

Vicinity Map **General Notes** Nothing set forth in these Drawings shall release any Contractor from responsibility to provide appropriate quantities, field measurements, dimensional stability, installation, anchorage and coordination with other trades, or waive the Contractor's responsibility to identify and resolve deviations from the requirements of the Contract Documents, or waive the Contractor's responsibility to alert the Architect to errors or omissions contained therein. Each Contractor shall verify in the field all existing applicable conditions and dimensions shown on the Drawings and as pertinent to the intent of these Drawings. Any discrepancy discovered shall be brought to the attention of the Architect prior to the commencement of any Work affected by, or related to, such discrepancy. Each Contractor shall be responsible for all costs associated with, or caused by failure to comply with requirement. Each Contractor shall review in advance all portions of the Work to verify that the Work will not prohibit completion of the Project as intended in these Contract Documents. Any questions shall be promptly referred to the Architect for resolution. Each Contractor shall refer to the Project Manual or the Soil Management Plan for cleaning and disposal requirements. interior and exterior of building. Damaged surfaces and finishes resulting from the performance of the Work shall be repaired at no cost to the Owner by the responsible Contractor to match existing to the satisfaction of the Owner. Each Contractor shall coordinate respective cutting and patching Work with the other Prime Contracts. Each Contractor shall become completely familiar with all aspects of the Work, even those areas designated to be provided by others. This familiarization includes full and complete understanding of the Work described on all Sheets of the Drawings and in all Sections of the Project Manual. Failure by the Contractor to become completely familiar and cognizant of all aspects of the Work shall not relieve the Contractor of the responsibility to provide materials, assemblies, or services indicated in the Contract Documents. Matthew Connolly PE10606154 AR10400134 STATE OF STATE OF BICSI ID # 212593 /NDIANP EXPIRES 12-31-21 Sattoo RCDD Mara Comer G. EGISTER GISTER No. PE60920470 No. PE11400535 No. 11900093 STATE OF STATE OF STATE OF . MOIANA NDIANP 1/in Kn/ Kondo

Consolidated Civil and Criminal Courthouse

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3/1/2019

2900 Prospect St Indianapolis, IN 46203

3/1/2019

Thoroughfare Map



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Project Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities

2900 Prospect St Indianapolis, IN 46203 Prepared For City of Indianapolis



Package #: CJ4.1 Foundations & Underground Utilities

03.01.2019





Project No: Number** Sheet Title SITE UTILITY PLAN

Issue Date:







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Professional Stamp



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Project
Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities 2900 Prospect St Indianapolis, IN 46203



- is not allowed 15. No notching or coping of studs is allowed, unless explicitly shown on the design or shop drawings. All field-cut holes must be reinforced. 16. The Framing Contractor is to ensure punch out alignment when assembling lateral bracing/bridging and
- field-cutting studs to length. Lateral bracing/bridging must be installed at the time the wall is erected. 17. Temporary bracing shall be provided and remain in place until work is completely stabilized. 18. Use a minimum of three studs at the corners of all exterior walls. Use a minimum of three studs at the intersections and corners of all load-bearing walls.
- 20. All headers and built-up beams must be constructed of UNPUNCHED material only. Install insulation in built-up exterior framing members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work. 21. Shop drawings: Show layout, spacings, sizes, thicknesses, types of cold-formed metal framing, and
- fastening and anchorage details, including mechanical fasteners. Show reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work. 22. For cold-formed metal framing indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer (SSE) responsible for their preparation. 23. Structural Performance: Provide cold-formed metal framing capable of withstanding design loads
- within limits and under conditions indicated. A) Design Loads: Reference the Design Criteria Notes. B) Deflection Limits: Design framing systems to withstand design loads without deflections greater than the following: 1. Wall Framing: Horizontal deflection of 1/240 of the wall height for walls with flexible finishes, e.g. metal siding, wood siding, EIFS, etc. 2. Wall Framing: Horizontal deflection of 1/360 of the wall height for walls with cementitious

finishes, e.g. cement plaster.

- 3. Wall Framing: Horizontal deflection of 1/600 of the wall height for walls with masonry veneer 4. Floor Joist Framing: Vertical deflection of 1/480 of the span under live load. Limit deflection under total load (dead + live) to 1/360 of the span. 5. Roof Framing: Vertical deflection of 1/360 of the span under live/snow load. Limit deflection under total load (dead + live/snow) to 1/240 of the span. 24. Design framing systems to provide for movement of framing members without damage or overstressing, sheathing failure, undue strain on fasteners and anchors, or other detrimental effects when subject to an ambient temperature change of not less than 120 degrees F.
- 25. Design framing system to maintain clearances at openings, to allow for construction tolerances, and to accommodate live load deflection of primary building structure as follows: Upward and downward movement of 3/4 inch. 26. Design exterior non load-bearing curtain wall framing to accommodate horizontal deflection without regard for contribution or sheathing materials.



DRILLED-IN DOWELS & ANCHOR BOLTS/RODS

- 1. All reinforcing steel and threaded rod anchors to be installed in 2-part epoxy anchoring system shall be treated as follows:
- A. Drill holes 1/8" larger than bar bolt to be embedded. B. Drill holes with single chisel tooth rotary percussion drill that feeds compressed air to the base of
- the hole through a hollow stem drill bit. C. Utilize a carbide bit to prevent damage to reinforcing steel.
- D. Drill the hole a minimum of 15 bar diameters or as shown on the plans. E. Clean drilled holes prior to filling with epoxy.
- F. Use a two-part epoxy adhesive anchoring system, Rawl Foil-Fast, Hilti Hit HY-150, or approved equal. G Reinforcing steel dowels shall be ASTM A615, Grade 60, unless noted.
- H. Anchor rods shall be ASTM F-1554, Grade 36, unless noted. Provide galvanized or stainless steel finish for exterior applications. When column anchor bolts have been omitted, or damaged by construction operations, the Contractor
- must obtain the written approval of the Engineer of Record prior to repair or replacement. A. As a precaution, the affected column must be guyed and braced after repair for the balance of the erection period.
- B. As an alternate to guying and bracing, the Contractor may at his option, employ a Testing Agency to perform a tensile pull test to confirm the strength of the repaired or replaced anchor bolt. The tensile proof load must exceed 1.33 x the design load of the original anchor without causing distress of the anchor bolts or the surrounding concrete. Reference the following table for the minimum proof loads: 3/4" diameter 11.6 kips
- 16.0 kips 7/8" diameter 1" diameter 20.9 kips Note: Values listed above are for ASTM F-1554, Grade 36 material. When higher grade or strength materials are specified, refer to the AISC Manual of Steel Construction for minimum allowable loads to
- be multiplied by 1.33. C. When affected anchor bolts are part of a fixed moment resisting column base, such as those in moment-resisting space frames, canopies, or fixed base installations, the repaired anchor bolts
- must be proof-loaded, or the affected column footing and/or pier replaced in its entirety. D. When affected anchor bolts are 1-1/8" diameter or larger, the affected column footing and/or pier must be replaced in its entirety.
- E. When affected anchor bolts are part of a braced frame the affected column footing and/or pier must be replaced in its entirety.
- F. Prior to erection, the controlling Contractor must provide written notification to the Steel Erector if there has been a repair, replacement or modification of the anchor bolts for that column.

CAST IN PLACE CONCRETE

- 1. Details of fabrication of reinforcement, handling and placing of the concrete, construction of forms and placement of reinforcement not otherwise covered by the Plans and Specifications, shall comply with the ACI Code requirements of the latest revised date. 2. Cold weather concreting shall be in accordance with ACI 306. Cold weather is defined as a period when for more than 3 successive days the average daily air temperature drops below 40F and stays below 50F. The Contractor shall maintain a copy of this publication on site. 3. Hot weather concreting shall be in accordance with ACI 305. Hot weather is defined as any combination of the following conditions that tends to impair the quality of the freshly mixed or hardened concrete: high ambient temperature, high concrete temperature, low relative humidity, wind speed, or solar radiation The Contractor shall maintain a copy of this publication on site. 4. A certified Testing Agency shall be retained to perform industry standard testing including measurement of slump, air temperature, concrete cylinder testing, etc. to ensure conformance with the Contract Documents. Submit reports to Architect/Engineer. 5. Finishing of Slabs: After screeding, bull floating and floating operations have been completed, apply final finish as indicated below, and as described in the Division 3 Cast In Place Concrete Specification of the Project Manual. A. Floor Slabs Hard Trowel Finish B. Ramps, Stairs, & Sidewalks Broom Finish C. Surfaces to Receive Topping Slab Float Finish D. Surfaces to receive thick-set mortar Float Finish beds or similar cementitious materials E. Driving Surfaces Rough Swirl Finish Sample Finishes: See Specifications for sample and mockup requirements, if any. Floor Tolerances: See the Specifications for specified Ff and Fl tolerances. Ff and Fl testing shall be performed by the Testing Agency in accordance with ASTM F-1155. Results, including acceptance or rejection of the work will be provided to the Contractor and the Architect/Engineer within 48 hours after data collection. Remedies for out-of-tolerance work shall be in accordance with the Specifications. When approved by the Structural Engineer of Record, measurement of the gaps beneath a 10-foot straight edge may be used in lieu of Ff and FI testing. Approval must be obtained in writing prior to the beginning of concrete operations. Finishing of Formed Surfaces: Finish formed surfaces as indicated below, and as described in the Division 3 Cast In Place Concrete Specification of the Project Manual. A. Sides of Footings & Pile Caps Rough Form Finish B. Sides of Grade Beams Rough Form Finish Rough Form Finish C. Surfaces not exposed to public view
- Smooth Form Finish D. Surfaces exposed to public view The Contractor shall consult with the Structural Engineer of Record before starting concrete work to establish a satisfactory placing schedule and to determine the location of construction joints so as to minimize the effects of shrinkage in the floor system.
- 8. Sawn or tooled control/contraction joints shall be provided in all slabs on grade. For a framed structure joints shall be located on all column lines. If the column spacing exceeds 20'-0", provide intermediate ioints. Exterior slabs, and interior slabs without column shall have joints spaced a maximum of 15'-0"
- apart. Layout joints so that maximum aspect ratio (ratio of long side to short side) does not exceed 1.5. 9. Where vinyl composition tile, vinyl sheets goods, thin-set epoxy terrazzo, or other similar material is the specified finish floor material, the Contractor shall coordinate the locations of control/contraction and construction joints with the Finish Flooring Contractor. Submit a dimensioned plan showing joint locations and proposed sequence of floor pours.
- 10. Unless specifically noted on the Plans, composite and non-composite supported slabs on metal deck. and supported cast-in-place concrete slabs do not require sawn control joints. Joints in slabs to receive a finished floor may remain unfilled, unless required by the finish flooring contractor. All exposed slabs shall be filled with sealant specified in Division 7, or as follows: All slabs in industrial, manufacturing, or warehouse applications subject to wheeled traffic shall be filled with specified epoxy resin sealant, all other joints shall be filled with specified elastometric sealant. Defer filling of joints as long as possible, preferably a minimum of 4 to 6 weeks after the slab has been cured. Prior to filling,
- remove all debris from the slab joints, the fill in accordance with the manufacturer's recommendations. 12. Refer to the Architectural Drawings for locations and details of reveals (1" maximum depth) in exposed walls. 13. Refer to the Architectural Drawings for chamfer requirements for corners of concrete. Where not
- indicated, provide 3/4" chamfers on exposed corners of concrete, except those abutting masonry. 14. Refer to the Architectural Drawings for exact locations and dimensions of recessed slabs, ramps, stairs,
- thickened slabs, etc. Slope slabs to drains where shown on the Architectural and Plumbing Drawings. Sidewalks, drives, exterior retaining walls, and other site concrete are not indicated on the Structural Drawings. Refer to the Site/Civil and Architectural Drawings for locations, dimensions, elevations, jointing, and finish details.

CLASS A CONCRETE: FOOTINGS, FOUNDATION WALLS	, PIERS, & GRADE BEAM
COMPRESSIVE STRENGTH (56 DAY STRENGTH)	4000 PSI
	0.50
AIR CONTENT	0 - 3 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SLUMP	5" TO 6 1/2"
MIX SHALL BE A LOW HEAT OF HYDRATION MIX DU FOUNDATIONS	E TO THICKNESS OF
CLASS B CONCRETE: INTERIOR CONCRETE SLABS	
COMPRESSIVE STRENGTH	4000 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	517 LB/CU YD
AIR CONTENT	0 - 3 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SLUMP	5" TO 6 1/2"
SYNTHETIC MICRO-FIBER	MIN. 1.5 LB/CU Y
POST-TENSIONED CONCRETE SLABS	
COMPRESSIVE STRENGTH	5000 PSI
MINIMUMN COMPRESSIVE STRENGTH AT TIME OF TENDON STRESSING (1 TO 3 DAYS)	3000 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	650 LB/CU YD
MAXIMUM WATER/CEMENT RATIO	0.40
AIR CONTENT	0 - 3 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SLUMP	4" TO 6"
ELEMENT 5 INTERNAL CURE AT MANUFACTURER'S RECOMMEND DOSAGE	}
COMPRESSIVE STRENGTH (SEE NOTE BEI OW)	5000-7000 PSI
	564 I B/CU YD
AIR CONTENT	0 - 3 PERCENT
WATER-REDUCING ADMIXTURE	HIGH RANGE RE
SLUMP	5" TO 8"
NOTE: VARIES BY LEVEL, REFER TO DRAWINGS AI	ND/OR SCHEDULES
CLASS D CONCRETE: BUILDING COLUMNS	
COMPRESSIVE STRENGTH	5000-7000 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	650 LB/CU YD
AIR CONTENT	0 - 3 PERCENT
MAXIMUM WATER/CEMENT RATIO	0.40
WATER-REDUCING ADMIXTURE	HIGH RANGE RE
SLUMP	4" TO 6"
NOTE: VARIES BY LEVEL, REFER TO DRAWINGS A	ND/OR SCHEDULES
CLASS E CONCRETE: EXTERIOR CONCRETE SUBJECT	TO FREEZE-THAW
COMPRESSIVE STRENGTH	4000 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	564 LB/CU YD
AIR CONTENT	6 ± 1 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SLUMP	5" TO 6 1/2"
COARSE AGGREGATE	CRUSHED STON
INCREASE COMPRESSIVE STRENGTH TO 4500 PSI REINFORCED CONCRETE SUBJECT TO THE USE O	For exterior F de-icers.
CLASS LC CONCRETE: LEAN CONCRETE FILL	
COMPRESSIVE STRENGTH	2000 PSI
MAXIMUM WATER/CEMENT RATIO	0.65
AIR CONTENT	OPTIONAL
WATER-REDUCING ADMIXTURE	NOT REQUIRED
SLUMP	4" TO 7"

- INIMUM CEMENTITIOUS MATERIAL CONTENTS ARE BASED ON THE USE OF WATER REDUCING ADMIXTURES. INCLUDE AN AIR-ENTRAINING ADMIXTURE FOR ALL CONCRETE EXPOSED TO FREEZING AND THAWING IN SERVICE AND FOR ALL CONCRETE EXPOSED TO COLD WEATHER DURING
- CONSTRUCTION, BEFORE ATTAINING ITS SPECIFIED DESIGN COMPRESSIVE STRENGTH. REF. ACI 306 FOR DEFINITION OF COLD WEATHER. CLASS C FLY ASH MAY BE USED AS A CEMENT SUBSTITUTE WITH A MAXIMUM 20%
- SUBSTITUTION RATE ON A POUND-PER-POUND BASIS. SLAG CEMENT MAY BE USED AS A SUBSTITUTE FOR PORTLAND CEMENT WITH A MAXIMUM
- 50% SUBSTITUTION RATE ON A POUND-PER-POUND BASIS WITH THE EXCEPTION OF CLASS E CONCRETE, WHICH SHALL BE LIMITED TO 30%. WHEN SLAB CEMENT AND FLY ASH ARE USED IN THE SAME CONCRETE MIX, THE MAXIMUM
- SUBSTITUTION RATES SHALL COMPLY WITH THE FOLLOWING: PORTLAND CEMENT/SLAG/FLY ASH RATIO: 70% / 20% / 10% CLASS E EXTERIOR CONCRETE 50% / 30% / 20% ALL OTHER CLASSES
- FOR CONCRETE TO BE CAST DURING COLD WEATHER. THE MAXIMUM SUBSTITUTION RATE FOR SLAG CEMENT SHALL BE 30% IF SLAG CEMENT AND FLY ASH ARE USED IN THE SAME MIX. THE MAXIMUM SUBSTITUTION RATES SHALL COMPLY WITH A RATIO OF PORTLAND CEMENT/SLAG/FLY ASH OF 70% / 20% / 10%. PROPORTION CONCRETE MIXES TO PROVIDE WORKABILITY AND CONSISTENCY TO PERMIT
- CONCRETE TO BE WORKED READILY INTO THE CORNERS AND ANGLES OF THE FORMS AND AROUND REINFORCEMENT BY THE METHODS OF PLACEMENT AND CONSOLIDATION TO BE EMPLOYED, WITHOUT SEGREGATION AND EXCESSIVE BLEEDING. ADJUSTMENTS TO THE APPROVED MIX DESIGNS MAY BE REQUESTED BY THE CONTRACTOR WHEN JOB CONDITIONS, WEATHER, TEST RESULTS, OR OTHER CIRCUMSTANCES WARRANT. THESE REVISED MIX DESIGNS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO USE.

POST-INSTALLED DOWELS & ANCHOR BOLTS/RODS

- All reinforcing steel and threaded rod anchors to be installed in a 2-part chemical anchoring system shall be treated as follows: A. Drill holes larger than bar or rod to be embedded. Coordinate hole diameter with Manufacturer's recommendations. B. Holes must be cleaned and prepared in accordance with Manufacturer's recommendations.
- C. When reinforcing steel is encountered during drilling for installation of anchors; stop drilling, use a sensor to locate the reinforcing in the surrounding area and install anchor(s) as close as possible to the original location. Contact the Structural Engineer of Record (SER) for direction when the revised location is more than 2" from the original location, or when the original function of the anchorage is significantly altered. When in doubt, contact the SER for direction.
- D. Drill the hole a minimum of 15 bar diameters or as shown on the plans. E. Use a 2-part adhesive anchoring system, Hilti HY-200, or approved equal.
- F. For anchorage into hollow substrate, use Hilti HY-70, or approved equal G. Reinforcing steel dowels shall be ASTM A615, Grade 60, unless noted.
- H. Anchor rods shall be ISO 898 5.8 (Hilti HAS-E), unless noted. Provide finish as noted on the Drawings. If not noted, provide hot-dip galvanized finish for interior applications. Provide stainless steel finish for all exterior applications, unless noted When column anchor bolts have been omitted, or damaged by construction operations, the Contractor must obtain the written approval of the Structural Engineer of Record prior to repair or replacement.
- A. As a precaution, the affected column must be guyed and braced after repair for the balance of the erection period. B. As an alternate to guying and bracing, the Contractor may at his option, employ a testing agency to perform a tensile pull test to confirm the strength for the repaired or replaced anchor bolt. The tensile proof load must exceed 1.33 x the design load of the original anchor without causing distress of the anchor bolt or the surrounding concrete. Reference the following table for the minimum proof loads: 3/4" diameter: 11.6 kips
- 7/8" diameter: 16.0 kips 1" diameter: 20.9 kips Note: Values listed above are for ASTM F-1554, Grade 36 material. When higher grade or
- strength materials are specified, refer to the AISC Manual of Steel Construction for minimum allowable loads to be multiplied by 1.33 C. When affected anchor bolts are part of a fixed moment resisting column base, such as those in moment-resisting space frames, canopies, or fixed-base installations, the repaired anchor bolts
- must be proof-loaded, or the affected column footing and/or pier replaced in its entirety. D. When affected anchor bolts are 1-1/8" diameter or larger, the affected column footing and/or pier must be replaced in its entirety
- E. When affected anchor bolts are part of a braced frame the affected column footing and/or pier must be replaced in its entirety
- F. Prior to erection, the controlling Contractor must provide written notification to the Steel Erector if there has been a repair, replacement or modification of the anchor bolts for that column.

SPECIALTY STRUCTURAL ENGINEERING (SSE) A Specialty Structural Engineer is defined as a Professional Engineer licensed in the State of Indiana, not

- the Structural Engineer of Record, who performs Structural Engineering functions necessary for the structure to be completed and who has shown experience and/or training in the specific speciality. It is the Specialty Structural Engineer's responsibility to review the Construction Drawings and
- Specifications to determine the appropriate scope of engineering. It is the intent of the Drawings and Specifications to provide sufficient information for the Specialty
- Structural Engineer (SSE) to perform his design and analysis. If the SSE determines there are details, features, or unanticipated project limits which conflict with the engineering requirements as described in the project documents, the SSE shall in a timely manner, contact the Structural Engineer of Record for resolution of conflicts. The Specialty Structural Engineer (SSE) shall forward documents to the Structural Engineer of Record for review. Such documents shall bear the stamp of the SSE and include: A) Drawings introducing engineering input, such as defining the configuration or structural capacity of
- structural components and/or their assembly into structural systems. B) Calculations. Computer printouts which are an acceptable substitute for manual calculations provided they are accompanied by sufficient design assumptions and identified input and output information to
- permit their proper evaluation. Such information shall bear the stamp of the Specialty Engineer as an indication that said engineer has accepted responsibility for the results.
- 5. Contractors are referred to the specific technical specification sections and the structural drawings for those elements requiring Specialty Structural Engineering. Examples of components requiring Specialty Structural Engineering include, but are not limited to the following:
- A) Specialty Foundation Systems. B) Temporary and Permanent Retention Systems
- C) Temporary and Permanent Dewatering Systems. D) High-Performance Concrete Mix Designs.
- E) Structural Steel Connections. F) Steel Joist and Joist Girder Systems.
- G) Steel Stairs.
- H) Cold-Formed Steel Framing. I) Curtain Wall Systems.
- J) Skylights and Structural Glazing Systems. K) Fall Restraint Systems.
- L) Window Washing Equipment Support Systems 6. When modifications are proposed to elements under the design and certification of the Specialty Structural Engineer (SSE), written authorization by the SSE must be obtained and submitted to the Engineer of Record for review, prior to performing the proposed modification.

CONCRETE REINFORCING

- 1. Reinforcement, other than cold drawn wire for spirals and welded wire fabric, shall have deformed surfaces in accordance with ASTM A305. Reinforcing steel shall conform to ASTM A615, Grade 60 for bars #7 and small and Grade 75 for bars #8 and larger. 3. Welded wire fabric shall conform to ASTM A185, unless noted. 4. Where hooks are indicated, provide standard hooks per ACI and CRSI for all bars unless other hook
- dimensions are shown on the plans or details. 5. Reinforcement in footings, walls and beams shall be continuous. Lap bars a minimum of 40 diameters, unless noted otherwise. 6. Reinforcement shall be supported and secured against displacement in accordance with the CRSI 'Manual of Standard Practice'.
- 7. Details of reinforcing steel fabrication and placement shall conform to ACI 315 'Details and Detailing of Concrete Reinforcement' and ACI 315R 'Manual of Engineering and Placing Drawings for Reinforced Concrete Structures', unless otherwise indicated. 8. Spread reinforcing steel around small openings and sleeves in slabs and walls, where possible, and where bar spacing will not exceed 1.5 times the normal spacing. Discontinue bars at all large openings
- where necessary, and provide an area of reinforcement, equal to the interrupted reinforcement, in full length bars, distributing one-half each side of the opening. Where shrinkage and temperature reinforcement is interrupted, add (2) #5 x opening dimension + 4'-0" on each side of the opening. Provide #5 x 4'-0" long diagonal bars in both faces, at each corner of openings larger than 12" in any direction. 9. Provide standees for the support of top reinforcement for footings, pile caps, and mats.
- 10. Provide individual high chairs with support bars, as required for the support of top reinforcement for supported slabs. Do NOT provide standees. 11. Provide snap-on plastic space wheels to maintain required concrete cover for vertical wall reinforcement. 12. Where walls sit on column footings, provide dowels for the wall. Dowels shall be the same size and
- spacing as the vertical wall reinforcement, unless noted otherwise, with lab splices as shown on the application sections. Install dowels in the footing forms before concrete is placed. Do NOT stick dowels into footings after concrete is placed.
- 13. Field bending of reinforcing steel is prohibited, unless noted on drawings. 14. Minimum concrete cover over reinforcing steel shall be as follows, unless noted otherwise on plan, section or note:

MINIMUM COVER FOR REINFOR	CEMENT
	MINIMUM COVER
SLABS AND JOISTS	
TOP & BOTTOM BARS FOR DRY CONDITIONS:	
#11 BARS & SMALLER	3/4"
#14 & #18 BARS	1 1/2"
FORMED CONCRETE SURFACES EXPOSED TO EARTH, WATER, AND OVER OR IN CONTACT WITH SEWAGE AND FOR BOTTOMS WORK MAT, OR SLABS SUPPORTING EARTH COVER:	OR WEATHER, BEARING ON
#5 BARS & SMALLER	1 1/2"
#6 THROUGH #18 BARS	2"
BEAMS & COLUMNS, FORMED	
FOR DRY CONDITIONS:	
STIRRUPS, SPIRALS & TIES	1 1/2"
PRINCIPAL REINFORCEMENT	2"
EXPOSED TO EARTH, WATER, SEWAGE, OR WEATHER:	
STIRRUPS & TIES	2"
PRINCIPAL REINFORCEMENT	2 1/2"
WALLS	
FOR DRY CONDITIONS:	
#11 BARS & SMALLER	3/4"
#14 & #18 BARS	1 1/2"
FORMED CONCRETE SURFACES EXPOSED TO EARTH, WATER, SEWAGE, WEATHER, OR IN CONTACT WITH GROUND	2"
FOOTINGS & BASE SLABS	
AT FORMED SURFACES & BOTTOMS BEARING ON CONCRETE WORK MAT	2"
AT UNFORMED SURFACES & BOTTOMS IN CONTACT WITH EARTH	3"
TOP OF FOOTINGS	SAME AS SLABS
OVER TOP OF PILES	2"





- 12" o.c., top & bottom, unless noted otherwise. Butt weld joints in continuous diaphragm chord for
- approved by Structural Engineer of Record.

where steel beams are called
diameter carriage bolts space
noted otherwise. Carriage bo
acilitate installation of continu

WELD INSPECTION SCHEDULE						
WELD TYPE	VT	MT	UT	PT	CRT	COMMENTS
FILLET (SINGLE PASS)	25%	-	-	-	-	ROOT PASS AND FINISHED WELD
FILLET (MULTIPLE PASS)	50%	25%	-	-	-	
FLARE BEVEL/ FLARE V	25%	-	-	-	-	
GROOVE (PARTIAL PENETRATION)	100%	-	100%	-	-	REFERENCE NOTE 'E' BELOW
GROOVE (FULL PENETRATION)	100%	-	100%	-	-	ALL FULL PENE- TRATION WELDS

A)	Test procedures:
	VT = Visual Test (inspec
	MT = Magnetic Particle
	UT = Ultrasonic Test: A
	PT = Penetrant Test: AS
	RT = Radiographic Test:

- Drawings.

- bracing members to gusset plates shall be visually inspected (VT).
- 1. Refer to the Design Criteria notes for live load and handrail requirements of Record with drawings showing location, direction and magnitudes of all stair load reactions on the
- guardrail design, shaft wall construction, etc.

A) fm = 2000 PSI B) Maximum height of masonry lift: 5'-0" C) Maximum height of grout lift: 5'-0" D) See Specifications for additional masonry wall information. 3. MORTAR: Type S required.



STRUCTURAL STEEL NOTES

all conform to the American Institute of Steel Construction "Specification
ers shall be ASTM A992, Fy=50 ksi.
es, and rods shall be ASTM A36, unless noted.
II ASTM A500, Grade B, unless noted.
ll be ASTM A53,Grade B, Fy=35 ksi unless noted.
nd erection of all structural steel shall be in accordance with the latest ise noted or specified.
ing and bracing as required.
ed on the Drawings, provide 8" minimum bearing each end for all loose
angles and other such items generally not shown on the Structural Drawing gs. See general notes on lintels this sheet for sizes, reinforcing, etc. Il be encased in a minimum of 4" concrete or painted with 2 coats of se shown.
ot specifically noted to receive camber so that after erection, any minor ssembly be upward.
al Steel Specification of the Project Manual for structural steel surface requirements.
parallel roof beams and joists with differential mill and induced

Provide cap plates/end plates to close off exposed, open ends of all tubular members, unless noted. Seal weld with partial penetration square groove welds for watertight condition.

STEEL CONNECTION NOTES

m-to-column connections shall be bearing type using A325 bolts, unless
vise shown, may be either bolted or welded. All field connections shall wn on the Structural Drawings.
by the Steel Fabricator to support the reactions shown on the framing plan vithout reactions listed on the Structural Drawings shall be designed by the with Table 3-6 of the AISC "Manual of Steel Construction, 14th Edition". actions are not indicated, design connections for 75% of the Maximum for the applicable beam size and span given in Table 3-6. For non- ections for 50% of the tabulated ASD value. ions not detailed on the Structural Drawings and not covered by the imited to:

C) Bracing Connections including Collectors and Drag Struts.

column and beam centerlines in horizontal plane, unless otherwise shown on the Structural Drawings. 11. All welding shall be in conformance with AWS D1.1, using E70XX electrodes, unless shown or noted otherwise. Welding, both shop and field, shall be performed by welders certified for the weld types and positions involved according to the current edition of AWS D1.1. Perform all AESS welds with care to

of holes in structural steel shall not be allowed without approval of the Structural Engineer of Record. 14. The minimum thickness of all connection material shall be 5/16" unless noted. 15. Continuous bent plate and angle closures, roof edges, diaphragm chords, etc. around perimeter of the floor and roof, as well as around openings shall be welded with a minimum 1/4" fillet weld x 3" long at

continuity. For continuous perimeter angles and bent plates perpendicular to and connected to the top chords of joists, provide a minimum 3" of 1/4" weld at each joist. Continuous angle and bent plate closures may be shop-applied to the supporting structural members only when requested and Illed to have wood nailers supporting wood floor or roof framing, provide 1/2"

ed at 24" on center and staggered each side of the beam web, unless olts may be over-tightened to compress the rounded head in the nailer to uous band/rim joists, rafters, trusses, etc. 17. A qualified independent Testing Agency shall be retained to perform inspection and testing of structural steel field weldaments as follows:

Test: ASTM E109, cracks or incomplete fusion or penetration not acceptable. ASTM E164. STM E165.

ASTM E94 and ASTM E142, min. quality level 2-21. B) Acceptance standards in AWS D1.1 shall be followed for each test procedure

C) Test procedures may be substituted to meet feasibility requirements of test based upon weld geometry or other factors with the approval of the Structural Engineer of Record. D) Samples shall occur at random locations; additional tests may be required at locations noted on the

E) Groove welds include square, bevel, V, U, and J grooves including single and double pass types. F) Partial penetration square groove welds at end seal plates of tubular members do not require inspection. G) Weld Procedure Specifications (WPS) shall be produced and maintained in accordance with AWS D1.1 The independent Testing Agency shall have access to all WPS's during the course of testing and

H) For highly-restrained welded joints, especially in thick plates and/or heavy structural shapes, details the welds so that shrinkage occurs as much as possible in the direction the steel was rolled. Refer to the AISC Manual for preferred welded-joint arrangements that reduce the possibility for lamellar tearing. Members scheduled to receive highly-restrained connections shall be tested by the independent Testing Agency by Ultrasonic Testing prior to commencing welding. I) In addition to inspection requirements for fillet welds in Table above, 100% of field welding of diagonal

STEEL STAIRS

2. All stair designs shall be provided by the Stair Manufacturer/Fabricator's Specialty Structural Engineer and shall be stamped by a Professional Engineer registered in the State of Indiana. Stair designs shall be in accordance with all applicable code provisions of the IBC. The Stair Manufacturer/Fabricator's Specialty Structural Engineer shall provide the Structural Enginee

building structure for approval, prior to fabrication. 4. The Stair Manufacturer/Fabricator shall coordinate the transition between the supported structural floor slab and the stair structure with the Structural Steel Fabricator, prior to fabrication. 5. Refer to the Architectural Drawings for stair width, rise, run, tread and riser geometry, handrail and

REINFORCED MASONRY NOTES

1. All construction of reinforced masonry walls to be in accordance with the Building Code Requirements for Concrete Masonry Structures (ACI 530) and Commentary.

2. CONCRETE BLOCK: Minimum compressive test strength on the net cross-sectional area: 2800 PSI. 4. GROUT: ASTM C476, 2500 PSI with a slump of 8" min. and 10" max.

5. REINFORCING: fy = 60000 PSI with a min. lap of 48 bar diameters.

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VAPOR MITIGATION
s drawings for the vapor intrusion (VI) mitigation scope. Contractor to VI components with structural scope.

## **POST-TENSIONING NOTES**

1. Project shall conform to all requirements of ACI 423, and ACI 301 chapter 9, latest edition, published by the American concrete institute, Farmington hills, Michigan, except as modified by these contract

uocuments.
The post-tensioning supplier shall be responsible for the detailed design of the post-tensioning system
including required tendons, anchorage, coupling systems, special reinforcement, tendon supports, and
tendon stressing. The post-tensioning supplier shall provide a minimum number of tendons equivalen
the effective force shown on the drawings divided by 26.7 and rounded to the nearest whole tendon.
field foreman: The field foreman responsible for the placement of all post-tensioning shall have a
minimum of three (3) years in this capacity for this type of construction.
PT steel quality: one sample of each reel or heat shall be tested by an approved laboratory. test result
mill certificates shall be submitted to the engineer before stressing of tendons. post-tensioning tendon
shall be stress-relieved or be of low-relaxation guality, and shall conform to the following:

Seven wire strand ASTM designation A-416 1/2" diamete Tendon area = 0.153 in so ultimate strength = 270 ksi

Tendon stresses shall conform to the following Maximum jacking stress =216 ksi Maximum stress immediately after prestress transfer = 200 ksi

Maximum anchorage stress immediately After prestress transfer = 189 ksi post-tension system shall be fully encapsulated per PTI specifications U.N.O. Effective force: Effective force shall be 24 kips per stress-relieved, and per low-relaxation tendon, 26.8 kips when tendon length is less than 100 feet, for variance from this value, contractor shall provide friction

and long-term loss calculations for the engineer's approval. PT hardware quality: All anchorages, couplers and miscellaneous hardware shall be standard and approved by governing agencies and the engineer. Tendons: Unbonded strands shall be encased in slippage sheathing which shall consist of a sealed

and which will contain a rust-inhibiting grease coating, tears in the sheathing shall be repaired to restore the watertightness of the sheathing, heat-sealed sheathing shall not be used unless the watertightness of the sheathing is guaranteed by the contractor.

stressing- end locations, and tendon support layouts with details necessary for installation for the engineer's approval. a set of approved shop drawings must be filed with the city engineer by the

Review of the shop drawings and calculations by the structural engineer does not relieve the posttensioning supplier of responsibility for detailed design as specified herein Tendon placement: Care shall be taken that tendons are located and held in their designed positions

noted or approved by the engineer. access to stressing ends shall be maintained where shown. 11. Tendon adjustments: Slight deviations in the horizontal spacing of the slab tendons will be permitted when required to avoid openings, inserts, and dowels which are specifically located. where locations of tendons

12. Twisting: Twisting or entwining of individual wires or strands within a bundle or a beam shall not be permitted unless approved by the engineer. 13. Strand bundles: The maximum allowable number of strands per bundle is four (4) for slabs, U.N.O. and

six (6) for beams. 14. Profiles: Profiles shall conform to controlling points shown on the drawings and should be in an approximate parabolic drape between supports, unless noted otherwise. low points are at midspan unless noted otherwise. harped tendons shall be straight between high and low point controls. Prestress cover: All dimensions showing the location of prestressing tendons are to the center of gravity of the tendon (CGS) unless noted otherwise.

Minimum chairing: Tendons shall be secured to a sufficient number of positioning devices to ensure correct location during and after the placing of the concrete, and shall be supported at a maximum of 3'-0" on center, chairs greater than 2.5" in size shall be stapled to the formwork Anchorages shall be recessed a minimum of two anchors: (2) inches. place two (2) continuous #4 bars behind all anchorages, unless noted otherwise. Rebar splices shall be 24" minimum and staggered 5'-0"

Blockouts: All pockets or blockouts required for anchorage shall be adequately reinforced so as not to decrease the strength of the structure. all pockets should be waterproofed to eliminate water leakage through or into the pocket. pipes: plastic or metal conduits may be embedded in slab providing that the following criteria are met: Pipes and electrical conduits shall not be embedded in structural concrete except where Α.

> one third of slab thickness or 2" dia. locate pipes within the middle third of the slab. Minimum spacing shall be six (6) times the pipe diameter, pipes shall not impair the strength of the member. Provide conduit layout for engineer review and approval. Conduits must not interrupt the post-tensioned cables. Column areas should be avoided.

It is undesirable to have excess amounts of conduit entering the slab from one location If this condition exists, the conduits must be fanned out immediately. 13. Holes in steel shall be drilled or punched. All slotted holes shall be provided with smooth edges. Burning 20. Penetrations: Penetrations shall not be permitted in beams except as shown in p.t. drawings or typical Inserts: All inserts and sleeves shall be cast in place whenever possible. Drilled and power-driven

> fasteners will be permitted only when it can be shown that the inserts will not spall the concrete and are located to avoid the tendons and anchorages. The contractor must locate tendons on the surface and soffit of the slab. Chlorides: Grout or concrete containing chlorides shall not be used.

Pumped concrete: If concrete is placed by the pump method, then horses shall be provided to support the hose. The hose shall not be allowed to ride on the tendons. Concrete consolidation: The contractor shall take precautions to assure complete consolidation and densification of concrete behind all post-tensioning anchorages.

cylinder compression test. for more information, see notes on plans. Tendon stressing: Tensioning shall be done by jacking under immediate control of a person experienced in this type of work. Continuous inspection and recording of elongations is required during all stressing

Calibration: The ram and attendant gauge used shall have been calibrated within sixty (60) days of their 28. Stressing sequence: Uniformly distributed tendons shall be stressed before concentrated beam strip (banded) tendons, and slab tendons shall be stressed before beam tendons.

Elongations: Individual tendon field readings of elongations and/or stressing forces shall not vary by more than  $\pm 7\%$  from calculated required values shown on the shop drawings. If the measured elongations vary from calculated values by more than  $\pm 7\%$ , the contractor shall provide friction calculations and/or other justification to the satisfaction of the enginee Member forces: The post-tensioned force provided in the field for each structural member shall not be

less than the values noted on the structural drawings. In this context, structural members are beams or slabs, whether with banded or distributed tendons, each serving their respective tributary. 31. Tendon ends: Do not burn off tendon ends until the entire floor system has been satisfactorily stressed and the engineer's approval is obtained. the stressing end anchors and wedges shall be spray painted with rust-oleum or a similar coating for corrosion protection. install grease caps within the following 24-

engineer's approval is obtained, unless shoring is required to carry floors on above levels.

32. Grouting of stressing pockets: Stressing pockets shall be filled with non-shrink grout after stressing, painting & grease-capping to stop moisture penetration. . De-shoring: labs or beams may be de-shored when all tendons have been satisfactorily stressed and the

AGG AGGREGATE AMERICAN INSTITUTE OF STEEL CONSTR'N. AISC AMERICAN IRON & STEEL INSTITUTE AISI AI T ALTERNATE ANCH ANCHORAGE AMERICAN NATIONAL STANDARDS INSTITUTE ANSI durable waterproof plastic tubing capable of preventing the penetration of moisture and cement paste, AMERICAN PLYWOOD ASSOCIATION APA APPROX APPROXIMATE 8. Shop drawings: The contractor shall submit shop drawings showing tendon layout, dead-end and ARCH ARCHITECT(URAL) ASSY ASSEMBLY ASTM AMERICAN SOCIETY FOR TESTING & MATLS. AVG AVERAGE AMERICAN WELDING SOCIETY tolerances for the location of the prestressing steel shall not be more than ± 1/8" vertically, except as AWS seem to interfere with each other, one tendon may be moved horizontally in order to avoid the B/X' BOTTOM OF REFERENCED ITEM BB BOND BEAM RFF BELOW FINISHED FLOOR BLDG BUILDING BLKG BLOCKING BLW BELOW BM BEAM BOT BOTTOM BP BASE PLATE BRDG BRIDGING BRG BEARING BS BOTH SIDES BTWN BETWEEN specifically approved by the engineer. Maximum pipe size shall not exceed the larger of C/C CENTER TO CENTER CAIS CAISSON CAPY CAPACITY CANT CANTILEVER CB CONCRETE BEAM CC CONCRETE COLUMN CFS | COLD-FORMED STEEL CIP CAST IN PLACE CJ CONTROL JOINT CNJ CONSTRUCTION JOINT At transfer of concrete strength at stressing: Prestress, concrete shall be 2,900 psi minimum for any given CENTERLINE CLR CLEAR(ANCE) CMU CONCRETE MASONRY UNIT COL COLUMN COLL COLLATERAL CONC CONCRETE

CONSTR | CONSTRUCTION CONT CONTINUOUS CRSI CONCRETE REINFORCING STEEL INSTITUTE CTR CENTER CTRD CENTERED CW CONCRETE WAL

D DEEP (DEPTH) DBA DEFORMED BAR ANCHOR DEG DEGREE DIA DIAMETER DIAG DIAGONAL DIM DIMENSION DL DEAD LOAD DN DOWN DP DRILLED PIER DT DOUBLE TEE DTL DETAIL DWG DRAWING DWL DOWEL

EA EACH NTS NO ECC ECCENTRIC NWC N EF EACH FACE EIFS EXTERIOR INSULATION & FINISH SYSTEM EJ EXPANSION JOINT 0/0 0 EL ELEVATION OA C ELEC ELECTRICAL OC ON ELEV ELEVATOR OD OU ENG ENGINEER OF OU EQ EQUAL OH C EQ SPA EQUALLY SPACED (EQUAL SPACING) OPNG OI EQUIV EQUIVALENT OPP OP ES EACH SIDE OSB OR EW EACH WAY EX EXISTING EXC EXCAVATE (EXCAVATION) EXT EXTERIOR

FD FLOOR DRAIN FDN FOUNDATION FIN FINISH FF FINISHED FLOOR FLG FLANGE FS FAR SIDE FT FOOT (FEET) FTG FOOTING FV FIELD VERIFY

FABR FABRICATE (FABRICATOR)



Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Title STRUCTURAL NOTE

Project No: 2017-178.CCC

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_____ Issue Date: 03.01.2019

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EST. 1821

2900 Prospect St

Prepared For

Indianapolis, IN 46203

City of Indianapolis

Consolidated Civil and

Criminal Courthouse -

Foundations, Underground

Utilities & Vapor Mitigation

Project

ABBR	DEFINITION	ABBR	DEFINITION
GA GALV	GAGE (GAUGE) GAI VANIZED	PAF	POWDER-ACTUATED FASTENER
GB	GRADE BEAM	PC	PRECAST CONCRETE
GC	GENERAL CONTRACTOR	PCF	POUNDS PER CUBIC FOOT
GLULAM	GLUE LAMINATED WOOD	PCI	PRECAST CONCRETE INSTITUTE
GRAN	GYPSUM WALL BOARD		POWER-DRIVEN FASTENER
OND		PL	PLATE
		PLBG	PLUMBING
Н	HIGH (HEIGHT)	PLF	POUNDS PER LINEAL FOOT
HAS	HEADED ANCHOR STUD	PLYWD	PLYWOOD
		PNL	
HK	HOOK	PREFAB PROJ	PREFABRICATED
HORIZ	HORIZONTAL	PSF	POUNDS PER SQUARE FOOT
HP	HIGH POINT	PSI	POUNDS PER SQUARE INCH
		PSL	PARALLEL STRAND LUMBER
		PPT	PRESSURE PRESERVATIVE TREATED
	INTERNATIONAL (INDIANA) BUILDING CODE	PSC	PRESTRESSED CONCRETE POST TENSIONED
IF	INSIDE FACE	PTD	PAINTED
INCR	INCREASE	PRTN	PARTITION
INFO	INFORMATION	PVMT	PAVEMENT
	INDIANA DEPARTMENT OF TRANSPORTATION		
INV	INVERT	QTY	QUANTITY
ISO	ISOLATION		
IT	INVERTED TEE BEAM		
		R	RADIUS
		RB	
	JUIST BEARING ELEVATION		
JT	JOINT	REV	REVISION (REVISED)
• •		RF	ROOF
		RO	ROUGH OPENING
KIP	1,000 POUNDS	RTU	ROOF TOP UNIT
KO	KNOCK OUT	RTN	RETURN
KSF	KIPS PER SQUARE FOOT	RW	RETAINING WALL
KSI	KIPS PER SQUARE INCH		
		SPCA	
1		SCT	STRUCTURAL DUILDING COMPONENTS ASSN.
Ld	TENSION DEVELOPMENT LENGTH	SCHED	SCHEDULE
LB	'L' BEAM	SDI	STEEL DECK INSTITUTE
LBS	POUNDS	SE	SLAB EDGE
LGSF	LIGHT GAUGE STEEL FRAMING	SER	STRUCTURAL ENGINEER OF RECORD
LL	LIVE LOAD	SECT	SECTION
LLH	LONG-LEG HORIZONTAL	SHT	SHEET
		SIM	
		SI	SI OPE
LONG	LONGITUDINAL	SOG	SLAB ON GRADE
LP	LOW POINT	SPA	SPACE (S)(D)(ING)
		517	
LVL	LAMINATED VENEER LUMBER	SPECS	SPECIFICATIONS
LVL LW	LAMINATED VENEER LUMBER	SPECS SQ	SPECIFICATIONS SQUARE
LVL LW LWC	LAMINATED VENEER LUMBER LONG WAY LIGHTWEIGHT CONCRETE	SPECS SQ SS	SPECIFICATIONS SQUARE STAINLESS STEEL
LVL LW LWC	LAMINATED VENEER LUMBER LONG WAY LIGHTWEIGHT CONCRETE	SPECS SQ SS SSE STD	SPECIFICATIONS SQUARE STAINLESS STEEL SPECIALTY STRUCTURAL ENGINEER STANDARD
LVL LW LWC MATL	LAMINATED VENEER LUMBER LONG WAY LIGHTWEIGHT CONCRETE MATERIAL	SPECS SQ SS SSE STD STIFF	SPECIFICATIONS SQUARE STAINLESS STEEL SPECIALTY STRUCTURAL ENGINEER STANDARD STIFFENER
LVL LW LWC MATL MAX	LAMINATED VENEER LUMBER LONG WAY LIGHTWEIGHT CONCRETE MATERIAL MAXIMUM	SPECS SQ SS SSE STD STIFF STL	SPECIFICATIONS SQUARE STAINLESS STEEL SPECIALTY STRUCTURAL ENGINEER STANDARD STIFFENER STEEL
LVL LWC MATL MAX MC	LAMINATED VENEER LUMBER LONG WAY LIGHTWEIGHT CONCRETE MATERIAL MAXIMUM MOMENT CONNECTION	SPECS SQ SS SSE STD STIFF STL STR	SPECIFICATIONS SQUARE STAINLESS STEEL SPECIALTY STRUCTURAL ENGINEER STANDARD STIFFENER STEEL STRENGTH
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LVL LWC MATL MAX MC MECH MEZZ	LAMINATED VENEER LUMBER LONG WAY LIGHTWEIGHT CONCRETE MATERIAL MAXIMUM MOMENT CONNECTION MECHANICAL MEZZANINE	SPECS SQ SS SSE STD STIFF STL STR STRUCT SW	SPECIFICATIONS SQUARE STAINLESS STEEL SPECIALTY STRUCTURAL ENGINEER STANDARD STIFFENER STEEL STRENGTH STRUCTURAL SHORT WAY
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ABBREVIATION LEGEND

DEFINITION

AMERICAN CONCRETE INSTITUTE

AUGERED CAST IN PLACE PILE

AESS ARCHITECTURALLY EXPOSED STRUCT. STL.

ABBR

AB

ABV

ACI

ACIP

AD.I

ANCHOR BOLT

ADJUSTABLE

AFF ABOVE FINISHED FLOOR

ABOVE

ADDL ADDITIONAL

ADDM ADDENDUM







OVERALL GRID PLAN

Project No: 2017-178.CCC Sheet Title

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Key Plan









Project Consolidated Civil and Criminal Courthouse -Foundations, Underground Utilities & Vapor Mitigation

INDIANAPOLIS MAYOR JOE HOGSETT * 857, 1821









FTG. FOOTIN		FOOTING RE	EINFORCING	
MARK	WIDTH	LONGITUDINAL	TRANSVERSE	
TF16	1'-4"	(2) #5 x CONTINUOUS	#3 x 0'-10" @ 96" O.C.	
TF32	2'-8"	(3) #5 x CONTINUOUS	#3 x 2'-2" @ 96" O.C.	
TF40	3'-4"	(4) #5 x CONTINUOUS	#4 x 2'-10" @ 48" O.C.	
<ol> <li>TOP OF TRENCH FOOTING = -1'-0" U.N.O. BOTTOM OF TRENCH FOOTING NOTED ON PLAN.</li> <li>TRENCH FOOTINGS MAY BE CAST DIRECTLY AGAINST SOIL WITHOUT FORMING WHERE EXISTING SOIL CONDITIONS PERMIT. FORM TOP OF TRENCH FOOTINGS WHERE SOIL HAS SLOUGHED SIGNIFICANTLY, WHERE GRADE IS LOWER THAN THE INDICATED TOP OF FOOTING ELEVATION, OR WHEREVER TRENCH FOOTING WOULD INTERFERE WITH THE INSTALLATION OF DOWNSPOUTS, CONDUIT, BOLLARDS, ETC. COORDINATE WITH MECHANICAL, ELECTRICAL, PLUMBING &amp; SITE/CIVIL DRAWINGS.</li> <li>INTERIOR OF TRENCH FOOTING SHALL BE FORMED WITH RIGID INSULATION. TAKE CARE IN TRIMMING INTERIOR FACE OF EXCAVATION TO MUMMER CARE DELINE THE INSULATION. FILL 470 CRUSHED STONE</li> </ol>				

BAS	SEME	NT / N	ON-SHEA	R WA	LL SC	HEDUL	.E		С	ON	CRETE P	IER/COLUMN S	CHED	ULE	
MARK	OUTSI	DE (EARTH	) FACE REINF.	INSIDE	E (EXPOSED	) FACE REINF						REINFORCING	}		
/ 'ť	VERTICAL	HORIZ.	DOWELS	VERTICAL	HORIZ.	DOWELS	3	MARK	S	ZE	VERTICALS	TIES-SIZE & SPA.	DETAIL	CRITICAL HEIGH	
CW-12	#5 @ 12"	#5 @ 18"	MATCH	#5 @ 12"	#5 @ 12"	MATCH					(8) #6	#3 @ 12" O.C.	B	≤ 3'-4"	
/ 12						VERTS.		P30	2'-6"	2'-6"	(4) #10	#4 @ 12" O.C.	A	> 3'-4"	
CW-14	#8 @ 18"	#5@18"	+ #7x12' @ 48"&	#7 @ 18"	±5 @ 18"	МАТСН	MATCH	Doo	01.01	01.01	(12) #8	#3 @ 12" O.C.	С	≤ 3'-4"	
/ 14"			#7x6' @ 48" o.c. STAGGERED		10 @ 10	VERT'S.		P38	3'-2"	3-2"	(8) #9	#4 @ 12" O.C.	В	> 3'-4"	
CW 24			MATCH VERTS.			матен	МАТСН	C20	1'-8"	1'-8"	(8) #8	#4 @ 16" O.C.	В	N/A	
/ 24"	#7 @ 16"	#5 @ 14"	#8x6' @ 48" o.c.	#6 @ 12"	#5 @ 14"	VERT'S.		C24A	2'-0"	2'-0"	(8) #8	#4 @ 16" O.C.	В	N/A	
NOTE	S:		STAGGERED					C24B	2'-0"	2'-0"	(12) #11	#4 @ 16" O.C.	С	N/A	
1. PF	1. PROVIDE #3 SPACER TIES @ 48" O.C. EACH WAY FOR ALL WALLS W/ (2) GR			W/ (2) GRIDS		C28A	2'-4"	2'-4"	(12) #11	#4 @ 16" O.C.	С	N/A			
0		JINO.						C28B	2'-4"	2'-4"	(20) #11	#4 @ 16" O.C.	С	N/A	
	CONC	DETE						C28RA	28'	Ø	(8) #8	#4 @ 1.5" PITCH SPIRAL	N/A	N/A	
	CONC	REIE	SHEAK V	VALL	2CHE	DULE		C28RB	28'	Ø	(8) #10	#4 @ 1.5" PITCH SPIRAL	N/A	N/A	
MARK	ENE	ZONE REI	NFORCING				<u> </u>	C32A	2'-8"	2'-8"	(16) #11	#4 @ 16" O.C.	В	N/A	
	SPACING	RUNS	VERTICAL	VERTICAL		DOWELS	$^{\sim}$	C32B	2'-8"	2'-8"	(20) #11	#4 @ 16" O.C.	С	N/A	
SW-17 12"	6"	4	#6	#5 @ 12"	#5 @ 18"	8" MATCH ZA1 VERT'S. +	$^{\prime}$ ERT'S. $$	T'S. $\xrightarrow{A1.6}$	C32RA	32'	Ø	(8) #10	#4 @ 1.5" PITCH SPIRAL	N/A	N/A
S/M 2 /						5 @ 18" MATCH VERT'S.		C36A	3'-0"	3'-0"	(16) #11	#4 @ 16" O.C.	В	N/A	
12"	6"	4	#8	#5 @ 12"	#5 @ 18"		#5 @ 18" VERT'S.		C36B	3'-0"	3'-0"	(20) #11	#4 @ 16" O.C.	С	N/A
SW-3 / 12"	6"	4	#10	#5 @ 12"	#5 @ 18"	MATCH VERT'S.		PIER NOTES: 1. PROVIDE MIN. 1-1/2" CLEAR TO PIER TIES. 2. 'CRITICAL HEIGHT' DENOTES HT. ABOVE WHICH LARGER DIA. VERTICALS WITH FEWER TIES MANUAL DEFERSE TO FOUNDATION DI ANIO, FOR THE FLETING							
<ul> <li>NOTES:</li> <li>ALL WALLS ARE TO HAVE A TWO CURTAINS OF REINFORCING.</li> <li>END ZONES ARE TO HAVE #4 TIES @ 18" O.C.</li> <li>PROVIDE #3 SPACER TIES @ 48" O.C. EACH WAY FOR ALL WALLS W/ (2) GRIDS OF REINFORCING.</li> <li>CONCRETE SHEARWALLS FROM GROUND LEVEL TO LEVEL 01 TO BE 7000 PSI CONCRETE</li> <li>MAY BE USED. REFER TO FOUNDATION PLAN(S) FOR T/P &amp; T/F ELEV'S.</li> <li>TYPICAL PIER TIE SPACING, UNLESS NOTED OTHERWISE: HOLD FIRST TIE 2" FROM TOP OF PIER. HOLD NEXT THREE* TIES 4" ON CENTER, SPACE BALANCE OF TIES AT SCHEDULED SPACING, WITH BOTTOM TIE HELD 2" ABOVE TOP OF FOOTING. *NOTE: INCREASE FROM THREE TO FIVE TIES AT 4" O.C. AT TOP OF PIERS WHERE COLUMN ANCHOR RODS ARE GREATER THAN 7/8" DIAMETER.</li> <li>PIER DOWELS TO FUNCTION AS PIER VERT'S FOR LESS THAN OR EQ. TO 5'-0" H. PROVIDE SEPARATE DOWELS &amp; VERTICALS FOR PIERS GREATER THAN OR EQUAL TO 5'-0" H.</li> </ul>															
	W	ALL F		SCHE	DULE			5. CC VE 6. M	NLESS / ONTAC ⁻ ERTICAI IN. HT. (	APPROV Fengin LS. DF Pier	VED. IEER FOR DIREC RS: #6 VERTICALS	TION IF COLUMN ANCHOR ROI = 2'-0". #7 VERTICALS = 2'-8".	DS FOUL WI	TH PIER TIES OR	
FTG.	FOOTIN	IG SIZE	FOC	TING REIN	FORCING				יסבדר ל						
MAR	WIDTH	DEPTH		AL	TRANSV	ERSE		1. PF	ROVIDE	MIN. 1-	1/2" CLEAR TO CO	DLUMN TIES.			
		1-0 01-6"			#4 X 2 -0 @	24" 0 0		2. TY	(P. COL Rovidf	UMN TI FOOTI	E SPACING TO BE	E REFERENCED IN COLUMN EI CHING SIZE AND SPACING AS	_EVATIONS VERTICAL (	ON CJ4.2 DWGS.	
		-2-0-	(10) #5 X CONTIN		#7 x 0' 0" 0	24 0.0.	$\Lambda$	4. PF	ROVIDE	ADDN.		ES AT 12" O.C. WHEN FOOTING	G THICKNES	S EXCEEDS 3'-0"	
WF80	0.0.0.	2'-0"	(10) #5 X CONTIN		#/ X 6'-2" @	; 12" U.C.	/A1.3	5. C		IE COL "A"	UMINS FROM GRO DETAIL "B"	DETAIL "C" DETAIL	3⊑ 7000 PSI "AIL "D"	DETAIL "E"	
WF96	8'-0"	3'-6"			#1U X /'-6" @ тор лир в	) 16" U.C									

(2) SETS

(2) SETS

(1) SET (2) SETS (3) SETS

















































			\ \			
	5					
		\	\ \ CRANE-1 -5' - 6"			
		6486				$\sim$
		6,44.0.3		CJ4.7.	9	CJ4.7 CJ4.6.9
		XX 1'-0"				
	(CJ4.9) '\	.0"				
	t,			40 B/FTG -5' - 6"		— TF40 B/FTG -4' - 0" — — — — — — — — — —
¢J4.M.5			TF40BIF12			
						<u></u> ⊂ C20
CJ4.10.		TEAD BIFTG 5-6	A1.7			
					⊢   N        28RA	-C28RB
¢J4.11.						
			C28RA	 1'-0" 8'-7 1/2"		<b>、</b> — — + — . + — — -
CJ4.11.5			A1.7 8'-7 1/2"	NOTE NI		
	7 CJ4.1-S-501	C28RB	NOTE INI	SW-3		M-2 -5' - 6"
4.12 C.J4.1-S-501			SW-3			
CW-14		F24.0x16.0 -4' - 0"			A1.7	}
				F F		C28B-
$\begin{array}{c} & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$						
ET TINIALL +12-1 12 112 112 112 112 112 112 112 112			C28A SW-1			
	SW-2			M-2 -5' - 6''		
$\frac{1}{2} = \frac{1}{2} + \frac{1}$						
$\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ $				SW-3	A1.	A1.7
$\begin{array}{c} 4 - 234^{\prime\prime} \\ + 1227^{\prime\prime} \\ \\ TNMALL + 1227^{\prime\prime} \\ \end{array}$				A1.7	SW-3	
	-C28A			SW-1	(9.7 112")	C24B
		F '	NOTE'N'	14 ATT 4		
F10.0 -4' - 8" C32RA	M-	1-3'-4" 🔍	31/2 11 A1.7 21	9 15/16 ² A1.0 OTE M Z	SW-3 7 7'-7 112"	
		F36.0x24.0 -5' - 6"	A1.6	9'-411/16") = (3) A1.6)	NOTEN	SW-1
	10.0		SW-1	NOTE M ATT		
	C32A			A1.7 A1.6 C12 E ( ) C12	Sw-3	
$F_{19.0} - 3' - 4''$	TS-30			A1.72		A1.7
$\begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \\ \end{array} \end{array}$	6-638" XI			NOTE 'M'		
$\begin{array}{c} A1.6 \\ F13 0 - 4' - 0'' \\ \end{array}$	A1.7	С		C24A A1.6	(K)	8
C32RA						
F10.0\-4' - 8"			A1.6			K
			-F15.0 -3' - 6" C28A			
	C C		(K) (F = F5.0	-3'-4" C A1.7	75-36 (B)	
F21.0-3'-4"	TS-361		HSS	6X6X1/2		
(14  K) $(14  K)$ $(14$						(4' - 11") F8.0 -4' - C20
$C32RA \qquad TIF-1^{1/4} \qquad TIF-1^$	F12.					
					TF32 B/FIG 3' - 4" A1.7	
	A1.6 44.0 -3' - 10"				F6.0 -3' - 4" TF3	2 B/FTG -4' - 8"
	<b>1 FOU</b>	NDATION PLAN - 1'-0"	UNIT B	(C.14 18 7 C.14 19		
F11.0-44-6" RASEMENT / NON SUE			FR/COLUMN SCHEDULE			
CJ4.M) CJ2RA DASEIVIENT / NON-STIE			REINFORCING			REINF. EA. WAY BOT. ONLY U.N.O.
CW-12         #5 @ 12"         #5 @ 18"         MATCH VERTS.	#5 @ 12" #5 @ 12" MATCH VERT'S.	P30 2'-6" 2'-6" (8) #6	TIES-SIZE & SPA.         DETAIL         CRITICAL           #3 @ 12" O.C.         B         ≤ 3	F4.0         4           '-4"         F5.0         5           F6.0         6         6	'-0"         4'-0"         1'-2"           '-0"         5'-0"         1'-6"           '-0"         6'-0"         1'-10"	(6) - #5 x 4'-6"
CJ4.M.4 CW-14 #8 @ 18" #5 @ 18" #5 @ 18" #7x12' @ 48 #7x6' @ 48" o	S	(4) #10       P38     3'-2"       (12) #8	#4 @ 12" O.C.     A     > 3       #3 @ 12" O.C.     C     ≤ 3	F6.0         6           F6.0-E         6           '-4"         F6.5	-0         6 - 0         1 - 10           '-0"         6' - 0"         2' - 6"           '-6"         6' - 6"         2' - 0"	(6) - #6 x 5-6 (8) - #6 x 5'-6" (7) - #6 x 6'-0"
7 14     #7 40 @ 40 0       STAGGEREI       WATCH VERT       CW-24     #7 0 40"       ##8x12' @ 48	S. MATCH	C20         1'-8"         1'-8"         (8) #9	#4 @ 12" O.C.         B         > 3           #4 @ 16" O.C.         B         N/	F7.0 7 F7.0M 7 F8.0 8	'- 0"         7' - 0"         2' - 0"           '- 0"         7' - 0"         2' - 0"           '- 0"         8' - 0"         2' - 4"	(7) - #7 x 6'-6" (7) - #7 x 6'-6" TOP & BOT. (6) - #8 x 7'-6"
/ 24" #7 @ 16" #5 @ 14" #8x6' @ 48" o STAGGEREI	.c. #6 @ 12" #5 @ 14" VERT'S. D	C24A         2'-0"         2'-0"         (8) #8           C24B         2'-0"         2'-0"         (12) #11	#4 @ 16" O.C.         B         N/           #4 @ 16" O.C.         C         N/	A F8.5M 8 A F9.0 9 F0.0M 0	'-6"         8'-6"         2'-0"           '-0"         9'-0"         2'-6"           '-0"         9'-0"         1'-40"	(9) - #7 x 8'-0" TOP & BOT. (6) - #9 x 8'-6"
1. PROVIDE #3 SPACER TIES @ 48" O.C. E/ OF REINFORCING.	ACH WAY FOR ALL WALLS W/ (2) GRIDS	C28A         2'-4"         (12) #11           C28B         2'-4"         2'-4"         (20) #11	#4 @ 16" O.C.         C         N/           #4 @ 16" O.C.         C         N/	A F9.5A 9 A F10.0 10	'- 0"         '- 0"         '- 10"           '- 0"         10' - 0"         2' - 2"	(9) - #9 x 9'-0" TOP & BOT (10) - #9 x 9'-0" TOP & BOT (7) - #9 x 9'-6"
CONCRETE SHEAR		C28RA         28" Ø         (8) #8           C28RB         28" Ø         (8) #10	#4 @ 1.5" PITCH SPIRAL         N/A         N/           #4 @ 1.5" PITCH SPIRAL         N/A         N/	A F10.0x5.0 5 F10.5A 10 A F11.0 11	'- 0"         10' - 0"         2' - 0"           '- 6"         10' - 6"         2' - 4"           '- 0"         11' - 0"         3' - 0"	(6)-#5 x 9'-6" & (7)-#9 x 4'-6" (11) - #9 x 10'-0" TOP & BOT (8) - #9 x 10'-6"
MARK     END ZONE REINFORCING       /'t'     SPACING     ROWS     VERTICAL	FIELD REINFORCING	C32A         2'-8"         2'-8"         (16) #11           C32B         2'-8"         2'-8"         (20) #11	#4 @ 16" O.C. B N/ #4 @ 16" O.C. C N/	A F11.0A 11 F11.0M 11 A F10.0 44	'-0"         11'-0"         2'-6"           '-0"         11'-0"         2'-6"	(11) - #9 x 10'-6" TOP & BOT (11) - #8 x 10'-6" TOP & BOT.
A1.3 6" 4 #6	#5 @ 12" #5 @ 18" MATCH /A1.6 VERT'S.	C32RA 32" Ø (8) #10 C36A 3'-0" 3'-0" (16) #11	#4 @ 1.5" PITCH SPIRAL N/A N/ #4 @ 16" O.C. B N/	F12.0         12           /A         F13.0         13           /A         F14.0         14	12 - 0         3 - 4           1 - 0"         13' - 0"         3' - 6"           1 - 0"         14' - 0"         3' - 8"	(0) - #10 x 11-6 (9) - #10 x 12'-6' (10) - #10 x 13'-6"
, SW-2/ 12" 6" 4 #8	#5 @ 12" #5 @ 18" MATCH VERT'S.	C36B 3'-0" 3'-0" (20) #11 PIER NOTES:	#4 @ 16" O.C. C N	A F15.0 15 F15.0A 15 F18.0 18	o-U"         15' - 0"         4' - 0"           i' - 0"         15' - 0"         4' - 2"           i' - 0"         18' - 0"         4' - 8"	(10) - #11 x 14'-6" (10) - #11 x 14'-6" (13) - #11 x 17'-6"
TRENCH FOOTING SCHEDULE     SW-3 / 12"     6"     4     #10       FTG.     FOOTING REINFORCING     •     •     •     •     •	#5 @ 12" #5 @ 18" MATCH VERT'S.	<ol> <li>PROVIDE MIN. 1-1/2" CLEAR TO PIEF</li> <li>'CRITICAL HEIGHT' DENOTES HT. AE MAY BE USED. REFER TO FOLINDA'</li> </ol>	R TIES. BOVE WHICH LARGER DIA. VERTICALS WITH FEWEF TION PLAN(S) FOR T/P & T/F ELEV'S.	R TIES F20.0 20	b' - 0"         19' - 0"         4' - 10"           0' - 0"         20' - 0"         4' - 10"           ' - 0"         20' - 0"         4' - 10"	(15) - #11 x 18'-6" (21) - #11 x 19'-6" (22) - #11 x 20' 6"
MARKWIDTHLONGITUDINALTRANSVERSEA1.6NOTES:TF161'-4"(2) #5 x CONTINUOUS#3 x 0'-10" @ 96" O.C.A1.61. ALL WALLS ARE TO HAVE A TWO CURT.2. END ZONES ARE TO HAVE #4 TIES @ 18		3. TYPICAL PIER TIE SPACING, UNLESS PIER. HOLD NEXT THREE* TIES 4" C SPACING, WITH BOTTOM TIE HELD	S NOTED OTHERWISE: HOLD FIRST TIE 2" FROM TO ON CENTER, SPACE BALANCE OF TIES AT SCHEDUL 2" ABOVE TOP OF FOOTING. *NOTE: INCREASE FR	POF         F21.0         21           LED         F24.0x16.0         24           OM         A         1000000000000000000000000000000000000	<u> 0" 16' - 0" 4' - 0"</u>	(14) - #11 BARS @ 23'-6" AND (24) - #11 BARS @ 15'-6" TOP & ROTTOM
TF32       2'-8"       (3) #5 x CONTINUOUS       #3 x 2'-2" @ 96" O.C.       3.       PROVIDE #3 SPACER TIES @ 48" O.C. E/OF REINFORCING.         TF40       3'-4"       (4) #5 x CONTINUOUS       #4 x 2'-10" @ 48" O.C.       4.       CONCRETE SHEARWALLS FROM GROUP	IND LEVEL TO LEVEL 01 TO BE 7000 PSI	THREE TO FIVE TIES AT 4" O.C. AT T GREATER THAN 7/8" DIAMETER. 4. PIER DOWELS TO FUNCTION AS PIE	I OP OF PIERS WHERE COLUMN ANCHOR RODS AR ER VERT'S FOR LESS THAN OR EQ. TO 5'-0" H. PRO	E /A1.6 F24.0x16.0A 24	.'- 0" 16' - 0" 4' - 2"	(14) - #11 BARS @ 23'-6" AND (24) - #11 BARS @ 15'-6" TOP & BOTTOM
NOTES:         1. CENTER FOOTINGS BENEATH WALLS, U.N.O.         2. TOP OF TRENCH FOOTING = -1'-0" U.N.O. BOTTOM OF TRENCH FOOTING		SEFARATE DOWELS & VERTICALS F UNLESS APPROVED. 5. CONTACT ENGINEER FOR DIRECTION VERTICALS	ON IF COLUMN ANCHOR RODS FOUL WITH PIER TIE	S OR	5' - 0" 24' - 0" 4' - 10"	(26) - #11 BARS @ 35'-6" AND (40) - #11 BARS @ 23'-6" TOP AND BOTTOM
NOTED ON PLAN.FTG.FOOTING SIZE3.TRENCH FOOTINGS MAY BE CAST DIRECTLY AGAINST SOIL WITHOUT FORMING WHERE EXISTING SOIL CONDITIONS PERMIT. FORM TOP OFMARKWIDTHDEPTHLONGIT	FOOTING REINFORCING UDINAL TRANSVERSE	6. MIN. HT. OF PIERS: #6 VERTICALS = <u>CONCRETE COLUMN NOTES</u>	: 2'-0", #7 VERTICALS = 2'-8".			
TRENCH FOOTINGS WHERE SOIL HAS SLOUGHED SIGNIFICANTLY, WHERE       WF30       2'-6"       1'-6"       (3) #5 x CO         GRADE IS LOWER THAN THE INDICATED TOP OF FOOTING ELEVATION, OR       WF30       2'-6"       1'-6"       (3) #5 x CO         WHEREVER TRENCH FOOTING WOULD INTERFERE WITH THE       VF48       -4'-0"       -2'-6"       (5) #5 x CO	NTINUOUS         #4 x 2'-6" @ 48" O.C.           NTINUOUS         #4 x 3'-6" @ 24" O.C.	<ol> <li>PROVIDE MIN. 1-1/2" CLEAR TO COL</li> <li>TYP. COLUMN TIE SPACING TO BE F</li> <li>PROVIDE FOOTING DOWELS MATCH</li> </ol>	LUMN TIES. REFERENCED IN COLUMN ELEVATIONS ON CJ4.2 D HING SIZE AND SPACING AS VERTICAL COLUMN RF	WGS. INF'G.		
<ul> <li>INSTALLATION OF DOWNSPOUTS, CONDUIT, BOLLARDS, ETC. COORDINATE</li> <li>WF80 6'-8" 2'-0" (10) #5 x CO</li> <li>WF80 6'-8" 2'-0" (10) #5 x CO</li> <li>WF96 8'-0" 3'-6" (8) #9 x CO</li> </ul>	ONTINUOUS         #7 x 6'-2" @ 12" O.C.           NTINUOUS -         #10 x 7'-6" @ 16" O.C           ROTTOM         TOD AND DOTTOM	<ol> <li>PROVIDE ADDN.'L PLACEMENT TIES</li> <li>CONCRETE COLUMNS FROM GROU DETAIL "A" DETAIL "B"</li> </ol>	S AT 12" O.C. WHEN FOOTING THICKNESS EXCEEDS JND LEVEL TO LEVEL 01 TO BE 7000 PSI CONCRETE DETAIL "C" DETAIL "D" DETAIL	\$ 3'-0" "E"		
INSULATION. TAKE CAKE IN TRIMINING INTERIOR FACE OF EXCAVATION TO       TOP AND         MINIMIZE GAPS BEHIND THE INSULATION. FILL WITH #8 CRUSHED STONE,       TOP AND         TAMPING AND COMPACTING WHERE SPACE PERMITS.       1. CENTER FOOTINGS BENEATH WALLS,	U.N.O.					



MARK	NOTE
А	SUMP PIT PER TYPICAL DETAIL ON S-500. COORD. F LOCATION w/ APPROPRIATE TRADE.
В	REF. 4/S-500 FOR TYPICAL THICKENED SLAB DETAIL
С	FULL HEIGHT 8" CONC. BLOCK WALL GROUTED SOLI AT 8" o.c. VERT. AND HORIZ.
D	FULL HEIGHT 12" CONC. BLOCK WALL GROUTED SO AT 8" o.c. VERT. AND HORIZ.
E	DENOTES PERIMETER FOUNDATION DRAIN PER SEC 23/S-500
F	APPROXIMATE LOCATION OF VAPOR MITIGATION VENTS/PIPING. COORD. EXACT LOCATIONS AND EX WITH VAPOR MITIGATION DRAWINGS.
G	12" (MIN.) WIDE SLAB TURN-DOWN TO -2'-0"
Н	REF. CJ5 DOCUMENTS FOR SPECIFICS AND VERIFIC OF DIMENSIONS.
J	AT LOCATIONS WHERE FOOTINGS ARE TOO CLOSE FORM SEPARATELY, 1" RIGID INSULATION SHALL BE TO SEPARATE THE FOOTINGS.
K	REFER TO DETAIL 27/CJ4.1-S-500 WHERE VAPOR VE CROSSES THICKENED SLAB. COORD. EXACT LOCAT VAPOR MITIGATION DRAWINGS.
L	REF. 5 & 6 ON CJ4.1-S-502 FOR REINFORCING AROU OPENINGS IN SHEARWALLS
М	DIMENSIONS ARE TO BE VERIFIED AND COORDINAT WITH ELEVATOR/STAIR SUPPLIERS





consulting management inspection design ENGINEERS | ARCHITECTS | LAND SURVEYORS

7

 $\Box$ 

Professional Stamp

ACOUSTI

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STATE OF

Sattloo



![](_page_5_Picture_34.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations, Underground Utilities & Vapor Mitigation 2900 Prospect St Indianapolis, IN 46203

Prepared For City of Indianapolis

INDIANAPOLIS MAYOR JOE HOGSETT * \$57, 1821

![](_page_6_Figure_0.jpeg)

![](_page_6_Figure_1.jpeg)

ilZE -		REINFORCING					
		VERTICALS	TIES-SIZE & SPA.	DETAIL	CRITICAL HEIGHT		
2' 6"		(8) #6	#3 @ 12" O.C.	В	≤ 3'-4"		
	2-0	(4) #10	#4 @ 12" O.C.	A	> 3'-4"		
	3' 7"	(12) #8	#3 @ 12" O.C.	С	≤ 3'-4"		
	5-2	(8) #9	#4 @ 12" O.C.	В	> 3'-4"		
	1'-8"	(8) #8	#4 @ 16" O.C.	В	N/A		
	2'-0"	(8) #8	#4 @ 16" O.C.	В	N/A		
	2'-0"	(12) #11	#4 @ 16" O.C.	С	N/A		
	2'-4"	(12) #11	#4 @ 16" O.C.	С	N/A		
	2'-4"	(20) #11	#4 @ 16" O.C.	С	N/A		
"	Ø	(8) #8	#4 @ 1.5" PITCH SPIRAL	N/A	N/A		
"	Ø	(8) #10	#4 @ 1.5" PITCH SPIRAL	N/A	N/A		
	2'-8"	(16) #11	#4 @ 16" O.C.	В	N/A		
	2'-8"	(20) #11	#4 @ 16" O.C.	С	N/A		
"	Ø	(8) #10	#4 @ 1.5" PITCH SPIRAL	N/A	N/A		
	3'-0"	(16) #11	#4 @ 16" O.C.	В	N/A		
	3'-0"	(20) #11	#4 @ 16" O.C.	С	N/A		
:							

<u>IUMN N</u>	<u>IOTES:</u>					
IIN. 1-1/2" CLEAR TO COLUMN TIES.						
MN TIE S	IN TIE SPACING TO BE REFERENCED IN COLUMN ELEVATIONS ON CJ4.2 DWGS.					
OOTING	DOWELS MATC	HING SIZE AND SPA	ACING AS VERTICAL C	OLUMN REINF'G.		
.DDN.'L F	PLACEMENT TIE	S AT 12" O.C. WHEN	FOOTING THICKNESS	S EXCEEDS 3'-0"		
E COLUN	INS FROM GROU	JND LEVEL TO LEVE	EL 01 TO BE 7000 PSI (	CONCRETE		
۹"	DETAIL "B"	DETAIL "C"	DETAIL "D"	DETAIL "E"		
	(2) SETS	(3) SETS	(2) SETS	(2) SETS		

FOOTING MARK	I ENGTH	WIDTH	DEPTH	ONLY UN O
F4 0	4' - 0"	4' - 0"	1'-2"	oner olivio.
F5.0	5' - 0"	5' - 0"	1'-6"	(6) - #5 x 4'-6"
F6.0	6' - 0"	6' - 0"	1' - 10"	(6) - #6 x 5'-6"
F6.0-F	6' - 0"	6' - 0"	2' - 6"	(8) - #6 x 5'-6"
F6.5	6' - 6"	6' - 6"	2' - 0"	(7) - #6 x 6'-0"
F7.0	7' - 0"	7' - 0"	2' - 0"	(7) - #7 x 6'-6"
F7.0M	7' - 0"	7' - 0"	2' - 0"	(7) - #7 x 6'-6" TOP & BOT.
F8.0	8' - 0"	8' - 0"	2' - 4"	(6) - #8 x 7'-6"
F8.5M	8' - 6"	8' - 6"	2' - 0"	(9) - #7 x 8'-0" TOP & BOT.
F9.0	9' - 0"	9' - 0"	2' - 6"	(6) - #9 x 8'-6"
F9.0M	9' - 0"	9' - 0"	1' - 10"	(9) - #8 x 8'-6" TOP & BOT.
F9.5A	9' - 6"	9' - 6"	2' - 2"	(10) - #9 x 9'-0" TOP & BOT
F10.0	10' - 0"	10' - 0"	2' - 10"	(7) - #9 x 9'-6"
F10.0x5.0	5' - 0"	10' - 0"	2' - 0"	(6)-#5 x 9'-6" & (7)-#9 x 4'-6'
F10.5A	10' - 6"	10' - 6"	2' - 4"	(11) - #9 x 10'-0" TOP & BO
F11.0	11' - 0"	11' - 0"	3' - 0"	(8) - #9 x 10'-6"
F11.0A	11' - 0"	11' - 0"	2' - 6"	(11) - #9 x 10'-6" TOP & BO
F11.0M	11' - 0"	11' - 0"	2' - 6"	(11) - #8 x 10'-6" TOP & BOT
F12.0	12' - 0"	12' - 0"	3' - 4"	(8) - #10 x 11'-6"
F13.0	13' - 0"	13' - 0"	3' - 6"	(9) - #10 x 12'-6'
F14.0	14' - 0"	14' - 0"	3' - 8"	(10) - #10 x 13'-6"
F15.0	15' - 0"	15' - 0"	4' - 0"	(10) - #11 x 14'-6"
F15.0A	15' - 0"	15' - 0"	4' - 2"	(10) - #11 x 14'-6"
F18.0	18' - 0"	18' - 0"	4' - 8"	(13) - #11 x 17'-6"
F19.0	19' - 0"	19' - 0"	4' - 10"	(15) - #11 x 18'-6"
F20.0	20' - 0"	20' - 0"	4' - 10"	(21) - #11 x 19'-6"
F21.0	21' - 0"	21' - 0"	4' - 10"	(22) - #11 x 20'-6"
F24.0x16.0	24' - 0"	16' - 0"	4' - 0"	(14) - #11 BARS @ 23'-6" AND (24) - #11 BARS @ 15'-6" TOP & BOTTOM
F24.0x16.0A	24' - 0"	16' - 0"	4' - 2"	(14) - #11 BARS @ 23'-6" AND (24) - #11 BARS @ 15'-6" TOP & BOTTOM
F36.0x24.0	36' - 0"	24' - 0"	4' - 10"	(26) - #11 BARS @ 35'-6" AND (40) - #11 BARS @ 23'-6" TOP AND BOTTOM

ÇJ4.N.5

ł	(EYED NOTES-FDN. PLAN
MARK	NOTE
А	SUMP PIT PER TYPICAL DETAIL ON S-500. COORD. FINAL LOCATION W/ APPROPRIATE TRADE.
В	REF. 4/S-500 FOR TYPICAL THICKENED SLAB DETAIL.
С	FULL HEIGHT 8" CONC. BLOCK WALL GROUTED SOLID w/ #5 AT 8" o.c. VERT. AND HORIZ.
D	FULL HEIGHT 12" CONC. BLOCK WALL GROUTED SOLID w/ #5 AT 8" o.c. VERT. AND HORIZ.
E	DENOTES PERIMETER FOUNDATION DRAIN PER SECTION 23/S-500
F	APPROXIMATE LOCATION OF VAPOR MITIGATION VENTS/PIPING. COORD. EXACT LOCATIONS AND EXTENTS WITH VAPOR MITIGATION DRAWINGS.
G	12" (MIN.) WIDE SLAB TURN-DOWN TO -2'-0"
Η	REF. CJ5 DOCUMENTS FOR SPECIFICS AND VERIFICATION OF DIMENSIONS.
J	AT LOCATIONS WHERE FOOTINGS ARE TOO CLOSE TO FORM SEPARATELY, 1" RIGID INSULATION SHALL BE USED TO SEPARATE THE FOOTINGS.
K	REFER TO DETAIL 27/CJ4.1-S-500 WHERE VAPOR VENT CROSSES THICKENED SLAB. COORD. EXACT LOCATIONS w/ VAPOR MITIGATION DRAWINGS.
L	REF. 5 & 6 ON CJ4.1-S-502 FOR REINFORCING AROUND OPENINGS IN SHEARWALLS
М	DIMENSIONS ARE TO BE VERIFIED AND COORDINATED WITH ELEVATOR/STAIR SUPPLIERS

A1.3

![](_page_6_Picture_11.jpeg)

![](_page_6_Figure_12.jpeg)

NOTED ON PLANS & SECTIONS.

PLAN LEGEND:

DENOTES CONC. OR -

STEEL COLUMN SIZE

ç_____Q

7. GROUT ALL CORES OF CMU BELOW FINISH FLOOR SOLID.

ALLOWABLE BEARING PRESSURE NOT LESS THAN 7,000 PSF.

F5.0 -4'-8"—

C24/W12x45

				<ul> <li>WEB WELD PF EACH SIDE U.</li> <li>STEEL BASE F TO RECEIVE A</li> </ul>	ER SCHEDULE, N.O. PLATE W/ (4) HC NNCHOR RODS	)LE
FLANGE WELD P EACH SIDE U.N.C	DER SCHEDULE,		STEEL CC (SIZE PER	LUMN PLAN)		
	BASEPLATE	SCHE	DULE			
COLUMN SIZE	BASE PLATE SIZE	EQ	EDGE	ANCHOR ROD DIA.	MAX. HOLE	
W12x45	1" X 1'-8" X 1'-8" FLANGE WELD = 3/8" WEB WELD = 3/8"	8"	2"	1"	1 13/16"	
W14x68	1 1/4" X 1'-10" X 1'-10" FLANGE WELD = 1/2" WEB WELD = 3/8"	9"	2"	1"	1 13/16"	
W14x109	1 1/2" X 2'-0" X 2'-0" FLANGE WELD = 5/16" WEB WELD = 5/16"	9 3/4"	2 1/4"	1 1/4"	2 1/16"	
W14x145	1 5/8" X 2'-2" X 1'-10"	10 3/4"	2 1/4"	1 1/4"	2 1/16"	

![](_page_6_Figure_14.jpeg)

![](_page_6_Figure_15.jpeg)

Z

Professional Stamp

Key Plan

+ ACOUSTIC

PE10606154

STATE OF

Sattles

CJ3

Revision Description

A1.1 CJ4.1 Addendum 1

A1.2 CJ4.1 Addendum 2

A1.3 CJ4.1 Addendum 3

A1.4 CJ4.1 Addendum 4

A1.6 CJ4.1 Addendum 6

A1.7 CJ4.1 Addendum 7

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UNIT B

UNIT A

CJ6

03.27.2019

04.03.2019

04.25.2019

06.11.2019

06.27.2019

07.25.2019

![](_page_6_Figure_16.jpeg)

![](_page_6_Picture_17.jpeg)

WILHELM

![](_page_6_Picture_18.jpeg)

Project Consolidated Civil and Criminal Courthouse -

Foundations, Underground Utilities & Vapor Mitigation

MAYOR JOE HOGSETT

![](_page_7_Figure_0.jpeg)

![](_page_7_Figure_1.jpeg)

![](_page_7_Picture_2.jpeg)

CONC. SHEAR WALL. REFERENCE SB100 DRAWINGS FOR REINFORCING

![](_page_7_Figure_3.jpeg)

![](_page_7_Picture_4.jpeg)

![](_page_7_Figure_5.jpeg)

![](_page_7_Figure_6.jpeg)

## SHEARWALL FOUNDATION NOTES

1.	SUPPORT BOTTOM BARS WITH CONCRETE BRICK.
2.	PROVIDE STANDEES AS REQUIRED BY CRSI TO PREVENT DISPLACEMENT OF REINFORCING. PROVIDE DIAGONAL AND LONGITUDINAL BRACING AS REQUIRED FOR STABILITY. SHORT REBAR STRUS TO SIDES/FORMWORK AT TOP REINFORCING IS ACCEPTABLE.
3.	LAP #8 HAIRPIN BARS AT PERIMETER OF FOUNDATIONS FOR LAP LENGTH OF #8 BARS.
4.	REFERENCE SHEAR WALL DETAILS ON CJ4.1-S-502 FOR END, CORNER, AND INTERMEDIATE ZONE REINFORCING.
5.	CONTROLLED MODULUS COLUMNS FOR SINGLE AND COMBINED COLUMN FOOTINGS AND MAT FOUNDATIONS SHOULD BE DESIGN FOR A BEARING PRESSURE OF 7,000 PSF.

![](_page_7_Picture_10.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations, Underground Utilities & Vapor Mitigation

2900 Prospect St Indianapolis, IN 46203

Prepared For City of Indianapolis

![](_page_7_Picture_14.jpeg)

![](_page_7_Picture_15.jpeg)

Professional Stamp

![](_page_8_Figure_0.jpeg)

![](_page_8_Figure_1.jpeg)

![](_page_9_Figure_0.jpeg)

![](_page_9_Figure_1.jpeg)

··················

![](_page_9_Picture_6.jpeg)

![](_page_9_Figure_7.jpeg)

Issue Date: 03.01.2019

CJ6 CJ3 Revision Description 04.03.2019 CJ4.1 Addendum 2 04.25.2019 A1.3 CJ4.1 Addendum 3

![](_page_9_Picture_12.jpeg)

![](_page_9_Picture_13.jpeg)

Key Plan

![](_page_9_Picture_14.jpeg)

![](_page_9_Picture_15.jpeg)

ENGINEERS | ARCHITECTS | LAND SURVEYORS

**CBRE** HEERY CBRE | HEERY 100 E. Pine St., Ste. 300 Orlando, FL 32801 t 407.992.6300

![](_page_9_Picture_17.jpeg)

![](_page_9_Picture_18.jpeg)

![](_page_9_Picture_19.jpeg)

Consolidated Civil and

Criminal Courthouse -

Foundations, Underground

![](_page_9_Picture_20.jpeg)

Project

![](_page_9_Picture_21.jpeg)

- 2. PROVIDE STANDEES AS REQUIRED BY CRSI TO PREVENT DISPLACEMENT OF REINFORCING. PROVIDE DIAGONAL AND LONGITUDINAL BRACING AS REQUIRED FOR STABILITY. SHORT REBAR STRUS TO SIDES/FORMWORK AT TOP REINFORCING IS
- ACCEPTABLE. 3. LAP #8 HAIRPIN BARS AT PERIMETER OF FOUNDATIONS FOR LAP LENGTH OF #8 BARS.
- 4. REFERENCE SHEAR WALL DETAILS ON CJ4.1-S-502 FOR END, CORNER, AND INTERMEDIATE ZONE REINFORCING.
- 5. CONTROLLED MODULUS COLUMNS FOR SINGLE AND COMBINED COLUMN FOOTINGS AND MAT FOUNDATIONS SHOULD BE DESIGN FOR A BEARING PRESSURE OF 7,000 PSF.

![](_page_10_Figure_1.jpeg)

![](_page_10_Figure_2.jpeg)

## 3 CRANE 1 SECTION 1/2" = 1'-0"

![](_page_10_Figure_6.jpeg)

(CJ4.1

![](_page_10_Figure_7.jpeg)

![](_page_10_Figure_8.jpeg)

![](_page_10_Figure_9.jpeg)

(CJ4.1)

![](_page_10_Figure_10.jpeg)

+++++

TOP MAT REINFORCING (38) - #9 BARS EACH WAY w/ ACI 90° HOOKS

CJ4.H

(CJ4.9

28' - 9"

6

CJ4.1-S-403 ~

![](_page_10_Figure_11.jpeg)

## **CRANE FOUNDATION NOTES**

1. SUPPORT BOTTOM BARS WITH CONCRETE BRICK. 2. PROVIDE STANDEES AS REQUIRED BY CRSI TO PREVENT DISPLACEMENT OF REINFORCING. PROVIDE DIAGONAL AND LONGITUDINAL BRACING AS REQUIRED FOR STABILITY. SHORT REBAR STRUS TO SIDES/FORMWORK AT TOP REINFORCING IS ACCEPTABLE.

3. CONTROLLED MODULUS COLUMNS FOR SINGLE AND COMBINED COLUMN FOOTINGS AND MAT FOUNDATIONS SHOULD BE DESIGN FOR A BEARING PRESSURE OF 7,000 PSF.

![](_page_10_Picture_15.jpeg)

![](_page_10_Picture_16.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations, Underground Utilities & Vapor Mitigation

2900 Prospect St Indianapolis, IN 46203

Prepared For City of Indianapolis

![](_page_10_Picture_20.jpeg)

![](_page_10_Picture_21.jpeg)

## 4 CRANE 2 TOP & BOTTOM MAT REINFORCING DETAILS

![](_page_10_Figure_23.jpeg)

**1** CRANE 1 TOP & BOTTOM MAT REINFORCING DETAILS

![](_page_10_Picture_25.jpeg)

![](_page_10_Picture_26.jpeg)

![](_page_11_Figure_0.jpeg)

5/3/2019 4:47:49 PM C:\Users\dlevitus\Desktop\Local Files\2017-178.CCC_CJ4-000_S_2019_Central_dlevitus.rvt

![](_page_12_Figure_1.jpeg)

![](_page_12_Figure_2.jpeg)

![](_page_13_Picture_1.jpeg)

(2)-#6 EA. FACE OF PUNCHED -OPENING, U.N.O. EXTEND 2'-6" PAST OPENING

C.I.P. ELEVATED CONC. SLAB, REF. PLAN

ROUGHEN INTERFACE TO 1/4" AMPLITUDE -

SHEAR WALL, REF. PLAN AND ELEVATIONS FOR SIZE AND REINF.

LAP REINF. FROM WALL BELOW.

![](_page_13_Picture_8.jpeg)

![](_page_13_Figure_10.jpeg)

![](_page_13_Figure_11.jpeg)

![](_page_13_Figure_12.jpeg)

![](_page_13_Figure_13.jpeg)

![](_page_13_Figure_14.jpeg)

## $\sim$

# A1.3 6 SHEARWALL HEADER DETAIL NOT TO SCALE

![](_page_13_Figure_17.jpeg)

A1.3 SHEARWALL DETAIL OPENING AT FLOOR NOT TO SCALE

![](_page_14_Figure_0.jpeg)

![](_page_15_Figure_0.jpeg)

![](_page_15_Figure_2.jpeg)

![](_page_15_Figure_3.jpeg)

![](_page_15_Figure_4.jpeg)

![](_page_15_Figure_6.jpeg)

![](_page_15_Figure_7.jpeg)

![](_page_15_Figure_8.jpeg)

VAPOR BARRIER NOTES:

- E1634-COMPLIANT INSTALLATION. 2. VAPOR BARRIER INSTALLATION DETAILS SHOW INSTALLATION DETAILS FOR MULTIPLE BUILDING
- STRUCTURES AND VARIATIONS FOR SPECIFIC STRUCTURES. 3.
- REQUIREMENTS. VAPOR BARRIER CONTRACTOR TO PROVIDE CERTIFICATION AND GUIDANCE/OVERSIGHT FOR VAPOR BARRIER INSTALLATION.
- OBJECTS THAT COULD PUNCTURE, TEAR, OR OTHERWISE DAMAGE THE MEMBRANE. 5. THE STRUCTURAL ENGINEER WILL HAVE FINAL DETERMINATION ON THE VAPOR BARRIER INSTALLATION INSTALLATION.
- 6. SEAL ALL VAPOR BARRIER TERMINATIONS AT FOOTINGS, COLUMNS, AND PENETRATIONS IN ACCORDANCE WITH THE VAPOR BARRIER MANUFACTURER'S WRITTEN INSTRUCTIONS AND DETAILS PROVIDED.
- INSTRUCTIONS AND DETAILS.
- SHALL REPAIR OR REPLACE DAMAGED SECTIONS OF VAPOR BARRIER. FORMWORK STAKES UNLESS PERMITTED BY VAPOR MITIGATION SYSTEM MANUFACTURER/CONTRACTOR. REPAIR DAMAGE AS REQUIRED BY VAPOR MITIGATION
- MANUFACTURER. CJC COURTS BUILDING.

![](_page_15_Figure_18.jpeg)

![](_page_15_Figure_19.jpeg)

1. VAPOR BARRIER INSTALLATION DETAILS PROVIDED BY STEGO INDUSTRIES, INC. AND FOLLOW ASTM

THE VAPOR BARRIER SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE MANUFACTURER'S

4. INSPECT SUBGRADE PRIOR TO INSTALLATION OF VAPOR BARRIER AND REMOVE DEBRIS OR OTHER

METHOD DETAIL UTILIZED WHERE MULTIPLE OPTIONS EXIST WHICH MEET ASTM E1634-COMPLIANT

7. SEAL PENETRATIONS IN ACCORDANCE WITH THE VAPOR BARRIER MANUFACTURE'S WRITTEN

8. CONTRACTOR SHALL PROTECT VAPOR BARRIER FROM PUNCTURE, TEARING, OR OTHER DAMAGE AND THOROUGHLY INSPECT VAPOR BARRIER FOR DAMAGE PRIOR TO PLACING CONCRETE. CONTRACTOR 9. DO NOT PUNCTURE VAPOR BARRIER OR OTHER COMPONENTS OF VAPOR MITIGATION SYSTEM WITH

10. ALL PROVIDED DETAILS MAY NOT BE APPLICABLE FOR THE INSTALLATON OF THE VAPOR BARRIER AT THE

![](_page_15_Picture_27.jpeg)

![](_page_16_Figure_0.jpeg)

INDIANAPOLIS Project Consolidated Civil and Criminal Courthouse -Foundations, Underground Utilities & Vapor Mitigation 2900 Prospect St. Indianapolis, IN 46203 Prepared For City of Indianapolis WILHELM CONSTRUCTION 3914 Prospect Street, Indianapolis, IN 46203 317.359.5411 In Association with Better Foresight Better Insight Better On-Site  $\mathbf{\sub}$ 317.263.6226 SCHMIDT Indianapolis, IN schmidt-arch.com ASSOCIATES **CBRE** HEERY CBRE | HEERY 100 E. Pine St., Ste. 300 Orlando, FL 32801 t 407.992.6300 Harrison & rumleve, P 317.423.1550 550 Virginia Avenue Indianapolis, IN 46203 F 317.423.1551 STRUCTURAL ENGI TECHNOLOGY + ACOUSTICS consulting management inspection desig ENGINEERS | ARCHITECTS | LAND SURVEYORS No. 11900093 STATE OF NDIAN 1/in no/ Key Plan UNIT B UNIT A No. Description Date 1 CJ4.1 Addendum 03.27.2019 Project No: 14.01000.00 Sheet Title VAPOR MITIGATION TYPICAL DETAILS

Original drawing is 48 x 36 Do not scale contents of this drawing

CJ4.1-QV501

Sheet Number

![](_page_17_Figure_0.jpeg)

![](_page_17_Figure_1.jpeg)

![](_page_17_Figure_2.jpeg)

![](_page_17_Figure_3.jpeg)

![](_page_17_Figure_4.jpeg)

![](_page_17_Picture_6.jpeg)

![](_page_17_Picture_7.jpeg)

![](_page_17_Figure_8.jpeg)

._____ Issue Date: 03/01/19

Project No: 2017-178.CCC
Sheet Title MECHANICAL ROOM AND UNDERGROUND UTILITIES

![](_page_17_Picture_11.jpeg)

2/2019 2:21:12 PM C:\Test\CAD\2017-178.CCC_CJ4-000_P_Central_rhamersley.rvt

	ABBREVIATIONS
AD ADA	AREA DRAIN AMERICAN DISABILITIES ACT
ADJ	
AFF	ABOVE FINISHED FLOOR
ALTER AMP	ALTERNATE AMPERE (AMP, AMPS)
APPROX ARCH	APPROXIMAT(E), (LY) ARCHITECT (URAL)
APD AV	AIR PRESSURE DROP (IN WG) ACID VENT
AW	
A	COMPRESSED AIR
BFC BLDG	BELOW FINISHED CEILING BUILDING
BOP BT	BOTTOM OF PIPING BATHTUB
BTUH	BRITISH THERMAL UNIT PER HOUR
CD	CONDENSATE DRAIN
CFOI CI	CONTRACTOR FURNISHED/OWNER INSTALLED CAST IRON
CO CO2	CLEANOUT CARBON DIOXIDE
D DF	DRAIN DRINKING FOUNTAIN
DN DS	DOWN DOWNSPOUT
DWG	
DWH	DOMESTIC WATER HEATER DOMESTIC WATER SOFTNER
EC	ELECTRICAL CONTRACTOR
ECO FFF	EXTERIOR CLEANOUT
ELEC	
	EMERGENCY
ENCL EQUIP	EQUIPMENT
ES ET	EMERGENCY SHOWER EXPANSION TANK
EW	EMERGENCY EYEWASH
EXP	EXPANSION
EXIST	EXISTING
°F FCO	DEGREES FAHRENHEIT FLOOR CLEANOUT
FD	
FDC FE	FIRE EXTINGUISHER
FH FHC	FIRE HOSE FIRE HOSE CABINET
FLR FOR	FLOOR FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV FP	FIRE PROTECTION
FPC FPM	FIRE PROTECTION CONTRACTOR FEET PER MINUTE
FT FTG	FOOT/FEET FOOTING
GA	GAUGE
GAL GALV	GALLON GALVANIZED
GC GPH	GENERAL CONTRACTOR GALLONS PER HOUR
GPM	GALLONS PER MINUTE
G	GREASE TRAP
HB HD	HOSE BIB HEAD (FT.)
HO HORIZ	HUB OUTLET HORIZONTAL
HWCP HR	HOT WATER RECIRCULATING PUMP
HW	HOT WATER (DOMESTIC)
HWR HZ	HOT WATER RETURN FREQUENCY (MEGAHERTZ)
ID	INSIDE DIAMETER
	INCH/INCHES INCLUD(E). (ED)
INDIC	INDICATOR
INSUL	
INV	INVERT
KEC K\M/	KITCHEN EQUIPMENT CONTRACTOR
L LA	
LAB LBS	LABORATORY POUND
LEC	LABORATORY EQUIPMENT CONTRACTOR
LPC LV	LABORATORY VACUUM
MA	MEDICAL AIR
MAX	MAXIMUM MOP BASIN
MS	MOP SINK
MBH MC	I HOUSANDS OF BTU PER HOUR MECHANICAL CONTRACTOR
MECH MH	MECHANICAL MANHOLE
MIN	
MTD	MOUNTED
N	NITROGEN
NA NC	NOT APPLICABLE NORMALLY CLOSED
NIC	
NU NTS	NOT TO SCALE
0	OXYGEN
OFD	ORAL EVACUATION
OFCI OFOI	OWNER FURNISHED/CONTRACTOR INSTALLED OWNER FURNISHED/OWNER INSTALLED
OSD	OPEN SITE DRAIN

Ъс	PUMP PLUMBING CONTR		
PER	PRESSURE DROP	(IN OR W	'G AS NOTED)
PH PI	PHASE PRESSURE INDICA	TOR	
PIV PLT	POST INDICATOR \ PLASTER TRAP	/ALVE	
POC PPM	POINT OF CONNEC	CTION (N )N	EW TO EXISTING)
PREFAB	PREFABRICATED PRESSURE		
PRV PSI	PRESSURE REDUC	CING VAL	VE H
>SIG >VC	POUNDS PER SQU POLYVINYL CHLOR	ARE INC RIDE	H GAUGE
२	THERMAL RESISTA	NCE	
	REINFORCED CON ROOF DRAIN	CRETE F	PIPE
RECIR RH	RECIRCULAT(E), (C	DR), (ING	)
RM RO	ROOM REVERSE OSMOSI	S WATE	२
			<u>-</u>
SCW	SOFT COLD WATE	r (dome	STIC)
SF SH	SQUARE FOOT SHOWER		
SHT SK	SHEET		
SPEC SPG	SPECIFICATIONS SPECIAL GAS		
SS SSD	STAINLESS STEEL SUB SURFACE (FC	) OTING)	DRAIN
SSK ST	SERVICE SINK STORAGE TANK	,	
STD STP	STANDARD STORAGE TANK P	UMP	
STS, STF STRUCT	STORAGE TANK S STRUCTURE(E). (A	UPPLY A	ND RETURN
SU	SHOWER UNIT		
Г&Р Г	TEMPERATURE AN TEMPERED WATER	ID PRES	SURE
remp TMV	TEMPERATURE THERMOSTATIC M	IXING VA	LVE
ſP ſS	TRAP PRIMER TAMPER SWITCH		
ΓΥΡ.	TYPICAL		
JNO JR	UNLESS NOTED O	THERWIS	SE
VA			
VAC		5	
		G	
VPD		SCHARG	E
V VV	VACUUM VENT		
N/ NC	WITH WATER CLOSET		
N.C. N.C.	WATER COLUMN		
NG NH	WATER GAUGE		
N/O NP	WITHOUT		
NPD WTR	WATER PRESSURE	E DROP	
YD	YARD DRAIN		
ZN	ZONE		
	F  Υ		
	 		FIRE DEPT. CONNECTION
	 下		FLOW SWITCH
		_	TAMPER SWITCH
	O	_	UPRIGHT SPRINKLER HEAD
			PENDANT SPRINKLER HEAD
•			DRY PENDANT SPRINKLER HEAD
	-0		
	► O	_	SIDEWALL SPRINKLER HEAD
			SIDEWALL SPRINKLER HEAD
		-	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y)
			SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE
	● ○ 	- - - - G N	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE OTATIONS
		- - - G N	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE OTATIONS
		- - - G N Plan	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE <b>OTATIONS</b> NOTE
		- - - - PLAN DETA	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE OTATIONS NOTE
		- - - - - - - - - - - - - - - - - - -	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE OTATIONS NOTE
		- - - - - - - - - - - - - - - - - - -	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE OTATIONS NOTE IL REFERENCE
		- - - - - - - - - - - - - - - - - - -	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE OTATIONS NOTE IL REFERENCE ION REFERENCE TO EXISTING
		- - - - - - - - - - - - - - - - - - -	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE OTATIONS NOTE IL REFERENCE TO EXISTING D TO THIS POINT
		G N PLAN DETA SECT NEW DEM( EQUI	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE OTATIONS NOTE IL REFERENCE ION REFERENCE TO EXISTING D TO THIS POINT PMENT TAG - (SEE SCHEDULE SHEETS)
	$\square$	- - - - - - - - - - - - - - - - - - -	SIDEWALL SPRINKLER HEAD CONCEALED PENDANT SPRINKLER HEAD ZONE VALVE (OS&Y) ALARM VALVE OTATIONS NOTE IL REFERENCE ION REFERENCE TO EXISTING D TO THIS POINT PMENT TAG - (SEE SCHEDULE SHEETS) JRE TAG - (SEE SCHEDULE SHEETS)

![](_page_18_Picture_4.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities

2900 Prospect St Indianapolis, IN 46203

WILHELM
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SCHMIDT ASSOCIATES Better Insight Better On-Site 317.263.6226 Indianapolis, IN schmidt-arch.com
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Lynch, Harrison & Brumleve, Inc. 550 Virginia Avenue Indianapolis, IN 46203 Brumleve, Inc. F 317.423.1550 F 317.423.1551 STRUCTURAL ENGINEERS
ENGINEERS   ARCHITECTS   LAND SURVEYORS
TECHNOLOGY + ACOUSTICS
Professional Stamp
Key Plan UNIT B UNIT A
CJ4 CJ5 CJ3 CJ6
No. Description Date
Issue Date: 03.01.2019 Project No: 2017-178.CCC
PLUMBING SYMBOLS AND ABBREVIATIONS
Original drawing is 48 x 36 Do not scale contents of this drawing Sheet Number CJ4.1-P-001

ENERAL DUTY V	ALVES & FITTINGS
o	RISE IN PIPING
	DROP IN PIPING
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	DRAWING
T	
↓	PLUG VALVE
	VALVE - SEE SPECIFICATIONS
	FOR VALVE TYPE
<u></u>	
· · · · · · · · · · · · · · · · · · ·	
'l' 	
<u>#</u>	GAUGE CONNECTION(S) & WELL
¥໕ᢤ' 	
	AUTOMATIC AIR VENT
	PETE'S PLUG
	Y-STRAINER W/BLOWDOWN
~~~~ <u>=</u>	
	PIPE ANCHORS
	FLEXIBLE PIPING CONNECTOR
	PIPE EXPANSION JOINT
	GAS COCK
Â	
X	(P) = PRESSURE DOMESTIC COLD WATER VALVE BOX
	CONCENTRIC REDUCER
<u>\</u>	ECCENTRIC REDUCER
	PRESSURE REDUCING VALVE
140°	140° DOMESTIC HOT WATER
	160° DOMESTIC HOT WATER
	160° DOMESTIC HOT WATER 160° DOMESTIC HOT WATER ACID RESISTANT VENT
	160° DOMESTIC HOT WATER 160° DOMESTIC HOT WATER ACID RESISTANT VENT ACID RESISTANT WASTE AIR
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- CEILING PLANS.
   ALL PIPING, SIZES, ZONES AND SPRINKLER MAINS SHOWN ON DRAWINGS ARE FOR BIDDING AND DESIGN INTENT ONLY. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR PROPER COVERAGE AND CAPACITY OF THE SPRINKLER SYSTEM.
- SPRINKLER PIPING SHALL NOT BE ROUTED THRU ANY TECHONOLGY EQUIPMENT ROOMS (TR OR ER), USE SIDEWALL SPRINKLER HEADS WITH GUARDS TO SERVE THE ROOM.

![](_page_19_Figure_0.jpeg)

![](_page_19_Figure_1.jpeg)

1 UNIT A UNDERGROUND PLUMBING PLAN

![](_page_19_Picture_3.jpeg)

![](_page_19_Picture_4.jpeg)

UNIT B UNIT A

![](_page_19_Picture_5.jpeg)

Key Plan

CJ4

![](_page_19_Picture_6.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities 2900 Prospect St Indianapolis, IN 46203

![](_page_20_Figure_1.jpeg)

![](_page_20_Figure_2.jpeg)

![](_page_20_Figure_3.jpeg)

![](_page_20_Figure_4.jpeg)

![](_page_20_Figure_5.jpeg)

![](_page_20_Figure_6.jpeg)

![](_page_20_Figure_7.jpeg)

![](_page_20_Figure_8.jpeg)

![](_page_20_Figure_9.jpeg)

![](_page_20_Figure_10.jpeg)

![](_page_20_Figure_11.jpeg)

![](_page_20_Figure_12.jpeg)

![](_page_20_Figure_13.jpeg)

![](_page_20_Figure_14.jpeg)

![](_page_20_Figure_15.jpeg)

![](_page_20_Figure_16.jpeg)

![](_page_20_Figure_17.jpeg)

![](_page_20_Figure_18.jpeg)

![](_page_20_Figure_19.jpeg)

![](_page_20_Figure_20.jpeg)

![](_page_20_Figure_21.jpeg)

![](_page_20_Figure_22.jpeg)

![](_page_20_Figure_23.jpeg)

![](_page_20_Figure_24.jpeg)

![](_page_20_Figure_25.jpeg)

![](_page_20_Figure_26.jpeg)

![](_page_20_Figure_27.jpeg)

![](_page_20_Figure_28.jpeg)

![](_page_20_Figure_29.jpeg)

![](_page_20_Figure_30.jpeg)

![](_page_20_Figure_31.jpeg)

![](_page_20_Figure_32.jpeg)

![](_page_20_Figure_33.jpeg)

![](_page_20_Figure_36.jpeg)

![](_page_20_Figure_39.jpeg)

![](_page_20_Figure_45.jpeg)

1 UNIT B UNDERGROUND PLUMBING PLAN

![](_page_20_Picture_55.jpeg)

![](_page_20_Picture_56.jpeg)

Project No: 2017-178.CCC Sheet Title FOUNDATION PLUMBING PLAN - UNIT

. Issue Date: 02/06/19

A1.6 CJ4.1 Addendum 6 A1.8 CJ4.1 Addendum 8

![](_page_20_Picture_60.jpeg)

![](_page_20_Picture_61.jpeg)

![](_page_20_Picture_62.jpeg)

![](_page_20_Picture_63.jpeg)

![](_page_20_Picture_64.jpeg)

![](_page_20_Picture_65.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities

2900 Prospect St Indianapolis, IN 46203

8/8/2019 10:28:42 AM C:\Users\rhamersley\Documents\2017-178.CCC_CJ4-000_P_2019_Central_rhamersley.rvt

![](_page_21_Picture_1.jpeg)

1 UNIT C UNDERGROUND PLUMBING PLAN

![](_page_21_Picture_3.jpeg)

PLUMBING PLAN - UNIT

Original drawing is 48 x 36 Do not scale contents of this drawing Sheet Number

CJ4.1-PB100C

С

![](_page_22_Figure_0.jpeg)

UNIT A LEVEL 00 PLUMBING PLAN

NOTES: 1.

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![](_page_22_Picture_4.jpeg)

Project No: 2017-178.CCC Sheet Title LEVEL 00 PLUMBING PLAN - UNIT A

Issue Date: 05/13/09

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No.Revision DescriptionA1.5CJ4.1 Addendum 5A1.6CJ4.1 Addendum 6A1.8CJ4.1 Addendum 8

![](_page_22_Picture_7.jpeg)

06.20.2019 06.27.2019 08.08.2019

![](_page_22_Picture_8.jpeg)

![](_page_22_Picture_9.jpeg)

WILHELM

CONSTRUCTION

![](_page_22_Picture_10.jpeg)

Criminal Courthouse -Foundations & Underground Utilities

2900 Prospect St Indianapolis, IN 46203

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![](_page_23_Figure_1.jpeg)

NOTES: 1.

![](_page_23_Picture_3.jpeg)

## Project No: 2017-178.CCC Sheet Title LEVEL 00 PLUMBING PLAN - UNIT B

Issue Date: 02/13/19

![](_page_23_Picture_7.jpeg)

INDIANAPOLIS MAYOR JOE HOGSETT * \$57, 1821

Foundations &

2900 Prospect St Indianapolis, IN 46203

Prepared For

In Association with

Project Consolidated Civil and

Criminal Courthouse -

Underground Utilities

City of Indianapolis

CONSTRUCTION

3914 Prospect Street, Indianapolis, IN 46203 317.359.5411

SCHMIDT ASSOCIATES 317.263.6226 Indianapolis, IN schmidt-arch.com

**CBRE** HEERY

Better Foresight Better Insight Better On-Site

![](_page_24_Figure_1.jpeg)

![](_page_24_Figure_2.jpeg)

CJ4.15

![](_page_24_Figure_3.jpeg)

CJ4,J

UNIT C LEVEL 00 PLUMBING PLAN 1/8" = 1'-0"

![](_page_24_Figure_11.jpeg)

![](_page_24_Picture_12.jpeg)

## Project No: 2017-178.CCC Sheet Title LEVEL 00 PLUMBING PLAN - UNIT C

Issue Date: 02/19/19

No.Revision DescriptionA1.5CJ4.1 Addendum 5A1.6CJ4.1 Addendum 6A1.8CJ4.1 Addendum 8

![](_page_24_Figure_15.jpeg)

Date 06.20.2019 06.27.2019 08.08.2019

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![](_page_24_Picture_16.jpeg)

![](_page_24_Picture_17.jpeg)

CONSTRUCTION 3914 Prospect Street, Indianapolis, IN 46203 317.359.5411 In Association with Better Foresight Better Insight Better On-Site SCHMIDT ASSOCIATES 317.263.6226 Indianapolis, IN schmidt-arch.com

INDIANAPOLIS MAYOR JOE HOGSETT * RST. 1821 Project
Consolidated Civil and Criminal Courthouse -

Foundations &

2900 Prospect St Indianapolis, IN 46203

Prepared For

Underground Utilities

City of Indianapolis

![](_page_25_Figure_0.jpeg)

![](_page_25_Figure_1.jpeg)

![](_page_25_Figure_2.jpeg)

• <u>TECH LEVEL 00</u> 0' - 0"

CJ4.GROUND TECH LEVEL 00 0' - 0"

![](_page_25_Figure_3.jpeg)

![](_page_25_Figure_4.jpeg)

![](_page_25_Figure_5.jpeg)

![](_page_25_Figure_6.jpeg)

12 WEST STORM DRAIN ELEVATION

13 SOUTHWEST STORM DRAIN BEGINNING ELEVATION

![](_page_25_Picture_11.jpeg)

Project No: 2017-178.CCC Sheet Title PLUMBING SECTIONS

Issue Date: 05/20/09

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14 SOUTHWEST STROM DRAIN ELEVATION

![](_page_25_Figure_19.jpeg)

INDIANAPOLIS MAYOR JOE HOGSETT * \$57, 1821

Project Consolidated Civil and

Criminal Courthouse -

![](_page_26_Figure_0.jpeg)

![](_page_26_Figure_1.jpeg)

![](_page_26_Figure_2.jpeg)

2 THRUST BLOCK 1/2" = 1'-0"

![](_page_26_Picture_5.jpeg)

Project No: 2017-178.CCC Sheet Title PLUMBING DETAILS

Issue Date: 03.01.2019

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![](_page_26_Picture_9.jpeg)

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![](_page_26_Picture_10.jpeg)

![](_page_26_Picture_11.jpeg)

![](_page_26_Picture_12.jpeg)

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![](_page_26_Picture_13.jpeg)

![](_page_26_Picture_14.jpeg)

WILHELM CONSTRUCTION

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In Association with

![](_page_26_Picture_16.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities

2900 Prospect St Indianapolis, IN 46203

		CLEANOUT, F	LOOR	DRAIN, FL	OOR SI		ND ROO	<b>OF DRA</b>	IN SCHE	DULE	
EQUIPMENT	17514	LOCATION	CONSTRUCTION			SEDIMENT		TDAD	BASIS OF DESIGN		DEMARKONOTEO
TAG	IIEM		BODY	STRAINER	51 KAINER SIZE	BUCKET	OUTLET TYPE	IRAP	MFR.	SERIES	REMARKS/NOTES
FD-A	FLOOR DRAIN		CAST IRON	CAST IRON	-		NO-HUB	JAY R. SMITH	JAY R. SMITH	2700	
FD-B	FLOOR DRAIN		CAST IRON	NICKEL BRONZE	-		NO-HUB	JAY R. SMITH	JAY R. SMITH	2700	<u> </u>
CO-A	FLOOR CLEANOUT		CAST IRON	CAST IRON			NO-HUB	JAY R. SMITH	JAY R. SMITH	-	HEAVY DUTY GRATE
CO-B	FLOOR CLEANOUT		CAST IRON	NICKEL BRONZE			NO-HUB	JAY R. SMITH	JAY R. SMITH	-	HEAVY DUTY GRATE
NOVES:											
1. TRAP GUARD	INSERTS TG33-WADE OR OWN	ER APPROVED EQUIVALENT SHALL BE INSTAL	LED TO COMPLY W	ITH TRAP PRIMER REQUIRE	MENTS.						
			$\frown$								

![](_page_27_Picture_3.jpeg)

Project No: 2017-178.CCC Sheet Title PLUMBING SCHEDULES

Issue Date: 05/20/09

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![](_page_27_Picture_7.jpeg)

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![](_page_27_Picture_8.jpeg)

![](_page_27_Picture_9.jpeg)

![](_page_27_Picture_10.jpeg)

![](_page_27_Picture_11.jpeg)

![](_page_27_Picture_12.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities

2900 Prospect St Indianapolis, IN 46203

ALA

Prepared For City of Indianapolis

![](_page_28_Figure_1.jpeg)

![](_page_28_Figure_2.jpeg)

![](_page_28_Figure_3.jpeg)

![](_page_28_Figure_4.jpeg)

![](_page_28_Figure_5.jpeg)

![](_page_28_Figure_6.jpeg)

SANITARY ISOMETRIC DIAGRAM SCALE: NONE

![](_page_28_Figure_8.jpeg)

![](_page_28_Picture_10.jpeg)

### _____ Sheet Title SANITARY ISOMETRIC -UNDERGROUND

Project No: 2017-178.CCC

_____ Issue Date: 03.01.2019

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![](_page_28_Figure_17.jpeg)

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![](_page_28_Figure_18.jpeg)

![](_page_28_Picture_19.jpeg)

![](_page_28_Picture_20.jpeg)

![](_page_28_Picture_21.jpeg)

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3914 Prospect Street, Indianapolis, IN 46203 317.359.5411

In Association with

Project Consolidated Civil and Criminal Courthouse -Foundations &

Underground Utilities

2900 Prospect St Indianapolis, IN 46203

![](_page_28_Picture_23.jpeg)

![](_page_29_Figure_0.jpeg)

![](_page_29_Figure_1.jpeg)

PENTHOUSE CJ4 (6) 4" FD 36 DFU			PEN CJ4. (4) 4 24 D
36 DFU	M EXEC RR		
WOMEN RM. JAN. CJ4.11041 36 DFU CJ4.11043 (5) WC (1) 3" S.SK. (1) 3" FD (3) LAV 5 DFU 28 DFU	MEN RM.         W EXEC RR         CJ4.11027           CJ4.11040         CJ4.11026         (2) WC           (3) WC         CORR         (3) WC         (1) UR         BREAK           (2) UR         CJ4.11025         (2) LAV         (2) LAV         CJ4.10028           (3) LAV         (1) DF         (1) SH         (1) SH         (2) K. SINK           (1) 3" FD         (1) 3" FD         (1) 3" FD           24 DFU         1 DFU         21 DFU         19 DFU         4 DFU		KITCH CJ4.1 (1) K. (1) DW 4 DFU
5 DFU 33 DFU 69 DFU	69 DFU 43 DF0 44 DF0 23 DF0 44 DF0		
WOMEN RM. GALLERY JAN. CJ4.10038 CJ4.10042 CJ4.10040 (5) WC (1) K. SINK (1) 3" S.SK. (1) 3" FD (3) LAV 2 DFU 5 DFU 28 DFU 2 DFU 7 DFU 35 DFU 2 DFU 7 DFU 35 DFU	CJ4.10037 (3) WC BREAK (2) UR CJ4.10032 (3) LAV (1) K. SINK (1) 3" FD 24 DFU 2 DFU 26 DFU 2 DFU		BRE CJ4. (1) k 2 DF
TLT       T	MEN RM.         CJ4.09035         (3) WC       HSKP.         FAM TLT       LOBBY         (2) UR       CJ4.09037       CJ4.09031         (3) LAV       (1) 3" S.SK.       (1) WC       (1) DF         (1) 3" FD       (1) LAV       (1) LAV         24 DFU       5 DFU       5 DFU       1 DFU         35 DFU       11 DFU       6 DFU       1 DFU         130 DFU       130 DFU       130 DFU       130 DFU		TLT TLT CJ4.09008 CJ4. (1) WC (1) V (1) LAV (1) L 5 DFU 5 DF 5 DFU 5 DF
TLT       T	MEN RM.         CJ4.08040         (3) WC       HSKP.         FAM TLT       LOBBY         (2) UR       CJ4.08042       CJ4.08035         (3) LAV       (1) 3" S.SK.       (1) WC       (1) DF         (1) 3" FD       (1) LAV       24 DFU       5 DFU       5 DFU       1 DFU         35 DFU       11 DFU       6 DFU       1 DFU       1 DFU         165 DFU       105 DFU       105 DFU       105 DFU       105 DFU		HLD       HLD       CORR.       HLD-GRP       TLT       TLT       HLD       CORR.       HLD       HLD       HLD       CORR.       HLD       HLD       HLD       CJ4.08010       CJ4.08010       CJ4.08030       CJ4.08032       CJ4.08032       CJ4.08017       CJ4.08016       CJ4.08010       CJ4.08006       CJ4.08006       CJ4.08007       CJ4.08007       CJ4.08017       CJ4.08016       CJ4.08010       (1) 2" FD       (1) CU       (1) WC       (1) WC       (1) WC       (1) LAV
TLT       T	MEN RM.         CJ4.07040         (3) WC       HSKP.         FAM TLT       LOBBY         (2) UR       CJ4.07042       CJ4.07036         (3) LAV       (1) 3" S.SK.       (1) WC       (1) DF         (1) 3" FD       (1) LAV       10 FU         24 DFU       5 DFU       5 DFU       1 DFU         35 DFU       11 DFU       6 DFU       1 DFU         200 DFU       200 DFU       10 FU       10 FU		HLD CJ4.07028 (1) CU       HLD CJ4.07029 (1) CU       CORR. CJ4.07030 (1) 2" FD       HLD-GRP CJ4.07033 (1) CU       TLT CJ4.07017 (1) WC       HLD CJ4.07016 (1) WC       CORR. CJ4.07016 (1) CU       HLD CJ4.07016 (1) CU       HLD CJ4.07006 (1) 2" FD       HLD CJ4.07007 (1) CU       HLD CJ4.07007 (1) CU<
TLT       CJ4.06010       CJ4.06010       CJ4.06007       CJ4.06006       CJ4.06006       CJ4.060058       CJ4.06058       CJ4.060602       CJ4.060601       CJ4.060601       CJ4.06090       (5) WC       (1) UC       (1) WC       (1) UC       (1) WC       (1) UC       (1) WC       (1) UC	MEN RM.         CJ4.06091         (3) WC       HSKP.         FAM TLT       LOBBY         (2) UR       CJ4.06092       CJ4.06026         (3) LAV       (1) 3" S.SK.       (1) WC       (1) DF         (1) 3" FD       (1) LAV       (1) LAV         24 DFU       5 DFU       5 DFU       1 DFU         35 DFU       11 DFU       6 DFU       235 DFU		HLD       HLD       CORR.       HLD-GRP       TLT       TLT       HLD       CORR.       HLD       COR.       HLD       CJ4.06033       CJ4.06017       CJ4.06016       CJ4.06010       CJ4.06006       CJ4.06006       CJ4.06007       CJ4.06010       CJ4.06010       CJ4.06006       CJ4.06007       CJ4.06017       CJ4.06016       CJ4.06010       CJ4.06006       CJ4.06007       CJ4.06007       CJ4.06010       CJ4.06006       CJ4.06016       CJ4.06006       CJ4.06016       CJ4.06006       CJ4.06016       CJ4.06006       CJ4.06016       CJ4.06006       CJ4.06016       CJ4.06007       CJ4.06016       <
TLT       T	MEN RM.         CJ4.05091         (3) WC       HSKP.         FAM TLT       LOBBY         (2) UR       CJ4.05092       CJ4.05026         (3) LAV       (1) 3" S.SK.       (1) WC       (1) DF         (1) 3" FD       (1) LAV       (1) AV         24 DFU       5 DFU       5 DFU       1 DFU         35 DFU       11 DFU       6 DFU       1 DFU         270 DFU       270 DFU       5 DFU       1 DFU		HLD       HLD       CORR.       HLD       TLT       TLT       TLT       CJ4.05048       CJ4.05052       HLD       LD       CJ4.05053       CJ4.05053       CJ4.05080       CJ4.05081       CJ4.05081       CJ4.05037       CJ4.05042       CJ4.05042       CJ4.05043
TLT       TLT       TLT       HLD       HLD       CORR.       HLD       CORR.       HLD       CJ4.04006       CJ4.04006       CJ4.04062       CJ4.04060       CJ4.040661       (5) WC       (1) WC       (1) WC       (1) CU       (1) CU       (1) 2" FD       (1) CU       (1) 3" FD       (3) LAV       (3) LAV       (3) LAV       28 DFU	MEN RM.         CJ4.04092         (3) WC       HSKP.         FAM TLT       LOBBY         (2) UR       CJ4.04093       CJ4.04024         (3) LAV       (1) 3" S.SK.       (1) WC       (1) DF         (1) 3" FD       (1) LAV       24 DFU       5 DFU       5 DFU       1 DFU         35 DFU       11 DFU       6 DFU       1 DFU       305 DFU		HLD       HLD       CORR.       HLD       TLT       TLT       HLD       CORR.       HLD       HLD       HLD       CJ4.04047       CJ4.04051A       CJ4.04051       CJ4.04054       CJ4.04078       CJ4.04079       CJ4.04044       CJ4.04043       CJ4.04038       CJ4.04038       CJ4.04039       CJ4.04044       CJ4.04043       CJ4.04038       CJ4.04038       CJ4.04038       CJ4.04039       CJ4.04044       CJ4.04043       CJ4.04038       C
JURY TLT       TLT       HLD       HLD       CORR.       HLD       WOMEN RM.       CJ4.03032       CJ4.03032       CJ4.03055       CJ4.03050       CJ4.03044       CJ4.03043       CJ4.03046       (1) WO       (1) WC       (1) CU       (1) CU       (1) 2" FD       (1) CU       (1) 3" FD       (1) ST FD       (3) LAV       S DFU       5 DFU       5 DFU       5 DFU       5 DFU       2 DFU       7 DFU       28 DFU       TO TEU	MEN RM.         CJ4.03033           (3) WC         HSKP.         FAM TLT         WAITING           (2) UR         CJ4.03076         CJ4.03013         CJ4.03000           (3) LAV         (1) 3" S.K.         (1) WC         (1) DF           (1) 3" FD         (1) LAV         10 FU           24 DFU         5 DFU         5 DFU         1 DFU           35 DFU         11 DFU         6 DFU         1 DFU	TLT TLT CJ4.03122 CJ4.03123 (1) WC (1) WC (1) LAV (1) LAV 5 DFU 5 DFU 5 DFU 10 DFU	HLD TLT TLT HLD CJ4.03064 CJ4.03075 CJ4.03074 CJ4 (1) CU (1) WC (1) WC (1) (1) (1) 2" FD (1) LAV (1) LAV (1) LAV (1) LAV 7 DFU 5 DFU 5 DFU 7 DF
5 DFU         10 DFU         15 DFU         20 DFU         22 DFU         29 DFU           303 DFU         300 DFU         300 DFU         300 DFU         300 DFU	340 DFU MEN RM. C.14 02033	10 DFU	7 DFU 12 DFU 17 DFU
FUTURE         HLD         CU4.02032           FOOD AREA         CJ4.02312         (5) WC           NON         (1) CU         (1) 3" FD           GREASE         (1) 2" FD         (3) LAV           7 DFU         7 DFU         28 DFU	(3) WC       HSKP.       FAM TLT       WAITING         (2) UR       CJ4.02034       CJ4.02050       CJ4.02000         (3) LAV       (1) 3" S.SK.       (1) WC       (1) DF         (1) 3" FD       (1) LAV       (1) LAV         24 DFU       5 DFU       5 DFU       1 DFU	TLT       TLT       TLT       TLT       TLT         CJ4.02022       CJ4.02023       CJ4.02091       CJ4.02092         (1) WC       (1) WC       (1) WC       (1) WC         (1) LAV       (1) LAV       (1) LAV       (1) LAV         5 DFU       5 DFU       5 DFU       5 DFU	HLD-ADA TLT TLT HLD CJ4.02073 CJ4.02095 CJ4.02096 CJ4 (1) CU (1) WC (1) WC (1) (1) (1) 2" FD (1) LAV (1) LAV (1) 2 7 DFU 5 DFU 5 DFU 7 DF
28 DFU  7 DFU 14 DFU 317 DFU 328 DFU	375 DFU	<u>30 DFU</u> 30 DFU	7 DFU 12 DFU 17 DFU
MEN         WOMEN RM.           WOMEN         CJ4.01033         CANTEEN         GRABNGO         CJ4.01043           CJ4.01034         (1) WC         CJ4.01038         CJ4.01035         (5) WC           (3) WC         (2) UR         (1) K. SINK         (1) K. SINK         (1) 3" FD           (2) LAV         (2) LAV         (1) 3" FD         (3) LAV           (14 DFU         9 DFU         7 DFU         28 DFU	CJ4.01044         (3) WC       HSKP.       FAM TLT       WAITING       LAC         (2) UR       CJ4.01090A       CJ4.01050       CJ4.01001       CJ4.01051         (3) LAV       (1) 3" S.SK.       (1) WC       (1) DF       (1) SINK         (1) 3" FD       (1) LAV         24 DFU       5 DFU       5 DFU       1 DFU       2 DFU	GALLEY         TLT         TLT         LAC         LAC         TLT         TLT         TLT           CJ4.01042         CJ4.01023         CJ4.01024         CJ4.01092         CJ4.01037         CJ4.01098B         CJ4.01098B         CJ4.01098A           (1) K. SINK         (1) WC         (1) WC         (1) SINK         (1) WC         (1) LAV         (	HLD-ADA       TLT       TLT       HLD         CJ4.01073       CJ4.01091C       CJ4.01091B       CJ4         (1) CU       (1) WC       (1) WC       (1) C         (1) 2" FD       (1) LAV       (1) LAV       (1) 2         7 DFU       5 DFU       5 DFU       7 DFU
14 DFU     23 DFU     30 DFU     37 DFU     28 DFU       354 DFU     356 DFU	37 DFU   13 DFU   8 DFU   2 DFU   2 DFU   412 DFU	I4 DFU     58 DFU     49 DFU     44 DFU     42 DFU     40 DFU     35 DFU	7 DFU 12 DFU 17 DFU
HLD       HLD       HLD       SEC. CORR.       CJ4.02067       CJ4.02067       CJ4.02066       TLT       TLT       FIRE PUMP       WOMEN RM.       WOMEN RM.       CJ4.02069       CJ4.02069         132       CJ4.00096       CJ4.00094       CJ4.00095       CJ4.00093       (1) WC       (1) WC       CJ4.00150       CJ4.00149       ROOM       CJ4.00037       CJ4.00037       (1) WC       (1) WC	X         MEN RM.           CJ4.00060         JAN.         WAITING         MEN RM.           (3) WC         CJ4.00036B         CJ4.0001A         CJ4.00060           (2) UR         (1) 3" S.SK.         (1) DF         (3) LAV           (1) 3" FD         21 DFU         5 DFU         1 DFU         3 DFU	MECH RM.         WTR SVC         TLT         HLD         HLD-GRP         HOLD         VEST.           CJ4.00112         CJ4.00110         CJ4.00031         CJ4.00087         CJ4.00089         CJ4.00085         CJ4.00081           (6) 4" FD         (4) 4" FD         (1) WC         (1) CU         (1) CU         (1) 2" FD         (1) 2" FD           36 DFU         24 DFU         5 DFU         5 DFU         5 DFU         2 DFU         2 DFU	HLD-ADA         TLT         HLD-GRP M.         CORR.         HLD-GRP F.         SEC. CORR.         TLT         TLT         TLT         TLT         VEH           CJ4.00082         CJ4.00028         CJ4.00198A         CJ4.00198         CJ4.00198B         CJ4.00090         CJ4.00025         CJ4.00026         CJ4.00027         SALI           (1) CU         (1) WC         (1) CU         (1) 2" FD         (1) CU         (1) DF         (1) WC         (1) WC         (1) WC         CJ4.00027         SALI           (1) LAV         (1) LAV         (1) CU         (1) 2" FD         (1) CU         (1) DF         (1) WC         (1) WC         (1) WC         CJ4.00027         CJ4.00026         CJ4.00026         CJ4.00027         CJ4.00198         CJ4.001
12 DFU     17 DFU     24 DFU     29 DFU     30 DFU     37 DFU     44 DFU     10 DFU     16 DFU     19 DFU     373 DFU     384 DFU	433 DFU 438 DFU 1 DFU 442 DFU 1250 DFU 1250 DFU	36 DFU         94 DFU           1344 DFU         5 DFU         10 DFU         15 DFU         17 DFU         19 DFU	24 DFU 29 DFU 34 DFU 36 DFU 41 DFU 42 DFU 47 DFU 52 DFU 57 DFU
L-S TO SANITARY SEWER		1368 DFU C SANITARY SEWER	

SANITARY RISER DIAGRAM

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![](_page_29_Picture_8.jpeg)

Project No: 2017-178.CCC Sheet Title SANITARY RISER DIAGRAM

Issue Date: 02/13/19

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No.Revision DescriptionA1.5CJ4.1 Addendum 5A1.6CJ4.1 Addendum 6A1.8CJ4.1 Addendum 8

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![](_page_29_Figure_11.jpeg)

Date 06.20.2019 06.27.2019 08.08.2019

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![](_page_29_Figure_12.jpeg)

![](_page_29_Picture_13.jpeg)

![](_page_29_Figure_14.jpeg)

![](_page_29_Figure_15.jpeg)

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![](_page_29_Figure_19.jpeg)

8200 SF 2100 SF 4400 SF 3800 SF 3500 SF 3400 SF 25600 SF 2 _____ 1 _____

9 —— 8 ——— 7 _____

10 —

PENTHOUSE

11 —

![](_page_30_Figure_32.jpeg)

STORM RISER DIAGRAM SCALE: NONE

500 SF	2100 SF	4650 SF	2700 SF 4200 SF		2800 SF	3000 SF 2700 SF
	2600 SF	11550 SF				
		14150 SF				8500 SF
				9300 S	F 9300 SF	
					18600 SF	
						07/00.05
00 SF 9	9200 SF					27100 SF
184	400 SF					
		29950 SF				
					000	
			S		9375 SF SPRINKLER RISER DRAIN	<b>36475 SF</b>
			12" TO SEWER			12" TO SEWER

![](_page_30_Picture_35.jpeg)

Sheet Title STORM DRAINAGE **RISER DIAGRAM** 

Issue Date: 03.01.2019

Project No: 2017-178.CCC

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![](_page_30_Figure_39.jpeg)

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![](_page_30_Figure_40.jpeg)

![](_page_30_Figure_41.jpeg)

![](_page_30_Picture_42.jpeg)

Professional Stamp

![](_page_30_Picture_43.jpeg)

ENGINEERS | ARCHITECTS | LAND SURVEYORS

![](_page_30_Picture_44.jpeg)

![](_page_30_Picture_45.jpeg)

![](_page_30_Picture_46.jpeg)

![](_page_30_Picture_47.jpeg)

Project
Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities

2900 Prospect St Indianapolis, IN 46203

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WILHELM

CONSTRUCTION

5 ——— 4 ———

10 -

_____

1 CU

2 WC

| 2 LAV || 3 SHW |

3 LAV

PENTHOUSE 11 ———

## COLD WATER RISER DIAGRAM SCALE: NONE

![](_page_31_Figure_15.jpeg)

![](_page_31_Figure_16.jpeg)

![](_page_31_Picture_17.jpeg)

Sheet Title COLD WATER RISER DIAGRAM

Issue Date: 03.01.2019

Project No: 2017-178.CCC

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![](_page_31_Picture_21.jpeg)

Date

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_____ No. Description

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![](_page_31_Figure_22.jpeg)

![](_page_31_Picture_23.jpeg)

![](_page_31_Picture_24.jpeg)

![](_page_31_Picture_25.jpeg)

![](_page_31_Picture_26.jpeg)

![](_page_31_Picture_27.jpeg)

City of Indianapolis

WILHELM

CONSTRUCTION

Project
Consolidated Civil and

Criminal Courthouse -

Underground Utilities

Foundations &

2900 Prospect St Indianapolis, IN 46203

Prepared For

![](_page_31_Picture_29.jpeg)

![](_page_32_Figure_1.jpeg)

HOT WATER RISER DIAGRAM SCALE: NONE

![](_page_32_Figure_3.jpeg)

![](_page_32_Picture_4.jpeg)

-----Sheet Title HOT WATER RISER DIAGRAM

Project No: 2017-178.CCC

Issue Date: 03.01.2019

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![](_page_32_Figure_9.jpeg)

![](_page_32_Figure_10.jpeg)

![](_page_32_Figure_11.jpeg)

UNIT B UNIT A

![](_page_32_Picture_12.jpeg)

Professional Stamp

![](_page_32_Picture_13.jpeg)

ENGINEERS | ARCHITECTS | LAND SURVEYORS

![](_page_32_Picture_14.jpeg)

WILHELM CONSTRUCTION 3914 Prospect Street, Indianapolis, IN 46203 317.359.5411 In Association with Better Foresight Better Insight Better On-Site 317.263.6226

![](_page_32_Picture_16.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities

2900 Prospect St Indianapolis, IN 46203

	ABBRI	EVIATIONS	ELECTRICAL LEGI	END & SYMBOLS				
	A		LIGHTING		WIRING DEVICES		FIRE ALARM SYS	TEM
	AC	ALTERNATING CURRENT AMPERES FRAME (BREAKER RATING)	SUBSCRIPTS FOR LIGHTING FIXTURES INDIC	ATE THE FOLLOWING, U.O.N.	SUBSCRIPTS FOR RECEPTACLES, JUNCTION	N BOXES AND OTHER DEVICES INDICATE THE	SUBSCRIPTS FOR FIRE ALARM SYSTEM DE	VICES INDICATE THE FOLLOWING, U.O.N:
	AFF AHU	ABOVE FINISH FLOOR AIR HANDLING UNIT	NL - NIGHT LIGHT, PA	NEL SWITCHED, U.O.N.	FOLLOWING, U.O.N: F - FLUSH IN FLOOR	L - LOCKING TYPE	S - SURFACE MOUNTED WP - WEATHERPROOF	
	AT ATS	AMPERES TRIP (BREAKER SETTING)		LIGHTING FIXTURE - TYPE AS INDICATED		I TP - TAMPER RESISTANT S - SURFACE MOUNTED WP - WEATHERPROOF IN JUSE	X - MOUNTED IN EXISTING OUTLET BOX	
	AUX	AUXILIARY			IG - ISOLATED GROUND	X - MOUNTED IN EXISTING OUTLET BOX		(FLUSH/SURFACE)
	с	CONDUIT	<u> </u>	WALL MOUNTED FIXTURE - TYPE AS INDICATED	φφ	OR COUNTERTOP TO BOTTOM) SIMPLEX RECEPTACLE, 2 POLE, 3 WIRE (NEMA		REMOTE FIRE ALARM CONTROL PANEL
	СВ СКТ	CIRCUIT BREAKER CIRCUIT		LIGHTING FIXTURE - TYPE AS INDICATED		520R) 725V.20A., (WALL/+2" ABOVE BACKSLPASH OR COUNTERTOP TO BOTTOM) DUPLEX		(FLUSH/SURFACE)
	СР		-& X	POLE MOUNTED LIGHTING FIXTURE - TYPE AS INDICATED		RECEPTACLE, 2 POLE, 3 WIRE (NEMA		FIRE ALARM ANNUNCIATOR PANEL (FLUSH/SURFACE)
	CPT	CURRENT TRANSFORMER		TRACK LIGHTING FIXTURE		BACKSPLASH OR COUNTERTOP TO BOTTOM) DOUBLE DUPLEX		
	DISC	DISCONNECT		EMERGENCY BATTERY WALL PACK	Н Ж Ж	(QUADRAPLEX) RECEPTACLE, 2 POLE, 3 WIRE (NEMA 5-20R)	<u>M</u>	
	DL DP	DOUBLE LUGS POWER DISTRIBUTION PANEL		LIGHTING FIXTURE - TYPE AS INDICATED SHADING INDICATES EMERGENCY	₽ ^{GFCI}	125V. 20A., (CEILING, MOUNTED) DUPLEX RECEPTACLE, 2 POLE, 3 WIRE (NEMA 5-20R)	\V ISI	SPEAKER
	DWG	DRAWING		FIXTURE CONNECTED TO BATTERY INVERTER OR GENERATOR. CONNECT TO		125V. 20A., (WALL/+2" ABOVE BACKSPLASH OR		SPEAKER/STROBE
	EF	EXHAUST FAN		UNSWITCHED SOURCE IN ADDITION TO SWITCHING INDICATED	<b>• •</b>	COUNTERTOP TO BOTTOM) EMERGENCY DUPLEX RECEPTACLE, 2 POLE, 3 WIRE		
	EG ELEC	EQUIPMENT GROUND ELECTRIC/ELECTRICAL		EXIT LIGHT - WALL/CEILING MOUNTED -		(NEMA 5-20R) 125V. 20A., (WALL/+2" ABOVE BACKSPLASH OR		HORN
	EM/EMERG		•••	DIRECTIONAL ARROWS AS INDICATED, SHADING INDICATES ILLUMINATED FACE.		COUNTERTOP TO BOTTOM) DOUBLE DUPLEX (QUADRAPLEX) RECEPTACLE, CONNECTED TO		HORN/STROBE
	EO	ELECTRICALLY OPERATED	-	CONNECT TO UNSWITCHED BRANCH CIRCUIT INDICATED		EMERGENCY POWER SYSTEM, 2 POLE, 3 WIRE (NEMA 5-20R)	$\square$	VISUAL STROBE
<ul> <li>Control and the control of the control</li></ul>	F	FUSE			φφ	SPECIAL RECEPTACLE - NEMA CONFIGURATION AS INDICATED ON DRAWING	∑	
	FA FB	FIRE ALARM FLOOR BOX			O Q	JUNCTION BOX (RECESSED/SURFACE)	B	
	FDR	FEEDER		POWER DISTRIBUTION PANELBOARD -			E _s	SMOKE DETECTOR
	FL FLEX	FLEXIBLE		480Y/277V, 3Ø, 4W & GRD, U.O.N.		DIRECT CONNECTION TO EQUIPMENT	Ē	HEAT DETECTOR
	FTL	FEED THRU LUGS		208Y/120V, 3Ø, 4W & GRD, U.O.N.	РВ	PULLBOX. PROVIDE PULLBOXES INDICATED		
	G	GROUND		BRANCH CIRCUIT PANELBOARD 208Y/120V OR 480Y/277V, 3Ø, 4W & GRD,		PULLBOXES, SIZED PER NEC, AS REQUIRED	S S	
				TERMINAL CABINET, TYPE AS NOTED ON	-~	FLUSH JUNCTION BOX WITH FURNITURE FEED ADAPTING CONNECTOR MOUNTED AT 6" A F F	©	DUCT DETECTOR - RETURN DUCT
	HP HOA	HORSEPOWER HAND-OFF-AUTOMATIC		DRAWINGS (FLUSH/SURFACE)			R	DOOR HOLD RELEASE DEVICE
	JB	JUNCTION BOX		INDICATED, NL INDICATES NON-LINEAR TYPE		RECEPTACLES IN LOCATIONS INDICATED		
						WIREWAY - WALL MOUNTED U.O.N.		
	KVA	KILOVOLTS-AMPERES	МСВ	SWITCHBOARD W/MAIN CIRCUIT BREAKER SECTION	FB	FLOOR BOX	TS	SPRINKLER SYSTEM TAMPER SWITCH
	KVAR KW	KILOVOLTS-AMPERES-REACTIVE KILOWATTS					FS	SPRINKLER SYSTEM FLOW SWITCH
	КШН	KILOWATT-HOURS		AUTOMATIC TRANSFER SWITCH				
	LA	LIGHTNING ARRESTOR		WORKING CLEARANCE ABOUT	\$	SINGLE POLE SWITCH		SPRINKLER STSTEM PRESSURE SWITCH
			j		\$ ₃	THREE-WAY SWITCH	P	POST INDICATOR VALVE
	MAX MCB	MAXIMUM MAIN CIRCUIT BREAKER	— — — UG — — —	UNDERGROUND CONDUIT/DUCTBANK			(NOTES APPLY TO ALL ELECTRICAL DRAW	'INGS)
	MCC MECH	MOTOR CONTROL CENTER MECHANICAL	FB	FEEDER BUSWAY	\$ ₄	FOUR-WAY SWITCH	CENER	
	MH		РВ	PLUG-IN BUSWAY	\$ _P	SINGLE POLE SWITCH W/ PILOT LIGHT	GENER ш	
	MISC	MISCELLANEOUS	G	GROUND CABLE, SIZE AS INDICATED	\$ _{3D}	THREE-WAY SWITCH WITH PILOT LIGHT	A CONNECT ALL LIGHTING FIXTURES W	ITHIN ROOM TO INDICATED SWITCH AND BRANCH
	MLO MTD	MAIN LUGS ONLY MOUNTED					CIRCUIT, U.O.N. B WHERE MULTIPLE SWITCHES, RECEP	TACLES, AND OTHER OUTLETS (EXCEPT PHONES)
	MTG	MOUNTING			\$ _K	KET OPERATED SINGLE POLE SWITCH	ARE INDICATED, PROVIDE MULTI-GAN AND A COMMON FACEPLATE FOR SIM	GEBACK OUTLET BOXES WITH GANG BARRIERS ILIAR DEVICES.
	NC				\$ _{3K}	KEY OPERATED THREE-WAY SWITCH	C WHERE EXIT SIGNS ARE INDICATED A DISTANCE BETWEEN THE TOP OF THE	BOVE DOOR, MOUNT AS FOLLOWS: IF THE E DOOR FRAME AND THE CEILING IS 24 INCHES OR
	NEC	NON-FUSED		CONDUIT TURNED DOWN	\$ and	WALL-MOUNTED, DUAL-TECHNOLOGY OCCUPANCY SENSOR WITH (1) MANUAL	OTHERWISE, MOUNT BOTTOM OF EXI MOUNT OTHER WALL MOUNTED EXIT	T SIGN 6 INCHES ABOVE TOP OF DOOR FRAME. SIGNS LOCATED WITHIN THE SAME AREA AT THE
	NIC NO	NOT IN CONTRACT NORMALLY OPEN	МЕМН	ELECTRIC MANHOLE	¥0S1	OVERRIDE LIGHT SWITCH, MANUAL-ON- OFF/AUTOMATIC-OFF OPERATION	SAME HEIGHT.           D         WHERE DIFFERENT RECESSED ELECT	TRICAL DEVICES WITH THE SAME MOUNTING
	NO.	NUMBER NOT TO SCALE		HOMERUN TO PANEL WITH CIRCUIT NUMBER(S) AS INDICATED	\$ ₀₅₂	WALL-MOUNTED, DUAL-TECHNOLOGY OCCUPANCY SENSOR WITH (2) MANUAL	HEIGHTS ARE INDICATED SIDE-BY-SIE INCHES BETWEEN ADJACENT VERTIC	DE, MOUNT THE DEVICES SO THAT THERE IS FOUR AL EDGES.
				GROUND WIRE		OVERRIDE LIGHT SWITCHES, MANUAL-ON- OFF/AUTOMATIC-OFF OPERATION	E WHERE ELECTRICAL DEVICES WITH D THE SAME AREA ALIGN DEVICES VER	DIFFERENT MOUNTING HEIGHTS ARE LOCATED IN TICALLY THROUGH THEIR CENTERLINES.
	OC OL'S	ON CENTER OVERLOADS	I	PHASE WIRE	(m)	1000SQFT COVERAGE, CEILING-MOUNTED, DUAL-TECHNOLOGY OCCUPANCY SENSOR	F INSTALL SEPARATE INDEPENDENT NE CIRCUITS. DO NOT SHARE NEUTRALS	EUTRAL CONDUCTORS FOR ALL 120V AND 277V
Pice       Pulse ButTown         Pice       Pulse ButTown         Pice       Pice          Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice         Pice       Pice	P	POLE				WITH TWO RELAYS, DISTRIBUTION COVERAGE AS REQUIRED FOR SPACE SIZE	H INSTALL NO MORE THAN THREE PHAS	DICATED WITH "NL" SHALL BE UNSWITCHED. SE CONDUCTORS (PLUS NEUTRALS AND GROUND)
	PB	PUSH BUTTON				2000SQFT COVERAGE, CEILING-MOUNTED, DUAL-TECHNOLOGY OCCUPANCY SENSOR	I NUMBER OF WIRES INDICATED ON DE	RAWINGS, IN PANEL SCHEDULES AND CIRCUIT
Image: Control Light The Present of Control Light The Present of Control Light The Control Light The Present of Control Light The	PT	POTENTIAL TRANSFORMER	•	GROUND ROD		WITH TWO RELAYS, DISTRIBUTION COVERAGE AS REQUIRED FOR SPACE SIZE	NEUTRALS. IN ADDITION TO THE NUM EQUIPMENT GROUNDING CONDUCTO	IBER OF WIRES INDICATED, PROVIDE AN R SIZED AS SCHEDULED OR SIZED BY NEC 250.
RECEPT RECEPT RECEPT RECEPT ALLE       Reference F       Recert Rocker A       Reference F	RCLP	REMOTE CONTROL LIGHTING PANEL	(M)	MOTOR - "M" INDICATES HORSEPOWER	HB	HIGHBAY COVERAGE, CEILING-MOUNTED, DUAL-TECHNOLOGY OCCUPANCY SENSOR	J UNLESS OTHERWISE NOTED, PROVID AN AMPACITY EQUAL TO OR GREATER	E FEEDERS AND BRANCH CIRCUITS WHICH HAVE R THAN THE CIRCUIT OVERCURRENT PROTECTIVE
NP     RECEIPTALE PANELBOARD       NR     FGR APPLCATION, PROVIDE SWITCH ADDRESS OF THE ADDRESS OF	RECEPT.	RECEPTACLE RETURN FAN		HEAVY-DUTY DISCONNECT SWITCH, NON- FUSED, NUMBER OF POLES AS REQUIRED		AS REQUIRED FOR SPACE SIZE	DEVICE RATING SERVING THE CIRCU OF FEEDERS AND BRANCH CIRCUITS	T. REFER TO CIRCUIT SIZING SCHEDULE FOR SIZES
INC.	RP			FOR APPLICATION, PROVIDE SWITCH AMPACITY AS INDICATED (DS-#)			K COORDINATE LOCATION OF CEILING I EQUIPMENT TO AVOID INTERFERENC	MOUNTED FIRE ALARM DEVICES WITH OTHER E. LOCATE FIRE ALARM DEVICES AS NEAR TO IG INTERFERENCES
Schedbull     Charlener     Prove APPLicATION, PROVIDE SWITCH AMAGENITY PROVIDED     Provide Application of the Control of the of the	<u>къс</u>			HEAVY-DUTY DISCONNECT SWITCH, FUSED, NUMBER OF POLES AS REQUIRED			L MAKE FINAL CONNECTION BETWEEN	DISCONNECT AND EQUIPMENT BEING SERVED BY
str       struct Trap       COMBINATION MOTOR STARTER (MS-4)         Str       struct Trap       Str       Struct Trap         Str       struct Trap       Str       Struct Str	SCHED SF	SCHEDULE SUPPLY FAN		FOR APPLICATION, PROVIDE SWITCH AMPACITY AS INDICATED (DS-#)			M DIVISION 26 CONTRACTOR SHALL REF REQUIREMENTS DIVISION 26 CONTRACTOR	FER TO LIFE SAFETY PLAN FOR FIRE-RATING ACTOR SHALL BE RESPONSIBLE FOR PROVIDING
UNX       SWITCH       VARUABLE FREQUENCY DRIVE (MS-#)         SW       SWITCH       VARUABLE FREQUENCY DRIVE (MS-#)         SW       SWITCH       PROLECTION         SW       MOTOR RATE OF SWITCH (200, SMGLE) SWITCH (2008, PARELEOASD)       PROLECTION SWITCH (2008, PARELEOASD)         TB       TERMINAL BLOCK       MOTOR RATE OF SWITCH (2008, PARELEOASD)         UON       UNLESS OTHERWISE NOTED       PROLECTION SWITCH (2008, PARELEOASD)         W       PROLECTION SWITCH (2008, PARELEOASD)         UON       UNLESS OTHERWISE NOTED       PROLECTION SWITCH (2008, PARELEOASD)         W       PROLECTION SWITCH (2008, PARELEOASD)       PROLECTION SWITCH (2008, PARELEOASD)         W       VICAL       PARELEOATOR       PROLECTION SWITCH (2008, PARELEOASD)         W       VOLTS       PARELEOATOR       PROLECTION SWITCH (2008, PARELEOASD)         W       VOLTS       PUSH BUTTON CONTROL STATION       PUSH BUTTON CONTROL STATION         V       VOLTS       PUSH BUTTON CONTROL STATION       PUSH BUTTON CONTROL STATION         W       WIRE       PUSH BUTTON CONTROL STATION       PUSH BUTTON CONTROL STATION         V       VOLTS       PUSH BUTTON CONTROL STATION       PUSH BUTTON CONTROL STATION         VOLTAGE       PUSH BUTTON CONTROL STATION       PUSH BUTTON CONTROL STATION	ST etd			COMBINATION MOTOR STARTER (MS-#)			FIRE-RATED DEVICES/SEALS AS SHOW BASED ON LIFE SAFETY PLAN INFORM	NN ON ELECTRICAL DRAWINGS AND AS REQUIRED
SWIL       SWIL       MOTOR RESUMANCY         Image: Constraint of the constraint	SW	SWITCH		VARIABLE FREQUENCY DRIVE (MS-#)			N PER NEC ARTICLE 110.26(A) AND 110.2 INCLUDES THE SPACE DEFINED BY EX	26(F) THE DEDICATED ELECTRICAL SPACE KTENDING THE FOOTPRINT OF THE ELECTRICAL
TERMINAL BLOOK       """       Switching       Switching <thswitching< th=""> <thswitching< th=""></thswitching<></thswitching<>	SWBD	SWITCHBOARD	¢	MOTOR RATED SWITCH (120V, SINGLE PHASE, HORSEPOWER RATED TOGGLE			EQUIPMENT (INCLUDING BUT NOT LIN TRANSFORMERS, MOTOR CONTROLL ABOVE THE HEIGHT OF THE FOUNDATE	ITED TO SWITCHBOARDS, PANELBOARDS, ERS) FROM THE FLOOR TO A HEIGHT OF 6'-0" NT OR TO THE STRUCTURAL CEILING MULICH EVED
Lig       Bit address of the RWISE NOTED       INSTAILATION PLUBMENT, HEATING, VENTLATION, AND ADARTING, VENTLATION, VENTLATION	TB TYP	TERMINAL BLOCK TYPICAL	₩M				IS LOWER. THE DEDICATED ELECTRIC LEAK PROTECTION APPARATUS, OR E	CAL SPACE MUST BE CLEAR OF ANY PIPING, DUCTS, EQUIPMENT FOREIGN TO THE ELECTRICAL
Image: Contract of the state way a buff in Open and the state way a				KVAR SIZE.			INSTALLATION. PLUMBING, HEATING, DUCTS, AND EQUIPMENT MUST BE INS	VENTILATION, AND AIR-CONDITIONING PIPING, STALLED OUTSIDE THE WIDTH AND DEPTH ZONE.
v     volts       w     wire       Description     push button control station       Bit Mark Boards     Distribution Panel Boards       1     1       2     208V/120V       4     480V/277V       FLOOR NUMBER     B-assement       2     208V/120V       4     480V/277V       FLOOR NUMBER     B-assement       2     2.2ND FLOOR			Ê	EMERGENCY SHUTOFF PUSHBUTTON			ELECTRICAL EQUIPMENT. COORDINA TRADES PRIOR TO INSTALLATION	TE THESE REQUIREMENTS WITH ALL OTHER
W WIRE  PANELBOARD NAMING  BRANCH PANELBOARDS  I 2 0F A 1 SEQUENCAL PANEL NUMBER I 3 0F A 1 SEQUENCAL PANEL	V	VOLTS	E	PUSH BUTTON CONTROL STATION			O CONTRACT DOCUMENTS CONSISTS C BOTH ARE MEANT TO BE COMPLEMENT	F BOTH A PROJECT MANUAL AND DRAWINGS.
PANELBOARD NAIVING         BRANCH PANELBOARDS         12 A 1         SEQUENCAL PANEL NUMBER         12 A 1         FLOOR PLAN UNIT         B - UNIT B         VOLTAGE         2 - 208Y/120V         FLOOR NUMBER         1 - ST FLOOR         PLOOR NUMBER         1 - ST FLOOR         1 - ST FLOOR         1 - ST FLOOR         1 - ST FLOOR         2 - 20ND FLOOR         2 - 2ND FLOOR	W	WIRE					BE EXECUTED THE SAME AS IF SHOW	N ON BOTH.
DRANCE PARELEQUARUS       USI INIEUI IUN PARELEQUARUS         12 P A 1       SEQUENCAL PANEL NUMBER         FLOOR PLAN UNIT       - UNIT A         B - UNIT B       - UNIT B         C - 208Y1/20V       - VOLTAGE         VOLTAGE       - 2.208/120V         A - 480Y/277V       - 2.208/120V         B - BASEMENT       FLOOR NUMBER         1 - 1ST FLOOR       B - BASEMENT         2 - 2ND FLOOR       1 - 1ST FLOOR         2 - 2ND FLOOR       - 1-SEQUENCAL								
SEQUENCAL PANEL NUMBER       SEQUENCAL PANEL NUMBER         FLOOR PLAN UNIT       FLOOR PLAN UNIT A         A - UNIT A       A - UNIT A         B - UNIT B       B - UNIT B         VOLTAGE       "DISTRIBUTION PANEL"         2 - 208Y/120V       VOLTAGE         FLOOR NUMBER       - 2.208Y/120V         FLOOR NUMBER       - 4.369Y/277V         B - BASEMENT       FLOOR NUMBER         1 - 1ST FLOOR       B - BASEMENT         1 - 1ST FLOOR       B - BASEMENT         2 - 2ND FLOOR       1 - 1ST FLOOR         2 - 2ND FLOOR       2 - 2ND FLOOR			$\frac{\text{BRANCH PANELBOARDS}}{1 \xrightarrow{2}{4} \xrightarrow{1}{4}}$	$\frac{DISTRIBUTION PANELBOARDS}{1 + 2 - DP} = 1$				
B - UNIT B     B - UNIT B       VOLTAGE     "DISTRIBUTION PANEL"       2 - 208Y/120V     VOLTAGE       4 - 480Y/277V     2 - 208Y/120V       FLOOR NUMBER     4 - 480Y/277V       B - BASEMENT     FLOOR NUMBER       1 - 1ST FLOOR     B - BASEMENT       2 - 2ND FLOOR     1 - IST FLOOR       2 - 2ND FLOOR     2 - 2ND FLOOR								
2 - 208Y/120VVOLTAGE4 - 480Y/277V2 - 208Y/120VFLOOR NUMBER4 - 480Y/277VB - BASEMENTFLOOR NUMBER1 - 1ST FLOORB - BASEMENT2 - 2ND FLOOR1 - 1ST FLOOR2 - 2ND FLOOR2 - 2ND FLOOR				B - UNIT A B - UNIT B "DISTRIBUTION PANFI "				
FLOOR NUMBER       4 - 480Y/277V         B - BASEMENT       FLOOR NUMBER         1 - 1ST FLOOR       B - BASEMENT         2 - 2ND FLOOR       1 - 1ST FLOOR         2 - 2ND FLOOR       2 - 2ND FLOOR			2 - 208Y/120V 4 - 480Y/277V	VOLTAGE 2 - 208Y/120V				
1 - 1ST FLOOR     B - BASEMENT       2 - 2ND FLOOR     1 - 1ST FLOOR       2 - 2ND FLOOR     2 - 2ND FLOOR			FLOOR NUMBER B - BASEMENT	4 - 480Y/277V FLOOR NUMBER				
			1 - 1ST FLOOR 2 - 2ND FLOOR	В - BASEMENT 1 - 1ST FLOOR 2 - 2ND FLOOR				

![](_page_33_Picture_7.jpeg)

**CBRE** HEERY

CBRE | HEERY 100 E. Pine St., Ste. 300 Orlando, FL 32801 t 407.992.6300

![](_page_33_Picture_10.jpeg)

![](_page_33_Picture_11.jpeg)

![](_page_33_Picture_12.jpeg)

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![](_page_33_Picture_13.jpeg)

![](_page_33_Figure_14.jpeg)

Issue Date: 03.01.2019

Project No: 2017-178.CCC Sheet Title SYMBOLS & ABBREVIATIONS

Criginal drawing is 48 x 36 Do not scale contents of this drawing Sheet Number CJ4.1-E-001

![](_page_34_Picture_1.jpeg)

	CJ4	VORK		
	COURTS			
SHERIFF'S OFFICE			CJ6 CENTRAL UTILITY PLANT (C.U.P.)	

1A CJ4.1 OVERALL SITE PLAN

## **GENERAL SITE NOTES**

NOTES

![](_page_34_Picture_6.jpeg)

![](_page_34_Picture_7.jpeg)

Project Consolidated Civil and Criminal Courthouse -Foundations & Underground Utilities 2900 Prospect St Indianapolis, IN 46203

![](_page_34_Picture_10.jpeg)

![](_page_34_Picture_11.jpeg)

![](_page_34_Picture_12.jpeg)

![](_page_35_Figure_2.jpeg)

	GENERAL SITE NOTES
#	NOTES
Α	REFER TO SHEET E-001 FOR ADDITIONAL INFORMATION.
	SITE PLAN NOTES
#	NOTES
1	6'L X 4'W X 6'H PRECAST MANHOLE FURNISHED AND INSTALLED BY CJ6 CONTRACTOR.
2	INSTALL (2) EMPTY 4" PVC CONDUITS FOR 13.2KV NORMAL POWER FEEDER FOR SWITCHGEAR NCDSA-BUS A FROM MANHOLE TO FOUNDATION WALL IN CONCRETE DUCT BANK. REFER TO 1/CJ4.1-E-501 FOR DUCT BANK DETAIL. PROVIDE CONNECTION BETWEEN DUCT BANK AND MANHOLE, AND DUCT BANK AND FOUNDATION WALL DOWELED WITH 4#5 REBAR. EPOXY REBAR INTO DRILLED HOLES, DRILL HOLE DEPTH 1/2 THE WALL THICKNESS.
3	EXTEND (2) EMPTY 4" PVC CONDUITS FOR 13.2KV NORMAL POWER FEEDER FOR SWITCHGEAR NCDSA-BUS A THROUGH FOUNDATION WALL TO SWITCHGEAR LOCATION DIRECT BURIED BELOW SLAB. REFER TO 3/CJ4.1-E-501 FOR CONDUIT-STUB UP DETAIL.
4	INSTALL (2) EMPTY 4" PVC CONDUITS FOR 13.2KV NORMAL POWER FEEDER FOR SWITCHGEAR NCDSA-BUS B FROM MANHOLE TO FOUNDATION WALL IN CONCRETE DUCT BANK. REFER TO 1/CJ4.1-E-501 FOR DUCT BANK DETAIL. PROVIDE CONNECTION BETWEEN DUCT BANK AND MANHOLE AND DUCT BANK, AND FOUNDATION WALL DOWELED WITH 4#5 REBAR. EPOXY REBAR INTO DRILLED HOLES, DRILL HOLE DEPTH 1/2 THE WALL THICKNESS.
5	EXTEND (2) EMPTY 4" PVC CONDUITS FOR 13.2KV NORMAL POWER FEEDER FOR SWITCHGEAR NCDSA-BUS B THROUGH FOUNDATION WALL TO SWITCHGEAR LOCATION DIRECT BURIED BELOW SLAB. REFER TO 3/CJ4.1-E-501 FOR CONDUIT STUB-UP DETAIL.
6	INSTALL (2) EMPTY 4" PVC CONDUIT FOR 480V LIFE SAFETY POWER FEEDER FOR PANELBOARD LC1HA FROM MANHOLE TO FOUNDATION WALL IN CONCRETE DUCT BANK. REFER TO 1/CJ4.1-E-501 FOR DUCT BANK DETAIL. PROVIDE CONNECTION BETWEEN DUCT BANK AND MANHOLE, AND DUCT BANK AND FOUNDATION WALL DOWELED WITH 4#5 REBAR. EPOXY REBAR INTO DRILLED HOLES, DRILL HOLE DEPTH 1/2 THE WALL THICKNESS.
7	EXTEND (2) EMPTY 4" PVC CONDUITS FOR 480V LIFE SAFTEY POWER FEEDER FOR PANELBOARD LC1HA FROM FOUNDATION WALL TO PANELBOARD LC1HA STUB-UP LOCATION DIRECT BURIED BELOW SLAB. REFER TO 4/CJ4.1-E-501 FOR STUB-UP DETAIL.
8	INSTALL (1) EMPTY 4" PVC CONDUIT FOR 480V EMERGENCY POWER FEEDER FOR FIRE PUMP FROM MANHOLE TO FOUNDATION WALL IN CONCRETE DUCT BANK. REFER TO 1/CJ4.1-E-501 FOR DUCT BANK DETAIL. PROVIDE CONNECTION BETWEEN DUCT BANK AND MANHOLE, AND DUCT BANK AND FOUNDATION WALL DOWELED WITH 4#5 REBAR. EPOXY REBAR INTO DRILLED HOLES, DRILL HOLE DEPTH 1/2 THE WALL THICKNESS.
9	EXTEND (1) EMPTY 4" PVC CONDUIT FOR 480V EMERGENCY POWER FEEDER FOR FIRE PUMP FROM THE FOUNDATION WALL TO FIRE PUMP CONTROLLER LOCATION. REFER TO 3/CJ4.1-E-501 FOR STUB-UP DETAIL.
10	INSTALL (1) EMPTY 2" PVC CONDUIT FOR 13.2KV NORMAL POWER FEEDER FOR FIRE PUMP TRANSFORMER FROM MANHOLE TO FOUNDATION WALL IN CONCRETE DUCT BANK. REFER TO 1/CJ4.1-E-501 FOR DUCT BANK DETAIL. PROVIDE CONNECTION BETWEEN DUCT BANK AND MANHOLE, AND DUCT BANK AND FOUNDATION WALL DOWELED WITH 4#5 REBAR. EPOXY REBAR INTO DRILLED HOLES, DRILL HOLE DEPTH 1/2 THE WALL THICKNESS.
11	EXTEND (1) EMPTY 2" PVC CONDUIT FOR 13.2KV NORMAL POWER FEEDER FOR FIRE PUMP TRANSFORMER FROM THE FOUNDATION WALL TO TRANSFORMER

LOCATION. REFER TO 3/CJ4.1-E-501 FOR STUB-UP DETAIL. 12 EXTEND (1) EMPTY 4" PVC CONDUIT FOR 480V NORMAL POWER FEEDER FOR FIRE PUMP CONTROLLER FROM FIRE PUMP TRANSFORMER. REFER TO 3/CJ4.1-E-501 FOR STUB-UP DETAIL.

![](_page_35_Picture_10.jpeg)

CBRE | HEERY 100 E. Pine St., Ste. 300 Orlando, FL 32801

Lynch, Harrison & Brumleve,

550 Virginia AvenueP 317.423.1550Indianapolis, IN 46203F 317.423.1551

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STRUCTURAL ENGINEERS

consulting management inspection design ENGINEERS | ARCHITECTS | LAND SURVEYORS

+ ACOUSTICS

Professional Stamp

_____

Mcgee designhouse commercial interiors

t 407.992.6300

![](_page_35_Picture_11.jpeg)

![](_page_35_Picture_12.jpeg)

-----Issue Date: 03.01.2019 Project No: 2017-178.CCC Sheet Title UNDERGROUND ROUTINGS Original drawing is 48 x 36 Do not scale contents of this drawing Sheet Number

CJ4.1-ES102

![](_page_36_Figure_1.jpeg)

![](_page_36_Figure_2.jpeg)

 $\langle \times \rangle$ 

12" A.F.F. MAX

- FUTURE CONDUIT AND

COUPLING

- FLOOR SLAB

![](_page_36_Figure_3.jpeg)

![](_page_36_Figure_4.jpeg)

۵____

3"

-----

- FINISHED GRADE

- MARKER RIBBON

RED OXIDE CEMENT COLOR
 SPRINKLED ON TOP

CONCRETE ENVELOPE -4000 PSI, 28 DAY STRENGTH

BACKFILL PLACED PER SPECIFICATIONS

CLEAN EARTH

![](_page_36_Picture_5.jpeg)

550 Virginia Avenue P 317.423.1550 Indianapolis, IN 46203 F 317.423.1551

STRUCTURAL ENGINEERS

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MCGCC designhouse commercial interiors

707

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![](_page_36_Figure_6.jpeg)

## TELECOM LEGEND

DATA VOICE LOCATION

DATA ONLY LOCATION WALL PHONE LOCATION

FB FLOORBOX LOCATION

WIRELESS ACCESS POINT - CEILING MOUNTED

÷	ABBREVIATI	<u>ONS:</u>	
	AFC	ABOVE FINISHED CEILING	
	AFF	ABOVE FINISHED FLOOR	
	AV		
	AWG		
	BLDG	BUILDING BUILDING MANAGEMENT SYSTEM	
	C. COND	CONDUIT	
	CAB	CABINET	
	CUP	CENTRAL UNIT PLANT	
	CCTV	CLOSED CIRCUIT TELEVISION	
	CR	COMMUNICATIONS ROOM OR CARD READER	
	DEMARC	DEMARCATION POINT	
	DWG		
		ELECTRICAL CONTRACTOR EQUIED LINSHIELD TWISTED PAIR	
	FO	FIBER OPTIC	
	FOPP	FIBER OPTIC PATCH PANEL	
	FT	FEET	
	FTU	FIBER TERMINAL UNIT	
	G, GRD	GROUND	
	GEN	GENERAL	
	GWY		
	" KVA	KILOVOLT-AMPERE	
	KW	KILOWATT	
	LAN	LOCAL AREA NETWORK	
	MAX	MAXIMUM	
	MC	MEDIA CONVERTER	
	MCR	MAIN COMMUNICATIONS ROOM	
	MIN		
	N/A	NOT APPLICABLE	
	NIC	NOT IN CONTRACT	
	NO, #	NUMBER	
	NTŚ	NOT TO SCALE	
	OD	OUTSIDE DIAMETER	
	OSP	OUTSIDE PLANT	
	PA	PUBLIC ADDRESS	
	PB	PULL BUX	
	PKG		
	PWR	POWER	
	QTA	QUICK TURN AROUND	
	RM	ROOM	
	RU	RACK MOUNT UNIT	
	SCS	STRUCTURED CABLING SYSTEM	
	SEC	SECURITY	
		SINGLE-MODE	
	STS	SPECIFICATION SHARED TENANT SERVICES	
	TBD	TO BE DETERMINED	
	TE	TELECOMMUNICATIONS ENCLOSURE	
	TV	TELEVISION	
	TYP	TYPICAL	
	UON	UNLESS OTHERWISE NOTED	
	UPS	UNINTERRUPTIBLE POWER SUPPLY	
	UIP		
	VA		
	WP	WEATHER PROO	

![](_page_37_Picture_8.jpeg)

Proiect No: Sheet Title TELECOM GENERAL INFORMATION

_____ Issue Date: 03.01.2019

![](_page_37_Figure_13.jpeg)

![](_page_37_Figure_14.jpeg)

![](_page_37_Picture_15.jpeg)

Bicsi

Matthew Connolly

BICSI ID # 212593

EXPIRES 12-31-21

![](_page_37_Picture_16.jpeg)

![](_page_37_Picture_17.jpeg)

![](_page_37_Picture_18.jpeg)

Orlando, FL 32801

WILHELM

CONSTRUCTION

3914 Prospect Street,

Indianapolis, IN 46203

![](_page_37_Picture_19.jpeg)

![](_page_37_Picture_20.jpeg)

GENERAL NOTES:

`A. THE DESIGN BUILD TEAM SHALL BE RESPONSIBLE FOR ALL THE WORK DESCRIBED IN THE DESIGN CRITERIA DOCUMENTS AND SHALL BE REFERERED TO THROUGHOUT THESE DOCUMENTS AS CONTRACTOR, THE PROJECT GENERAL CONDITIONS, AND ALL ADDITIONAL RIDERS. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR THE APPROXIMATE LOCATIONS FOR ALL NETWORKING EQUIPMENT AND DROPS. ALL FINAL EQUIPMENT COLOR AND FINISH SELECTIONS SHALL BE REVIEWED AND APPROVED BY THE PROJECT ARCHITECT. ALL FINAL LOCATIONS OF DROPS AD QUIPMENT SHALL BE REVIEWED AND APPROVED BY THE PROJECT ARCHITECT. C. IF THE DIVISION 27 GENERAL CONDITIONS AND THE PROKECT GENERAL CONDTIONS DIFFER ON THE SAME POINT, THEN THE STRICTECT DEFIINITIONG AND/OR INTERPRETATION SHALL BE FOLLOWED. D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE FINAL INFORMATION TRANSPORT SYSTEM QUIPMENT, CABLING, AND INFRASTRUCTURE LAYOUT AS SHOWIN ON THE DRAWINGS WITH THE SITE CONDITIONS. CONLFICTS, IF ANY, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, WHO SHALL APPROVE ALL CHANGES PRIOR TO THE INSTALLATION OF THE WORK. NOTES AND GRAPHIC REPRESENTATIONS ON THE DRAWINGS SHALL NOT LIMIT THE EXTENT OF THE WORK REQUIRED. CONTRACTOR SHALL PROVIDE A COMPLETE TURNKEY FULLY

THE ENGINEER.

LOCATIONS NOTED ON THE DRAWINGS ARE OBSTRUCTED AND/OR IF ANY MOUNTING LOCATION CONFLICTS OR PROBLEMS ARE DISCOVERED. ALL ELECTRICAL, SAFETY AND FIRE CODES SHALL BE FOLLOWED. IF FEDERAL, STATE AND OR LOCAL CODES DIFFER ON THE SAME POINT THEN THE STRICTEST DEFINITION SHALL BE FOLLOWED. H. ALL CONDUITS, CABLE TRAYS, PENETRATIONS, JUNCTION BOXES, CABLE LADDERS AND REQUIRED SUPPORTS SHALL BE PROVIDED BY THE CONTRACTOR. I. CONTRACTOR SHALL VERIFY THE SIZE OF ALL CONDUITS AND JUNCTION BOXES (30%

MAXIMUM FILL) WITH THE ELECTRICAL CONTRACTOR. RACEWAYS AND CONDUITS SHALL BE CONCEALED IN WALLS AND CEILINGS. ALL RACEWAYS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO WALLS. EXPOSED RACEWAYS, WHERE NECESSARY AND APPROVED BY THE ENGINEER SHALL ALSO BE RUN PARALLEL TO OR AT RIGHT ABLES TO WALLS. BUSHINGS SHALL BE INSTALLED AT THE END OF ALL CONDUITS

TO AVOID CHAFFING OF THE CABLE. WHERE CABLES AND/OR CONDUITS PASS THROUGH FIRE RATED, FIRE REISTANT AND/OR FIRE STOPPED FLOOR AND WALLS USE CABLE SLEEVES THAT PREVENT THE SPREAD OF FIRE OR PRODUCTS OF COMBUSTION RESISTANT MATERIALS. SLEEVES SHALL BE NELSON "FLAME SEAL" OR AS APPROVED BY THE ENGINEER. APPROVED FIRE SEALS SHALL BE PROVIDED AT ALL CABLE AND CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS. WHERE CONDUITS PASS THROUGH EXTERIOR WALLS, PENETRATION SHALL BE WATERPROOFED TO MAINTAIN

ORIGINAL ENVIRONTMENTAL RATING AND PROTECTION. ALL CONDUIT SHALL BE GROUNDED AND BONDED AND SHALL NOT CREAT BONDING LOOPS. THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT THE BEND RADIUS OF CONDUITS (UNDER 2 INCHES) SHALL BE NO LESS THAN SIX TIMES THE OUTSIDE DIAMETER OF THAT CONDUIT. (6x CONDUIT OD). CONDIUT RUNS CANNOT CONTAIN MORE THAN THE EQUIVALENT OF TWO 90-DEGREE TURNS IN ANY DIMENSIONAL PLANE WITHOUT THE ADDITION OF A PULL BOX. PROVIDE CONDUITS THROUGH NON-ACCESSIBLE CEILINGS. THE

CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR CONDUIT IN NON-ACCESSIBLE CEILINGS. R. 120 VAC POWER CONDUCTORS SHALL NOT BE INSTALLED IN THE SAME CONDUIT AS LOW VOLTAGE INFORMATION TRANSPORT CABLES OR OTHER LOW VOLTAGE CALBES.

THE CONTRACTOR SHALL NOT EXCEED THE MAXIMUM TENSILE FORCE THAT THE MANUFACTURER RECOMMENDS WHEN PULLING CABLE. ALL INFORMATION TRANSPORT WIRING SHALL BE IN CONDUIT IN THE ADULT DETENTION CENTER. INFORMATION TRANSPORT WIRING IN THE SHERIFF'S BUILIDNG, COURTS BUILDING AND

CENTRUAL UTILITY PLANT MAY BE ROUTED IN CABLE TRAY PROVIDED IT IS TYPE CMP. THE CONTRACTOR SHALL VERIFY THE SIZE OF ALL

CONDUCTORS. THE NUMBER OF CONDUCTORS REQUIRED MAY VARY DEPENDENT ON THE MANFACTURERS OF EQUIPMENT SLECTED BY THE CONTRACTOR. IF THE EQUIPMENT THAT THE CONTRACTGOR INTENDS TO FURNISH AND INSTALL HAS ANY

SPECIAL REQUIREMENTS, THE CONTRACTOR SHALL PROVIDE FOR THESE REQUIREMENTS IN THE BID AT NO EXTRA COST TO THE OWNER. WIRING FOR THE INFORMATIN TRANSPORT SYSTEM SHALL BE CONSISTENTLY COLOR CODED AND TAGGED. COORDINATION OF

Y. ALL CONDUCTORS MUST TEST FREE OF OPENS, SHORTS AND GROUNDS.

OBSERVED

AA. MINIMUM SIZE OF CONDUCTORS SHALL BE 18 AWG UNLESS OTHERWISE INDICATED. CONTRACTORS SHALL MODIFY STANDARD EQUIPMENT INPUT/OUTPUT WIRING TERMINALS TO

WIRING. IF APPROVED BY THE ENGINEER.

ACCEPT 18 AWG. EXCEPTIONS MAY BE ALLOWED FOR MANUFACTURER PROVIDED LEADS AND INTERNAL EQUIPMENT

BB. THE CONTRACTOR SHALL PROVIDE 120 VAC INPUT POWER FOR POWER SUPPLIES AND OTHER SYSTEM COMPONENTS. THE CONTACTOR SHALL BE RESPONSIBLE FOR ALL LOW VOLTAGE POWER REQUIREMENTS. ALL EQUIPMENT, INCLUDING CENTRAL AND LOCAL UPS UNITS AND BATTER BACK-UP POWER SUPPLIES,

CC. CONTRACTOR IS REQUIRED TO ACCOMMODATE INCIDENTAL

FF. CONTRACTOR SHALL SUPPLY ALL CONDUIT, BOXES, AND CABLE

GG. ALL TELECOM PATHWAY SYSTEMS SHALL BE INDEPENDENTLY SUPPORTED FROM AND ATTACHED TO THE BUILDING

HH. LL TELECOM PATHWAY SYSTEMS SHALL BE COMPLETELY AND

JJ. ALL TELECOM OUTLET BOXES SHALL BE A MINIMUM DOUBLE

KK. CORRIDOR CABLE TRAY SHALL BE PROVIDED AS REQUIRED BY THE CONTRACT DRAWINGS. REFER TO DIVISION 27

SPECIFICATIONS FOR ADDITIONAL PRODUCT DETAILS AND

CONDUIT MEANT FOR TELECOMMUNICATIONS CABLING. MM. CONTRACTOR SHALL CALCULATE FILL RATIOS BASED ON

> CATEGORY 6 CABLE ARE SHOWN HERE FOR REFERENCE PURPOSES ONLY: 1" EMT = 6 CABLES; 1¹/₄" EMT = 11 CABLES; 2" EMT = 24 CABLES; 3" EMT = 64 CABLES; 4" EMT = 107

OO. CONTRACTOR SHALL PROVIDE FIRE CONDUIT PATHWAY FOR ALL

PENETRATIONS THROUGH FLOORS, WALLS, STAIRS, AND ELEVATORS AS NECESSARY TO MEET CODE REQUIREMENTS. FIRE STOPS SHALL BE PROVIDED IN ACCORDANCE WITH ALL

QQ. CONTRACTOR SHALL PROVIDE PROPERLY RATED FIRE STOP

TELECOMMUNICATIONS ROOMS. EACH CONTRACTOR IS RESPONSIBLE FOR SEALING PENETRATIONS AFTER EACH SCOPE

SYSTEMS FOR ALL CONDUIT AND/OR CABLE TRAY ENTERING THE

NN. CONDUIT RUNS SHALL NOT INCLUDE MORE THAN TWO 90° BENDS BETWEEN PULLING POINTS. IF THE PATH OF THE CONDUIT RUN REQUIRES BENDS EXCEEDING A TOTAL OF 180°, INSTALLATION OF AN APPROPRIATELY SIZED JUNCTION BOX IS

PP. CONTRACTOR SHALL PROVIDE FIRE STOPS TO SEAL ALL

APPLICABLE CODES AND STANDARDS.

CONTRACTOR SHALL NOT EXCEED 40% FILL RATIO WITHIN ANY

ACTUAL CATEGORY 6 CABLING USED. TYPICAL FILL RATIOS FOR

TRAY AS REQUIRED TO ENSURE ALL TRANSMISSION MEDIA IS FULLY SUPPORTED FROM ALL DEVICE LOCATIONS TO THE POINT

PROPERLY LABELED AS REQUIRED IN REFERENCED STANDARDS. CONDUIT SYSTEMS SHALL BE PROVIDED FOR ALL PATHWAYS IN INACCESIBLE CEILING SPACES AND WHERE EXPOSED TO PUBLIC VIEW. ALL CONDUIT SYSTEMS THROUGHOUT THE BUILDING SHALL INCLUDE PROPERLY SIZED SLEEVED PENETRATIONS

WIRING DROP ROUGH-IN HAS NOT COMMENCED. DD. LOW VOLTAGE CABLE SPECIFIED AND LISTED HERIN IS TYPE CMP. WHERE CABLING FOR FIELD DEVICES IS ROUTED CONTINUOUSLY IN CONDUIT, TYPE SM MAY BE SUBSTITUTED. ALL CABLING SHALL BE TERMINATED IN THE ER/TR NOTED IN THE

TELECOM SCHEDULES.

THROUGH ALL BARRIERS.

REQUIREMENTS.

CABLES

REQUIRED.

EXPOSED DATA CABLING.

OF WORK IS COMPLETED.

GANG BOX NO LESS THAN 2¹/₂" DEEP.

OF TERMINATION.

STRUCTURE.

SHALL BE FROM DEDICATED CIRCUIT BREAKERS CONNECTED TO THE BUILDINGS EMERGENCY POWER DISTRIBUTION SYSTEM.

THE LOCATION INDICATED UP TO 10 FEET, PROVIDED DEVICE OR

MOVEMENT OF THE FIELD DEVICES AND WIRING DROPS FROM

a. METALLIC CONTINUITY MUST BE MAINTAINED

WHEN INSTALLING SHIELDED CABLE, THE FOLLOWING MUST BE

THROUGHOUT THE ENTIRE LENGTH OF THE CABLE RUN THE CABLE SHIELD MUST BE ISOLATED FROM GROUND. GROUNDING MUST COMPLY WITH ATRICAL 250 OF THE

EXACT WIRE CODING AND TAGGING, INCLUDING BETWEEN DIVISION 27 AND 28 IS MANDATORY. W. THE CONTRACTOR IS DIRECTLY RESPONSIBLE FOR COORDINATING WIRING FROM EQUIPMENT MANUFACTURERS TERMINAL STRIPS TO THE FINAL CONNECTION POINTS OF THE EQUIPMENT WITHIN THE SCOPE OF THE PROJECT. X. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC 2008 ARTICLE 760.

ENGINEER PIOR TO INSTALLATION OF WORK IF ANY MOUNTING

DOCUMENTS. QUESTIONS REGARDING THE INTENT OF THE

OPERATIONAL SYSTEM BASED UPON THE CONSTRUCTION

F.

K.

М

Ν.

P.

U.

C.

EE.

LL.

DESIGN SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF

THE ORIENTATION OF THE SYMBOLS REFLECTS THE GENERAL MOUNTING LOCATION AND ORIENTATION OF THE DEVICE OR NETWORK DROP. CONTRACTOR SHALL PROMPTLY NOTIFY

Project

INDIANAPOLIS, IN

Prepared For MARION COUNTY

MARION COUNTY COMMUNITY JUSTICE CAMPUS

![](_page_37_Picture_88.jpeg)

![](_page_38_Figure_0.jpeg)

![](_page_38_Figure_1.jpeg)

![](_page_38_Figure_2.jpeg)

![](_page_38_Picture_4.jpeg)

Project MARION COUNTY COMMUNITY JUSTICE CAMPUS

INDIANAPOLIS, IN

Prepared For MARION COUNTY

![](_page_38_Figure_8.jpeg)

Original drawing is 48 x 36 Do not scale contents of this drawing Sheet Number CJ4.1-TT002

TELECOM UNDERGROUND PLAN

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Project No: Sheet Title