FORT THOMPSON HEALTH CENTER
DENTAL & OPTOMETRY ADDITION
INDIAN HEALTH SERVICE
FORT THOMPSON, SOUTH DAKOTA

BID PACKAGE # 1

PROJECT TEAM

OWNER:

INDIAN HEALTH SERVICE
1323 BIA ROUTE 4
FORT THOMPSON, SD, 57339

ARCHITECTURE:

SEVEN GENERATIONS A+E
600 E. MICHIGAN AVENUE - SUITE B
KALAMAZOO, MI 49007
PHONE: 269.927.0144
FAX: 269.593.5933
WEB: WWW.7GENAE.COM

ENGINEERING:

STEELHEAD ENGINEERING
259 E MICHIGAN AVE
KALAMAZOO, MI 49007
PHONE: 269.585.2255

PROJECT INFORMATION

CONSTRUCTION TYPE:
2B, AUTOMATIC SPRINKLER SYSTEM

BUILDING OCCUPANCY:
B - BUSINESS

BUILDING HEIGHT:
16'-4"

BUILDING AREA SQUARE FOOTAGE:

EXISTING: 20,000 S.F.
ADDITION: 5,875 S.F.

LOCATION MAP

FT. THOMPSON INDIAN HEALTH CENTER BUILDING

FORT THOMPSON, SOUTH DAKOTA

NORTH

DRAWING SHEET INDEX

SHEET	DESCRIPTION	ISSUE DATE
G001	COVER SHEET	NOVEMBER 4, 2022
G002	GENERAL INFORMATION & SYMBOL LEGEND	NOVEMBER 4, 2022
G200	CODE COMPLIANCE PLAN	NOVEMBER 4, 2022
C100	EXISTING CONDITIONS	NOVEMBER 4, 2022
C102	DEMOLITION PLAN	NOVEMBER 4, 2022
C200	GEOMETRIC PLAN	NOVEMBER 4, 2022
C330	UTILITY PLAN	NOVEMBER 4, 2022
C331	PLAN AND PROFILES SANITARY SEWER	NOVEMBER 4, 2022
C332	PLAN AND PROFILES STORM SEWER	NOVEMBER 4, 2022
C333	CROSS SECTION STORM BASIN	NOVEMBER 4, 2022
C334	PLAN AND PROFILES GAS AND ELECTRIC	NOVEMBER 4, 2022
C335	PLAN AND PROFILE WATER SERVICE	NOVEMBER 4, 2022
C400	GRADING AND DRAINAGE PLAN	NOVEMBER 4, 2022
C401	SOIL EROSION SEDIMENTATION CONTROL PLAN	NOVEMBER 4, 2022
C500	DETAILS	NOVEMBER 4, 2022
C501	DETAILS	NOVEMBER 4, 2022
C502	DETAILS	NOVEMBER 4, 2022
C503	DETAILS	NOVEMBER 4, 2022
S101	FOUNDATION PLAN	NOVEMBER 4, 2022
S121	ROOF FRAMING PLAN	NOVEMBER 4, 2022
S500	FOUNDATION DETAILS	NOVEMBER 4, 2022
S520	SUPERSTRUCTURE DETAILS	NOVEMBER 4, 2022
S521	SUPERSTRUCTURE DETAILS	NOVEMBER 4, 2022
AD101	FIRST FLOOR DEMOLITION PLAN	NOVEMBER 4, 2022
A001	WALL TYPES	NOVEMBER 4, 2022
A100	FLOOR PLAN - COMPOSITE	NOVEMBER 4, 2022
A101A	FLOOR PLAN - UNIT A	NOVEMBER 4, 2022
A101B	FLOOR PLAN - UNIT B	NOVEMBER 4, 2022
A120	REFLECTED CEILING PLAN - COMPOSITE	NOVEMBER 4, 2022
A121A	REFLECTED CEILING PLAN - UNIT A	NOVEMBER 4, 2022
A121B	REFLECTED CEILING PLAN - UNIT B	NOVEMBER 4, 2022
A140	ROOF PLAN	NOVEMBER 4, 2022
A200	EXTERIOR ELEVATIONS	NOVEMBER 4, 2022
A201	EXTERIOR ELEVATIONS	NOVEMBER 4, 2022
A300	BUILDING SECTIONS	NOVEMBER 4, 2022
A301	BUILDING SECTIONS	NOVEMBER 4, 2022
A320	WALL SECTIONS	NOVEMBER 4, 2022
A321	WALL SECTIONS	NOVEMBER 4, 2022
A340	PLAN DETAILS	NOVEMBER 4, 2022
A410	EQUIPMENT PLAN - COMPOSITE	NOVEMBER 4, 2022
A411A	EQUIPMENT PLAN - UNIT A	NOVEMBER 4, 2022
A411B	EQUIPMENT PLAN - UNIT B	NOVEMBER 4, 2022
A412	EQUIPMENT SCHEDULE	NOVEMBER 4, 2022
A420	INTERIOR ELEVATIONS	NOVEMBER 4, 2022
A421	INTERIOR ELEVATIONS	NOVEMBER 4, 2022
A500	DETAILS	NOVEMBER 4, 2022
A501	DETAILS	NOVEMBER 4, 2022
A520	CASEWORK DETAILS	NOVEMBER 4, 2022
A521	CASEWORK DETAILS	NOVEMBER 4, 2022
A600	DOOR AND FRAME SCHEDULE	NOVEMBER 4, 2022
A700	INTERIOR FINISH KEY AND SCHEDULE	NOVEMBER 4, 2022
A701A	FIRST FLOOR FINISH PLAN - UNIT A	NOVEMBER 4, 2022
A701B	FIRST FLOOR FINISH PLAN - UNIT B	NOVEMBER 4, 2022
A800	INTERIOR SIGN TYPES & SCHEDULE	NOVEMBER 4, 2022

SHEET	DESCRIPTION	ISSUE DATE
F001	FIRE PROTECTION GENERAL INFO & SYMBOL LEGEND	NOVEMBER 4, 2022
F101	FIRST FLOOR FIRE PROTECTION PLAN	NOVEMBER 4, 2022
P001	PLUMBING GENERAL INFO & SYMBOL LEGEND	NOVEMBER 4, 2022
P101	FIRST FLOOR DOMESTIC WATER AND GAS PLAN	NOVEMBER 4, 2022
P121	FIRST FLOOR SANITARY AND VENT PLAN	NOVEMBER 4, 2022
P141	FIRST FLOOR STORM PLAN	NOVEMBER 4, 2022
P142	ROOF STORM PLAN	NOVEMBER 4, 2022
P201	FIRST FLOOR MEDICAL GAS PLAN	NOVEMBER 4, 2022
P500	PLUMBING DETAILS	NOVEMBER 4, 2022
P520	DOMESTIC WATER AND GAS RISER DIAGRAMS	NOVEMBER 4, 2022
P521	SANITARY & VENT RISER DIAGRAM	NOVEMBER 4, 2022
P522	STORM RISER DIAGRAM	NOVEMBER 4, 2022
P523	MEDICAL GAS RISER DIAGRAM	NOVEMBER 4, 2022
P600	PLUMBING SCHEDULES	NOVEMBER 4, 2022
M001	MECHANICAL GENERAL INFO & SYMBOL LEGEND	NOVEMBER 4, 2022
M011	THERMAL ZONE DIAGRAM AND VENT. SCHEDULE	NOVEMBER 4, 2022
M101	FIRST FLOOR MECHANICAL PLAN	NOVEMBER 4, 2022
M101A	FIRST FLOOR MECHANICAL PLAN - UNIT A	NOVEMBER 4, 2022
M101B	FIRST FLOOR MECHANICAL PLAN - UNIT B	NOVEMBER 4, 2022
M201	FIRST FLOOR MECHANICAL PIPING PLAN	NOVEMBER 4, 2022
M500	MECHANICAL DETAILS	NOVEMBER 4, 2022
M501	MECHANICAL DETAILS	NOVEMBER 4, 2022
M520	DUCT RISER DIAGRAMS	NOVEMBER 4, 2022
M521	HYDRONIC RISER DIAGRAMS	NOVEMBER 4, 2022
M600	MECHANICAL SCHEDULES	NOVEMBER 4, 2022
M601	MECHANICAL SCHEDULES	NOVEMBER 4, 2022
E001	ELECTRICAL ABBREV. & SYMBOL LEGEND	NOVEMBER 4, 2022
E002	ELECTRICAL GENERAL INFORMATION	NOVEMBER 4, 2022
E003	ELECTRICAL SITE PLAN	NOVEMBER 4, 2022
E101	FIRST FLOOR LIGHTING PLAN	NOVEMBER 4, 2022
E101a	FIRST FLOOR LIGHTING LEVELS	NOVEMBER 4, 2022
E201	FIRST FLOOR POWER PLAN	NOVEMBER 4, 2022
E301	FIRST FLOOR SYSTEMS PLAN	NOVEMBER 4, 2022
E400	ELECTRICAL ENLARGED PLANS	NOVEMBER 4, 2022
E401	FIRST FLOOR FIRE ALARM PLAN	NOVEMBER 4, 2022
E501	ELECTRICAL DETAILS	NOVEMBER 4, 2022
E500	ELECTRICAL DETAILS	NOVEMBER 4, 2022
E520	ELECTRICAL ONE-LINE DIAGRAMS	NOVEMBER 4, 2022
E601	ELECTRICAL SCHEDULES	NOVEMBER 4, 2022
E602	ELECTRICAL SCHEDULES	NOVEMBER 4, 2022

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15404
BRADEN S. COX
SOUTH DAKOTA
11/04/22

SOUTH DAKOTA
JUSTIAN CRANE
ENGINEER
NO. 13073
LICENSED PROFESSIONAL ENGINEER

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT REGA
SOUTH DAKOTA
11.04.2022

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING CO
259 E Michigan Ave
Kalamazoo, MI 49007
www.steelheadengineeringco.com

NEHIL·SIVAK STRUCTURAL ENGINEERS
414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
INDIAN HEALTH SERVICE
DIVISION OF ENGINEERING SERVICES
GREAT PLAINS AREA

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CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: STL
CHECKED BY: JD

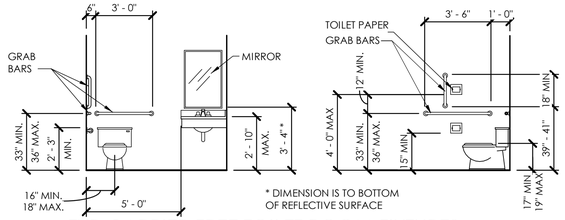
SHEET TITLE:

COVER SHEET

G001

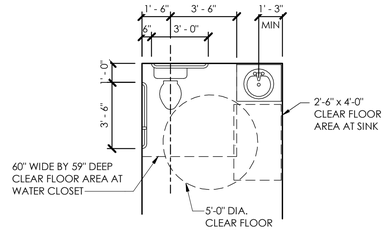
SHEET 1 OF 95

BARRIER-FREE DESIGN INFORMATION



TYP. BARRIER FREE TOILET ROOM FIXTURES

SCALE: NONE



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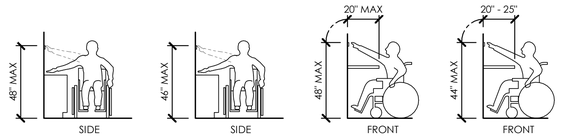
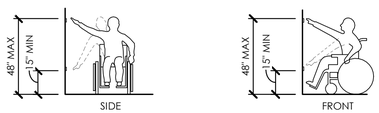


OBSTRUCTED APPROACH



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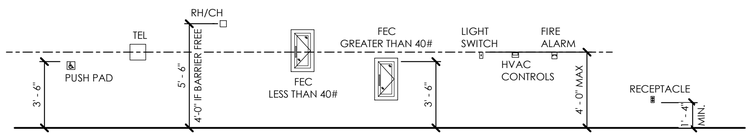
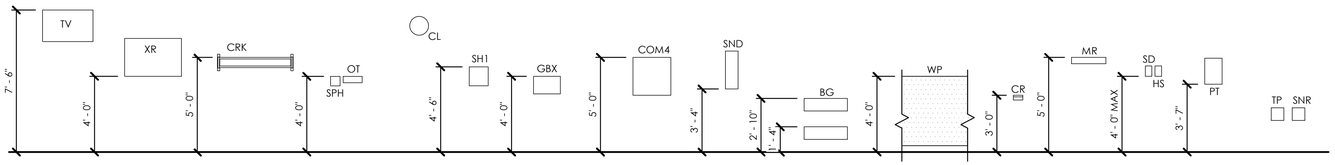


TYP. CODE REGULATED MOUNTING HEIGHTS

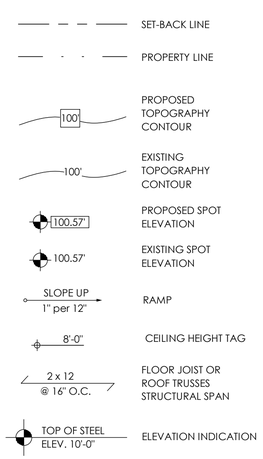
SCALE: NONE

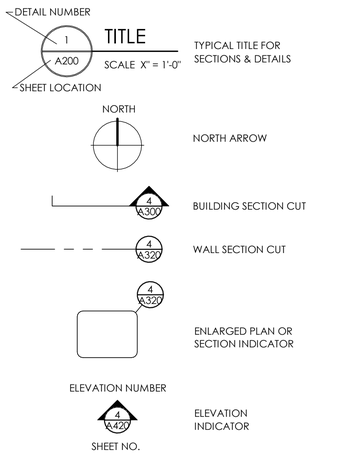


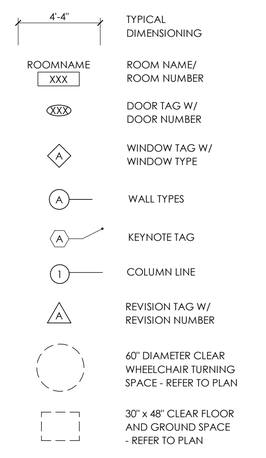
TYP. EQUIPMENT MOUNTING HEIGHTS

SCALE: NONE

ARCHITECTURAL SYMBOLS & PLAN INDICATORS







GENERAL NOTES

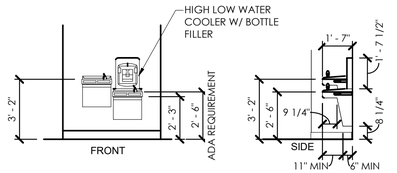
1. THIS PROJECT SHALL BE CONSTRUCTED IN CONFORMANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS AND BUILDING CODES. CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH APPLIACABLE BIE DESIGN GUIDES AND INTERNATIONAL BUILDING CODES.
2. CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL ASSOCIATED PERMITS FOR CONSTRUCTION AND SHALL DO ALL NECESSARY ITEMS FOR PROCUREMENT OF A CERTIFICATE OF OCCUPANCY. ANY COSTS DERIVED FROM OBTAINING SAID PERMITS SHALL BE BORNE BY CONTRACTOR.
3. CONTRACTOR SHALL SUPPLY AND ASSIST OWNER IN APPLYING FOR ANY UTILITIES REQUIRED FOR THE COMPLETION OF THE WORK UNLESS SPECIFIED OTHERWISE IN WRITING. ALL COSTS ASSOCIATED WITH TEMPORARY POWER, PHONE OR GAS SHALL BE PART OF THIS CONTRACT.
4. DRAWINGS AND SPECIFICATIONS ARE SUPPLEMENTARY. ANYTHING SHOWN IN ONE SHALL BE CONSIDERED IN BOTH. ANY SHEET OF THE CONTRACT DOCUMENTS IS VOID UNLESS USED IN CONJUNCTION WITH THE REST OF THE CONTRACT DOCUMENTS.
5. IT IS THE RESPONSIBILITY OF CONTRACTOR TO COORDINATE THE WORK OF ALL TRADES. ANY CONFLICTING WORK TO BE REPORTED TO THE OWNER'S CONTRACTING OFFICER PRIOR TO THE INSTALLATION OF ANY WORK.
6. CONTRACTOR TO TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND/OR WORKMEN ON THE SITE TO PREVENT ACCIDENTS OR INJURY. CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, CODES AND REGULATIONS PERTAINING TO SAFETY AND THE PREVENTION OF ACCIDENTS.
7. CONTRACTOR SHALL NOTIFY COR IMMEDIATELY IF ANY UNFORESEEN STRUCTURAL OR UTILITY RELATED ISSUES ARISE DURING DEMOLITION OR EXCAVATION.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN CLARIFICATION OF ANY DISCREPANCIES FOUND ON DRAWINGS OR SPECIFICATIONS PRIOR TO BID DATE.
9. PRIOR TO ANY EXCAVATION WORK, ALL UTILITY COMPANIES ARE TO BE NOTIFIED TO LOCATE UTILITIES ON SITE THAT MAY CONFLICT WITH EXCAVATION WORK.
10. CONTRACTOR(S) TO VERIFY ALL DIMENSIONS IN FIELD. ANY DISCREPANCIES SHALL BE REPORTED TO THE COR PRIOR TO THE INSTALLATION OF ANY WORK.
11. DO NOT SCALE DRAWINGS. USE INDICATED DIMENSIONS ONLY.
12. CONTRACTOR(S) TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS TO UNDERSTAND THE NATURE AND SCOPE OF THE WORK. THE BASE BID SHALL REFLECT MODIFICATIONS TO SYSTEMS AND DEVICES REQUIRED BY STATE AND LOCAL CODES WHETHER INDICATED OR NOT ON THE CONTRACT DOCUMENTS. THE SUBMISSION OF A BID WILL BE EVIDENCE THAT SUCH AN EXAMINATION AND COMPLIANCE WITH GOVERNING CODES/ REQUIREMENTS HAVE BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED, OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORSEEN HAD AN EXAMINATION AND CODE REQUIREMENT REVIEW OCCURED, WILL NOT BE ALLOWED. ALL OF THE ABOVE SHALL BE PROVIDED AT THE CONTRACTOR'S EXPENSE.
13. ARCHITECT WILL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THESE DOCUMENTS OR DEVIATIONS FOR SPECIFIED PRODUCTS, UNLESS APPROVED BY OWNER'S CONTRACTING OFFICER.

ADA NOTE:

THIS PROJECT IS TO MEET THE ADA STANDARDS IN EFFECT AT THE TIME OF THE PROJECT. IF A MATERIAL OR SYSTEM HAS BEEN SPECIFIED OR DRAWN THAT DOES NOT MEET THE STANDARDS, THE ARCHITECT REQUESTS THAT THE CONTRACTOR, SUPPLIER OR MATERIAL MANUFACTURER ADVISE AND ASSIST THE ARCHITECT TO PROVIDE THE PRODUCT OR SYSTEM. ALL PRODUCTS OR SYSTEMS WILL NEED ACCEPTANCE OF THE OWNER AND THE ARCHITECT.

GENERAL NOTES – SITE

1. CONTRACTOR TO REQUEST LOCATION OF ALL UTILITIES BY CONTACTING MISS DIG.
2. ALL EXCESS/ UNSUITABLE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND WHO SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF MATERIAL.
3. ALL STRUCTURES LOCATED ON PROPERTY, SHOWN DASHED, TO BE REMOVED IN ITS ENTIRETY.
4. ALL TREES ARE TO REMAIN. CONTRACTOR TO VERIFY ALL EXISTING TREE REMOVAL WITH OWNER AND ARCHITECT PRIOR TO EXTRACATION.
5. TREES SHALL BE PROTECTED BY THE CONTRACTOR. DAMAGED TREES SHALL BE RESTORED TO THE ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE. ALL TREES DAMAGED BEYOND SAVING AS DETERMINED BY THE ARCHITECT SHALL BE REMOVED AND REPLACED WITH A NURSERY GROWN TREE AS SPECIFIED BY THE ARCHITECT.
6. CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE PREMISES AND EXISTING CONDITIONS TO COORDINATE NEW INSTALLATIONS.
7. CAP OFF EXISTING UNDERGROUND UTILITIES BEYOND EXTENT OF NEW BUILDING LOCATION FOR POSSIBLE RECONNECTION.



DRINKING FOUNTAIN REQUIREMENTS

SCALE: NONE

GENERAL NOTES:

ACCESSIBLE CONTROLS, OPERATING MECHANISMS & HARDWARE SHALL COMPLY WITH SECTIONS 1109.13 OF THE MBC AND SECTION 309 OF ICC/ANSI A117.1.

ACCESSIBLE SIGNAGE FURNISHED BY OWNER, SHALL COMPLY WITH SECTIONS 1110 OF THE MBC AND SECTION 703 OF ICC/ANSI A117.1.

PORTABLE FIRE EXTINGUISHERS TO BE PROVIDED IN ACCORDANCE WITH THE 2000 ICC INTERNATIONAL FIRE CODE. MBC (906.1). REFER TO FLOOR PLAN SHEETS FOR LOCATIONS OF FIRE EXTINGUISHER CABINETS (FEC)

MOUNTING HEIGHT GENERAL NOTES:

1. REFER TO SHEET A410, A411A, A411B FOR EQUIPMENT ABBREVIATIONS AND LOCATIONS.
2. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
3. ITEMS ON THIS SHEET ARE NOT NECESSARILY INCLUDED IN THIS PROJECT.
4. CONTRACTOR TO VERIFY ALL EQUIPMENT MOUNTING HEIGHTS WITH OWNER/AE PRIOR TO INSTALLATION.
5. REFER TO MECHANICAL/ELECTRICAL DRAWINGS FOR DEVICE MOUNTING HEIGHTS.

ABBREVIATIONS

@	AT
A/C	AIR CONDITIONING/AIR CONDITIONER
ACOUS	ACOUSTICAL
AD	AREA DRAIN, AUTOMATIC DAMPER
ADJ	ADJUST, ADJUSTABLE
ALUM	ALUMINUM
AP	ACCESS PANEL
ACT	ACOUSTICAL CEILING
B	BASE
BAR	BARRIER
BD	BOARD
BF	BARRIER FREE
BKT	BRACKET
BLDG	BUILDING
BLKG	BLOCKING
BOTT	BOTTOM
C TO C	CENTER TO CENTER
CAB	CABINET
CE	COLUMN ENCLOSURE
CIR	CIRCLE
CIR	CIRCUIT
CL	CENTER LINE, CLEARANCES
CLG	CEILING
CJ	CONTROL JOINT
CLKG	CAULKING
CLO	CLOSET
CMT	CERAMIC MOSAIC TILE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CORR	CORRIDOR
CPJ	CONCRETE PANEL JOINT
CPT	CARPET
CSS	CLINICAL SERVICE SINK
CT	CERAMIC TILE
CTR	CENTER
CUH	CABINET UNIT HEATER
DEMO	DEMOLITION, DEMOLISH
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIA, D	DIAMETER
DIM	DIMENSION
DN	DOWN
DR	DRAIN
DS	DOWNSPOUT
ELECT	ELECTRICAL
ELEV	ELEVATION
ENTR	ENTRANCE
EQ	EQUAL
EP	ELECTRICAL PANEL
EXH	EXHAUST
EXP	EXPOSED
EXIST	EXISTING, EXSIST'G
EXT	EXTERIOR
EW	EACH WAY
FA	FIRE ALARM
FD	FIRE DAMPER OR FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH
FL, FLR	FLOOR FINISH
FLG, FLRG	FLOORING, FLOOR'G
FURN	FURNITURE, FURNACE
FWC	FABRIC WALL COVERING
FT	FEET, FOOT
GALV	GALVANIZE(D)
GL	GLASS
GSB	GYPSUM SHEATHING BOARD
GWB	GYPSUM WALLBOARD
GYP. BD	GYPSUM BOARD
ID	INSIDE DIAMETER
INSUL	INSULATION
IN	INCH(ES)
JAN	JANITOR'S CLOSET
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HANDRAIL
HT	HEIGHT
HW	HEADWALL
LAM	LAMINATED
LF	LINEAL FEET
MAS	MASONRY
MAT'L	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MANUF	MANUFACTURED, MANUFACTURER
MIN	MINIMUM
MLD'G	MOLDING
MTL	METAL
N	NORTH
NAT	NATURAL
NIC	NOT IN CONTRACT
NORM	NORMAL
NTS	NOT TO SCALE
O.C.	ON CENTER
OPN'G	OPENING
OPP.	OPPOSITE
O, O2	OXYGEN
PLAST	PLASTIC
PNT	PAINT
PREFAB	PREFABRICATED
PLYWD	PLYWOOD, PLYW'D
R	RADIUS
RA	RETURN AIR
REQ'D	REQUIRED
RM	ROOM
S	SINK, SOUTH, SHINGLE
SA	SUPPLY AIR
SAN	SANITARY
SMKD	SMOKE DAMPER
SECT	SECTION
SHWR	SHOWER
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	SERVICE SINK, STAINLESS STEEL
STD	STANDARD
STOR	STORAGE
SUSP	SUSPEND(ED)
SYM	SYMBOL, SYMMETRICAL
TOIL	TOILET
TYP	TYPICAL
UNFIN	UNFINISHED
UTIL	UTILITY
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VCT	VINYL COMPOSITION TILE
VD	VOLUME DAMPER
VERT	VERTICAL
V.I.F.	VERIFY IN FIELD
VT	VINYL TILE
VWC	VINYL WALL COVERING
W/	WITH
WC	WATER CLOSET
WD	WOOD
WNDW	WINDOW
W. HTR	WATER HEATER
W/O	WITHOUT
WP	WALL PROTECTION

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PROJECT NO: 220079
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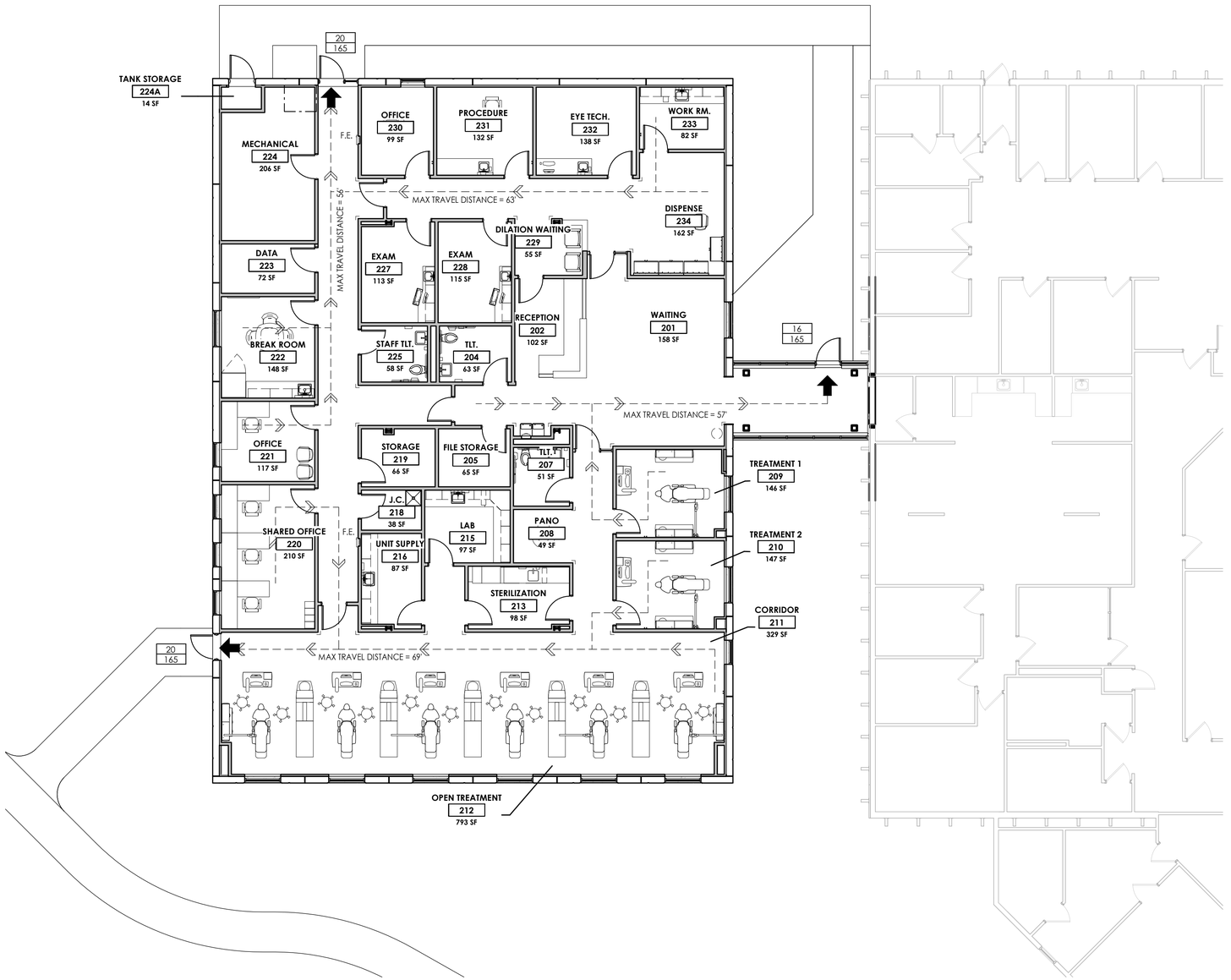
DRAWN BY: STL
CHECKED BY:

SHEET TITLE:

GENERAL INFORMATION & SYMBOL LEGEND

G002

SHEET 2 OF 95



NORTH

LIFE SAFETY PLAN

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

CODE COMPLIANCE LEGEND

- 1-HOUR FIRE RATED PARTITION - UL DES U419
- 2-HOUR FIRE RATED BARRIER - UL DES U419
- 3-HOUR FIRE RATED BARRIER - UL DES U419
- 4-HOUR FIRE RATED BARRIER - UL DES U419
- 1-HOUR SMOKE BARRIER - NFPA 101 - 8.3
- PATH OF EGRESS
- EGRESS CORRIDOR
- EXIT
- 118 / 180 — OCCUPANT LOAD - COUNTED / OCCUPANT LOAD - MAXIMUM CAPACITY

CODE ROOM TAG INFORMATION

ROOM NAME ← ROOM NAME
100 ← ROOM NUMBER
XXX SF ← ROOM AREA
XX ← ROOM OCCUPANT LOAD

F.E. FIRE EXTINGUISHER

CODE INFORMATION

1. APPLICABLE CODES
   INTERNATIONAL BUILDING CODE 2015
   2018 NFPA 101
   INTERNATIONAL PLUMBING CODE 2015
   2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
   ASHRAE 90.1

2. USE GROUP (IBC: 304.1)
   B

3. CONSTRUCTION CLASSIFICATION (IBC: 602.2)
   II-B

4. ALLOWABLE BUILDING HEIGHT (IBC: TABLE 504.3 & 504.4)
   75' - 4 STORY

5. FIRE RESISTIVE RATINGS (IBC: TABLE 601)

STRUCTURAL FRAME:	0 HOURS
BEARING WALLS:	0 HOURS
NON-BEARING WALLS:	0 HOURS
FLOOR CONSTRUCTION:	0 HOURS
ROOF CONSTRUCTION:	0 HOURS

6. INTERIOR FINISHES (IBC: 803.1.1)
   CLASS A FLAME SPREAD 0-25;
   SMOKE DEVELOPED INDEX 0-450.

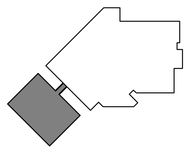
7. OCCUPANCY LOAD (IBC: TABLE 1004.1.2)
   BUSINESS AREA = 1 OCCUPANT PER 100 GROSS S.F.
   STORAGE AREA = 1 OCCUPANT PER 300 GROSS S.F.
   CURRENT = 5,387 S.F. / 100 S.F. = 54
   488 S.F. / 300 S.F. = 2
   TOTAL 56

8. EGRESS REQUIREMENTS (FULLY SPRINKLED BUILDING)
   WIDTH:
   DOOR OPENINGS = 0.3 x 54 OCCUPANTS = 16.2" (IBC: 1005.3.2)
   CORRIDOR = 36" (NFPA: 7.3.4.1(2) & IBC: TABLE 1020.2)
   MINIMUM NO. OF EXITS = 2 (NFPA: 38.2.4.2(2) & IBC: 1006.3.1)
   DEAD-END CORRIDORS = 50' MAX (NFPA: 38.2.5.2.1 & IBC: 1020.4.2)
   TRAVEL DISTANCE TO EXITS = 300' MAX (NFPA: 38.2.6.3 & IBC: TABLE 1017.2)

9. PLUMBING FIXTURE REQUIREMENTS (IPC: TABLE 403.1)

MEN:	1WC PER 50	= 1 REQ'D
	1 LAV PER 40	= 1 REQ'D
WOMEN:	1 WC PER 50	= 1 REQ'D
	1 LAV PER 40	= 1 REQ'D
DRINKING FOUNTAIN = 1 PER 100		= 1 REQ'D
SERVICE SINK		= 1 REQ'D

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022



KEY PLAN

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1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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INDIAN HEALTH SERVICE
DIVISION OF ENGINEERING SERVICES
GREAT PLAINS AREA

REVIEWED:
ES ARCHITECT / ENGINEER — DATE

APPROVED:
ES PROJECT MANAGER — DATE
ES BRANCH CHIEF — DATE

CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: STL
CHECKED BY:

SHEET TITLE:

CODE COMPLIANCE PLAN

G200

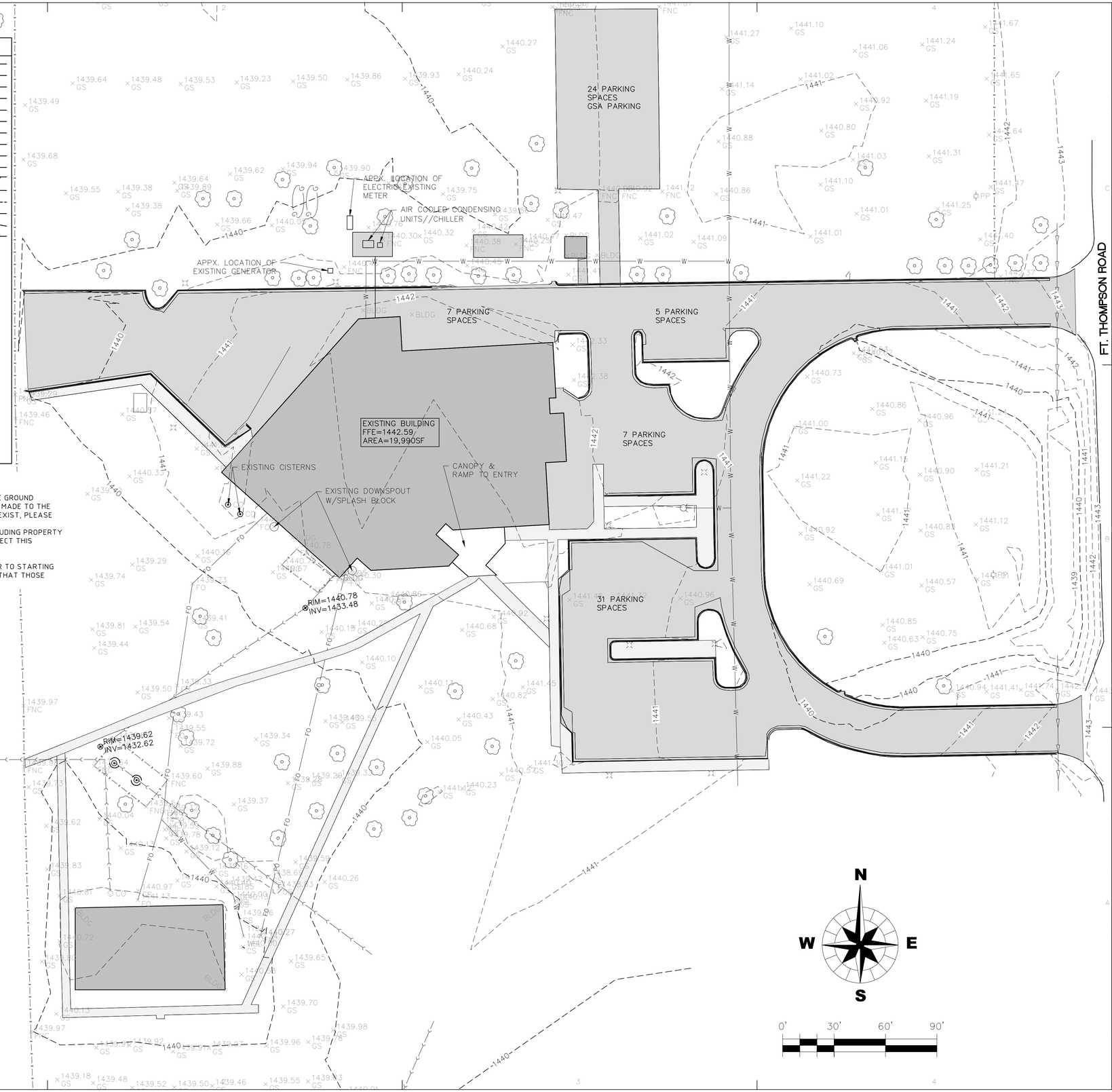
SHEET 3 OF 95

PLAN LEGEND

EXISTING	LINETYPES	PROPOSED
	DRAIN TILE	
	STORM SEWER	
	SANITARY SEWER	
W 8"	WATER MAIN (W/ SIZE)	W 8"
	PIPE TRENCH BACKFILL	
G G	GAS MAIN	G G
T T	TELEPHONE LINES	T T
E E	ELECTRIC LINE	E E
	FENCE	
	RIGHT-OF-WAY	
	EASEMENT	
	PROPERTY LINE	
	SETBACK LINE	
	CENTERLINE	
680	CONTOUR	680
	GUARDRAIL	
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	INLET	
	SUMP STRUCTURE	
	FIRE HYDRANT	
	PRESSURE CONNECTION	
	VALVE & VAULT, VALVE	
	FLARED END SECTION	
	STREET LIGHT	
	UTILITY POLE	
	CONTROL POINT	
	SIGN	
XXX.XX	SPOT ELEVATION	XXX.XX
	OVERLAND FLOW ROUTE	
	DRAINAGE SLOPE	
	TREE, EVERGREEN, SHRUB & PROPOSED TREE TO REMOVE	

NOTES:

1. SURVEY BASED ON TOPOGRAPHIC SURVEY DATA PROVIDED BY IHS.
2. UTILITIES ARE SHOWN BASED ON THE MEASURED LOCATIONS OF THEIR ABOVE GROUND SURFACE IMPROVEMENTS ONLY. NO RESEARCH OR INVESTIGATION HAS BEEN MADE TO THE EXISTENCE OR LOCATION OF UNDERGROUND UTILITIES. OTHER UTILITIES MAY EXIST, PLEASE CALL ONE-CALL SYSTEM PRIOR TO CONSTRUCTION.
3. NO RESEARCH OR INVESTIGATION HAS BEEN MADE IN MATTERS OF TITLE INCLUDING PROPERTY BOUNDARIES AND/OR EASEMENTS OR OTHER ENCUMBRANCES THAT MAY AFFECT THIS PROPERTY. NO PROPERTY CORNERS HAVE BEEN SET.
4. NO WETLANDS OR FEMA FLOODPLAIN EXIST ON SITE.
5. THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.



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GREAT PLAINS AREA

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PE, BRANCH CHIEF — DATE
CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO:
PROJECT NO: 210205
CAD DWG FILE: EC210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

EXISTING CONDITIONS

C100

SHEET OF

SouthDakota 811 Know what's below. Call before you dig.

UPDATED: 12/4/2022 - BIDS/RES

PLAN LEGEND

EXISTING	LINETYPES	PROPOSED
	DRAIN TILE	
	STORM SEWER	
	SANITARY SEWER	
W 8"	WATER MAIN (W/ SIZE)	W 8"
	PIPE TRENCH BACKFILL	
G G	GAS MAIN	G G
T T	TELEPHONE LINES	T T
E E	ELECTRIC LINE	E E
	FENCE	
	RIGHT-OF-WAY	
	EASEMENT	
	PROPERTY LINE	
	SETBACK LINE	
	CENTERLINE	
680	CONTOUR	680
	GUARDRAIL	
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	INLET	
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	STREET LIGHT	
	UTILITY POLE	
	CONTROL POINT	
	SIGN	
XXX.XX	SPOT ELEVATION	XXX.XX
	OVERLAND FLOW ROUTE	
	DRAINAGE SLOPE	
	TREE, EVERGREEN, SHRUB & PROPOSED TREE TO REMOVE	

PHASING:
1. ESTABLISH CONSTRUCTION ACCESS AND STAGING AREA. PLACE SESC MEASURES.
2. RE-ROUTE SANITARY SEWER.
3. WHEN REQUIRED REMOVAL/RELOCATION WORK HAS BEEN COMPLETED, ROUGH GRADE PROPOSED SITE.
4. EXCAVATE BUILDING FOUNDATION, CONSTRUCT FOUNDATION AND FLOOR SLAB.
5. INSTALL REMAINING UTILITIES.
6. PLACE SIDEWALK AND PAVEMEMNTS. NOTE THAT TIMING OF REPLACING CONCRETE CURB AND GUTTER AND SIDEWALKS IN BETWEEN STAGING AREA AND ADDITION TO BE DETERMINED BY CONTRACTOR.
7. PERFORM RESTORATION ON SITE

CONTRACTOR STAGING AREA, SEE SHEET C401

REMOVE 42LF OF CONCRETE CURB AND GUTTER FOR CONSTRUCTION ENTRANCE

APPX. LOCATION OF ELECTRIC EXISTING METER

AIR COOLED CONDENSING UNITS//CHILLER

APPX. LOCATION OF EXISTING GENERATOR

24 PARKING SPACES GSA PARKING

REMOVE 22SY OF CONCRETE SIDEWALK FOR CONSTRUCTION ENTRANCE

REMOVE 42LF OF CONCRETE CURB AND GUTTER FOR CONSTRUCTION ENTRANCE

7 PARKING SPACES

5 PARKING SPACES

EXISTING BUILDING FFE=1442.59/ AREA=19,990SF

7 PARKING SPACES

REMOVE EXISTING FIBERGLASS UNDERGROUND CISTERNS (2) APPROXIMATELY 500 GAL EACH. COORDINATE WITH IHS COR TO VERIFY THAT EXISTING SUBMERSIBLE PUMPS HAVE BEEN FULLY ABANDONED

EXISTING CISTERNS

EXISTING DOWNSPOUT W/SPLASH BLOCK

CANOPY & RAMP TO ENTRY

NOT IN CONTRACT BUILDING MECHANICALS RELOCATED BY IHS PRIOR TO START OF WORK

NOT IN CONTRACT, FENCE REMOVAL BY IHS STAFF

REMOVE EXISTING MH

RIM=1440.78
INV=1433.48

NOT IN CONTRACT FIBER OPTICS AND TELEPHONE LINE RELOCATED BY IHS PRIOR TO START OF WORK

31 PARKING SPACES

REMOVE TREES (2)

REMOVE 149SY OF CONCRETE SIDEWALK

8" PVC SANITARY SEWER @ 0.6%

REMOVE AND RE-ROUTE 75LF OF SANITARY SEWER

RIM=1439.62
INV=1432.62

EXISTING SEWER LIFT STATION

FT. THOMPSON ROAD

BURTON STEPP LOOP

N
W E
S

0' 30' 60' 90'

South Dakota 811
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UPDATED: 12/1/2022 - REVIEWED

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PE, BRANCH CHIEF — DATE

CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO:
PROJECT NO: 210205
CAD DWG FILE: DM210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

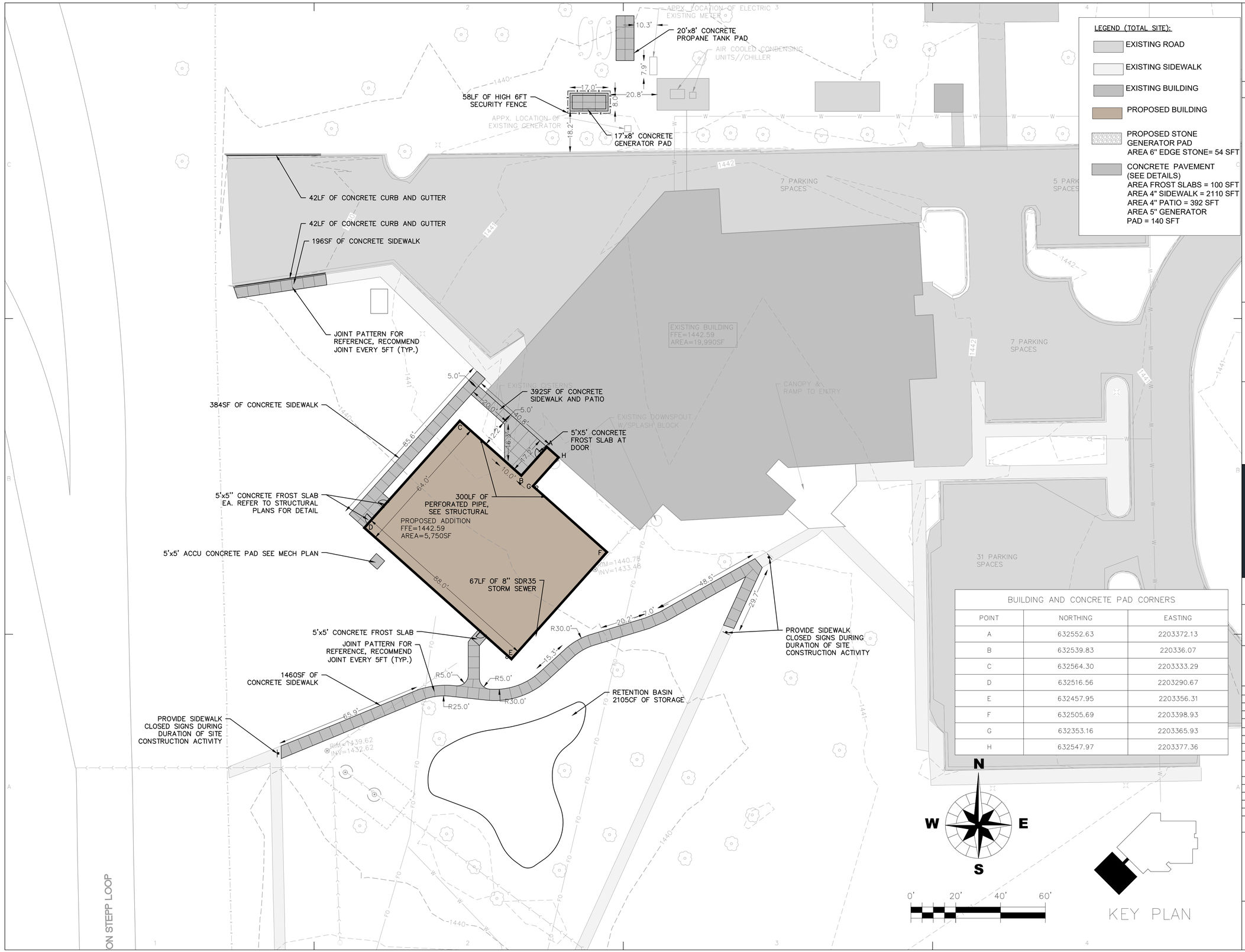
SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

DEMOLITION PLAN

C102

SHEET OF



BUILDING AND CONCRETE PAD CORNERS		
POINT	NORTHING	EASTING
A	632552.63	2203372.13
B	632539.83	220336.07
C	632564.30	2203333.29
D	632516.56	2203290.67
E	632457.95	2203356.31
F	632505.69	2203398.93
G	632353.16	2203365.93
H	632547.97	2203377.36

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ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO:
PROJECT NO: 210205
CAD DWG FILE: GM210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

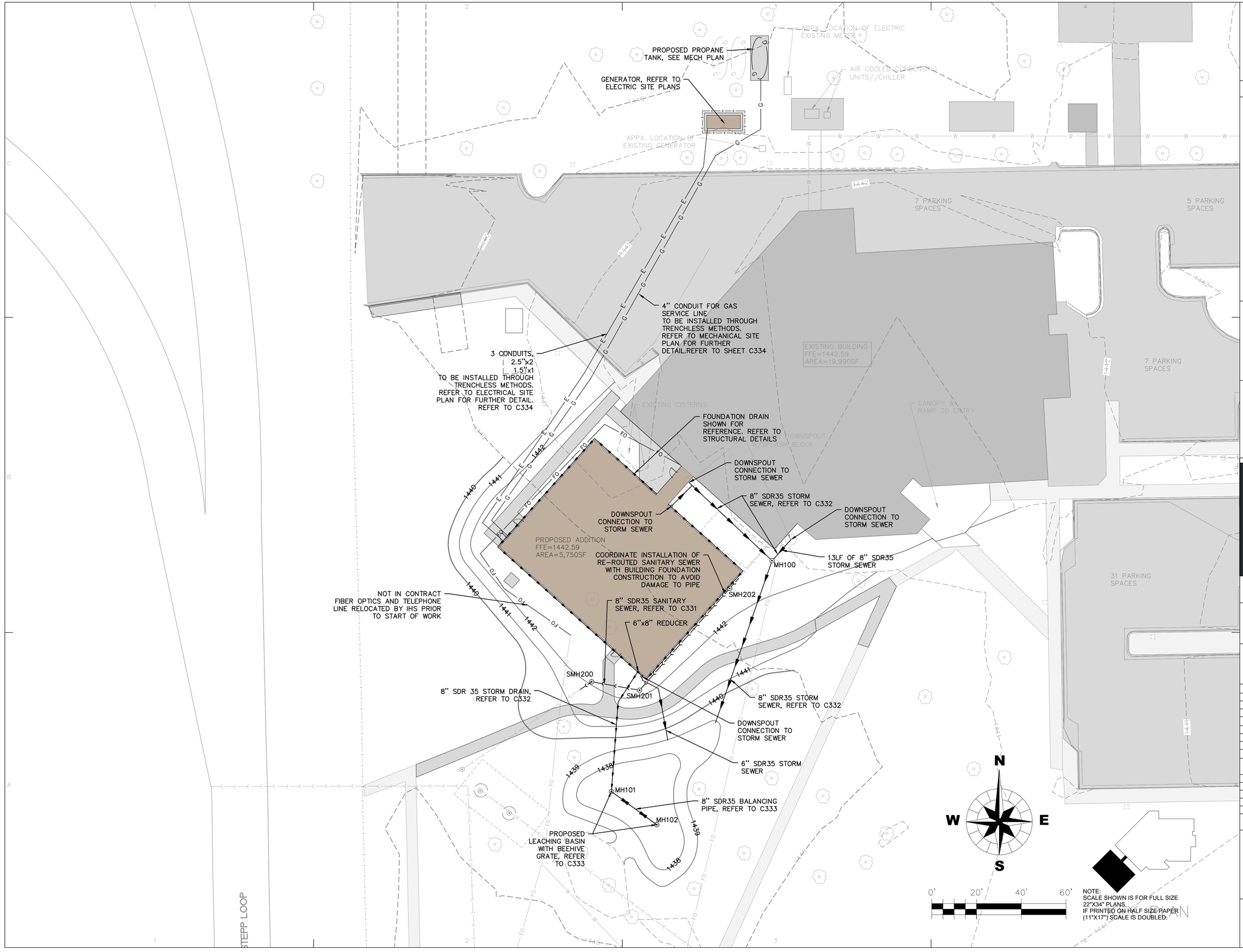
SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

GEOMETRIC PLAN

C200

SHEET OF



NOTE:
SCALE SHOWN IS FOR FULL SIZE 22"X34" PLANS.
IF PRINTED ON HALF SIZE PAPER (11"X17") SCALE IS DOUBLED.

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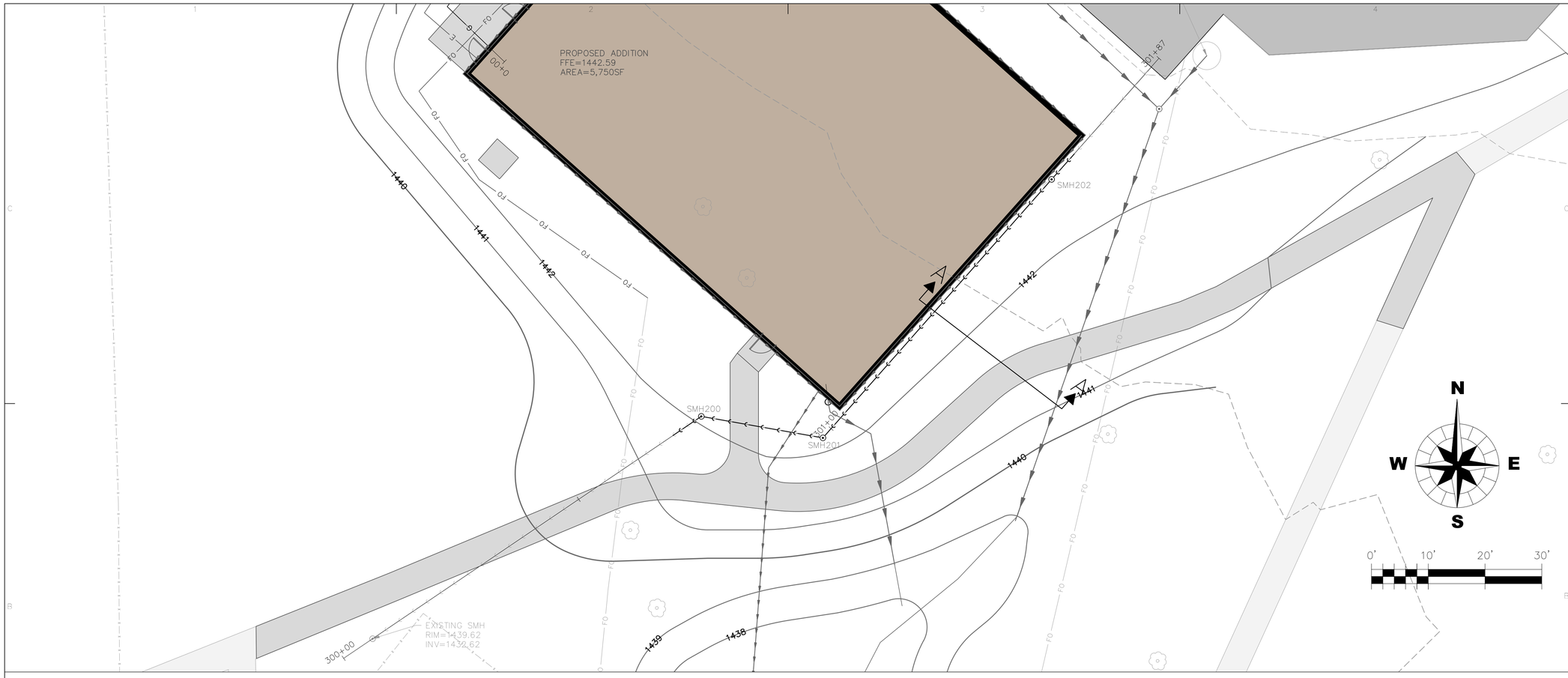
ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO:
PROJECT NO: 210205
CAD DWG FILE: UT210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

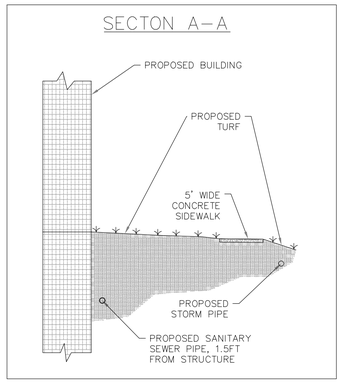
UTILITY PLAN

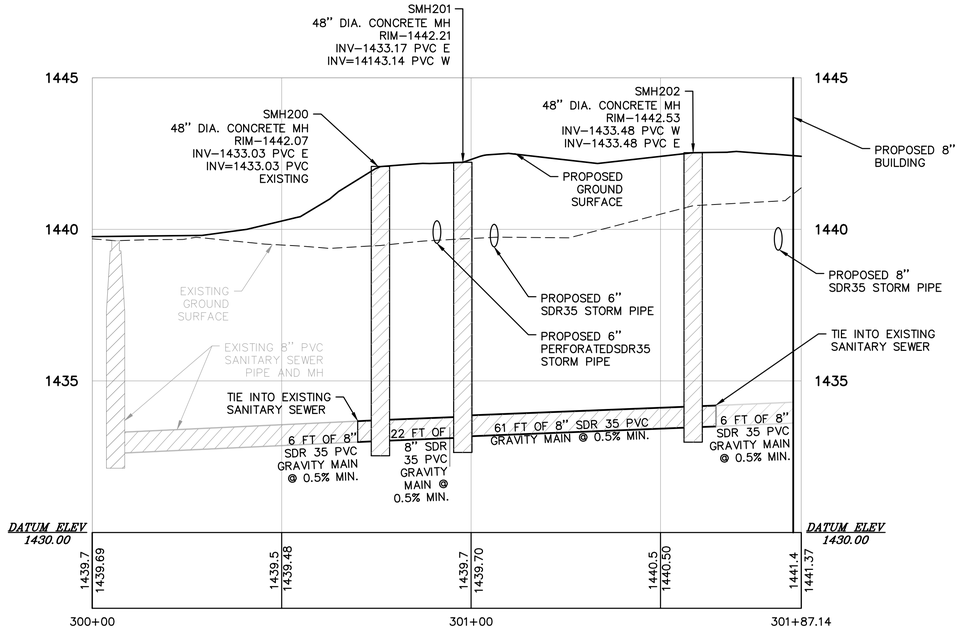
C330

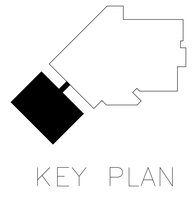
SHEET OF



PROFILE SCALE:
1" = 20' HORIZONTAL
1" = 2' VERTICAL






KEY PLAN

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ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO.:
PROJECT NO.: 210205
CAD DWG FILE: PP210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

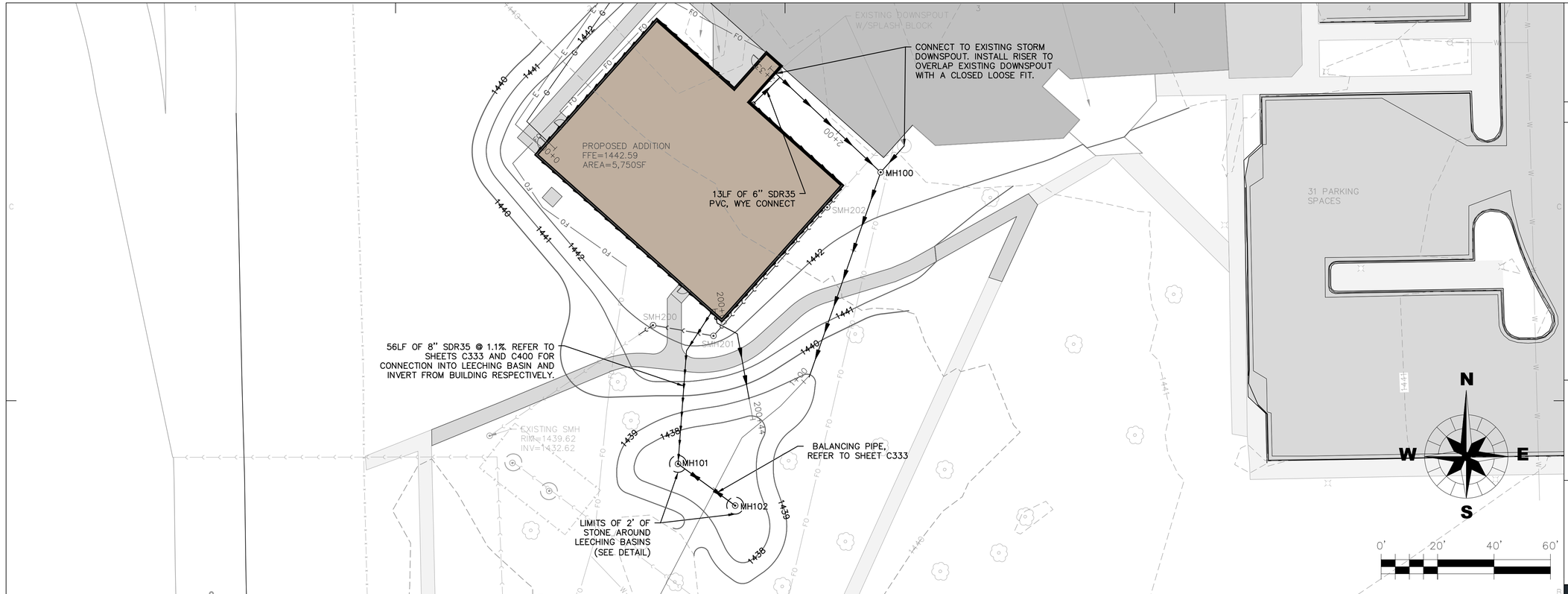
SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

PLAN AND PROFILES SANITARY SEWER

C331

SHEET ___ OF ___



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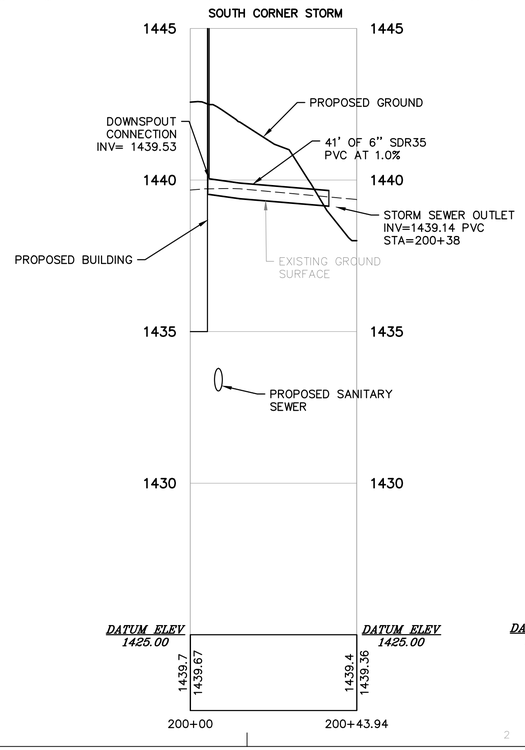

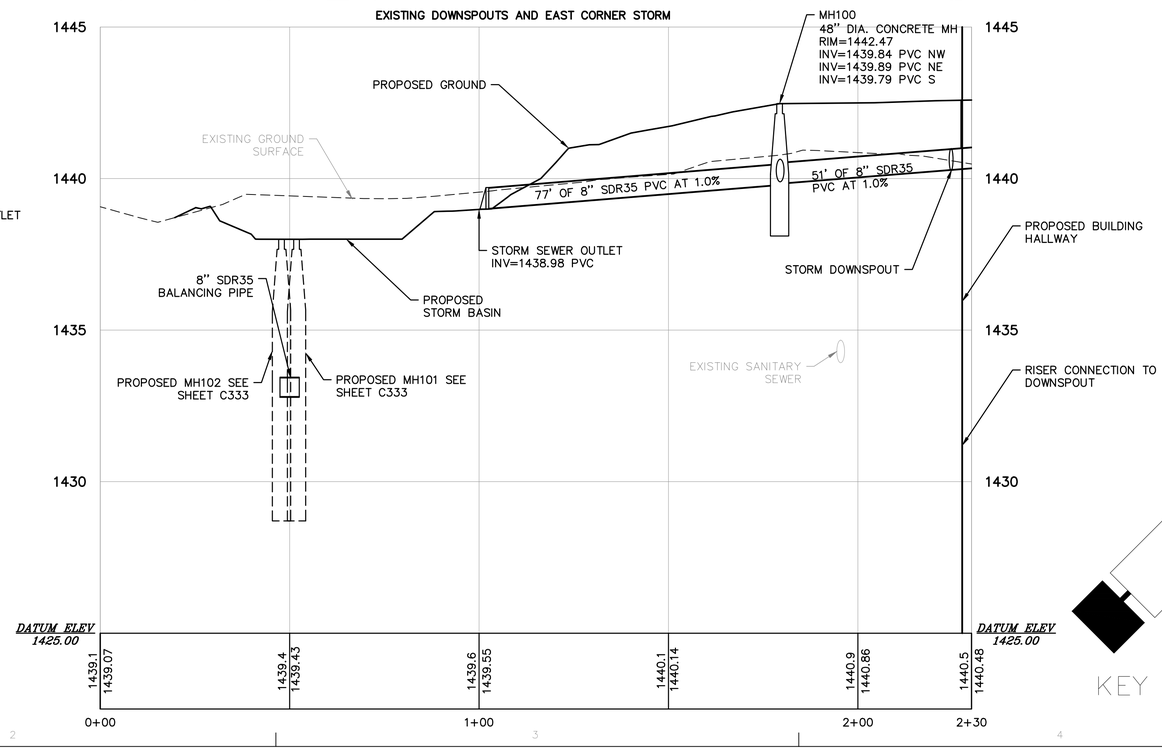

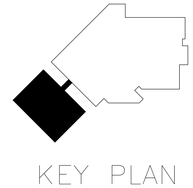

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PROJECT NO: 210205
CAD DWG FILE: PP210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

PLAN AND PROFILES STORM SEWER

C332

SHEET ___ OF ___

NOTE:
CONTRACTOR TO PROTECT BASINS AREAS DURING CONSTRUCTION TO PREVENT OVER COMPACTION OF NATIVE SOILS WHICH COULD RESULT IN LOSS OF INFILTRATION CAPACITY. AFTER BASINS HAVE BEEN EXCAVATED, CONTRACTOR IS TO AVOID RUNNING EQUIPMENT THROUGH THE BASINS. AT THE DIRECTION OF THE ENGINEER OR THE LOCAL MUNICIPALITY THE CONTRACTOR MAY BE REQUIRED TO INSTALL TEMPORARY FENCING (SUCH AS SNOW FENCE) AROUND THE TOP PERIMETER OF THE BASIN TO FURTHER PROTECT THE AREA.

DO NOT STOCKPILE SOIL OR MATERIAL OVERTOP BASIN AREAS BEFORE THEY ARE EXCAVATED OR WITHIN BASIN AREA AFTER EXCAVATION.

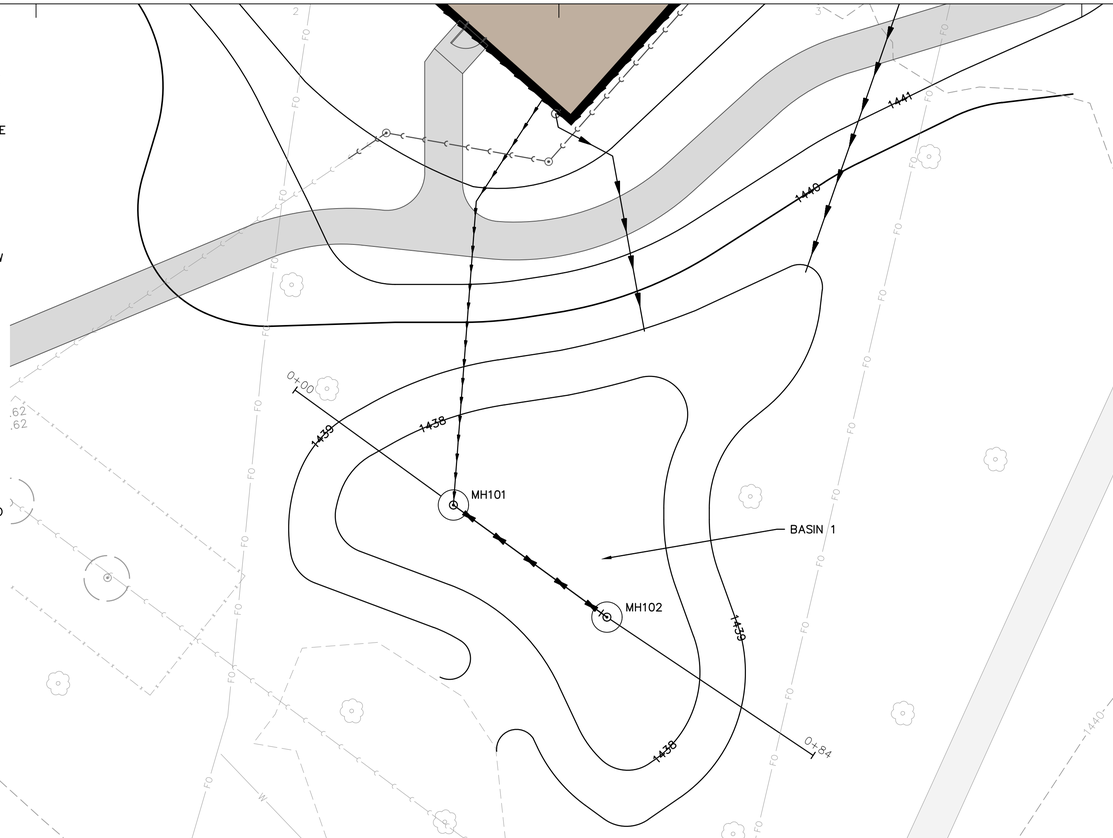
CONTRACTOR TO INSTALL A MINIMUM OF 4 INCHES OF NEW MATERIAL IN THE BASIN BOTTOM. MATERIAL SHALL BE A MIX OF NEW TOPSOIL, AND LEAF COMPOST. DO NOT USE SALVAGED TOPSOIL.

BASIN SIDES SHALL CONSIST OF TOPSOIL WHICH MAY BE NEW OR SALVAGED.

INSTALL A LOW VELOCITY EROSION CONTROL BLANKET ON ALL BASIN SIDE SLOPES 4:1 (H:V) AND SHALLOWER. SLOPES STEEPER THAN 4:1 AND AREAS OF CONCENTRATE FLOW SHALL HAVE A HIGH VELOCITY MULCH BLANKET INSTALLED. INSTALL HIGH VELOCITY MULCH BLANKET AT BASIN WEIR OVERFLOW POINTS.

STORMWATER BASIN SUMPS SHALL BE CLEANED OUT TO THEIR DESIGN VOLUME AT THE COMPLETION OF CONSTRUCTION ACTIVITIES OR ONCE THE SITE IS ESTABLISHED.

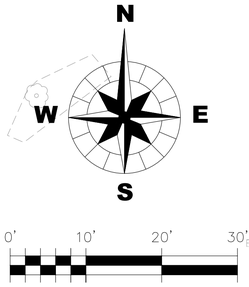
CONTRACTOR SHALL TAKE CARE DURING CONSTRUCTION TO PREVENT THE MIGRATION OF SILT AND SEDIMENT INTO STORMWATER BASINS. IF A BASIN BECOMES INUNDATED WITH SEDIMENT AND SILT THE CONTRACTOR SHALL EXPEDIENTLY CLEAN THE BASIN TO ITS ORIGINAL DESIGN VOLUME.



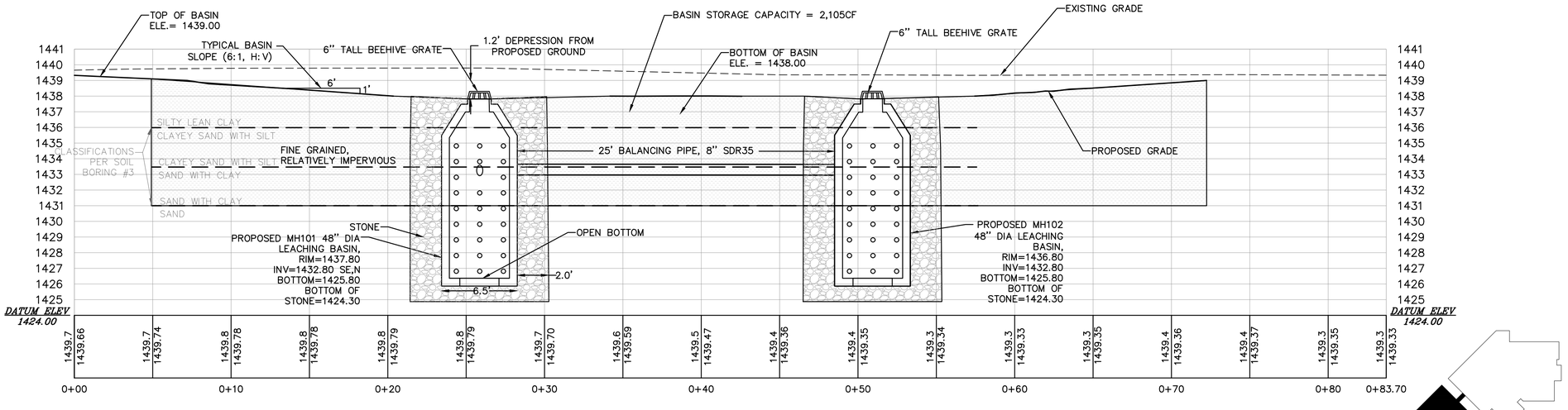
BASIN INFORMATION:

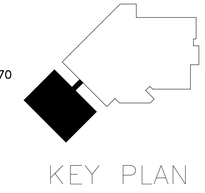
BASIN 1:

BASIN VOLUME = 2,105 CFT
BASIN BOTTOM = 1437.98
BASIN TOP = 1439 OVERFLOW POINT = 1438.6
BASIN DEPTH = 1.02 FT
BASIN IS A RETENTION / DETENTION BASIN
CONTRACTOR TO INSTALL 4" OF A MIX OF 50% TOPSOIL, 25% CLEAN SAND, AND 25% COMPOST IN BASIN BOTTOM.
NATIVE SOIL AT BASIN BOTTOM = SANDY CLAY.
CONTRACTOR TO OVER-EXCAVATE TO NATIVE SAND AND BACKFILL WITH SANDY SOILS TO 85% COMPACTION.



PROFILE SCALE:
1" = 40' HORIZONTAL
1" = 4' VERTICAL




KEY PLAN

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INDIAN HEALTH SERVICE
DIVISION OF ENGINEERING SERVICES
GREAT PLAINS AREA

REVIEWED:
PE ARCHITECT / ENGINEER DATE

APPROVED:
PE PROJECT MANAGER DATE
PE BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO.
PROJECT NO. 210205
CAD DWG FILE CS210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

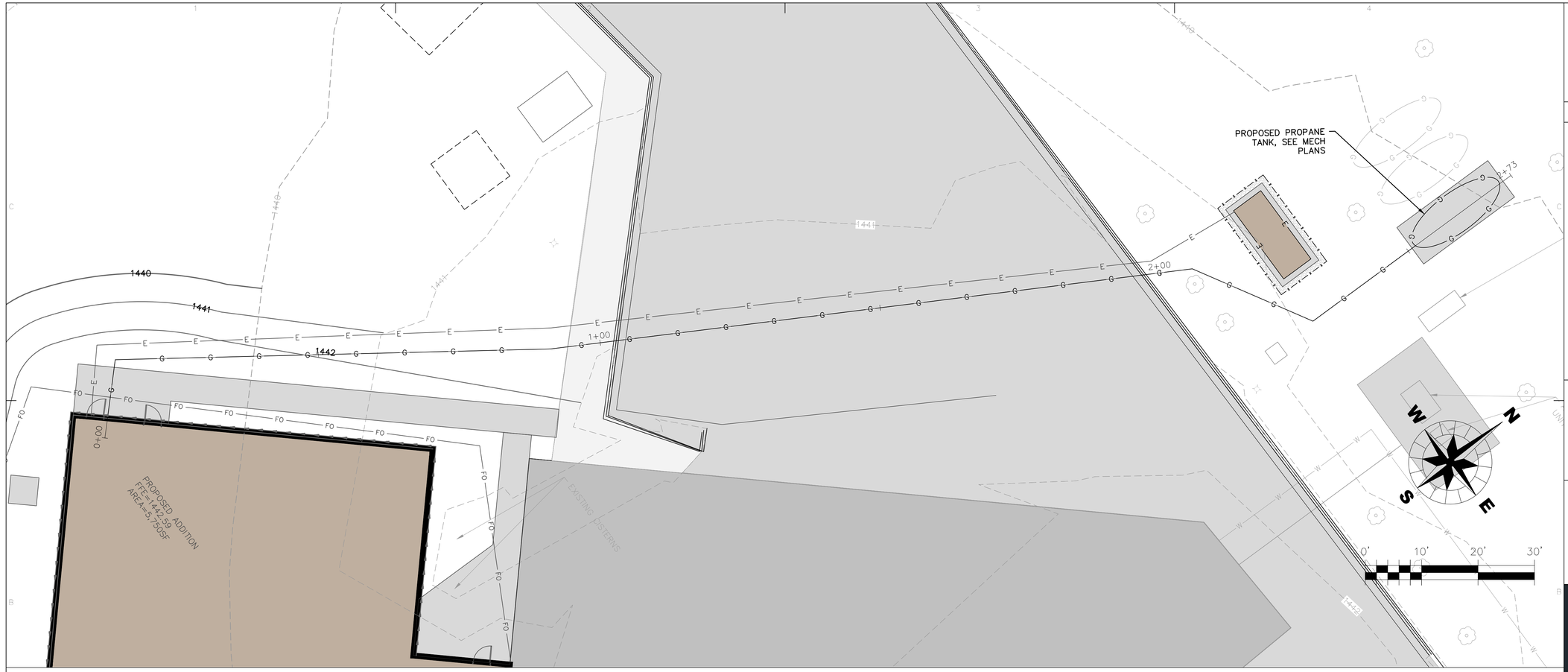
SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

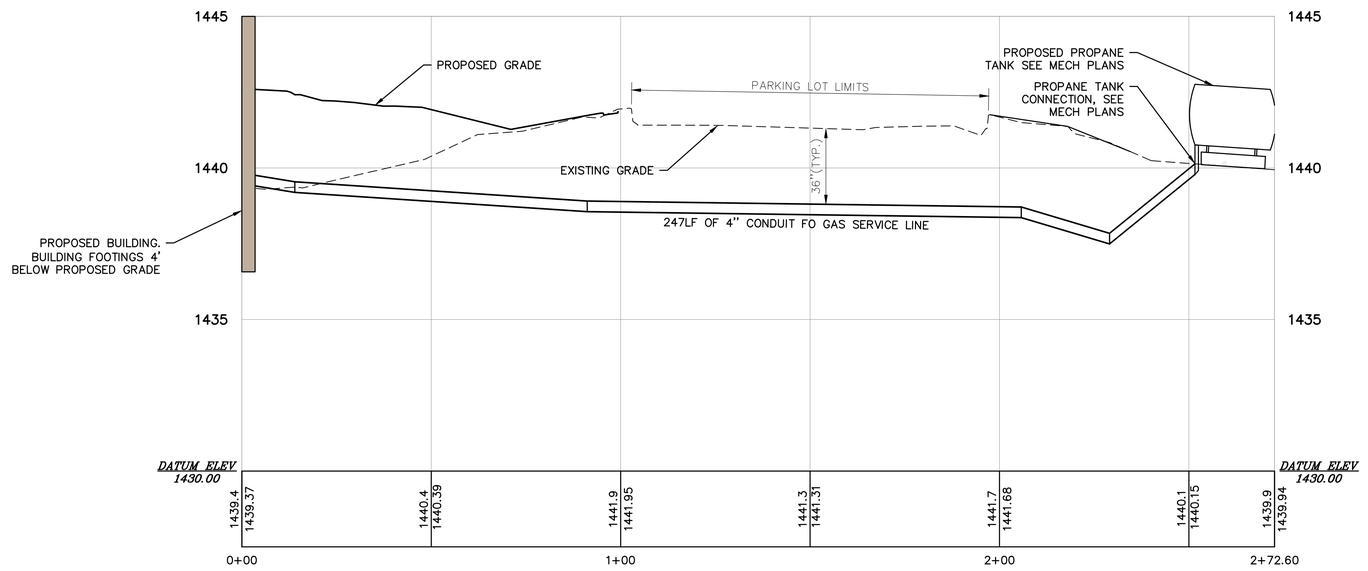
CROSS SECTION STORM BASIN

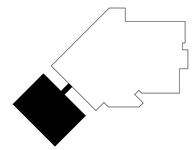
C333

SHEET OF



PROFILE SCALE:
1" = 20' HORIZONTAL
1" = 2' VERTICAL





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CAD DWG FILE: PP210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

PLAN AND PROFILES GAS AND ELECTRIC

C334

SHEET ____ OF ____

LEGEND:

RIM = STRUCTURE RIM

ME = MATCH EXISTING

INV = INVERT OF PIPE

+999.99 SPOT GRADE

PROPOSED ADDITION
FFE=1442.59
AREA=5,750SF

EXISTING BUILDING
FFE=1442.59
AREA=19,990SF

APPX. LOCATION OF ELECTRIC METER

AIR COOLED CONDENSING UNITS//CHILLER

APPX. LOCATION OF EXISTING GENERATOR

7 PARKING SPACES

5 PARKING SPACES

31 PARKING SPACES

CANOPY & RAMP TO ENTRY

EXISTING DOWNSPOUT W/SPLASH BLOCK

EXISTING CISTERNS

SLOPE OVERFLOW 2% TOWARDS LEECHING BASINS

STEPP LOOP

KEY PLAN

0' 20' 40' 60'

N

W E

S

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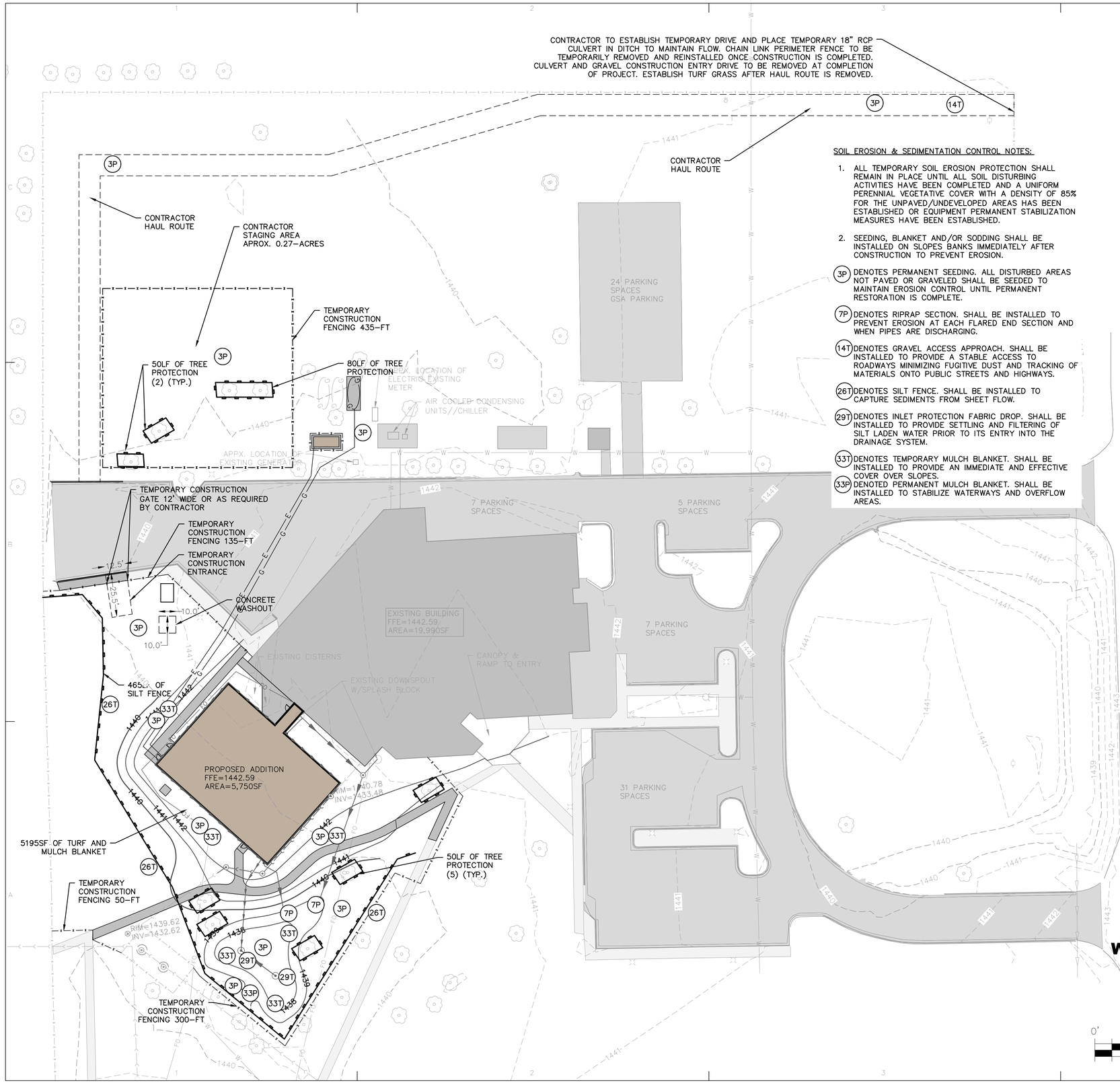
IHS FORT THOMPSON CLINIC EXPANSION

GRADING AND DRAINAGE PLAN

C400

SHEET



SOIL EROSION & SEDIMENTATION CONTROL NOTES:

1. ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 85% FOR THE UNPAVED/UNDEVELOPED AREAS HAS BEEN ESTABLISHED OR EQUIPMENT PERMANENT STABILIZATION MEASURES HAVE BEEN ESTABLISHED.
2. SEEDING, BLANKET AND/OR SODDING SHALL BE INSTALLED ON SLOPES BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.

(3P) DENOTES PERMANENT SEEDING. ALL DISTURBED AREAS NOT PAVED OR GRAVELED SHALL BE SEEDED TO MAINTAIN EROSION CONTROL UNTIL PERMANENT RESTORATION IS COMPLETE.

(7P) DENOTES RIPRAP SECTION. SHALL BE INSTALLED TO PREVENT EROSION AT EACH FLARED END SECTION AND WHEN PIPES ARE DISCHARGING.

(14T) DENOTES GRAVEL ACCESS APPROACH. SHALL BE INSTALLED TO PROVIDE A STABLE ACCESS TO ROADWAYS MINIMIZING FUGITIVE DUST AND TRACKING OF MATERIALS ONTO PUBLIC STREETS AND HIGHWAYS.

(26T) DENOTES SILT FENCE. SHALL BE INSTALLED TO CAPTURE SEDIMENTS FROM SHEET FLOW.

(29T) DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED TO PROVIDE SETTLING AND FILTERING OF SILT LADEN WATER PRIOR TO ITS ENTRY INTO THE DRAINAGE SYSTEM.

(33T) DENOTES TEMPORARY MULCH BLANKET. SHALL BE INSTALLED TO PROVIDE AN IMMEDIATE AND EFFECTIVE COVER OVER SLOPES.

(33P) DENOTED PERMANENT MULCH BLANKET. SHALL BE INSTALLED TO STABILIZE WATERWAYS AND OVERFLOW AREAS.

SOIL EROSION & SEDIMENTATION CONTROL SPECIFICATIONS

1. GENERAL

   A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.

   B. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE FUNCTIONAL BEFORE LAND IS OTHERWISE DISTURBED ON THE SITE.

2. IMPLEMENTATION

   A. BEFORE STARTING CLEARING AND SITE GRADING WORK, SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS.

   B. THE CONSTRUCTION ENTRANCE TO THE SITE SHALL BE STABILIZED PER THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN PRIOR TO ANY WORK ON THE SITE. THE ENTRANCE SHALL BE MONITORED PERIODICALLY FOR ITS EFFECTIVENESS TO COLLECT DIRT WHICH COULD LEAVE THE SITE VIA CONSTRUCTION VEHICLES. ANY DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.

   C. GRAVELED ROADS, ACCESS DRIVES, PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH, AND VEHICLE WASHDOWN FACILITIES, IF NECESSARY, SHALL BE PROVIDED TO PREVENT SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED BEFORE THE END OF EACH WORKDAY OR AS DIRECTED BY THE ENGINEER OR CITY.

   D. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED.

   E. EROSION CONTROL BARRIER SHALL BE INSTALLED AND MAINTAINED AROUND INTAKE STRUCTURES (I.E., INLETS, CATCH BASINS, MANHOLES) AS SHOWN ON THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN.

   F. IF A STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN 3 DAYS, SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED AROUND SUCH STOCKPILE. IF MORE THAN 14 DAYS, THEN IT IS REQUIRED THAT THE STOCKPILE BE SEEDED SO AS TO MINIMIZE SOIL EROSION BY BOTH WIND AND WATER.

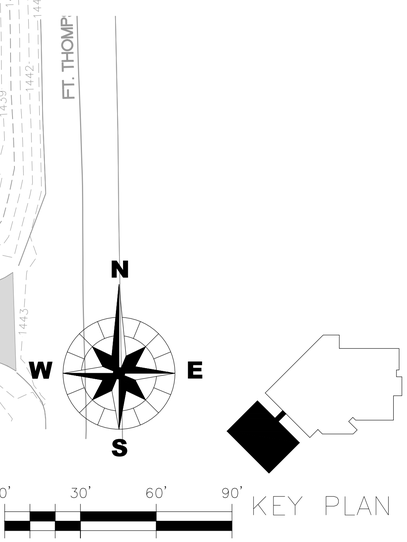
   G. THE SURFACE OF STRIPPED AREAS SHALL BE PERMANENTLY OR TEMPORARILY PROTECTED FROM SOIL EROSION WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED. STRIPPED AREAS NOT AT FINAL GRADE THAT WILL REMAIN UNDISTURBED FOR MORE THAN 14 DAYS AFTER INITIAL DISTURBANCE SHALL BE PROTECTED FROM EROSION WITHIN 7 DAYS OF WORK STOPPAGE. TEMPORARY COVER SHALL BE MAINTAINED CONTINUOUSLY UNTIL PERMANENT COVER IS ESTABLISHED. .

3. INSPECTION AND MAINTENANCE

   A. THE TEMPORARY EROSION CONTROL MEASURES SHALL BE IN PLACE AND WORK EFFECTIVELY UNTIL ALL THE PERMANENT EROSION CONTROL ITEMS ARE FULLY FUNCTIONAL.

   B. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES EVERY 7 DAYS AND WITHIN 24 HOURS OF ANY STORM EVENT IN EXCESS OF 1/2 ". ANY DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.

   C. AT THE COMPLETION OF THE PROJECT, ALL STORM SEWER PIPES AND STRUCTURES SHALL BE CLEANED AND FREE OF DIRT AND DEBRIS. THE SEDIMENTATION SHALL BE REMOVED FROM THE STORM SEWER SYSTEM AND SHALL NOT BE WASHED OUT IN THE STORM SEWER SYSTEM.



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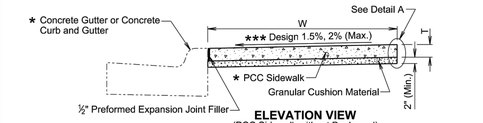
PROJECT NO: 210205
CAD DWG FILE: SE210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

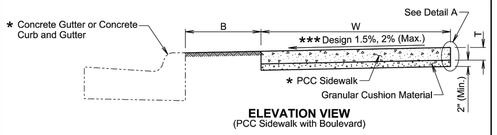
IHS FORT THOMPSON CLINIC EXPANSION SOIL EROSION SEDIMENTATION CONTROL PLAN

C401

SHEET OF



ELEVATION VIEW
(PCC Sidewalk without Boulevard)



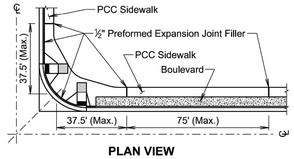
ELEVATION VIEW
(PCC Sidewalk with Boulevard)

B Width of boulevard as specified in the plans.

T Thickness of PCC sidewalk as specified in the plans.

W Width of PCC sidewalk as specified in the plans.

★ Type as specified in the plans.



PLAN VIEW

GENERAL NOTES:

The PCC sidewalk will be constructed in accordance with Section 651 of the Specifications.

★★★ The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.

The maximum length between expansion joints in the PCC sidewalk is 75 feet.

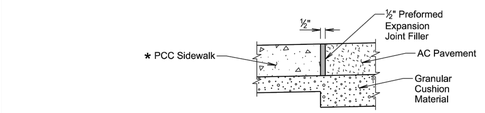
PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.

An expansion joint in the PCC sidewalk will consist of a ½ -inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

★★ Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

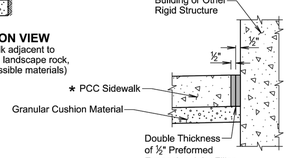
February 14, 2020

Published Date: 4th Qtr. 2021	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75	Sheet 1 of 2

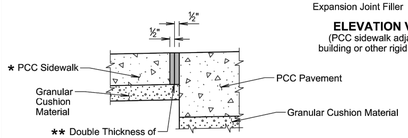


ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)

ELEVATION VIEW
(PCC sidewalk adjacent to earthen material, landscape rock, or other compressible materials)



ELEVATION VIEW
(PCC sidewalk adjacent to building or other rigid structure)

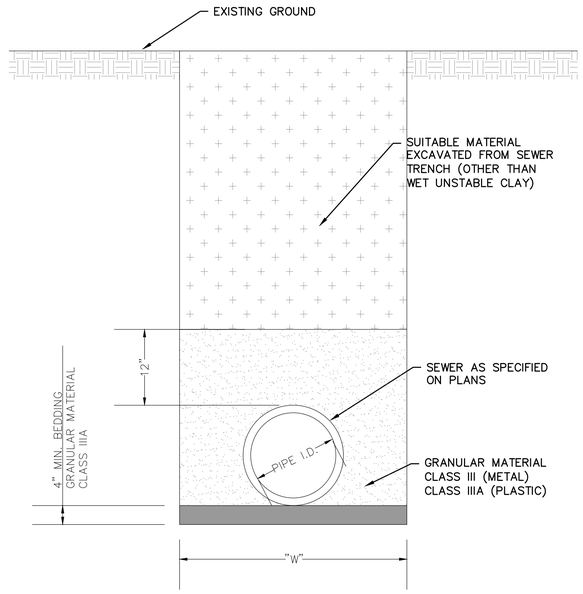


ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

DETAIL A
(Use Appropriate Detail(s))

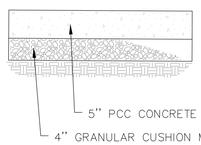
February 14, 2020

Published Date: 4th Qtr. 2021	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75	Sheet 2 of 2



SEWER NOT UNDER PAVEMENT METAL AND PLASTIC PIPE

N.T.S.

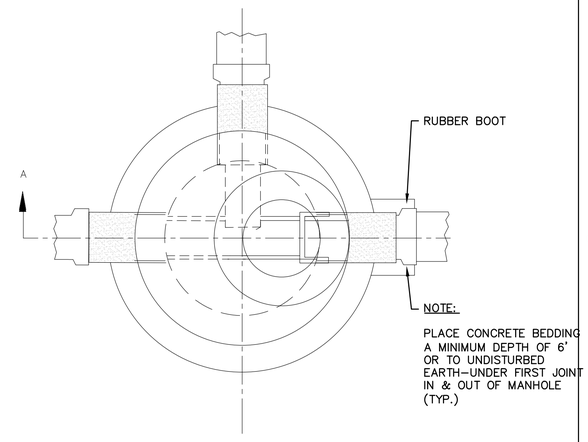


CONCRETE UTILITY PAD SECTION

N.T.S.

PIPE I.D. (IN)	"W" MIN. TRENCH WIDTH (FT.)	PIPE I.D. (IN)	"W" MIN. TRENCH WIDTH (FT.)
<18"	3.0'	60"	10.0'
24"	4.0'	66"	10.5'
30"	5.0'	72"	11.0'
36"	6.0'	78"	11.5'
42"	7.0'	84"	12.0'
48"	8.0'	90"	12.5'
54"	9.5'	96"	13.0

MINIMUM TRENCH WIDTH TABLE



PLAN

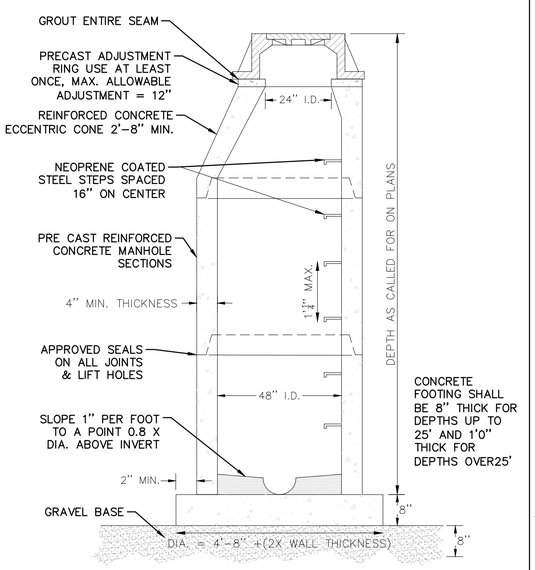
PRECAST MANHOLE

48" DIA. REINFORCED & WITH STEPS

GENERAL NOTES

1. ALL BACKFILL UNDER PIPE TO BE DEPOSITED BY HAND IN 6" LAYERS AND EACH LAYER MECHANICALLY TAMPED.
2. BRICK UNDER CASTING TO BE LAID RADIAL AND VOIDS FULLY MORTARED.
3. ALL CONCRETE TO MEET SDDOT STANDARDS AND SPECIFICATIONS.
4. MANHOLE INLETS AND OUTLETS WILL HAVE A WATERTIGHT RUBBER BOOT.
5. RESILIENT CONNECTOR (ASTM C–923) TYPICAL AT ALL CONNECTIONS TO PIPE.
6. PVC SEWER SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. "UNDERGROUND INSTALLATION OF THERMOPLASTIC SEWER PIPE." DEFLECTION TESTING TO BE PERFORMED ON THE NEW SEWER NO LESS THAT 30 DAYS AFTER PLACEMENT OF THE FINAL BACKFILL. NO PIPE SHALL EXCEPT A DEFLECTION OF 5%.
7. EXTRA STRENGTH VITRIFIED CLAY SEWER PIPE. E.S. VCP SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C12–82. "STANDARD PRACTICE FOR INSTALLING VITRIFIED CLAY PIPE LINES."

ALL PRECAST SANITARY STRUCTURES SHALL BE MANUFACTURED WITH AN APPROVED CEMENT ADDITIVE FOR CORROSION PER SANITARY SPECIFICATIONS.



TYPICAL SANITARY MANHOLE

N.T.S. PRECAST REINFORCED CONCRETE SHOWN

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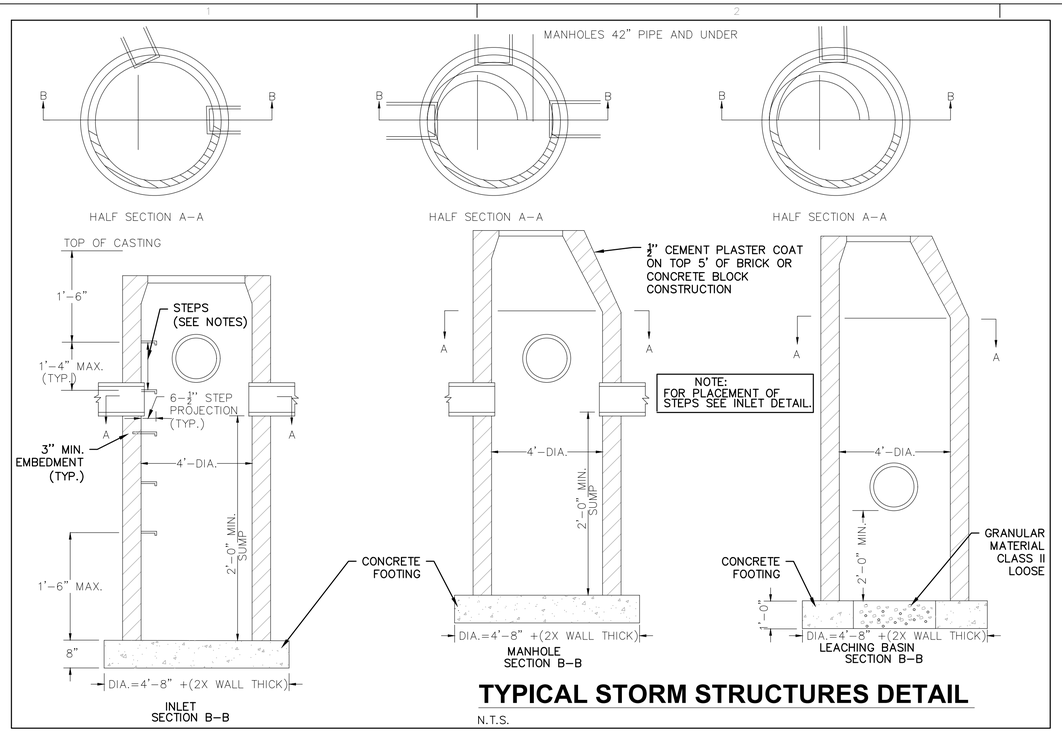
SHEET TITLE:

DETAILS

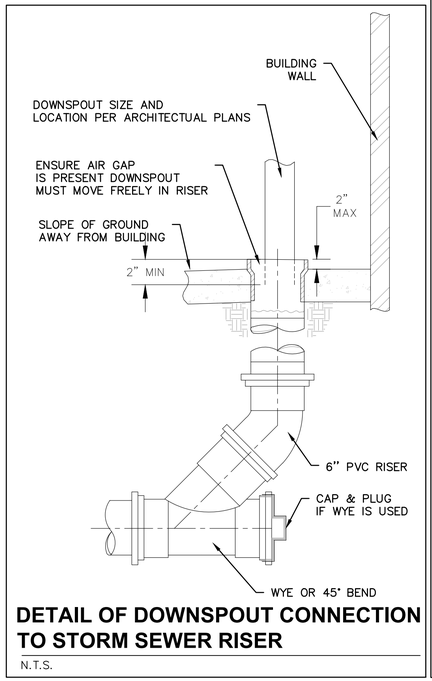
C500

SHEET 2



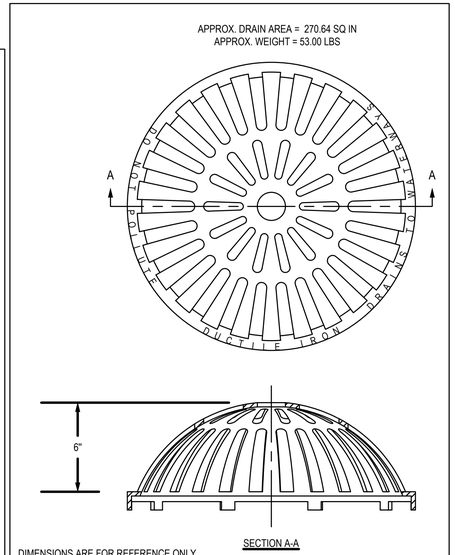
TYPICAL STORM STRUCTURES DETAIL

N.T.S.



DETAIL OF DOWNSPOUT CONNECTION TO STORM SEWER RISER

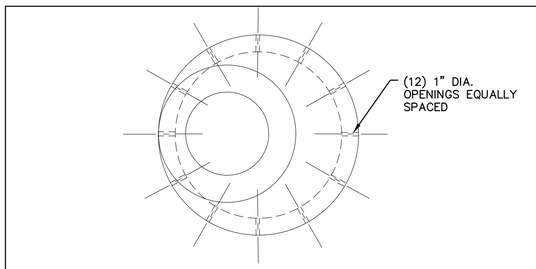
N.T.S.

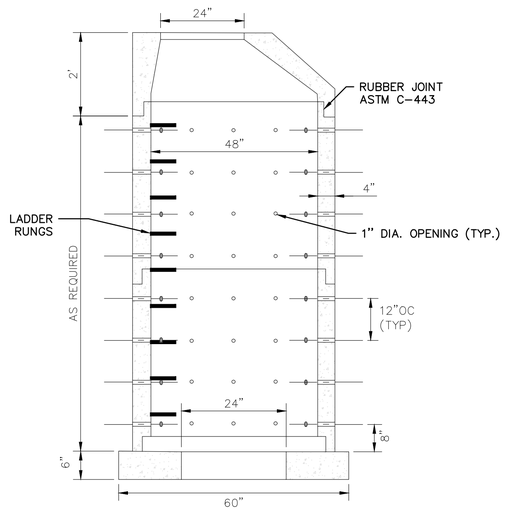


DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST

TYPICAL BEEHIVE GRATE

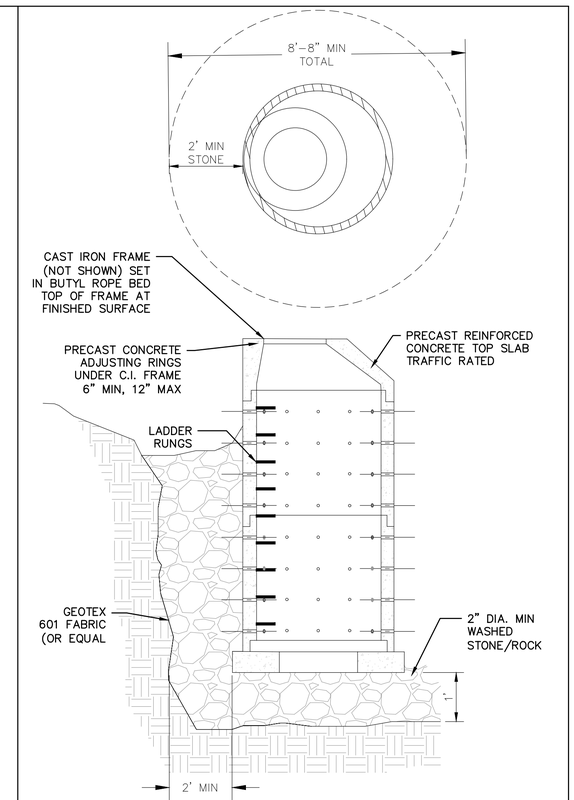
N.T.S.





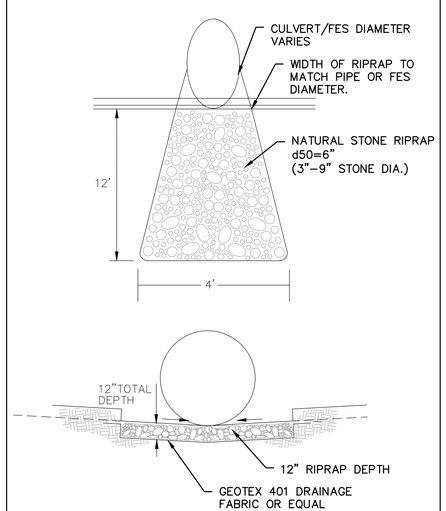
TYPICAL LEACHING BASIN

N.T.S.



TYPICAL LEACHING BASIN INSTALLATION

N.T.S.



RIP-RAP SECTION

N.T.S.

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PE / ARCHITECT / ENGINEER DATE

APPROVED:
ES PROJECT MANAGER DATE
ES BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV.	DATE	DESCRIPTION

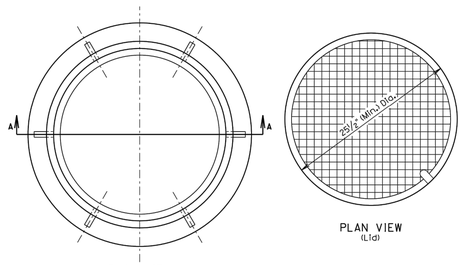
ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO:
PROJECT NO: 210205
CAD DWG FILE: DT210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

DETAILS

C501

SHEET OF

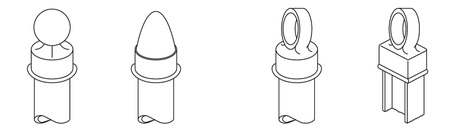


TYPE	HEIGHT (Inches)	MINIMUM WEIGHT (Lb.)
A7	7	400
A8	8	440
A9	9	470
A10	10	480

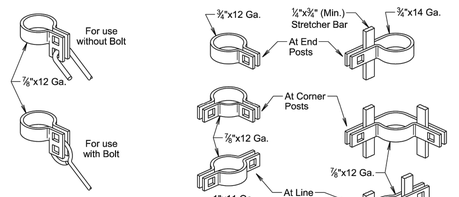
GENERAL NOTE:
Geometric pattern on top of lid other than that shown shall be approved by the Engineer.

June 26, 2016

Published Date: 4th Qtr. 2021 | SDDOT | TYPE A MANHOLE FRAME AND LID | PLATE NUMBER 671.10 | Sheet 1 of 1



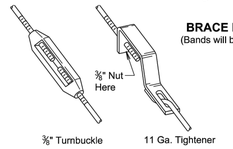
TYPICAL POST TOPS
(Shown for example only)



BRACE AND TRUSS BANDS

BRACE BANDS
(Bands will be rectangular for "C" Section and "H" Beam Posts.)

TENSION BANDS

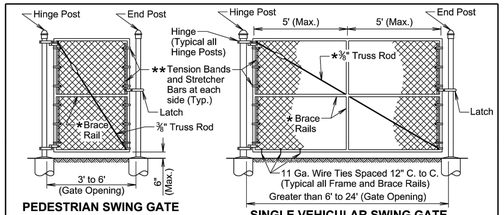


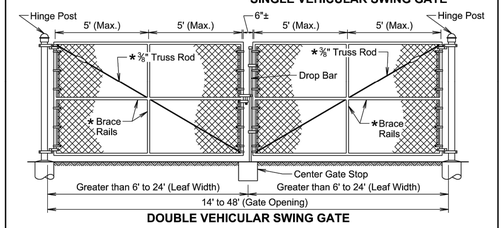
TIGHTENING DEVICES

RAIL ENDS

June 26, 2019

Published Date: 4th Qtr. 2021 | SDDOT | HARDWARE FOR CHAIN LINK FENCE | PLATE NUMBER 621.03 | Sheet 1 of 1





[1]Gate Opening Width	Hinge Post		Concrete Footing	
	Round Pipe Nominal	Roll Formed Steel	Depth	Diameter
3' to 6'	3.00"	3.50"x3.50"	36"	12"
> 6' to 13'	4.00"	—	42"	12"
> 13' to 18'	6.625"	—	48"	18"
> 18' to 23'	8.625"	—	48"	24"

Gate Opening		Frame Pipe Nominal	Brace Rail Pipe Nominal
[1]Width	[2]Height		
3' to 8'	3' to 6'	1.50"	1.50"
>8' to 23'	6'	1.90"	1.50"
>8' to 23'	>6' to 12'	1.90"	1.90"

★ Are not required for gates 3' to 5' height or 5' or less in width.
★★ Tension Bands will be spaced 12" center to center.
⬭ Tightening Device such as shown on standard plate 621.03
1 Leaf width for Double Vehicular Swing Gate
2 Will coincide with fence height

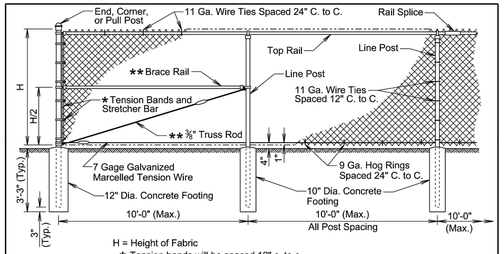
GENERAL NOTES:

Gate frames may be constructed of bent or welded steel tubing, must be approved by the Engineer prior to installation, and installed in accordance with the Manufacturer's installation instructions.

Center gate stops must be approved by the Engineer prior to installation and will be installed in accordance with the Manufacturer's installation instructions.

June 26, 2019

Published Date: 4th Qtr. 2021 | SDDOT | SWING GATES FOR CHAIN LINK FENCE | PLATE NUMBER 621.10 | Sheet 1 of 1



H = Height of Fabric
★ Tension bands will be spaced 12" c. to c.
★★ Are not required for 3' through 5' height fences.
⬭ Tightening device such as shown on standard plate 621.03

COMPONENT	END, CORNER, and PULL POST		LINE POST			TOP and BRACE RAIL	
Type of Fabrication	Round Pipe Nominal	Roll Formed Steel	Round Pipe Nominal	"C" Section	H Beam Steel	Round Pipe Nominal	Roll Formed Steel
Size	3.00" O. D.	3.5"x3.5"	2.50" O. D.	1.875"x1.625"	2.25"x1.70"	1.625" O. D.	1.625"x1.25"
Weight (lb. / Ft.)	5.79 or 4.64	5.14	3.65 or 3.12	2.34	3.43	2.27 or 1.84	1.35

GENERAL NOTES:

Specific details of the component parts of the fence will be approved by the Engineer. Commercially available items produced specifically for the use intended will be used wherever possible in the construction of the fence.

Height of the fabric will be as shown in the plans. Fabric is available at the following heights: 36", 42", 48", 60", 72", 84", 96", 108", 120", and 144". Fabric heights 60 inches and less will be knuckled at both selvages. Fabric heights 72 inches and higher will be knuckled at one selvage and twisted at the other selvage.

Chain link fabric will be 2-inch mesh, No. 9 gage galvanized wire securely fastened to tension wire, line post, rails, braces, and stretcher bars.

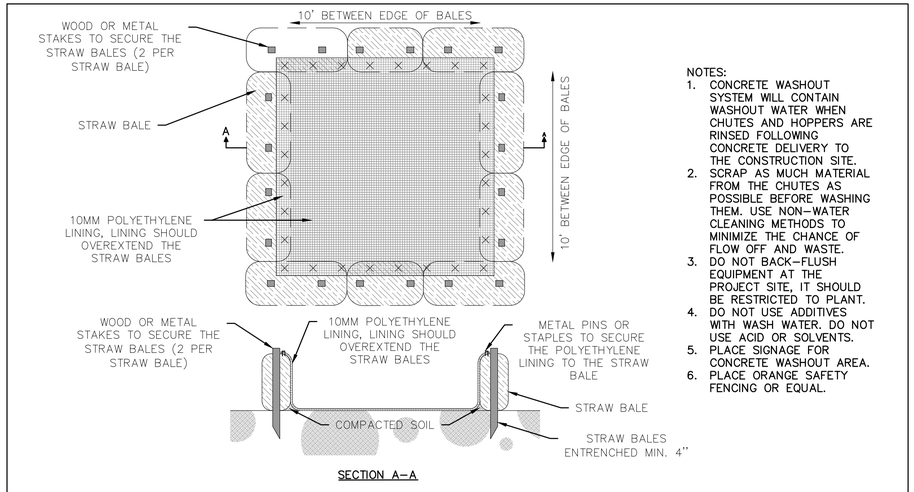
Fence may be constructed with either round pipe, "C" section, "H" beam, or roll formed steel components as shown in the table above. Line posts may be round pipe, "C" section, or "H" beam. The corner post and rails will be either round pipe or roll formed steel. The type of components used must be approved by the Engineer prior to installation.

Where fence must cross small bodies of water such as drainage areas or ponds that could freeze during the winter, use 11 gage hog rings. Provide only two ties per tension wire and top rail between line posts.

A suitable method of rail splicing will be used to allow for expansion and contraction while maintaining proper position of the top rail.

June 26, 2019

Published Date: 4th Qtr. 2021 | SDDOT | CHAIN LINK FENCE WITH TOP RAIL | PLATE NUMBER 621.01 | Sheet 1 of 1



NOTES:
1. CONCRETE WASHOUT SYSTEM WILL CONTAIN WASHOUT WATER WHEN CHUTES AND HOPPERS ARE RINSED FOLLOWING CONCRETE DELIVERY TO THE CONSTRUCTION SITE.
2. SCRAP AS MUCH MATERIAL FROM THE CHUTES AS POSSIBLE BEFORE WASHING THEM. USE NON-WATER CLEANING METHODS TO MINIMIZE THE CHANCE OF FLOW OFF AND WASTE.
3. DO NOT BACK-FLUSH EQUIPMENT AT THE PROJECT SITE, IT SHOULD BE RESTRICTED TO PLANT.
4. DO NOT USE ADDITIVES WITH WASH WATER. DO NOT USE ACID OR SOLVENTS.
5. PLACE SIGNAGE FOR CONCRETE WASHOUT AREA.
6. PLACE ORANGE SAFETY FENCING OR EQUAL.

CONCRETE WASHOUT DETAIL

N.T.S

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REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO.
PROJECT NO.: 210205
CAD DWG. FILE: DT210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

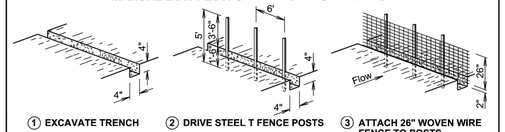
SHEET TITLE:

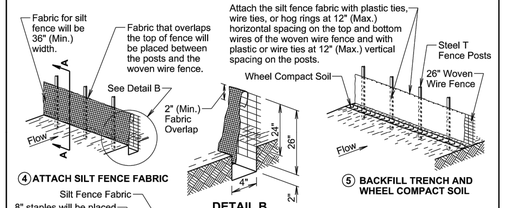
DETAILS

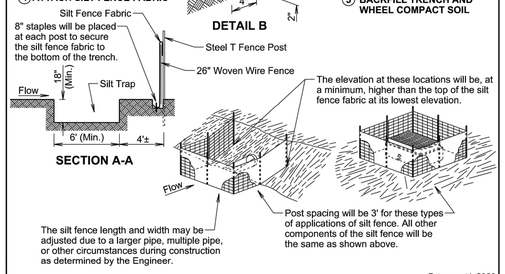
C502

SHEET OF

MANUAL LOW FLOW SILT FENCE INSTALLATION

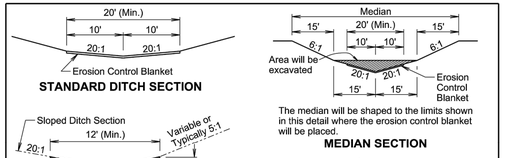


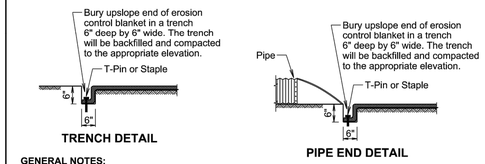




February 14, 2020

Published Date: 4th Qtr. 2021	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 1 of 2





GENERAL NOTES:

Prior to placement of the erosion control blanket, the areas will be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket will be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket will be buried in a trench 6" wide by 6" deep. There will be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

The erosion control blanket will be pinned to the ground according to the manufacturer's installation recommendations.

After the placement of the erosion control blanket, the Contractor will fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

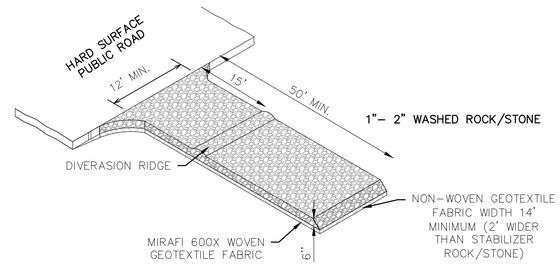
All ditch sections will be shaped when installing the erosion control blanket. All costs for shaping the ditches will be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

February 14, 2020

Published Date: 4th Qtr. 2021	SDDOT	EROSION CONTROL BLANKET	PLATE NUMBER 734.01
			Sheet 1 of 1

STABILIZED CONSTRUCTION ENTRANCE

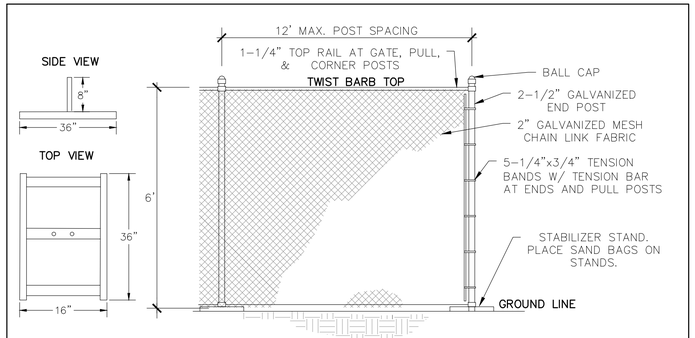
N.T.S



NOTES:
1. UTILIZE EXISTING DRIVEWAY AND ADD STONE AS REQUIRED WHEN POSSIBLE.
2. ACCEPTABLE AGGREGATE
   - 2.1. ASTM D48 SIZE #1 (2"–3" DIA.)
   - 2.2. INDOT COARSE AGGREGATE # 2
   - 2.3. MDOT COARSE AGGEAGAE 3x1 (3" TO 1").
3. PLACE GEOTEXTILE FABRIC OVER ENTIRE AREA PRIOR TO AGGREGATE PLACEMENT.
4. SURFACE WATER TO BE ROUTED AROUND CONSTRUCTION ENTRANCE WITH CULVERT UNDER ENTRANCE OR MOUNTABLE BERM AROUND ENTRANCE.
5. THE ENTRANCE SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC ROAD, ADDITIONAL AGGREGATE MAY BE REQUIRED.
6. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROAD SHALL BE REMOVED IMMEDIATELY.
7. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING THE PUBLIC ROAD, IF WASHING IS REQUIRED IT SHALL BE DONE ON AREA WITH STABALIZED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8. PROVIDE PERIODIC INSPECTION AND MAINTENANCE AFTER EACH RAIN EVENT.

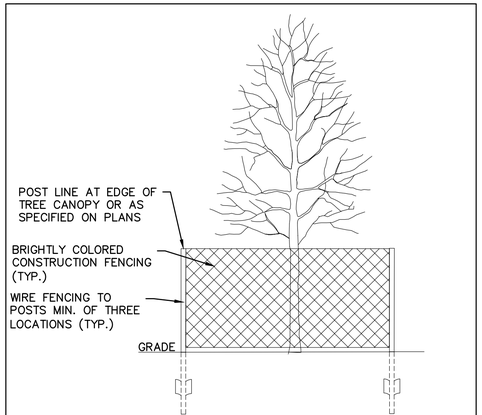
TEMPORARY CONSTRUCTION FENCE

N.T.S.

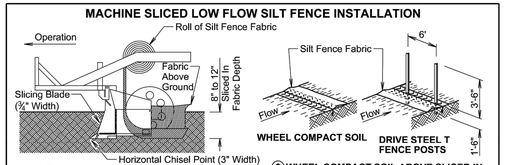


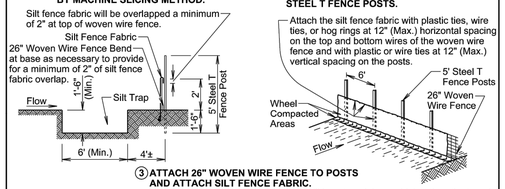
TREE PROTECTION FENCING DETAIL

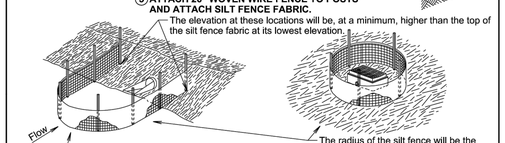
N.T.S



MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION







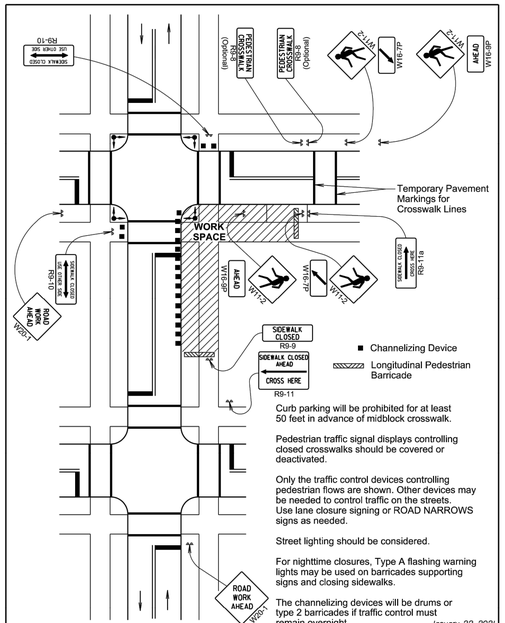
GENERAL NOTES:

A silt trap will be provided when specified by a plan note. All costs for constructing the silt trap will be incidental to the contract unit price per cubic yard for "Silt Trap".

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

February 14, 2020

Published Date: 4th Qtr. 2021	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 2 of 2



January 22, 2021

Published Date: 4th Qtr. 2021	SDDOT	SIDEWALK CLOSURES AND PEDESTRIAN DETOURS	PLATE NUMBER 634.33
			Sheet 1 of 1

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DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

DETAILS

C503

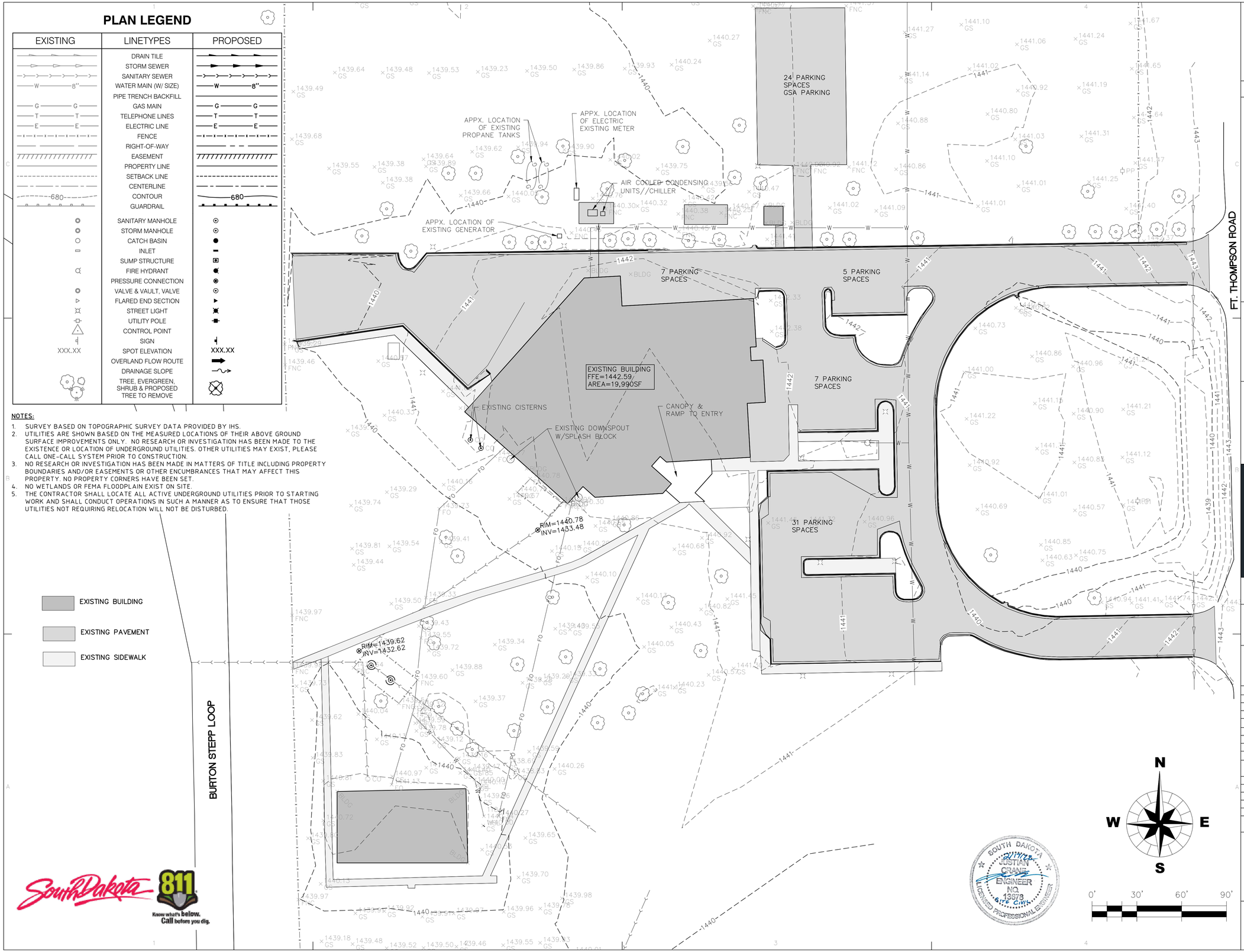
SHEET OF

PLAN LEGEND

EXISTING	LINETYPES	PROPOSED
	DRAIN TILE	
	STORM SEWER	
	SANITARY SEWER	
W 8"	WATER MAIN (W/ SIZE)	W 8"
	PIPE TRENCH BACKFILL	
G G	GAS MAIN	G G
T T	TELEPHONE LINES	T T
E E	ELECTRIC LINE	E E
	FENCE	
	RIGHT-OF-WAY	
	EASEMENT	
	PROPERTY LINE	
	SETBACK LINE	
	CENTERLINE	
680	CONTOUR	680
	GUARDRAIL	
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	INLET	
	SUMP STRUCTURE	
	FIRE HYDRANT	
	PRESSURE CONNECTION	
	VALVE & VAULT, VALVE	
	FLARED END SECTION	
	STREET LIGHT	
	UTILITY POLE	
	CONTROL POINT	
	SIGN	
XXX.XX	SPOT ELEVATION	XXX.XX
	OVERLAND FLOW ROUTE	
	DRAINAGE SLOPE	
	TREE, EVERGREEN, SHRUB & PROPOSED TREE TO REMOVE	

NOTES:

1. SURVEY BASED ON TOPOGRAPHIC SURVEY DATA PROVIDED BY IHS.
2. UTILITIES ARE SHOWN BASED ON THE MEASURED LOCATIONS OF THEIR ABOVE GROUND SURFACE IMPROVEMENTS ONLY. NO RESEARCH OR INVESTIGATION HAS BEEN MADE TO THE EXISTENCE OR LOCATION OF UNDERGROUND UTILITIES. OTHER UTILITIES MAY EXIST, PLEASE CALL ONE-CALL SYSTEM PRIOR TO CONSTRUCTION.
3. NO RESEARCH OR INVESTIGATION HAS BEEN MADE IN MATTERS OF TITLE INCLUDING PROPERTY BOUNDARIES AND/OR EASEMENTS OR OTHER ENCUMBRANCES THAT MAY AFFECT THIS PROPERTY. NO PROPERTY CORNERS HAVE BEEN SET.
4. NO WETLANDS OR FEMA FLOODPLAIN EXIST ON SITE.
5. THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.



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GREAT PLAINS AREA

REVIEWED:
PE ARCHITECT / ENGINEER DATE

APPROVED:
PE PROJECT MANAGER DATE
PE BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F35002
PROJECT NO: 210205
CAD DWG FILE: EC210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

EXISTING CONDITIONS

C100

SHEET 4 OF 95

UPDATED: 2/10/2022 - BIDS/WEB

PLAN LEGEND

EXISTING	LINETYPES	PROPOSED
	DRAIN TILE	
	STORM SEWER	
	SANITARY SEWER	
W 8"	WATER MAIN (W/ SIZE)	W 8"
	PIPE TRENCH BACKFILL	
G G	GAS MAIN	G G
T T	TELEPHONE LINES	T T
E E	ELECTRIC LINE	E E
	FENCE	
	RIGHT-OF-WAY	
	EASEMENT	
	PROPERTY LINE	
	SETBACK LINE	
	CENTERLINE	
680	CONTOUR	680
	GUARDRAIL	
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	INLET	
	SUMP STRUCTURE	
	FIRE HYDRANT	
	PRESSURE CONNECTION	
	VALVE & VAULT, VALVE	
	FLARED END SECTION	
	STREET LIGHT	
	UTILITY POLE	
	CONTROL POINT	
	SIGN	
XXX.XX	SPOT ELEVATION	XXX.XX
	OVERLAND FLOW ROUTE	
	DRAINAGE SLOPE	
	TREE, EVERGREEN, SHRUB & PROPOSED TREE TO REMOVE	

PHASING:
1. ESTABLISH CONSTRUCTION ACCESS AND STAGING AREA. PLACE SESC MEASURES.
2. RE-ROUTE SANITARY SEWER.
3. WHEN REQUIRED REMOVAL/RELOCATION WORK HAS BEEN COMPLETED, ROUGH GRADE PROPOSED SITE.
4. EXCAVATE BUILDING FOUNDATION, CONSTRUCT FOUNDATION AND FLOOR SLAB.
5. INSTALL REMAINING UTILITIES.
6. PLACE SIDEWALK AND PAVEMENTS. NOTE THAT TIMING OF REPLACING CONCRETE CURB AND GUTTER AND SIDEWALKS IN BETWEEN STAGING AREA AND ADDITION TO BE DETERMINED BY CONTRACTOR.
7. PERFORM RESTORATION ON SITE

CONTRACTOR STAGING AREA, SEE SHEET C401

APPX. LOCATION OF EXISTING PROPANE TANKS

APPX. LOCATION OF ELECTRIC EXISTING METER

REMOVE 42LF OF CONCRETE CURB AND GUTTER FOR CONSTRUCTION ENTRANCE

AIR COOLED CONDENSING UNITS//CHILLER

APPX. LOCATION OF EXISTING GENERATOR

24 PARKING SPACES GSA PARKING

REMOVE 22SY OF CONCRETE SIDEWALK FOR CONSTRUCTION ENTRANCE

REMOVE 42LF OF CONCRETE CURB AND GUTTER FOR CONSTRUCTION ENTRANCE

7 PARKING SPACES

5 PARKING SPACES

EXISTING BUILDING FFE=1442.59/ AREA=19,990SF

7 PARKING SPACES

REMOVE EXISTING FIBERGLASS UNDERGROUND CISTERNS (2) APPROXIMATELY 500 GAL EACH. COORDINATE WITH IHS COR TO VERIFY THAT EXISTING SUBMERSIBLE PUMPS HAVE BEEN FULLY ABANDONED

EXISTING CISTERNS

CANOPY & RAMP TO ENTRY

EXISTING DOWNSPOUT W/SPLASH BLOCK

NOT IN CONTRACT BUILDING MECHANICALS RELOCATED BY IHS PRIOR TO START OF WORK

NOT IN CONTRACT, FENCE REMOVAL BY IHS STAFF

REMOVE EXISTING MH

RIM=1440.78
INV=1433.48

NOT IN CONTRACT FIBER OPTICS AND TELEPHONE LINE RELOCATED BY IHS PRIOR TO START OF WORK

31 PARKING SPACES

REMOVE TREES (2)

REMOVE 149SY OF CONCRETE SIDEWALK

8" PVC SANITARY SEWER @ 0.6%

REMOVE AND RE-ROUTE 75LF OF SANITARY SEWER

RIM=1439.62
INV=1432.62

EXISTING SEWER LIFT STATION

FT. THOMPSON ROAD

BURTON STEPP LOOP

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PE, PROJECT MANAGER — DATE
PE, BRANCH CHIEF — DATE

CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 210205
CAD DWG FILE: DM210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

DEMOLITION PLAN

C102

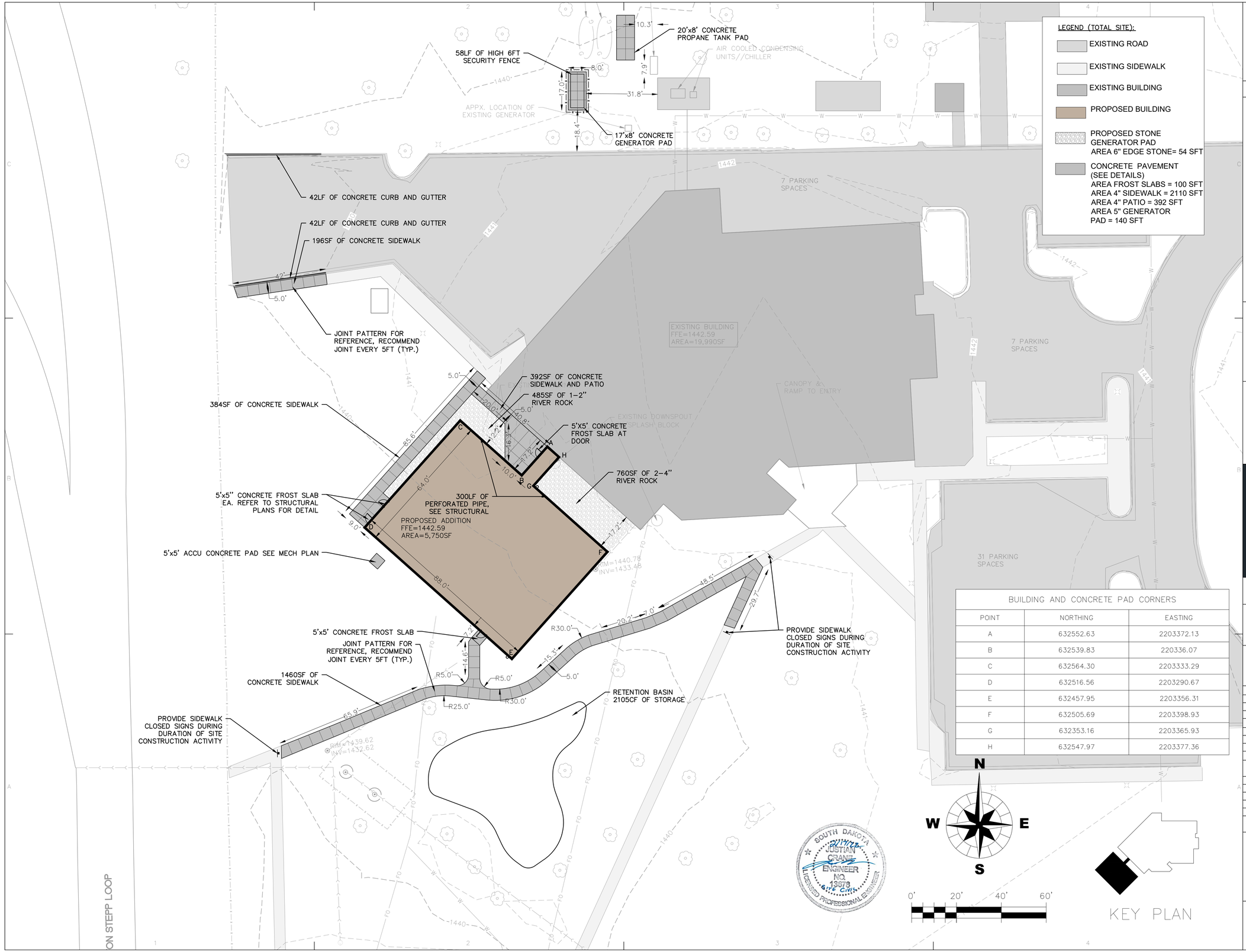
SHEET 5 OF 95

SOUTH DAKOTA JUSTIN CRANE ENGINEER NO. 13978 LICENSED PROFESSIONAL ENGINEER

N W E S

0' 30' 60' 90'

UPDATED: 2/16/2022 - REVISIONS



BUILDING AND CONCRETE PAD CORNERS		
POINT	NORTHING	EASTING
A	632552.63	2203372.13
B	632539.83	220336.07
C	632564.30	2203333.29
D	632516.56	2203290.67
E	632457.95	2203356.31
F	632505.69	2203398.93
G	632353.16	2203365.93
H	632547.97	2203377.36

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PE ARCHITECT / ENGINEER DATE

APPROVED:
PE PROJECT MANAGER DATE
PE BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F00002
PROJECT NO: 210205
CAD DWG FILE: GM210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

GEOMETRIC PLAN

C200

SHEET 6 OF 95

PROPOSED PROPANE TANK, SEE MECH PLAN

GENERATOR, REFER TO ELECTRIC SITE PLANS

APPX. LOCATION OF EXISTING GENERATOR

AIR COOLED CONDENSING UNITS//CHILLER

GATE VALVE

2" DIA. HDPE IPS DR9 TO BE INSTALLED THROUGH TRENCHLESS METHODS, SEE SHEET C335

4" CONDUIT FOR GAS SERVICE LINE TO BE INSTALLED THROUGH TRENCHLESS METHODS. REFER TO MECHANICAL SITE PLAN FOR FURTHER DETAIL. REFER TO SHEET C334

3 CONDUITS, 2.5"x2 1.5"x1 TO BE INSTALLED THROUGH TRENCHLESS METHODS. REFER TO ELECTRICAL SITE PLAN FOR FURTHER DETAIL. REFER TO C334

7 PARKING SPACES

5 PARKING SPACES

7 PARKING SPACES

EXISTING BUILDING FFE=1442.59 AREA=19,990SF

EXISTING CISTERNS

CANOPY & RAMP TO ENTRY

DOWNSPOUT W/SPLASH BLOCK

FOUNDATION DRAIN SHOWN FOR REFERENCE. REFER TO STRUCTURAL DETAILS

DOWNSPOUT CONNECTION TO STORM SEWER

8" SDR35 STORM SEWER, REFER TO C332

DOWNSPOUT CONNECTION TO STORM SEWER

DOWNSPOUT CONNECTION TO STORM SEWER

PROPOSED ADDITION FFE=1442.59 AREA=5,750SF

COORDINATE INSTALLATION OF RE-ROUTED SANITARY SEWER WITH BUILDING FOUNDATION CONSTRUCTION TO AVOID DAMAGE TO PIPE

13LF OF 8" SDR35 STORM SEWER

MH100

67LF OF 8" SDR35 STORM SEWER

SMH202

NOT IN CONTRACT FIBER OPTICS AND TELEPHONE LINE RELOCATED BY IHS PRIOR TO START OF WORK

8" SDR35 SANITARY SEWER, REFER TO C331

6"x8" REDUCER

SMH200

SMH201

8" SDR 35 STORM DRAIN, REFER TO C332

8" SDR35 STORM SEWER, REFER TO C332

DOWNSPOUT CONNECTION TO STORM SEWER

6" SDR35 STORM SEWER

MH101

MH102

8" SDR35 BALANCING PIPE, REFER TO C333

PROPOSED LEACHING BASIN WITH BEEHIVE GRATE, REFER TO C333

31 PARKING SPACES

STEPP LOOP

SOUTH DAKOTA JUSTIN CRANE ENGINEER NO. 13873 LICENSED PROFESSIONAL ENGINEER

N W E S

0' 20' 40' 60'

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PE/BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75D30121C36552
PROJECT NO: 210205
CAD DWG FILE: UT210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

UTILITY PLAN

C330

SHEET 7 OF 95

PROPOSED ADDITION
FFE=1442.59
AREA=5,750SF

PROPOSED SANITARY SERVICE CLEAN OUT

13.5LF OF 4" SDR35 @ 53%

SMH202

SMH200

SMH201

EXISTING SMH
RIM=1439.62
INV=1432.62

1440
1441
1442
1439
1438

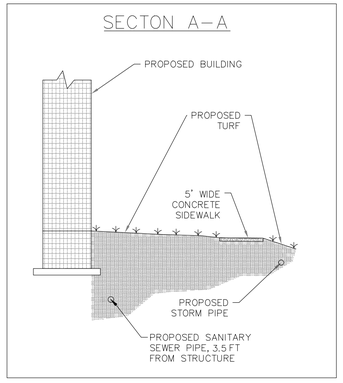
300+00
301+00
301+89.14

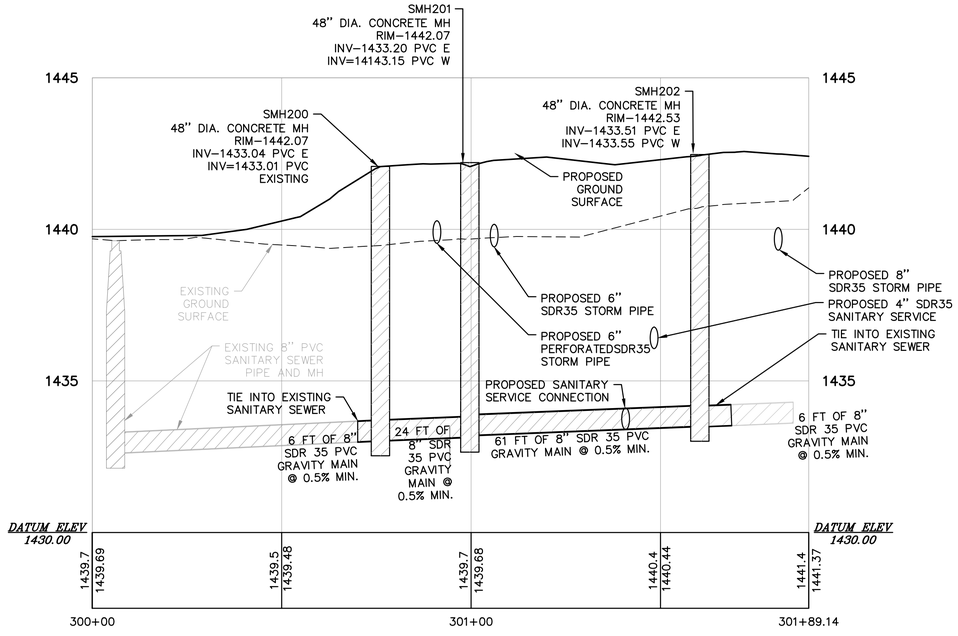
N
W
E
S

0' 10' 20' 30'

PROFILE SCALE:
1" = 20' HORIZONTAL
1" = 2' VERTICAL

SECTON A-A





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P.E. ARCHITECT / ENGINEER DATE

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P.E. PROJECT MANAGER DATE
P.E. BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO.: TIHT0121E50002
PROJECT NO.: 210205
CAD DWG FILE: PP210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

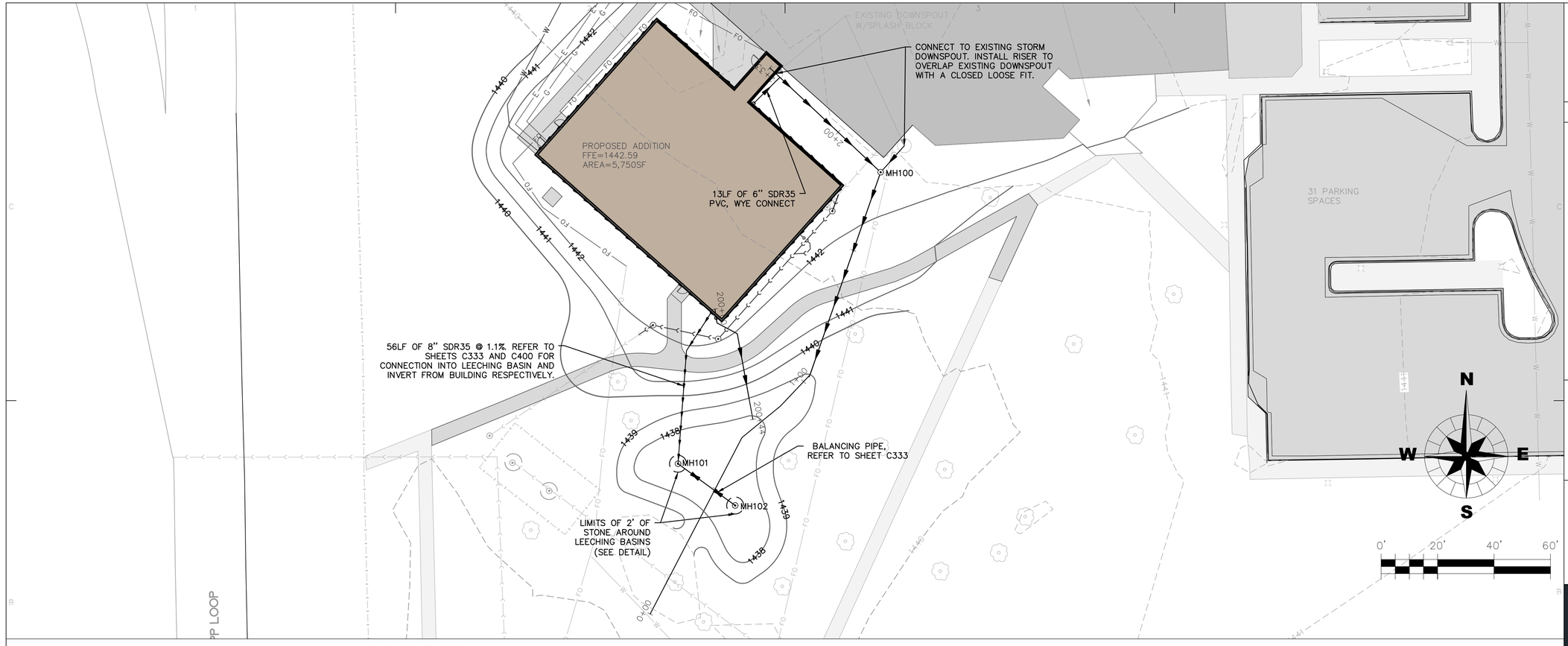
SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

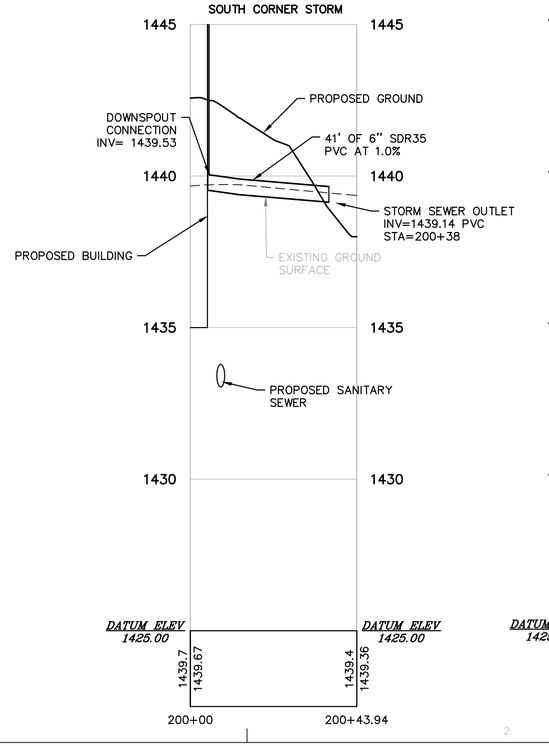
PLAN AND PROFILES SANITARY SEWER

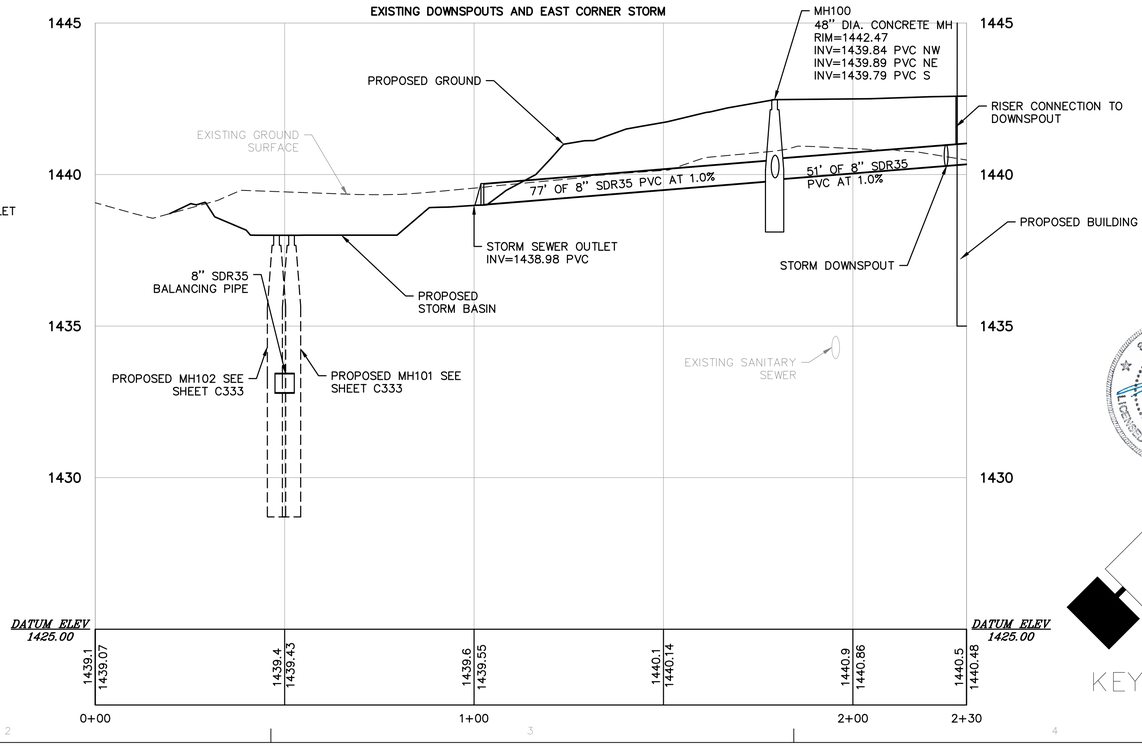
C331

SHEET 8 OF 95



PROFILE SCALE:
1" = 20' HORIZONTAL
1" = 2' VERTICAL





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PE BRANCH CHIEF — DATE

CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: HHSI181F50002
PROJECT NO: 210205
CAD DWG FILE: PP210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

PLAN AND PROFILES STORM SEWER

C332

SHEET 9 OF 95

KEY PLAN

NOTE:
CONTRACTOR TO PROTECT BASINS AREAS DURING CONSTRUCTION TO PREVENT OVER COMPACTION OF NATIVE SOILS WHICH COULD RESULT IN LOSS OF INFILTRATION CAPACITY. AFTER BASINS HAVE BEEN EXCAVATED, CONTRACTOR IS TO AVOID RUNNING EQUIPMENT THROUGH THE BASINS. AT THE DIRECTION OF THE ENGINEER OR THE LOCAL MUNICIPALITY THE CONTRACTOR MAY BE REQUIRED TO INSTALL TEMPORARY FENCING (SUCH AS SNOW FENCE) AROUND THE TOP PERIMETER OF THE BASIN TO FURTHER PROTECT THE AREA.

DO NOT STOCKPILE SOIL OR MATERIAL OVERTOP BASIN AREAS BEFORE THEY ARE EXCAVATED OR WITHIN BASIN AREA AFTER EXCAVATION.

CONTRACTOR TO INSTALL A MINIMUM OF 4 INCHES OF NEW MATERIAL IN THE BASIN BOTTOM. MATERIAL SHALL BE A MIX OF NEW TOPSOIL, AND LEAF COMPOST. DO NOT USE SALVAGED TOPSOIL.

BASIN SIDES SHALL CONSIST OF TOPSOIL WHICH MAY BE NEW OR SALVAGED.

INSTALL A LOW VELOCITY EROSION CONTROL BLANKET ON ALL BASIN SIDE SLOPES 4:1 (H:V) AND SHALLOWER. SLOPES STEEPER THAN 4:1 AND AREAS OF CONCENTRATE FLOW SHALL HAVE A HIGH VELOCITY MULCH BLANKET INSTALLED. INSTALL HIGH VELOCITY MULCH BLANKET AT BASIN WEIR OVERFLOW POINTS.

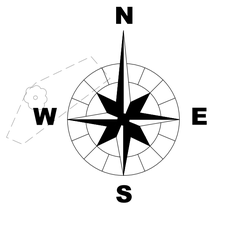
STORMWATER BASIN SUMPS SHALL BE CLEANED OUT TO THEIR DESIGN VOLUME AT THE COMPLETION OF CONSTRUCTION ACTIVITIES OR ONCE THE SITE IS ESTABLISHED.

CONTRACTOR SHALL TAKE CARE DURING CONSTRUCTION TO PREVENT THE MIGRATION OF SILT AND SEDIMENT INTO STORMWATER BASINS. IF A BASIN BECOMES INUNDATED WITH SEDIMENT AND SILT THE CONTRACTOR SHALL EXPEDIENTLY CLEAN THE BASIN TO ITS ORIGINAL DESIGN VOLUME.

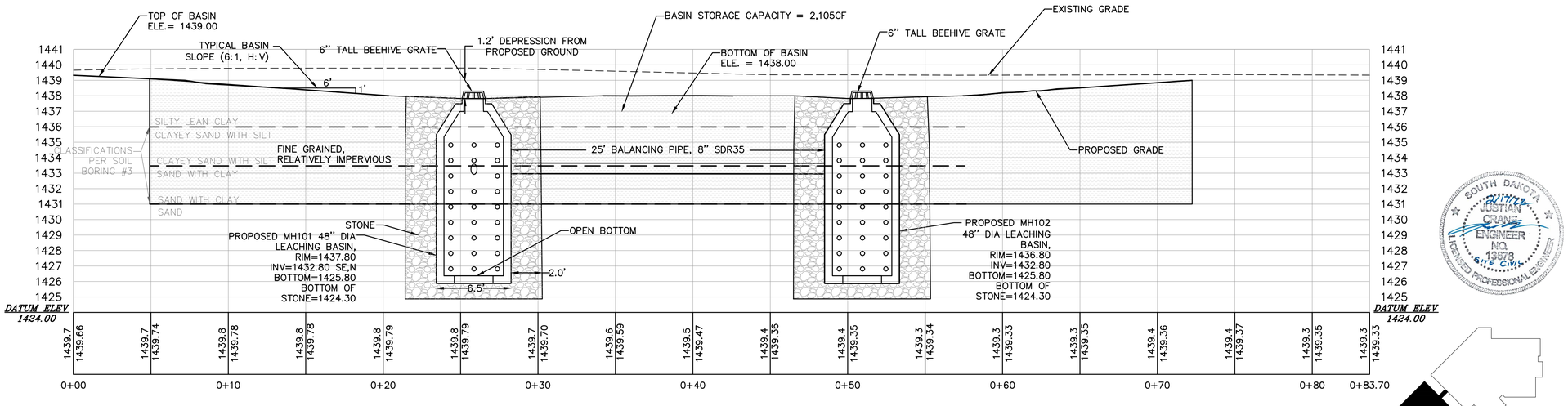
BASIN INFORMATION:

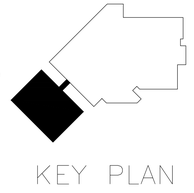
BASIN 1:

BASIN VOLUME = 2,105 CFT
BASIN BOTTOM = 1437.98
BASIN TOP = 1439 OVERFLOW POINT = 1438.6
BASIN DEPTH = 1.02 FT
BASIN IS A RETENTION / DETENTION BASIN
CONTRACTOR TO INSTALL 4" OF A MIX OF 50% TOPSOIL, 25% CLEAN SAND, AND 25% COMPOST IN BASIN BOTTOM.
NATIVE SOIL AT BASIN BOTTOM = SANDY CLAY.
CONTRACTOR TO OVER-EXCAVATE TO NATIVE SAND AND BACKFILL WITH SANDY SOILS TO 85% COMPACTION.



PROFILE SCALE:
1" = 4' HORIZONTAL
1" = 4' VERTICAL





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APPROVED:
IHS PROJECT MANAGER DATE
IHS BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO. (TENTATIVE) 15XXX
PROJECT NO. 210205
CAD DWG FILE CS210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

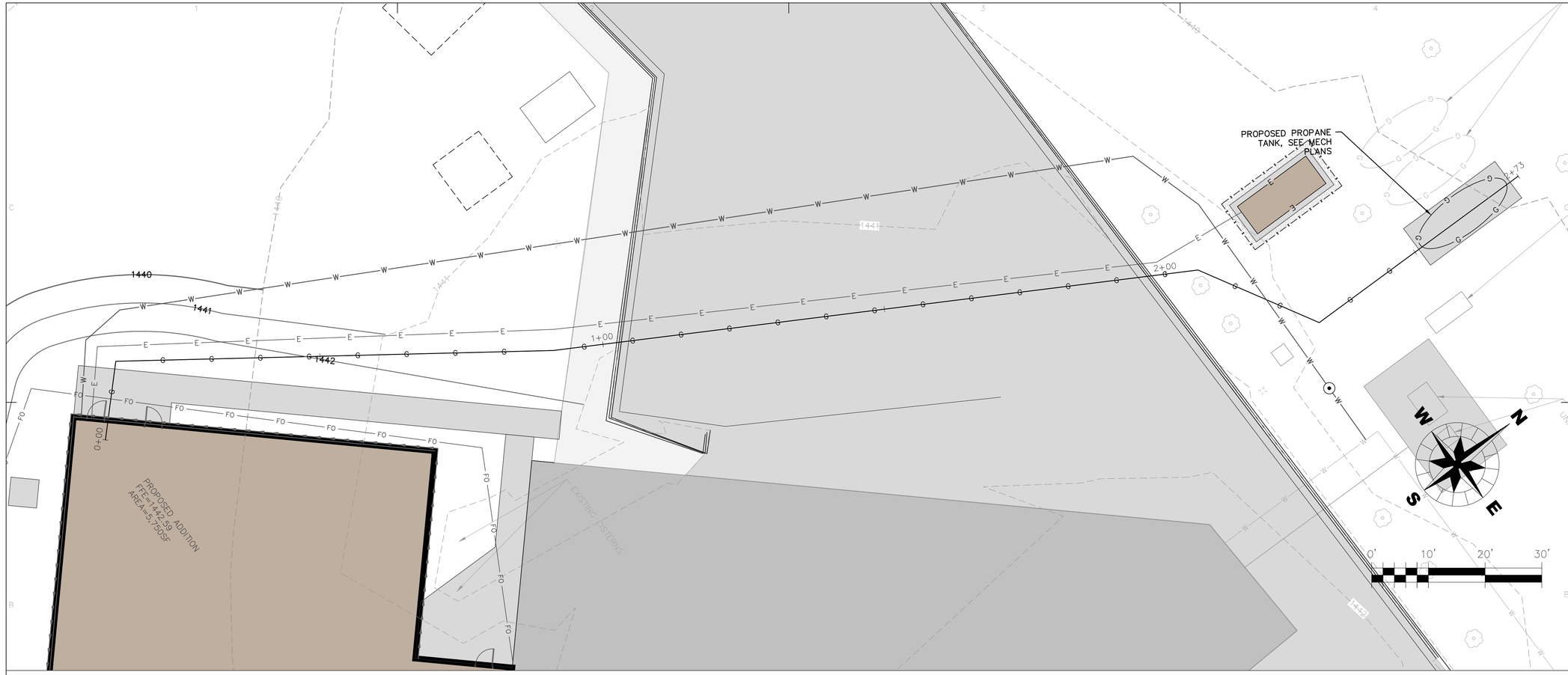
SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

CROSS SECTION STORM BASIN

C333

SHEET 10 OF 95



PROFILE SCALE:
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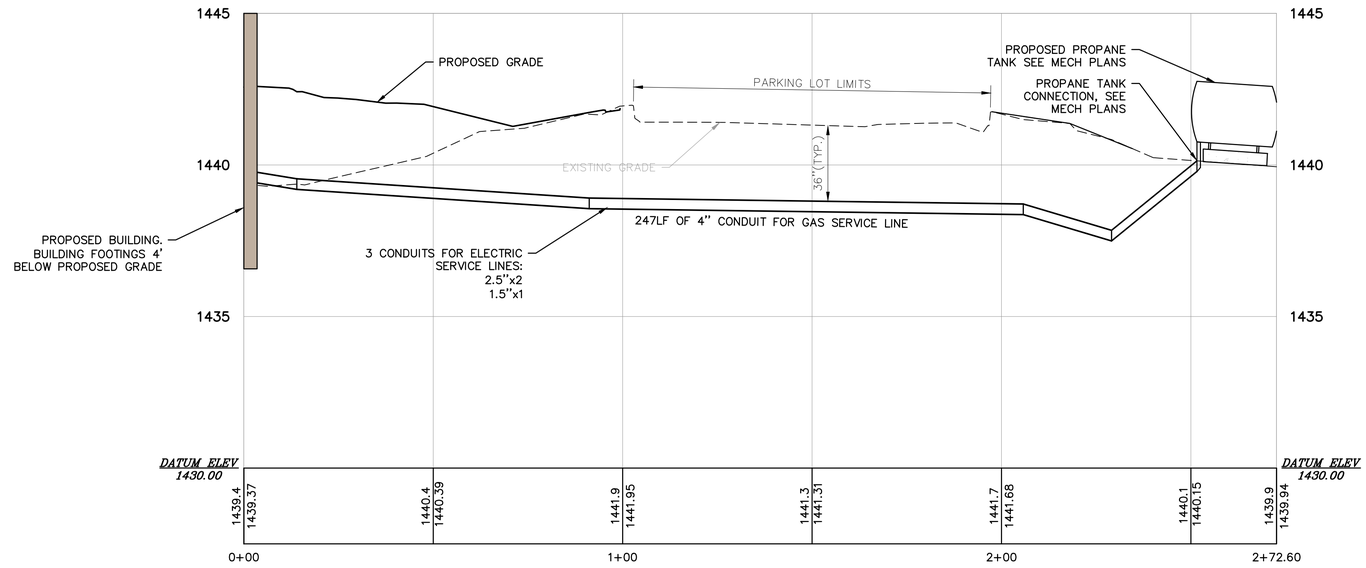

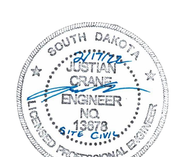

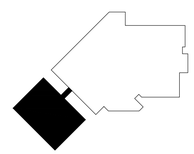

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PROJECT MANAGER — DATE
BRANCH CHIEF — DATE

CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F35052
PROJECT NO: 210205
CAD DWG FILE: PP210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

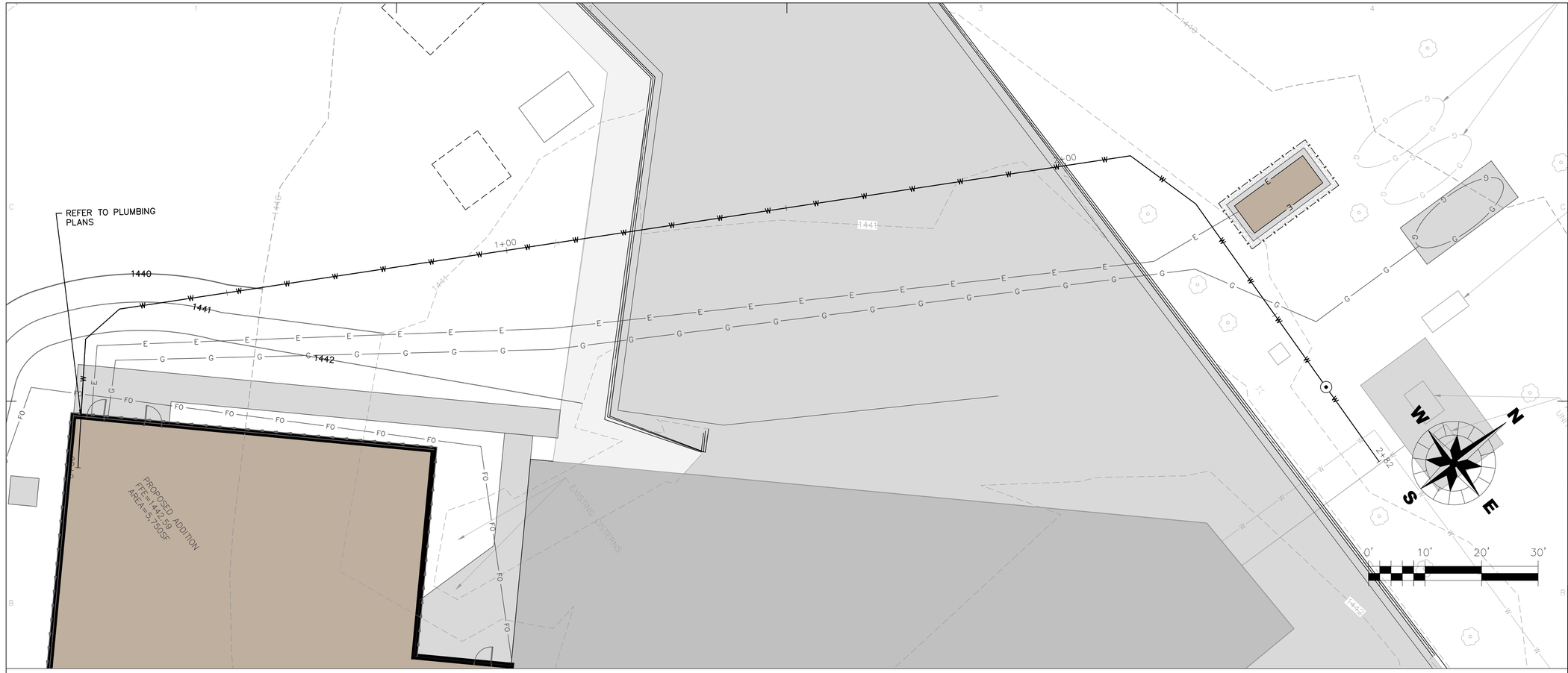
SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

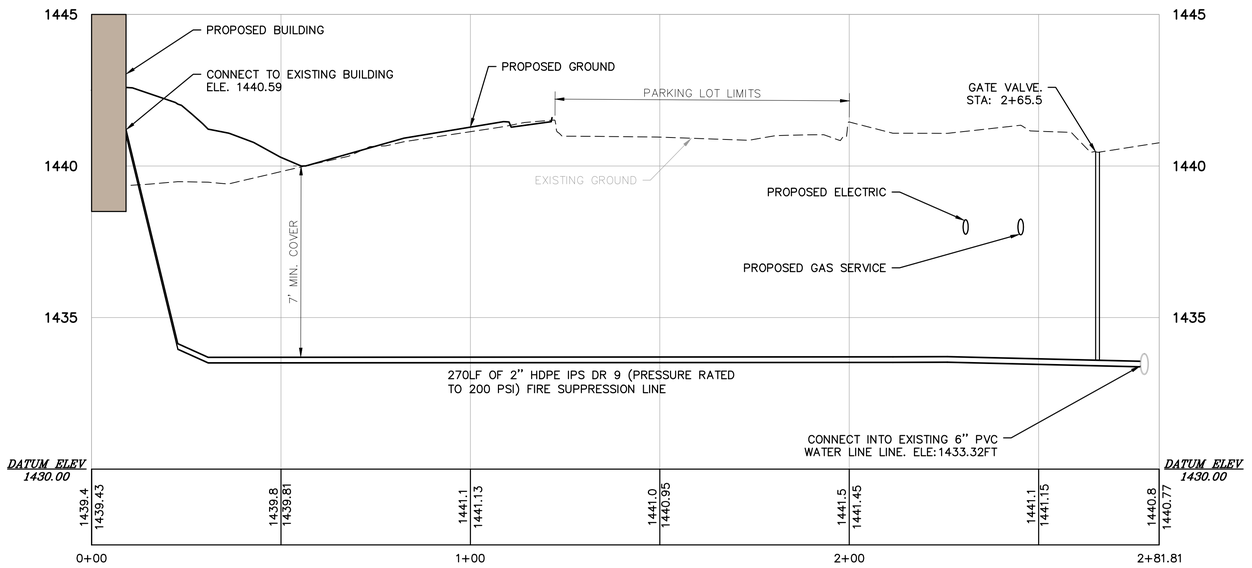
PLAN AND PROFILES GAS AND ELECTRIC

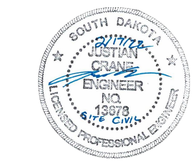
C334

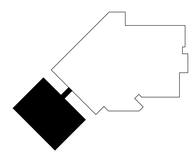
SHEET 11 OF 95



PROFILE SCALE:
1" = 20' HORIZONTAL
1" = 2' VERTICAL







KEY PLAN

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING CO
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GREAT PLAINS AREA

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LT, ARCHITECT / ENGINEER — DATE
APPROVED:
LT, PROJECT MANAGER — DATE
LT, BRANCH CHIEF — DATE
CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F35002
PROJECT NO: 210205
CAD DWG FILE: PP210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION

PLAN AND PROFILES WATER SERVICE

C335

SHEET 12 OF 95

LEGEND:

RIM = STRUCTURE RIM

ME = MATCH EXISTING

INV = INVERT OF PIPE

+999.99 SPOT GRADE

PROPOSED ADDITION
FFE=1442.59
AREA=5,750SF

EXISTING BUILDING
FFE=1442.59
AREA=19,990SF

APPX. LOCATION OF EXISTING GENERATOR

AIR COOLED CONDENSING UNITS//CHILLER

7 PARKING SPACES

5 PARKING SPACES

31 PARKING SPACES

CANOPY & RAMP TO ENTRY

EXISTING DOWNSPOUT W/SPLASH BLOCK

EXISTING CISTERNS

SLOPE OVERFLOW 2% TOWARDS LEECHING BASINS

STEPP LOOP

0' 20' 40' 60'

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PE, BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F35992
PROJECT NO: 210205
CAD DWG FILE: GR210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

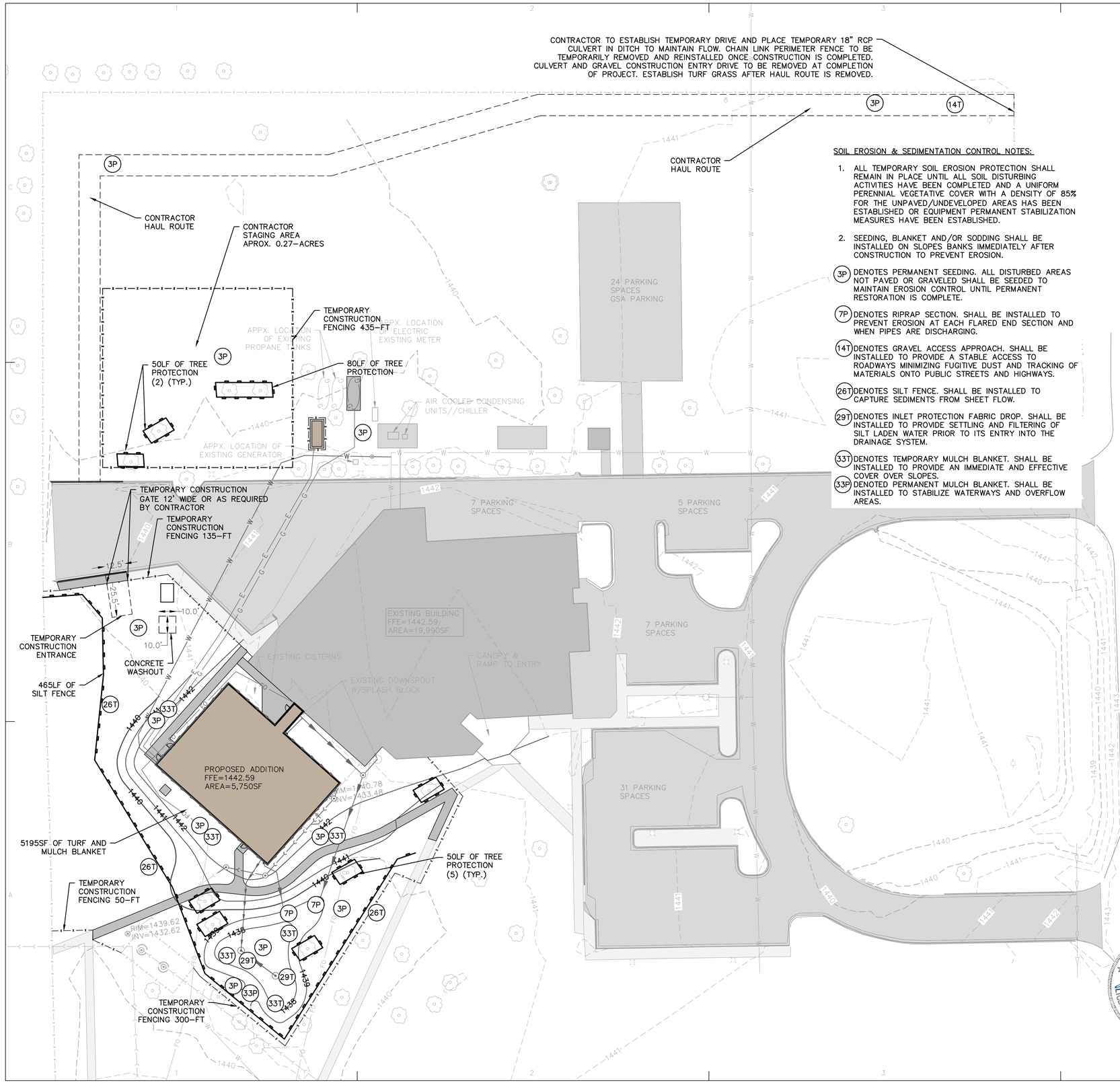
IHS FORT THOMPSON CLINIC EXPANSION

GRADING AND DRAINAGE PLAN

C400

SHEET 13 OF 95

SOUTH DAKOTA
JUSTIAN CRANE
ENGINEER
NO. 13678
SITE CIVIL
LICENSED PROFESSIONAL ENGINEER



SOIL EROSION & SEDIMENTATION CONTROL NOTES:

1. ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 85% FOR THE UNPAVED/UNDEVELOPED AREAS HAS BEEN ESTABLISHED OR EQUIPMENT PERMANENT STABILIZATION MEASURES HAVE BEEN ESTABLISHED.
2. SEEDING, BLANKET AND/OR SODDING SHALL BE INSTALLED ON SLOPES BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.

(3P) DENOTES PERMANENT SEEDING. ALL DISTURBED AREAS NOT PAVED OR GRAVELED SHALL BE SEEDED TO MAINTAIN EROSION CONTROL UNTIL PERMANENT RESTORATION IS COMPLETE.

(7P) DENOTES RIPRAP SECTION. SHALL BE INSTALLED TO PREVENT EROSION AT EACH FLARED END SECTION AND WHEN PIPES ARE DISCHARGING.

(14T) DENOTES GRAVEL ACCESS APPROACH. SHALL BE INSTALLED TO PROVIDE A STABLE ACCESS TO ROADWAYS MINIMIZING FUGITIVE DUST AND TRACKING OF MATERIALS ONTO PUBLIC STREETS AND HIGHWAYS.

(26T) DENOTES SILT FENCE. SHALL BE INSTALLED TO CAPTURE SEDIMENTS FROM SHEET FLOW.

(29T) DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED TO PROVIDE SETTLING AND FILTERING OF SILT LADEN WATER PRIOR TO ITS ENTRY INTO THE DRAINAGE SYSTEM.

(33T) DENOTES TEMPORARY MULCH BLANKET. SHALL BE INSTALLED TO PROVIDE AN IMMEDIATE AND EFFECTIVE COVER OVER SLOPES.

(33P) DENOTED PERMANENT MULCH BLANKET. SHALL BE INSTALLED TO STABILIZE WATERWAYS AND OVERFLOW AREAS.

SOIL EROSION & SEDIMENTATION CONTROL SPECIFICATIONS

1. GENERAL

   A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.

   B. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE FUNCTIONAL BEFORE LAND IS OTHERWISE DISTURBED ON THE SITE.

2. IMPLEMENTATION

   A. BEFORE STARTING CLEARING AND SITE GRADING WORK, SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS.

   B. THE CONSTRUCTION ENTRANCE TO THE SITE SHALL BE STABILIZED PER THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN PRIOR TO ANY WORK ON THE SITE. THE ENTRANCE SHALL BE MONITORED PERIODICALLY FOR ITS EFFECTIVENESS TO COLLECT DIRT WHICH COULD LEAVE THE SITE VIA CONSTRUCTION VEHICLES. ANY DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.

   C. GRAVELED ROADS, ACCESS DRIVES, PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH, AND VEHICLE WASHDOWN FACILITIES, IF NECESSARY, SHALL BE PROVIDED TO PREVENT SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED BEFORE THE END OF EACH WORKDAY OR AS DIRECTED BY THE ENGINEER OR CITY.

   D. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED.

   E. EROSION CONTROL BARRIER SHALL BE INSTALLED AND MAINTAINED AROUND INTAKE STRUCTURES (I.E., INLETS, CATCH BASINS, MANHOLES) AS SHOWN ON THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN.

   F. IF A STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN 3 DAYS, SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED AROUND SUCH STOCKPILE. IF MORE THAN 14 DAYS, THEN IT IS REQUIRED THAT THE STOCKPILE BE SEEDED SO AS TO MINIMIZE SOIL EROSION BY BOTH WIND AND WATER.

   G. THE SURFACE OF STRIPPED AREAS SHALL BE PERMANENTLY OR TEMPORARILY PROTECTED FROM SOIL EROSION WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED. STRIPPED AREAS NOT AT FINAL GRADE THAT WILL REMAIN UNDISTURBED FOR MORE THAN 14 DAYS AFTER INITIAL DISTURBANCE SHALL BE PROTECTED FROM EROSION WITHIN 7 DAYS OF WORK STOPPAGE. TEMPORARY COVER SHALL BE MAINTAINED CONTINUOUSLY UNTIL PERMANENT COVER IS ESTABLISHED. .

3. INSPECTION AND MAINTENANCE

   A. THE TEMPORARY EROSION CONTROL MEASURES SHALL BE IN PLACE AND WORK EFFECTIVELY UNTIL ALL THE PERMANENT EROSION CONTROL ITEMS ARE FULLY FUNCTIONAL.

   B. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES EVERY 7 DAYS AND WITHIN 24 HOURS OF ANY STORM EVENT IN EXCESS OF 1/2 ". ANY DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.

   C. AT THE COMPLETION OF THE PROJECT, ALL STORM SEWER PIPES AND STRUCTURES SHALL BE CLEANED AND FREE OF DIRT AND DEBRIS. THE SEDIMENTATION SHALL BE REMOVED FROM THE STORM SEWER SYSTEM AND SHALL NOT BE WASHED OUT IN THE STORM SEWER SYSTEM.

SOUTH DAKOTA JUSTIAN CRANE ENGINEER NO. 13978 LICENSED PROFESSIONAL ENGINEER

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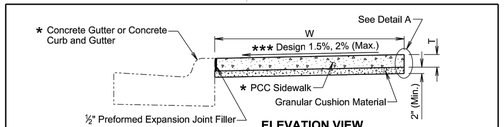
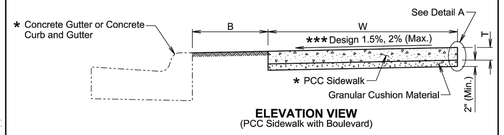
SHEET TITLE:

IHS FORT THOMPSON CLINIC EXPANSION SOIL EROSION SEDIMENTATION CONTROL PLAN

C401
SHEET 14 OF 95



ELEVATION VIEW
(PCC Sidewalk without Boulevard)



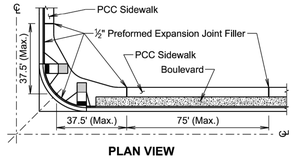
ELEVATION VIEW
(PCC Sidewalk with Boulevard)

B Width of boulevard as specified in the plans.

T Thickness of PCC sidewalk as specified in the plans.

W Width of PCC sidewalk as specified in the plans.

★ Type as specified in the plans.



PLAN VIEW

GENERAL NOTES:

The PCC sidewalk will be constructed in accordance with Section 651 of the Specifications.

★★★ The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.

The maximum length between expansion joints in the PCC sidewalk is 75 feet.

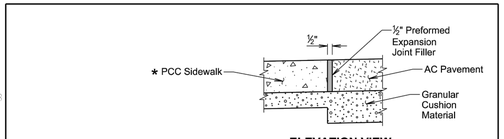
PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.

An expansion joint in the PCC sidewalk will consist of a ½ -inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

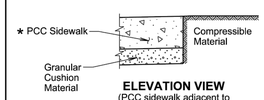
★★ Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

February 14, 2020

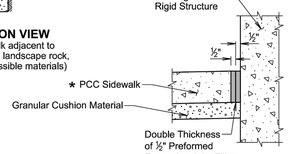
Published Date: 4th Qtr. 2021	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75 Sheet 1 of 2



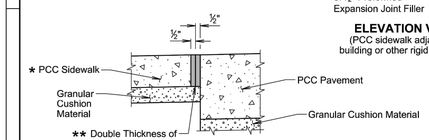
ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)



ELEVATION VIEW
(PCC sidewalk adjacent to earthen material, landscape rock, or other compressible materials)



ELEVATION VIEW
(PCC sidewalk adjacent to building or other rigid structure)

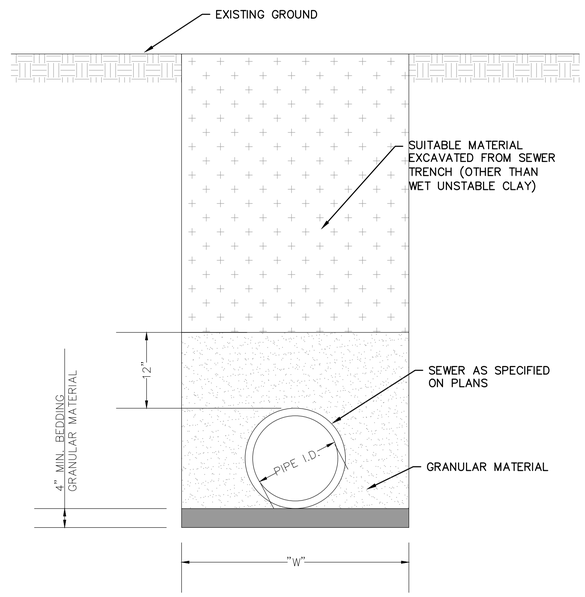


ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

DETAIL A
(Use Appropriate Detail(s))

February 14, 2020

Published Date: 4th Qtr. 2021	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75 Sheet 2 of 2



SEWER NOT UNDER PAVEMENT METAL AND PLASTIC PIPE

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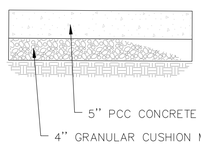


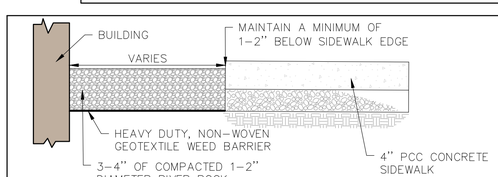
4,000PSI MIN. COMPRESSIVE STRENGTH

CONCRETE UTILITY PAD SECTION

N.T.S.

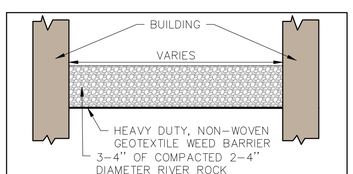
PIPE I.D. (IN)	"W" MIN. TRENCH WIDTH (FT.)	PIPE I.D. (IN)	"W" MIN. TRENCH WIDTH (FT.)
<18"	3.0'	60"	10.0'
24"	4.0'	66"	10.5'
30"	5.0'	72"	11.0'
36"	6.0'	78"	11.5'
42"	7.0'	84"	12.0'
48"	8.0'	90"	12.5'
54"	9.5'	96"	13.0

MINIMUM TRENCH WIDTH TABLE



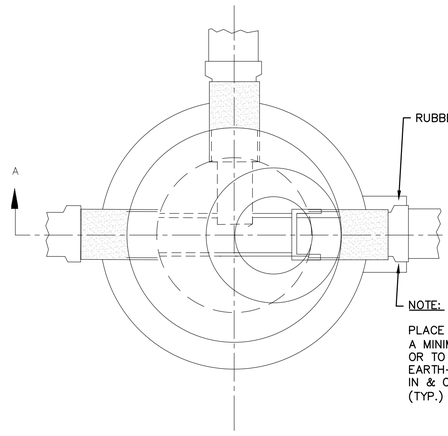
COMPACTED STONESCAPE

N.T.S.



COMPACTED STONESCAPE BETWEEN BLDG

N.T.S.



PLAN

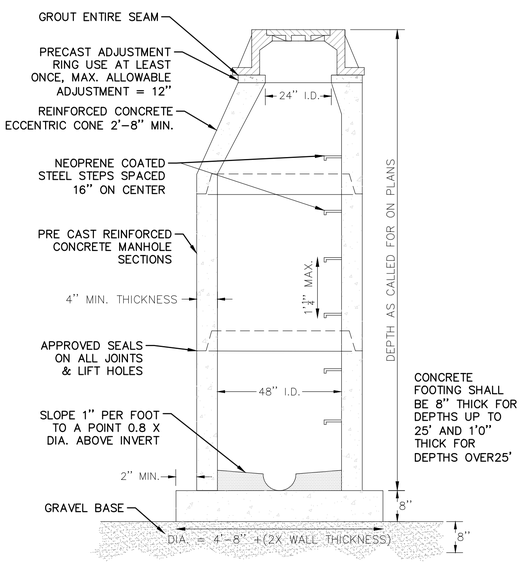
PRECAST MANHOLE

48" DIA. REINFORCED & WITH STEPS

GENERAL NOTES

1. ALL BACKFILL UNDER PIPE TO BE DEPOSITED BY HAND IN 6" LAYERS AND EACH LAYER MECHANICALLY TAMPED.
2. BRICK UNDER CASTING TO BE LAID RADIAL AND VOIDS FULLY MORTARED.
3. ALL CONCRETE TO MEET SDDOT STANDARDS AND SPECIFICATIONS.
4. MANHOLE INLETS AND OUTLETS WILL HAVE A WATERTIGHT RUBBER BOOT.
5. RESILIENT CONNECTOR (ASTM C-923) TYPICAL AT ALL CONNECTIONS TO PIPE.
6. PVC SEWER SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. "UNDERGROUND INSTALLATION OF THERMOPLASTIC SEWER PIPE." DEFLECTION TESTING TO BE PERFORMED ON THE NEW SEWER NO LESS THAT 30 DAYS AFTER PLACEMENT OF THE FINAL BACKFILL. NO PIPE SHALL EXCEPT A DEFLECTION OF 5%.
7. EXTRA STRENGTH VITRIFIED CLAY SEWER PIPE. E.S. VCP SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C12-82. "STANDARD PRACTICE FOR INSTALLING VITRIFIED CLAY PIPE LINES."

ALL PRECAST SANITARY STRUCTURES SHALL BE MANUFACTURED WITH AN APPROVED CEMENT ADDITIVE FOR CORROSION PER SANITARY SPECIFICATIONS.



TYPICAL SANITARY MANHOLE

N.T.S. PRECAST REINFORCED CONCRETE SHOWN

SEVEN GENERATIONS
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600 E Michigan Ave, Suite B
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www.7GenAE.com

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PROJECT NO: 210205

CAD DWG FILE: DT210205.DWG

DRAWN BY: BTD

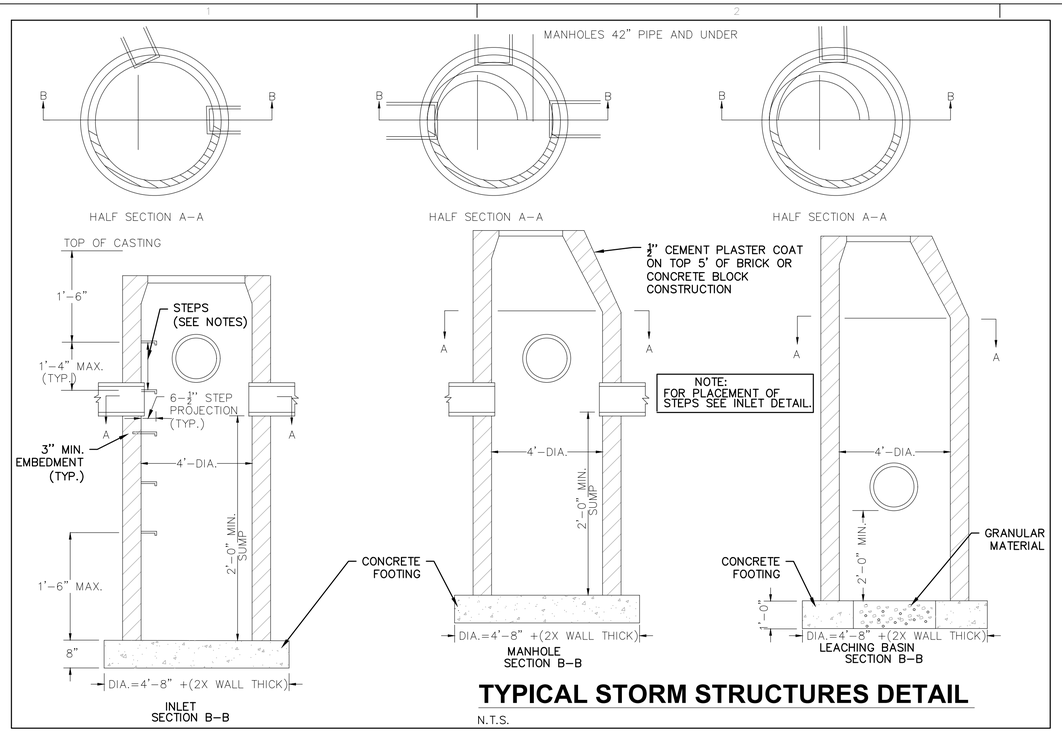
CHECKED BY: JWC

SHEET TITLE:

DETAILS

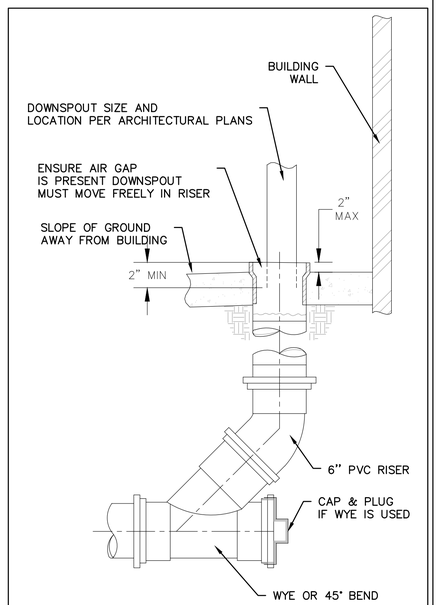
C500

SHEET 15 OF 95



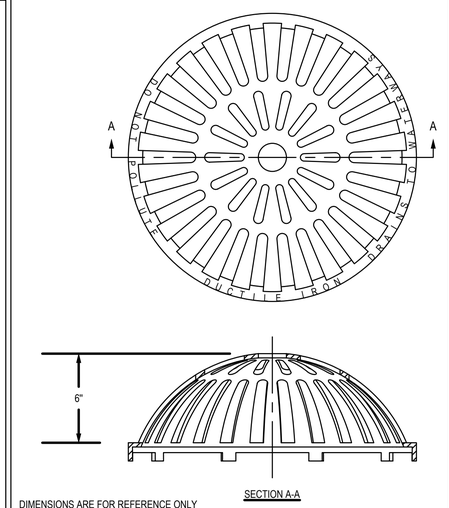
TYPICAL STORM STRUCTURES DETAIL

N.T.S.



DETAIL OF DOWNSPOUT CONNECTION TO STORM SEWER RISER

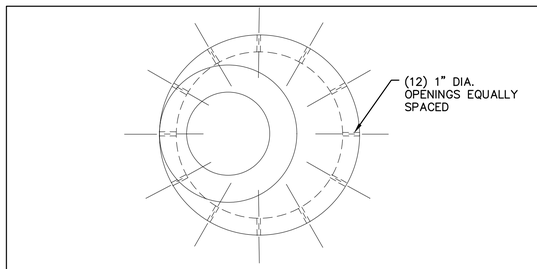
N.T.S.

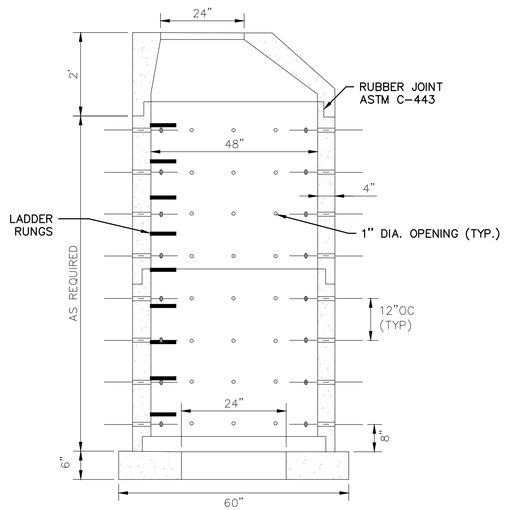


DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST

TYPICAL BEEHIVE GRATE

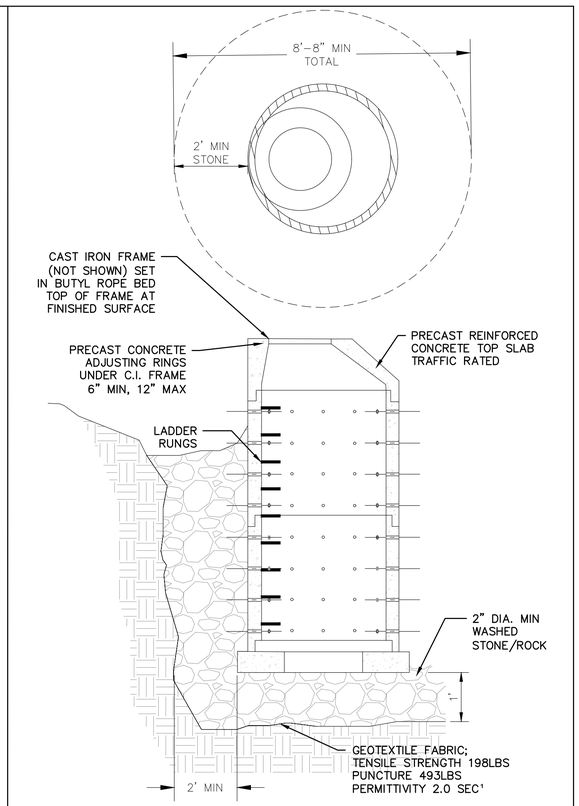
N.T.S.





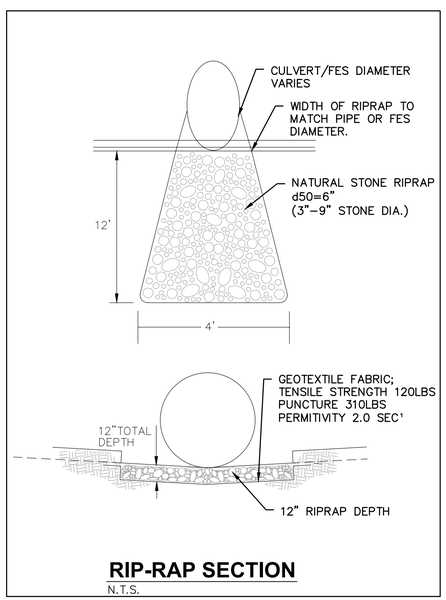
TYPICAL LEACHING BASIN

N.T.S.



TYPICAL LEACHING BASIN INSTALLATION

N.T.S.



RIP-RAP SECTION

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REVIEWED:
PE ARCHITECT / ENGINEER — DATE

APPROVED:
ES PROJECT MANAGER — DATE
PE BRANCH CHIEF — DATE

CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO.: TIHTA121FX0002
PROJECT NO.: 210205
CAD DWG FILE: DT210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

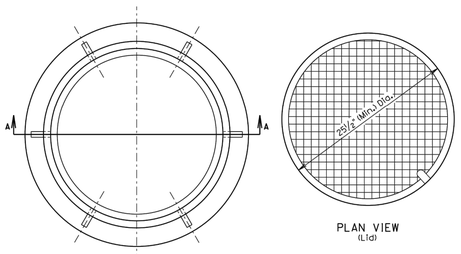
SHEET TITLE:

DETAILS

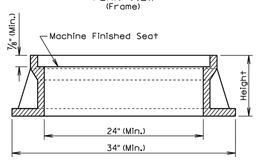
C501

SHEET 16 OF 95

SOUTH DAKOTA JUSTIAN CRANE ENGINEER NO. 12078 6/15 CIVIL LICENSED PROFESSIONAL ENGINEER



PLAN VIEW
(Lid)



SECTION A-A

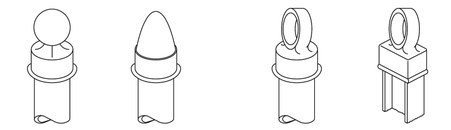
ISOMETRIC VIEW

TYPE	HEIGHT (Inches)	MINIMUM WEIGHT (Lb.)
A7	7	400
A8	8	440
A9	9	470
A10	10	480

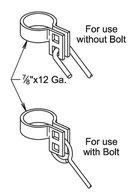
GENERAL NOTE:
Geometric pattern on top of lid other than that shown shall be approved by the Engineer.

June 26, 2016

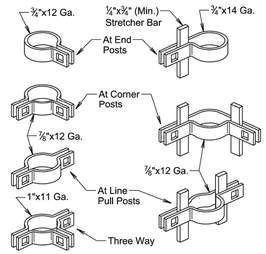
Published Date: 4th Qtr. 2021 | SDDOT | TYPE A MANHOLE FRAME AND LID | PLATE NUMBER 671.10 | Sheet 1 of 1



TYPICAL POST TOPS
(Shown for example only)

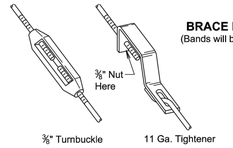


BRACE AND TRUSS BANDS



BRACE BANDS
(Bands will be rectangular for "C" Section and "H" Beam Posts.)

TENSION BANDS

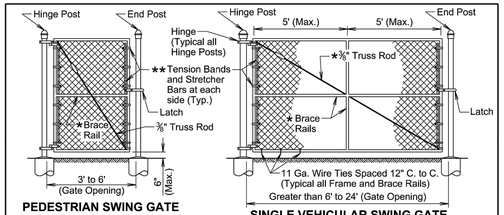


TIGHTENING DEVICES

RAIL ENDS

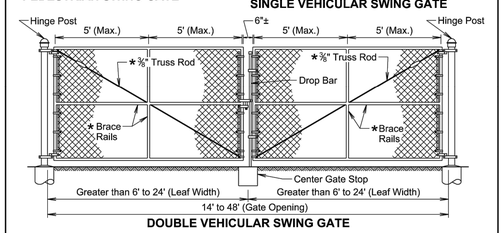
June 26, 2019

Published Date: 4th Qtr. 2021 | SDDOT | HARDWARE FOR CHAIN LINK FENCE | PLATE NUMBER 621.03 | Sheet 1 of 1



PEDESTRIAN SWING GATE

SINGLE VEHICULAR SWING GATE



DOUBLE VEHICULAR SWING GATE

[1]Gate Opening Width	Hinge Post		Concrete Footing	
	Round Pipe Nominal	Roll Formed Steel	Depth	Diameter
3' to 6'	3.00"	3.50"x3.50"	36"	12"
> 6' to 13'	4.00"	—	42"	12"
> 13' to 18'	6.625"	—	48"	18"
> 18' to 23'	8.625"	—	48"	24"

Gate Opening		Frame Pipe Nominal	Brace Rail Pipe Nominal
[1]Width	[2]Height		
3' to 8'	3' to 6'	1.50"	1.50"
>8' to 23'	6'	1.90"	1.50"
>8' to 23'	>6' to 12'	1.90"	1.90"

★ Are not required for gates 3' to 5' height or 5' or less in width.
★★ Tension Bands will be spaced 12" center to center.
⬭ Tightening Device such as shown on standard plate 621.03
1 Leaf width for Double Vehicular Swing Gate
2 Will coincide with fence height

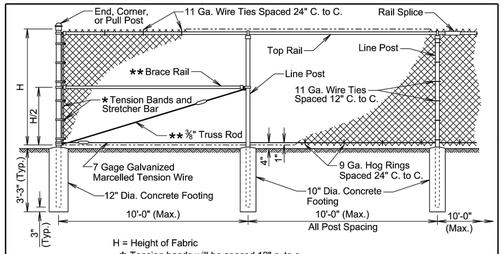
GENERAL NOTES:

Gate frames may be constructed of bent or welded steel tubing, must be approved by the Engineer prior to installation, and installed in accordance with the Manufacturer's installation instructions.

Center gate stops must be approved by the Engineer prior to installation and will be installed in accordance with the Manufacturer's installation instructions.

June 26, 2019

Published Date: 4th Qtr. 2021 | SDDOT | SWING GATES FOR CHAIN LINK FENCE | PLATE NUMBER 621.10 | Sheet 1 of 1



H = Height of Fabric
★ Tension bands will be spaced 12" c. to c.
★★ Are not required for 3' through 5' height fences.
⬭ Tightening device such as shown on standard plate 621.03

COMPONENT	END, CORNER, and PULL POST		LINE POST			TOP and BRACE RAIL	
Type of Fabrication	Round Pipe Nominal	Roll Formed Steel	Round Pipe Nominal	"C" Section	H Beam Steel	Round Pipe Nominal	Roll Formed Steel
Size	3.00" O. D.	3.5"x3.5"	2.50" O. D.	1.875"x1.625"	2.25"x1.70"	1.625" O. D.	1.625"x1.25"
Weight (lb. / Ft.)	5.79 or 4.64	5.14	3.65 or 3.12	2.34	3.43	2.27 or 1.84	1.35

GENERAL NOTES:

Specific details of the component parts of the fence will be approved by the Engineer. Commercially available items produced specifically for the use intended will be used wherever possible in the construction of the fence.

Height of the fabric will be as shown in the plans. Fabric is available at the following heights: 36", 42", 48", 60", 72", 84", 96", 108", 120", and 144". Fabric heights 60 inches and less will be knuckled at both selvages. Fabric heights 72 inches and higher will be knuckled at one selvage and twisted at the other selvage.

Chain link fabric will be 2-inch mesh, No. 9 gage galvanized wire securely fastened to tension wire, line post, rails, braces, and stretcher bars.

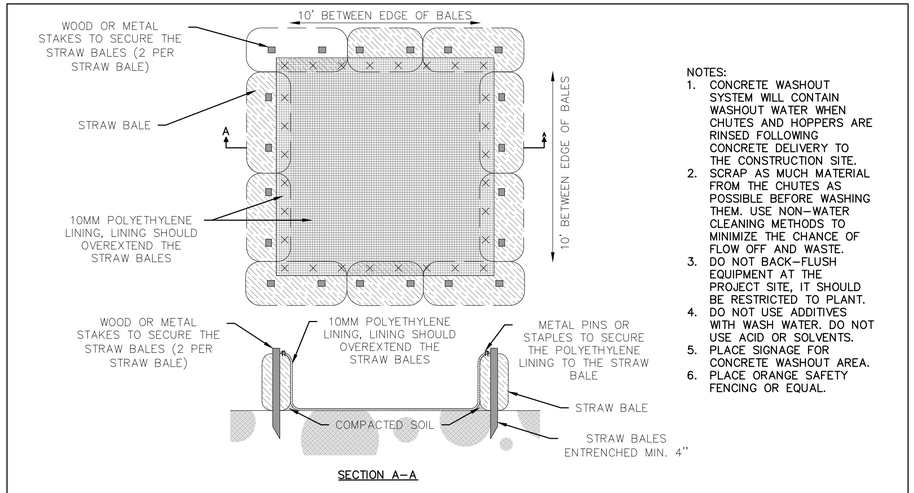
Fence may be constructed with either round pipe, "C" section, "H" beam, or roll formed steel components as shown in the table above. Line posts may be round pipe, "C" section, or "H" beam. The corner post and rails will be either round pipe or roll formed steel. The type of components used must be approved by the Engineer prior to installation.

Where fence must cross small bodies of water such as drainage areas or ponds that could freeze during the winter, use 11 gage hog rings. Provide only two ties per tension wire and top rail between line posts.

A suitable method of rail splicing will be used to allow for expansion and contraction while maintaining proper position of the top rail.

June 26, 2019

Published Date: 4th Qtr. 2021 | SDDOT | CHAIN LINK FENCE WITH TOP RAIL | PLATE NUMBER 621.01 | Sheet 1 of 1

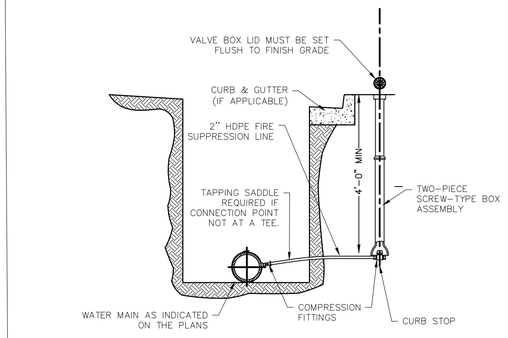


SECTION A–A

NOTES:
1. CONCRETE WASHOUT SYSTEM WILL CONTAIN WASHOUT WATER WHEN CHUTES AND HOPPERS ARE RINSED FOLLOWING CONCRETE DELIVERY TO THE CONSTRUCTION SITE.
2. SCRAP AS MUCH MATERIAL FROM THE CHUTES AS POSSIBLE BEFORE WASHING THEM. USE NON–WATER CLEANING METHODS TO MINIMIZE THE CHANCE OF FLOW OFF AND WASTE.
3. DO NOT BACK–FLUSH EQUIPMENT AT THE PROJECT SITE, IT SHOULD BE RESTRICTED TO PLANT.
4. DO NOT USE ADDITIVES WITH WASH WATER. DO NOT USE ACID OR SOLVENTS.
5. PLACE SIGNAGE FOR CONCRETE WASHOUT AREA.
6. PLACE ORANGE SAFETY FENCING OR EQUAL.

CONCRETE WASHOUT DETAIL

N.T.S



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BY: ARCHITECT / ENGINEER DATE

APPROVED:
BY: PROJECT MANAGER DATE
BY: BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO.: HHSIHS219F95002
PROJECT NO.: 210205
CAD DWG. FILE: DT210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

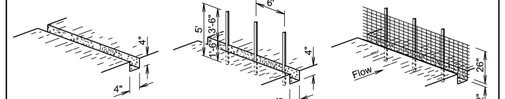
SHEET TITLE:

DETAILS

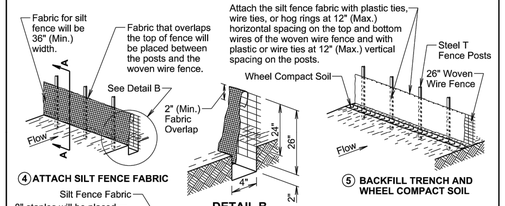
C502

SHEET 17 OF 95

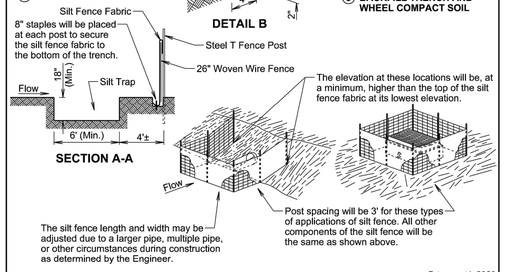
MANUAL LOW FLOW SILT FENCE INSTALLATION



① EXCAVATE TRENCH ② DRIVE STEEL T FENCE POSTS ③ ATTACH 26" WOVEN WIRE FENCE TO POSTS



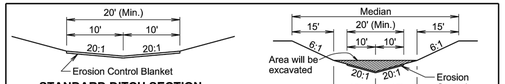
④ ATTACH SILT FENCE FABRIC — DETAIL B — ⑤ BACKFILL TRENCH AND WHEEL COMPACT SOIL



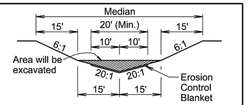
SECTION A-A

February 14, 2020

Published Date: 4th Qtr. 2021	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 1 of 2

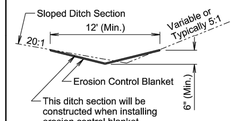


STANDARD DITCH SECTION

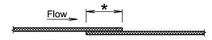


The median will be shaped to the limits shown in this detail where the erosion control blanket will be placed.

MEDIAN SECTION



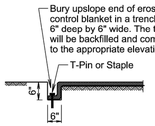
SLOPED DITCH SECTION



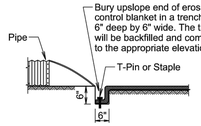
* Use a 4" (Min.) overlap wherever two widths of erosion control blanket are applied side by side.

* Use a 6" (Min.) overlap wherever one roll of erosion control blanket ends and another begins.

OVERLAP DETAIL



TRENCH DETAIL



PIPE END DETAIL

GENERAL NOTES:

Prior to placement of the erosion control blanket, the areas will be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket will be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket will be buried in a trench 6" wide by 6" deep. There will be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

The erosion control blanket will be pinned to the ground according to the manufacturer's installation recommendations.

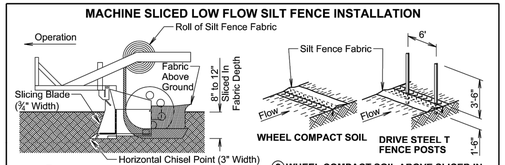
After the placement of the erosion control blanket, the Contractor will fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

All ditch sections will be shaped when installing the erosion control blanket. All costs for shaping the ditches will be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

February 14, 2020

Published Date: 4th Qtr. 2021	SDDOT	EROSION CONTROL BLANKET	PLATE NUMBER 734.01
			Sheet 1 of 1

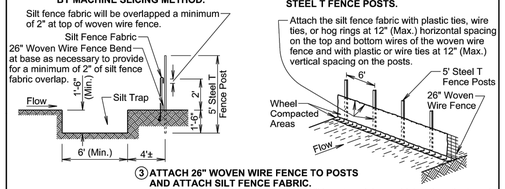
MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION



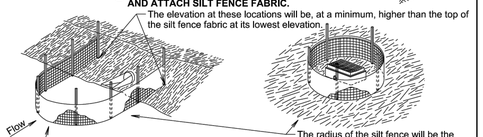
WHEEL COMPACT SOIL — DRIVE STEEL T FENCE POSTS

① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.

② WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.



③ ATTACH 26" WOVEN WIRE FENCE TO POSTS AND ATTACH SILT FENCE FABRIC.



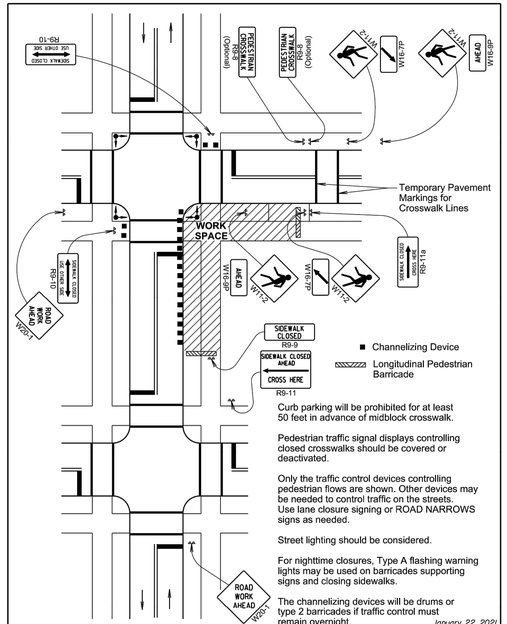
GENERAL NOTES:

A silt trap will be provided when specified by a plan note. All costs for constructing the silt trap will be incidental to the contract unit price per cubic yard for "Silt Trap".

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

February 14, 2020

Published Date: 4th Qtr. 2021	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 2 of 2



Curb parking will be prohibited for at least 50 feet in advance of midblock crosswalk.

Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.

Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing or ROAD NARROWS signs as needed.

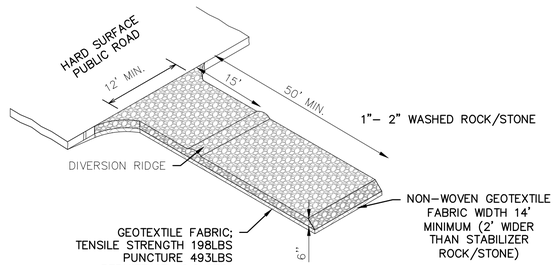
Street lighting should be considered.

For nighttime closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks.

The channelizing devices will be drums or type 2 barricades if traffic control must remain overnight.

January 22, 2021

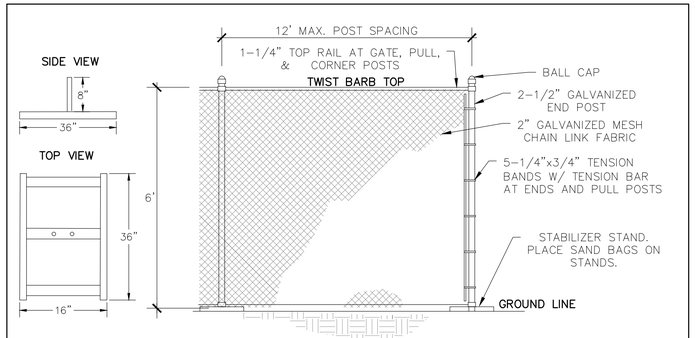
Published Date: 4th Qtr. 2021	SDDOT	SIDEWALK CLOSURES AND PEDESTRIAN DETOURS	PLATE NUMBER 634.33
			Sheet 1 of 1



STABILIZED CONSTRUCTION ENTRANCE

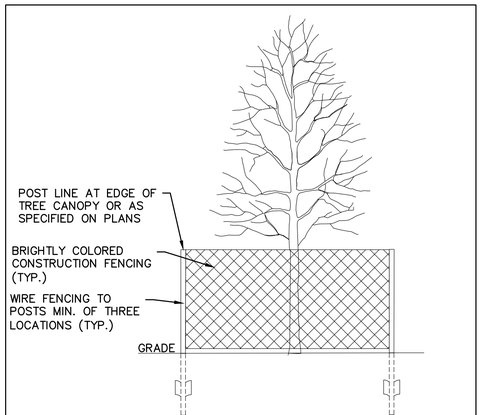
N.T.S

NOTES:
1. UTILIZE EXISTING DRIVEWAY AND ADD STONE AS REQUIRED WHEN POSSIBLE.
2. ACCEPTABLE AGGREGATE
   2.1. ASTM D48 SIZE #1 (2"–3" DIA.).
3. PLACE GEOTEXTILE FABRIC OVER ENTIRE AREA PRIOR TO AGGREGATE PLACEMENT.
4. SURFACE WATER TO BE ROUTED AROUND CONSTRUCTION ENTRANCE WITH CULVERT UNDER ENTRANCE OR MOUNTABLE BERM AROUND ENTRANCE.
5. THE ENTRANCE SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC ROAD, ADDITIONAL AGGREGATE MAY BE REQUIRED.
6. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROAD SHALL BE REMOVED IMMEDIATELY.
7. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING THE PUBLIC ROAD, IF WASHING IS REQUIRED IT SHALL BE DONE ON AREA WITH STABILIZED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8. PROVIDE PERIODIC INSPECTION AND MAINTENANCE AFTER EACH RAIN EVENT.



TEMPORARY CONSTRUCTION FENCE

N.T.S.



TREE PROTECTION FENCING DETAIL

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US BRANCH CHIEF — DATE

CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV.	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO.: 75N00019C50002
PROJECT NO.: 210205
CAD DWG FILE: DT210205.DWG
DRAWN BY: BTD
CHECKED BY: JWC

SHEET TITLE:

DETAILS

C503

SHEET 18 OF 95

GENERAL NOTES

I. Construction
A. Construction shall be in accordance with applicable Federal, State of South Dakota and current building code requirements of Fort Thompson, including Fire codes.

B. Design Live Loads per the 2018 International Building Code.
1. First Floor Live Load 100 p.s.f.

C. Snow Loads
1. Flat roof snow, Pf = 28 p.s.f.
2. Snow exposure factor, Ce = 1.0
3. Snow load importance factor, Is = 1.0
4. Thermal Factor, Ct = 1.0
5. Ground Snow Pg = 40 p.s.f.

D. Wind Design Data
Basic wind speed = 115 m.p.h.
Building Category = II
Exposure = C
Internal Pressure coefficient = +/- 0.18
External component and cladding loads (unfactored working loads)

Component	Location	Net Uplift
Building Roof	Middle Zone	-18.9 psf
	End Zone	-26.1 psf
	Corner Zone	-36.6 psf
Canopy Roof		-36.1 psf
Component		
Wall	Middle Zone	-31.9 psf
	End Zone	-38.3 psf

E. Seismic Design Data
Seismic group importance Factor = 1.0
Mapped spectral response acceleration Ss = 0.15
Mapped spectral response acceleration S1 = 0.15
Site Class = D
Spectral response coefficient Sds = 0.044g
Spectral response coefficient Sd1 = 0.034g
Seismic design category = A
Basic seismic - force resisting system = Rigid Steel Frames
Design base shear V = 34 k
Seismic response coefficient Cs = 1.8
Response modification factor R = 6.5
Analysis procedure used = Per section 11.1 of ASCE-1-2010

II. FOUNDATION WORK
A. Foundations, foundation drainage and slab on grade have been designed in accordance with the recommendations outlined in the report by Core Engineering Consultants dated July 20, 2020.

B. Foundation Design

Description	Allowable Load
1. Spread Footings	2000 p.s.f.
2. Continuous Footings	2000 p.s.f

C. See division 2 of the Specifications for excavation and compacting.

D. Footings shall bear on original soil or compacted engineered fill.

III. CONCRETE

Material Properties	f'c@ 28 days	Max W/C	Air +/- 1.5%
A. Concrete			
1. Footings	3,000 psi	0.58	no test
2. Cast-in-Place Walls	4,000 psi	0.44	6.0
3. Slab-On-Grade Interior	4,000 psi	0.44	no test
4. Slab-On-Grade Exterior	4,500 psi	0.44	6.0
5. Supported Slab	4,000 psi	0.44	no test
B. Other Concrete			
1. Column Dry Pack	6,000 psi	-	no test
2. N.S.N.S. Grout	6,000 psi	-	no test

3. For more information regarding Air Entrainment, see Specification

C. Reinforcing and Connection Steel * with proper heat treatment

	Fy	ASTM
1. Welded Bars	60,000	A706
or	60,000	A615*
or	40,000	A615
2. #3	40,000	A615
3. #4 and larger	60,000	A615
4. M.W.F.	65,000	A185
5. Welding Steel for Rebar		AWS D1.4
6. Deformed Bar and Anchors	70,000	A496
7. Headed Anchor Studs	60,000	A108

D. General Notes for Cast-in-Place Concrete
1. Where shown hooked, provide standard 90 degree bar hooks unless otherwise noted.
2. When reinforcing is lap spliced, provide Class B splice, typical, unless otherwise noted.
3. Provide a 3/4" chamfer on all exposed corners of concrete. Top edge walls may be tooled.

E. Concrete Protection for Reinforcement
1. The minimum concrete protection for reinforcement shall be per ACI 318 Section 7.7.

IV. STRUCTURAL STEEL

Material Properties	Fy p.s.i.	ASTM
A. Structural Steel		
1. Structural Shapes	50,000 psi	A572 or A992
2. Bolts, 5/8" to 1"	92,000 psi	A325
3. Bolts, larger than 1"	81,000 psi	A490
4. Anchor Bolts	36,000 psi	A307
5. Welding Electrodes	E71.1-80 psi	
6. Structural Pipe	35,000 psi	A501
7. Structural Tube	46,000 psi	A500

B. General Structural Steel Notes
1. Plumb columns and grout beneath baseplates before continuing erection.
2. Design beam connections for 1/2 allowable uniform load.
3. Brace frames for wind loads during erection.

V. MASONRY CONSTRUCTION

Material Properties	f'm' p.s.i.
A. Masonry Description	
1. Gym Hollow Masonry	3000
2. All other hollow masonry	2500
3. Mortar for CMU	Type S

B. General concrete masonry notes.
1. Provide dowels between foundations and walls equal in size and at all the same spacing as vertical dowels.
2. Provide control or construction joints in walls @ 24'-0" O.C. maximum or as noted on drawings, except at shear walls.
3. Refer to architectural drawings for fire rating.

VI. MISCELLANEOUS

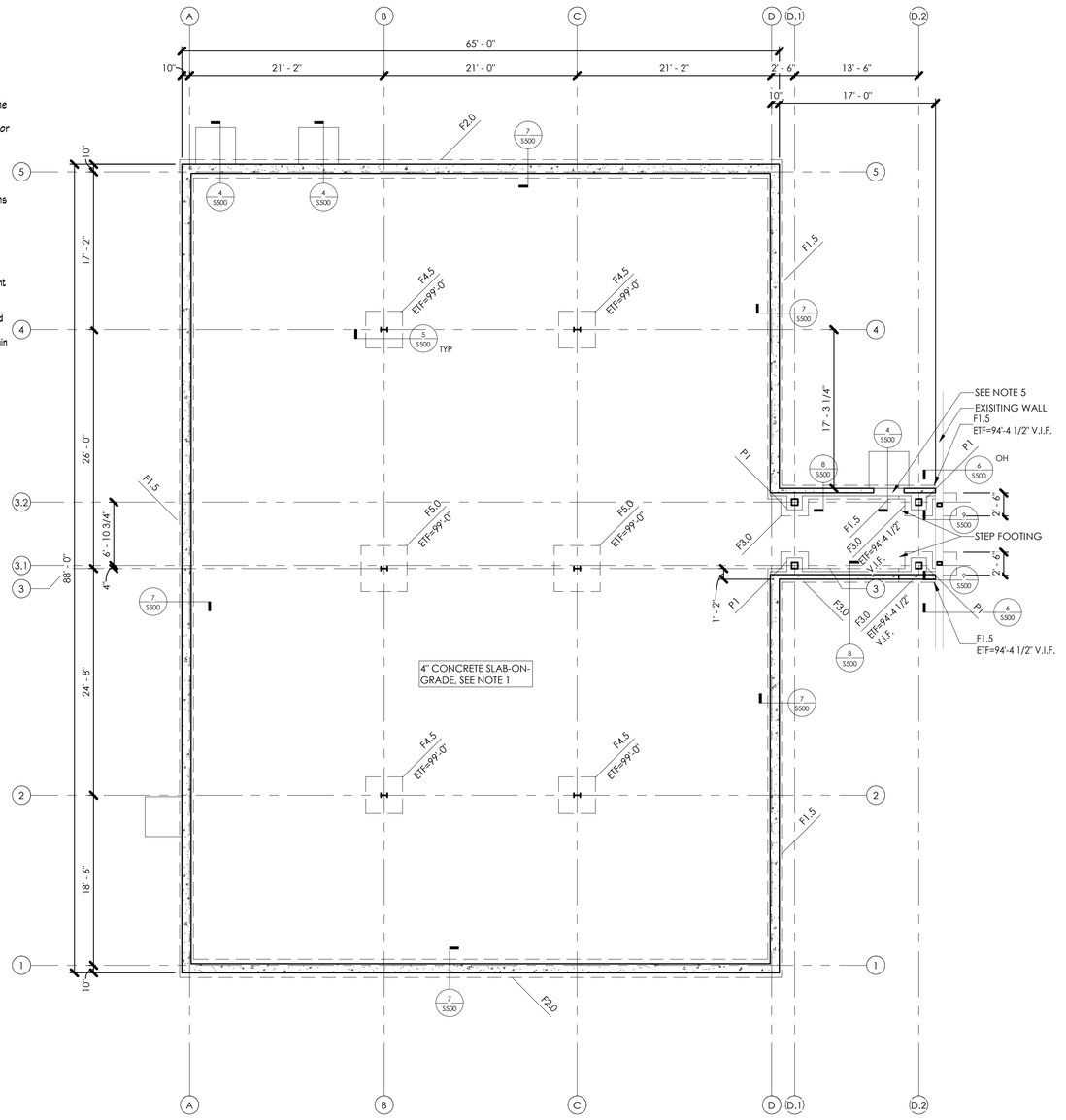
A. For exact sizes and locations of mechanical equipment and electrical items and openings consult respective subcontractor.

B. See Specifications for additional information.

C. Abbreviations

AB	= anchor bolt	ENP	= elevation working point
BRG	= bearing	GA	= gauge
CIP	= cast in place	GC	= general contractor
CJ	= construction / control joint	HAS	= headed anchor stud
CMU	= concrete masonry unit	NS	= non-shrink
EA	= each	NSNS	= non-shrink, non-stain
EF	= each face	OC	= on center
ETF	= elevation top of footing	SOG	= slab on grade
ETP	= elevation top of pier	TOS	= top of steel
ETW	= elevation top of wall	WWF	= welded wire fabric
EW	= each way	UN	= unless noted
EWEF	= each way, each face	VIF	= verify in field

D. Do not scale drawings



FOUNDATION NOTES

1. 4" CONCRETE SLAB ON GRADE WITH 6x6 W2.9xW2.9 WELDED WIRE FABRIC REINFORCING OVER 15 MIL VAPOR RETARDER, OVER COMPACTED MDOT CLASS II SAND. PROVIDE CONTROL JOINTS AT GRID LINES AND AT 12'-0" OC MAX. SEE GEOTECHNICALREPORT FOR SUBGRADE PREPARATION. ELEVATION 100'-0" = X.XX' CIVIL
2. ALL TOP OF FOOTING ELEVATIONS = 97'-0" UNLESS NOTED.
3. ALL TOP OF POURED CONCRETE WALL ELEVATIONS = 101'-0" UNLESS NOTED.
4. ALL TOP OF PIER ELEVATIONS = 99'-4" UNLESS NOTED.
5. RECESS TOP OF WALL 8" AT DOOR OPENING, SEE ARCH FOR LOCATIONS.
6. FINISH FLOOR 100'-0" = CIVIL 1442.59'

NORTH

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

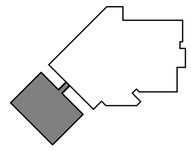
FOUNDATION SCHEDULE

MARK	SIZE	REINFORCING
F1.5	1'-6" x 1'-0" x CONT.	(2) #5 CONT
F2.0	2'-0" x 1'-0" x CONT.	(2) #5 CONT
F3.0	3'-0" x 3'-0" x 10"	(5) #5 EACH WAY
F4.5	4'-6" x 4'-6" x 1'-0"	(5) #5 EACH WAY
F5.0	5'-0" x 5'-0" x 1'-0"	(6) #5 EACH WAY

CENTER FOUNDATIONS ON GRIDLINES AND CENTER BENEATH WALLS UNLESS NOTED OTHERWISE

PIER SCHEDULE

MARK	SIZE	VERTICAL REINFORING	TIES	DETAIL
P1	2'-4" x 1'-8"	(4) #6	(2) #4 ☐ @ TOP 5", REM @ 12" O.C.	10/S500



KEY PLAN

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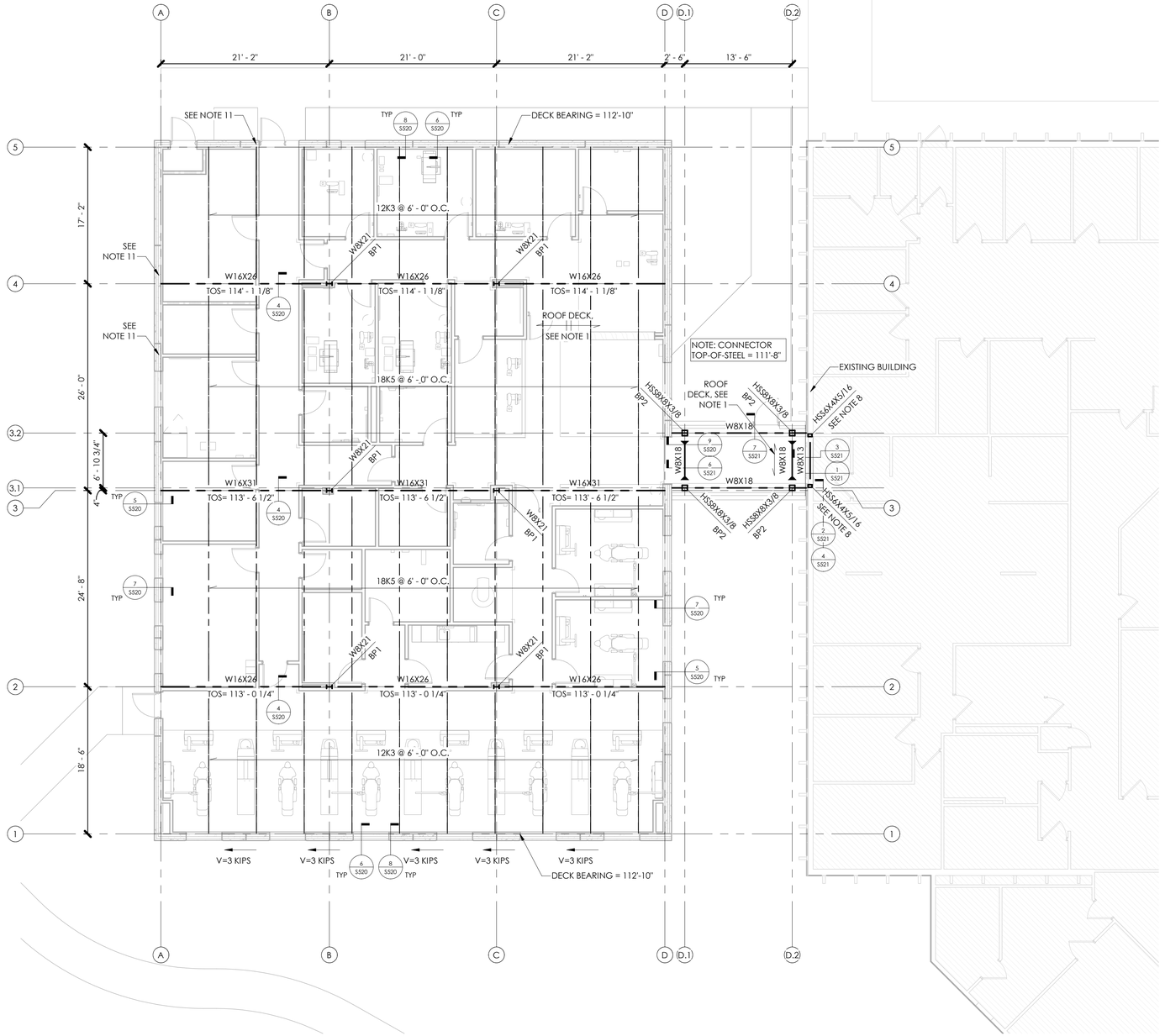
DRAWN BY: CAC
CHECKED BY: TAP

SHEET TITLE:
FOUNDATION PLAN

S101

SHEET 19 OF 95



NORTH

ROOF FRAMING PLAN

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

ROOF FRAMING NOTES

1. ROOF DECK SHALL BE 1-1/2", 18 GAUGE TYPE B METAL DECK, MINIMUM TWO SPAN CONTINUOUS.
2. FOR SUPPORT AT ROOF DECK OPENINGS, SEE DETAIL 1/S520.
3. FOR SUPPORT AT ROOF DRAINS, SEE DETAIL 2/S520.
4. ▶— REPRESENTS RIGID MOMENT CONNECTION.
5. PROVIDE JOIST BRIDGING PER STEEL JOIST INSTITUTE SPECIFICATIONS. ANCHOR BRIDGING PER DETAILS 3/S520.
6. HSS 6X4 COLUMN IS CONTINUOUS FROM ROOF TO FOUNDATION, SEE DETAIL 5/S521 FOR OPTIONAL COLUMN SPLICE. FIELD VERIFY LOCATION OF EXISTING FLOOR JOISTS. REPORT TO EOR POTENTIAL INTERFERENCE BETWEEN JOIST AND NEW HSS6X4 COLUMN. COLUMNS ARE TO BE SHIFTED TO AVOID JOIST INTERFERENCE.
7. PRECAST SUPPLIER TO PROVIDE PRECAST CONCRETE PANELS DESIGNED FOR THE LATERAL SHEAR LOADS (V=XX) AS SHOWN ON THE PLAN. SHEAR LOADS ARE APPLIED AT THE ROOF LEVEL.
8. PRECASTER TO PROVIDE OPENINGS FOR MECHANICAL LOUVERS. REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR SIZE AND LOCATIONS.
9. PRECASTER TO PROVIDE EMBED PLATES AND ANCHORAGE FOR CANOPY CONNECTIONS BOTH SIDES OF ENTRY DOOR. COORDINATE LOCATIONS AND ELEVATION WITH ARCHITECT AND CANOPY SUPPLIER.

METAL STUD SCHEDULE

	MAX UNBRACED HEIGHT	STUD	NOTE	MIN Ix	Sx
INTERIOR	15'-0"	4", 20 GA. @ 16" O.C.		0.61 IN^4	0.30 IN^3

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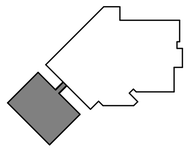
CHECKED BY: TAP

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022

SHEET TITLE:

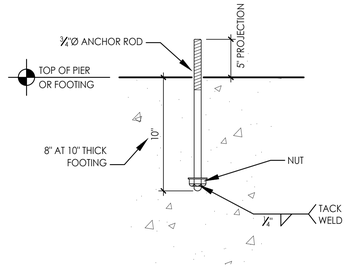
ROOF FRAMING PLAN



KEY PLAN

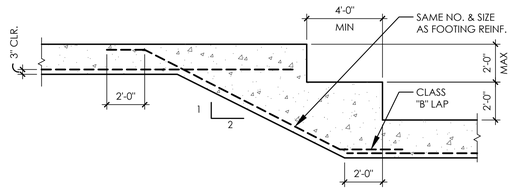
S121

SHEET 20 OF 95



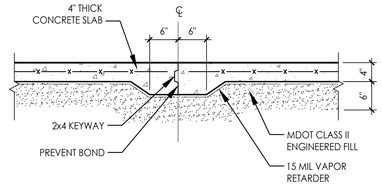
1 S500 **ANCHOR ROD DETAIL**

SCALE: 1-1/2" = 1'-0" D11



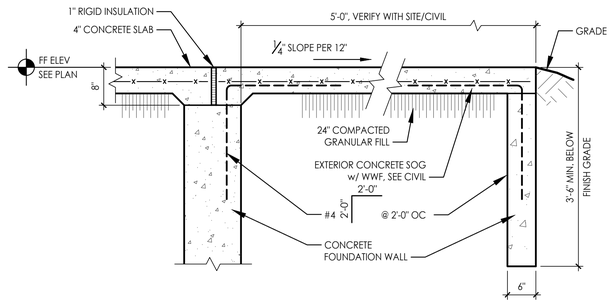
2 S500 **STEPPED FOOTING DETAIL**

SCALE: 1/4" = 1'-0" D10



3 S500 **SLAB CONSTRUCTION JOINT**

SCALE: 3/4" = 1'-0" D8



4 S500 **FROST WALL DETAIL**

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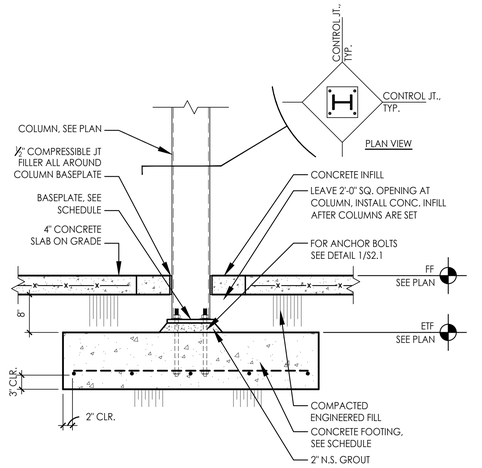
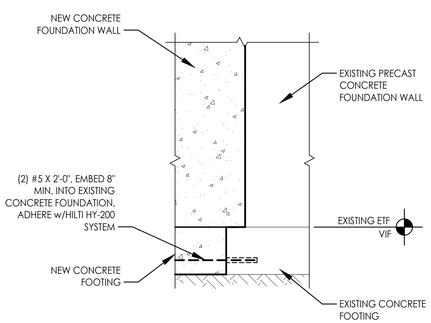


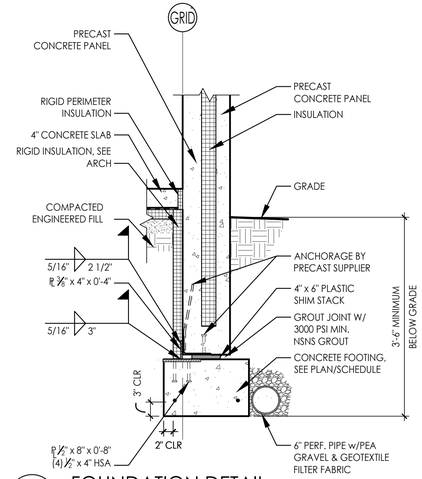
5 S500 **FOUNDATION DETAIL**

SCALE: 3/4" = 1'-0" D7



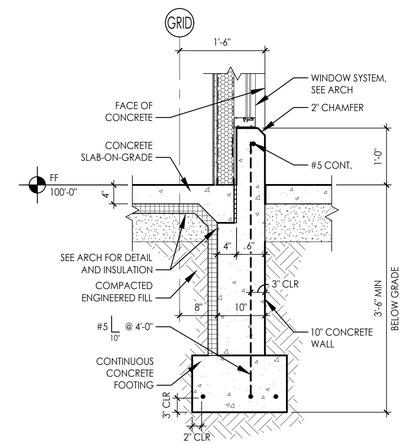
6 S500 **FOUNDATION SECTION**

SCALE: 3/4" = 1'-0" D60



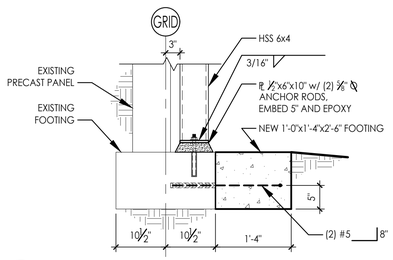
7 S500 **FOUNDATION DETAIL**

SCALE: 3/4" = 1'-0" D43



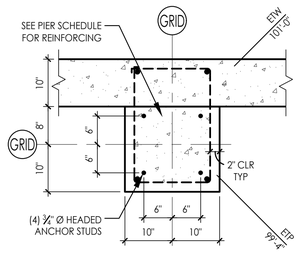
8 S500 **FOUNDATION AT CONNECTOR**

SCALE: 3/4" = 1'-0" D14A



9 S500 **FOUNDATION SECTION**

SCALE: 3/4" = 1'-0" D8A



10 S500 **PIER PLAN P1**

SCALE: 3/4" = 1'-0" P14

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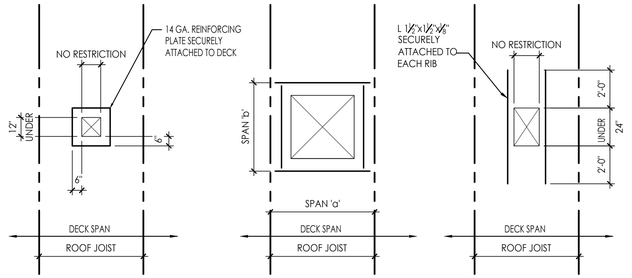
FOUNDATION DETAILS

S500

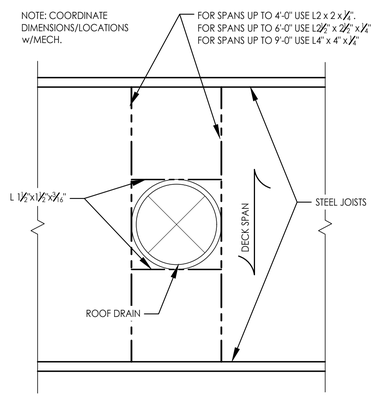
SHEET 21 OF 95



SPAN 'a'	MEMBER	SPAN 'b'	MEMBER
3'-0" MAX	L 2 1/2 x 2 1/2 x 1/4	3'-0" MAX	L 2 1/2 x 2 1/2 x 1/4
5'-0" MAX	C 3 x 4.1	5'-0" MAX	L 3 x 3 x 1/4
7'-0" MAX	C 5 x 6.7	7'-0" MAX	L 5 x 5 x 1/4
10'-0" MAX	C 6 x 8.2	10'-0" MAX	C6x8.2

NOTE: SEE MECHANICAL PLAN FOR ROOF OPENINGS

1 S520 — DECK SUPPORT AT ROOF OPENINGS — D33
NOT TO SCALE



2 S520 — ROOF DRAIN SUPPORT PLAN — D28
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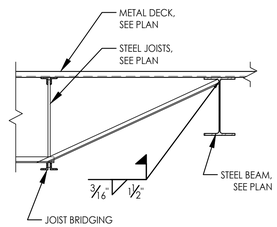

3 S520 — BRIDGING ANCHORAGE DETAIL — D34
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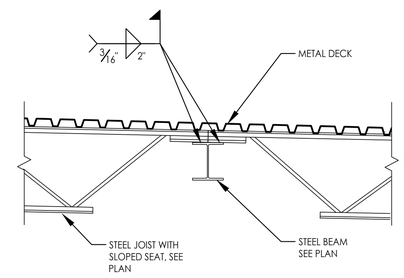

4 S520 — CONNECTION DETAIL — D52B
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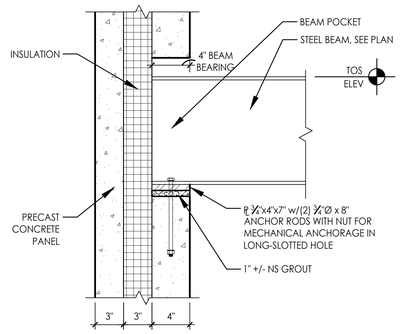

5 S520 — BEAM BEARING DETAIL — D120
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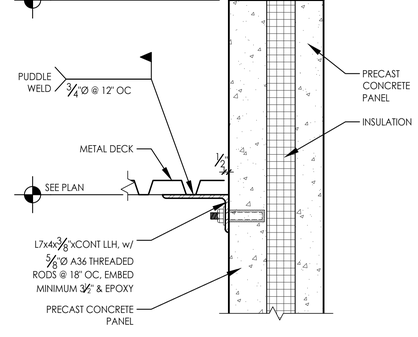

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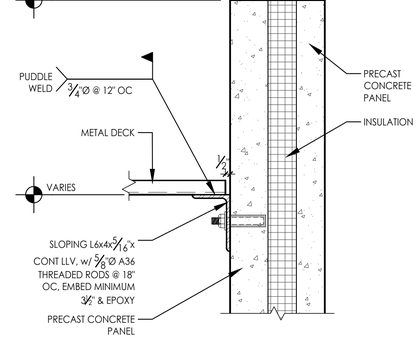

7 S520 — CONNECTION DETAIL — D40
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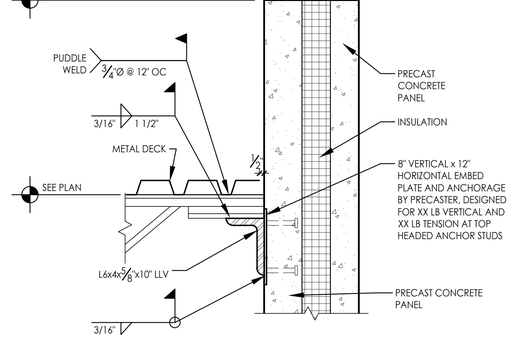

8 S520 — CONNECTION DETAIL — D408
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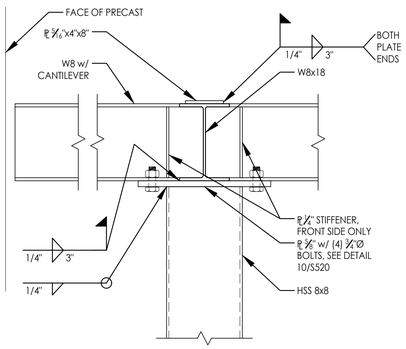
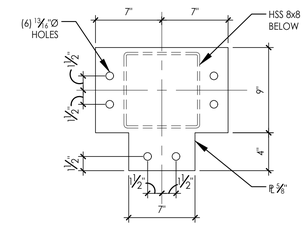
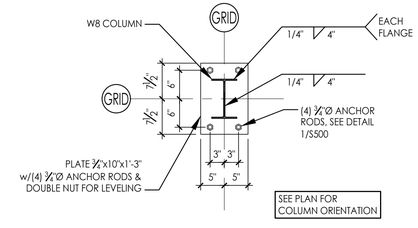


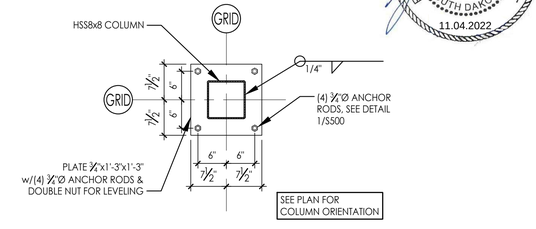
9 S520 — CONNECTION DETAIL — D41
SCALE: 1-1/2" = 1'-0"



10 S520 — COLUMN CAP PLATE — D42
SCALE: 1-1/2" = 1'-0"



11 S520 — BASEPLATE BP1 — BP1
SCALE: 3/4" = 1'-0"



12 S520 — BASEPLATE BP2 — BP2
SCALE: 3/4" = 1'-0"

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REV:	DATE:	DESCRIPTION:

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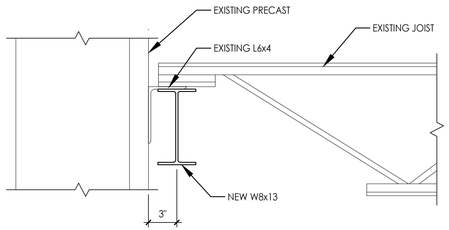
CONTRACT NO:
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: CAC
CHECKED BY: TAP

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022

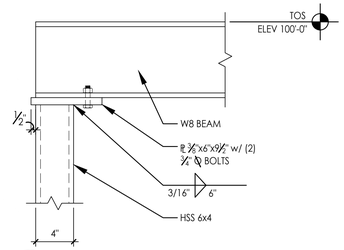
SHEET TITLE:
SUPERSTRUCTURE DETAILS

S520
SHEET 22 OF 95



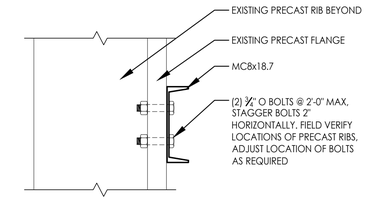
1 S521 CONNECTION DETAIL

SCALE: 1-1/2" = 1'-0" D6



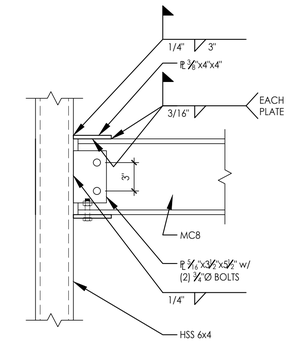
2 S521 CONNECTION DETAIL

SCALE: 1-1/2" = 1'-0" D2



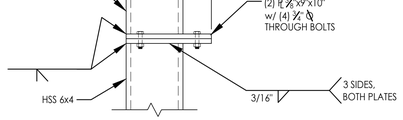
3 S521 CONNECTION DETAIL

SCALE: 1-1/2" = 1'-0" D3



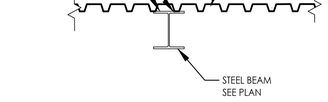
4 S521 CONNECTION DETAIL

SCALE: 1-1/2" = 1'-0" D4



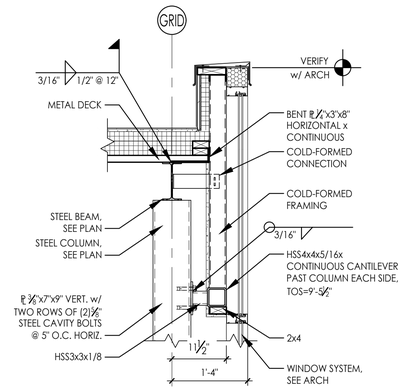
5 S521 OPTIONAL COLUMN SPLICE

SCALE: 1-1/2" = 1'-0" D5



6 S521 CONNECTION DETAIL

SCALE: 3/4" = 1'-0" D1



7 S521 FRAMING SECTION

SCALE: 3/4" = 1'-0" D44A

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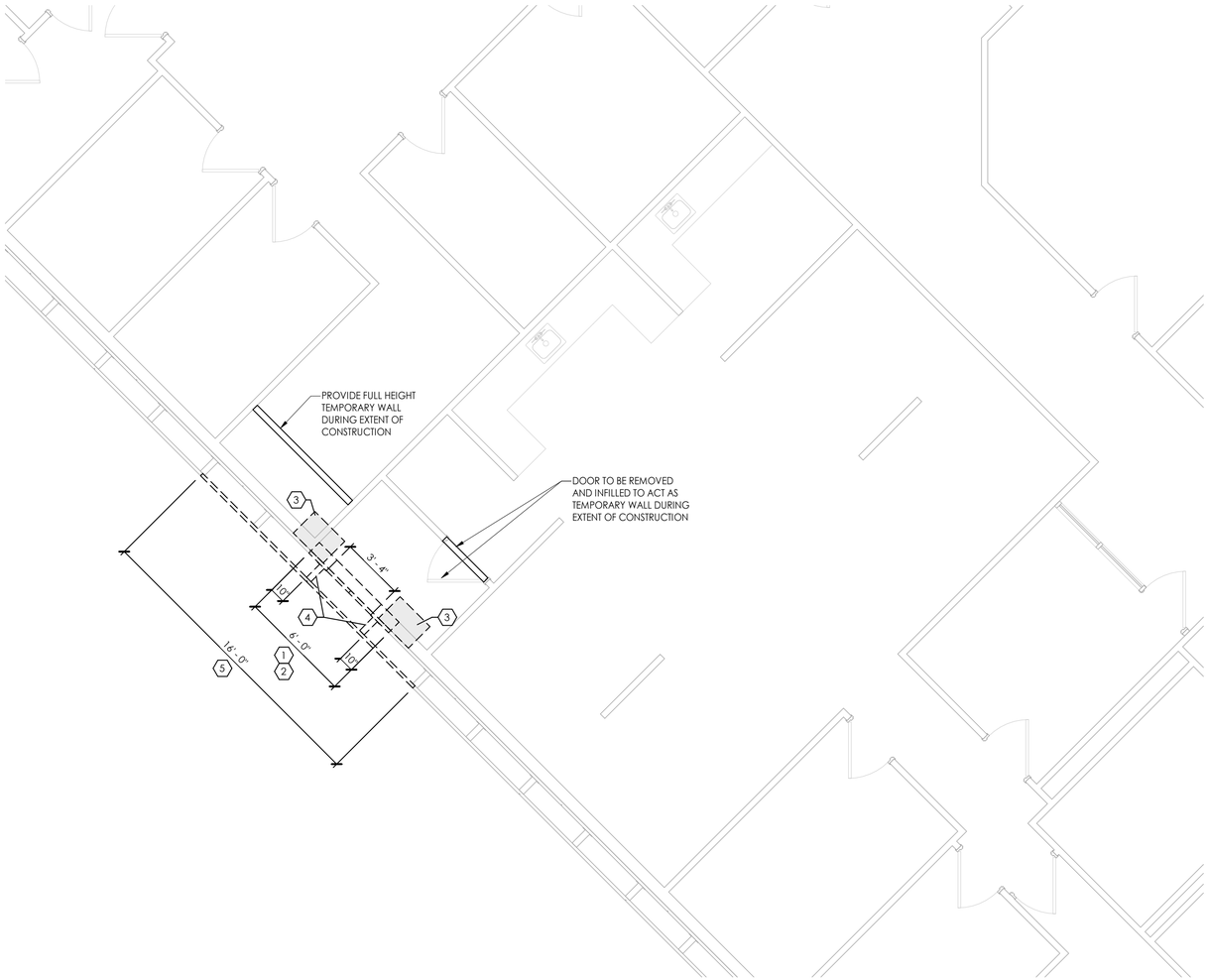
CHECKED BY: TAP

SHEET TITLE:

SUPERSTRUCTURE DETAILS

S521

SHEET 23 OF 95



NORTH

DEMOLITION PLAN

SCALE: 1/4" = 1'-0"

DEMOLITION KEY NOTES

1. REMOVE EXISTING WALL CONSTRUCTION AS SHOWN. PATCH & REPAIR ADJACENT SURFACES TO REMAIN AS NECESSARY TO PREPARE FOR NEW CONSTRUCTION AND/OR NEW FINISHES.
2. SAWCUT AND REMOVE EXISTING EXTERIOR PRECAST CONCRETE WALL CONSTRUCTION AS SHOWN. PATCH & REPAIR ADJACENT SURFACES TO REMAIN AS NECESSARY TO PREPARE FOR NEW CONSTRUCTION AND/OR NEW FINISHES.
3. SAWCUT AND REMOVE PORTION OF CONCRETE FLOOR TO ALLOW FOR INSTALLATION OF NEW STRUCTURE. REFER TO STRUCTURAL DRAWINGS FOR EXACT LOCATION. FIELD VERIFY LOCATION OF EXISTING STRUCTURE PRIOR TO DEMOLITION.
4. SAWCUT PORTION OF EXISTING VERTICAL PRECAST CONCRETE RIB. REFER TO NEW CONSTRUCTION DRAWINGS FOR EXTENT OF REMOVAL.
5. REMOVE EXISTING HORIZONTAL PRECAST CONCRETE PANEL AS SHOWN. GRIND EXISTING EXPOSED WELD PLATE TO SMOOTH FINISH. PAINT TO MATCH EXISTING VERTICAL CONCRETE RIB.

GENERAL DEMO NOTES

1. ALL DEMOLITION WORK REQUIRED IS NOT NECESSARILY LIMITED TO WHAT IS SHOWN ON THE DEMOLITION PLANS. THE INTENT IS TO REMOVE ALL MATERIALS AND ITEMS AS REQUIRED TO FACILITATE NEW CONSTRUCTION.
2. CONTRACTORS ARE TO VERIFY FIELD CONDITIONS. IF CONDITIONS DO NOT REFLECT WHAT IS NOTED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR IS TO NOTIFY THE ARCHITECT.
3. THIS PLAN IS TO BE USED IN CONJUNCTION WITH THE ENTIRE SET OF CONSTRUCTION DOCUMENTS. DO NOT REMOVE ANY ITEMS WITHOUT VERIFYING AND COORDINATING WITH ALL GENERAL TRADES AS TO HOW THEY RELATE TO THE OVERALL PROJECT.
4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING DUMPSTERS. LOCATION OF DUMPSTERS TO BE DETERMINED BY OWNER WITH CONTRACTORS INPUT.
5. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEMOLISHED MATERIALS. DO NOT ALLOW MATERIALS AND DEBRIS GENERATED BY DEMOLITION ACTIVITIES TO ACCUMULATE ON THE JOBSITE. REMOVE DAILY AND DISPOSE OF IN A LEGAL MANNER. NO ONSITE SALE OR BURNING OR REMOVED ITEMS IS PERMITTED.
6. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND/OR WORKMEN ON THE SITE TO PREVENT ACCIDENTS OR INJURY TO ANY PERSON ON, ABOUT OR ADJACENT TO THE PREMISES. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, CODES AND REGULATIONS PERTAINING TO SAFETY AND THE PREVENTION OF ACCIDENTS.
7. THE CONTRACTOR MUST MAINTAIN ADEQUATE SUPPORT, INSULATION, WATERPROOFING, EMERGENCY LIGHTING, SECURITY, ALARMS, ETC. FOR ALL OR PART OF ITEMS WHICH ARE TO REMAIN.
8. THE OWNER RESERVES THE RIGHTS TO ANY REMOVED MATERIALS OR ITEMS. CONTRACTOR TO COORDINATE WITH OWNER.
9. DO NOT CUT AND/OR PATCH STRUCTURAL ELEMENTS IN A MANNER THAT COULD CHANGE THEIR LOAD-CARRYING CAPACITY OR LOAD-DEFLECTION RATIO.
10. PATCH/REPAIR OR REPLACE ALL AREAS DAMAGED BY DEMOLITION, REWORK AS REQUIRED, PREPARE FOR NEW CONSTRUCTION AS REQUIRED. BRICK OR BLOCK PATCHING SHALL BE TOOTHED-IN TO MATCH EXISTING COURSING PATTERN.
11. WHERE WALLS & CEILINGS ARE TO BE REMOVED, ALL ITEMS THAT FALL WITH THE WALLS &/OR CEILINGS ARE TO BE REMOVED OR REROUTED. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING PLANS FOR ADDITIONAL DEMOLITION NOT SHOWN ON THIS SHEET.
12. CONSTRUCTION AREAS TO BE COMPLETELY SEPARATED FROM OCCUPIED AREAS WITH A ONE-HOUR FIRE RATED ASSEMBLY, AND WITH SUITABLE DUST BARRIER. TEMPORARILY SEAL OFF ALL RETURN & SUPPLY AIR DIFFUSERS IN CONSTRUCTION AREA. PROVIDE RECIRCULATING HEPA FILTER IN CONSTRUCTION AREA. ALL DEMOLISHED MATERIAL IS TO BE REMOVED FROM SITE IN A COVERED CONTAINER. NEGATIVE AIR PRESSURE TO BE MAINTAINED WITHIN CONSTRUCTION ZONE.
13. IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING DEMOLITION, CONTRACTOR SHALL CONTACT OWNER FOR ABATEMENT.
14. REMOVE, REPLACE, PATCH, AND REPAIR MATERIALS AND SURFACES CUT OR DAMAGED DURING DEMOLITION, BY METHODS AND WITH MATERIALS SO AS NOT TO VOID EXISTING WARRANTIES.
15. CLEAN AREAS AND SPACES WHERE CUTTING AND PATCHING ARE PERFORMED.
16. INTERIOR WALLS TO BE REMOVED, SHALL BE REMOVED THE ENTIRE HEIGHT OF THE WALL UNLESS REQUIRED OTHERWISE BY NEW OPENINGS IN EXISTING WALLS TO REMAIN.
17. CONTRACTOR SHALL PATCH, REPAIR, AND INFILL ALL APPLIED FIREPROOFING MATERIAL IN AREAS LEFT UNPROTECTED DUE TO REMOVAL OF EXISTING ELEMENTS OR AREAS DAMAGED DURING NEW WORK AND DEMOLITION. MATCH EXISTING FIREPROOFING MATERIAL TYPE AND THICKNESS TO MAINTAIN REQUIRED LEVEL OR PROTECTION.

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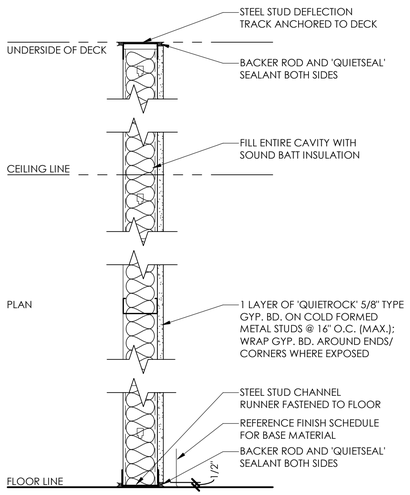
SHEET TITLE:

FIRST FLOOR DEMOLITION PLAN

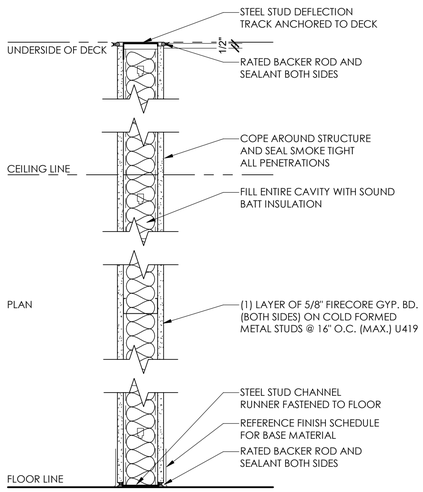
AD101

SHEET 24 OF 95



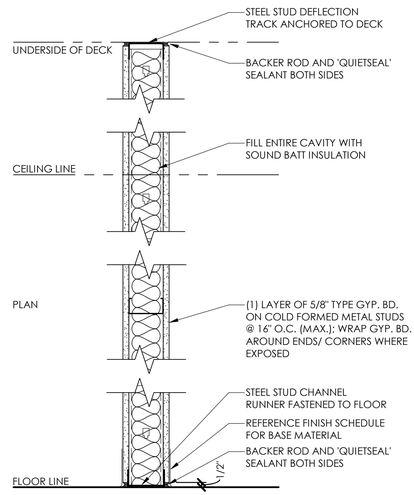
TYPE	STUD SIZE	PARTITION WIDTH	FIRE RATING	SOUND ATTENUATION
C3	2-1/2"	3-1/8"	-	BATTS STC 52 MIN.
C4	3-5/8"	4-1/4"	-	BATTS STC 52 MIN.

03 / A001 WALL TYPE C
SCALE: 1 1/2" = 1'-0"



TYPE	STUD SIZE	PARTITION WIDTH	FIRE RATING	SOUND ATTENUATION	NOTES
B4	3-5/8"	4-7/8"	1 HOUR	BATTS	U419

02 / A001 WALL TYPE B
SCALE: 1 1/2" = 1'-0"



TYPE	STUD SIZE	PARTITION WIDTH	FIRE RATING	SOUND ATTENUATION
A6	6"	7-1/4"	1 HOUR	BATTS STC 49 MIN
A4	3-5/8"	4-7/8"	-	-

01 / A001 WALL TYPE A
SCALE: 1 1/2" = 1'-0"

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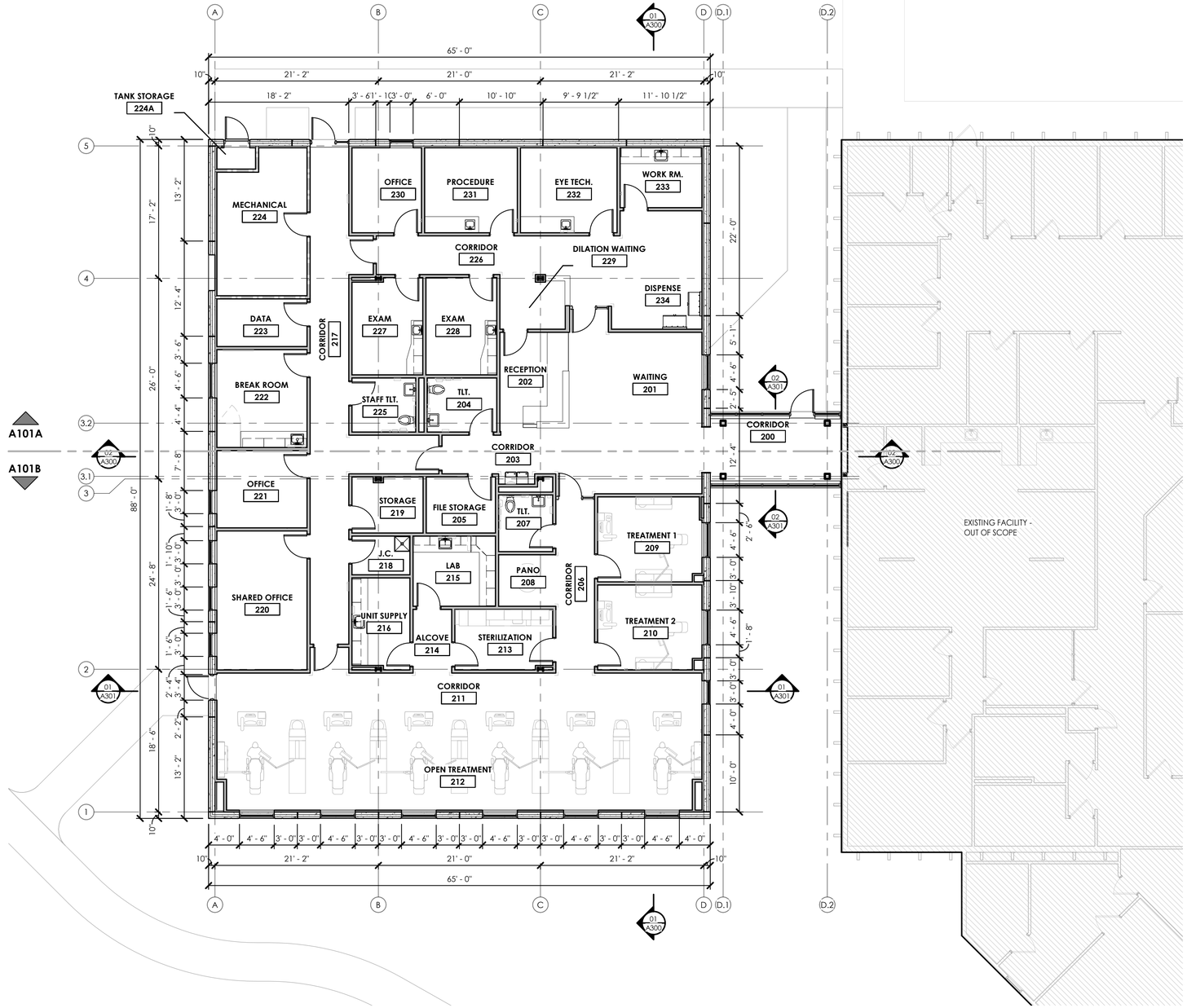
SHEET TITLE:

WALL TYPES

A001

SHEET 25 OF 95



NORTH

FLOOR PLAN - COMPOSITE

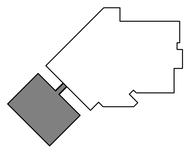
SCALE: 1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL WALLS ARE WALL TYPE (A4) UNLESS NOTED OTHERWISE.
2. EXTERIOR WALL FURRING TO BE WALL TYPE (C3) UNLESS NOTED OTHERWISE.
3. ALL FURRING AT COLUMNS TO BE (C3) UNLESS NOTED OTHERWISE. PROVIDE LARGER FRAMING AS NEEDED TO ENCLOSE PIPES RUNNING ADJACENT TO COLUMNS. FRAMING TO BE AS TIGHT AS POSSIBLE.
4. PROVIDE UL RATED WALLS WHERE SHOWN. REFER TO WALL TYPES FOR WALL CONSTRUCTION.
5. ALL COUNTERTOP OUTSIDE CORNERS TO BE 2" RADIUS UNLESS NOTED OTHERWISE.
6. PROVIDE BLOCKING IN WALLS FOR OWNER PROVIDED EQUIPMENT AS SHOWN ON ENLARGED PLANS AND ON INTERIOR ELEVATIONS. COORDINATE FINAL LOCATIONS WITH OWNER.
7. ALL WALL BOARD CARRYING CERAMIC TILE SHALL BE CEMENT BOARD - REFER TO FINISH SCHEDULE.
8. ALL WALLS CARRYING PLUMBING FIXTURES SHALL BE 5/8" MOISTURE RESISTANT FIRECORE GYP BOARD UNLESS NOTED OTHERWISE.
9. CONTRACTOR SHALL PATCH, REPAIR, AND INFILL ALL APPLIED FIREPROOFING MATERIAL IN AREAS LEFT UNPROTECTED DUE TO REMOVAL OF EXISTING ELEMENTS OR AREAS DAMAGED DURING NEW WORK AND DEMOLITION. MATCH EXISTING FIREPROOFING MATERIAL TYPE AND THICKNESS TO MAINTAIN REQUIRED LEVEL OR PROTECTION.

FLOOR PLAN LEGEND

- EXISTING NON-FIRE RATED WALL
- NEW NON-FIRE RATED WALL
- 1-HOUR FIRE RATED PARTITION - UL DES U419
- NEW DOOR



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FLOOR PLAN – COMPOSITE

A100

SHEET 26 OF 95

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT MEIS
SOUTH DAKOTA
11.04.2022

FLOOR PLAN KEY NOTES

1. UNDER-MOUNTED STAINLESS STEEL SINK - REFER TO PLUMBING.
2. MOP SINK - REFER TO PLUMBING.
3. BI-LEVEL DRINKING FOUNTAIN W/WATER BOTTLE FILLING STATION - REFER TO PLUMBING.
4. SEMI-RECESSED FIRE EXTINGUISHER CABINET.
5. CUSTOM RECEPTION DESK W/ SOLID SURFACE COUNTERTOP - REFER TO INTERIOR ELEVATIONS.
6. STEEL COLUMN - REFER TO STRUCTRAL.
7. DENTAL CASEWORK - REFER TO EQUIPMENT PLANS.
8. DENTAL CHAIR - REFER EQUIPMENT PLANS.
9. AIR HANDLING UNIT - REFER TO MECHANICAL.
10. AIR COMPRESSOR - REFER TO MECHANICAL.
11. WATER HEATER - REFER TO MECHANICAL.
12. VACUUM HEATER - REFER TO MECHANICAL.
13. CONDENSING UNIT - REFER TO MECHANICAL.
14. NEW CONCRETE SIDEWALK - REFER TO CIVIL.

FLOOR PLAN GENERAL NOTES

1. ALL WALLS ARE WALL TYPE A4 UNLESS NOTED OTHERWISE.
2. EXTERIOR WALL FURRING TO BE WALL TYPE C2 UNLESS NOTED OTHERWISE.
3. ALL FURRING AT COLUMNS TO BE C2 UNLESS NOTED OTHERWISE. PROVIDE LARGER FRAMING AS NEEDED TO ENCLOSE PIPES RUNNING ADJACENT TO COLUMNS. FRAMING TO BE AS TIGHT AS POSSIBLE.
4. PROVIDE UL RATED WALLS WHERE SHOWN. REFER TO WALL TYPES FOR WALL CONSTRUCTION.
5. ALL COUNTERTOP OUTSIDE CORNERS TO BE 2" RADIUS UNLESS NOTED OTHERWISE.
6. PROVIDE BLOCKING IN WALLS FOR OWNER PROVIDED EQUIPMENT AS SHOWN ON ENLARGED PLANS AND ON INTERIOR ELEVATIONS. COORDINATE FINAL LOCATIONS WITH OWNER.
7. ALL WALL BOARD CARRYING CERAMIC TILE SHALL BE CEMENT BOARD - REFER TO FINISH SCHEDULE.
8. ALL WALLS CARRYING PLUMBING FIXTURES SHALL BE 5/8" MOISTURE RESISTANT FIRECORE GYP BOARD UNLESS NOTED OTHERWISE.
9. CONTRACTOR SHALL PATCH, REPAIR, AND INFILL ALL APPLIED FIREPROOFING MATERIAL IN AREAS LEFT UNPROTECTED DUE TO REMOVAL OF EXISTING ELEMENTS OR AREAS DAMAGED DURING NEW WORK AND DEMOLITION. MATCH EXISTING FIREPROOFING MATERIAL TYPE AND THICKNESS TO MAINTAIN REQUIRED LEVEL OR PROTECTION.

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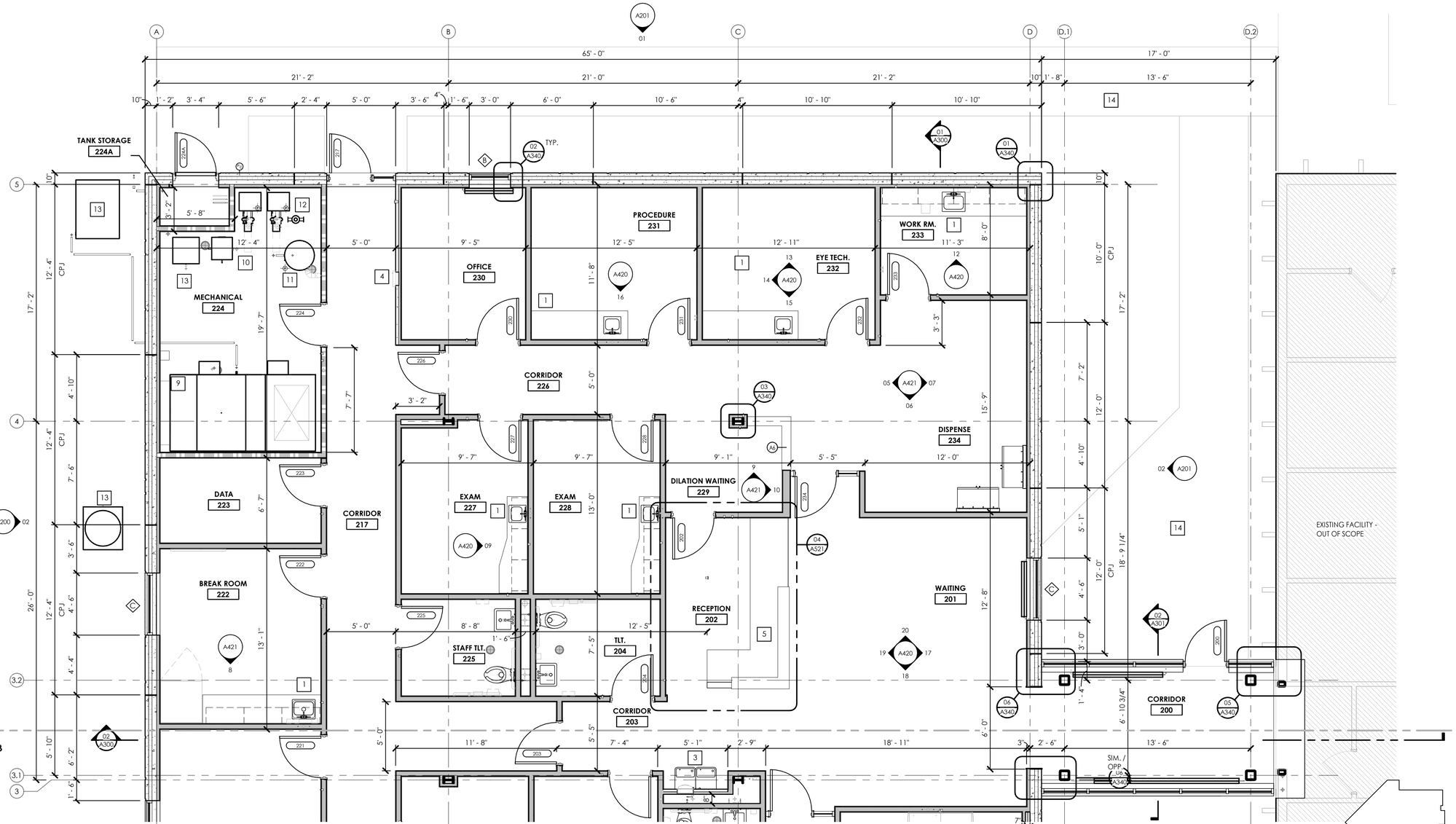

NORTH

FLOOR PLAN - UNIT A
SCALE: 1/4" = 1'-0"

KEY PLAN

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FT. THOMPSON INDIAN HEALTH CENTER DENTAL & OPTOMETRY ADDITION

1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
INDIAN HEALTH SERVICE
DIVISION OF ENGINEERING SERVICES
GREAT PLAINS AREA

REVIEWED:
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APPROVED:
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CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: STL
CHECKED BY:

SHEET TITLE:

FLOOR PLAN – UNIT A

A101A

SHEET 27 OF 95

FLOOR PLAN KEY NOTES

1. UNDER-MOUNTED STAINLESS STEEL SINK - REFER TO PLUMBING.
2. MOP SINK - REFER TO PLUMBING.
3. BI-LEVEL DRINKING FOUNTAIN W/WATER BOTTLE FILLING STATION - REFER TO PLUMBING.
4. SEMI-RECESSED FIRE EXTINGUISHER CABINET.
5. CUSTOM RECEPTION DESK W/ SOLID SURFACE COUNTERTOP - REFER TO INTERIOR ELEVATIONS.
6. STEEL COLUMN - REFER TO STRUCTRAL.
7. DENTAL CASEWORK - REFER TO EQUIPMENT PLANS.
8. DENTAL CHAIR - REFER EQUIPMENT PLANS.
9. AIR HANDLING UNIT - REFER TO MECHANICAL.
10. AIR COMPRESSOR - REFER TO MECHANICAL.
11. WATER HEATER - REFER TO MECHANICAL.
12. VACUUM HEATER - REFER TO MECHANICAL.
13. CONDENSING UNIT - REFER TO MECHANICAL.
14. NEW CONCRETE SIDEWALK - REFER TO CIVIL.

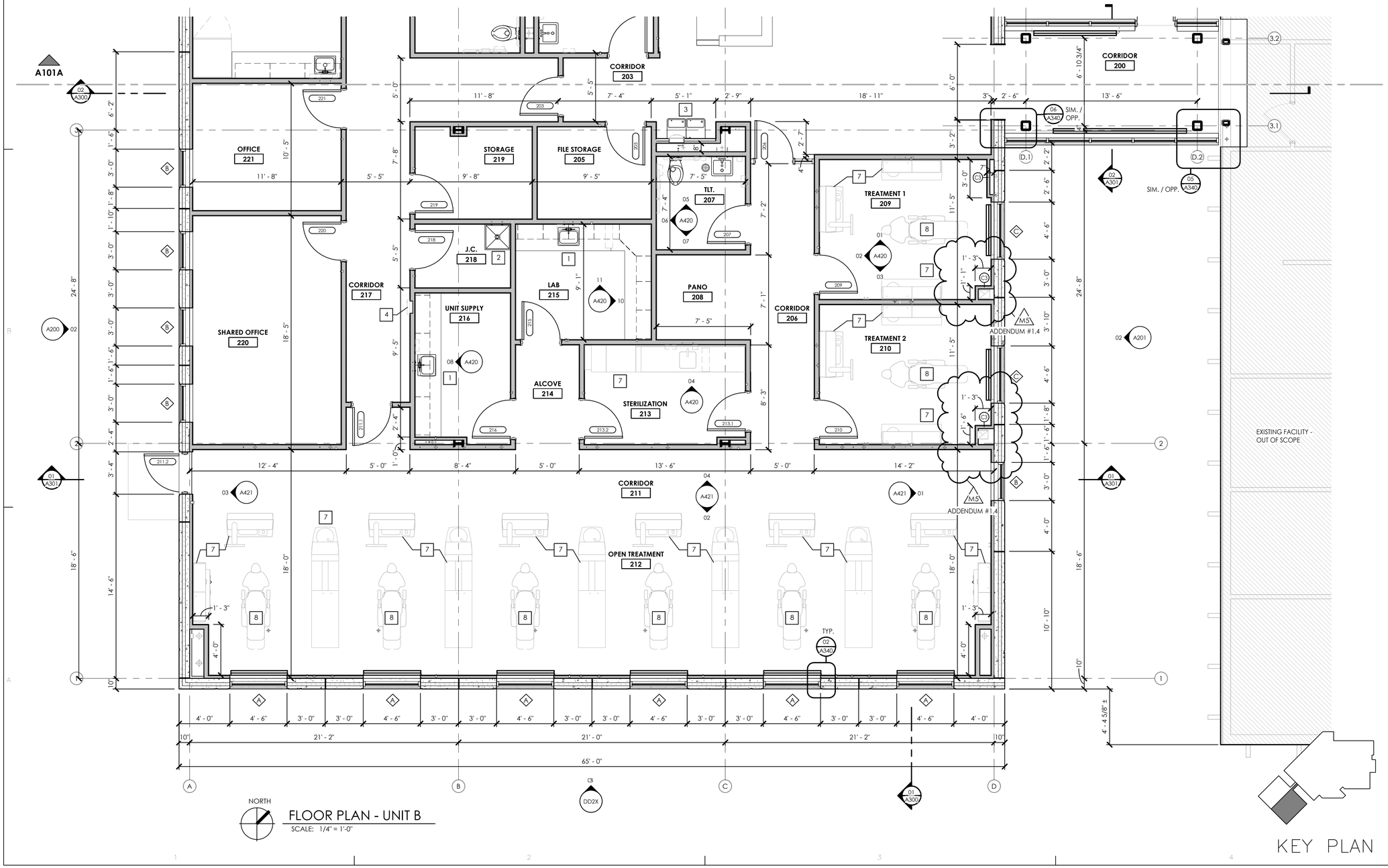
FLOOR PLAN GENERAL NOTES

1. ALL WALLS ARE WALL TYPE A4 UNLESS NOTED OTHERWISE.
2. EXTERIOR WALL FURRING TO BE WALL TYPE C3 UNLESS NOTED OTHERWISE.
3. ALL FURRING AT COLUMNS TO BE C3 UNLESS NOTED OTHERWISE. PROVIDE LARGER FRAMING AS NEEDED TO ENCLOSE PIPES RUNNING ADJACENT TO COLUMNS. FRAMING TO BE AS TIGHT AS POSSIBLE.
4. PROVIDE UL RATED WALLS WHERE SHOWN. REFER TO WALL TYPES FOR WALL CONSTRUCTION.
5. ALL COUNTERTOP OUTSIDE CORNERS TO BE 2" RADIUS UNLESS NOTED OTHERWISE.
6. PROVIDE BLOCKING IN WALLS FOR OWNER PROVIDED EQUIPMENT AS SHOWN ON ENLARGED PLANS AND ON INTERIOR ELEVATIONS. COORDINATE FINAL LOCATIONS WITH OWNER.
7. ALL WALL BOARD CARRYING CERAMIC TILE SHALL BE CEMENT BOARD - REFER TO FINISH SCHEDULE.
8. ALL WALLS CARRYING PLUMBING FIXTURES SHALL BE 5/8" MOISTURE RESISTANT FIRECORE GYP BOARD UNLESS NOTED OTHERWISE.
9. CONTRACTOR SHALL PATCH, REPAIR, AND INFILL ALL APPLIED FIREPROOFING MATERIAL IN AREAS LEFT UNPROTECTED DUE TO REMOVAL OF EXISTING ELEMENTS OR AREAS DAMAGED DURING NEW WORK AND DEMOLITION. MATCH EXISTING FIREPROOFING MATERIAL TYPE AND THICKNESS TO MAINTAIN REQUIRED LEVEL OR PROTECTION.

FLOOR PLAN LEGEND

- EXISTING NON-FIRE RATED WALL
- NEW NON-FIRE RATED WALL
- 1-HOUR FIRE RATED PARTITION - UL DES U419
- NEW DOOR

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERZ
SOUTH DAKOTA
11.04.2022



FLOOR PLAN - UNIT B
SCALE: 1/4" = 1'-0"

KEY PLAN

SEVEN GENERATIONS ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

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1	09/08/2022	ADDENDUM #1.3
0	10/27/2022	ADDENDUM #1.4

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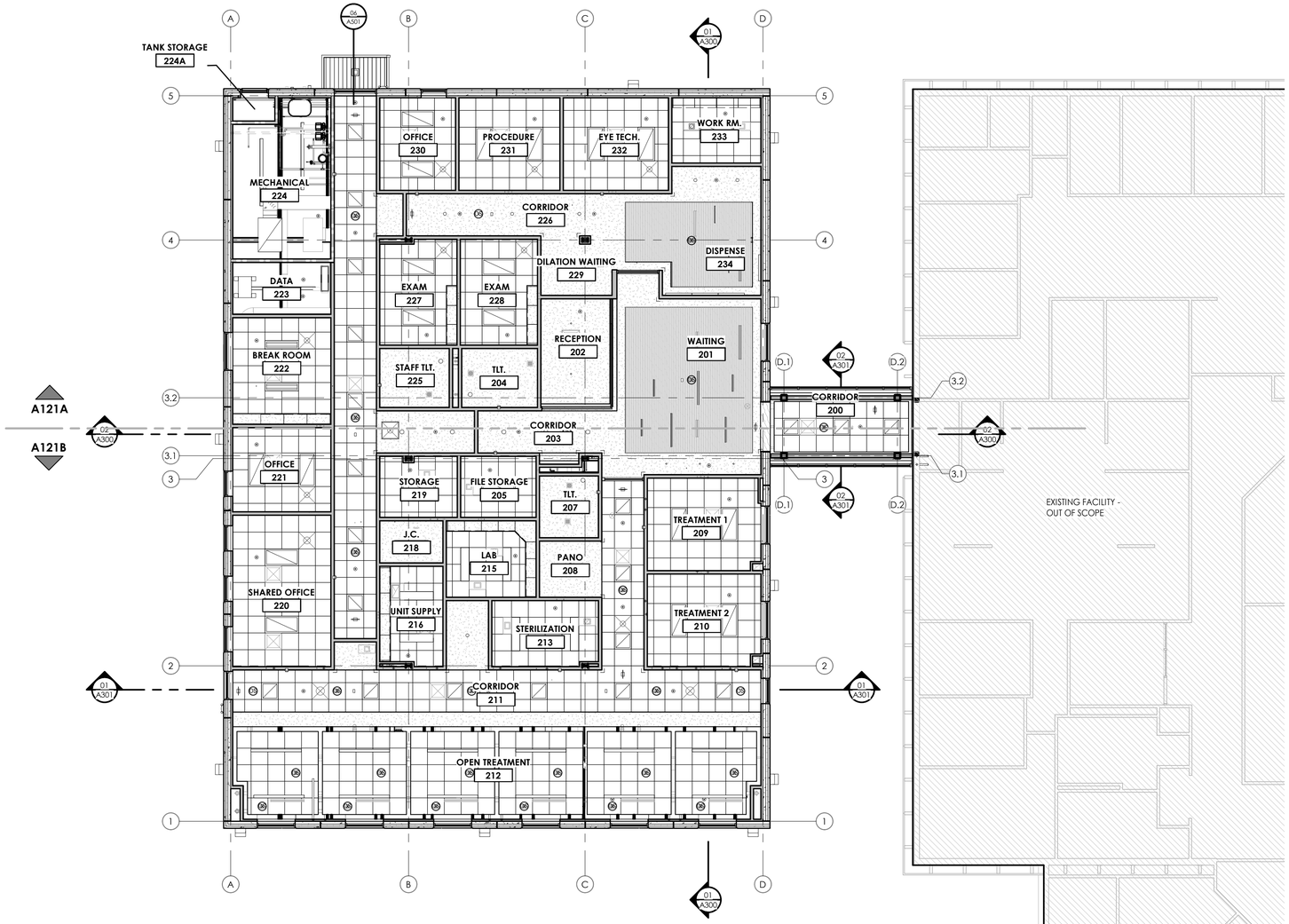
FLOOR PLAN – UNIT B

A101B

SHEET 28 OF 95



NORTH

REFLECTED CEILING PLAN - ADDITION

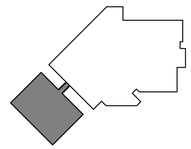
SCALE: 1/8" = 1'-0"

GENERAL NOTES - CEILING PLAN

1. CEILINGS IN ROOMS TO BE CENTERED.
2. ELECTRICAL AND MECHANICAL FIXTURES AND DUCTWORK ARE SHOWN FOR REFERENCE ONLY. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.
3. REFER TO FINISH SCHEDULE FOR CEILING FINISHES.

REFLECTED CEILING PLAN LEGEND

- SUSPENDED ACOUSTIC TILE
- FINISHED GYPSUM BOARD CEILING
- SUPPLY DIFFUSER - SEE MECHANICAL DRAWINGS
- RETURN AIR DIFFUSER - SEE MECHANICAL DRAWINGS
- LINEAR LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
- CEILING MOUNTED 2x2 LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
- CEILING MOUNTED 2x4 LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
- CEILING MOUNTED EXIT SIGN - SEE ELECTRICAL DRAWINGS
- RECESSED LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
- OCCUPANCY SENSOR - SEE ELECTRICAL DRAWINGS
- RETURN AIR GRILLE - SEE MECHANICAL DRAWINGS
- RETURN AIR DIFFUSER - SEE MECHANICAL DRAWINGS
- SUPPLY DIFFUSER - SEE MECHANICAL DRAWINGS
- SMOKE DETECTOR - SEE ELECTRICAL DRAWINGS
- FIRE ALARM STROBE - SEE ELECTRICAL DRAWINGS
- 8'-0" CEILING HEIGHT ABOVE FINISHED FLOOR
- EXP. EXPOSED STRUCTURE
- VARIES CEILING HEIGHT VARIES



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REFLECTED CEILING PLAN – COMPOSITE

A120

SHEET 29 OF 95

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT REISS
SOUTH DAKOTA
11.04.2022

GENERAL NOTES - CEILING PLAN

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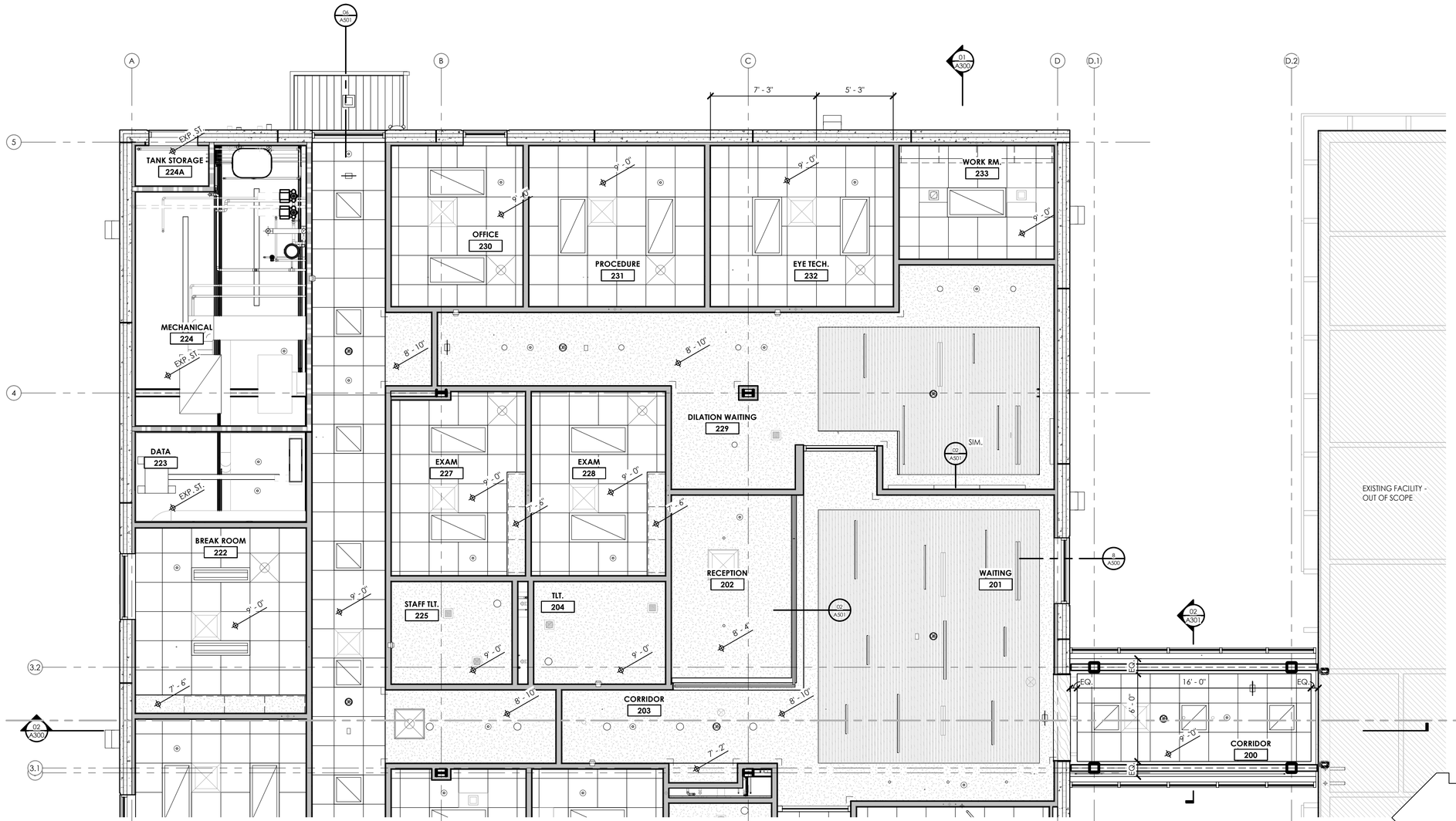

NORTH

REFLECTED CEILING PLAN - UNIT A

SCALE: 1/4" = 1'-0"

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REFLECTED CEILING PLAN – UNIT A

A121A

SHEET 30 OF 95

GENERAL NOTES - CEILING PLAN

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- SMOKE DETECTOR - SEE ELECTRICAL DRAWINGS
- FIRE ALARM STROBE - SEE ELECTRICAL DRAWINGS
- 8'-0" — CEILING HEIGHT ABOVE FINISHED FLOOR
- EXP. — EXPOSED STRUCTURE
- VARIES — CEILING HEIGHT VARIES

NORTH

REFLECTED CEILING PLAN - UNIT B

SCALE: 1/4" = 1'-0"

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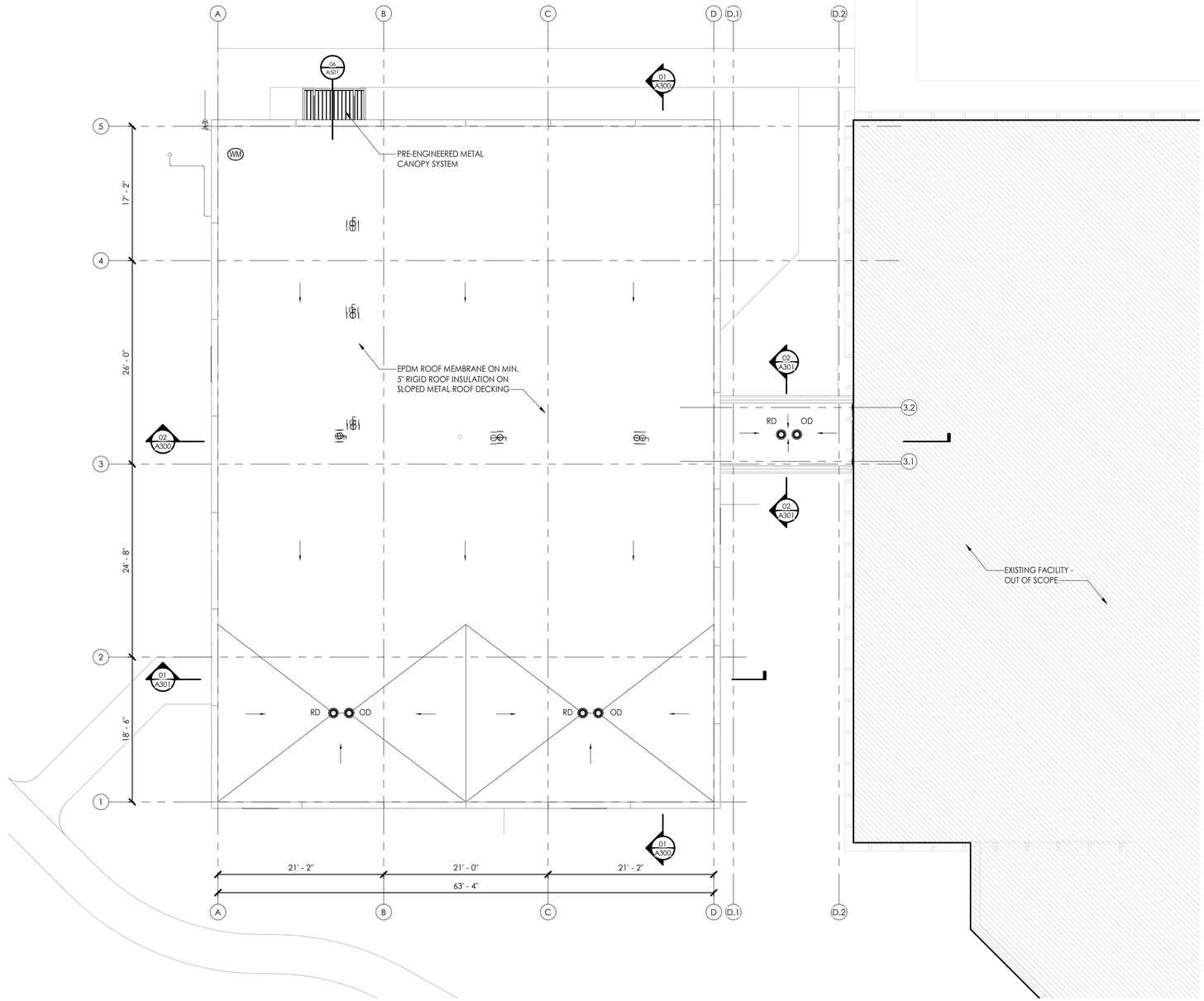
REFLECTED CEILING PLAN – UNIT B

A121B

SHEET 31 OF 95



NORTH

ROOF PLAN

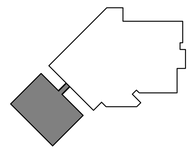
SCALE: 1/8" = 1'-0"

ROOF PLAN LEGEND

R.D.	NEW ROOF DRAIN
O.D.	OVERFLOW DRAIN
E.F.	EXISTING EXHAUST FAN (E.F.) OR RELIEF VENT (R.V.) IN ROOF AREA
	INDICATES ROOF PITCH
	RUBBER ROOF WALKWAY TRAFFIC PAD - ADHERE PAD TO ROOF MEMBRANE
	TAPERED INSULATION
	ICE AND WATER SHIELD

GENERAL NOTES - ROOF PLAN

1. SEE MECHANICAL DRAWINGS FOR LOCATIONS OF PLUMBING VENTS, FLASH AS SPECIFIED.
2. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, IF ANY, IN ROOF(S).
3. TYPICAL ROOF IS (FULLY ADHERED OR MECHANICALLY FASTENED) SINGLE-PLY MEMBRANE ROOFING ON RIGID INSULATION ON METAL DECK (PROVIDE TAPERED INSULATION TO CREATE SLOPES TO DRAINS)
4. TAPERED INSULATION LAYOUTS ARE SCHEMATIC ONLY. FINAL LAYOUT FOR THE PROPOSED AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. MINIMUM 1/4" PER FOOT SLOPE AT ALL NEW LOW SLOPE ROOF AREAS.
6. MINIMUM 1/8" PER FOOT SLOPE AT ALL EXISTING RE-ROOF LOW SLOPE ROOF AREAS.



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ROOF PLAN

A140

SHEET 32 OF 95

EXTERIOR ELEVATIONS LEGEND

PRECAST CONCRETE FINISH 1 - PC1

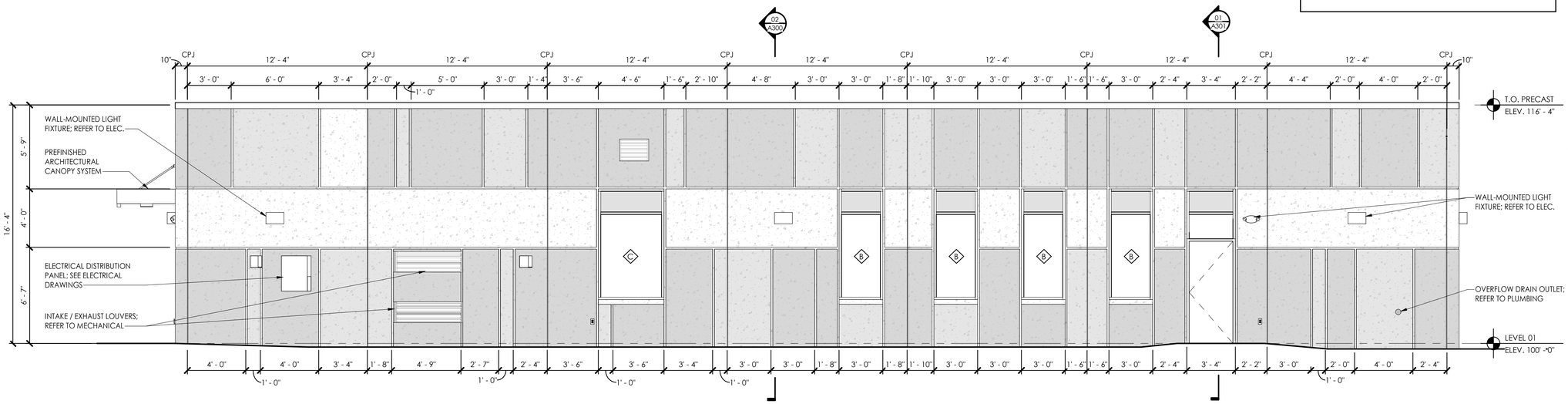
BASIS OF DESIGN:
CONCRETE COLOR: #25 DARK DUFF
MIX: 3% WHITE PORTLAND CEMENT
FINISH: SMOOTH - LIGHT SANDBLAST

PRECAST CONCRETE FINISH 1 - PC2

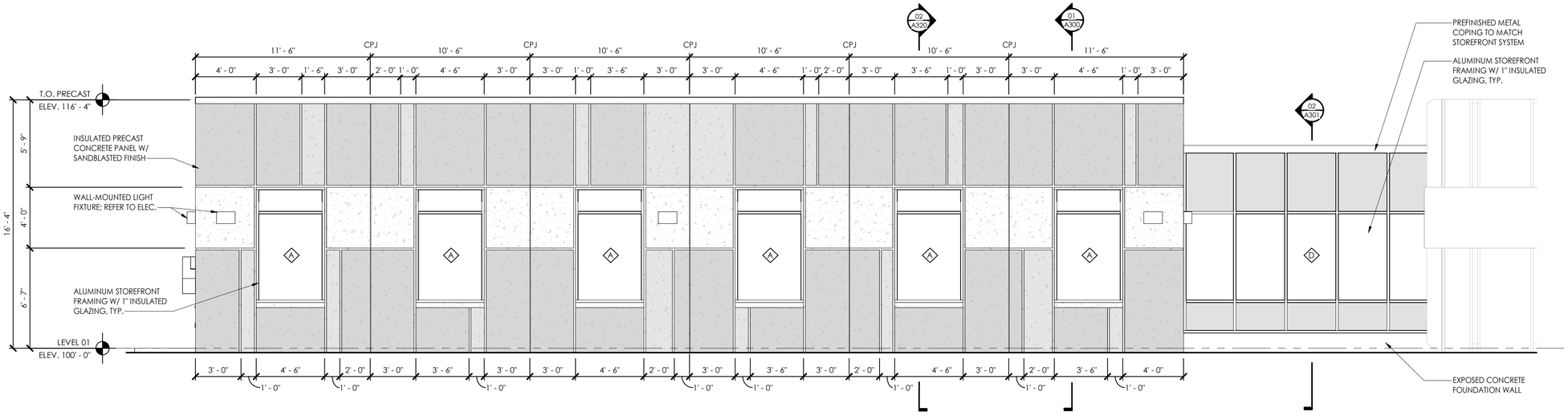
BASIS OF DESIGN:
CONCRETE COLOR: #25 DARK DUFF
MIX: 3% WHITE PORTLAND CEMENT
FINISH: SMOOTH - MEDIUM SANDBLAST

PRECAST CONCRETE FINISH 1 - PC3

BASIS OF DESIGN:
CONCRETE COLOR: #25 DARK DUFF
MIX: 3% WHITE PORTLAND CEMENT
FINISH: SMOOTH - ACID ETCHED



02 A200 EXTERIOR ELEVATION - WEST
SCALE: 1/4" = 1'-0"



01 A200 EXTERIOR ELEVATION - SOUTH
SCALE: 1/4" = 1'-0"

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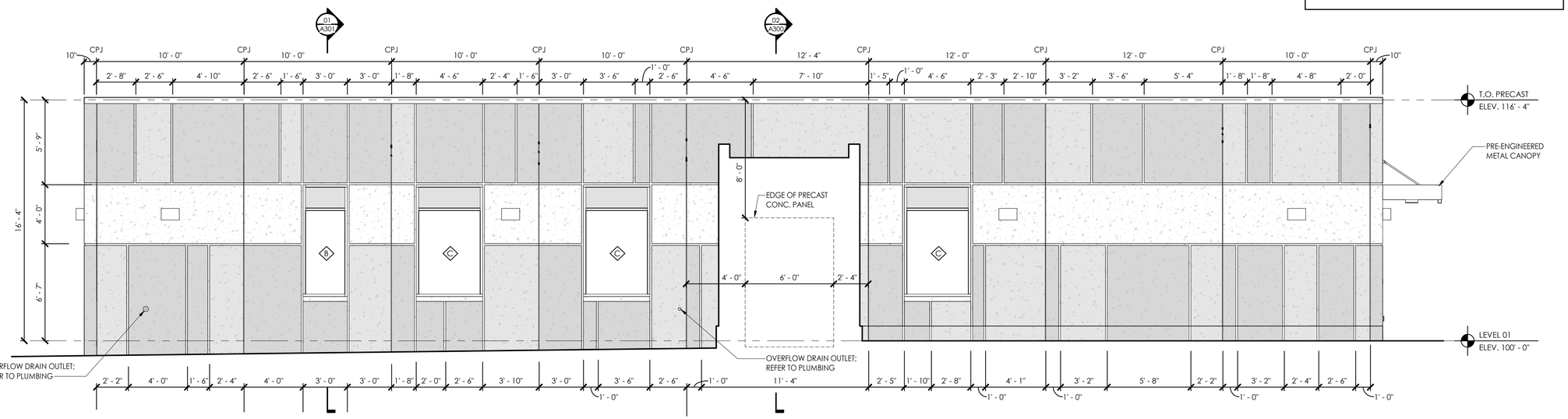
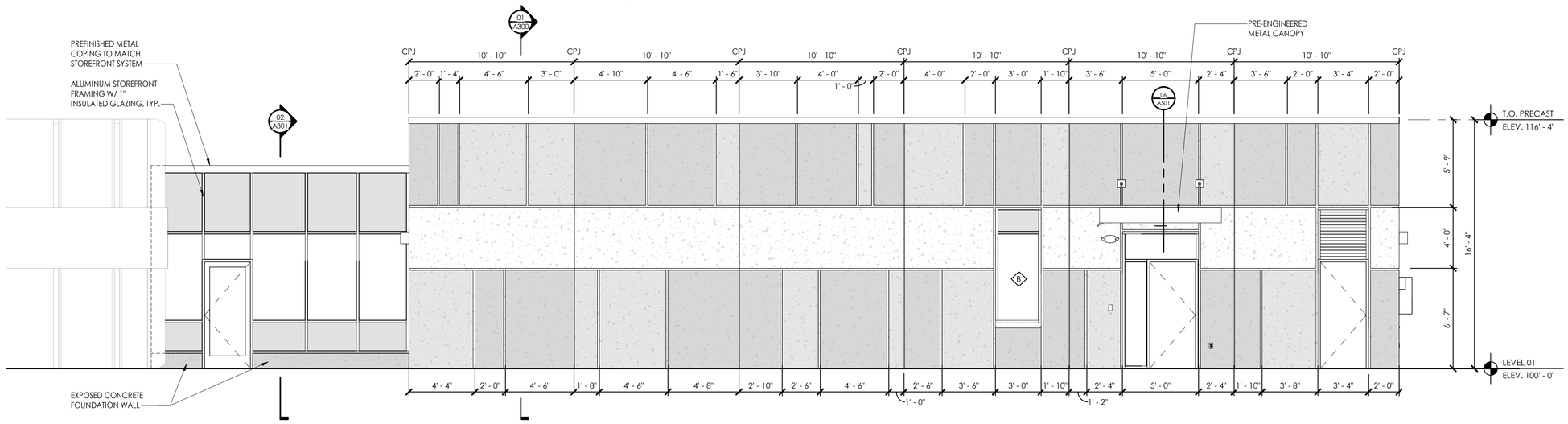
EXTERIOR ELEVATIONS

A200

SHEET 33 OF 95



02 A201 EXTERIOR ELEVATION - EAST
SCALE: 1/4" = 1'-0"



01 A201 EXTERIOR ELEVATION - NORTH
SCALE: 1/4" = 1'-0"

EXTERIOR ELEVATIONS LEGEND

PRECAST CONCRETE FINISH 1 - PC1

BASIS OF DESIGN:
CONCRETE COLOR: #25 DARK DUFF
MIX: 3% WHITE PORTLAND CEMENT
FINISH: SMOOTH - LIGHT SANDBLAST

PRECAST CONCRETE FINISH 1 - PC2

BASIS OF DESIGN:
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MIX: 3% WHITE PORTLAND CEMENT
FINISH: SMOOTH - MEDIUM SANDBLAST

PRECAST CONCRETE FINISH 1 - PC3

BASIS OF DESIGN:
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MIX: 3% WHITE PORTLAND CEMENT
FINISH: SMOOTH - ACID ETCHED

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022

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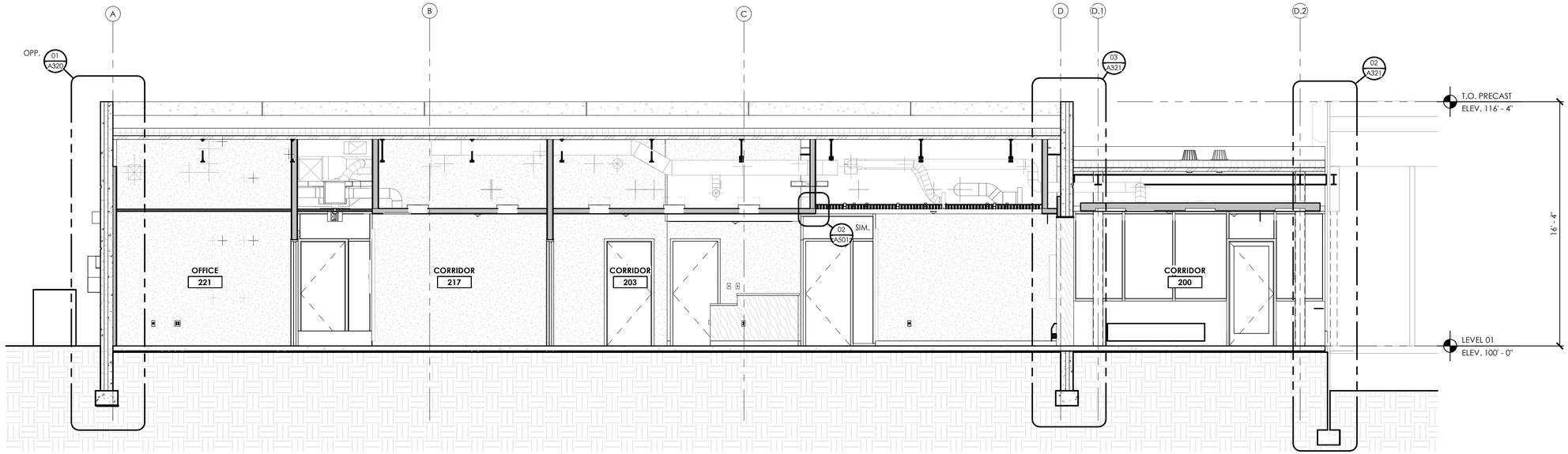
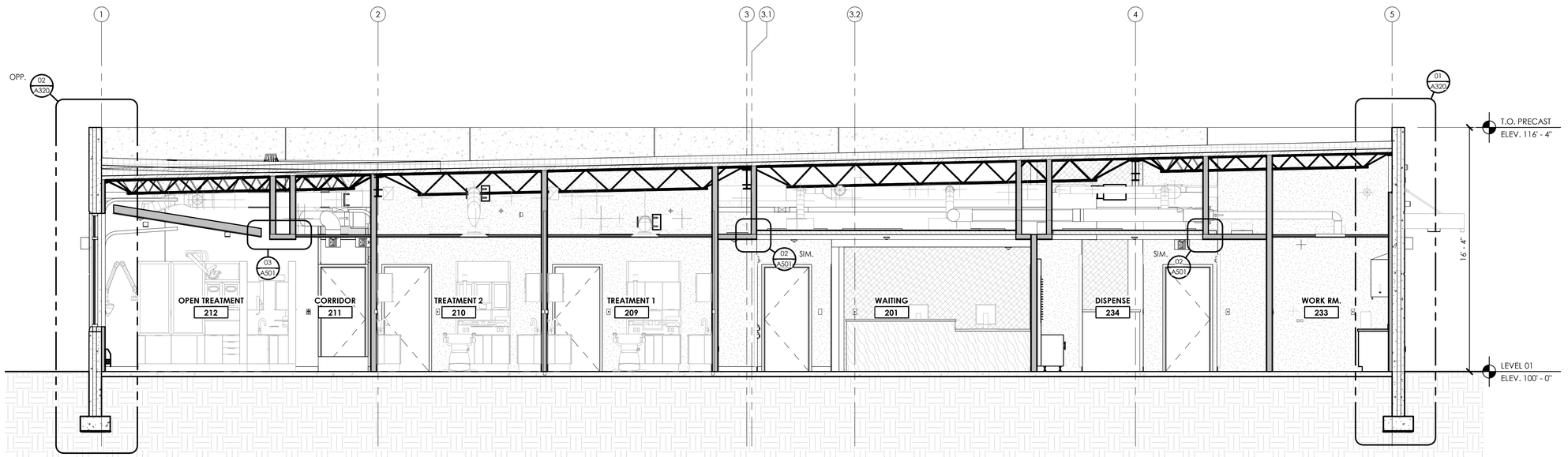
SHEET 34 OF 95



02 A300 E/W BUILDING SECTION @ CONNECTOR
SCALE: 1/4" = 1'-0"



01 A300 N/S BUILDING SECTION
SCALE: 1/4" = 1'-0"

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414 S Burdick St #300
Kalamazoo, MI 49007
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REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT
REIS
SOUTH DAKOTA
11.04.2022

FT. THOMPSON INDIAN HEALTH CENTER DENTAL & OPTOMETRY ADDITION

1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
INDIAN HEALTH SERVICE
DIVISION OF ENGINEERING SERVICES
GREAT PLAINS AREA

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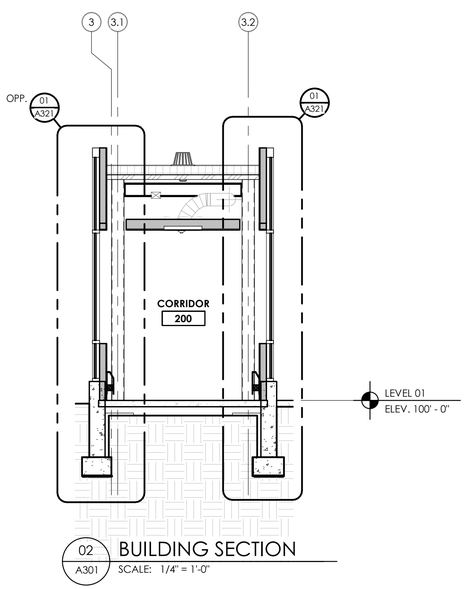
ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: STL
CHECKED BY:

SHEET TITLE:

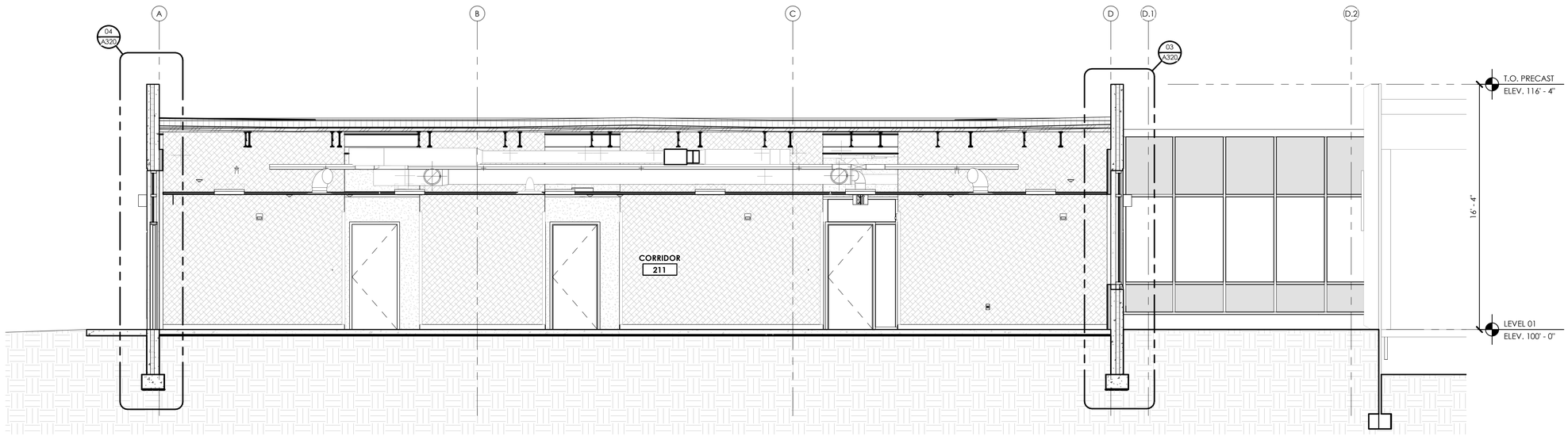
BUILDING SECTIONS

A300

SHEET 35 OF 95



02 A301 BUILDING SECTION
SCALE: 1/4" = 1'-0"



01 A301 E/W BUILDING SECTION @ CORRIDOR
SCALE: 1/4" = 1'-0"

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022

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Kalamazoo, MI 49007
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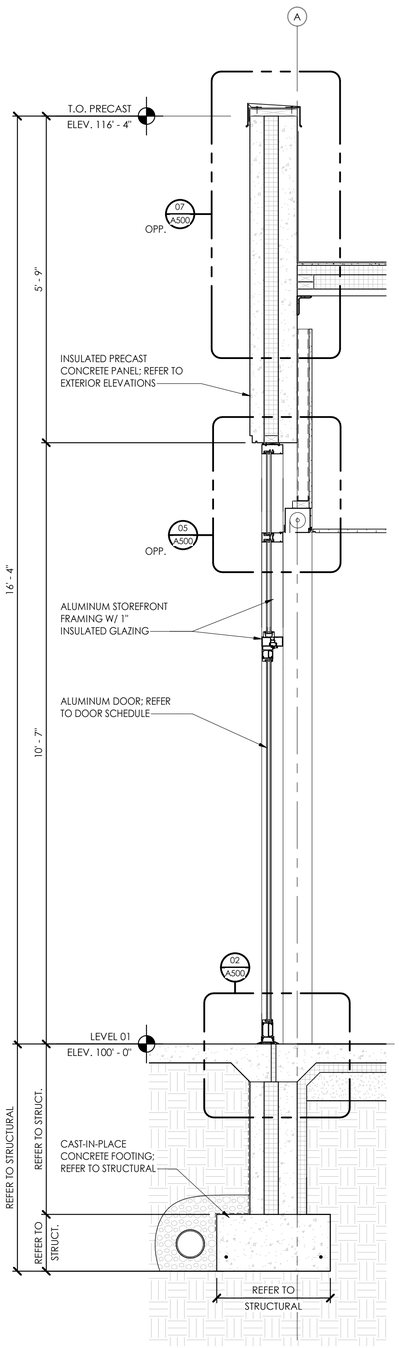
SHEET TITLE:

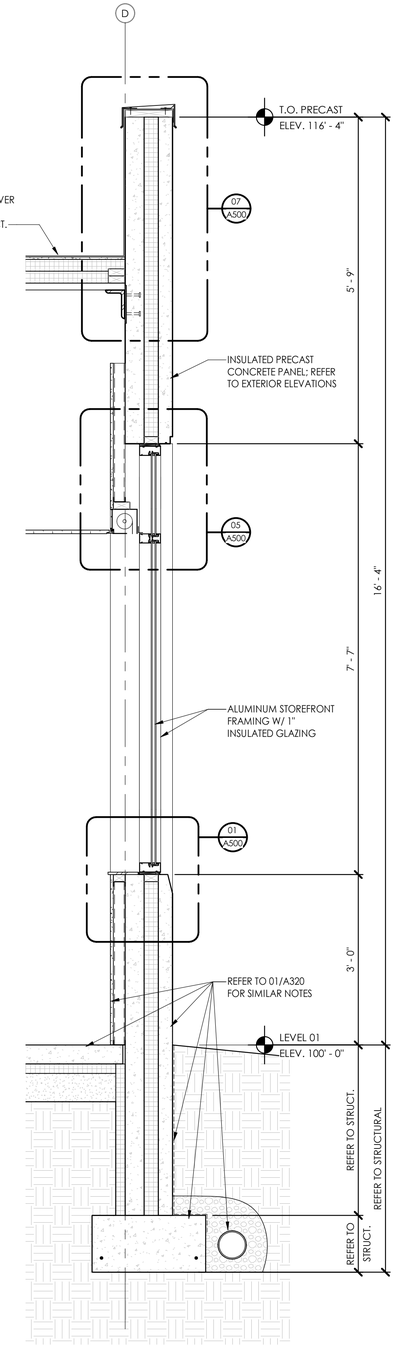
BUILDING SECTIONS

A301

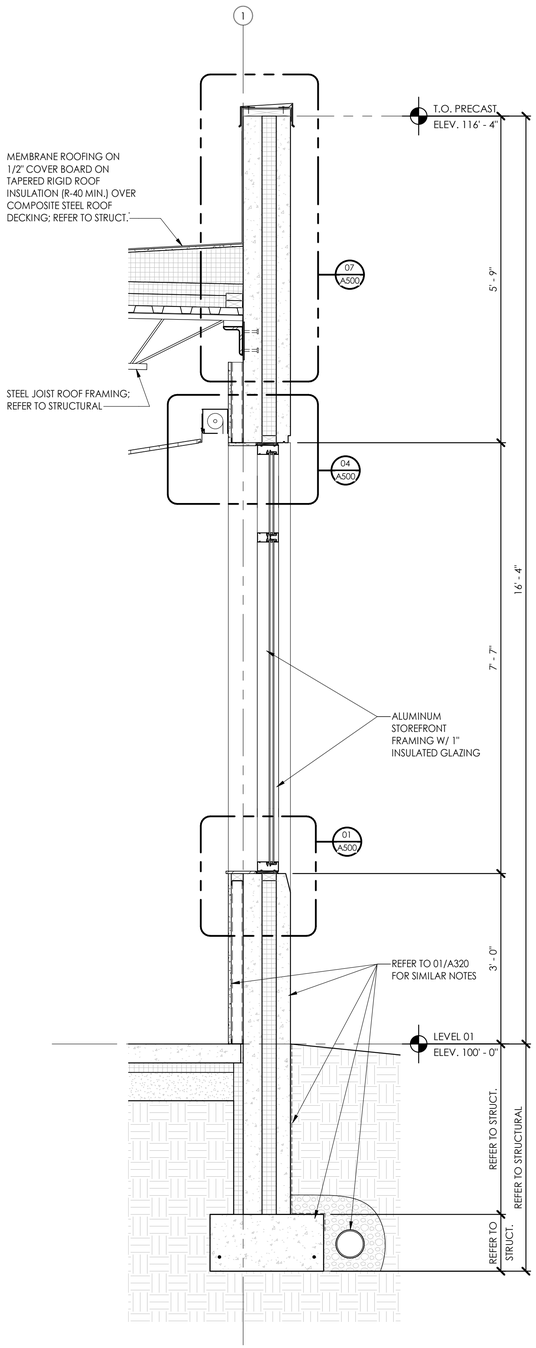
SHEET 36 OF 95



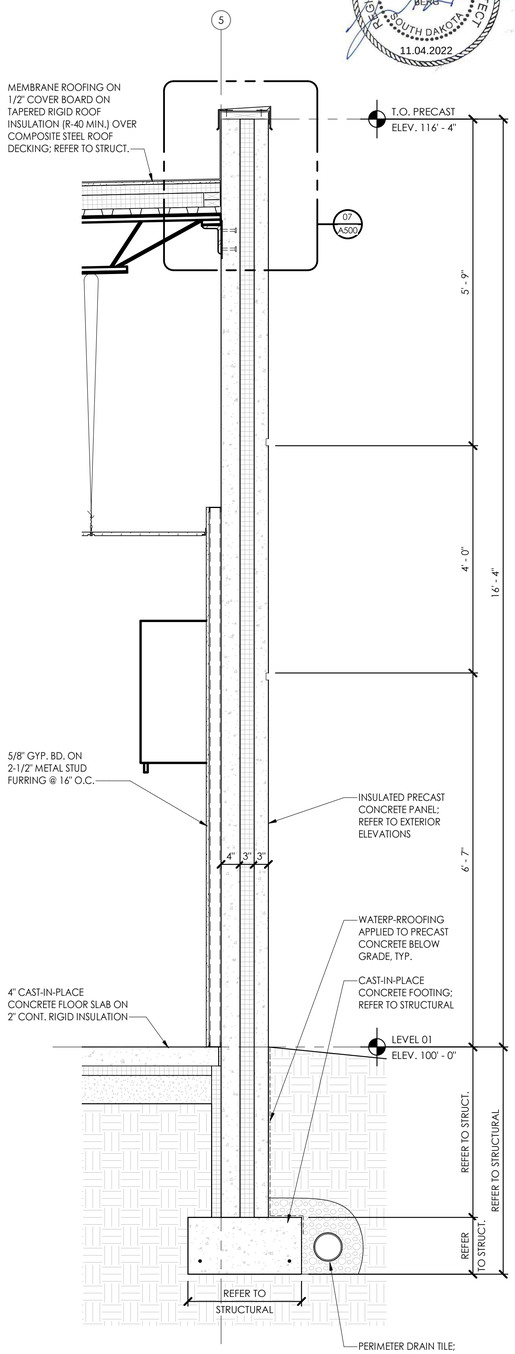
04 A320 WALL SECTION
SCALE: 3/4" = 1'-0"



03 A320 WALL SECTION
SCALE: 3/4" = 1'-0"



02 A320 WALL SECTION
SCALE: 3/4" = 1'-0"



01 A320 WALL SECTION
SCALE: 3/4" = 1'-0"

REGISTERED PROFESSIONAL ARCHITECT
REG. NO. 12193
JEREMY ROBERT MEIS
SOUTH DAKOTA
11.04.2022

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ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
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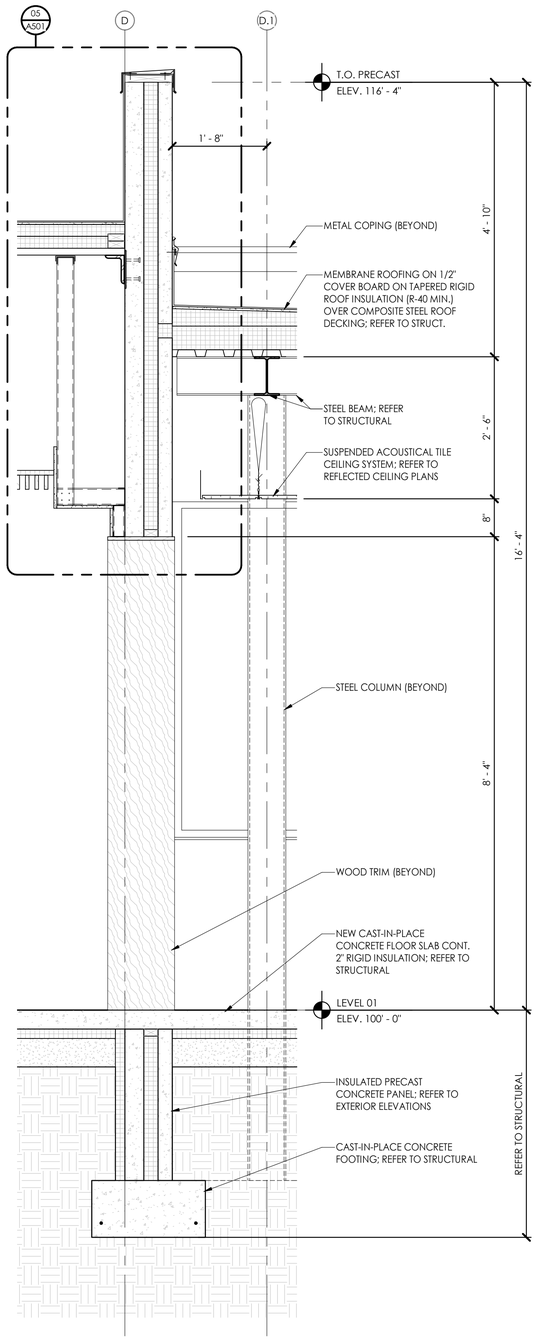
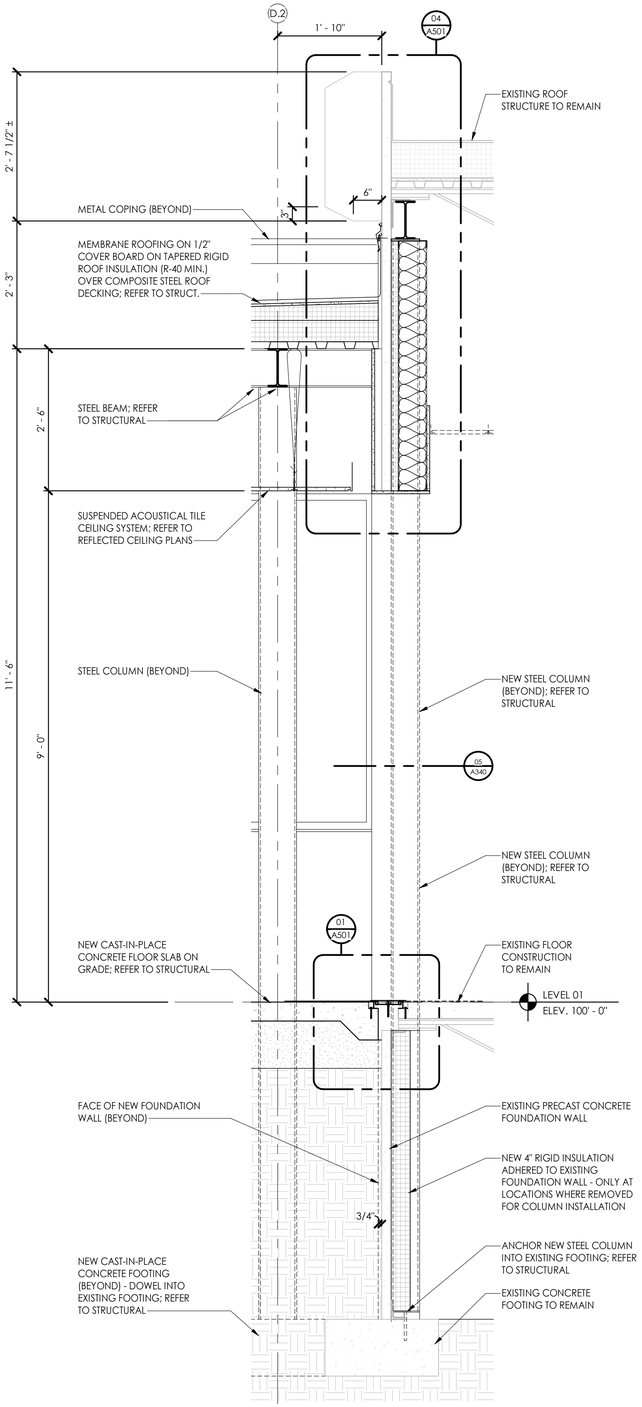
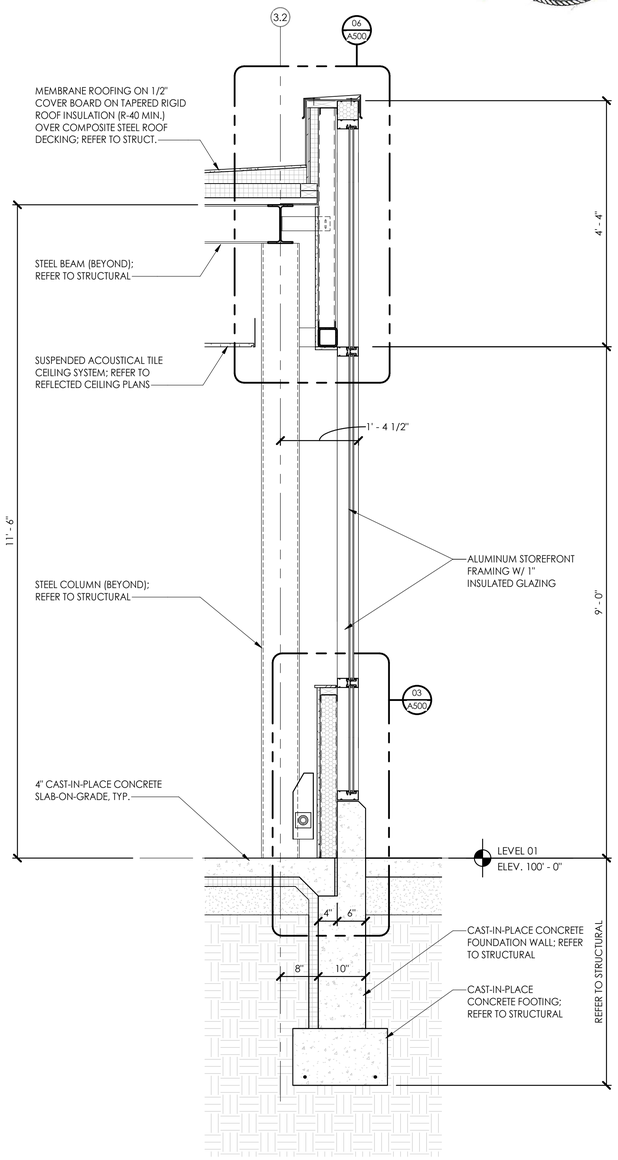
WALL SECTIONS

A320

SHEET 37 OF 95







03 A321 WALL SECTION
SCALE: 3/4" = 1'-0"

02 A321 WALL SECTION
SCALE: 3/4" = 1'-0"

01 A321 WALL SECTION
SCALE: 3/4" = 1'-0"

REGISTERED PROFESSIONAL ARCHITECT
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JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022

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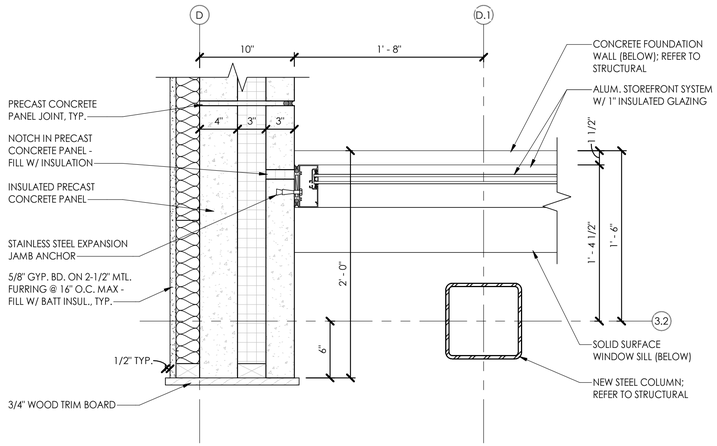
SHEET TITLE:

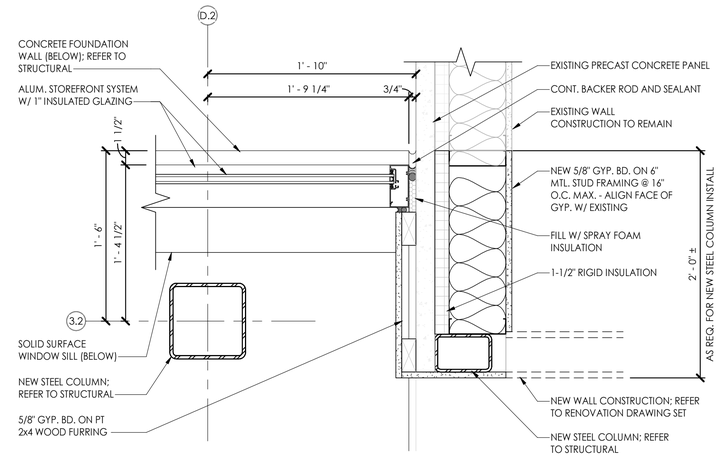
WALL SECTIONS

A321

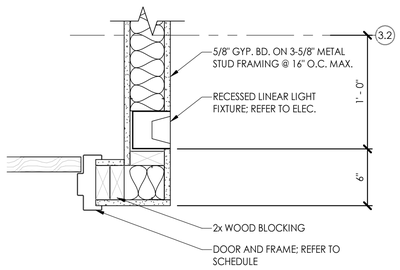
SHEET 38 OF 95



06 A340 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



05 A340 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



04 A340 PLAN DETAIL
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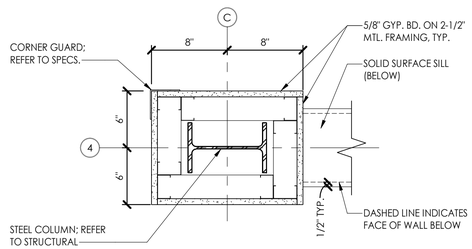

03 A340 PLAN DETAIL
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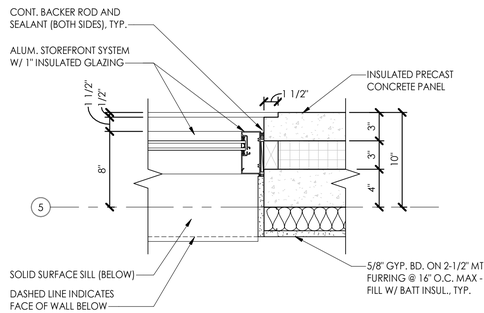
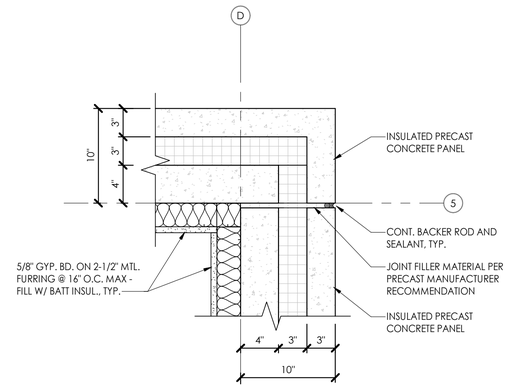


02 A340 TYPICAL WINDOW JAMB DETAIL
SCALE: 1 1/2" = 1'-0"



TYPICAL PRECAST CONCRETE PANEL CORNER DETAIL
01 A340 SCALE: 1 1/2" = 1'-0"

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT PERRY
SOUTH DAKOTA
11.04.2022

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ARCHITECTURE + ENGINEERING
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PROJECT NO: 220079
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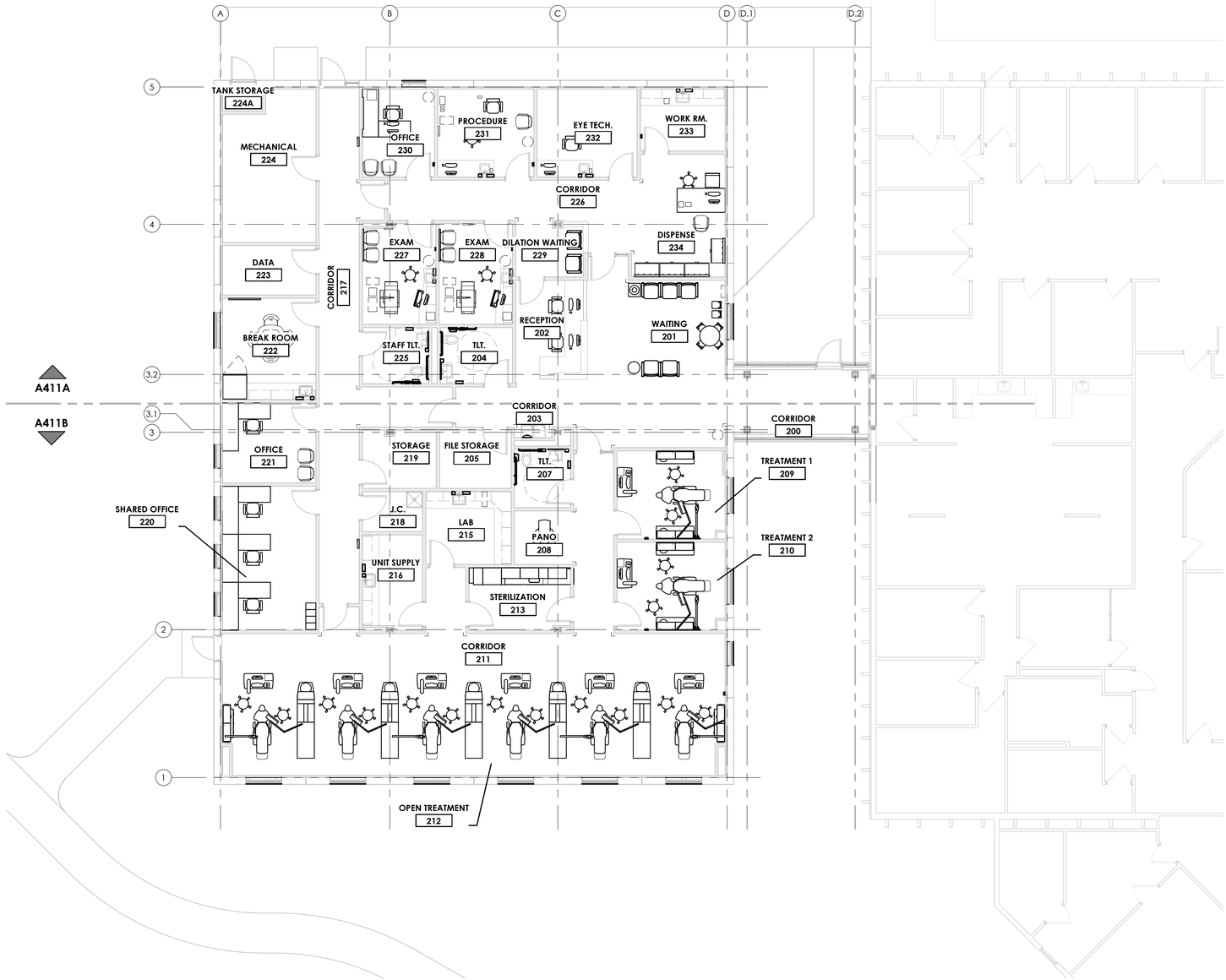
SHEET TITLE:

PLAN DETAILS

A340

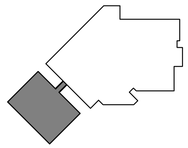
SHEET 39 OF 95



NORTH

EQUIPMENT PLAN - COMPOSITE

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



KEY PLAN

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REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12199
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022

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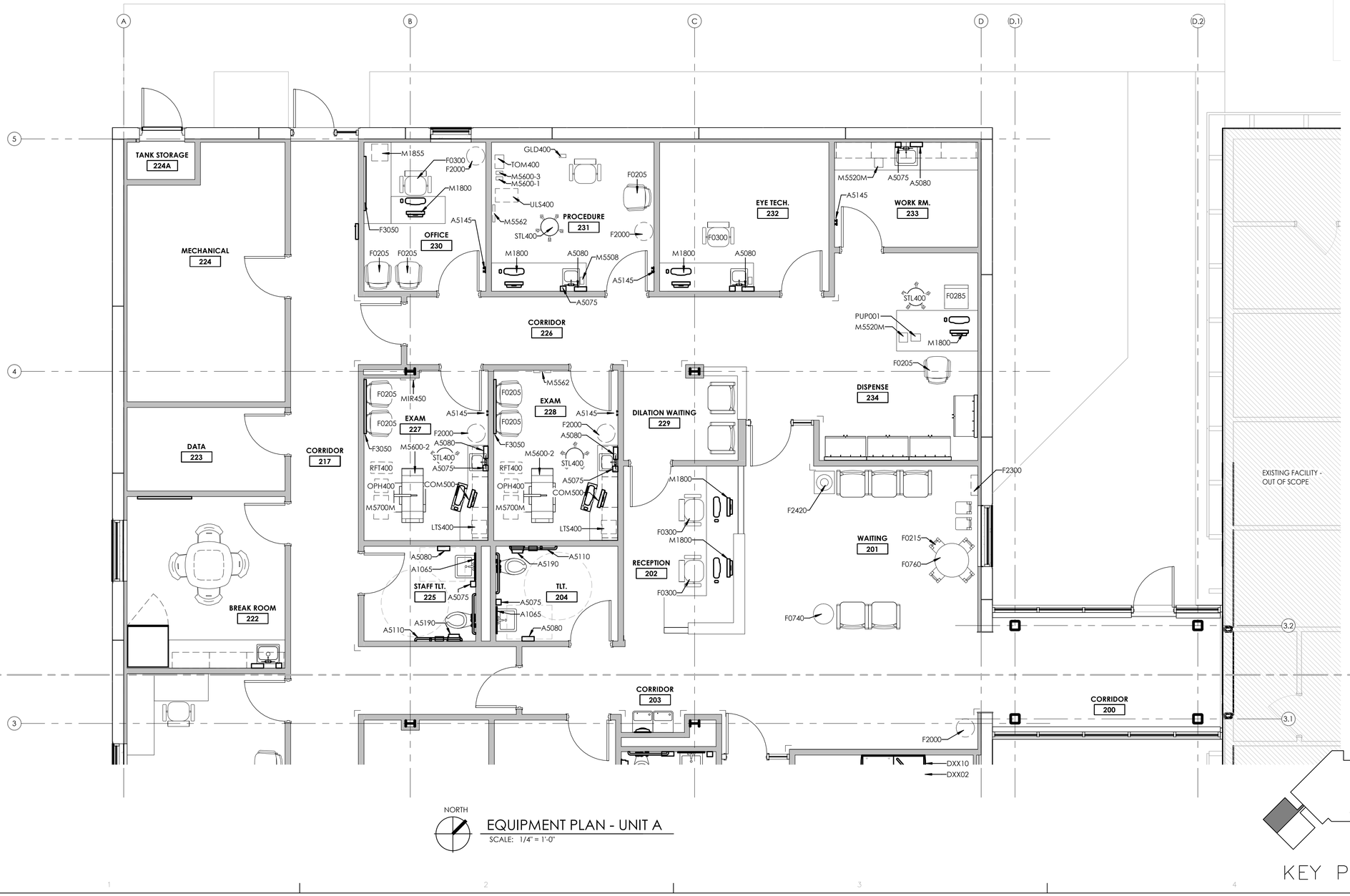
SHEET TITLE:

EQUIPMENT PLAN – COMPOSITE

A410

SHEET 40 OF 95



NORTH

EQUIPMENT PLAN - UNIT A

SCALE: 1/4" = 1'-0"

KEY PLAN

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022

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ARCHITECTURE + ENGINEERING
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Kalamazoo, MI 49007
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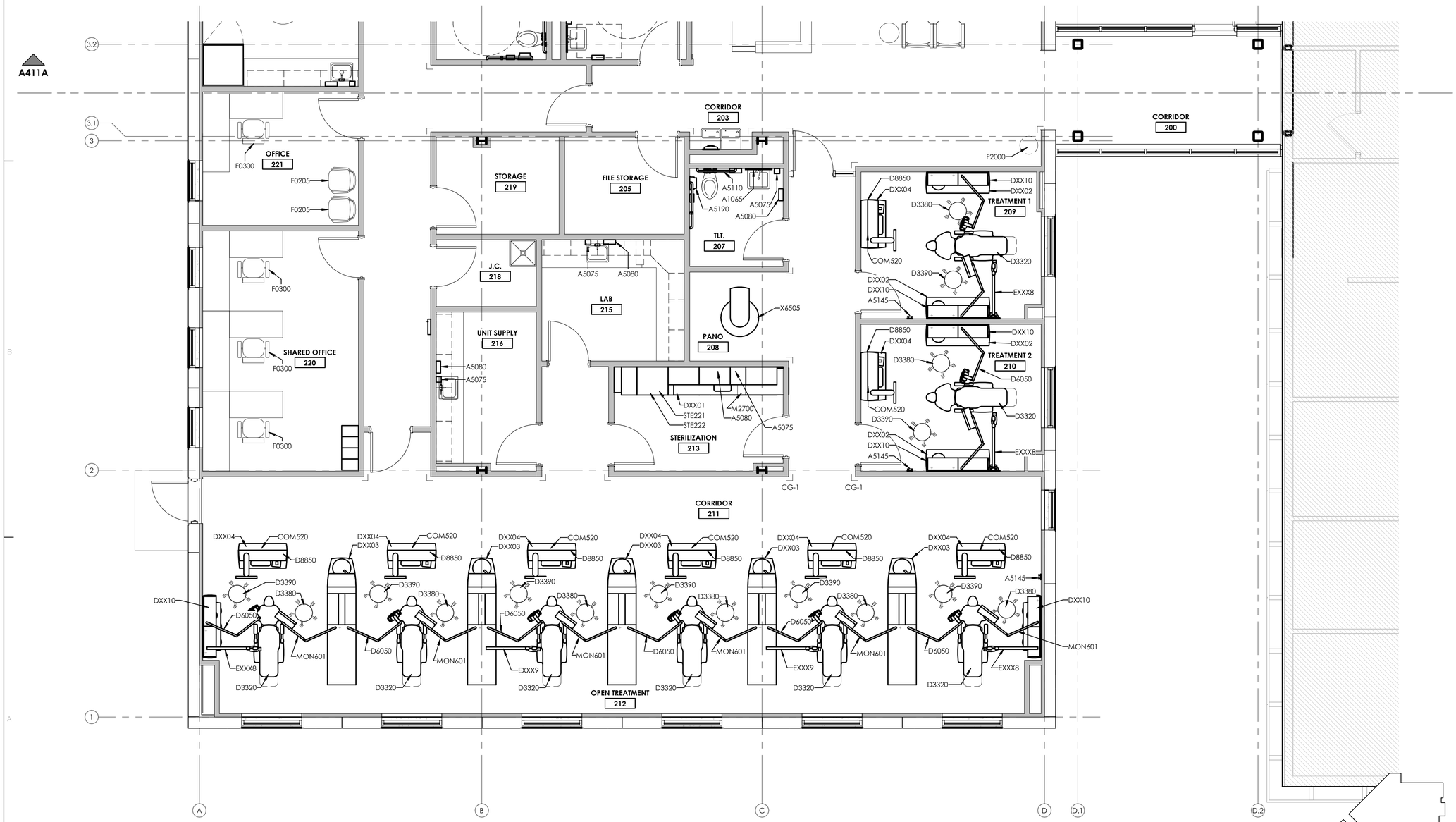
SHEET TITLE:

EQUIPMENT PLAN – UNIT A

A411A

SHEET 41 OF 95



NORTH

EQUIPMENT PLAN - UNIT B

SCALE: 1/4" = 1'-0"

KEY PLAN

REGISTERED PROFESSIONAL ARCHITECT
REG. NO. 12193
JEREMY ROBERT BEAN
SOUTH DAKOTA
11.04.2022

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

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CHECKED BY:

SHEET TITLE:

EQUIPMENT PLAN – UNIT B

A411B

SHEET 42 OF 95

EQUIPMENT SCHEDULE

JSN	DESCRIPTION	SPECIFIED BY	SUPPLIED BY	INSTALLED BY	ELEC.	DATA	CABLE TV.	BLOCKING	WATER	DRAIN	REMARKS	Count
	BOTTLE FILLING STATION	A	C	C				X	X	X		1
A1065	MIRROR, SS FRAME, 14"X1/4"X20"H	O	O	C				X				3
A5075	DISPENSER, SOAP, DISPOSABLE	O	O	C				X				12
A5080	DISPENSER, PAPER TOWEL, WALL	O	O	C				X				13
A5110	GRAB BAR, SS 1-1/4 DIA	A	C	C				X				3
A5145	HOOK, ROBE, 2 PRONG	O	C	C								8
A5190	HOLDER, TOILETPAPER, RECESSED	O	O	C				X				3
CG-1	CORNER GUARD	A	C	C								22
COM500	COMPUTER, HEALTH RECORDS	O	O	O	X	X						2
COM520	COMPUTER, DENTAL, OPERATORY	O	O	O	X	X						8
D3320	CHAIR, OPERATING, DENTAL	-	-	-	X				X	X	SPECIFIED, SUPPLIED, AND INSTALLED BY MANUFACTURER	8
D3380	STOOL, OPERATING, DENTAL, ASSISTANT		O	O								8
D3390	STOOL, OPERATING, DENTAL		O	O								8
D6050	LIGHT, DENTAL, OPERATING, CONSOLE MTD	-	-	-	X						SPECIFIED, SUPPLIED, AND INSTALLED BY MANUFACTURER	8
D8850	AMALGAMATOR	O	O	O								8
DXX01	CONSOLE, STERILIZATION	-	-	-	X	X			X	X	SPECIFIED, SUPPLIED, AND INSTALLED BY MANUFACTURER	1
DXX02	ACCESSORY CONSOLE (LOWER)	-	-	-	X	X			X	X	SPECIFIED, SUPPLIED, AND INSTALLED BY MANUFACTURER	4
DXX03	CONSOLE, CENTER W/ SINK, LIGHT, X-RAY	-	-	-	X	X			X	X	SPECIFIED, SUPPLIED, AND INSTALLED BY MANUFACTURER	5
DXX04	CONSOLE, TREATMENT, 12 O'CLOCK	-	-	-	X	X					SPECIFIED, SUPPLIED, AND INSTALLED BY MANUFACTURER	8
DXX10	ACCESSORY CONSOLE, WALL MTD (UPPER)	-	-	-	X			X			SPECIFIED, SUPPLIED, AND INSTALLED BY MANUFACTURER	6
EXXX8	RADIOGRAPHIC UNIT, DENTAL, WALL MTD	O	O	C	X						RELOCATED X-RAY UNIT FROM EXISTING DENTAL CLINIC - COORDINATE W/ OWNER	4
EXXX9	RADIOGRAPHIC UNIT, DENTAL, CONSOLE MTD	O	C	C	X						NEW X-RAY UNIT MOUNTED TO DENTAL CONSOLE - MOUNTING ARM TO BE SUPPLIED BY CONSOLE MANUFACTURER	2
F0205	CHAIR, SIDE W/ARMS		O	O								10
F0215	CHAIR, CHILDS		O	O								6
F0285	CHAIR, TASK, W/O ARMS		O	O								1
F0300	STAFF CHAIR		O	O								9
F0725	TABLE, OCCASIONAL, EX, WOOD, 16X20X24H		O	O								1
F0740	TABLE, OCCASIONAL, ROUND		O	O								1
F0760	TABLE, CHILDS		O	O								1
F2000	RECEPTACLE, WASTE, FIRE RESISTANT, 7 QT	O	O	O								5
F2300	RACK, MAGAZINE, WALL MTD		O	O								1
F2420	LAMP, TABLE W/SHADE		O	O								1
F3050	WHITEBOARD, WCP, 36X48"	O	O	C				X				4
GLD400	GLIDE, CHAIR, EYE EXAM	O	O	O								1
K4665	OVEN, MICROWAVE, DOMESTIC	O	O	C	X							1
LTS400	LIGHT, TRANSILLUMINATOR	O	O	O	X							2
M1800	COMPUTER, DESKTOP	O	O	O	X	X						6
M1855	LASER PRINTER/FAX/COPY/SCAN	O	O	O	X	X						1
M2700	SEALER, HEAT, PLASTIC BAG	O	O	O								2
M5010	DESK, FITTING/DISPENSING		O	O								1
M5508	CAMERA, FUNDUS, DIGITAL	O	O	O	X							2
M5520M	LENSOMETER, AUTOMATIC W/COLOR	O	O	O								2
M5562	TESTER, VISUAL ACUITY, VIDEO/MICROPROCESSOR BASED	O	C	C	X	X		X				3
M5600-1	INSTRUMENT STAND, PHOROPTER	O	O	O								1
M5600-2	CHAIR, EXAM, POWER, EYE LANE	O	C	C								2
M5600-3	PHOROPTER (MANUAL REFRACTOR)	O	O	O	X							1
M5700M	TRIAL LENS FRAME SET, MINUS CYLINDER	O	O	O								2
MIR450	BOX EYE PROJECTION MIRROR SET	O	O	O								1
MON601	MONITOR, CONSOLE MTD	O	C	C	X	X						8
OPH400	OPHTHALMASCOPE, INDIRECT, WIRELESS	O	O	O								2
PUP001	PUPILOMETER, DIGITAL	O	O	O								1
R7000	REFRIGERATOR/FREEZER, 22 CUFT	O	C	C	X				X			1
RFT400	AUTOREFRACTOR/KETATOMETER, HANDHELD	O	O	O								2
STE221	STERLIZER, STEAM, ELECTRIC, COUNTERTOP	O	O	O	X							1
STE222	STERLIZER, STEAM, ELECTRIC, COUNTERTOP	O	O	O	X							1
STL400	STOOL, EXAM, EYE		O	O								4
TOM400	TOMOGRAPHER, OPTICAL	O	O	O	X							1
ULS400	ULTRASOUND, EYE/OPTHALMIC	O	O	O	X							1
X6505	RADIOGRAPHIC UNIT, DENTAL, PANO & CEPH	O	O	C	X						RELOCATED X-RAY UNIT FROM EXISTING DENTAL CLINIC - COORDINATE W/ OWNER	1

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TITLE

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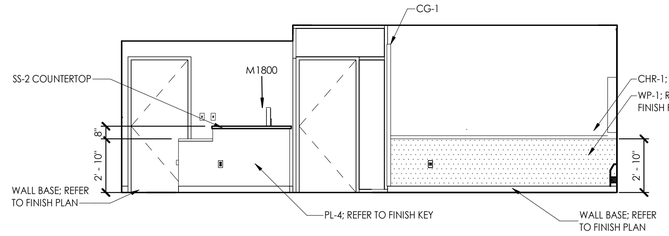
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: STL
CHECKED BY:

SHEET TITLE:

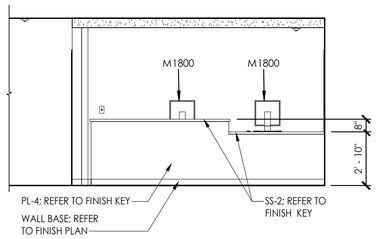
EQUIPMENT SCHEDULE

A412

SHEET 43 OF 95



20 A420 WAITING 201 - NORTH
SCALE: 1/4" = 1'-0"



19 A420 RECEPTION 202 - WEST
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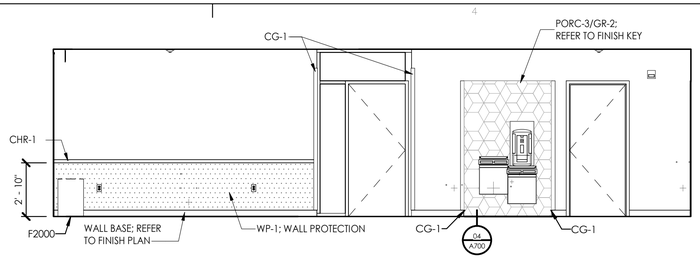

18 A420 WAITING 201 - SOUTH
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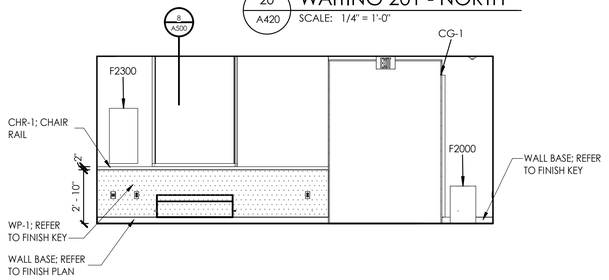

17 A420 WAITING 201 -EAST
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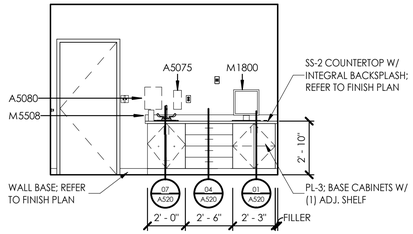

16 A420 PROCEDURE 231 - SOUTH
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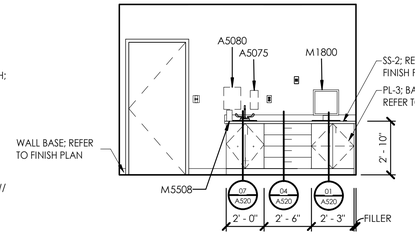

15 A420 EYE TECH 232 - SOUTH
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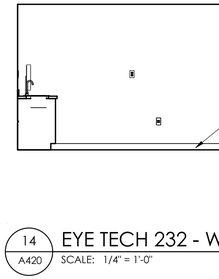

14 A420 EYE TECH 232 - WEST
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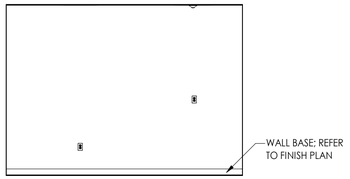
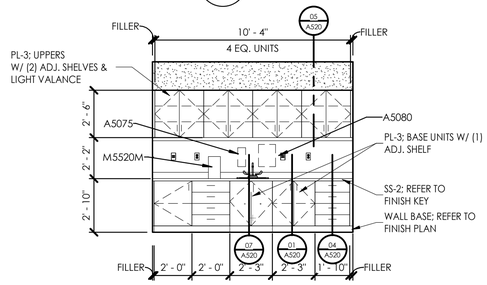
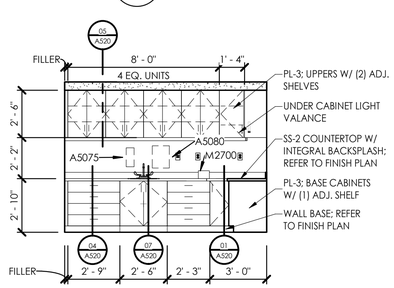


13 A420 EYE TECH 232 - NORTH
SCALE: 1/4" = 1'-0"



12 A420 WORK ROOM 233 - NORTH
SCALE: 1/4" = 1'-0"



11 A420 LAB 215 - NORTH
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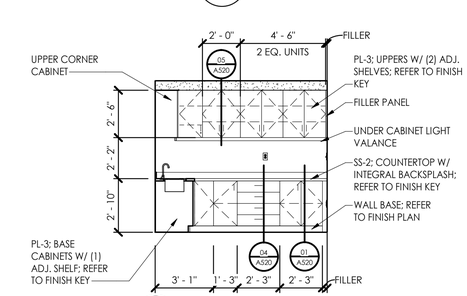

10 A420 LAB 215 - EAST
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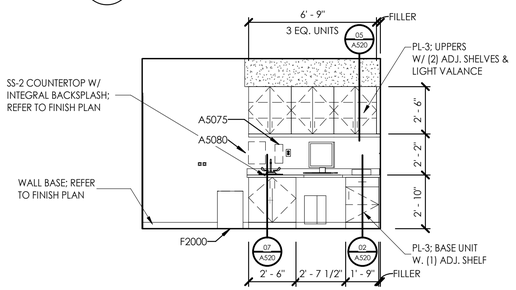
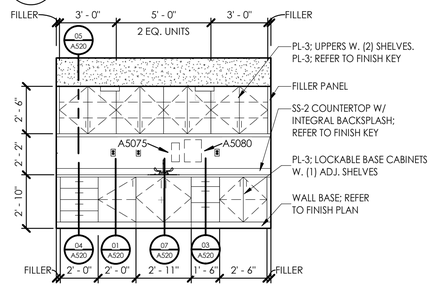


09 A420 EXAM 227 - EAST
SCALE: 1/4" = 1'-0"



08 A420 UNIT SUPPLY 216 - WEST
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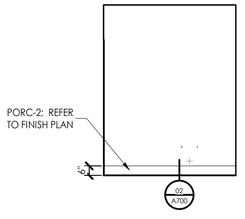
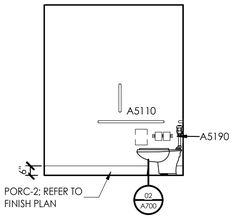


07 A420 TOILET 207
SCALE: 1/4" = 1'-0"



06 A420 TOILET 207
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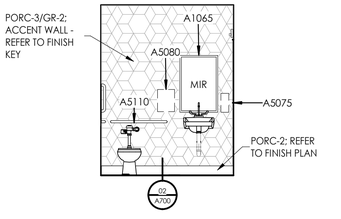

05 A420 TOILET 207
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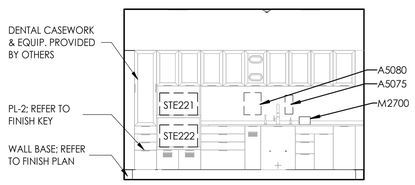
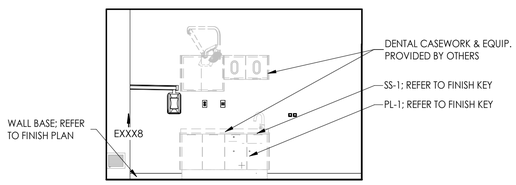
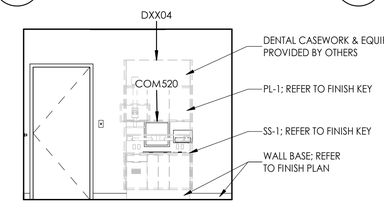


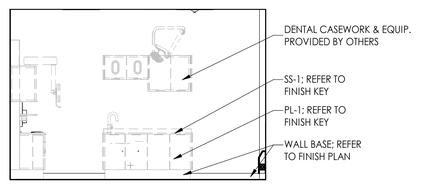
04 A420 STERILIZATION 213 - NORTH
SCALE: 1/4" = 1'-0"



03 A420 TREATMENT - SOUTH (TYP.)
SCALE: 1/4" = 1'-0"



02 A420 TREATMENT - WEST (TYP.)
SCALE: 1/4" = 1'-0"



01 A420 TREATMENT - NORTH (TYP.)
SCALE: 1/4" = 1'-0"

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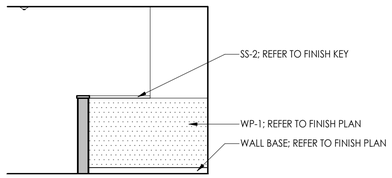
ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: AL
CHECKED BY:

SHEET TITLE:
INTERIOR ELEVATIONS

A420
SHEET 44 OF 95

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12193
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022



10 A421 DILATION WAITING 229 - EAST
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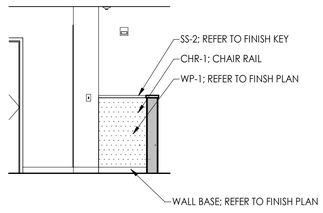

9 A421 DILATION WAITING 229 - NORTH
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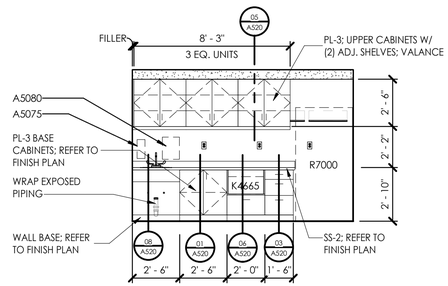
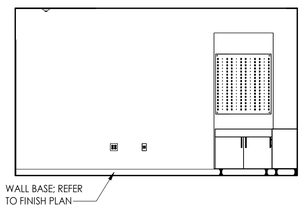
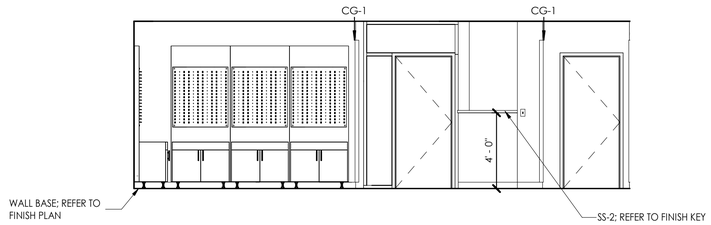


8 A421 BREAK ROOM 222 - SOUTH
SCALE: 1/4" = 1'-0"



07 A421 DISPENSE 234 - EAST
SCALE: 1/4" = 1'-0"



06 A421 DISPENSE 234 - SOUTH
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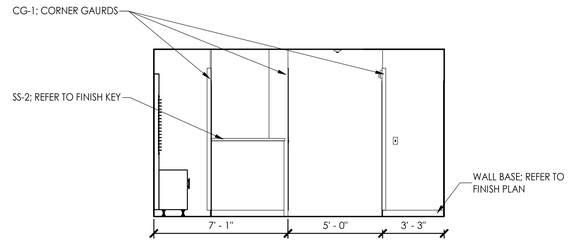

05 A421 DISPENSE 234 - WEST
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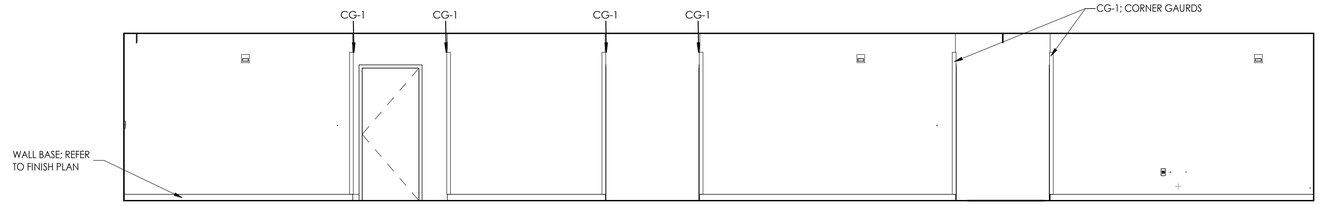

04 A421 CORRIDOR 211 - NORTH
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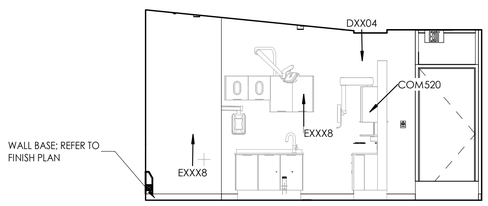

03 A421 OPEN TREATMENT 212 - WEST
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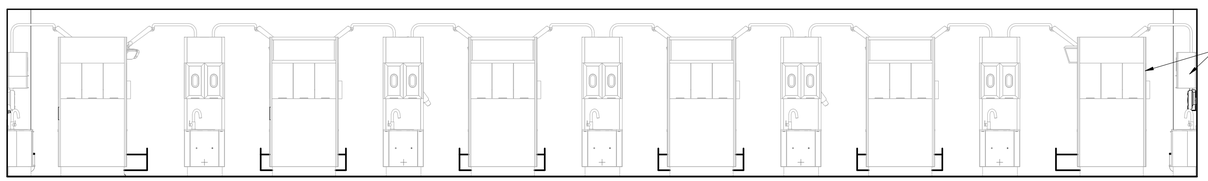

02 A421 OPEN TREATMENT 212 - SOUTH
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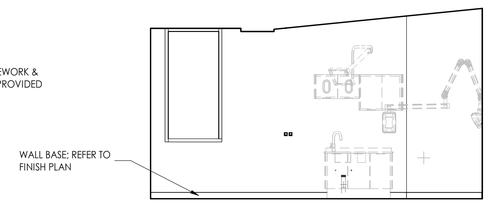

01 A421 OPEN TREATMENT 212 - EAST
SCALE: 1/4" = 1'-0"

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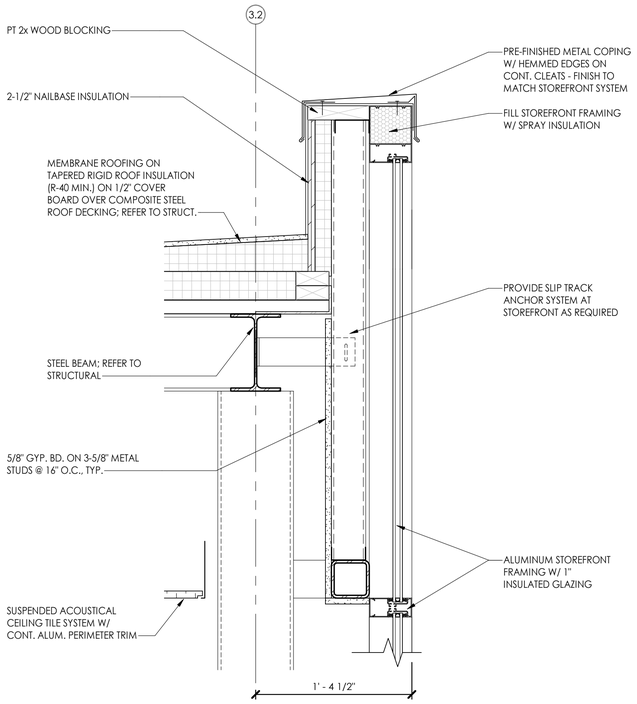
CHECKED BY:

SHEET TITLE:

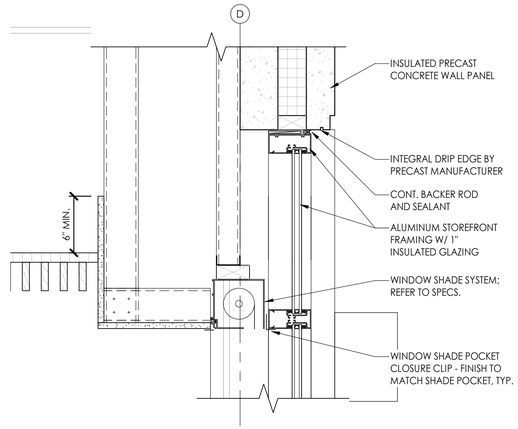
INTERIOR ELEVATIONS

A421

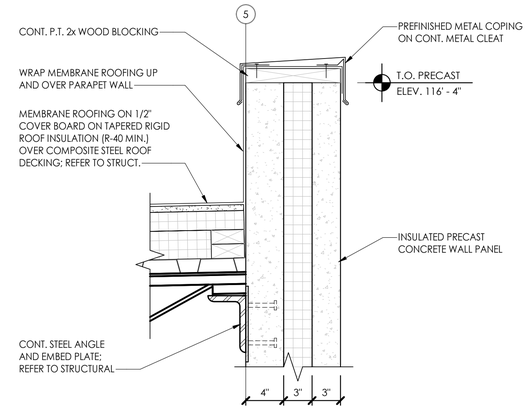
SHEET 45 OF 95



06 A500 WINDOW HEAD/PARAPET DETAIL
SCALE: 1 1/2" = 1'-0"



8 A500 CEILING / WINDOW HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



07 A500 PARAPET DETAIL
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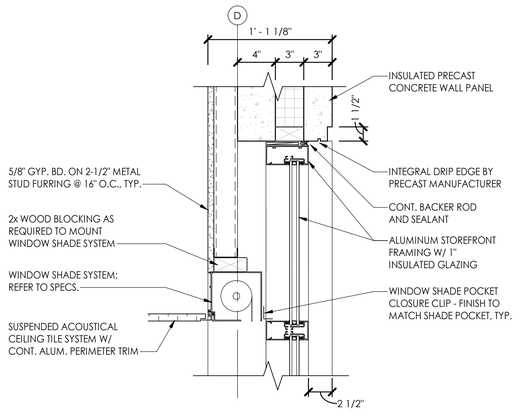
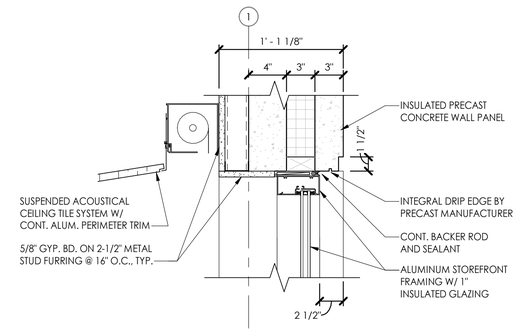
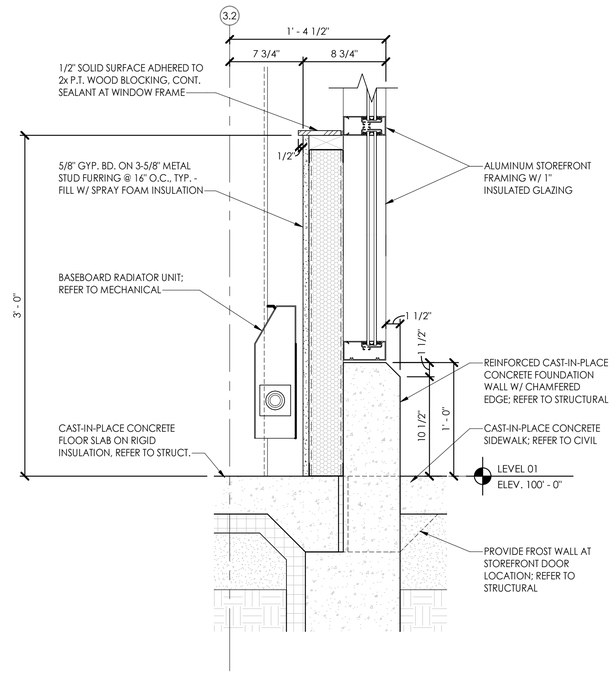


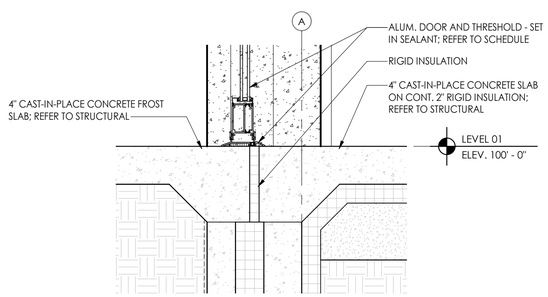
05 A500 CEILING / WINDOW HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



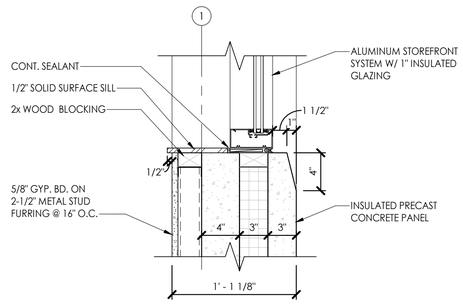
04 A500 WINDOW HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



03 A500 WINDOW SILL DETAIL
SCALE: 1 1/2" = 1'-0"



02 A500 THRESHOLD DETAIL
SCALE: 1 1/2" = 1'-0"



01 A500 WINDOW SILL DETAIL
SCALE: 1 1/2" = 1'-0"

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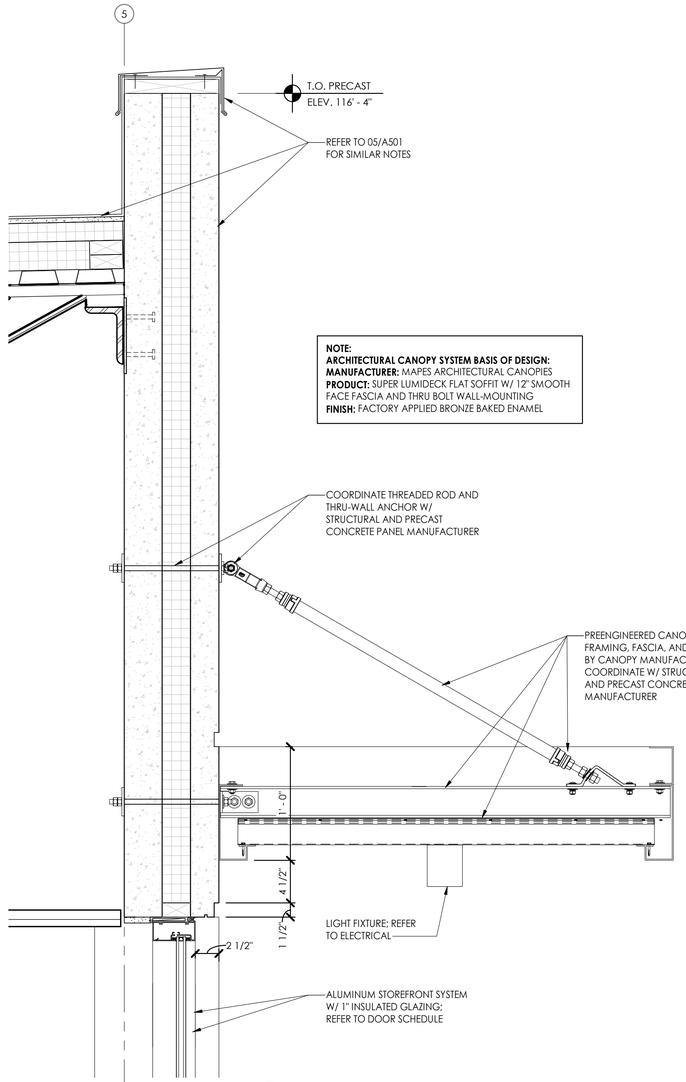
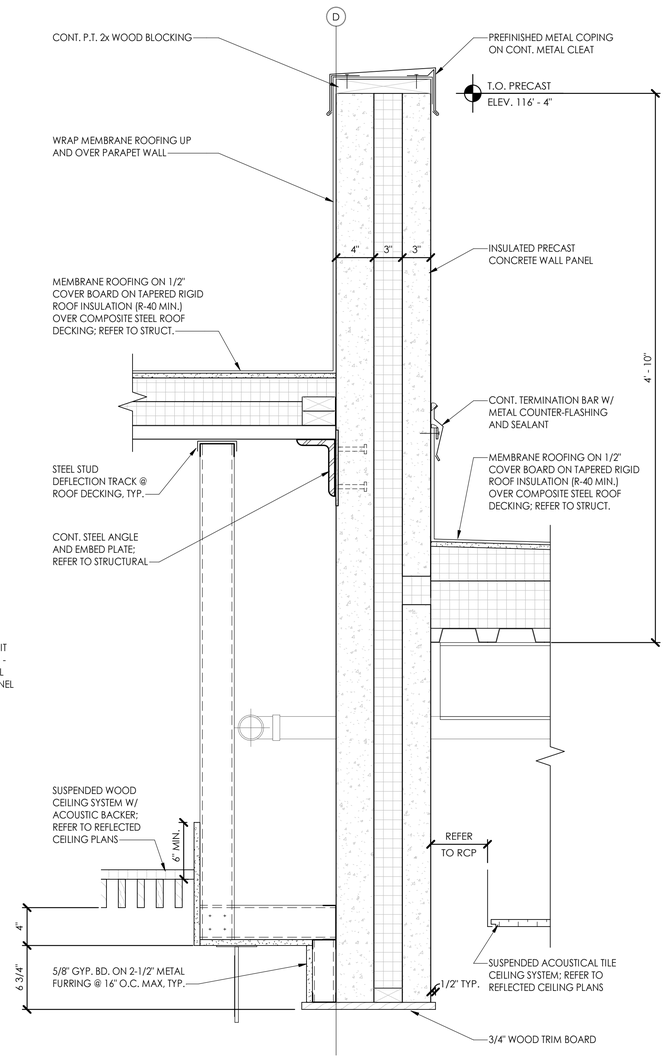
DETAILS

A500
SHEET 46 OF 95

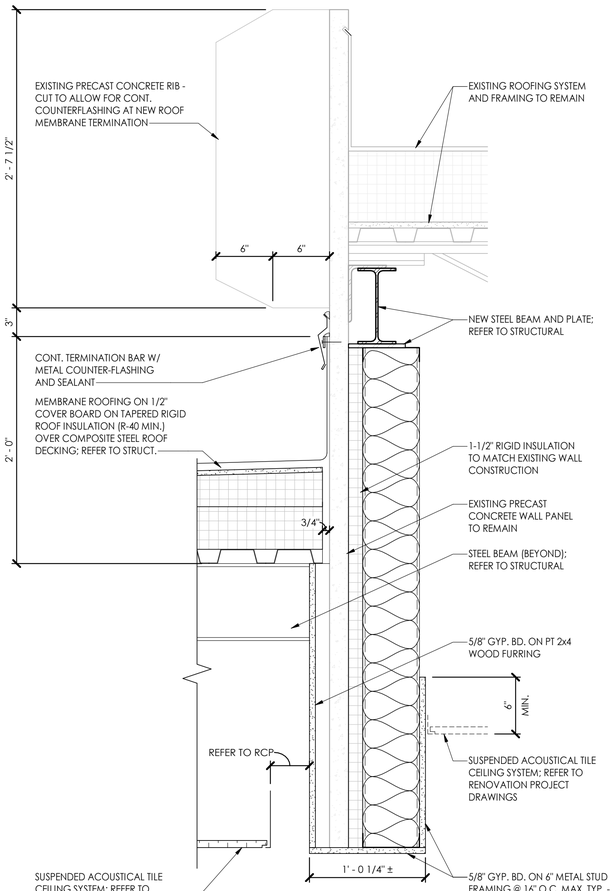
REGISTERED PROFESSIONAL ARCHITECT
REG. NO. 12193
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022



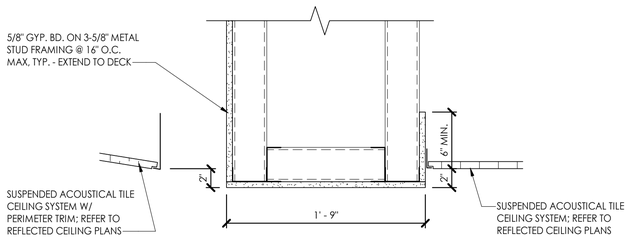
06 A501 CANOPY DETAIL
SCALE: 1 1/2" = 1'-0"



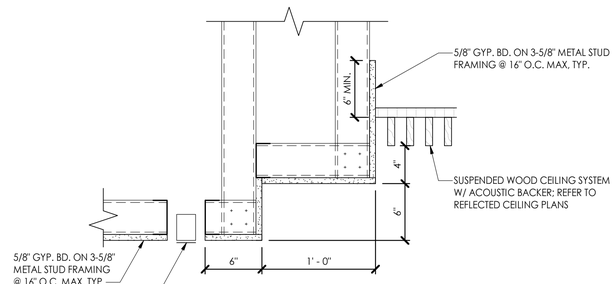
05 A501 CEILING / ROOF DETAIL
SCALE: 1 1/2" = 1'-0"



04 A501 CEILING / ROOF DETAIL
SCALE: 1 1/2" = 1'-0"



03 A501 CEILING DETAIL
SCALE: 1 1/2" = 1'-0"



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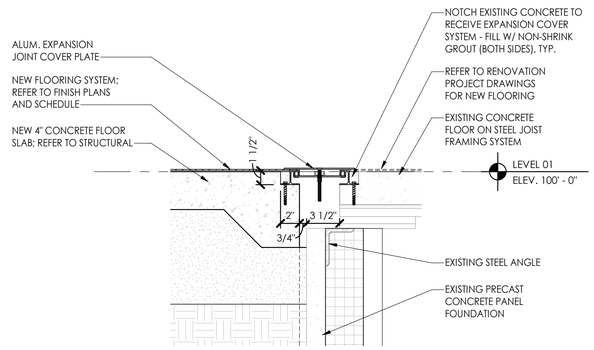
SCALE: 1 1/2" = 1'-0"



01 A501 EXPANSION COVER DETAIL
SCALE: 1 1/2" = 1'-0"

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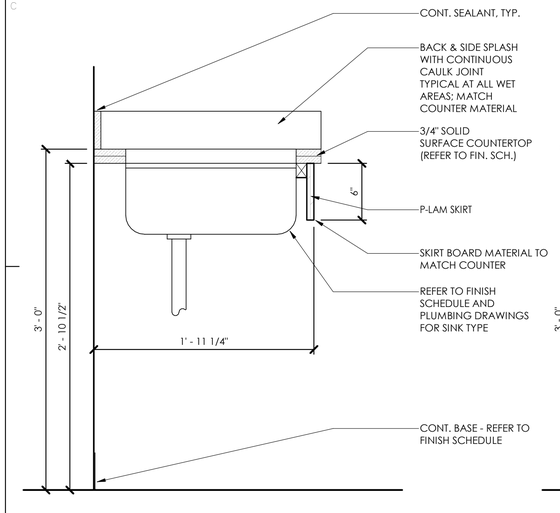
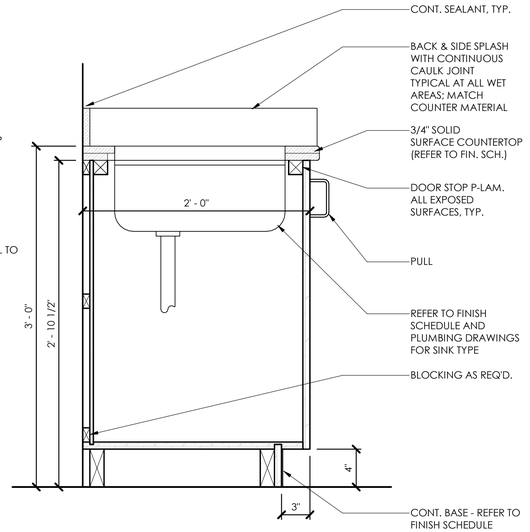
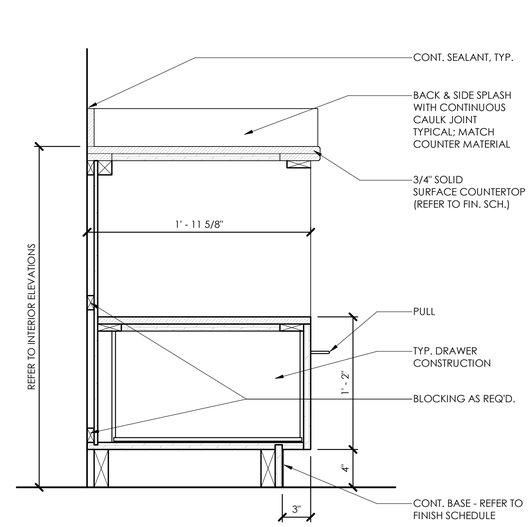
A501
SHEET 47 OF 95



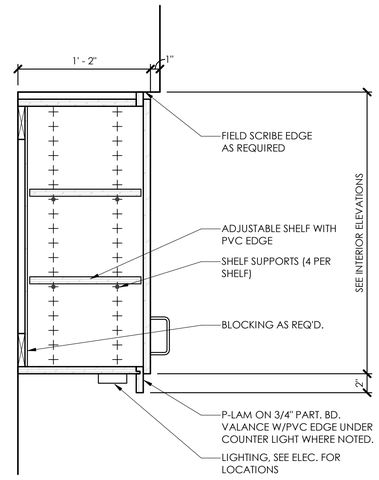
08 A520 SINK OPEN BASE UNIT
SCALE: 1 1/2" = 1'-0"



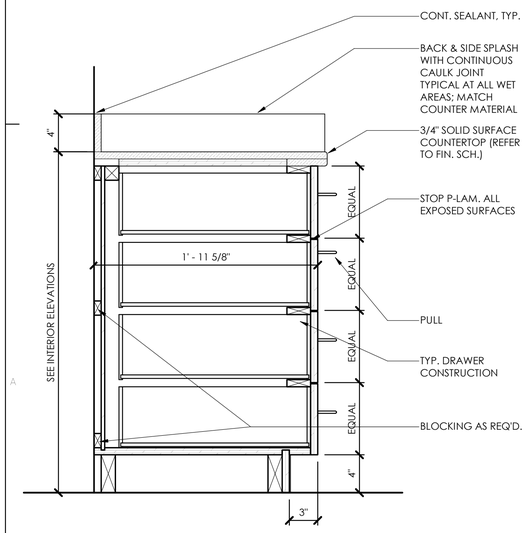
07 A520 SINK BASE UNIT
SCALE: 1 1/2" = 1'-0"



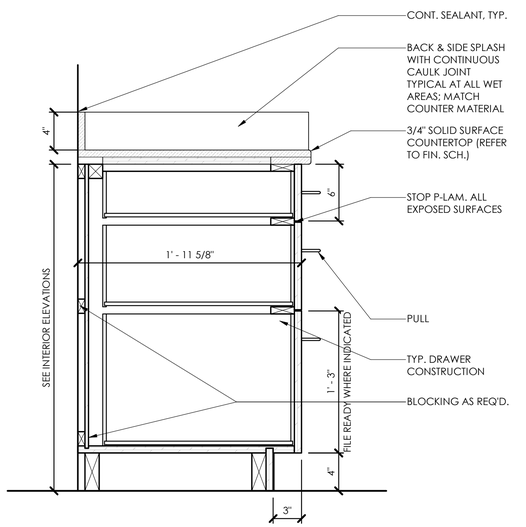
06 A520 MICROWAVE SHELF BASE UNIT
SCALE: 1 1/2" = 1'-0"



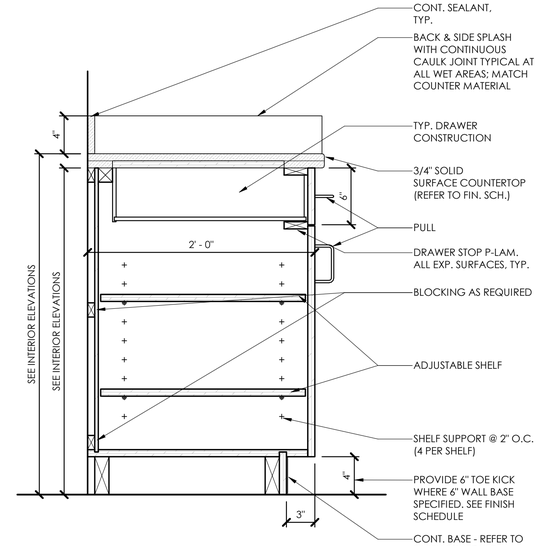
05 A520 UPPER UNIT W/ LIGHT VALANCE
SCALE: 1 1/2" = 1'-0"



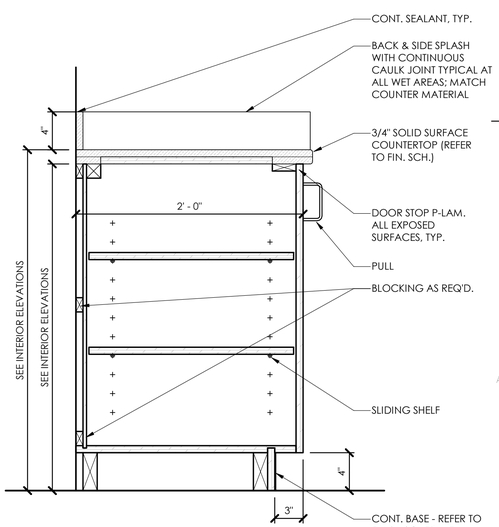
04 A520 FOUR DRAWER BASE UNIT
SCALE: 1 1/2" = 1'-0"



03 A520 THREE DRAWER BASE UNIT
SCALE: 1 1/2" = 1'-0"



02 A520 SINGLE DRAWER BASE UNIT
SCALE: 1 1/2" = 1'-0"



01 A520 BASE UNIT
SCALE: 1 1/2" = 1'-0"

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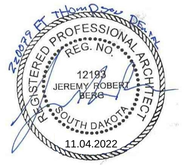
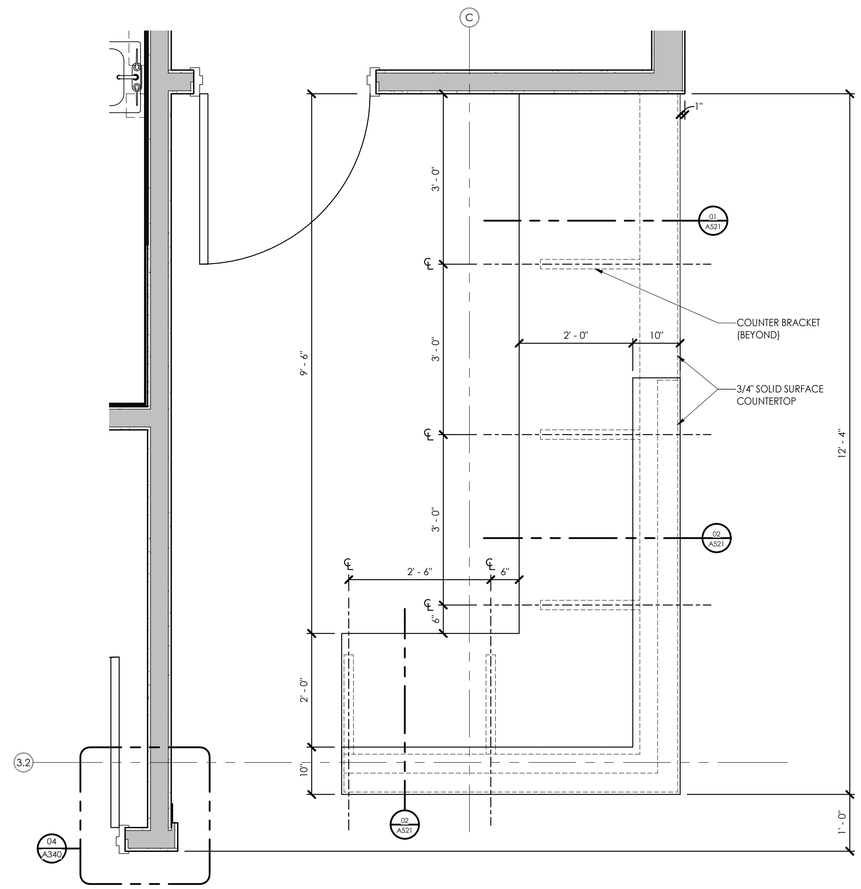
CASEWORK DETAILS

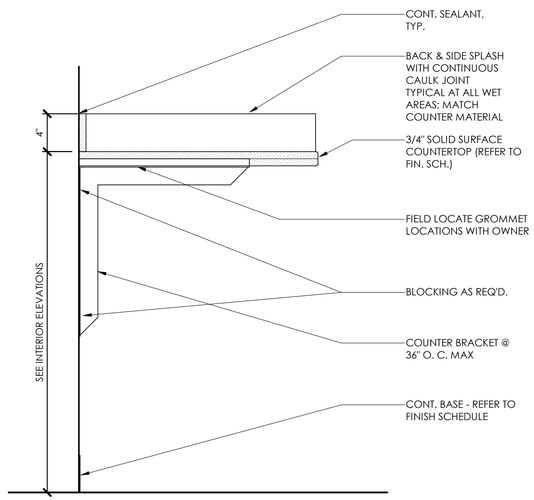
A520

SHEET 48 OF 95

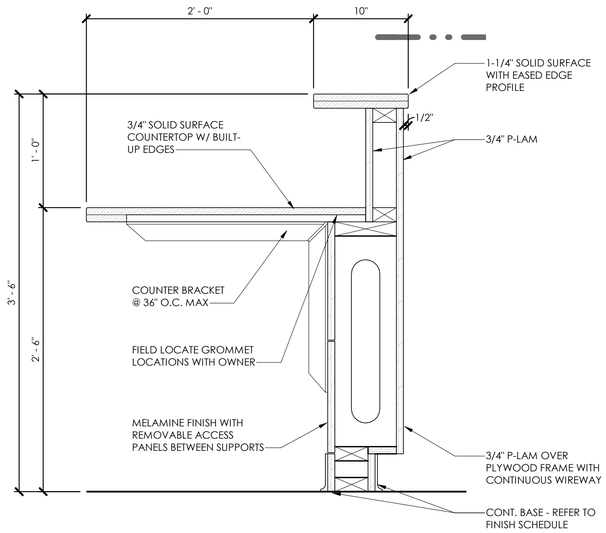




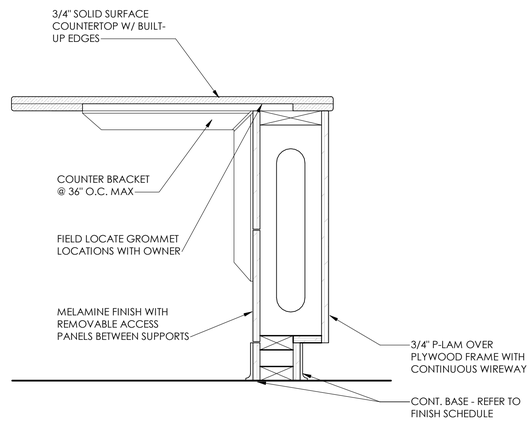
04 A521 ENGLARGED PLAN - RECEPTION DESK
SCALE: 3/4" = 1'-0"



03 A521 WALL-MOUNTED COUNTERTOP DETAIL
SCALE: 1 1/2" = 1'-0"



02 A521 RECEPTION DESK DETAIL
SCALE: 1 1/2" = 1'-0"



01 A521 RECEPTION DESK DETAIL
SCALE: 1 1/2" = 1'-0"

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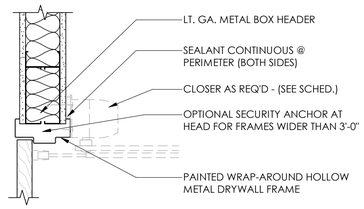
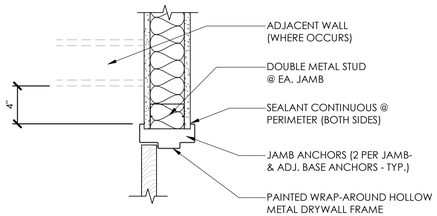
A521

SHEET 49 OF 95



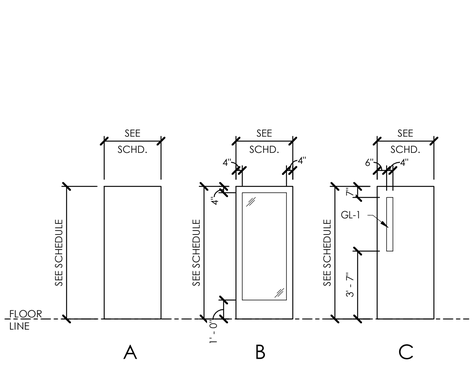
02 A600 DOOR HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



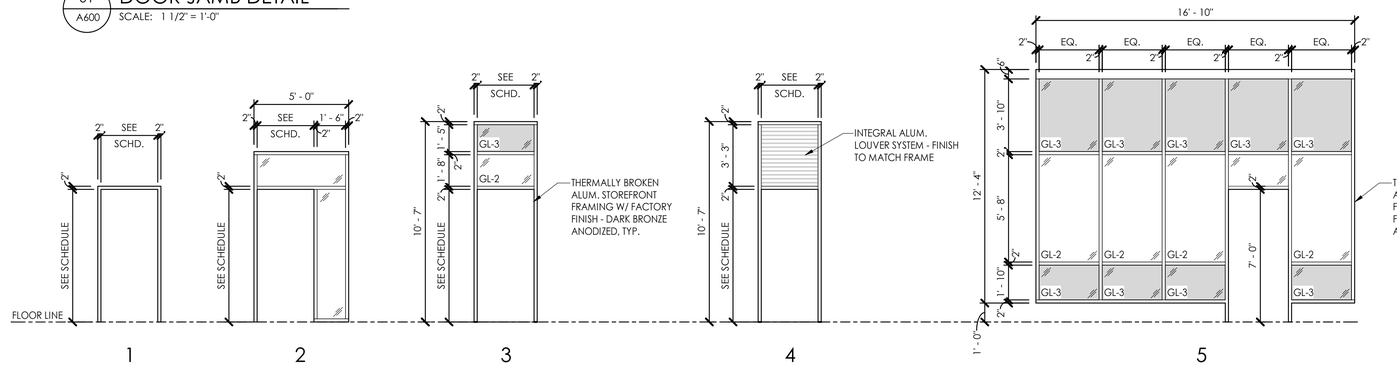
01 A600 DOOR JAMB DETAIL
SCALE: 1 1/2" = 1'-0"

DOOR AND FRAME SCHEDULE

DOOR NUMBER	ROOM NAME	SIZE	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FIRE RATING (MIN.)	HARDWARE SET	REMARKS
200	CORRIDOR	3'-0" X 7'-0" Aluminum	B	ALUM	5	ALUM	-	15	GL-2
202	RECEPTION	3'-0" X 7'-0"	A	WD	1	HM		08	
203	CORRIDOR	3'-0" X 7'-0"	C	WD	1	HM		10	GL-1
204	TLT.	3'-0" X 7'-0"	A	WD	1	HM		02	
205	FILE STORAGE	3'-0" X 7'-0"	A	WD	1	HM		04	
206	CORRIDOR	3'-0" X 7'-0"	B	WD	2	HM		13	GL-1
207	TLT.	3'-0" X 7'-0"	A	WD	1	HM		02	
209	TREATMENT 1	3'-0" X 7'-0"	A	WD	1	HM		01	
210	TREATMENT 2	3'-0" X 7'-0"	A	WD	1	HM		01	
211.1	CORRIDOR	3'-0" X 7'-0"	C	WD	1	HM		06	GL-1
211.2	CORRIDOR	3'-0" X 7'-0" Aluminum	A	ALUM	3	ALUM		16	
213.1	STERILIZATION	3'-0" X 7'-0"	C	WD	1	HM		04	GL-1
213.2	STERILIZATION	3'-0" X 7'-0"	C	WD	1	HM		04	GL-1
215	LAB	3'-0" X 7'-0"	C	WD	1	HM		04	GL-1
216	UNIT SUPPLY	3'-0" X 7'-0"	C	WD	1	HM		05	GL-1
217	CORRIDOR	3'-0" X 7'-0" Aluminum	A	ALUM	2	ALUM		15	
218	J.C.	3'-0" X 7'-0"	A	WD	1	HM		07	
219	STORAGE	3'-0" X 7'-0"	A	WD	1	HM		04	
220	SHARED OFFICE	3'-0" X 7'-0"	C	WD	1	HM		03	GL-1
221	OFFICE	3'-0" X 7'-0"	C	WD	1	HM		03	GL-1
222	BREAK ROOM	3'-0" X 7'-0"	B	WD	1	HM		04	GL-1
223	DATA	3'-0" X 7'-0"	A	WD	1	HM		12	
224	MECHANICAL	3'-0" X 7'-0"	A	WD	1	HM	1	09	
224A	TANK STORAGE	3'-0" X 7'-0" Aluminum	A	ALUM	4	ALUM		14	
225	STAFF TLT.	3'-0" X 7'-0"	A	WD	1	HM		11	
226	CORRIDOR	3'-0" X 7'-0"	C	WD	1	HM		06	GL-1
227	EXAM	3'-0" X 7'-0"	A	WD	1	HM		01	
228	EXAM	3'-0" X 7'-0"	A	WD	1	HM		01	
230	OFFICE	3'-0" X 7'-0"	C	WD	1	HM		03	GL-1
231	PROCEDURE	3'-0" X 7'-0"	A	WD	1	HM		01	
232	EYE TECH.	3'-0" X 7'-0"	A	WD	1	HM		03	
233	WORK RM.	3'-0" X 7'-0"	A	WD	1	HM		04	
234	CORRIDOR	3'-0" X 7'-0"	B	WD	2	HM		13	GL-1



DOOR TYPES
SCALE: 1/4" = 1'-0"



FRAME TYPES
SCALE: 1/4" = 1'-0"

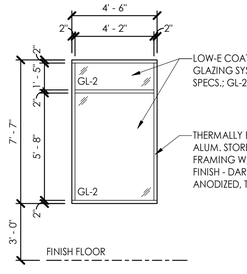
GLAZING NOTES

GL-1: 1/4" CLEAR, FULLY TEMPERED FLOAT GLASS - REFER TO SPECS

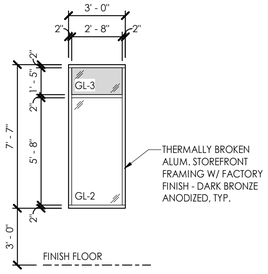
GL-2: 1" INSULATED, LOW-E TINTED FLOAT GLASS - REFER TO SPECS

GL-3: SPANDREL GLAZING SYSTEM - REFER TO SPECS

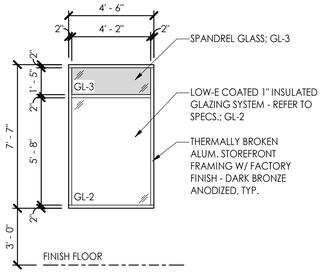
GENERAL NOTES:
REFER TO SPECIFICATION SECTION 08 80 00 GLAZING FOR ADDITIONAL INFORMATION



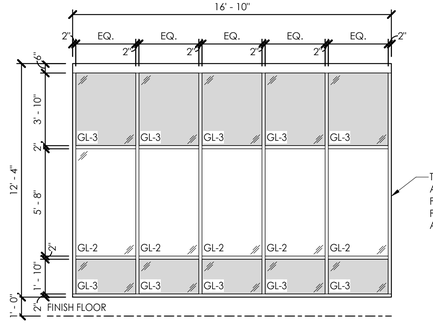
WINDOW TYPE A
SCALE: 1/4" = 1'-0"



WINDOW TYPE B
SCALE: 1/4" = 1'-0"



WINDOW TYPE C
SCALE: 1/4" = 1'-0"



WINDOW TYPE D
SCALE: 1/4" = 1'-0"

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FT. THOMPSON INDIAN HEALTH CENTER DENTAL & OPTOMETRY ADDITION

1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
INDIAN HEALTH SERVICE
DIVISION OF ENGINEERING SERVICES
GREAT PLAINS AREA

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CONCURRENCE
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TITLE

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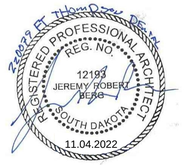
ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: STL
CHECKED BY:

SHEET TITLE:

DOOR AND FRAME SCHEDULE

A600

SHEET 50 OF 95

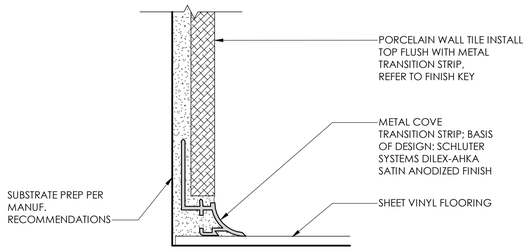


INTERIOR FINISH KEY

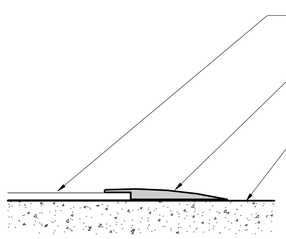
TAG	MATERIAL	MANUFACTURER	STYLE	COLOR	REMARKS
01 FLOORING					
GR-1	GROUT	TEC	ACCUCOLOR EFX	949 - SILVERADO	USE W. PORC-1 & PORC-2
PORC-1	PORCELAIN TILE	AMERICAN OLEAN	NEOCONCRETE	WHITE L191	24x24 FORMAT
SC-1	SEALED CONCRETE	-	-	-	
SHV-1	SHEET VINYL	ARMSTRONG FLOORING	WALNUT GROVE	PLUM CREEK	MOCHA WS149 WELD ROD
02 WALL BASE					
PORC-2	PORCELAIN TILE	AMERICAN OLEAN	NEOCONCRETE	WHITE L191	CUT TO 6"H x 24"W
RB-1	RUBBER WALL BASE	ARMSTRONG	4" COVE	SADDLE	STANDARD TOE
03 WALL FINISH					
GR-2	GROUT	TEC	POWER GROUT	925 - SABLE	USE W. PORC-3
PORC-3	PORCELAIN TILE	AMERICAN OLEAN	NEOCONCRETE 3D CUBE	CHARCOAL	RESTROOM ACCENT TILE
PT-1	WALL PAINT	SHERWIN WILLIAMS	ZERO V.O.C. LATEX	SW6203 SPARE WHITE	EGGSHELL FINISH
PT-2	WALL PAINT	BENJAMIN MOORE	ZERO V.O.C. LATEX	HC-111 NANTUCKET GRAY	EGGSHELL FINISH
PT-3	WALL PAINT	SHERWIN WILLIAMS	ZERO V.O.C. LATEX	SW6223 STILL WATER	EGGSHELL FINISH
PT-4	WALL PAINT	SHERWIN WILLIAMS	WATERBASED EPOXY	SW6203 SPARE WHITE	EGGSHELL FINISH
PT-5	DOOR FRAME PAINT	SHERWIN WILLIAMS	PRO INDUSTRIAL WATERBASED ALKYD URETHANE	SW6203 SPARE WHITE	SEMIGLOSS FINISH
VWC-1	VINYL WALLCOVERING	DESIGNTEX	INKWASH	PEBBLE 3971-803	
WP-1	WALL PROTECTION	VERSA	VERSAGUARD HALCYON	SHIMMER TYP3-127175	
WP-2	WALL PROTECTION	CONSTRUCTION SPECIALTIES	ACROVYN	PEARL #934	
04 CEILINGS					
ACP- 1	ACOUSTIC CEILING PANEL	ARMSTRONG CEILING SOLUTIONS	ULTIMA TEGULAR 1942	WHITE	24"X24"
CP-1	CEILING PAINT	SHERWIN WILLIAMS	ZERO V.O.C. LATEX	SW7007 CEILING BRIGHT WHITE	FLAT FINISH
WD-1	WOOD BAFFLES	ARMSTRONG CEILING SOLUTIONS	WOODWORKS GRILLE	7097BO MAPLE (GMP)	
05 MILLWORK					
IF-1	CABINET DOOR INFILL	A DEC	VEIL PURE	-	
PL-1	PLASTIC LAMINATE	A DEC	-	BRIDAL BLANCO	
PL-2	PLASTIC LAMINATE	A DEC	-	LOOKS LIKEATRE	
PL-3	PLASTIC LAMINATE	WILSON ART	-	PHANTOM ECRU 8212K-28	GLOSS LINE FINISH
PL-4	PLASTIC LAMINATE	WILSON ART	-	PHANTOM PEARL 8211K-28	SOFTGRAIN FINISH
SS-1	SOLID SURFACE	DUPONT	CORIAN	CONCRETE 12234159	
SS-2	SOLID SURFACE	DUPONT	CORIAN	ANTARTICA	
06 MISCELLANEOUS					
CG-1	CORNER GUARDS	CONSTRUCTION SPECIALTIES	SSM-20	OYSTER GRAY #929	
CHR-1	VINYL CHAIR RAIL	CONSTRUCTION SPECIALTIES	FR-270	OYSTER GRAY #929	
TEXTILE	SEWN UPHOLSTERY	A DEC	SEWN	RIVIERA	
WIND-1	WINDOW TREATMENT	SWF CONTRACT	R SERIES MANUAL SHADES	ZENITH FOG STRIPE C9504	4% OPENNESS

INTERIOR FINISH GENERAL NOTES

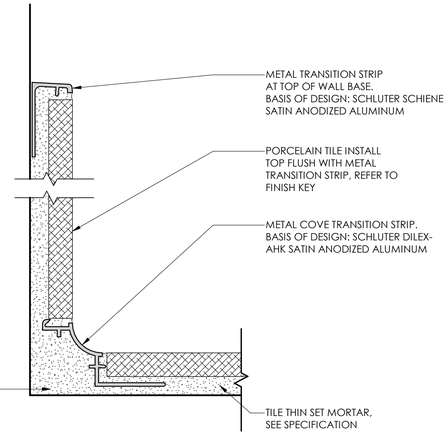
1. THE MANUFACTURER PRODUCT IDENTIFIED MEETS THE SALIENT CHARACTERISTICS OF THIS SPECIFICATION; SUCH INFORMATION IS ONLY TO SHOW AN EXAMPLE OF PRODUCTS WHICH MEET THE SPECIFICATIONS AND DO NOT, IN ANY WAY, LIMIT THE OFFEROR FROM PROVIDING PRODUCTS FROM OTHER MANUFACTURERS WHICH MEET THE SALIENT CHARACTERISTICS AS IDENTIFIED IN THE SPECIFICATION.
2. REFERENCE FLOOR PLANS AND INTERIOR ELEVATIONS FOR INTERIOR SPECIALTY ELEVATIONS.
3. REFERENCE FINISH PLAN FOR FLOOR PATTERNS, ACCENT PAINT LOCATIONS, AND ROOM FINISH TAGS FOR TYPE AND PLACEMENT OF INTERIOR FINISHES.
4. REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL CEILING FINISHES.
5. PATTERN NAME, COLOR, AND NUMBER FOR EACH MATERIAL ARE GIVEN WHEREVER POSSIBLE ON THE FINISH PLAN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/INTERIOR DESIGNER SO THAT THE CORRECT MATERIAL IS INSTALLED.
6. ALL FLOORING TRANSITIONS SHALL BE CENTERED UNDER THE DOOR IN THE CLOSED POSITION.
7. REFER TO SHEET A700 FOR FLOOR TRANSITION AND WALL BASE DETAILS.
8. THERE SHALL NOT BE PAINT CONDITIONS THAT OCCUR CAUSING FINISH OR COLOR TO CHANGE ON AN OUTSIDE CORNER UNLESS SPECIFICALLY NOTED OTHERWISE. IF THIS CONDITION OCCURS, BRING THIS TO THE DESIGNER'S ATTENTION IMMEDIATELY.
9. BULKHEADS/SOFFITS/FURDOWNS SHALL BE FINISHED WITH SAME MATERIAL AND/OR COLOR ON ALL FACES AS SPECIFIED U.N.O.
10. WIREWAYS, ACCESS PANELS, GRILLES, ELECTRICAL PANELS, MECHANICAL DEVICES, ETC. SHALL BE FINISHED TO MATCH THE ADJACENT SURFACE.
11. ALL WALL PROTECTION OR WALL PANELING SHALL BE TRIMMED AROUND WALL MOUNTED DEVICES, ACCESS PANELS, MECHANICAL DEVICES, ETC.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADA-COMPLIANT TRANSITIONS AT ALL CHANGES IN FLOOR FINISH U.N.O.
13. RESILIENT WALL BASE SHALL BE CONTINUED AROUND ALL CASEWORK BASE/TOE KICKS UNLESS DETAILED OTHERWISE.
14. ALL HM DOOR FRAMES SHALL BE PAINTED PT-5 U.N.O.



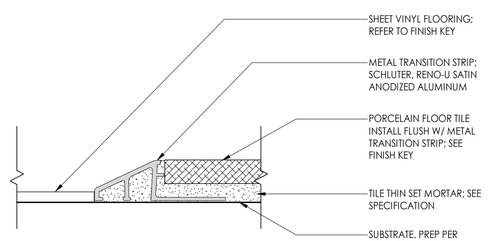
04 A700 WALL TILE COVE TO SHV
SCALE: 12" = 1'-0"



03 A700 SHV TO SEALED CONC.
SCALE: 12" = 1'-0"



02 A700 PORCELAIN COVE BASE
SCALE: 12" = 1'-0"



01 A700 SHV to PORC
SCALE: 12" = 1'-0"

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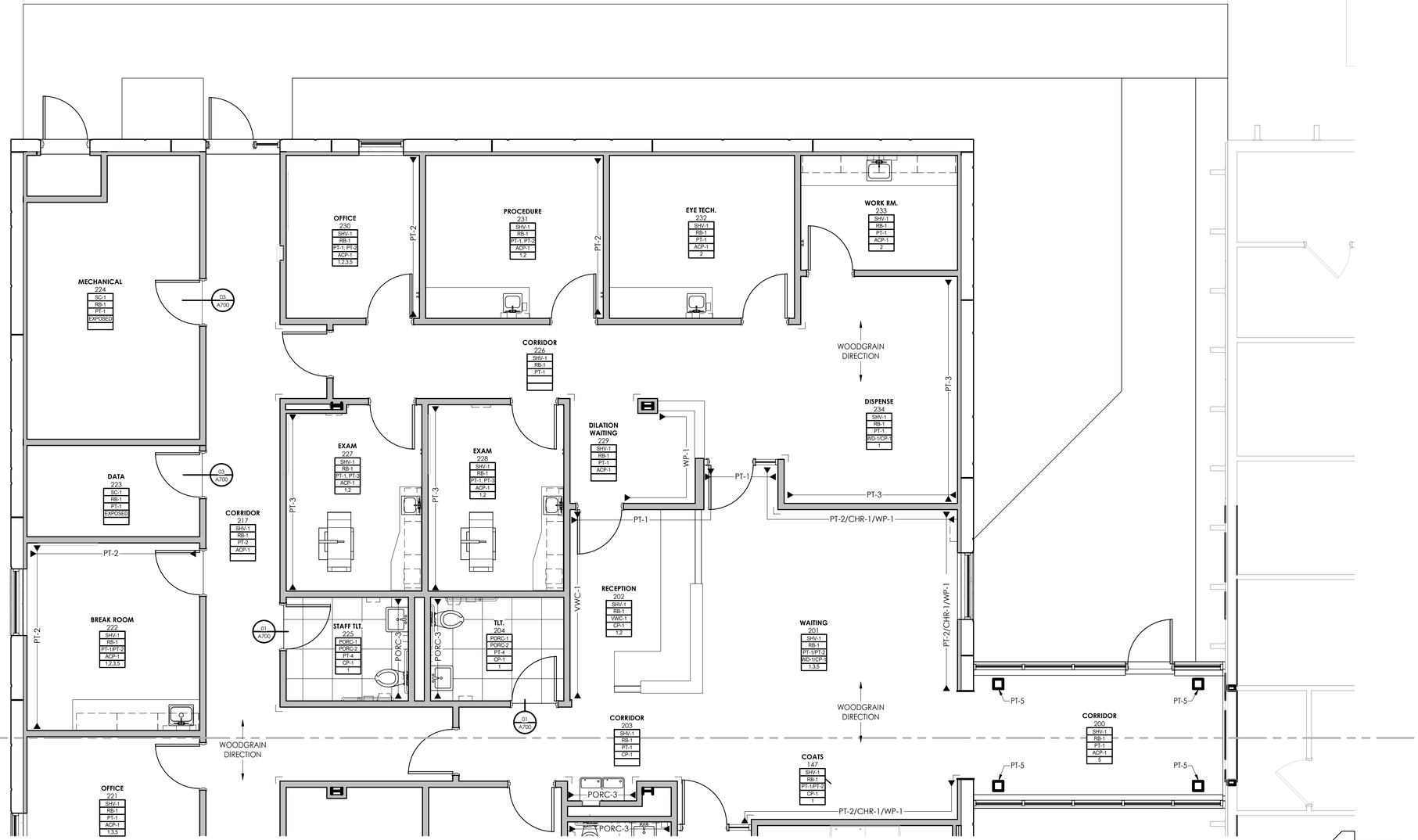
CHECKED BY: SS

SHEET TITLE:

INTERIOR FINISH KEY AND SCHEDULE

A700

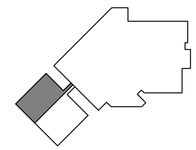
SHEET 51 OF 95



NORTH

FIRST FLOOR FINISH PLAN - UNIT A

SCALE: 1/4" = 1'-0"



KEY PLAN

FINISH PLAN REMARKS

1. REFER TO FINISH PLAN FOR WALL TILE / ACCENT PAINT COLOR & LOCATION
2. REFER TO INTERIOR ELEVATIONS FOR CASEWORK FINISHES
3. PROVIDE ROLLER WINDOW SHADE ON EXTERIOR WINDOWS; WIND-1
4. REFER TO FINISH PLAN GENERAL NOTES ON SHEET A700
5. SOLID SURFACE WINDOW SILLS; SS-2

FINISH PLAN LEGEND

ROOM NAME	**OFFICE**
ROOM NUMBER	XXXX
FLOOR FINISH	CPT-1
BASE FINISH	RB-1
TYP. WALL FINISH	PT-1
CEILING FINISH	ACP-1
REMARKS	1

ACCENT FINISH LOCATION — PT-#

*NOTE: REFER TO FINISH KEY ON SHEET A700.

REGISTERED PROFESSIONAL ARCHITECT
REG. NO.
12199
JEREMY ROBERT BERG
SOUTH DAKOTA
11.04.2022

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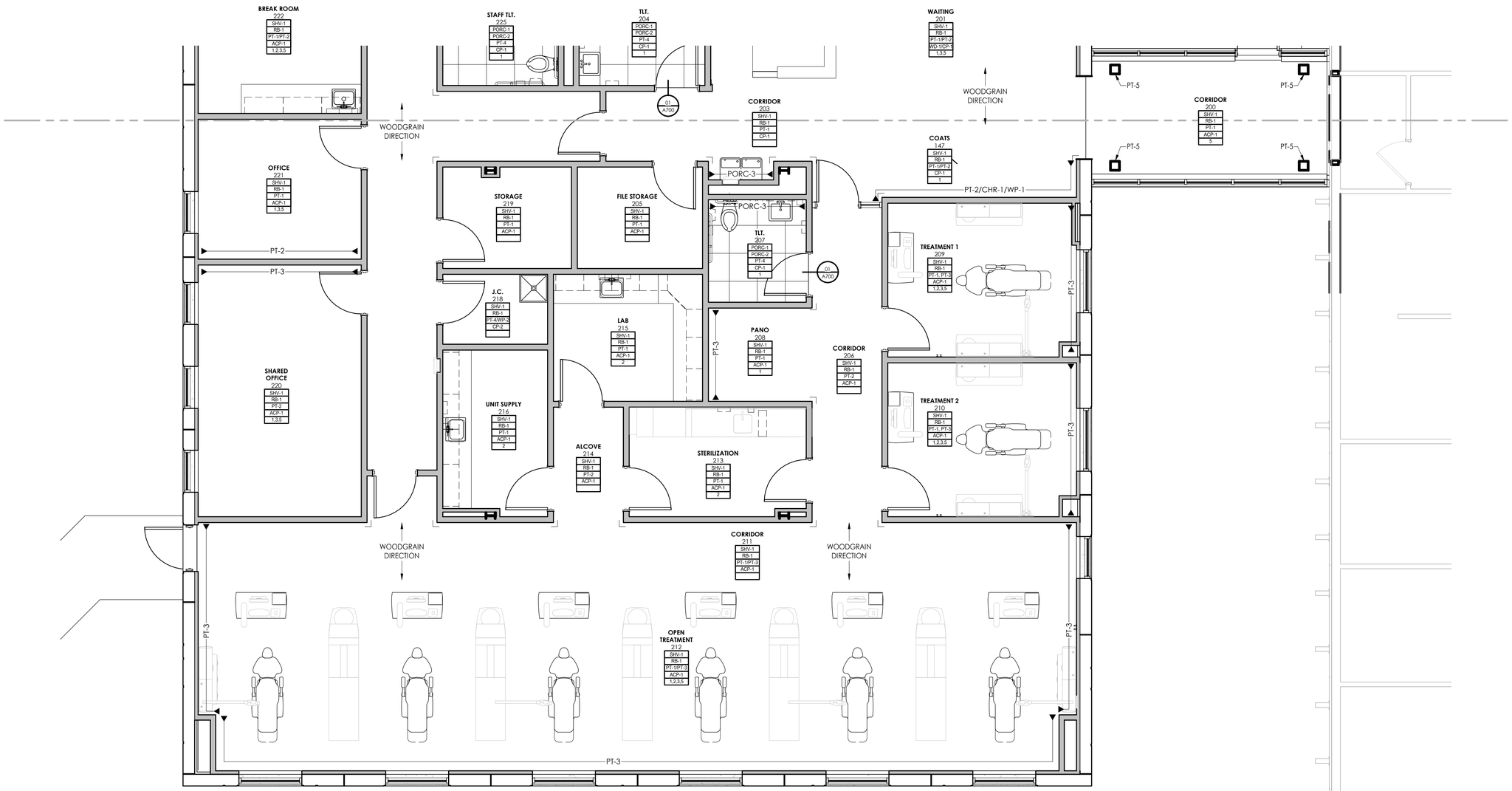
SHEET TITLE:

FIRST FLOOR FINISH PLAN – UNIT A

A701A

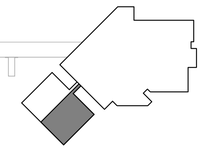
SHEET 52 OF 95



NORTH

FIRST FLOOR FINISH PLAN - UNIT B

SCALE: 1/4" = 1'-0"



KEY PLAN

FINISH PLAN REMARKS

1. REFER TO FINISH PLAN FOR WALL TILE / ACCENT PAINT COLOR & LOCATION
2. REFER TO INTERIOR ELEVATIONS FOR CASEWORK FINISHES
3. PROVIDE ROLLER WINDOW SHADE ON EXTERIOR WINDOWS; WIND-1
4. REFER TO FINISH PLAN GENERAL NOTES ON SHEET A700
5. SOLID SURFACE WINDOW SILLS; SS-2

FINISH PLAN LEGEND

ROOM NAME — **OFFICE**
ROOM NUMBER — XXXX
FLOOR FINISH — CPT-1
BASE FINISH — RB-1
TYP. WALL FINISH — PT-1
CEILING FINISH — ACP-1
REMARKS — 1

ACCENT FINISH LOCATION — PT-#

*NOTE: REFER TO FINISH KEY ON SHEET A700.

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FIRST FLOOR FINISH PLAN – UNIT B

A701B

SHEET 53 OF 95

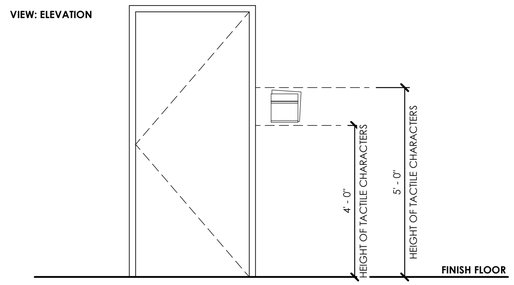
INTERIOR SIGNAGE SCHEDULE				
ROOM NUMBER	ROOM NAME	SIGN TYPE	SIGN QUANTITY	SIGN COPY
200	CORRIDOR			
201	WAITING			
202	RECEPTION			
203	CORRIDOR			
204	TLT.	03, 04	1 EA.	
205	FILE STORAGE	02	1	VERIFY W. OWNER
206	CORRIDOR			
207	TLT.	03, 04	1 EA.	
208	PANO		1	VERIFY W. OWNER
209	TREATMENT 1	01	1	VERIFY W. OWNER
210	TREATMENT 2	01	1	VERIFY W. OWNER
211	CORRIDOR			
212	OPEN TREATMENT			
213	STERILIZATION	01	1	VERIFY W. OWNER
214	ALCOVE			VERIFY W. OWNER
215	LAB	01	1	VERIFY W. OWNER
216	UNIT SUPPLY	01	1	VERIFY W. OWNER
217	CORRIDOR			
218	J.C.	01	1	VERIFY W. OWNER
219	STORAGE	01	1	VERIFY W. OWNER
220	SHARED OFFICE	02	1	VERIFY W. OWNER
221	OFFICE	02	1	VERIFY W. OWNER
222	BREAK ROOM	01	1	VERIFY W. OWNER
223	DATA	01	1	VERIFY W. OWNER
224	MECHANICAL	01	1	VERIFY W. OWNER
224A	TANK STORAGE			
225	STAFF TLT.	03, 04	1 EA.	VERIFY W. OWNER
226	CORRIDOR			
227	EXAM	02	1	VERIFY W. OWNER
228	EXAM	02	1	VERIFY W. OWNER
229	DILATION WAITING	01	1	VERIFY W. OWNER
230	OFFICE	02	1	VERIFY W. OWNER
231	PROCEDURE	02	1	VERIFY W. OWNER
232	EYE TECH.	02	1	VERIFY W. OWNER
233	WORK RM.	02	1	VERIFY W. OWNER
234	DISPENSE			

SIGNAGE TYPE LEGEND

MATERIAL A	PLASTIC LAMINATE TAKEFORM - PHANTOM CHARCOAL
MATERIAL B	PLASTIC LAMINATE TAKEFORM - IRISH LINEN
MATERIAL C	ACRYLIC PLASTIC INSERT WINDOW BACKGROUND: CLEAR
MATERIAL D	SOLID ACRYLIC BACKGROUND: IRON

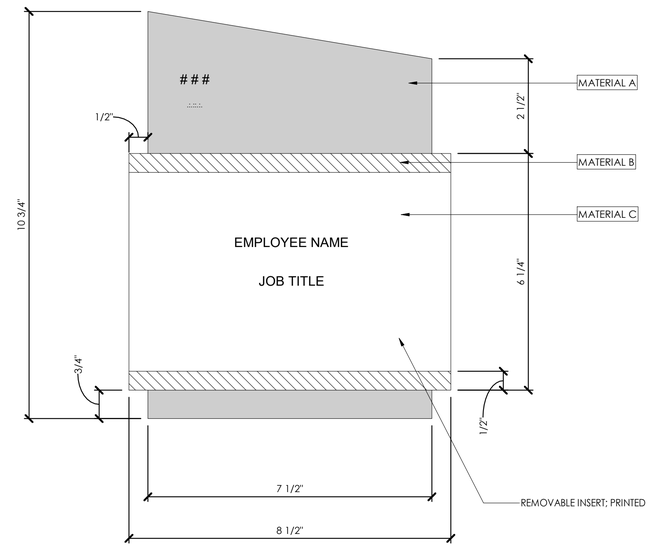
RAISED TEXT:
FONT TYPE: FUTURA
COLOR: WHITE
HEIGHT & SIZE: IN COMPLIANCE W/ ADA MIN. REQUIREMENTS INCLUDING BRAILLE

SIGNAGE LOCATION & MOUNTING GUIDELINES



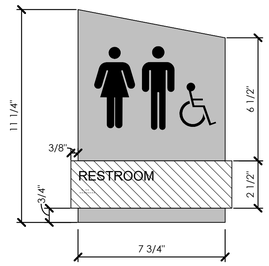
NOTES:

1. TACTILE CHARACTERS ON SIGNS SHALL BE LCOATED 48" MIN. A.F.F. MEASURED FROM THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 80" MAX. A.F.F. MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER.
2. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES MINIMUM BY 18 INCHES MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND THE 45 DEGREE OPEN POSITION.
3. THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE, WHERE THERE IS NO WALL SPACE AT THE LATCHSIDE OF THE DOOR, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL.
4. CHARACTER HEIGHT MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8 INCH MINIMUM AND 2 INCHES MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I". WHERE SEPARATE RAISED AND VISUAL CHARACTERS WITH THE SAME INFORMATION ARE PROVIED, RAISED CHARACTER HEIGHT SHALL BE PERMITTED TO BE 1/2 INCH MINIMUM.
5. IF CARD READERS ARE PRESENT, COORDINATE LOCATION W. CARD READER & VERIFY LOCATION W. OWNER PRIOR TO MOUNTING.
6. ONE DOOR/ROOM SIGN REQUIRED PER DOOR. PLACE ON WALL OR STOREFRONT SYSTEM AS INDICATED ON THE SIGNAGE PLANS; REFER TO SHEET AW101.
7. COMPLY WITH ABA SIGNAGE MOUNTING GUIDELINES.
8. COORDINATE INSERT VERBIAGE W. OWNER.

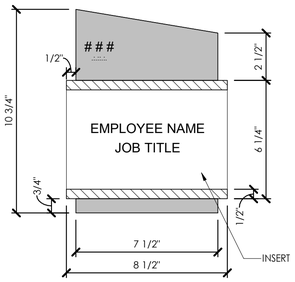


5 A800 SIGNAGE - SUITE ID
SCALE: 6" = 1'-0"

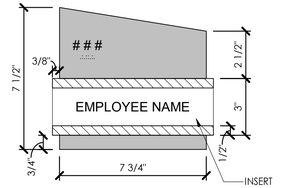
04 A800 SIGNAGE - RESTROOM
SCALE: 3" = 1'-0"



03 A800 SIGNAGE - RESTROOM ID
SCALE: 3" = 1'-0"



02 A800 SIGNAGE - SUITE ID
SCALE: 3" = 1'-0"



01 A800 SIGNAGE - OFFICE ID
SCALE: 3" = 1'-0"

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INTERIOR SIGN TYPES & SCHEDULE

A800

SHEET 54 OF 95

FIRE PROTECTION SHEET LIST

SHEET	DESCRIPTION
F001	FIRE PROTECTION GENERAL INFO & SYMBOL LEGEND
F101	FIRST FLOOR FIRE PROTECTION PLAN

GENERAL FIRE PROTECTION NOTES

A. PROVIDE A COMPLETE WET TYPE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.

B. THE SPRINKLER SYSTEM SHALL BE DESIGNED BASED UPON ACTUAL WATER FLOW TEST DATA OBTAINED AT OR NEAR THE JOB SITE.

C. ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED ABOVE THE SUSPENDED CEILING SYSTEM, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO EXPOSING ANY PIPING IN ANY ROOM WHICH HAS A SUSPENDED CEILING.

D. DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.

E. THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SPRINKLER HEADS AS REQUIRED TO ENSURE AN APPROVED FIRE PROTECTION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.

F. AUXILIARY DRAINS SHALL BE EXPOSED WITH 1" DRAIN VALVES. WHEN 5 OR MORE GALLONS ARE TRAPPED, THIS CONTRACTOR SHALL PROVIDE FIXED PIPING TO AN ADEQUATELY SIZED RECEIPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE DRAIN. WHEN LESS THAN 5 GALLONS ARE TRAPPED, A HOSE BIB SHALL BE PROVIDED AT THE DRAIN VALVE.

G. AUXILIARY DRAINS SHALL NOT BE LOCATED ABOVE PLASTER OR GYPSUM BOARD CEILING SYSTEMS. ONLY BY A SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER WILL A VARIANCE BE PROVIDED.

H. AN INSPECTOR'S TEST CONNECTION SHALL BE PROVIDED FOR EACH FIRE SPRINKLER ZONE. THIS CONTRACTOR SHALL PROVIDE FIXED PIPING FROM THE TEST CONNECTION TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE TEST. EXTERIOR DISCHARGE OF THE TEST CONNECTION SHALL BE PERMITTED ONLY BY SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER.

I. SHOW ALL ROOM NUMBERS ON SHOP DRAWING PLANS.

J. ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT. SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM.

K. THIS DRAWING INDICATES A GENERAL PIPING ARRANGEMENT AND SUGGESTED SIZING ONLY. THIS CONTRACTOR SHALL DETERMINE THE ACTUAL PIPE SIZING REQUIRED AND COORDINATE WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.

L. THIS CONTRACTOR SHALL PREPARE HYDRAULIC CALCULATIONS BASED UPON THE CONFIGURATION OF THE ACTUAL SYSTEM DESIGN AS SHOWN ON THIS CONTRACTOR'S SHOP DRAWINGS.

M. REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION REGARDING SPRINKLER HEAD LOCATION AND PIPE, UNLESS NOTED OTHERWISE.

GENERAL SYMBOLS

- REVISION NUMBER - SHOWN ON PLANS
- POINT WHERE DISCONNECT/DEMOLITION OCCURS AT EXISTING
- POINT WHERE NEW CONNECTS TO EXISTING
- NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- KEYNOTE
- CONTINUATION SYMBOL
- Room 1 — ROOM NAME AND NUMBER
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT
- 2" — PIPE SIZE TAG (DIAMETER)
- ABOVE GROUND PIPING
- 1/8" / 12" SLOPE — PIPE SLOPE TAG
- BELOW GROUND PIPING
- INVERT: -105' - 1" — PIPE INVERT ELEVATION TAG
- (E) — EXISTING PIPE TAG
- (D) — PIPING BEING DEMOLISHED

ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	MAX	MAXIMUM
AD	AREA DRAIN	MD	MOTORIZED DAMPER
ADD	ADDENDUM	MECH	MECHANICAL
AFF	ABOVE FINISHED FLOOR	MFR	MANUFACTURER
ALT	ALTERNATE	MIN	MINIMUM
AP	ACCESS PANEL	MISC	MISCELLANEOUS
ARCH	ARCHITECT/ARCHITECTURAL	MTR	MOTOR
BFF	BELOW FINISHED FLOOR	NC	NORMALLY CLOSED
BLW	BELOW	NIC	NOT IN CONTRACT
CAP	CAPACITY	NO	NUMBER
CB	CATCH BASIN	NO	NORMALLY OPEN
CLG	CEILING	NTS	NOT TO SCALE
CO	CLEAN OUT	PD	PRESSURE DROP
CW	COLD WATER	PIV	POST INDICATOR VALVE
D	DEGREE	PRESS	PRESSURE
DIA	DIAMETER	PRV	PRESSURE REDUCING VALVE
DN	DOWN	PSI	POUNDS PER SQUARE INCH
EA	EACH	PSIG	POUNDS PER SQUARE INCH GAUGE
ELEC	ELECTRICAL		
EQUIP	EQUIPMENT	PWR	POWER
E/A	EXHAUST AIR	REC	RECESSED
F	DEGREES FAHRENHEIT	RED	REDUCER
FD	FLOOR DRAIN	RM	ROOM
FDC	FIRE DEPARTMENT CONNECTION	RPM	REVOLUTIONS PER MINUTE
FL	FLOOR	SF	SQUARE FOOT
FO	FUEL OIL	SAN	SANITARY
FOV	FUEL OIL VENT	SF	SQUARE FOOT
FOR	FUEL OIL RETURN	SD	SMOKE DAMPER
FOS	FUEL OIL SUPPLY	SM	SURFACE MOUNT
FPM	FEET PER MINUTE	SP	STANDPIPE
FT	FOOT/FEET	SP	STATIC PRESSURE
GAL	GALLON	T	THERMOSTAT
GF	GAS-FIRED	TD	TEMPERATURE DROP
GC	GENERAL CONTRACTOR	TEMP	TEMPERATURE
GPM	GALLONS PER MINUTE	TYP	TYPICAL
HB	HOSE BIB	UG	UNDERGROUND
HP	HORSE POWER	V	VENT
HTR	HEATER	VENT	VENTILATION
HYD	HYDRANT	W	WASTE
ID	INDIRECT	WH	WALL HYDRANT
IN	INCH		
INV	INVERT		
LB	POUND		

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER		
CUH	CABINET UNIT HEATER	HWP	HEATING WATER PUMP
CHWP	CHILLED WATER PUMP	HRU	HEAT RECOVERY UNIT
DBP	DOMESTIC WATER BOOSTER PUMP	PRV	POWER ROOF VENTILATOR
DC	DUCT MOUNTED COIL	RE	RETURN/EXHAUST FAN
DCP	DOMESTIC WATER CIRCULATING PUMP	RTU	ROOFTOP UNIT
		SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

* NOTE *

ALL GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

FIRE PROTECTION SYMBOLS

- FP-D — FIRE PROTECTION DRY
- FP-O — FIRE PROTECTION OTHER
- FP-PA — FIRE PROTECTION PRE-ACTION
- FP-W — FIRE PROTECTION WET
- FP-DOM-W — COMBINATION FIRE & DOMESTIC
- UPRIGHT SPRINKLER HEAD
- PENDENT SPRINKLER HEAD
- RECESSED SPRINKLER HEAD
- CONCEALED SPRINKLER HEAD
- DRY SPRINKLER HEAD
- D — SIDEWALL SPRINKLER HEAD
- EXTENDED COVERAGE SIDEWALL SPRINKLER HEAD
- 48"x18" S/A — OBSTRUCTION FROM DUCTWORK 48" AND GREATER
- PIPE DROP
- PIPE RISE
- PIPE TEE
- CAP
- 4" / 2" — PLUG
- REDUCING 45 DEGREE TEE
- 45 DEGREE TEE

PIPE ACCESSORY TAGS

- WM — 2" DOM. WM DOMESTIC WATER METER
- 2" BALANCING BALANCING VALVE
- 2" SHUTOFF 1/4 TURN BALL VALVE
- 2" CHECK CHECK VALVE
- 2" TMV 3-WAY MIXING VALVE
- ALARM CHECK VALVE
- DRY PIPE VALVE
- FREESTANDING SIAMESE FIRE DEPARTMENT CONNECTION
- INDICATING BUTTERFLY VALVE
- OS&Y VALVE
- PREACTION VALVE
- FIRE DAMPER
- SMOKE DAMPER
- M — 2" M-CNTRL MOTORIZED CONTROL VALVE
- M — 2" 3-WAY CNTRL 3 WAY MOTORIZED CONTROL VALVE
- 2" PRV PRESSURE REDUCING VALVE
- S — 3/8" SOLENOID REFRIGERANT SOLENOID VALVE
- 2" BUTTERFLY BUTTERFLY VALVE
- FIRE SMOKE DAMPER
- POST INDICATOR VALVE
- RISER
- SIAMESE FIRE DEPARTMENT CONNECTION
- SINGLE FIRE DEPARTMENT CONNECTION
- THRUST BLOCK
- VALVE NONRISING STEM

GENERAL PROJECT NOTES

A. COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.

B. FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.

C. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.

D. ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.

E. LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS. TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.

F. PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE AN APPROVED MATERIAL AS PRESCRIBED IN CSFM STANDARD 43-1 AND SHALL BE U.L. LISTED.

G. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.

H. MAINTAIN CLEAR ACCESS TO SERVICE EQUIPMENT AND OTHER ACCESSORIES REQUIRING SERVICE. VISUAL INSPECTION OR HAND OPERATION. WHERE INDICATED OR REQUIRED, PROVIDE ACCESS PANELS OF THE TYPE SELECTED TO SUIT MATERIALS IN WHICH INSTALLED.

I. ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.

J. REFER TO HVAC SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE DRAIN PIPING.

K. PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.

L. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.

M. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.

N. LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.

O. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

P. THE CONTRACTOR'S WORK SCHEDULE SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER.

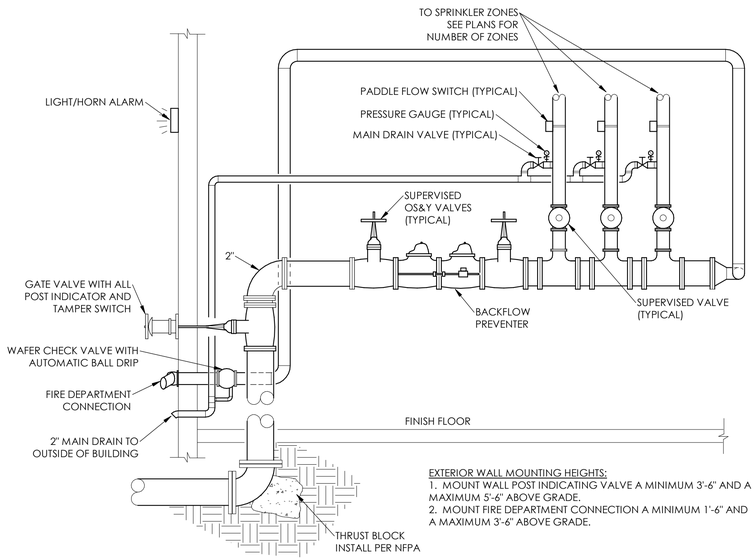
Q. PRIOR TO STARTING WORK, SUBMIT SHOP DRAWINGS FOR ALL MECHANICAL EQUIPMENT, PLUMBING FIXTURES, AND DIFFUSERS.

R. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND SHALL ARRANGE FOR ALL INSPECTIONS AS REQUIRED.

S. PROVIDE ONE YEAR WARRANTY FOR ALL WORKMANSHIP AND MATERIALS AFTER THE DATE OF FINAL ACCEPTANCE.

SPRINKLER SYSTEM DESIGN CRITERIA

SYMBOL	OCCUPANCY HAZARD CLASSIFICATION	DESIGN DENSITY (GPM/SF)	DESIGN AREA
R	RESIDENTIAL (DWELLING) OCCUPANCY	0.05	400 SF
LH	LIGHT HAZARD OCCUPANCY	0.10	1500 SF
OH1	ORDINARY HAZARD, GROUP 1 OCCUPANCY	0.15	1500 SF
OH2	ORDINARY HAZARD, GROUP 2 OCCUPANCY	0.20	1500 SF
EH1	EXTRA HAZARD, GROUP 1 OCCUPANCY	0.30	2500 SF
EH2	EXTRA HAZARD, GROUP 2 OCCUPANCY	0.40	2500 SF
S	SPECIAL HAZARD OCCUPANCY		



EXTERIOR WALL MOUNTING HEIGHTS:
1. MOUNT WALL POST INDICATING VALVE A MINIMUM 3'-6" AND A MAXIMUM 5'-6" ABOVE GRADE.
2. MOUNT FIRE DEPARTMENT CONNECTION A MINIMUM 1'-6" AND A MAXIMUM 3'-6" ABOVE GRADE.

1 / F001 FIRE PROTECTION RISER ELEVATION
SCALE: NTS

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING co
259 E Michigan Ave
Kalamazoo, MI 49007
www.steelheadengineeringco.com

NEHIL-SIVAK STRUCTURAL ENGINEERS
414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

REGISTERED PROFESSIONAL ENGINEER — REG. NO. 14014 — BRADEN R. COX — SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
INDIAN HEALTH SERVICE
DIVISION OF ENGINEERING SERVICES
GREAT PLAINS AREA

REVIEWED:
ES ARCHITECT / ENGINEER — DATE

APPROVED:
ES PROJECT MANAGER — DATE
ES BRANCH CHIEF — DATE

CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV	DATE	DESCRIPTION
1	03/11/2022	ADDENDUM #1

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: LF
CHECKED BY: JDS

SHEET TITLE:

FIRE PROTECTION GENERAL INFO & SYMBOL LEGEND

F001

SHEET 55 OF 95

REMAINING AREA SHALL BE LOW HAZARD

NORTH

FIRST FLOOR FIRE PROTECTION PLAN

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

FIRE PROTECTION NOTES

A INSTALLATION CONTRACTOR SHALL PROVIDE A WET FIRE SUPPRESSION SYSTEM. CONTRACTOR SHALL DETERMINE SPACE DENSITY AND HYDRAULICALLY CALCULATE MOST DEMANDING AREA. FIRE PROTECTION SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 13, THE AUTHORITY HAVING JURISDICTION, AND STATE AND LOCAL REQUIREMENTS.

OCCUPANCY HAZARD CLASSIFICATION

LOCATION NO.	LOCATION NAME	AREA	OCCUPANCY HAZARD CLASSIFICATION SYMBOL
LEVEL 01			
147	COATS	32 SF	LH
200	CORRIDOR	137 SF	LH
201	WAITING	154 SF	LH
202	RECEPTION	101 SF	LH
203	CORRIDOR	265 SF	LH
204	TLT.	63 SF	LH
205	FILE STORAGE	65 SF	LH
206	CORRIDOR	115 SF	LH
207	TLT.	51 SF	LH
208	PANO	44 SF	LH
209	TREATMENT 1	147 SF	LH
210	TREATMENT 2	147 SF	LH
211	CORRIDOR	328 SF	LH
212	OPEN TREATMENT	764 SF	LH
213	STERILIZATION	99 SF	LH
214	ALCOVE	41 SF	LH
215	LAB	97 SF	LH
216	UNIT SUPPLY	88 SF	LH
217	CORRIDOR	404 SF	LH
218	J.C.	38 SF	LH
219	STORAGE	66 SF	LH
220	SHARED OFFICE	211 SF	LH
221	OFFICE	117 SF	LH
222	BREAK ROOM	148 SF	LH
223	DATA	72 SF	LH
224	MECHANICAL	207 SF	LH
224A	TANK STORAGE	14 SF	OH1
225	STAFF TLT.	58 SF	LH
226	CORRIDOR	188 SF	LH
227	EXAM	113 SF	LH
228	EXAM	116 SF	LH
229	DILATION WAITING	54 SF	LH
230	OFFICE	100 SF	LH
231	PROCEDURE	132 SF	LH
232	EYE TECH.	138 SF	LH
233	WORK RM.	82 SF	LH
234	DISPENSE	161 SF	LH

KEY PLAN

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

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AGENCY REPRESENTATIVE DATE
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PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: LF
CHECKED BY: JDS

SHEET TITLE:

FIRST FLOOR FIRE PROTECTION PLAN

F101

SHEET 56 OF 95

PLUMBING SHEET LIST

SHEET	DESCRIPTION
P001	PLUMBING GENERAL INFO & SYMBOL LEGEND
P101	FIRST FLOOR DOMESTIC WATER AND GAS PLAN
P121	FIRST FLOOR SANITARY AND VENT PLAN
P141	FIRST FLOOR STORM PLAN
P142	ROOF STORM PLAN
P201	FIRST FLOOR MEDICAL GAS PLAN
P500	PLUMBING DETAILS
P520	DOMESTIC WATER AND GAS RISER DIAGRAMS
P521	SANITARY & VENT RISER DIAGRAM
P522	STORM RISER DIAGRAM
P523	MEDICAL GAS RISER DIAGRAM
P600	PLUMBING SCHEDULES

GENERAL SYMBOLS

- REVISION NUMBER - SHOWN ON PLANS
- POINT WHERE DISCONNECT/DEMOLITION OCCURS AT EXISTING
- POINT WHERE NEW CONNECTS TO EXISTING
- NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- KEYNOTE
- CONTINUATION SYMBOL
- Room 4 — ROOM NAME AND NUMBER
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT
- 2" — PIPE SIZE TAG (DIAMETER)
- ABOVE GROUND PIPING
- 1/8" / 12" SLOPE — PIPE SLOPE TAG
- BELOW GROUND PIPING
- INVERT: -105' - 1" — PIPE INVERT ELEVATION TAG
- (E) — EXISTING PIPE TAG
- (D) — PIPING BEING DEMOLISHED

ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MU/A	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER		
EWT	ENTERING WATER TEMPERATURE	PWR	POWER
E/A	EXHAUST AIR	R	DUCT RISER
EXIST	EXISTING	R/A	RETURN AIR
F	DEGREES FAHRENHEIT	RCP	RADIANT CEILING PANEL
FCO	FLOOR CLEAN OUT	RD	ROOF DRAIN
FD	FLOOR DRAIN	REC	RECESSED
FDC	FIRE DEPARTMENT CONNECTION	RED	REDUCER
FL	FLOOR	RH	RELATIVE HUMIDITY
FO	FUEL OIL	RL/A	RELIEF AIR
FOV	FUEL OIL VENT	RM	ROOM
FOR	FUEL OIL RETURN	RPM	REVOLUTIONS PER MINUTE
FOS	FUEL OIL SUPPLY	RW	RAIN WATER
FPM	FEET PER MINUTE	SF	SQUARE FOOT
FS	FLOOR SINK	S/A	SUPPLY AIR
FT	FOOT/FEET	SAN	SANITARY
FTR	FIN TUBE RADIATION	SF	SQUARE FOOT
GAL	GALLON	SD	SMOKE DAMPER
GF	GAS-FIRED	SM	SURFACE MOUNT
GC	GENERAL CONTRACTOR	SP	STANDPIPE
GPM	GALLONS PER MINUTE	SP	STATIC PRESSURE
GW	GREASE WASTE	STM	STEAM
HB	HOSE BIB	T	THERMOSTAT
HP	HORSE POWER	TD	TEMPERATURE DROP
HTG	HEATING	TDR	TRENCH DRAIN
HTR	HEATER	TEMP	TEMPERATURE
HW	HOT WATER	TYP	TYPICAL
HYD	HYDRANT	UG	UNDERGROUND
ID	INDIRECT	VAC	VACUUM
IN	INCH	V	VENT
INV	INVERT	VAV	VARIABLE AIR VOLUME
LB	POUND	VENT	VENTILATION
LB/HR	POUNDS PER HOUR	VTR	VENT THROUGH ROOF
LAT	LEAVING AIR TEMPERATURE	W	WASTE
LP	LOW PRESSURE	WB	WET BULB
LPG	LIQUEFIED PETROLEUM GAS	WCO	WALL CLEAN OUT
		WH	WALL HYDRANT

PLUMBING AND PIPING SYMBOLS

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CD — CONDENSATE DRAINAGE
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- GWR — GEOTHERMAL WATER RETURN
- GWS — GEOTHERMAL WATER SUPPLY
- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- G — NATURAL GAS
- PG — PROPANE GAS
- REF-L — REFRIGERANT-LIQUID
- REF-S — REFRIGERANT-SUCTION
- REF-HG — REFRIGERANT-HOT GAS
- STM — STEAM
- CDR — CONDENSATE RETURN
- CWV — COMBINATION WASTE & VENT
- CA — COMPRESSED AIR
- CW — DOMESTIC COLD WATER
- H-CW — HARD COLD WATER
- S-CW — SOFT COLD WATER
- F-CW — FILTERED COLD WATER
- RO — REVERSE OSMOSIS WATER
- HW — HOT WATER
- HW 140° — HOT WATER 140°
- HW-R — HOT WATER RECIRCULATION
- HW-R 140° — HOT WATER RECIRCULATION 140°
- GV — GREASE VENT
- GW — GREASE WASTE
- IW — INDIRECT WASTE
- OV — OIL VENT
- OW — OIL WASTE
- PD — PUMP DISCHARGE
- V — SANITARY VENT
- SS — SANITARY SEWER
- SHWR — SOLAR HOT WATER RETURN
- SHWS — SOLAR HOT WATER SUPPLY
- SD — STORM DRAINAGE
- OSD — OVERFLOW STORM DRAINAGE

PIPE ACCESSORY TAGS

- 2" DOM. WM DOMESTIC WATER METER
- 2" BALANCING BALANCING VALVE
- 2" SHUTOFF 1/4 TURN BALL VALVE
- 2" CHECK CHECK VALVE
- 2" TMV 3-WAY MIXING VALVE
- GATE VALVE
- 3-WAY AIRMOTOR CONTROLLER
- ANGLE GLOBE VALVE
- ANGLE HOSE VALVE
- DIAPHRAGM VALVE
- GLOBE VALVE
- HOSE GLOBE VALVE
- 2" M-CNTRL MOTORIZED CONTROL VALVE
- 2" 3-WAY CNTRL 3 WAY MOTORIZED CONTROL VALVE
- 2" PRV PRESSURE REDUCING VALVE
- 3/8" SOLENOID REFRIGERANT SOLENOID VALVE
- 2" BUTTERFLY BUTTERFLY VALVE
- LOCK SHIELD VALVE
- NEEDLE VALVE
- PLUG VALVE
- QUICK OPENING VALVE
- SPRING CHECK VALVE
- SWING GATE CHECK VALVE
- TEMP PRESSURE RELIEF VALVE

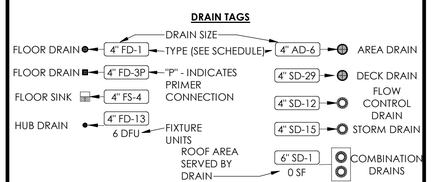
EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
		UH	UNIT HEATER
EF	EXHAUST FAN	WH	WATER HEATER
EDC	ELECTRIC DUCT COIL		

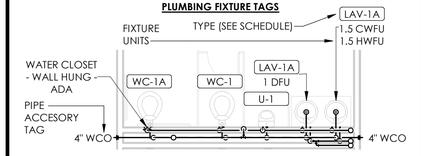
* NOTE *

ALL GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

DRAIN TAGS



PLUMBING FIXTURE TAGS



GENERAL PROJECT NOTES

- A — COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- B — FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- C — LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- D — ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
- E — LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
- F — PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE AN APPROVED MATERIAL AS PRESCRIBED IN CSFM STANDARD 43-1 AND SHALL BE U.L. LISTED.
- G — PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- H — MAINTAIN CLEAR ACCESS TO SERVICE EQUIPMENT AND OTHER ACCESSORIES REQUIRING SERVICE, VISUAL INSPECTION OR HAND OPERATION. WHERE INDICATED OR REQUIRED, PROVIDE ACCESS PANELS OF THE TYPE SELECTED TO SUIT MATERIALS IN WHICH INSTALLED.
- I — ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
- J — REFER TO HVAC SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE DRAIN PIPING.
- K — PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- L — FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- M — INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- N — LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- O — INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.
- P — THE CONTRACTOR'S WORK SCHEDULE SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER.
- Q — PRIOR TO STARTING WORK, SUBMIT SHOP DRAWINGS FOR ALL MECHANICAL EQUIPMENT, PLUMBING FIXTURES, AND DIFFUSERS.
- R — CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND SHALL ARRANGE FOR ALL INSPECTIONS AS REQUIRED.
- S — PROVIDE ONE YEAR WARRANTY FOR ALL WORKMANSHIP AND MATERIALS AFTER THE DATE OF FINAL ACCEPTANCE.

GENERAL PLUMBING NOTES

- A — PITCH UNDERFLOOR SANITARY WASTE PIPING AT 1/4" PER FOOT, UNLESS NOTED OTHERWISE.
- B — PITCH UNDERFLOOR STORM PIPING 3" AND GREATER AT 1/8" PER FOOT, UNLESS NOTED OTHERWISE. PITCH ALL OTHER STORM PIPING AT 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- C — FIELD VERIFY LOCATION AND INVERTS OF SITE UTILITIES PRIOR TO INSTALLATION.
- D — ROUTE DOMESTIC WATER, FIRE PROTECTION, SANITARY SEWER, AND STORM SEWER SERVICES TO SITE UTILITIES 5'-0" FROM BUILDING UNLESS NOTED OTHERWISE. REFER TO CIVIL PLANS.
- E — WASTE AND VENT PIPING BELOW FLOOR AND THROUGH FLOOR SHALL BE 2" MINIMUM.
- F — PROVIDE CLEANOUT IN ACCESSIBLE LOCATION AT THE BASE OF ALL PLUMBING RISERS.

SEVEN GENERATIONS
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CONSULTANTS

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IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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AGENCY REPRESENTATIVE — DATE
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REV	DATE	DESCRIPTION
1	03/11/2022	ADDENDUM #1

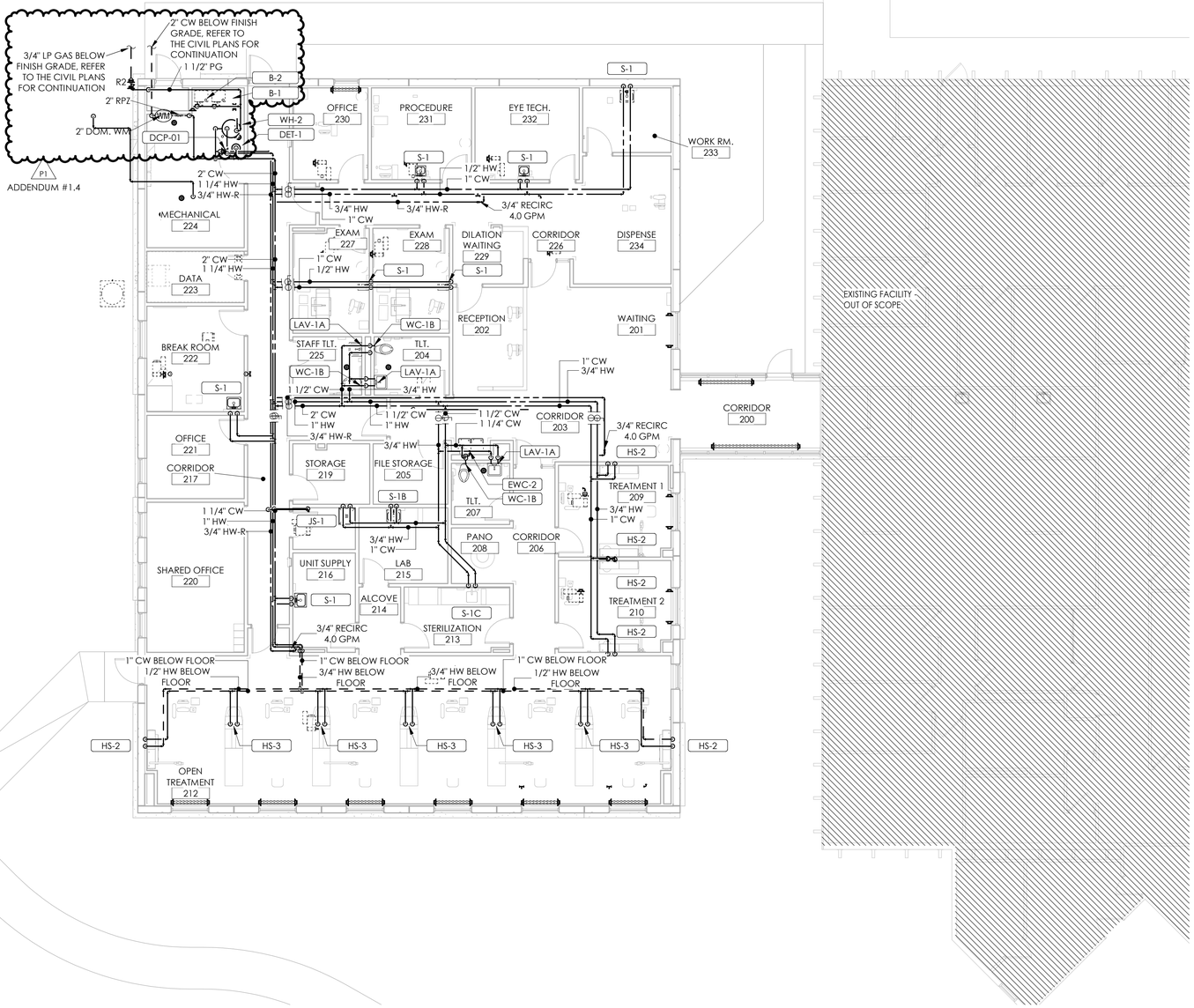
ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
CHECKED BY: JDS

SHEET TITLE:

PLUMBING GENERAL INFO & SYMBOL LEGEND

P001

SHEET 57 OF 95



NORTH

FIRST FLOOR PLUMBING PLAN

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

PLUMBING NOTES

A. THIS PLAN IS DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED TO DETERMINE THE LOCATION OR DIMENSION OF THE WORK. CONTRACTOR SHALL VERIFY EXACT LOCATION OF PIPING AND PENETRATIONS.

B. REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.

C. ALL WALL-MOUNTED ACCESS PANELS SHALL BE LOCKABLE TYPE.

D. ABOVE-GRADE WASTE PIPE SHALL BE RUN AT 2% GRADE. BELOW-GRADE WASTE PIPE SHALL BE RUN AT 1% GRADE.

E. ALL CONDENSATE DRAIN PIPE SHALL BE RUN AT 1% GRADE.

F. MAINTAIN MINIMUM 10-0" SEPARATION BETWEEN FLUE AND PLUMBING VENT OUTLETS AND ANY FRESH AIR INTAKE. COORDINATE WITH HVAC CONTRACTOR.

G. FLOORS SHALL SLOPE TO DRAINS AT 1% MINIMUM SLOPE. SEE ARCHITECTURAL PLANS FOR MORE INFORMATION.

H. PROVIDE ALL FLOOR DRAINS, FLOOR SINKS, TRENCH DRAINS, ETC. WITH TRAP GUARD DEVICES (ASSE 1072 COMPLIANT).

I. PROVIDE WALL CLEAN OUTS IN ALL VENT RISERS ON BRANCHES LONGER THAN 5'-0" AND ON BRANCHES SERVING SINKS OR URINALS.

J. SEE RISER DIAGRAMS FOR PIPE SIZING.

DOMESTIC WATER NOTES

A. ROUTE ALL PIPING IN ABOVE CEILING LEVEL SPACE, EXCEPT WHERE OTHERWISE INDICATED. COORDINATE ROUTING WITH OTHER TRADES. SLOPED PIPING ELEVATIONS TAKE PRIORITY OVER ALL OTHER SYSTEMS AND TRADES.

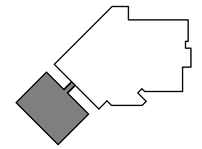
B. PROVIDE SLEEVED AND WATERTIGHT PENETRATIONS AT ALL PIPE PENETRATIONS THROUGH: LOWER LEVEL FLOOR SLAB, UPPER LEVEL FLOOR SLAB, MECHANICAL PENTHOUSE FLOOR SLAB, ROOF STRUCTURES AND, PERIMETER WALLS BELOW GRADE.

C. PROVIDE WATERTIGHT INSTALLATIONS OF ALL FLOOR EMBEDDED DEVICES INCLUDING BUT NOT LIMITED TO: FLOOR DRAINS, FLOOR SINKS, SHOWER DRAINS, HUB DRAINS, FLOOR RECESSED CLEANOUTS AND, FLUSH TO FLOOR ACCESS HOUSINGS.

D. COORDINATE WITH ARCHITECT TO MAINTAIN THE WATERTIGHT INTEGRITY OF THE BUILDING ENVELOPE AND FLOOR SLABS.

E. PROVIDE LOCKABLE TYPE BALL VALVE AT TAP TO ALL SAFEITY EYE WASH AND SHOWER FIXTURES. ALL VALVES TO BE LOCKED IN THE OPEN POSITION.

F. PROVIDE BALL VALVE FOR ISOLATION OF ALL DOMESTIC WATER BRANCH LINES, TYPICAL UNLESS OTHERWISE NOTED.



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Kalamazoo, MI 49007
www.nehilsivak.com

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 14844
BRADEN S. COX
SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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AGENCY REPRESENTATIVE — DATE
TITLE

REV	DATE	DESCRIPTION
4	10/27/2022	ADDENDUM #1.4

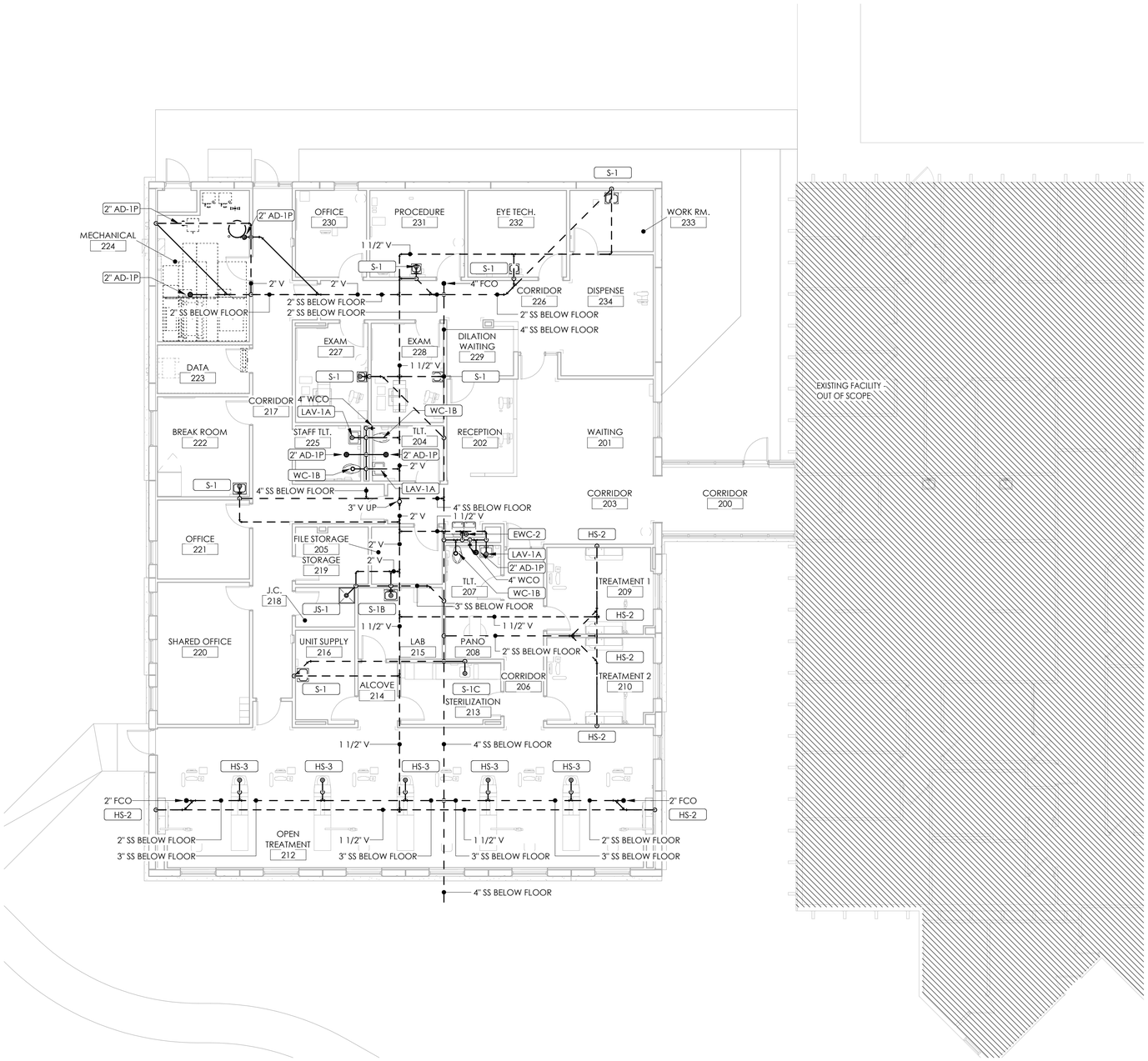
ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
CHECKED BY: JOS

SHEET TITLE:

FIRST FLOOR DOMESTIC WATER AND GAS PLAN

P101

SHEET 58 OF 95



NORTH

FIRST FLOOR SANITARY & VENT PLAN

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

PLUMBING NOTES

A. THIS PLAN IS DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED TO DETERMINE THE LOCATION OR DIMENSION OF THE WORK. CONTRACTOR SHALL VERIFY EXACT LOCATION OF PIPING AND PENETRATIONS.

B. REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.

C. ALL WALL-MOUNTED ACCESS PANELS SHALL BE LOCKABLE TYPE.

D. ABOVE-GRADE WASTE PIPE SHALL BE RUN AT 2% GRADE. BELOW-GRADE WASTE PIPE SHALL BE RUN AT 1% GRADE.

E. ALL CONDENSATE DRAIN PIPE SHALL BE RUN AT 1% GRADE.

F. MAINTAIN MINIMUM 10-0" SEPARATION BETWEEN FLUE AND PLUMBING VENT OUTLETS AND ANY FRESH AIR INTAKE. COORDINATE WITH HVAC CONTRACTOR.

G. FLOORS SHALL SLOPE TO DRAINS AT 1% MINIMUM SLOPE. SEE ARCHITECTURAL PLANS FOR MORE INFORMATION.

H. PROVIDE ALL FLOOR DRAINS, FLOOR SINKS, TRENCH DRAINS, ETC. WITH TRAP GUARD DEVICES (ASSE 1072 COMPLIANT).

I. PROVIDE WALL CLEAN OUTS IN ALL VENT RISERS ON BRANCHES LONGER THAN 5'-0" AND ON BRANCHES SERVING SINKS OR URINALS.

J. SEE RISER DIAGRAMS FOR PIPE SIZING.

SANITARY & VENT NOTES

A. ALL SANITARY DRAINAGE (SAN) PIPING IS LOCATED BELOW SLAB, UNLESS OTHERWISE NOTED.

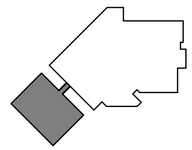
B. ROUTE ALL PIPING INTENDED FOR ABOVE CEILING LEVEL INSTALLATION AS HIGH AS POSSIBLE. COORDINATE ROUTING WITH OTHER TRADES. SLOPED PIPING ELEVATIONS TAKE PRIORITY OVER ALL OTHER SYSTEMS AND TRADES.

C. PROVIDE SLEEVED AND WATERTIGHT PENETRATIONS AT ALL PIPE PENETRATIONS THROUGH: LOWER LEVEL FLOOR SLAB, UPPER LEVEL FLOOR SLAB, MECHANICAL PENTHOUSE FLOOR SLAB, ROOF STRUCTURES AND, PERIMETER WALLS BELOW GRADE.

D. PROVIDE WATERTIGHT INSTALLATIONS OF ALL FLOOR EMBEDDED DEVICES INCLUDING BUT NOT LIMITED TO: FLOOR DRAINS, FLOOR SINKS, SHOWER DRAINS, HUB DRAINS, FLOOR RECESSED CLEANOUTS AND, FLUSH TO FLOOR ACCESS HOUSINGS.

E. COORDINATE WITH ARCHITECT TO MAINTAIN THE WATERTIGHT INTEGRITY OF THE BUILDING ENVELOPE AND FLOOR SLABS.

F. PROVIDE ALL FLOOR DRAINS, FLOOR SINKS AND SHOWER DRAINS WITH IN-LINE TRAP SEAL PROTECTION DEVICES, AS MANUFACTURED BY "SURE SEAL MANUFACTURING", OR APPROVED EQUAL. DEVICES TO MEET OR EXCEED ASSE - 1072AG-GW.



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SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
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REG. NO.
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11/04/22

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REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
CHECKED BY: JDS

SHEET TITLE:

FIRST FLOOR SANITARY AND VENT PLAN

P121

SHEET 59 OF 95

NORTH

FIRST FLOOR STORM PLAN

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

KEYNOTES

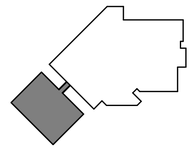
1	OVERFLOW SPOUT

PLUMBING NOTES

A	THIS PLAN IS DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED TO DETERMINE THE LOCATION OR DIMENSION OF THE WORK. CONTRACTOR SHALL VERIFY EXACT LOCATION OF PIPING AND PENETRATIONS.
B	REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
C	ALL WALL-MOUNTED ACCESS PANELS SHALL BE LOCKABLE TYPE.
D	ABOVE-GRADE WASTE PIPE SHALL BE RUN AT 2% GRADE. BELOW-GRADE WASTE PIPE SHALL BE RUN AT 1% GRADE.
E	ALL CONDENSATE DRAIN PIPE SHALL BE RUN AT 1% GRADE.
F	MAINTAIN MINIMUM 10-0" SEPARATION BETWEEN FLUE AND PLUMBING VENT OUTLETS AND ANY FRESH AIR INTAKE. COORDINATE WITH HVAC CONTRACTOR.
G	FLOORS SHALL SLOPE TO DRAINS AT 1% MINIMUM SLOPE. SEE ARCHITECTURAL PLANS FOR MORE INFORMATION.
H	PROVIDE ALL FLOOR DRAINS, FLOOR SINKS, TRENCH DRAINS, ETC. WITH TRAP GUARD DEVICES (ASSE 1072 COMPLIANT).
I	PROVIDE WALL CLEAN OUTS IN ALL VENT RISERS ON BRANCHES LONGER THAN 5'-0" AND ON BRANCHES SERVING SINKS OR URINALS.
J	SEE RISER DIAGRAMS FOR PIPE SIZING.

STORM NOTES

A	STORM DRAIN PIPING TO A CONNECT AT A MINIMUM OF 5'-0" OUTSIDE OF BUILDING PERIMETER AND SECURELY SEAL PIPING WATER TIGHT.



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REG. NO. 14044
BRADEN R. COX
SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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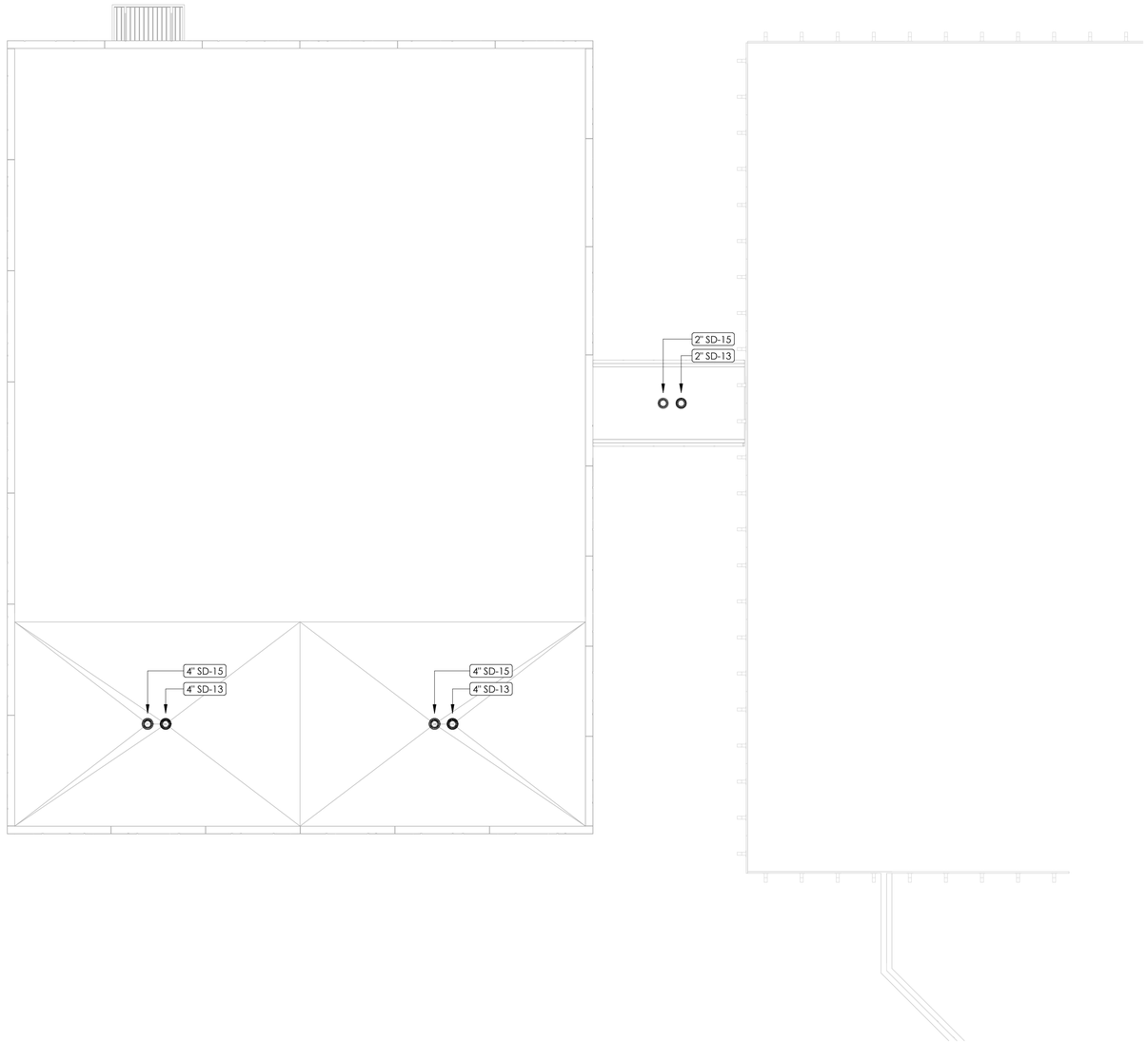
ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
CHECKED BY: JDS

SHEET TITLE:

FIRST FLOOR STORM PLAN

P141

SHEET 60 OF 95



NORTH

ROOF STORM PLAN

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

PLUMBING NOTES

A THIS PLAN IS DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED TO DETERMINE THE LOCATION OR DIMENSION OF THE WORK. CONTRACTOR SHALL VERIFY EXACT LOCATION OF PIPING AND PENETRATIONS.

B REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.

C ALL WALL-MOUNTED ACCESS PANELS SHALL BE LOCKABLE TYPE.

D ABOVE-GRADE WASTE PIPE SHALL BE RUN AT 2% GRADE. BELOW-GRADE WASTE PIPE SHALL BE RUN AT 1% GRADE.

E ALL CONDENSATE DRAIN PIPE SHALL BE RUN AT 1% GRADE.

F MAINTAIN MINIMUM 10-0" SEPARATION BETWEEN FLUE AND PLUMBING VENT OUTLETS AND ANY FRESH AIR INTAKE. COORDINATE WITH HVAC CONTRACTOR.

G FLOORS SHALL SLOPE TO DRAINS AT 1% MINIMUM SLOPE. SEE ARCHITECTURAL PLANS FOR MORE INFORMATION.

H PROVIDE ALL FLOOR DRAINS, FLOOR SINKS, TRENCH DRAINS, ETC. WITH TRAP GUARD DEVICES (ASSE 1072 COMPLIANT).

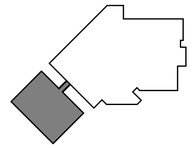
I PROVIDE WALL CLEAN OUTS IN ALL VENT RISERS ON BRANCHES LONGER THAN 5'-0" AND ON BRANCHES SERVING SINKS OR URINALS.

J SEE RISER DIAGRAMS FOR PIPE SIZING.

STORM NOTES

A STORM DRAIN PIPING TO A CONNECT AT A MINIMUM OF 5'-0" OUTSIDE OF BUILDING PERIMETER AND SECURELY SEAL PIPING WATER TIGHT.

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER
REG. NO. 14144
BRADEN R COX
SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
CHECKED BY: JDS

SHEET TITLE:

ROOF STORM PLAN

P142

SHEET 61 OF 95

NORTH

FIRST FLOOR MEDICAL GAS PLAN

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

KEYNOTES

1	PIPING UP TO THE UNDERCOUNTER FIXTURE PROVIDED BY DENTAL CONSULTANTS. PIPING SHALL BE STUBBED 3" A.F.F., COORDINATE REQUIREMENTS WITH DENTAL EQUIPMENT SUPPLIER.
2	VACUUM TO BE PROVIDED BY DENTAL EQUIPMENT CONSULTANTS. CONTRACTOR TO PROVIDE CONNECTIONS.
3	AIR COMPRESSOR TO BE PROVIDED BY DENTAL EQUIPMENT CONSULTANTS. CONTRACTOR TO PROVIDE CONNECTIONS.

PLUMBING NOTES

A	THIS PLAN IS DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED TO DETERMINE THE LOCATION OR DIMENSION OF THE WORK. CONTRACTOR SHALL VERIFY EXACT LOCATION OF PIPING AND PENETRATIONS.
B	REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
C	ALL WALL-MOUNTED ACCESS PANELS SHALL BE LOCKABLE TYPE.
D	ABOVE-GRADE WASTE PIPE SHALL BE RUN AT 2% GRADE. BELOW-GRADE WASTE PIPE SHALL BE RUN AT 1% GRADE.
E	ALL CONDENSATE DRAIN PIPE SHALL BE RUN AT 1% GRADE.
F	MAINTAIN MINIMUM 10-0" SEPARATION BETWEEN FLUE AND PLUMBING VENT OUTLETS AND ANY FRESH AIR INTAKE. COORDINATE WITH HVAC CONTRACTOR.
G	FLOORS SHALL SLOPE TO DRAINS AT 1% MINIMUM SLOPE. SEE ARCHITECTURAL PLANS FOR MORE INFORMATION.
H	PROVIDE ALL FLOOR DRAINS, FLOOR SINKS, TRENCH DRAINS, ETC. WITH TRAP GUARD DEVICES (ASSE 1072 COMPLIANT).
I	PROVIDE WALL CLEAN OUTS IN ALL VENT RISERS ON BRANCHES LONGER THAN 5'-0" AND ON BRANCHES SERVING SINKS OR URINALS.
J	SEE RISER DIAGRAMS FOR PIPE SIZING.

MEDICAL GAS NOTES

A	REFER TO ARCHITECTURAL SHEETS FOR EXACT MEDICAL GAS OUTLET INSTALLATION LOCATION.

KEY PLAN

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

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259 E Michigan Ave
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www.nehilsivak.com

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BRADEN R. COX
SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

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GREAT PLAINS AREA

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ES ARCHITECT / ENGINEER — DATE

APPROVED:

ES PROJECT MANAGER — DATE

ES BRANCH CHIEF — DATE

CONCURRENCE

AGENCY REPRESENTATIVE — DATE

TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022

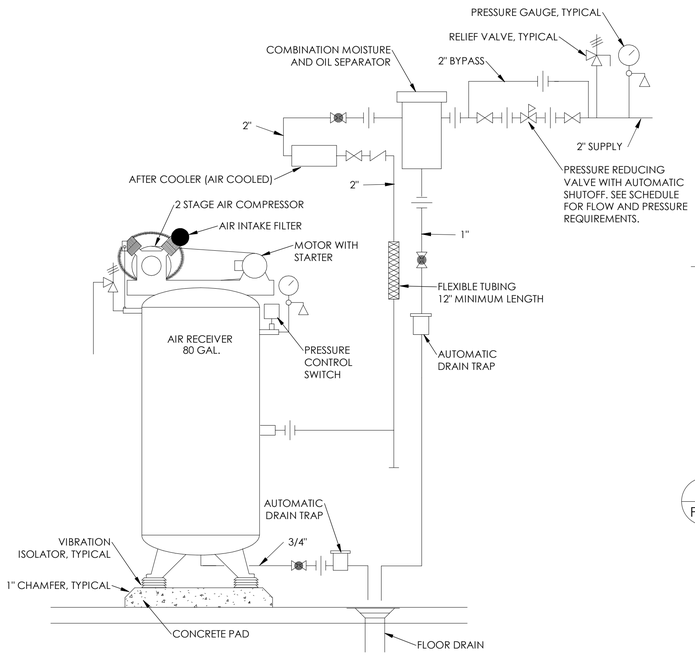
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
CHECKED BY: JDS

SHEET TITLE:

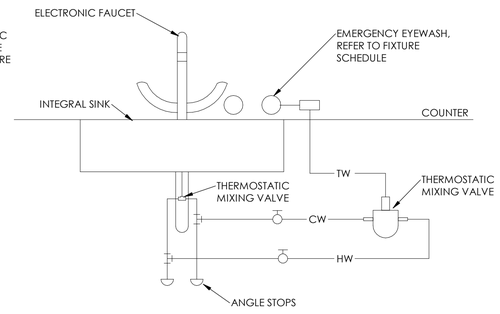
FIRST FLOOR MEDICAL GAS PLAN

P201

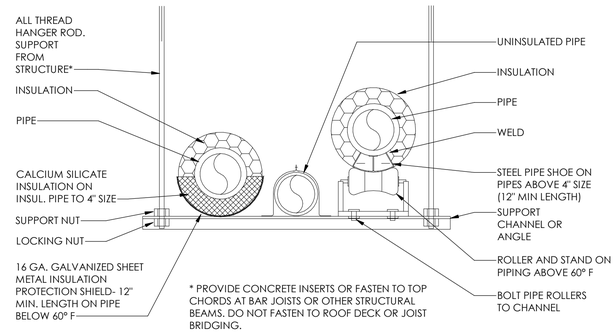
SHEET 62 OF 95



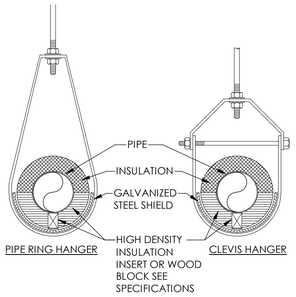
9 P500 VERTICAL AIR COMPRESSOR DETAIL
SCALE: NTS



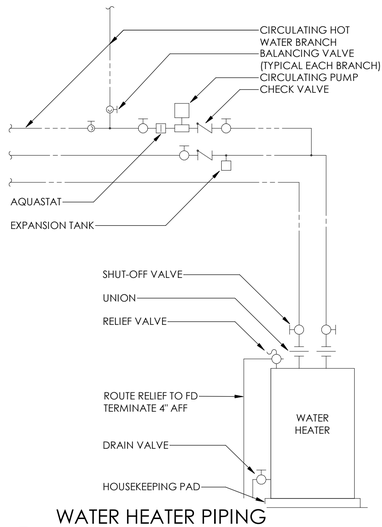
8 P500 COUNTER MOUNT SWING ACTIVATED EYEWASH DETAIL
SCALE: NTS



7 P500 TRAPEZE PIPE HANGER DETAIL
SCALE: NTS

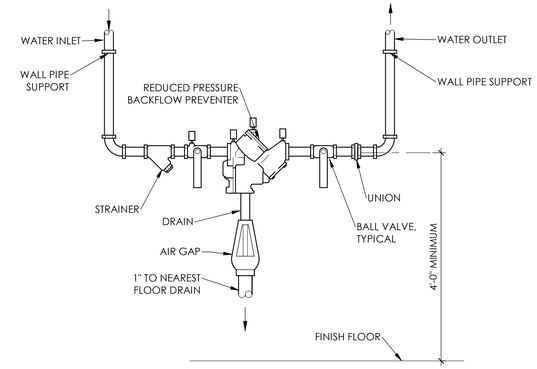


6 P500 INSULATED PIPE AT HANGER DETAIL
SCALE: NTS

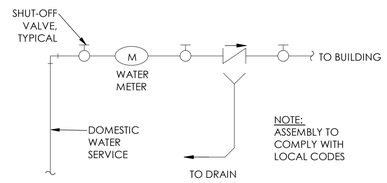


WATER HEATER PIPING DETAIL - SINGLE W/RECIRCULATION

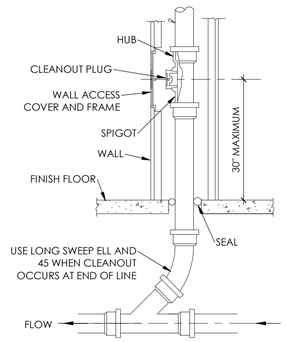
5 P500
SCALE: NTS



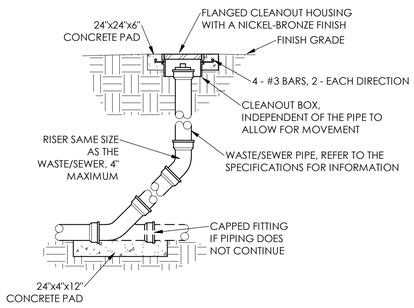
4 P500 BACKFLOW PREVENTER DETAIL
SCALE: NTS



3 P500 WATER SERVICE PIPING DETAIL
SCALE: NTS



2 P500 WALL CLEAN OUT DETAIL
SCALE: NTS



1 P500 CLEAN OUT AND PLUGGED RISER
SCALE: NTS

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600 E Michigan Ave, Suite B
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BRADEN R. COX
SOUTH DAKOTA
11/04/22

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ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
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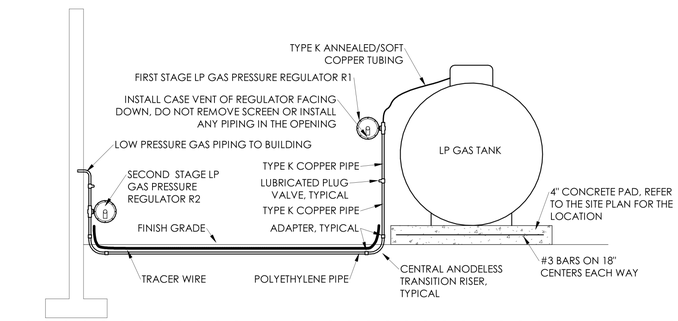
SHEET TITLE:
PLUMBING DETAILS

P500
SHEET 63 OF 95



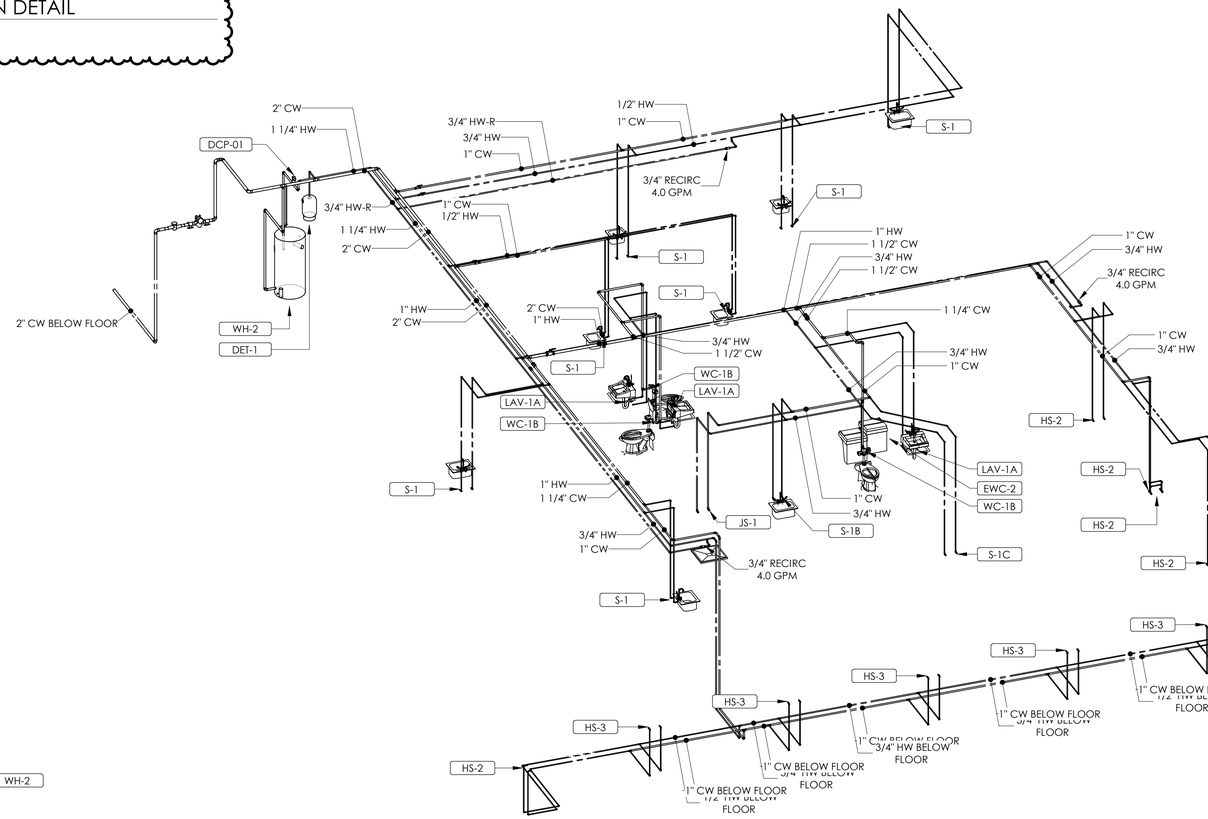
3 / P520 LP REGULATORS AND TANK INSTALLATION DETAIL

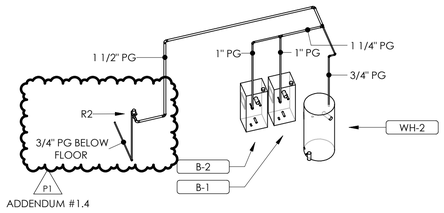
SCALE: NTS

P1 ADDENDUM #1.4

FUEL LOADS SUMMARY

ID	DESCRIPTION	LOCATION NAME	LOCATION NO	FUEL INPUT MAX	FUEL INPUT STAGES	FUEL INPUT MIN	EFF	OUTPUT CAPACITY MAX	OUTPUT CAPACITY MIN	FUEL PROPERTIES TYPE	FUEL PROPERTIES PRESS AVAIL	FUEL PROPERTIES PIPE FLOW (CFH)
B-1	BOILER	MECHANICAL	224	199000 Btu/h	10	19900 Btu/h	93	18507000 Btu/h	1850700 Btu/h	LP	2.0 psi	199
B-2	BOILER	MECHANICAL	224	199000 Btu/h	10	19900 Btu/h	93	18507000 Btu/h	1850700 Btu/h	LP	2.0 psi	199
WH-2	WATER HEATER	MECHANICAL	224	72000 Btu/h	2	36000 Btu/h	0.95	68400 Btu/h	34200 Btu/h	LP	2.0 psi	72





2 / P520 GAS RISER DIAGRAM

SCALE: NTS

1 / P520 DOMESTIC WATER RISER DIAGRAM

SCALE: NTS

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Kalamazoo, MI 49007
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WBK ENGINEERING
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BRADEN R. COX
SOUTH DAKOTA
11/04/22

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IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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REV	DATE	DESCRIPTION
4	10/27/2022	ADDENDUM #1.4

ISSUE DATE: NOVEMBER 4, 2022

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PROJECT NO: 220079
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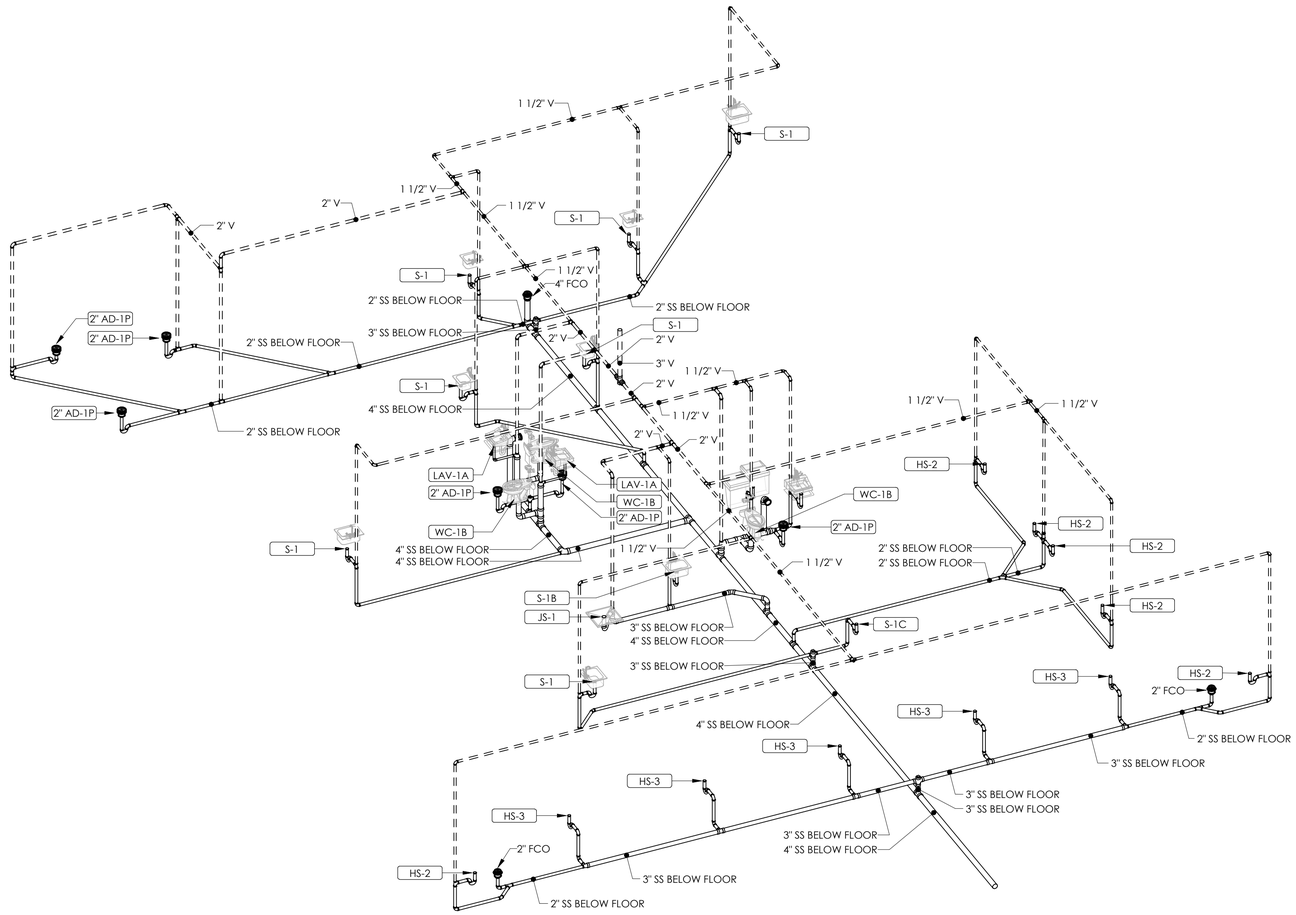
SHEET TITLE:

DOMESTIC WATER AND GAS RISER DIAGRAMS

P520

SHEET 64 OF 95



1 P521 WASTE & VENT RISER DIAGRAM

SCALE: NTS

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Kalamazoo, MI 49007
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CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING co
259 E Michigan Ave
Kalamazoo, MI 49007
www.steelheadengineeringco.com

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414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 14144
BRADEN R. COX
SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
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CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022

CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
CHECKED BY: JDS

SHEET TITLE:

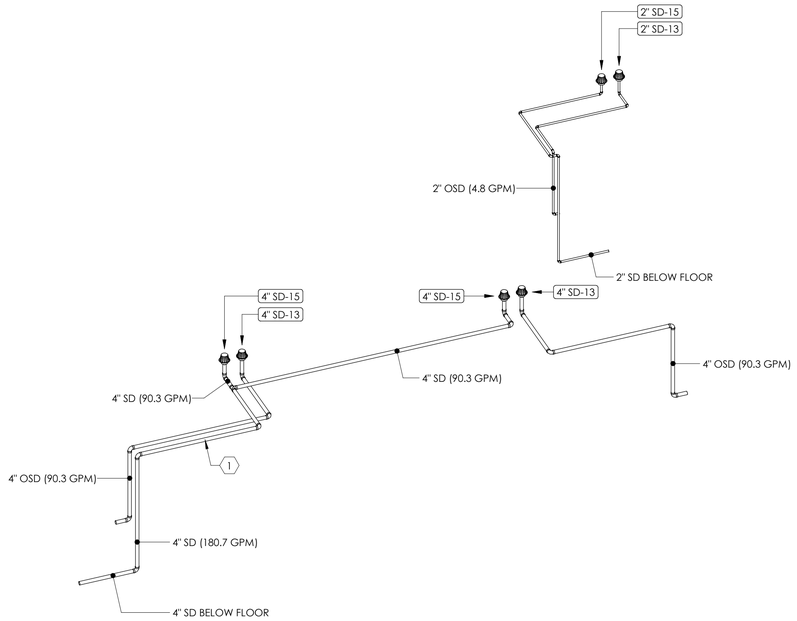
SANITARY & VENT RISER DIAGRAM

P521

SHEET 65 OF 95

KEYNOTES

1 SLOPE STORM PIPING AT 1/2" PER FOOT.



1 / P522 STORM RISER DIAGRAM
SCALE: NTS

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ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

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WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

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REG. NO. 14144
BRADEN R. COX
SOUTH DAKOTA
11/04/22

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CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV	DATE	DESCRIPTION

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
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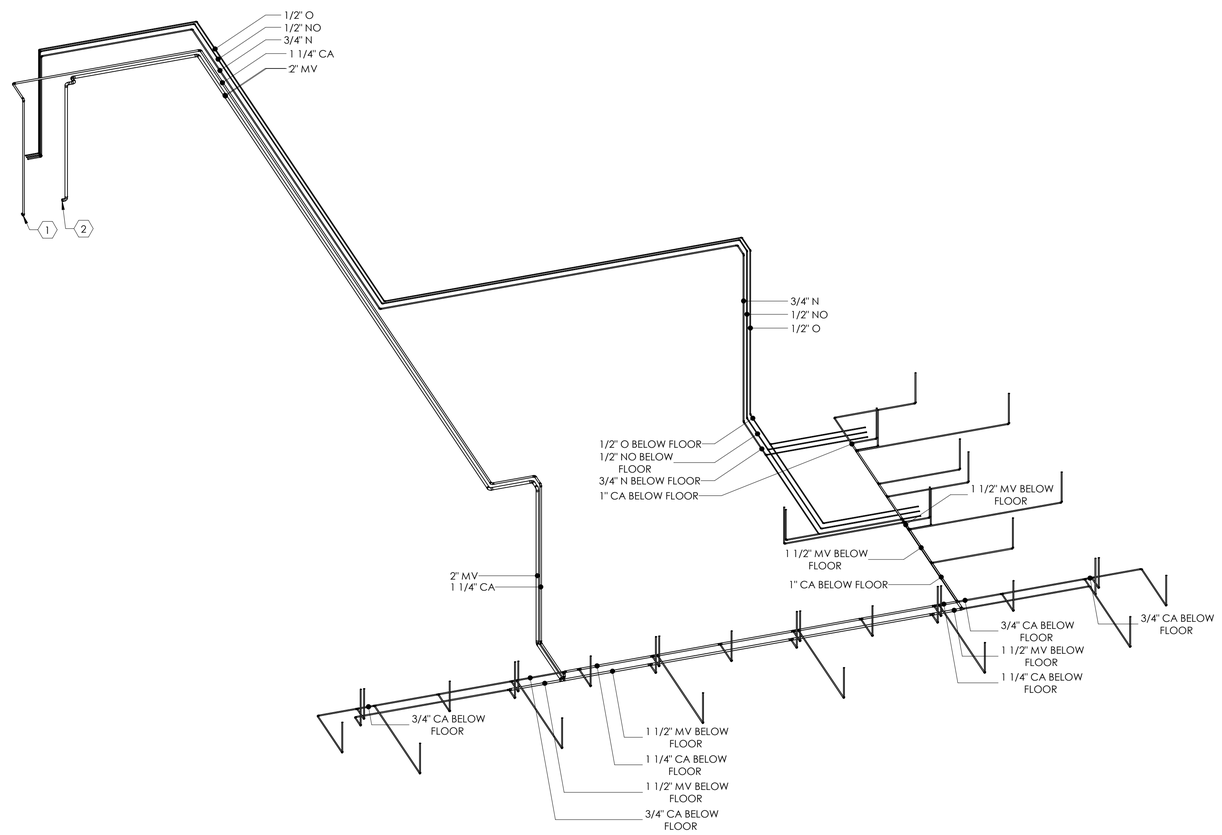
SHEET TITLE:

STORM RISER DIAGRAM

P522

SHEET 66 OF 95



1 P523 MEDICAL GAS RISER DIAGRAM
SCALE: NTS

KEYNOTES

1. AIR COMPRESSOR TO BE PROVIDED BY DENTAL EQUIPMENT CONSULTANTS. CONTRACTOR TO PROVIDE CONNECTIONS.
2. VACUUM TO BE PROVIDED BY DENTAL EQUIPMENT CONSULTANTS. CONTRACTOR TO PROVIDE CONNECTIONS.

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ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

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WBK ENGINEERING
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BRADEN R. COX
SOUTH DAKOTA
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TITLE

REV	DATE	DESCRIPTION
1	03/11/2022	ADDENDUM #1

ISSUE DATE: NOVEMBER 4, 2022

CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
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SHEET TITLE:

MEDICAL GAS RISER DIAGRAM

P523

SHEET 67 OF 95

PLUMBING FIXTURE SCHEDULE

ID	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL DESCRIPTION	FINISH	TRIM				FLOW FIXTURE					FLUSH FIXTURE		WASTE ROUGH-IN PIPE SIZE	INDIRECT WASTE PIPE SIZE	VENT PIPE SIZE	COLD WATER ROUGH-IN PIPE SIZE	HOT WATER ROUGH-IN PIPE SIZE	SPECIFICATION	REMARKS
						MANUFACTURER	MODEL	TYPE	MOTION SENSOR CONTROL	WATER FLOW	TIMER DURATION (SEC)	CWT	HWT	MAX. MWT	VOL. PER FLUSH	MIN. VOL. PER FLUSH							
EWC-2	WATER COOLER - DUAL HEIGHT	ELKAY	EZSTL8WSSK	GALVANIZED STEEL	STAINLESS STEEL CABINET				No	0.1 GPM	15	40 °F		40 °F			2"		1 1/2"	1/2"		TWO LEVEL WALL HUNG WATER COOLER WITH BOTTLE FILLING STATION. THE UNIT SHALL BE COMPLETE WITH CABINET, MOUNTING FRAME, SELF CLOSING EASY TOUCH SIDE AND FRONT PUSHBAR CONTROLS, FLEXIGUARD SAFETY BUBBLER, REFRIGERATING SYSTEM, AIR COOLED, 120 VOLT, 60 CYCLE, SINGLE PHASE POWER CONNECTION, FULLY AUTOMATIC, COMPLETE AND READY TO OPERATE.	
HS-2	HAND SINK	-	-	-	-	-	-	MANUAL	No	0.5 GPM	0	40 °F	120 °F	105 °F			2"		1 1/2"	1/2"	1/2"	SIDE CONSOLE FIXTURE PROVIDED BY DENTAL CONSULTANTS.	
HS-3	HAND SINK	-	-	-	-	-	-	MANUAL	No	0.5 GPM	0	40 °F	120 °F	105 °F			2"		1 1/2"	1/2"	1/2"	FULL CENTRAL CONSOLE FIXTURE PROVIDED BY DENTAL CONSULTANTS.	
JS-1	JANITOR SINK	FIAT	MSB-2424	MOLDED STONE		CHICAGO FAUCET CO	897-CP	MANUAL	No	2.5 GPM	0	40 °F	120 °F	105 °F			3"		2"	3/4"	3/4"	SERVICE BASIN WITH CAP ON TWO SIDES, WITH CHROME PLATED 3" DRAIN AND CAST IRON TRAP. FAUCET SHALL INCLUDE PAIL HOOK AND ATMOSPHERIC VACUUM BREAKER SPOUT. FURNISH 5'-0" LENGTH OF 5-PLY GARDEN HOSE AND FITTINGS.	
LAV-1A	LAVATORY - WALL HUNG - ADA	AMERICAN STANDARD	LUCERNE	WHITE VITREOUS CHINA	WHITE	CHICAGO FAUCET CO	116.976.AB.1	ELECTRONIC	Yes	0.5 GPM	12	40 °F	120 °F	105 °F			2"		1 1/2"	1/2"	1/2"	WALL HUNG LAVATORY WITH BACKSPLASH, FAUCET HOLES ON 4" CENTERS. DECK-MOUNTED FAUCET WITH SENSOR, WATER TURBINE POWER WITH VANDAL RESISTANT SPRAY, EXTERNAL ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE, GRID DRAIN, LOOSE KEY ANGLE STOPS AND SUPPLIES. INSULATE WATER AND WASTE WITH ADA INSULATION KIT. MOUNT AT ADA COMPLIANT HEIGHT.	
S-1	SINGLE BOWL SINK	ELKAY	LRAD221955-3	STAINLESS STEEL	STAINLESS STEEL	ELKAY	LK1000	MANUAL	No	1.0 GPM	240	40 °F	120 °F	105 °F			2"		2"	1/2"	1/2"	SINGLE COMPARTMENT, ADA COMPLIANT, SELF-RIMMING, 18 GAUGE, SINGLE LEVER SWIVEL FAUCET. ONE ELKAY MODEL NO. LK35 BASKET STRAINER, P-TRAP, TAILPIECES, SUPPLIES AND STOPS. INSULATE WATER AND WASTE TO MEET ADA REQUIREMENTS.	
S-1B	SINGLE BOWL SINK WITH EYEWASH STATION	ELKAY	LRAD221955-3	STAINLESS STEEL	STAINLESS STEEL	ELKAY	LK1000	MANUAL	No	1.0 GPM	240	40 °F	120 °F	105 °F			2"		2"	1/2"	1/2"	SINGLE COMPARTMENT, ADA COMPLIANT, SELF-RIMMING, 18 GAUGE. SINGLE LEVER SWIVEL FAUCET. ONE ELKAY MODEL NO. LK35 BASKET STRAINER, P-TRAP, TAILPIECES, SUPPLIES AND STOPS. INSULATE WATER AND WASTE TO MEET ADA REQUIREMENTS. WALL MOUNTED SWING DOWN EYEWASH THAT IS INSTALLED BEHIND THE SINK WITH ABS PLASTIC EYEWASH SPRAY HEADS. THE EYEWASH SWINGS DOWN OVER THE SINK FROM THE REAR AND THE WATER FLOW IS ACTIVATED AUTOMATICALLY. THE EYEWASH FLOW IS TERMINATED ONCE THE UNIT HAS BEEN SWUNG BACK UP INTO ITS ORIGINAL POSITION FOR STORAGE. ALL STAINLESS STEEL, THERMOSTATIC MIXING VALVE ASSE LISTED PER THE ASSE 1071 STANDARD, THE TEPID OUTPUT WATER SHALL COMPLY WITH ANSI Z358.1 STANDARD. VALVE INCLUDES BALL VALVE SHUT-OFFS AND OUTLET TEMPERATURE GAUGE. STAINLESS STEEL DUST COVERS, STAINLESS STEEL EYEWASH SPRAY HEADS SPRAY HEAD ASSEMBLY. ABS YELLOW PLASTIC EYEWASH HEADS WITH INTEGRAL FLIP DUST COVERS, INTERNAL FLOW CONTROLS AND FILTERS TO REMOVE DEBRIS FORM THE WATER.	
S-1C	SINGLE BOWL SINK	-	-	-	-	-	-	MANUAL	No	1.0 GPM	240	40 °F	120 °F	105 °F			2"		2"	1/2"	1/2"	STERILIZATION FIXTURE PROVIDED BY DENTAL CONSULTANTS.	
WC-1B	WATER CLOSET - WALL HUNG - ADA	AMERICAN STANDARD	AFWALL	WHITE VITREOUS CHINA	WHITE	SLOAN	8111-1.28	BATTERY	Yes			40 °F		40 °F	1.28 gal	1.28 gal	4"		2"	1"		ELONGATED WALL HUNG WATER CLOSET, 1-1/2" TOP SPUD, WITH CHURCH 295CT ELONGATED OPEN FRONT SEAT. SOLAR POWERED SENSOR ACTIVATED FLUSHOMETER. INSTALL AT ADA COMPLIANT HEIGHT.	

GAS-FIRED WATER HEATER SCHEDULE

ID	LOCATION		MANUFACTURER	MODEL NO.	TYPE	GAS-FIRED HEAT EXCHANGER					FLA	MOCP	VOLT	PH	REMARKS
						GAS BURNER		WATERSIDE							
							FUEL	STORAGE		MAX TEMP RISE					
	NAME	NO.				INPUT	TYPE	RECOVERY	VOL						
WH-2	MECHANICAL	224	LOCHINVAR	PRL075 75ESST	CONDENSING	72000 Btu/h	LP	82 gal/h	72.0 gal	90 °F	5 A	15 A	120 V	1	PROVIDE ASSE 1017 COMPLIANT MIXING VALVE; POWERS SERIES LFSH OR EQUAL.

DOMESTIC CIRCULATING PUMP SCHEDULE

ID	LOCATION		SYSTEM	MANUFACTURER	MODEL NO.	TYPE	PUMP				MOTOR		UNIT WEIGHT	OPTIONS		FLA	MCA	MOCP	VOLT	PH	REMARKS
							DESIGN FLOW	HEAD	SPEED (RPM)	DRIVE TYPE	POWER	ECM		AQUASTAT	TIMER KIT						
	NAME	NO.																			
DCP-01	MECHANICAL	224	DOM. HW-R	BELL & GOSSETT	ECOCIRC e3-6V	INLINE	5.0 GPM	0.0 FT	0	DIRECT	28 W	Yes	6 lb	Yes	Yes	1 A	1 A	15 A	120 V	1	

DOMESTIC EXPANSION TANK SCHEDULE

ID	LOCATION		MANUFACTURER	MODEL NO.	SYSTEM	TYPE	ARRANGEMENT	VOL	MAX ACCEPTANCE FACTOR	ACCEPTANCE VOL	PRESS RELIEF	PRECHARGE PRESS	UNIT DIMENSIONS		ASME	UNIT WEIGHT	REMARKS
													DIAMETER	HEIGHT			
	NAME	NO.															
DET-1	MECHANICAL	224	AMTROL	ST-20VC	DOM. WATER	FIXED DIAPHRAM	VERTICAL FLOOR MOUNT	8.0 gal	0.40	3.2 gal	100 psi	55 psi	12"	19"	Yes	108 lb	

FLOOR DRAIN SCHEDULE

ID	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL DESCRIPTION		PRIMER CONNECTION	WASTE	VENT	PRIMER	SPECIFICATION	REMARKS
				DRAIN BODY	STRAINER		PIPE SIZE	PIPE SIZE	PIPE SIZE		
AD-1	AREA DRAIN	WATTS	FD-300	EPOXY COATED CAST IRON	DUCTILE IRON	Yes	2"		1/2"	AREA DRAIN WITH ANCHOR FLANGE, WEEPHOLES, 7"(178) DIAMETER ADJUSTABLE TOP WITH HEEL PROOF GRATE, AND NO HUB (STANDARD) OUTLET.	

STORM DRAIN SCHEDULE

ID	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL DESCRIPTION		WASTE	SPECIFICATION	REMARKS
				DRAIN BODY	STRAINER	PIPE SIZE		
SD-13	STORM DRAIN	MIFAB	R1200-W	LACQUERED CAST IRON	POLYETHYLENE	2"	DEEP SUMP ROOF DRAIN WITH 15" DIAMETER ANCHOR FLANGE, LARGE CAST IRON WATERPROOFING MEMBRANE CLAMP RING WITH INTEGRAL GRAVEL STOP, ADJUSTABLE INTERNAL STANDPIPE DAM AND STANDARD SELF-LOCKING DOME STRAINER WITH A FREE AREA OF 125 SQUARE INCHES.	
SD-13	STORM DRAIN	MIFAB	R1200-W	LACQUERED CAST IRON	POLYETHYLENE	4"	DEEP SUMP ROOF DRAIN WITH 15" DIAMETER ANCHOR FLANGE, LARGE CAST IRON WATERPROOFING MEMBRANE CLAMP RING WITH INTEGRAL GRAVEL STOP, ADJUSTABLE INTERNAL STANDPIPE DAM AND STANDARD SELF-LOCKING DOME STRAINER WITH A FREE AREA OF 125 SQUARE INCHES.	
SD-15	STORM DRAIN	MIFAB	R1200	LACQUERED CAST IRON	POLYETHYLENE	2"	DEEP SUMP ROOF DRAIN WITH 15" DIAMETER ANCHOR FLANGE, LARGE CAST IRON WATERPROOFING MEMBRANE CLAMP RING WITH INTEGRAL GRAVEL STOP, AND STANDARD SELF-LOCKING DOME STRAINER WITH A FREE AREA OF 125 SQUARE INCHES.	
SD-15	STORM DRAIN	MIFAB	R1200	LACQUERED CAST IRON	POLYETHYLENE	4"	DEEP SUMP ROOF DRAIN WITH 15" DIAMETER ANCHOR FLANGE, LARGE CAST IRON WATERPROOFING MEMBRANE CLAMP RING WITH INTEGRAL GRAVEL STOP, AND STANDARD SELF-LOCKING DOME STRAINER WITH A FREE AREA OF 125 SQUARE INCHES.	

GAS REGULATOR SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	SIZE: INLET x OUTLET	CAPACITY MBH	INLET PRESSURE	OUTLET PRESSURE	NOTES
R1	FISHER	R122H	PROPANE 1ST STAGE REGULATOR	1/4" x 1/2"	1100	30 PSI	10 PSI	1
R2	FISHER	R222-BAF	PROPANE 2ND STAGE REGULATOR	1/2" x 1/2"	650	10 PSI	11" W.C.	

NOTES:
1. 1ST STAGE REGULATOR LOCATED AT NEW PROPANE TANK. CONTRACTOR TO FIELD VERIFY PIPING AND CONNECTIONS.

P1
ADDENDUM #1.4

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING co
259 E Michigan Ave
Kalamazoo, MI 49007
www.steelheadengineeringco.com

NEHIL·SIVAK STRUCTURAL ENGINEERS
414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

REGISTERED PROFESSIONAL ENGINEER
REG. NO
BRADEN R. COX
SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
INDIAN HEALTH SERVICE
DIVISION OF ENGINEERING SERVICES
GREAT PLAINS AREA

REVIEWED:
ES ARCHITECT / ENGINEER DATE

APPROVED:
ES PROJECT MANAGER DATE
ES BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV	DATE	DESCRIPTION
4	10/27/2022	ADDENDUM #1.4

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: SM
CHECKED BY: JDS

SHEET TITLE:
PLUMBING SCHEDULES

P600
SHEET 68 OF 95

GENERAL SYMBOLS

- REVISION NUMBER - SHOWN ON PLANS
- POINT WHERE DISCONNECT/DEMOLITION OCCURS AT EXISTING
- POINT WHERE NEW CONNECTS TO EXISTING
- NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- KEYNOTE
- CONTINUATION SYMBOL
- Room 5 — ROOM NAME AND NUMBER
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT
- 2" — PIPE SIZE TAG (DIAMETER)
- ABOVE GROUND PIPING
- 1/8" / 12' SLOPE — PIPE SLOPE TAG
- BELOW GROUND PIPING
- INVERT: -105' - 1" — PIPE INVERT ELEVATION TAG
- (E) — EXISTING PIPE TAG
- (D) — PIPING BEING DEMOLISHED

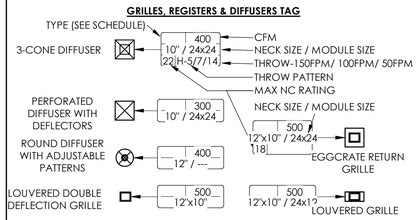
ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MU/A	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER		
EWT	ENTERING WATER TEMPERATURE	PWR	POWER
E/A	EXHAUST AIR	R	DUCT RISER
EXIST	EXISTING	R/A	RETURN AIR
F	DEGREES FAHRENHEIT	RCP	RADIANT CEILING PANEL
FCO	FLOOR CLEAN OUT	RD	ROOF DRAIN
FD	FLOOR DRAIN	REC	RECESSED
FDC	FIRE DEPARTMENT CONNECTION	RED	REDUCER
FL	FLOOR	RH	RELATIVE HUMIDITY
FO	FUEL OIL	RL/A	RELIEF AIR
FOV	FUEL OIL VENT	RM	ROOM
FOR	FUEL OIL RETURN	RPM	REVOLUTIONS PER MINUTE
FOS	FUEL OIL SUPPLY	RW	RAIN WATER
FPM	FEET PER MINUTE	SF	SQUARE FOOT
FS	FLOOR SINK	S/A	SUPPLY AIR
FT	FOOT/FEET	SAN	SANITARY
FTR	FIN TUBE RADIATION	SF	SQUARE FOOT
GAL	GALLON	SD	SMOKE DAMPER
GF	GAS-FIRED	SM	SURFACE MOUNT
GC	GENERAL CONTRACTOR	SP	STANDPIPE
GPM	GALLONS PER MINUTE	SP	STATIC PRESSURE
GW	GREASE WASTE	STM	STEAM
HB	HOSE BIB	T	THERMOSTAT
HP	HORSE POWER	TD	TEMPERATURE DROP
HTG	HEATING	TDR	TRENCH DRAIN
HTR	HEATER	TEMP	TEMPERATURE
HW	HOT WATER	TYP	TYPICAL
HYD	HYDRANT	UG	UNDERGROUND
ID	INDIRECT	VAC	VACUUM
IN	INCH	V	VENT
INV	INVERT	VAV	VARIABLE AIR VOLUME
LB	POUND	VENT	VENTILATION
LB/HR	POUNDS PER HOUR	VTR	VENT THROUGH ROOF
LAT	LEAVING AIR TEMPERATURE	W	WASTE
LP	LOW PRESSURE	WB	WET BULB
LPG	LIQUEFIED PETROLEUM GAS	WCO	WALL CLEAN OUT
		WH	WALL HYDRANT

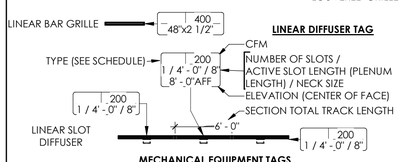
HVAC SYMBOLS

- 18"x12" — SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
- 18"/12" — OVAL DUCT SIZE TAG (WIDTH / HEIGHT)
- 18"Ø — ROUND DUCT SIZE TAG (DIAMETER)
- (E) — EXISTING DUCT TAG
- (D) — DUCT BEING DEMOLISHED
- 18"x18" S/A — SUPPLY AIR
- 18"x18" S-O/A — CONDITIONED OUTSIDE AIR
- 18"x18" O/A — OUTSIDE AIR
- 18"x18" R/A — RETURN AIR
- 18"x18" T/A — TRANSFER AIR
- 18"x18" E/A — EXHAUST AIR
- 18"x18" L/A — RELIEF AIR
- 18"x18" GE/A — GREASE EXHAUST AIR
- 18"x18" CE/A — CONDENSATE EXHAUST AIR
- 18"x18" SE/A — SMOKE EXHAUST AIR
- 6"Ø FLUE — EXHAUST GAS FLUE
- 6"Ø C/A — COMBUSTION AIR
- DROP — RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — ROUND SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — RECTANGULAR RETURN/TRANSFER AIR DUCT RISE
- DROP — ROUND RETURN/TRANSFER AIR DUCT RISE
- DROP — RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE
- DROP — ROUND EXHAUST/RELIEF AIR DUCT RISE

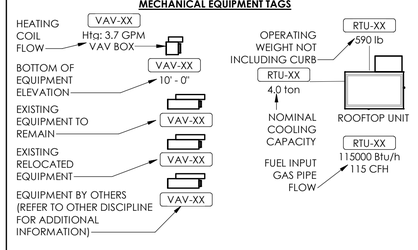
GRILLES, REGISTERS & DIFFUSERS TAG



LINEAR DIFFUSER TAG

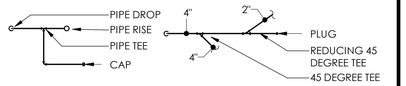


MECHANICAL EQUIPMENT TAGS

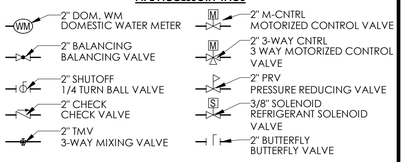


PIPING SYMBOLS

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CD — CONDENSATE DRAINAGE
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- GWR — GEOTHERMAL WATER RETURN
- GWS — GEOTHERMAL WATER SUPPLY
- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- G — NATURAL GAS
- PG — PROPANE GAS
- REF-L — REFRIGERANT-LIQUID
- REF-S — REFRIGERANT-SUCTION
- REF-HG — REFRIGERANT-HOT GAS
- STM — STEAM
- CDR — CONDENSATE RETURN



PIPE ACCESSORY TAGS



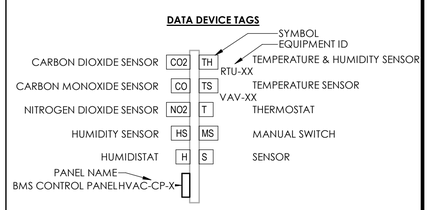
* NOTE *

ALL GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

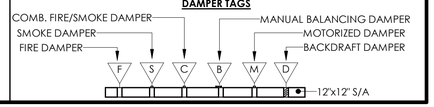
EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER		
CUH	CABINET UNIT HEATER	HWP	HEATING WATER PUMP
CHWP	CHILLED WATER PUMP	HRU	HEAT RECOVERY UNIT
DBP	DOMESTIC WATER BOOSTER PUMP	PRV	POWER ROOF VENTILATOR
DC	DUCT MOUNTED COIL	RE	RETURN/EXHAUST FAN
DCP	DOMESTIC WATER CIRCULATING PUMP	RTU	ROOFTOP UNIT
		SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

DATA DEVICE TAGS



DAMPER TAGS



GENERAL PROJECT NOTES

A	COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
B	FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
C	LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
D	ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
E	LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS. TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
F	PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE AN APPROVED MATERIAL AS PRESCRIBED IN CSFM STANDARD 43-1 AND SHALL BE U.L. LISTED.
G	PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
H	MAINTAIN CLEAR ACCESS TO SERVICE EQUIPMENT AND OTHER ACCESSORIES REQUIRING SERVICE, VISUAL INSPECTION OR HAND OPERATION. WHERE INDICATED OR REQUIRED, PROVIDE ACCESS PANELS OF THE TYPE SELECTED TO SUIT MATERIALS IN WHICH INSTALLED.
I	ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
J	REFER TO HVAC SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE DRAIN PIPING.
K	PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
L	FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
M	INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
N	LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
O	INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.
P	THE CONTRACTOR'S WORK SCHEDULE SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER.
Q	PRIOR TO STARTING WORK, SUBMIT SHOP DRAWINGS FOR ALL MECHANICAL EQUIPMENT, PLUMBING FIXTURES, AND DIFFUSERS.
R	CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND SHALL ARRANGE FOR ALL INSPECTIONS AS REQUIRED.
S	PROVIDE ONE YEAR WARRANTY FOR ALL WORKMANSHIP AND MATERIALS AFTER THE DATE OF FINAL ACCEPTANCE.

GENERAL HVAC NOTES

A	SUPPLY AND RETURN PIPING TO COILS ARE THE SAME SIZE.
B	CONTRACTOR SHALL LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 5'-0" AFF, A MINIMUM OF 8" FROM LIGHT SWITCH.
C	REFER TO HVAC DRAWINGS FOR THERMOSTAT AND TEMPERATURE SENSOR LOCATIONS.
D	CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES. CONDENSATE PIPING SHALL BE TYPE "L" COPPER.
D	ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE.
E	COORDINATE THE EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH NEW AND EXISTING LIGHTING.
F	PROVIDE DIFFUSERS AND REGISTERS WITH 4-WAY BLOW PATTERN UNLESS OTHERWISE NOTED.
G	PROVIDE A 4" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUIPMENT. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.
H	THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.

MECHANICAL SHEET LIST

SHEET	DESCRIPTION
M001	MECHANICAL GENERAL INFO & SYMBOL LEGEND
M011	THERMAL ZONE DIAGRAM AND VENT. SCHEDULE
M101	FIRST FLOOR MECHANICAL PLAN
M101A	FIRST FLOOR MECHANICAL PLAN - UNIT A
M101B	FIRST FLOOR MECHANICAL PLAN - UNIT B
M201	FIRST FLOOR MECHANICAL PIPING PLAN
M500	MECHANICAL DETAILS
M501	MECHANICAL DETAILS
M520	DUCT RISER DIAGRAMS
M521	HYDRONIC RISER DIAGRAMS
M600	MECHANICAL SCHEDULES
M601	MECHANICAL SCHEDULES

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REGISTERED PROFESSIONAL ENGINEER — REG. NO. 15404 — BRADEN S. COX — SOUTH DAKOTA

11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
INDIAN HEALTH SERVICE
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GREAT PLAINS AREA

REVIEWED:

ES ARCHITECT / ENGINEER — DATE

APPROVED:

ES PROJECT MANAGER — DATE

ES BRANCH CHIEF — DATE

CONCURRENCE

AGENCY REPRESENTATIVE — DATE

TITLE

REV	DATE	DESCRIPTION
1	03/11/2022	ADDENDUM #1

ISSUE DATE: NOVEMBER 4, 2022

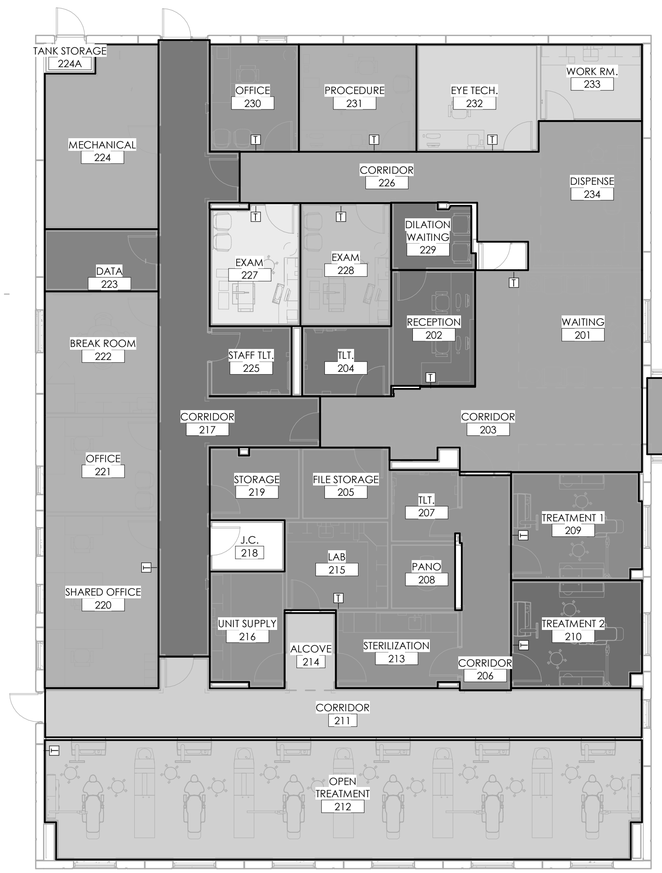
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: LF
CHECKED BY: JDS

SHEET TITLE:

MECHANICAL GENERAL INFO & SYMBOL LEGEND

M001

SHEET 69 OF 95



NORTH

LEVEL 1 THERMAL ZONE DIAGRAM

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

- Zone 1 - VAV 1A & 1B
- Zone 2 - VAV 2
- Zone 3 - VAV 3
- Zone 4 - VAV 4
- Zone 5 - VAV 5
- Zone 6 - VAV 6
- Zone 7 - VAV 7
- Zone 8 - VAV 8
- Zone 9 - VAV 9
- Zone 10 - VAV 10
- Zone 11 - VAV 11
- Zone 12 - VAV 12
- Zone 13 - AC 1

ASHRAE 62.1 VENTILATION AIRFLOW SUMMARY

ROOM IDENTITY			LOCATION	Code/Standard Inputs	REVIT Space Inputs	Occupants	Space Dimensions	ASHRAE 62.1 Ventilation Procedure					
NO.	NAME	Zone	NAME	ASHRAE 62.1 Occupancy Category	Number of Occupants Design	or Units Design	Area, Az	Default Occupant Density (Pz / 1000 SF)	Outdoor Airflow Rate Per Person, Rp	Outdoor Airflow Rate Per Unit Area, Ra	Breathing Zone Outdoor Airflow, Voz	Zone Air Distribution Effectiveness, Ez	Required Outdoor Air Intake Flow, Vot
218	J.C.	Default	J.C.	[NONE]	0.075443	0.0	38 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
224A	TANK STORAGE	Default	TANK STORAGE	(none)	0.04471		14 SF						
211	CORRIDOR	Zone 1 - VAV 1A & 1B	CORRIDOR	[NONE]	1.094818		328 SF	0	0.0 CFM	0.00 CFM/SF			
212	OPEN TREATMENT	Zone 1 - VAV 1A & 1B	OPEN TREATMENT	Outpatient Health Care Facilities - Dental operatory	14.204036	16.0	764 SF	20	10.0 CFM	0.18 CFM/SF	298 CFM	0.8	373 CFM
214	ALCOVE	Zone 1 - VAV 1A & 1B	ALCOVE	[NONE]	0.13224		41 SF	0	0.0 CFM	0.00 CFM/SF			
220	SHARED OFFICE	Zone 2 - VAV 2	SHARED OFFICE	Office Buildings - Office space	1.05475	2.0	211 SF	5	5.0 CFM	0.06 CFM/SF	23 CFM	0.8	29 CFM
221	OFFICE	Zone 2 - VAV 2	OFFICE	Office Buildings - Office space	0.585548	1.0	117 SF	5	5.0 CFM	0.06 CFM/SF	12 CFM	0.8	15 CFM
222	BREAK ROOM	Zone 2 - VAV 2	BREAK ROOM	Office Buildings - Break rooms	2	2.0	148 SF	50	5.0 CFM	0.12 CFM/SF	28 CFM	0.8	35 CFM
224	MECHANICAL	Zone 2 - VAV 2	MECHANICAL	[NONE]	0.414615	0.0	207 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
230	OFFICE	Zone 3 - VAV 3	OFFICE	Office Buildings - Office space	0.497632	1.0	100 SF	5	5.0 CFM	0.06 CFM/SF	11 CFM	0.8	14 CFM
202	RECEPTION	Zone 4 - VAV 4	RECEPTION	Office Buildings - Reception areas	0.503626	4.0	101 SF	30	5.0 CFM	0.06 CFM/SF	26 CFM	0.8	33 CFM
204	TLT.	Zone 4 - VAV 4	TLT.	Toilets - private (non-continuous system operation)	0.525186	0.0	63 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
217	CORRIDOR	Zone 4 - VAV 4	CORRIDOR	[NONE]	1.346239	0.0	404 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
225	STAFF TLT.	Zone 4 - VAV 4	STAFF TLT.	Toilets - private (non-continuous system operation)	0.484735	0.0	58 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
229	DILATION WAITING	Zone 4 - VAV 4	DILATION WAITING	[NONE]	0.151177	0.0	54 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
147	COATS	Zone 5 - VAV 5	COATS	[NONE]	0.105071	0.0	32 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
200	CORRIDOR	Zone 5 - VAV 5	CORRIDOR	[NONE]	0.456875	0.0	137 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
201	WAITING	Zone 5 - VAV 5	WAITING	[NONE]	1.433438	0.0	154 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
203	CORRIDOR	Zone 5 - VAV 5	CORRIDOR	[NONE]	0.88388	0.0	265 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
226	CORRIDOR	Zone 5 - VAV 5	CORRIDOR	[NONE]	0.625068	0.0	188 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
234	DISPENSE	Zone 5 - VAV 5	DISPENSE	[NONE]	0.448045	0.0	161 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
209	TREATMENT 1	Zone 6 - VAV 6	TREATMENT 1	Outpatient Health Care Facilities - Dental operatory	2.725305	3.0	147 SF	20	10.0 CFM	0.18 CFM/SF	56 CFM	0.8	70 CFM
210	TREATMENT 2	Zone 7 - VAV 7	TREATMENT 2	Outpatient Health Care Facilities - Dental operatory	2.736413	3.0	147 SF	20	10.0 CFM	0.18 CFM/SF	57 CFM	0.8	71 CFM
205	FILE STORAGE	Zone 8 - VAV 8	FILE STORAGE	[NONE]	0.129896	0.0	65 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
206	CORRIDOR	Zone 8 - VAV 8	CORRIDOR	[NONE]	0.383935	0.0	115 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
207	TLT.	Zone 8 - VAV 8	TLT.	Toilets - private (non-continuous system operation)	0.427056	0.0	51 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
208	PANO	Zone 8 - VAV 8	PANO	Outpatient Health Care Facilities - Other dental treatment areas	0.218143	1.0	44 SF	5	5.0 CFM	0.06 CFM/SF	8 CFM	0.8	10 CFM
213	STERILIZATION	Zone 8 - VAV 8	STERILIZATION	(none)	0.32098		99 SF					0.8	
215	LAB	Zone 8 - VAV 8	LAB	(none)	0.315045		97 SF					0.8	
216	UNIT SUPPLY	Zone 8 - VAV 8	UNIT SUPPLY	(none)	0.244938		88 SF					0.8	
219	STORAGE	Zone 8 - VAV 8	STORAGE	**Storage rooms, chemical	0.132163	0.0	66 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
232	EYE TECH.	Zone 9 - VAV 9	EYE TECH.	[NONE]	0.6875	0.0	138 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
233	WORK RM.	Zone 9 - VAV 9	WORK RM.	Office Buildings - Office space	0.410104	1.0	82 SF	5	5.0 CFM	0.06 CFM/SF	10 CFM	0.8	13 CFM
231	PROCEDURE	Zone 10 - VAV 10	PROCEDURE	Outpatient Health Care Facilities - Dental operatory	2.45264	3.0	132 SF	20	10.0 CFM	0.18 CFM/SF	54 CFM	0.8	68 CFM
227	EXAM	Zone 11 - VAV 11	EXAM	Outpatient Health Care Facilities - General examination room	2.108839	3.0	113 SF	20	7.5 CFM	0.12 CFM/SF	36 CFM	0.8	45 CFM
228	EXAM	Zone 12 - VAV 12	EXAM	Outpatient Health Care Facilities - General examination room	2.146425	3.0	116 SF	20	7.5 CFM	0.12 CFM/SF	36 CFM	0.8	45 CFM
223	DATA	Zone 13 - AC 1	DATA	[NONE]	0.144435	0.0	72 SF	0	0.0 CFM	0.00 CFM/SF	0 CFM	0.8	0 CFM
							5157 SF						819 CFM

ASHRAE 170 VENTILATION AIRFLOW SUMMARY

ROOM NAME AND NO.	FUNCTION OF SPACE	VOLUME	MINIMUM OUTDOOR ACH	MINIMUM TOTAL ACH	REQUIRED OUTDOOR AIR	MINIUM REQUIRED SUPPLY AIR
LAB 215	LABORATORY WORK AREA, GENERAL	836 FT^3	2	6	30 CFM OA	80 CFM
UNIT SUPPLY 216	STERILE STORAGE ROOM	773 FT^3	2	4	30 CFM OA	50 CFM
STERILIZATION 213	DECONTAMINATION ROOM	891 FT^3	2	6	30 CFM OA	90 CFM

IHS DESIGN GUIDE VENTILATION AIRFLOW SUMMARY

ROOM NAME AND NO.	FUNCTION OF SPACE	VOLUME	MINIMUM OUTDOOR ACH	MINIMUM TOTAL ACH	REQUIRED OUTDOOR AIR	MINIUM REQUIRED SUPPLY AIR
TREATMENT 1 209	ENCLOSED DENTAL OPERATORY	1,320 FT^3	3	12	66 CFM OA	297 CFM
TREATMENT 2 210	ENCLOSED DENTAL OPERATORY	1,325 FT^3	3	12	66 CFM OA	297 CFM
OPEN TREATMENT 212	OPEN DENTAL OPERATORY	6,880 FT^3	2	6	229 CFM OA	1,032 CFM
STERILIZATION 213	CLEAN WORKROOM/STERILIZATION	888 FT^3	2	64	26 CFM OA	844 CFM
LAB 215	LABORATORY	836 FT^3	2	6	29 CFM OA	131 CFM
UNIT SUPPLY 216	STERILE STORAGE	773 FT^3	2	10	30 CFM OA	148 CFM

M1 ADDENDUM #1.4

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ARCHITECTURE + ENGINEERING
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www.7GenAE.com

CONSULTANTS

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NEHIL·SIVAK STRUCTURAL ENGINEERS
414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 14044
BRADEN R. COX
SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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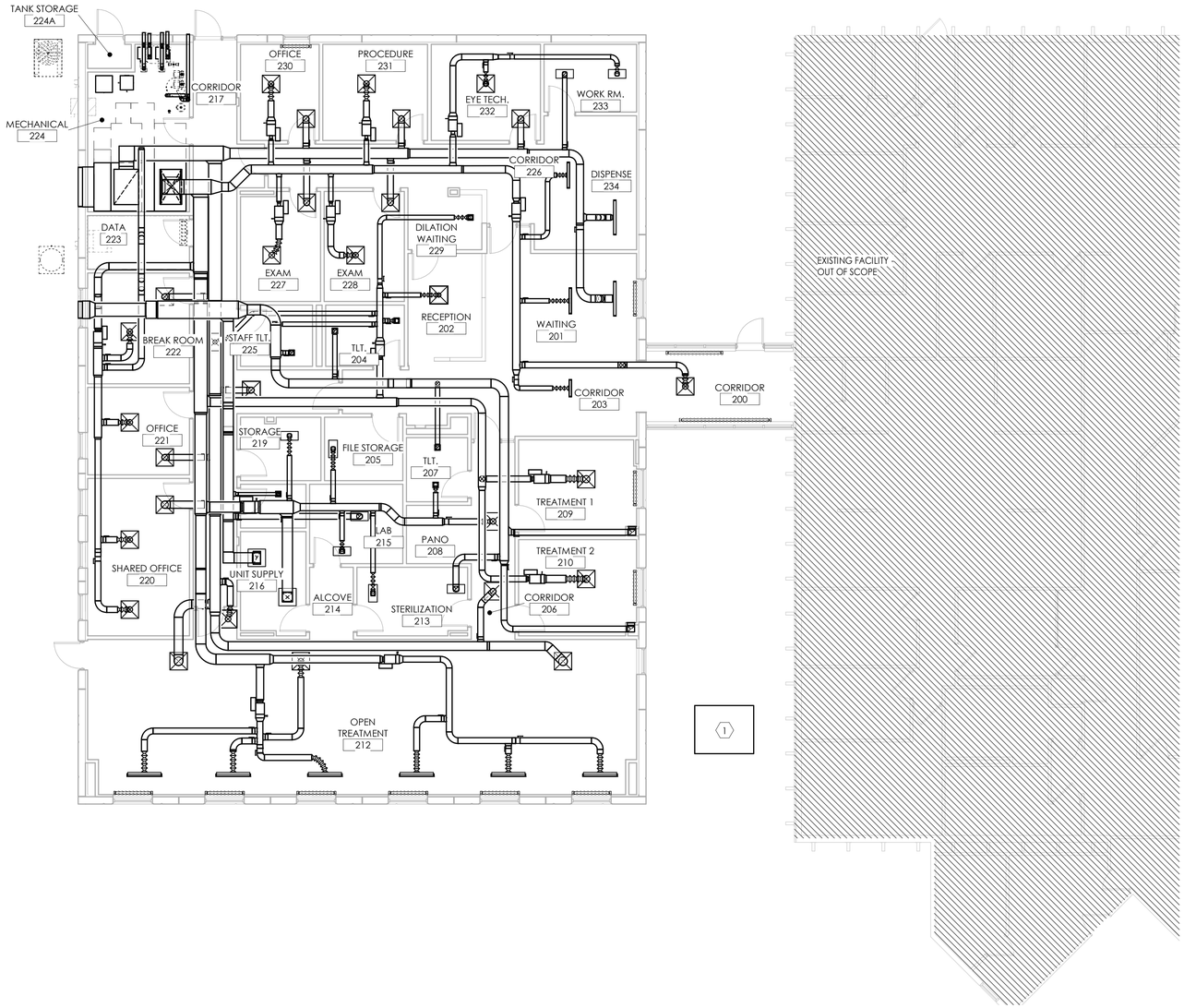
ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: LF
CHECKED BY: JDS

SHEET TITLE:

THERMAL ZONE DIAGRAM AND VENT. SCHEDULE

M011

SHEET 70 OF 95



NORTH

FIRST FLOOR MECHANICAL PLAN

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

M2

ADDENDUM #1.4

KEYNOTES

1 CONDENSING UNIT RELOCATED BY OWNER.

MECHANICAL NOTES

A CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A COMPLETE AND WORKING SYSTEM.

B INSTALL, SUPPORT, & BRACE NEW DUCTWORK AND ACCESSORIES PER SMACNA GUIDELINES.

C DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL MAKE ALLOWANCE FOR ANY INTERIOR LINING, INSULATION, ETC.

D ALL NEW DUCT ELBOWS SHALL BE LONG RADIUS ELBOWS.

E PROVIDE FLAT BLADE MANUAL VOLUME DAMPERS AT ALL TERMINAL DUCT BRANCHES AND AS INDICATED.

F ALL PRIMARY CONDENSATE DRAIN PIPING SHALL BE INSULATED TO A MINIMUM THICKNESS OF 1/2" AND SHALL INCLUDE A VAPOR RETARDANT OUTSIDE THE INSULATION. SEAL ALL JOINTS AND PENETRATIONS.

G COORDINATE ALL EXTERIOR PENETRATIONS INCLUDING ROOF PENETRATIONS WITH OTHER TRADES TO PROVIDE A COMPLETE AND FULLY WEATHER-PROOF INSTALLATION.

H CONTRACTOR SHALL ENGAGE A TESTING AND BALANCE FIRM CERTIFIED BY AABC TO PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM ACCORDING TO THE PROCEDURES CONTAINED IN AABC'S "NATIONAL STANDARDS, FOR TESTING AND BALANCING HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS" AND PROVIDE TWO COPIES OF THE CERTIFIED TAB REPORTS.

MECHANICAL SHEET METAL NOTES

A THE INSTALLATION OF ALL DUCTWORK SHALL BE CLOSELY COORDINATED WITH NEW PLUMBING, ELECTRICAL, AND STRUCTURAL CONDITIONS, NOT ALL REQUIRED OFFSETS AND FITTINGS ARE INDICATED ON DRAWINGS, BUT SHALL BE PROVIDED. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES. ALTERNATE DUCT ROUTING SHALL BE APPROVED BY ARCHITECT/ENGINEER BEFORE PROCEEDING IN ORDER TO ENSURE THAT THE AVAILABLE STATIC PRESSURE REMAINS ADEQUATE. DUCTWORK LOCATION SHALL TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION PIPING AND ELECTRICAL CONDUIT AND CABLE TRAY.

B REFER TO DUCT TAKEOFF DETAILS. SPIN-IN TYPE WITH SCOOPS SHALL NOT BE ACCEPTED. A MINIMUM OF 2 FEET SHALL BE PROVIDED BETWEEN RUNOUT TAKEOFFS FROM TRUNK DUCTS.

C THERMOSTAT AND SENSORS LOCATIONS WITHIN DUCTWORK SHALL BE VERIFIED WITH ARCHITECT/ ENGINEER BEFORE ROUGH -IN.

D RUNOUT BALANCING DAMPERS SHALL BE MOUNTED AS CLOSE TO MAIN DUCT AS POSSIBLE.

E TERMINAL UNITS SHALL BE MOUNTED TO NOT IMPAIR ACCESS TO FILTERS, COILS AND CONTROLS.

F DUCTWORK AND ASSOCIATED COMPONENTS SHALL CLEAR DOORS AND WINDOWS.

G UNLESS OTHERWISE NOTED, ALL DUCTWORK ABOVE CEILING OR EXPOSED IS OVERHEAD AND AS HIGH AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE, WITH SPACE FOR INSULATION WHERE REQUIRED.

H LOCATE MECHANICAL EQUIPMENT SUCH THAT THERE IS UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS AND VALVING.

I PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS CONNECTED TO MECHANICAL EQUIPMENT THAT REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT UNLESS OTHERWISE NOTED.

J DUCTWORK SIZES ARE INSIDE CLEAR DIMENSIONS.

K DUCTS CONNECTED TO EQUIPMENT SHALL EQUAL EQUIPMENT CONNECTION SIZE UNLESS NOTED OTHERWISE.

L MAXIMUM LENGTH ON FLEXIBLE DUCT SHALL BE 5'-0".

BUILDING AUTOMATION SYSTEM

A THE BUILDING AUTOMATION SYSTEM FOR THE SCOPE OF THIS PROJECT SHALL BE AN EXTENSION OF THE SYSTEM IN THE EXISTING BUILDING. THE EXISTING HEAD-END SYSTEM IS A DISTECH NIAGARA 4 SYSTEM, AS INSTALLED BY DIRECT DIGITAL CONTROL, SIOUX FALLS, SD. CONTACT KASEY ABBOTT, 605.575.3739.

KEY PLAN

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600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

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REGISTERED PROFESSIONAL ENGINEER
REG. NO 14144
BRADEN R. COX
SOUTH DAKOTA
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IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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ES BRANCH CHIEF DATE

CONCURRENCE

AGENCY REPRESENTATIVE DATE

TITLE

REV	DATE	DESCRIPTION
4	10/27/2022	ADDENDUM #1.4

ISSUE DATE: NOVEMBER 4, 2022

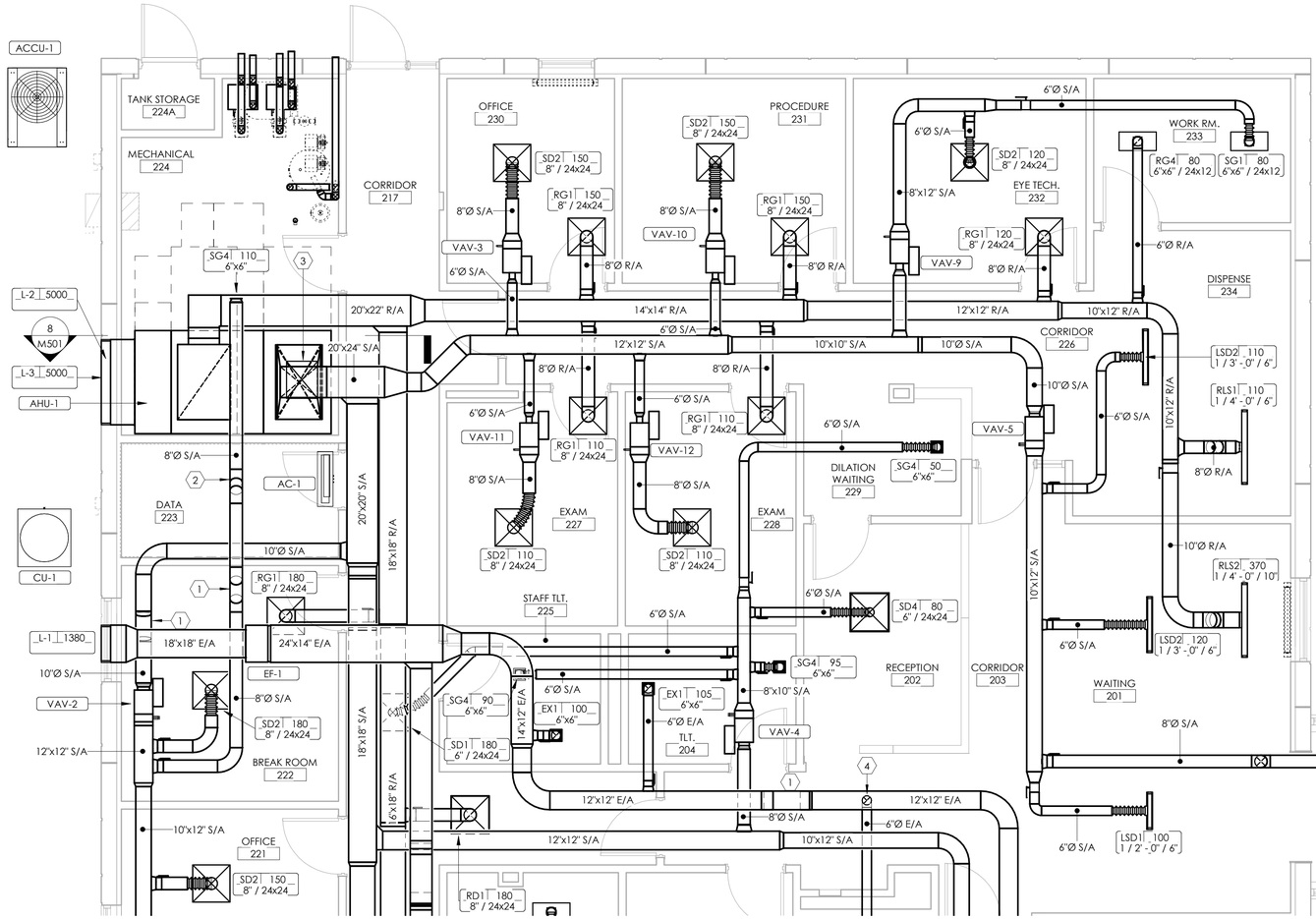
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: LF
CHECKED BY: JDS

SHEET TITLE:

FIRST FLOOR MECHANICAL PLAN

M101

SHEET 71 OF 95



KEYNOTES

1	CHANGE IN DUCT ELEVATION (DUCT FALL IN DIRECTION OF AIRFLOW).
2	CHANGE IN DUCT ELEVATION (DUCT RISE IN DIRECTION OF AIRFLOW).
3	REFER TO FINAL FILTER HOUSING IN THE SUPPLY AIR DISCHARGE DUCT DETAIL 8 SHEET M501
4	CONICAL FITTING WITH A DAMPER ON BOTTOM OF DUCT.

M4
ADDENDUM #1.4

NORTH

FIRST FLOOR MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

M3
ADDENDUM #1.4

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REG. NO. 19144
BRADENS. COX
SOUTH DAKOTA
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SHEET TITLE:

FIRST FLOOR MECHANICAL PLAN – UNIT A

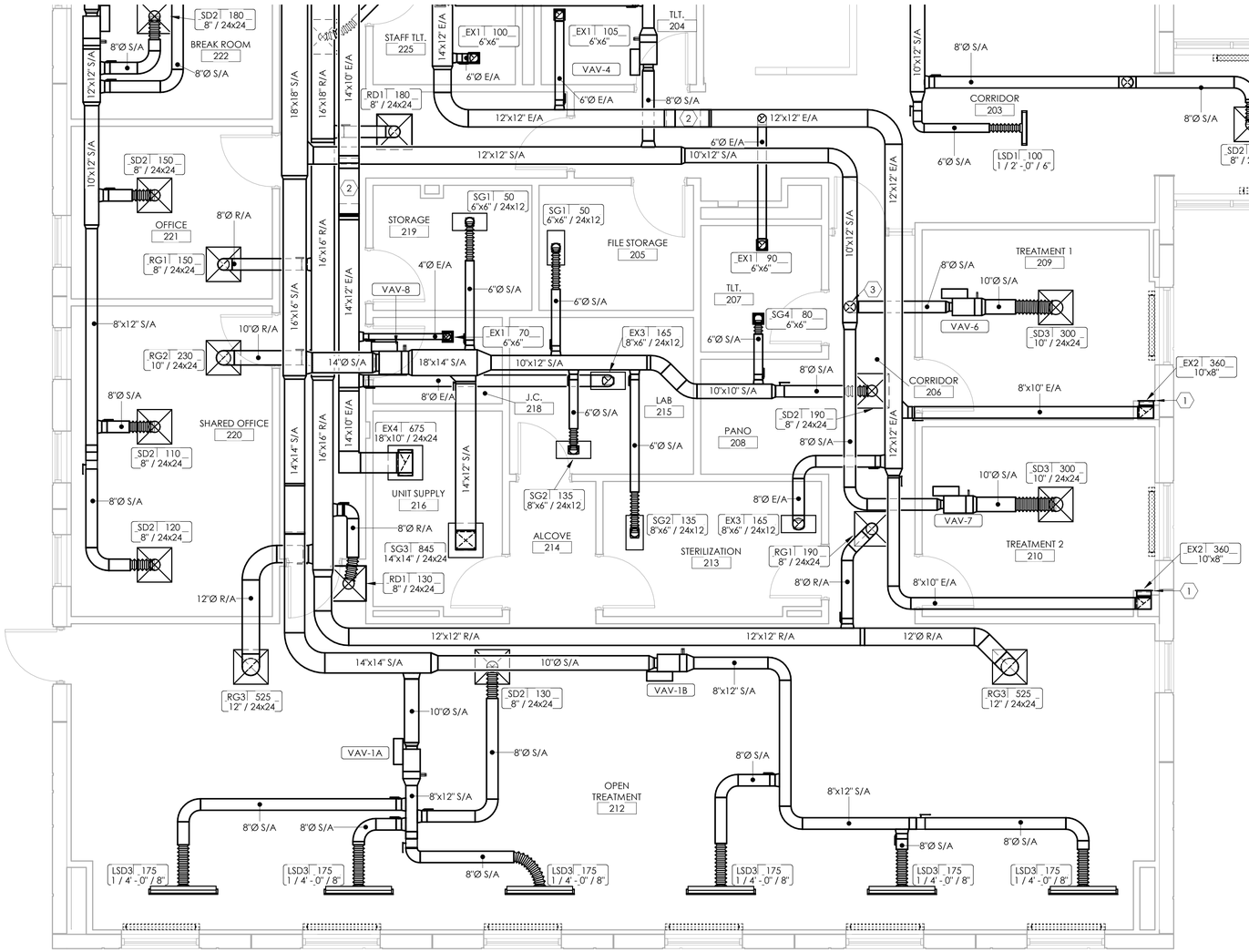
M101A

SHEET 72 OF 95

KEYNOTES

1	BOTTOM OF GRILLE MOUNTED AT 0'-8" A.F.F.
2	CHANGE IN DUCT ELEVATION (DUCT RISE IN DIRECTION OF AIRFLOW).
3	CONICAL FITTING ON BOTTOM OF DUCT.

M6 ADDENDUM #1.4

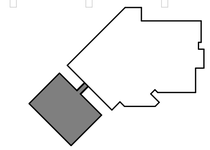


NORTH

FIRST FLOOR MECHANICAL PLAN - UNIT B

SCALE: 1/4" = 1'-0"

M5 ADDENDUM #1.4



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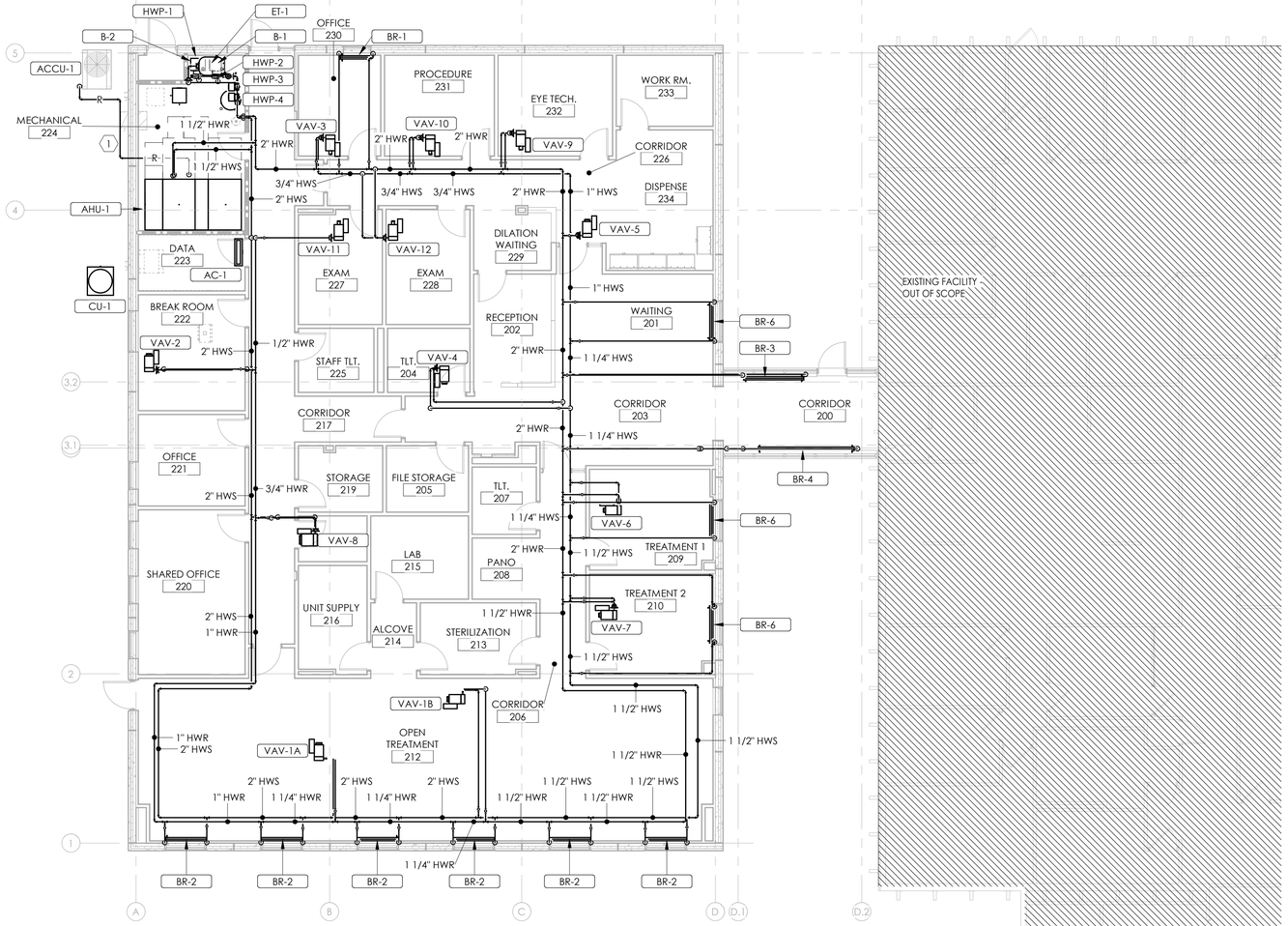
FIRST FLOOR MECHANICAL PLAN – UNIT B

M101B

SHEET 73 OF 95



KEYNOTES

1 REFRIGERANT LINE SET DOWN TIGHT TO THE WALL AND OUT TO EXTERIOR HVAC UNIT AT 12" ABOVE THE FINISH GRADE. FIELD VERIFY THE ROUTE.

M8
ADDENDUM #1.4

MECHANICAL NOTES

A CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A COMPLETE AND WORKING SYSTEM.

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C DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL MAKE ALLOWANCE FOR ANY INTERIOR LINING, INSULATION, ETC.

D ALL NEW DUCT ELBOWS SHALL BE LONG RADIUS ELBOWS.

E PROVIDE FLAT BLADE MANUAL VOLUME DAMPERS AT ALL TERMINAL DUCT BRANCHES AND AS INDICATED.

F ALL PRIMARY CONDENSATE DRAIN PIPING SHALL BE INSULATED TO A MINIMUM THICKNESS OF 1/2" AND SHALL INCLUDE A VAPOR RETARDANT OUTSIDE THE INSULATION. SEAL ALL JOINTS AND PENETRATIONS.

G COORDINATE ALL EXTERIOR PENETRATIONS INCLUDING ROOF PENETRATIONS WITH OTHER TRADES TO PROVIDE A COMPLETE AND FULLY WEATHER-PROOF INSTALLATION.

H CONTRACTOR SHALL ENGAGE A TESTING AND BALANCE FIRM CERTIFIED BY AABC TO PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM ACCORDING TO THE PROCEDURES CONTAINED IN AABC'S "NATIONAL STANDARDS, FOR TESTING AND BALANCING HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS" AND PROVIDE TWO COPIES OF THE CERTIFIED TAB REPORTS.

MECHANICAL PIPING NOTES

A THE INSTALLATION OF ALL PIPING SHALL BE CLOSELY COORDINATED WITH SHEET METAL, ELECTRICAL, AND STRUCTURAL CONDITIONS. NOT ALL REQUIRED OFFSETS AND FITTINGS ARE INDICATED ON DRAWINGS, BUT SHALL BE PROVIDED. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES.

B ALL PIPING SHALL BE INSTALLED TO FACILITATE COIL REMOVAL, FILTER REPLACEMENT AND OPENING OF ACCESS PANELS.

C INSTALL MAINS AS HIGH AS POSSIBLE. MANUAL AIR VENTS SHALL BE PROVIDED AT ALL PIPING HIGH POINTS AND END OF PIPING LOOPS. PROVIDE REMOVABLE INSULATION PLUG.

D PIPE ANCHORS, EXPANSION LOOPS, AND GUIDES SHALL BE PROVIDED AS REQUIRED. REFER TO SPECIFICATIONS.

E SLEEVE AND SEAL EXTERIOR WALL AND ROOF PENETRATIONS TO A WEATHER TIGHT CONDITION. SLEEVE AND SEAL INTERIOR FLOOR PENETRATIONS TO A WATER TIGHT CONDITION.

F PROVIDE MINIMUM OF 3/4" PIPE FOR ALL PIPING UNLESS SHOWN OTHERWISE.

G ALL VALVES ARE TO BE FULL LINE SIZE EXCEPT CONTROL AND BALANCING VALVES.

H PROVIDE 1/2" DRAIN VALVES WITH HOSE-END CAPS AT ALL LOW POINTS IN PIPING. PROVIDE MINIMUM PITCH SUFFICIENT TO INSURE ADEQUATE DRAINING. PROVIDE REMOVABLE INSULATION PLUG.

I ELEVATIONS AS SHOWN ON THE DRAWINGS ARE TO THE BOTTOM OF ALL PRESSURE PIPING AND TO THE INVERT OF ALL GRAVITY PIPING UNLESS OTHERWISE NOTED.

J UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD AND AS HIGH AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE OR SLAB, WITH SPACE FOR INSULATION WHERE REQUIRED.

K PIPING AND ASSOCIATED APPURTENANCES SHALL NOT INTERFERE WITH DOORS AND WINDOWS.

L INSTALL PIPING WITHOUT FORCING OR SPRINGING.

M ALL PIPING WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. PROVIDE OFFSETS IN PIPING AROUND OBSTRUCTIONS ENCOUNTERED IN FIELD.

N PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO, AND WITHIN 50 FEET OF ISOLATED EQUIPMENT (EXCEPT AT BASE ELBOW SUPPORTS AND ANCHOR POINTS) THROUGHOUT MECHANICAL EQUIPMENT ROOMS.

O AIR CONDITIONING CONDENSATE DRAIN LINES FROM EACH UNIT'S DRAIN PAN SHALL BE PIPED FULL SIZE OF THE UNIT DRAIN OUTLET WITH "P" TRAP. CONDENSATE WATER PIPING SHALL BE A MINIMUM OF 3/4". SEE THE DETAILS SHOWN IN THE DRAWINGS OR MANUFACTURER'S LITERATURE FOR THE DEPTH OF THE AIR CONDITIONING CONDENSATE TRAP. PITCH DOWN IN DIRECTION OF FLOW. MINIMUM 1 INCH PER 10 FEET.

P INSTALL PIPING SO ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE. PROVIDE PRESSURE/TEMPERATURE (P/T) PLUGS, WITH CAPS UP AND DOWNSTREAM OF ALL EQUIPMENT, AT THE SUPPLY AND RETURN TAPS OF ALL PIPING BRANCHES AND/OR WHERE INDICATED. PROVIDE EXTENDED PLUGS AND LABELS WHERE PIPING IS INSULATED.

Q WHERE SPACE PERMITS PROVIDE AUXILIARY DRAIN PANS UNDER COOLING EQUIPMENT LOCATED ABOVE CEILINGS. WHERE SPACE DOES NOT PERMIT THE USE OF AN AUXILIARY DRAIN PAN PROVIDE WATER LEVEL DETECTION DEVICE (FLOAT SWITCH) CONFORMING TO UL 508 THAT WILL SHUT OFF THE EQUIPMENT SERVED IN THE EVENT THAT THE PRIMARY DRAIN IS BLOCKED.

R PROVIDE FLUSHING VALVES AND TEES AT BOTH ENDS OF ALL EQUIPMENT. TAPS SHALL MATCH EQUIPMENT PIPING UP TO 1". FOR LARGER EQUIPMENT AND PIPE LOOPS, PROVIDE 1-1/2" TAPS AND VALVES.

S ALL HYDRONIC PIPING BRANCH TAKEOFFS FROM MAINS SHALL BE MADE WITH SWING JOINTS.

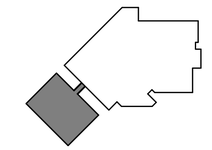
T THE CONTRACTOR SHALL DEVELOP AND PRODUCE COORDINATION DRAWINGS PRIOR TO STARTING THE INSTALLATION OF ANY HYDRONIC SYSTEM.

NORTH

FIRST FLOOR MECHANICAL PIPING PLAN

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

M7
ADDENDUM #1.4



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www.wbkengineering.com

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Kalamazoo, MI 49007
www.nehilsivak.com

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REG. NO 14014
BRADENS COX
SOUTH DAKOTA
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IHS 1323 BIA ROUTE 4
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ES BRANCH CHIEF — DATE

CONCURRENCE
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TITLE

REV	DATE	DESCRIPTION
4	10/27/2022	ADDENDUM #1.4

ISSUE DATE: NOVEMBER 4, 2022

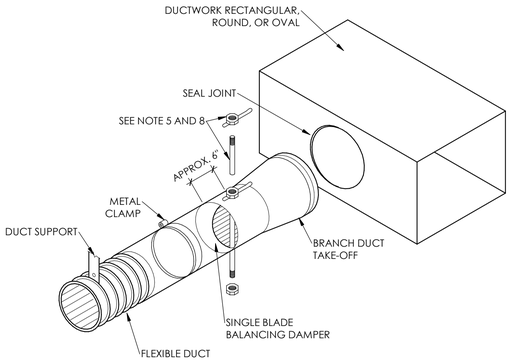
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: LF
CHECKED BY: JDS

SHEET TITLE:

FIRST FLOOR MECHANICAL PIPING PLAN

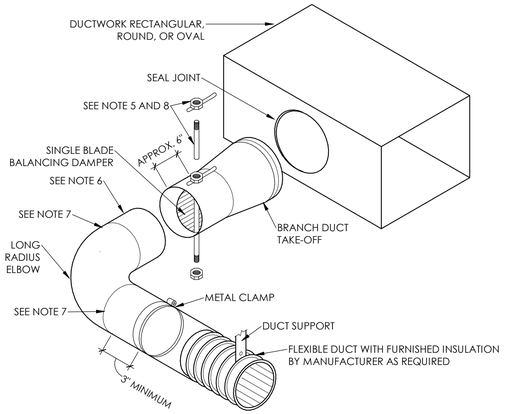
M201

SHEET 74 OF 95



NOTES:
1. SUPPORT DUCTWORK AS REQUIRED.
2. BAND FLEX TO COLLAR 1/2" MINIMUM FROM OUTBOARD END OF COLLAR.
3. INSTALL SPIN COLLAR DAMPER IN OPEN POSITION; FINAL ADJUSTMENT BY TAB CONTRACTOR.
4. PULL FLEXIBLE DUCT INSULATION UP TO END OF SPIN COLLAR AT EDGE OF RECTANGULAR DUCTWORK; SEAL VAPOR BARRIER WITH GREY TAPE TO PREVENT MOISTURE MIGRATION.
5. PROVIDE EXTENSION RODS TO ACCOMMODATE INSULATION, PULL TO EDGE OF DUCTWORK AS REQUIRED AND SEAL TO AFFECT VAPOR BARRIER.
6. POP RIVET OR SHEET METAL SCREWS, MINIMUM 3 EACH AT 120 INTERVALS, CONNECTING STOVEPIPE TO COLLAR. ENSURE RIVETS OR SCREWS DO NOT INTERFERE WITH DAMPER.
7. TAPE AND SEAL ALL JOINTS TO PREVENT LEAKAGE.
8. INSTALL LOCKING QUADRANT AND HANDLE ON BOTTOM OF DUCT FOR EASY SERVICE (SHOWN ON TOP FOR EASE OF ILLUSTRATION ONLY).

8 M500 SPIN COLLAR FLEXIBLE DUCT CONNECTOR WITH DAMPER
SCALE: NTS



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3. INSTALL SPIN COLLAR DAMPER IN OPEN POSITION; FINAL ADJUSTMENT BY TAB CONTRACTOR.
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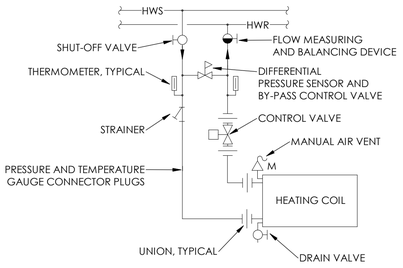
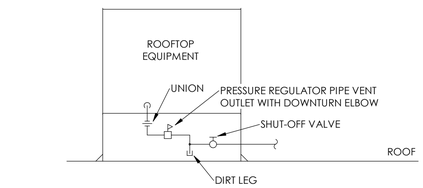
8. INSTALL LOCKING QUADRANT AND HANDLE ON BOTTOM OF DUCT FOR EASY SERVICE (SHOWN ON TOP FOR EASE OF ILLUSTRATION ONLY).

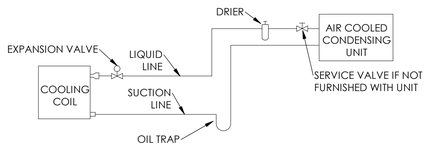
7 M500 SPIN COLLAR FLEXIBLE DUCT CONNECTOR WITH DAMPER AND WITH LONG RADIUS ELBOW
SCALE: NTS



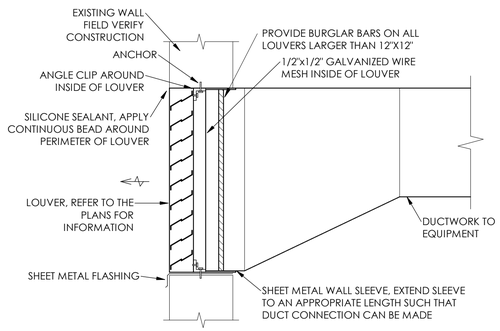
4 M500 HOT WATER COIL PIPING WITH DIFFERENTIAL PRESSURE SENSOR - SINGLE
SCALE: NTS



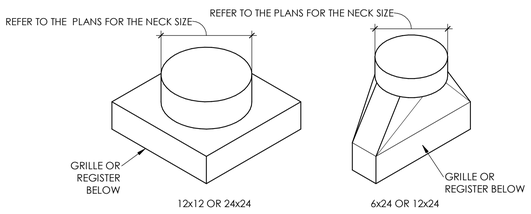
6 M500 GAS PIPING CONNECTION DETAIL
SCALE: NTS



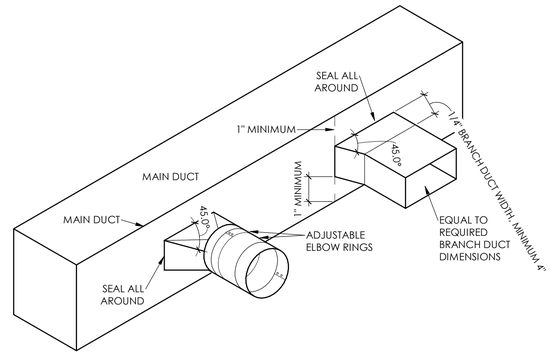
5 M500 SPLIT SYSTEM FAN COIL UNIT PIPING SCHEMATIC
SCALE: NTS



3 M500 LOUVER ASSEMBLY DETAIL
SCALE: NTS



2 M500 GRILLE & REGISTER BOOT DETAIL
SCALE: NTS



1 M500 TYPICAL BRANCH TAKEOFF FITTING DETAIL
SCALE: NTS

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414 S Burdick St #300
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REG. NO. 11414
BRADEN R. COX
SOUTH DAKOTA
11/04/22

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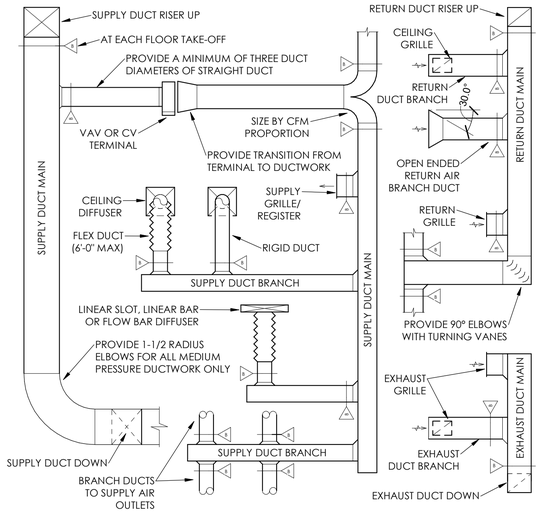
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: LF
CHECKED BY: JDS

SHEET TITLE:

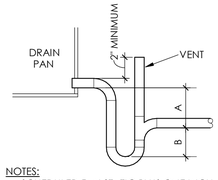
MECHANICAL DETAILS

M500

NOTES:
1. REFER TO HVAC FLOOR PLANS FOR DUCT SIZES
2. REFER TO SCHEDULES FOR GRILLES, REGISTERS, DIFFUSERS AND TERMINAL SIZES AND TYPES
3. PROVIDE A MANUAL TYPE BALANCING DAMPER FOR EACH SUPPLY OUTLET AND RETURN INLET
4. ALL DUCT RUNOUTS TO DIFFUSERS SHALL BE THE SAME SIZE AS DIFFUSER NECK SIZE, UNLESS OTHERWISE NOTED
5. FLEX DUCT WILL NOT BE ALLOWED ON RETURN OR EXHAUST DUCTWORK SYSTEMS
6. PROVIDE 12" AIR CUSHION AT THE END OF EACH SUPPLY MAIN AND BRANCH DUCT
7. INDIVIDUAL BRANCH BALANCING DAMPERS NOT REQUIRED FOR SUPPLY OR EXHAUST REGISTERS

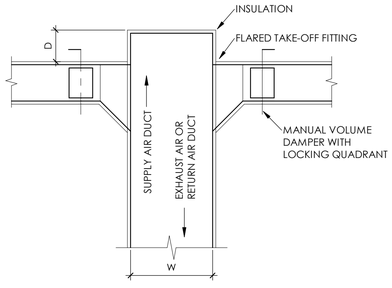


6 M501 DUCTWORK INSTALLATION DIAGRAM
SCALE: NTS



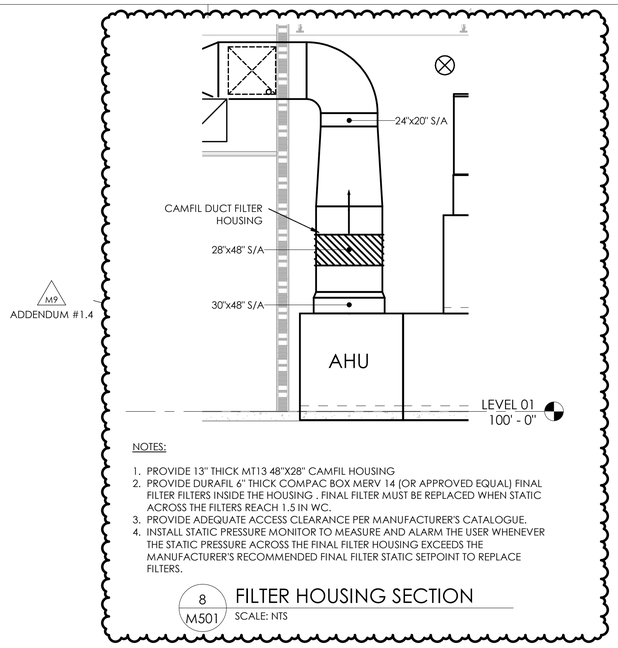
NOTES:
A. SCHEDULED FAN STATIC PLUS ONE INCH
B. 1/2 OF SCHEDULED FAN STATIC

7 M501 COOLING COIL CONDENSATE DRAIN DETAIL
SCALE: NTS



NOTES:
1. AIR CUSHION REQUIRED AT END OF RUN FOR BRANCH TAKE OFFS ILLUSTRATED
2. CUSHION DEPTH, D, EQUAL TO 1/2 THE GREATER OF H OR W, SUBJECT TO 6" MINIMUM, WHERE H = HEIGHT OF DUCT
3. SUPPLY AIR AND RETURN AIR DUCT SHALL BE EXTERNALLY INSULATED ONLY.

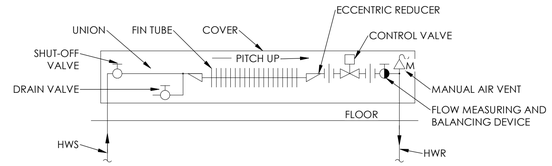
5 M501 EXTERNALLY INSULATED DUCTWORK TEE
SCALE: NTS



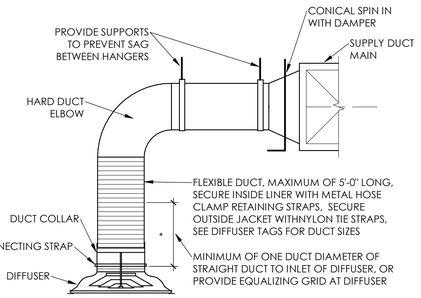
M9 ADDENDUM #1.4

NOTES:
1. PROVIDE 13" THICK MT13 48"X28" CAMFIL HOUSING
2. PROVIDE DURAFIL 6" THICK COMPAC BOX MERV 14 (OR APPROVED EQUAL) FINAL FILTER FILTERS INSIDE THE HOUSING . FINAL FILTER MUST BE REPLACED WHEN STATIC ACROSS THE FILTERS REACH 1.5 IN WC.
3. PROVIDE ADEQUATE ACCESS CLEARANCE PER MANUFACTURER'S CATALOGUE.
4. INSTALL STATIC PRESSURE MONITOR TO MEASURE AND ALARM THE USER WHENEVER THE STATIC PRESSURE ACROSS THE FINAL FILTER HOUSING EXCEEDS THE MANUFACTURER'S RECOMMENDED FINAL FILTER STATIC SETPOINT TO REPLACE FILTERS.

8 M501 FILTER HOUSING SECTION
SCALE: NTS

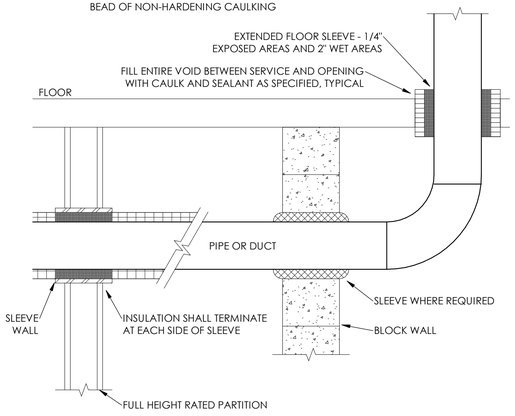


4 M501 HOT WATER BASEBOARD RADIATION PIPING DETAIL I
SCALE: NTS

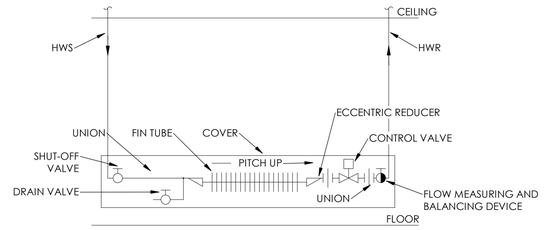


3 M501 DIFFUSER FLEXIBLE DUCT CONNECTION
SCALE: NTS

NOTE: VAPOR BARRIER (WHERE REQUIRED) AND INSULATION TO BE FITTED TIGHT TO SLEEVE. SEAL WITH CONTINUOUS BEAD OF NON-HARDENING CAULKING



2 M501 DUCT OR PIPE WALL AND FLOOR PENETRATION DETAIL
SCALE: NTS



1 M501 HOT WATER BASEBOARD RADIATION PIPING DETAIL II
SCALE: NTS

SEVEN GENERATIONS
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REG. NO 14164
BRADEN S. COX
SOUTH DAKOTA
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CHECKED BY: JDS

SHEET TITLE:

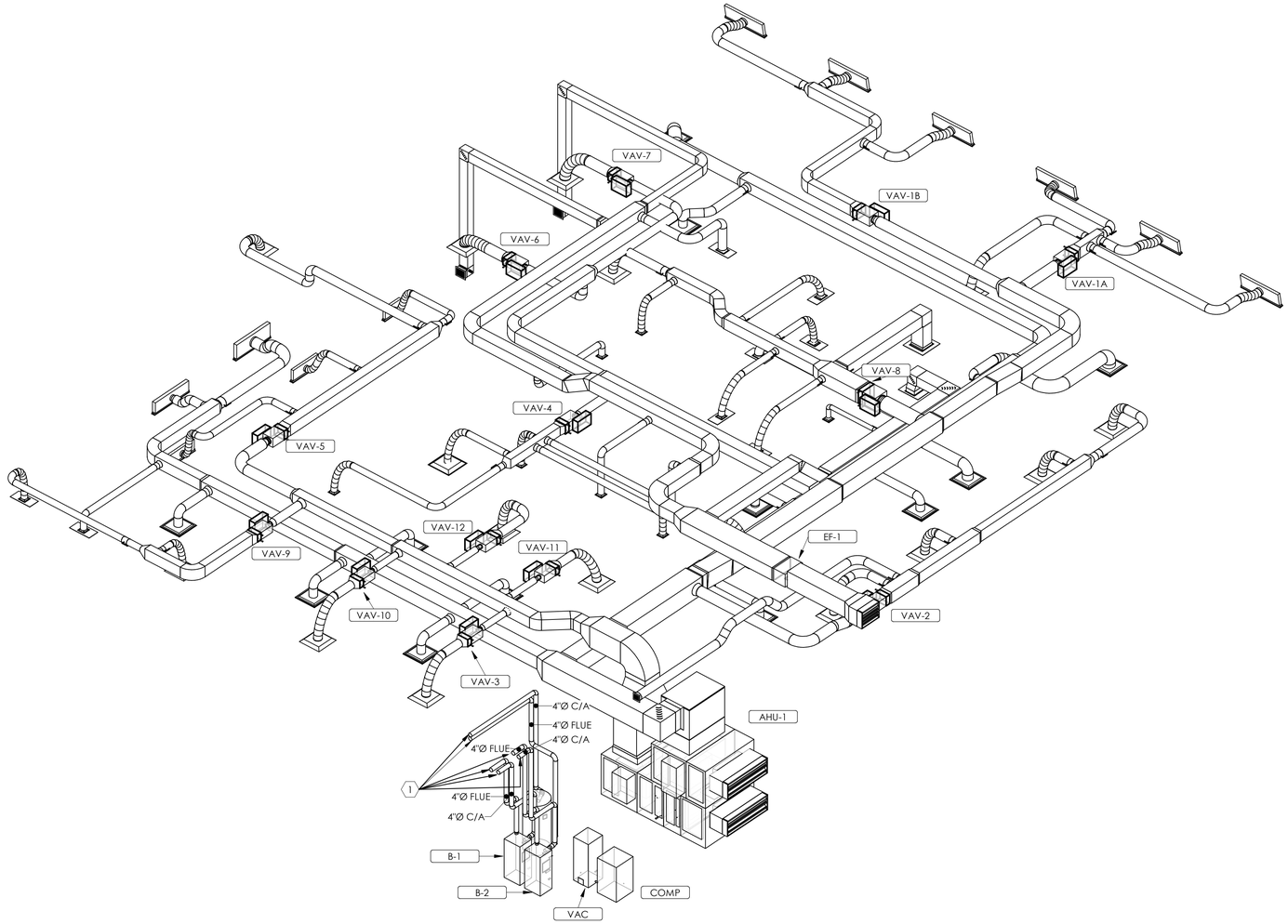
MECHANICAL DETAILS

M501

SHEET 76 OF 95

KEYNOTES

1	PROVIDE SCHEDULE 40 PVC FOR FLUE GAS INLET AND OUTLET. INSTALL PER MANUFACTURERS RECOMMENDATIONS.



3 M520 DUCTWORK RISER DIAGRAM

SCALE: NTS

/M10\

ADDENDUM #1.4

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CAD DWG FILE:
DRAWN BY: LF
CHECKED BY: JOS

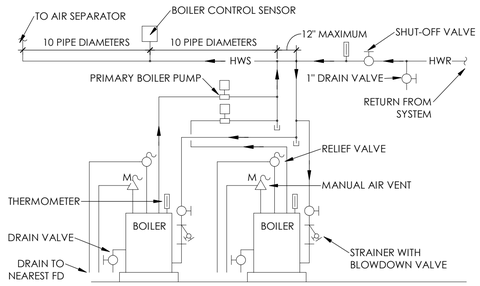
SHEET TITLE:

DUCT RISER DIAGRAMS

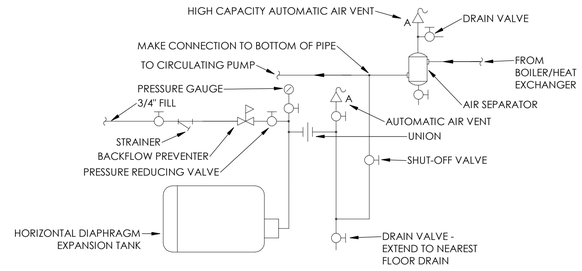
M520

SHEET 77 OF 95

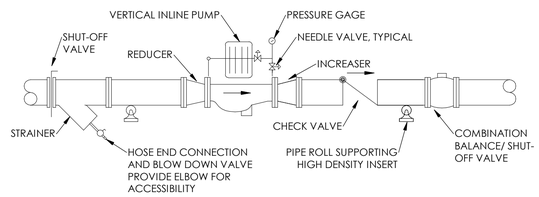
KEYNOTES	
1	REFER TO THE HOT WATER BOILER PIPING DETAIL FOR PIPING CONTINUATION.



3 / M521 HOT WATER BOILER PIPING DETAIL
SCALE: NTS

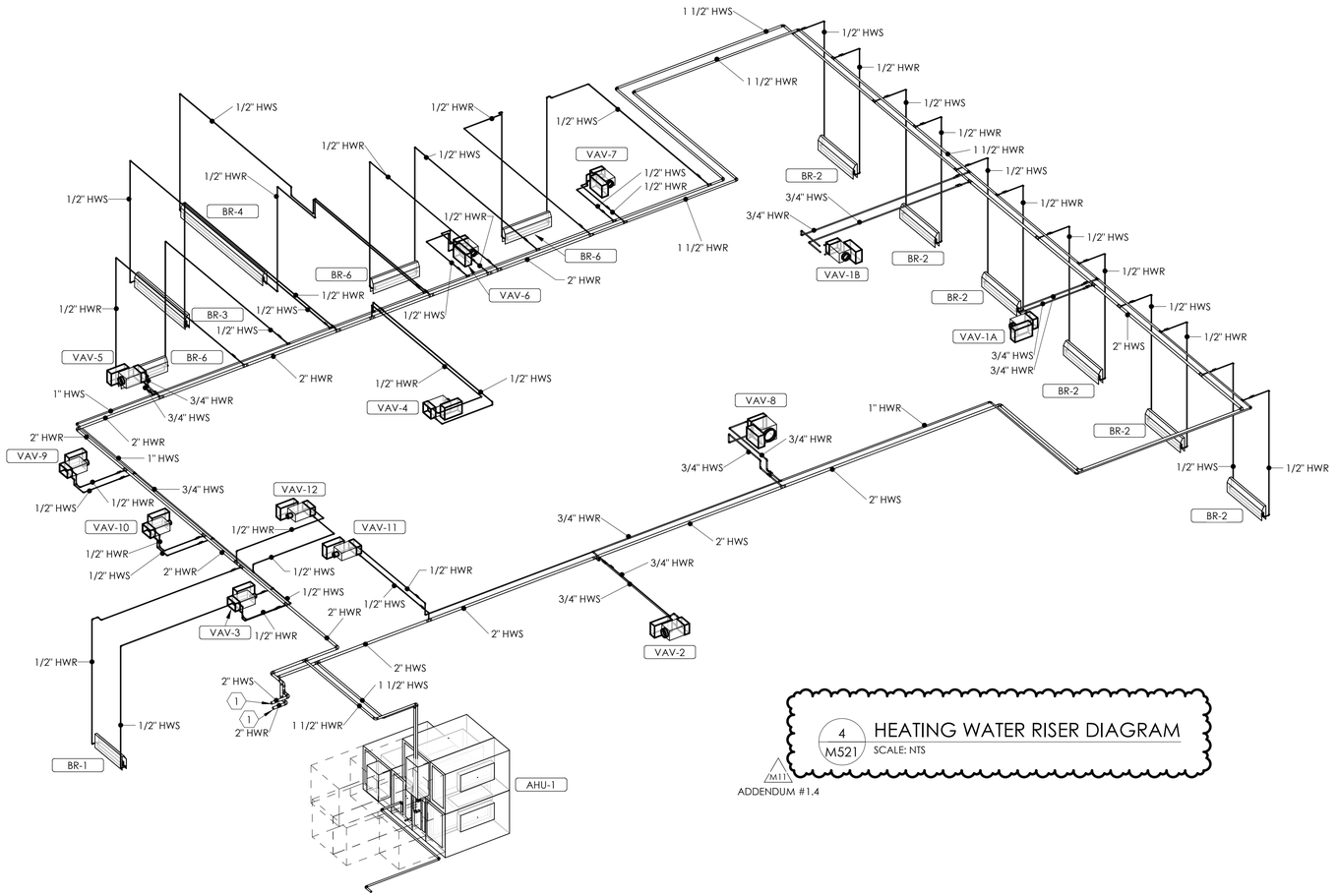


2 / M521 EXPANSION TANK PIPING DETAIL
SCALE: NTS



NOTE:
INSULATION AND VAPOR BARRIER JACKET NOT SHOWN.

1 / M521 INLINE PUMP PIPING
SCALE: NTS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GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	SYSTEM	FACE SIZE	NECK SIZE	NECK WIDTH	NECK HEIGHT	INSTALLATION BORDER TYPE	SPECIFICATION
EX1	LOUVERED GRILLE	TITUS	350FL	E/A			6"	6"	TYPE 1 (SURFACE)	
EX2	LOUVERED GRILLE	TITUS	350FL	E/A			10"	8"	TYPE 1 (SURFACE)	
EX3	LOUVERED GRILLE	TITUS	350FL	E/A	24x12		8"	6"	TYPE 3 (LAY-IN)	
EX4	LOUVERED GRILLE	TITUS	350FL	E/A	24x24		18"	10"	TYPE 3 (LAY-IN)	
RD1	PERFORATED DIFFUSER WITH DEFLECTORS	TITUS	PAR-AA	R/A	24x24	8"			TYPE 1 (SURFACE)	PERFORATED DIFFUSER WITH FACE MOUNTED DEFLECTORS
RG1	PERFORATED DIFFUSER WITH DEFLECTORS	TITUS	PAR	R/A	24x24	8"			TYPE 3 (LAY-IN)	PERFORATED DIFFUSER WITH FACE MOUNTED DEFLECTORS
RG2	PERFORATED DIFFUSER WITH DEFLECTORS	TITUS	PAR	R/A	24x24	10"			TYPE 3 (LAY-IN)	PERFORATED DIFFUSER WITH FACE MOUNTED DEFLECTORS
RG3	PERFORATED DIFFUSER WITH DEFLECTORS	TITUS	PAR	R/A	24x24	12"			TYPE 3 (LAY-IN)	PERFORATED DIFFUSER WITH FACE MOUNTED DEFLECTORS
RG4	LOUVERED GRILLE	TITUS	350FL	R/A	24x12		6"	6"	TYPE 3 (LAY-IN)	
SD1	PLAQUE FACE DIFFUSER	TITUS	OMNI-AA	S/A	24x24	6"			TYPE 3 (LAY-IN)	
SD2	PLAQUE FACE DIFFUSER	TITUS	OMNI-AA	S/A	24x24	8"			TYPE 3 (LAY-IN)	
SD3	PLAQUE FACE DIFFUSER	TITUS	OMNI-AA	S/A	24x24	10"			TYPE 3 (LAY-IN)	
SD4	PLAQUE FACE DIFFUSER	TITUS	OMNI-AA	S/A	24x24	6"			TYPE 1 (SURFACE)	
SG1	LOUVERED DOUBLE DEFLECTION GRILLE	TITUS	300FL	S/A	24x12		6"	6"	TYPE 3 (LAY-IN)	
SG2	LOUVERED DOUBLE DEFLECTION GRILLE	TITUS	300FL	S/A	24x12		8"	6"	TYPE 3 (LAY-IN)	
SG3	LOUVERED DOUBLE DEFLECTION GRILLE	TITUS	300FL	S/A	24x24		14"	14"	TYPE 3 (LAY-IN)	
SG4	LOUVERED DOUBLE DEFLECTION GRILLE	TITUS	300FL	S/A			6"	6"	TYPE 1 (SURFACE)	

M14
ADDENDUM #1.4

VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE

ID	MANUFACTURER	MODEL NO.	NECK SIZE	TYPE	PRIMARY AIRFLOW MAX	PRIMARY AIRFLOW MIN	EXTERIOR ZONE	HEATING COIL DESCRIPTION	HEATING COIL CAP	AIRSIDE DESIGN FLOW	AIRSIDE EAT(db)	AIRSIDE LAT(db)	AIRSIDE PD	AIRSIDE ROWS	AIRSIDE FPI	WATERSIDE FLOW	WATERSIDE EWT	WATERSIDE LWT	WATERSIDE PD	UNIT WEIGHT	NOTES
VAV-1A	TITUS	DESV	8"	SINGLE DUCT	655 CFM	200 CFM	Yes	HEATING WATER COIL	28253 Btu/h	655 CFM	55.0 °F	95.0 °F	0.32 in-wg	2	10	2.0 GPM	140 °F	110 °F	0.6 ftH2O	46 lb	
VAV-1B	TITUS	DESV	7"	SINGLE DUCT	525 CFM	160 CFM	Yes	HEATING WATER COIL	22646 Btu/h	525 CFM	55.0 °F	95.0 °F	0.22 in-wg	2	10	1.7 GPM	140 °F	110 °F	0.4 ftH2O	46 lb	
VAV-2	TITUS	DESV	8"	SINGLE DUCT	670 CFM	205 CFM	Yes	HEATING WATER COIL	28900 Btu/h	670 CFM	55.0 °F	95.0 °F	0.35 in-wg	2	10	2.1 GPM	140 °F	110 °F	0.7 ftH2O	46 lb	
VAV-3	TITUS	DESV	4"	SINGLE DUCT	150 CFM	45 CFM	Yes	HEATING WATER COIL	6470 Btu/h	150 CFM	55.0 °F	95.0 °F	0.05 in-wg	2	10	0.5 GPM	140 °F	110 °F	0.0 ftH2O	43 lb	
VAV-4	TITUS	DESV	7"	SINGLE DUCT	495 CFM	150 CFM	Yes	HEATING WATER COIL	21352 Btu/h	495 CFM	55.0 °F	95.0 °F	0.23 in-wg	2	10	1.6 GPM	140 °F	110 °F	0.2 ftH2O	46 lb	
VAV-5	TITUS	DESV	7"	SINGLE DUCT	480 CFM	145 CFM	Yes	HEATING WATER COIL	20705 Btu/h	480 CFM	55.0 °F	95.0 °F	0.20 in-wg	2	10	1.5 GPM	140 °F	110 °F	0.4 ftH2O	46 lb	
VAV-6	TITUS	DESV	6"	SINGLE DUCT	300 CFM	90 CFM	Yes	HEATING WATER COIL	12940 Btu/h	300 CFM	55.0 °F	95.0 °F	0.12 in-wg	2	10	1.0 GPM	140 °F	110 °F	0.1 ftH2O	43 lb	1
VAV-7	TITUS	DESV	6"	SINGLE DUCT	300 CFM	90 CFM	Yes	HEATING WATER COIL	12940 Btu/h	300 CFM	55.0 °F	95.0 °F	0.12 in-wg	2	10	1.0 GPM	140 °F	110 °F	0.1 ftH2O	43 lb	1
VAV-8	TITUS	DESV	12"	SINGLE DUCT	1485 CFM	450 CFM	Yes	HEATING WATER COIL	64055 Btu/h	1485 CFM	55.0 °F	95.0 °F	0.35 in-wg	2	10	4.6 GPM	140 °F	110 °F	0.7 ftH2O	65 lb	
VAV-9	TITUS	DESV	5"	SINGLE DUCT	200 CFM	60 CFM	Yes	HEATING WATER COIL	8627 Btu/h	200 CFM	55.0 °F	95.0 °F	0.08 in-wg	2	10	0.7 GPM	140 °F	110 °F	0.1 ftH2O	43 lb	
VAV-10	TITUS	DESV	4"	SINGLE DUCT	150 CFM	45 CFM	Yes	HEATING WATER COIL	6470 Btu/h	150 CFM	55.0 °F	95.0 °F	0.05 in-wg	2	10	0.5 GPM	140 °F	110 °F	0.0 ftH2O	43 lb	
VAV-11	TITUS	DESV	4"	SINGLE DUCT	110 CFM	35 CFM	Yes	HEATING WATER COIL	4745 Btu/h	110 CFM	55.0 °F	95.0 °F	0.03 in-wg	2	10	0.5 GPM	140 °F	110 °F	0.0 ftH2O	43 lb	
VAV-12	TITUS	DESV	4"	SINGLE DUCT	110 CFM	35 CFM	Yes	HEATING WATER COIL	4745 Btu/h	110 CFM	55.0 °F	95.0 °F	0.03 in-wg	2	10	0.5 GPM	140 °F	110 °F	0.0 ftH2O	43 lb	

NOTES:
1. DURING UNOCCUPIED HOURS, UNIT SHALL VARY THE AIRFLOW TO MINIMUM AIRFLOW SETTING. DURING OCCUPIED HOURS, UNIT SHALL NOT VARY THE AIRFLOW BELOW MAXIMUM AIRFLOW SETTING.

M13
ADDENDUM #1.4

WALL MOUNTED AIR CONDITIONER SCHEDULE

ID	LOCATION NAME	LOCATION NO.	MANUFACTURER	MODEL NO.	TYPE	COOLING COIL NOMINAL CAP	COOLING COIL CAP TOTAL	FILTER EFF	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	INTERLOCK ID	REMARKS
AC-1	DATA	223	CARRIER	40MAHBQ12XA1	DUCTLESS AC UNIT	1 ton	12000 Btu/h	MERV-13	20 lb	18 A	23 A	25 A	0 V	1		unit power is powered from the outdoor unit

LINEAR SLOT DIFFUSER SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL	FINISH	SYSTEM	LINEAR DIFFUSER SLOT WIDTH	SLOT QTY	PLENUM NOM. LENGTH	PLENUM INSULATED	NECK SIZE	NECK TYPE Oval	NECK TYPE Round	TOTAL TRACK LENGTH	THROW SYMBOL	INSTALLATION BORDER TYPE	SPECIFICATION	NOTES
LSD1	LINEAR SLOT DIFFUSER	TITUS	FL-10	ALUMINUM	WHITE ENAMEL	S/A	1"	1	2' - 0"	Yes	6"	No	Yes	2' - 0"	H	DEFAULT	ARCHITECTURAL LINEAR SLOT DIFFUSER	
LSD2	LINEAR SLOT DIFFUSER	TITUS	FL-10	ALUMINUM	WHITE ENAMEL	S/A	1"	1	3' - 0"	Yes	6"	No	Yes	6' - 0"	H	DEFAULT	ARCHITECTURAL LINEAR SLOT DIFFUSER	
LSD3	LINEAR SLOT DIFFUSER	TITUS	FL-10	ALUMINUM	WHITE ENAMEL	S/A	1"	1	4' - 0"	Yes	8"	No	Yes	24' - 0"	H	DEFAULT	ARCHITECTURAL LINEAR SLOT DIFFUSER	
RLS1	LINEAR SLOT DIFFUSER	TITUS	FL-10	ALUMINUM	WHITE ENAMEL	R/A	1"	1	4' - 0"	No	6"	No	Yes	4' - 0"		DEFAULT	ARCHITECTURAL LINEAR SLOT DIFFUSER	
RLS2	LINEAR SLOT DIFFUSER	TITUS	FL-10	ALUMINUM	WHITE ENAMEL	R/A	1"	1	4' - 0"	No	10"	No	Yes	4' - 0"		DEFAULT	ARCHITECTURAL LINEAR SLOT DIFFUSER	

SPLIT SYSTEM CONDENSING UNIT SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL NO.	TYPE	COMPRESSOR CAP	REFRIGERANT TYPE	MOTOR RLA	LOW AMBIENT KIT	SUMMER AMBIENT DBT	WINTER AMBIENT DBT	SEER	EER	UNIT WEIGHT	MCA	MOCP	VOLT	PH	INTERLOCK ID	REMARKS
ACCU-1	CONDENSING UNIT	TRANE	TTA120A3D	OUTDOOR	15 ton	R-410A	57 A	Yes	91.0 °F	-11.0 °F		11.2	692 lb	74 A	100 A	208 V	3	AHU-1	
CU-1	CONDENSING UNIT	CARRIER	38MARBQ12AA1	OUTDOOR	1 ton	R-410A	13 A	Yes	91.0 °F	-11.0 °F	28.1	13	67 lb	19 A	25 A	208 V	1	AC-1	

M12
ADDENDUM #1.4

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING co
259 E Michigan Ave
Kalamazoo, MI 49007
www.steelheadengineeringco.com

NEHIL·SIVAK STRUCTURAL ENGINEERS
414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 14164
BRADEN R. COX
SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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MECHANICAL SCHEDULES

M600

SHEET 79 OF 95

EXHAUST FAN SCHEDULE

ID	MANUFACTURER	MODEL NO.	TYPE	FAN					UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	ACCESSORIES	NOTES
				DESIGN AIRFLOW	OUTLET VELOCITY	ESP	RPM	DRIVE TYPE								
EF-1	GREENHECK	CSP-A3300-VG	INLINE	2090 CFM	685 FPM	0.50 in-wg	945	DIRECT	122 lb	14.0 A	17.5 A	31.5 A	115 V	1	BD, ED	1

ACCESSORIES:
BD - GRAVITY BACKDRAFT DAMPER/SHUTTER
ED - INTEGRAL ELECTRICAL DISCONNECT

SCHEDULE NOTES:
1. EXHAUST FAN SHALL OPERATE DURING OCCUPIED HOURS, REFER TO THE POWER PLANS FOR CONTROL INFORMATION.

M20 ADDENDUM #1.4

AIR SEPARATOR SCHEDULE

LOCATION		MANUFACTURER	MODEL NO.	SYSTEM	TYPE	ARRANGEMENT	DESIGN FLOW	MAX FLOW	PIPE SIZE	ASME	UNIT WEIGHT
NAME	NO.										
MECHANICAL	224	BELL & GOSSETT	R-2N	HEATING WATER	CENTRIFUGAL AIR SEPARATOR	VERTICAL	43.0 GPM	140.0 GPM	2"	Yes	51 lb

M19 ADDENDUM #1.4

HYDRONIC BASEBOARD RADIATION SCHEDULE

MARK	MANUFACTURER	MODEL NO.	TYPE	Heating Capacity	HEATING COIL						LENGTH	ENCLOSURE HEIGHT	TOP MOUNT HEIGHT
					ROWS	FPI	WATERSIDE						
							FLOW	EWT	LWT	HEAD LOSS			
BR-1	STERLING	JVA-S	SLOPED TOP	1565 BTU/HR	1	50	1.0 GPM	140 °F	110 °F	0.1 ftH2O	3' - 0"	14"	18"
BR-2	STERLING	JVA-S	SLOPED TOP	2086 BTU/HR	1	50	1.0 GPM	140 °F	110 °F	0.1 ftH2O	4' - 0"	14"	18"
BR-3	STERLING	JVA-S	SLOPED TOP	3130 BTU/HR	1	50	1.0 GPM	140 °F	110 °F	0.1 ftH2O	6' - 0"	14"	18"
BR-4	STERLING	JVA-S	SLOPED TOP	5216 BTU/HR	1	50	1.0 GPM	140 °F	110 °F	0.1 ftH2O	10' - 0"	14"	18"
BR-6	STERLING	JVA-S	SLOPED TOP	1826 BTU/HR	1	50	1.0 GPM	140 °F	110 °F	0.1 ftH2O	3' - 6"	14"	18"

CIRCULATING PUMP SCHEDULE

MARK	LOCATION		SYSTEM	MANUFACTURER	MODEL NO.	TYPE	PUMP			MOTOR		UNIT WEIGHT	VOLT	PH	ACCESSORIES	NOTES
	NAME	NO.					FLOW DESIGN	HEAD	DRIVE TYPE	POWER	ECM					
HWP-1	MECHANICAL	224	BOILER	GRUNDFOS	UPMXL 25-124L 20-140	INLINE	15.0 GPM	20.0 FT	DIRECT	0.2 hp	Yes	35 lb	120 V	1	-	1
HWP-2	MECHANICAL	224	BOILER	GRUNDFOS	UPMXL 25-124L 20-140	INLINE	15.0 GPM	20.0 FT	DIRECT	0.2 hp	Yes	35 lb	120 V	1	-	1
HWP-3	MECHANICAL	224	HOT WATER	BELL & GOSSETT	e-80 1.5x1.5x9.5B	INLINE	43.1 GPM	70.0 FT	DIRECT	3.0 hp	Yes	180 lb	208 V	3	VFD	-
HWP-4	MECHANICAL	224	HOT WATER	BELL & GOSSETT	e-80 1.5x1.5x9.5B	INLINE	43.1 GPM	70.0 FT	DIRECT	3.0 hp	Yes	180 lb	208 V	3	VFD	-

ACCESSORIES:
1. VFD - VARIABLE FREQUENCY DRIVE EQUAL TO MODEL NUMBER P2003720.

SCHEDULE NOTES:
1. PUMP PROVIDED AS AN ACCESSORY TO THE BOILER.

M18 ADDENDUM #1.4

LOUVER SCHEDULE

MARK	MANUFACTURER	MODEL	MATERIAL	FINISH	SYSTEM	AIRFLOW	AIR PD	FREE AREA	FREE AREA VELOCITY	DIMENSIONS		NOTES
										HEIGHT	WIDTH	
L-1	GREENHECK	ESD-635	ALUMINUM	PAINTED	E/A	1380 CFM	0.17 in-wg	1.2 SF	1112 FPM	1' - 6"	2' - 0"	PROVIDE BACKDRAFT DAMPER, 4" BLADE DEPTH
L-2	GREENHECK	ESD-635	ALUMINUM	PAINTED	S-O/A	5000 CFM	0.60 in-wg	2.6 SF	3100 FPM	1' - 5"	4' - 7 1/2"	
L-3	GREENHECK	ESD-635	ALUMINUM	PAINTED	E/A	5000 CFM	0.60 in-wg	2.6 SF	3100 FPM	1' - 5"	4' - 7"	

M17 ADDENDUM #1.4

EXPANSION TANK SCHEDULE

ID	LOCATION		MANUFACTURER	MODEL NO.	MATERIAL	FINISH	SYSTEM	TYPE	ARRANGEMENT	VOL	ACCEPTANCE VOL	MAX ACCEPTANCE FACTOR	PRESS RELIEF	PRECHARGE PRESS	UNIT DIMENSIONS		ASME	UNIT WEIGHT
	NAME	NO.													DIAMETER	HEIGHT		
ET-1	MECHANICAL	224	AMTROL	AX-100V	STEEL - POLYPROPYLENE LINING	RED OXIDE PRIMER	HEATING WATER	FIXED DIAPHRAM	VERTICAL	55.7 gal	22.6 gal	0.41	100 psi	12 psi	24"	34"	Yes	641 lb

GAS-FIRED BOILER SCHEDULE

ID	LOCATION		MANUFACTURER	MODEL NO.	TYPE	ARRANGEMENT	GAS-FIRED HEAT EXCHANGER								UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	ACCESSORIES	NOTES
							GAS BURNER						WATERSIDE									
	NAME	NO.					INPUT	INPUT @ MIN FIRE	CAP	CAP @ MIN FIRE	STAGES	FUEL TYPE	FLOW DESIGN	EWT	LWT							
B-1	MECHANICAL	224	LOCHINVAR	KHB199N	CONDENSING	FLOOR-STAND	199000 Btu/h	19900 Btu/h	18507000 Btu/h	1850700 Btu/h	10	LP	15.0 GPM	110 °F	140 °F	195 lb	10 A	12 A	15 A	120 V	1	BC,CV,FS,LP, LW	1
B-2	MECHANICAL	224	LOCHINVAR	KHB199N	CONDENSING	FLOOR-STAND	199000 Btu/h	19900 Btu/h	18507000 Btu/h	1850700 Btu/h	10	LP	15.0 GPM	110 °F	140 °F	195 lb	10 A	12 A	15 A	120 V	1	BC,CV,FS,LP, LW	1

ACCESSORIES:
BC-BACNET GATEWAY
CV-CONCENTRIC VENT KIT
FS-FLOW SWITCH
LP-LP GAS CONVERSION KIT
LW-LOW WATER CUTOFF

SCHEDULE NOTES:
1. REFER TO THE CIRCULATING PUMP SCHEDULE FOR THE BOILER LOOP PUMP INFORMATION. BOILER LOOP PUMP PROVIDED AS AN ACCESSORY TO THE BOILER.

M16 ADDENDUM #1.4

AIR HANDLING UNIT SCHEDULE

M13 ADDENDUM #1.4 M14 ADDENDUM #1.4 M15 ADDENDUM #1.4

MARK	UNIT MODEL/UNIT SIZE	OA SYSTEM FLOW	SYSTEM AIR FLOW	RETURN FAN			RETURN FAN MOTOR POWER	SUPPLY FAN			SUPPLY FAN MOTOR POWER	Heating Coil Water Flow	HEATING COIL AIR PD	HEATING COIL						COOLING COIL AIR PD	COOLING COIL						
				EXTERNAL STATIC PRESSURE	TOTAL STATIC PRESSURE	MOTOR VOLTAGE		EXTERNAL STATIC PRESSURE	TOTAL STATIC PRESSURE	MOTOR VOLTAGE				ENTERING DRY BULB TEMPERATURE	LEAVING DRY BULB TEMPERATURE	TOTAL CAPACITY	ENTERING FLUID TEMPERATURE	LEAVING FLUID TEMPERATURE		FACE AREA	FACE VELOCITY	ENTERING DRY BULB TEMPERATURE	ENTERING WET BULB TEMPERATURE	LEAVING DRY BULB TEMPERATURE	LEAVING WET BULB TEMPERATURE	TOTAL CAPACITY	SENSIBLE CAPACITY
AHU-1	AHU-DDP/CSAA012	1400 CFM	5000 CFM	2.00 in-wg	3.20 in-wg	208 V	5.0 hp	3.50 in-wg	5.40 in-wg	208 V	7.5 hp		0.06 in-wg	60 °F	90 °F	162675 Btu/h	140 °F	120 °F	0.62 in-wg	12.1 SF	413 FPM	78 °F	65 °F	55 °F	54 °F	159470 Btu/h	126237 Btu/h

ELECTRICAL INFORMATION: 208V/3PH/60Hz FLA: 50.00A MCA: 57.00A MAX FUSE SIZE: 80A

HEATING COIL SYSTEM TYPE: HOT WATER COOLING COIL SYSTEM TYPE: REFRIGERANT SHIPPING WEIGHT: 2.82 kip OPERATING WEIGHT: 2.84 kip

FILTER INFORMATION: PROVIDE A 2" MERV 8 PREFILTER AND A MERV 14 FINAL FILTER.

M15 ADDENDUM #1.4

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING co
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414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

REGISTERED PROFESSIONAL ENGINEER REG. NO 14844 BRADEN R. COX SOUTH DAKOTA 11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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MECHANICAL SCHEDULES

M601

SHEET 80 OF 95

ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)
A	AMPERE
AC	ABOVE COUNTER
ACLG	ABOVE CEILING
ADO	AUTOMATIC DOOR OPENER
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI	ARC FAULT CIRCUIT INTERRUPTER
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
AMPL	AMPLIFIER
ANNUN	ANNUNCIATOR
APPROX	APPROXIMATELY
AQ-STAT	AQUASTAT
ARCH	ARCHITECT, ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BD	BOARD
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CD	CANDELA
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
COMB	COMBINATION
CMPR	COMPRESSOR
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUATION OR CONTINUOUS
CONTR	CONTRACTOR
CONV	CONVECTOR
CP	CIRCULATING PUMP
CRT	CATHODE-RAY TUBE
CT	CURRENT TRANSFORMER
CTR	CENTER
CU	COPPER
DCP	DOMESTIC WATER CIRCULATING PUMP
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
DPR	DAMPER
DS	SAFETY DISCONNECT SWITCH
DT	DOUBLE THROW
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
ELU	EMERGENCY LIGHTING UNIT
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EP	ELECTRIC PNEUMATIC
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXH	EXHAUST
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLUORESCENT
FU	FUSE
FUDS	FUSED SAFETY DISCONNECT SWITCH
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTOR
GND	GROUND
GRS	GALVANIZED RIGID STEEL (CONDUIT)
GYP BD	GYPSUM BOARD
HOA	HANDS-OFF-AUTOMATIC SWITCH
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
IR	INFRARED
I/W	INTERLOCK WITH
J-BOX	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT-AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LOC	LOCATE OR LOCATION
LT	LIGHT
LTG	LIGHTING
LTNG	LIGHTNING
LV	LOW VOLTAGE
MAX	MAXIMUM
MAG.S	MAGNETIC STARTER
M/C	MOMENTARY CONTACT
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDC	MAIN DISTRIBUTION CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MFS	MAIN FUSED DISCONNECT SW
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MMS	MANUAL MOTOR STARTER
MOA	MULTIOUTLET ASSEMBLY
MSP	MOTOR STARTER PANELBOARD
MSBD	MAIN SWITCHBOARD
MT	MOUNT
MT.C	EMPTY CONDUIT
MTS	MANUAL TRANSFER SWITCH
MTR	MOTOR, MOTORIZED
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFDS	NON-FUSED SAFETY DISCONNECT SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NPF	NORMAL POWER FACTOR
NTS	NOT TO SCALE
OH	OVERHEAD
OL	OVERLOADS
PA	PUBLIC ADDRESS
PB	PULL BOX OR PUSHBUTTON
PE	PNEUMATIC ELECTRIC
PED	PEDESTAL
PF	POWER FACTOR
PH	PHASE
PIV	POST INDICATING VALVE
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRI	PRIMARY
PROJ	PROJECTION
PRV	POWER ROOF VENTILATOR
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (CONDUIT)
PWR	POWER
QUAN	QUANTITY
RCPT	RECEPTACLE
REQD	REQUIRED
RM	ROOM
RSC	RIGID STEEL CONDUIT
RTU	ROOF TOP UNIT
SC	SURFACE CONDUIT
SEC	SECONDARY
SHT	SHEET
SIM	SIMILAR
S/N	SOLID NEUTRAL
SPEC	SPECIFICATION
SPKR	SPEAKER
SP	SPARE
SR	SURFACE RACEWAY
SS	STAINLESS STEEL
SSW	SELECTOR SWITCH
S/S	STOP/START PUSHBUTTONS
STA	STATION
STD	STANDARD
SURF	SURFACE MOUNTED
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
SYS	SYSTEM
TEL	TELEPHONE
TEL/DAT	TELEPHONE/DATA
TERM	TERMINAL
TL	TWIST LOCK
TR	TAMPER RESISTANT
T-STAT	THERMOSTAT
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TVTC	TELEVISION TERMINAL CABINET
TYP	TYPICAL
UC	UNDER COUNTER
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
UT	UNDERGROUND TELEPHONE
UTIL	UTILITY
UV	ULTRAVIOLET
V	VOLT
VA	VOLT-AMPERES
VDT	VIDEO DISPLAY TERMINAL
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WATT
W/	WITH
WG	WIRE GUARD
WH	WATER HEATER
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER
XFR	TRANSFER
∠	ANGLE
@	AT
▲	DELTA
'	FEET
"	INCHES
#	NUMBER
Ø	PHASE
C	CENTER LINE
P	PLATE

* NOTE *

ALL GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

ELECTRICAL SYMBOL LEGEND

SYMBOL — DESCRIPTION

- LIGHTING FIXTURES, TYPICAL, RECTANGULAR FILLED CIRCLES INDICATE RECESSED, OPEN CIRCLES INDICATE SURFACE. DIAGONAL LINE INDICATES LENSED OUTER DOTS INDICATE SUSPENDED
- LIGHTING FIXTURES, TYPICAL, ROUND CENTER DOT INDICATES PENDANT. DIAGONAL LINE INDICATES LENSED. CHEVRON INDICATES WALL WASH
- WALL-MOUNTED FIXTURES, TYPICAL
- STRIP FIXTURE
- DIRECTIONAL LIGHT, TRACK, FLOOD
- LINEAR LIGHT, TAPE LIGHT
- EMERGENCY LIGHTING UNIT, CEILING-MOUNTED, INTEGRAL BATTERY
- EMERGENCY LIGHTING UNIT, CEILING-MOUNTED, REMOTE BATTERY
- EMERGENCY LIGHTING UNIT, WALL-MOUNTED, INTEGRAL BATTERY
- EMERGENCY LIGHTING UNIT, WALL-MOUNTED, REMOTE BATTERY
- EXIT LIGHT, CEILING-MOUNTED, SHADING AND ARROWS INDICATE FACES AND DIRECTION
- EXIT LIGHT, WALL-MOUNTED, SHADING AND ARROWS INDICATE FACES AND DIRECTION
- EXIT/ELU COMBO
- POLE/AREA LIGHTS
- POST-TOP AREA LIGHT
- BOLLARD LIGHT
- DIAGONAL HATCH INDICATES LIGHT ON A CRITICAL CIRCUIT
- SOLID HATCH INDICATES LIGHT ON AN EMERGENCY OR LIFE SAFETY CIRCUIT
- SINGLE POLE SWITCH
- 3-WAY SWITCH
- 4-WAY SWITCH
- KEYED SWITCH
- SWITCH W/PILOT
- DIMMER SWITCH
- OCCUPANCY SENSOR W/ MANUAL SWITCH
- TIMER SWITCH
- TIME DELAY SWITCH
- TIME CONTROL SWITCH

SYMBOL — DESCRIPTION

- SINGLE RECEPTACLE
- DUPLEX RECEPT.
- DUPLEX RECEPT. (MOUNTING HEIGHT)
- GFI DUPLEX RECEPT. (FEED THROUGH)
- GFI WEATHERPROOF RECEPT.
- SPLIT DUPLEX RECEPT.
- DUPLEX RECEPTACLE
- DUPLEX ISOLATED GROUND RECEPT.
- WATER COOLER RECEPTACLE
- COORDINATE THE LOCATION WITH THE EQUIPMENT SUPPLIER
- DUPLEX RECEPT. ON EMERG. CIRCUIT
- GFI DUPLEX RECEPT. (FEED THROUGH)
- FLOOR DUPLEX RECEPT.
- CEILING DUPLEX RECEPT.
- FOURPLEX RECEPTACLE
- FOURPLEX RECEPTACLE ON EMERGENCY CIRCUIT
- 240V RECEPTACLE
- RECEPTACLE ON CORD REEL
- SPECIAL RECEPTACLE NEMA CONFIGURATION
- JUNCTION BOX
- FLOOR JUNCTION BOX
- CEILING JUNCTION BOX
- MULTIOUTLET ASSEMBLY
- COMB. MOTOR STARTER (FUSED)
- SAFETY DISC. SW. (NON-FUSED)
- SAFETY DISC. SW. (FUSED)
- RELAY
- PUSH BUTTON
- THERMOSTAT
- HUMIDISTAT
- POWER POLE (OPEN OFFICE STYLE)
- SURGERY SERVICE COLUMN
- STATIC GROUND RECEPTACLE
- UTILITY SERVICE POWER POLE
- XX-1 MOTOR
- XX-1 IDENTITY (SEE SCHEDULE)

EXISTING TO REMAIN: XX-1 — RELOCATED: XX-1 — DEMOLISHED: XX-1

- T1 TRANSFORMER
- BUS DUCT W/ PLUG IN DISCONNECT CABLE TAP BOX

SYMBOL — DESCRIPTION

- TELEPHONE OUTLET
- FLOOR TELEPHONE OUTLET
- VOICE/DATA OUTLET # OF VOICE AND # OF DATA PORTS EXAMPLE 1V2D = 1 VOICE, 2 DATA
- FLOOR DATA OUTLET
- CEILING DATA OUTLET
- MICROPHONE OUTLET
- CATV OUTLET
- TV OUTLET
- VOLUME CONTROL
- DOOR BELL
- DOOR BUZZER
- DOOR CHIME
- DOOR SIGNAL
- AUTO DOOR PUSH PAD
- ELECTRIC STRIKE
- MAGNETIC LOCK
- COMBINATION LOCK
- DOOR CONTACT
- CARD READER
- SECURITY KEYPAD
- MOTION DETECTOR
- NURSE CALL EMERG. STATION
- NURSE CALL CODE BLUE STATION
- NURSE CALL DUTY STATION
- NURSE CALL STAFF STATION
- NURSE CALL PATIENT STATION
- NURSE CALL DOME LIGHT (1-COLOR)
- NURSE CALL DOME LIGHT (2-COLORS)
- NURSE CALL DOME LIGHT (4-COLORS)
- FIRE ALARM PULL STATION
- FIRE ALARM BELL
- FIRE ALARM HORN W/STROBE
- FIRE ALARM SPEAKER W/STROBE
- FIRE ALARM BELL W/STROBE
- FIRE ALARM CHIME W/STROBE
- FIRE ALARM DOOR HOLDER
- FIRE ALARM DOOR CLOSER
- FIRE ALARM SHUT DOWN RELAY
- SPRINKLER FLOW SWITCH
- SPRINKLER VALVE TAMPER SWITCH
- THERMAL DETECTOR
- DUCT SMOKE DETECTOR
- CEILING SMOKE DETECTOR

PANELBOARD IDENTIFICATION

P4N1

1. EQUIPMENT DESIGNATION:
L = LIGHTING
P = POWER
D = DISTRIBUTION
S = SWITCHBOARD
M = MOTOR CONTROL CENTER
R = RELAY PANEL

2. VOLTAGE DESIGNATION:
1 = 120/240V - 1PH
2 = 240V - 3PH
3 = 208Y/120V - 3PH
4 = 480Y/277V - 3PH
5 = 120/208 - 1PH
6 = SPECIAL

3. SYSTEM DESIGNATION:
N = NORMAL
E = EMERGENCY
C = POWER CONDITIONED
U = UNINTERRUPTIBLE POWER SOURCE

5. PANEL NO. DESIGNATION:
1 = PANELBOARD #1
2 = PANELBOARD #2
3 = PANELBOARD #3
ETC.

ELECTRICAL SYMBOL NOTES

- S3d — LIGHTING FIXTURE TAG DESCRIPTORS: TOP VALUE: FIXTURE TYPE ID. BOTTOM VALUE, NUMBER: CIRCUIT NUMBER, REFER TO DRAWINGS FOR PANEL. BOTTOM VALUE, LOWERCASE LETTER: SWITCH DESIGNATION. ABSENCE OF A SWITCH ID INDICATES FIXTURE IS CONTROLLED BY THE ONLY SWITCH IN THE SPACE. "x" IN PLACE OF THE SWITCH ID INDICATES NIGHT LIGHT, UNSWITCHED.
- EXW1 — EXIT LIGHTS. STEM INDICATES WALL MOUNTING. NO STEM INDICATES CEILING MOUNTING. SHADED AREA INDICATES ILLUMINATED FACE(S). ARROW INDICATES DIRECTIONAL ARROW ON ILLUMINATED FACE(S). THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. EXAMPLE: THE WALL MOUNTED EXIT LIGHT TYPE "E1" WITH SINGLE FACE AND DIRECTIONAL ARROW IS CONNECTED TO CIRCUIT 1.
- d — DEVICES. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SPLIT DUPLEX RECEPTACLE IS CONNECTED TO CIRCUIT 1 AND ONE RECEPTACLE OUTLET IS CONTROLLED BY SWITCH "d".
- d — THE CONTROL DEVICE DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SINGLE POLE SWITCH "d" TO CONTROL LIGHTING FIXTURES INDICATED BY "d".
- e — WALL BOX DIMMER WITH SIZE AS INDICATED AT DEVICE. EXAMPLE: 600 WATT WALL BOX DIMMER TO CONTROL LIGHTING FIXTURES INDICATED BY "e". SEE SPECIFICATIONS FOR WATTAGE IF NOT INDICATED.
- ELEC-1 — SPECIAL CONNECTIONS. THE EQUIPMENT IS INDICATED BY A NUMBER IN A CIRCLE. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE LOAD DESCRIPTION AND TYPE OF CONNECTION. THE CIRCUIT DESIGNATION IS INDICATED BY NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: EQUIPMENT NO. ELEC-1; 1 PHASE CONNECTION TO CIRCUITS 2, 4.
- PANELBOARDS. PANELBOARD DOORS MAY BE SHOWN TO INDICATE OPENING SIDE OF RECESSED PANELBOARDS. SEE PANELBOARD IDENTIFICATION FOR DESIGNATION CODES.
- FLOOR CLEARANCE AREA
- XX-1 — MOTOR CONNECTIONS. THE MOTOR IS INDICATED BY A NUMBER WITHIN OR CHARACTERS ADJACENT TO THE MOTOR SYMBOL. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE MOTOR DESCRIPTION AND ELECTRICAL REQUIREMENTS.
- T1 — TRANSFORMERS. THE TRANSFORMER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "T". SEE THE TRANSFORMER SCHEDULE OR THE SINGLE LINE DIAGRAM FOR THE TRANSFORMER DESCRIPTION AND REQUIREMENTS. EXAMPLE: TRANSFORMER TYPE "T1".
- CONDUIT IN CEILING, FLOOR OR WALL AS REQUIRED BY FIELD CONDITIONS
- #12 — CONDUIT SHOWN WITHOUT SLASH MARKS SHALL CONTAIN 1 # 12 CONDUCTOR PER PHASE, NEUTRAL, AND GROUND IN 1/2" CONDUIT UNLESS SPECIFIC EQUIPMENT REQUIRES A DIFFERENT SIZE.
- #10 — CONDUIT SHOWN SHALL CONTAIN 1 # 10 CONDUCTOR PER PHASE IN ELECTRICAL CODE SIZED MINIMUM CONDUIT UNLESS A CONDUCTOR AND CONDUIT SIZE IS SHOWN ADJACENT.
- P4N-102 1, 3, 5 — HOME RUN TO BRANCH CIRCUIT PANELBOARD. THE PANELBOARD DESIGNATION IS SHOWN ADJACENT TO THE HOME RUN ARROW AS A NUMERATOR AND THE CIRCUIT DESIGNATION IS SHOWN AS THE DENOMINATOR. CIRCUIT BREAKER SIZES (AMPS/NUMBER OF POLES) ARE SHOWN IN THE PANELBOARD SCHEDULE WITH THE CORRESPONDING PANELBOARD AND CIRCUIT DESIGNATION. EXAMPLE: HOME RUN TO PANELBOARD P4N-102; CIRCUITS 1, 3, 5.
- GRAPHICAL REPRESENTATION OF PHASING, TYPICAL FOR ALL SYMBOLS.
  - EXISTING TO REMAIN
  - EXISTING TO BE REMOVED
  - NEW
  - ITEM TO BE REMOVED
  - AREA NOT IN CONTRACT
- REVISION NUMBER - SHOWN ON PLANS
- - / --- — NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- 1 — KEYED NOTE (SEE SCHEDULE)
- ROOM NAME AND NUMBER

ELECTRICAL SHEET LIST

SHEET	DESCRIPTION
E001	ELECTRICAL ABBREV. & SYMBOL LEGEND
E002	ELECTRICAL GENERAL INFORMATION
E003	ELECTRICAL SITE PLAN
E101	FIRST FLOOR LIGHTING PLAN
E101a	FIRST FLOOR LIGHTING LEVELS
E201	FIRST FLOOR POWER PLAN
E301	FIRST FLOOR SYSTEMS PLAN
E401	FIRST FLOOR FIRE ALARM PLAN
E400	ELECTRICAL ENLARGED PLANS
E501	ELECTRICAL DETAILS
E500	ELECTRICAL DETAILS
E520	ELECTRICAL ONE-LINE DIAGRAMS
E601	ELECTRICAL SCHEDULES
E602	ELECTRICAL SCHEDULES

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Kalamazoo, MI 49007
www.7GenAE.com

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68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING co
259 E Michigan Ave
Kalamazoo, MI 49007
www.steelheadengineeringco.com

NEHIL-SIVAK STRUCTURAL ENGINEERS
414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

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FORT THOMPSON, SOUTH DAKOTA 57339

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INDIAN HEALTH SERVICE
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REVIEWED:
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ELECTRICAL ABBREV. & SYMBOL LEGEND

E001

SHEET 81 OF 95

GENERAL PROJECT NOTES

A CONDUCTORS OPERATING AT 50 VOLTS OR GREATER SHALL BE IN RACEWAY. RACEWAY WITHIN THE STRUCTURE ABOVE THE FLOOR SLAB SHALL BE METAL. RACEWAY BELOW THE FLOOR SLAB AND UNDERGROUND RACEWAY OUTSIDE THE STRUCTURE SHALL BE PVC.

B LOW VOLTAGE CABLES OR CONDUCTORS OPERATING AT LESS THAN 50 VOLTS SHALL BE IN METAL RACEWAY. LOW VOLTAGE CABLES MAY BE RUN IN CABLE TRAY WHERE NOTED. LOW VOLTAGE CABLE SHALL BE PLENUM RATED IN PLENUM SPACES.

C COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND DETAILS. ARCHITECTURAL ELEVATIONS AND DETAILS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON ELECTRICAL DRAWINGS.

D PROVIDE CABLE OR CONDUIT AND WIRE AS REQUIRED TO ACHIEVE CIRCUITING SHOWN. SIZE CONDUCTORS PER NEC AMPACITY AND WIRE FILL CRITERIA. PROVIDE DEDICATED NEUTRAL AND GROUND CONDUCTORS FOR CIRCUITING, UNLESS NOTED OTHERWISE. INCREASE BRANCH CIRCUIT AND/OR FEEDER CONDUCTORS INCLUDING EQUIPMENT GROUNDING CONDUCTORS PROPORTIONALLY FOR NO MORE THAN 3% VOLTAGE DROP ON BRANCH CIRCUITS AND 2% ON FEEDERS PER ENERGY CODE.

E IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE INSTALLATION OF ELECTRICAL SYSTEMS AND THOSE REQUIRING ELECTRICAL CONNECTIONS TO MAINTAIN NEC REQUIRED CLEARANCES, INCLUDED BY NOT LIMITED TO AREAS ABOVE ACCESSIBLE CEILINGS.

F COORDINATE WITH OTHER TRADES FOR PROPER INSTALLATION OF ELECTRICAL COMPONENTS. CONSULT THE DRAWINGS OF OTHER TRADES OR CRAFTS TO AVOID CONFLICTS WITH EQUIPMENT, ETC. CONFLICTS SHALL BE RESOLVED PRIOR TO ROUGH-IN AND AT NO ADDITIONAL COST TO THE OWNER.

G LEAVE THE SITE CLEAN AND READY FOR OCCUPANCY. REMOVE DIRT, DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT AND WIRE SCRAPS AND MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THIS DIVISION OF THE WORK DURING CONSTRUCTION. COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS AND LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.

H THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

I PERFORM WORK TO COMPLY WITH THE STANDARD PRACTICES FOR GOOD WORKMANSHIP PUBLISHED BY NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA). COMPLY WITH THE LATEST ENFORCED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), LOCAL CODES, AMENDMENTS, AND ORDINANCES.

J FIELD COORDINATE FINAL MECHANICAL AND EQUIPMENT LOCATIONS ALONG WITH CONNECTION REQUIREMENTS AND CONTROL WIRING PRIOR TO ROUGH-IN, ADJUST CORRESPONDING CIRCUIT BREAKER RATINGS AND BRANCH CIRCUITING ACCORDINGLY.

K ELECTRICAL WORK SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED MASTER ELECTRICIAN. PROCURE PERMITS AND LICENSES AND PAY FEES ASSOCIATED WITH THIS WORK.

L MATERIALS FURNISHED FOR THIS PROJECT SHALL BE NEW, COMMERCIAL GRADE, FREE OF DEFECTS, AND LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY UNO.

M LOW VOLTAGE CABLES OR CONDUCTORS OPERATING AT LESS THAN 50 VOLTS SHALL BE IN METAL RACEWAY WHERE INSTALLED WITHIN WALLS OR INACCESSIBLE SPACES. LOW VOLTAGE CABLES MAY BE RUN IN CABLE TRAY WHERE NOTED. LOW VOLTAGE CABLES MAY BE RUN IN CABLE SUPPORT HOOKS ABOVE ACCESSIBLE CEILINGS WHERE NOTED. LOW VOLTAGE CABLE SHALL BE PLENUM RATED IN PLENUM SPACES.

N PROVIDE COMPLETE OPERATION & MAINTENANCE MANUAL INCLUDING APPROVED SUBMITTAL DRAWINGS, WARRANTY INFORMATION FOR PRODUCT SUPPLIED, AND MANUFACTURES OPERATION AND MAINTENANCE INSTRUCTIONS.

O THE CONTRACTOR IS RESPONSIBLE FOR MAKING FINAL WIRING TERMINATIONS TO PRE-INSTALLED RECEPTACLES IN OFFICE FURNITURE. CONTRACTOR IS RESPONSIBLE FOR WIRING AND INSTALLING VOICE/DATA DEVICES IN OFFICE FURNITURE. COORDINATE PLACEMENT OF DEVICES WITH FURNITURE LAY-OUT.

P SECURITY SYSTEM TO BE PROVIDED UNDER SEPARATE CONTRACT. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE CONDUIT PROVISIONS, BACK BOXES, ROUGH-INS, SLEEVES AND POWER TO HEAD END EQUIPMENT FOR EXACT REQUIREMENTS PRIOR TO START OF WORK.

Q CONDUIT AND WIRE SHALL NOT BE INSTALLED BELOW FLOOR SLAB UNLESS INDICATED ON PLAN BY DASHED CONDUIT.

R TV OUTLETS, VOLUME CONTROLS, NURSE CALL DOME LIGHTS, NURSE CALL DEVICES, TELEPHONE OUTLETS, DATA OUTLETS, AND FIRE ALARM DEVICES SHALL CONSIST OF A DATA DEVICE BACK BOX WITH CONDUIT STUBBED ABOVE THE ACCESSIBLE CEILING, SEE STUB UP DETAIL.VERIFY SIZE OF BACK BOX REQUIRED WITH DEVICE TO BE INSTALLED. LOCATE BACK BOXES 6" FROM ADJACENT POWER RECEPTACLE INTENDED FOR COMPUTER USE. COORDINATE BOX REQUIREMENTS INCLUDING SIZE, LOCATION AND CONDUIT SIZE, ROUTE AND TERMINATION LOCATION WITH THE EQUIPMENT SUPPLIER PRIOR TO ROUGHING IN. COORDINATE CIRCUITRY/WIRE/CABLE REQUIREMENTS WITH THE RESPECTIVE EQUIPMENT SUPPLIER/SPECIFIER.

S FURNISH AND INSTALL CONDUIT FROM BACK BOXES FOR THE FOLLOWING DEVICES INTO THE ACCESSIBLE CEILING SPACE IN THE CORRIDOR, UNLESS NOTED OTHERWISE:
- 1/2"C TV OUTLETS
- 1/2"C VOLUME CONTROLS
- 3/4"C DOOR SECURITY DEVICES (CARD READERS, DOOR STRIKES ETC..
- 1/2"C NURSE CALL DOME LIGHTS
- 3/4"C NURSE CALL DEVICES
- 3/4"C TELEPHONE OUTLETS
- 3/4"C INFORMATION OUTLETS
- 3/4"C FIRE ALARM DEVICES

T CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ELECTRICAL ITEMS SHOWN ON DRAWINGS EXCEPT FOR ITEMS LISTED IN NOTE 'R' BELOW.

U EMERGENCY ILLUMINATION UNITS SHALL BE CONNECTED TO THE LOCAL NORMAL LIGHTING CIRCUIT AHEAD OF ANY LOCAL SWITCHING, REFER TO THE N.E.C. SECTION 700-12(e) FOR MORE INFORMATION.

V FOR EACH HVAC TEMPERATURE SENSOR, THERMOSTAT OR HUMIDISTAT, PROVIDE A JUNCTION BOX, WITH A SINGLE GANG MUD RING, AT 48" ABOVE THE FINISH FLOOR WITH A 3/4" CONDUIT (WITH A PULL STRING) TO ABOVE THE CEILING FOR THE HVAC CONTROLS. HVAC CONTROLS WIRING, DEVICES AND TERMINATIONS PROVIDED BY THE MECHANICAL CONTROLS CONTRACTOR.

GENERAL FIRE ALARM NOTES

A PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.

B CONDUITS MAY PENETRATE WALLS OR PARTITIONS, PROVIDED THEY ARE FIRESTOPPED.

C OPENINGS FOR STEEL ELECTRICAL BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED PROVIDED OPENINGS DO NOT AGGREGATE MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL OR PARTITION.

D OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES.

E LIGHT FIXTURES AND OTHER APPARATUS SUPPORTED BY THE ACOUSTICAL CEILING GRID MUST MEET THE REQUIREMENTS OF NEC SECTION 410.16, MEANS OF SUPPORT.

F RECESSED LIGHTING FIXTURES INSTALLED IN FIRE RATED CEILING ASSEMBLIES SHALL BE FIRE RATED FIXTURES BEARING THE UL FIRE RATED LABEL. FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE UL FIRE RESISTANCE DIRECTORY, AND SHALL INCLUDE A FIRE RATED ENCLOSURE INSTALLED OVER THE FIXTURE THAT MEETS THE REQUIREMENTS OF THE UL FIRE RESISTANCE DIRECTORY.

G NEW FIRE ALARM DEVICES WILL BE INSTALLED AS NEEDED TO PROVIDE PROPER COVERAGE.

H PROVIDE COMPLETE FIRE ALARM SYSTEM IN ACCORDANCE TO NFPA 72. NEW FIRE ALARM DEVICES CONNECTED TO THE EXISTING FIRE ALARM CONTROL PANEL LOCATED IN THE EXISTING BUILDING.

I THE DRAWINGS ARE CONCEPTUAL IN NATURE. THEY DO NOT SHOW THE EXACT LOCATIONS OF COMPONENTS NOR SHOW ALL SYSTEM COMPONENTS. CONTRACTOR SHALL MODIFY DEVICE LOCATIONS AND PROVIDE ADDITIONAL COMPONENTS AS NECESSARY FOR A CODE COMPLIANT AND FULLY FUNCTIONAL SYSTEM.

J CONTRACTORS SHALL BE RESPONSIBLE TO ENSURE FIRE ALARM SYSTEM PRIORITIES ARE PROGRAMMED IN ACCORDANCE TO NFPA 72.

L COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION TO AVOID CONFLICT DURING CONSTRUCTION.

M CLASS B PATHWAYS FOR ADDRESSABLE DETECTION, NOTIFICATION, AND SIGNALING CIRCUITS MEET ALL MINIMUM/NECESSARY AHJ PERFORMANCE REQUIREMENTS. CLASS C, D, AND E PATHWAYS ARE NOT APPROVED FOR USE.

N PROVIDE SEPARATE ADDRESSES FOR EACH INITIATING DEVICE.

O ALL FIRE ALARM WIRING SHALL BE INSTALLED IN RACEWAY SEPARATE FROM ALL OTHER SYSTEMS. FIRE ALARM CONDUIT AND JUNCTION BOXES SHALL BE RED.

P ALL FIRE ALARM CIRCUITS SHALL BE TERMINATED AT DEVICE LUGS ONLY. SPLICING THE FIRE ALARM CIRCUIT WILL NOT BE ALLOWED UNLESS THE SPLICE IS VIA TERMINAL STRIPS LOCATED WITHIN A TERMINAL CABINET. T-TAPS SHALL NOT BE USED. USE OF WIRE NUTS, CRIMPED CONNECTORS, OR TWISTING OF CONDUCTORS IS PROHIBITED.

Q WALL MOUNTED NOTIFICATION APPLIANCES SHALL BE INSTALLED BETWEEN 80 IN. AND 96 IN. ABOVE THE FINISHED FLOOR OR 6 IN. BELOW THE CEILING, WHICHEVER IS LOWER.

R VISUAL NOTIFICATION APPLIANCES SHALL BE LOCATED IN ALL PUBLIC SPACES INCLUDING BUT NOT LIMITED TO RESTROOMS, MEETING ROOMS, CORRIDORS, LOUNGES AND WAITING AREAS. THE NOTIFICATION APPLIANCES SHALL BE SYNCHRONIZED WHEN IN THE SAME FIELD OF VIEW WITH A FLASH RATE BETWEEN 1 HZ AND 2 HZ.

S VISUAL NOTIFICATION APPLIANCE INTENSITY SHALL BE A MINIMUM OF 75 CD. VISUAL NOTIFICATION WITHIN BATHROOMS SHALL BE 15 CD.

T MANUAL FIRE ALARM STATIONS SHALL BE LOCATED WITHIN 5FT OF EACH EXIT AND IN ADDITIONAL LOCATIONS SUCH THAT THE TRAVEL DISTANCE TO PULL STATIONS DOES NOT EXCEED 200FT.

U ALL WIRING, CABLES, BOXES, TROUGHS AND OTHER RELATED EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).

V PERFORM TESTING IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, APPLICABLE CODES AND STANDARDS.

W THE FIRE ALARM SYSTEM IS TO REPORT ON THE EXISTING MFR MONITORING EQUIPMENT. CONTRACTOR TO PROVIDE ALL PROGRAMMING TO MATCH EXISTING POINT REPORTING.

X PLANNED OUTAGES FOR FIRE ALARM SHALL NOT EXCEED 8 HOURS WITHOUT FIRE WATCH

Y ALL SPEAKERS TO BE TAPPED AT 1/2 WATT UNLESS NOTED OTHERWISE.

GENERAL GROUNDING NOTES

A ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THE DRAWINGS.

B ALL UNDERGROUND CONNECTIONS OF GROUNDING CONDUCTORS AND LIGHTNING PROTECTION SHALL BE BY EXOTHERMIC WELD, ALL BUILDING CONNECTIONS TO STRUCTURAL STEEL SHALL BE BY EXOTHERMIC WELD.

C PROVIDE GROUND RING ELECTRODE AROUND ENTIRE BUILDING; 17 GAUGE 32 STRAND COPPER. BURIAL DEPTH SHALL BE 30". LOCATE BETWEEN 3'-0" AND 8'-0" FROM BUILDING FOUNDATION. CONNECT TO GROUND RODS AT EACH CORNER OF BUILDING.

D UNDER SLAB STATIC GROUND CONDUCTORS SHALL BE BARE 17 GAUGE 32 STRAND COPPER.

E ALL DOWN CONDUCTORS AND MAIN CONDUCTORS OF LIGHTNING PROTECTION SYSTEM SHALL BE 17 GAUGE 32 STRAND COPPER.

F FURNISH AND INSTALL 1" PVC SLEEVE THRU FOUNDATION WALLS FOR ALL FOUNDATION PENETRATIONS.

G NO BEND OF A CONDUCTOR SHALL FORM AN INCLUDED ANGLE OF LESS THAN 90°, NOR SHALL IT HAVE A RADIUS OF BEND LESS THAN 8".

H ALL MAIN CONDUCTORS SHALL BE COPPER, EXCEPT WHERE ALUMINUM IS REQUIRED AT MECHANICAL EQUIPMENT. PROVIDE BIMETAL PARALLEL SPLICER AT TRANSITION TO ALUMINUM.

J PROVIDE TYPE "P" AIR TERMINALS ON PARAPET, SPACED AT NO GREATER THAN 20'-0" APART, AND LOCATED WITHIN 2'-0" OF CORNERS OF STRUCTURE.

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TITLE

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CONTRACT NO: 75H70121F30002
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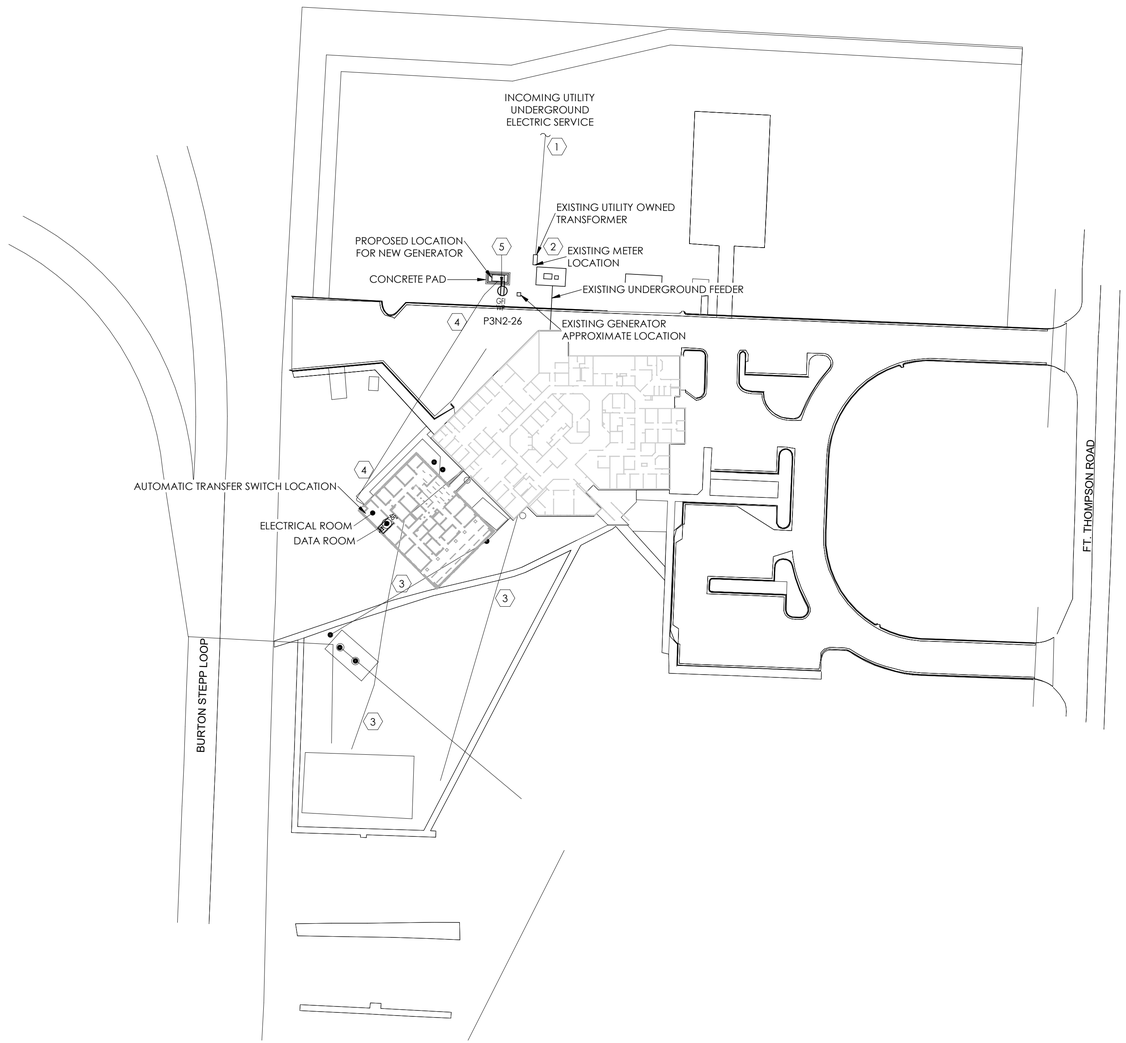
ELECTRICAL GENERAL INFORMATION

E002

SHEET 82 OF 95



NORTH

ELECTRICAL SITE PLAN

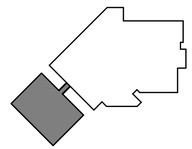
SCALE: 1" = 60'-0"

KEYNOTES

1	INCOMING UNDERGROUND 3 PHASE UTILITY OWNED PRIMARY LINE SUPPLIED BY CENTRAL ELECTRIC COOPERATIVE.
2	EXISTING UTILITY OWNED TRANSFORMER.
3	EXISTING UNDERGROUND FIBER OPTIC LINE.
4	APPROXIMATE ROUTE OF POWER CONDUIT AND 2 - 2" COMMUNICATIONS CONDUITS FROM THE GENERATOR TO THE BUILDING, REFER TO THE ELECTRICAL RISER DIAGRAM FOR INFORMATION.
5	RECEPTACLE FOR GENERATOR BATTERY CHARGING. COORDINATE THE LOCATION WITH THE EQUIPMENT SUPPLIER. UTILIZE #6 COPPER CONDUCTORS FOR THE HOMERUN CIRCUITRY.

GENERAL SITE PLAN NOTES

A	ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED BETWEEN 24" (MINIMUM) AND 36" (MAXIMUM) BELOW FINISHED GRADE.
B	ALL COMMUNICATIONS CONDUIT AND CABLES SHALL BE INSTALLED 36" (MINIMUM) BELOW FINISHED GRADE.
C	ALL CONDUCTORS FOR EXTERIOR LIGHTING AND POWER CIRCUITS SHALL BE #10 AWG MINIMUM.
D	PROVIDE TRANSFORMER BASE AT ALL POLE MOUNTED FIXTURES, TAP 2 LEGS OF THREE PHASE FEEDER (CIRCUITS DENOTED), PROVIDE BALLAST FUSES AT TAP, AND PROVIDE BRANCH CIRCUITS TO FIXTURES.



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SEVEN GENERATIONS
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68 E Michigan Ave
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www.wbkengineering.com

Steelhead ENGINEERING CO
259 E Michigan Ave
Kalamazoo, MI 49007
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414 S Burdick St #300
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www.nehilsivak.com

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REG. NO. 14144
BRADEN R. COX
SOUTH DAKOTA

11/04/22

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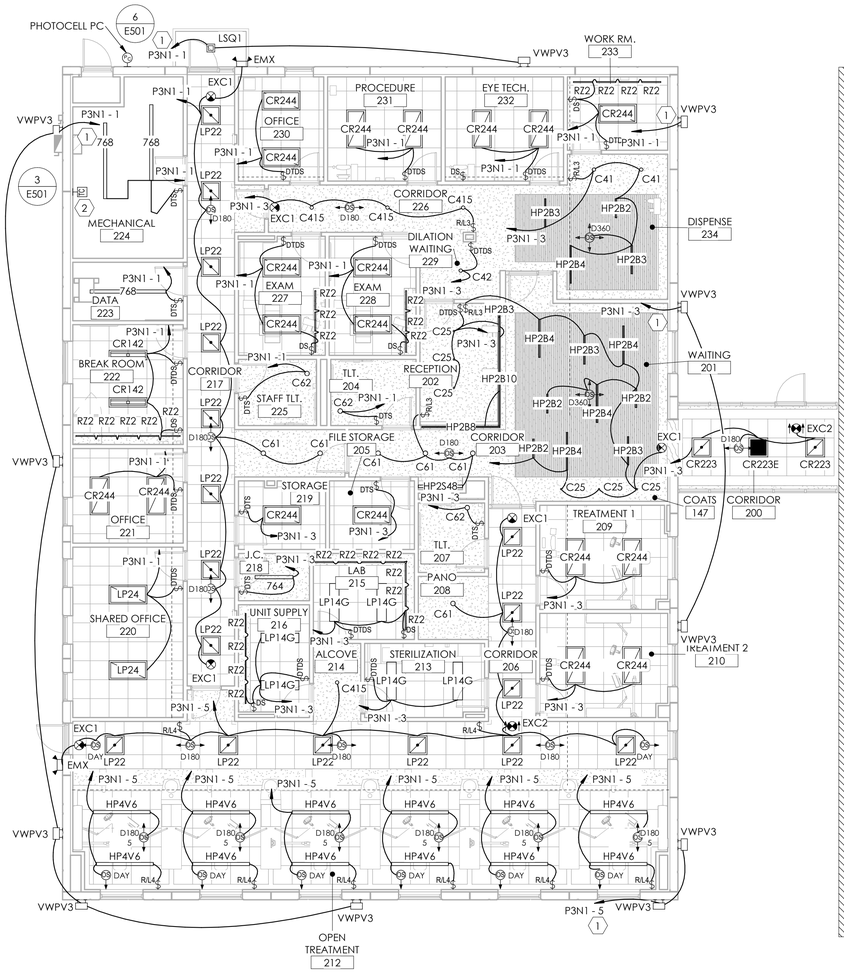
ELECTRICAL SITE PLAN

E003

SHEET 83 OF 95



NORTH

FIRST FLOOR LIGHTING PLAN

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

KEYNOTES

1. HOMERUN CIRCUITRY ROUTED THROUGH LIGHTING CONTACTOR LC2.
2. LIGHTING CONTACTORS LC1, LC2, LC3 AND TIMESWITCHES TS1 AND TS2 MOUNTED STACKED ON THE WALL NEXT TO THE PANEL.

GENERAL LIGHTING NOTES

- A ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH 6' LONG (MAXIMUM) FLEXIBLE METAL CONDUIT.
- B ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.
- C SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS OF LIGHTING FIXTURES.
- D REFER TO SECTION 26 0519 FOR MINIMUM CONDUCTOR SIZE ADJUSTMENTS FOR VOLTAGE DROP.
- F WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.
- K PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
- L CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.
- M NIGHT LIGHT (FIXTURES WITH "NL" NOTED ADJACENT) AND EMERGENCY ILLUMINATION UNITS SHALL BE CONNECTED TO THE LOCAL NORMAL LIGHTING CIRCUIT AHEAD OF ANY LOCAL SWITCHING. REFER TO N.E.C. SECTION 700-12(e) FOR INFORMATION.

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Kalamazoo, MI 49007
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CONSULTANTS

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BRADEN S. COX
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1	03/11/2022	ADDENDUM #1

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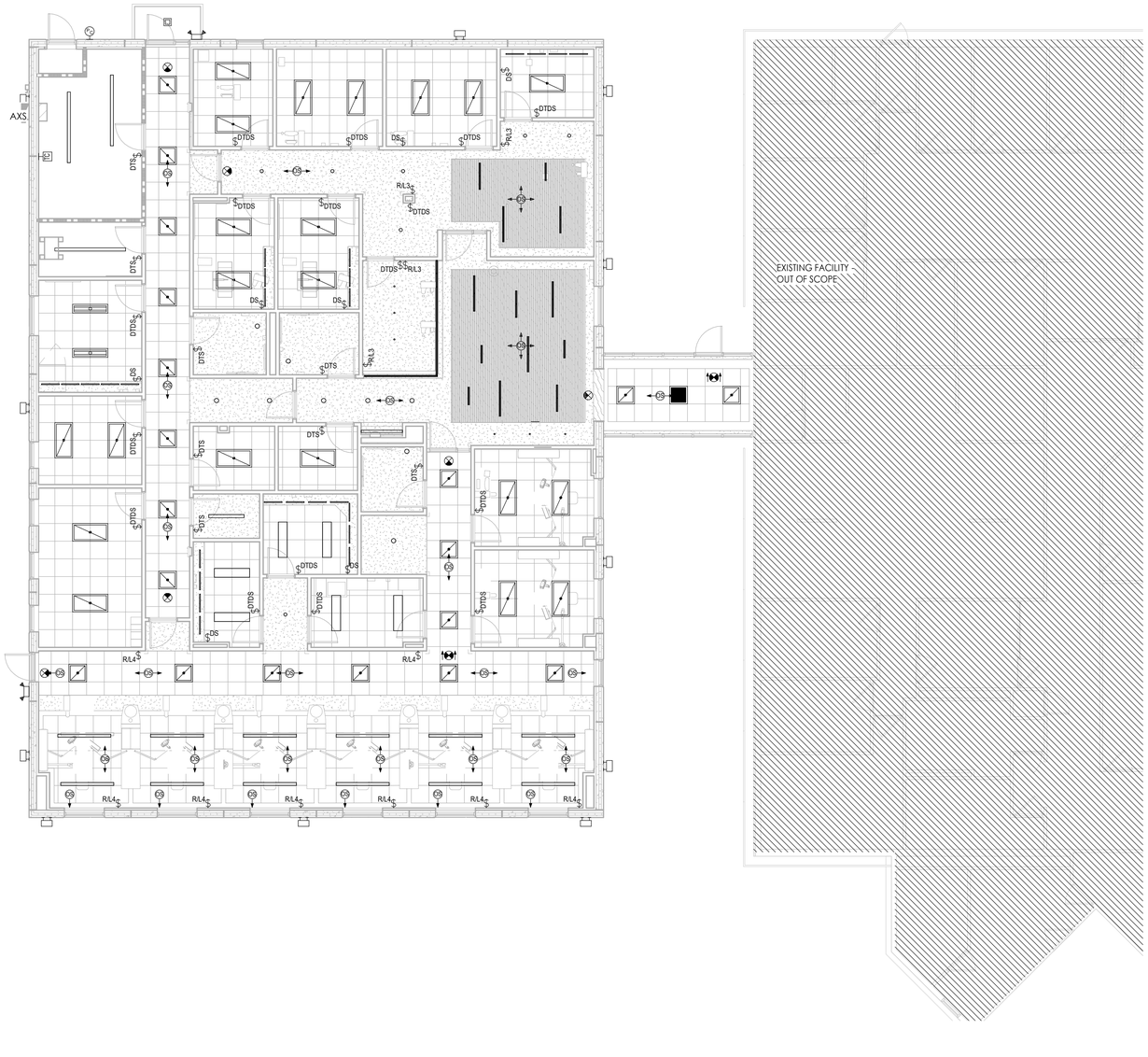
FIRST FLOOR LIGHTING PLAN

E101

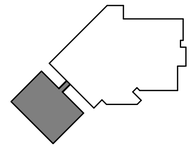
SHEET 84 OF 95



NORTH

FIRST FLOOR LIGHTING PLAN

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



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FIRST FLOOR LIGHTING LEVELS

E101a

SHEET 85 OF 95

KEYNOTES

1. HOMERUN CIRCUITRY ROUTED THROUGH LIGHTING CONTACTOR LC1.
2. HOMERUN CIRCUITRY ROUTED THROUGH LIGHTING CONTACTOR LC3.
3. PUMP POWER ROUTED THROUGH THE BOILER, FIELD VERIFY THE REQUIREMENTS WITH THE EQUIPMENT MANUFACTURER.
4. HOMERUN CIRCUITRY ROUTED THROUGH MOTOR STARTER MS2.
5. LIGHTING CONTACTORS LC1, LC2, LC3 AND TIMESWITCHES TS1 AND TS2 MOUNTED STACKED ON THE WALL NEXT TO THE PANEL.
6. MOTOR STARTERS MS1, MS2 AND MS3 MOUNTED STACKED ON THE WALL.
7. 3/4" CONDUIT FROM THE EXTERIOR HVAC UNIT TO THE INTERIOR HVAC UNIT FOR CONTROL AND POWER WIRING FOR THE INTERIOR UNIT.
8. JUNCTION BOX FOR POWER TO 3D X-RAY SYSTEM. FIELD VERIFY LOCATION AND CONNECTION REQUIREMENTS.
9. JUNCTION BOX FOR POWER TO STERILIZER. FIELD VERIFY LOCATION AND CONNECTION REQUIREMENTS.
10. HOMERUN CIRCUITRY ROUTED THROUGH MOTOR STARTER MS3.
11. JUNCTION BOX FOR THE POWER CONNECTION TO THE DATA RACK. FIELD VERIFY LOCATION AND CONNECTION REQUIREMENTS.
12. 3/4" CONDUIT FROM THE EXTERIOR CONDENSING UNIT TO THE INTERIOR AHU FOR CONTROL WIRING OF THE UNIT.
13. ROUTE #3 COPPER CONDUCTORS AND #8 GROUND THROUGH 1 1/4" CONDUIT FROM THE PANEL TO THE DISCONNECT SWITCH.
14. ROUTE #4 COPPER CONDUCTORS AND #8 GROUND THROUGH 1 1/4" CONDUIT FROM THE PANEL TO THE AHU.

E2 ADDENDUM #1.4

GENERAL POWER NOTES

A. WHERE CONNECTED TO A 20A, BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.

B. PROVIDE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED AND GRADE MOUNTED ELECTRICAL EQUIPMENT. MINIMUM REQUIREMENTS: 4" HIGH, 4% AIR ENTRAINED, POLYFIBER REINFORCED CONCRETE, 4" WIDER AND 4" LONGER THAN EQUIPMENT TO BE PLACED ON IT. REFER TO ELECTRICAL DETAIL DRAWINGS FOR TRANSFORMER, GENERATOR, OR SWITCHGEAR PADS THAT MAY EXCEED THESE REQUIREMENTS.

C. REFER TO SECTION 26 0519 FOR MINIMUM CONDUCTOR SIZE ADJUSTMENTS FOR VOLTAGE DROP.

D. WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.

E. CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.

F. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.

G. SINGLE PHASE BRANCH CIRCUITS SHALL NOT SHARE NEUTRALS.

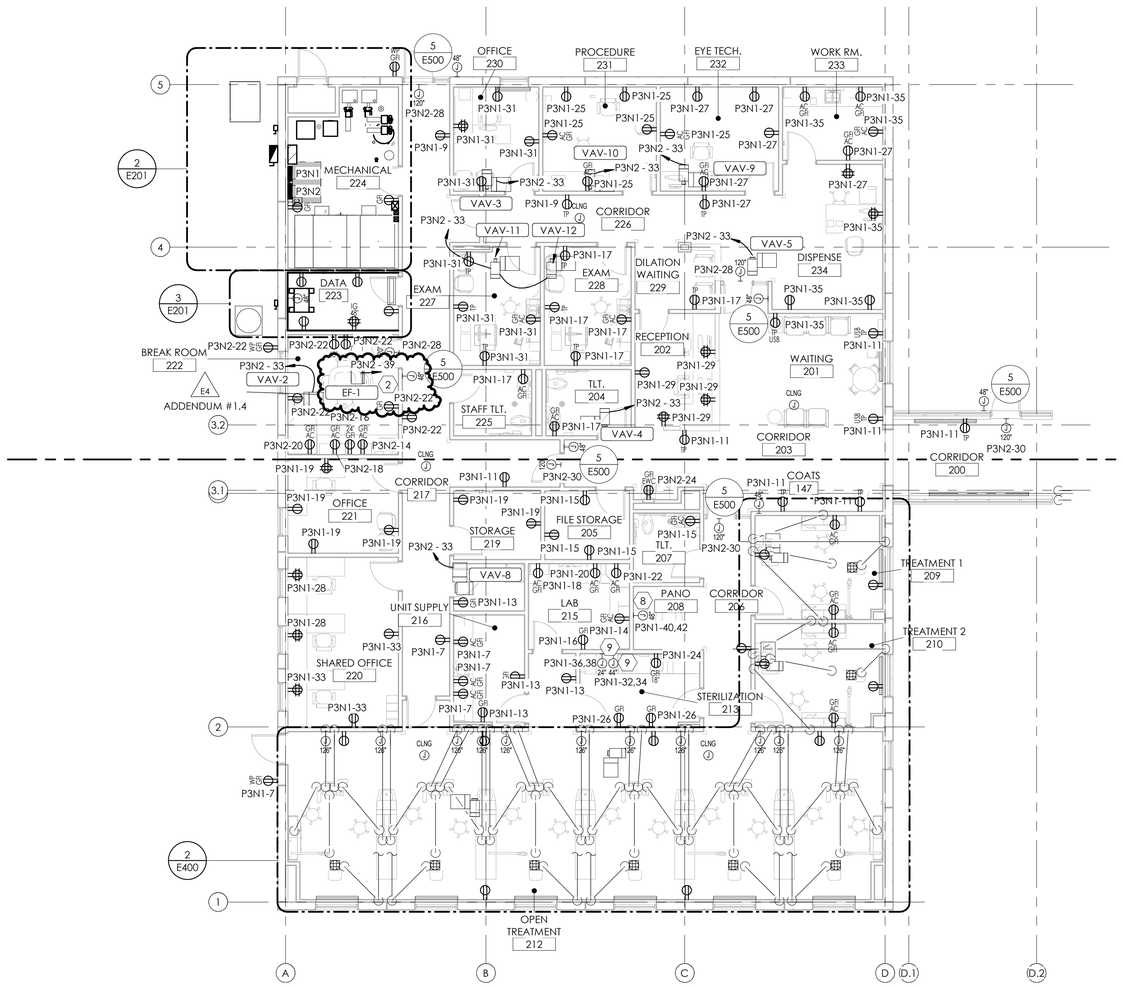
H. THE CONTRACTOR SHALL PROVIDE THE DATA CONDUITS, BOXES AS SHOWN AND THE DATA CABLING.

I. THE CONTRACTOR SHALL FIELD VERIFY THE ROUGH-IN DIMENSIONS OF ALL FLOOR BOXES, DATA OUTLETS, TV OUTLETS AND TV RECEPTACLES PRIOR TO ANY INSTALLATION. ANY CHANGE OF LOCATION OF A BOX THAT WAS NOT VERIFIED WITH THE OWNER PRIOR TO INSTALLATION SHALL BE RELOCATED, TO THE OWNER'S SATISFACTION, AT THE CONTRACTOR'S EXPENSE.

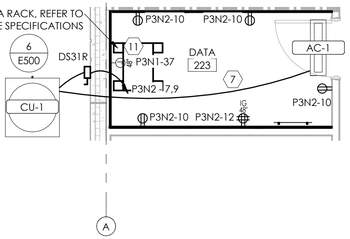
J. PROVIDE THE REQUIRED POWER FOR ALL MECHANICAL OR PLUMBING EQUIPMENT SPECIFIED IN THE CONTRACT DOCUMENTS, EVEN IF NOT SHOWN ON THE POWER PLANS.

K. THE CONTRACTOR SHALL FIELD VERIFY THE POWER REQUIREMENTS OF ALL MECHANICAL AND PLUMBING EQUIPMENT, WITH THE EQUIPMENT SUPPLIERS, PRIOR TO PREPARING SUBMITTALS OR ORDERING ANY SWITCHGEAR OR EQUIPMENT, SUPPLIED PLUMBING AND/OR MECHANICAL EQUIPMENT MAY VARY FROM EQUIPMENT SPECIFIED IN THE PLANS.

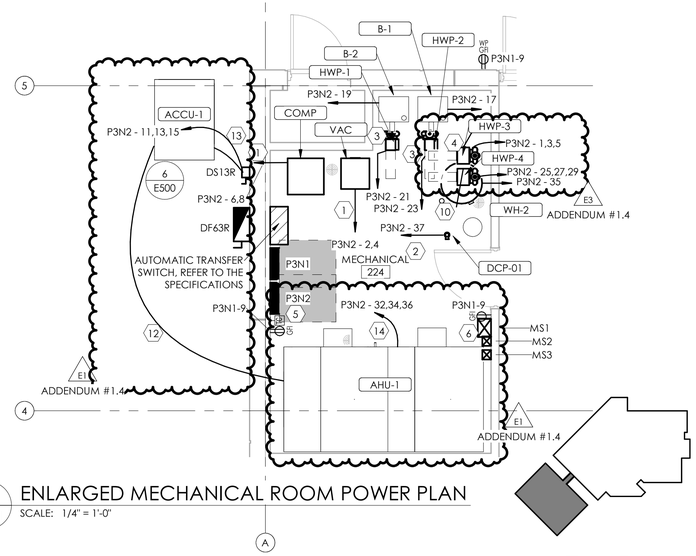
L. FOR EACH THERMOSTAT, TEMPERATURE SENSOR OR WALL MOUNTED HVAC CONTROL DEVICE PROVIDE A JUNCTION BOX, WITH A SINGLE GANG MUD RING, AT 48" ABOVE THE FINISH FLOOR WITH A ¾" CONDUIT (WITH A PULL STRING) TO ABOVE THE CEILING FOR THE HVAC CONTROLS. HVAC CONTROLS WIRING AND DEVICES INSTALLED BY MECHANICAL CONTROLS CONTRACTOR.



FIRST FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"



3 E201 ENLARGED DATA ROOM POWER PLAN
SCALE: 1/4" = 1'-0"



2 E201 ENLARGED MECHANICAL ROOM POWER PLAN
SCALE: 1/4" = 1'-0"

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www.7GenAE.com

CONSULTANTS

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414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 14014
BRADEN S. COX
SOUTH DAKOTA
11/04/22

FT. THOMPSON DENTAL & OPTOMETRY CLINIC

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FORT THOMPSON, SOUTH DAKOTA 57339

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2	06/27/2022	ADDENDUM #1.2
3	09/08/2022	ADDENDUM #1.3
4	10/27/2022	ADDENDUM #1.4

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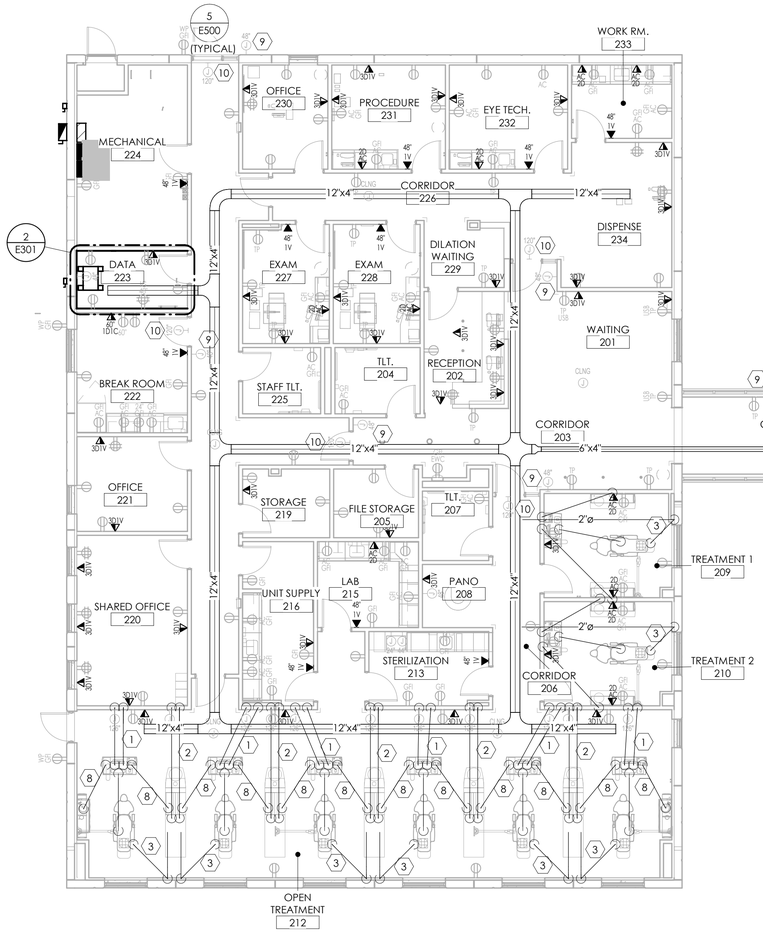
FIRST FLOOR POWER PLAN

E201
SHEET 86 OF 95



NORTH

FIRST FLOOR SYSTEMS PLAN

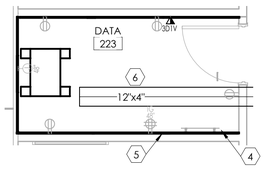
SCALE: 1/8" = 1'-0"

KEYNOTES

1	2" COMMUNICATIONS CONDUIT DOWN FROM THE CABLE TRAY TO BELOW THE FLOOR AND OVER AND UP TO 1" ABOVE THE FINISH FLOOR BELOW THE 12 O'CLOCK CABINET.
2	2" COMMUNICATIONS CONDUIT DOWN FROM THE CABLE TRAY TO BELOW THE FLOOR AND OVER AND UP TO 1" ABOVE THE FINISH FLOOR BELOW THE CENTRAL CONSOLE CABINET.
3	2" COMMUNICATIONS CONDUIT DOWN FROM THE CABLE TRAY TO BELOW THE FLOOR AND OVER AND UP TO 1" ABOVE THE FINISH FLOOR BELOW THE CHAIR.
4	TELECOM GROUNDING BUSBAR, MOUNTED AT 7'-0" ABOVE THE FINISH FLOOR ON THE 4'x8'x3/4" PAINTED FIRE TREATED PLYWOOD BACKBOARD. BUSBAR AND ALL LAN ROOM EQUIPMENT SHALL BE GROUNDED AND BONDED PER THE RECOMMENDATIONS OF BICSI AND ANSI/EIA/TIA-607 STANDARDS.
5	3/4" PAINTED PLYWOOD BACKBOARD MOUNTED WITH THE BOTTOM AT 6" ABOVE THE FINISH FLOOR ON EACH WALL.
6	PROVIDE 12" CABLE LADDER AT 8'-0" ABOVE THE FINISH FLOOR. USE MANUFACTURER'S RECOMMENDED SUPPORTS, BRACKETS, AND WATERFALLS.
7	2 - 2" CONDUITS, FOR COMMUNICATIONS CABLING, OVER FROM THE CABLE TRAY, DOWN IN THE WALL TO THE EXISTING CRAWL SPACE.
8	1-1/2" COMMUNICATIONS CONDUIT BELOW THE FLOOR TO 1" ABOVE THE FINISH FLOOR BELOW THE 12 O'CLOCK CABINET AND THE DIVIDING CABINET.
9	JUNCTION BOX FOR DOOR ACCESS CARD READER.
10	JUNCTION BOX ABOVE THE CEILING FOR DOOR ACCESS CONNECTIONS.

GENERAL SYSTEMS NOTES

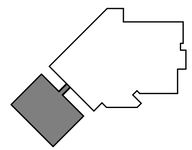
A	ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THE DRAWINGS.
B	ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CONDUIT, CABLE TRAY, OR SUPPORTED BY CABLE HOOKS. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUIT WHERE STUBBED ABOVE ACCESSIBLE CEILINGS OR WHERE DROPPED INTO CABLE TRAY. PROVIDE CABLE HOOKS ABOVE ACCESSIBLE CEILINGS FOR CABLE INSTALLATION WHERE NOT INSTALLED IN CONDUIT OR CABLE TRAY.
C	MAXIMUM NUMBER OF 4 INFORMATION OUTLET LOCATIONS PER CONDUIT HOME RUN TO MDF OR IDF IS PERMITTED. CONDUIT SHALL BE SIZED AS FOLLOWS
C1	1 INFORMATION OUTLET LOCATION: 1"
C2	2 INFORMATION OUTLET LOCATIONS:1 1/4"
C3	3 INFORMATION OUTLET LOCATIONS:1 1/2"



NORTH

ENLARGED DATA ROOM SYSTEMS PLAN

SCALE: 1/4" = 1'-0"



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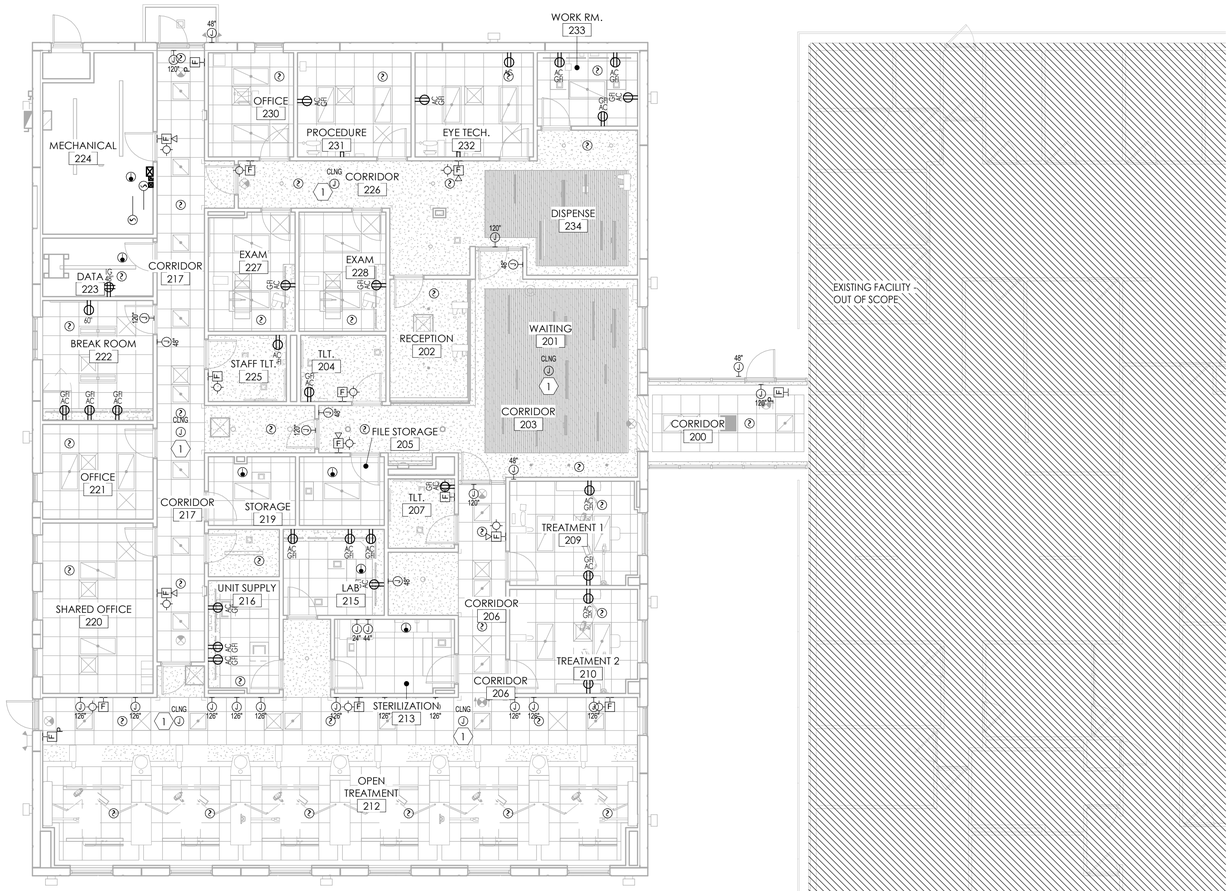
FIRST FLOOR SYSTEMS PLAN

E301

SHEET 87 OF 95



NORTH

FIRST FLOOR FIRE ALARM PLAN

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

KEYNOTES

1	JUNCTION BOX ABOVE THE CEILING FOR THE PA SPEAKER.

GENERAL FIRE ALARM NOTES

A. PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.

B. CONDUITS MAY PENETRATE WALLS OR PARTITIONS, PROVIDED THEY ARE FIRESTOPPED.

C. OPENINGS FOR STEEL ELECTRICAL BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED PROVIDED OPENINGS DO NOT AGGREGATE MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL OR PARTITION.

D. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES.

E. LIGHT FIXTURES AND OTHER APPARATUS SUPPORTED BY THE ACOUSTICAL CEILING GRID MUST MEET THE REQUIREMENTS OF NEC SECTION 410.16, MEANS OF SUPPORT.

F. RECESSED LIGHTING FIXTURES INSTALLED IN FIRE RATED CEILING ASSEMBLIES SHALL BE FIRE RATED FIXTURES BEARING THE UL FIRE RATED LABEL. FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE UL FIRE RESISTANCE DIRECTORY, AND SHALL INCLUDE A FIRE RATED ENCLOSURE INSTALLED OVER THE FIXTURE THAT MEETS THE REQUIREMENTS OF THE UL FIRE RESISTANCE DIRECTORY.

G. NEW FIRE ALARM DEVICES WILL BE INSTALLED AS NEEDED TO PROVIDE PROPER COVERAGE.

H. PROVIDE COMPLETE FIRE ALARM SYSTEM IN ACCORDANCE TO NFPA 72. NEW FIRE ALARM DEVICES CONNECTED TO THE EXISTING FIRE ALARM CONTROL PANEL LOCATED IN THE EXISTING BUILDING.

I. THE DRAWINGS ARE CONCEPTUAL IN NATURE. THEY DO NOT SHOW THE EXACT LOCATIONS OF COMPONENTS NOR SHOW ALL SYSTEM COMPONENTS. CONTRACTOR SHALL MODIFY DEVICE LOCATIONS AND PROVIDE ADDITIONAL COMPONENTS AS NECESSARY FOR A CODE COMPLIANT AND FULLY FUNCTIONAL SYSTEM.

J. CONTRACTORS SHALL BE RESPONSIBLE TO ENSURE FIRE ALARM SYSTEM PRIORITIES ARE PROGRAMMED IN ACCORDANCE TO NFPA 72.

L. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION TO AVOID CONFLICT DURING CONSTRUCTION.

M. CLASS B PATHWAYS FOR ADDRESSABLE DETECTION, NOTIFICATION, AND SIGNALING CIRCUITS MEET ALL MINIMUM/NECESSARY AHJ PERFORMANCE REQUIREMENTS. CLASS C, D, AND E PATHWAYS ARE NOT APPROVED FOR USE.

N. PROVIDE SEPARATE ADDRESSES FOR EACH INITIATING DEVICE.

O. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN RACEWAY SEPARATE FROM ALL OTHER SYSTEMS. FIRE ALARM CONDUIT AND JUNCTION BOXES SHALL BE RED.

P. ALL FIRE ALARM CIRCUITS SHALL BE TERMINATED AT DEVICE LUGS ONLY. SPLICING THE FIRE ALARM CIRCUIT WILL NOT BE ALLOWED UNLESS THE SPLICE IS VIA TERMINAL STRIPS LOCATED WITHIN A TERMINAL CABINET. T-TAPS SHALL NOT BE USED. USE OF WIRE NUTS, CRIMPED CONNECTORS, OR TWISTING OF CONDUCTORS IS PROHIBITED.

Q. WALL MOUNTED NOTIFICATION APPLIANCES SHALL BE INSTALLED BETWEEN 80 IN. AND 96 IN. ABOVE THE FINISHED FLOOR OR 6 IN. BELOW THE CEILING, WHICHEVER IS LOWER.

R. VISUAL NOTIFICATION APPLIANCES SHALL BE LOCATED IN ALL PUBLIC SPACES INCLUDING BUT NOT LIMITED TO RESTROOMS, MEETING ROOMS, CORRIDORS, LOUNGES AND WAITING AREAS. THE NOTIFICATION APPLIANCES SHALL BE SYNCHRONIZED WHEN IN THE SAME FIELD OF VIEW WITH A FLASH RATE BETWEEN 1 HZ AND 2 HZ.

S. VISUAL NOTIFICATION APPLIANCE INTENSITY SHALL BE A MINIMUM OF 75 CD. VISUAL NOTIFICATION WITHIN BATHROOMS SHALL BE 15 CD.

T. MANUAL FIRE ALARM STATIONS SHALL BE LOCATED WITHIN 5FT OF EACH EXIT AND IN ADDITIONAL LOCATIONS SUCH THAT THE TRAVEL DISTANCE TO PULL STATIONS DOES NOT EXCEED 200FT.

U. ALL WIRING, CABLES, BOXES, TROUGHS AND OTHER RELATED EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).

V. PERFORM TESTING IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, APPLICABLE CODES AND STANDARDS.

W. THE FIRE ALARM SYSTEM IS TO REPORT ON THE EXISTING MFR MONITORING EQUIPMENT. CONTRACTOR TO PROVIDE ALL PROGRAMMING TO MATCH EXISTING POINT REPORTING.

X. PLANNED OUTAGES FOR FIRE ALARM SHALL NOT EXCEED 8 HOURS WITHOUT FIRE WATCH

Y. ALL SPEAKERS TO BE TAPPED AT 1/2 WATT UNLESS NOTED OTHERWISE.

GENERAL SECURITY NOTES

A. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THE DRAWINGS.

B. INSTALL CONDUIT WITH NO MORE THAN (2) 90° BENDS BETWEEN PULL BOXES, AND NO MORE THAN 100'-0" BETWEEN PULL BOXES. PULL BOXES SHALL BE INSTALLED FOR STRAIGHT THRU PULLS ONLY.

C. ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CONDUIT, CABLE TRAY, OR SUPPORTED BY CABLE HOOKS. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUIT WHERE STUBBED ABOVE ACCESSIBLE CEILINGS OR WHERE DROPPED INTO CABLE TRAY. PROVIDE CABLE HOOKS ABOVE ACCESSIBLE CEILINGS FOR CABLE INSTALLATION WHERE NOT INSTALLED IN CONDUIT OR CABLE TRAY.

GENERAL SYSTEMS NOTES

A. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THE DRAWINGS.

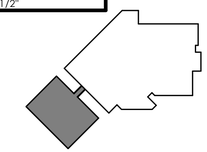
B. ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CONDUIT, CABLE TRAY, OR SUPPORTED BY CABLE HOOKS. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUIT WHERE STUBBED ABOVE ACCESSIBLE CEILINGS OR WHERE DROPPED INTO CABLE TRAY. PROVIDE CABLE HOOKS ABOVE ACCESSIBLE CEILINGS FOR CABLE INSTALLATION WHERE NOT INSTALLED IN CONDUIT OR CABLE TRAY.

C. MAXIMUM NUMBER OF 4 INFORMATION OUTLET LOCATIONS PER CONDUIT HOME RUN TO MDF OR IDF IS PERMITTED. CONDUIT SHALL BE SIZED AS FOLLOWS

C1 1 INFORMATION OUTLET LOCATION: 1"

C2 2 INFORMATION OUTLET LOCATIONS: 1 1/4"

C3 3 INFORMATION OUTLET LOCATIONS: 1 1/2"



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IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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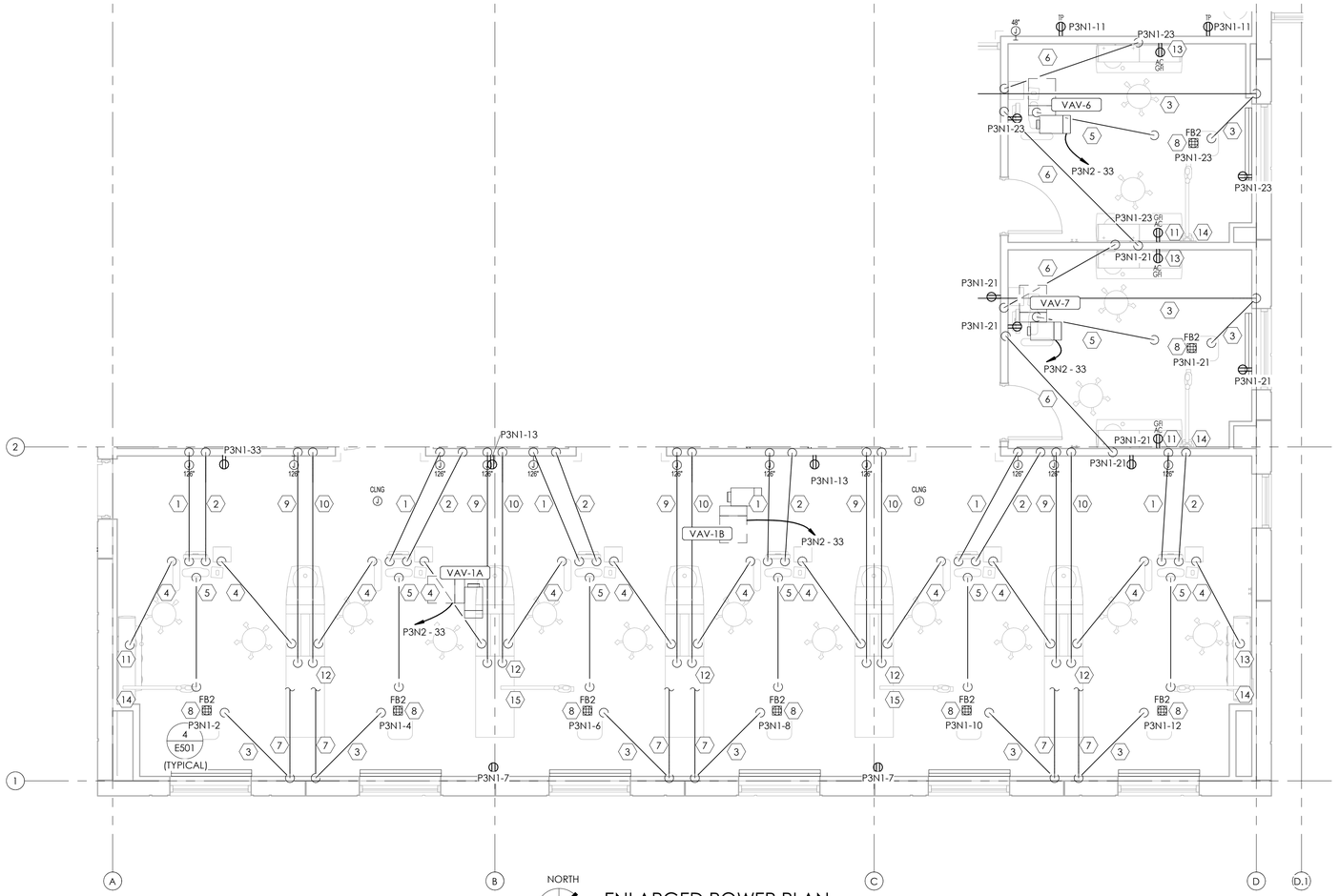
SHEET TITLE:

FIRST FLOOR FIRE ALARM PLAN

E401

SHEET 88 OF 95



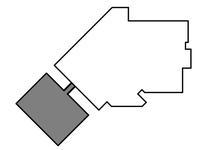
NORTH

ENLARGED POWER PLAN

SCALE: 1/4" = 1'-0"

KEYNOTES

1	POWER CONDUIT DOWN FROM THE JUNCTION BOX TO BELOW THE FLOOR, OVER AND UP TO 1" ABOVE THE FINISH FLOOR BELOW THE 12 O'CLOCK CABINET, TRANSITION TO 3'-0" FLEXIBLE CONDUIT TO CONNECT TO DENTAL EQUIPMENT.
2	2" COMMUNICATIONS CONDUIT DOWN FROM THE CABLE TRAY TO BELOW THE FLOOR AND OVER AND UP TO 1" ABOVE THE FINISH FLOOR BELOW THE 12 O'CLOCK CABINET.
3	2" COMMUNICATIONS CONDUIT DOWN FROM THE CABLE TRAY TO BELOW THE FLOOR AND OVER AND UP TO 1" ABOVE THE FINISH FLOOR BELOW THE CHAIR.
4	PROVIDE LOW VOLTAGE CABLES IN 2" COMMUNICATIONS CONDUIT BETWEEN THE REAR TREATMENT CONSOLE AND THE SIDE/CENTRAL CONSOLE.
5	PROVIDE LOW VOLTAGE CABLES IN 2" COMMUNICATIONS CONDUIT BETWEEN THE REAR TREATMENT CONSOLE AND THE DENTAL CHAIR.
6	2" COMMUNICATIONS CONDUIT DOWN FROM THE CEILING SPACE TO BELOW THE FLOOR AND OVER AND UP TO 1" ABOVE THE FINISH FLOOR BELOW THE 12 O'CLOCK CABINET, TRANSITION TO 3'-0" FLEXIBLE CONDUIT TO CONNECT TO DENTAL EQUIPMENT.
7	COMMUNICATIONS CONDUIT CONTINUES TO THE CABLE TRAY, NOT SHOWN FOR CLARITY ONLY.
8	FLOOR MOUNTED RECEPTACLE BELOW THE CHAIR, COORDINATE THE LOCATION WITH THE EQUIPMENT SUPPLIER.
9	POWER CONDUIT DOWN FROM THE JUNCTION BOX TO BELOW THE FLOOR, OVER AND UP TO 1" ABOVE THE FINISH FLOOR BELOW THE CENTRAL CONSOLE CABINET, TRANSITION TO 3'-0" FLEXIBLE CONDUIT TO CONNECT TO DENTAL EQUIPMENT MAINS POWER LOCATED IN THE CABINET BASE.
10	2" COMMUNICATIONS CONDUIT DOWN FROM THE CABLE TRAY TO BELOW THE FLOOR AND OVER AND UP TO 1" ABOVE THE FINISH FLOOR BELOW THE CENTRAL CONSOLE CABINET.
11	WALL MOUNTED DENTAL LIGHT FIXTURE. CONNECTED TO MANUFACTURER SUPPLIED POWER SUPPLY INSIDE THE SIDE CONSOLE DENTAL CABINET. REFER TO THE MANUFACTURER FOR INSTALLATION DETAILS. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL PLAN.
12	CABINET MOUNTED DENTAL LIGHT FIXTURE. CONNECTED TO MANUFACTURER SUPPLIED POWER SUPPLY INSIDE THE SIDE CONSOLE DENTAL CABINET. REFER TO THE MANUFACTURER FOR INSTALLATION DETAILS. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL PLAN.
13	WALL MOUNTED MONITOR MOUNT. ROUTE POWER CABLES THROUGH THE MONITOR ARM AND INSIDE OF THE FULL CONSOLE DENTAL FIXTURE TO MANUFACTURER SUPPLIED RECEPTACLE. REFER TO THE MANUFACTURER FOR INSTALLATION DETAILS. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL PLAN.
14	WALL MOUNTED X-RAY FIXTURE. ROUTE X-RAY POWER CABLES INTERNALLY THROUGH THE SIDE CONSOLE THROUGH THE SUPPORT COLUMN/X-RAY MODULE. FIELD VERIFY ROUTE AND REQUIREMENTS.
15	CABINET MOUNTED X-RAY FIXTURE. ROUTE X-RAY POWER CABLES INTERNALLY THROUGH THE CENTRAL CONSOLE THROUGH THE SUPPORT COLUMN/X-RAY MODULE. FIELD VERIFY ROUTE AND REQUIREMENTS.



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IHS 1323 BIA ROUTE 4
FORT THOMPSON, SOUTH DAKOTA 57339

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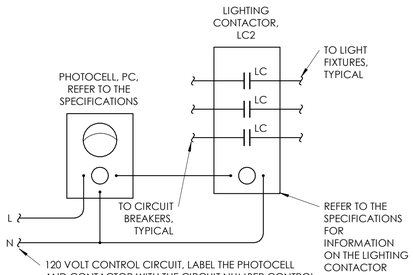
ELECTRICAL ENLARGED PLANS

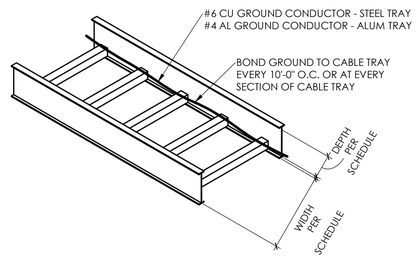
E400

SHEET 89 OF 95



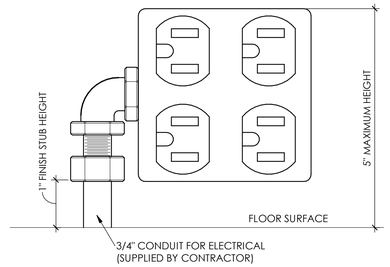
SEQUENCE OF OPERATION:
1. THE PHOTOCELL SWITCH WILL PROVIDE THE AUTOMATIC "ON" AT DUSK AND "OFF" AT DAWN.
2. LOCATE THE CONTACTOR AND PHOTOCELL PER THE PLANS.

6 E501 EXTERIOR LIGHTING CONTROL DETAIL
SCALE: NTS

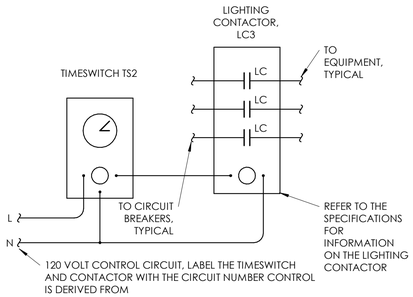


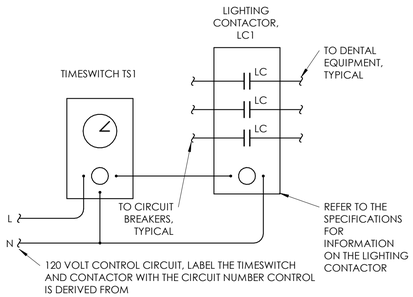
5 E501 TELECOMMUNICATION CABLE TRAY DETAIL
SCALE: NTS

NOTE: COORDINATE THE FINAL LOCATION OF THE BOX WITH THE EQUIPMENT SUPPLIER.



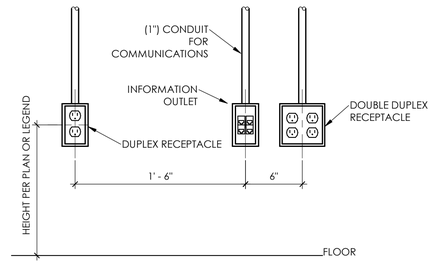
4 E501 CHAIR RECEPTACLE DETAIL
SCALE: NTS



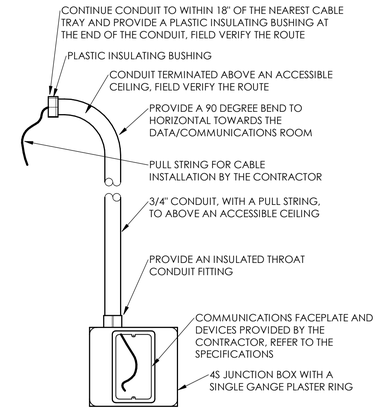


SEQUENCE OF OPERATION:
1. TIME SWITCH WILL PROVIDE AUTOMATIC "ON" AND "OFF" CONTROL OF DENTAL EQUIPMENT.
2. INITIALLY THE TIME SWITCH SHALL BE SET TO TURN "ON" (CLOSE CONTACT) AT 7:00 AM AND TURN "OFF" (OPEN CONTACT) AT 5:30 PM. THESE SETTINGS SHALL BE ADJUSTED AS DIRECTED BY LOCAL USERS OF FACILITY.
4. LOCATE THE TIMESWITCH AND CONTACTOR PER THE PLANS.

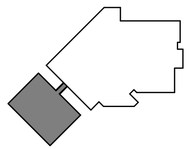
3 E501 EQUIPMENT CONTROL DETAIL
SCALE: NTS



2 E501 TYPICAL OUTLET INSTALLATION DETAIL
SCALE: NTS



1 E501 COMMUNICATIONS/DATA/TV BOX DETAIL
SCALE: NTS



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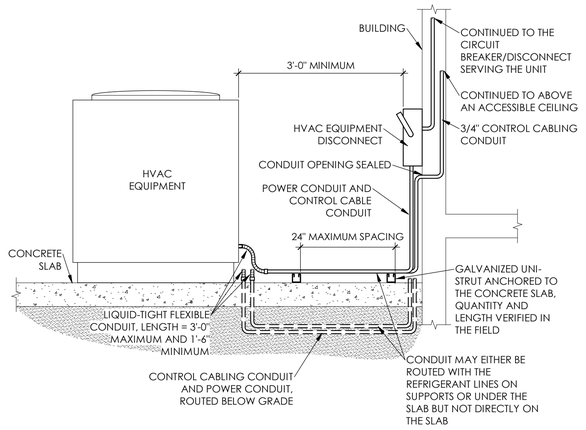
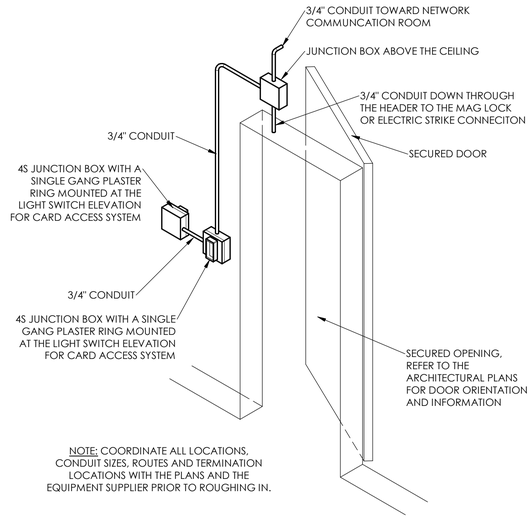
E501
SHEET 90 OF 95

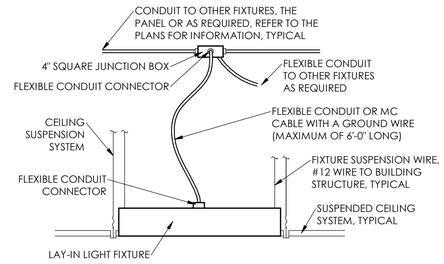


6 E500 GROUNDING DETAIL
SCALE: NTS

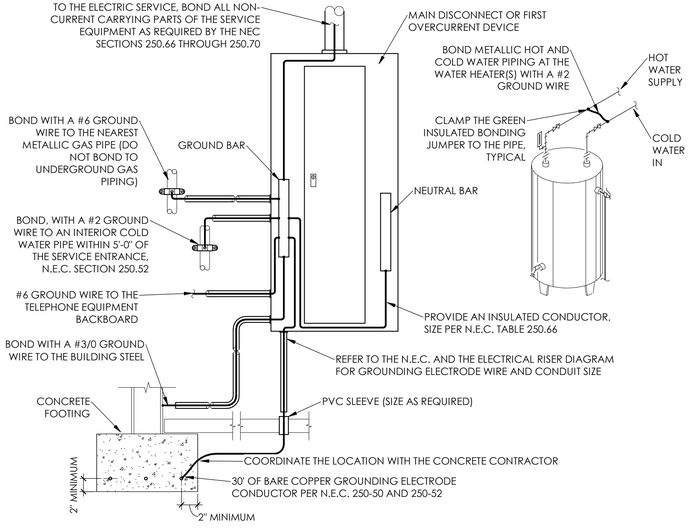


NOTE: COORDINATE ALL LOCATIONS, CONDUIT SIZES, ROUTES AND TERMINATION LOCATIONS WITH THE PLANS AND THE EQUIPMENT SUPPLIER PRIOR TO ROUGHING IN.

5 E500 DOOR ACCESS DETAIL
SCALE: NTS



4 E500 HEALTHCARE - ROOM LIGHTING CONTROL
SCALE: NTS

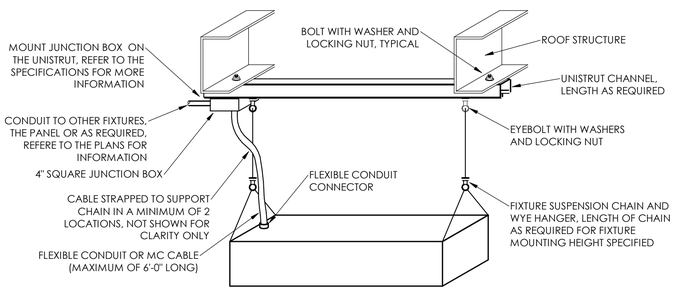


3 E500 GROUNDING DETAIL
SCALE: NTS

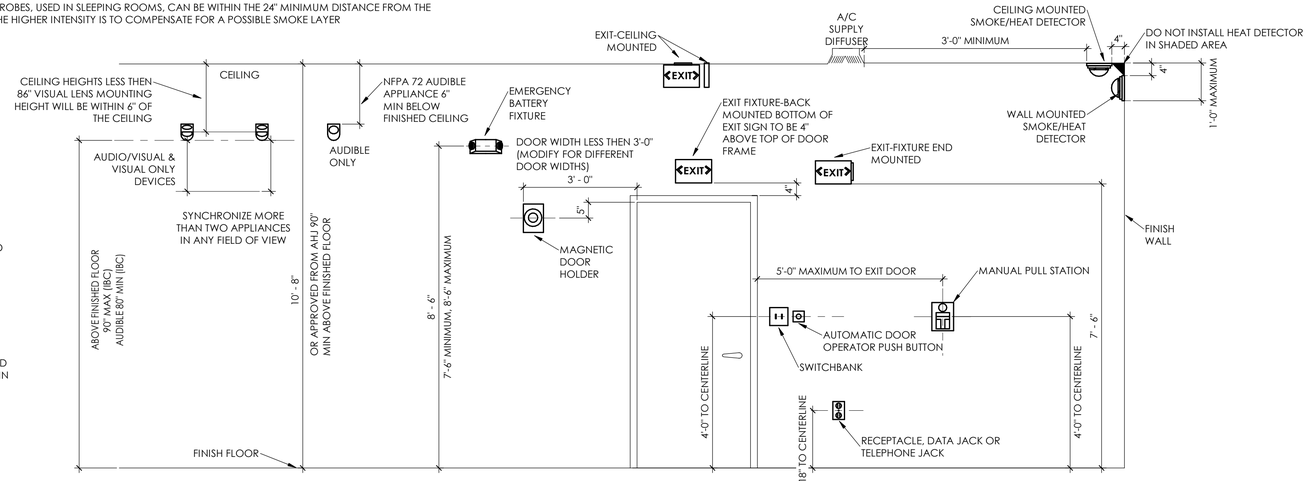
VISUAL MOUNTING APPLIANCE MOUNTING HEIGHT IN SLEEPING ROOMS NOTES:

1. MINIMUM DISTANCE IN SLEEPING ROOMS IS 24" FROM CEILING TO THE TOP OF LENS FOR 110cd STROBES WITHIN 16' OF PILLOW

2. 177cd STROBES, USED IN SLEEPING ROOMS, CAN BE WITHIN THE 24" MINIMUM DISTANCE FROM THE CEILING, THE HIGHER INTENSITY IS TO COMPENSATE FOR A POSSIBLE SMOKE LAYER



2 E500 SUSPENDED LIGHT FIXTURE DETAIL
SCALE: NTS



1 E500 TYPICAL MOUNTING HEIGHTS
SCALE: NTS

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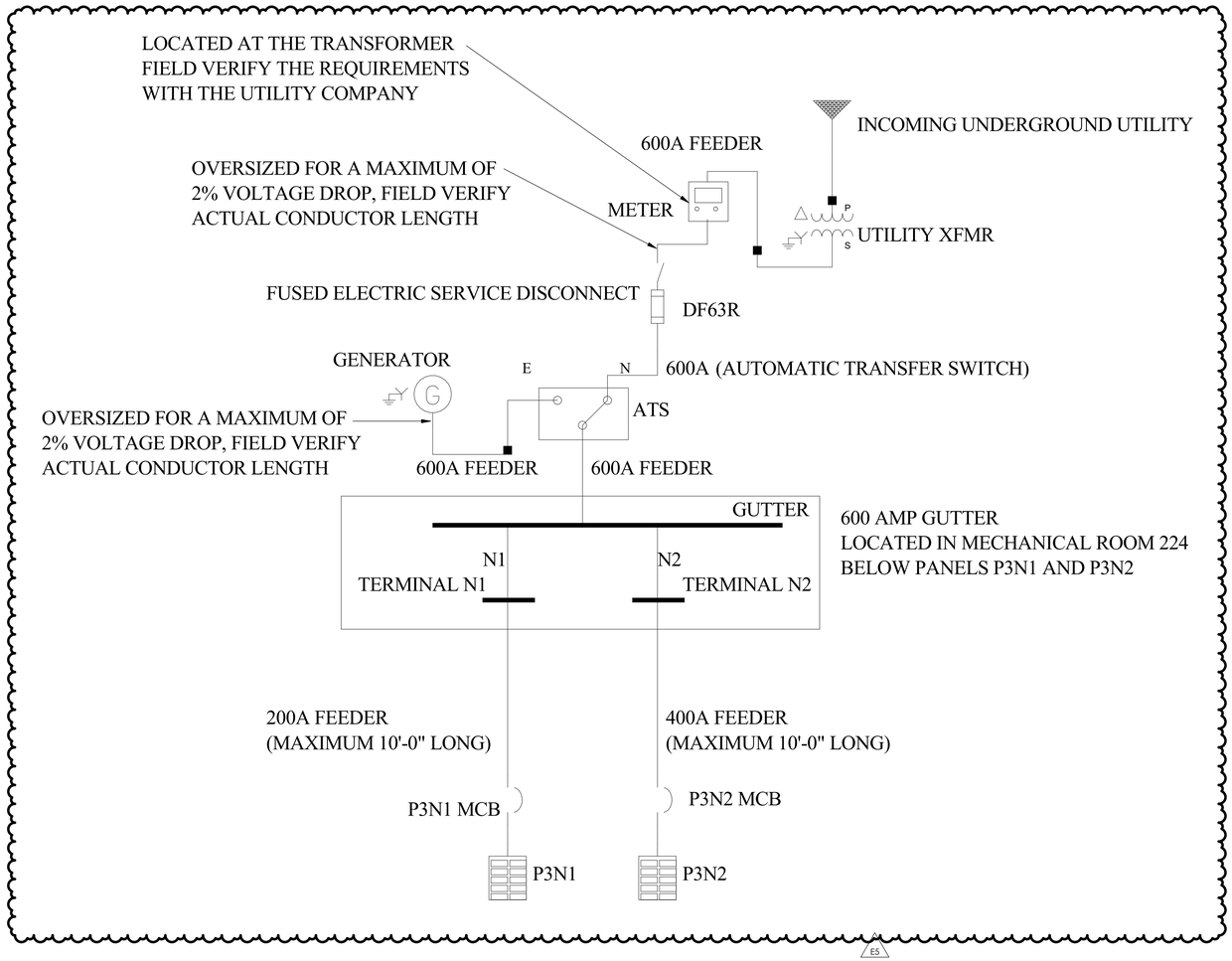
SHEET 91 OF 95



E5
ADDENDUM #1.4

GENERAL SINGLE LINE NOTES

A. OVERCURRENT DEVICES OF ENTIRE DISTRIBUTION SYSTEM SHALL MEET STATED FAULT CURRENT VALUES WITH FULLY RATED EQUIPMENT.

B. CONDUCTOR LENGTHS INDICATED ON THE SINGLE LINE DIAGRAM ARE FOR FAULT CURRENT CALCULATIONS ONLY. ACTUAL LENGTH SHALL BE DETERMINED BY FIELD CONDITIONS AND ACTUAL ROUTES OF FEEDERS.

C. REFER TO SWITCHBOARD SCHEDULES AND DISTRIBUTION PANEL SCHEDULES FOR ADDITIONAL REQUIREMENTS. WHERE A DISCREPANCY EXISTS BETWEEN EQUIPMENT ON THE SINGLE LINE DIAGRAM AND THE DETAILED SCHEDULES, THE ITEM OR ARRANGEMENT WITH BETTER QUALITY, GREATER QUANTITY, OR HIGHER COST SHALL BE USED.

D. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

E. REFER TO THE MOTOR AND SPECIAL CONNECTION SCHEDULE FOR ALL FEEDERS DESIGNATED "EQ".

F. GROUNDING ELECTRODE CONDUCTORS SIZES ARE NOT INDICATED ON THE SINGLE LINE DIAGRAM ARE. REFER TO THE GROUNDING RISER DIAGRAM FOR CONNECTIONS AND CONDUCTOR SIZES.

CONDUIT AND WIRE SCHEDULE

FEEDER TYPE	COPPER CONDUCTORS		CONDUIT SIZE			
	Ø & N	GND	2Ø+N+GND	3Ø+GND	3Ø+N+GND	3Ø+2N+2GND
20	#12	#12	16 (1/2")	16 (1/2")	16 (1/2")	21 (3/4")
30	#10	#10	16 (1/2")	16 (1/2")	21 (3/4")	21 (3/4")
40	#8	#10	21 (3/4")	21 (3/4")	27 (1")	27 (1")
55	#6	#10	27 (1")	27 (1")	27 (1")	27 (1")
70	#4	#8	35 (1 1/4")	35 (1 1/4")	35 (1 1/4")	35 (1 1/4")
85	#3	#8	35 (1 1/4")	35 (1 1/4")	35 (1 1/4")	41 (1 1/2")
95	#2	#8	35 (1 1/4")	35 (1 1/4")	41 (1 1/2")	41 (1 1/2")
110	#1	#6	41 (1 1/2")	41 (1 1/2")	41 (1 1/2")	53 (2")
150	#1/0	#6	41 (1 1/2")	41 (1 1/2")	53 (2")	53 (2")
175	#2/0	#6	53 (2")	53 (2")	53 (2")	63 (2 1/2")
200	#3/0	#6	53 (2")	53 (2")	53 (2")	63 (2 1/2")
230	#4/0	#4	53 (2")	53 (2")	63 (2 1/2")	63 (2 1/2")
255	250 kCM	#4	63 (2 1/2")	63 (2 1/2")	63 (2 1/2")	78 (3")
285	300 kCM	#4	63 (2 1/2")	78 (3")	78 (3")	78 (3")
310	350 kCM	#3	78 (3")	78 (3")	78 (3")	91 (3 1/2")
335	400 kCM	#3	78 (3")	78 (3")	78 (3")	91 (3 1/2")
380	500 kCM	#3	78 (3")	78 (3")	91 (3 1/2")	103 (4")
510	(2) 250 kCM	(2) #1	(2) 63 (2 1/2")	(2) 63 (2 1/2")	(2) 78 (3")	(2) 78 (3")
570	(2) 300 kCM	(2) #1	(2) 63 (2 1/2")	(2) 63 (2 1/2")	(2) 78 (3")	(2) 91 (3 1/2")
620	(2) 350 kCM	(2) #1	(2) 78 (3")	(2) 78 (3")	(2) 78 (3")	(2) 91 (3 1/2")
760	(2) 500 kCM	(2) #1/0	(2) 78 (3")	(2) 78 (3")	(2) 91 (3 1/2")	(2) 103 (4")
1005	(3) 400 kCM	(3) #2/0	(3) 78 (3")	(3) 78 (3")	(3) 78 (3")	(3) 91 (3 1/2")
1240	(4) 350 kCM	(4) #3/0	(4) 78 (3")	(4) 78 (3")	(4) 78 (3")	(4) 91 (3 1/2")
1260	(3) 600 kCM	(3) #3/0	(3) 91 (3 1/2")	(3) 91 (3 1/2")	(3) 103 (4")	(3) 129 (5")
1675	(5) 400 kCM	(5) #4/0	(5) 78 (3")	(5) 78 (3")	(5) 91 (3 1/2")	(5) 103 (4")
1680	(4) 600 kCM	(4) #4/0	(4) 91 (3 1/2")	(4) 91 (3 1/2")	(4) 103 (4")	(4) 129 (5")
2010	(6) 400 kCM	(6) 250 kCM	(6) 78 (3")	(6) 78 (3")	(6) 91 (3 1/2")	(6) 103 (4")
2100	(5) 600 kCM	(5) 250 kCM	(5) 91 (3 1/2")	(5) 91 (3 1/2")	(5) 103 (4")	(5) 129 (5")
2520	(6) 600 kCM	(6) 350 kCM	(6) 91 (3 1/2")	(6) 91 (3 1/2")	(6) 103 (4")	(6) 129 (5")
2660	(7) 500 kCM	(7) 350 kCM	(7) 91 (3 1/2")	(7) 91 (3 1/2")	(7) 91 (3 1/2")	(7) 129 (5")
3040	(8) 500 kCM	(8) 400 kCM	(8) 91 (3 1/2")	(8) 91 (3 1/2")	(8) 91 (3 1/2")	(8) 129 (5")
4275	(8) 750 kCM	(8) 500 kCM	(8) 103 (4")	(8) 103 (4")	(8) 129 (5")	(8) 129 (5")
EQ	EQUIPMENT FEEDER - REFER TO ELECTRICAL EQUIPMENT SCHEDULE					

200 - 4 - 1G FEEDER DESIGNATION

GROUND CONDUCTORS:
(0) - NO GROUND
(1G) - EQUIPMENT GND OR ISOLATED GND
(2G) - EQUIPMENT GND AND ISOLATED GND
SYSTEM DESCRIPTION:
(3) - 1Ø, 3W OR 3Ø, 3W
(4) - 3Ø, 4W
(5) - 3Ø, 5W (2 NEUTRALS)
CONDUCTOR AMPACITY:
(SEE FEEDER SCHEDULE)

GENERAL NOTES:

A. THE ABOVE FEEDER SCHEDULE IS A SCHEDULE OF TYPICAL FEEDERS AND SOME SIZES MAY NOT BE UTILIZED.
B. ALL CONDUCTOR AMPACITIES ARE BASED ON TABLE 310-15(b)(16) OF THE NEC FOR COPPER CONDUCTOR TYPE THW/THWN.
C. FEEDER SIZES SHOWN ON THE RISER DIAGRAM INDICATE FEEDER AMPACITIES AND DO NOT NECESSARILY CORRESPOND TO CIRCUIT BREAKER AMPACITIES. CERTAIN FEEDERS MAY BE SIZED FOR THE DERATION FACTORS REQUIRED BY CODE AND/OR ARE OVERSIZED FOR VOLTAGE DROP.
D. WHERE MULTIPLE CONDUITS AND CONDUCTORS ARE INDICATED FOR A SINGLE FEEDER, EACH CONDUIT SHALL CONTAIN 1 PARALLEL PHASE, NEUTRAL, AND GROUND CONDUCTORS INDICATED.
E. CONDUIT ABOVE GRADE INDOORS SHALL BE EMT. CONDUIT ABOVE GRADE OUTDOORS SHALL BE GALVANIZED IMC OR RMC. CONDUIT BELOW GRADE SHALL BE PVC WITH GALVANIZED RMC ELBOWS. CONDUIT SIZE INDICATED IS MINIMUM SIZE REGARDLESS OF CONDUIT TYPE.
F. CONDUITS SIZED LARGER THAN INDICATED SHALL BE PERMITTED FOR RUNS WITH UP TO (4) 90° ELBOWS, OR FOR PULLING LONGER RUNS.

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING CO
259 E Michigan Ave
Kalamazoo, MI 49007
www.steelheadengineeringco.com

NEHIL·SIVAK STRUCTURAL ENGINEERS
414 S Burdick St #300
Kalamazoo, MI 49007
www.nehilsivak.com

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FORT THOMPSON, SOUTH DAKOTA 57339

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GREAT PLAINS AREA

REVIEWED:
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ES BRANCH CHIEF DATE

CONCURRENCE
AGENCY REPRESENTATIVE DATE
TITLE

REV	DATE	DESCRIPTION
4	10/27/2022	ADDENDUM #1.4

ISSUE DATE: NOVEMBER 4, 2022
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ELECTRICAL ONE-LINE DIAGRAMS

E520

SHEET 92 OF 95

DISCONNECT SCHEDULE

E6 ADDENDUM #1.4

MARK	MANUFACTURER	SWITCH DUTY	AMP RATING	VOLTAGE	PHASE	POLES	FUSE INFO. AMP	FUSE INFO. TYPE	ENCLOSURE	NOTES
DS13R	SQUARE D	GENERAL	100 A	208 V	3	3	0 A	-	NEMA 3R	
DF63R	SQUARE D	GENERAL	600 A	208 V	3	3	600 A	LPN-RK_SP	NEMA 3R	
DS31R	SQUARE D	GENERAL	30 A	208 V	1	2	0 A	-	NEMA 3R	

SCHEDULE NOTES:

1. ELECTRIC SERVICE RATED DISCONNECT.

CABLE TRAY SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	WIDTH	HEIGHT	NOTES
6"x4"	6"x4" PRE-GALVANIZED WIRE CABLE TRAY	HUBBELL	HBT	6"	4"	1, 2
12"x4"	6"x4" PRE-GALVANIZED WIRE CABLE TRAY	HUBBELL	HBT	12"	4"	1, 2

SCHEDULE NOTES:

1. FACTORY FABRICATED FITTINGS
2. ANGLE WALL BRACKETS AND T-HANGER SUPPORTS.

LIGHTING CONTROL DEVICE SCHEDULE

MARK	DESCRIPTION - TYPE	MANUFACTURER	MODEL NO.	NOTES
D180	PIR & ULTRASONIC, 180 DEG., 500 SQ. FT., OCCUPANCY SENSOR	HUBBELL	NXOS-OMDT5R	1
D360	PIR & ULTRASONIC, 360 DEG., 2000 SQ. FT., OCCUPANCY SENSOR	HUBBELL	NXOS-OMDT2R	1
DAY	NX DAYLIGHT SENSOR	HUBBELL	NXDS	1
DS	4-BUTTON (ON, OFF, RAISE, LOWER) 0-10 VOLT, WALL MOUNTED, 0-10 VOLT, STAND ALONE DIMMER SWITCH	HUBBELL	LVSD-ML-4-WH	--
DTDS	DUAL-TECHNOLOGY, WALL SWITCH SENSOR, SINGLE CIRCUIT, TWO BUTTONS, 1000 SQ. FT. SENSOR	HUBBELL	LVSD-M-3-WH	1
DTS	MULTI-TECHNOLOGY, WALL SWITCH, SINGLE CIRCUIT, ONE BUTTON, 1000 SQ. FT. SENSOR WITH PHOTOCELL	HUBBELL	LHMTS1-N-WH	--
RL3	4-BUTTON (ON, OFF, RAISE, LOWER) 0-10 VOLT, WALL MOUNTED, 0-10 VOLT, STAND ALONE DIMMER SWITCH	HUBBELL	LVSD-M-3-WH	1
RL4	4-BUTTON (ON, OFF, RAISE, LOWER) 0-10 VOLT, WALL MOUNTED, 0-10 VOLT, STAND ALONE DIMMER SWITCH	HUBBELL	NXSW-ORLO-WH	1

GENERAL NOTES:

A. PROVIDE A HUBBELL BLUE TOOTH RADIO CONTROLLER MODEL NXBTC FOR PROGRAMMING AND COMMISSIONING OF THE SYSTEM. CONTROLLER SHALL BE TURNED OVER TO THE OWNER FOLLOWING PROGRAMMING.

B. PROVIDE COMMUNICATIONS CABLING, IN CONDUIT, AS REQUIRED BETWEEN DEVICES PER THE MANUFACTURER'S RECOMMENDATIONS.

SCHEDULE NOTES:

1. PROVIDE A HUBBELL NX CONTROLLER MODEL NXRCFX-1RD-UNV FOR EACH ROOM TO CONTROL THE FIXTURES AND SWITCH STATION(S).

FLOOR BOX SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	BOX MODEL #	COVER MODEL #	RECEPT. FACEPLATE	DATA FACEPLATE	FINISH	NOTES
FB2	PEDESTAL CONDUIT MOUNTED CAST ALUMINUM RECEPTACLE	HUBBELL	SA6687G	SS82	SS82	-	BRUSHED ALUMINUM	--

SCHEDULE NOTES

1. COORDINATE THE MOUNTING REQUIREMENTS WITH THE DENTAL EQUIPMENT SUPPLIER.

MAGNETIC MOTOR STARTER SCHEDULE

E8 ADDENDUM #1.4

MARK	MANUFACTURER	STARTER NEMA SIZE	STARTER TYPE	LOAD EQUIPMENT SERVED	LOAD HP	LOAD VOLT	LOAD PHASE	INTERLOCK STARTED BY	INTERLOCK STARTS	ACCESSORIES	NOTES
MS1	SQUARE D	3	FVNR	AIR HANDLING UNIT	12.5	208 V	3	BUILDING AUTOMATION SYSTEM (BAS)	AIR HANDLING UNIT FAN	AC, TC, HOA, OL, PL, CT	--
MS2	SQUARE D	0	FVNR	HEATING WATER PUMP	3	208 V	3	BUILDING AUTOMATION SYSTEM (BAS)	PUMP HWP-3	AC, TC, HOA, OL, PL, CT	--
MS3	SQUARE D	0	FVNR	HEATING WATER PUMP	3	208 V	3	BUILDING AUTOMATION SYSTEM (BAS)	PUMP HWP-4	AC, TC, HOA, OL, PL, CT	--

E9 ADDENDUM #1.4 E9 ADDENDUM #1.4

ACCESSORIES:

AC - INPUT AND OUTPUT AUXILIARY CONTACTS
CT - CONTROL VOLTAGE TRANFORMER
HOA - HAND/OFF/AUTO SELECTOR SWITCH
OL - MELTING ALLOY THERMAL OVERLOADS
PL - PILOT LIGHT
SS - START/STOP BUTTON
TC - TEMPERATURE CONTROLS SYSTEM
2S - TWO SPEED SELECTOR

LIGHT FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL NO.	CONSTRUCTION LENS/LOUVER	CONSTRUCTION MOUNTING	LIGHT SOURCE LAMP	LUMENS DOWN	LUMENS UP	CCT	CRI	ELECTRICAL BALLAST/ DRIVER	VOLTAGE	PHASE	WATTS	W./FT.	EMERGENCY COMPONENT	NOTES
764	4' STANDARD LED STRIP WITH WIREGUARD	WILLIAMS	76-4-L32/840-WG-7614-DRV-UNV	WIREGUARD	SURFACE	LED	3200 lm	0 lm	4000 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	25 W		--	--
768	8' STANDARD LED STRIP WITH WIREGUARD	WILLIAMS	76-8-L64/840-WG-7614-DRV-UNV	WIREGUARD	SURFACE	LED	6400 lm	0 lm	4000 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	45 W		--	--
C25	2" ROUND DOWNLIGHT	WILLIAMS	2DR-L5/840-DIM-UNV-OW-OF-SG-MWT-N-F1	--	RECESSED	LED	500 lm	0 lm	4000 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	7 W		--	--
C41	4" ROUND DOWNLIGHT	WILLIAMS	4DR-TL-L10/840-DIM-UNV-OW-OF-SG-MWT-N-F1	--	RECESSED	LED	1000 lm	0 lm	4000 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	10 W		--	--
C42	4" ROUND DOWNLIGHT	WILLIAMS	4DR-TL-L20/840-DIM-UNV-OW-OF-SG-MWT-N-F1	--	RECESSED	LED	2000 lm	0 lm	4000 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	20 W		--	--
C61	6" DOWNLIGHT	WILLIAMS	6DR-TL-L10/835-DIM-UNV-OW-OF-SG-MWT-N-F1	--	RECESSED	LED	1000 lm	0 lm	3500 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	10 W		--	--
C62	6" DOWNLIGHT	WILLIAMS	6DR-TL-L20/835-DIM-UNV-OW-OF-SG-MWT-N-F1	--	RECESSED	LED	2000 lm	0 lm	3500 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	20 W		--	--
C415	4" ROUND DOWNLIGHT	WILLIAMS	4DR-TL-L15/840-DIM-UNV-OW-OF-SG-MWT-N-F1	--	RECESSED	LED	1500 lm	0 lm	4000 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	20 W		--	--
CR142	1x4 ARCHITECTURAL LED BASKET TROFFER	CREE	CR14-22L-40K-_-S	CURVED RIBBED FROSTED ACRYLIC	SURFACE	LED	2200 lm	0 lm	4000 K	82	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	22 W		--	--
CR223	2x2 ARCHITECTURAL LED BASKET TROFFER	CREE	CR22-32L-40K-_-10V	CURVED RIBBED FROSTED ACRYLIC	LAY-IN	LED	3200 lm	0 lm	4000 K	82	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	32 W		--	--
CR223E	2x2 ARCHITECTURAL LED BASKET TROFFER	CREE	CR22-32L-40K-_-10V	CURVED RIBBED FROSTED ACRYLIC	LAY-IN	LED	3200 lm	0 lm	4000 K	82	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	32 W		--	--
CR244	2x4 ARCHITECTURAL LED BASKET TROFFER	CREE	CR24-40L-40K-_-10V	CURVED RIBBED FROSTED ACRYLIC	LAY-IN	LED	4000 lm	0 lm	4000 K	90	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	40 W		--	--
EMX	EXTERIOR DECORATIVE EMERGENCY LED LIGHT	WILLIAMS	EMER/DECO-BLK-LT-D	--	SURFACE WALL	LED	300 lm	0 lm	4000 K	80	--	120 V	1	12 W		BATTERY	1
EXC1	EXIT SIGN, EDGE-LIT, 1-SIDED	LITHONIA	EDGR 1 R EL	--	CEILING	LED	0 lm	0 lm	0 K	0	--	120 V	1	5 W		BATTERY	1
EXC2	EXIT SIGN, EDGE-LIT, 2-SIDED	LITHONIA	EDGR 2 R EL	--	CEILING	LED	0 lm	0 lm	0 K	0	--	120 V	1	5 W		BATTERY	1
EXW2	EXIT SIGN, EDGE-LIT, RED LETTERING, 2-SIDED	LITHONIA	EDG 2 R EL WM	--	WALL	LED	0 lm	0 lm	0 K	0	--	120 V	1	5 W		--	--
HP2B2	2" x 2'-0" APERATURE LINEAR HIGH-PERFORMANCE BOOSTED OUTPUT LED	FINELIGHT	HP-2-R-D-2'-B-835-F-96LG-120-SC-FC-10%-SF-FE-SW	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	810 lm	0 lm	3500 K	82	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	3 W		--	--
HP2B3	2" x 3'-0" APERATURE LINEAR HIGH-PERFORMANCE BOOSTED OUTPUT LED	FINELIGHT	HP-2-R-D-3'-B-835-F-96LG-120-SC-FC-10%-SF-FE-SW	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	1215 lm	0 lm	3500 K	82	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	13 W		--	--
HP2B4	2" x 4'-0" APERATURE LINEAR HIGH-PERFORMANCE BOOSTED OUTPUT LED	FINELIGHT	HP-2-R-D-4'-B-835-F-96LG-120-SC-FC-10%-SF-FE-SW	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	1620 lm	0 lm	3500 K	82	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	18 W		--	--
HP2B8	2" x 8'-3" APERATURE LINEAR HIGH-PERFORMANCE BOOSTED OUTPUT LED	FINELIGHT	HP-2-R-D-8'-3"-B-835-F-96LG-120-SC-FC-10%-SF-FE-SW	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	3341 lm	0 lm	3500 K	82	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	37 W		--	--
HP2B10	2" x 10'-0" APERATURE LINEAR HIGH-PERFORMANCE BOOSTED OUTPUT LED	FINELIGHT	HP-2-R-D-10'-B-835-F-96LG-120-SC-FC-10%-SF-FE-SW	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	4050 lm	0 lm	3500 K	82	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	44 W		--	--
HP2S48	2" x 4'-8" APERATURE LINEAR HIGH-PERFORMANCE STANDARD OUTPUT LED	FINELIGHT	HP-2-RG-D-4ft-S-835-FC-10%-C1-SW	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	1503 lm	0 lm	3500 K	83	LED DRIVER	120 V	1	17 W		--	--
HP4V6	4" x 6'-0" APERATURE LINEAR HIGH-PERFORMANCE VERY HIGH OUTPUT LED	FINELIGHT	HP-4-R-D-6'-V-835-F-96LG-120-SC-FC-10%-SF-FE-SW	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	5562 lm	0 lm	3500 K	83	LED DRIVER	120 V	1	56 W		--	-
LP14G	1x4 EDGE-LIT LED FLAT PANEL	WILLIAMS	LP-14-L40/840-DFK-1248W-DIM-UNV	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	4000 lm	0 lm	4000 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	40 W		--	--
LP22	2x2 EDGE-LIT LED FLAT PANEL	WILLIAMS	LP-22-L40/840-DIM-UNV	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	4155 lm	0 lm	4000 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	40 W		--	--
LP24	2x4 EDGE-LIT LED FLAT PANEL	WILLIAMS	LP-24-L50/840-DIM-UNV	SMOOTH FROSTED ACRYLIC	LAY-IN	LED	4906 lm	0 lm	4000 K	80	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	50 W		--	--
LSQ1	10"x10" CANOPY LED FIXTURE	HUBBELL	LSQ1-25-3K7-UNV-BLT	FROSTED ACRYLIC	SURFACE	LED	3000 lm	0 lm	3000 K	82	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	25 W		--	--
RZ2	UNDERCABINET SURFACE MOUNTED LED	LITHONIA	RAZ-24IN-30K-90CRI-RAZC3-	FROSTED ACRYLIC	SURFACE	LED	958 lm	0 lm	3000 K	95	LED DRIVER, 0-10V DIMMING, 1%	120 V	1	3 W		--	--
VWPV3	ARCHITECTURAL EXTERIOR LED WALL PACK	WILLIAMS	VWPV-L30/740-TFT-BLK-SDGL-DIM-UNV	--	WALL	LED	3000 lm	0 lm	4000 K	70	LED DRIVER	120 V	1	39 W		--	--

GENERAL NOTES:

A. CONTRACTOR SHALL REFER TO SPECIFICATIONS REGARDING PROVIDING ADDITIONAL SPARE LENSES, AND GLOBES.

SCHEDULE NOTES:

1. FIELD VERIFY THE MOUNTING HEIGHTS AND REFER TO THE ARCHITECTURAL PLANS FOR THE MOUNTING LOCATIONS.

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600 E Michigan Ave, Suite B
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ISSUE DATE: NOVEMBER 4, 2022

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ELECTRICAL SCHEDULES

E601

SHEET 94 OF 95

INTERIOR LIGHTING CONTROL SEQUENCE OF OPERATION

ROOM NUMBER	ROOM NAME	SPACE TYPE	TURN ON LIGHTING TO %	DIMMABLE TYPE	DAYLIGHT		
					SIDE LIGHT	TOP LIGHT	MAINTAIN FC LEVEL
212	OPEN TREATMENT	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	YES	NO	EQUAL TO LIGHT OUTPUT OF FIXTURES OUTSIDE OF DAYLIGHTING AREA
206	CORRIDOR	CORRIDOR - ALL OTHER CORRIDORS	FULL 100%	N/A	NO	NO	N/A
210	TREATMENT 2	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
209	TREATMENT 1	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
203	CORRIDOR	CORRIDOR - ALL OTHER CORRIDORS	FULL 100%	N/A	NO	NO	N/A
201	WAITING	LOBBY - ALL OTHER LOBBIES	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
234	DISPENSE	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
233	WORK RM.	OFFICE - ENCLOSED AND ≤250 ft^2	PARTIAL 50%	CONTINUOUS DIM	NO	NO	N/A
232	EYE TECH.	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
231	PROCEDURE	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
226	CORRIDOR	CORRIDOR - ALL OTHER CORRIDORS	FULL 100%	N/A	NO	NO	N/A
229	DILATION WAITING	OFFICE - ENCLOSED AND ≤250 ft^2	PARTIAL 50%	CONTINUOUS DIM	NO	NO	N/A
202	RECEPTION	LOBBY - ALL OTHER LOBBIES	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
224	MECHANICAL	ELECTRICAL / MECHANICAL ROOM	FULL 100%	N/A	NO	NO	N/A
217	CORRIDOR	CORRIDOR - ALL OTHER CORRIDORS	FULL 100%	N/A	NO	NO	N/A
230	OFFICE	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
227	EXAM	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
228	EXAM	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
204	TLT.	RESTROOM - ALL OTHER RESTROOMS	FULL 100%	N/A	NO	NO	N/A
225	STAFF TLT.	RESTROOM - ALL OTHER RESTROOMS	FULL 100%	N/A	NO	NO	N/A
219	STORAGE	ELECTRICAL / MECHANICAL ROOM	FULL 100%	N/A	NO	NO	N/A
216	UNIT SUPPLY	OFFICE - ENCLOSED AND ≤250 ft^2	PARTIAL 50%	CONTINUOUS DIM	NO	NO	N/A
215	LAB	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
205	FILE STORAGE	ELECTRICAL / MECHANICAL ROOM	FULL 100%	N/A	NO	NO	N/A
207	TLT.	RESTROOM - ALL OTHER RESTROOMS	FULL 100%	N/A	NO	NO	N/A
208	PANO	OFFICE - ENCLOSED AND ≤250 ft^2	PARTIAL 50%	CONTINUOUS DIM	NO	NO	N/A
213	STERILIZATION	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
220	SHARED OFFICE	OFFICE - OPEN PLAN	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
221	OFFICE	OFFICE - ENCLOSED AND ≤250 ft^2	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
222	BREAK ROOM	LOUNGE / BREAKROOM - ALL OTHER LOUNGES / BREAKROOMS	PARTIAL 50%	CONTINUOUS DIM	NO	NO	N/A
223	DATA	COMPUTER ROOM	PARTIAL 50%	CONTINUOUS DIM	NO	NO	N/A
200	CORRIDOR	CORRIDOR - ALL OTHER CORRIDORS	FULL 100%	N/A	NO	NO	N/A
147	COATS	LOBBY - ALL OTHER LOBBIES	FULL 100%	CONTINUOUS DIM	NO	NO	N/A
218	J.C.	ELECTRICAL / MECHANICAL ROOM	FULL 100%	N/A	NO	NO	N/A
211	CORRIDOR	CORRIDOR - ALL OTHER CORRIDORS	FULL 100%	N/A	NO	NO	N/A
214	ALCOVE	CORRIDOR - ALL OTHER CORRIDORS	FULL 100%	N/A	NO	NO	N/A
224A	TANK STORAGE	(none)					

Branch Panel: P3N2

Location: MECHANICAL 224
Supply From:
Mounting: SURFACE
Enclosure: NEMA1

Volts: 208Y/120
Phases: 3
Wires: 4

A.I.C. Rating: 10,000 AMPS SYMMETRICAL
Mains Type: MAIN CB
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	Circuit Description	Trip	Poles	A (VA)		B (VA)		C (VA)		Poles	Trip	Circuit Description	CKT
1				920	2288					2	30 A	DENTAL VACUUM PUMP VAC	2
3	BUILDING HOT WATER LOOP PUMP HWP-3	20 A	3			920	2288						4
5								920	1875	2	20 A	DENTAL AIR COMPRESSOR COMP	6
7	CONDENSING UNIT CU-1	25 A	2	1429	1875								8
9						1429	720			1	20 A	RCPT - DATA 122	10
11								8012	180	1	20 A	RCPT - DATA 122	12
13	CONDENSING UNIT ACCU-1	100 A	3	8012	180					1	20 A	RCPT - BREAK ROOM 135	14
15						8012	180			1	20 A	RCPT - BREAK ROOM 135 MICROWAVE	16
17	BOILER B-1	20 A	1					1200	180	1	20 A	RCPT - BREAK ROOM 135	18
19	BOILER B-2	20 A	1	1200	1200					1	20 A	RCPT - BREAK ROOM 135	20
21	BOILER PUMP HWP-1	20 A	1			528	1080			1	20 A	RCPT - ROOMS 135, 78	22
23	BOILER PUMP HWP-2	20 A	1					528	1200	1	20 A	RCPT - CORRIDOR 142	24
25				920	180					1	20 A	RCPT - GENERATOR BATTERY CHARGER	26
27	BUILDING HOT WATER LOOP PUMP HWP-4	20 A	3			920	900			1	20 A	DOOR ACCESS	28
29								920	900	1	20 A	DOOR ACCESS	30
31	SPACE	--	1	--	6000								32
33	VAV BOXES	20 A	1			1300	6000			3	80 A	AHU-1	34
35	WATER HEATER	20 A	1					600	6000				36
37	WATER HEATER RE-CIRC PUMP DCP-01	15 A	1	60	--					1	--	SPACE	38
39	EXHAUST FAN EF-1	20 A	1			386	0			1	20 A	SPARE	40
41	SPACE	--	1					--	0	1	20 A	SPARE	42
		Total Load:		24264 VA		24663 VA		22515 VA					
		Total Amps:		204 A		208 A		188 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	45787 VA	100.00%	45787 VA		
MTR	60 VA	125.00%	75 VA	**Total Conn. Load:**	71443 VA
RCPT	5460 VA	100.00%	5460 VA	**Total Est. Demand:**	71458 VA
SPEC	600 VA	100.00%	600 VA	**Total Conn.:**	198 A
AC	2858 VA	100.00%	2858 VA	**Total Est. Demand:**	198 A
MN	15238 VA	100.00%	15238 VA		
R	1440 VA	100.00%	1440 VA		

Notes:

E8
ADDENDUM #1.4

Branch Panel: P3N1

Location: MECHANICAL 224
Supply From:
Mounting: SURFACE
Enclosure: NEMA1

Volts: 208Y/120
Phases: 3
Wires: 4

A.I.C. Rating: 10,000 AMPS SYMMETRICAL
Mains Type: MAIN CB
Mains Rating: 225 A
MCB Rating: 200 A

Notes:

E7
ADDENDUM #1.4

CKT	Circuit Description	Trip	Poles	A (VA)		B (VA)		C (VA)		Poles	Trip	Circuit Description	CKT
1	LITES MECHANICAL 133	20 A	1	1714	1800					1	20 A	RCPT - OPEN TREATMENT 114	2
3	LITES CORRIDOR 145	20 A	1			1320	1800			1	20 A	RCPT - OPEN TREATMENT 114	4
5	LITES CORRIDOR 140	20 A	1					1295	1800	1	20 A	RCPT - OPEN TREATMENT 114	6
7	RCPT - ROOM 78, 115	20 A	1	1260	1800					1	20 A	RCPT - OPEN TREATMENT 114	8
9	RCPT - ROOM 78, 122, 133, 134, 145	20 A	1			900	1800			1	20 A	RCPT - OPEN TREATMENT 114	10
11	RCPT - ROOM 78, 139, 142	20 A	1					1260	1800	1	20 A	RCPT - OPEN TREATMENT 114	12
13	RCPT - ROOM 115, 140	20 A	1	1080	180					1	20 A	RCPT - LAB 116	14
15	RCPT - ROOM 119, 128	20 A	1			720	180			1	20 A	RCPT - LAB 116	16
17	RCPT - ROOM 120, 127, 130, 144	20 A	1					1260	180	1	20 A	RCPT - LAB 116	18
19	RCPT - ROOM 121, 136	20 A	1	1260	180					1	20 A	RCPT - LAB 116	20
21	RCPT - ROOM 123, 140	20 A	1			2880	180			1	20 A	RCPT - LAB 116	22
23	RCPT - TREATMENT 1 124	20 A	1					2520	180	1	20 A	RCPT - STERILIZATION 118	24
25	RCPT - ROOM 125, 132	20 A	1	1080	360					1	20 A	RCPT - STERILIZATION 118	26
27	RCPT - ROOM 125, 138, 143, 145	20 A	1			1260	720			1	20 A	RCPT - SHARED OFFICE 137	28
29	RCPT - RECEPTION 126	20 A	1					1260	0	1	20 A	SPARE	30
31	RCPT - ROOM 129, 131	20 A	1	1620	1500					2	20 A	RCPT STERILIZATION 213	32
33	RCPT - ROOM 137, 140	20 A	1			900	1500						34
35	RCPT - ROOM 138, 142, 143, 145	20 A	1					1440	1500	2	20 A	RCPT STERILIZATION 213	36
37	DATA RACK POWER	20 A	1	1500	1500								38
39	SPARE	20 A	1			0	1250			2	20 A	RCPT PANO 208	40
41	SPARE	20 A	1					0	1250				42
		Total Load:		16834 VA		15410 VA		15745 VA					
		Total Amps:		141 A		128 A		132 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
RCPT	36820 VA	63.58%	23410 VA		
LITES	4329 VA	125.00%	5412 VA	**Total Conn. Load:**	47989 VA
L	0 VA	0.00%	0 VA	**Total Est. Demand:**	35662 VA
R	6840 VA	100.00%	6840 VA	**Total Conn.:**	133 A
				Total Est. Demand:	99 A

Notes:

SEVEN GENERATIONS
ARCHITECTURE + ENGINEERING
600 E Michigan Ave, Suite B
Kalamazoo, MI 49007
www.7GenAE.com

CONSULTANTS

WBK ENGINEERING
68 E Michigan Ave
Battle Creek, MI 49017
www.wbkengineering.com

Steelhead ENGINEERING co
259 E Michigan Ave
Kalamazoo, MI 49007
www.steelheadengineeringco.com

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
INDIAN HEALTH SERVICE
DIVISION OF ENGINEERING SERVICES
GREAT PLAINS AREA

REVIEWED:
ES ARCHITECT / ENGINEER — DATE

APPROVED:
ES PROJECT MANAGER — DATE
ES BRANCH CHIEF — DATE

CONCURRENCE
AGENCY REPRESENTATIVE — DATE
TITLE

REV	DATE	DESCRIPTION
2	06/27/2022	ADDENDUM #1.2
3	09/08/2022	ADDENDUM #1.3
4	10/27/2022	ADDENDUM #1.4

ISSUE DATE: NOVEMBER 4, 2022
CONTRACT NO: 75H70121F30002
PROJECT NO: 220079
CAD DWG FILE:
DRAWN BY: RM
CHECKED BY: BSC

SHEET TITLE:
ELECTRICAL SCHEDULES

E602
SHEET 95 OF 95