## CITY OF DEARBORN

# FORD FIELD COMFORT STATION

CHERRY HILL

DEARBORN, MICHIGAN 48124



**LOCATION PLAN** 

## NORTH

#### **GENERAL**

T1.0 DRAWING LIST / LOCATION PLAN
G1.0 GENERAL INFORMATION

#### CIVIL ENGINEERING/SITE WORK

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#### STRUCTURAL

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S2.0 FRAMING PLAN
S3.0 STRUCTURAL DETAILS
S4.0 STRUCTURAL GENERAL NOTES
S4.1 STRUCTURAL GENERAL NOTES

STRUCTURAL GENERAL NOTES

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A1.0 FLOOR PLAN & INTERIOR ELEVATIONS

A2.0 REFLECTED CEILING PLAN

A3.0 ROOF PLAN, EXTERIOR ELEVATIONS AND

DETAILS

4.0 WALL SECTIONS & DETAILS5.0 DOOR SCHEDULE FINISH & MATERIAL

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SCHEDULE

#### **MECHANICAL**

M1.0 HVAC PLAN

#### **ELECTRICAL**

E1.0 ELECTRICAL SYMBOLS, LEGENDS, LUMINAIRE SCHEDULE & NOTES

.0 LIGHTING PLAN

E3.0 POWER PLAN

## BIDS & PERMITS

DATE: 02-27-2017

#### **CLIENT:**

### CITY OF DEARBORN

RECREATION DEPARTMENT 16901 MICHIGAN AVE. DEARBORN, MICHIGAN 48126

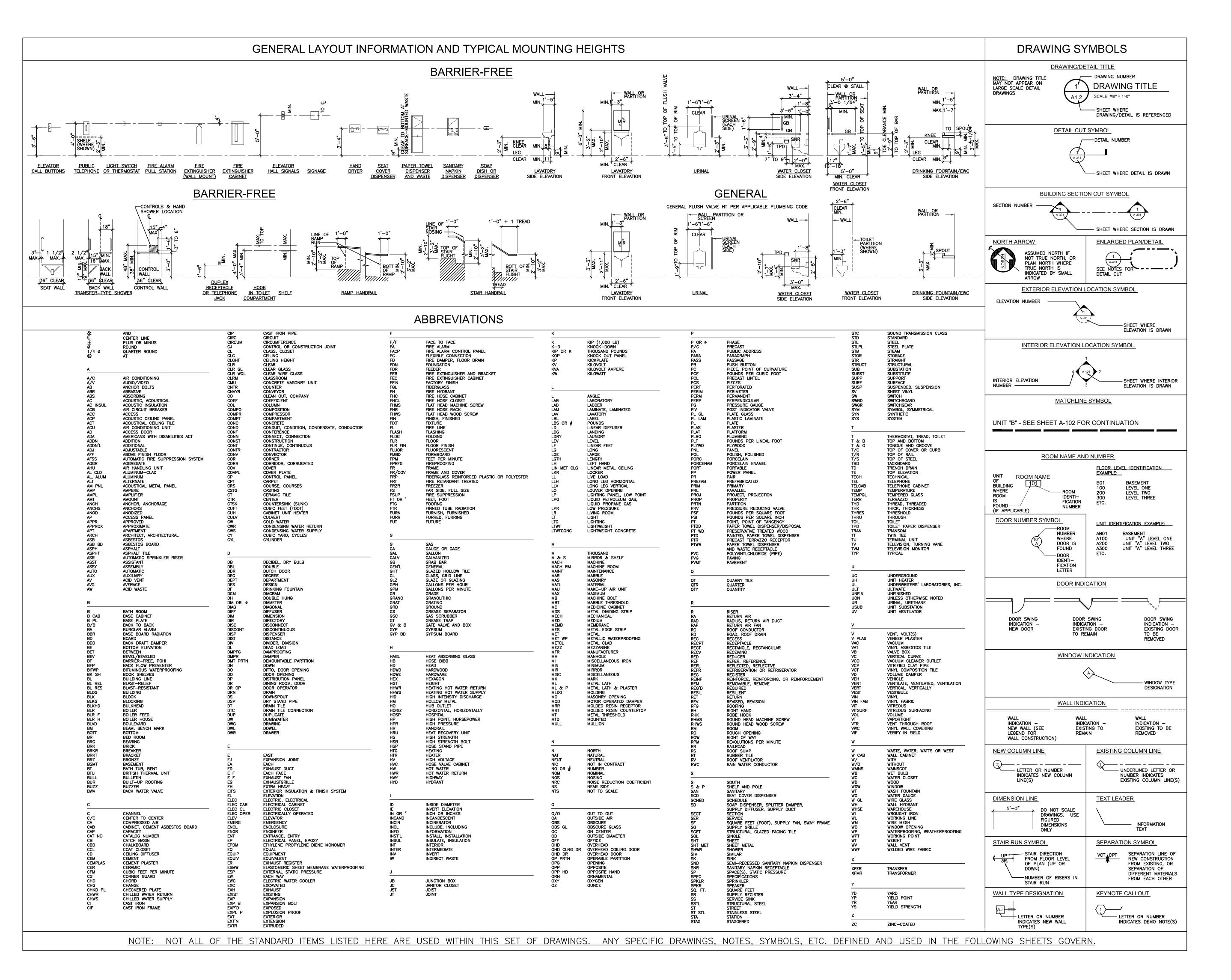
#### ARCHITECT/ENGINEERS/STRUCTURAL:

## NSA ARCHITECTS ENGINEERS PLANNERS

23761 RESEARCH DRIVE FARMINGTON HILLS, MICHIGAN 48335 (248) 477-2444 CITY OF DEARBORN FORD FIELD COMFORT STATION ISSUED FOR:BIDS & PERMITS DATE:02-27-2017

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Checked: DC Approved: AT

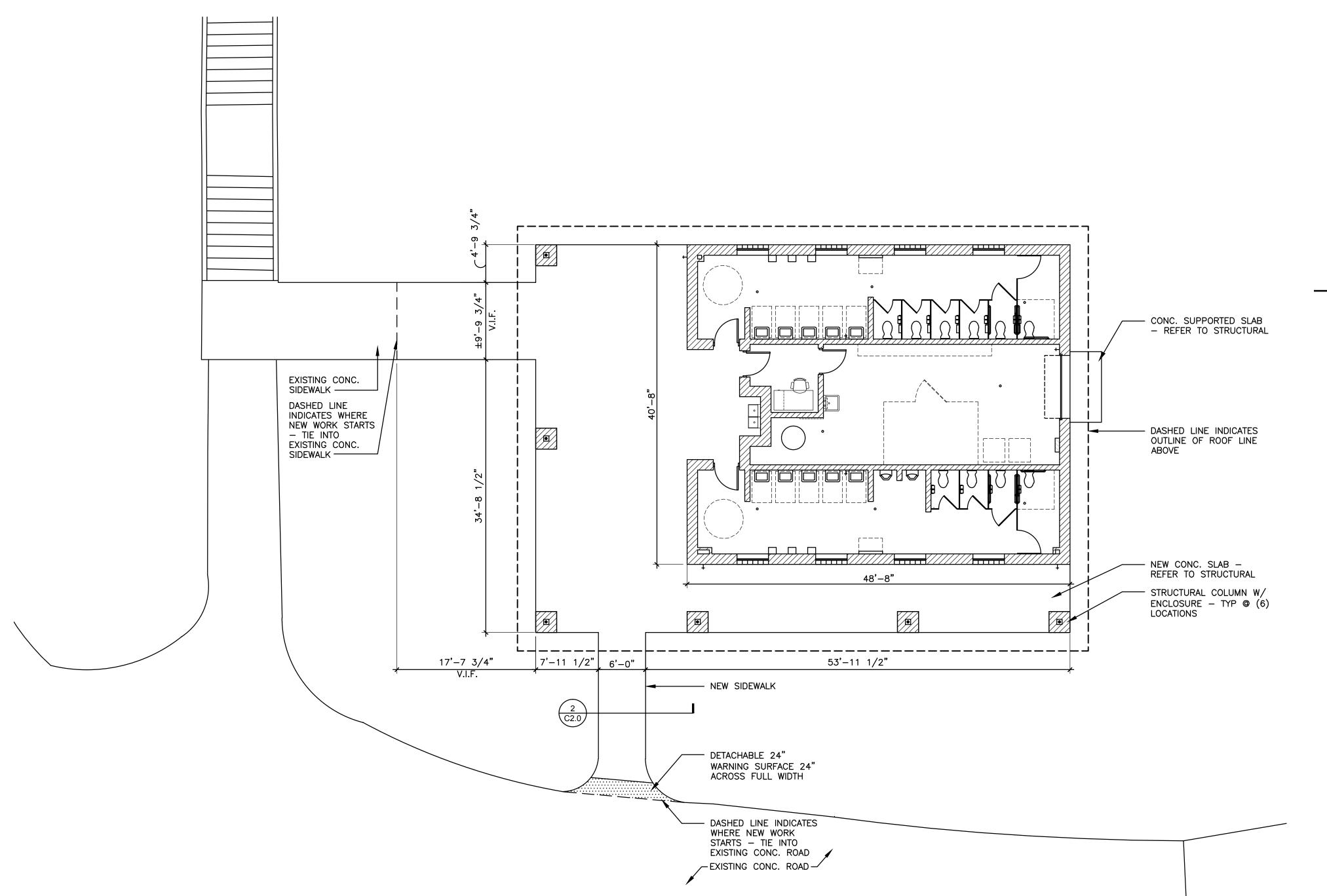
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GENERAL
INFORMATION

Sheet Number:

G-1.0



GENERAL NOTES:

1) ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND

SPECIFICATIONS THE CITY OF DEARBORN.

2) ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCE ETC. SHALL BE PAID FOR BY THE CONTRACTOR. THE OWNER SHALL PAY FOR ALL CITY

CONTRACTOR. THE OWNER SHALL PAY FOR ALL CITY INSPECTION FEES.

3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING THE PERIODS OF CONSTRUCTION. THIS

SHALL BE CONSIDERED INCIDENTAL TO THE JOB.

4) PRIOR TO ANY EXCAVATION, THEN CONTRACTOR SHALL CONTACT MISS DIG (811) TO VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES AND SHALL NOTIFY OTHER REPRESENTATIVES OF OTHER UTILITIES IN THE VICINITY OF THE WORK.

5) ALL PROPERTIES OR FACILITIES IN THE SURROUNDING ARES, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND / OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.

6) MANHOLE, CATCH BASIN, GATE VALVES AND HYDRANT FINISH GRADES MUCH BE CLOSELY CHECKED AND APPROVED BY THE ENGINEER BEFORE THE CONTRACTORS WORK IS CONSIDERED COMPLETE.

7) CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF—SITE ANY PRESS, BRUSHES, STUMPS, TREES OR OTHER UNWANTED DEBRIS AT THE OWNERS DIRECTION, INCLUDING OLD BUILDING FOUNDATIONS AND FLOORS. BURNING OF TRASH, STUMPS OR OTHER DEBRIS SHALL NOT BE PERMITTED.

8) THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, LIGHT AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY CONTAIN TRAFFIC IN ACCORDANCE WITH "MMUTCDE".

9) ALL EXCAVATIONS SHALL BE SLOPED, SHORED AND BRACED IN ACCORDANCE WITH MI—OSHA REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE AN ADEQUATELY CONSTRUCTED AND BRACED SHORING SYSTEM FOR EMPLOYEES WORKING IN AN EXCAVATION THAT MAY EXPOSE EMPLOYEES TO THE DANGER OF MOVING GROUND.

10) ALL REFERENCES TO MDOT SPECIFICATIONS ARE TO BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PAVING NOTES:

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF DEARBORN AND MDOT.

 IN AREAS WHERE NEW PAVEMENTS ARE BEING

2) IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.

3) SUB-GRADE UNDERCUTTING, INCLUDING BACKFILLING
SHALL BE PREFORMED TO REPLACE MATERIALS
SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL
CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED
BELOW THE TOPSOIL IN FILL SECTIONS OR BELOW
SUB-GRADE IN CUT SECTIONS, WILL BE CLASSIFIED AS
SUB-GRADE UNDERCUTTING.
4) SUB-GRADE UNDERCUTTING SHALL BE PREFORMED

4) SUB-GRADE UNDERCUTTING SHALL BE PREFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUB-GRADE UNDERCUTTING SHALL BE BACKFILLED WITH SAND OR OTHER SIMILAR APPROVED MATERIAL BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT (PER ASTM D-1557) UNLESS OTHERWISE SPECIFIED.

5) BACKFILL UNDER PAVED AREAS SHALL BE AS SPECIFIED

ON DETAILS.

6) ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB

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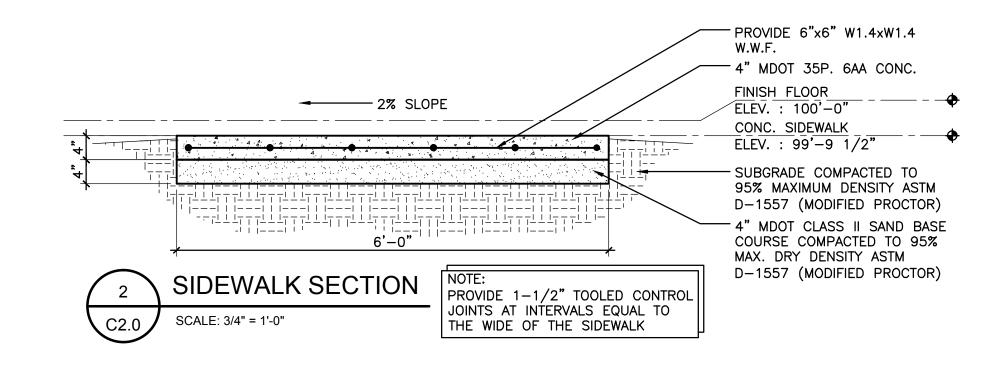
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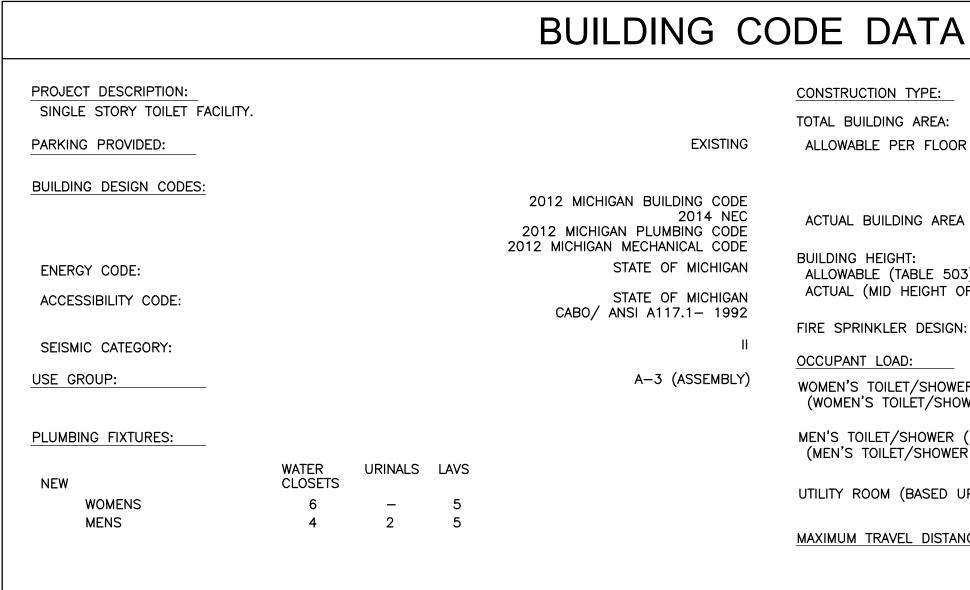
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ARCHITECTURAL SITE PLAN

C2.0

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





VB	CONSTRUCTION TYPE:
	OTAL BUILDING AREA:
BASED UPON A-3 USE GROUP BASIC: 6,000 S.F. FOR OPEN PERIMETER: + 4,500 S.F. SPRINKLER: (N.A.) 10,500 S.F.	ALLOWABLE PER FLOOR (TABLE 503)
EXTERIOR COLUMNS UNDER ROOF PROJECTION): 3,919.50 S.F.	ACTUAL BUILDING AREA (TO FACE OF
	BUILDING HEIGHT:
	ALLOWABLE (TABLE 503): BASED UP ACTUAL (MID HEIGHT OF LARGEST H
1 STORT, 15 –4	ACTUAL (MID HEIGHT OF LARGEST H
N.A.	FIRE SPRINKLER DESIGN:
	OCCUPANT LOAD:
TABLE 1004.1.2 2003 MBC): 746 NET S.F./15 = 50 OCC. N MAXIMUM NUMBER OF FIXTURES AVAILABLE): (19 OCC.)	WOMEN'S TOILET/SHOWER (BASED UP (WOMEN'S TOILET/SHOWER BASED U
ABLE 1004.1.2 2003 MBC): 746 NET S.F./15 = 50 OCC. MAXIMUM NUMBER OF FIXTURES AVAILABLE): (21 OCC.)	MEN'S TOILET/SHOWER (BASED UPON (MEN'S TOILET/SHOWER BASED UPO
4.1.2 2003 MBC): $284 \text{ GSF}/300 = 1 \text{ OCC}.$	UTILITY ROOM (BASED UPON TABLE 1

Drawn:

DE

Designed:

BKC

Checked:

DC

Approved:

AT

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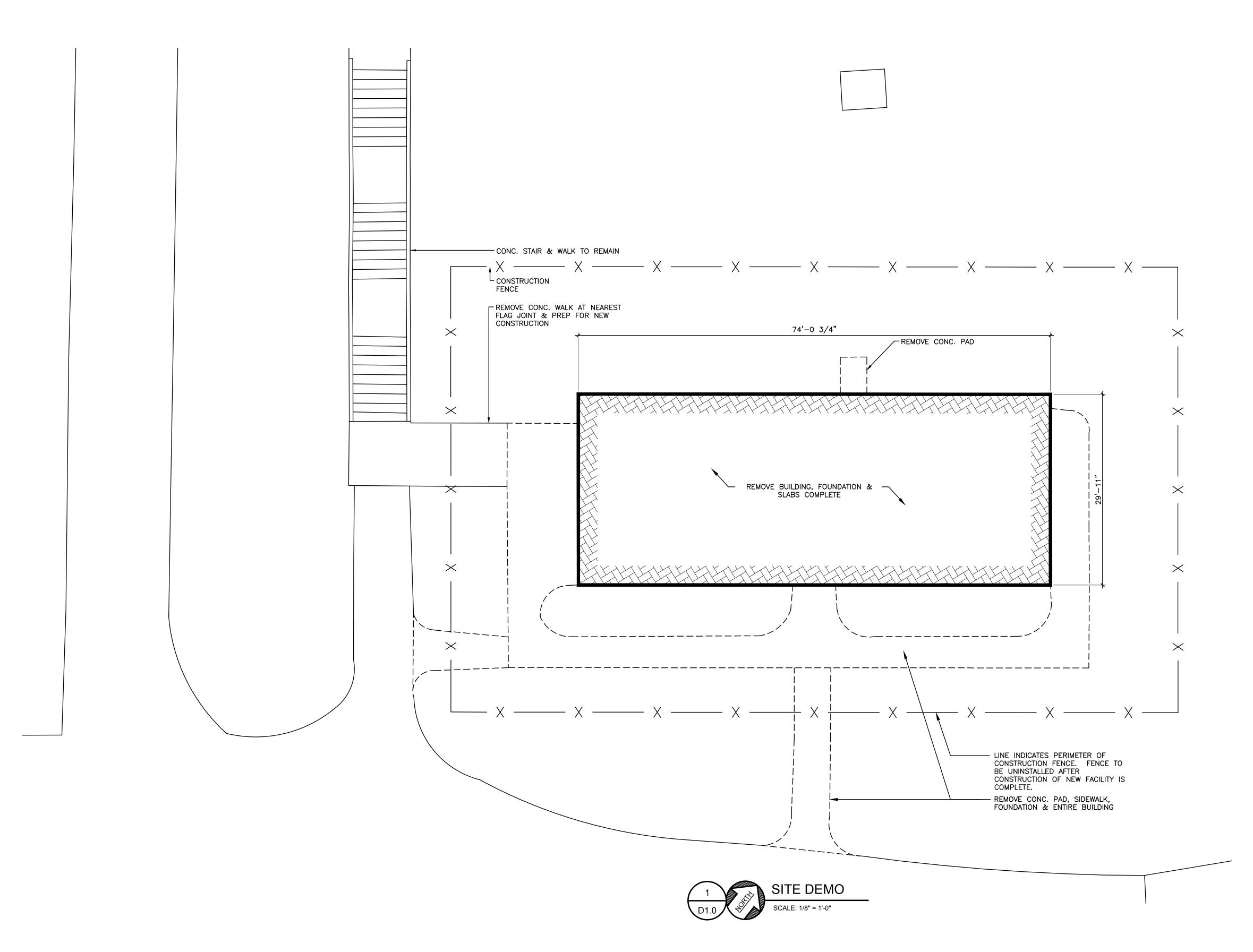
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ARCHITECTURAL
SITE PLAN & CODES

Sheet Number:

G2.0



#### GENERAL ARCHITECTURAL DEMOLITION NOTES

1. DO NOT SCALE DRAWINGS. USE CALCULATED DIMENSIONS

2. DRAWINGS ARE SCHEMATIC AND DO NOT ACCOUNT FOR HIDDEN CONDITIONS THAT MAY BECOME APPARENT DURING DEMOLITION. VERIFY ALL ON—SITE CONDITIONS AND COORDINATE EXTENT OF DEMOLITION IN FIELD WITH EXISTING CONDITIONS AND NEW WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

- NEW WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

  3. PRIOR TO START OF DEMOLITION WORK, SUBMIT A SCHEDULE FOR REVIEW TO THE OWNER'S REPRESENTATIVE INDICATING
- 4. PROVIDE TEMPORARY BARRICADES DURING CONSTRUCTION.

PROPOSED METHODS AND SEQUENCE OF OPERATIONS.

- 5. REMOVE PROTECTIONS AT COMPLETION OF WORK.
- 6. DOCUMENTS ARE BASED UPON PARTIAL DRAWING SET FROM ORIGINAL BUILDING CONSTRUCTION AND FROM BUILDING RENOVATION (OF 1990). VERIFY SCOPE OF DEMOLITION IN THE FIELD AND REPORT DISCREPANCIES TO THE ARCHITECT.
- 7. COORDINATE WITH OWNER LOCATION FOR REFUSE CONTAINERS ON THE SITE.

8. REMOVE STRUCTURE IN ITS ENTIRETY, INCLUDING ALL SLABS, FROST SLABS, AND RECESSED (+/- 3 FOOT) FLOOR AREAS, ALONG WITH FOUNDATIONS, SITE PAVING, AND UTILITY LEADS WITHIN DESIGNATED "LIMITS OF DEMOLITION". MINIMIZE DISTURBANCE TO SITE WITHIN LIMITS OF PERIMETER BARRICADES.

9. OWNER RESERVES THE RIGHT TO REMOVE ITEMS FROM THE BUILDING PRIOR TO START OF STRUCTURE DEMOLITION.

10. NOTIFY OWNER IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING DEMOLITION OPERATIONS.

#### GENERAL MECHANICAL/PLUMBING DEMOLITION NOTES

- 1. REMOVE WATER SERVICE BACK TO "LIMIT OF DEMOLITION" AND CAP. MARK POINT OF TERMINATION FOR POTENTIAL SUBSEQUENT TIE-IN.
- 2. REMOVE SANITARY SERVICE BACK TO "LIMIT OF DEMOLITION" AND CAP. MARK POINT OF TERMINATION FOR POTENTIAL SUBSEQUENT TIE-IN.
- 3. REMOVE GAS SERVICE BACK TO "LIMIT OF DEMOLITION" AND CAP. MARK POINT OF TERMINATION FOR POTENTIAL SUBSEQUENT TIE-IN.

#### GENERAL ELECTRICAL DEMOLITION NOTES

2. COORDINATE DISCONNECTION & REMOVAL OF OVERHEAD POWER & COMMUNICATION UTILITY SERVICES WITH OWNER AND UTILITY COMPANIES.

Architect Engineer

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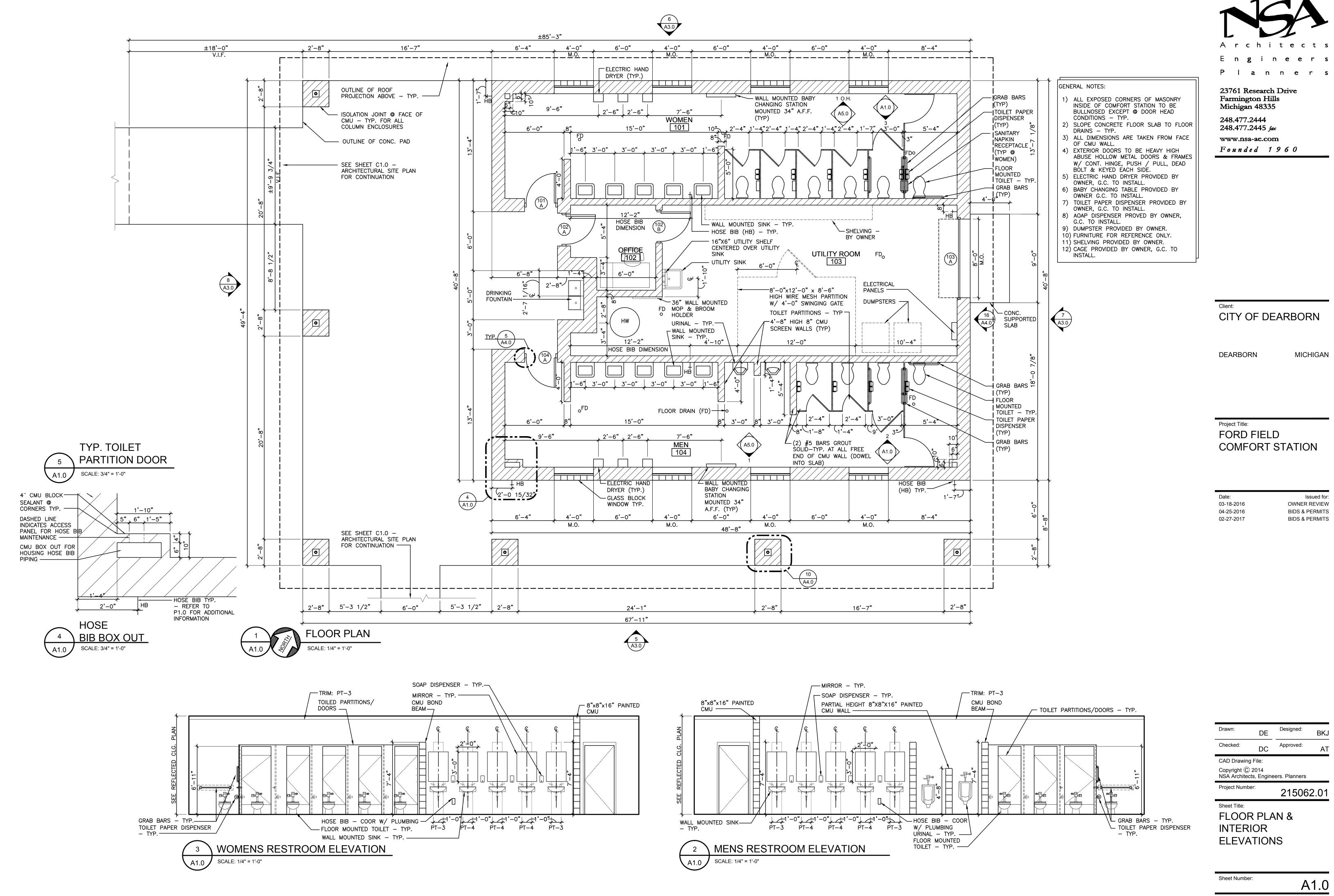
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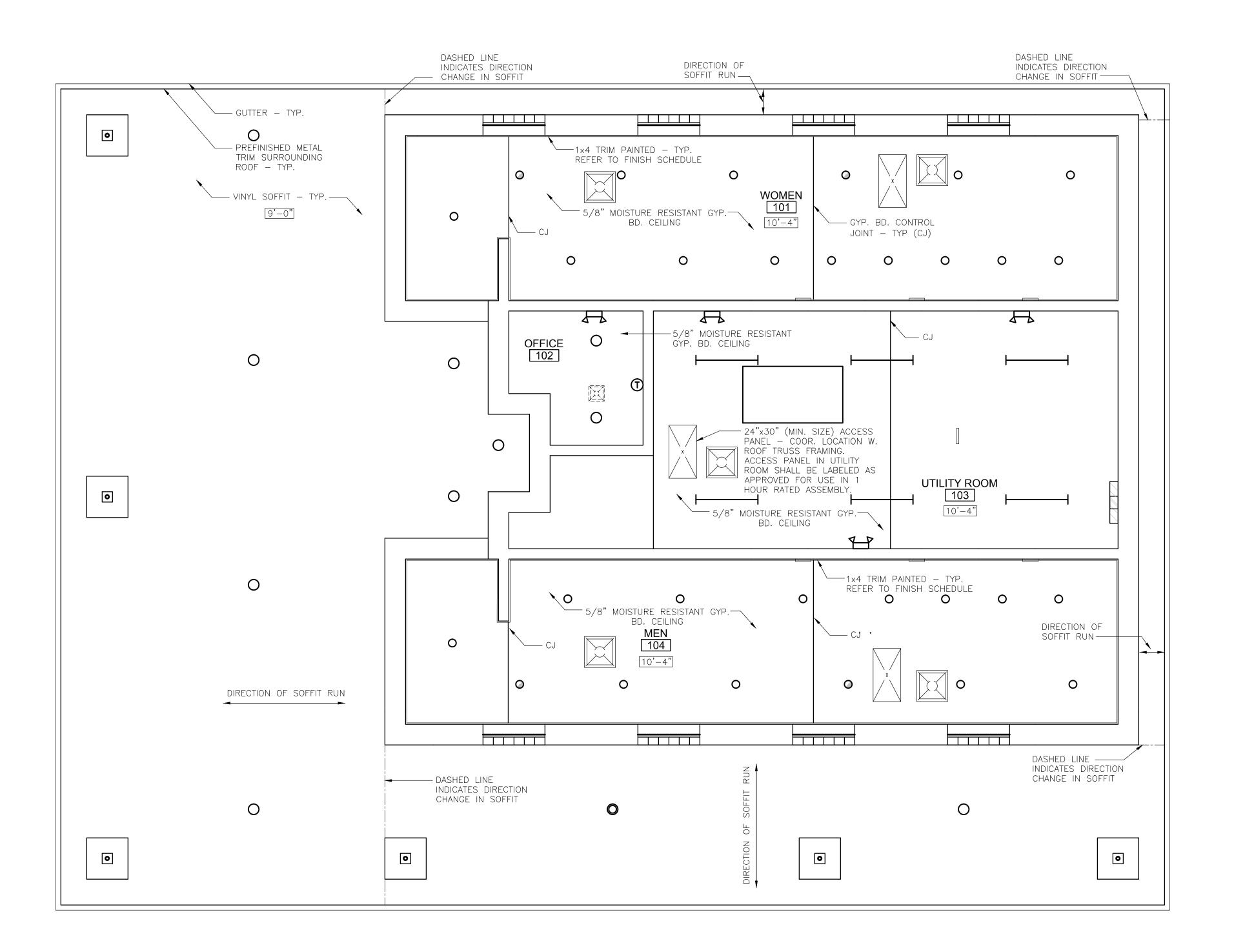
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SITE DEMOLITION
PLAN

Sheet Number:

AD1.0



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#### **CEILING LEGEND:**

GYPSUM BOARD

2'-0" X 2'-0" ACOUSTICAL CEILING TILE

2'-0" X 4'-0" RECESSED LIGHT FIXTURE

2'-0" X 4'-0" RECESSED LIGHT FIXTURE ON EMERGENCY CIRCUIT

→ 4'-0" LIGHTING STRIP

**₹** 1'-0" X 4'-0" SURFACE MOUNTED LIGHT FIXTURE

1'-0" X 4'-0" SURFACE MOUNTED LIGHT FIXTURE ON EMERGENCY CIRCUIT

CEILING FAN

DOUBLE BOWL PENDANT LIGHT FIXTURE

Q-O CEILING OR WALL MOUNTED FIXTURE CEILING OR WALL MOUNTED

FIXTURE ON EMERGENCY CIRCUIT

INDICATE DIRECTION

AIR RETURN GRILLE

M AIR SUPPLY DIFFUSER

O'-O" INDICATES NON TYPICAL CEILING HEIGHT

1 HOUR RATED HATCH FOR VISUAL INSPECTION OF FIREWALL (20"X36")

CJ CONTROL JOINT

- 1. GENERAL CONTRACTOR TO COORDINATE RECESSED LIGHT
- 2. FIXTURE/EQUIPMENT LOCATIONS
- 3. FOR FIXTURE TYPES, REFER TO ELECTRICAL PLANS.
- 4. CENTER SPRINKLER HEADS, DIFFUSERS, GRILLES, LIGHTING FIXTURES, ETC. IN CEILING TILES OR ALIGN IN GYPSUM BOARD
- 5. PROVIDE FIRE-RATED RECESSED FIXTURES IN ALL UL ROOF/CEILING ASSEMBLIES. REFER TO ELECTRICAL DRAWINGS FOR FIXTURE SCHEDULE.
- 6. CEILING TILES TO BE CENTERED BETWEEN BULKHEADS AS SHOWN UNLESS NOTED OTHERWISE.
- 7. REFER TO FINISH SCHEDULE FOR REFER TO PLAN FOR SPECIAL CONDITIONS. CEILING HEIGHT IS 8'-0" U.O.N.
- A-100) INCLUDING BUT NOT LIMITED TO TENTING OF LIGHT FIXTURES.

**CEILING NOTES:** 

FIXTURE LOCATIONS W/ DUCTWORK, SPRINKLERS AND STRÚCTURE.

PER ELÉCTRICAL DRAWINGS.

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CEILINGS. www.nsa-ae.com Founded 1960

GENERAL ROOM CEILING HEIGHTS.

8. AT RATED CEILINGS, PRICE TO INCLUDE ALL ITEMS REQUIRED BY U.L. ASSEMBELIES ( AS SHOWN ON

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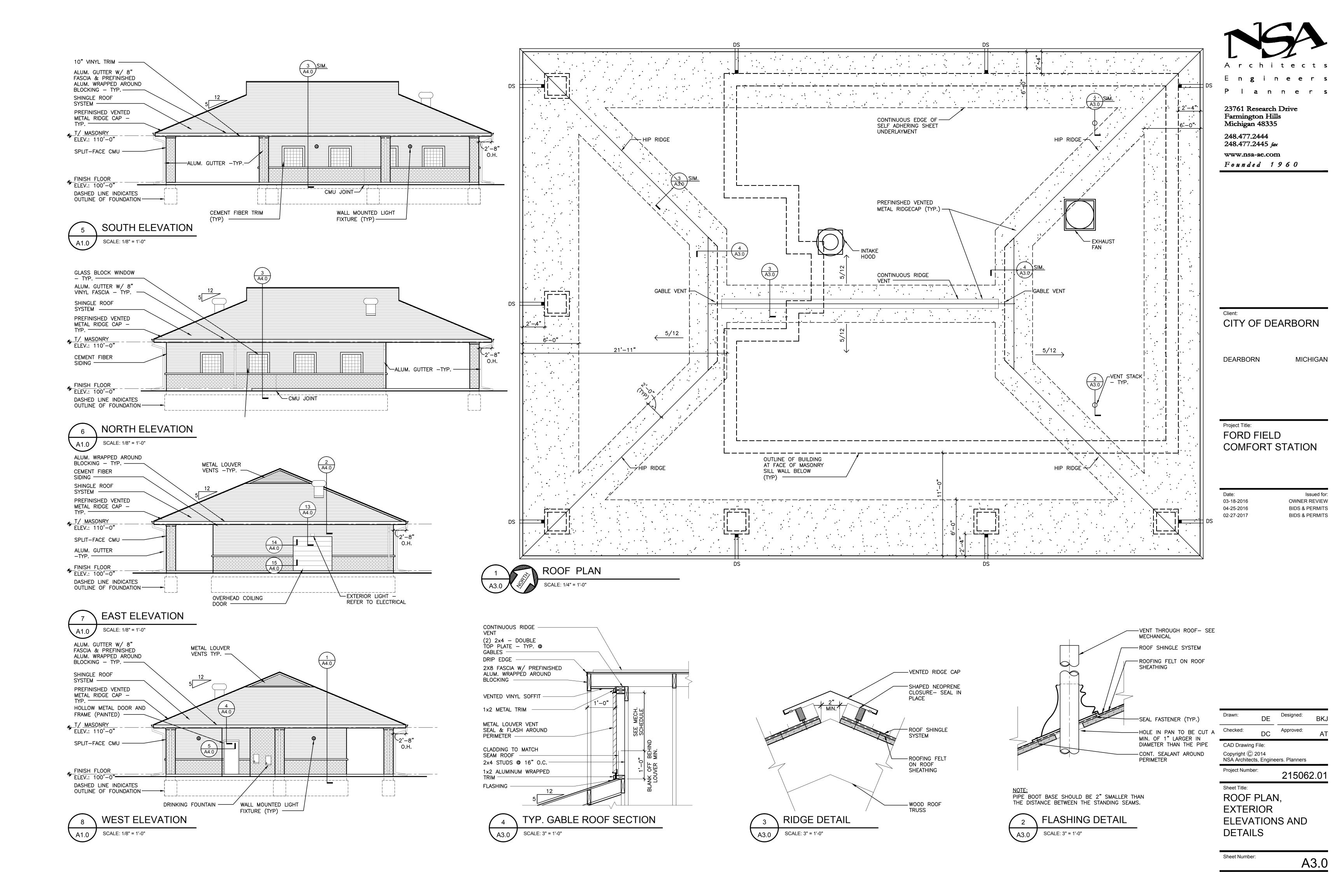
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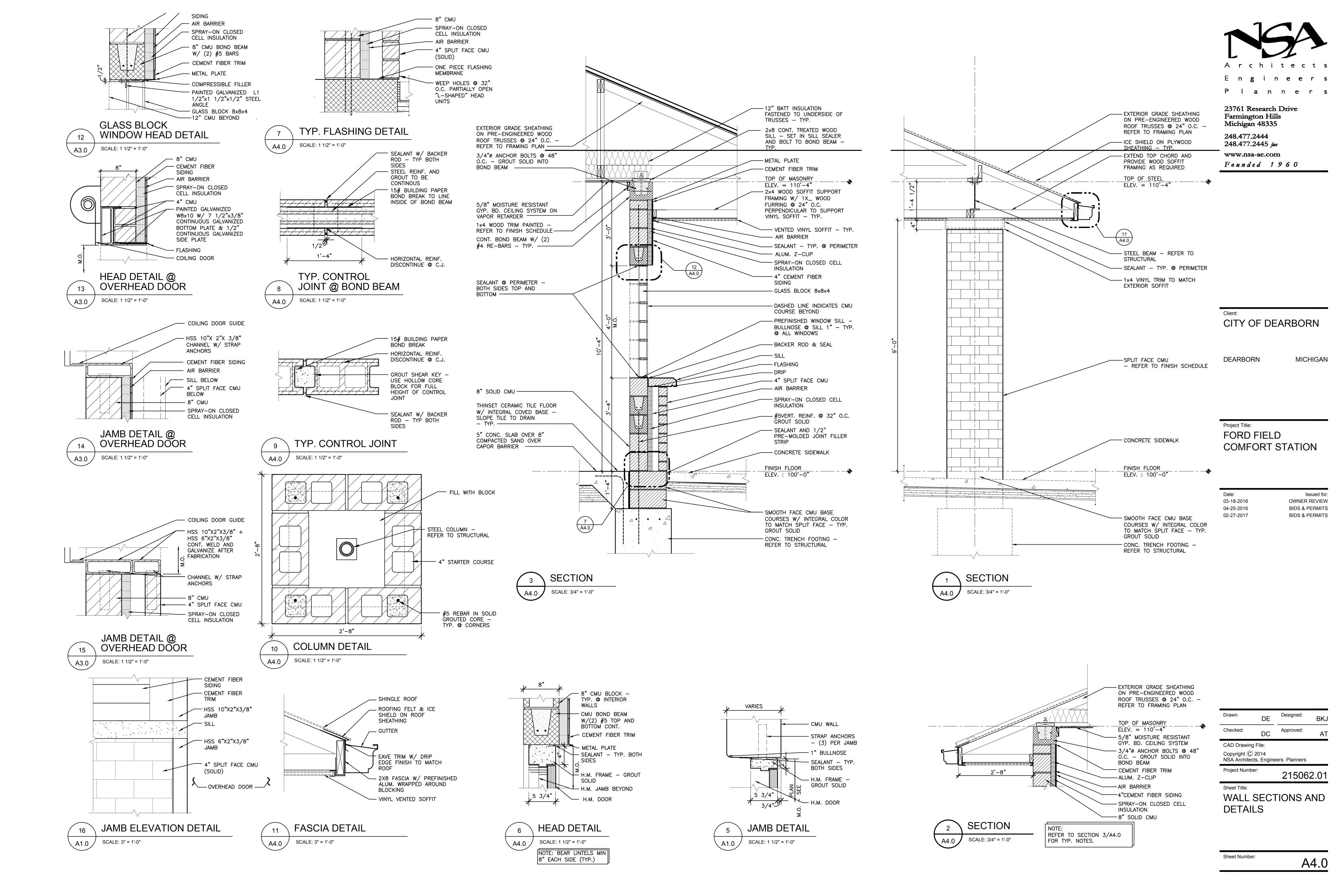
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REFLECTED CEILING PLAN

Sheet Number:

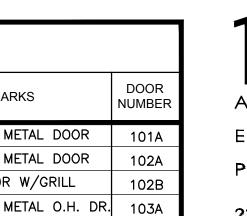
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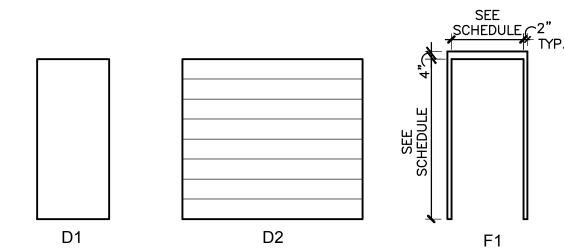
	DOOR SCHEDULE																			
DOOR	LOCATION	DOOR OPENING SIZE	DOOD ODENING CIZE	DOOD ODENING SIZE	DOOR		DOOR			FRAME		RATING	UNDER	HARD	THRESHOLD		DETAILS		REMARKS	DOOR
NUMBER	LOCATION		THICK TYPE MATL FIN TYPE MATL FIN (MIN.) CUT	CUT	CUT WARE	RE THRESHOLD	JAMB	HEAD	SILL	NEIWIARNS NI	NUMBER									
101A	WOMEN	3'-0" x 7'-0"	1 3/4"	D1	НМ	PT-3	F1	НМ	PT-3	_	-	SEE SPEC	AL	5/A4.0	6/A4.0	_	INSULATED METAL DOOR	101A		
102A	OFFICE	3'-0" x 7'-0"	1 3/4"	D1	НМ	PT-3	F1	НМ	PT-3	-	_	SEE SPEC	AL	5/A4.0	6/A4.0	_	INSULATED METAL DOOR	102A		
102B	OFFICE	3'-0" x 7'-0"	1 3/4"	D1	НМ	PT-3	F1	НМ	PT-3	_	_	SEE SPEC	AL	5/A4.0	4/A4.0	_	METAL DOOR W/GRILL	102B		
103A	UTILITY ROOM	8'-0" x 7'-4"	_	D2	_	PT-3	_	STEEL	PT-3	_	_	SEE SPEC	_	13/A4.0	14/A4.0	_	INSULATED METAL O.H. DR.	103A		
104A	MEN	3'-0" x 7'-0"	1 3/4"	D1	НМ	PT-3	F1	НМ	PT-3	-	_	SEE SPEC	AL	5/A4.0	6/A4.0	_	INSULATED METAL DOOR	104A		



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ROOM FINISH SCHEDULE											
ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILI	CEILING		
NOOM NO.	NOOW NAME	TEOOR	DAGE	NORTH	EAST	SOUTH	WEST	MATERIAL	FINISH	ROOM FINISH NOTES	
101	WOMEN	SEALED CONCRETE	_	CMU EPOXY PT	CMU EPOXY PT	CMU EPOXY PT	CMU EPOXY PT	SUSPENDED MOISTURE RESISTANT GYP. BD.	EPOXY PAINT	_	
103	OFFICE	SEALED CONCRETE	_	CMU EPOXY PT	CMU EPOXY PT	CMU EPOXY PT	CMU EPOXY PT	SUSPENDED GYP. BD.	EPOXY PAINT	_	
103	UTILITY ROOM	CONC. W/HARDENER	_	CMU EPOXY PT	CMU EPOXY PT	CMU EPOXY PT	CMU EPOXY PT	MOISTURE RESISTANT GYP. BD.	EPOXY PAINT	_	
104	MEN	SEALED CONCRETE	_	CMU EPOXY PT	CMU EPOXY PT	CMU EPOXY PT	CMU EPOXY PT	SUSPENDED MOISTURE RESISTANT GYP. BD.	EPOXY PAINT	_	

	Client:
4	CITY OF DEARBORN

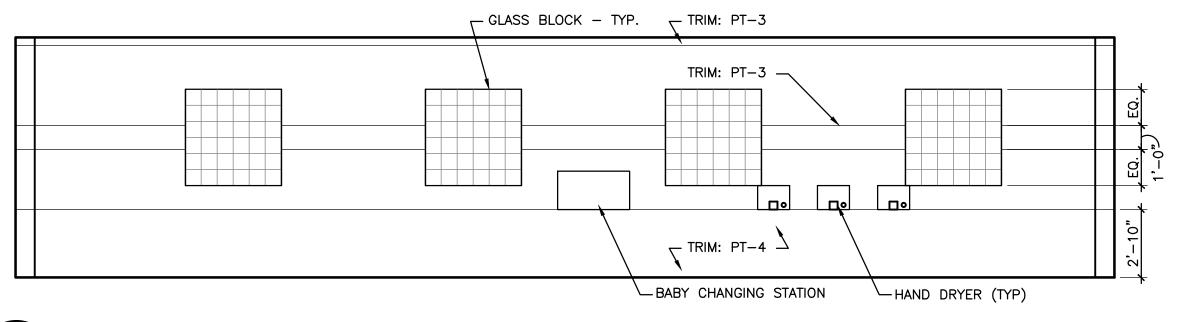
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			MATERIA	AL FINISHES	
	CODE	DISTRIBUTOR	MANUFACTURER	SPECIFICATIION	REMARKS
	PT-1		BENJAMIN MOORE	COLOR: NATURAL CREAM OC-14 FINISH: SEMI-GLOSS	GENERAL
	PT-1a		BENJAMIN MOORE	COLOR: SILVER SATIN OC-26 FINISH: SEMI-GLOSS	GENERAL (ALTERNATE)
IOR	PT-2		BENJAMIN MOORE	COLOR: ICE MIST OC-67 FINISH: FLAT	CEILING
INTERIOR	PT-3		BENJAMIN MOORE	COLOR: HUNTER GREEN 2041-10 FINISH: SEMI-GLOSS	ACCENT PAINT AND H.M. DOORS AND FRAMES
2	PT-4		BENJAMIN MOORE	COLOR: OL' BLUE EYES 2064-30 FINISH: SEMI-GLOSS	ACCENT PAINT (ALTERNATE)
	S. CONC.		-	_	SEALED CONC FLOOR
	TLT.P		ACCURATE	COLOR: HUNTER GREEN 9508 ITEM: SOLID PLASTIC (HDPE)	PARTITION AND DOOR
	CMU-1	NATIONAL BLOCK & READY—MIX, INC		COLOR: RED BARN FINISH: SMOOTH ITEM: HALF HIGH CMU	GENERAL
JR	CMU-2	NATIONAL BLOCK & READY—MIX, INC		COLOR: SKY GREY/WHITE FINISH: GROUND FACE	ACCENT BAND
EXTERIOR	METAL		PAC-CLAD	COLOR: HUNTER GREEN	STANDING SEAM METAL ROOF
EX	MORTAR		GLEN-GERY	COLOR: PORTLAND CEMENT & LIME BLEND	
	VINYL SOFFIT		CERTAINTEED	COLOR: COLONIAL WHITE ITEM: TRIPLE 3-1/3" INVISIVENT	

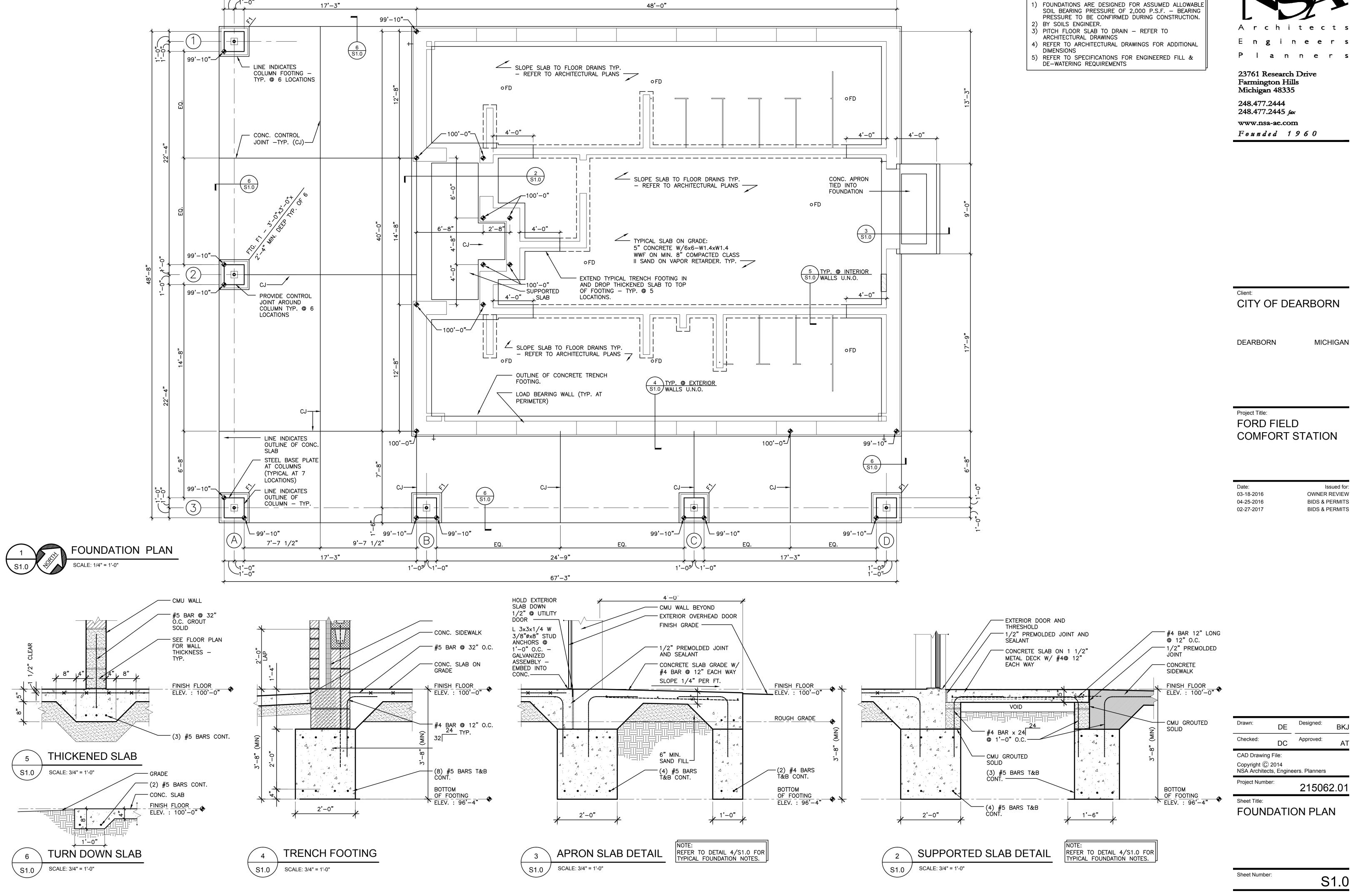


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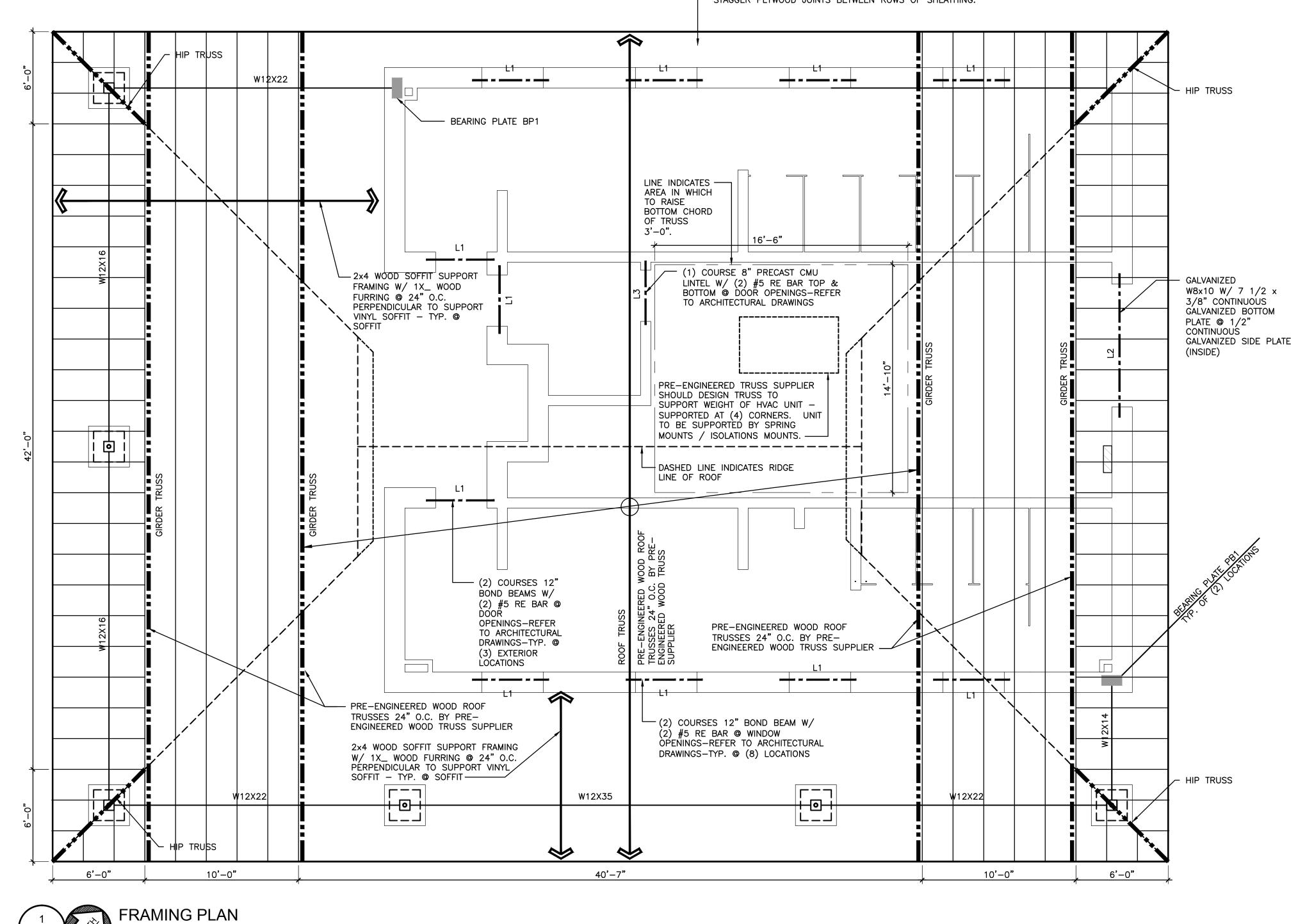


67'-3"

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## TYPICAL ROOF SHEATHING IS 19/32 PLYWOOD OR 5/8 O.S.B. ATTACHED WI/ 8D NAILS @ 6" O.C. @ EDGES & 12" O.C. IN FIELD. PANEL ROOF CLIPS BETWEEN TRUSSES EDGES BETWEEN TRUSSES. STAGGER PLYWOOD JOINTS BETWEEN ROWS OF SHEATHING.



STRUCTURAL NOTES:

1) STRUCTURAL DESIGN OF WOOD TRUSSES BY TRUSS MANUFACTURER. SUBMIT SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF MICHIGAN.

2) DESIGN FOR DEAD LOAD OF ROOFING
MATERIALS PLUS A LIVE LOAD OF 20 PSF.

3) PROVIDE LATERAL TRUSS BRACING AS
REQUIRED.

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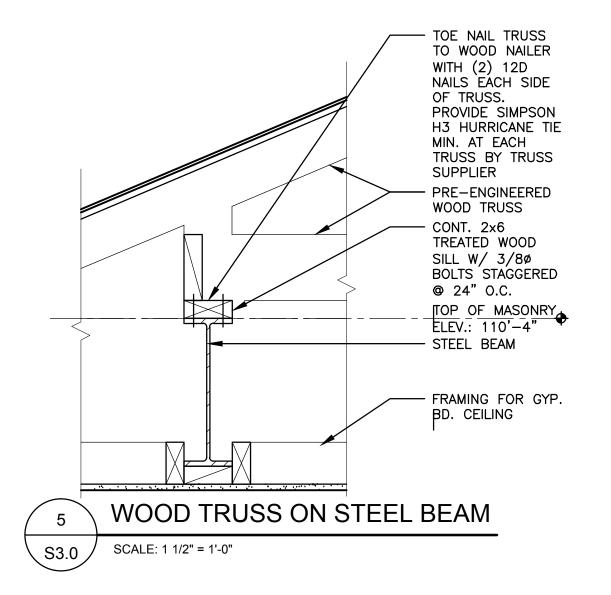
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Sheet Title:
FRAMING PLAN

Sheet Number:

S2.0



TYP. BASE PLATE

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

PIPE DETAIL

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

S3.0

S3.0

— FLASHING @ BASE COURSE

-FINISH FLOOR TOO'-0" →

STEEL PIPE COLUMN

INFILL W/ CONC.BEFORECONTINUING

LEVELING PLATE

MASONRY

— NON-SHRINK GROUT

CONT. WOOD NAILER

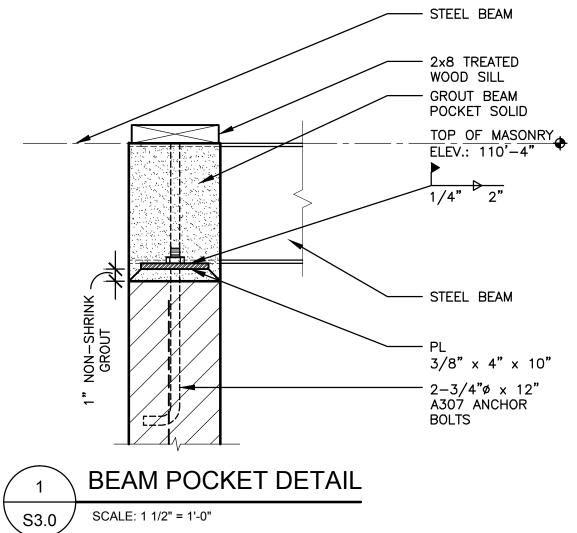
- SLOT PIPE FOR SHEAR UP TO PASS THROUGH

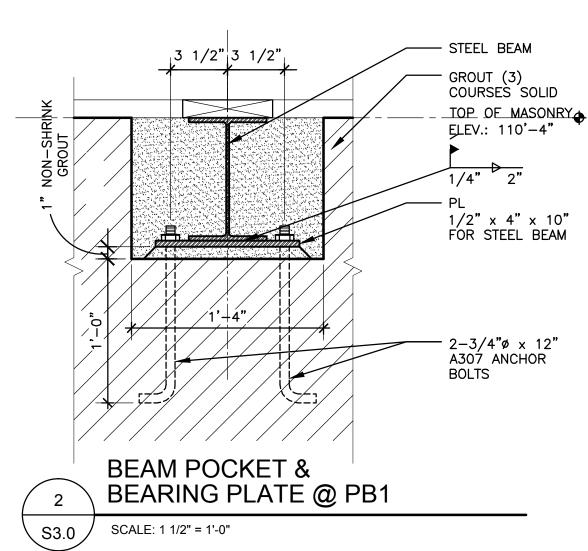
3/8" MIN. THRU PLATE CONNECTION

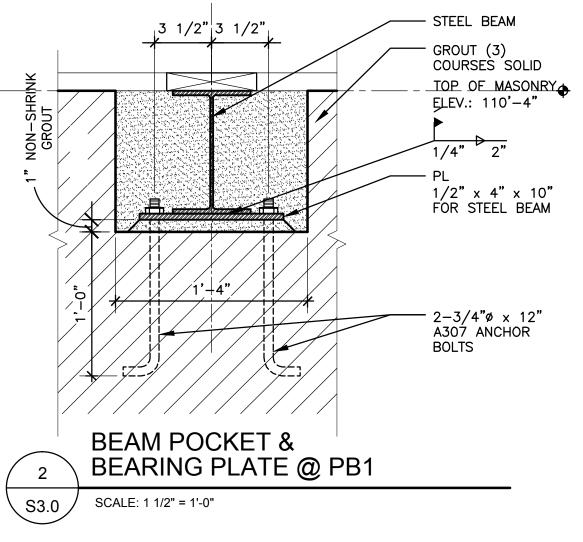
— STEEL BEAM

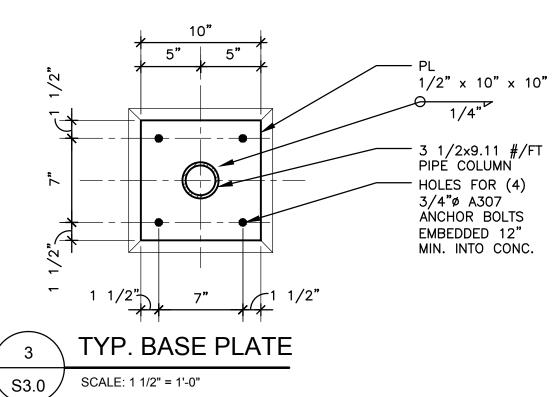
- 4" PIPE

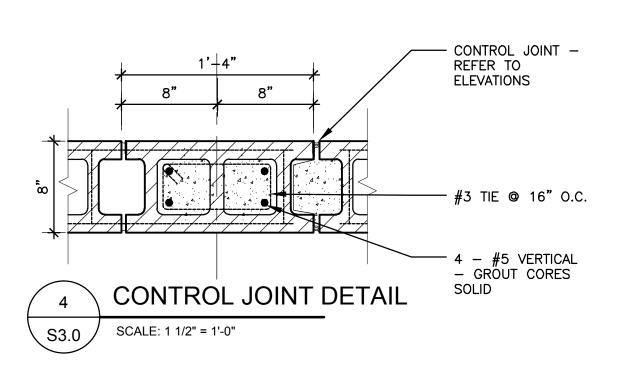
--- SIDEWALK











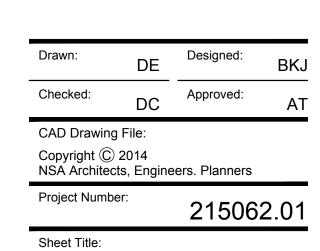


CITY OF DEARBORN DEARBORN Project Title: FORD FIELD

Date:	Issued for:
03-18-2016	ONWER REVIEW
04-25-2016	BIDS & PERMITS
02-27-2017	BIDS & PERMITS

**COMFORT STATION** 

MICHIGAN



STRUCTURAL DETAILS

S3.0

Sheet Number:	

WOOD

1. WOOD CONSTRUCTION SHALL BE PER AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS AND SPECIFICATIONS, AND NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) AS PUBLISHED BY NATIONAL FOREST PRODUCTS ASSOCIATION.

2. ALL LUMBER FRAMING MEMBERS ARE TO HAVE THE FOLLOWING MINIMUM BASE DESIGN VALUES IN ACCORDANCE WITH THE LATEST ISSUE OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) AS PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION (NFPA):

Fb = 850 P.S.I.fv = 150 P.S.I.

E = 1.300.000 P.S.I.NO. 2 OR BETTER

3. PLYWOOD TO BE CONTINUOUS OVER TWO (2) OR MORE SPANS AND FACE GRAIN PERPENDICULAR TO SUPPORT. PLYWOOD OR ORIENTED STRAND BOARD FOR ROOF: 5/8" (32/16) 5 PLY STANDARD GRADE.

SEE ARCHITECTURAL DRAWINGS FOR EXPOSED OVERHANGS AND CEILINGS. 4. PLYWOOD OR ORIENTED STRAND BOARD FOR FLOORS: 3/4" TONGUE AND GROOVE, U.N.O.

5. HANGERS, STRAPS, CLIPS AND HOLDOWNS SHALL BE MANUFACTURED BY THE

"SIMPSON MANUFACTURING COMPANY". 6. PROVIDE DOUBLE CRIPPLE STUD AT EACH END OF WOOD HEADERS, TYPICAL, UNLESS NOTED

7. TIMBER SUPPLIER SHALL BE A MEMBER OF AITC. TIMBER CONNECTIONS TO BE DESIGNED AND DETAILED BY TIMBER SUPPLIER, WITH FABRICATION BY STEEL

8. UNLESS OTHERWISE NOTED, PROVIDE 2-2X8 HEADER FOR OPENINGS IN STUD WALLS FOR SPANS UP TO 3'-0 MAXIMUM.

9. TRUSS MANUFACTURER SHALL PROVIDE SHOP DRAWINGS, WITH DESIGN LOADS, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN. TRUSS MANUFACTURER SHALL VERIFY WITH ARCHITECT AND MECHANICAL CONTRACTOR SIZE, LOCATION & SUPPORT OF MECHANICAL UNITS. TRUSS FRAMING AND TRUSS TO TRUSS CONNECTIONS ARE TO BE DESIGNED BY TRUSS MANUFACTURER FOR ALL REQUIRED LOADS. SHOP DRAWINGS NOT SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF MICHIGAN WILL BE REJECTED. SEE MECHANICAL DRAWINGS FOR MECHANICAL LOADS AT ROOF AND FLOOR TRUSSES. TRUSS SUPPLIER TO DESIGN TRUSSES FOR SUPPORT OF ALL MECH. UNITS, PIPING, FIRE SUPPRESSION LINES, AND ALL UTILITIES. COORDINATE

ADDITIONAL LOADING AND PIPE SUPPORT/UTILITY LOCATIONS WITH MECH. CONTRACTOR 10. DESIGN OF THE LUMBER AND CONNECTOR PLATES FOR TRUSSES SHALL BE IN ACCORDANCE WITH LATEST TRUSS PLATE INSTITUTE (TPI) REQUIREMENTS. 11. THE TRUSS SUPPLIER SHALL DESIGN AND DETAIL ALL REQUIRED BRIDGING, BRACING

12. TRUSSES: SHALL BE MANUFACTURED BY AN ACCEPTABLE TRUSS MANUFACTURER, RECOGNIZED BY THE GOVERNING BUILDING CODE. TRUSS MANUFACTURER SHALL SUPPLY ALL HANGERS, PLATES, BLOCKS, CLIPS, BRIDGING AND OTHER ITEMS RELATIVE TO THEIR UNITS. DESIGN CRITERIA ARE AS FOLLOWS:

AND SUPPLEMENTAL MATERIAL TO PROVIDE A COMPLETE SYSTEM FOR THE LOADS

ROOF TRUSS (PITCHED 4:12 AND GREATER):

TC LL = 25 PSF DL = 10 PSFBC DL = 10 PSFTL = 45 PSF

AND PERFORMANCE REQUIREMENTS NOTED.

13. TRUSS TOP CHORD MUST BE BRACED WITH ROOF SHEATHING OR CONTINUOUS LATERAL BRACING AT 3 -0" O.C. BOTTOM CHORD MUST BE BRACED WITH A RIGID CEILING OR CONTINUOUS BRACING AT 10'-0" O.C. PLYWOOD SHEATHING SHALL BE NAILED OR SCREWED TO TRUSS MEMBERS AT 6" O.C. MAXIMUM SPACING.

14. ALL FLOOR AND ROOF TRUSSES PARALLEL TO AND OVER SHEARWALLS SHALL BE DESIGNED TO HORIZONTALLY TRANSFER THE LATERAL LOADS TO THE SHEARWALL BELOW. SUPPLY HORIZONTAL LOAD ON ONE FACE OF TRUSS.

15. GIRDER TRUSSES SHALL BE DESIGNED TO SUPPORT ALL LOADS FROM THEIR TRIBUTARY AREA. 16. ALL FABRICATION SHOPS SHALL BE APPROVED BY THE BUILDING DEPARTMENT AND ENGINEER PRIOR TO

ANY WORK BEING PERFORMED. SUBMIT ALL CERTIFICATIONS AND DOCUMENTATION FOR THEIR REVIEW. WOOD TRUSS DOCUMENTS SUBMITTED BY THE WOOD TRUSS SUPPLIER IS A "DEFERRED SUBMITTAL" PER SECTION 107.3.4.1 OF THE MBC 2012 17. TRUSSES SHALL BE INSTALLED PER THE LATEST TPI BCSI REQUIREMENTS.

18. POWDER-DRIVEN FASTENERS (P.D.F.) SHALL HAVE MINIMUM SHANK DIAMETER OF 3/16" AND A MINIMUM EMBEDMENT OF 1-1/4". SPACING IS AS NOTED ON THE PLANS. POWDER-DRIVEN FASTENERS SHALL BE AS MANUFACTURED

BY "HILTI", "RAMSET", "REDHEAD" OR AN APPROVED EQUAL.

NAILING SCHEDULE

<u>CONNECTION</u>

IF NAILING IS NOT NOTED OR SHOWN ON THE PLANS, SHEARWALL SCHEDULE OR DETAILS, NAILING SCHEDULE IS AS FOLLOWS : SCHEDULE IS BASED ON WIRE GAGE NAILS

	<u></u>
1. 2.	JOIST TO SILL OR GIRDER, TOE NAIL
3. 4. 5. 6.	TOE NAILED OR PER 'SW' SCHEDULE BRIDGING TO JOIST, TOENAIL EACH END (2) 8d SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL
7. 8. 9. 10.	(2) 16d , END NAIL DOUBLE STUDS, FACE NAIL
11. 12. 13. 14. 15. 16. 17. 18. 19.	STAGGERED ALONG EDG CEILING JOISTS TO PLATE, TOE NAIL
	WALL SHEATHING TO FRAMING; SEE SHEARWALL SCHEDULE PROVIDE MINIMUM 8d NAILS 6" O.C. AT EDGES AND 12"O.C. AT INTERMEDIATE SUPPORTS  ROOF SHEATHING TO FRAMING; 8d NAILS @ 6" O.C. AT EDGES  AND @ 12" AT INTERMEDIATE SUPPORT U.N.O.  NOTE: COMMON NAILS ARE REQUIRED FOR SHEAR WALLS INCLUDING PLATE NAILING,  TIEDOWNS, HANGERS AND LEDGERS

BOX NAILS REQUIRED 1/3 MORE NAILS THAN LISTED ABOVE. CEMENT COATED

SINKERS ARE CONSIDERED BOX NAILS

STRUCTURAL STEEL

1. STEEL DESIGN, FABRICATION AND ERECTION TO BE IN ACCORDANCE WITH THE LATEST A.I.S.C. MANUAL AND SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS. ALL WIDE FLANGE BEAMS AND COLUMNS SHALL CONFORM TO THE LATEST ASTM. SERIAL DESIGNATION A992, GR50; ALL MISCELLANEOUS STEEL PLATES, BARS, ANGLES, ETC., SHALL CONFORM TO ASTM A36; STEEL TUBING TO BE ASTM A500, GRADE B; STEEL PIPE ASTM. A-53, GRADE B.

2. UNLESS OTHERWISE NOTED OR SHOWN, ALL BEAM CONNECTIONS TO HSS 5 X 5 OR SMALLER COLUMN,5" OR SMALLER COLUMN, OR ANY TUBE COLUMN REGARDLESS OF SIZE WITH A WALL THICKNESS LESS THAN 5/16" SHALL BE MADE WITH THRU PLATES WELDED TO BOTH WALLS OF COLUMN.

3. ALL WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS CODE, E70XX ELECTRODES, WITH WELDING PERFORMED BY QUALIFIED

4. BOLTED CONNECTIONS SHALL BE MADE WITH A-325 OR A-490 BOLTS. ALL BOLTS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS FOR "STRUCTURAL JOINTS USING A.S.T.M. A-325 OR A-490 BOLTS." TYPICAL BOLTED CONNECTIONS ARE "BEARING TYPE" UNLESS NOTED OTHERWISE.

5. DESIGN CONNECTIONS FOR MINIMUM ONE—HALF THE TOTAL ALLOWABLE UNIFORM LOAD PER A.I.S.C. BEAM LOAD TABLES, UNLESS OTHERWISE NOTED. (MIN. 2 BOLTS EACH CONNECTION).

6. SINGLE PLATE SHEAR CONNECTIONS ARE ACCEPTABLE ONLY FOR BEAM TO GIRDER AND SKEWED CONNECTIONS LESS THAN 30 KPS. SHEAR PLATE OR SINGLE SHEAR ANGLES SHALL BE WELDED TO TOP FLANGE OF SUPPORTING GIRDERS.

7. THE DESIGN, CONFIGURATION & ERECTION SAFETY OF ALL STRUCTURAL STEEL CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE STRUCTURAL STEEL FABRICATOR. REVIEW AND ACCEPTANCE OF THE SHOP DRAWINGS BY THE ENGINEER SHALL CONSTITUTE APPROVAL OF THE LOAD CARRYING ADEQUACY

8. TYPE OF CONSTRUCTION PER ASCE A2.2 IS TYPE 2 "SIMPLE FRAMING" UNLESS NOTED OTHERWISE.

9. TEMPORARY ERECTION SEATS SHALL BE PROVIDED AS RECOMMENDED ON PAGE 3-59 OF THE A.I.S.C. PUBLICATION "ENGINEERING FOR STEEL CONSTRUCTION". 10. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL ANGLES, PLATES, BARS, CLIPS, ETC., ATTACHED TO STRUCTURAL STEEL.

11. THIS STEEL FRAME IS NON SELF-SUPPORTING PER A.I.S.C. CODE OF STANDARD PRACTICE, SECTIONS 7.9.3. AND 7.9.5. ERECTION, BRACING, SHORING, ETC. SHALL CONFORM TO THESE SECTIONS. IT IS THE CONTRACTOR'S SOLE

RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE. 12. THE CONTRACTOR SHALL FURNISH ALL ACCESSORIES INCLUDING CLOSURES, "Z" CLOSURES, COLUMN CLOSURES, SCREED ANGLES AND GIRDER FILLERS AS

required. 13. MASONRY AND BRICK LINTELS SHALL BE GALVANIZED G90 PER ASTM A123.

14. PROVIDE L4X4X1/4 SEATS AT COLUMN WEBS WHERE REQUIRED FOR SUPPORT OF ROOF AND FLOOR DECKS. PROVIDE ANGLE OUTRIGGER FROM EXTERIOR COLUMNS FOR SLAB AND ROOF EDGE PLATE SUPPORT.

15. ALL BOLTED MOMENT CONNECTIONS REQUIRE SLIP CRITICAL BOLTS.

#### CONCRETE

<u>nailing</u>

EDGE

1. MINIMUM CONCRETE STRENGTH TO BE 3000 P.S.I. @ 28 DAYS, U.O.N.; SLABS SHALL BE 3500 P.S.I. MIN. U.O.N. EXPOSED CONCRETE SHALL BE 4000 PSI WITH 6% + 1% ENTRAINED AIR U.O.N.

2. FLYASH OR GROUND GRANULATED BLAST FURNACE SLAG MAY BE SUBSTITUTED UP TO 25% MAXIMUM OF MIX DESIGN CEMENT CONTENT IN NON-EXPOSED CONCRETE MIXES. DO NOT USE IN EXPOSED MIX DESIGNS.

3. ALL CONCRETE WORK AND PLACEMENT SHALL CONFORM TO THE LATEST RECOMMENDATIONS OF A.C.I.

4. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO A.S.T.M. A615 GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS AND SHALL HAVE MINIMUM 36 BAR DIAMETER LAP AND BE FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. - 315 LATEST EDITION.

5. REINFORCED CONCRETE WALL FOOTINGS SHALL HAVE CORNER BARS AT ALL INTERSECTIONS OF THE SAME SIZE AND SPACING AS THE MAIN HORIZONTAL REINFORCING.

6. WHERE SLAB REINFORCING RUNS PARALLEL TO A SUPPORTING BEAM, GIRDER SPANDREL, OR WALL, PROVIDE #4 @ 12" O.C. IN TOP OF SLAB AT RIGHT ANGLES TO MAIN REINFORCING. HOOK BARS AT EXTERIOR WALLS OR SPANDRELS. 7. ALL SLABS ON GROUND SHALL BE 4" THICK AND HAVE 6" X 6" W1.4 X W1.4

WELDED WIRE FABRIC IN THE TOP 1/3 OF THE SLAB, UNLESS OTHERWISE NOTED. 8. CONCRETE CONTRACTOR SHALL INCLUDE IN HIS COST ADDITIONAL CONCRETE QUANTITY AS REQUIRED TO COMPENSATE FOR DEFLECTIONS OF METAL DECK AND

UNSHORED COMPOSITE BEAMS AND TO PROVIDE A LEVEL CONCRETE SURFACE. 9. FIELD AND SHOP TESTING OF CONCRETE WORK SHALL INCLUDE INSPECTION OF REINFORCING STEEL PLACEMENT, REBARS, NUMBER, LOCATION, AND LAP SPLICE

10. PROVIDE DOWELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL

REINFORCEMENT AT ALL COLUMNS AND WALLS. UNLESS OTHERWISE NOTED. 11. UNLESS OTHERWISE SHOWN, PROVIDE THE FOLLOWING COVER FOR

REINFORCING STEEL: A. UNFORMED SURFACES IN CONTACT WITH EARTH B. UNFORMED SURFACES OVER MOISTURE BARRIERS −2 IN. C. FORMED SURFACES EXPOSED TO EARTH OR WEATHER OR WATER PROOFING/DAMP PROOFING #6 OR LARGER −2 IN.

#5 OR SMALLER D. FORMED SURFACES NOT EXPOSED TO EARTH

-1 1/2 IN. OR WEATHER -3/4 IN. SLABS AND WALLS -1 1/2 IN. COLUMNS  $-1 \frac{1}{2}$  IN. BEAMS AND GIRDERS

#### GENERAL NOTES

**GENERAL CONDITIONS** 

1. IF ANY GENERAL NOTE CONFLICTS WITH ANY DETAIL OR NOTE ON THE PLANS OR IN THE SPECIFICATIONS, THE STRICTEST PROVISION SHALL GOVERN.

2. THE STRUCTURAL DRAWINGS ARE FOR THE PLACEMENT AND SIZE OF STRUCTURAL COMPONENTS ONLY. O.S.H.A., LOCAL GOVERNMENT CODES AND SAFETY CODE REQUIREMENTS SHALL BE ADHERED TO BY THE CONTRACTOR.

3. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER IT IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES PROVIDING TEMPORARY BRACING, SHORING, GUYS OR TIE- DOWNS. THESE TEMPORARY SUPPORTS WILL REMAIN IN PLACE UNTIL ALL STRUCTURAL COMPONENTS ARE IN PLACE AND COMPLETED.

4. USE OF ENGINEERING DRAWINGS AS ERECTION DRAWINGS BY THE CONTRACTOR IS STRICTLY PROHIBITED. DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR BUILDING LAYOUT AND LOCATION. SEE ARCHITECTURAL DRAWINGS AND SITE PLAN FOR THESE PURPOSES.

5. THE CONTRACTOR SHALL CHECK SHOP DRAWINGS PRIOR TO SUBMITTAL AND IS SOLELY RESPONSIBLE FOR ERRORS & OMISSION IN THE PREPARATION OF SHOP DRAWINGS TO CONFORM TO THE DESIGN DRAWINGS. SUBMIT NO MORE THAN ONE REPRODUCIBLE AND TWO PRINTS OF SHOP DRAWINGS FOR ENGINEER REVIEW. TWO COPIES WILL BE RETURNED TO THE

6. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL RELEVANT DIMENSIONS AND ELEVATIONS FOR EQUIPMENT INSTALLATIONS AGAINST PURCHASED MANUFACTURER'S CERTIFIED EQUIPMENT DRAWINGS. DIMENSIONS THAT DEPEND UPON SPECIFIC EQUIPMENT SUCH AS ELEVATOR OPENINGS, MECHANICAL EQUIPMENT SUPPORTS. ETC. SHALL BE COORDINATED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. SUCH DIMENSIONS SHALL BE PROVIDED ON THE SHOP DRAWINGS BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER.

#### FOUNDATIONS

ARCHITECT

1. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL WITH A SAFE BEARING CAPACITY OF P.S.F. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ARCHITECT. VERIFY FOUNDATION SOIL BEARING PRESSURE IN FIELD BY SOILS ENGINEER.

2. WHERE NEW FOOTINGS ABUT EXISTING FOUNDATIONS, CAREFULLY HAND EXCAVATE AND PLACE BOTTOM OF NEW FOOTING AT THE SAME ELEVATION AS THE EXISTING.

3. PROVIDE NECESSARY SHEETING SHORING BRACING, ETC. AS REQUIRED DURING EXCAVATIONS TO PROTECT SIDES OF EXCAVATIONS.

4. COMPLY FULLY WITH REQUIREMENTS OF OSHA AND OTHER REGULATORY AGENCIES FOR SAFETY PROVISIONS.

1. THE MASONRY PORTIONS OF THIS STRUCTURE ARE DESIGNED ACCORDING TO THE LATEST ALLOWABLE STRESS DESIGN PROVISIONS OF THE MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 602) INCLUDING SECTIONS 2106 AND 2107 OF CHAPTER 21 IN THE MICHIGAN BUILDING CODE. MASONRY COMPONENTS HAVE BEEN DESIGNED ACCORDING TO THE PROVISIONS FOR SEISMIC DESIGN CATEGORY B.

2. ALL STRUCTURAL MASONRY IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402/ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6) MASONRY SUBMITTALS ARE REQUIRED BY ACI 530.1/ASCE 6/TMS 602. SECTION 1.5 MASONRY TESTING AND INSPECTIONS ARE REQUIRED BY ACI 530.1/ASCE 6/TMS 602 SECTION 1.6, TABLE 5.

3. ALL STRUCTURAL MASONRY HAS BEEN ENGINEERED IN ACCORDANCE WITH CHAPTER 2 ALLOWABLE STRENGTH DESIGN. COMPRESSION STRENGTH SHALL BE DETERMINED ACCORDING TO THE UNIT STRENGTH METHOD FOR CONCRETE MASONRY MSJC SECTION 1.4. B.2.b.

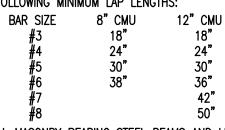
4. ALL BLOCK SHALL CONFORM TO ASTM C90, TYPE I, WITH A MINIMUM UNIT NET AREA COMPRESSIVE STRENGTH OF 2800 PSI.

5. MASONRY COMPRESSIVE STRENGTH f'm = 2000 PSI MINIMUM.

6. MORTAR SHALL BE TYPE "S" (1800 PSI) CONFORMING TO ASTM C-270. USE MORTAR CEMENT WHERE EXTERIOR WALLS ARE UNREINFORCED.

7. PROVIDE HORIZONTAL WIRE TYPE REINFORCING WITH 9 GAUGE SIDE AND CROSS MEMBERS IN EVERY SECOND COURSE (16" O.C.), IN ALL MASONRY WALLS. WALLS WITH VERTICAL REINFORCING SHALL ONLY HAVE "LADDER" TYPE REINFORCING.

8. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO A.S.T.M. A615 GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS, FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. - 315 LATEST EDITION AND HAVE THE FOLLOWING MINIMUM LAP LENGTHS:



9. ALL MASONRY BEARING STEEL BEAMS AND LINTELS TO BEAR 8" MINIMUM ON 3 COURSES SOLID MASONRY, WITH 2-3/4" DIAMETER BOLTS EACH END, UNLESS OTHERWISE NOTED.

10. UNLESS OTHERWISE NOTED WHERE STEEL JOISTS BEAR ON MASONRY, PROVIDE A MINIMUM OF ONE COURSE OF SOLID BLOCK BELOW K-SERIES JOISTS AND A MINIMUM OF TWO COURSES SOLID BELOW LH SERIES JOISTS. 11. ALL MASONRY BELOW GRADE SHALL BE GROUTED SOLID.

12. MASONRY GROUT SHALL CONFORM TO ASTM C 476, WITH PEA GRAVEL AGGREGATE AND A MINIMUM STRENGTH OF 2000 PSI, BUT NOT LESS THAN SPECIFIED f'm.

13. UNLESS OTHERWISE NOTED, AT ALL MASONRY WALLS PROVIDE THE FOLLOWING LINTELS:

8" WALLS (2) L4x3 1/2 x 5/16 LLV FOR OPENINGS UP TO 4'-0" (2) L5x3 1/2 x 5/16 LLV FOR OPENINGS UP TO 5'-4" W8x18 + 3/8" PLATE FOR OPENINGS UP TO 8'-0"

(3) L4x3- 1/2 x 5/16 LLV FOR OPENINGS UP TO 4'-0" (3) L5x3-1/2 x 5/16 LLV FOR OPENINGS UP TO 5'-4" W8x18 + 3/8" PLATE FOR OPENINGS UP TO 8'-0"

W8x28 + 3/8" PLATE FOR OPENINGS UP TO 12'-4"

W8x28 + 3/8" PLATE FOR OPENINGS UP TO 12'-4"

14. ALL DOUBLE ANGLE LINTELS SHALL BE WELDED BACK TO BACK WITH A MINIMUM 2 INCH STITCH WELD EVERY 8 INCHES. 15. UNLESS OTHERWISE NOTED, PROVIDE L5 X 3-1/2 X 5/16 L.L.V. LINTEL

FOR EACH 4" OF MASONRY FOR SPANS UP TO 5'-0" MAX. 16. PROVIDE DOWELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL

REINFORCEMENT AT ALL COLUMNS AND WALLS, UNLESS OTHERWISE NOTED.

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Founded 1960

CITY OF DEARBORN

DEARBORN MICHIGAN

Project Title: FORD FIELD COMFORT STATION

Issued for: 04-25-2016 BIDS & PERMITS 02-27-2017 BIDS & PERMITS

Designed: Checked: Approved:

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Project Number: 215062.01

Sheet Title: **STRUCTURAL** GENERAL NOTES

Sheet Number:

S4.0

TABLE 1704.4
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

TILQUITED VEITII IOATION AND		-			
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	NOT APPLICABLE	REFERENCED STANDARD	MBC REFERENCED
INSPECTION OF REINFORCING STEEL INCLUDING     PRESTRESSING TENDONS AND PLACEMENT.	-	X	-	ACI 318: 3.5, 7.1-7.7	1913.4
INSPECTION OF REINFORCING STEEL WELDING     IN ACCORDANCE WITH TABLE 1704.3 ITEM 5b	-	-	-	AWS D1.4 ACI 318: 3.5.2	-
3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	Х	-	-	ACI 318 8.13,2128	1911.5 1912.1
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.	-	X	-	ACI 318 3.8.6,8.1.3,21.2.8	1912.1
5. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X	-	ACI 318: CH.4,5.2-5.4	1904.2.2, 1913.2,1913.3
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	-	-	ASTM C 172 ASTM C 31 ACI 318: 5.6,5.8	1913.10
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	_	-	ACI 318: 5.9,5.10	1913.6, 1913.7,1913.8
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	-	ACI 318: 5.11-5.13	1913.9
9. INSPECTION OF PRESTRESSED CONCRETE a. APPLICATION OF PRESTRESSING FORCES b. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE RESISTING SYSTEM	X	-	-	ACI 318: 18.20 ACI 318: 18.18.4	_
10. ERECTION OF PRECAST CONCRETE MEMBERS.	-	Х	-	ACI 318: CH.16	_
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS BEAMS AND STRUCTURAL SLABS.	-	X	-	ACI 318: 6.2	_
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	Х	-	ACI 318: 6.1.1	-

TABLE 1704.5.1

LEVEL 1 REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION

		FREQ	UENCY OF INSF	PECTION	REF	ERENCE FOR CRITE	ERIA
	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	NOT APPLICABLE	IBC SECTION	TMS 402/ACI 530/ASCE 5	TMS 602/ACI 530.1/ASCE 6
1.	. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.		X	-	-	-	ART. 1.5
2.	VERIFICATION OF f' AND f' M PRIOR TOCCONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE.	-	х	-	-	_	ART. 1.4B
3.	VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT.	х	-	-	-	-	ART. 1.5B.1.b.3
4.	AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:						
	a. PROPORTIONS OF SITE-PREPARED MORTAR.	_	Х	-	_	-	ART. 2.6A
	b. CONSTRUCTION OF MORTAR JOINTS.	-	Х	_	_	_	ART. 3.3B
	c. LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS AND ANCHORAGES.	-	Х	-	-	-	ART. 3.4, 3.6A
	d. PRESTRESSING TECHNIQUE.	_	Х	_	_	_	ART. 3.6B
	e. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES.	-	Х	_	-	_	ART. 2.4B, 2.4H
5.	DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY:						
	a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	_	Х	-	_	_	ART. 3.3F
	b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.	-	Х	_	_	SEC. 1.2.2(e), 1.16.1	-
	C. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES.	-	Х	_	-	SEC. 1.15	ART. 2.4, 3.4
	d. WELDING OF REINFORCING BARS.	Х	-	-	-	SEC. 2.1.9.7.2, 3.3.3.4(b)	-
	e. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	-	Х	-	SEC. 2104.3, 2104.4	_	ART. 1.8C 1.8D
	f. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	Х	-	-	-	_	ART. 3.6B
6.	PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		,				
	a. GROUT SPACE IS CLEAN.	-	X	-	_	_	ART. 3.2D
	b. PLACEMENT OF REINFORCEMENT AND CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.	-	Х	-	-	SEC. 1.13	ART. 3.4
	C. PROPORTIONS OF SITE—PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	-	Х	-	_	-	ART. 2.6B
	d. CONSTRUCTION OF MORTAR JOINTS.	-	Х	_	_	_	ART. 3.3B
7.	GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE:	X	-	_	-	_	ART. 3.5
	a. GROUTING OF PRESTRESSING BONDED TENDONS.	X	-	-	-	_	ART. 3.6C
8.	PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	-	Х	-	SEC. 2105.2.2 2105.3	-	ART. 1.4

#### SPECIAL INSPECTION

- 1. WORK CONSTRUCTED SHALL BE INSPECTED BY AN INDEPENDENT TESTING AGENCY TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. INSPECTIONS REQUIRED BY CHAPTER 17 OF THE MICHIGAN BUILDING CODE; LOCAL BUILDING DEPARTMENTS AND THE CONTRACT DOCUMENTS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AGENCY. SITE VISITS BY THE DESIGN ENGINEER DO NOT CONSTITUTE OR REPLACE INSPECTION
- 2. THE FOLLOWING ITEMS SHALL BE INSPECTED IN ACCORDANCE WITH MBC 2012 SEC. 1704 BY A CERTIFIED SPECIAL INSPECTOR UNLESS NOTED OTHERWISE IN REMARKS COLUMN. ALL INSPECTION SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED. ALL PRODUCTS WITH ICC APPROVALS SHALL BE INSTALLED PER THE APPROVAL AND PER MANUFACTURER'S RECOMMENDATIONS. FOR MATERIAL TESTING REQUIREMENTS, SEE SPECIFICATIONS AND/OR GENERAL NOTES. TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT.

FABRICATOR'S SHOP (SEC. 1704.2) \*

WOOD TRUSSES STEEL FABRICATION

\*SPECIAL INSPECTION IS NOT REQUIRED FOR FABRICATOR SHOP IF CERTIFICATE OF APPROVAL SUBMITTED BY FABRICATOR'S INSPECTION AGENCY PER 1704.2.1 EXCEPTION AND 1704.2.2

TABLE 1704.3
REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	NOT APPLICABLE	REFERENCED STANDARD	MBC REFERENCED
1. MATERIAL VERIFICATION OF HIGH-STRENGHT BOLTS, NUTS AND WASHERS:	ı				
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	Х	-	AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS	
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	_	Х	_	-	_
2. INSPECTION OF HIGH-STRENGTH BOLTING:	-				
a. SNUG-TIGHT JOINTS.	_	X	-		
b. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION.	-	X	-	AISC 360, SECTION M2.5	1704.3.3
c. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	Х	-	-		
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD—FORMED STEEL DECK:					
a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360.	_	X	-	AISC 360, SECTION M5.5	
<ul> <li>FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.</li> </ul>	_	X	-	APPLICABLE ASTM MATERIAL STANDARDS	
c. MANUFACTURER'S CERTIFIED TEST REPORTS.	_	X	_		
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:		,			
a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X	-	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS	_
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	_	X	-	-	-
5. INSPECTION OF WELDING:					
a. STRUCTURAL STEEL AND COLD—FORMED STEEL DECK:					
1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS.	X	_	-		
2) MULTIPASS FILLET WELDS.	X	_	_		
3) SINGLE-PASS FILLET WELDS > 5/16"	X	_	_	AWS D1.1	1704.3.1
4) PLUG AND SLOT WELDS.	X	_	_		
5) SINGLE-PASS FILLET WELDS ≤ 5/16"	-	Х	-		
6) FLOOR AND ROOF DECK WELDS.	-	Х	_	AWS D1.3	
b. REINFORCING STEEL:					
<ol> <li>VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.</li> </ol>	_	X	-		
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	Х	-	-	AWS D1.4 ACI 318: SECTION 3.5.2	-
3) SHEAR REINFORCEMENT.	Х	-	_		
4) OTHER REINFORCING STEEL.	_	Х	_		
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:	ı				1
a. DETAILS SUCH AS BRACING AND STIFFENING.	-	X	-		
b. MEMBER LOCATIONS.	-	X	_	-	1704.3.2
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	_	Х	_		



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**MICHIGAN** 

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COMFORT STATION

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 04-25-2016
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 02-27-2017
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Drawn:

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STRUCTURAL
GENERAL NOTES

Sheet Number:

S4.1

### TABLE 1704.7 REQUIRED VERIFICATION AND INSPECTION OF SOILS

NEQUINED VENITION	HON AND INSI ECTION OF SOI	LJ	
VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	NOT APPLICABLE
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	Х	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	_	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	Х	

#### WOOD CONSTRUCTION 1704.6

- 1. PRE-FABRICATED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES (1704.6)
- 2. WOOD CONSTRUCTION FABRICATION OR HIGH-LOAD DIAPHRAGMS (1704.6)

#### DESIGN CRITERIA

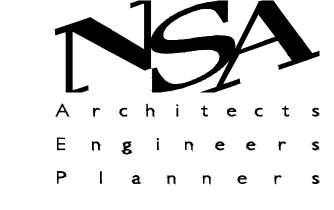
- CODE: MBC 2012 THE STRUCTURE IS DESIGNED FOR THE FOLLOWING LIVE LOADS, IN ADDITION TO THE LATERAL LOADS, SUPER-IMPOSED DEAD LOADS, & SELF WEIGHT OF THE STRUCTURE. WHERE APPLICABLE LIVE LOADS ARE REDUCED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE.
  - A. AMERICAN CONCRETE INSTITUTE BUILDING CODE (ACI-318).
  - B. MANUAL OF STEEL CONSTRUCTION BY AMERICAN INSTITUTE OF STEEL CONSTRUCTION (LATEST EDITION).
  - C. LATEST MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402/ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6)
  - D. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS AND SPECIFICATIONS.
  - E. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) AS PUBLISHED BY AMERICAN FOREST AND PAPER ASSOCIATION.

		CODE REFERENCE
BUILDING OCCUPANCY CATEGORY	II	MBC-Table 1604.5 ASCE Table 1.5-1

SNOW LOADS/ROOF LIVE LOADS								
SNOW CRITERIA		CODE REFERENCE						
GROUND SNOW LOAD	Pg = 25 PSF	MBC FIG. 1608.2 ASCE Fig. 7-1						
FLAT ROOF SNOW LOAD	Pf = 20 PSF (MINIMUM)	ASCE Sec. 7.3						
EXPOSURE FACTOR	Ce = 1.0	ASCE Table 7–2						
IMPORTANCE FACTOR	I = 1.0	ASCE Table 1.5–2						
THERMAL FACTOR	Ct = 1.0	ASCE Table 7-3						
ROOF LIVE LOADS	Lr = 20 PSF	ASCE Table 4-1						
NOTE: SNOW LOADS ADJACENT VERTICAL PROJECTIONS, ON LOWER ROOFS, ADJACENT TO HIGH ROOFS, OR SLOPED ROOFS ARE INCREASED FOR THE EFFECT OR DRIFTING								

WIND LOADS		
WIND CRITERIA		CODE REFERENCE
BASIC WIND SPEED (3 SEC. GUST)	V = 115 MPH	ASCE FIG. 26.5-1A, 26.5-1B, 26.5-1C
RISK FACTOR	Ш	ASCE Table 1.5-1
EXPOSURE CATEGORY	В	ASCE Sec. 26.7.3
INTERNAL PRESSURE COEFFICIENT	± 0.18 (ENCLOSED)	ASCE TABLE 26.11-1
MWFRS ANALYSIS PROCEDURE	DIRECTIONAL PROCEDURE	ASCE CHAP. 27
COMPONENTS AND CLADDING	± 33 PSF MINIMUM AND PER CODE REQUIREMENTS BASED ON ABOVE INFORMATION	ASCE Sec. 30.2.2

SEISMIC LOADS		
SEISMIC CRITERIA		CODE REFERENCE
SEISMIC IMPORTANCE FACTOR	I = 1.0	ASCE Table 1.5-2
-0.2 SEC MAPPED SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING) Ss	Ss = .0953	ASCE Sec. 11.4
-1.0 SEC MAPPED SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING) S 1	S <sub>1</sub> = .0469	ASCE Sec. 11.4
SOIL SITE CLASS	D	ASCE Sec. 11.4.2
SEISMIC DESIGN CATEGORY	В	ASCE Sec. 11.6
SEISMIC FORCE RESISTING SYSTEM	INTERMEDIATE REINFORCED MASONRY SHEAR WALLS	ASCE Table 12.2-1
RESPONSE MODIFICATION FACTOR	R = 3.5	ASCE Table 12.2-1
DEFLECTION AMPLIFICATION FACTOR	Cd = 2.25	ASCE Table 12.2–1
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE	ASCE Sec. 12.8



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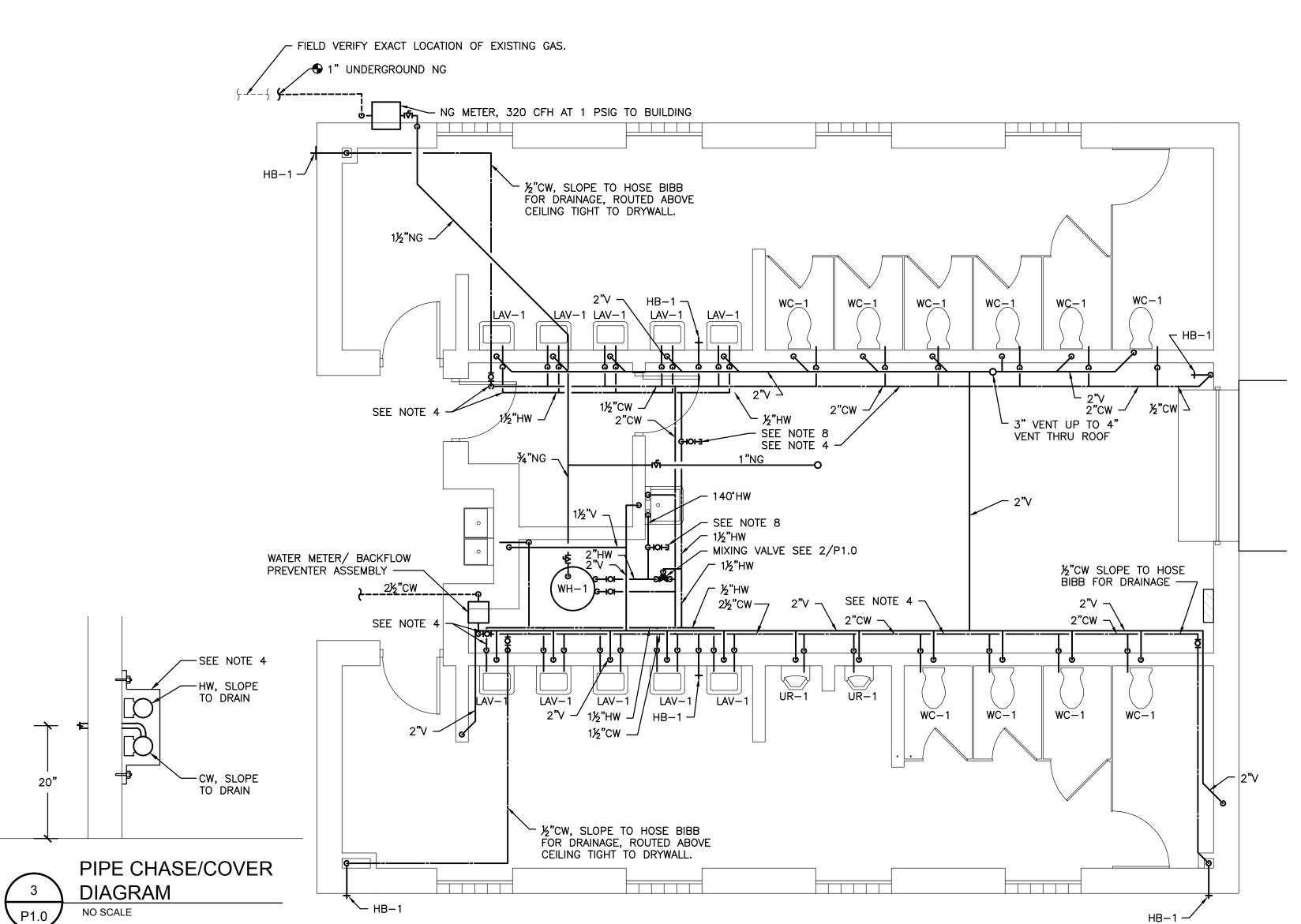
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GENERAL NOTES

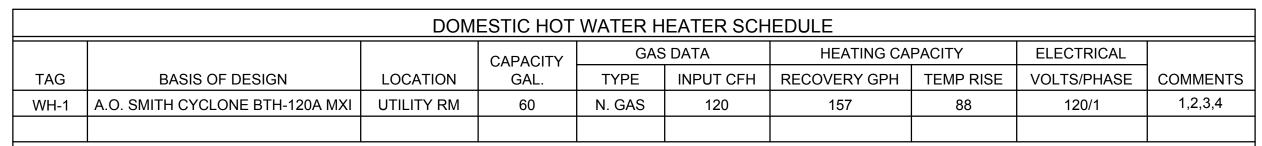
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				PLU	MBING FIX	TURE SCHEDULE	
TAG	FUNCTION	CW	HW	WASTE	VENT	MANUFACTURER	REMARKS
WC-1	WATER CLOSET	1"	-	4"	2"	AMERICAN STANDARD MADERA FLOWISE	FLOOR MOUNTED, ELONGATED BOWL WITH TOP 1-1/2" TOP SPUD, 16-1/2" RIM HEIGHT, WHITE VITREOUS CHINA, ADA COMPLIANT. LOW CONSUMPTION WITH 1.1-1.6GPF SLOAN 110 ES-S FLUSHOMETER, WITH AMERICAN STANDARD 5901.100 TOILET SEAT. PROVIDE HERCULES #90214 WAX RING COMBO PACK.
UR-1	URINAL	3/4"	-	2"	2"	MANSFIELD CASCADE 410HE	WHITE VITREOUS CHINA, WALL MOUNTED WITH EXTENDED SIDES, 3/4" TOP SPUD, TWO CONCEALED HANGERS AND BOLTS, INTEGRAL TRAP. PROVIDE SLOAN MODEL OPTIMA SENSOR ACTIVATED FLUSHOMETER, MODEL 186-1 DFB ESS OR. URINAL SHALL BE ADA COMPLIANT.
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	MANSFIELD 2018HBNS	WALL MOUNTED WHITE VITREOUS CHINA, ADA COMPLIANT, PROVIDE DOUBLE LEVER FAUCET WITH AERATOR, AMERICAN STANDARD COLONY SOFT 2275.500, ADA COMPLIANT. PROVIDE R19 VALVE STOPS WITH REMOVABLE BONNET, PERFORATED DRAIN STRAINER AND TRAP ASSEMBLY WITH PROTECTIVE PIPE COVERS EQUAL TO TRUEBRO 102. FAUCET TO BE CHROME FINISH, WITH RENEWABLE SEATS AND DISKS OR CARTRIDGE STYLE.
SS-1	SERVICE SINK (MOP SINK)	1/2"	1/2"	2"	1-1/2"	FIAT 63M	MUSTEE MODEL 63M, 24"X24"X10" DEEP, ONE-PIECE MOLDED DURASTONE STRUCTURAL FIBERGLASS, 3" PVC SCH.80 DRAIN SEAL INTGRALLY MOLDED, STAINLESS STEEL STRAINER, HOSE AND BRACKET (65.7), MOP HANGER (65.6). FAUCET: ZURN, MODEL Z843M1-RC, ROUGH CHROME PLATED WITH VACUUM BREAKER, 1/4 TURN CERAMIC DISC CARTRIDGES, INTEGRAL SERVICE STOPS WITH ADJUSTABLE CENTERS, 3/4" HOSE THREADED OUTLET, PAIL HOOK AND ADJUSTABLE WALL BRACE.
EWC-1	ELECTRIC WATER COOLER	1-1/2"	-	1-1/2"	1-1/2"	ELKAY VRCTLDDWS	ADA, ELECTRIC WATER COOLER, STAINLESS STEEL CONSTRUCTION, INCLUDE VANDAL-RESISTANT BUBBLER, BOTTLE FILLING UNIT SHALL INCLUDE AN AUTOMATIC 20-SECOND SHUT-OFF TIMER, QUICK FILL RATE 1.5 GPM, LAMINAR FLOW, VANDAL-RESISTANT PUSHBUTTON ACTIVATION, REAL DRAIN SYSTEM. PROVIDE 1/4 TURN SHUT-OFF VALVE.
FD-1	FLOOR DRAIN		-	-	-	NEPTUNE	CONSTRUCTED OF LEAD FREE RILSAN NYLON-COATED DUCTILE IRON WHICH IS CHEMICAL AND CORROSION RESISTANT. RATED AT 150 PSI WORKING PRESSURE, STAINLESS STEEL STRAINER PLATE AND COVER BOLTS. INLINE SERVICEABILITY. PREVENTION OF DEBRI SUCH AS STONES OR PEBBLES GREATER THAN 3/16" IN DIAMETER FROM ENTERING OR DAMAGING WATER METER.
BFP-1	BACKFLOW PREVENTER	2"	-	-	-	ZURN WILKINS 375	REDUCED PRESSURE PRINCIPAL ASSEMBLY, ASSE LISTED 1013 AND IAMPO LISTED. REINFORCED NYLON HOUSING, SUPPLIED WITH CAST BRONZE BALL VALVES AND SILICONE SEAT DISC ELASTOMERS . 2" SIZE WITH A MAXIMUM WORKING WATER PRESSURE = 175 PSI, RATED TO 180 DEG. F MAXIMUM WORKING TEMPERATURE.
HB-1	HOSE BIBB	1/2"	-	-	-	WOODFORD MODEL 65	HOSE BIBB, SINGLE CHECK ANTI-SIPHON BACKFLOW PROTECTION, FREEZLESS, WITH 3/4" THREADED HOSE NOZZLE AND TEE KEY OPERATION.





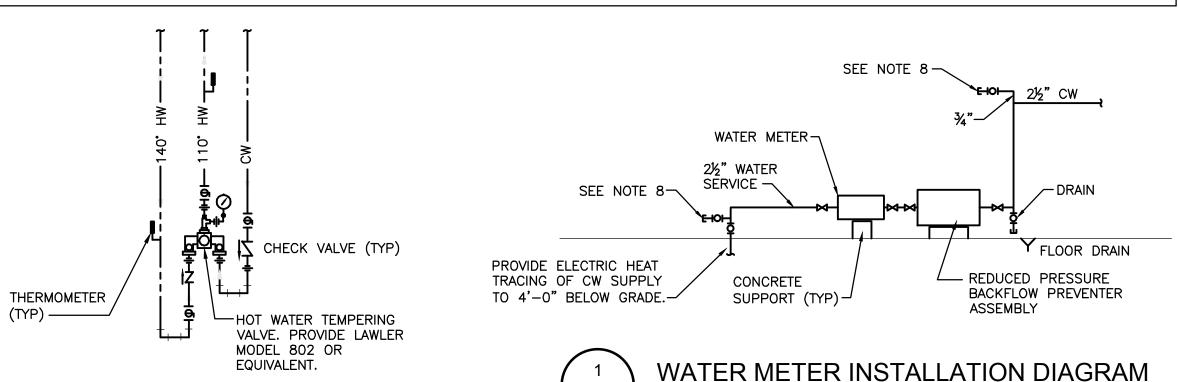


1) PROVIDE P&T RELIEF VALVE TO FLOOR DRAIN. SET HEATER AT 140°F

2) PROVIDE SYSTEM LAWLER #802 MIXING VALVE WITH 1" HW AND CW INLETS, AND 1 1/4" OUTLET.

3) PROVIDE GAS PRESSURE REGULATOR FOR 1 PSI GAS MAIN PRESSURE.

4) LOW WATER CUTOFF AND CONDENSATE NEUTRALIZATION KIT.



NO SCALE

#### **GENERAL NOTES:**

WATER MIXING VALVE DIAGRAM

NO SCALE

- THE CONTRACTOR SHALL PROVIDE R19 VALVE STOPS WITH REMOVAL BONNETS AS REQUIRED BY OWNER FOR DRAINING.
- 2. ALL PLUMBING TO BE INSTALLED AND SLOPED FOR GRAVITY DRAINAGE AND SEASONAL SHUTDOWN.
- 3. PROVIDE HANGERS FOR ALL PIPING.
- 4. PROVIDE 4"X14", 16 GAUGE GALVANIZED PIPE COVER/CHASE MOUNTED AT 26" AFF TO TOP.
- 5. PROVIDE A MANUAL MAIN GAS SHUT-OFF VALVE.
- 6. PROVIDE ACCESS PANELS FOR VALVES LOCATED ABOVE CEILING.
- 7. ROUTE VENTING IN WALLS AND ABOVE CEILING.
- PROVIDE THREADED PIPE CONNECTION AND CAP, FOR CONNECTION OF COMPRESSED AIR SUPPLY FOR WINTERIZING OF SYSTEM.

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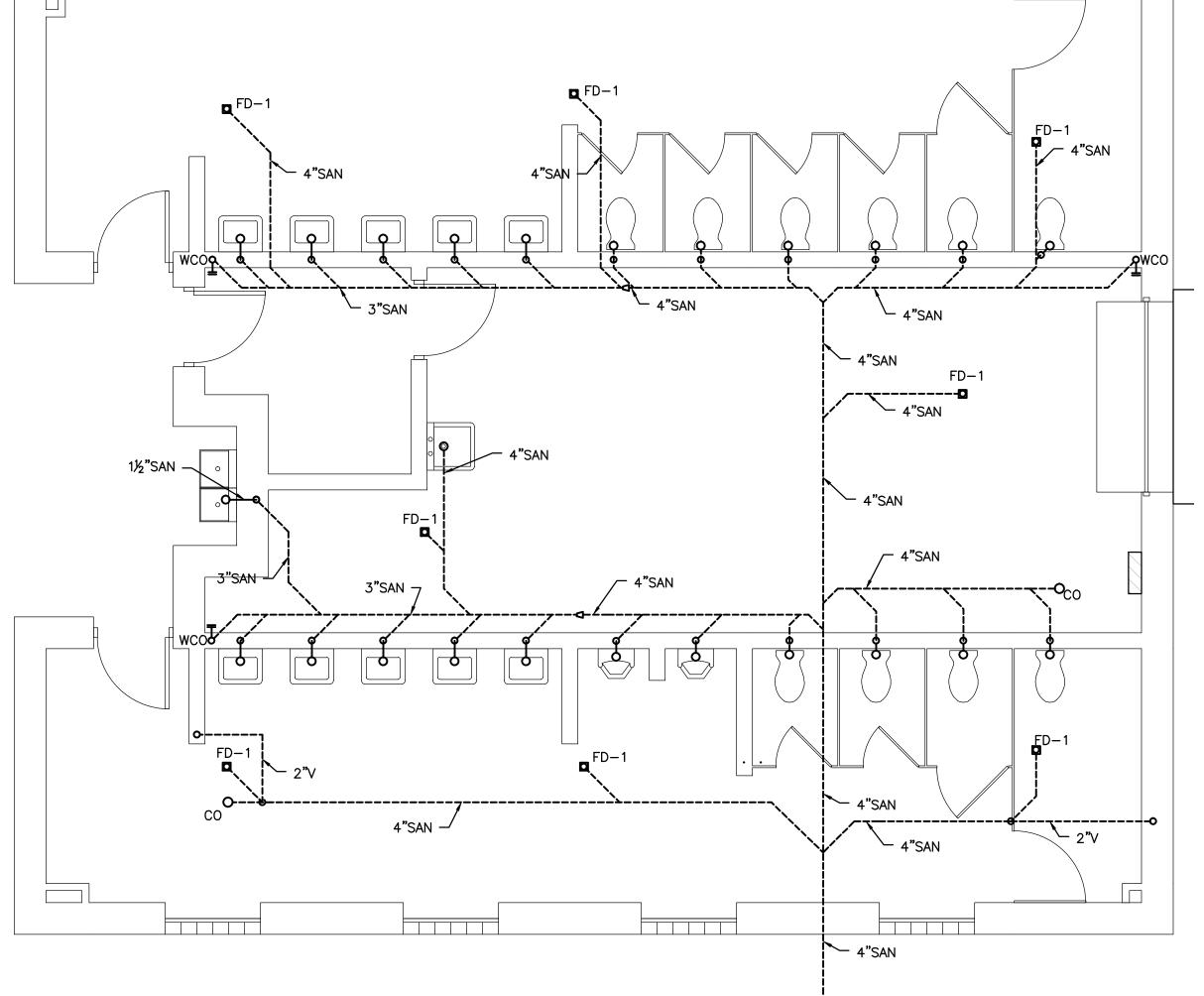
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PLUMBING FLOOR

PLUMBING FLOOR
PLAN



	GRILLE, REGISTER AND DIFFUSER SCHEDULE												
TAG BASIS OF DESIGN TYPE CFM RANGE NECK SIZE SURFACE MODULE MAX NC NOTES													
S-1	TITUS, TDC	SUPPLY	0-160	6"X6"	12x12	30	1,2						
S-2	TITUS, TDC	SUPPLY	250-350	12"X12"	24X24	30	1,2						
S-3	TITUS, TDC	SUPPLY	450-500	12"X12"	24X24	30	1,2						
E-1	TITUS, 23RFL	EXHAUST	50-350	12"x10"	14"X12"	30	1						
E-2	TITUS, 23RFL	EXHAUST	350-600	14"x12"	16"X14"	30	1						
NOTES:													

1) OPPOSED BLADE VOLUME DAMPER, WHITE FINISH

2) SQUARE TO ROUND ADAPTER

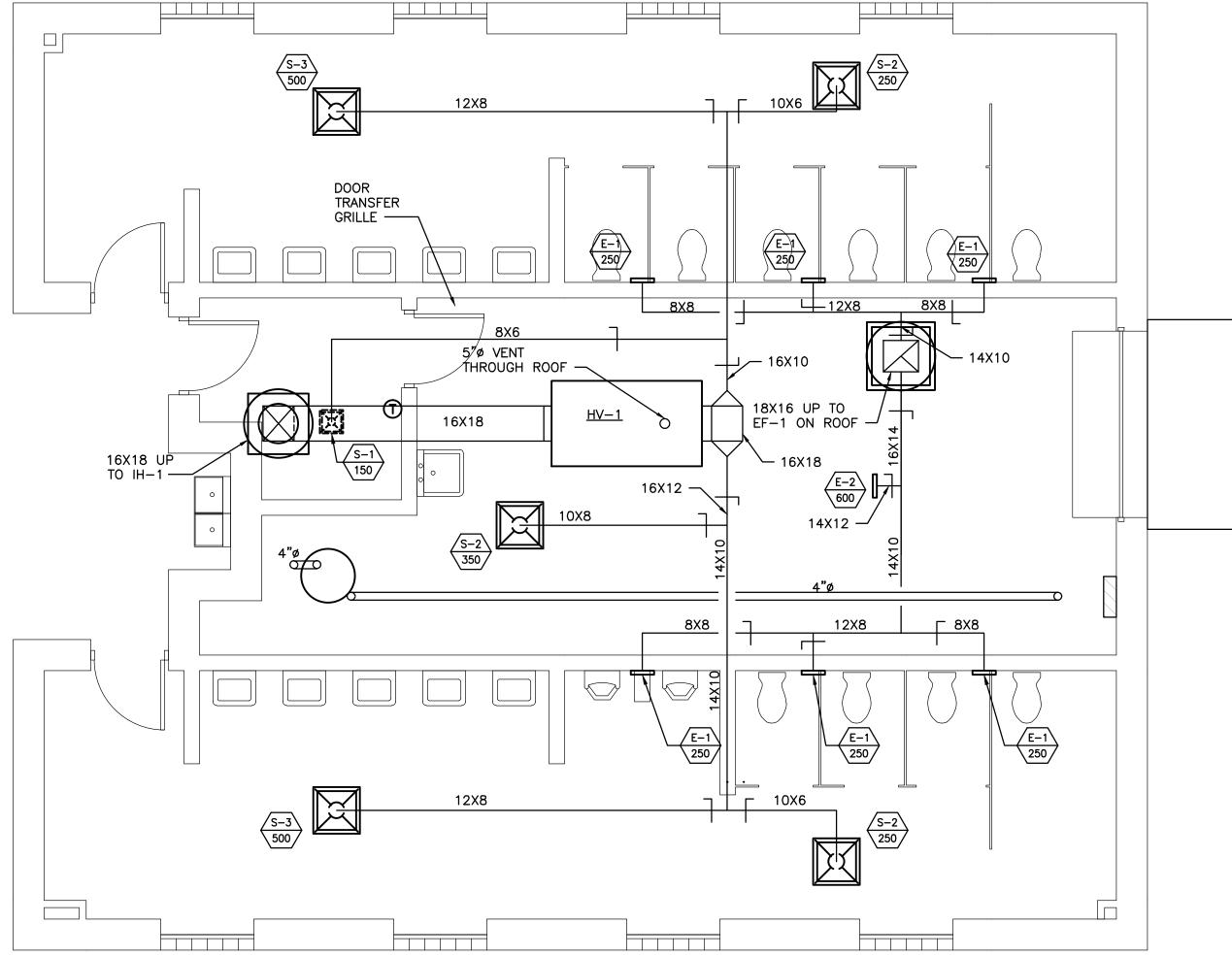
	FAN SCHEDULE											
MOTOR DATA												
TAG	BASIS OF DESIGN	LOCATION	SERVICE	TYPE	CFM	E.S.P.	DRIVE	HP	VOLTS	PHASE	Hz	COMMENTS
EF-1	GREENHECK CUBE-180HP-7	ROOF	FACILITY	CENTR.	2100	1.00	BELT	3/4	208	1	60	1,2,3
NOTES:	DTES:											
) VERIFY V	VERIFY VOLTAGE PRIOR TO PURCHASING EQUIPMENT (208V vs 230V).											

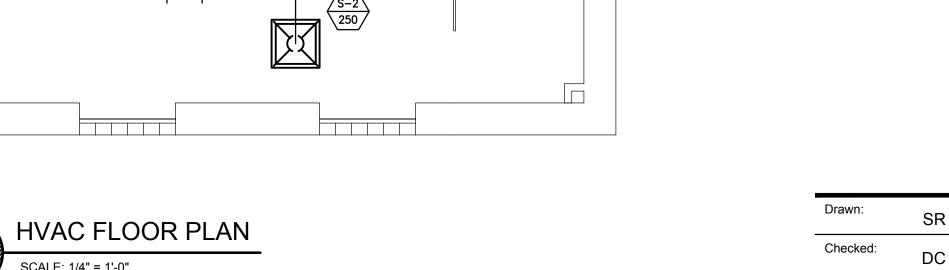
TAG	BASIS OF DESIGN	LOCATION	SERVICE	TYPE	CFM	E.S.P.	DRIVE	HP	VOLTS	PHASE	Hz	COMMENTS	
EF-1	GREENHECK CUBE-180HP-7	ROOF	FACILITY	CENTR.	2100	1.00	BELT	3/4	208	1	60	1,2,3	
NOTES:	NOTES:												
1) VERIFY	1) VERIFY VOLTAGE PRIOR TO PURCHASING EQUIPMENT (208V vs 230V).												
2) PROVIDI	2) PROVIDE DISCONNECT SWITCH, BACK-DRAFT DAMPER, AND BIRDSCREEN.												
3) PROVIDI	3) PROVIDE ROOF CURB.												

MAKE-UP AIR UNIT SCHEDULE												
TAG	LOCATION	BASIS OF DESIGN		F 0 D	OFM	HEATING	E					
	LOCATION	MANUFACTURER	MODEL NO.	E.S.P.	CFM	INPUT (MBH)	OUTPUT (MBH)	VOLTS / PH / HZ	MCA	MOP	HP	NOTES/ACCESSORIES
HV-1	UTILITY ROOM	STERLING	ME-20A2B01K23K1A	1.00	2000	200	160	208/1/60	7.65	11.85	3/4	1,2,3
NOTES:			S/ISOLATION MOUNTS AT FOUR COF					•	•			

	NOTES:										
	1) UNIT TO B	BE MOUNTED BETWEEN 1	TRUSSES, SUPPORTED BY SPRING	G/ISOLATION MOUNTS AT FO	UR CORNERS.						
	2) PROVIDE	DISCONNECT SWITCH, D	IGITAL TEMPERATURE ROOM SEI	NSORS, SMOKE SENSOR, CO	02 SENSOR, AND GAS PRESSURE REG	ULATOR TO R	EDUCE FROM 1 PSIG GAS	PRESSURE.			
	3) HV-1 TO E	BE INTERLOCKED WITH E	F-1.								
-											

	INTAKE HOOD												
TAG	BASIS OF DESIGN	MODEL	TYPE	CFM RANGE	NECK SIZE	THROAT AREA (SF)	NOTES						
IH-1	GREENHECK	GRSF	INTAKE	2000	20.25	2.25	1,2						
NOTES:													
1) PROVIDI	1) PROVIDE INSECT/BIRD SCREEN, AND BACK-DRAFT DAMPER.												
2) SQUARE	TO ROUND ADAPTER												





#### **GENERAL NOTES**

- PRIOR TO PURCHASE OF ANY MECHANICAL EQUIPMENT, MECHANICAL CONTRACTOR TO VERIFY EXACT SERVICE VOLTAGE (208V. VS. 240V.) WITH ELECTRICAL CONTRACTOR.
- 2. RUN EXHAUST DUCTWORK BELOW CEILING.
- RUN SUPPLY DUCTWORK ABOVE CEILING. PROVIDE INSULATION IN UNCONDITIONED SPACE.
- 4. MOUNT HV-1 FLUSH TO BOTTOM CHORD OF TRUSS. COORDINATE WITH STRUCTURAL.

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Sheet Title: **HVAC PLAN** 

Sheet Number: M1.0

LOAD DESCRIPTION			LOAD IN	KILO-VOL	T-AMPS												LOADIN	KILO-VO	LT-AMPS		LOAD DESCRIPTION
LOAD DESCRIPTION	A/C	HTG	KIT	MIS	MTS	RCP	LTB	СВ	Р	CKT	PH	CKT	P	СВ	LTG	RCP	MTS	MIS	KIT	HTG	A/C LOAD DESCRIPTION
GATOR						10.40		100	2	1	Α	2	1	20				2.30			MEN'S ROOM HAND DRYER
GATOR						10.40		100	_	3	В	4	1	20				2.30			MEN'S ROOM HAND DRYER
EXHAUST FAN (3/4 HP)					0.79	***************************************		20	2	5	Α	6	1	20				2.30			MEN'S ROOM HAND DRYER
EXTAGST FAIN (5/4 HF)					0.79			20		7	В	8	1	20				2.30			WOMEN'S ROOM HAND DRYER
COILING DOOR (3/4 HP)					1.66			20	1	9	Α	10	1	20				2.30			WOMEN'S ROOM HAND DRYER
WOMEN'S ROOM 101 LTG.							0.59	20	1	11	В	12	1	20				2.30			WOMEN'S ROOM HAND DRYER
OFFICE 102 & EXTERIOR LTG.							0.27	20	1	13	Α	14	1	20		0.72					S. & E. UTILITY ROOM WALL RCPT. (2)
UTILITY ROOM 103 LTG.							0.25	20	1	15	В	16	1	20		0.36					EXTERIOR RCPT. WEST SIDE (2)
MEN'S ROOM 104 LTG.							0.54	20	1	17	Α	18	1	20		0.72					EXTERIOR RCPT. SOUTH/WEST SIDE (4)
NL/EM LTG.							0.18	20	1	19	В	20	1	20		0.36					OFFICE 102 RCPT. (2)
EXTERIOR LTG.							0.51	20	1	21	Α	22	2	20							HV-1
FLUSHOMETERS				0.60				20	1	23	В	24	2	20							
EXTERIOR RCPT. WEST SIDE COLUMN (1)							0.18	20	1	25	Α	26	1	20		0.18					UTILITY ROOM RCPT. (1)
EXTERIOR RCPT. SOUTH SIDE COLUMN (1)							0.18	20	1	27	В	28	1	20		0.36					N. & W.UTILITY ROOM WALL RCPT. (2)
DRINKING FOUNTAIN				0.02				20	1	29	A	30	1	20		0.18					MEN'S ROOM RCPT. (1)
SPACE										31	В	32	1	20		0.18					WOMEN'S ROOM RCPT. (1)
SPACE										33	Α	34									SPACE
										35	В	36									SPACE
										37	Α	38									
								***************************************		39	В	40									
										41	Α	42									
														-							
CONNECTED KILO-VOL	T-AMPS					DEM	AND						D	EMAND	KILO-VO	LT-AMPS					ACCESSORIES
LOAD TYPE	Α	В		TOTAL		FACT	ORS				L	OAD T	YPE			Α	В		TOTAL		SURFACE
Lighting (Ltg)	1.50	1.20		270		1.	00		LIGHT	1NG						1.50	1.20		2.70		FLUSH
RECEPTACLES (RCP)	12.20	11.66		23.86		NEC	220		RECE	PTACL	ES					8.66	8.27		16.93		NEMA ENCLOSURE TYPE NUMBER
MOTORS (MTS)	2.45	0.79		3.24		0.	65		MOTO	RS						1.59	0.51		2.10		ISOLATED GROUND BUS
MISCELLANEOUS (MIS)	6.92	7.50		14.42		1.	00		MISCE	ELLANI	EOUS					6.92	7.50		14.42		HANDLE ATTACHMENT
KITCHEN (KIT)	0.00	0.00		0.00		0.	65		KITCH	EN						0.00	0.00		0.00		ARC-FAULT PROTECTION
HEATING (HTG)	0.00	0.00		0.00		0.	65		HEAT	NG						0.00	0.00		0.00		EQUIPMENT GROUND BAR
AIR CONDITIONING (A/C)	0.00	0.00		0.00		0.	65		AIR C	ONDIT	ONING	3				0.00	0.00		0.00		BUS MATERIAL
CONNECTED kVA	23.06	21.15		44.22					DEMA	ND kV	A					18.66	17.49		36.15		ALARM SWITCHES
CONNECTED AMPS	192.20	176.27		122.88					DEMA	ND AM	1PS					155.54	145.74		100.47		SHUNTTRIP CIRCUIT BREAKER
	•																				GROUND FAULT INTERRUPTER

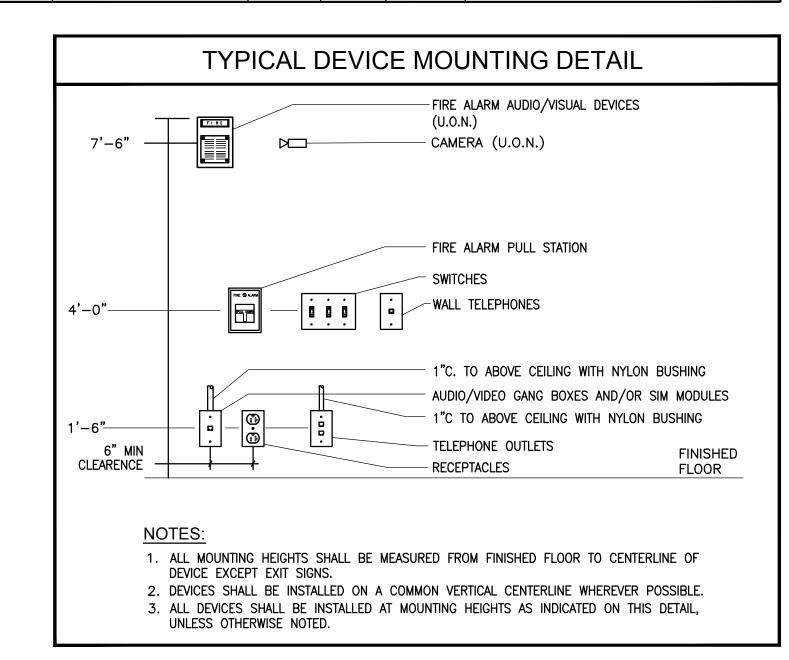
#### GENERAL NOTES

- 1. ALL WIRING IN CONDUITS SHALL RUN CONCEALED UNLESS OTHERWISE NOTED.
- 2. ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE.
- 3. CONSTRUCTION DOCUMENTS CONSIST OF PLANS, DETAILS, DIAGRAMS, AND
- 4. ALL RACEWAYS AND CABLE TRAYS (IF ANY) RUNNING ACROSS BUILDING EXPANSION JOINTS SHALL BE EQUIPPED WITH EXPANSION FITTINGS.
- 5. ELECTRICAL SERVICES (HOME RUNS) SHOWN ON THE DRAWINGS ARE SHOWN DIAGRAMMATICALLY, CONTRACTOR SHALL VERIFY ROUTING AND MEET CONDUCTOR FILL/AMAPACITY REQUIREMENTS PER THE NATIONAL ELECTRICAL CODE.
- 6. CONTRACTOR SHALL REVIEW CONTRACT DOCUMENTS OF ALL TRADES TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR ELECTRICAL EQUIPMENT, COORDINATE EXACT
- 7. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATION OF ALL DEVICES UNLESS SHOWN ON ELECTRICAL DRAWINGS.
- 8. PROVIDE ALL REQUIRED SUPPORTS AND MATERIALS TO INSTALL ELECTRICAL DEVICES AND EQUIPMENT. COORDINATE WITH MANUFACTURES SUBMITTALS.
- 9. ALL ELECTRICAL WIRING FROM THE SERVICE ENTRANCE TO DOWNSTREAM DEVICES SHALL BE COPPER (CU) UNLESS OTHERWISE NOTED ON PLANS.
- 10. LIGHTING/RECEPTACLE BRANCH CIRCUITS 100 FEET AND FURTHER FROM THEIR ASSOCIATED PANELS SHALL BE FED WITH #10 WIRING MINIMUM. UNLESS OTHERWISE NOTED.
- 11. PROVIDE LABELING OF CIRCUIT NUMBERS ALL RECEPTACLES.

LOCATION WITH THE ARCHITECTURAL DRAWINGS.

12. ELECTRICAL CONTRACTOR TO VERIFY EXACT SERVICE VOLTAGE (208V. VS. 240V.) WITH UTILITY COMPANY AND COORDINATE EQUIPMENT VOLTAGE REQUIREMENTS WITH MECHANICAL TRADES.

	LUMINAIRE SCHEDULE											
TYPE	MANUFACTURER	CATALOG NUMBER	LAMP	VOLTS	MOUNTING	DESCRIPTION						
LA	JUNO	L6-50401-G3-L600P- CS-WET	LED 45.3W.	120	RECESS	6" DIAMETER RECESSED LED DOWNLIGHT, IC RATED.						
LAE	JUNO	L6-50401-G3-BR L600P-CS-WET	LED 45.3W.	120	RECESS	6" DIAMETER RECESSED LED DOWNLIGHT WITH EMERGENCY BATTERY BACK—UP, IC RATED.						
LB	LITHONIA	LED Z SERIES ZL2NL48-3000LM-MDD- 35K-80CRI-WH	LED 42W.	MVOLT	SURFACE/ CHAIN HUNG	4' LONG SURFACE CEILING/CHAIN HUNG LED LENSED STRIPLIGHT FIXTURE.						
LC	SOLERA	SMRT-24LED-120-OPL -TP-SG	LED 29W.	120	SURFACE	9 1/2" DIAMETER SURFACE MOUNTED LED LAMP						
EM	LITHONIA	ELM2-LED-HO	6W	MVOLT	CEILING	EMERGENCY LIGHT FIXTURE WITH BATTERY PACK FOR 90 MINUTES						



SYMBOL	DESCRIPTION
Ф	DUPLEX RECEPTACLE NEMA 5-20R-125V, WHEN NOTED "D" DEDICATED
<b>#</b>	DOUBLE DUPLEX RECEPTACLE NEMA 5-20R-125V
<b>•</b> •	NEMA RECEPTACLE 30A, 50A, 250V. "TL" TWIST LOCK. (NEMA 6-30R, 6-50R)
J	JUNCTION BOX
	NON-FUSED DISCONNECT SWITCH
\ <u>\</u>	SINGLE PHASE, THREE PHASE MOTOR
	ELECTRICAL PANELS (RECESSED , SURFACE MOUNTED @ 6'-6" A.F.F. TO TOP)
•	ELEC SERVICE CONNECTION (SINGLE POINT) AT EQPT. DISCONNECT DEVICE BY EQPT MFR
M	UTILITY METER
O O1	CEILING OR WALL MOUNTED FIXTURE
	WALL MOUNTED 84" MIN. A.F.F. BATTERY POWERED EMERGENCY BACKUP LIGHT FIXTURE
$\vdash$	CEILING OR WALL MTD FLUORESCENT FIXTURE, SEE FIXTURE SCHED.
S	SINGLE POLE TOGGLE SWITCH
SK	KEY OPERATED SWITCH
PC	PHOTOCELL

A	AMPERES	KVA	KILOVOLT AMPERES
ADA AFF	AMERICANS WITH DISABILITIES ACT ABOVE FINISH FLOOR	KW LTG	KILOWATTS LIGHTING
ALC	AMPERE INTERRUPTING CAPACITY	MCB	MAIN CIRCUIT BREAKER
AL	ALUMINUM	MDP	
ARCH	ARCHITECT	MECH	
ATS	AUTOMATIC TRANSFER SWITCH	MSB	MAIN SWITCHBOARD
AWG	AMERICAN WIRE GAUGE	MISC	MISCELLANEOUS
CB	CIRCUIT BREAKER	MLO	MAIN LUGS ONLY
CKT/CIRC		NTS	NOT TO SCALE
COĽ	COLUMN	NIC	NOT IN CONTRACT
CT	CURRENT TRANSFORMER	PB	PUSHBUTTON
CU	COPPER	PC	PERSONAL COMPUTER
DWG	DRAWING	PNL	PANELBOARD
EF_	EXHAUST FAN	PP	POWER PANEL
ELEC	ELECTRICAL	PVC	POLYVINYL CHLORIDE
EM	EMERGENCY TUBBLE	PWR	POWER
EMT	ELECTRICAL METALLIC TUBING	REQ'D	
EPO	EMERGENCY POWER-OFF ELECTRIC WATER COOLER	SP TVSS	SPARE TRANSIENT VOLTAGE SURGE
EWC FAAP	FIRE ALARM ANNUNCIATOR PANEL	1722	SUPPRESSION
FACP	FIRE ALARM CONTROL PANEL	UG	UNDERGROUND
FLA	FULL LOAD AMPS	UC	
FMCS	FACILITY MANAGEMENT CONTROL	UON	UNLESS OTHERWISE NOTED
1 14100	SYSTEM	UH	UNIT HEATER
GRD	GROUND	V	VOLT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	VA	VOLT AMPERES
HOA	HAND-OFF-AUTOMATIC SWITCH	VIF	VERIFY IN FIELD
ICMS	INTEGRATED CARE MANAGEMENT SYSTEM	l WH	WATER HEATER
		WP XFMR	WEATHERPROOF
			TRANSFORMER



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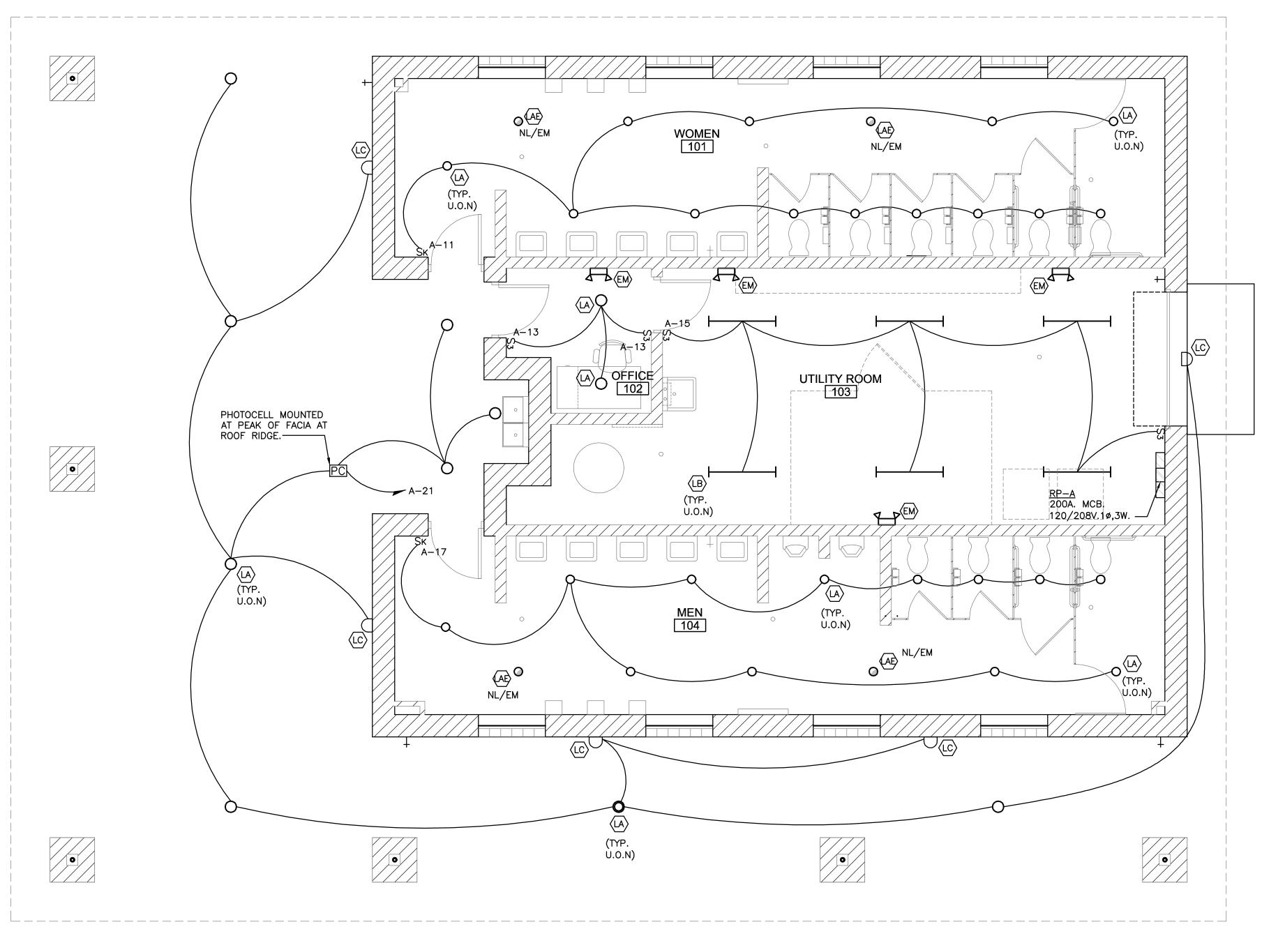
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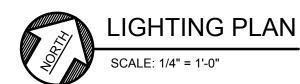
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Sheet Number:

E1.0







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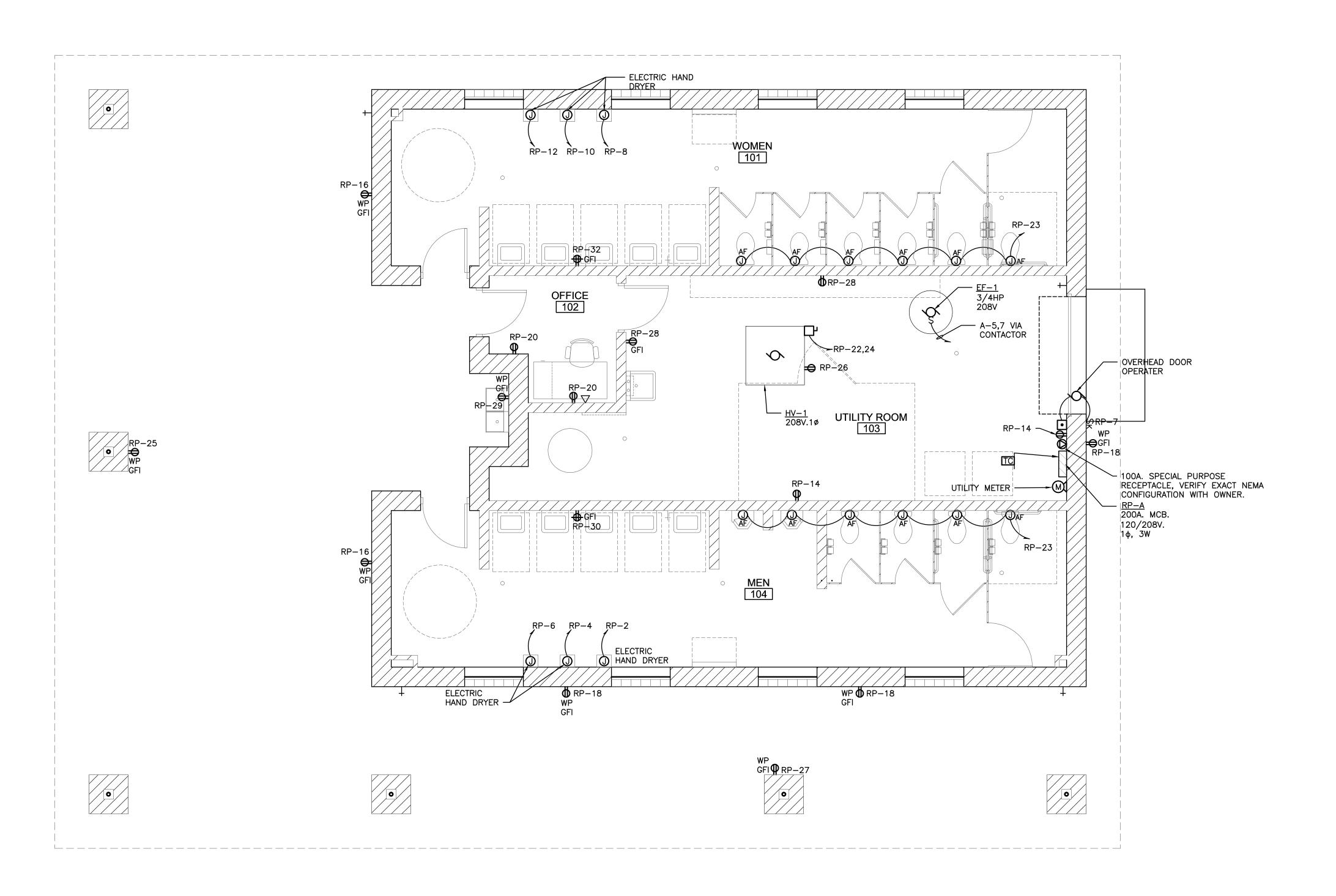
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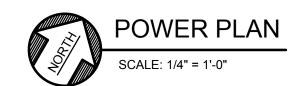
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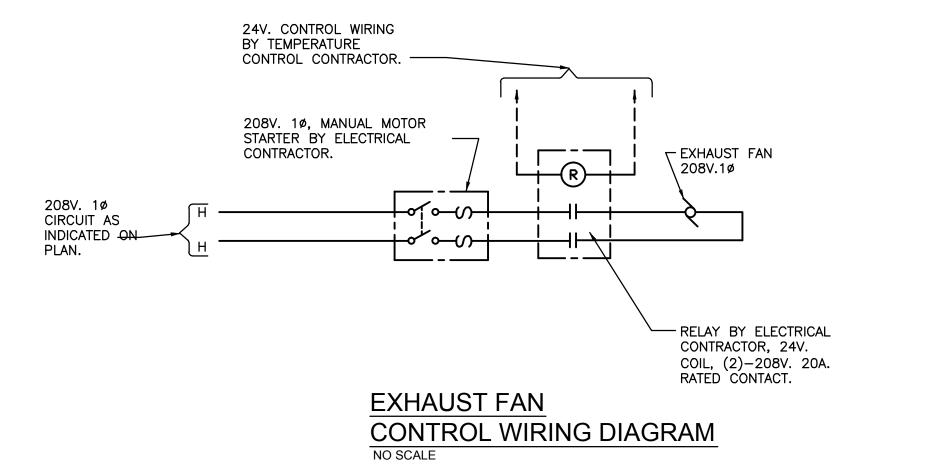
LIGHTING PLAN

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POWER PLAN

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