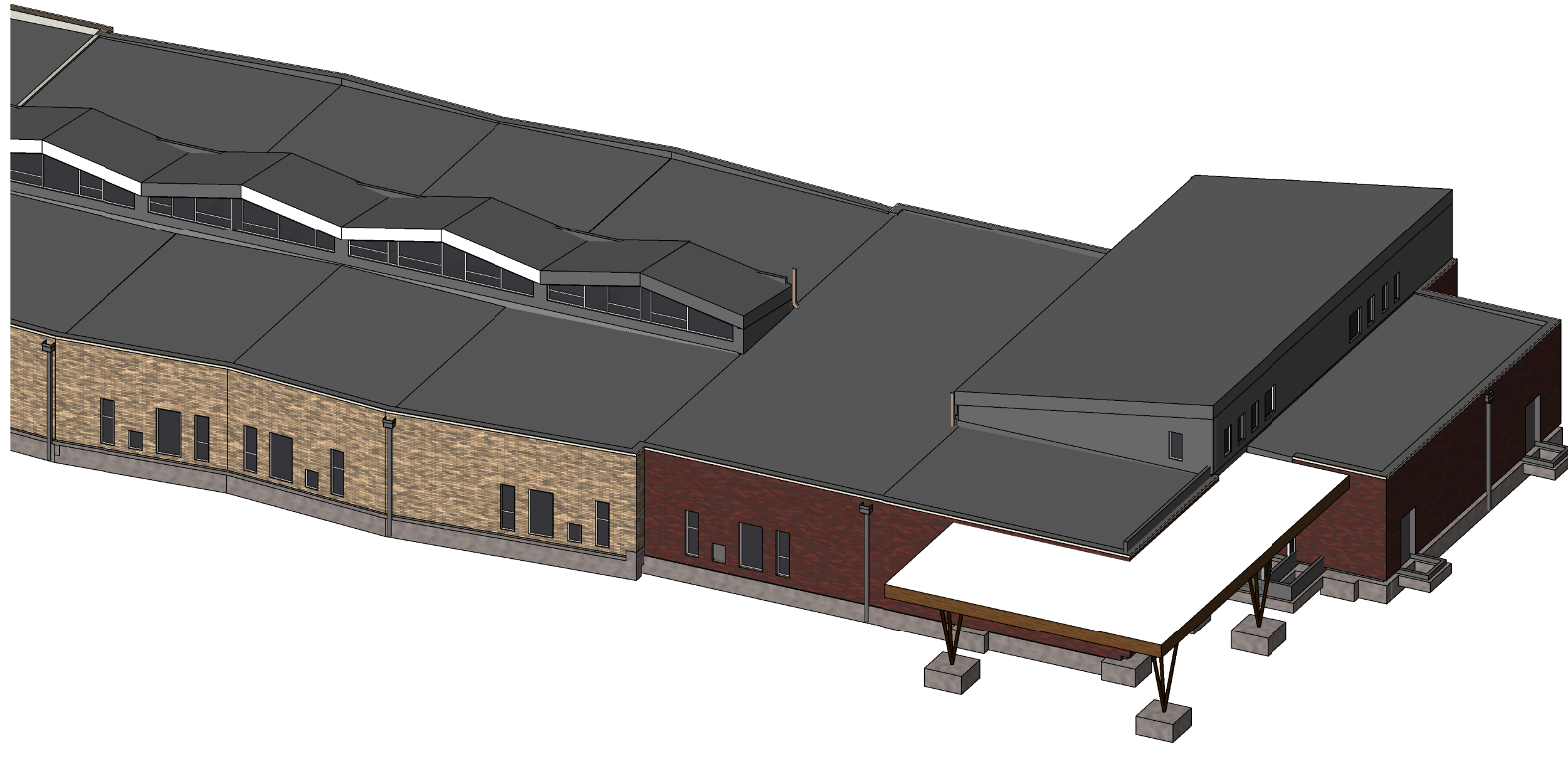
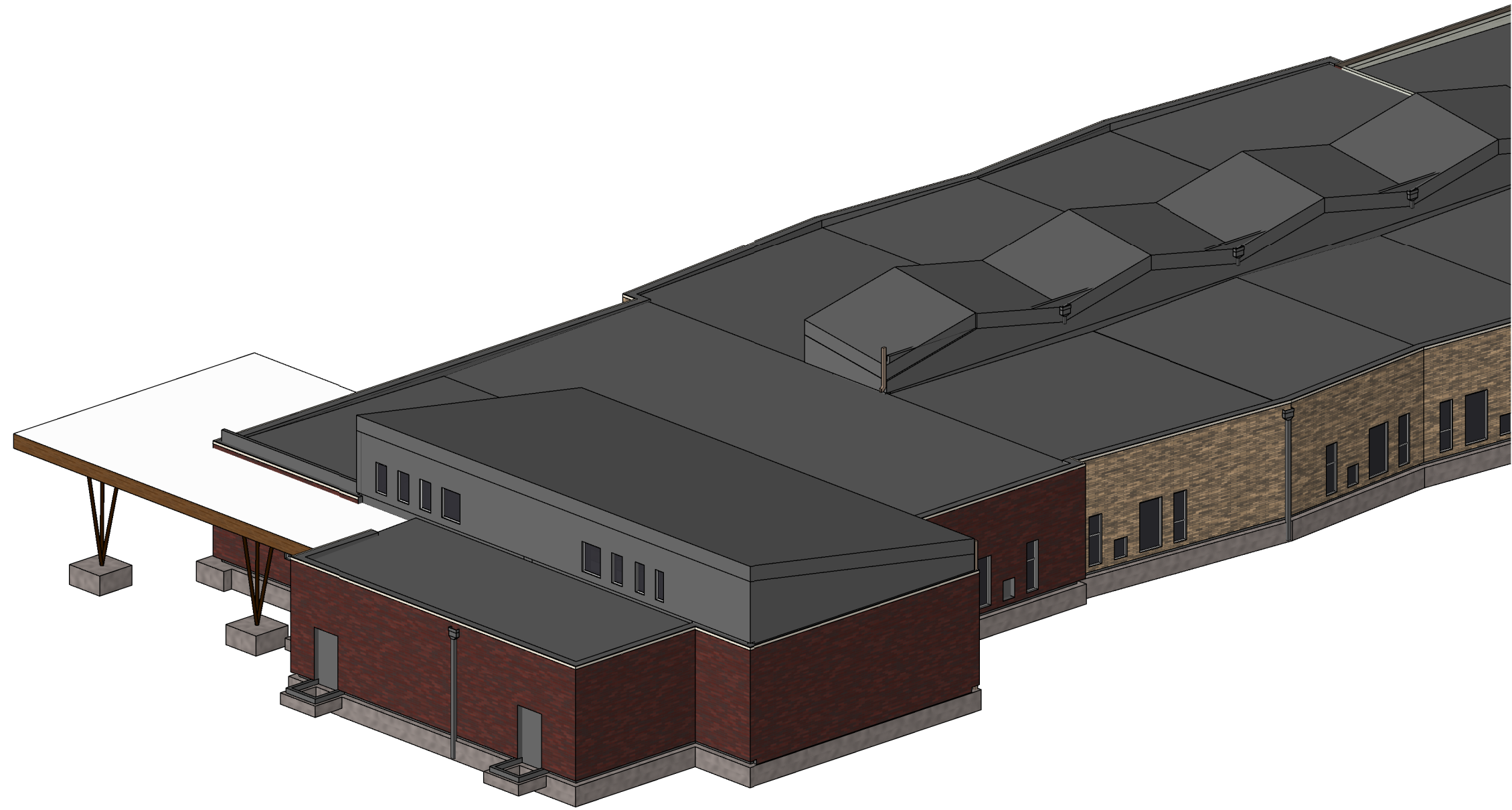
JOHN E. FUNK  
E 2000173299  
REGISTERED PROFESSIONAL

JOHN E. FUNK  
E 2000173299

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DRAWN BY: SAH  
CHECKED BY: DBH  
DATE: 09.30.2016

**S201**  
OF





# SHEET KEYNOTE LEGEND

Structural Column Schedule			
Type	Size	Anchor Rods	Base Plate
CS.4	HSS4x4x1/4	AR-2	8/4X11X11
CS.4	HSS5x5x1/4	AR-2	1X12X12
CS.5	HSS5x5x3/8	AR-2	1X12X12
CR5.5	HSS5x5/16	AR-2	1X1'-0"X1'-4"
CR5.5	HSS5x5/16	AR-2	1x1'-5"X1'-5"
CR5.5	HSS5x5/16	AR-1	1X1'-7"X1'-7"

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Structural # 000001335

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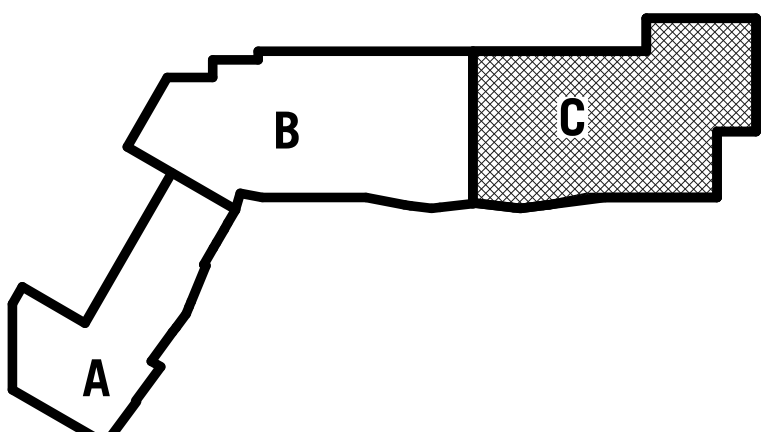
Smith & Boucher Engineers  
MEP Engineers  
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Geotechnical Engineers  
CO# 00062  
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Springfield, MO, 65807  
417.782.7399 phone  
417.782.7389 fax

# PLAN REFERENCE NOTES

- METAL DECK 1 1/2" DEEP 22 GAGE WIDE RIB PAINTED METAL ROOF DECK. ATTACH TO SUPPORTING COLD FORMED METAL STUDS OR TRUSSES IN 56/4 PATTERN WITH #12 TEK SCREWS AT SUPPORTS WITH 1 SIDELAP FASTENER PER SPAN TO TRANSFER 400# OF MINIMUM HORIZONTAL DIAPHRAGM SHEAR
- GIRDER POST (S) 600S160-60 (50)
- GIRDER TRUSS PER TRUSS MANUFACTURER
- 12" HOLLOW CORE SLAB WITH 4" COMPOSITE TOPPING SLAB REINFORCED WITH #4 AT 12" ON CENTER EACH WAY
- ATTACH 600S160-64 (50) BLOCKING BETWEEN ROOF SUPPORTING MEMBERS TO METAL DECK WITH #10 SCREWS AT 18" OC
- (2) 600S250-60 POST
- COORDINATE ROOF TRUSS FRAMING WITH MECHANICAL CONTRACTOR AT ROOF TOP UNIT PENETRATION LOCATIONS
- SWING LOCATION. REFERENCE ARCH FOR LOCATION. REFERENCE N1/S20S FOR TRUSS ATTACHMENT
- ADDITIONAL LOAD FROM SUPPORTED PANELS. REFERENCE ARCH FOR LOCATION. COORDINATE WITH CONTRACTOR FOR HEIGHT OF PANELS AND ATTACHMENT LOCATIONS

# KEY PLAN



Joplin Early Childhood Center  
Joplin Schools

REVISIONS:		
#	Description	Date
1	As Noted	10/14/2016



John E. Funk  
E-2000173299

The Professional Engineer seal reflects the design approval of the engineer and does not constitute an endorsement of the design. The engineer assumes no liability for the design or the construction of the project, and the engineer represents that the design is the work of the engineer and is not a copy of any other design.

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DATE: 09.30.2016

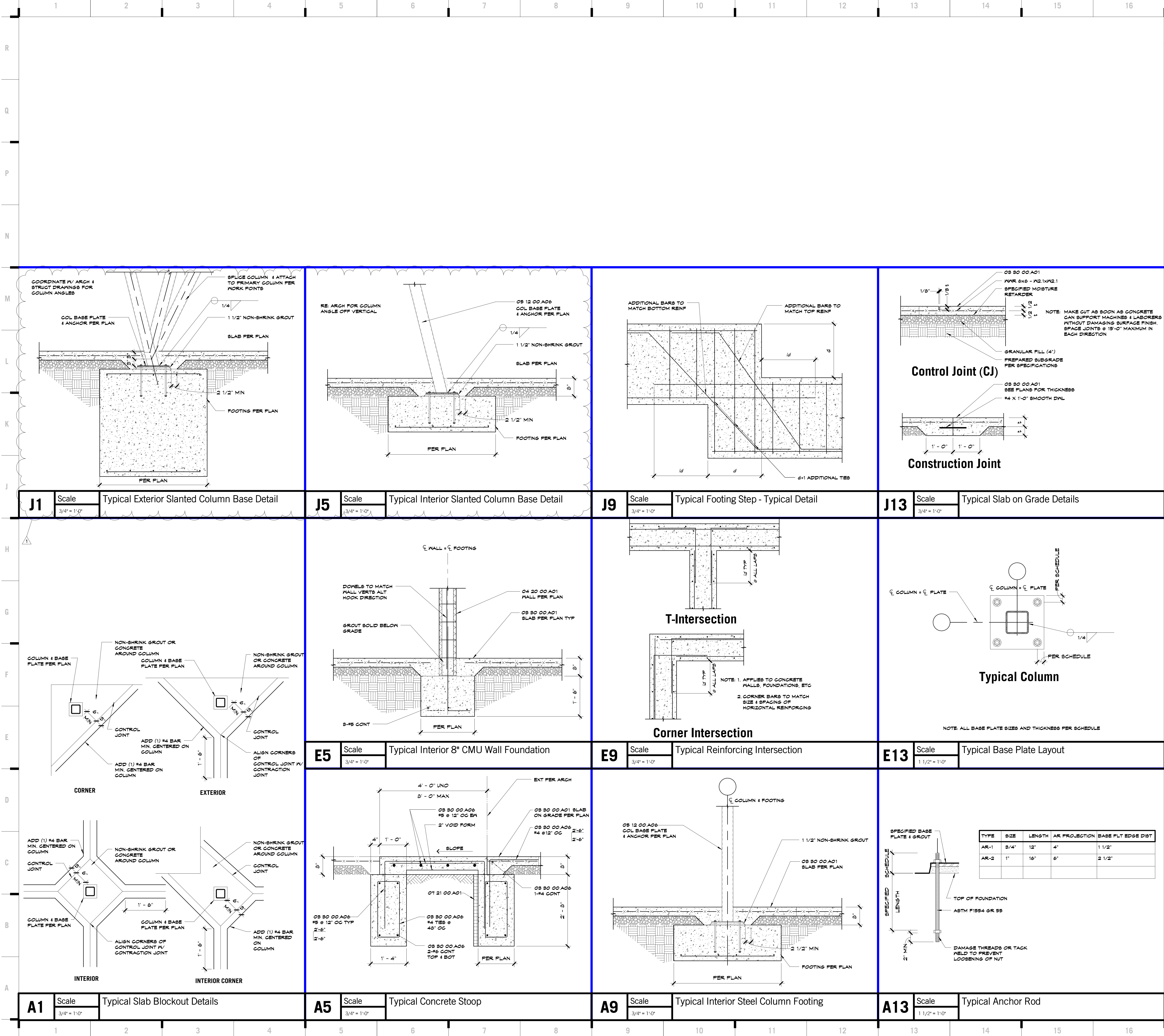
S202

OF

FRAMING PLAN

Please consider the environment before printing this.





SHEET KEYNOTE LEGEND

OS 50 00 A01 CAST-IN-PLACE CONCRETE

OS 50 00 A02 REINFORCING BARS

OS 20 00 A01 CONCRETE MASONRY UNITS

OS 12 00 A06 GOLD-FORMED HSS

OT 21 00 A01 EXTRUDED POLYSTYRENE BOARD INSULATION

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REVISIONS:

#	Description	Date
1	As Issued	10/14/2016

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The Professional Engineer seal reflects the Engineer's only the subject of the seal. All drawings, specifications or other documents prepared by the Engineer and the completed project by the engineer and the engineer represent the engineer's work and the engineer is not responsible for the design, construction or performance of the project.

JOB NO: 16054  
DRAWN BY: SAH  
CHECKED BY: DBH  
DATE: 09.30.2016

S300

OF

FOUNDATION SECTIONS

architects  
hollis + miller

relationships & results

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REVISIONS:

#	Description	Date
1	As Issued	10/14/2016

JOHN E. FUNK  
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REGISTERED PROFESSIONAL

John E. Funk  
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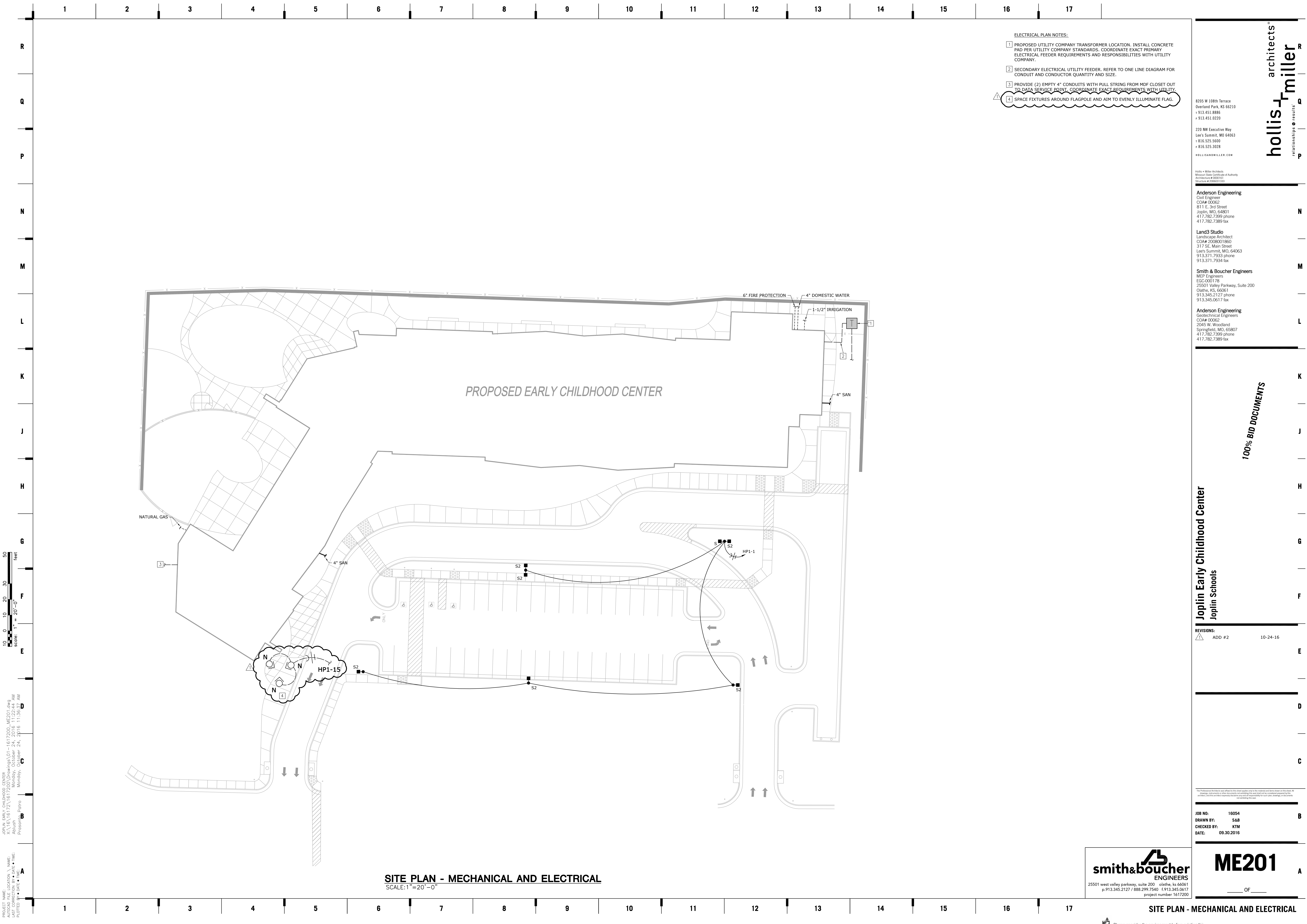
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DATE: 09.30.2016

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OF

FOUNDATION SECTIONS





PROJECT NAME: Joplin Early Childhood Center  
DRAWN BY: S&B  
LAST CORRECTION BY: S&B  
DATE: 09/30/2016  
TIME: 11:36:57 AM

SITE PLAN - MECHANICAL AND ELECTRICAL  
SCALE: 1"=20'-0"

- ELECTRICAL PLAN NOTES:
- 1 PROPOSED UTILITY COMPANY TRANSFORMER LOCATION. INSTALL CONCRETE PAD PER UTILITY COMPANY STANDARDS. COORDINATE EXACT PRIMARY ELECTRICAL FEEDER REQUIREMENTS AND RESPONSIBILITIES WITH UTILITY COMPANY.
  - 2 SECONDARY ELECTRICAL UTILITY FEEDER. REFER TO ONE LINE DIAGRAM FOR CONDUIT AND CONDUCTOR QUANTITY AND SIZE.
  - 3 PROVIDE (2) EMPTY 4" CONDUITS WITH PULL STRING FROM MDF CLOSET OUT TO DATA SERVICE POINT. COORDINATE EXACT REQUIREMENTS WITH UTILITY.
  - 4 SPACE FIXTURES AROUND FLAGPOLE AND AIM TO EVENLY ILLUMINATE FLAG.

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Structure # 000001303

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Joplin Early Childhood Center  
Joplin Schools

REVISIONS:		
ADD #2	10-24-16	

JOB NO: 16054  
DRAWN BY: S&B  
CHECKED BY: KTM  
DATE: 09.30.2016

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ENGINEERS  
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project number 1617200

ME201

OF

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SHEET KEYNOTE LEGEND

GENERAL NOTES:

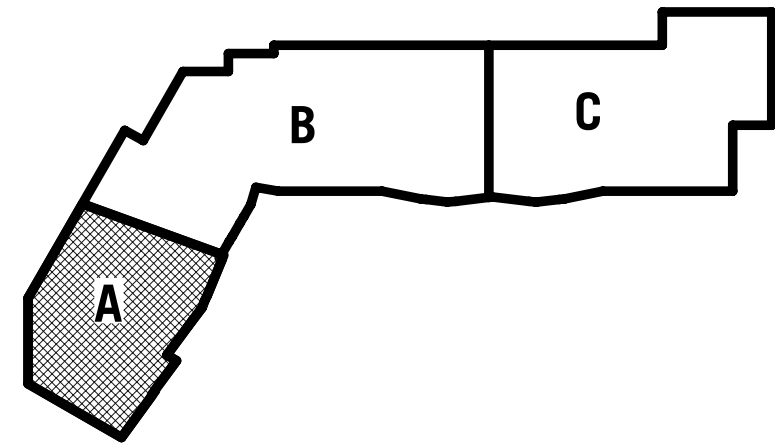
1. REFER TO MECHANICAL SCHEDULES ON ME SHEETS FOR CIRCUITING INFORMATION OF MECHANICAL EQUIPMENT.
2. ALL WALL MOUNTED ELECTRICAL DEVICES ARE TO BE INSTALLED IN AN ORDERLY FASHION. DEVICES IN CLOSE PROXIMITY AND AT DIFFERENT HEIGHTS ARE TO BE STACKED VERTICALLY. DEVICES AT THE SAME HEIGHT SHOULD BE INSTALLED GANGED TOGETHER OR AS CLOSE AS REASONABLY EXPECTED. DEVICE ROUGH IN IS TO BE APPROVED BY ARCHITECT/ENGINEER PRIOR TO DRYWALLING.
3. TELECOM BOXES ARE TO HAVE TWO DROPS UNLESS NOTED OTHERWISE. PROVIDE 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING.
4. PROVIDE SLEEVES AS REQUIRED THROUGH WALLS THAT EXTEND TO STRUCTURE FOR COMMUNICATION CABLING PATHWAYS. FIRE STOP-SLEEVES AS REQUIRED WHEN INSTALLED IN RATED WALLS.
5. PROVIDE DEDICATED 120V CIRCUIT TO EACH BMS PANEL AS REQUIRED. CIRCUIT FROM SPARE 20A SINGLE POLE BREAKERS.
6. PROVIDE SINGLE DATA OUTLET IN BOX ABOVE ACCESSIBLE CEILING AT ALL WIRELESS ACCESS POINT LOCATIONS. MARK TILES TO INDICATE WHERE WAPS ARE INSTALLED. COORDINATE WITH OWNER.
7. ALL SPEAKERS DENOTED WITH AN "F" ARE DUAL TAP SPEAKERS WITH FIRE ALARM INPUT ON PRIMARY TAP. RE: SPECIFICATIONS.

ELECTRICAL PLAN NOTES:

- 1 POWER AND DATA FOR SMART BOARD. RE: ARCHITECTURAL DRAWINGS FOR EXACT ELEVATION AND MOUNTING LOCATIONS.
- 2 4X12 CABLE TRAY. COORDINATE INSTALLATION WITH OTHER TRADES ABOVE CORRIDOR CEILING.
- 3 DEDICATED RECEPTACLE FOR DRINKING FOUNTAIN. COORDINATE ROUGH IN ELEVATION AND LOCATION TO BE CONCEALED WITHIN FIXTURE HOUSING.
- 4 PROVIDE FLOOR BOX WITH DUPLEX RECEPTACLE, (2) DATA OUTLETS, AND BLANK GANG WITH EMPTY 1-1/2" CONDUIT TO WALL BOX.
- 5 PROVIDE WIREMOLD EFSB4 WALL BOX FOR TV/MONITOR. PROVIDE WITH DUPLEX RECEPTACLE, (2) DATA OUTLETS, BLANK GANG WITH EMPTY 1-1/2" CONDUIT TO FLOOR BOX, AND BLANK GANG WITH EMPTY 1-1/2" CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE WITH BUSHINGS ON CONDUIT ENDS.
- 6 DEDICATED RECEPTACLE FOR REFRIGERATOR.
- 7 DEDICATED RECEPTACLE FOR VENDING MACHINE.
- 8 DEDICATED RECEPTACLE FOR DISHWASHER.
- 9 DEDICATED RECEPTACLE FOR UNDERCOUNTER REFRIGERATOR.
- 10 NEMA 14-30R FOR CLOTHES DRYER. CIRCUIT WITH (3)#10, #10G, 3/4"C.
- 11 DEDICATED CIRCUIT FOR WASHING MACHINE. COORDINATE EXACT ELEVATION AND MOUNTING LOCATION WITH APPLIANCE.
- 12 PROVIDE 8'X8' PLYWOOD BACKBOARD FOR MDF. PAINT WITH 2 COATS WHITE FIRE RETARDANT PAINT.
- 13 PROVIDE WIREMOLD EFSB4 WALL BOX FOR TV/MONITOR. PROVIDE WITH DUPLEX RECEPTACLE, (2) DATA OUTLETS, AND BLANK GANG WITH EMPTY 1-1/2" CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE WITH BUSHINGS ON CONDUIT ENDS.
- 14 ADA DOOR OPERATOR. PROVIDE JUNCTION BOXES AS INDICATED FOR PUSH BUTTONS. PROVIDE POWER AS REQUIRED FOR DOOR SYSTEM. COORDINATE LOCATIONS AND MOUNTING WITH ARCHITECT.
- 15 KEYPAD TO TEMPORARY DISARM EXTERIOR DOOR. COORDINATE WITH DOOR HARDWARE PROVIDER. PROVIDE ALL CONNECTIONS AS REQUIRED.
- 16 PUSH BUTTON FOR DOOR ENTRY REQUEST WITH AUDIO INTERCOM. COORDINATE MOUNTING WITH ARCHITECT. COORDINATE REQUIREMENTS WITH DOOR HARDWARE PROVIDER.
- 17 JUNCTION BOX FOR EXTERIOR DOOR RELEASE. COORDINATE EXACT REQUIREMENTS WITH DOOR HARDWARE PROVIDER.
- 18 PROVIDE POWER CONNECTION FOR SECURED DOOR SYSTEM AS REQUIRED. COORDINATE EXACT REQUIREMENTS WITH DOOR HARDWARE PROVIDER.
- 19 PROVIDE NEMA 14-30R RECEPTACLE FOR UPS. CIRCUIT WITH (3)#10, #10G, 1/2"C.
- 20 ALL WORK IN THIS AREA TO BE PART OF ALTERNATE 2.
- 21 MDF LOCATION. PROVIDE 4-POST RACK PER SPECIFICATIONS. COORDINATE EXACT LOCATION WITH OWNER. PROVIDE GROUNDING BUS BAR PER DETAIL.
- 22 PROVIDE POST TO MOUNT ENTRANCE HARDWARE ON. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDER. COORDINATE EXACT LOCATION WITH ARCHITECT.

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KEY PLAN



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Architecture # 0000101  
Mechanical # 250001031

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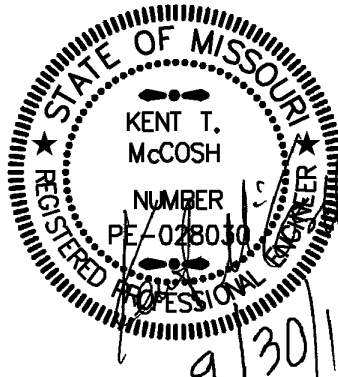
**Land3 Studio**  
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**Joplin Early Childhood Center**  
**Joplin Schools**

REVISIONS:		
#	Description	Date
1	APPENDIX #2	10-24-16

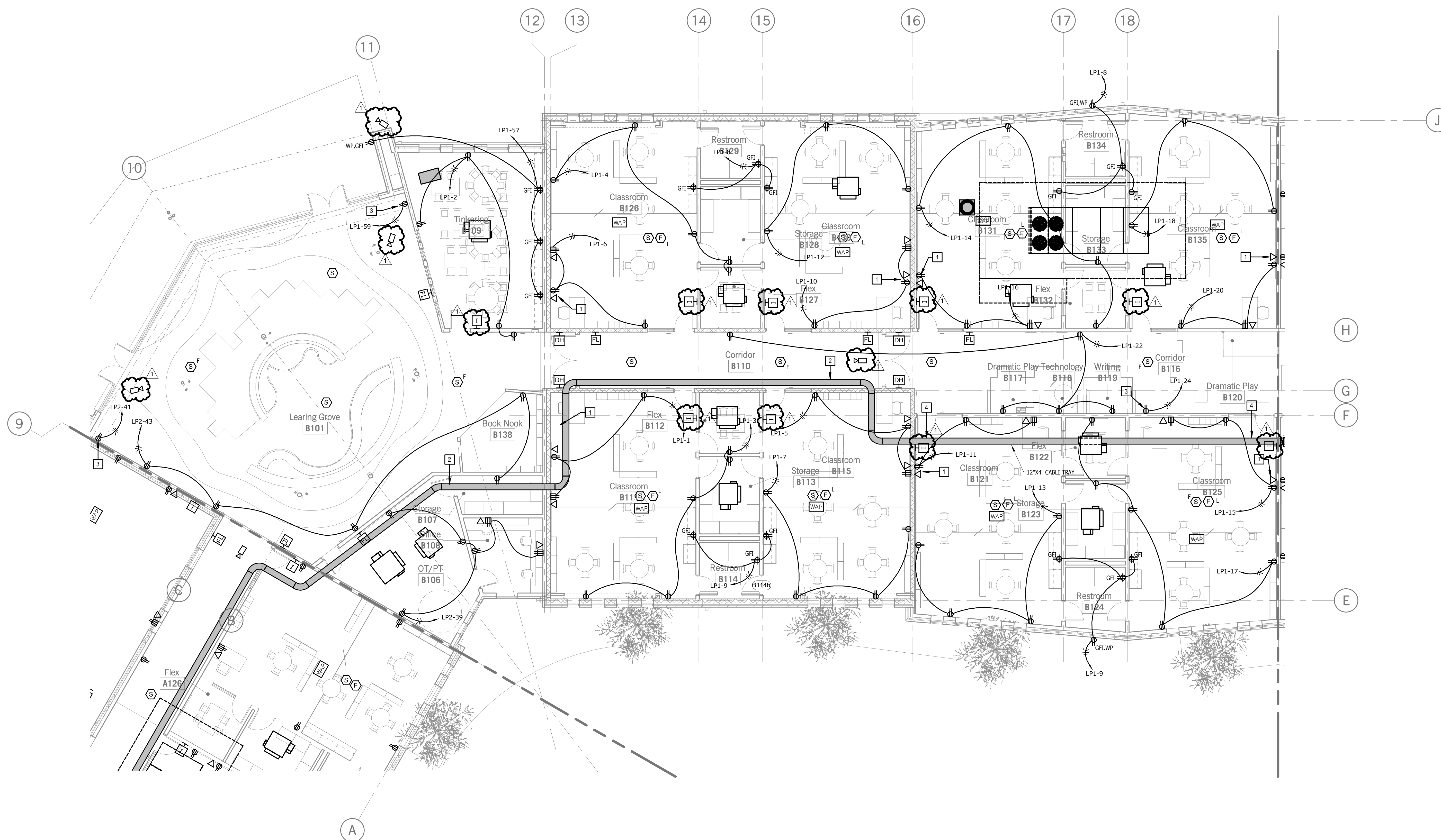


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DATE: 09.30.2016

**E201A**  
OF

FLOOR PLAN - AREA A - POWER





### SHEET KEYNOTE LEGEND

GENERAL NOTES:

1. REFER TO SHEET E201A FOR ADDITIONAL GENERAL NOTES.

ELECTRICAL PLAN NOTES:

- 1 POWER AND DATA FOR SMART BOARD. RE: ARCHITECTURAL DRAWINGS FOR EXACT ELEVATION AND MOUNTING LOCATIONS.
- 2 4X12 CABLE TRAY. COORDINATE INSTALLATION WITH OTHER TRADES ABOVE CORRIDOR CEILING.
- 3 DEDICATED RECEPTACLE FOR DRINKING FOUNTAIN. COORDINATE ROUGH IN ELEVATION AND LOCATION TO BE CONCEALED WITHIN FIXTURE HOUSING.
- 4 DEDUCT ALTERNATE A: REROUTE CABLE TRAY TO BE ABOVE PLAY AREA CEILINGS.

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HOLLISANDMILLER.COM

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Missouri State Certificate of Authority  
Architecture # 0000161  
Structure # 2006031333

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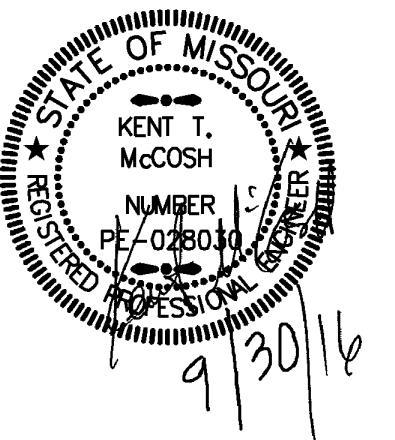
**Land3 Studio**  
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**Joplin Early Childhood Center**  
**Joplin Schools**

#	Description	Date
1	ADDENDUM #2	10-24-10




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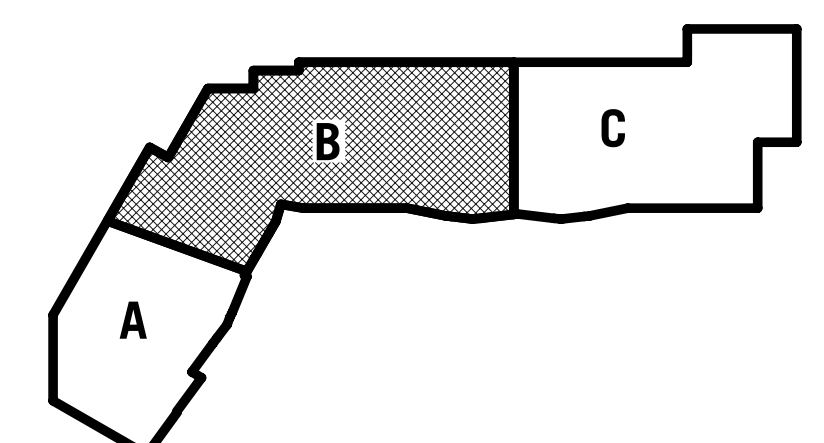
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CHECKED BY: KTM  
DATE: 09.30.2016

# E202B

### FLOOR PLAN - AREA B - POWER

  
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project number 1617200

## KEY PLAN





### SHEET KEYNOTE LEGEND

GENERAL NOTES:

1. REFER TO SHEET E201A FOR ADDITIONAL GENERAL NOTES.

ELECTRICAL PLAN NOTES:

- 1 POWER AND DATA FOR SMART BOARD. RE: ARCHITECTURAL DRAWINGS FOR EXACT ELEVATION AND MOUNTING LOCATIONS.
- 2 4X12 CABLE TRAY. COORDINATE INSTALLATION WITH OTHER TRADES ABOVE CORRIDOR CEILING.
- 3 DEDICATED RECEPTACLE FOR DRINKING FOUNTAIN. COORDINATE REAR ELEVATION AND LOCATION TO BE CONCEALED WITHIN FIXTURE HOUSING.
- 4 DEDICATED RECEPTACLE FOR REFRIGERATOR.
- 5 DEDICATED RECEPTACLE FOR ICE MAKER.
- 6 FURNISH AND INSTALL FLOW AND TAMPER SWITCHES FOR DISINFECTOR. COORDINATE ELEVATION AND LOCATION WITH FIRE PROTECTION CONTRACTOR. CONNECT TO FIRE ALARM SYSTEM AS REQUIRED.
- 7 INSTALL WEATHERPROOF FIRE ALARM HORN STROBE ABOVE FIRE DEPARTMENT CONNECTION.
- 8 ADA DOOR OPERATOR. PROVIDE JUNCTION BOXES AS INDICATED FOR PUSH BUTTONS. PROVIDE POWER AS REQUIRED FOR DOOR STOPS. COORDINATE LOCATIONS AND MOUNTING WITH ARCHITECT.
- 9 KEYPAD TO TEMPORARY DISARM EXTERIOR DOOR. COORDINATE WITH DOOR HARDWARE PROVIDER. PROVIDE ADA CONNECTIONS AS REQUIRED.
- 10 PROVIDE POWER CONNECTION FOR SECURED DOOR SYSTEM AS REQUIRED. COORDINATE EXACT REQUIREMENTS WITH DOOR HARDWARE PROVIDER.
- 11 DEDUCT ALTERNATE A. REROUTE CABLE TRAY TO BE ABOVE PLUMB AREA DETAILINGS.
- 12 LOCATION OF SECONDARY IT SWITCH AND RACK. PROVIDE LOCKABLE CABINET ENCLOSURE. COORDINATE MOUNTING HEIGHT WITH ARCHITECT/OWNER. PROVIDE FIRE BACKBONE BETWEEN MDF RACK AND SWITCH.

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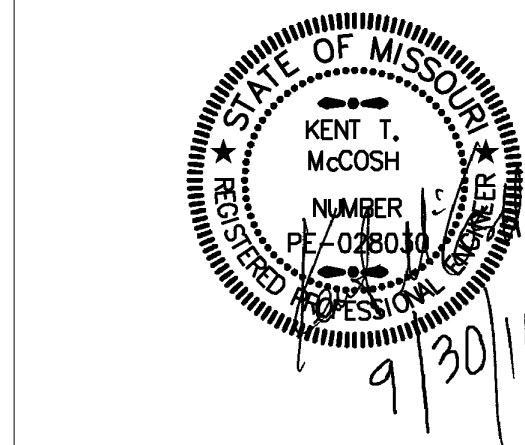
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**Joplin Early Childhood Center**  
**Joplin Schools**

**100% BID DOCUMENTS**

REVISIONS:		
#	Description	Date
1	ADDENDUM #2	10-24-10




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JOB NO: 16054  
DRAWN BY: S&B  
CHECKED BY: KTM  
DATE: 09.30.2016

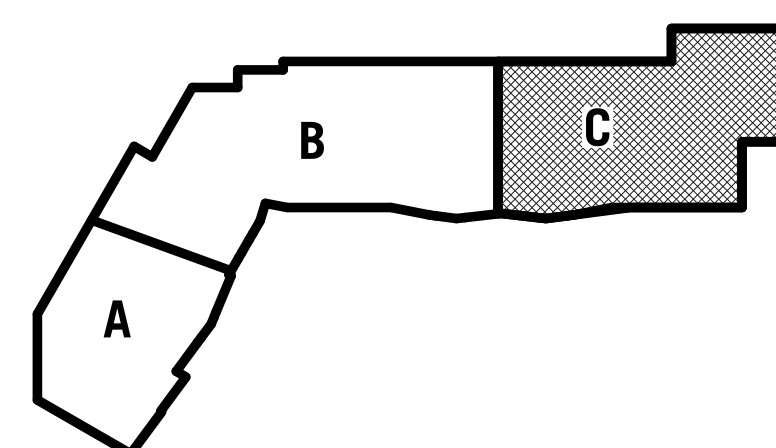
## E203C

OF

**FLOOR PLAN - AREA C - POWER**

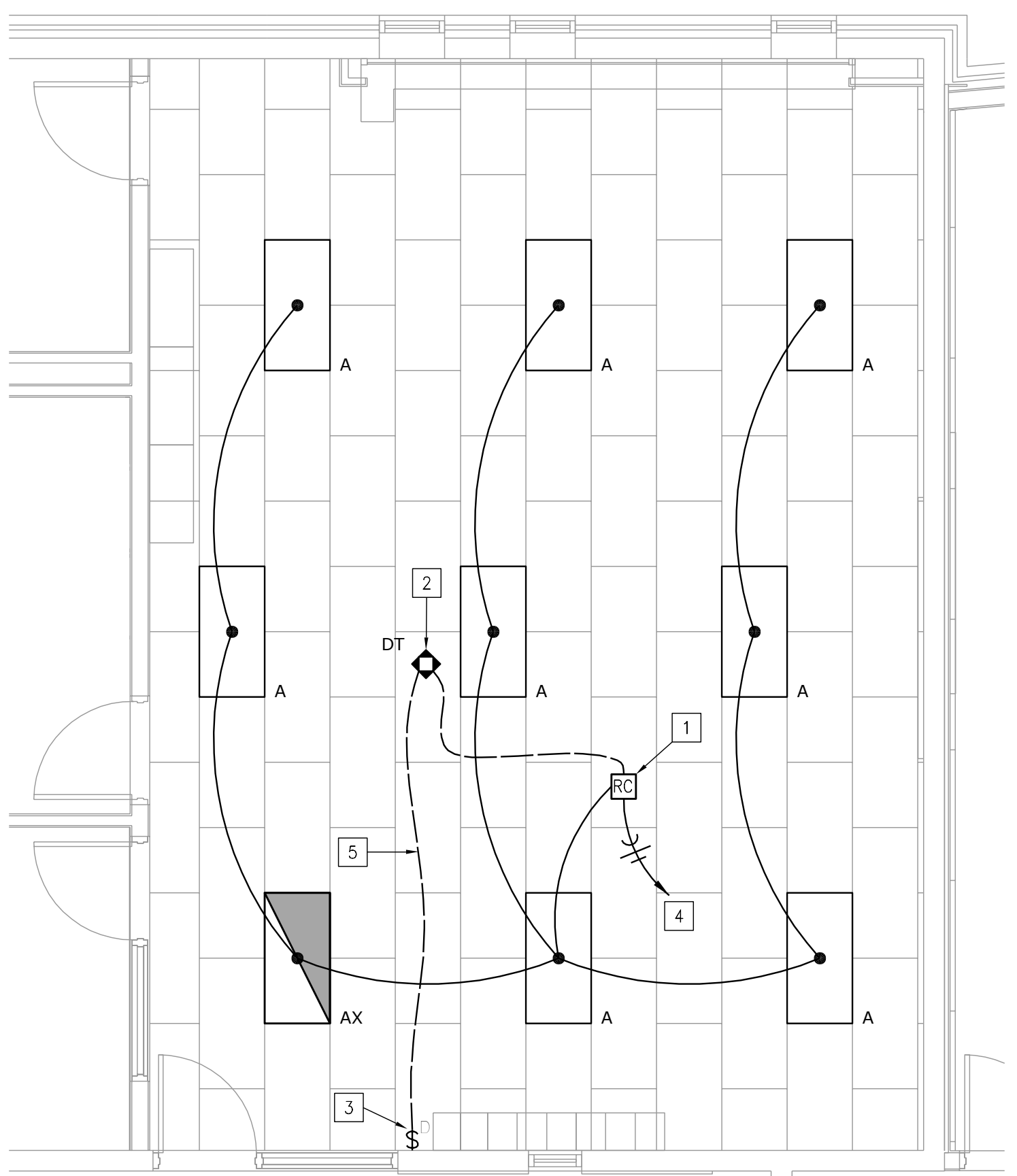
  
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project number 1617200

## KEY PLAN

 Please consider the environment before printing this.



PROJECT NAME: Joplin Early Childhood Center  
DRAWN BY: J. Miller  
LAST CORRECTION: 10/24/2016 11:41:36 AM  
PLOT DATE: 10/24/2016 11:42:45 AM  
PLOT BY: J. Miller



**TYPICAL CLASSROOM - LIGHTING CONTROL**  
SCALE : 1/4" = 1'-0"

**SEQUENCE OF OPERATION**

- LIGHT FIXTURES ARE MANUAL ON/OFF WITH OCCUPANCY SENSOR TO TURN OFF LIGHTS AFTER AN ADJUSTABLE VACANCY TIME PERIOD.
- CONTROL LOCATION AT ENTRY ALLOWS ON/OFF AND DIMMING CONTROL OF LIGHTING.

**GENERAL NOTES:**

- BASIS OF DESIGN IS WATTSTOPPER DIGITAL LIGHTING MANAGEMENT SERIES. PROVIDE COMPLETE SYSTEM AS REQUIRED TO MEET LIGHTING CONTROL DESCRIPTION AS INDICATED FOR BASIS OF DESIGN OR ALTERNATE MANUFACTURER.

**TYPICAL CLASSROOM - LIGHTING CONTROL DETAIL**  
NOT TO SCALE

INTERIOR LIGHTING CONTROL EQUIPMENT LEGEND					
SYMBOL	FUNCTION	MOUNTING	SETTING(TYPICAL)	WATT STOPPER MODEL #	NOTES
DT	MOTION SENSOR	CEILING	ON: AUTOMATIC OFF: 30 MINUTE DELAY	WATTSTOPPER LMDC-100	NOTE 1
SW	MOTION SENSOR	WALL SWITCH	ON: MANUAL OFF: 15 MINUTE DELAY	WATTSTOPPER PW-100	NOTE 3
OS	VERRIDE SWITCH	WALL SWITCH	----	RE: SPECS	NOTE 2
RC	ROOM CONTROLLER	----	----	WATTSTOPPER LMRC	NOTE 4

GENERAL NOTES: THE MANUFACTURERS AND MODELS LISTED ARE THE BASIS OF DESIGN, ALL PRODUCT SUBSTITUTIONS SUBMITTED MUST BE APPROVED AS EQUAL. REFER TO DRAWINGS FOR QUANTITIES.

NOTE 1: PROVIDE "B" SERIES POWER PACKS AS REQUIRED IN EACH SPACE. PROVIDE 8'-0" OF EXCESS CONTROL WIRING, COILED AND TIED, BETWEEN CEILING MOUNTED OCCUPANCY SENSORS AND CORRESPONDING POWER PACKS AT EACH SENSOR LOCATION.

NOTE 2: LINE VOLTAGE LOCAL OVERRIDE SWITCH FOR MOTION SENSORS, REFER TO OCCUPANCY SENSOR WIRING DIAGRAM FOR CIRCUITING/LOCATION OF SWITCH. OVERRIDE SWITCH TO TURN OFF LIGHTS ONLY, NOT OCCUPANCY SENSOR.

NOTE 3: PASSIVE INFRARED-SINGLE RELAY WALL MOUNT-LINE VOLTAGE.

NOTE 4: LOCATE DEVICE ABOVE ACCESSIBLE CEILING, LOCATIONS SHOWN ON DRAWINGS ARE SCHEMATIC.

**GENERAL NOTES:**

- REFER TO LIGHTING CONTROL DETAIL FOR CONNECTION INFORMATION FOR LIGHTING CONTROL DEVICES.
- PROVIDE ALL EQUIPMENT NEEDED FOR A COMPLETE WORKING DAY LIGHT HARVESTING CONTROLS SYSTEM.

**PLAN NOTES:**

- ROOM CONTROLLER, 0-10V DIMMING, WATTSTOPPER MODEL LMRC-212 OR APPROVED EQUAL. PROVIDE CONTROL OF FIXTURES AS SHOWN. MOUNT ABOVE ACCESSIBLE CEILING AS REQUIRED.
- CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR (VACANCY SENSOR), WATTSTOPPER MODEL LMDC-100 OR APPROVED EQUAL. PROVIDE AUTOMATIC OFF ONLY, OCCUPANT MUST MANUALLY TURN FIXTURES ON VIA SWITCH AS SHOWN.
- 1-BUTTON DIMMING WALL SWITCH, WATTSTOPPER MODEL LMDC-101 OR APPROVED EQUAL.
- 277V CIRCUIT AS INDICATED ON DRAWINGS.
- CAT 5 CABLE TYPICAL ALL DASHED LINES THIS PLAN. REFER TO MANUFACTURERS CONNECTION DIAGRAMS FOR ALL CONNECTIONS REQUIRED.

**FIXTURE SCHEDULE**

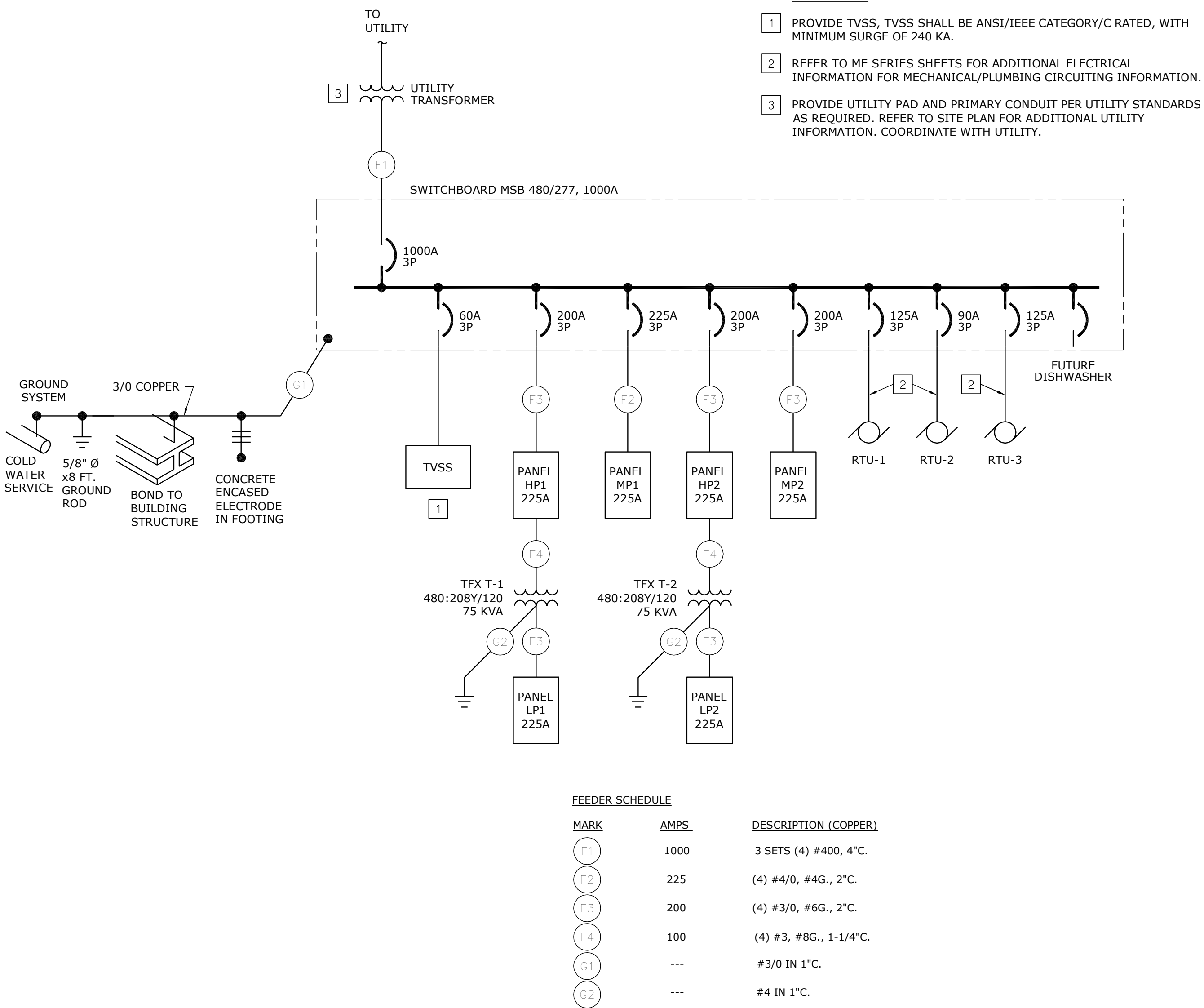
TYPE	DESCRIPTION	MOUNTING	LAMP	VOLTS	MANUFACTURER	V-A
A	2X4' ARCHITECTURAL RECESSED LED TROFFER, STEEL HOUSING, OPTICAL ACRYLIC LENS, INTEGRAL DRIVER, (X) PROVIDE WITH 90 MINUTE EM DRIVER, 1400 LUMENS.	RECESSED	LED 3500K	277	CREE ZR SERIES WILLIAMS LT SERIES OR APPROVED EQUAL	44
B	LINEAR LED PENDANT, EXTRUDED ALUMINUM HOUSING, FLUSH FROSTED ACRYLIC LENS, 275 LUMENS UP, 625 LUMENS DOWN, INTEGRAL DRIVER.	PENDANT	LED 3500K	277	FOCAL POINT SEE-MA FINE-LITE HP4 SERIES OR APPROVED EQUAL	11 PER FT
C	4'-0" LINEAR LED WALL MOUNT, EXTRUDED ALUMINUM HOUSING, SQUARE ACRYLIC LENS, INTEGRAL DRIVER.	SURFACE	LED 3500K	277	BARTCO BSS210 OR APPROVED EQUAL	34
C1	SAME AS TYPE C BUT 2'-0" LENGTH.	SURFACE	LED 3500K	277	BARTCO BSS210 OR APPROVED EQUAL	17
D	4' LENSED LED STRIP LIGHT, STEEL HOUSING, SEMI FROST ACRYLIC LENS.	SURFACE	LED 3500K 3000 LUMENS	277	COOPER METALUX 4S/NLED PHILIPS LF SERIES	25
F	4" DIAMETER GLASS GLOBE PENDANT, PROVIDE CABLE LENGTH AS REQUIRED TO MOUNT AT ELEVATION INDICATED BY ARCHITECT.	PENDANT	GY6.35 BASE XENON	120	LBL LIGHTING BULLE OR APPROVED EQUAL	35
G	1" WIDTH LINEAR LED, SUSPENSION MOUNT, ALUMINUM HOUSING, ACRYLIC LENS, REMOTE DRIVER, REFER TO ARCHITECTURAL DRAWINGS FOR INDIVIDUAL LENGTHS	PENDANT	LED 3500K 235 LUM/FT	277	EDGE LIGHTING CIRRRUS CHANNEL OR APPROVED EQUAL	5 PER FT
H	EXTERIOR LED WALL PACK, ALUMINUM HOUSING, TAMPER RESISTANT, TYPE 4 DISTRIBUTION, EMERGENCY COLD WEATHER POWER PACK, COLOR BY ARCHITECT.	WALL	LED 4000K 3000 LUMENS	277	MCGRW-EDISON IST SERIES GAROCO WRM SERIES OR APPROVED EQUAL	54
J	3.5" APERTURE RECESSED DOWNLIGHT, ALUMINUM HOUSING, BOROSILICATE GLASS LENS, ALUMINUM HEAT SINK, INTEGRAL DRIVER.	RECESSED	LED 3500K 1445 LUMENS	277	WAC LIGHTING TESLA SERIES FOCAL POINT ID 3.5 SERIES OR APPROVED EQUAL	22
K	LED WALL SCONCE, FROSTED ACRYLIC SHADE, 2-1/2" DIAMETER, ALUMINUM BRACKET, INTEGRAL DRIVER.	WALL	LED 3000K 200 LUMENS	120	SONNEMAN 2210 SERIES OR APPROVED EQUAL	3
L	DECORATIVE PENDANT, SILICONE SOCKET, POLYMER CABLE, PROVIDE WITH ARCHIPELAGO LIGHTING LED CLEAR GLOBE BULB. REFER TO ARCH FOR MOUNTING.	ARM MOUNTED PENDANT	LED 3500K 500 LUMENS	120	Y LIGHTING E27 SERIES OR APPROVED EQUAL	5
M	6" RECESSED LED DOWNLIGHT, ALUMINUM HOUSING AND HEAT SINK, ALUMINUM REFLECTOR, INTEGRAL DRIVER, (X) PROVIDE WITH 90MIN BATTERY BACKUP	RECESSED	LED 3500K 2000 LUMENS	277	PORTFOLIO LD6 SERIES PRESCOLITE LP6 SERIES PHILIPS DIM SERIES	32
N	INGROUND LED UPLIGHT, NONMETALLIC RECESSED HOUSING, SOLID BRASS ROUND TRIM RING, DOMED 1/2" THICK GLASS LENS, 9 DEGREE SPOT, INTEGRAL LED DRIVER, FINISH COLOR BY ARCHITECT.	IN-GRADE	LED 4000K 85 CRI	277	LUMIERE MONACO 3002 SERIES BEGA 7003 SERIES OR APPROVED EQUAL	18
X	LED SIGN, POLYCARBONATE HOUSING, CHEVRONS PER PLANS, RED LED LETTERING, N-CAD BATTERY.	POLE	LED 4000K 20,000 LUMENS	277	COOPER ECLIPSE SERIES KIM ALT SERIES OR APPROVED EQUAL	100
S2	INGROUND LED UPLIGHT, NONMETALLIC RECESSED HOUSING, SOLID BRASS ROUND TRIM RING, DOMED 1/2" THICK GLASS LENS, 9 DEGREE SPOT, INTEGRAL LED DRIVER, FINISH COLOR BY ARCHITECT.	IN-GRADE	LED 4000K 85 CRI	277	LUMIERE MONACO 3002 SERIES BEGA 7003 SERIES OR APPROVED EQUAL	18
X	EXIT SIGN, POLYCARBONATE HOUSING, CHEVRONS PER PLANS, RED LED LETTERING, N-CAD BATTERY.	VARIOUS WALL OR CEILING	LED	277	SURE LITES LPX7 SERIES DUAL LITE LX SERIES	-

**LIGHTING CONTACTOR SCHEDULE**

NO.	DESCRIPTION	PANEL	LOAD CIRCUITS	CONTROL CIRCUIT	# POLES	OPERATION	REMARKS
LC-1	EXTERIOR LIGHTING	HP1	1,15	HP1-15	4	NOTE 2	NOTE 1

- NOTES:
- PROVIDE INTERMATIC ET8000 SERIES ELECTRONIC TIME CLOCK OR EQUAL.
  - PHOTOCELL/ASTRONOMIC TIME CLOCK ON/OFF BASED ON SUNSET/SUNRISE AND OWNER INPUT.

**ELECTRICAL ONE-LINE DIAGRAM**  
NOT TO SCALE



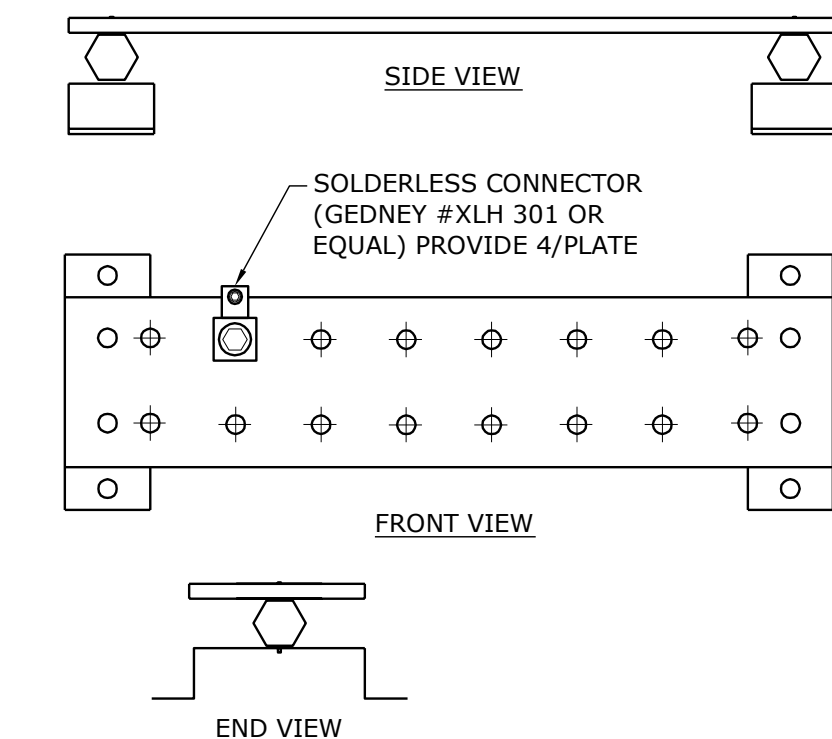
GROUND BUS ASSEMBLY:  
1/4" X 4" X 18" COPPER GROUND BAR WITH 7/16" DIAMETER HOLES ON 2" CENTERS.

1-3/8" STAND-OFF INSULATORS WITH 3/8: 16 HARDWARE.

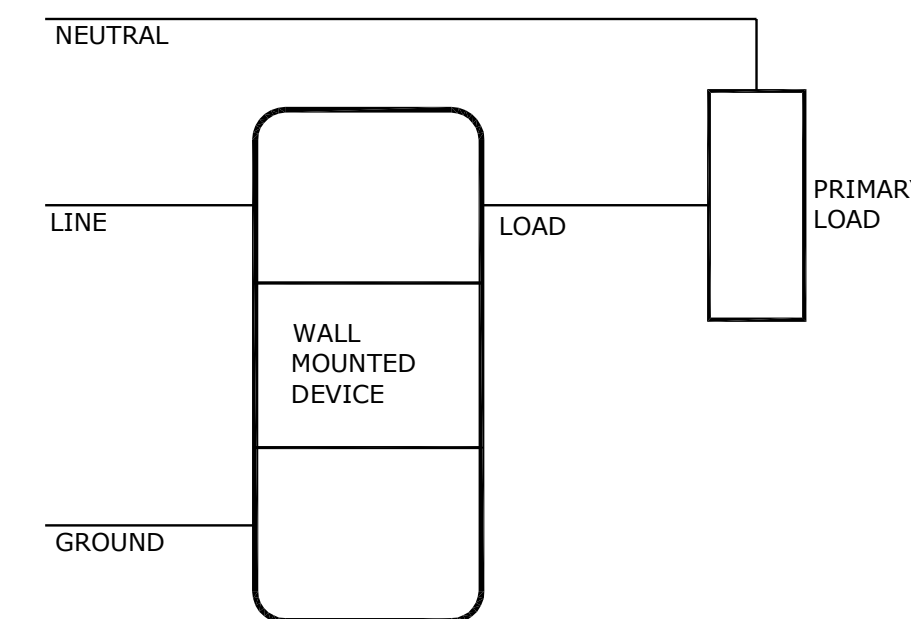
GALVANIZED MOUNTING BRACKETS, 14 GAUGE.

GROUND BUS ASSEMBLY AS MANUFACTURED BY EMI OR EQUAL.

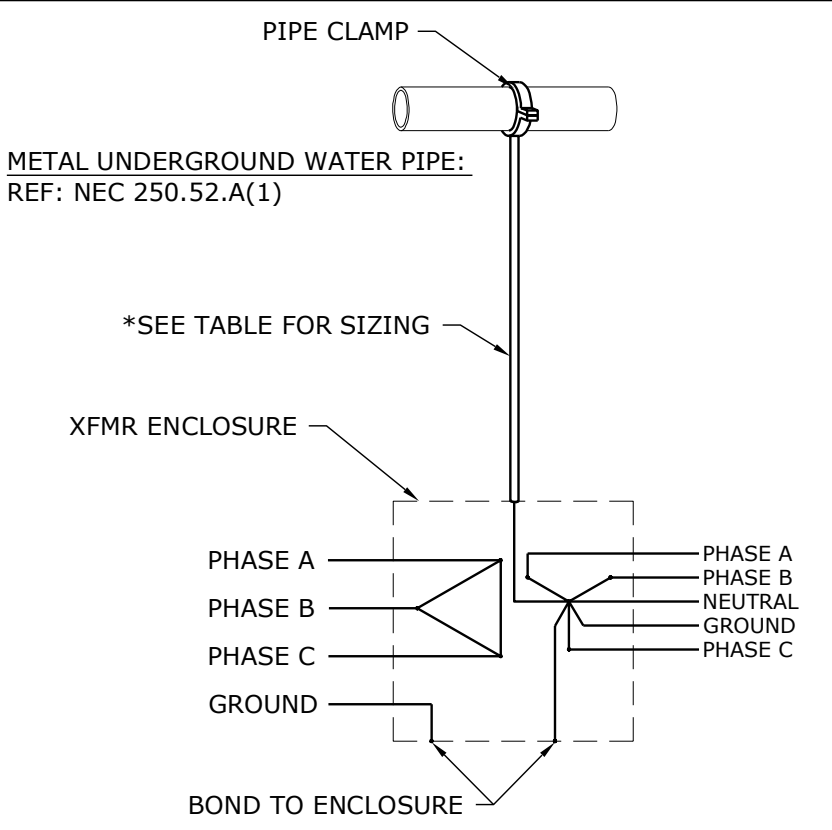
PROVIDE #6 CU IN 1/2" C. BONDED TO MAIN BUILDING ELECTRICAL SERVICE ENTRANCE GROUNDING SYSTEM.



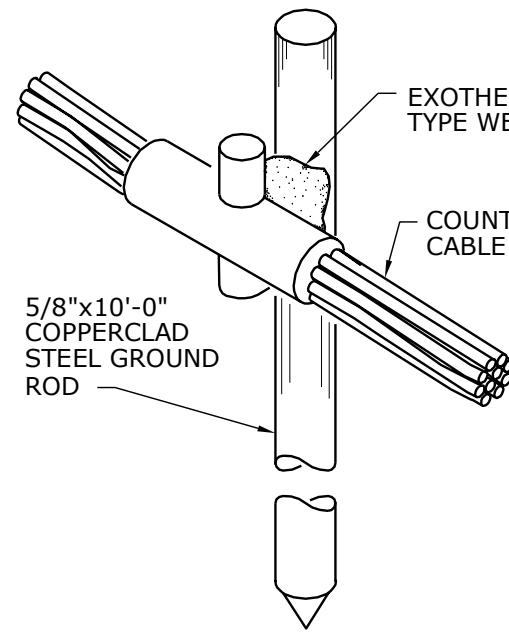
**TELECOMMUNICATIONS MAIN GROUNDING BUS BAR DETAIL**  
NOT TO SCALE



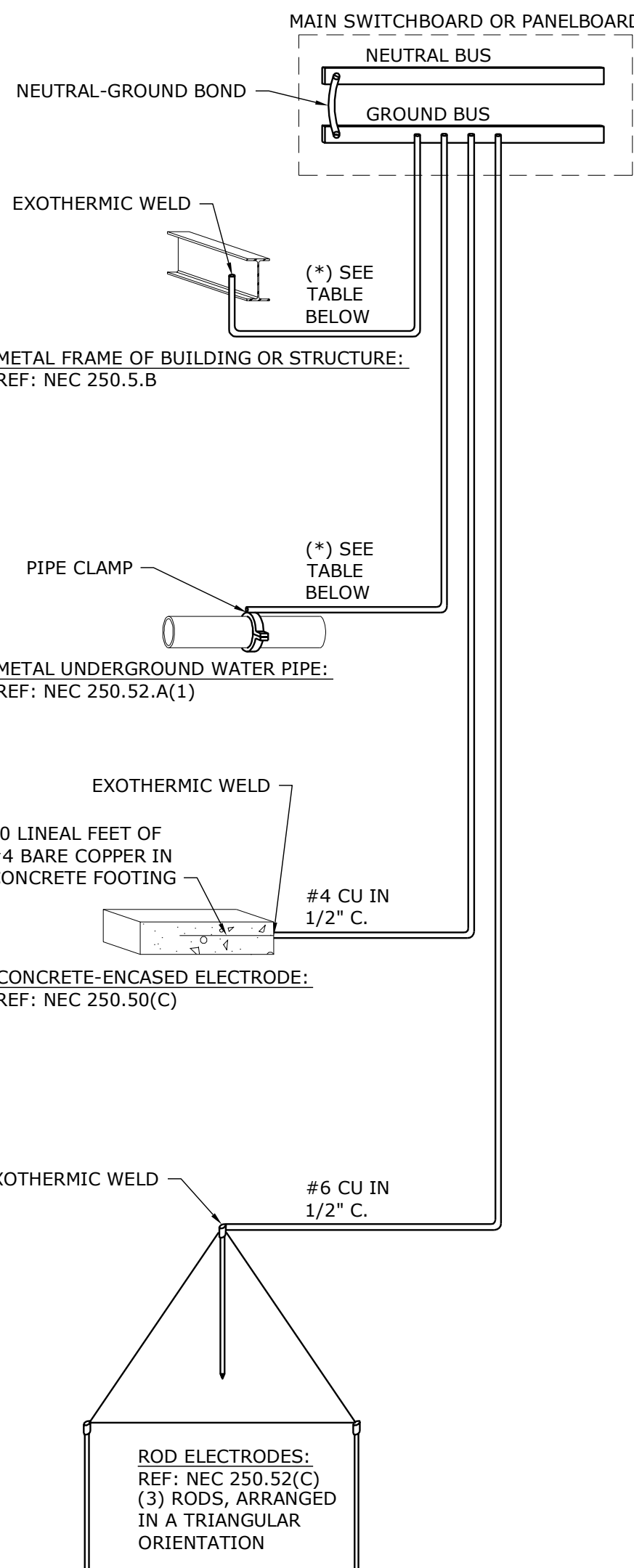
**LINE VOLTAGE OCCUPANCY SENSOR WIRING DIAGRAM**  
NOT TO SCALE



**TYPICAL TRANSFORMER GROUNDING**  
NOT TO SCALE



**TYPICAL GROUND ROD CONNECTION**  
NOT TO SCALE



**SERVICE GROUNDING DIAGRAM**  
NOT TO SCALE

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project number 1617200

**Joplin Early Childhood Center**  
Joplin Schools

REVISIONS:		
ADD #1	10-14-16	
ADD #2	10-24-16	

JOB NO: 16054  
DRAWN BY: S&B  
CHECKED BY: KTM  
DATE: 09.30.2016

**E301**  
OF