CITY OF BONDURANT

PUBLIC WORKS FACILITY

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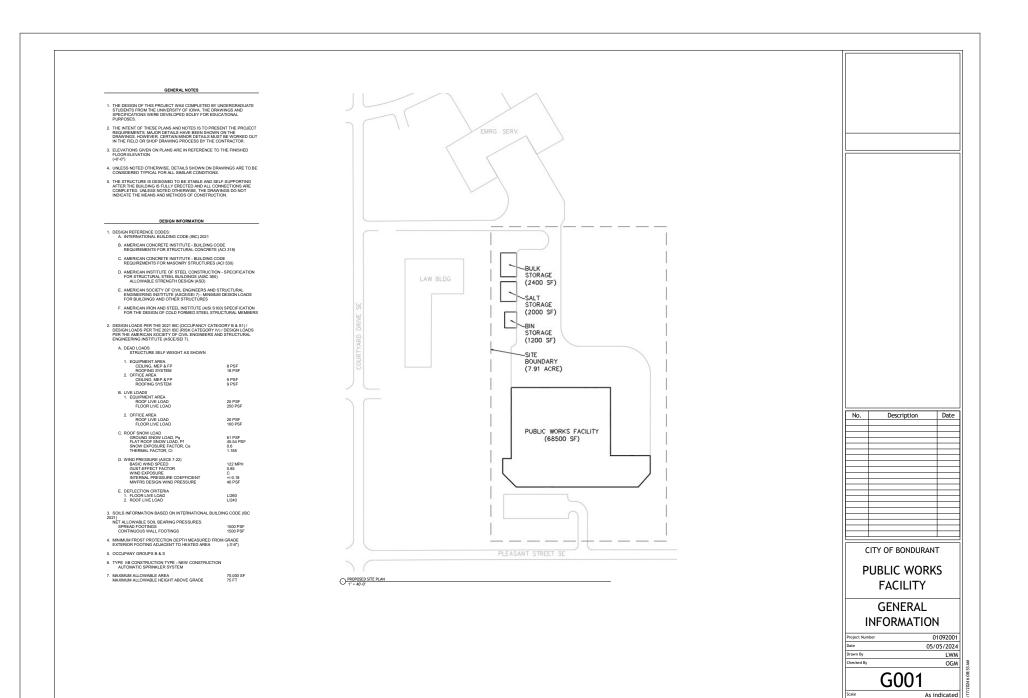


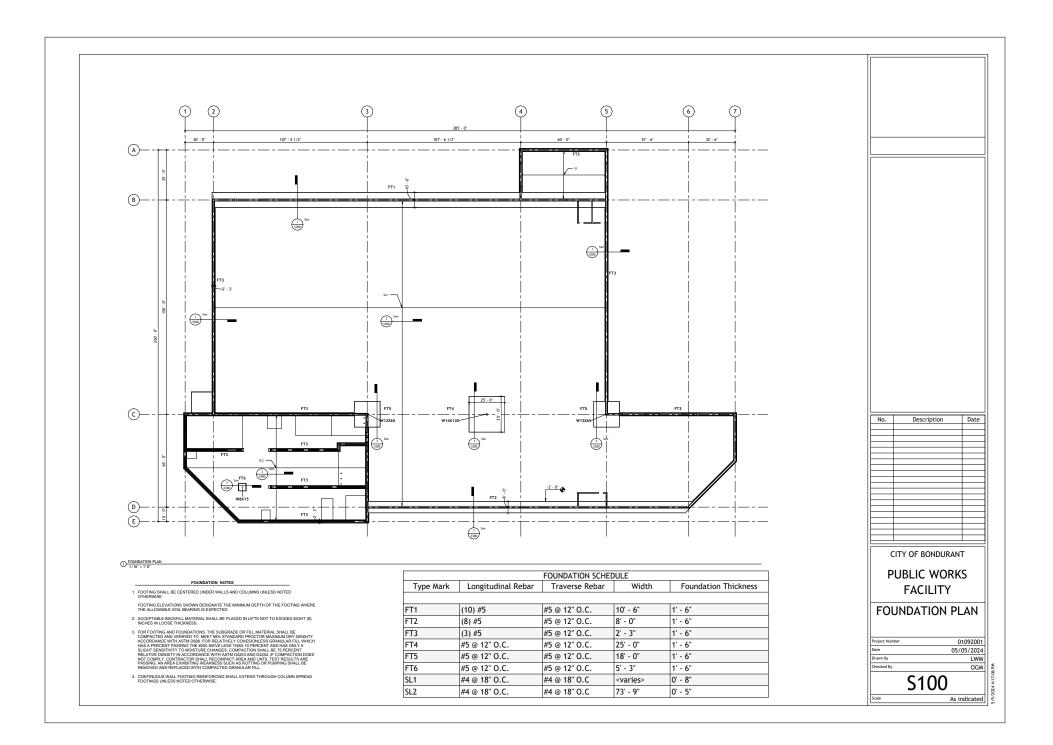
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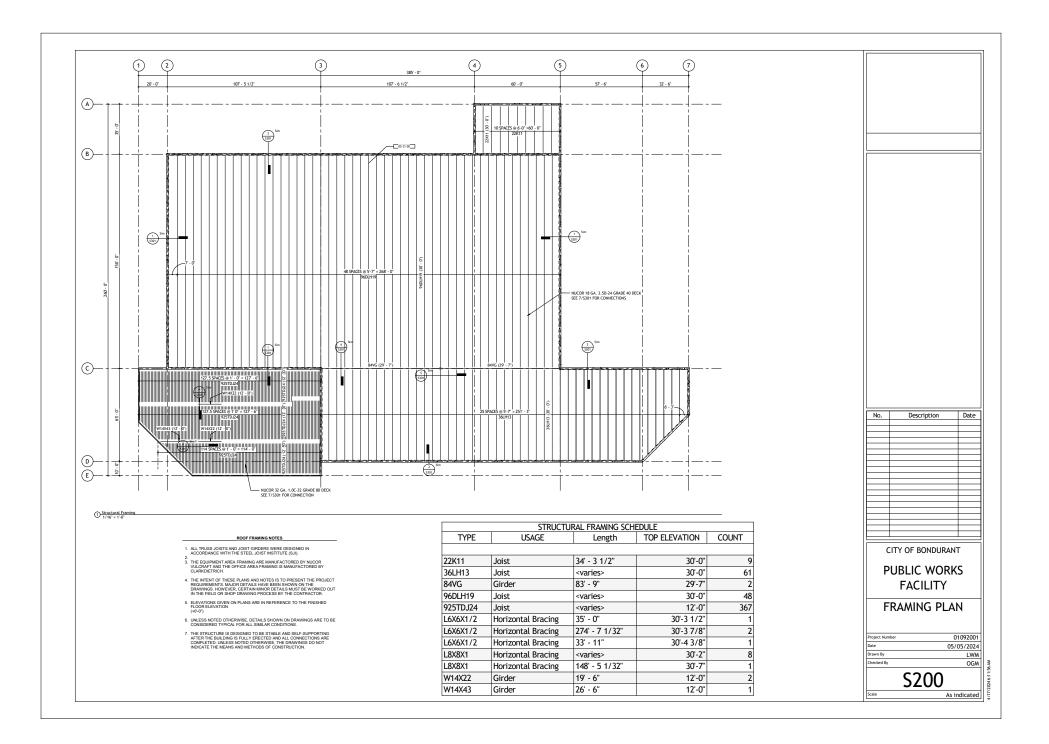


Project Number

01092001 05/05/2024









- 1. DESIGN STRUCTURAL RECAST TO COMPLY WITH ACI 318 AMD PO INAL 120, "YO DESIGN HAADROOK. PRECISE MOI PRESTRESSED STATUS DESIGN HAADROOK. PRECISE MOI PRESTRESSED STATUS DESIGN HAADROOK. PRESIS DI ATTE STATUS HAADROOK BE DESIGNED YITH PRECISE TANGE MOUNTED STRUCTURAL ENONREE LICENSED IN THE STATE WHERE THE PROJECT IS LOCATIONS. PROVIDE COMPREHENSIVE ENONGENISME ANALYSES MOU DESIGN USING PERFORMANCE RECURRENTS AND DESIGN CRITERIA MOICATED IN THE DRAVINGS AND SFEEDFACTIONS.
- 2. PRECAST STRUCTURAL CONCRETE MATERIAL STANDARDS:

- A MINIMUM 28 DAY COMPRESSIVE STRENGTH: 5000 PSI REMINION PSI REMINION PSI REMINION PSI C. LOW-ALLOY WELDABLE REINFORCING BARS: ASTM A7M6 60,000 PSI D. PRESTRESSING STREL WIRE, MINIMUM ULTIMATE STRENGTH ASTM AX16 270000 PSI MINIMUM 20 DAY 2000 PSI D. PRESTRESSING STREL WIRE, MINIMUM ULTIMATE STRENGTH ASTM AX16 27000 PSI
- 3. PRECAST MANUFACTURER SHALL BE A PCI CERTIFIED PLANT. PRECAST STRUCTURAL CONCRETE COMPONENTS SHALL BE FABRICATED TO COMPLY WITH PCI MILLIN, MANUALL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF STRUCTURAL PRECAST CONCRETE PRODUCTS
- 4. DESIGN PRECAST STRUCTURAL CONCRETE FRAMING SYSTEM AND CONNECTIONS TO MAINTAIN CLEARANCES AT OPENINGS, TO ALLOW FOR FARRICATION AND CORSTRUCTION TOLERANCES, TO ACCOMMODATE LIVE LOAD DEFLECTIONS, SHRINKAGE, CREEP AND OTHER BUILDING MOVEMENTS, MAINTAIN DEFLECTION LINTS OF ACI 318
- 5. ALL PRECAST BEARING CONDITIONS SHALL USE A BEARING PAD AS RECOMMENDED BY THE PRECAST MANUFACTURER FOR THE APPLICATION. STEEL SHIMS ARE NOT ALLOWED.
- CAST-IN ANCHORS, INSERTS, PLATES ANGLES OR OTHER ANCHORAGE HARDWARE WITH SUFFICIENT ANCHORAGE AND EMBEDMENT TO COMPLY WITH DESIGN REQUIREMENTS.
- 7. DO NOT INSTALL PRECAST CONCRETE UNITS UNTIL SUPPORTING STRUCTURE IS COMPLETE AND STRUCTURALLY READY TO RECEIVE LOADS FROM PRECAST. CAST: INFLACE CONCRETE SHALL HAVE ACHIEVED SPECIFIED DESIGN STRENGTH WITH TESTING CONFIRMATION PERFORMED
- 8. ERECT PRECAST STRUCTURAL CONCRETE LEVEL, PLUMB, AND SQUARE WITHIN ACI TO LERANCES. PROVIDE TEMPORARY FRAMING, SHORING, AND BRACING AS REQUIRED TO MAINTAIN POSITION STRAILTY AND ALIGNMENT OF UNITS UNTIL PERMANENT CONNECTIONS ARE COMIN LET D
- 9. REFER TO ARCHITECTURAL DRAWINGS FOR EXPOSED SURFACE FINISHES, TEXTURES, REVEALS, ETC.

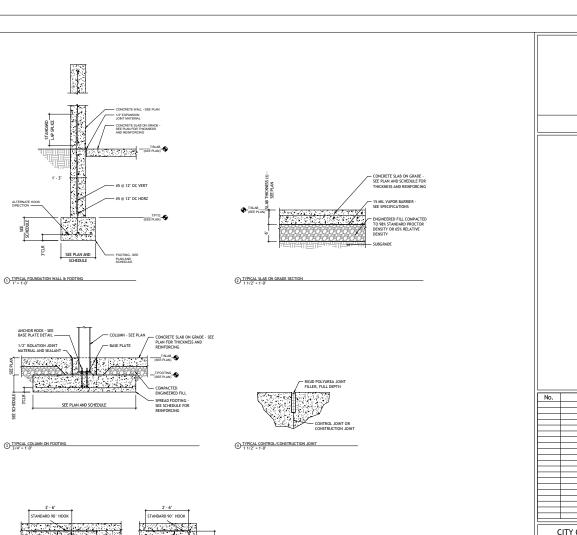
CAST-IN-PLACE CONCRETE

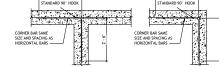
- ALL CONCRETE SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTES PUBLICATIONS: ACI 301, ACI 305.1, ACI 308.1, ACI 315, AND ACI 318 UNLESS NOTED OTHERWISE.
- 2. CONCRETE COMPRESSIVE STRENGTH (28 DAY)(Fc) ECOTINGS 4000 PS 4000 PSI 4000 PSI 4000 PSI FOUNDATION WALLS AND PIERS SLAB ON GRADE
- 3. CONCRETE REINFORCEMENT STANDARDS: DEFORMED BARS WELDED WIRE REINFORCEMENT (WWR) ASTM A1064 Fy = 60 KSI
- REINFORCEMENT PROTECTION

 CONCRETE PLACED AGAINST EARTH 3*
- B. CONCRETE PLACED IN FORMS BUT EXPOSED TO WEATHER OR EARTH: EARTH: a. BARS #5 AND SMALLER - 1 1/2" b. BARS LARGER THAN #5 - 2"
- C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH a. SLABS, WALLS, AND JOISTS - 3/4" b. BEAMS, COLUMNS - 1 1/2"
- 5. WHERE REQUIRED, DOWELS SHALL MATCH THE SIZE, NUMBER AND SPACING OF THE MAIN REINFORCING UNLESS NOTED OTHERWISE.
- ALL SPLICES, STANDARD HOOKS, AND DEVELOPMENT LENGTHS TO BE PER THE REFERENCED EDITION OF ACI 318. MAKE BARS CONTINUOUS AROUND CORNERS. ALL SPLICES SHALL BE BY CONTACT LAP.
- ALL SPLICES SHALL BE A CLASS "B" TENSION SPLICE AS DEFINED IN ACI 318. PROVIDE LAP SPLICES LENGTHS AS FOLLOWS:
- 8. WALLS AND GRADE BEAMS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE.
- THERE SHALL BE NO ADDITIONAL OPENINGS LARGER THAN 10" IN CONCRETE WALLS AND SLABS NOT SHOWN. REFER TO CONCRETE OPENING DETAIL FOR ADDITIONAL REINFORCEMENT AROUND OPENINGS.

FOUNDATIONS - SLAB ON GRADE

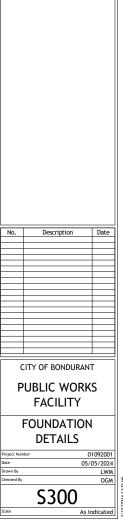
- 1. CONCRETE SLAB ON GRADE SHALL BE PLACED ON A 6" WELL GRADED COMPACTED GRANULAR FILL SUB-BASE.
- 2. PLACE ALL SLABS ON GRADE WITH AN APPROVED JOINT PATTERN SUBMITTED BY CONTRACTOR AND APPROVED BY ENGINEER. SEQUENCE OF CONSTRUCTION AND CONTROL JOINTS SHALL BE PLACED TO MINIMUZE SHRINKAGE CRACKS.
- CONCRETE SLAB ON GRADES SHALL HAVE CONTROL JOINTS SAW CUT OR TOOLED.
- 4. FLOOR FINISHES SHALL BE STEEL TROWELED FOR ALL INTERIORS AND BROOM FINISHED FOR ALL EXTERIORS UNLESS NOTED OTHERWISE.
- SLOPE SLABS TO DRAINS TO CREATE POSITIVE DRAINAGE. PROVIDE DEPRESSIONS WHERE INDICATED ON ARCHITECTURAL DRAWINGS, WHILE MAINTAINING THE THICKNESS OF THE CONCRETE SLAB.





S TYPICAL WALL CORNER DETAILS

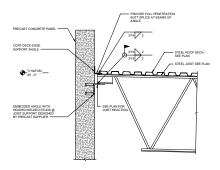
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THE METAL DECKS SPECIFIED ARE MANUFACTORED BY NUCOR VULCRAFT. THE DECKS ARE DESIGNED FOR GRAVITY AND WIND LOADS. THE DESCKS OF THE TWO ROOF HEIGHTS ARE AS FOLLOWS.

- A. EQUIPMENT AREA DECK 18 GA. 3.5D-24 GRADE
- 40 B. OFFICE AREA DECK NC 26 GA. 1.0C-32 GRADE 80
- ALL BETAL DECK SHALL BE DESIGNED MANUFACTURED AND INSTALLED A ACCOLDANCE WITH THE LIFEST PROVISION OF THE STEEL DECK NOTTUTE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS AND CELLULAR HETAL FLOOD DECK WITH ELECTRICAL DISTRIBUTION AND UNDERWRITER REQUIREMENTS (I.E. FACTORY MUTUAL).
- PROVIDE METAL DECK MANUFACTURED BY A MEMBER OF THE STEEL DECK INSTITUTE OF THE TYPE AND GAUGE INDICATED ON THE DRAWINGS.
- MINIMUM DECK BEARING ON STEEL MEMBERS SHALL BE 1 1/2". INSTALL DECK WITH A MINIMUM 2" END LAPS CENTERED OVER SUPPORT MEMBERS.
- 4. DECK MANUFACTURER SHALL PROVIDE ALL RIDGE AND VALLEY PLATES, FLOOR DECK FILLERS, AND COLUMN CLOSURES NECESSARY TO COMPLETE THE DECK INSTALLATION ALL DECK AND ACCESSORIES SHALL BE GALVANIZED, 20 GA. MINIMUM.
- WHERE NOT INDICATED IN THE DRAWINGS, ATTACH ROOF DECK TO SUPPORTING STEEL MEMBERS WITH EITHER PUDDLE WELDS OR POWDER ACTUATED FASTENERS:
- A. APPROVED EQUIVALENT POWDER ACTUATED FASTENERS THAT MEET THE SAME CAPACITY VALUES AS WELDED CONNECTIONS.
- A. DO NOT HANG ANY PIPING, DUCT WORK OR EQUIPMENT GREATER THAN 50LBS FROM STEEL ROOF DECK.



JOST V

22

2. CONNECTION SHOWN IS BASED ON STEEL JOIST INSTITUTE REQUIREMENTS

34" COLUMN CAP PLAT - STEEL JOIST - SEE PLAN

4

PRECAST JOIST CONNECTION

(2) 1/21Ø BOLTS

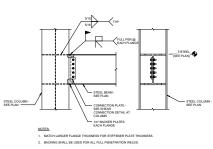
1"x6" x 0"-6" VERT STABILIZER PLAT

13/1618 HOLE FOR

5 TYPICAL JOIST AT COLUMN

STEEL COLUMN - SEE PLAT NOTES:

1. GIRDER NOT SHOWN FOR CLARITY.



STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE REFERENCED EDITION OF THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS". 2. STRUCTURAL STEEL MATERIAL STANDARDS WIDE FLANGE SECTIONS ASTM A992 KSI ANGLES, CHANNELS & PLATES ASTM A38 KSI

490 TENSION CONTROL BOLTNUT/WASHER ASTM F1852 HEAV'HEX NUT ASTM AGG NOT AND A AND A

ALL HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH RCSC. "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A980 BOLTS." SEE DRAWINGS FOR BOLTS SIZES. USE 3/4" DIAMETER, A325 BOLTS UNLESS NOTED OTHERWISE.

5. ALL MISCELLANEOUS STEEL AS SHOWN OR REFERENCED ON THE ARCHITECTURAL DRAWINGS SHALL BE FABRICATED AND INSTALLED AS PART OF THE STRUCTURAL STEEL.

6. CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORES, GUYS, BRACES AND OTHER SUPPORTS DURING ERECTION TO KEEP TEMPORARY CONSTRUCTION LOADS AND DURONG EQUAL TO DESIGN LOADS, REMOVE ALL TEMPORARY SUPPORTS WHEN PERIAMENT STRUCTURA, STEEL FRAMING AND CONNECTIONS ARE COMPLETED.

MAINTAIN ERECTION TOLERANCES OF STRUCTURAL STEEL WITHIN AISC 303, "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."

CAP AND BASE PLATE ASTM A36 GUSSET PLATES ASTM A36 STIFFENER PLATES ASTM A36 CONNECTION PLATES AND ANGLES ASTM A36 CAP AND BASE PLATE

3. STRUCTURAL STEEL CONNECTION STANDARDS: HIGH STRENGTH BOLTS ASTM F3125

WASHERS ASTM F4: ANCHOR RODS ASTM F1: HEADED WELDED STUDS ASTM A1: WELDING ELECTRODES (CARBON STEEL) WELDING ELECTRODES (STAINLESS STEEL)

A325 HIGH STRENGTH BOLTS A490

Fy = 50

Fy = 36

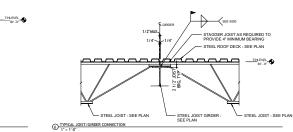
Fy = 36 KSI Fy = 36 KSI Fy = 36 KSI Fy = 36 KSI

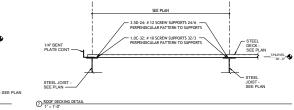
GRADE

GRADE

ASTM F3125

3 TYPICAL MOMENT CONNECTION INTO WEB

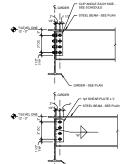


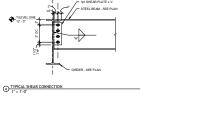


STEEL JOIST PRECAST CONCRETE CLIP ANGLE EACH SEE SCHEDULE STEEL BEAM - SEE PLA

D PRECAST DECK CONNECTION

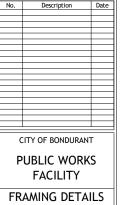
WELDED STUDS @ 4-0" OC DESIGNER BY PRECAST SUPPLIER





PROVIDE FULL PENETRATION BUTT SPLICE AT SEAMS OF ANGLE

- STEEL ROOF DECI



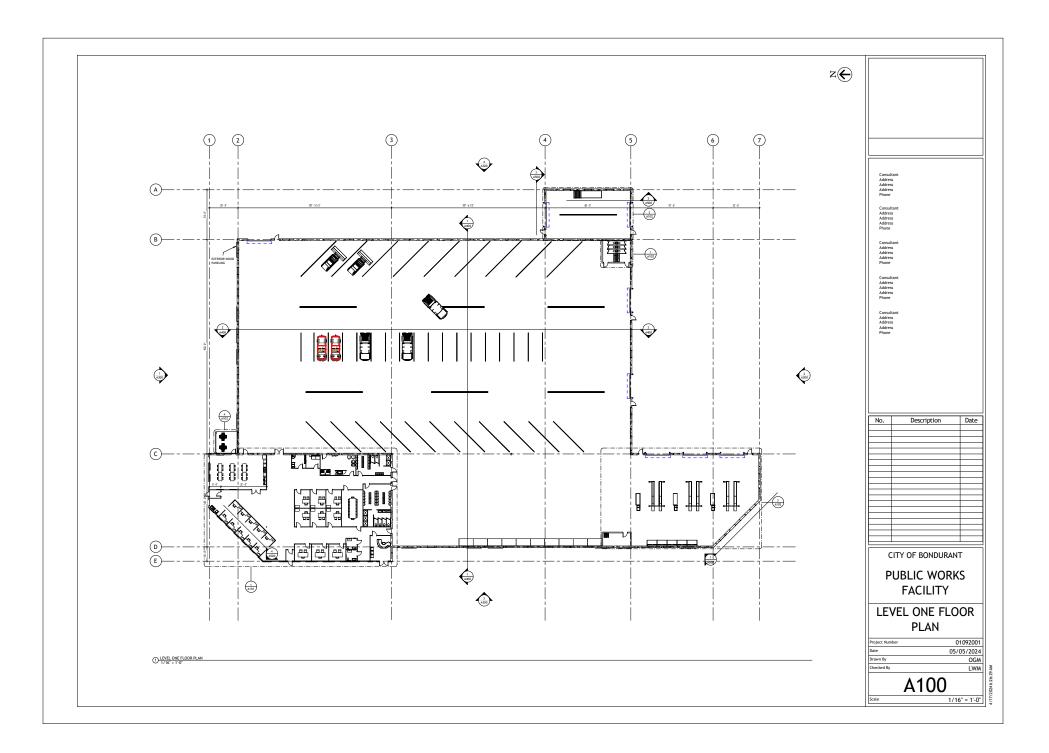
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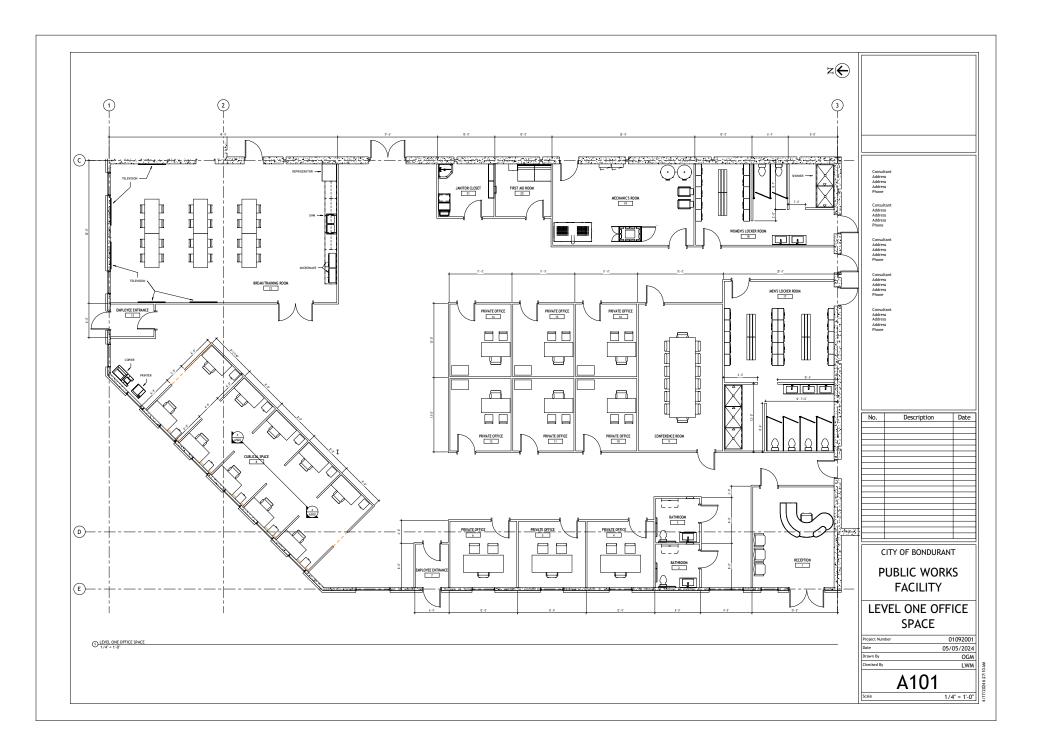
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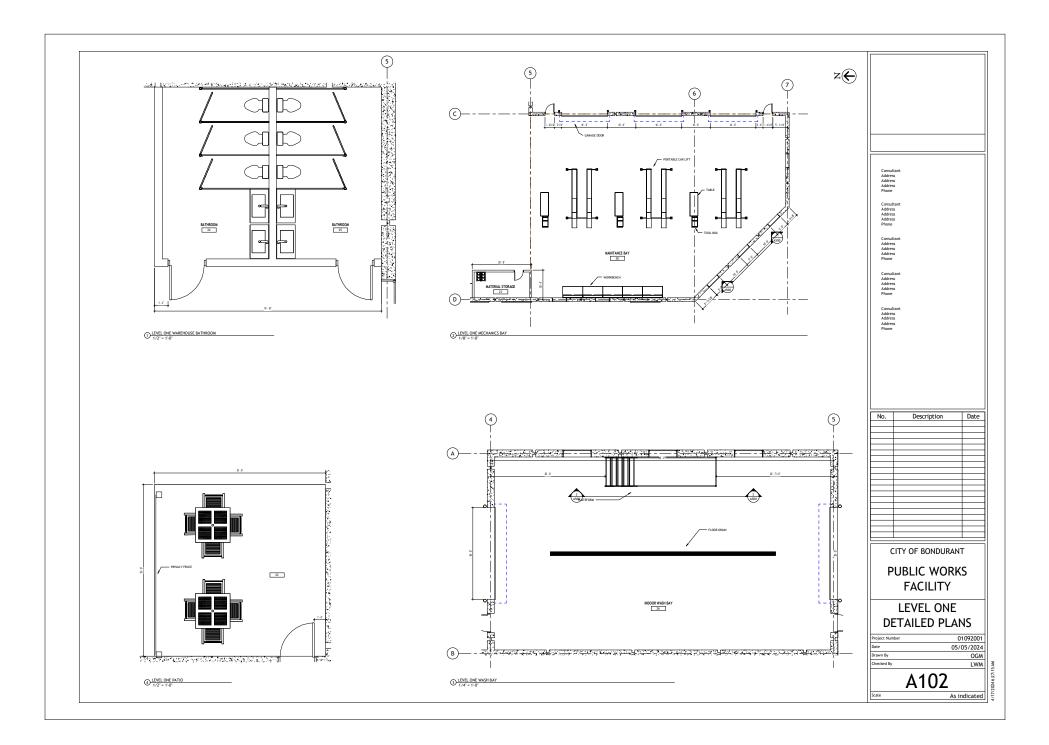
Scale

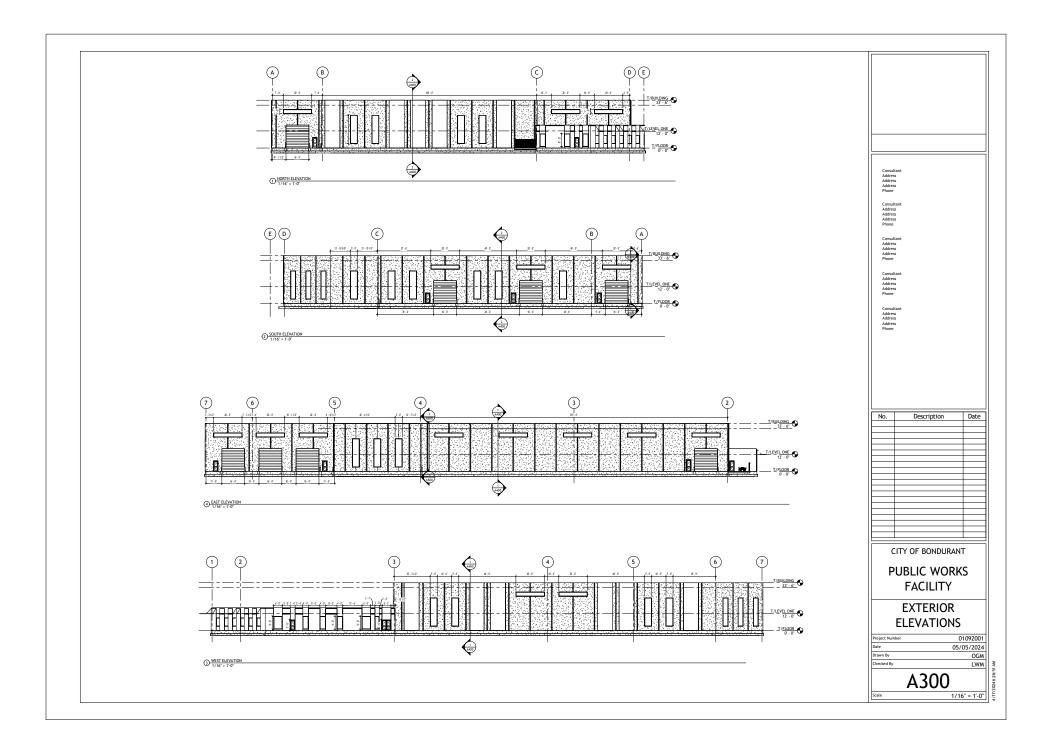
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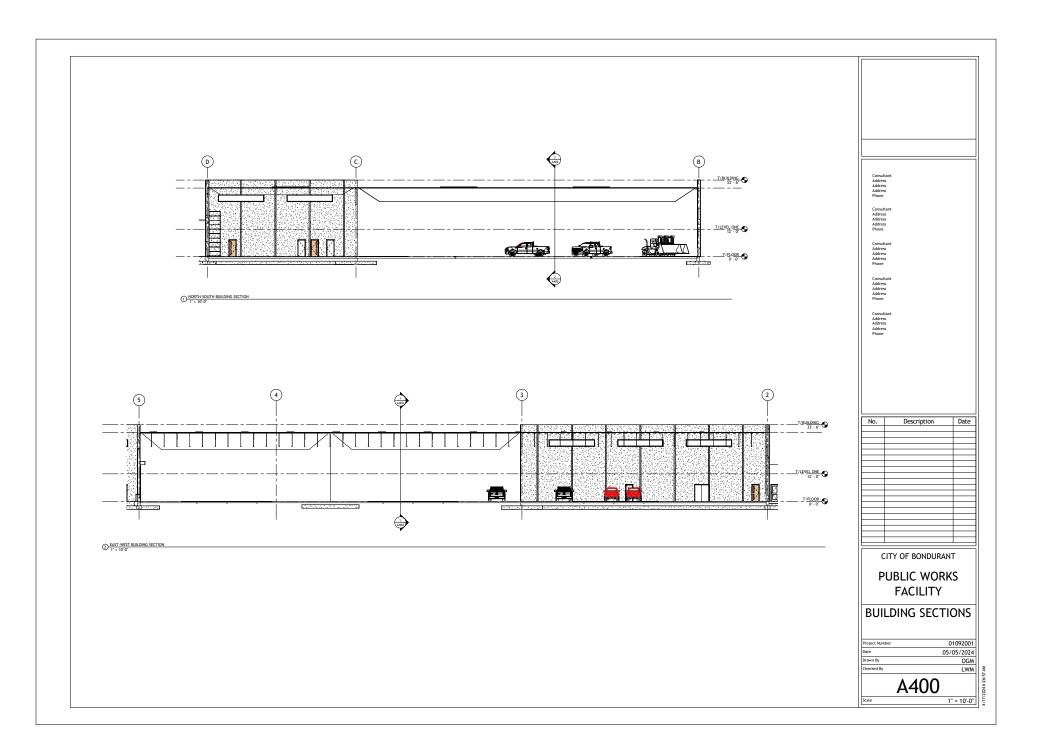
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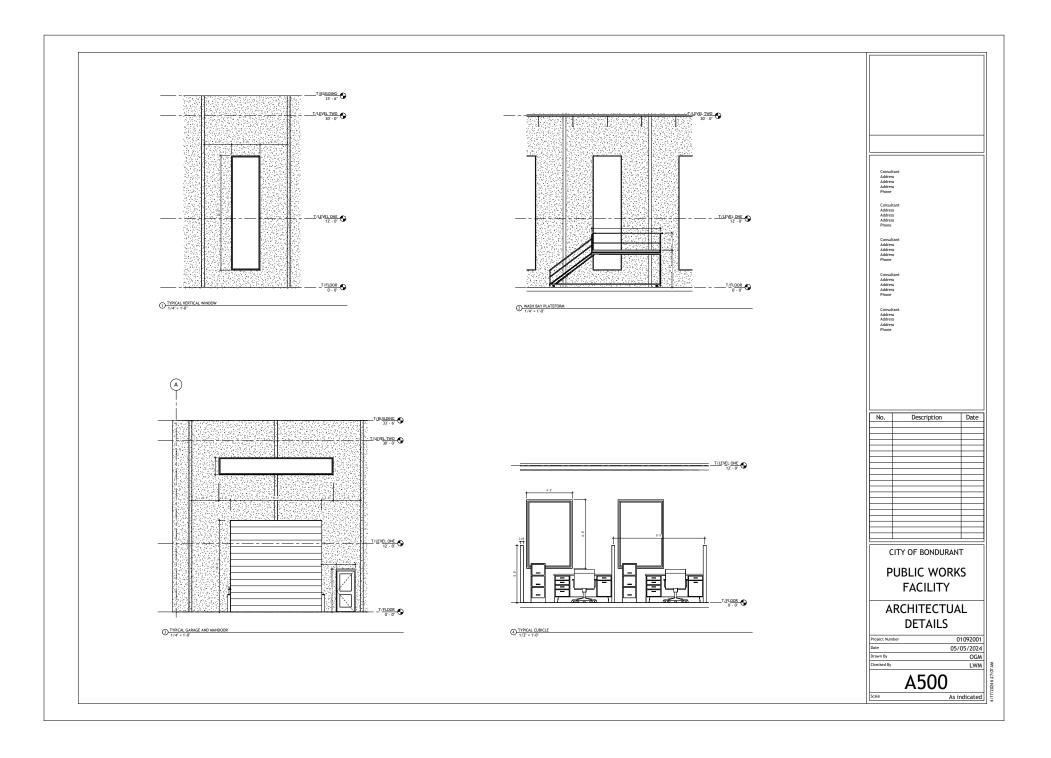












Room Finish Schedule						
Room Name	Number	Area	WALL FINISH	FLOOR FINISH		
RECEPTION	1	250 SF	PAINT COLOR: LINEN	WOOD FLOORS: OAK		
BATHROOM	2	58 SF	PAINT COLOR: LINEN	WOOD FLOORS: OAK		
BATHROOM	3	59 SF	PAINT COLOR: LINEN	WOOD FLOORS: OAK		
PRIVATE OFFICE	4	136 SF	PAINT COLOR: LINEN	CARPET		
PRIVATE OFFICE	5	136 SF	PAINT COLOR: LINEN	CARPET		
PRIVATE OFFICE	6	136 SF	PAINT COLOR: LINEN	CARPET		
EMPLOYEE ENTRANCE	7	43 SF	PAINT COLOR: LINEN	WOOD FLOORS: OAK		
CUBLICAL SPACE	8	620 SF	PAINT COLOR: DARK GREY	CARPET		
CONFERENCE ROOM	9	378 SF	PAINT COLOR: LINEN	CARPET		
PRIVATE OFFICE	10	136 SF	PAINT COLOR: LINEN	CARPET		
PRIVATE OFFICE	11	136 SF	PAINT COLOR: LINEN	CARPET		
PRIVATE OFFICE	12	136 SF	PAINT COLOR: LINEN	CARPET		
EMPLOYEE ENTRANCE	13	43 SF	PAINT COLOR: LINEN	WOOD FLOORS: OAK		
PRIVATE OFFICE	14	136 SF	PAINT COLOR: LINEN	CARPET		
PRIVATE OFFICE	15	136 SF	PAINT COLOR: LINEN	CARPET		
PRIVATE OFFICE	16	136 SF	PAINT COLOR: LINEN	CARPET		
MEN'S LOCKER ROOM	17	563 SF	WHITE SQUARE TILE	WHITE SQUARE TILE		
WOMEN'S LOCKER ROOM	18	337 SF	WHITE SQUARE TILE	WHITE SQUARE TILE		
MECHANIC'S ROOM	19	351 SF	PAINT COLOR: LINEN	WOOD FLOORS: OAK		
FIRST AID ROOM	20	89 SF	PAINT COLOR: LINEN	WOOD FLOORS: OAK		
JANITOR CLOSET	21	89 SF	PAINT COLOR: LINEN	WOOD FLOORS: OAK		
BREAK/TRAINING ROOM	22	959 SF	PAINT COLOR: LINEN	WOOD FLOORS: OAK		
	23	225 SF	PRE-CAST CONCRETE PANEL	CAST-IN-PLACE CONCRETE SLAB		
BATHROOM	24	140 SF	PAINT COLOR: POWERED GREY	CAST-IN-PLACE CONCRETE SLAB		
BATHROOM	25	138 SF	PAINT COLOR: POWERED GREY	CAST-IN-PLACE CONCRETE SLAB		
INDOOR WASH BAY	26	1987 SF	PRE-CAST CONCRETE PANEL	CAST-IN-PLACE CONCRETE SLAB		
MATERIAL STORAGE	27	175 SF	PAINT COLOR: POWERED GREY	CAST-IN-PLACE CONCRETE SLAB		
MAINTANCE BAY	28	5173 SF	PRE-CAST CONCRETE PANEL	CAST-IN-PLACE CONCRETE SLAB		
FACILITY WAREHOUSE	29	51083 SF	PRE-CAST CONCRETE PANEL	CAST-IN-PLACE CONCRETE SLAB		

Door Schedule					
Family Count He		Height	Width		
Door-Exterior-Double-Two_Lite	1	7' - 2"	6' - 0"		
Door-Exterior-Single-Two_Lite	10	<varies></varies>	3' - 0"		
Door-Overhead-Rolling	8	16' - 0"	16' - 0"		
Door-Passage-Double-Flush	2	7' - 2"	6' - 0"		
Door-Passage-Single-Flush	13	7' - 2"	3' - 0"		
Door-Passage-Single-Two_Lite_Narrow	17	7' - 2"	3' - 0"		

Window Schedule							
Family	Width	Height	Count	Sill Height			
Instance-Window-Fixed	3' - 0"	9' - 0"	1	1' - 0"			
Instance-Window-Fixed	4' - 0"	6' - 0"	6	3' - 0"			
Instance-Window-Fixed	4' - 0"	9' - 0"	6	1' - 0"			
Instance-Window-Fixed	5' - 0"	20' - 0"	20	3' - 0"			
Instance-Window-Fixed	6' - 0"	9' - 0"	2	1' - 0"			
Instance-Window-Fixed	20' - 0''	3' - 0"	19	12' - 0"			

