MAD

MAY 2024

PROJECT ID: 1071-07-79

WITH: N/A

COUNTY: MONROE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control Plans)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
~~Section No.~~	~~8~~	~~Structure Plans~~
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 400



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

LA CROSSE - SPARTA

SAFETY REST AREA 16 SPARTA BUILDING

IH 90

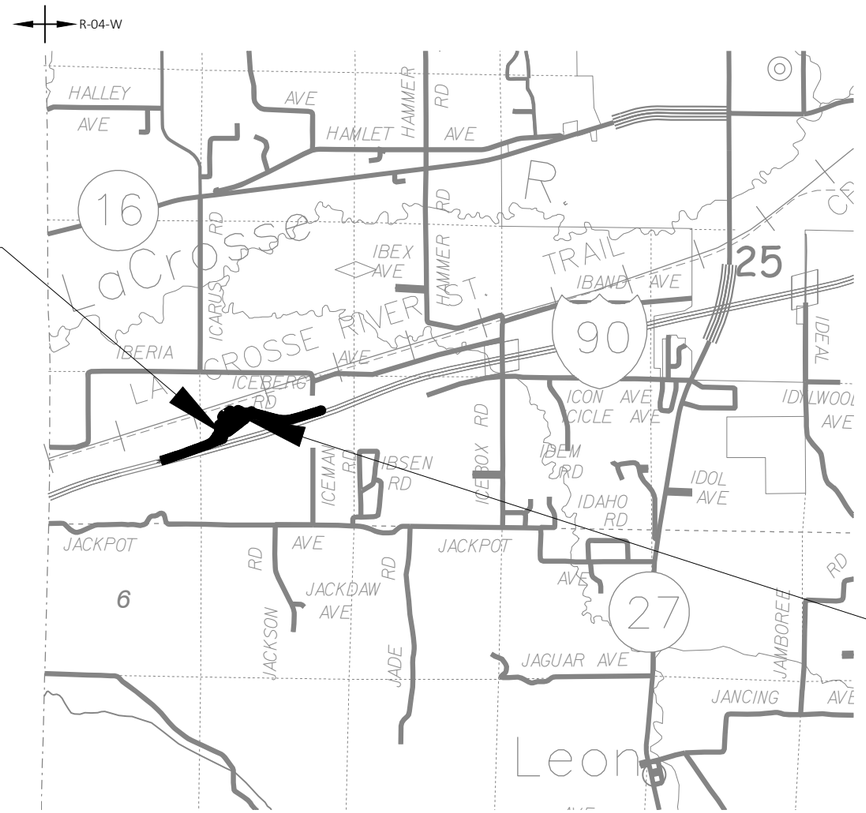
MONROE COUNTY

STATE PROJECT NUMBER
1071-07-79

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1071-07-79	WISC 2024351	1

DESIGN DESIGNATION

			IH 90	REST AREA AMPS
A.A.D.T.	2024	=	24,500	460
A.A.D.T.	2044	=	26,200	490
D.H.V.		=	3,990	75
D.D.		=	58/42	NA
T.		=	25.5%	34.1%
DESIGN SPEED		=	70 MPH	70 MPH - 30 MPH
ESALS		=	29,000,000	1,700,000



BEGIN PROJECT 1071-07-79
STA 1159+39.38 WB =
STA 1159+36.30 RA
Y: 365,770.99
X: 604,625.82

END PROJECT 1071-07-79
STA 1218+25.96 WB =
STA 1222+08.21 RA

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

LAYOUT

SCALE 0 1.0 MI

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), MONROE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ORIGINAL PLANS PREPARED BY

KL Engineering
[A] Better Experience

WISCONSIN PROFESSIONAL ENGINEER
BRIAN J. ST. VINCENT
44329-6
FITCHBURG, WI

January 11, 2024 (Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT/KL ENGINEERING
Designer	KL ENGINEERING
Project Manager	JOSEPH COUGHLIN & BIREN PATEL
Regional Examiner	
Regional Supervisor	THOMAS DEWINTER

APPROVED FOR THE DEPARTMENT

DATE: 01/25/2024

Joseph Coughlin (Signature)

E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\010101-TI_79.DWG

PLOT DATE : 1/22/2024 4:42 PM

PLOT BY : KL ENGINEERING

PLOT NAME :

STANDARD ABBREVIATIONS

AEW	APRON ENDWALL
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
BLDG.	BUILDING
CTR	CENTER
C/L	CENTERLINE
C.E.	COMMERCIAL ENTRANCE
CONC.	CONCRETE
CSW	CONCRETE SIDEWALK
CMCP	CORRUGATED METAL CULVERT PIPE
CP	CULVERT PIPE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CPT	CONSTRUCTION PERMIT
EB	EASTBOUND
ELEC	ELECTRIC
IE	INVERT ELEVATION
EX.	EXISTING
FO	FIBER OPTIC
F.E.	FIELD ENTRANCE
GAS	GAS
HMA	HOT MIX ASPHALT
HSE.	HOUSE
LHF	LEFT HAND FORWARD
MH	MANHOLE
MAX.	MAXIMUM
MIN.	MINIMUM
NOR.	NORMAL
NTS	NOT TO SCALE
PLE	PERMANENT LIMITED EASEMENT
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
PROP.	PROPOSED
PRW	PROPOSED RIGHT-OF-WAY
RAD	RADIUS
R/L	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQ'D.	REQUIRED
RHF	RIGHT HAND FORWARD
RW	RIGHT-OF-WAY LINE
SAN	SANITARY SEWER
SHLD	SHOULDER
SW	SIDEWALK
SF	SQUARE FEET
SY	SQUARE YARD
S.D.D.	STANDARD DETAIL DRAWING
STA	STATION
SS	STORM SEWER
TEL	TELEPHONE
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
WAT	WATER
WB	WESTBOUND

UTILITIES

COMMUNICATIONS

BRIGHTSPEED OF MIDWEST WISCONSIN
TOM MURRAY
1905 WARD AVENUE
LA CROSSE, WI 54601
PHONE: 608-780-0895
EMAIL: TOM.L.MURRAY@BRIGHTSPEED.COM

COMMUNICATIONS

ROGERS TELECOM
JULIE PAULSON
4804 N 40TH STREET
SHEBOYGAN, WI 53083
PHONE: 920-459-2600
EMAIL: JPAULSON@GABES.COM

COMMUNICATIONS

WIN TECHNOLOGY
JOHN LOUIS
4955 BULLIS FARM ROAD
EAU CLAIRE, WI 53701
PHONE: 715-838-4012
EMAIL: JOHN.LOUIS@WINTECHNOLOGY.COM

ELECTRICITY

XCEL ENERGY
NATHAN ABBOTT
3215 COMMERCE ST
LA CROSSE, WI 54603
PHONE: 608-789-3790
EMAIL: NATHAN.J.ABBOTT@XCELENERGY.COM

DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

GENERAL NOTES

ALL RADII DIMENSIONS WITH OR WITHOUT CURB AND GUTTER ARE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

ALL GRADES PROVIDED ALONG RADII ARE ALONG EDGE OF PAVEMENT.

EXPANSION JOINTS TO BE CONSTRUCTED AT ALL RADII POINTS IN THE CURB AND GUTTER.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.

RIGHT OF WAY LINES SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE.

NO TREES OR SHRUBS ARE TO THE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

PROTECT INLETS WITH PROPER INLET PROTECTION AT LOCATIONS EXHIBITING RISK OF BEING IMPACTED BY CONSTRUCTION OPERATIONS AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THE OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

PLACE TOPSOIL AND SALVAGED TOPSOIL IN ALL GRADED AREAS AS DESIGNATED BY THE ENGINEER IMMEDIATELY AFTER GRADING HAS BEEN COMPLETED. SEED, MULCH, AND FERTILIZE ALL AREAS 5 DAYS AFTER PLACEMENT OF TOPSOIL.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY, OR FLOODPLAIN OF ANY WATERWAY.

THE EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM "TRAFFIC CONTROL COVERING SIGNS TYPE 2".

5 FOOT WIDE SIDEWALK REQUIRES TRANSVERSE JOINTS SPACED AT 5 FEET AND 6 FOOT WIDE SIDEWALK REQUIRES TRANSVERSE JOINTS SPACED AT 6 FEET.

CLOSE COORDINATION WILL BE REQUIRED WITH PROJECT 1071-07-80 (BY OTHERS). LINEWORK SHOWING PROPOSED WORK FOR PROJECT 1071-07-80 IS SHOWN IN DARK GRAY ON THESE PLANS FOR REFERENCE. PROJECT 1071-07-80 GENERALLY INCLUDES WORK OUTSIDE OF THE REST AREA PLAZA STARTING AT THE BACK OF CURB, WITH A BOUNDARY BETWEEN THE PROJECTS SHOWN AND LABELED ON THE PLANS. WHERE ITEMS OR WORK MAY CROSS OVER THIS BOUNDARY, NOTES HAVE BEEN ADDED FOR CLARITY.

REFERENCE ALIGNMENTS

WB	IH 90 WESTBOUND
RA	REST AREA RAMP A
RB	REST AREA RAMP B
MBD	MAINTENANCE BUILDING DRIVEWAY
MG	MAINTENANCE GARAGE
MGD	MAINTENANCE GARAGE DRIVEWAY
PC	PLAZA CENTERLINE SIDEWALK
WC	WALKING CIRCLE
OPE	OVAL PATH EAST
OPW	OVAL PATH WEST
SP	CIRCLE SIDE PATHS

ORDER OF DETAIL SHEETS

PROJECT OVERVIEW/SITE OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
CURB RAMP DETAILS
EROSION CONTROL PLAN
STORM SEWER PLAN
UTILITY SERVICE CONNECTION PLAN
SEPTIC PLAN
WELL PLAN
REST AREA BUILDING PLANS
- ARCHITECTURAL
- STRUCTURAL
- PLUMBING
- MECHANICAL
- ELECTRICAL
- TECHNOLOGY

MAINTENANCE BUILDING PLANS
- ARCHITECTURAL
- STRUCTURAL
- PLUMBING
- MECHANICAL

PLANTING DETAILS
SITE FURNISHING
SITE RESTORATION PLAN
PERMANENT SIGNING
LIGHTING PLAN
FTMS PLAN
TRAFFIC CONTROL
ALIGNMENT DIAGRAM
BENCHMARKS AND CONTROL POINTS
SOIL BORINGS

WISCONSIN DEPARTMENT OF TRANSPORTATION

ELECTRIC

WISDOT SOUTHWEST REGION
COLLIN WEBB, P.E.
TRAFFIC SIGNAL ENGINEER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 792-5824
COLLIN.WEBB@DOT.WI.GOV

ITS

WISDOT
JEFF MADSON
433 W. ST. PAUL AVE
STE. 300
MILWAUKEE, WI 53203
(414) 225-3723
JEFFREY.MADSON@DOT.WI.GOV

DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
KAREN KALVELAGE
3550 MORMON COULEE RD
LA CROSSE, WI 54601
(608) 785-9115
(608) 406-7880
KAREN.KALVELAGE@WISCONSIN.GOV

DESIGN CONTACT

KL ENGINEERING, INC.
BRIAN ST. VINCENT, P.E.
5400 KING JAMES WAY, SUITE 200
MADISON, WI 53711
(608) 663-1218
BSTVINCENT@KLENGINEERING.COM

WISDOT CONTACT

BUREAU OF HIGHWAY MAINTENANCE
JOSEPH COUGHLIN
4822 MADISON YARDS WAY
MADISON, WI 53705
(608) 261-8975
JOSEPH.COUGHLIN@DOT.WI.GOV

WISDOT CONTACT

BUREAU OF HIGHWAY MAINTENANCE
BIREN PATEL
4822 MADISON YARDS WAY
MADISON, WI 53705
(608) 266-7231
BIREN.PATEL@DOT.WI.GOV

2

N

TOWN OF SPARTA

LA CROSSE & MILWAUKEE RAIL ROAD COMPANY

LA CROSSE RIVER REC TRAIL - WIS DNR

ICEBERG RD

DRAINAGE POND
BY OTHERS

REST AREA RAMP A 'RA'
WORK BY OTHERS

EXISTING R/W

1071-07-79/80
PROJECT BOUNDARY

WISDOT REST AREA #16

R/W

MAINTENANCE GARAGE
DRIVEWAY 'MGD'

MAINTENANCE GARAGE 'MG'

ENVIRONMENTALLY SENSITIVE AREA,
DELINEATED WETLANDS (TYP.)

1195RA
1200RA
1205RA
1210RA
1215RA
1220RA
1195RB
1190RA
1190RB
1185RA
1185RB
1195WB
1200WB
1205WB
1210WB
1215WB
1190WB
1185WB
1180RA
1180RB
1180WB
1175RA
1175WB
1170RA
1170WB
1165RA
1165WB
1160RA
1160WB
1155WB

IH 90 WB

IH 90 EB

REST AREA RAMP B 'RB'
WORK BY OTHERS

PROPOSED REST AREA BUILDING

PROPOSED MAINTENANCE BUILDING

END PROJECT 1071-07-80
BY OTHERS
STA 1222+08 RA =
STA 1218+26 WB

END PROJECT 1071-07-79
STA 1193+46 RA =
STA 1191+61 WB

EXISTING BOX CULVERT
C-41-25 (TO REMAIN)

IH 90 WB 'WB'
WORK BY OTHERS

BEGIN PROJECT 1071-07-79
STA 1183+06 RA =
STA 1182+84 WB

EXISTING R/W

BEGIN PROJECT 1071-07-80
BY OTHERS
STA 1159+36 RA =
STA 1159+39 WB

TOWN OF SPARTA

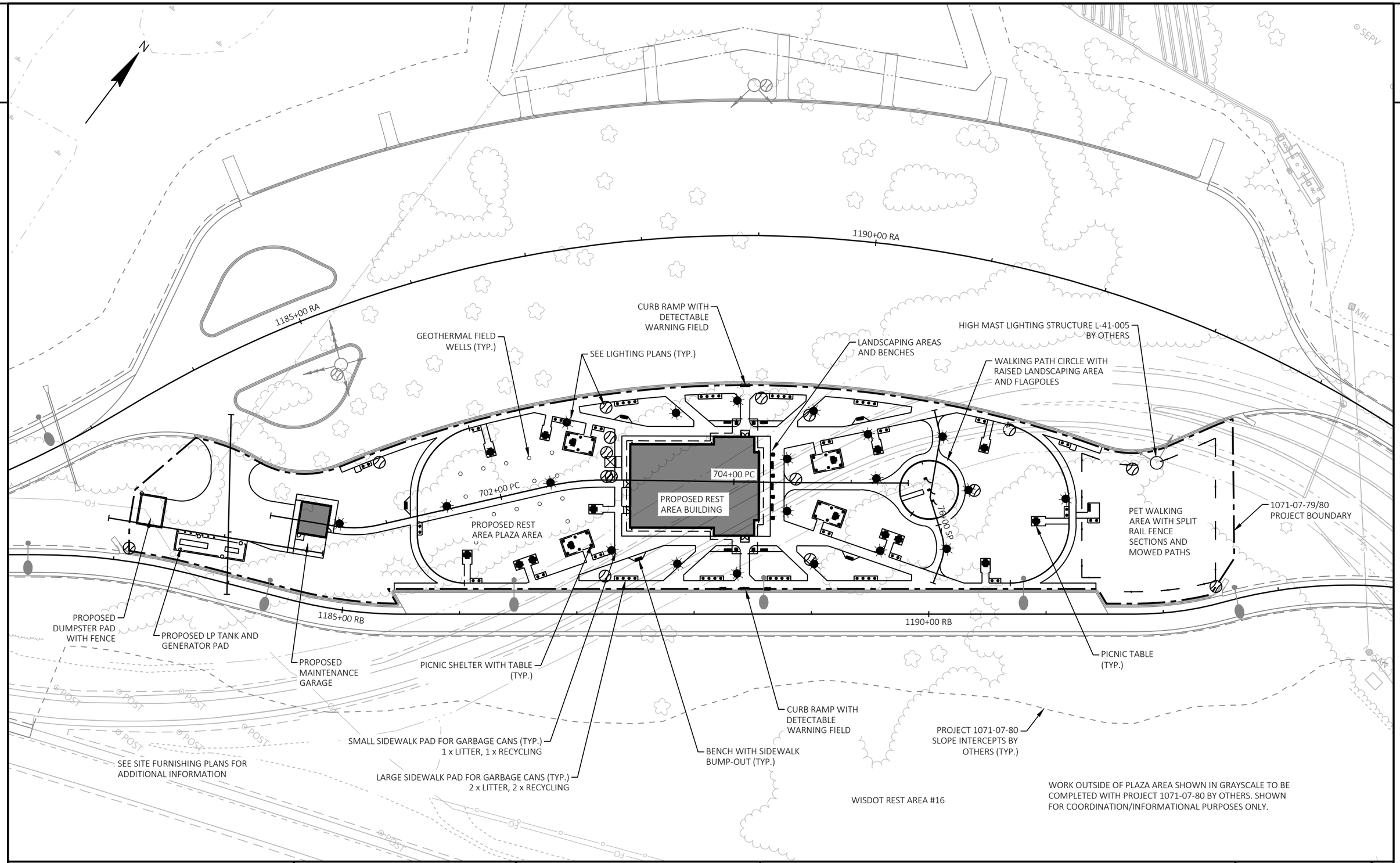
PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - -79

PLOT DATE : 1/31/2024 12:16 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:400 FT

WISDOT/CADDS SHEET 42

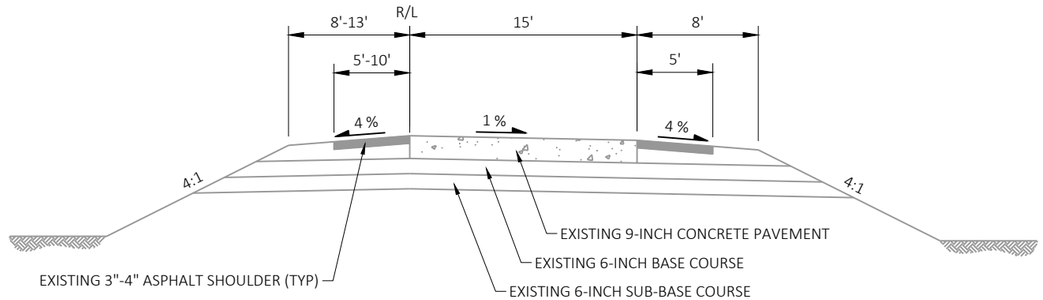
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PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	SITE OVERVIEW	SHEET 4	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\020202-SO.DWG
LAYOUT NAME - -79
PLOT DATE : 1/31/2024 1:35 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1:75
WISDOT/CADDS SHEET 42

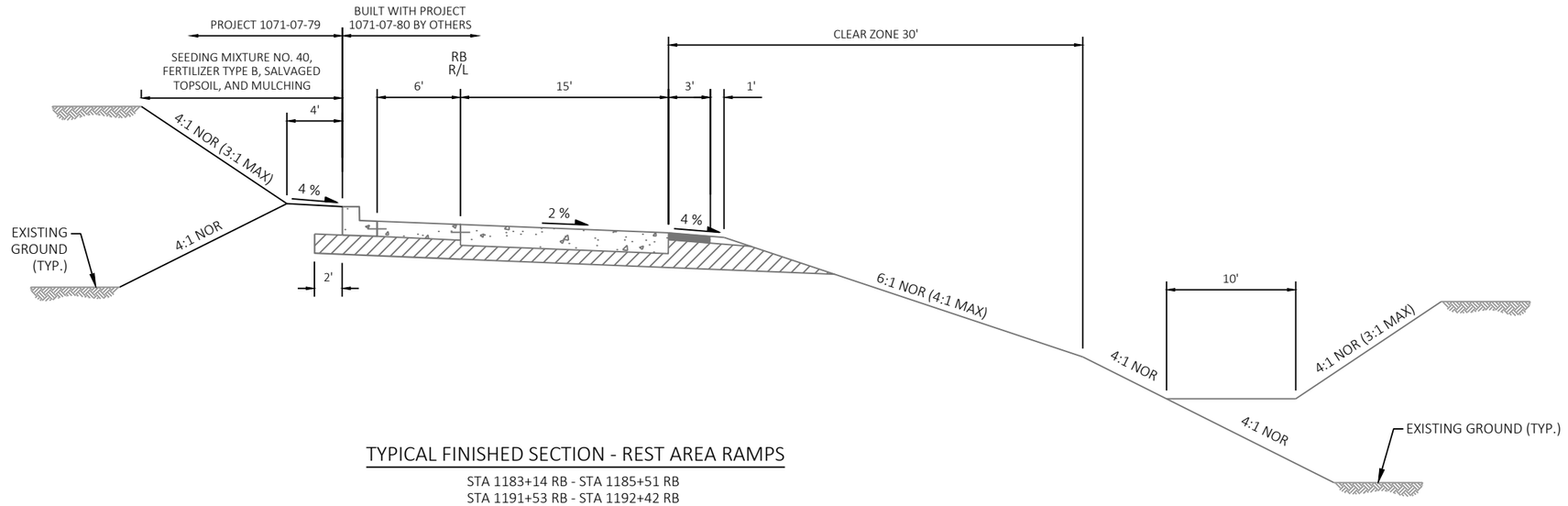
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EXISTING TYPICAL SECTION - REST AREA RAMP

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	EXISTING TYPICAL SECTIONS	SHEET 5	E

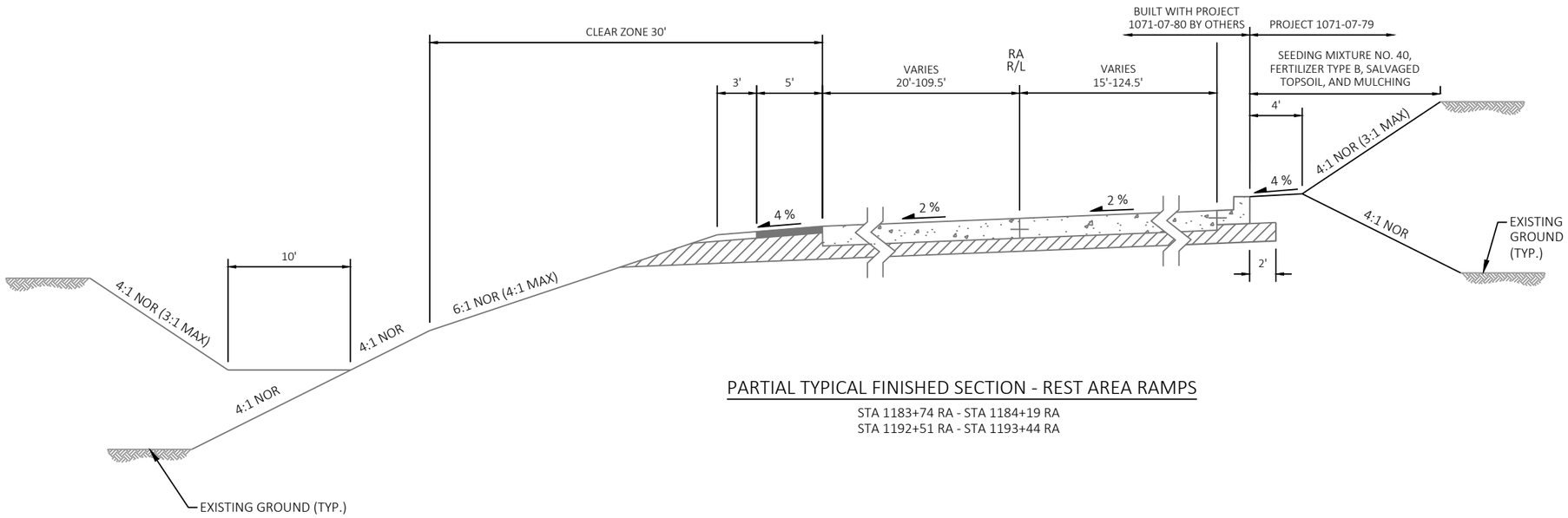
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TYPICAL FINISHED SECTION - REST AREA RAMPS

STA 1183+14 RB - STA 1185+51 RB
STA 1191+53 RB - STA 1192+42 RB

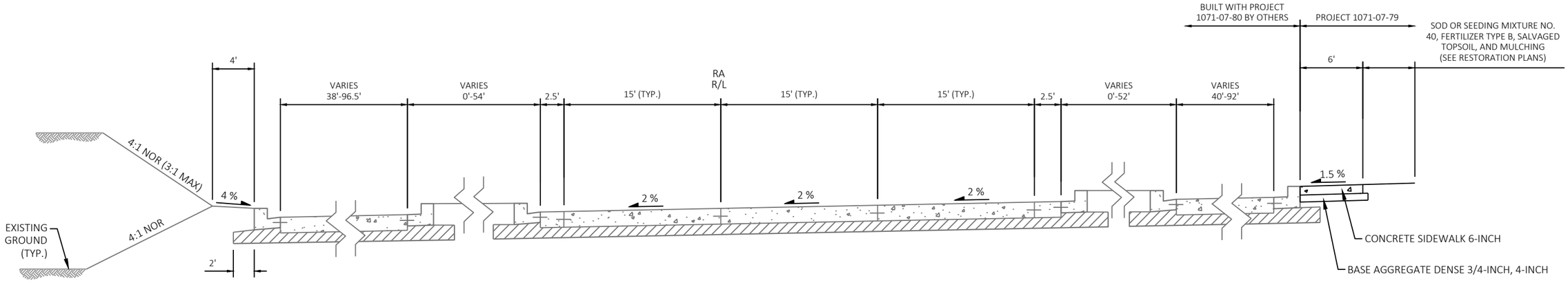
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PARTIAL TYPICAL FINISHED SECTION - REST AREA RAMPS

STA 1183+74 RA - STA 1184+19 RA
STA 1192+51 RA - STA 1193+44 RA

2

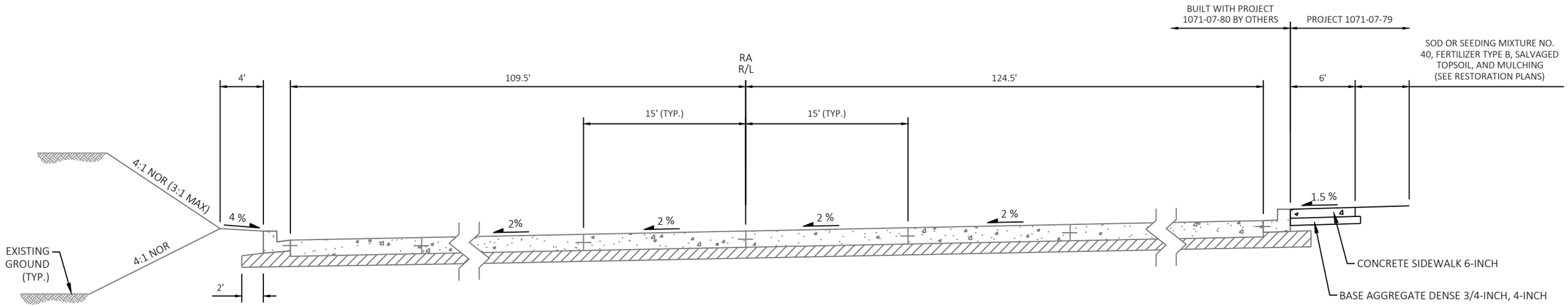


TYPICAL FINISHED SECTION - TRUCK PARKING AREA

STA 1184+19 RA - STA 1185+42 RA

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS	SHEET 8	E

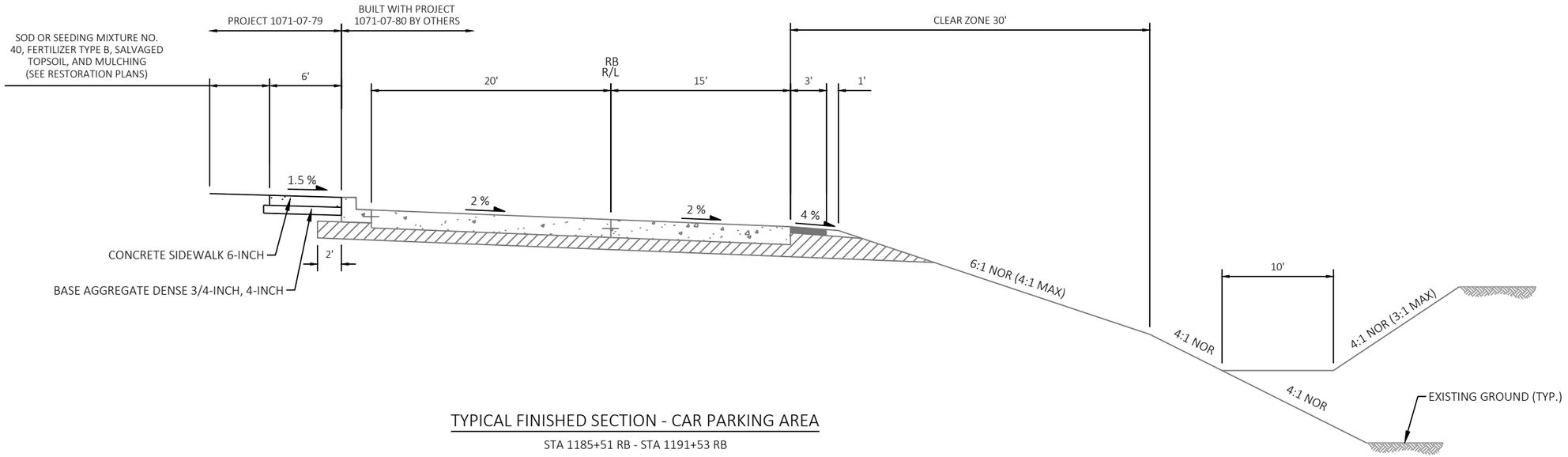
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TYPICAL FINISHED SECTION - TRUCK PARKING AREA

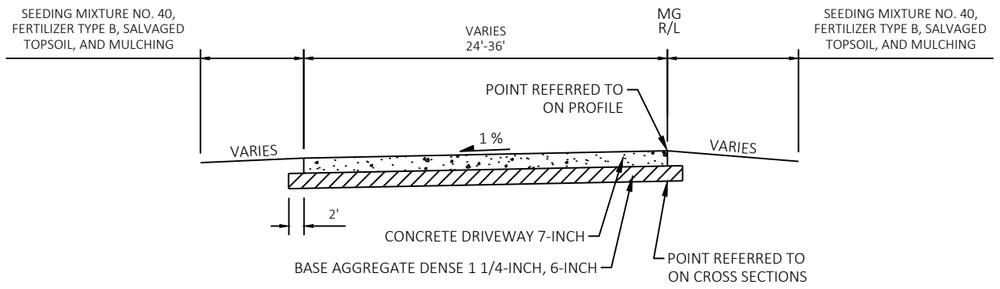
STA 1185+42 RA - STA 1192+51 RA

2



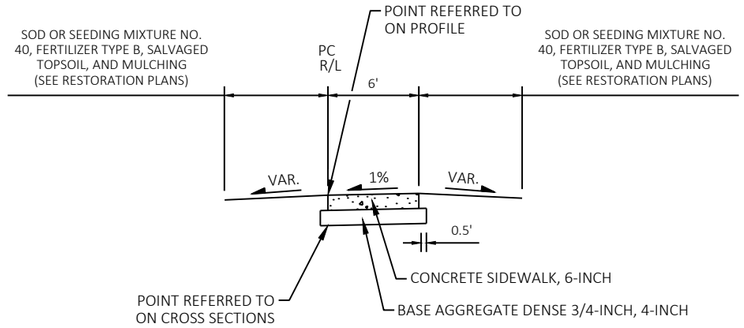
TYPICAL FINISHED SECTION - CAR PARKING AREA

STA 1185+51 RB - STA 1191+53 RB



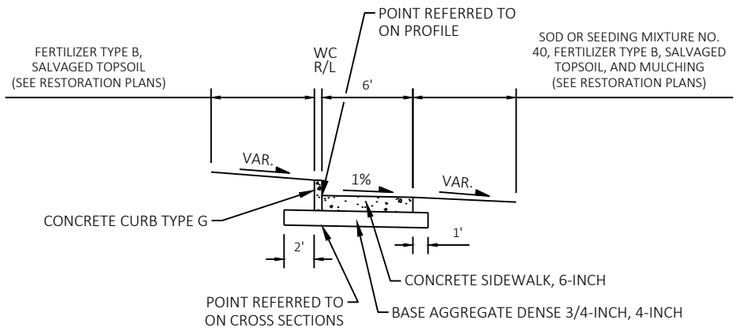
TYPICAL FINISHED SECTION - MAINTENANCE GARAGE

STA 300+25 MG - STA 301+60 MG



TYPICAL FINISHED SECTION - PLAZA CENTERLINE SIDEWALK

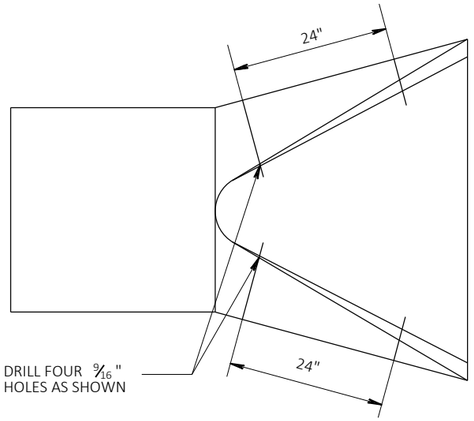
STA 700+56 PC - STA 702+98 PC
STA 704+43 PC - STA 705+36 PC

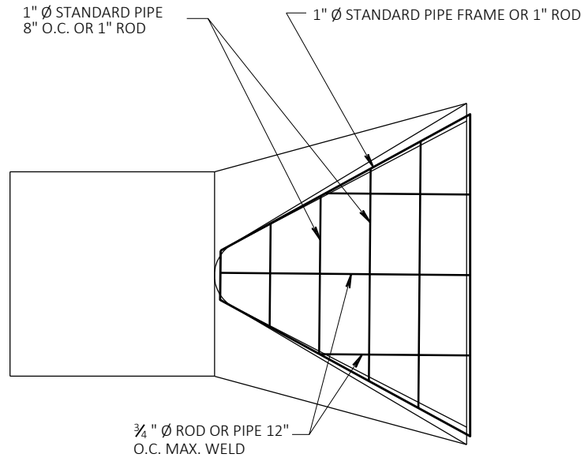


TYPICAL FINISHED SECTION - WALKING CIRCLE

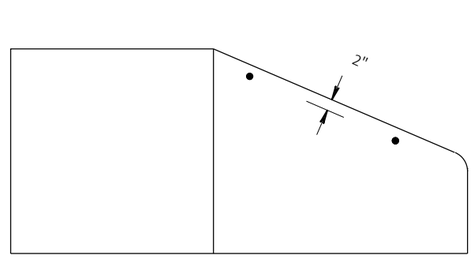
STA 250+00 WC - STA 251+57 WC

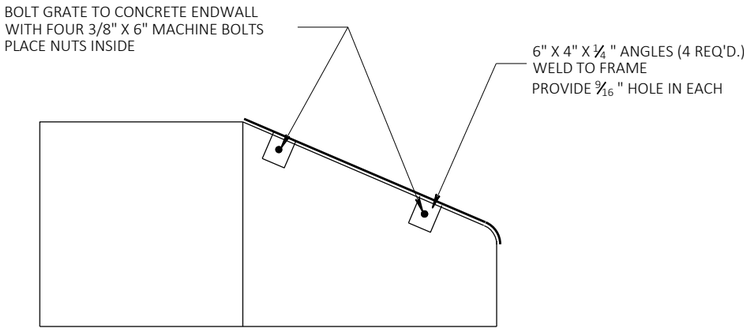
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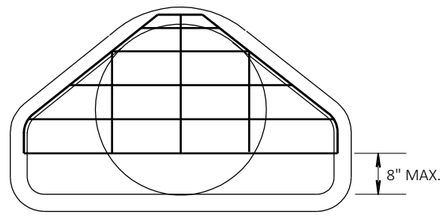




AT EACH PIPE







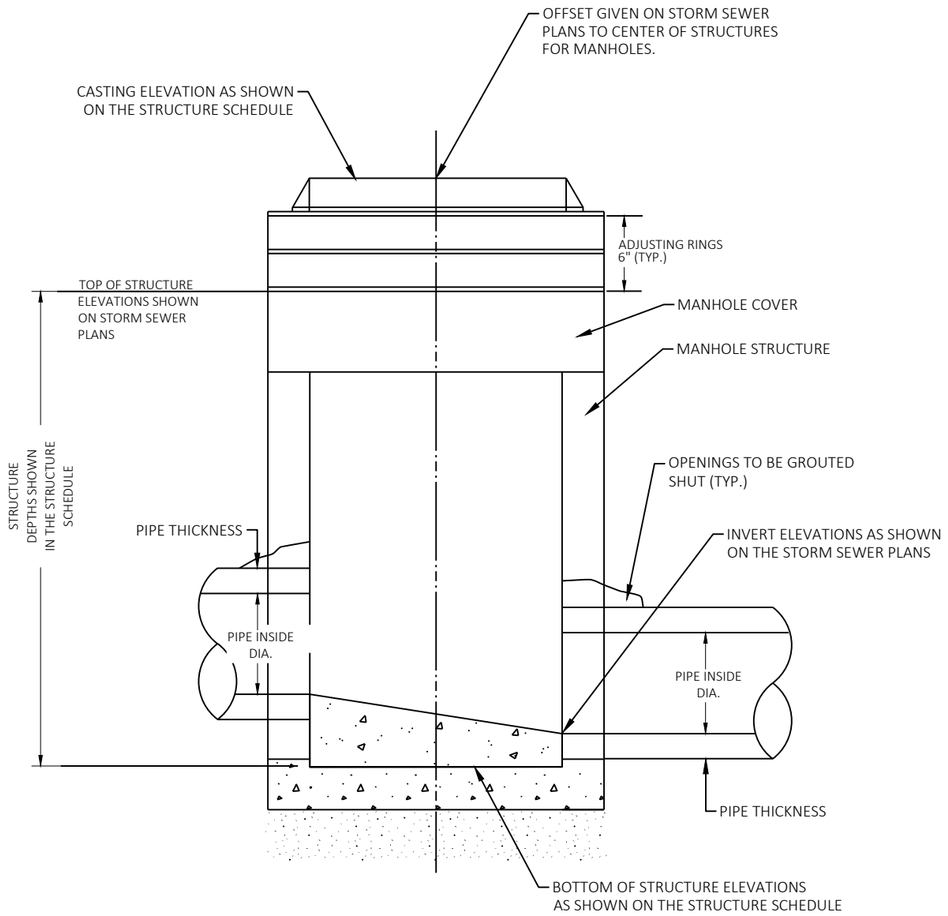
PIPE GRATE DETAIL

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAILS	SHEET 12	E

GENERAL NOTES:

GRANULAR BACKFILL REQUIRED AROUND MANHOLE
(INCIDENTAL TO CONSTRUCTION OF MANHOLE)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS, AND S.D.D. FOR MANHOLES

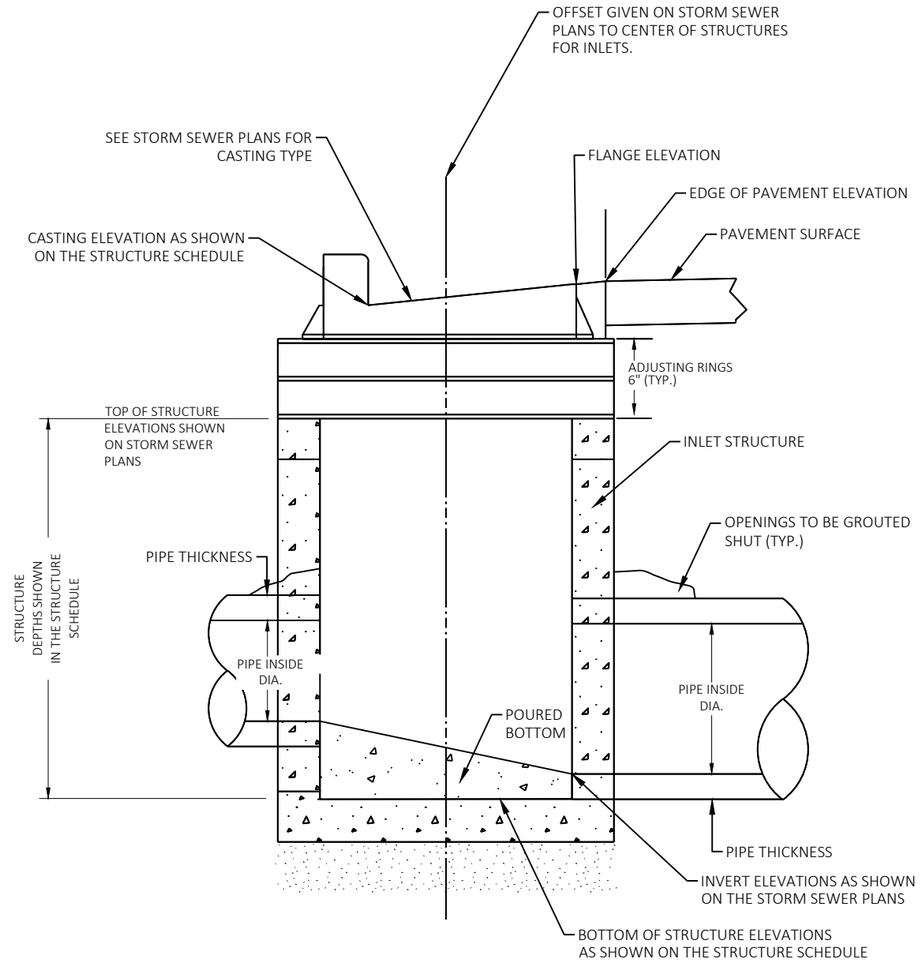


MANHOLE W/CASTING DETAIL

GENERAL NOTES:

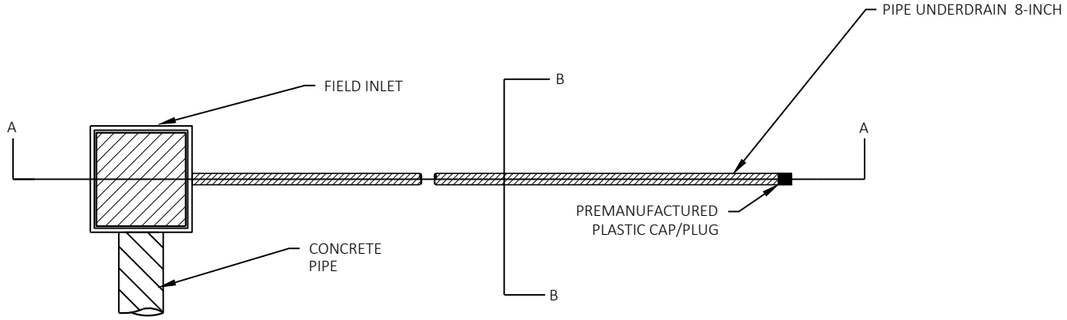
GRANULAR BACKFILL REQUIRED AROUND INLET
(INCIDENTAL TO CONSTRUCTION OF INLET)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS, AND S.D.D. FOR INLETS



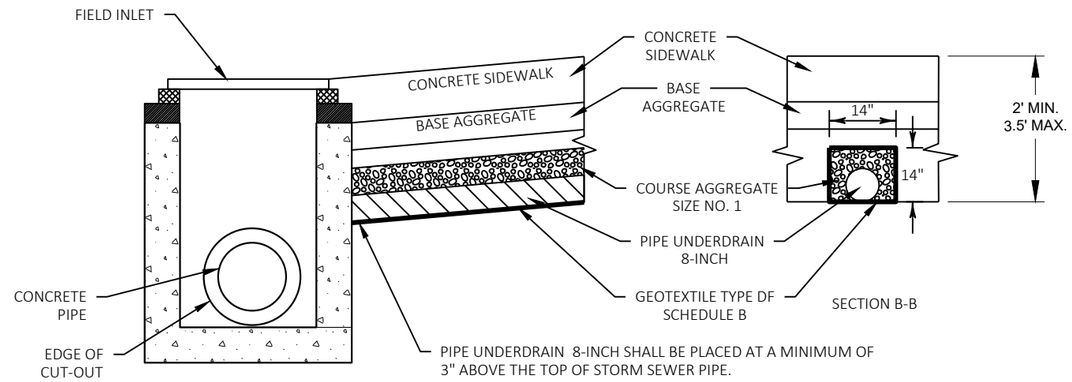
INLET W/CASTING DETAIL

2



TOP VIEW

SPLIT DETAIL



SECTION A-A

TYPICAL INLET
CONFIGURATION WITH
UNDERDRAIN CORED
INTO INLET WALL

NOTE:
1. BOTTOM OF PIPE SHALL BE PLACED AT THE BOTTOM OF AGGREGATE.
2. ELEVATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
3. MAINTAIN MINIMUM UNDERDRAIN SLOPE OF 0.5%.

PIPE UNDERDRAIN (8-INCH) WITH GEOTEXTILE FABRIC AND AGGREGATE

(SEE STORM SEWER PLANS
FOR LOCATIONS)

2

N

BOLLARD, SEE DETAIL

INSTALL SECURITY FENCE GATE 4-FT IN TWO OPPOSING CORNERS OF THE PAD AREA. EXACT LOCATIONS TO BE DETERMINED ON SITE AND AGREED TO BY BHM.

SPACE BOLLARDS TO AVOID BLOCKING GATE OPENING ENVELOPE.

60.7'
5.0'
3.0'
1.5'
24.0'
4.6'
3.0'
4.0'
4.6'
5.6'
15.0'
11.7'
3.8'
5.0'
6.0'
5.0'
13.8'
17.8'

PROPOSED LP TANK, 2000 GALLONS

CHAIN LINK FENCE 6-FT. PLACEMENT TO MAINTAIN 3' MINIMUM LATERAL CLEARANCE FROM TANK AND 5' MINIMUM FROM GENERATOR.

CONCRETE PAD, SEE DETAILS

PROPOSED GENERATOR

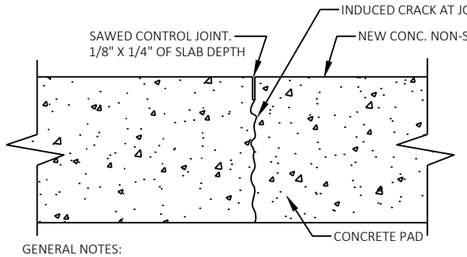
REST AREA RAMP B

1184+00 RB

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL - LP TANK AND GENERATOR PAD	SHEET 15	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\021005-CD_79_LP TANK PAD.DWG
LAYOUT NAME - Preferred
PLOT DATE : 2/1/2024 10:49 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

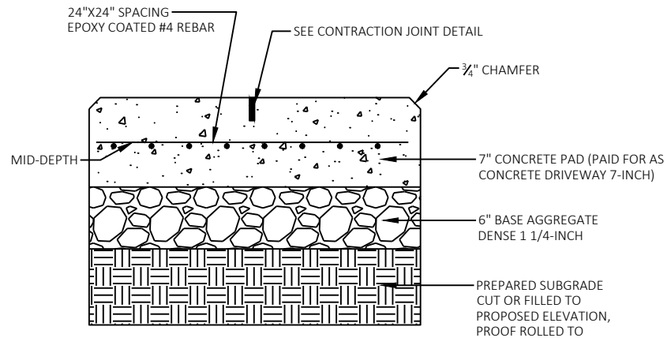
2



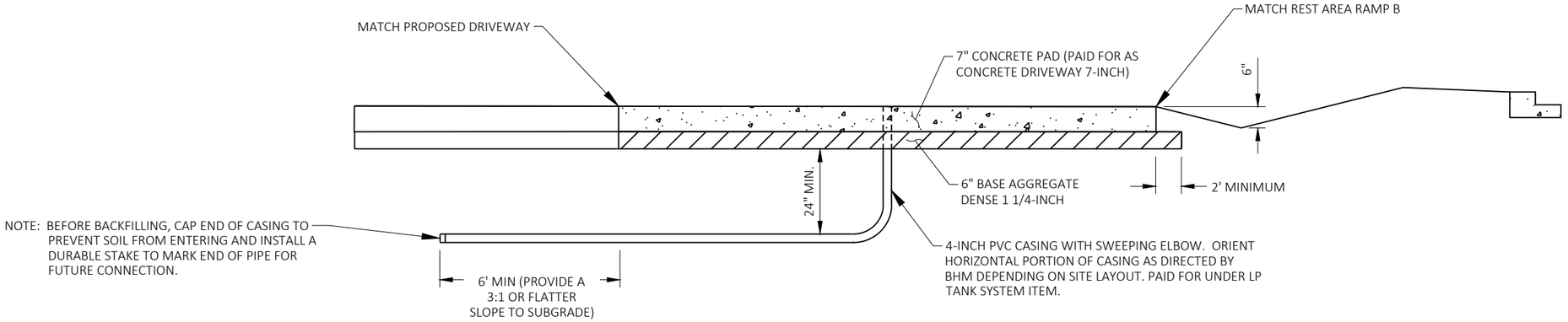
GENERAL NOTES:

1. CONTROL JOINTS SHALL BE SAWED ¼" PER 1" OF DEPTH OF THE CONCRETE PAD.
2. CONTROL JOINTS SHALL BE PLACED ON A 12' X 12' GRID (MAXIMUM) SO THAT THE TOTAL SQUARE FOOTAGE OF THE SLAB DOES NOT EXCEED 150 SQUARE FEET TOTAL SURFACE AREA.

CONTRACTION JOINT DETAIL



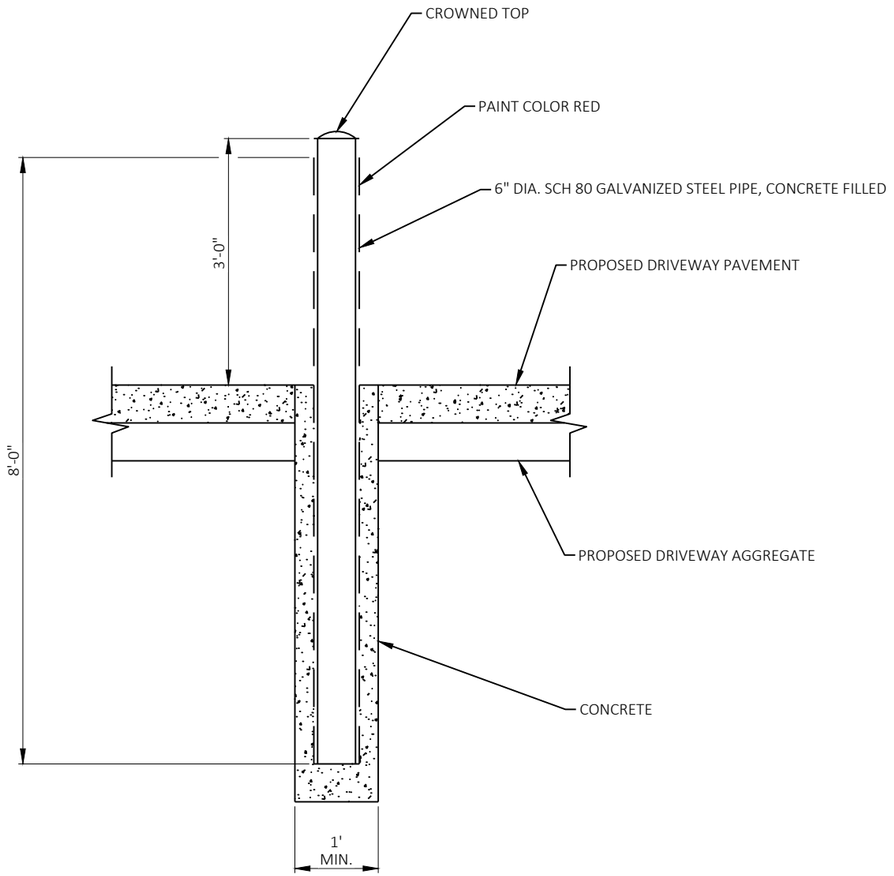
CONCRETE PAD CROSS SECTION DETAIL



LP TANK PIPE SYSTEM DETAIL

LP TANK AND GENERATOR PAD DETAILS

2



BOLLARD

SEE PLANS FOR LOCATIONS

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL - LP TANK AND GENERATOR PAD	SHEET 17	E

2

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE
TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS.
SHOWN FOR COORDINATION/INFORMATION ONLY.

1184+00 RA

REST AREA RAMP A

1182+00 RA

1071-07-79/80 PROJECT BOUNDARY

1182+00 RB

REST AREA RAMP B

1184+00 RB

1186+00 RB

REST AREA RAMP B / CAR PARKING AREA

1188+

MATCH LINE STA 1188+00 RB

PROJECT 1071-07-80 SLOPE
INTERCEPTS BY OTHERS (TYP.)

POST

POST

POST

POST

POST

POST

POST

IH 90 WB

LEGEND

OR

GRUBBING

REMOVING CONCRETE PAVEMENT

REMOVING FENCE

REMOVING SMALL PIPE CULVERTS

SAWING CONCRETE

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REMOVAL PLANS - REST AREA RAMP B	SHEET 18	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\021102-RM_79.DWG
LAYOUT NAME - B2

PLOT DATE : 2/14/2024 10:48 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

REMOVE ENTIRE LENGTH OF SMALL PIPE CULVERT

1194+00 RA

REST AREA RAMP A

MATCH LINE STA 1188+00 RB

00 RB

1190+00 RB

1192+00 RB

1194+00 RB

REST AREA RAMP B / CAR PARKING AREA

REST AREA RAMP B

1071-07-79/80 PROJECT BOUNDARY

PROJECT 1071-07-80 SLOPE
INTERCEPTS BY OTHERS (TYP.)

SAW

WELL

WELL

WELL

WELL

LEGEND

OR

GRUBBING

REMOVING CONCRETE PAVEMENT

REMOVING FENCE

REMOVING SMALL PIPE CULVERTS

SAWING CONCRETE

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE
TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS.
SHOWN FOR COORDINATION/INFORMATION ONLY.

N

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REMOVAL PLANS - REST AREA RAMP B	SHEET 19	E

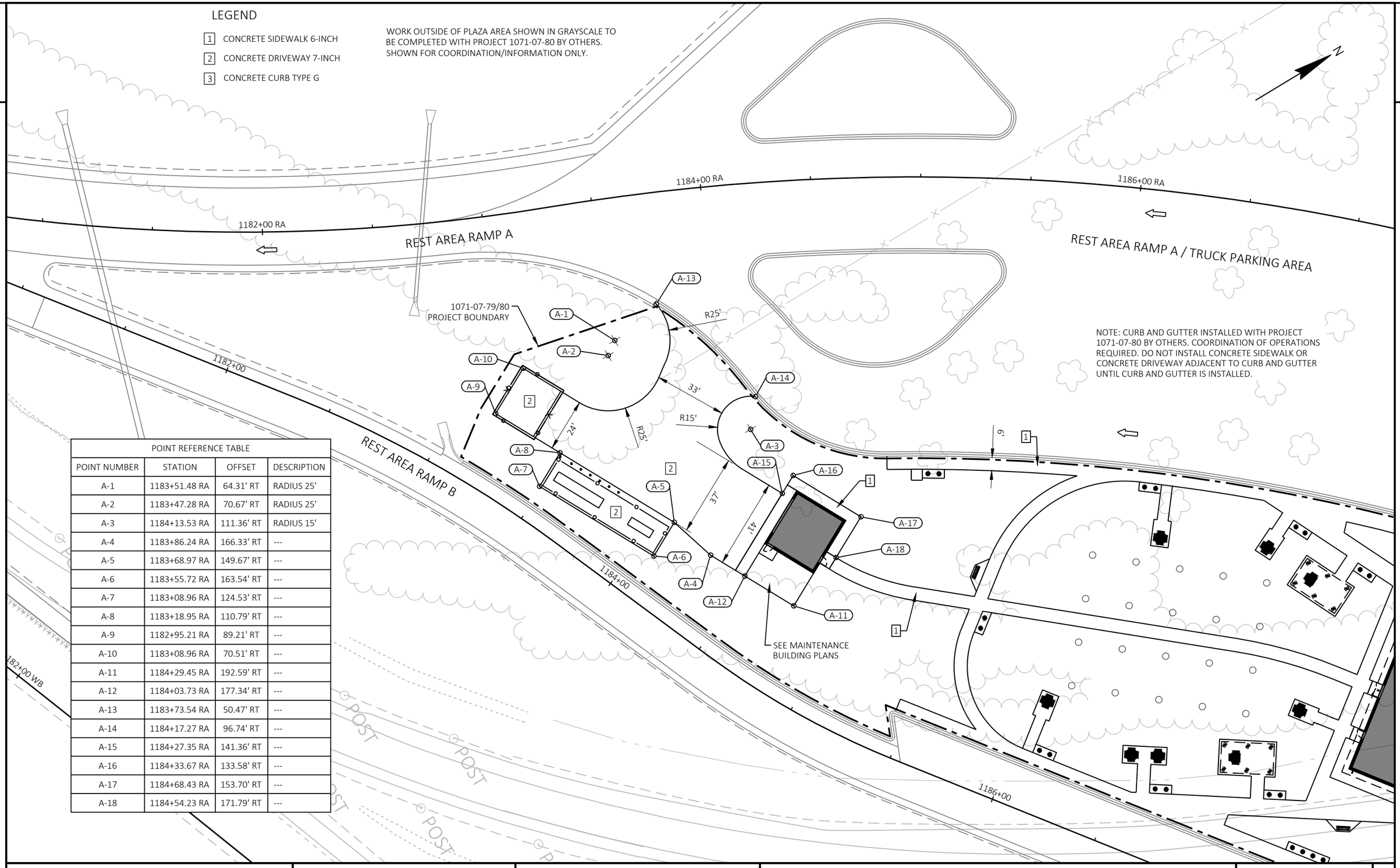
FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\021102-RM_79.DWG
LAYOUT NAME - B3

PLOT DATE : 2/14/2024 10:48 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:50 FT

LEGEND

1. CONCRETE SIDEWALK 6-INCH
2. CONCRETE DRIVEWAY 7-INCH
3. CONCRETE CURB TYPE G

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR COORDINATION/INFORMATION ONLY.



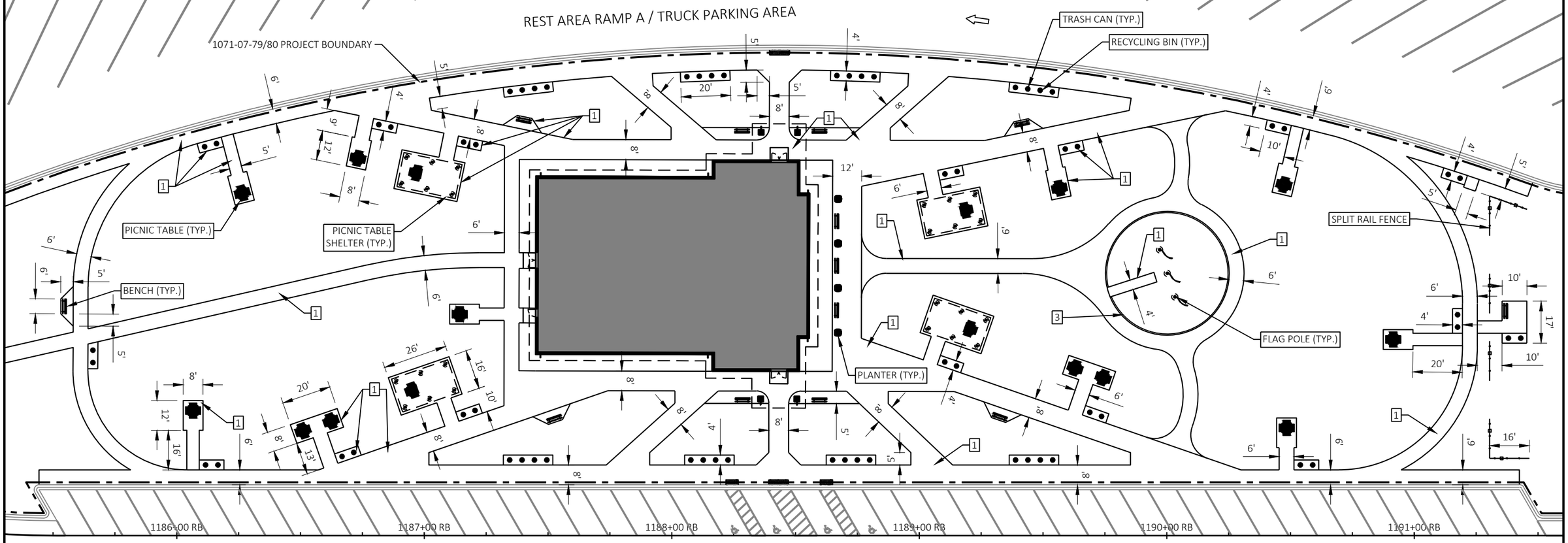
NOTE: CURB AND GUTTER INSTALLED WITH PROJECT 1071-07-80 BY OTHERS. COORDINATION OF OPERATIONS REQUIRED. DO NOT INSTALL CONCRETE SIDEWALK OR CONCRETE DRIVEWAY ADJACENT TO CURB AND GUTTER UNTIL CURB AND GUTTER IS INSTALLED.

POINT REFERENCE TABLE			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
A-1	1183+51.48 RA	64.31' RT	RADIUS 25'
A-2	1183+47.28 RA	70.67' RT	RADIUS 25'
A-3	1184+13.53 RA	111.36' RT	RADIUS 15'
A-4	1183+86.24 RA	166.33' RT	---
A-5	1183+68.97 RA	149.67' RT	---
A-6	1183+55.72 RA	163.54' RT	---
A-7	1183+08.96 RA	124.53' RT	---
A-8	1183+18.95 RA	110.79' RT	---
A-9	1182+95.21 RA	89.21' RT	---
A-10	1183+08.96 RA	70.51' RT	---
A-11	1184+29.45 RA	192.59' RT	---
A-12	1184+03.73 RA	177.34' RT	---
A-13	1183+73.54 RA	50.47' RT	---
A-14	1184+17.27 RA	96.74' RT	---
A-15	1184+27.35 RA	141.36' RT	---
A-16	1184+33.67 RA	133.58' RT	---
A-17	1184+68.43 RA	153.70' RT	---
A-18	1184+54.23 RA	171.79' RT	---

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS - REST AREA RAMP A	SHEET 20	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\021201-PD_79.DWG
LAYOUT NAME - 05
PLOT DATE : 2/14/2024 11:01 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

NOTE: CURB AND GUTTER INSTALLED WITH PROJECT 1071-07-80 BY OTHERS. COORDINATION OF OPERATIONS REQUIRED. DO NOT INSTALL CONCRETE SIDEWALK OR CONCRETE DRIVEWAY ADJACENT TO CURB AND GUTTER UNTIL CURB AND GUTTER IS INSTALLED.



LEGEND

1. CONCRETE SIDEWALK 6-INCH
2. CONCRETE DRIVEWAY 7-INCH
3. CONCRETE CURB TYPE G

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR COORDINATION/INFORMATION ONLY.

NOTES:

WIDTH AND RADIUS DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT.

MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS - REST AREA PLAZA	SHEET 21	E

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P1-1	1185+13.06 RA	92.90' RT	---	RADIUS 94'
P1-2	1186+14.71 RA	192.50' RT	---	RADIUS 60'
P1-3	1185+78.57 RA	219.44' RT	---	RADIUS 40'
P1-7	1184+88.64 RA	236.69' RT	781.68	---
P1-8	1184+82.80 RA	132.50' RT	780.86	---
P1-9	1185+81.98 RA	132.50' RT	781.23	---
P1-10	1186+80.36 RA	132.50' RT	781.73	---
P1-11	1185+33.98 RA	250.07' RT	781.63	---
P1-12	1186+91.86 RA	280.41' RT	782.07	---
P1-13	1186+31.43 RA	272.50' RT	781.82	---
P1-14	1187+55.91 RA	207.87' RT	783.35	---
P1-15	1187+56.95 RA	201.59' RT	783.35	---
P1-16	1187+38.09 RA	261.93' RT	783.20	---
P1-17	1187+48.72 RA	248.82' RT	783.35	---
P1-18	1187+95.17 RA	260.91' RT	783.27	---
P1-19	1188+31.46 RA	262.96' RT	783.27	---
P1-20	1188+31.07 RA	267.96' RT	783.17	---
P1-21	1187+90.41 RA	290.74' RT	782.43	---
P1-22	1188+14.83 RA	292.21' RT	782.52	---
P1-23	1188+15.33 RA	287.22' RT	782.61	---
P1-24	1188+75.28 RA	294.04' RT	782.40	---
P1-25	1188+82.36 RA	289.09' RT	782.46	---
P1-26	1188+75.78 RA	269.17' RT	---	RADIUS 5'
P1-30	1188+54.95 RA	263.78' RT	783.27	---
P1-31	1188+47.16 RA	268.60' RT	783.22	---
P1-32	1188+82.57 RA	269.22' RT	783.19	---
P1-38	1186+93.17 RA	275.50' RT	782.17	---
P1-39	1185+30.42 RA	189.80' RT	782.32	---
P1-40	1185+37.93 RA	190.56' RT	782.32	---
P1-41	1185+27.78 RA	195.58' RT	782.36	---
P1-42	1185+35.35 RA	196.35' RT	782.38	---
P1-43	1187+24.74 RA	134.50' RT	781.98	---
P1-44	1187+24.74 RA	139.50' RT	782.06	---
P1-45	1187+56.59 RA	157.90' RT	783.27	---
P1-46	1187+62.81 RA	164.23' RT	783.35	---
P1-47	1187+89.36 RA	158.57' RT	783.27	---
P1-48	1188+10.11 RA	134.50' RT	782.41	---
P1-49	1188+29.22 RA	134.50' RT	782.51	---
P1-50	1188+29.22 RA	139.50' RT	782.66	---
P1-51	1188+36.66 RA	156.61' RT	783.10	---

REST AREA RAMP A / TRUCK PARKING AREA

1185+00 RA

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR COORDINATION/INFORMATION ONLY.

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1071-07-79/80
PROJECT BOUNDARY

P1-1 P1-2 P1-3 P1-4 P1-7 P1-8 P1-9 P1-10 P1-11 P1-12 P1-13 P1-14 P1-15 P1-16 P1-17 P1-18 P1-19 P1-20 P1-21 P1-22 P1-23 P1-24 P1-25 P1-26 P1-30 P1-31 P1-32 P1-38 P1-39 P1-40 P1-41 P1-42 P1-43 P1-44 P1-45 P1-46 P1-47 P1-48 P1-49 P1-50 P1-51 P1-52 P1-53 P1-54 P1-60 P1-61 P1-63 P1-64 P1-102 P1-103 P1-104 P1-105

R60' R94' R40' R200' R5' R5' R5'

1185+00 RB 1186+00 RB 1187+00 RB 1188+00 RB

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P1-52	1188+36.34 RA	161.60' RT	783.27	---
P1-53	1188+57.99 RA	162.39' RT	783.27	---
P1-54	1188+51.24 RA	157.18' RT	783.22	---
P1-60	1188+77.67 RA	157.76' RT	---	RADIUS 5'
P1-61	1188+83.59 RA	157.81' RT	783.19	---
P1-63	1188+78.01 RA	134.50' RT	782.42	---
P1-64	1188+83.73 RA	139.50' RT	782.49	---
P1-102	1187+53.21 RA	223.72' RT	783.35	---
P1-103	1187+52.17 RA	229.67' RT	783.35	---
P1-104	1184+54.23 RA	171.79' RT	781.80	---
P1-105	1184+50.20 RA	176.77' RT	781.80	---

REST AREA RAMP B / CAR PARKING AREA

NOTES:

WIDTH AND RADIUS DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT.

MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

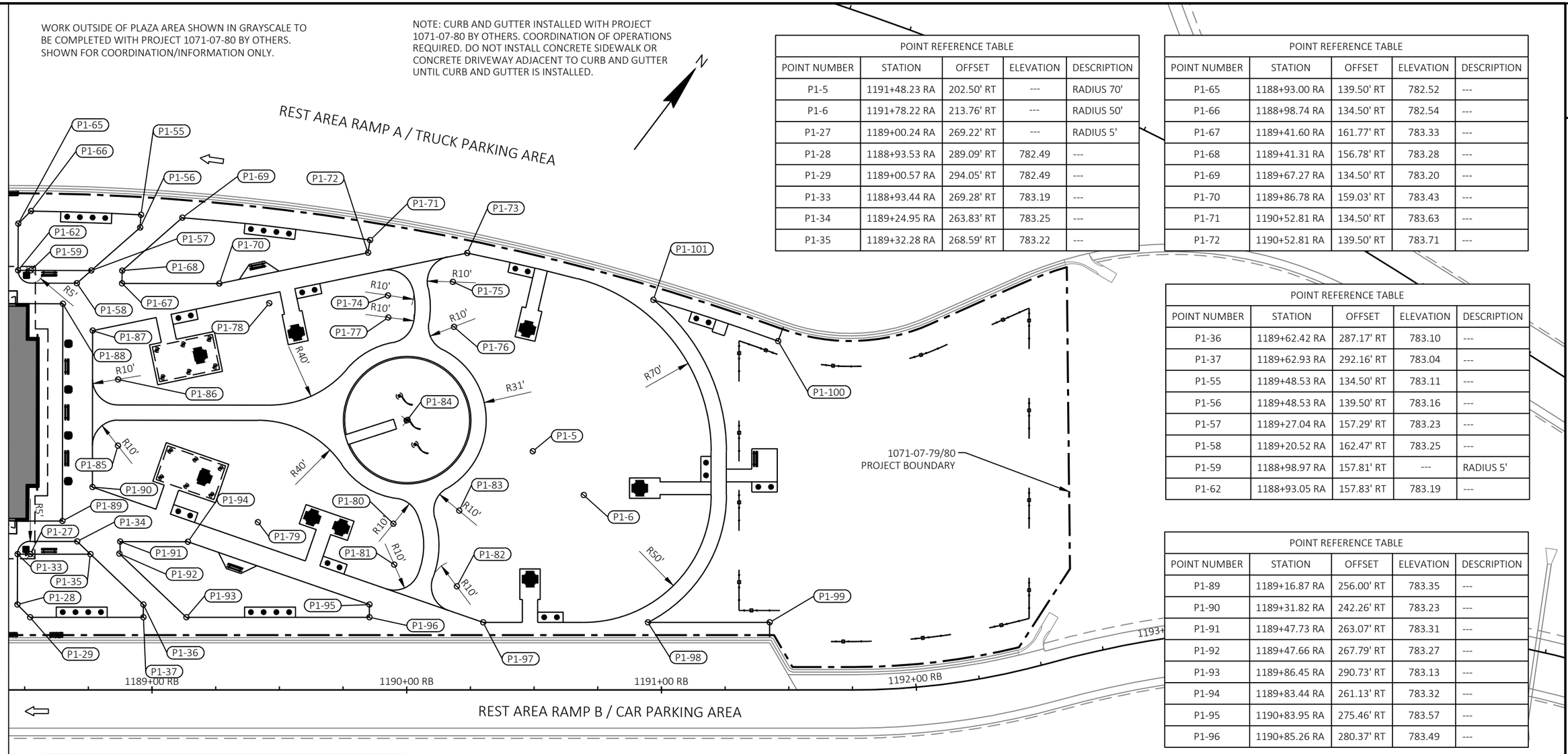
MATCH LINE A

2

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS - REST AREA PLAZA	SHEET 22	E

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR COORDINATION/INFORMATION ONLY.

NOTE: CURB AND GUTTER INSTALLED WITH PROJECT 1071-07-80 BY OTHERS. COORDINATION OF OPERATIONS REQUIRED. DO NOT INSTALL CONCRETE SIDEWALK OR CONCRETE DRIVEWAY ADJACENT TO CURB AND GUTTER UNTIL CURB AND GUTTER IS INSTALLED.



POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P1-5	1191+48.23 RA	202.50' RT	---	RADIUS 70'
P1-6	1191+78.22 RA	213.76' RT	---	RADIUS 50'
P1-27	1189+00.24 RA	269.22' RT	---	RADIUS 5'
P1-28	1188+93.53 RA	289.09' RT	782.49	---
P1-29	1189+00.57 RA	294.05' RT	782.49	---
P1-33	1188+93.44 RA	269.28' RT	783.19	---
P1-34	1189+24.95 RA	263.83' RT	783.25	---
P1-35	1189+32.28 RA	268.59' RT	783.22	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P1-65	1188+93.00 RA	139.50' RT	782.52	---
P1-66	1188+98.74 RA	134.50' RT	782.54	---
P1-67	1189+41.60 RA	161.77' RT	783.33	---
P1-68	1189+41.31 RA	156.78' RT	783.28	---
P1-69	1189+67.27 RA	134.50' RT	783.20	---
P1-70	1189+86.78 RA	159.03' RT	783.43	---
P1-71	1190+52.81 RA	134.50' RT	783.63	---
P1-72	1190+52.81 RA	139.50' RT	783.71	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P1-36	1189+62.42 RA	287.17' RT	783.10	---
P1-37	1189+62.93 RA	292.16' RT	783.04	---
P1-55	1189+48.53 RA	134.50' RT	783.11	---
P1-56	1189+48.53 RA	139.50' RT	783.16	---
P1-57	1189+27.04 RA	157.29' RT	783.23	---
P1-58	1189+20.52 RA	162.47' RT	783.25	---
P1-59	1188+98.97 RA	157.81' RT	---	RADIUS 5'
P1-62	1188+93.05 RA	157.83' RT	783.19	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P1-89	1189+16.87 RA	256.00' RT	783.35	---
P1-90	1189+31.82 RA	242.26' RT	783.23	---
P1-91	1189+47.73 RA	263.07' RT	783.31	---
P1-92	1189+47.66 RA	267.79' RT	783.27	---
P1-93	1189+86.45 RA	290.73' RT	783.13	---
P1-94	1189+83.44 RA	261.13' RT	783.32	---
P1-95	1190+83.95 RA	275.46' RT	783.57	---
P1-96	1190+85.26 RA	280.37' RT	783.49	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P1-73	1190+97.02 RA	132.50' RT	783.81	---
P1-74	1190+65.11 RA	154.72' RT	---	RADIUS 10'
P1-75	1190+93.28 RA	144.79' RT	---	RADIUS 10'
P1-76	1190+97.97 RA	161.98' RT	---	RADIUS 10'
P1-77	1190+67.05 RA	163.25' RT	---	RADIUS 10'
P1-78	1190+10.94 RA	164.62' RT	---	RADIUS 40'
P1-79	1190+18.78 RA	250.50' RT	---	RADIUS 40'
P1-80	1190+88.11 RA	242.47' RT	---	RADIUS 10'

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P1-81	1190+92.77 RA	258.19' RT	---	RADIUS 10'
P1-82	1191+27.45 RA	261.20' RT	---	RADIUS 10'
P1-83	1191+19.65 RA	232.08' RT	---	RADIUS 10'
P1-84	1190+84.89 RA	201.54' RT	---	RADIUS 31'
P1-85	1189+43.80 RA	225.50' RT	---	RADIUS 10'
P1-86	1189+42.11 RA	199.53' RT	---	RADIUS 10'
P1-87	1189+28.79 RA	180.86' RT	783.23	---
P1-88	1189+14.21 RA	170.69' RT	783.35	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P1-97	1191+45.61 RA	272.45' RT	783.64	---
P1-98	1192+29.14 RA	253.73' RT	783.70	---
P1-99	1192+87.97 RA	236.75' RT	783.59	---
P1-100	1192+42.98 RA	132.50' RT	783.82	---
P1-101	1191+83.68 RA	132.50' RT	783.95	---

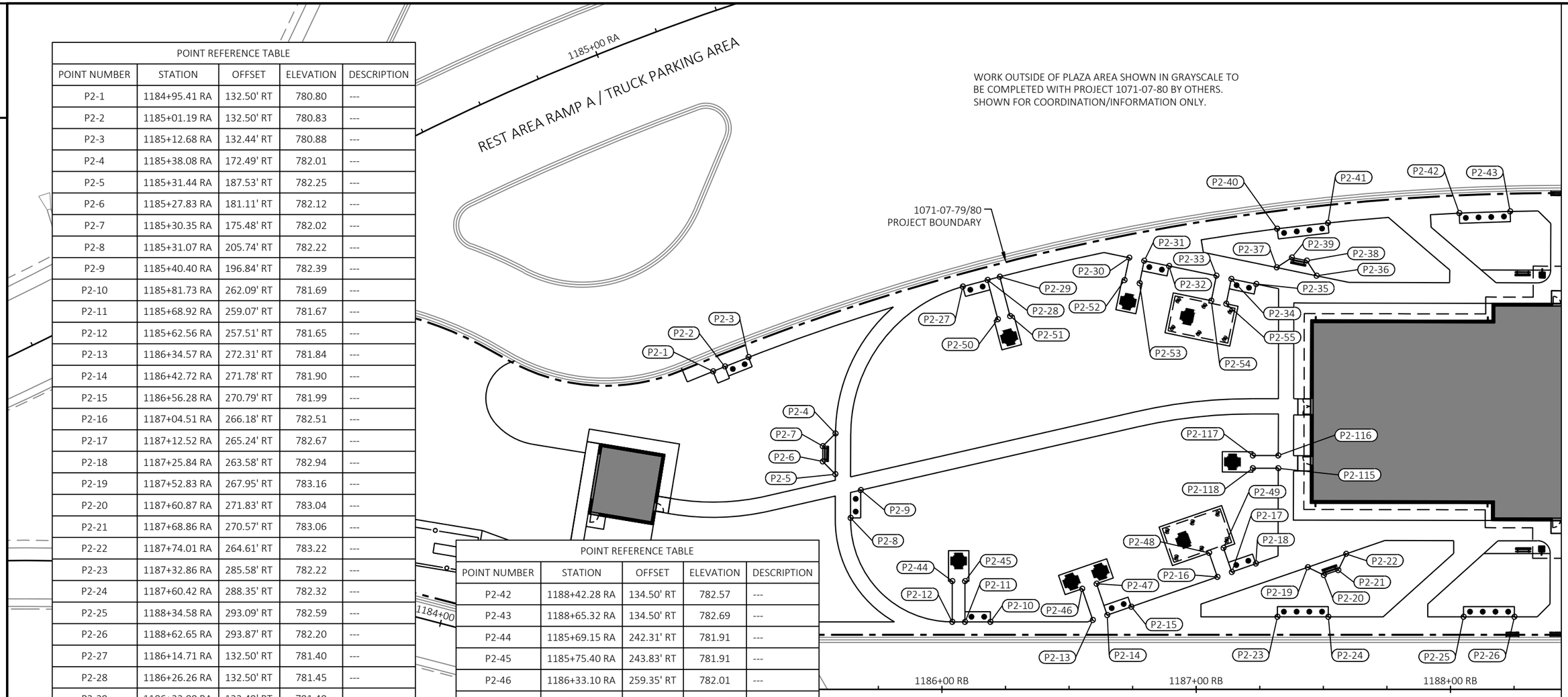
NOTES:

WIDTH AND RADIUS DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT.

MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

2

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-1	1184+95.41 RA	132.50' RT	780.80	---
P2-2	1185+01.19 RA	132.50' RT	780.83	---
P2-3	1185+12.68 RA	132.44' RT	780.88	---
P2-4	1185+38.08 RA	172.49' RT	782.01	---
P2-5	1185+31.44 RA	187.53' RT	782.25	---
P2-6	1185+27.83 RA	181.11' RT	782.12	---
P2-7	1185+30.35 RA	175.48' RT	782.02	---
P2-8	1185+31.07 RA	205.74' RT	782.22	---
P2-9	1185+40.40 RA	196.84' RT	782.39	---
P2-10	1185+81.73 RA	262.09' RT	781.69	---
P2-11	1185+68.92 RA	259.07' RT	781.67	---
P2-12	1185+62.56 RA	257.51' RT	781.65	---
P2-13	1186+34.57 RA	272.31' RT	781.84	---
P2-14	1186+42.72 RA	271.78' RT	781.90	---
P2-15	1186+56.28 RA	270.79' RT	781.99	---
P2-16	1187+04.51 RA	266.18' RT	782.51	---
P2-17	1187+12.52 RA	265.24' RT	782.67	---
P2-18	1187+25.84 RA	263.58' RT	782.94	---
P2-19	1187+52.83 RA	267.95' RT	783.16	---
P2-20	1187+60.87 RA	271.83' RT	783.04	---
P2-21	1187+68.86 RA	270.57' RT	783.06	---
P2-22	1187+74.01 RA	264.61' RT	783.22	---
P2-23	1187+32.86 RA	285.58' RT	782.22	---
P2-24	1187+60.42 RA	288.35' RT	782.32	---
P2-25	1188+34.58 RA	293.09' RT	782.59	---
P2-26	1188+62.65 RA	293.87' RT	782.20	---
P2-27	1186+14.71 RA	132.50' RT	781.40	---
P2-28	1186+26.26 RA	132.50' RT	781.45	---
P2-29	1186+32.00 RA	132.49' RT	781.48	---
P2-30	1186+91.09 RA	136.47' RT	781.84	---
P2-31	1186+97.49 RA	138.77' RT	781.91	---
P2-32	1187+08.24 RA	142.54' RT	782.02	---
P2-33	1187+28.93 RA	149.42' RT	782.39	---
P2-34	1187+35.52 RA	151.51' RT	782.60	---
P2-35	1187+46.58 RA	154.93' RT	782.95	---
P2-36	1187+74.85 RA	154.66' RT	783.24	---
P2-37	1187+57.02 RA	149.57' RT	783.10	---
P2-38	1187+71.10 RA	148.35' RT	783.03	---
P2-39	1187+64.44 RA	146.45' RT	782.93	---
P2-40	1187+59.42 RA	134.50' RT	782.15	---
P2-41	1187+82.57 RA	134.50' RT	782.27	---



POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-42	1188+42.28 RA	134.50' RT	782.57	---
P2-43	1188+65.32 RA	134.50' RT	782.69	---
P2-44	1185+69.15 RA	242.31' RT	781.91	---
P2-45	1185+75.40 RA	243.83' RT	781.91	---
P2-46	1186+33.10 RA	259.35' RT	782.01	---
P2-47	1186+41.12 RA	258.83' RT	782.07	---
P2-48	1187+02.47 RA	256.30' RT	782.55	---
P2-49	1187+10.39 RA	255.37' RT	782.68	---
P2-50	1186+26.26 RA	148.50' RT	781.77	---
P2-51	1186+32.11 RA	148.49' RT	781.80	---
P2-52	1186+87.03 RA	144.76' RT	782.05	---
P2-53	1186+93.49 RA	147.09' RT	782.17	---
P2-54	1187+24.75 RA	158.77' RT	782.69	---
P2-55	1187+31.41 RA	160.89' RT	782.78	---
P2-115	1187+44.69 RA	227.85' RT	783.29	---
P2-116	1187+45.60 RA	222.90' RT	783.29	---
P2-117	1187+32.96 RA	221.42' RT	783.27	---
P2-118	1187+31.97 RA	226.36' RT	783.26	---

NOTES:

WIDTH AND RADIUS DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT.

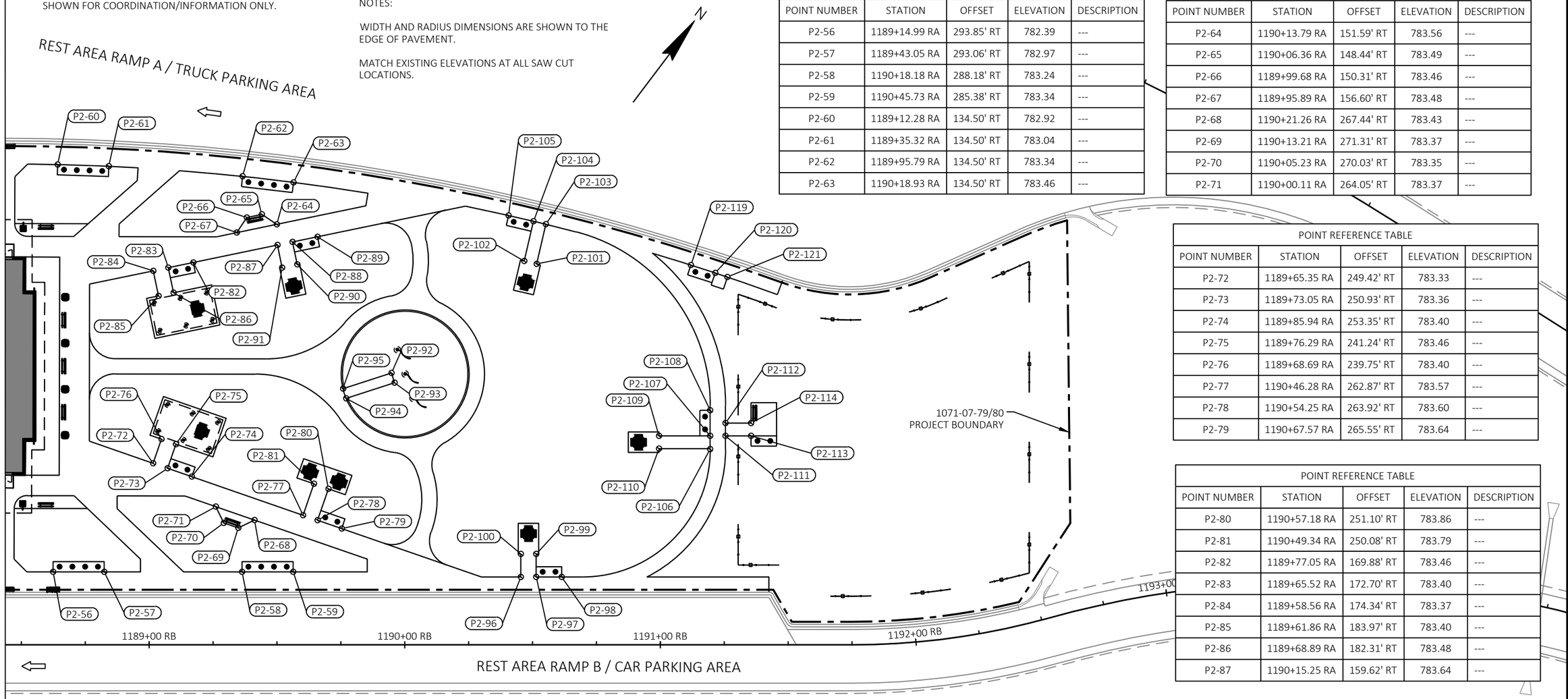
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR COORDINATION/INFORMATION ONLY.

NOTES:

WIDTH AND RADIUS DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT.

MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.



POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-56	1189+14.99 RA	293.85' RT	782.39	---
P2-57	1189+43.05 RA	293.06' RT	782.97	---
P2-58	1190+18.18 RA	288.18' RT	783.24	---
P2-59	1190+45.73 RA	285.38' RT	783.34	---
P2-60	1189+12.28 RA	134.50' RT	782.92	---
P2-61	1189+35.32 RA	134.50' RT	783.04	---
P2-62	1189+95.79 RA	134.50' RT	783.34	---
P2-63	1190+18.93 RA	134.50' RT	783.46	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-64	1190+13.79 RA	151.59' RT	783.56	---
P2-65	1190+06.36 RA	148.44' RT	783.49	---
P2-66	1189+99.68 RA	150.31' RT	783.46	---
P2-67	1189+95.89 RA	156.60' RT	783.48	---
P2-68	1190+21.26 RA	267.44' RT	783.43	---
P2-69	1190+13.21 RA	271.31' RT	783.37	---
P2-70	1190+05.23 RA	270.03' RT	783.35	---
P2-71	1190+00.11 RA	264.05' RT	783.37	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-72	1189+65.35 RA	249.42' RT	783.33	---
P2-73	1189+73.05 RA	250.93' RT	783.36	---
P2-74	1189+85.94 RA	253.35' RT	783.40	---
P2-75	1189+76.29 RA	241.24' RT	783.46	---
P2-76	1189+68.69 RA	239.75' RT	783.40	---
P2-77	1190+46.28 RA	262.87' RT	783.57	---
P2-78	1190+54.25 RA	263.92' RT	783.60	---
P2-79	1190+67.57 RA	265.55' RT	783.64	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-80	1190+57.18 RA	251.10' RT	783.86	---
P2-81	1190+49.34 RA	250.08' RT	783.79	---
P2-82	1189+77.05 RA	169.88' RT	783.46	---
P2-83	1189+65.52 RA	172.70' RT	783.40	---
P2-84	1189+58.56 RA	174.34' RT	783.37	---
P2-85	1189+61.86 RA	183.97' RT	783.40	---
P2-86	1189+68.89 RA	182.31' RT	783.48	---
P2-87	1190+15.25 RA	159.62' RT	783.64	---

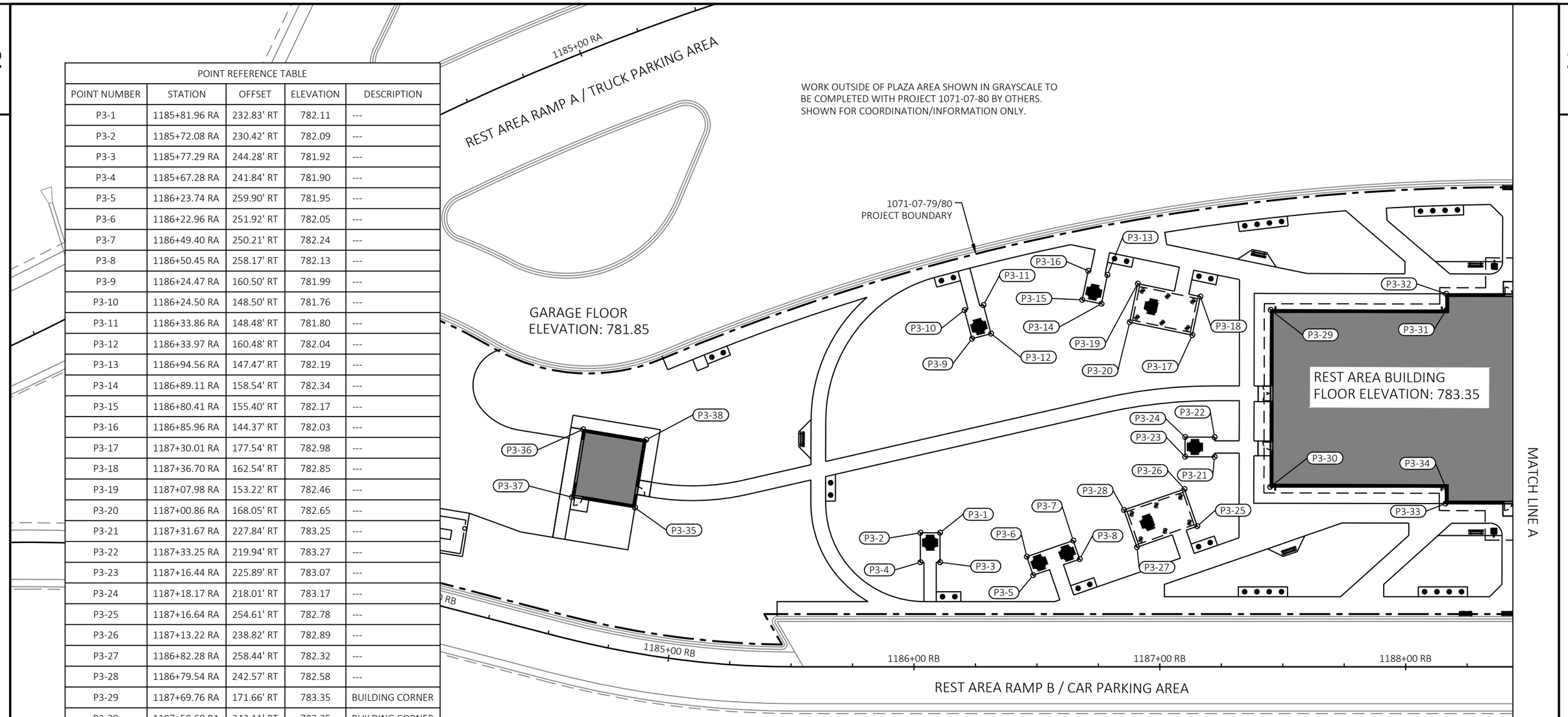
POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-88	1190+21.97 RA	157.66' RT	783.67	---
P2-89	1190+33.09 RA	154.31' RT	783.72	---
P2-90	1190+25.51 RA	166.15' RT	783.78	---
P2-91	1190+18.73 RA	168.13' RT	783.70	---
P2-92	1190+78.23 RA	202.19' RT	785.88	---
P2-93	1190+80.62 RA	205.71' RT	785.88	---
P2-94	1190+58.47 RA	215.08' RT	784.24	---
P2-95	1190+56.15 RA	211.53' RT	784.20	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-96	1191+65.92 RA	268.45' RT	783.68	---
P2-97	1191+73.75 RA	266.81' RT	783.69	---
P2-98	1191+86.72 RA	263.99' RT	783.70	---
P2-99	1191+70.42 RA	258.16' RT	783.83	---
P2-100	1191+62.67 RA	259.78' RT	783.82	---
P2-101	1191+34.33 RA	148.44' RT	784.14	---
P2-102	1191+28.48 RA	148.49' RT	784.14	---
P2-103	1191+34.12 RA	132.44' RT	783.91	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-104	1191+28.38 RA	132.50' RT	783.90	---
P2-105	1191+16.88 RA	132.50' RT	783.87	---
P2-106	1192+37.84 RA	198.34' RT	784.36	---
P2-107	1192+35.68 RA	193.43' RT	784.42	---
P2-108	1192+31.60 RA	184.00' RT	784.43	---
P2-109	1192+12.24 RA	199.89' RT	784.44	---
P2-110	1192+14.19 RA	204.64' RT	784.39	---
P2-111	1192+42.65 RA	191.40' RT	784.36	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P2-112	1192+40.56 RA	186.70' RT	784.41	---
P2-113	1192+54.17 RA	187.95' RT	784.26	---
P2-114	1192+52.03 RA	183.26' RT	784.31	---
P2-119	1192+01.86 RA	132.50' RT	783.93	---
P2-120	1192+13.36 RA	132.50' RT	783.90	---
P2-121	1192+19.14 RA	132.50' RT	783.88	---

POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P3-1	1185+81.96 RA	232.83' RT	782.11	---
P3-2	1185+72.08 RA	230.42' RT	782.09	---
P3-3	1185+77.29 RA	244.28' RT	781.92	---
P3-4	1185+67.28 RA	241.84' RT	781.90	---
P3-5	1186+23.74 RA	259.90' RT	781.95	---
P3-6	1186+22.96 RA	251.92' RT	782.05	---
P3-7	1186+49.40 RA	250.21' RT	782.24	---
P3-8	1186+50.45 RA	258.17' RT	782.13	---
P3-9	1186+24.47 RA	160.50' RT	781.99	---
P3-10	1186+24.50 RA	148.50' RT	781.76	---
P3-11	1186+33.86 RA	148.48' RT	781.80	---
P3-12	1186+33.97 RA	160.48' RT	782.04	---
P3-13	1186+94.56 RA	147.47' RT	782.19	---
P3-14	1186+89.11 RA	158.54' RT	782.34	---
P3-15	1186+80.41 RA	155.40' RT	782.17	---
P3-16	1186+85.96 RA	144.37' RT	782.03	---
P3-17	1187+30.01 RA	177.54' RT	782.98	---
P3-18	1187+36.70 RA	162.54' RT	782.85	---
P3-19	1187+07.98 RA	153.22' RT	782.46	---
P3-20	1187+00.86 RA	168.05' RT	782.65	---
P3-21	1187+31.67 RA	227.84' RT	783.25	---
P3-22	1187+33.25 RA	219.94' RT	783.27	---
P3-23	1187+16.44 RA	225.89' RT	783.07	---
P3-24	1187+18.17 RA	218.01' RT	783.17	---
P3-25	1187+16.64 RA	254.61' RT	782.78	---
P3-26	1187+13.22 RA	238.82' RT	782.89	---
P3-27	1186+82.28 RA	258.44' RT	782.32	---
P3-28	1186+79.54 RA	242.57' RT	782.58	---
P3-29	1187+69.76 RA	171.66' RT	783.35	BUILDING CORNER
P3-30	1187+58.60 RA	243.11' RT	783.35	BUILDING CORNER
P3-31	1188+55.59 RA	177.10' RT	783.35	BUILDING CORNER
P3-32	1188+55.86 RA	170.43' RT	783.35	BUILDING CORNER
P3-33	1188+52.00 RA	255.71' RT	783.35	BUILDING CORNER
P3-34	1188+52.34 RA	249.05' RT	783.35	BUILDING CORNER
P3-35	1184+41.56 RA	178.36' RT	781.85	BUILDING CORNER
P3-36	1184+35.11 RA	140.54' RT	781.85	BUILDING CORNER
P3-37	1184+16.04 RA	163.37' RT	781.85	BUILDING CORNER
P3-38	1184+60.27 RA	155.14' RT	781.85	BUILDING CORNER



NOTES:

WIDTH AND RADIUS DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT.

MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

VERIFY BUILDING LOCATION AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION. SEE BUILDING PLANS.

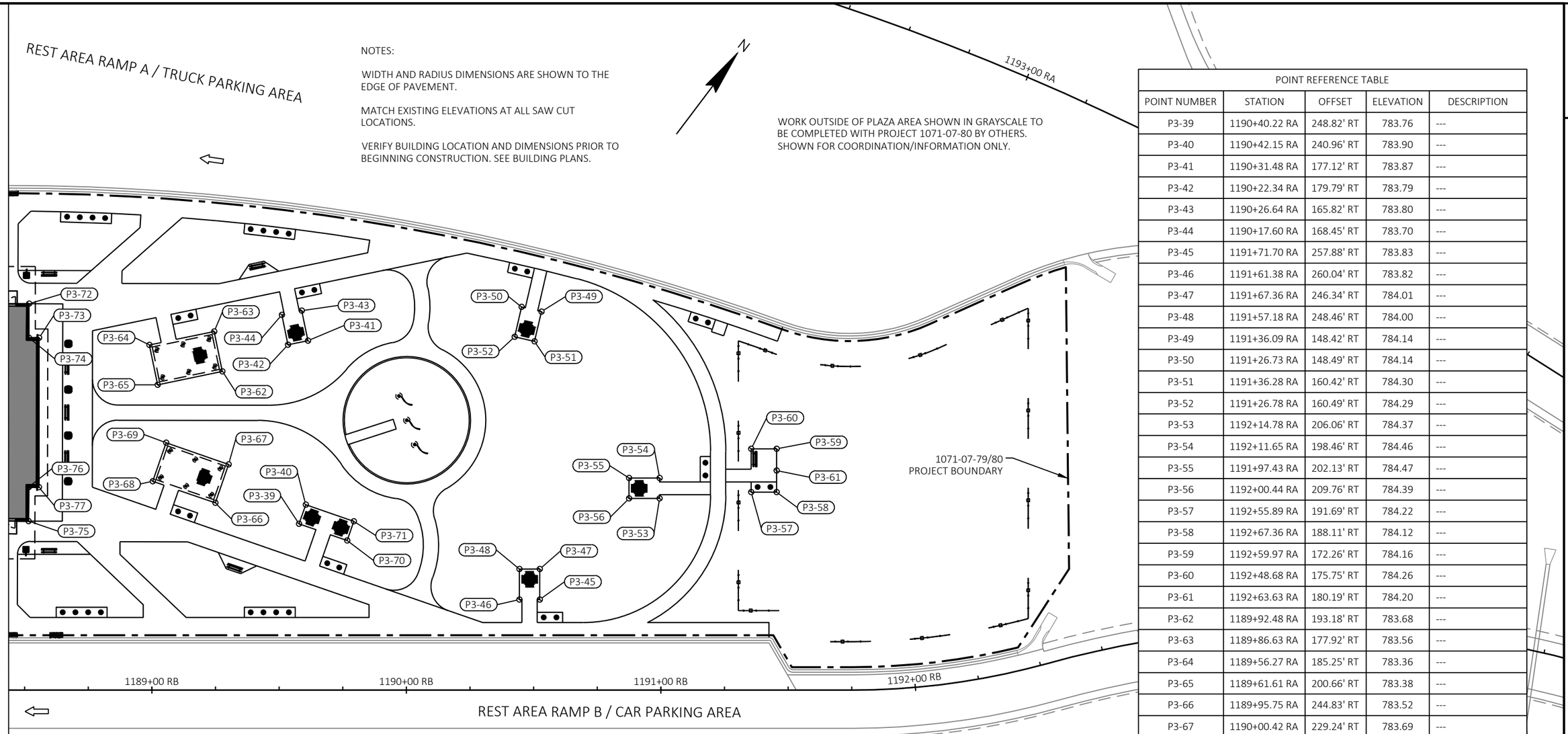
NOTES:

WIDTH AND RADIUS DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT.

MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS.

VERIFY BUILDING LOCATION AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION. SEE BUILDING PLANS.

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR COORDINATION/INFORMATION ONLY.



POINT REFERENCE TABLE				
POINT NUMBER	STATION	OFFSET	ELEVATION	DESCRIPTION
P3-39	1190+40.22 RA	248.82' RT	783.76	---
P3-40	1190+42.15 RA	240.96' RT	783.90	---
P3-41	1190+31.48 RA	177.12' RT	783.87	---
P3-42	1190+22.34 RA	179.79' RT	783.79	---
P3-43	1190+26.64 RA	165.82' RT	783.80	---
P3-44	1190+17.60 RA	168.45' RT	783.70	---
P3-45	1191+71.70 RA	257.88' RT	783.83	---
P3-46	1191+61.38 RA	260.04' RT	783.82	---
P3-47	1191+67.36 RA	246.34' RT	784.01	---
P3-48	1191+57.18 RA	248.46' RT	784.00	---
P3-49	1191+36.09 RA	148.42' RT	784.14	---
P3-50	1191+26.73 RA	148.49' RT	784.14	---
P3-51	1191+36.28 RA	160.42' RT	784.30	---
P3-52	1191+26.78 RA	160.49' RT	784.29	---
P3-53	1192+14.78 RA	206.06' RT	784.37	---
P3-54	1192+11.65 RA	198.46' RT	784.46	---
P3-55	1191+97.43 RA	202.13' RT	784.47	---
P3-56	1192+00.44 RA	209.76' RT	784.39	---
P3-57	1192+55.89 RA	191.69' RT	784.22	---
P3-58	1192+67.36 RA	188.11' RT	784.12	---
P3-59	1192+59.97 RA	172.26' RT	784.16	---
P3-60	1192+48.68 RA	175.75' RT	784.26	---
P3-61	1192+63.63 RA	180.19' RT	784.20	---
P3-62	1189+92.48 RA	193.18' RT	783.68	---
P3-63	1189+86.63 RA	177.92' RT	783.56	---
P3-64	1189+56.27 RA	185.25' RT	783.36	---
P3-65	1189+61.61 RA	200.66' RT	783.38	---
P3-66	1189+95.75 RA	244.83' RT	783.52	---
P3-67	1190+00.42 RA	229.24' RT	783.69	---
P3-68	1189+62.69 RA	238.54' RT	783.36	---
P3-69	1189+67.97 RA	223.07' RT	783.45	---
P3-70	1190+66.35 RA	252.24' RT	783.89	---
P3-71	1190+68.02 RA	244.34' RT	784.05	---
P3-72	1188+98.30 RA	170.89' RT	783.35	BUILDING CORNER
P3-73	1189+03.31 RA	184.19' RT	783.35	BUILDING CORNER
P3-74	1188+98.43 RA	184.23' RT	783.35	BUILDING CORNER
P3-75	1188+99.18 RA	256.23' RT	783.35	BUILDING CORNER
P3-76	1188+99.03 RA	242.89' RT	783.35	BUILDING CORNER
P3-77	1189+04.28 RA	242.85' RT	783.35	BUILDING CORNER

2

2

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR COORDINATION/INFORMATION ONLY.

1071-07-79/80
PROJECT BOUNDARY

PROJECT 1071-07-80
PROPOSED CONTOUR
BY OTHERS (TYP.)

PROPOSED CONTOUR
(TYP.)

PROPOSED
DUMPSTER PAD WITH
FENCE

PROPOSED LP TANK
AND GENERATOR PAD

REST AREA RAMP A / TRUCK PARKING AREA

REST AREA RAMP B / CAR PARKING AREA

1181+00 RA
1182+00 RA
1183+00 RA
1181+00 RB
1182+00 RB
1183+00 RB
1184+00 RB

771 772 773 774 775 776 777 778 779 780 781 782

-6:1 -4:1 -16:1 -10:1 -5.3% -1.1%

N

MATCH LINE B

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS - REST AREA PLAZA GRADING	SHEET 28	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\021203-PD_79.DWG
LAYOUT NAME - Grade

PLOT DATE : 2/1/2024 3:06 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR COORDINATION/INFORMATION ONLY.

1071-07-79/80 PROJECT BOUNDARY

PROJECT 1071-07-80 PROPOSED CONTOUR BY OTHERS (TYP.)

REST AREA RAMP A / TRUCK PARKING AREA

PROPOSED CONTOUR (TYP.)

GARAGE FLOOR ELEVATION: 781.85

REST AREA RAMP B / CAR PARKING AREA

MATCH LINE B

MATCH LINE C

2

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS - REST AREA PLAZA GRADING	SHEET 29 E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\021203-PD_79.DWG
LAYOUT NAME - Grade (2)

PLOT DATE : 2/1/2024 3:06 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

PROJECT 1071-07-80
PROPOSED CONTOUR
BY OTHERS (TYP.)

1071-07-79/80
PROJECT BOUNDARY

REST AREA RAMP A / TRUCK PARKING AREA

REST AREA BUILDING FLOOR ELEVATION: 783.35

PROPOSED CONTOUR
(TYP.)

MATCH LINE C

MATCH LINE D

REST AREA RAMP B / CAR PARKING AREA

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS - REST AREA PLAZA GRADING	SHEET 30	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\021203-PD_79.DWG
LAYOUT NAME - Grade (3)

PLOT DATE : 2/1/2024 3:06 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

REST AREA RAMP A / TRUCK PARKING AREA

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR COORDINATION/INFORMATION ONLY.

PROJECT 1071-07-80 PROPOSED CONTOUR BY OTHERS (TYP.)

MATCH LINE D

1071-07-79/80 PROJECT BOUNDARY

PROPOSED CONTOUR (TYP.)

REST AREA RAMP B / CAR PARKING AREA

190+00 RB

1191+00 RB

1192+00 RB

1193+00 R

N

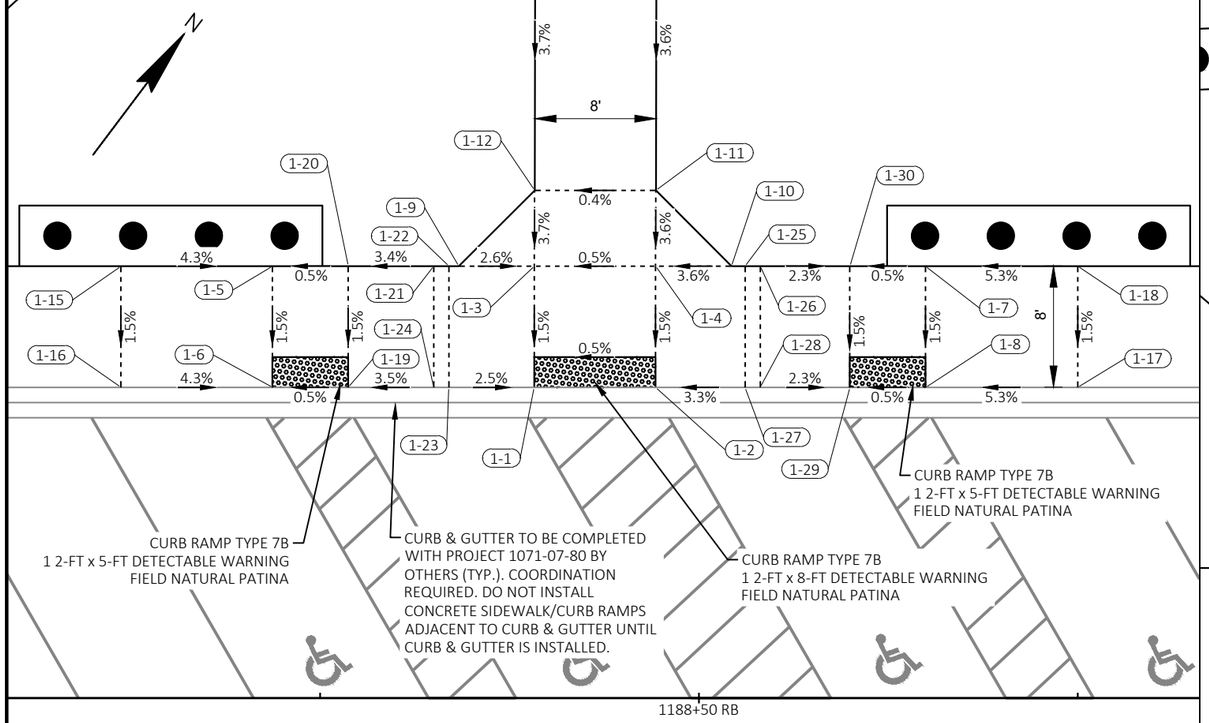
PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS - REST AREA PLAZA GRADING	SHEET 31	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\021203-PD_79.DWG
LAYOUT NAME - Grade (4)
PLOT DATE : 2/1/2024 3:06 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

REFERENCE POINT TABLE			
POINT NO.	STATION	OFFSET	ELEVATION
1-1	1188+39.13 RB	20.50' L	782.15
1-2	1188+47.14 RB	20.50' L	782.19
1-3	1188+39.14 RB	28.50' L	782.27
1-4	1188+47.14 RB	28.49' L	782.31
1-5	1188+21.85 RB	28.50' L	782.19
1-6	1188+21.85 RB	20.50' L	782.07
1-7	1188+64.96 RB	28.49' L	782.40
1-8	1188+64.96 RB	20.50' L	782.28
1-9	1188+34.15 RB	28.50' L	782.40
1-10	1188+52.15 RB	28.50' L	782.49
1-11	1188+47.16 RB	33.50' L	782.49
1-12	1188+39.16 RB	33.50' L	782.46
1-13	1188+39.20 RB	53.39' L	783.20
1-14	1188+47.20 RB	53.31' L	783.19
1-15	1188+11.85 RB	28.49' L	782.62

REFERENCE POINT TABLE			
POINT NO.	STATION	OFFSET	ELEVATION
1-16	1188+11.85 RB	20.50' L	782.50
1-17	1188+75.00 RB	20.50' L	782.82
1-18	1188+75.00 RB	28.49' L	782.94
1-19	1188+26.85 RB	20.50' L	782.09
1-20	1188+26.85 RB	28.50' L	782.21
1-21	1188+32.49 RB	28.50' L	782.41
1-22	1188+33.49 RB	28.50' L	782.41
1-23	1188+33.49 RB	20.50' L	782.29
1-24	1188+32.49 RB	20.50' L	782.29
1-25	1188+53.05 RB	28.50' L	782.51
1-26	1188+54.05 RB	28.50' L	782.51
1-27	1188+53.05 RB	20.50' L	782.39
1-28	1188+54.05 RB	20.50' L	782.39
1-29	1188+59.96 RB	20.50' L	782.26
1-30	1188+59.96 RB	28.49' L	782.38

REST AREA BUILDING



REST AREA RAMP B / CAR PARKING AREA

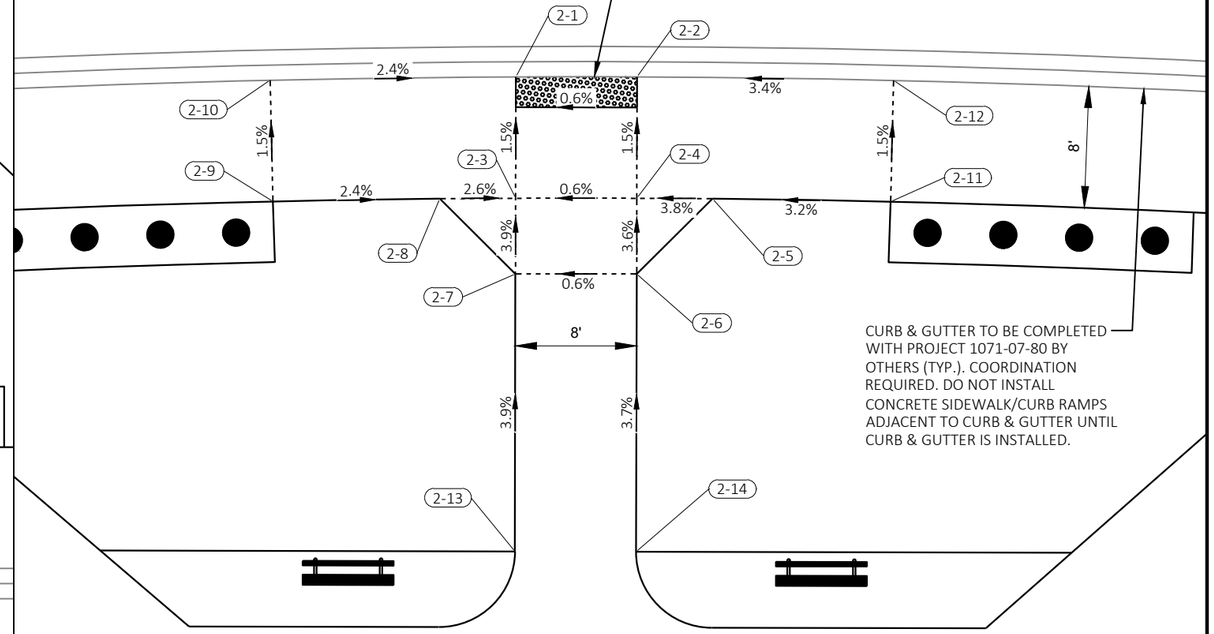
WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

REFERENCE POINT TABLE			
POINT NO.	STATION	OFFSET	ELEVATION
2-1	1188+83.83 RA	126.50' R	782.18
2-2	1188+92.96 RA	126.50' R	782.22
2-3	1188+83.77 RA	134.49' R	782.30
2-4	1188+92.98 RA	134.50' R	782.34
2-5	1188+98.74 RA	134.50' R	782.54
2-6	1188+93.00 RA	139.50' R	782.52
2-7	1188+83.73 RA	139.50' R	782.49
2-8	1188+78.01 RA	134.50' R	782.42
2-9	1188+65.32 RA	134.50' R	782.69
2-10	1188+65.32 RA	126.50' R	782.57

REFERENCE POINT TABLE			
POINT NO.	STATION	OFFSET	ELEVATION
2-11	1189+12.28 RA	134.50' R	782.92
2-12	1189+12.28 RA	126.50' R	782.80
2-13	1188+83.59 RA	157.81' R	783.19
2-14	1188+93.05 RA	157.83' R	783.19

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

REST AREA RAMP A / TRUCK PARKING AREA



REST AREA BUILDING

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CURB RAMP DETAILS	SHEET 32	E

2

2

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

SOD LAWN ALONG SIDEWALK (SEE SITE RESTORATION PLAN FOR ADDITIONAL INFORMATION)

REST AREA RAMP A

1184+00 RA

1182+00 RB

REST AREA RAMP B

1184+00 RB

1071-07-79/80 PROJECT BOUNDARY

1186+00 RB

REST AREA RAMP B / CAR PARKING AREA

1188+

MATCH LINE STA 1188+00 RB

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE C
- RIPRAP
- MULCHING
- SILT FENCE HEAVY DUTY
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- EROSION BALES

EROSION CONTROL ITEMS INSTALLED WITH PROJECT 1071-07-80 BY OTHERS (TYP.)

PROJECT 1071-07-80 SLOPE INTERCEPTS BY OTHERS (TYP.)

N

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL - REST AREA RAMP B	SHEET 33	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\022002-EC_79.DWG
LAYOUT NAME - B2

PLOT DATE : 1/31/2024 10:16 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

SOD LAWN ALONG SIDEWALK (SEE SITE RESTORATION PLAN FOR ADDITIONAL INFORMATION)

REST AREA RAMP A

1194+00 RA

1071-07-79/80 PROJECT BOUNDARY

MATCH LINE STA 1188+00 RB

00 RB

1190+00 RB

1192+00 RB

1194+00 RB

REST AREA RAMP B / CAR PARKING AREA

REST AREA RAMP B

RIPRAP PLACED WITH PROJECT 1071-07-79 WITH TEMPORARY DITCH GRADING (SEE STORM SEWER PLANS)

PROJECT 1071-07-80 SLOPE INTERCEPTS BY OTHERS (TYP.)

EROSION CONTROL ITEMS INSTALLED WITH PROJECT 1071-07-80 BY OTHERS (TYP.)

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE C
- RIPRAP
- MULCHING
- SILT FENCE HEAVY DUTY
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- EROSION BALES

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL - REST AREA RAMP B	SHEET 34	E

2

2

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE C
- RIPRAP
- MULCHING
- SILT FENCE HEAVY DUTY
- INLET PROTECTION (TYPE)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- EROSION BALES

REST AREA RAMP A

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

N

SOD LAWN ALONG SIDEWALK
SEE SITE RESTORATION PLAN FOR
ADDITIONAL INFORMATION (TYP.)

(A,B)

(A,B)

1071-07-79/80 PROJECT BOUNDARY

REST AREA RAMP B

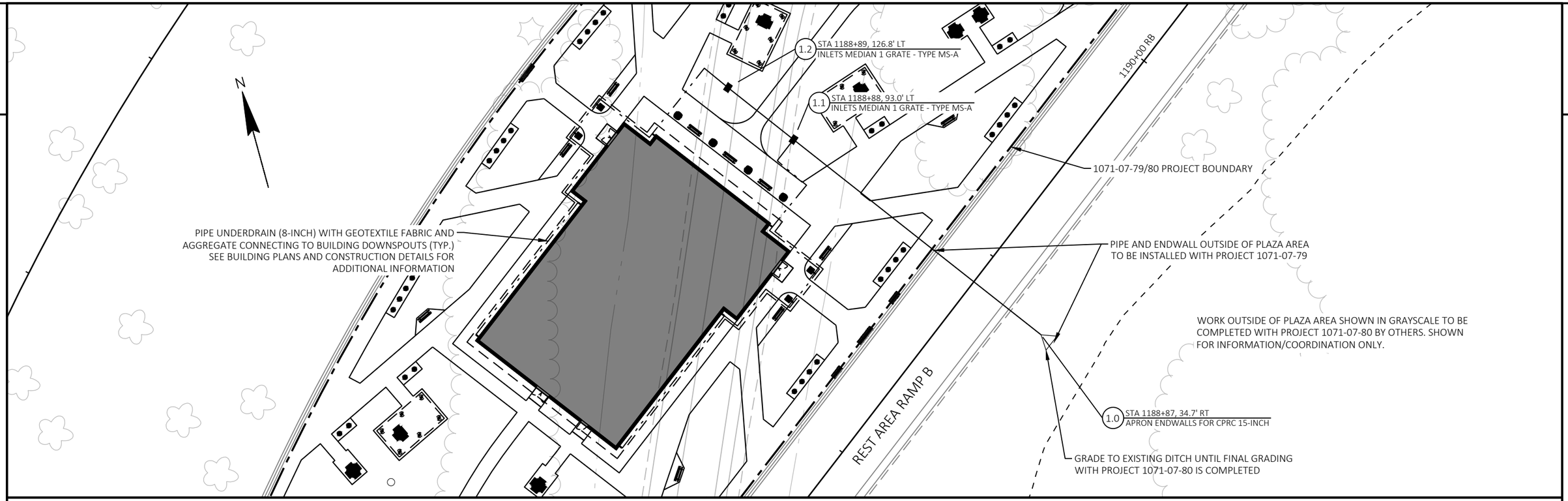
RIPRAP PLACED WITH PROJECT 1071-07-79 WITH TEMPORARY DITCH GRADING (SEE STORM SEWER PLANS).

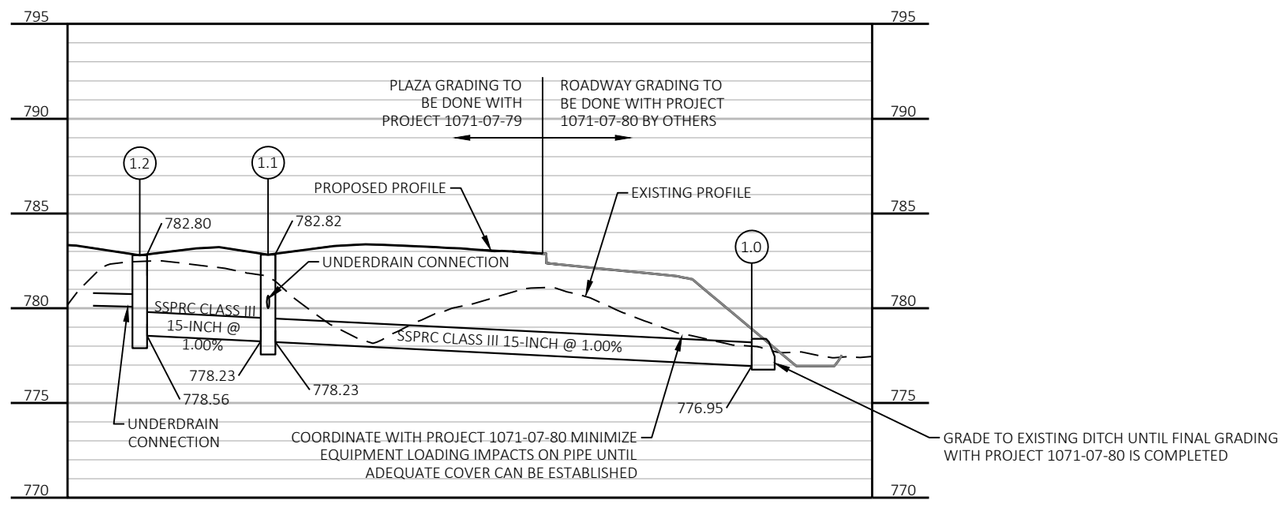
PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL - PLAZA	SHEET 35	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\022003-EC.DWG
LAYOUT NAME - P1 (2)

PLOT DATE : 1/25/2024 10:00 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT

2





PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	STORM SEWER REST AREA RAMP B	SHEET 36	E

2

2

1190+00 RA

1185+00 RA

S.2 STA 1188+69, 145.0' RT
MANHOLES 4-J

2-IN FORCE MAIN

CLEANOUT

ADJUSTING MANHOLE COVERS
WITH RUBBER RINGS REQ'D

P-2

P-3

P-4

P-5

704+00 PC

PROPOSED REST
AREA BUILDING

PROPOSED REST
AREA PLAZA AREA

702+00 PC

706+00 SP

P-1

S.3 STA 1192+68, 155.0' RT
MANHOLES 4-J

EX2 STA 1194+41, 100.0' RT
EXISTING MANHOLE 2

S.1 STA 1185+24, 62.0' LT
MANHOLES 4-J

1185+00 RB

1190+00 RB

PROPOSED
MAINTENANCE
GARAGE

1071-07-79/80
PROJECT BOUNDARY

SANITARY LINE
COMPLETED WITH
PROJECT 1071-07-79

WORK OUTSIDE OF PLAZA AREA SHOWN IN
GRAYSCALE TO BE COMPLETED WITH
PROJECT 1071-07-80 BY OTHERS. SHOWN
FOR INFORMATION/COORDINATION ONLY.

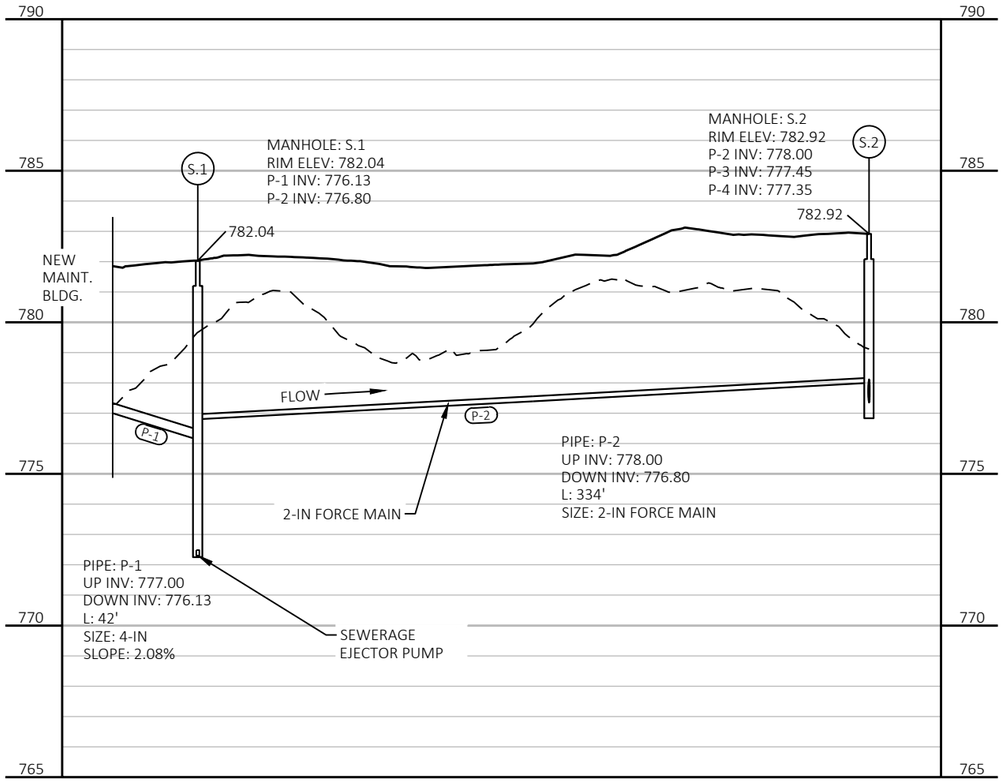
WISDOT REST AREA #16

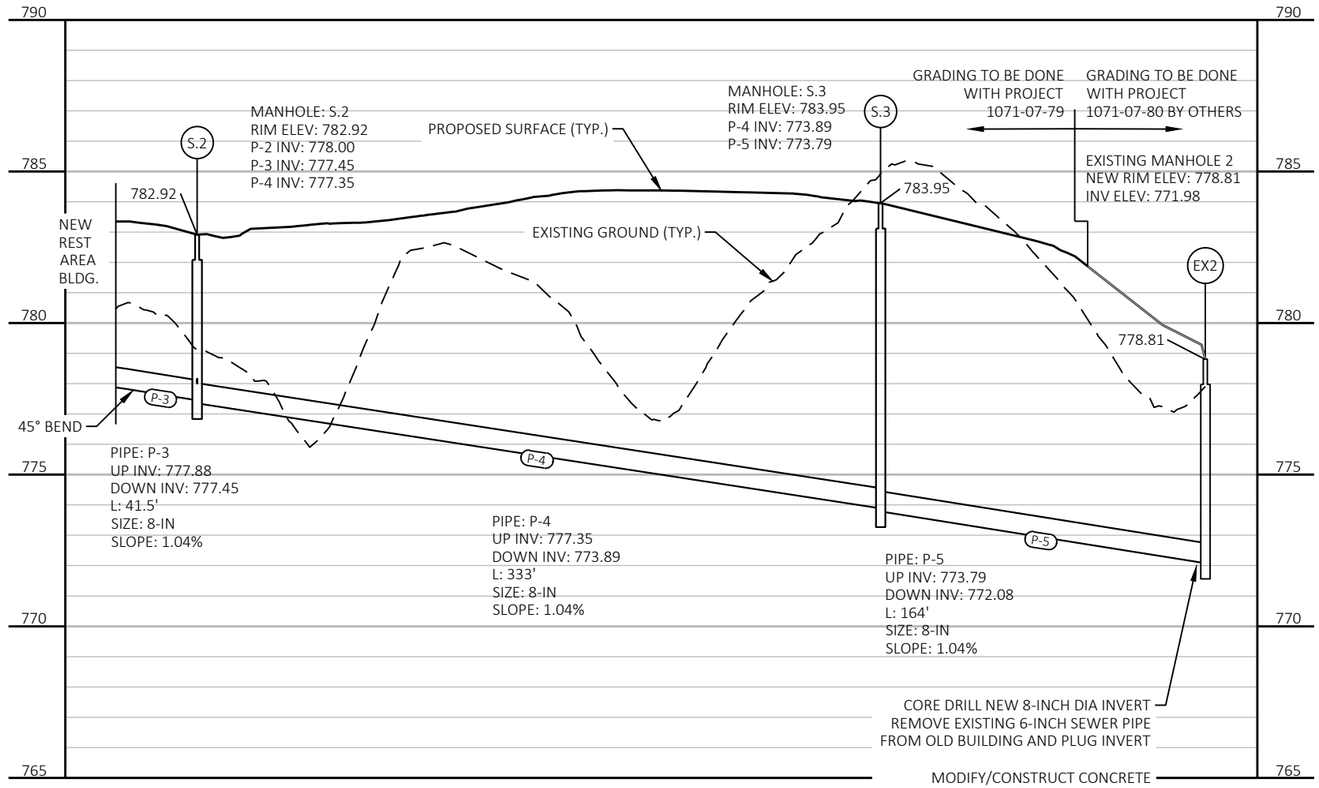
PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	UTILITY PLANS - SANITARY	SHEET 37	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\023001-UP_79.DWG
LAYOUT NAME - SAN1

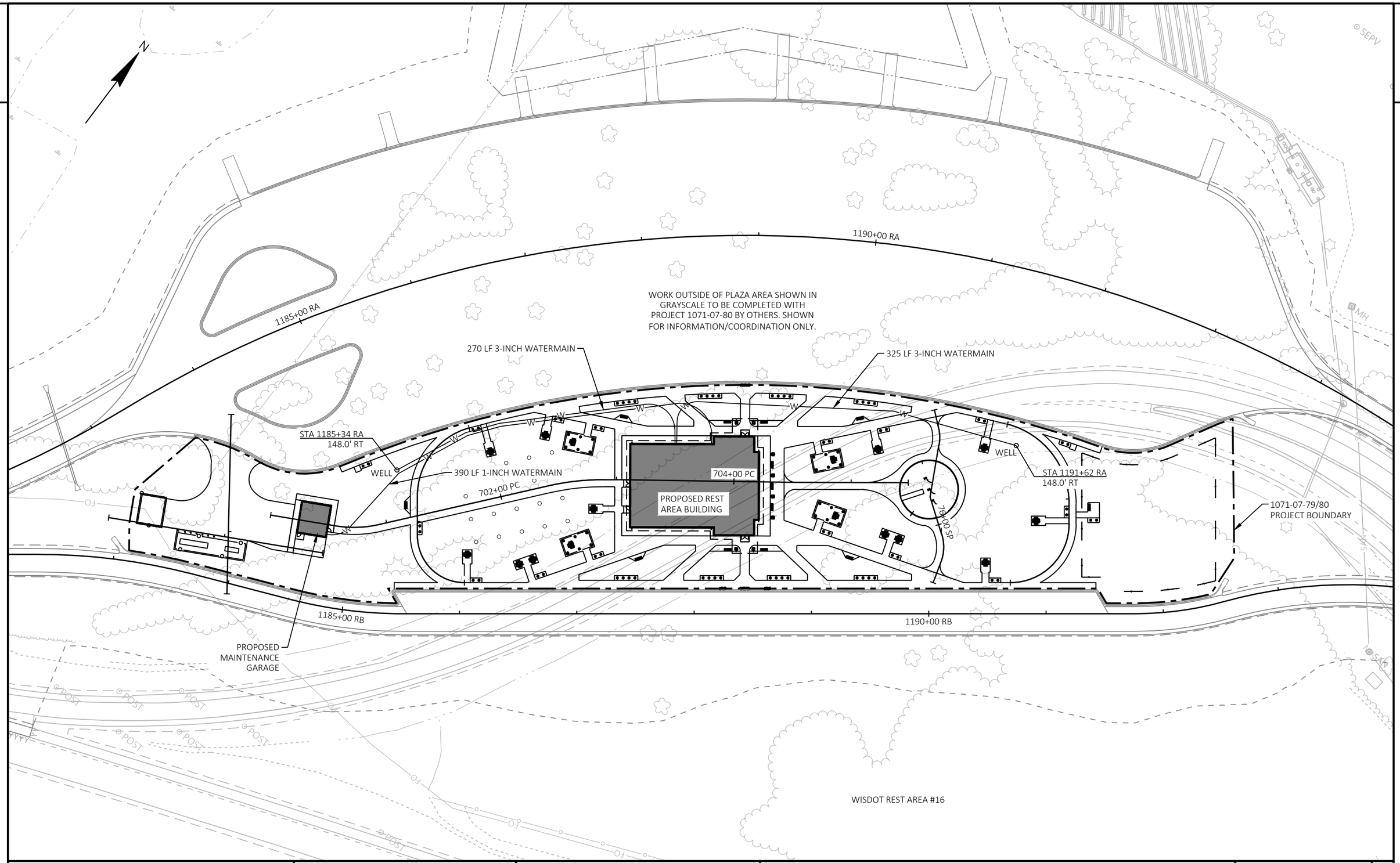
PLOT DATE : 1/31/2024 10:32 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1:75

2


790
785
780
775
770
765
S.1
MANHOLE: S.1
RIM ELEV: 782.04
P-1 INV: 776.13
P-2 INV: 776.80
782.04
NEW
MAINT.
BLDG.
MANHOLE: S.2
RIM ELEV: 782.92
P-2 INV: 778.00
P-3 INV: 777.45
P-4 INV: 777.35
S.2
782.92
FLOW
P-1
P-2
PIPE: P-2
UP INV: 778.00
DOWN INV: 776.80
L: 334'
SIZE: 2-IN FORCE MAIN
2-IN FORCE MAIN
PIPE: P-1
UP INV: 777.00
DOWN INV: 776.13
L: 42'
SIZE: 4-IN
SLOPE: 2.08%
SEWERAGE
EJECTOR PUMP

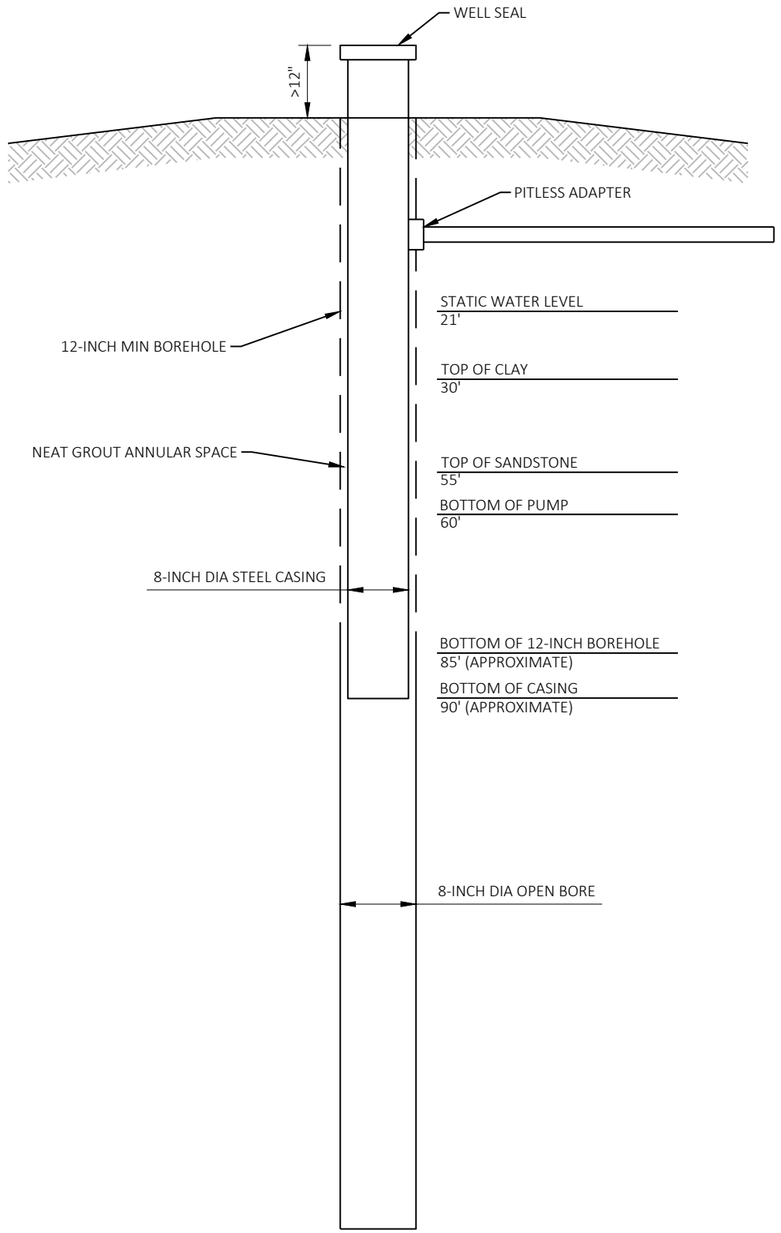

790
785
780
775
770
765
S.2
MANHOLE: S.2
RIM ELEV: 782.92
P-2 INV: 778.00
P-3 INV: 777.45
P-4 INV: 777.35
782.92
NEW
REST
AREA
BLDG.
PROPOSED SURFACE (TYP.)
EXISTING GROUND (TYP.)
MANHOLE: S.3
RIM ELEV: 783.95
P-4 INV: 773.89
P-5 INV: 773.79
S.3
783.95
GRADING TO BE DONE
WITH PROJECT
1071-07-79
GRADING TO BE DONE
WITH PROJECT
1071-07-80 BY OTHERS
EXISTING MANHOLE 2
NEW RIM ELEV: 778.81
INV ELEV: 771.98
EX2
778.81
45° BEND
P-3
P-4
P-5
PIPE: P-3
UP INV: 777.88
DOWN INV: 777.45
L: 41.5'
SIZE: 8-IN
SLOPE: 1.04%
PIPE: P-4
UP INV: 777.35
DOWN INV: 773.89
L: 333'
SIZE: 8-IN
SLOPE: 1.04%
PIPE: P-5
UP INV: 773.79
DOWN INV: 772.08
L: 164'
SIZE: 8-IN
SLOPE: 1.04%
CORE DRILL NEW 8-INCH DIA INVERT
REMOVE EXISTING 6-INCH SEWER PIPE
FROM OLD BUILDING AND PLUG INVERT
MODIFY/CONSTRUCT CONCRETE
FLOWLINE TO DIRECT FLOW FROM NEW
CONNECTION TO EXISTING OUTLET

2



PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	UTILITY PLANS - WATER	SHEET 39	E

2



WELL SCHEMATIC
NOT TO SCALE

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	UTILITY PLANS - WATER	SHEET 40	E

ELECTRICAL SERVICE CONNECTION NOTES

1) EXACT ELECTRICAL SERVICE ROUTE/TRANSFORMER/CT CABINET LOCATIONS TO BE DETERMINED IN THE FIELD WITH THE APPROVAL OF THE ENGINEER.

2) XCEL ENERGY WILL PROVIDE TWO (2) 6" CONDUITS ALONG THE PROPOSED SERVICE ROUTE TO THE TRANSFORMER LOCATION. CONTRACTOR IS RESPONSIBLE FOR PROVIDING/INSTALLING TWO (2) 6" SWEEPS AT THE TRANSFORMER LOCATION (PAID FOR UNDER THE 'ELECTRICAL SERVICE, SPARTA REST AREA' ITEM).

3) XCEL ENERGY WILL PROVIDE THE TRANSFORMER AND TRANSFORMER PAD. CONTRACTOR IS RESPONSIBLE FOR THE TRANSFORMER SITE PREP (GRAVEL AND COMPACTION) (PAID FOR UNDER THE 'ELECTRICAL SERVICE, SPARTA REST AREA' ITEM).

4) CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING/INSTALLING TWO (2) 5" CONDUITS FROM THE TRANSFORMER LOCATION TO THE CT CABINET (PAID FOR UNDER THE 'ELECTRICAL SERVICE, SPARTA REST AREA' ITEM).

5) INSTALL TRACER WIRE ALONG ALL CONDUIT RUNS. CONNECT WIRE ACCORDING TO THE STANDARD SPECIFICATION AND TO THE TRACER WIRE MARKER POST.

1190+00 RA
1185+00 RA
APPROXIMATE TRANSFORMER LOCATION
704+00 PC
PROPOSED REST AREA BUILDING
702+00 PC
PROPOSED REST AREA PLAZA AREA
760+00 SP
1185+00 RB
1190+00 RB
PROPOSED MAINTENANCE GARAGE
APPROXIMATE CT CABINET LOCATION
1071-07-79/80 PROJECT BOUNDARY
XCEL ENERGY PROPOSED ELECTRIC SERVICE ROUTE
WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.
WISDOT REST AREA #16
MH
SAN
POST
FO
E

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	UTILITY PLANS - ELECTRICAL SERVICE	SHEET 41	E

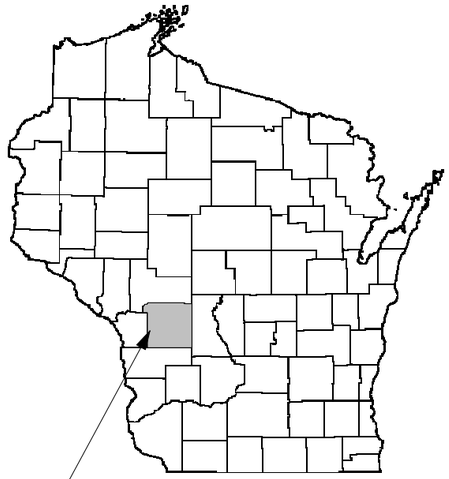
FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\023001-UP_79.DWG
LAYOUT NAME - ELEC
PLOT DATE : 2/26/2024 2:01 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1:75



PROJECT GENERAL NOTES

A.	ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS, WHICH INCLUDE, BUT ARE NOT LIMITED TO, THE OWNER - CONTRACTOR AGREEMENT, THE PROJECT MANUAL (WHICH INCLUDES GENERAL AND SUPPLEMENTARY CONDITIONS AND SPECIFICATIONS), DRAWINGS OF ALL DISCIPLINES AND ALL ADDENDA, MODIFICATIONS AND CLARIFICATIONS ISSUED BY THE ARCHITECT / ENGINEER.
B.	CONTRACT DOCUMENTS SHALL BE ISSUED TO ALL SUBCONTRACTORS BY THE GENERAL CONTRACTOR IN COMPLETE SETS IN ORDER TO ACHIEVE THE FULL EXTENT AND COMPLETE COORDINATION OF ALL WORK. CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CORRELATING QUANTITIES AND DIMENSIONS.
C.	WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
D.	FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E.	DETAILS SHOWN ARE INTENDED TO BE INDICATIVE OF THE PROFILES AND TYPE OF DETAILING REQUIRED THROUGHOUT THE WORK. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO DETAILS SHOWN. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, NOTIFY ARCHITECT / ENGINEER BEFORE PROCEEDING WITH THE WORK.
F.	ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, CLEANED AND CONDITIONED ACCORDING TO MANUFACTURERS' INSTRUCTIONS. IN CASE OF DISCREPANCIES BETWEEN MANUFACTURERS' INSTRUCTIONS AND THE CONTRACT DOCUMENTS, NOTIFY ARCHITECT / ENGINEER BEFORE PROCEEDING WITH THE WORK.
G.	LARGE-SCALE, MORE SPECIFIC DETAILS TAKE PRECEDENCE OVER SMALLER-SCALE, LESS SPECIFIC DETAILS AND INFORMATION. MORE STRINGENT REQUIREMENTS FOR CODE, PRODUCTS AND INSTALLATION TAKE PRECEDENCE OVER LESS STRINGENT REQUIREMENTS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
H.	PROVIDE CONTINUOUS SEALANT AROUND ALL MATERIALS AT ALL INTERIOR AND EXTERIOR WALL PENETRATIONS. REFER TO SPECIFICATIONS FOR APPROPRIATE SEALANT.
I.	ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO AVOID GALVANIC CORROSION.
J.	SEAL ALL OPENINGS IN WALLS, FLOORS, CEILINGS, AND ROOFS, AROUND DUCTS, PIPES, VENTS, TRAPS, CONDUIT AND ALL OTHER PENETRATIONS WITH FIRE STOPPING AS SPECIFIED AND REQUIRED BY CODES. IF FIRE STOPPING IS NOT REQUIRED AT PENETRATIONS PER CODE, SEAL WITH CONTINUOUS SEALANT.
K.	PROVIDE TEMPORARY WALLS, ENCLOSURES, DUST SHIELDS AND WALK-OFF MATS AS REQUIRED TO SEPARATE DEMOLITION AND CONSTRUCTION FROM EXISTING BUILDING.
L.	PROVIDE BRACING AND SHORING AS REQUIRED TO PROTECT EXISTING STRUCTURE TO REMAIN. PROVIDE SECURE AND WEATHERPROOF ENCLOSURE OF TEMPORARY OPENINGS IN EXTERIOR WALLS. PROTECT ALL BUILDING COMPONENTS FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
M.	RESTORE ALL EXISTING AREAS AFFECTED BY DEMOLITION AND RELATED NEW CONSTRUCTION TO THEIR ORIGINAL CONDITION, INCLUDING BUT NOT LIMITED TO WALLS, FLOORS, AND CEILINGS AND THEIR ASSOCIATED FINISHES.
N.	PROVIDE SOLID WALL BACKING WITH METAL OR FIRE-RETARDANT WOOD BLOCKING BEHIND DOOR HARDWARE SUCH AS WALL STOPS, BUMPERS, HOLD OPENS, ETC. AND AT ALL ITEMS REQUIRING FASTENING THROUGH GYP BD. TO BLOCKING
O.	RENDERED IMAGES MAY NOT BE AN ACCURATE REPRESENTATION OF BUILDING CONDITIONS, REFER TO PLANS AND DETAILS CONTAINED WITHIN FOR SCOPE OF WORK.





PROJECT LOCATION

SPARTA REST AREA NO. 16
I-90 WESTBOUND
SPARTA, WI

LA CROSSE OFFICE

201 MAIN STREET
SUITE 1020
LA CROSSE, WISCONSIN 54601
PHONE: 608.789.2034

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	TITLE SHEET, PROJECT GENERAL NOTES	SHEET NO: G1-10

2

SPARTA REST AREA NO. 16

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G1-13	ABBREVIATIONS
G1-14	SYMBOLS
G1-21	CODE DATA AND CODE DATA PLAN
G1-22	CODE DATA
LANDSCAPE	
C0-21	PLANTING DETAILS
C0-22	PLANTING DETAILS
C0-23	PLANTING DETAILS
C0-24	PICNIC SHELTER DETAILS
C0-25	PICNIC SHELTER DETAILS
C0-26	DUMPSTER ENCLOSURE DETAILS
C3-10	SITE FURNISHING PLAN
C3-20	SITE RESTORATION PLAN
C5-21	REST AREA SITE PLANTING PLAN
C5-22	BUILDING SITE PLANTING PLAN
C5-23	FLAG SITE PLANTING PLAN
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A1-02	WALL TYPES
A1-03	WALL TYPES
A1-04	WALL NOTES
A1-05	CONSTRUCTION ASSEMBLIES
A1-10	ARCHITECTURAL SITE PLAN
A1-21	FLOOR PLAN
A1-21A	FLOOR PLAN - AREA A
A1-21B	FLOOR PLAN - AREA B
A1-31	REFLECTED CEILING PLAN
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A1-31B	REFLECTED CEILING PLAN - AREA B
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A1-33	CEILING DETAILS
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A1-41B	FINISH PLAN - AREA B
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A4-13	GLAZING ELEVATIONS
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A4-22	WINDOW DETAILS
A4-23	WINDOW & DOOR DETAILS
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A4-25	DOOR DETAILS
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A5-12	ENLARGED FLOOR PLAN - MENS RESTROOMS
A5-13	ENLARGED FLOOR PLANS
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A6-12	INTERIOR ELEVATIONS
A6-13	INTERIOR ELEVATIONS

SHEET INDEX

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A6-16	INTERIOR ELEVATIONS
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S1-02	STRUCTURAL NOTES
S1-03	STRUCTURAL NOTES
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S2-15	FOUNDATION & SLAB DETAILS
S2-16	FOUNDATION & SLAB DETAILS
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M3-12	HVAC SECTIONS
M3-21	HYDRONIC ISOMETRICS
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M4-14	HVAC DETAILS
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M5-11	HVAC SCHEDULES AND SPECIFICATIONS
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ELECTRICAL	
G-E2-13	MAINTENANCE SHED ELECTRICAL PLAN
TECHNOLOGY	
G-T2-13	MAINTENANCE SHED TECHNOLOGY PLAN

2

WISCONSIN
PAUL C. NELSON 870-14 DES MOINES, IA
LANDSCAPE ARCHITECT

WISCONSIN
ALYSSA F. CAMPBELL A-11247 DE PERE, WIS.
ARCHITECT

WISCONSIN
GREGORY A NAGHTIN E-100269-6 GREEN BAY, WISC.
PROFESSIONAL ENGINEER

WISCONSIN
ROSS K. DIEDERICH E-41415 APPLETON, WISC.
PROFESSIONAL ENGINEER

WISCONSIN
ALEX GREGOR E-100149-6 HUTCHINSON, MINN
PROFESSIONAL ENGINEER

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	SHEET INDEX	SHEET NO: G1-11

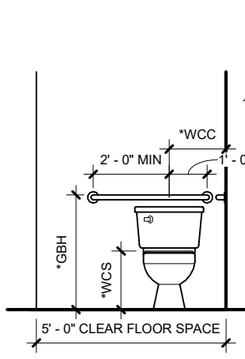
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MOUNTING HEIGHTS AND STANDARDS

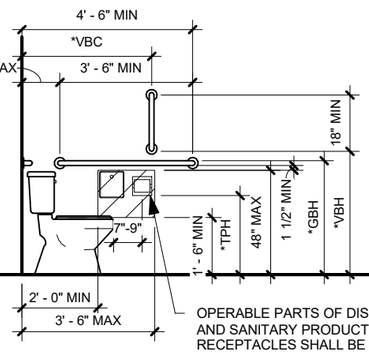
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FIXTURE CLEARANCES

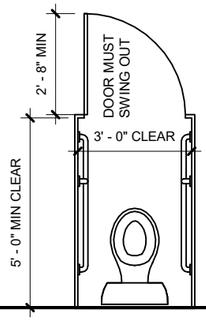
	DESCRIPTION	ADULTS (>12 YR)
*GBH	GRAB BAR HEIGHT	33" - 36"
*VBH	VERTICAL GRAB BAR HEIGHT	39" - 41"
*VBC	VERTICAL GRAB BAR CENTERLINE	39" - 41"
*TPH	TOILET TISSUE DISPENSER HEIGHT	18" - 48"
*WCC	WATER CLOSET CENTER LINE	16" - 18"
*WCS	WATER CLOSET SEAT HEIGHT	17" - 19"
*TSH	TOP OF SINK OR COUNTER HEIGHT	34"
*KCH	KNEE CLEARANCE HEIGHT	27"
*HDH	HIGH DRINKING FOUNTAIN SPOUT HEIGHT	38" - 43"
*LDH	LOW DRINKING FOUNTAIN SPOUT HEIGHT	36"
*DSD	DRINKING FOUNTAIN SPOUT DEPTH	5"



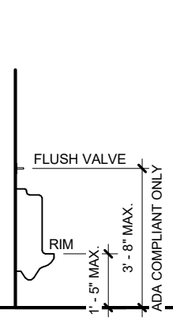
WATER CLOSET
REAR WALL



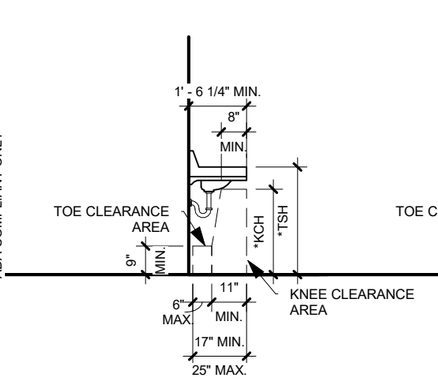
WATER CLOSET
SIDE WALL



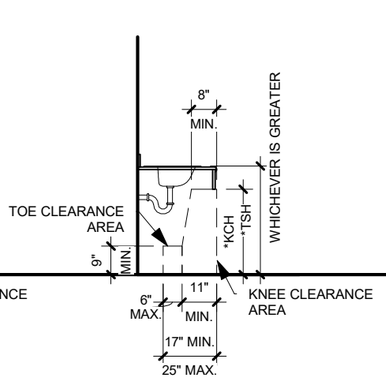
AMBULATORY STALL
PLAN VIEW
(GRAB BARS EA SIDE-SEE WATER CLOSET - SIDE WALL DETAIL FOR CONFIGURATION)



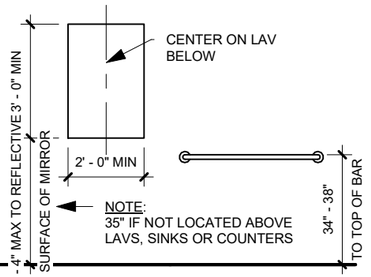
URINAL (ADA COMPLIANT ONLY)
WHEN TWO OR MORE URINALS ARE SHOWN, MOUNT ONLY ONE AT ADA COMPLIANT HEIGHT AND OTHERS AT 24" TO RIM



WALL-MOUNT LAVATORY (WITH KNEE AND TOE CLEARANCES)

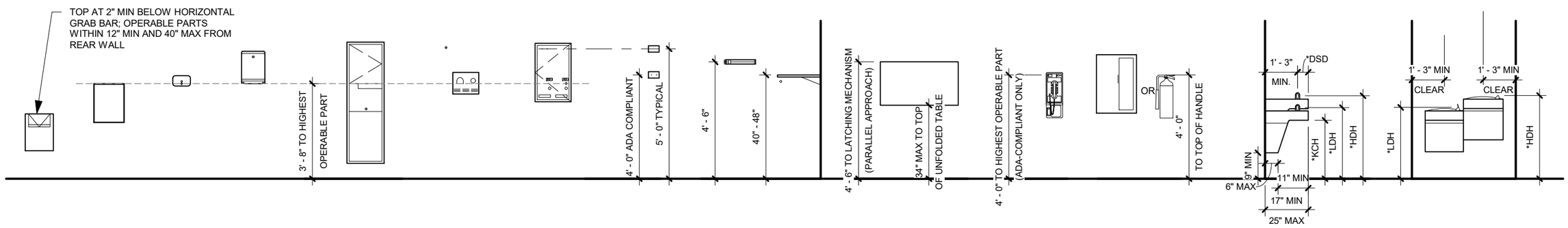


DROP-IN LAVATORY (WITH KNEE AND TOE CLEARANCES)



MIRROR

HANDRAIL



SANITARY PRODUCT RECEPTACLE

WASTE RECEPTACLE

SOAP DISPENSER

PAPER TOWEL DISPENSER

PAPER TOWEL DISPENSER WITH WASTE

ELECTRIC HAND DRYER

SANITARY PRODUCT DISPENSER

COAT HOOKS

MOP STRIP

SHELF

DIAPER CHANGING TABLE

PUBLIC TELEPHONE

FIRE EXTINGUISHER OR CABINET

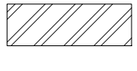
DRINKING FOUNTAINS
SIDE ELEVATION

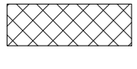
DRINKING FOUNTAINS
FRONT ELEVATION

ABBREVIATIONS

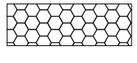
#	POUND OR NUMBER
@	AT
ACP	ACOUSTICAL CEILING PANEL
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADD	ADDENDUM
ADDL	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATELY
ARCH	ARCHITECTURAL
AWP	ACOUSTICAL WALL PANEL
B	BASE
BD	BOARD
BL	BROADLOOM CARPET
BLDG	BUILDING
BO	BOTTOM OF OR BY OWNER
BR	BRICK
BRG	BEARING
BSMT	BASEMENT
C	CONDUIT
CFS	COLD FORMED STEEL
CG	CORNER GUARD
CIP	CAST IN PLACE
CJ	CONTROL JOINT OR CONSTRUCTION JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CM	CORRUGATED METAL
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
CONC	CONCRETE
CONF	CONFERENCE
CONT	CONTINUOUS
CPT	CARPET
CR	CHAIR RAIL
CRK	CORK
CT	TILE
CURT	PRIVACY CURTAIN
CY	CUBIC YARD
DEMO	DEMOLITION
DF	DRINKING FOUNTAIN
DH	DOOR HOLDER (MAGNETIC)
DIA	DIAMETER
DLS	DIMENSIONAL LETTER SIGNAGE
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EIFS	EXTERIOR INSULATION FINISH SYSTEM
ELEC	ELECTRICAL
ELEV	ELEVATION
EMERG	EMERGENCY
ENCL	ENCLOSURE
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPX	EPOXY
EQ	EQUAL
EQUIP	EQUIPMENT
ETC	ETCETERA
EWC	ELECTRIC WATER COOLER
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR
F&I	FURNISH AND INSTALL
FA	FRESH AIR
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FLOOR FINISH
FFE	FINISHED FLOOR ELEVATION
FRP	FIBERGLASS REINFORCED PLASTIC
FRZ	FREEZER
FT	FOOT OR FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPT
GL	GLAZING
GND	GROUND
GYP	GYPSUM
HD	HUB DRAIN
HDG	HOT DIP GALVANIZED
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HVAC	HEATING VENTILATION AND AIR CONDITIONING
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
IMP	INSULATED METAL PANEL
INFO	INFORMATION
INP	IN-PLACE
INSUL	INSULATION
INT	INTERIOR
J	JUNCTION BOX
JAN	JANITOR
JBE	JOIST BEARING ELEVATION
JST	JOIST
KES	KITCHEN EQUIPMENT SUPPLIER
kW	KILOWATT
LAV	LAVATORY
LB	POUND
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LN	LINEAR
LVT	LUXURY VINYL TILE
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD
MECH	MECHANICAL
MEP	MECHANICAL , ELECTRICAL, PLUMBING
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
MULL	MULLION
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OHD	OVERHEAD DOOR
OL	OVERALL LENGTH
OPNG	OPENING
ORD	OVERFLOW ROOF DRAIN
OSB	ORIENTED STRAND BOARD
PC	PHOTO CELL, POLISHED CONCRETE
PLAM	PLASTIC LAMINATE
PLWP	PLASTIC LAMINATE WALL PANEL
PNT	PAINT
PNT-#E	EPOXY PAINT
POLYETH	POLYETHYLENE
POLYISO	POLYISOCYANURATE
PRV	POWER ROOF VENTILATOR
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
QTZ	QUARTZ
RA	RETURN AIR
RB	RESILIENT BASE
RBR	RUBBER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFRIGERATOR
REINF	REINFORCED
REQD	REQUIRED
RES	RESINOUS FLOOR
REV	REVISION / REVISED
RM	ROOM
RO	ROUGH OPENING
ROW / R/W	RIGHT OF WAY
RP	RESIN PANEL
RTE	REFER TO ELEVATION
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SC	SEALED CONCRETE
SF	SQUARE FOOT
SIM	SIMILAR
SM	SURFACE MOUNTED
SPEC	SPECIFICATION
SS	SOLID SURFACE
SSTL	STAINLESS STEEL
STD	STANDARD
STN	STONE
STOR	STORAGE
SUSP	SUSPENDED
SV	SHEET VINYL
SY	SQUARE YARDS
T&G	TONGUE AND GROOVE
T&P	TEMPERATURE AND PRESSURE
TB	TACK BOARD
TBD	TO BE DETERMINED
TD	TRENCH DRAIN
TEC	TECTUM
TEL	TELEPHONE
TEMP	TEMPERATURE
TER	TERRAZZO
TO	TOP OF
TOF	TOP OF FOOTING
TOL	TOP OF LEDGE
TOS	TOP OF STEEL
TOW	TOP OF WALL
TP	TOILET PARTITION
TR	TAMPER RESISTANT
TS	TUBE STEEL / THRESHOLD / TRANSITION STRIP
TV	TELEVISION
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITE TILE
VERT	VERTICAL
VEST	VESTIBULE
VF	VINYL FLOOR
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
VWP	VENEER WALL PANEL
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCG	WALL COVERING
WD	WOOD
WF	WINDOW FILM
WG	WALL GUARD
WH	WALL HYDRANT
WHTR	WATER HEATER
WP	WEATHERPROOF
WT	WINDOW TREATMENT
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER

MATERIALS KEY


BATT INSULATION


BRICK


CONCRETE (SECTION)


CMU (SECTION)

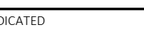
EARTH

GRANULAR FILL

GRAVEL

GYPSUM BOARD
OR SHEATHING


RIGID INSULATION


PLYWOOD

SAND

STEEL

SYNTHETIC STUCCO

WOOD

SPRAY IN PLACE
INSULATION

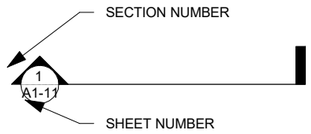
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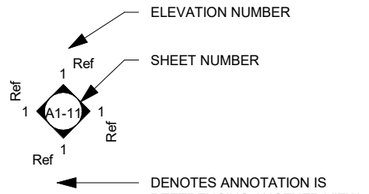
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TAGS AND SYMBOLS

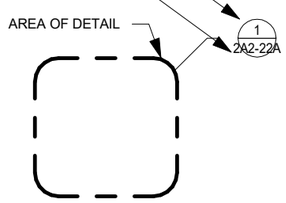
SECTION



INTERIOR / EXTERIOR ELEVATION



DETAIL CALLOUT



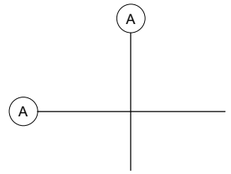
DRAWING TITLE

1 VIEW NAME
1/8" = 1'-0"

ELEVATION

LEVEL 1
100'-0"

NEW CONSTRUCTION GRIDS



KEYNOTE TAG 3

DOOR NUMBERS X

WALL TYPE M12

SHEAR WALL TYPE M12

SLAB TYPE SL#

WINDOW TYPE AL15

EQUIPMENT TYPE A

FLOOR MATERIAL TYPE FIN-#

MATERIAL TYPE FIN-#

ROOM / FINISH TAG

ROOM NAME

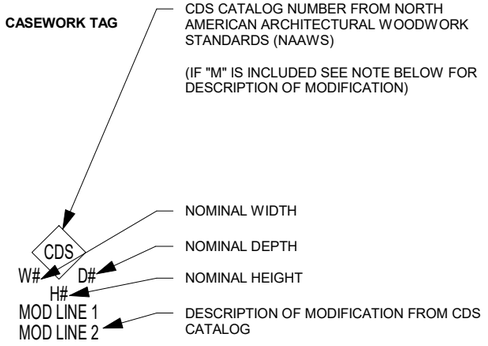
ROOM #	
C	CEILING
W	WALL
B	BASE
F	FLOOR

FINISHES LISTED IN ROOM TAG APPLY TO ALL ELEMENTS IN ROOM, UNLESS NOTED OTHERWISE

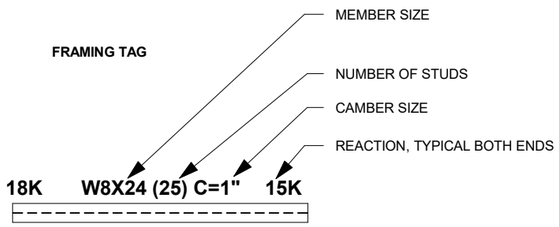
THE FOLLOWING SYMBOL APPLIES TO FINISHES DIFFERENT FROM THOSE NOTED IN ROOM TAG:

FINISH

CASEWORK TAG



FRAMING TAG



MOMENT CONNECTION SYMBOL M1

*REFER TO MOMENT CONNECTION DETAILS

FOOTING STEP

LEDGE STEP

FOOTING & LEDGE STEP

BEAM SPLICE SYMBOL S

PIER TYPE P1

FOOTING TYPE F1

FOUNDATION WALL TYPE FDN1

DIRECTION OF INSTALL

SPOT ELEVATION

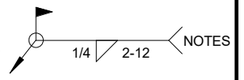
??? 100' - 0"
DESCRIPTION
ELEVATION

COLUMN TYPE

CP# CAP PLATE
C# COLUMN
BP# BASE PLATE

WELD SYMBOL

*REFER TO ANSI FOR WELD SYMBOL STANDARDS



CODE DATA PLAN KEY

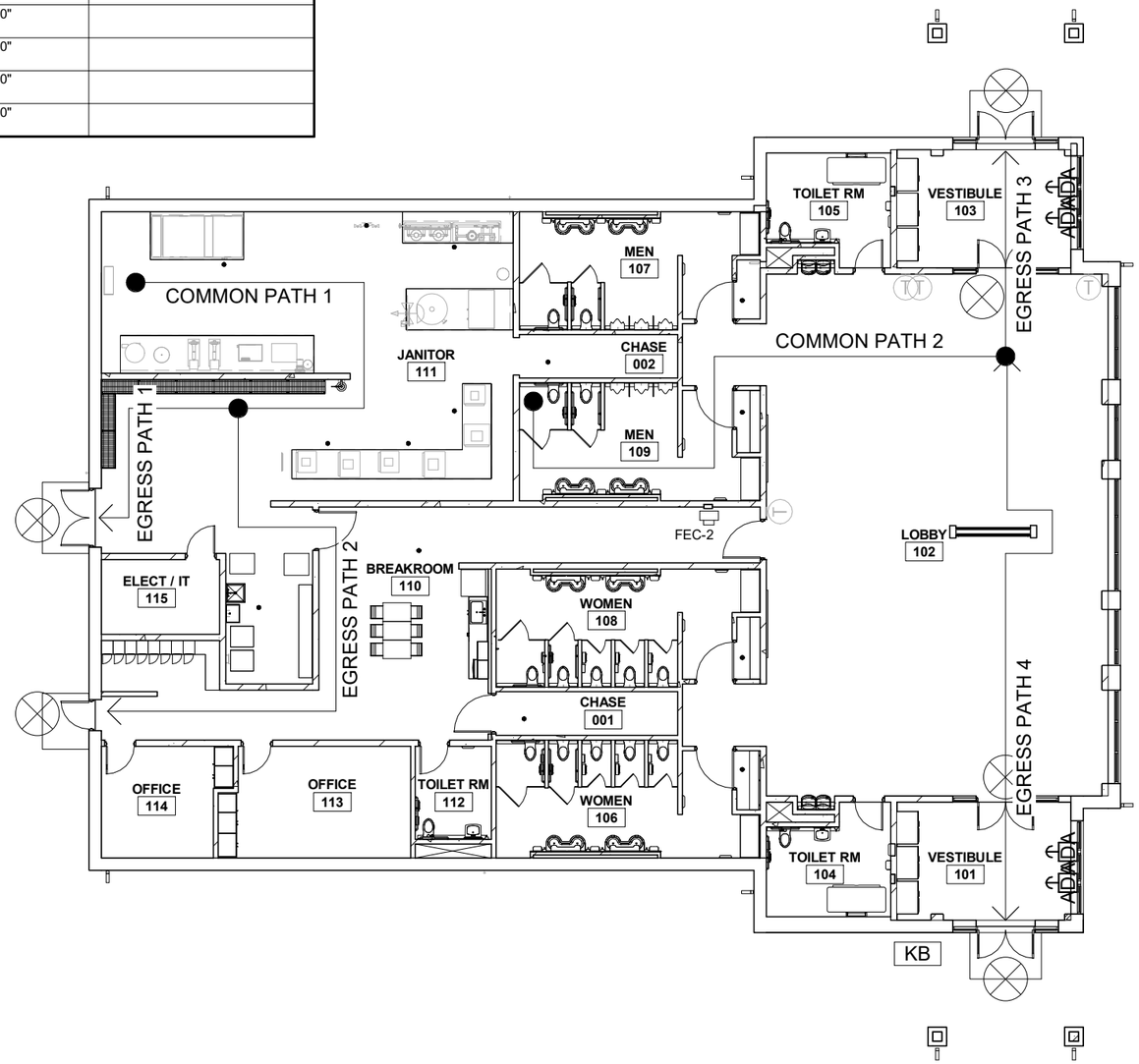
⊗	EXIT
	FIRE EXTINGUISHER
	FIRE EXTINGUISHER CABINET
KB	KNOX BOX

FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL:

1. BE LOCATED IN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACES
2. BE LOCATED WITHIN 15 FEET OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION, AND
3. INCLUDE LETTERING NOT LESS THAN 3 INCHES IN HEIGHT WITH A MINIMUM 3/8" STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER SIMILAR WORDING.

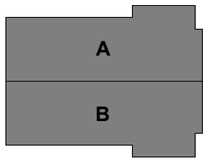
EGRESS PATH SCHEDULE

MARK	TRAVEL DISTANCE	CLEAR WIDTH	COMMENTS
COMMON PATH 1	51' - 6"	3' - 0"	
COMMON PATH 2	69' - 10"	3' - 0"	
EGRESS PATH 1	26' - 8"	3' - 0"	
EGRESS PATH 2	67' - 6"	3' - 0"	
EGRESS PATH 3	22' - 0"	3' - 0"	
EGRESS PATH 4	70' - 2"	3' - 0"	



2 CODE DATA PLAN - MAIN LEVEL

1/16" = 1'-0"



KEYPLAN

N

GENERAL CODE DATA

BUILDING CODE

WISCONSIN COMMERCIAL BUILDING CODE, CHAPTER SPS-362 (BASED ON 2015 INTERNATIONAL BUILDING CODE)

ACCESSIBILITY CODE AND STANDARDS

WISCONSIN COMMERCIAL BUILDING CODE
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

BUILDING #1 (REST AREA)

OCCUPANCY CLASSIFICATION AND USE

BUSINESS GROUP B

FIRE PROTECTION SYSTEMS

NONSPRINKLERED

CONSTRUCTION TYPE

TYPE IIB
PRIMARY STRUCTURAL FRAME: 0 HOUR RATED
EXTERIOR BEARING WALLS: 0 HOUR RATED
INTERIOR BEARING WALLS: 0 HOUR RATED
EXTERIOR NONBEARING WALLS (BASED ON FIRE SEPARATION DISTANCE): 0 HOUR RATED
INTERIOR NONBEARING WALLS: 0 HOUR RATED
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 0 HOUR RATED
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 0 HOUR RATED

BUILDING HEIGHT

TABULAR ALLOWABLE HEIGHT: 3 STORIES / 55 FEET ABOVE GRADE PLANE
ACTUAL HEIGHT: 1 STORY / 23 FEET ABOVE GRADE PLANE

BUILDING AREA

TABULAR ALLOWABLE AREA FACTOR (A_t): 23,000 SF
TABULAR ALLOWABLE AREA FACTOR FOR NONSPRINKLERED BUILDING (NS): 23,000 SF
AREA FACTOR INCREASE DUE TO FRONTAGE (I_f) = [(F / P) – 0.25] (W / 30)
[(442 / 442) – 0.25] (30 / 30) = 0.75
ALLOWABLE AREA (A_a) = [A_t + (NS)(I_f)]
[23,000 + (23,000)(0.75)] = 40,250 SF
ACTUAL AREA: 8,327 SF

OCCUPANT LOAD

ACCESSORY STORAGE / MECHANICAL: 1,917 SF / 300 GROSS SF = 7 OCCUPANTS
BUSINESS AREAS: 6,410 SF / 100 GROSS SF = 65 OCCUPANTS

TOTAL OCCUPANT LOAD: 72 OCCUPANTS

MEANS OF EGRESS

MINIMUM NUMBER OF EXITS REQUIRED (BASED ON OCCUPANT LOAD): 2
ACTUAL NUMBER OF EXITS: 4
MINIMUM EGRESS WIDTH REQUIRED: (72 OCCUPANTS)(0.20) = 14.40 INCHES
ACTUAL EGRESS WIDTH: 237 INCHES (7 EXTERIOR EXIT DOORS)
COMMON PATH OF EGRESS TRAVEL DISTANCE: 75 FEET MAXIMUM
EXIT ACCESS TRAVEL DISTANCE: 200 FEET MAXIMUM

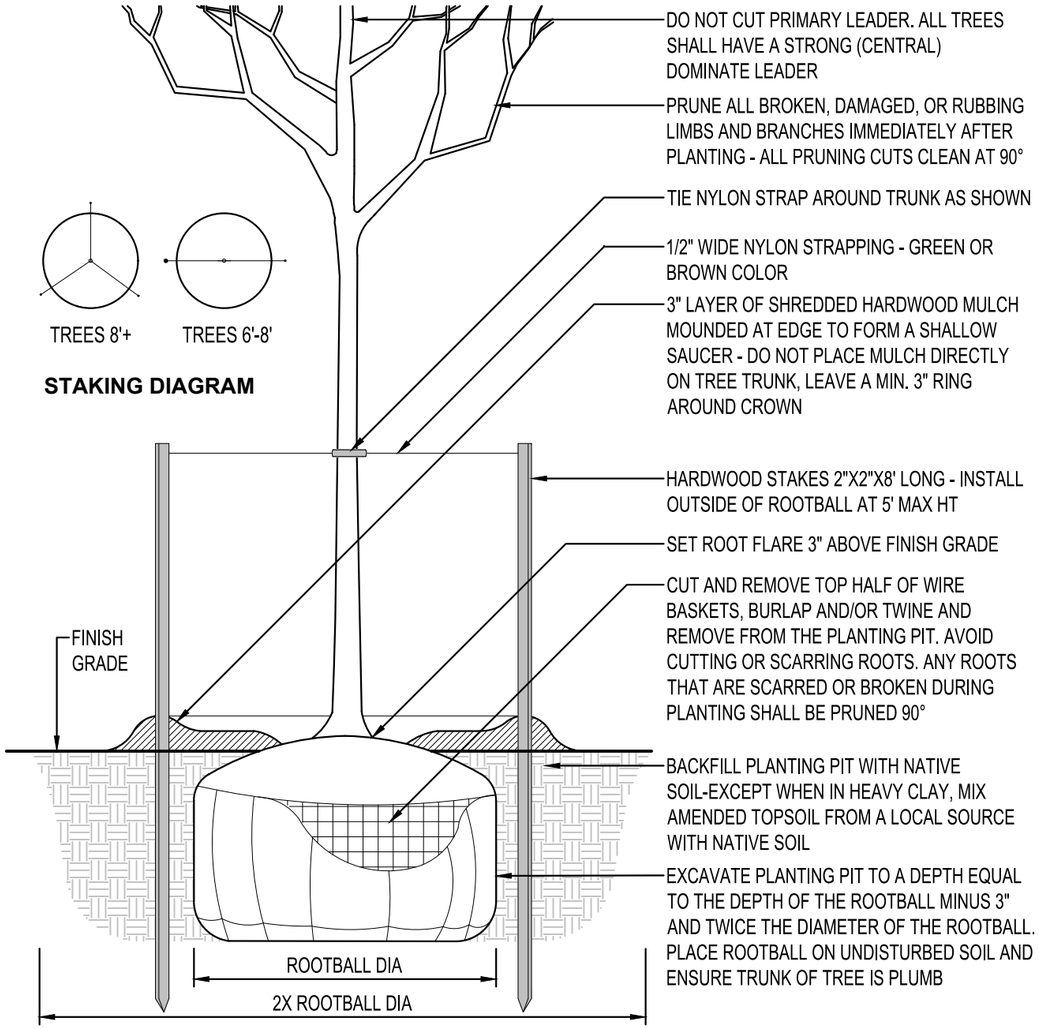
PLUMBING FIXTURES REQUIRED

BUSINESS
65 OCCUPANTS / 2 = 33 MEN AND 33 WOMEN
33 / 25 = 1.32 WATER CLOSETS FOR MEN
33 / 25 = 1.32 WATER CLOSETS FOR WOMEN
33 / 40 = 0.83 LAVATORIES FOR MEN
33 / 40 = 0.83 LAVATORIES FOR WOMEN
65 / 100 = 0.65 DRINKING FOUNTAINS
STORAGE
7 OCCUPANTS / 2 = 4 MEN AND 4 WOMEN
4 / 100 = 0.04 WATER CLOSETS FOR MEN
4 / 100 = 0.04 WATER CLOSETS FOR WOMEN
4 / 100 = 0.04 LAVATORIES FOR MEN
4 / 100 = 0.04 LAVATORIES FOR WOMEN
7 / 1,000 = 0.01 DRINKING FOUNTAINS
TOTAL PLUMBING FIXTURES REQUIRED
1.36 (2) WATER CLOSETS FOR MEN
1.36 (2) WATER CLOSETS FOR WOMEN
0.87 (1) LAVATORY FOR MEN
0.87 (1) LAVATORY FOR WOMEN
0.66 (2) ACCESSIBLE DRINKING FOUNTAINS (1 HIGH SPOUT AND 1 LOW SPOUT)
1 SERVICE SINK

PLUMBING FIXTURES PROVIDED

4 WATER CLOSETS AND 6 URINALS FOR MEN
10 WATER CLOSETS FOR WOMEN
8 LAVATORIES FOR MEN
8 LAVATORIES FOR WOMEN
1 UNISEX TOILET ROOM, WITH 1 WATER CLOSET AND 1 LAVATORY
2 FAMILY TOILET ROOMS, WITH 1 WATER CLOSET AND 1 LAVATORY EACH
4 ACCESSIBLE DRINKING FOUNTAINS (2 HIGH SPOUT AND 2 LOW SPOUT)
1 SERVICE SINK

2



STAKING DIAGRAM

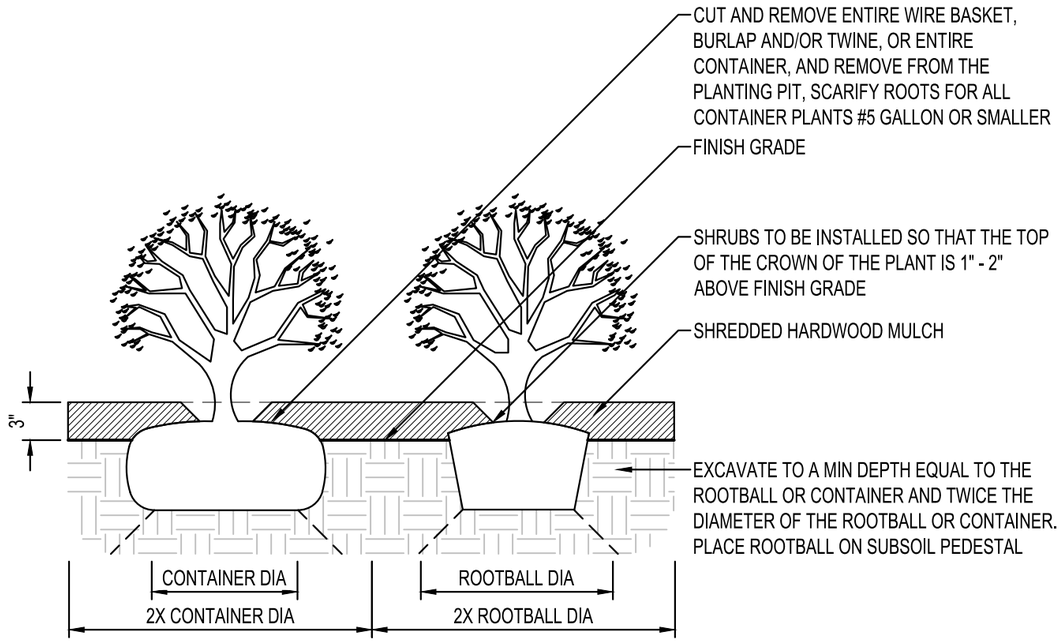
DECIDUOUS TREE PLANTING

NTS

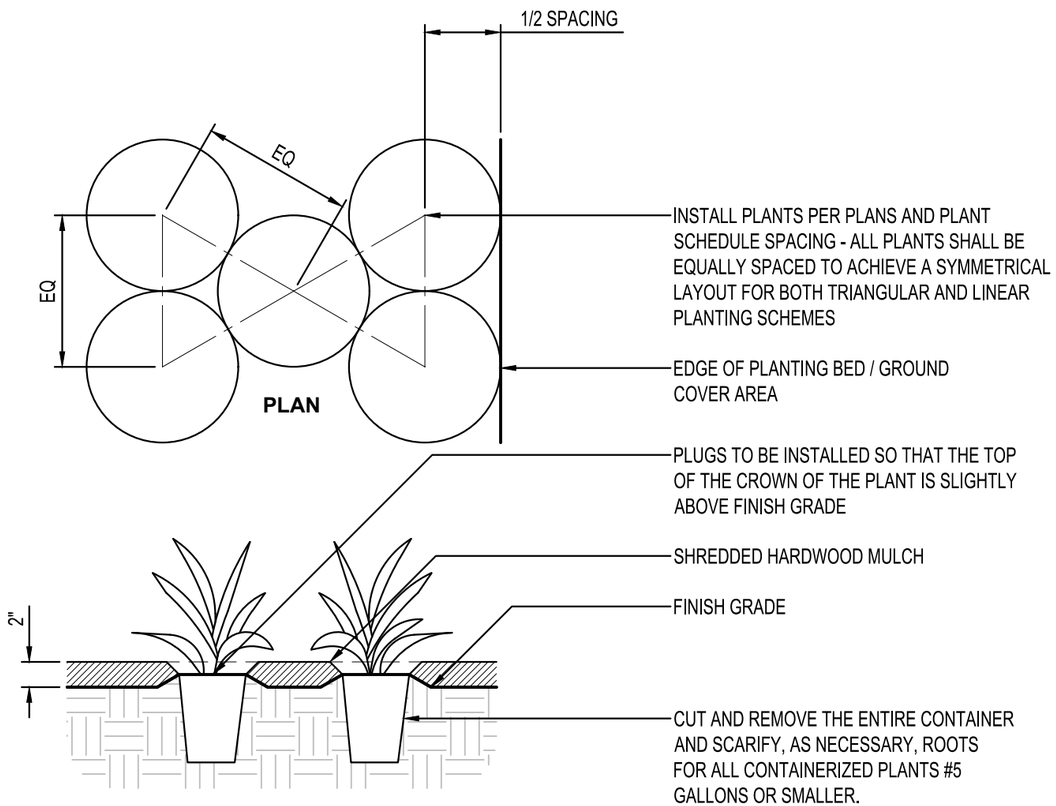
PLANTING NOTES

1. COORDINATE LOCATION OF ALL UTILITIES (LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC.) WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (FENCE, FOOTINGS, TREE ROOTBALLS, ETC.). CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO OWNER'S REPRESENTATIVE PRIOR TO CONTINUING WORK.
2. SAVE AND PROTECT ALL EXISTING TREES NOT NOTED TO BE REMOVED.
3. REMOVE ALL CONSTRUCTION DEBRIS AND MATERIALS INJURIOUS TO PLANT GROWTH FROM PLANTING PITS AND BEDS PRIOR TO BACKFILLING WITH PLANTING MIX.
4. REFER TO PLANTING DETAILS FOR AMENDED SOIL DEPTH IN PLANTING BEDS AND SURROUNDING TREES.
5. FIELD STAKE PLANTINGS ACCORDING TO PLAN. OWNER'S REPRESENTATIVE SHALL APPROVE ALL PLANT LOCATIONS PRIOR TO INSTALLATION. OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REVISE PLANTING LAYOUT AT TIME OF INSTALLATION.
6. ALL PLANT MATERIALS SHALL BE TRUE TO THEIR SCIENTIFIC NAME AND SIZE AS INDICATED IN THE PLANT SCHEDULE.
7. IF DISCREPANCIES EXIST BETWEEN THE NUMBER OF PLANTS DRAWN ON THE PLANTING PLAN AND THE NUMBER OF PLANTS IN THE SCHEDULE, THE PLANTING PLAN SHALL GOVERN.
8. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE, AND ONLY AFTER WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
9. ALL PLANT MATERIALS MUST CONFORM TO AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1), LATEST EDITION PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, WASHINGTON D.C. LARGER SIZED PLANT MATERIALS OF THE SPECIES LISTED MAY BE USED IF THE STOCK CONFORMS TO ANSI Z60.1.
10. FOLLOW WISDOT 632 STANDARD SPECIFICATIONS FOR FURNISHING AND PLANTING PLANT MATERIALS.
11. A PLANT ESTABLISHMENT PERIOD OF TWO (2) YEARS MUST FOLLOW THE COMPLETION OF PLANTING PER WISDOT 632.3.18.
12. ALL TREES SHALL HAVE A STRONG CENTRAL LEADER. ANY TREES DEEMED NOT TO HAVE A STRONG CENTRAL LEADER SHALL BE REJECTED.
13. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE DUE TO CONSTRUCTION OPERATIONS. ANY AREAS THAT ARE DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
14. PROVIDE SHREDDED HARDWOOD MULCH SURROUNDING ALL PROPOSED TREES (Ø5') AND WITHIN PLANTING BEDS AS SHOWN IN TREE PLANTING DETAIL. DO NOT USE AN UNDERLAYMENT SUCH AS PLASTIC SHEET OR LANDSCAPE FABRIC. APPLY PRE-EMERGENT TO ALL PLANTING BEDS PRIOR TO MULCHING. REFER TO PLANS FOR ADDITIONAL DETAILS. REFER TO STORMWATER DETAILS FOR BASIN CONSTRUCTION AND MULCH APPLICATION.
15. INDICATED QUANTITIES ARE ESTIMATES AND SHALL BE CONFIRMED BY THE CONTRACTOR.
16. ADJUST SPACING OF PLANT MATERIALS AROUND ADJACENT UTILITY STRUCTURES.

2

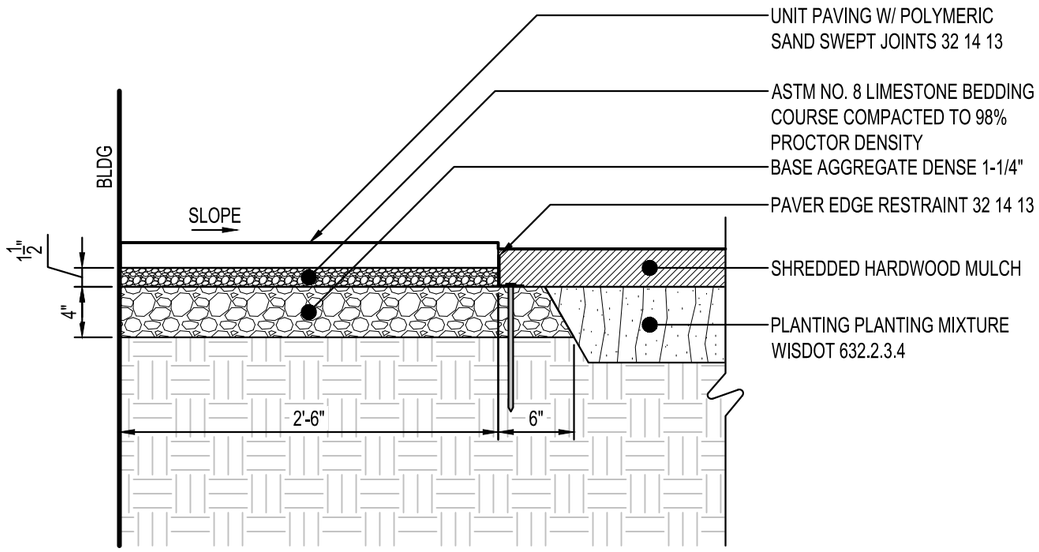


SHRUB PLANTING



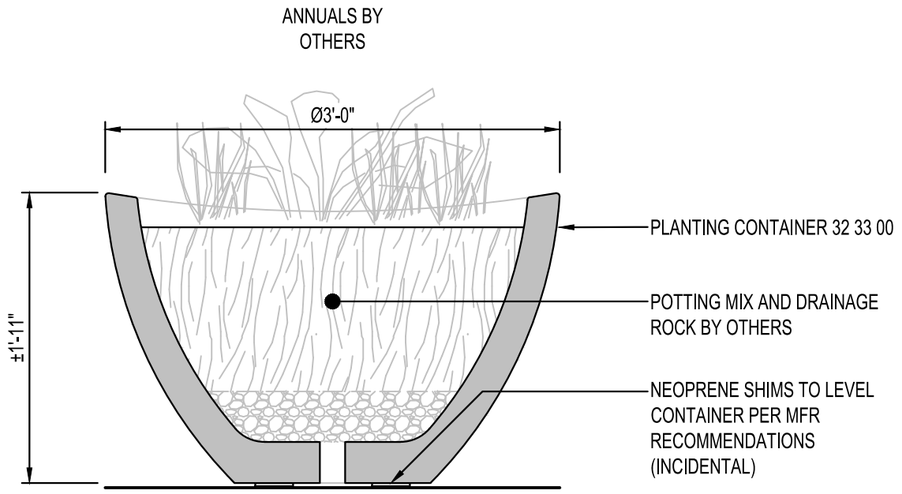
PERENNIAL (PLUG) PLANTING

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLANTING DETAILS	C0-22 SHEET 50 E



MAINTENANCE BORDER

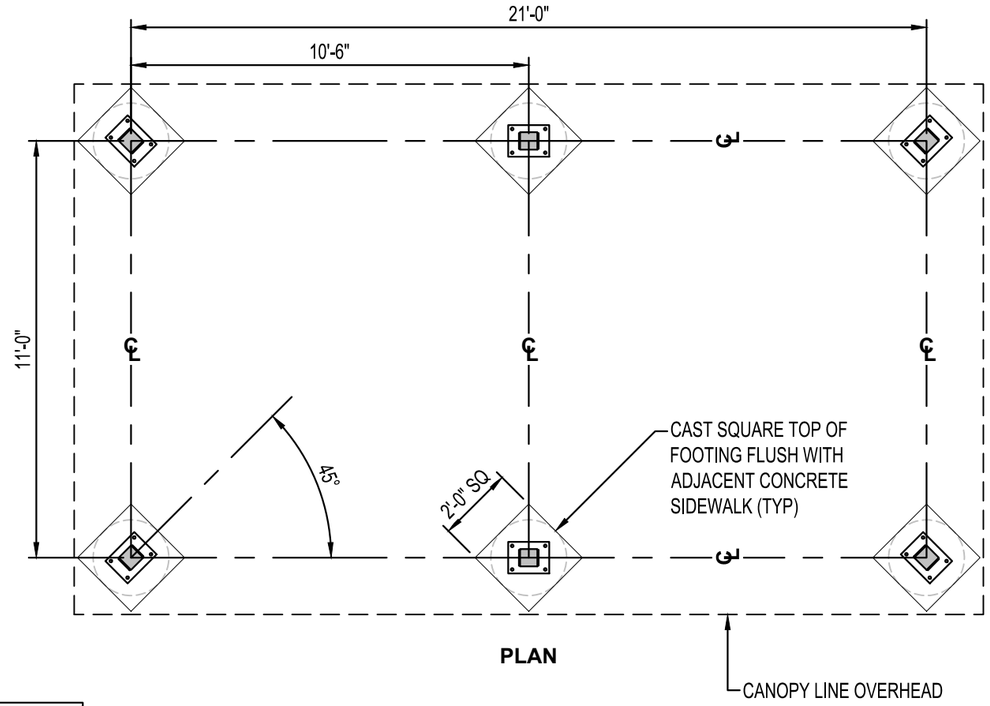
SCALE: 1" = 1'-0"



PLANTING CONTAINER

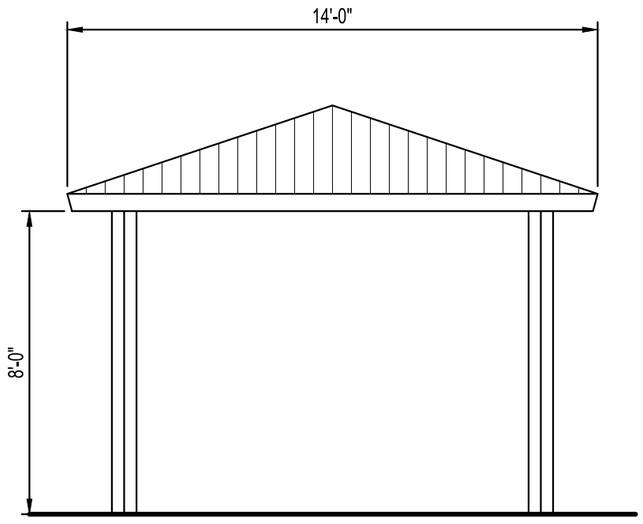
SCALE: 1" = 1'-0"

2

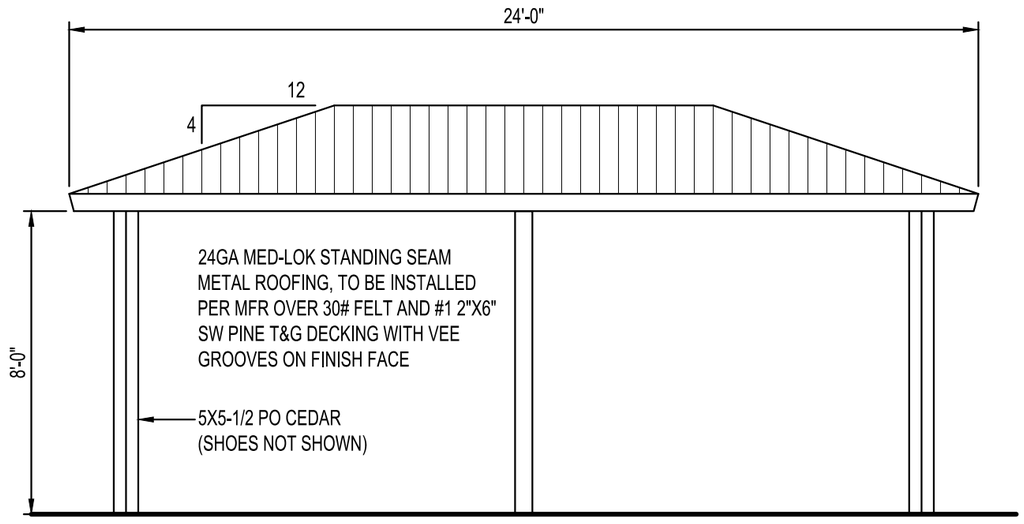


PLAN

SHOP DRAWING REQUIRED

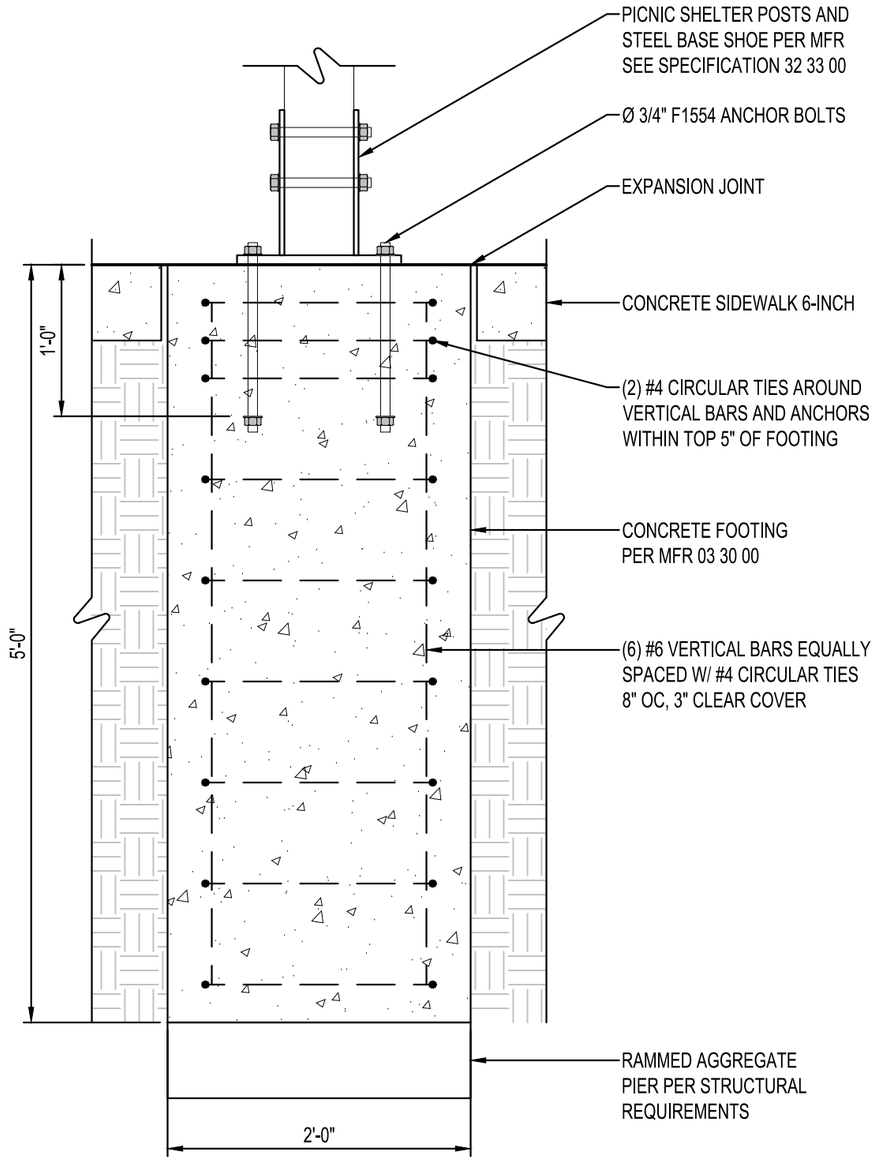


SIDE ELEVATION



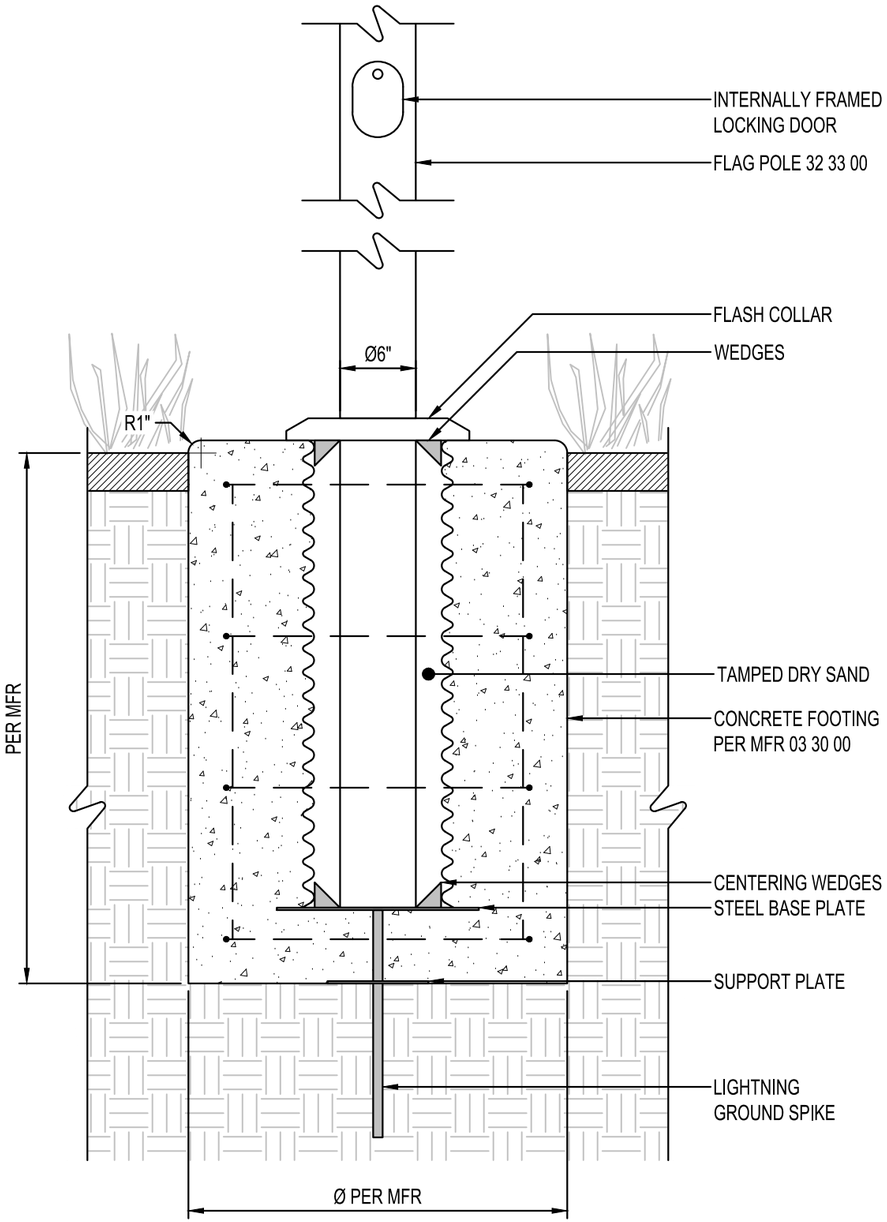
FRONT ELEVATION

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PICNIC SHELTER DETAILS	C0-24
				SHEET 52 E



PICNIC SHELTER FOOTING

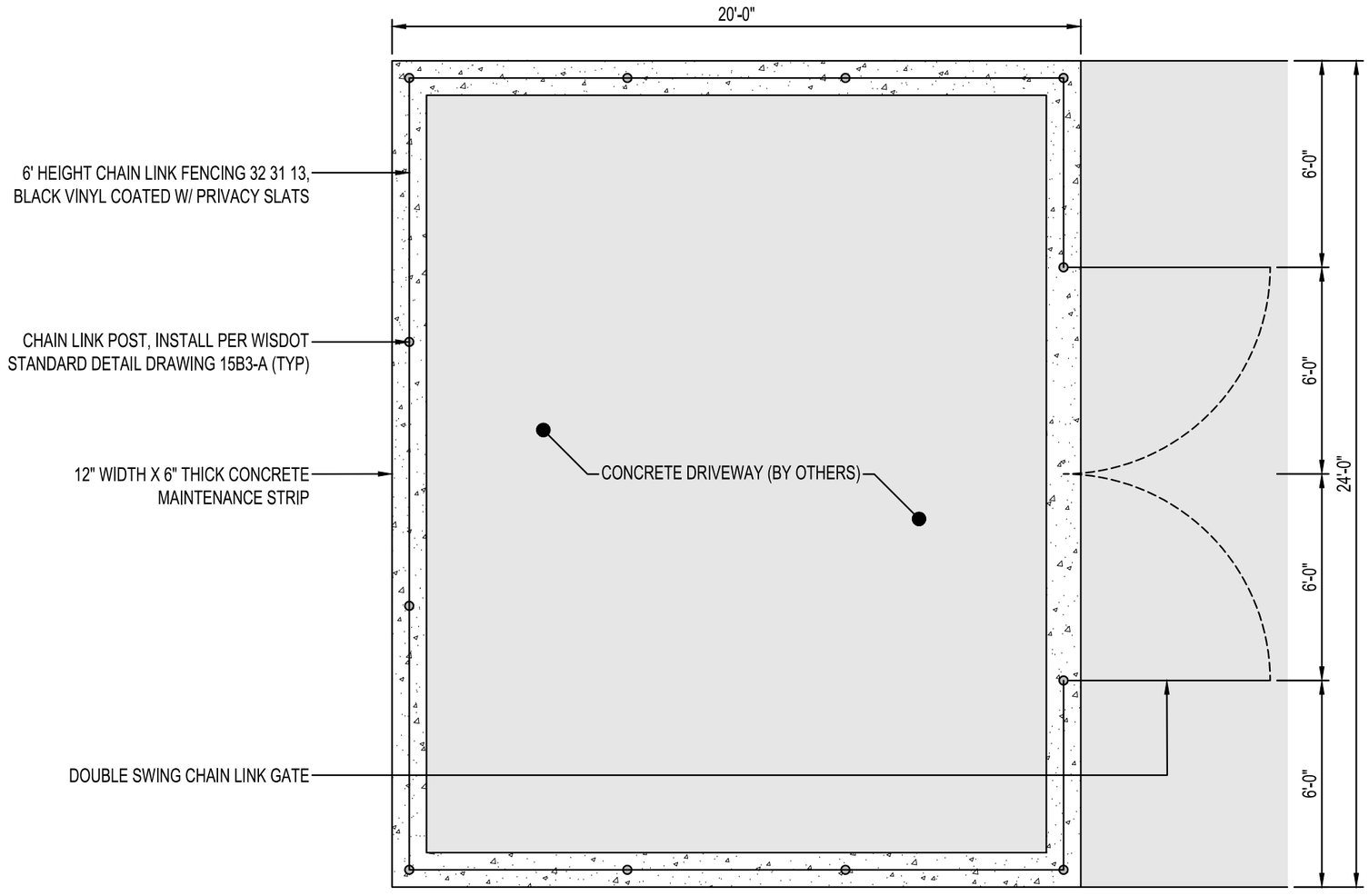
SCALE: 1" = 1'-0"



FLAG POLE

SCALE: 1" = 1'-0"

2



DUMPSTER ENCLOSURE PLAN

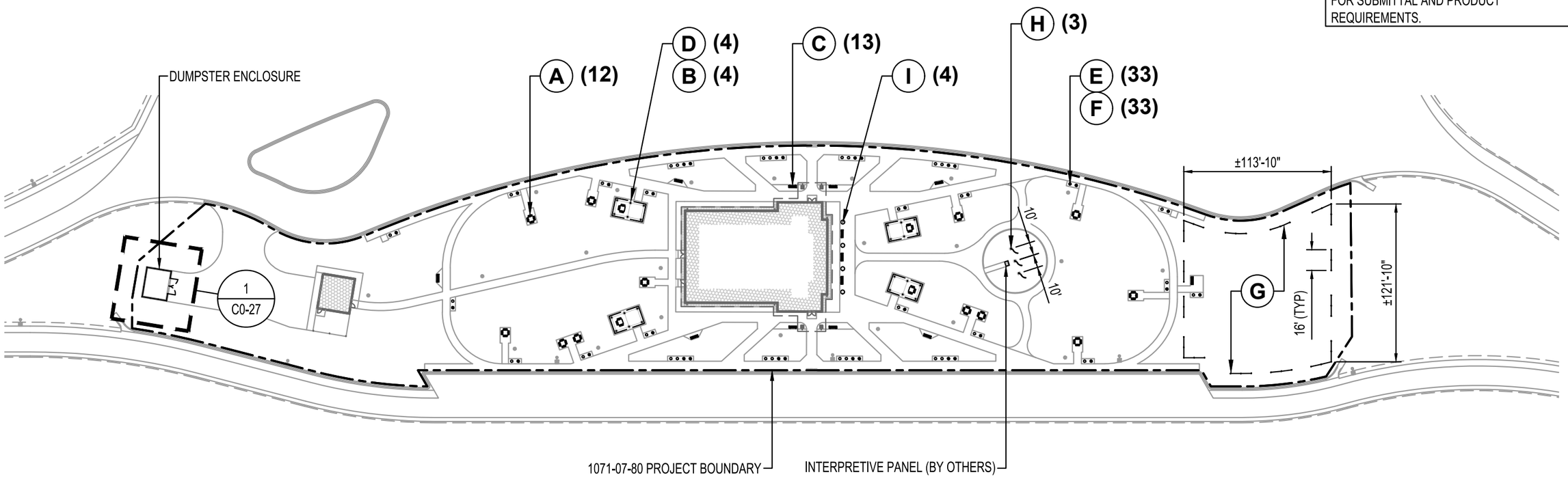
SCALE: 1/4" = 1'-0"

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	DUMPSTER ENCLOSURE DETAILS	C0-26 SHEET 54 E

FURNISHING LEGEND	
KEY	DESCRIPTION
A	PICNIC TABLE
B	ADA PICNIC TABLE
C	BENCH
D	PICNIC SHELTER
E	LITTER RECEPTACLE
F	RECYCLING RECEPTACLE
G	SPLIT RAIL FENCE SECTIONS [1]
H	FLAG POLE
I	PLANTING CONTAINER

NOTE 1: FENCE SECTIONS ARE IN 16' LENGTH SEGMENTS WITH POSTS AT 8' OC.

REFER TO SPECIFICATION SECTION 32 33 00 FOR SUBMITTAL AND PRODUCT REQUIREMENTS.



SCALE IN FEET 0 40 80

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	SITE FURNISHING PLAN	C3-10 SHEET 55 E

FILE NAME : 27044 C3-SITE (79).DWG
LAYOUT NAME - FURNISHINGS (3)

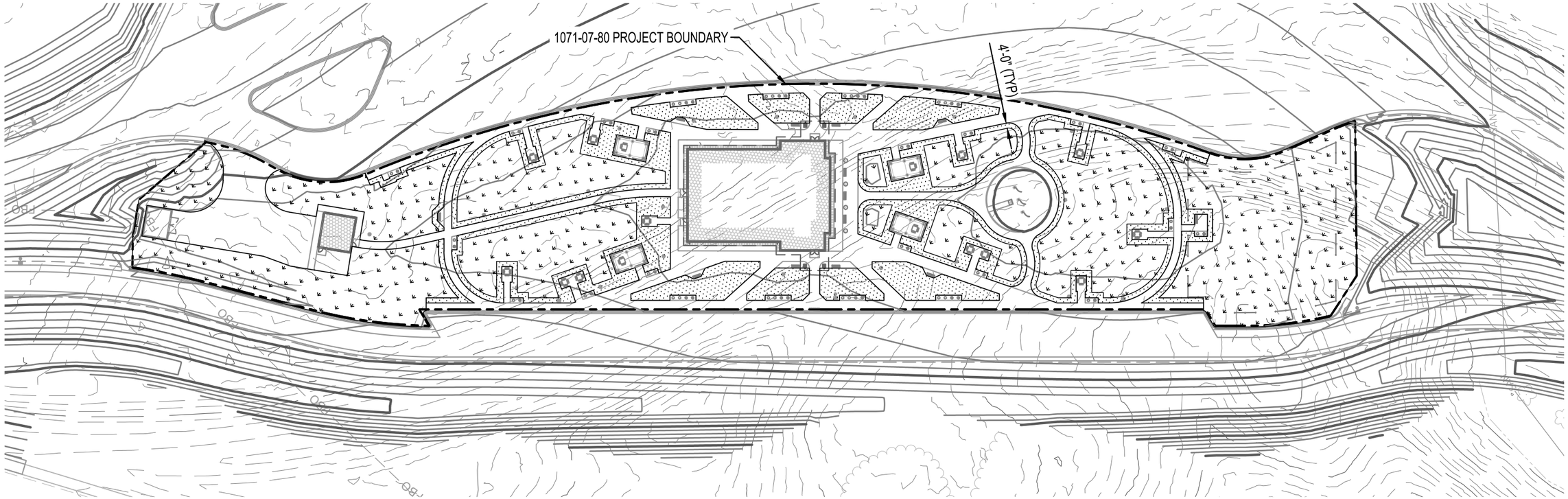
PLOT DATE : 1/26/2024 11:33 AM PLOT BY : PAUL NELSON PLOT NAME : PLOT SCALE : 1" = 80'

2

2

RESTORATION SCHEDULE

SYMBOL	DESCRIPTION
	SEED MIX NO. 40 WISDOT 630.0140
	SOD LAWN WISDOT 631.1000



0 40 80
SCALE IN FEET

C5-20

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	SITE RESTORATION PLAN	SHEET 56 E

FILE NAME : 27044 C5-LAND (79).DWG
LAYOUT NAME - AREA C

PLOT DATE : 1/26/2024 11:34 AM PLOT BY : PAUL NELSON PLOT NAME : PLOT SCALE : 1" = 80'

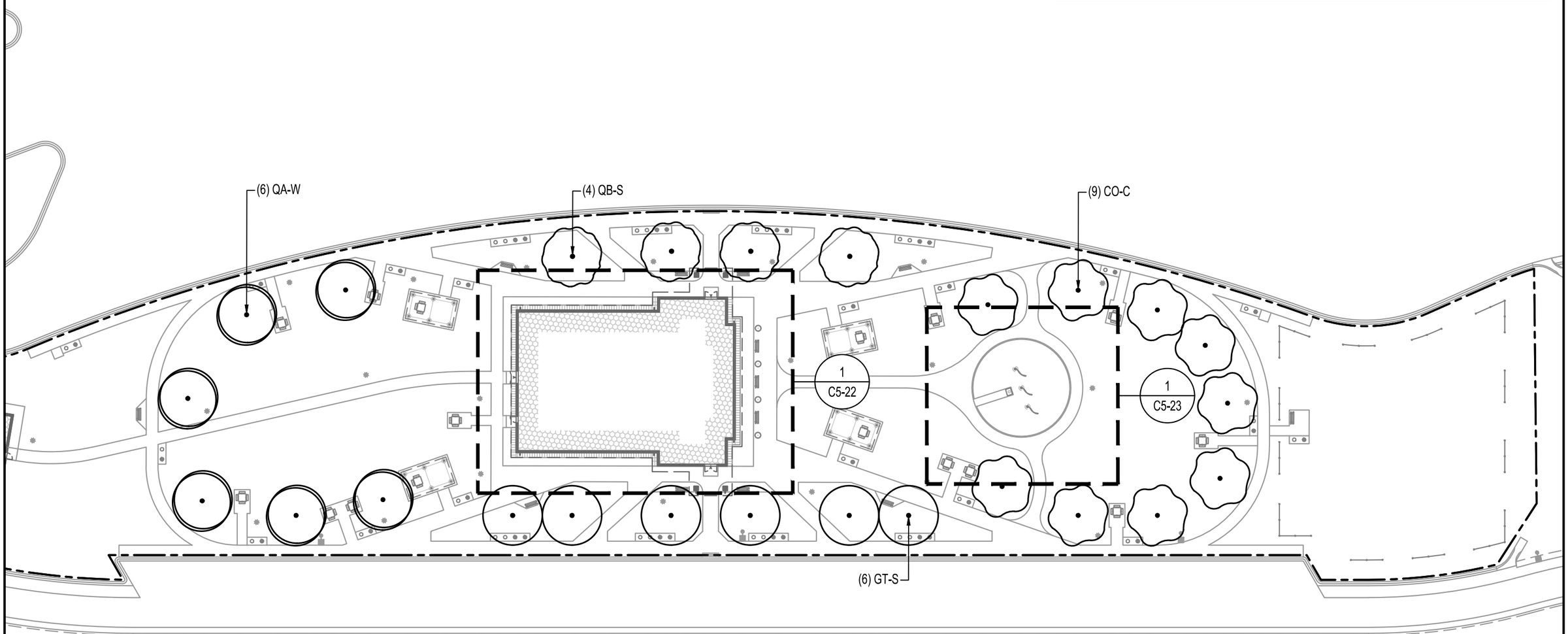
WISDOT/CADDS SHEET 42

2

2

REST AREA SITE PLANTING PLAN

CODE	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT
CO-C	9	CELTIS OCCIDENTALIS 'CHICAGOLAND' CHICAGOLAND HACKBERRY	2.5" CAL	B & B
GT-S	6	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' SKYLINE HONEY LOCUST	2.5" CAL	B & B
QA-W	6	QUERCUS ALBA WHITE OAK	2.5" CAL	B & B
QB-S	4	QUERCUS BICOLOR SWAMP WHITE OAK	2.5" CAL	B & B



PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REST AREA SITE PLANTING PLAN	C5-21
				SHEET 57 E

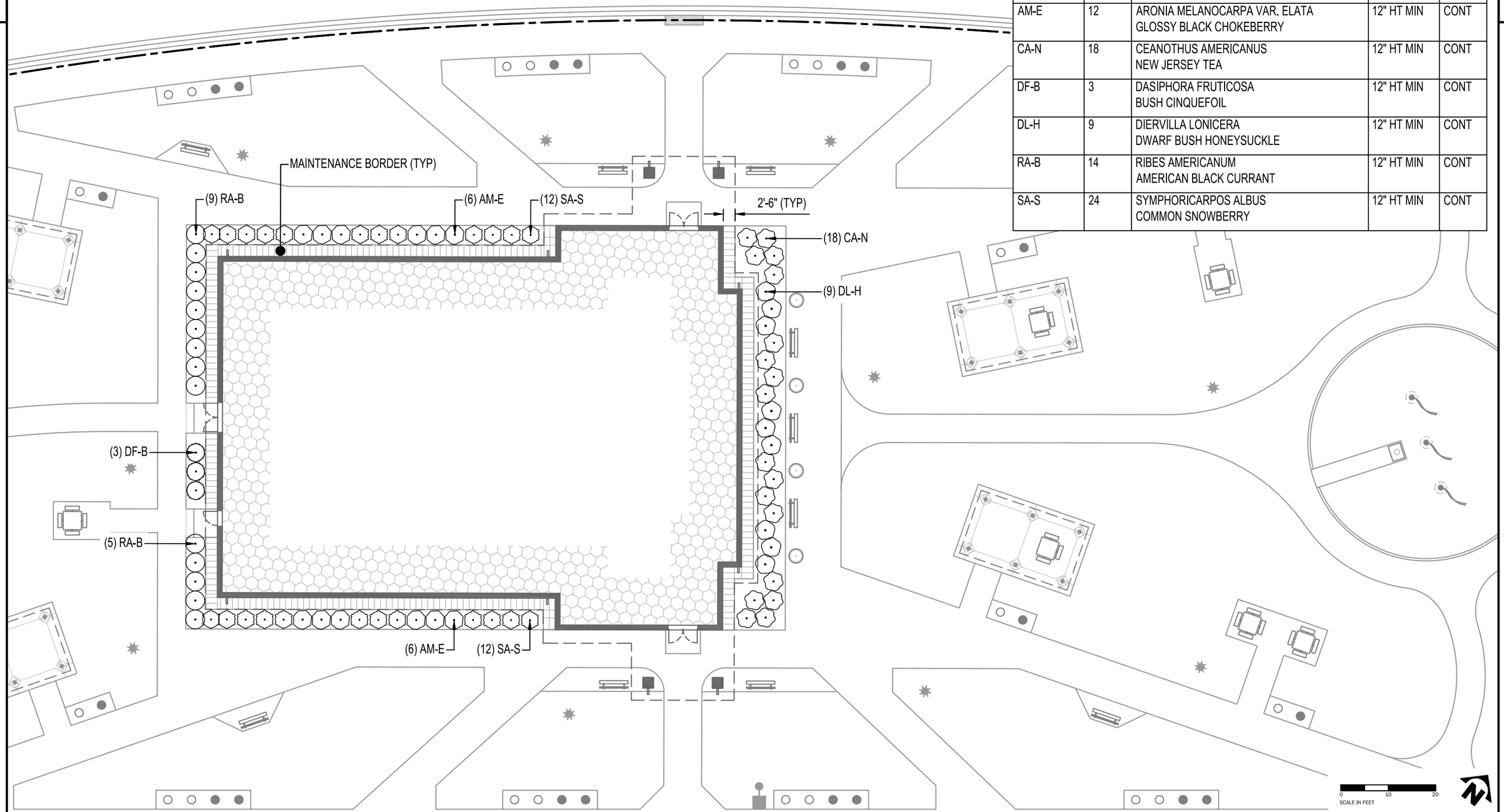
FILE NAME : 27044 C5-LAND (79).DWG
LAYOUT NAME - REST AREA

PLOT DATE : 1/26/2024 11:34 AM PLOT BY : PAUL NELSON PLOT NAME : PLOT SCALE : 1" = 50'

2

BUILDING SITE PLANT SCHEDULE

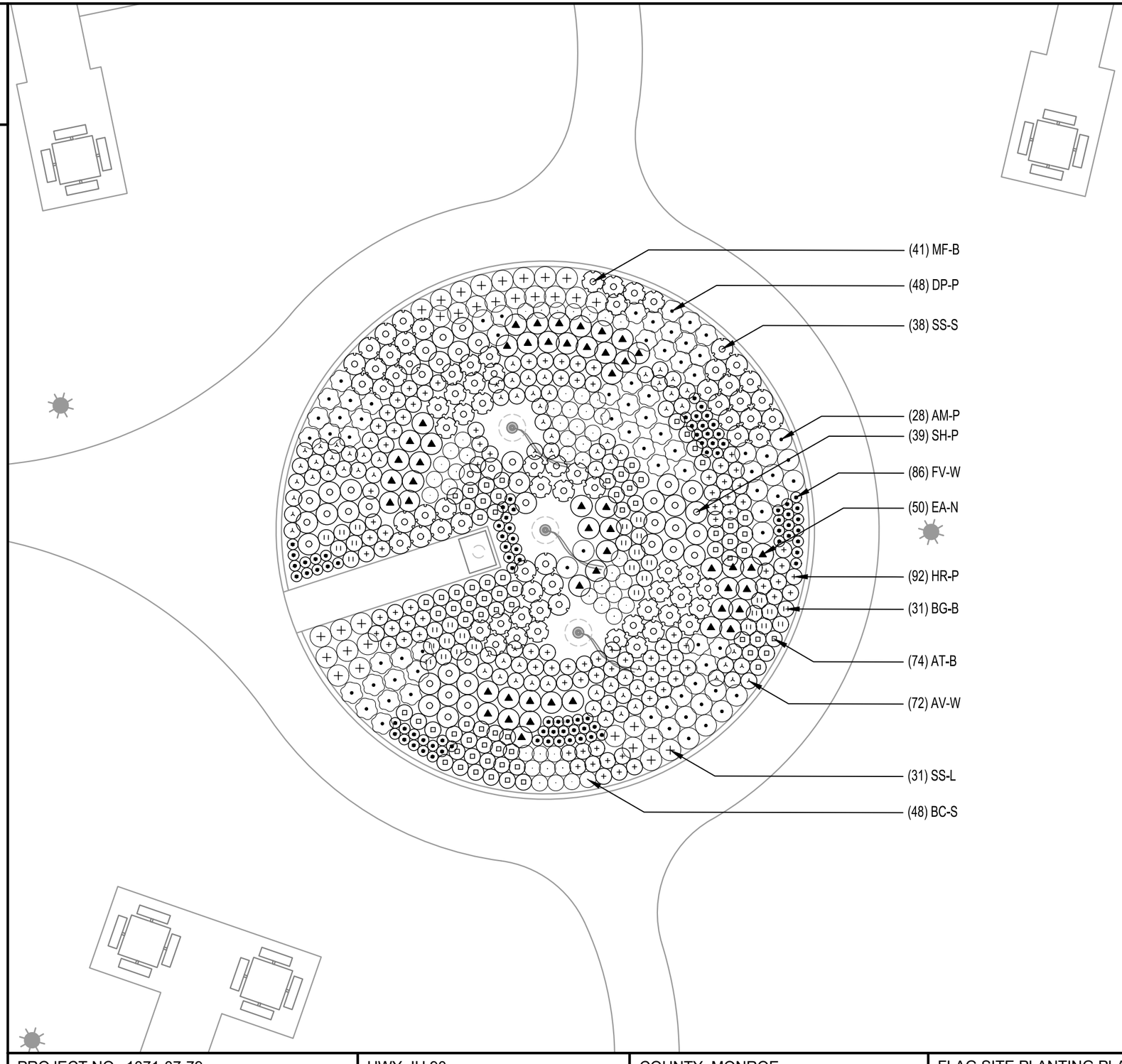
CODE	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT
AM-E	12	ARONIA MELANOCARPA VAR. ELATA GLOSSY BLACK CHOKEBERRY	12" HT MIN	CONT
CA-N	18	CEANOTHUS AMERICANUS NEW JERSEY TEA	12" HT MIN	CONT
DF-B	3	DASIPHORA FRUTICOSA BUSH CINQUEFOIL	12" HT MIN	CONT
DL-H	9	DIERVILLA LONICERA DWARF BUSH HONEYSUCKLE	12" HT MIN	CONT
RA-B	14	RIBES AMERICANUM AMERICAN BLACK CURRANT	12" HT MIN	CONT
SA-S	24	SYMPHORICARPOS ALBUS COMMON SNOWBERRY	12" HT MIN	CONT



PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	BUILDING SITE PLANTING PLAN	C5-22 SHEET E

FILE NAME : 27044 C5-LAND (79).DWG
LAYOUT NAME - BUILDING

PLOT DATE : 1/26/2024 11:34 AM PLOT BY : PAUL NELSON PLOT NAME : PLOT SCALE : 1" = 20'



FLAG SITE PLANTING PLAN

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT
	AM-P	28	ANAPHALIS MARGARITACEA PEARLY EVERLASTING	DP50	PLUG
	AT-B	74	ASCLEPIAS TUBEROSA BUTTERFLY MILKWEED	DP50	PLUG
	AV-W	72	ASCLEPIAS VERTICILLATA WHORLED MILKWEED	DP50	PLUG
	BC-S	48	BOUTELOUA CURTIPENDULA SIDE OATS GRAMA	DP50	PLUG
	BG-B	31	BOUTELOUA GRACILIS BLUE GRAMA GRASS	DP50	PLUG
	DP-P	48	DALEA PURPUREA PURPLE PRAIRIE CLOVER	DP50	PLUG
	EA-N	50	ECHINACEA ANGUSTIFOLIA NARROW LEAF CONEFLOWER	DP50	PLUG
	FV-W	86	FRAGARIA VESCA WOODLAND STRAWBERRY	DP50	PLUG
	HR-P	92	HEUCHERA RICHARDSONII PRAIRIE ALUM ROOT	DP50	PLUG
	MF-B	41	MONARDA FISTULOSA BERGAMOT	DP50	PLUG
	SS-L	31	SCHIZACHYRIUM SCOPARIUM LITTLE BLUESTEM	DP50	PLUG
	SH-P	39	SPOROBOLUS HETEROLEPIS PRAIRIE DROPSEED	DP50	PLUG
	SS-S	38	SYMPHYOTRICHUM SERICEUM SILKY ASTER	DP50	PLUG

2

SCALE IN FEET 0 5 10

N

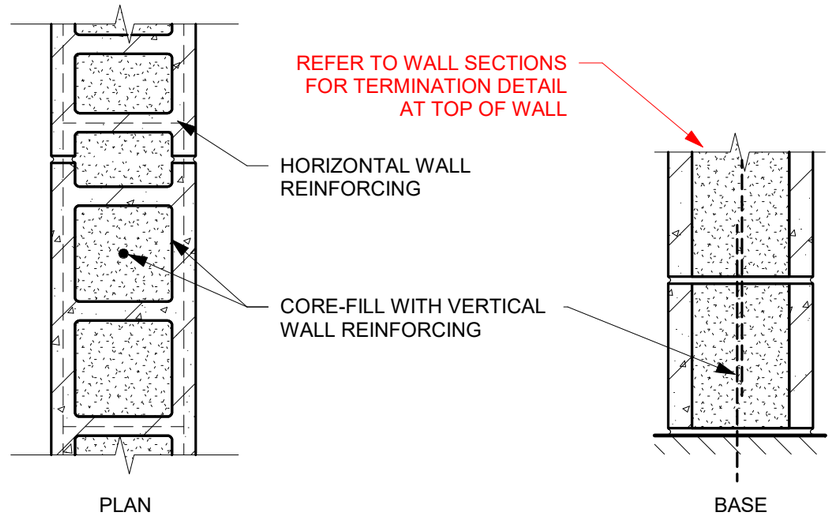
C5-23

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FLAG SITE PLANTING PLAN	SHEET 59	E

2

SHEET NOTES

A. REFER TO SHEET A1-03 - WALL NOTES FOR WALL ASSEMBLY KEY NOTES.



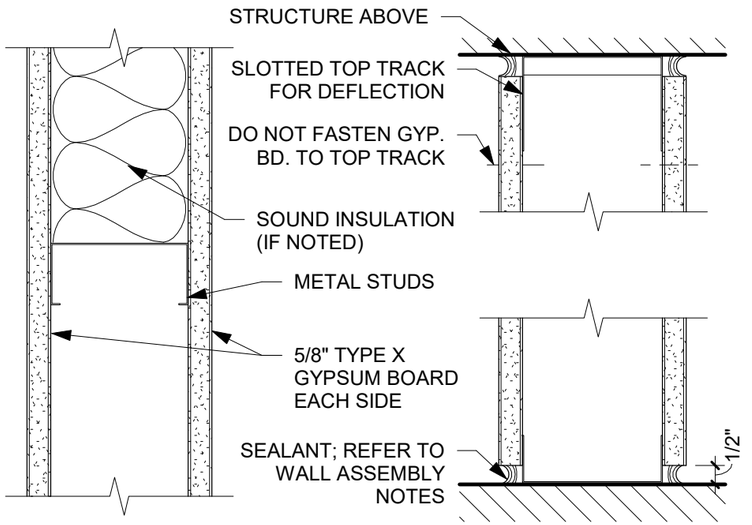
WALL TYPE	BLOCK SIZE (NOMINAL WIDTH AND HEIGHT)	CALCULATED FIRE RATING	REINFORCEMENT	KEY NOTES
M4	4x8		REFER TO STRUCTURAL SCHEDULES FOR SPECIFIC INFO	3, 5, 8
M6	6x8			3, 5, 8
M8	8x8			3, 5, 8
M8B	8x8			3, 5, 8
M10	10x8			3, 5, 8
M12	12x8			3, 5, 8

1 WALL TYPE M (INTERIOR NON-RATED MASONRY)
1 1/2" = 1'-0"

2

SHEET NOTES

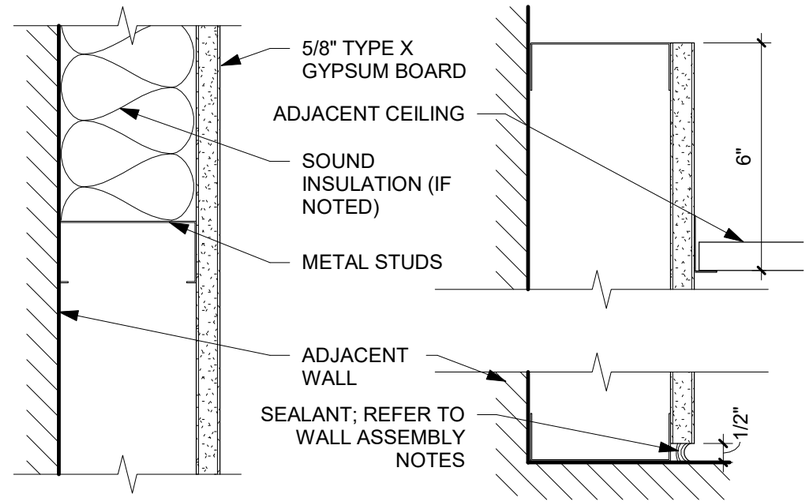
A. REFER TO SHEET A1-03 - WALL NOTES FOR WALL ASSEMBLY KEY NOTES.



PLAN TOP / BOTTOM

WALL TYPE	STUD DESIGNATION	SPACING	MAX. HEIGHT (5 PSF, L/240)		KEY NOTES
A1	250S125-30	16"	11'-7"		1, 5, 8
A2	350S125-30	16"	15'-0"		1, 5, 8
A3	362S125-30	16"	15'-6"		1, 5, 8
A4	400S125-30	16"	16'-8"		1, 5, 8
A5	550S125-30	16"	21'-6"		1, 5, 8
A6	600S125-30	16"	22'-11"		1, 5, 8

1 WALL TYPE A (METAL STUD PARTITION)
3" = 1'-0"

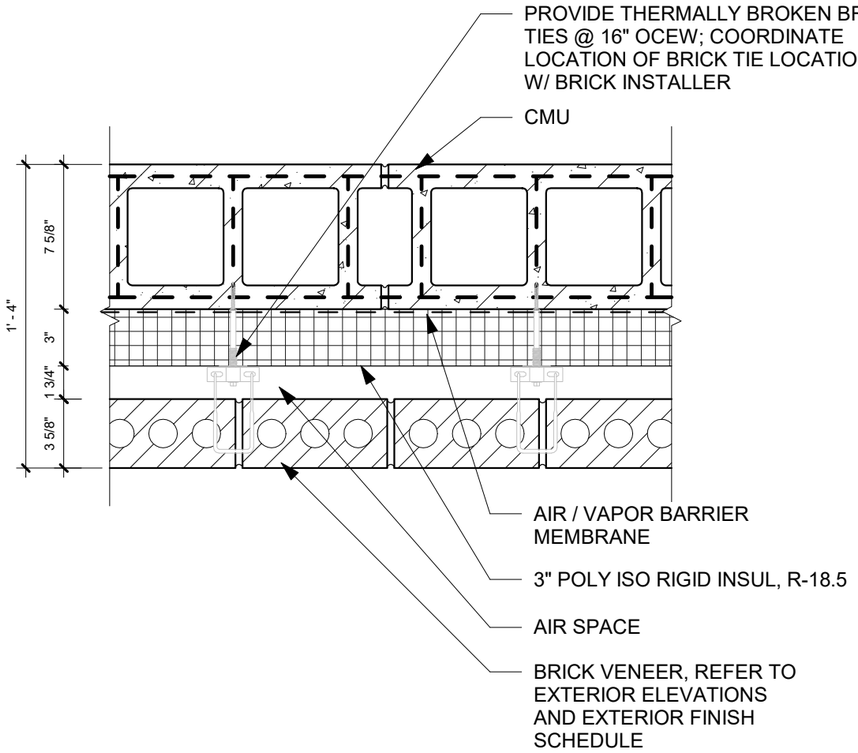


PLAN TOP / BOTTOM

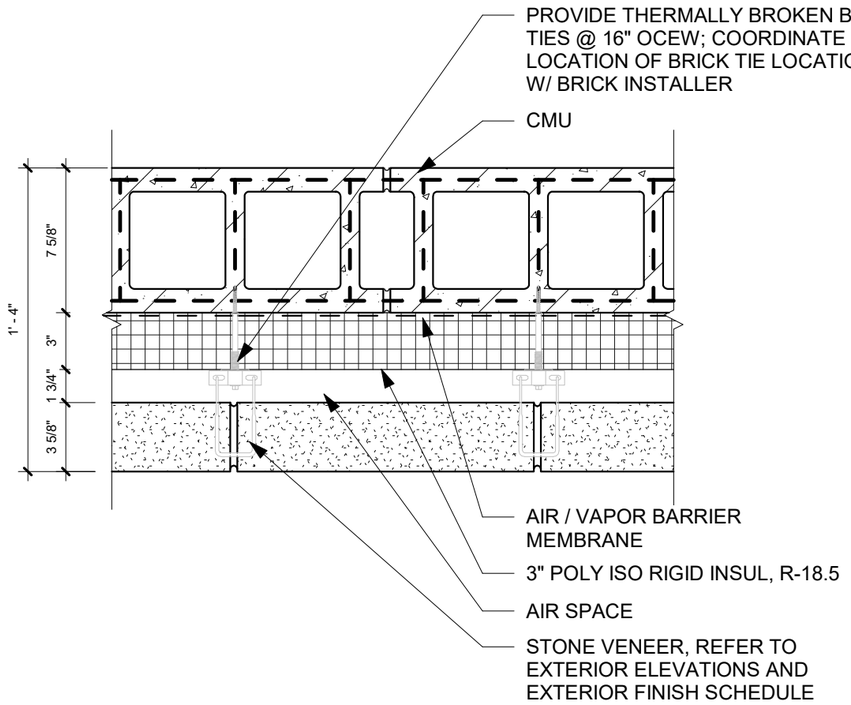
WALL TYPE	STUD DESIGNATION	SPACING			KEY NOTES
B1	250S125-30	16"			1, 5
B2	350S125-30	16"			1, 5
B3	362S125-30	16"			1, 5
B4	400S125-30	16"			1, 5
B5	550S125-30	16"			1, 5
B6	600S125-30	16"			1, 5

2 WALL TYPE B (METAL STUD FURRING)
3" = 1'-0"

2



1 WALL TYPE - X1
1 1/2" = 1'-0"



2 WALL TYPE - X2
1 1/2" = 1'-0"

WALL ASSEMBLY KEY NOTES:

NOT ALL KEY NOTES APPLY TO PROJECT. VERIFY WITH SPECIFIC WALL TYPE.

1. INCLUDE FIBERGLASS SOUND INSULATION.
2. PROVIDE FIRE-RATED SEALANT AT WALL BASE, TOP, AND AROUND ALL PENETRATIONS. ENSURE SPECIFIC FIRE RATED ASSEMBLY REQUIREMENTS ARE MAINTAINED. TYPICAL BOTH SIDES OF WALL.
3. REFER TO IBC CHAPTER 7, TABLE "MINIMUM EQUIVALENT THICKNESS OF BEARING OR NONBEARING CONCRETE MASONRY WALLS" FOR CALCULATED FIRE-RESISTANCE RATING.
4. 2 HOUR FIRE RATED 8" CMU WALL ASSEMBLY REQUIRES GROUTED CELLS AT 40" OC MAXIMUM.
5. INCLUDE PAINTABLE ACOUSTIC SEALANT AT WALL BASE AND TOP TERMINATIONS. TYPICAL BOTH SIDES OF WALL (WHERE APPLICABLE).
6. PROVIDE DOUBLE TOP PLATES AT ALL LOAD BEARING WALLS.
7. WOOD FRAMING MEMBERS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.
8. PROVIDE 1" GAP FOR DEFLECTION ALLOWANCE BETWEEN WALL FINISH / SUBSTRATE AND STRUCTURE ABOVE. TYPICAL UNLESS NOTED OTHERWISE ON STRUCTURAL DOCUMENTS.

GENERAL WALL ASSEMBLY NOTES:

A. NOT ALL WALL TYPES LISTED APPLY TO THIS PROJECT. REFER TO FLOOR PLAN FOR LOCATIONS AND ADDITIONAL NOTES.

B. LIGHT GAUGE STEEL FRAMING MEMBER DESIGNATION SYSTEM: (REFER TO STRUCTURAL NOTES)

600S125-54 (EQUIVALENT TO 6" x 16 GAUGE STUD OR JOIST WITH 1 1/4" FLANGES)

- 54 — MINIMUM BASE METAL THICKNESS IN MILS. EXAMPLE - .054 = 54 MILS)
  - 18 = 25 GAUGE
  - 27 = 22 GAUGE
  - 30 = 20 GAUGE (DRYWALL)
  - 33 = 20 GAUGE (STRUCTURAL)
  - 43 = 18 GAUGE
  - 54 = 16 GAUGE
  - 68 = 14 GAUGE
  - 97 = 12 GAUGE
- 125 — FLANGE WIDTH (1/100 INCHES): EXAMPLE - 125 = 1.25"
- S — STYLE: S = STUD OR JOIST SECTION (WITH FLANGE STIFFENERS) = [
  - T = TRACK SECTION = ⌊⌋
  - U = CHANNEL SECTION (STUDS WITHOUT FLANGE STIFFENERS) = [
  - F = FURRING CHANNEL = ∩
  - Z = ZEE SECTION = ⌐
- 600 — MEMBER DEPTH (1/100 INCHES): EXAMPLE - 600 = 6"

C: IN ALL WET AREAS SUCH AS SHOWERS AND TUBS, INSTALL CEMENT-BASED BACKER BEHIND AREAS SCHEDULED TO RECEIVE TILE FINISH.

D. ON ALL RESTROOM WALLS AND OTHER AREAS SCHEDULED TO RECEIVE FRP OR TILE FINISH, PROVIDE A MINIMUM OF MOISTURE-RESISTANT GYPSUM BOARD.

E. ALL PARTITIONS CONTAINING PLUMBING OR HAVING AN EXTERIOR FACE SHALL BE INSULATED.

F. WHERE GYPSUM BOARD EXTENDS TO UNDERSIDE OF STRUCTURE ABOVE, STOP GYPSUM BOARD 1/2" BELOW LINE OF STRUCTURE AND SEAL AS REQUIRED.

G. REFERENCE FLOOR FINISH PLANS AND WALL FINISH PLANS FOR ADDITIONAL FINISHES NOT INDICATED ON PARTITION TYPES.

H. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF WALL PENETRATIONS. SEAL ALL OPENINGS WITH ACOUSTICAL SEALANT.

I. PROVIDE FIRE-TREATED WOOD OR STEEL BACKING FOR ALL WALL-MOUNTED FINISH CARPENTRY, ARCHITECTURAL WOODWORK, TOILET PARTITIONS, ACCESSORIES AND OTHER SIMILAR ITEMS.

J. REFER TO STRUCTURAL DOCUMENTS FOR SHEAR WALL CRITERIA.

FIRE-RATED PARTITION NOTES:

K. ALL PARTITIONS NOTED TO BE FIRE-RESISTANCE RATED SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE REFERENCED FIRE RESISTANCE TEST. ANY PROPRIETARY PRODUCTS REQUIRED BY FIRE RATED ASSEMBLIES AS INDICATED ON THE DRAWINGS ARE APPROVED.

L. ALTERNATE MATERIALS AND ASSEMBLIES MUST BE APPROVED BY THE ARCHITECT PRIOR TO COMMENCING WORK.

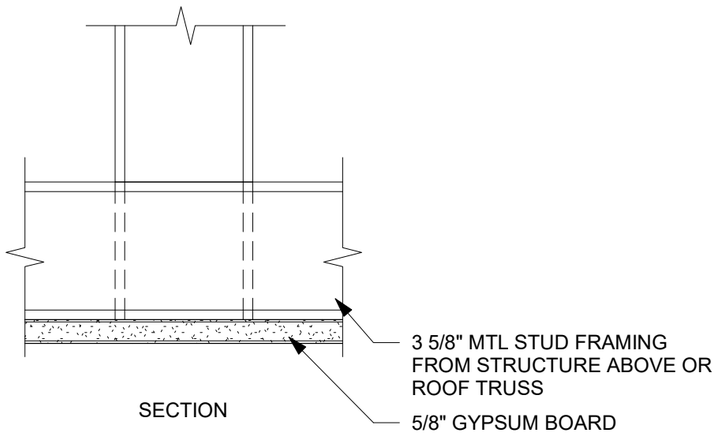
M. FIRE-RATED PARTITIONS SHALL BE CONSTRUCTED BEFORE NON-RATED PARTITIONS.

N. ALL FIRE-RATED PARTITIONS TO EXTEND FROM TOP OF UNFINISHED FLOOR TO UNDERSIDE OF STRUCTURE ABOVE. SEAL TOP, BOTTOM AND ALL PENETRATIONS WITH FIRE-RATED SEALANT.

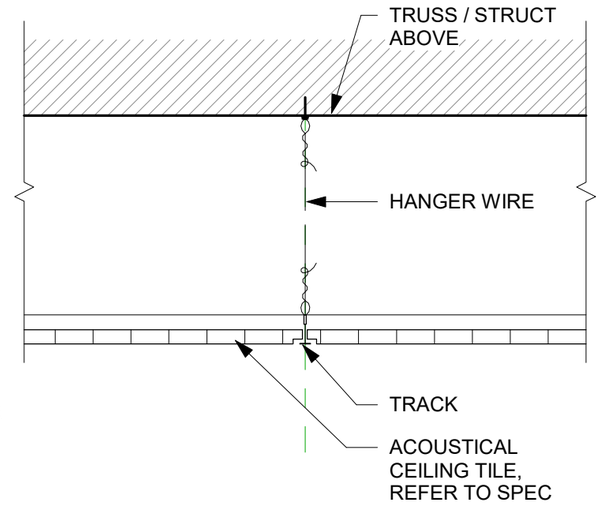
O. ALL PENETRATIONS IN FIRE-RATED PARTITIONS SHALL BE SEALED WITH MATERIALS, SEALANTS AND/OR ASSEMBLIES WHICH MAINTAIN THE FIRE-RESISTANCE RATING OF THE PARTITION.

2

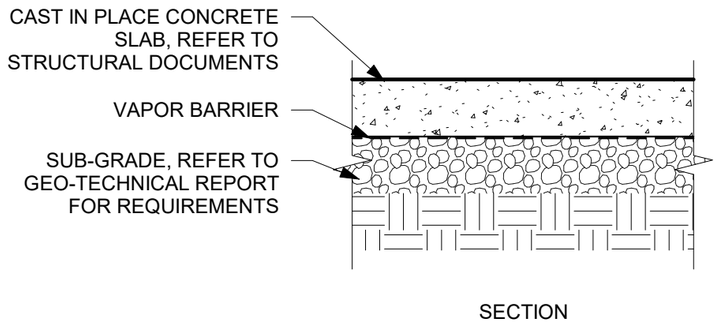
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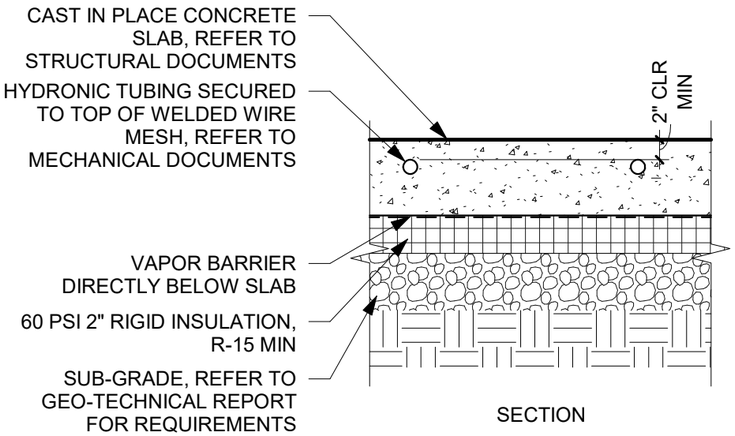
1 CEILING ASSEMBLY (GYP-1)
3" = 1'-0"



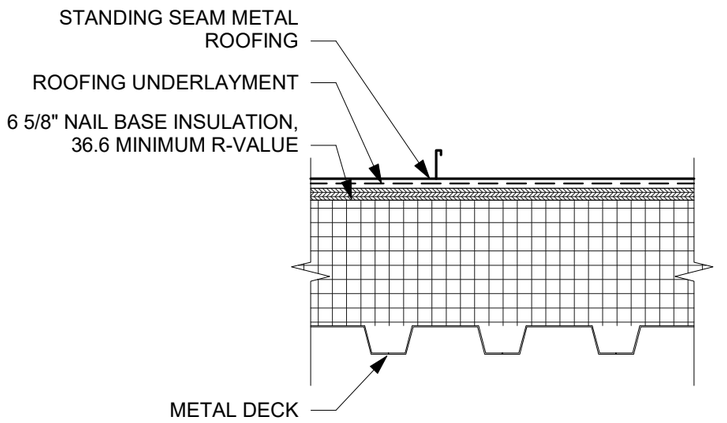
2 ACT CEILING
1 1/2" = 1'-0"



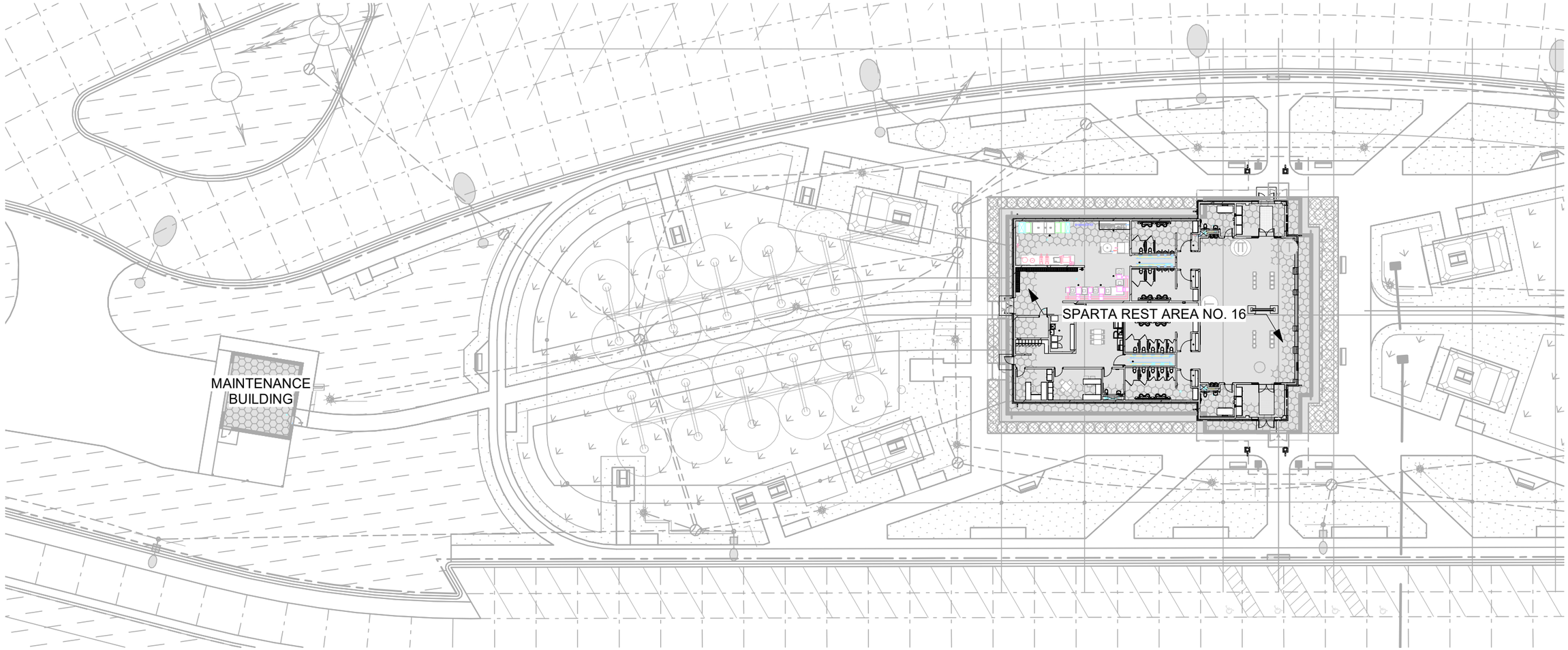
3 SLAB ON GRADE ASSEMBLY - SL2/SL3/SL5
1 1/2" = 1'-0"



4 IN-FLOOR HEAT SLAB ON GRADE ASSEMBLY - SL4
1 1/2" = 1'-0"



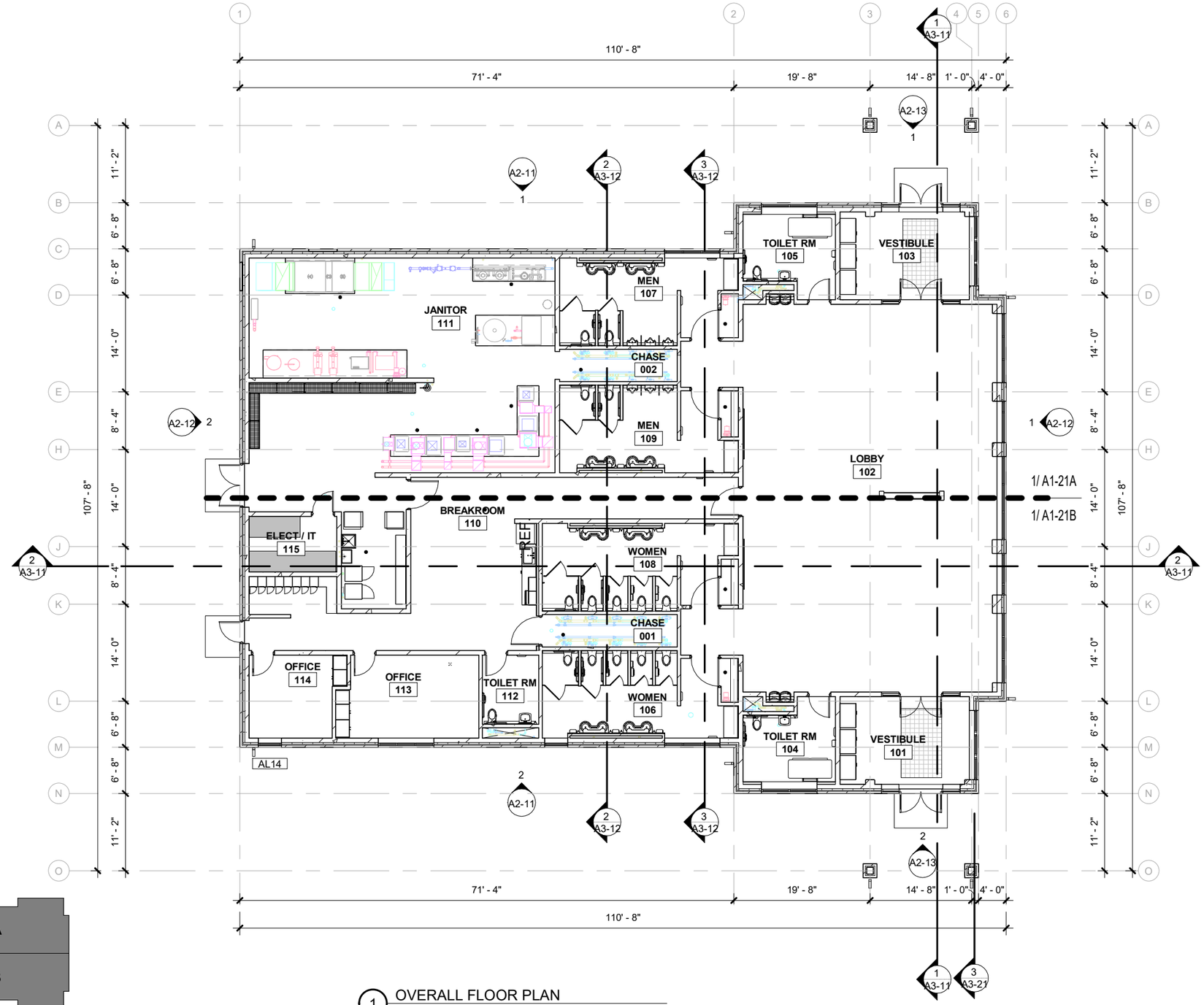
5 R1 ROOF ASSEMBLY
1 1/2" = 1'-0"



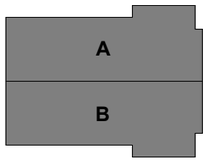
1 ARCHITECTURAL SITE PLAN
1" = 40'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ARCHITECTURAL SITE PLAN	SHEET NO: A1-10

PLOT DATE: 1/26/2024 2:24:27 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



1 OVERALL FLOOR PLAN
1/16" = 1'-0"



KEYPLAN

SHEET NOTES

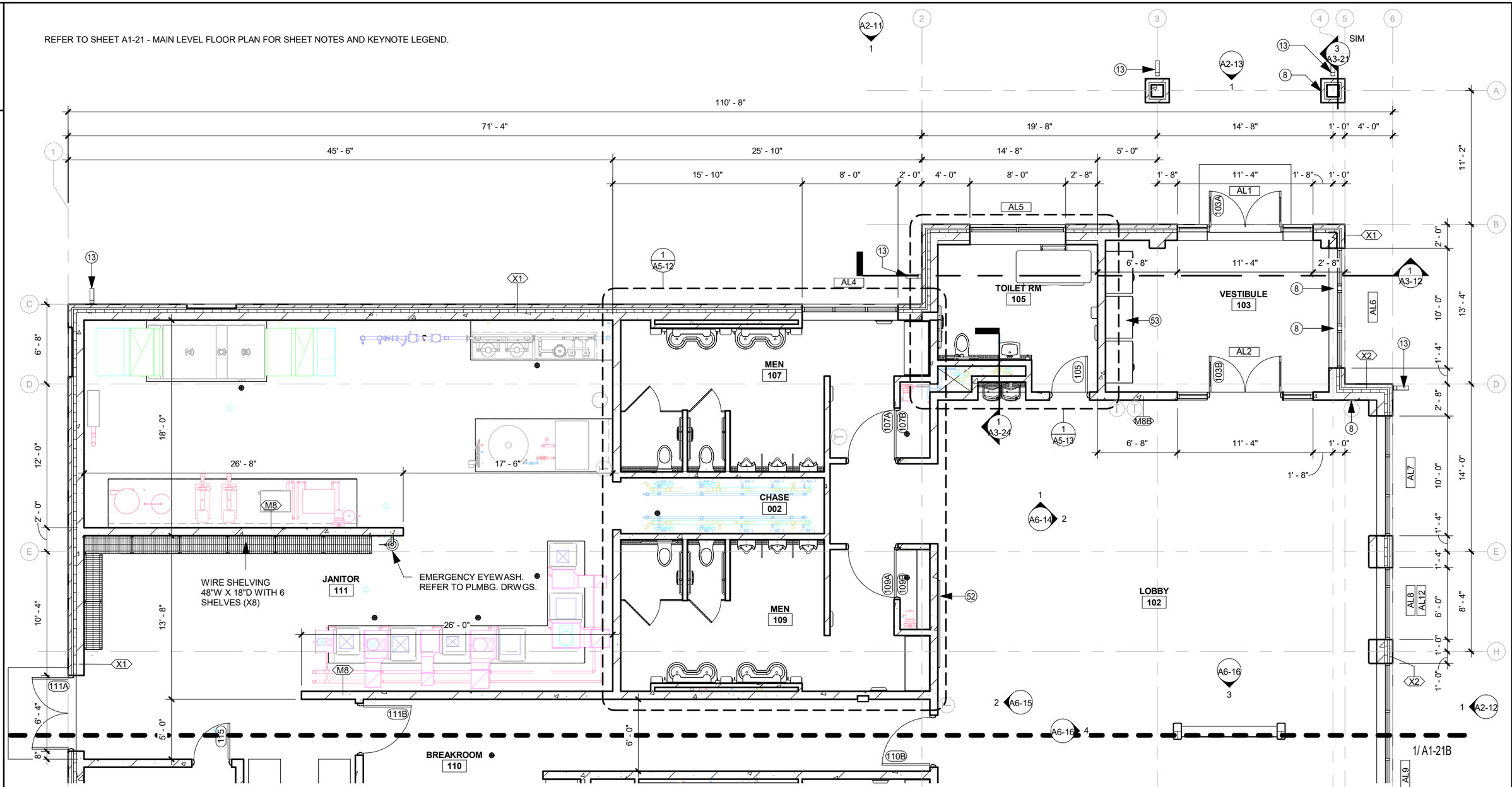
A. ALL INTERIOR PARTITION WALLS SHALL BE WALL TYPE M8, UNLESS OTHERWISE NOTED.
B. PITCH ALL NEW CONCRETE STOOPS 1/4" PER FOOT AWAY FROM BUILDING.
C. DIMENSIONS ARE FROM FACE OF MASONRY / CONCRETE AND CENTER OF ASSEMBLY FOR STUD WALL, UNLESS NOTED OTHERWISE.
D. HOUSEKEEPING AND EQUIPMENT PADS BY GENERAL CONTRACTOR. COORDINATE SIZE W/ TRADE CONTRACTOR.
E. SEE STRUCTURAL PLANS FOR MASONRY WALL BRACING DETAILS.
F. PROVIDE LINTELS AS SHOWN IN STRUCTURAL DRAWINGS ON NON-LOAD BEARING WALL LINTEL SCHEDULE AT ALL NON-BEARING WALL OPENINGS, INCLUDING DUCT OPENINGS.
G. ALL PIPING, CONDUITS AND RELATED MECHANICAL AND ELECTRICAL ITEMS SHALL BE CONCEALED WITHIN GYPSUM BOARD FURRING AS REQUIRED IN FINISHED AREAS WHETHER SHOWN ON DRAWINGS OR NOT, UNLESS NOTED OTHERWISE.
H. PROVIDE BULLNOSE CORNERS AT CMU VERTICAL CORNERS UNLESS OTHERWISE INDICATED. PROVIDE SQUARE EDGE CMU AT VERTICAL CORNERS WHERE CMU IS SCHEDULE TO RECEIVE CERAMIC TILE.
I. PAINT ALL EXPOSED METALS INCLUDING, BUT NOT LIMITED TO COLUMNS, RISERS, STRINGERS, HANDRAILS, GUARDRAILS, EXPOSED LINTELS AND FLOOR EDGES, UNLESS NOTED OTHERWISE.
J. ALL EXPOSED GYP BOARD OUTSIDE CORNERS TO HAVE CORNER GUARD UNLESS INDICATED OTHERWISE.
K. PROVIDE WINDOW SILL (REFER TO DETAIL) AT ALL WINDOWS, UNLESS NOTED OTHERWISE.

KEYNOTE LEGEND

8	ADA DOOR ACTUATOR
10	PREFINISHED METAL GUTTER AND DOWNSPOUT. REFER TO CIVIL DOCUMENTS FOR DRAINAGE ROUTING.
11	ALIGN EXTERIOR WALL FACE CMU WITH INTERIOR WALL FACE.
12	HOSE BIBB (HOT AND COLD) IN CLOSET.
13	PREFINISHED METAL DOWNSPOUT. REFER TO CIVIL DOCUMENTS FOR DRAINAGE ROUTING.
14	FLOOR SCRUBBER (BY OWNER).
16	TRENCH DRAIN, SEE DETAIL 2 / A5-12. REFER TO PLUMBING DOCS FOR ADDITIONAL INFORMATION
17	ALIGN FINISHED FACE OF WALL WITH FINISHED FACE OF WALL.
18	WATERTABLE BAND TO RECESS AT CT CABINET TO PROVIDE FLUSH SURFACE FOR MOUNTING, REFER TO ELECTRICAL DOCUMENTS.
50	METAL DOOR TO BE PNT-5E.
51	METAL DOOR TO BE PNT-6E.
52	ART ON ACRYLIC STANDOFFS BY OWNER. IMAGES PROVIDED BY OTHER.
53	PROVIDED BY OWNER.
54	ALIGN TILE PATTERN WITH SIDE WALLS.
55	COAT HOOK LOCATED IN NOOK. REFER TO ELEVATIONS AND INTERIOR DETATILS FOR ADDITIONAL INFORMATION.
57	4" RAISED PLATFORM FOR MECHANICAL EQUIPMENT TO BE FINISHED WITH SC-1 ON TOP AND ALL SIDES.

N

REFER TO SHEET A1-21 - MAIN LEVEL FLOOR PLAN FOR SHEET NOTES AND KEYNOTE LEGEND.



A
B

KEYPLAN

1 FLOOR PLAN - AREA A
1/8" = 1'-0"

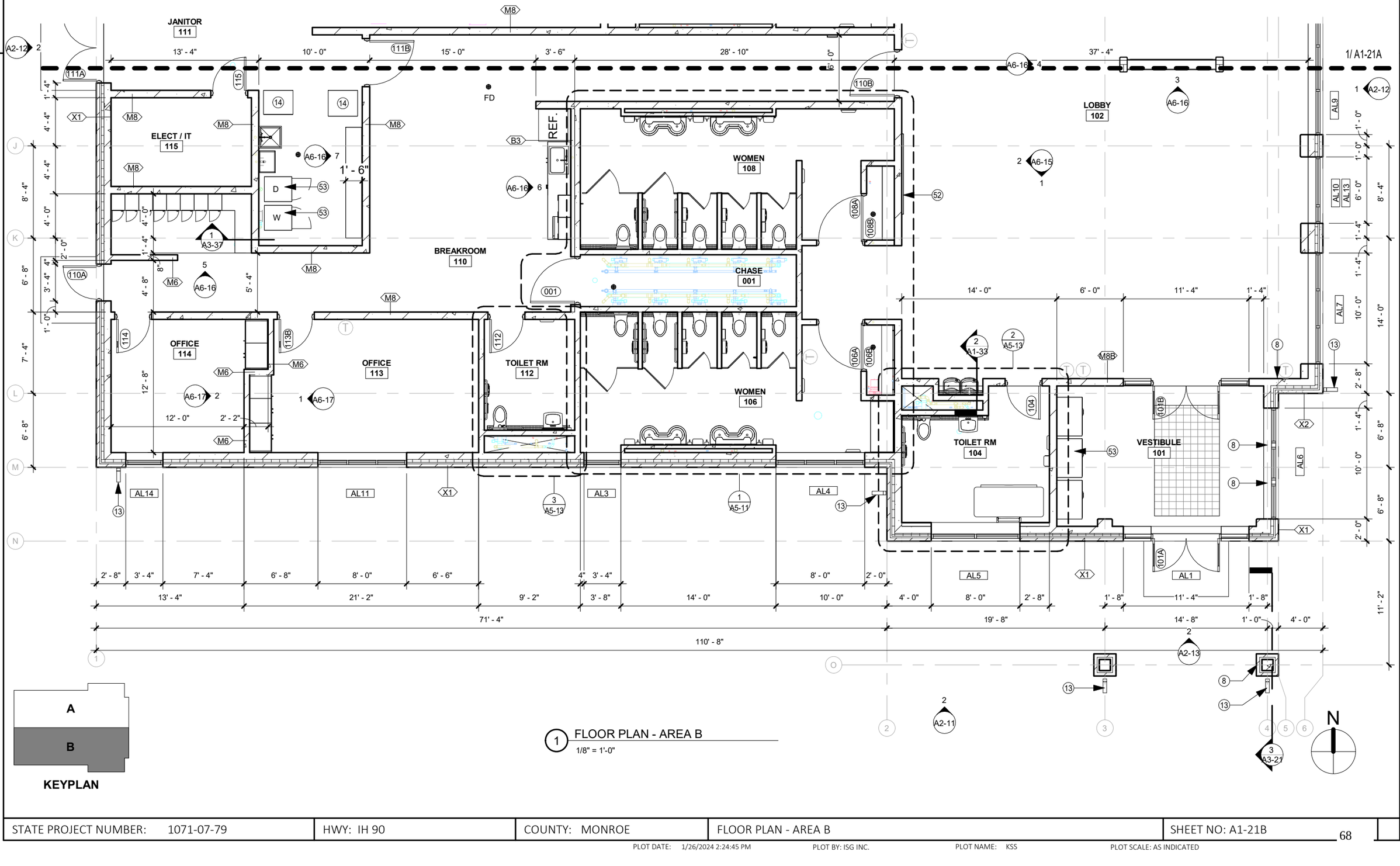
N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FLOOR PLAN - AREA A	SHEET NO: A1-21A

PLOT DATE: 1/26/2024 2:24:41 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

REFER TO SHEET A1-21 - MAIN LEVEL FLOOR PLAN FOR SHEET NOTES AND KEYNOTE LEGEND.

JANITOR 111
ELECT / IT 115
OFFICE 114
OFFICE 113
TOILET RM 112
BREAKROOM 110
WOMEN 108
CHASE 001
WOMEN 106
TOILET RM 104
LOBBY 102
VESTIBULE 101

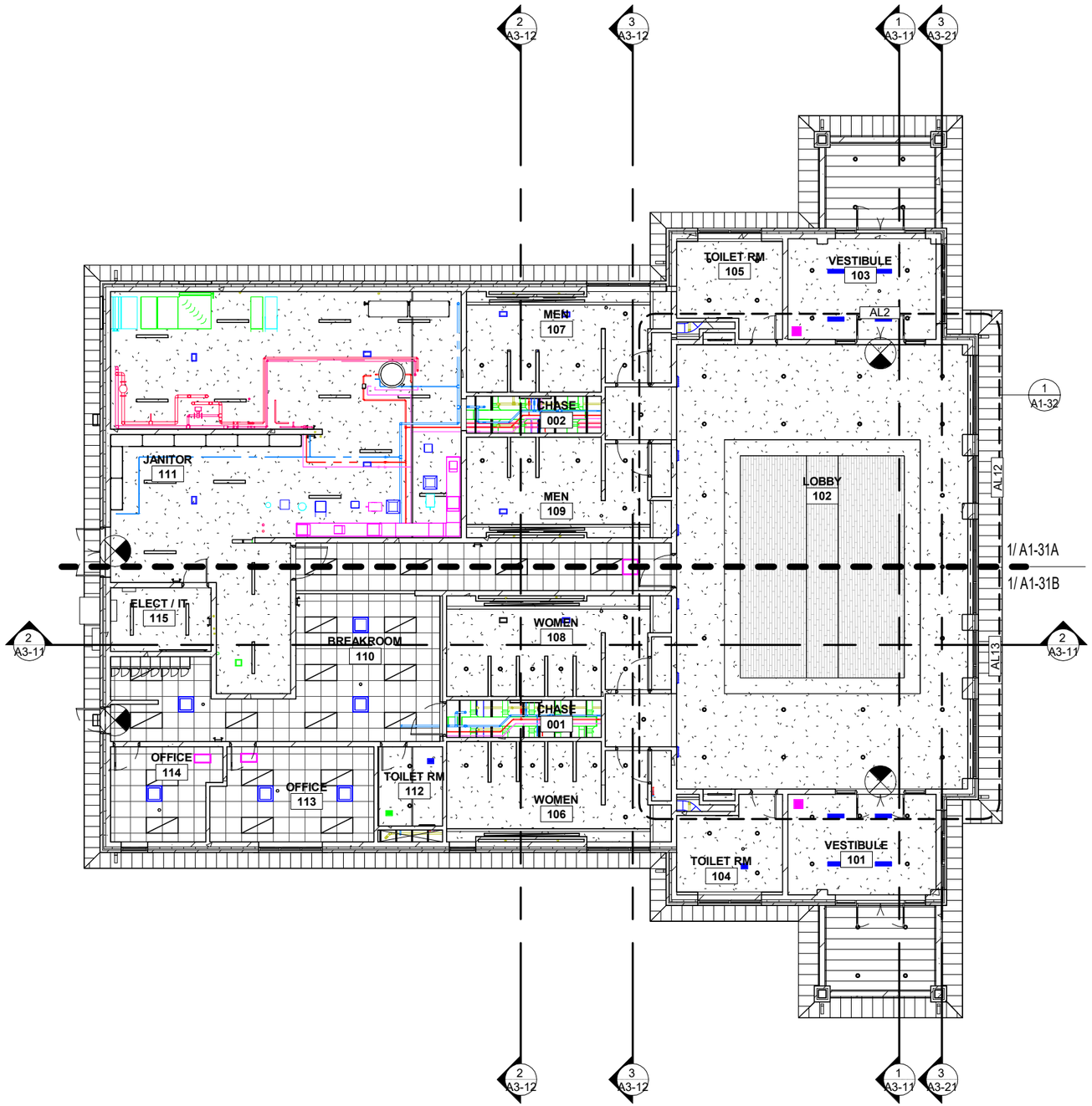


A
B
KEYPLAN

1 FLOOR PLAN - AREA B
1/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FLOOR PLAN - AREA B	SHEET NO: A1-21B

PLOT DATE: 1/26/2024 2:24:45 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



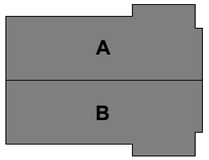
1 REFLECTED CEILING PLAN
1/16" = 1'-0"

SHEET NOTES

A. REFER TO G1-21 FOR RATED WALL LOCATIONS.
B. ALL PIPING, CONDUITS AND RELATED MECHANICAL AND ELECTRICAL ITEMS SHALL BE CONCEALED WITHIN GYPSUM BOARD FURRING AS REQUIRED IN FINISHED AREAS WHETHER SHOWN ON DRAWINGS OR NOT, UNLESS NOTED OTHERWISE.
C. COORDINATE WITH MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL FOR EXACT LOCATIONS OF CEILNG FIXTURES, DIFFUSERS, ETC.
D. RECESSED LIGHT FIXTURES, SPEAKERS, EXIT LIGHTS, SMOKE DETECTORS, ETC. TO BE LOCATED IN THE EXACT CENTER OF CEILING TILES.
E. REFER TO HVAC PLANS FOR THE LOCATION OF ANY AND ALL PLENUM CEILING SPACES. ALL WALLS AND SOFFITS CREATING THE PLENUM SHALL EXTEND TO THE UNDERSIDE OF STRUCTURE ABOVE AND BE SEALED.
F. ALL WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR/ ROOF DECK ABOVE, UNLESS NOTED OTHERWISE.

KEYNOTE LEGEND

C1	5/8" GYPSUM BOARD TO UNDERSIDE OF STRUCTURE, PAINT AS NOTED ON PLANS. REFER TO FINISH DOCUMENTS.
C2	PRE-FINISHED METAL SOFFIT.
C3	PAINT BULKHEAD.
C4	LINTEL, REFER TO STRUCTURAL DOCUMENTS.
C5	WALL HEIGHT AT 8' - 0".



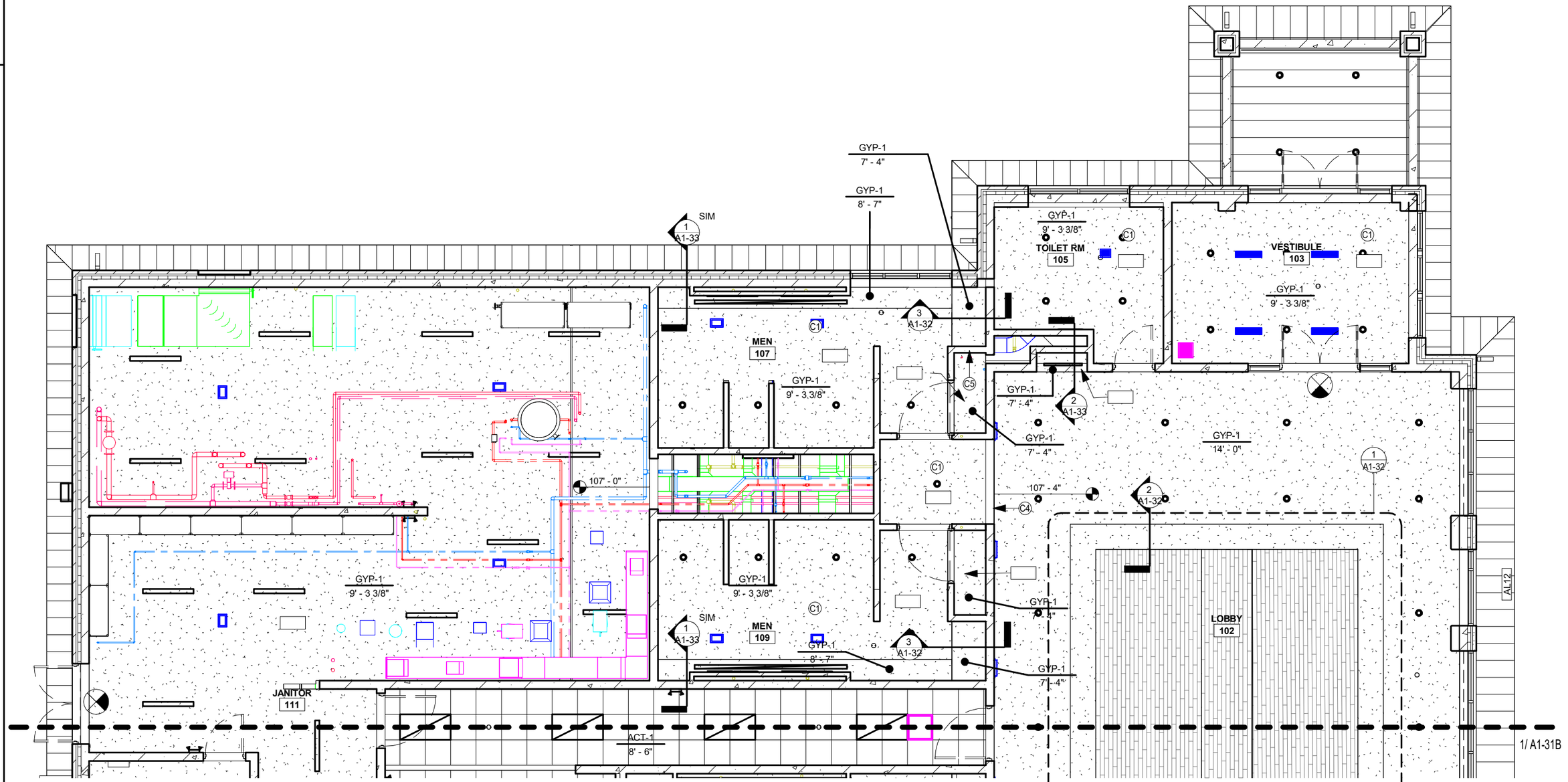
KEYPLAN

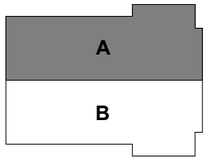
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STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REFLECTED CEILING PLAN	SHEET NO: A1-31

PLOT DATE: 1/26/2024 2:24:49 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

REFER TO SHEET A1-31 - REFLECTED CEILING PLAN FOR SHEET NOTES AND KEYNOTE LEGEND.





KEYPLAN

1 REFLECTED CEILING PLAN - AREA A

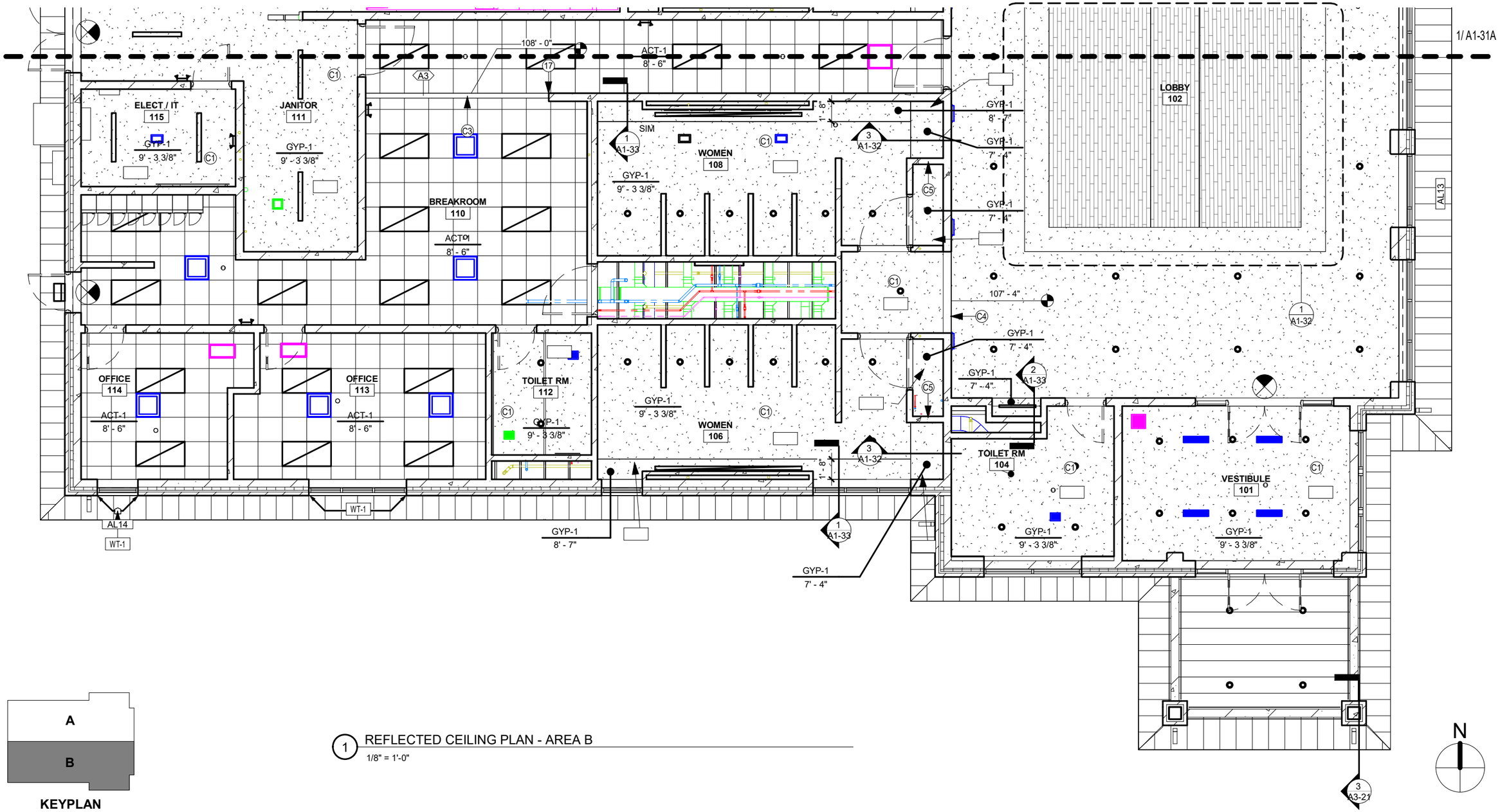
1/8" = 1'-0"

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REFLECTED CEILING PLAN - AREA A	SHEET NO: A1-31A

PLOT DATE: 1/26/2024 2:24:53 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

REFER TO SHEET A1-31 - REFLECTED CEILING PLAN FOR SHEET NOTES AND KEYNOTE LEGEND.



A

B

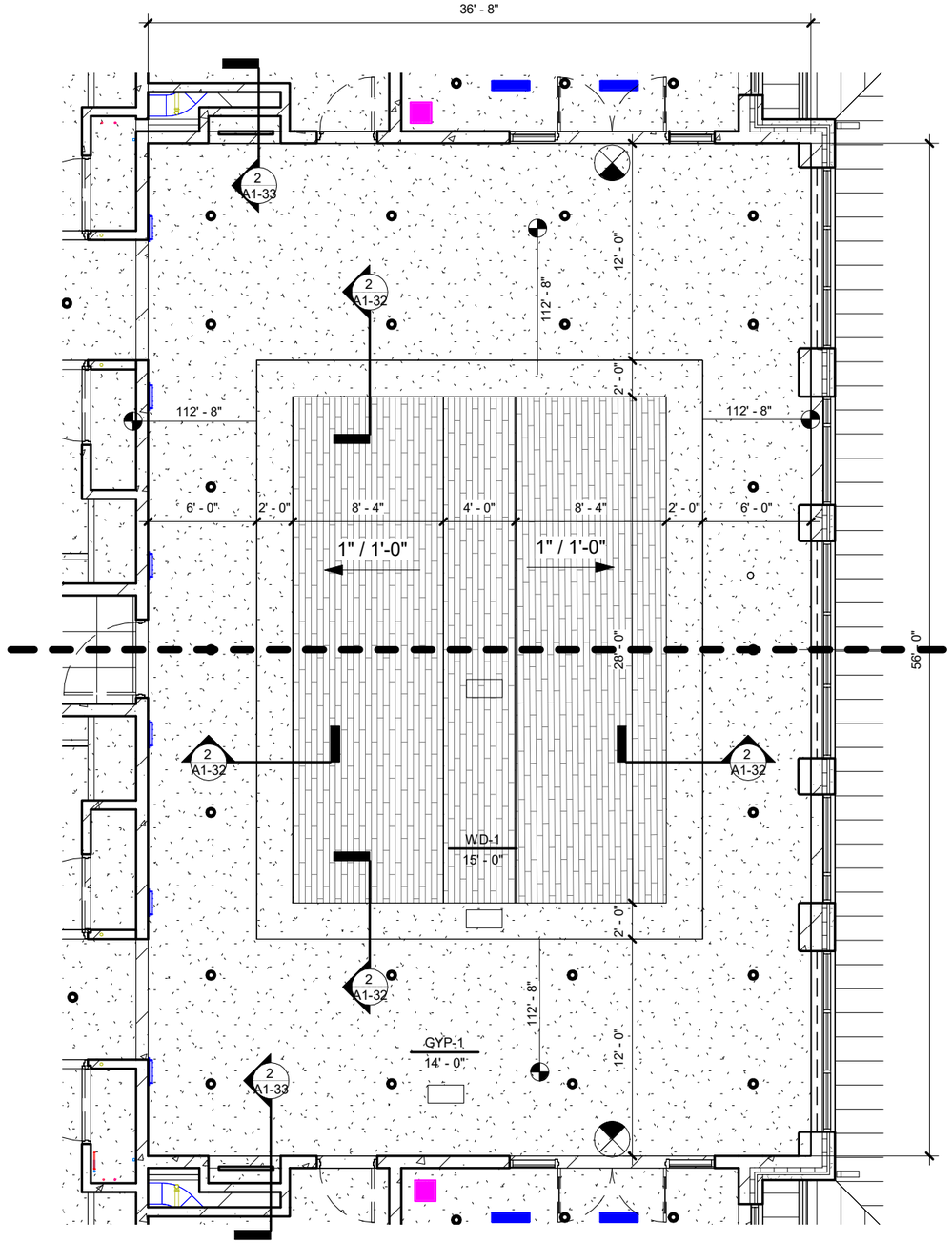
KEYPLAN

1 REFLECTED CEILING PLAN - AREA B

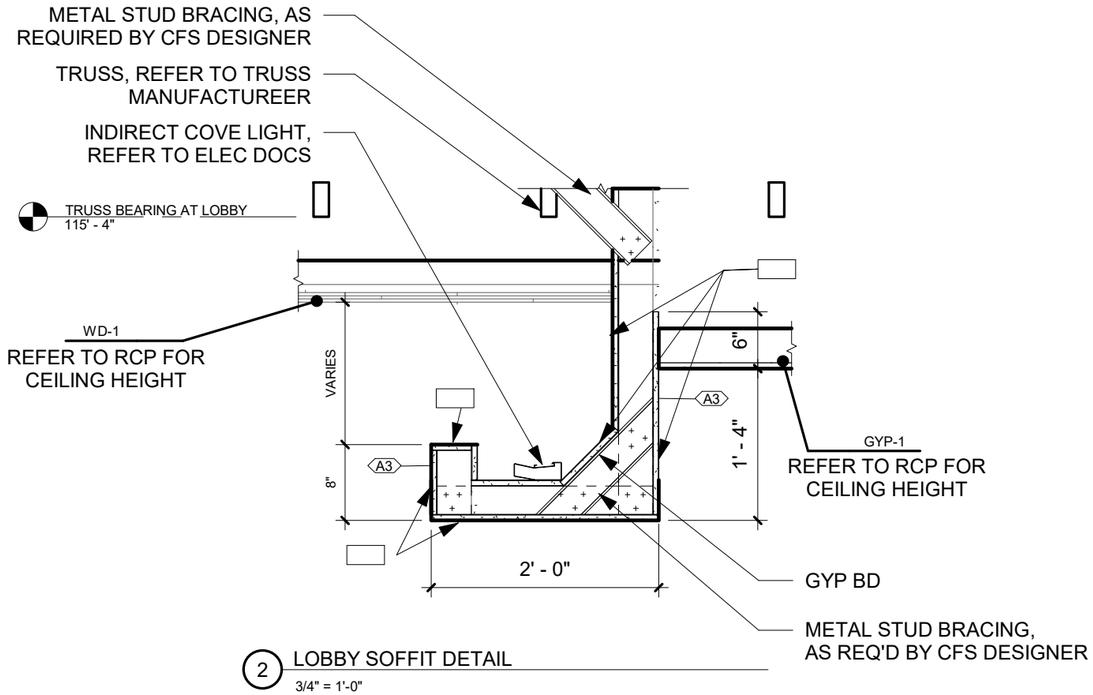
1/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REFLECTED CEILING PLAN - AREA B	SHEET NO: A1-31B

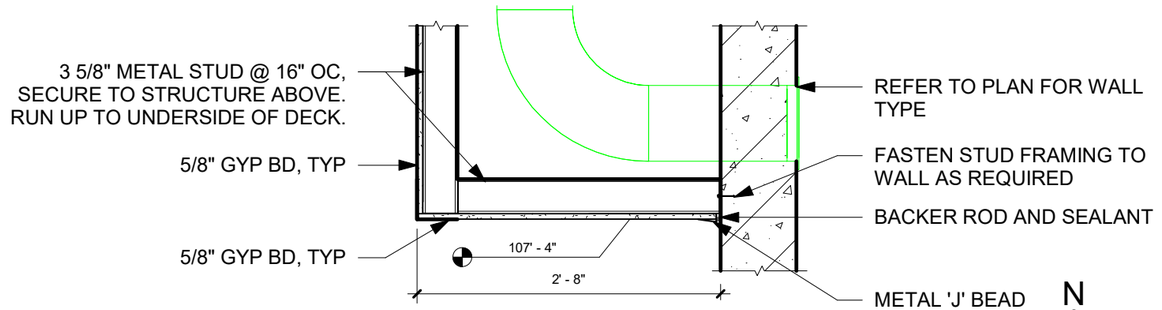
PLOT DATE: 1/26/2024 2:24:56 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



1 ENLARGED CEILING PLAN IN LOBBY
1/8" = 1'-0"



2 LOBBY SOFFIT DETAIL
3/4" = 1'-0"



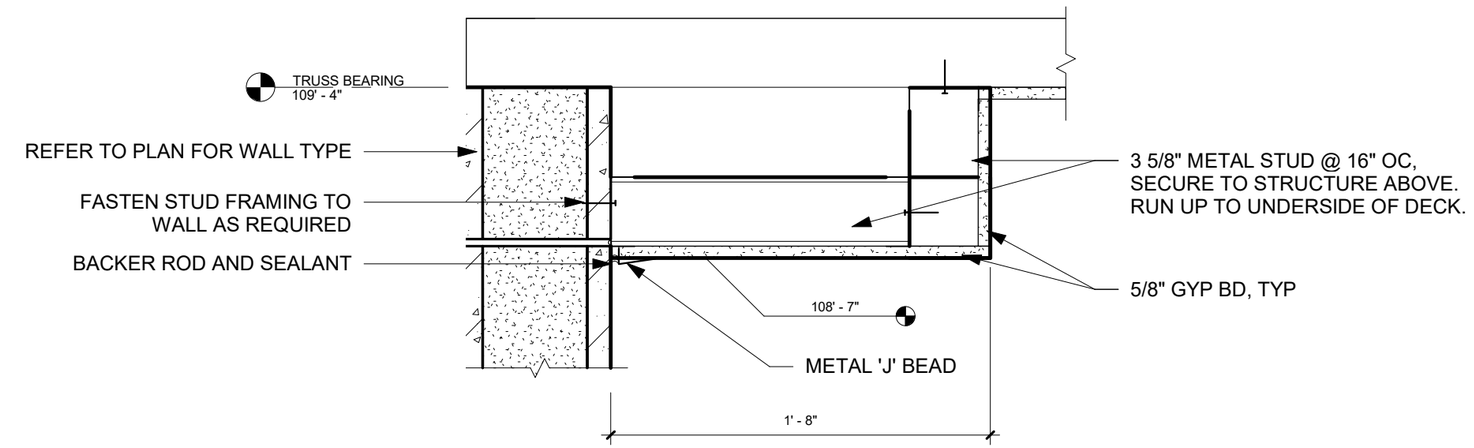
3 RESTROOM SOFFIT DETAIL
3/4" = 1'-0"

N

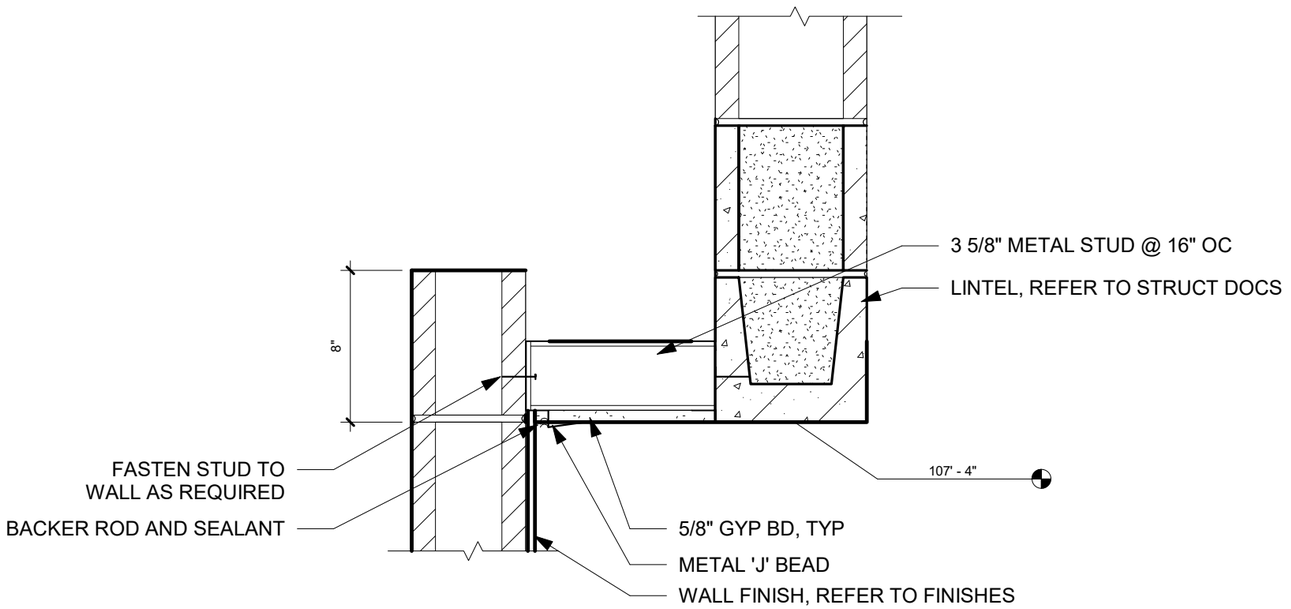
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ENLARGED CEILING PLAN AND CEILING DETAILS	SHEET NO: A1-32

PLOT DATE: 1/26/2024 2:24:59 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2

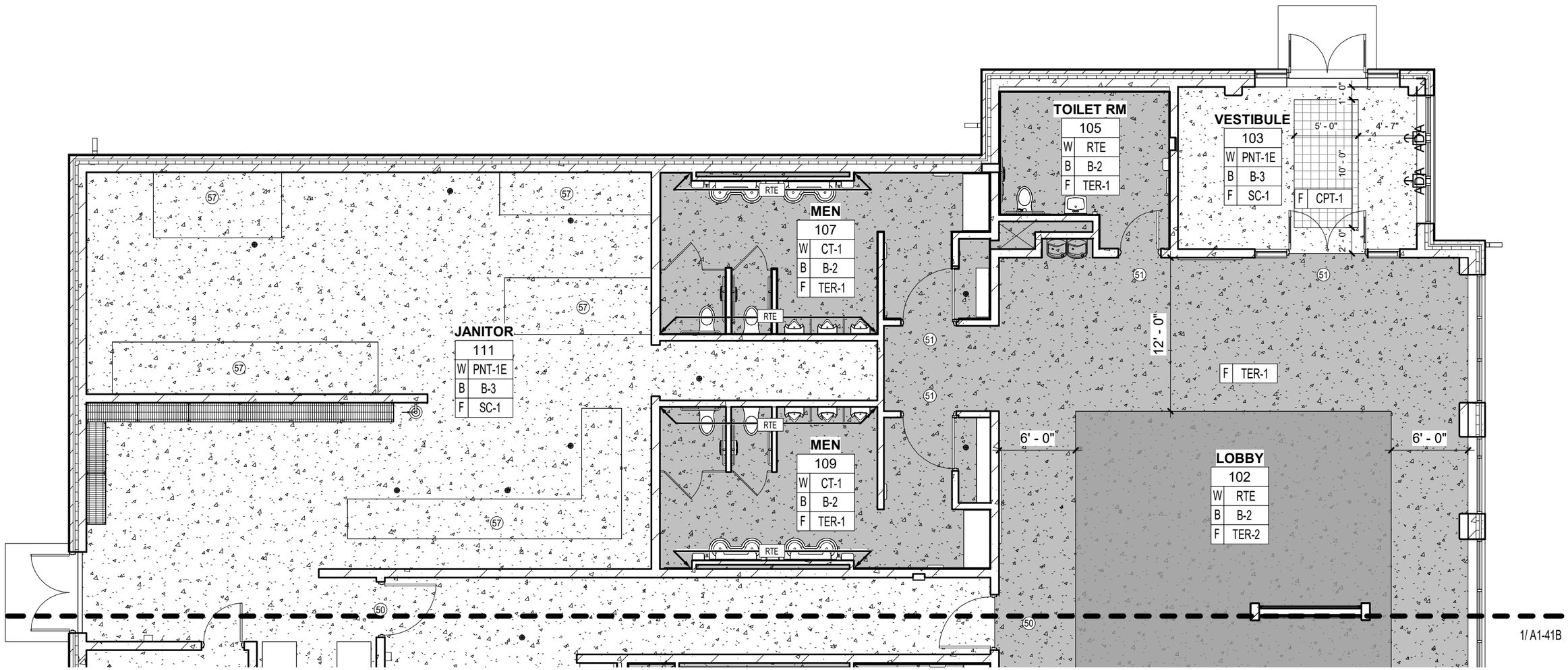


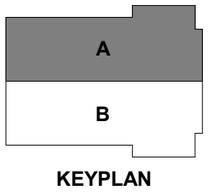
1 SOFFIT AT RR SINK DETAIL
1 1/2" = 1'-0"



2 DRINKING FOUNTAIN SOFFIT DETAIL
1 1/2" = 1'-0"

KEYNOTE LEGEND	
50	METAL DOOR TO BE PNT-5E.
51	METAL DOOR TO BE PNT-6E.
57	4" RAISED PLATFORM FOR MECHANICAL EQUIPMENT TO BE FINISHED WITH SC-1 ON TOP AND ALL SIDES.





KEYPLAN

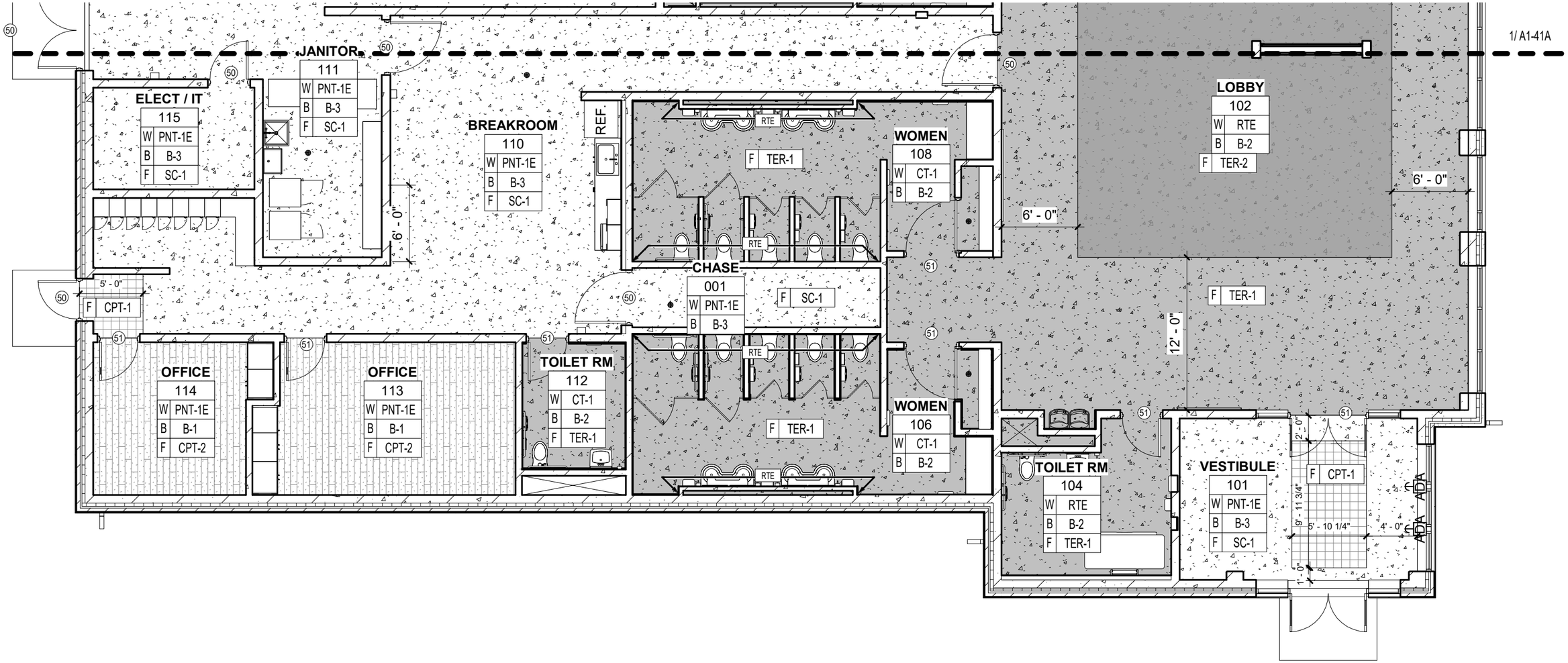
1 FINISH PLAN - AREA A
1/8" = 1'-0"

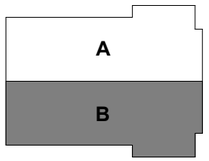
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STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FINISH PLAN - AREA A	SHEET NO: A1-41A

PLOT DATE: 1/26/2024 2:25:02 PM PLOT BY: ISG INC. PLOT NAME: AMS PLOT SCALE: AS INDICATED

KEYNOTE LEGEND	
50	METAL DOOR TO BE PNT-5E.
51	METAL DOOR TO BE PNT-6E.





KEYPLAN

1 FINISH PLAN - AREA B

1/8" = 1'-0"

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FINISH PLAN - AREA B	SHEET NO: A1-41B

PLOT DATE: 1/26/2024 2:25:05 PM PLOT BY: ISG INC. PLOT NAME: AMS PLOT SCALE: AS INDICATED

INTERIOR FINISH SCHEDULE

MARK	MATERIAL TYPE	MANUFACTURER	MODEL / SIZE	COLOR	ADDITIONAL INFORMATION	COMMENTS
CEILING						
ACT-1	MINERAL FIBER	ARMSTRONG	ULTIMA 1941 24" X 24" X 3/4"	WHITE TILE / WHITE GRID / BEVELED TEGULAR	GRID: 15/16"	CLEAR HOLD DOWN CLIPS TO BE USED AT ALL LOCATIONS NEAR EXTERIOR DOORS / REFER TO RCP FOR LOCATIONS
PNT-2	PAINT	SHERWIN WILLIAMS	FLAT	GAUNTLET GRAY		REFER TO RCP FOR LOCATIONS
PNT-3	PAINT	SHERWIN WILLIAMS	FLAT	SNOWBOUND		REFER TO RCP FOR LOCATIONS
WD-1	WOOD VENEER	ARMSTRONG	WOODWORKS VECTOR / 12" X 48'	6480W1 NATURAL VARIATIONS WALNUT	EDGE: VECTOR 15/16 / BLACK CONCEALED GRID / PERFORATED - W3 / CAC 38	REFER TO RCP FOR LOCATIONS
FLOOR						
CPT-1	WALK OFF GRATE	MILLIKEN	OBEX OPEN GRID CUTX / 2OOMM X 200MM	GREY	RECESSED	REFER TO FINISH PLANS FOR LOCATIONS
CPT-2	CARPET TILE	MOHAWK	UNEXPECTED DETAIL / 12" X 36"	949 MINERAL	ASHLER	REFER TO FINISH PLANS FOR INSTALL DIRECTION
SC-1	SEALED CONCRETE	L & M CONSTRUCTION CHEMICALS	DRESS AND SEAL	NATURAL	ACRYLIC CURE, SEALER, AND DUSTPROOFER	
TER-1	EPOXY TERRAZZO	TERRAZZO AND MARBLE SUPPLY		TM #23-1770	PROVIDE ISO-CRACK EPOXY MEMBRANE	DIVIDER STRIPS TO BE BRUSHED STAINLESS
TER-2	EPOXY TERRAZZO	TERRAZZO AND MARBLE SUPPLY		TM #23-1771	PROVIDE ISO-CRACK EPOXY MEMBRANE	DIVIDER STRIPS TO BE BRUSHED STAINLESS
PLASTIC LAMINATE						
PLAM-1	PLASTIC LAMINATE	NEVAMAR	POLISHED VELVET	GIANT GRAY BAMBOO		--
PLAM-2	PLASTIC LAMINATE	PIONITE	TEXTURED / SUEDE	WT860 TAILGATING		CASEWORK / SHELVING
SOLID SURFACE						
SS-1	SOLID SURFACE	WILSONART	SOLID SURFACE	DUSK ICE	STYLE"A"	COUNTERTOP / BENCH
SS-2	SOLID SURFACE	CORIAN	SOLID SURFACE	PEARL GRAY	STYLE"A"	WINDOW SILL
WALL						
CMU-1	CONCRETE BLOCK	COUNTY MATERIALS CORPORATION	8" X 16"	SPECKLED FROST / SEA SALT / ECHO	33% MIX OF EACH COLOR TO CREATE THE FIELD MIX	NO SINGLE BLOCK COURSE (MIN 2 MAX 3) MIN 3 BLOCK IN LENGTH PER COURSE MAX 5 BLOCKS
CMU-2	CONCRETE BLOCK	COUNTY MATERIALS CORPORATION	8" X 8"	SPECKLED FROST / SEA SALT / ECHO	33% MIX OF EACH COLOR TO CREATE THE FIELD MIX	NO SINGLE BLOCK COURSE (MIN 2 MAX 3) MIN 3 BLOCK IN LENGTH PER COURSE MAX 5 BLOCKS
CMU-3	CONCRETE BLOCK	COUNTY MATERIALS CORPORATION	8" X 32"	SPECKLED FROST / SEA SALT / ECHO	33% MIX OF EACH COLOR TO CREATE THE FIELD MIX	NO SINGLE BLOCK COURSE (MIN 2 MAX 3) MIN 3 BLOCK IN LENGTH PER COURSE MAX 5 BLOCKS
CMU-4	CONCRETE BLOCK	COUNTY MATERIALS CORPORATION	8" X 16"	TWILIGHT		
CT-1	CERAMIC TILE	VIRGINIA TILE	CROSSVILLE / OWEN STONE / 12" X 24" X 9.5MM	MITTENS / LEATHER RECTIFIED	1/3 RUNNING BOND	REFER TO ELEVATIONS FOR DIRECTION OF TILE
CT-2	CERAMIC TILE	VIRGINIA TILE	OWEN STONE MOSAIC / 9 X 15	MOSAIC - MITTENS		REFER TO FINISH PLANS FOR LOCATIONS
FRP-1	FIBER REINFORCED PLASTIC PANEL	MARLITE	SYMMETRIX - WOODWARD OAK	2049-SKY	TRIM AS NECESSAY FOR COMPLETE FINISHED INSTALL / PIECES TO MATCH	REFER TO FINISH PLANS FOR LOCATIONS
PNT-1E	EPOXY PAINT	SHERWIN WILLIAMS	EG-SHEL	WORLDLY GRAY		REFER TO FINISH PLANS FOR LOCATIONS
PNT-5E	EPOXY PAINT	SHERWIN WILLIAMS	SATIN	WORLDLY GRAY		HOLLOW METAL FRAMES. DOORS AS NOTED
PNT-6E	EPOXY PAINT	SHERWIN WILLIAMS	SATIN	GAUNTLET GRAY		HOLLOW METAL DOORS AS NOTED
WALL BASE						
B-1	VINYL BASE	TARKETT	4" TRADITIONAL COVE	BURNT UMBER		
B-2	EPOXY TERRAZZO BASE	TERRAZZO AND MARBLE SUPPLY	4"H X 3/8"D INTEGRAL COVE	TM #23-1770		COLOR SELECTION TO BE CONFIRMED WITH CLIENT PRIOR TO ORDERING
B-3	TILE BASE	VIRGINIA TILE	CROSSVILLE / OWEN STONE / 4"X 24"	MITTENS / LEATHER RECTIFIED		

GROUT SCHEDULE

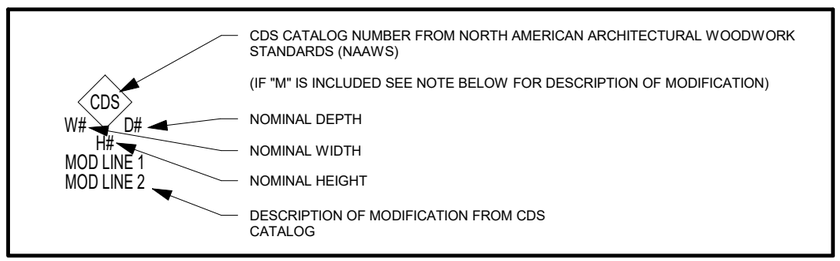
MARK	MATERIAL TYPE	MANUFACTURER	COLOR	SIZE	COMMENTS
GR-1	EPOXY GROUT	MAPEI	47 CHARCOAL	MANUFACTURER RECOMMENDED	USE AT ALL CT LOCATIONS

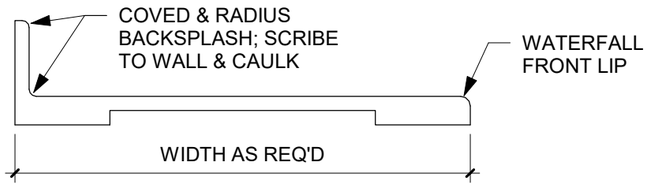
MISCELLANEOUS SCHEDULE

MARK	MATERIAL TYPE	MANUFACTURER	PROFILE	COLOR	ADDITIONAL INFORMATION	COMMENTS
DIS-1	DISPLAY CASE	REFER TO SPECS	9' W x 4'H x 8"D		2" METAL FRAME / SWING GLASS DOORS W/ HINGES AND 2 LOCKS ON DOOR (TOP AND BOTTOM)	--
DLS-1	DIMENSIONAL LETTER SIGNAGE	GEMINI	FLAT CUT METAL / 8"H X 1/4"TH	STAINLESS	1" STANDOFFS	FINAL VERBIAGE TO BE APPROVED BY CLIENT PRIOR TO MANUF.
HDW-1	METAL COUNTER BRACKET	A&M HARDWARE	24 X 24	BLACK	TO BE INSTALLED AT EVERY 60" O.C OR CONTRACTOR RECOMMENDATION	--
HDW-2	METAL COUNTER BRACKET	A&M HARDWARE	16 X 16	BLACK	TO BE INSTALLED AT EVERY 60" O.C OR CONTRACTOR RECOMMENDATION	--
LOCKERS	LOCKERS	PENCO	VANGUARD DOUBLE TIER LOCKERS / 6'H x 1'-3"W x 1'-6"D	JET BLACK	SLOPE TOPS	--
TOILET PARTITIONS	SOLID PLASTIC HDPE	SCRANTON - HINY HIDERS	-	CHARCOAL GREY	5'H URINAL PARITION	DOOR FRONTS ONLY - SIDE OF STALLS ARE TILED WALLS
TS-1	METAL TRIM	SCHLUTER SYSTEMS	RONDEC	SATIN ANODIZED	INSTALL AT ALL EXTERIOR TILE CORNERS AND EXPOSED TILE LOCATIONS	--
TS-2	FLOOR TRANSITION	TARKETT	SLIM LINE TRANSITIONS - SLT	BLACK	INSTALL AT ALL CPT / SC LOCATIONS	--
WG-1	WALL GUARD	SOLAN	15.75"W X 31.75"H	STAINLESS	ADHERE ON TOP OF TILE	--
WT-1	MANUAL ROLLER SHADE SHADE	LUTRON	ROLLER 20	E SCREEN / CHARCOAL	3% OPEN / INSIDE MOUNT / BLACK FASCIA	OFFICE WINDOWS

PROJECT FINISH NOTES

A.	SOME SPECIFIED PRODUCTS AND FINISHES MAY HAVE SUBSTANTIAL LEAD TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING ORDERS IN A MANNER TO ENSURE THEIR TIMELY ARRIVAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXPENSES, INCLUDING DESIGN FEES, RELATED TO ANY RESELECTION REQUIRED DUE TO FAILURE TO ORDER PRODUCTS IN A TIMELY MANNER.
B.	ALL FINISH WORK SHALL BE PERFORMED IN COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS. SHOP DRAWINGS, SAMPLES, AND PRODUCT DATA SHALL BE SUBMITTED TO THE ARCHITECT FOR THEIR REVIEW & APPROVAL PRIOR TO BEGINNING WORK.
C.	ALL WALLS TO RECEIVE PNT-1 & B-1, UNLESS NOTED OTHERWISE.
D.	BULKHEADS AND SOFFITS: ALL SIDES AND UNDERSIDES TO BE PAINTED THE PAINT COLOR INDICATED, UNLESS NOTED OTHERWISE.
E.	REFER TO REFLECTED CEILING PLANS FOR CEILING/SOFFIT FINISHES AND LOCATIONS.
F.	PAINT ALL EXPOSED DUCTWORK, CONDUIT, ELECTRICAL EQUIPMENT, ETC, TO MATCH ADJACENT SURFACES, UNLESS NOTED OTHERWISE.
G.	EXTEND ALL FLOORING UNDER FURNITURE, DESKS AND COUNTERS, UNLESS NOTED OTHERWISE.
H.	ALL FLOORING TRANSITIONS TO BE CENTERED UNDER DOOR IN CLOSED POSITION, UNLESS NOTED OTHERWISE.
I.	INSTALL FLOORING PER PATTERNS REFLECTED ON FINISH PLANS. REFER TO FINISH SCHEDULE FOR ADDITIONAL NOTES.
J.	INSTALL DIFFERENT FLOORING TYPES PER MANUFACTURER'S RECOMMENDED METHODS, UNLESS NOTED OTHERWISE.
K.	FLOOR TILE AT FLOOR DRAINS TO BE INSTALLED WITH MINIMAL CUTS.
L.	INSTALL FIRE TREATED BLOCKING AS REQUIRED IN ALL PARTITIONS TO RECEIVE COUNTERS, SHELVING, MARKER BOARDS, TV'S, ETC.
M.	ALL EXPOSED ENDS OF CASEWORK TO HAVE FINISHED END PANELS.
N.	VERIFY GROMMET LOCATIONS WITH DESIGNER.
O.	IN-WALL OR WALL SUPPORT BRACKETS TO BE PAINTED TO MATCH WALL FINISH, UNLESS NOTED OTHERWISE.
P.	PLUMBING FIXTURES HAVE BEEN REMOVED FROM FINISH PLAN FOR VIEWING CLARITY. REFER TO THE RESPECTIVE PLANS AND DOCUMENTS FOR PLUMBING CRITERIA.
Q.	WOOD DOORS, FRAMES, BASE MOLDING TO BE FILLED, STAINED, SEALED AND SHOP FINISHED TO MATCH ARCHITECT'S SAMPLE. WORK SHOULD BE PERFORMED IN A DUST FREE ENVIRONMENT.
R.	UNLESS OTHERWISE INDICATED, PROVIDE PRODUCTS OF QUALITY SPECIFIED BY AWI/AWMAC/WI ARCHITECTURAL WOODWORK STANDARDS FOR CUSTOM GRADE.
S.	RTE: REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL FINISH INFORMATION





STYLE "A"

1 COUNTERTOP STYLES

1 1/2" = 1'-0"

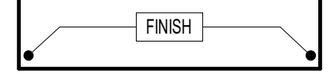
ROOM / FINISH TAG

ROOM NAME

ROOM #	
W	WALL
B	BASE
F	FLOOR

FINISHES LISTED IN ROOM TAG APPLY TO ALL ELEMENTS IN ROOM, UNLESS NOTED OTHERWISE

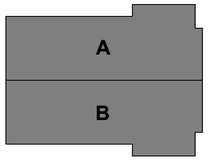
THE FOLLOWING SYMBOL APPLIES TO FINISHES DIFFERENT FROM THOSE NOTED IN ROOM TAG:



FURNITURE PLAN SHEET NOTES

A. ALL FURNITURE SHOWN FOR REFERENCE ONLY. ALL FURNITURE TO BE PROVIDED AND INSTALLED BY OWNER UNLESS NOTED OTHERWISE. FINAL LOCATIONS AND TYPES OF FURNITURE TO BE DETERMINED BY OWNER.
B. PROVIDE AND INSTALL BLOCKING FOR ALL EQUIPMENT AND FIXTURES.





KEYPLAN

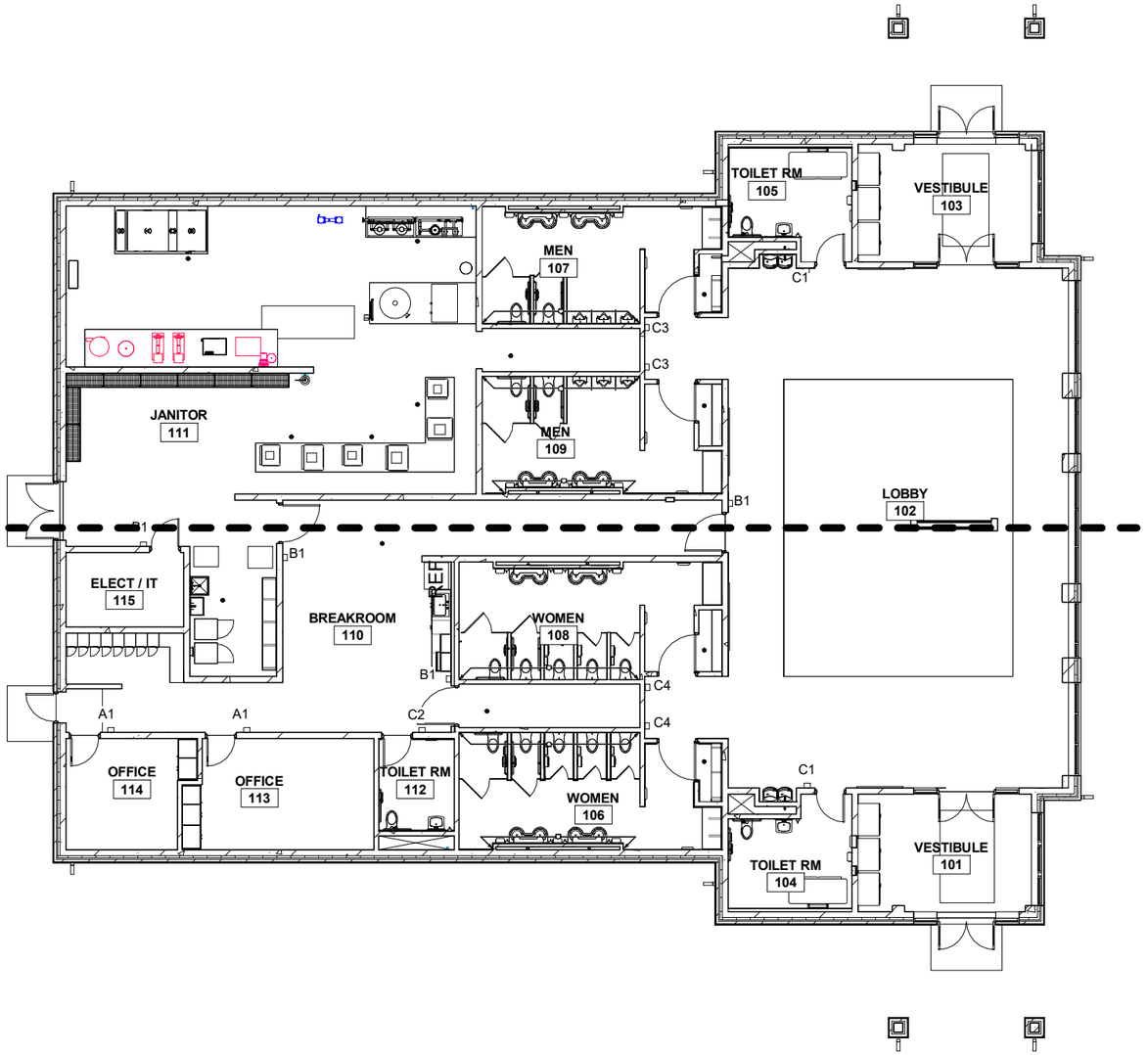
1 FURNITURE PLAN
1/16" = 1'-0"

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FURNITURE PLAN	SHEET NO: A1-51

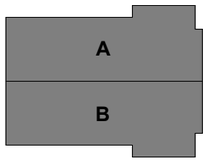
PLOT DATE: 1/26/2024 2:25:12 PM PLOT BY: ISG INC. PLOT NAME: AMS PLOT SCALE: AS INDICATED

2



SIGNAGE SCHEDULE

MARK	SIGNAGE LOCATION	SIGNAGE VERBIAGE	COMMENTS
A1	BREAKROOM	--	--
A1	BREAKROOM	--	--
B1	BREAKROOM	JANITOR	VERBIAGE TO BE CONFIRMED WITH OWNER PRIOR TO ORDERING
B1	BREAKROOM	CHASE	VERBIAGE TO BE CONFIRMED WITH OWNER PRIOR TO ORDERING
B1	LOBBY	STAFF ONLY	VERBIAGE TO BE CONFIRMED WITH OWNER PRIOR TO ORDERING
B1	JANITOR	ELECTRICAL	VERBIAGE TO BE CONFIRMED WITH OWNER PRIOR TO ORDERING
C1	LOBBY	FAMILY	--
C1	LOBBY	FAMILY	--
C2	BREAKROOM	RESTROOM	--
C3	LOBBY	MEN	--
C3	LOBBY	MEN	--
C4	LOBBY	WOMEN	--
C4	LOBBY	WOMEN	--

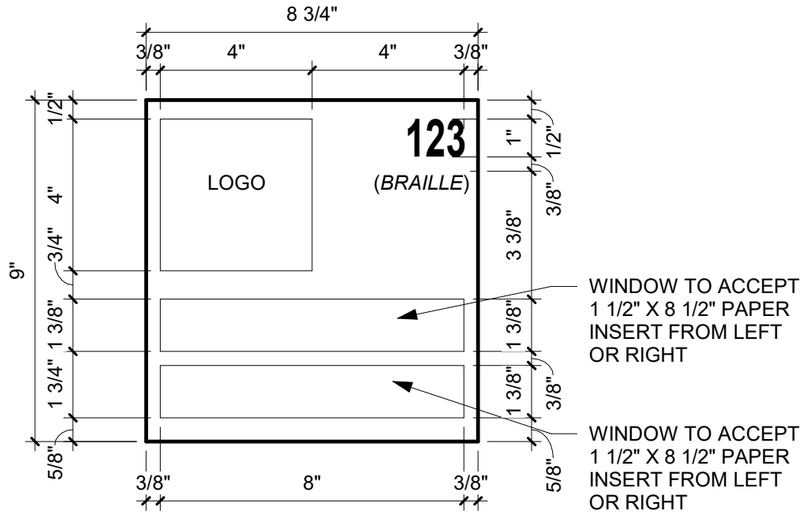


KEYPLAN

1 FIRST FLOOR SIGNAGE

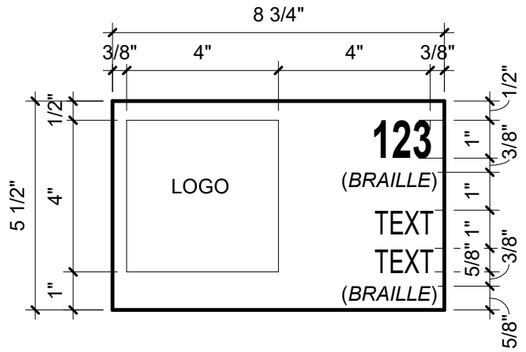
1/16" = 1'-0"

ROOM SIGNAGE



SIGN TYPE A1

QTY. 2



SIGN TYPE B1

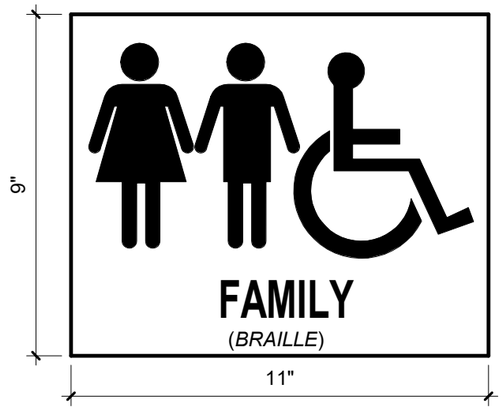
QTY. 4

SIGNAGE GENERAL NOTES

A. SIGNAGE TYPES SUPPLIED AS A BASIS OF DESIGN. ALL REGULATORY SIGNAGE SHALL COMPLY WITH ADAAAG STANDARDS. CONFIRM FINAL SELECTIONS AND SPECIFICATIONS WITH SIGNAGE CONTRACTOR PRIOR TO ORDER/INSTALL.
B. SIGN BACKERS REQUIRED ON ALL SIGNS MOUNTED TO GLASS
C. VERBIAGE AND LOCATION TO BE CONFIRMED BY OWNER

2

REGULATORY SIGNAGE



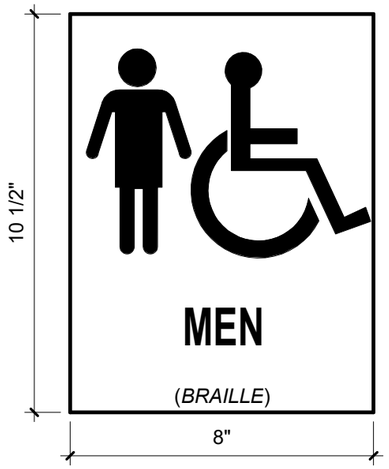
SIGN TYPE C1

QTY. 2



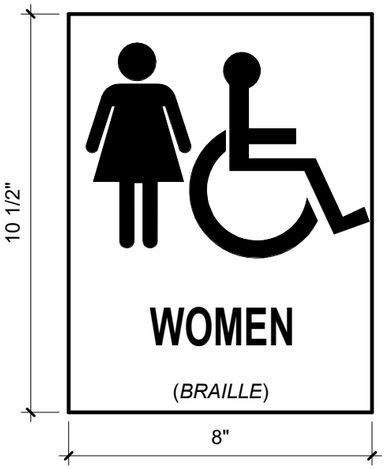
SIGN TYPE C2

QTY. 1



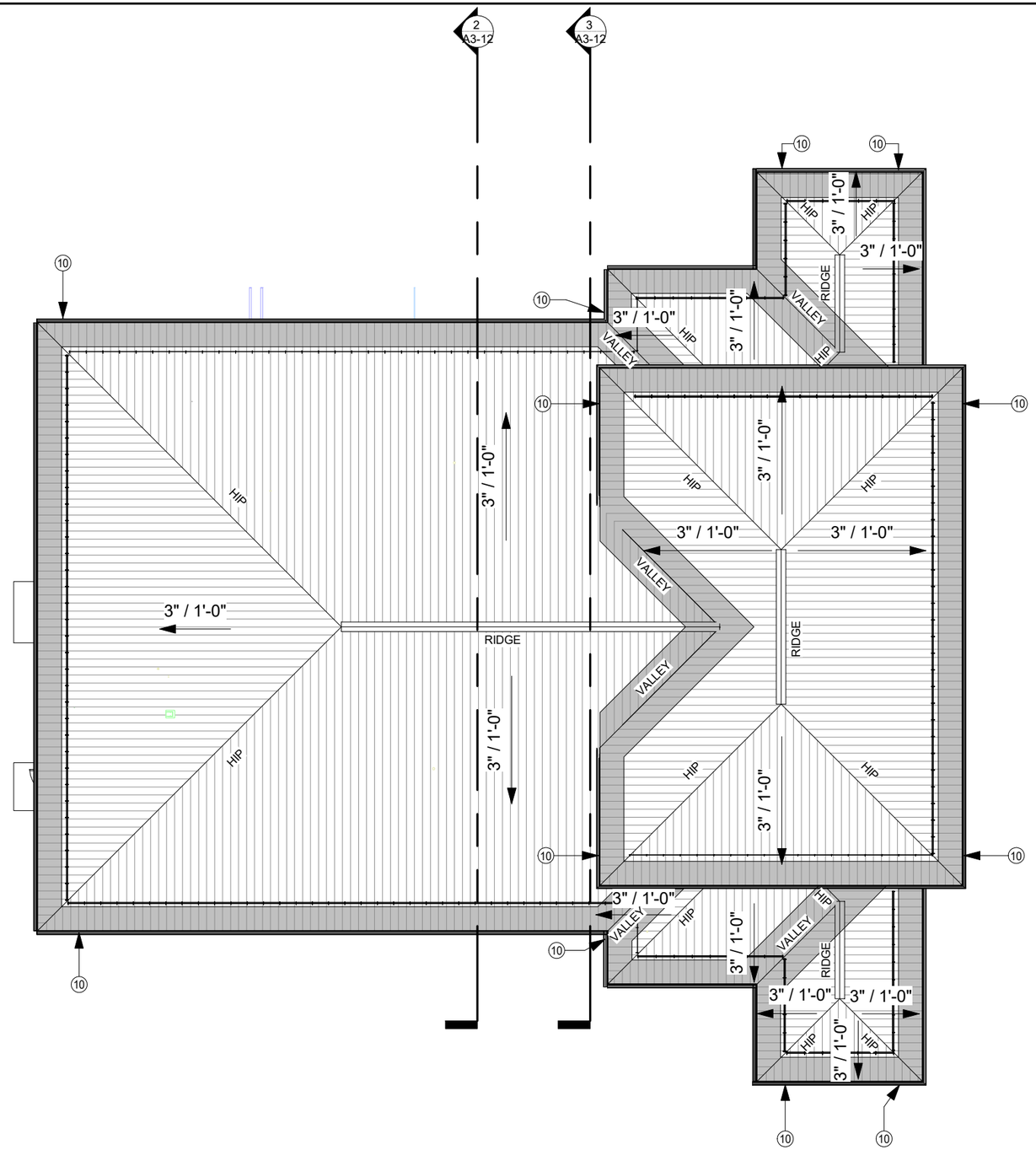
SIGN TYPE C3

QTY. 2



SIGN TYPE C4

QTY. 2



SHEET NOTES

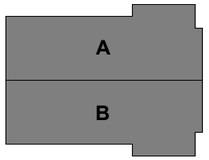
A. ICE AND WATERSHIELD LOCATIONS INSTALL 3' - 0" FROM EXTERIOR FACE OF WALL STUD, VALLEYS, AND POTENTIAL ICE AREAS.
B. FIELD VERIFY EXACT QUANTITY, SIZE AND LOCATIONS OF ROOF HOODS, VENTS, DRAINS, ETC.
C. ALL VENT-THRU PIPES SHALL BE EXTENDED, AS NECESSARY, TO PROTECT MINIMUM OF 12" ABOVE FINISHED ELEVATION OF ROOFING. FLASH ALL VENTS WITH PREMOLDED PIPE BOOTS WITH STAINLESS STEEL CLAMPING RING. ANY THAT EXTEND ABOVE THE PARAPET HEIGHT AND ARE VISIBLE FROM GROUND LEVEL SHALL BE PAINTED, UNLESS NOTED OTHERWISE.
D. ALL ROOF TOP CURBS TO BE SADDLES WITH MINIMUM 1/2" PER FOOT PITCH.
E. FLASH DRAINS, CURBS, VENTS AND STACKS PER MANUFACTURER'S RECOMMENDATIONS IF DETAIL NOT SHOWN ON PLANS.
F. PROVIDE SOLID WOOD BLOCKING WHERE INSULATION THICKNESS IS 6" OR MORE AND AT LOCATIONS INDICATED ON DRAWINGS, UNLESS NOTED OTHERWISE.
G. FIELD VERIFY CONDITIONS PRIOR TO FABRICATION.

ROOF LEGEND

ICE AND WATER SHIELD LOCATIONS

KEYNOTE LEGEND

10	PREFINISHED METAL GUTTER AND DOWNSPOUT. REFER TO CIVIL DOCUMENTS FOR DRAINAGE ROUTING.



KEYPLAN

1 ROOF PLAN
1/16" = 1'-0"

N

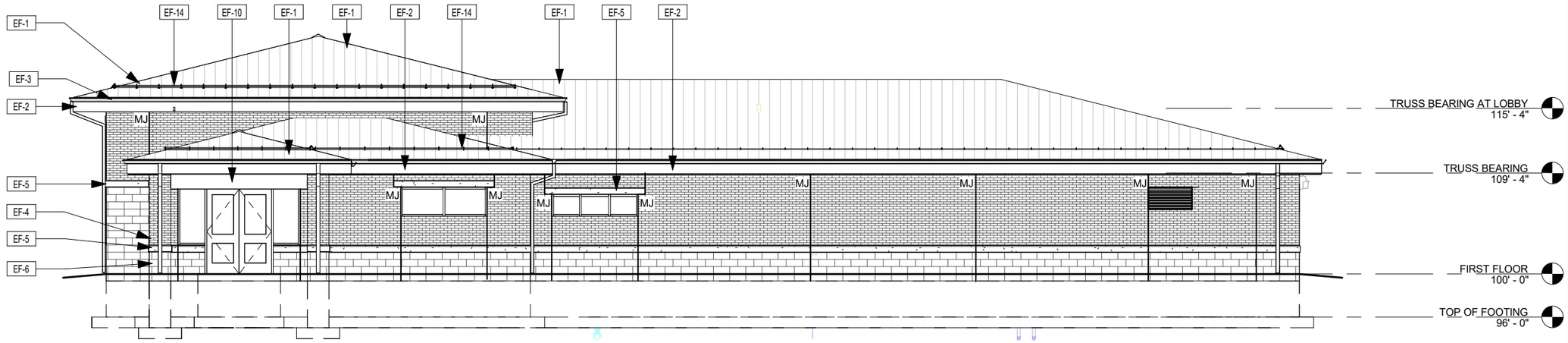
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ROOF PLAN	SHEET NO: A1-71

PLOT DATE: 1/26/2024 2:25:18 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2

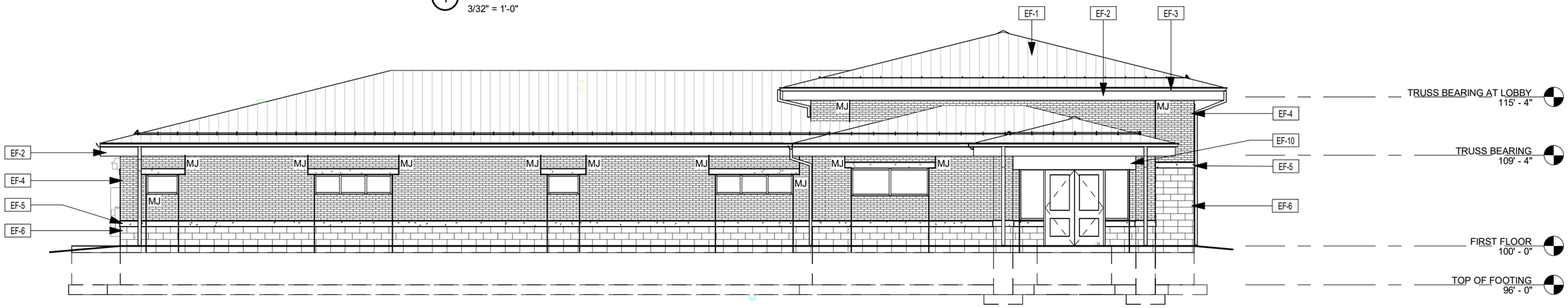
EXTERIOR FINISH SCHEDULE

MARK	MATERIAL TYPE	MANUFACTURER	MODEL / SIZE	COLOR	ADDITIONAL INFORMATION	COMMENTS
EF-1	STANDING SEAM	UNACLAD	PENCIL RIBBED / UC 6	EXTRA DARK BRONZE		
EF-2	14" WRAPPED LSL FASCIA BOARD	UNACLAD		EXTRA DARK BRONZE		
EF-3	GUTTER			DARK BRONZE		
EF-4	BRICK	GLEN GARY	MODULAR	MOUNTAIN SHADOW VELOUR		
EF-5	PRECAST CONCRETE			MATCH CAST STONE		
EF-6	CAST STONE	CUSTOM CAST STONE	8" X 16"	CREME		
EF-7	TRIM BOARD					
EF-8	STOREFRONT MULLION	KANEER		DARK BRONZE		
EF-10	COMPOSITE METAL PANEL	ALUCABOND		DARK BRONZE		
EF-14	SNOW GUARD	SNO-JAX	-	BLACK	SNOW BAR TO MATCH ROOF COLOR	REFER TO ROOF PLAN



1 NORTH ELEVATION

3/32" = 1'-0"



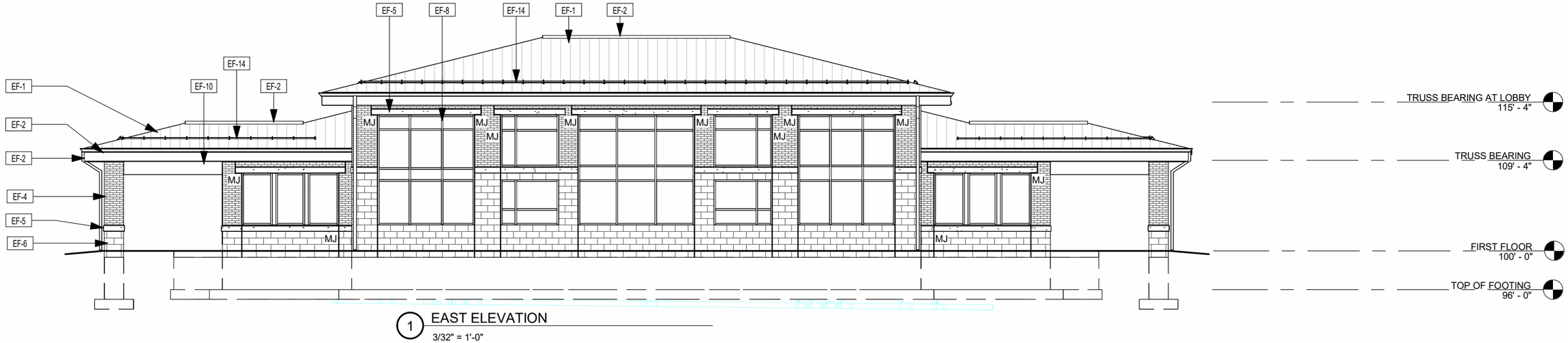
2 SOUTH ELEVATION

3/32" = 1'-0"

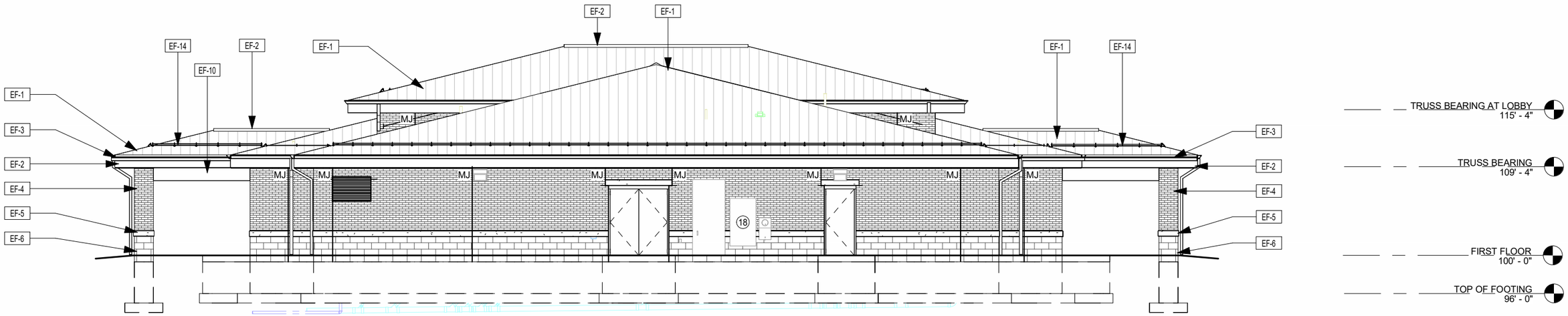
KEYNOTE LEGEND	
18	WATERTABLE BAND TO RECESS AT CT CABINET TO PROVIDE FLUSH SURFACE FOR MOUNTING, REFER TO ELECTRICAL DOCUMENTS.

EXTERIOR FINISH SCHEDULE

MARK	MATERIAL TYPE	MANUFACTURER	MODEL / SIZE	COLOR	ADDITIONAL INFORMATION	COMMENTS
EF-1	STANDING SEAM	UNACLAD	PENCIL RIBBED / UC 6	EXTRA DARK BRONZE		
EF-2	14" WRAPPED LSL FASCIA BOARD	UNACLAD		EXTRA DARK BRONZE		
EF-3	GUTTER			DARK BRONZE		
EF-4	BRICK	GLEN GARY	MODULAR	MOUNTAIN SHADOW VELOUR		
EF-5	PRECAST CONCRETE			MATCH CAST STONE		
EF-6	CAST STONE	CUSTOM CAST STONE	8" X 16"	CREME		
EF-7	TRIM BOARD					
EF-8	STOREFRONT MULLION	KANEER		DARK BRONZE		
EF-10	COMPOSITE METAL PANEL	ALUCABOND		DARK BRONZE		
EF-14	SNOW GUARD	SNO-JAX	-	BLACK	SNOW BAR TO MATCH ROOF COLOR	REFER TO ROOF PLAN



1 EAST ELEVATION
3/32" = 1'-0"

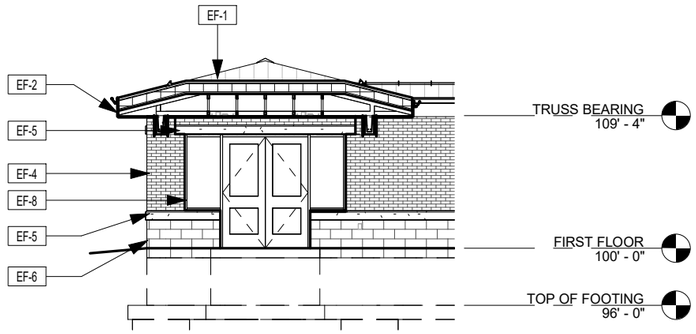


2 WEST ELEVATION
3/32" = 1'-0"

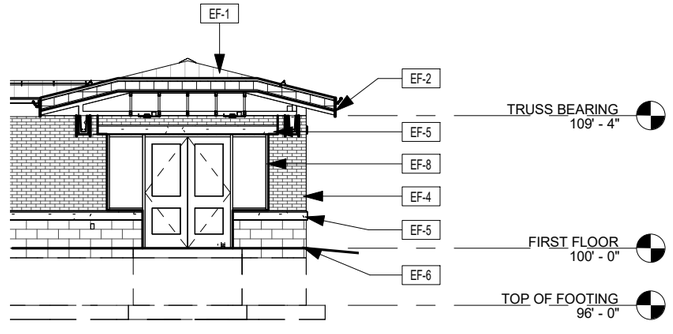
2

EXTERIOR FINISH SCHEDULE

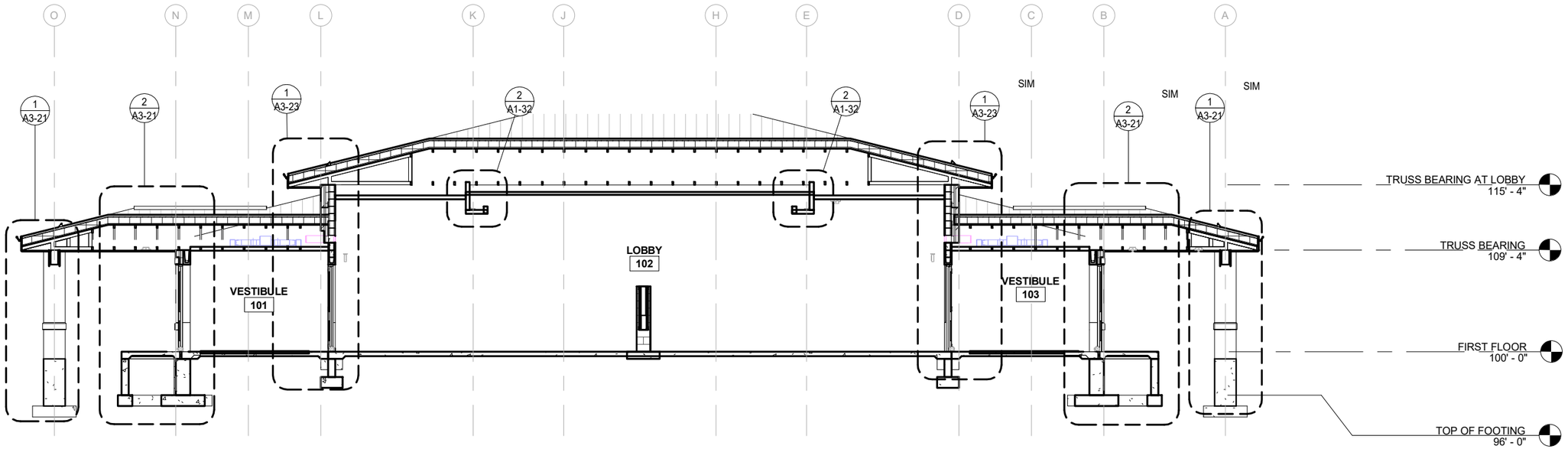
MARK	MATERIAL TYPE	MANUFACTURER	MODEL / SIZE	COLOR	ADDITIONAL INFORMATION	COMMENTS
EF-1	STANDING SEAM	UNACLAD	PENCIL RIBBED / UC 6	EXTRA DARK BRONZE		
EF-2	14" WRAPPED LSL FASCIA BOARD	UNACLAD		EXTRA DARK BRONZE		
EF-3	GUTTER			DARK BRONZE		
EF-4	BRICK	GLEN GARY	MODULAR	MOUNTAIN SHADOW VELOUR		
EF-5	PRECAST CONCRETE			MATCH CAST STONE		
EF-6	CAST STONE	CUSTOM CAST STONE	8" X 16"	CREME		
EF-7	TRIM BOARD					
EF-8	STOREFRONT MULLION	KANEER		DARK BRONZE		
EF-10	COMPOSITE METAL PANEL	ALUCABOND		DARK BRONZE		
EF-14	SNOW GUARD	SNO-JAX	-	BLACK	SNOW BAR TO MATCH ROOF COLOR	REFER TO ROOF PLAN



1 NORTH VESTIBULE ELEVATION
3/32" = 1'-0"

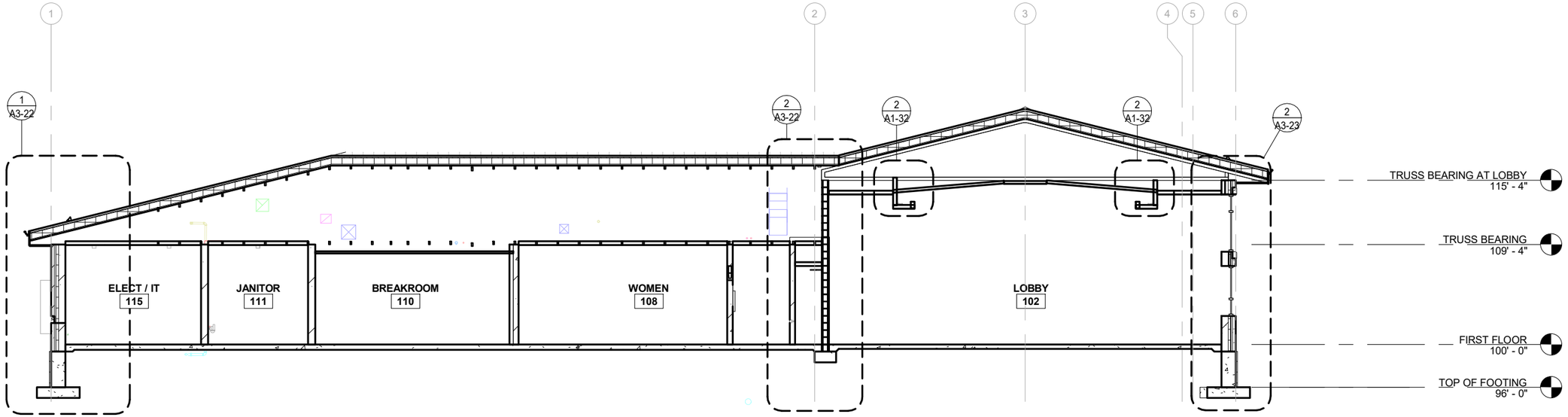


2 SOUTH VESTIBULE ELEVATION
3/32" = 1'-0"



1 BUILDING SECTION

3/32" = 1'-0"



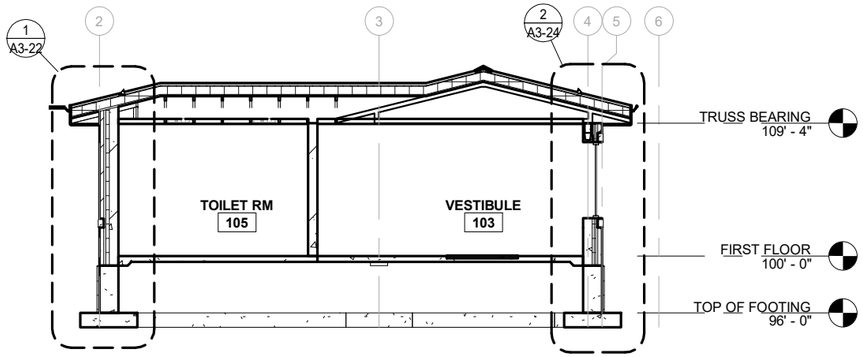
2 BUILDING SECTION

3/32" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	BUILDING SECTION	SHEET NO: A3-11

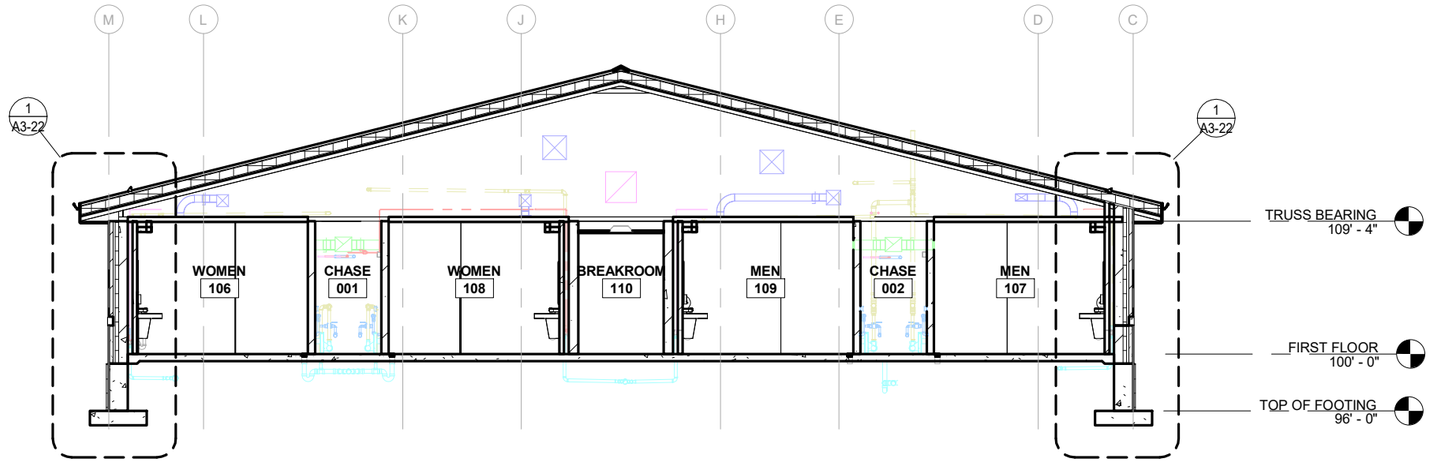
PLOT DATE: 1/26/2024 2:25:32 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2



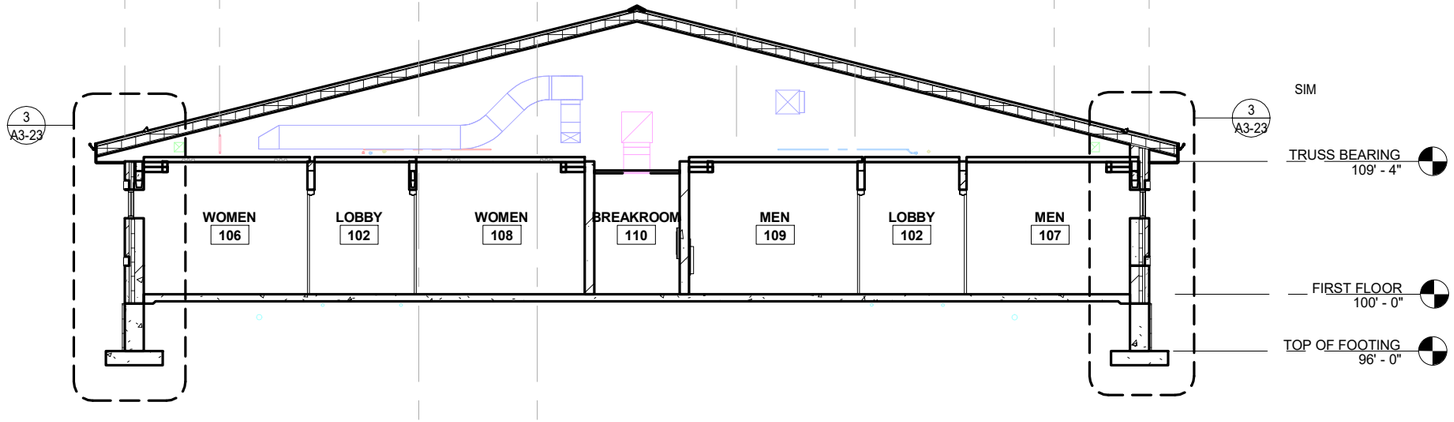
1 VESTIBULE CROSS SECTION

3/32" = 1'-0"



2 BUILDING SECTION THRU RESTROOMS

3/32" = 1'-0"



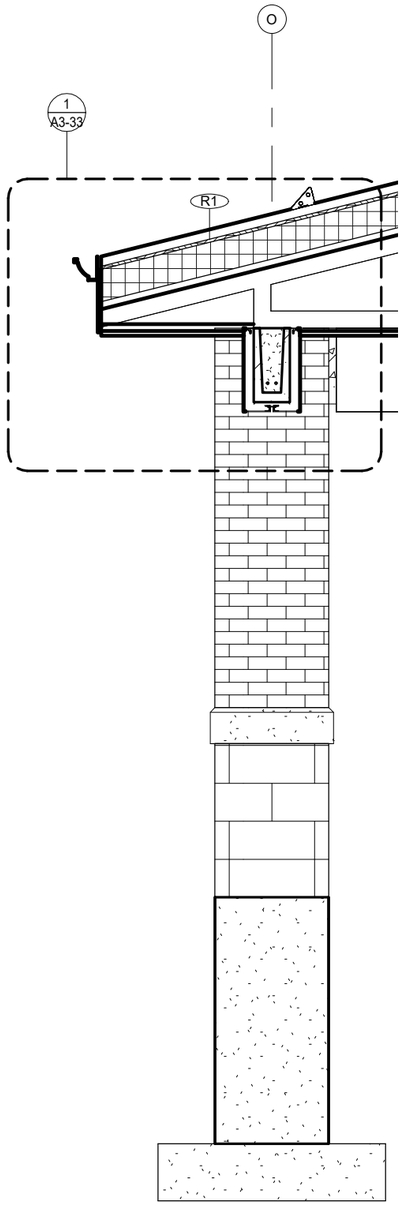
3 BUILDING SECTION THRU RESTROOMS

3/32" = 1'-0"

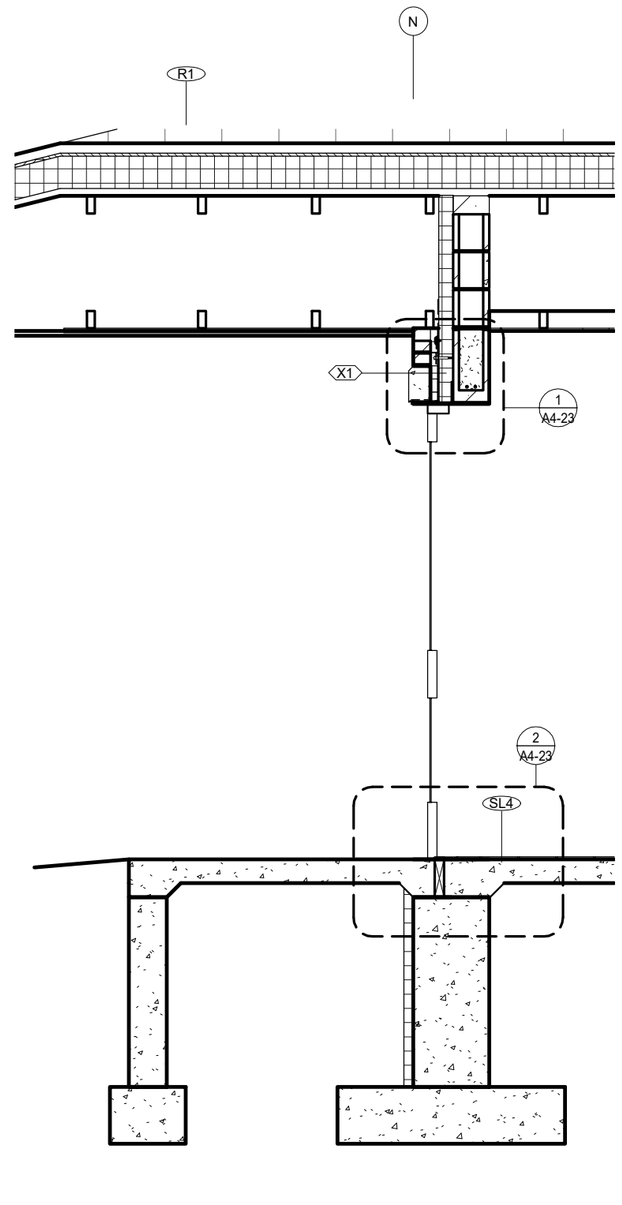
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	BUILDING SECTION	SHEET NO: A3-12

PLOT DATE: 1/26/2024 2:25:36 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

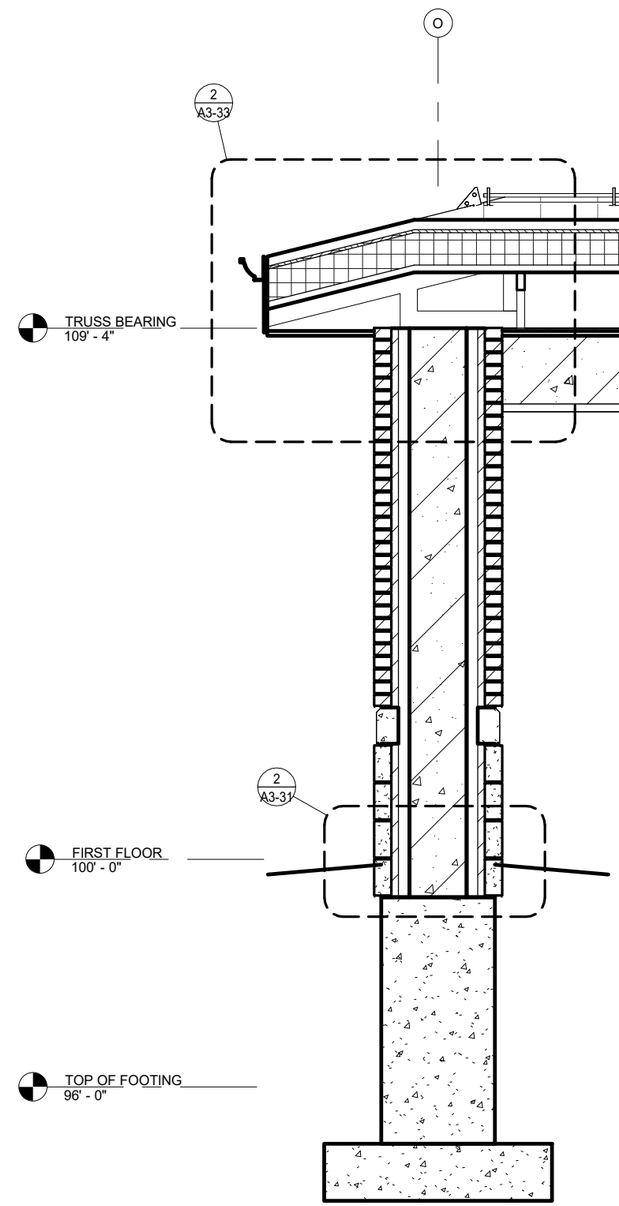
2



1 WALL SECTION
3/8" = 1'-0"



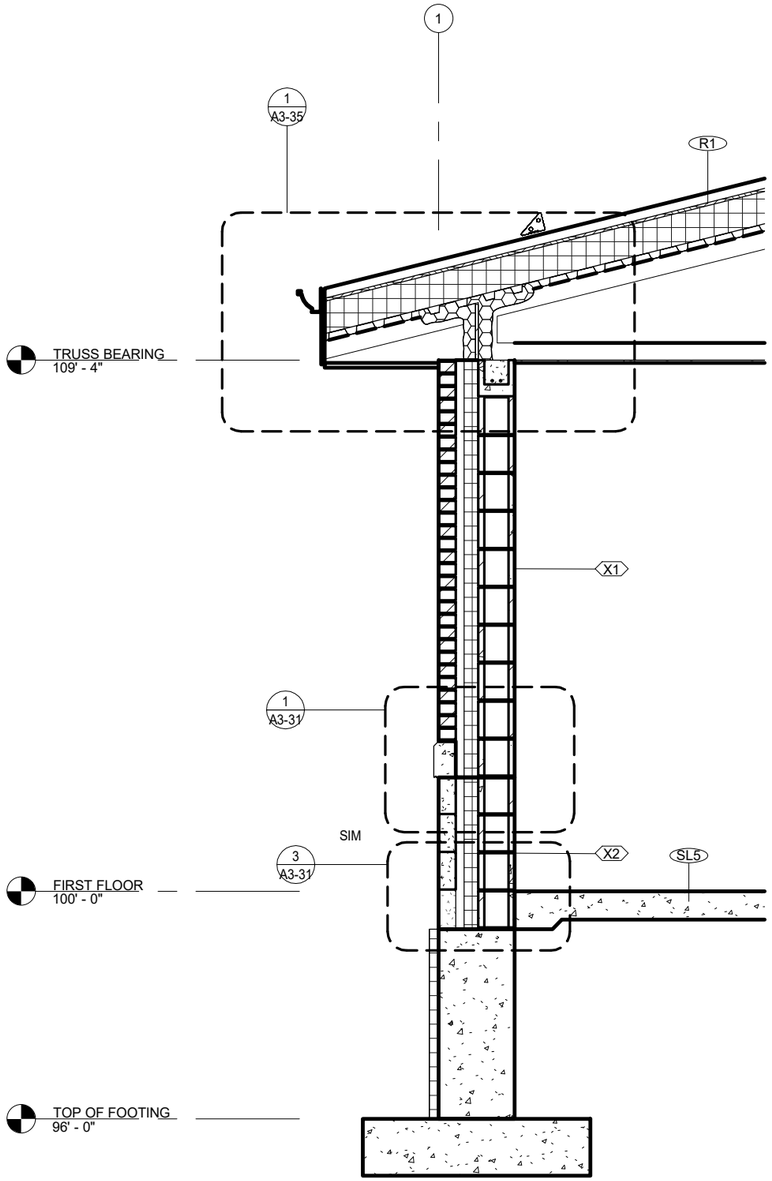
2 WALL SECTION
3/8" = 1'-0"



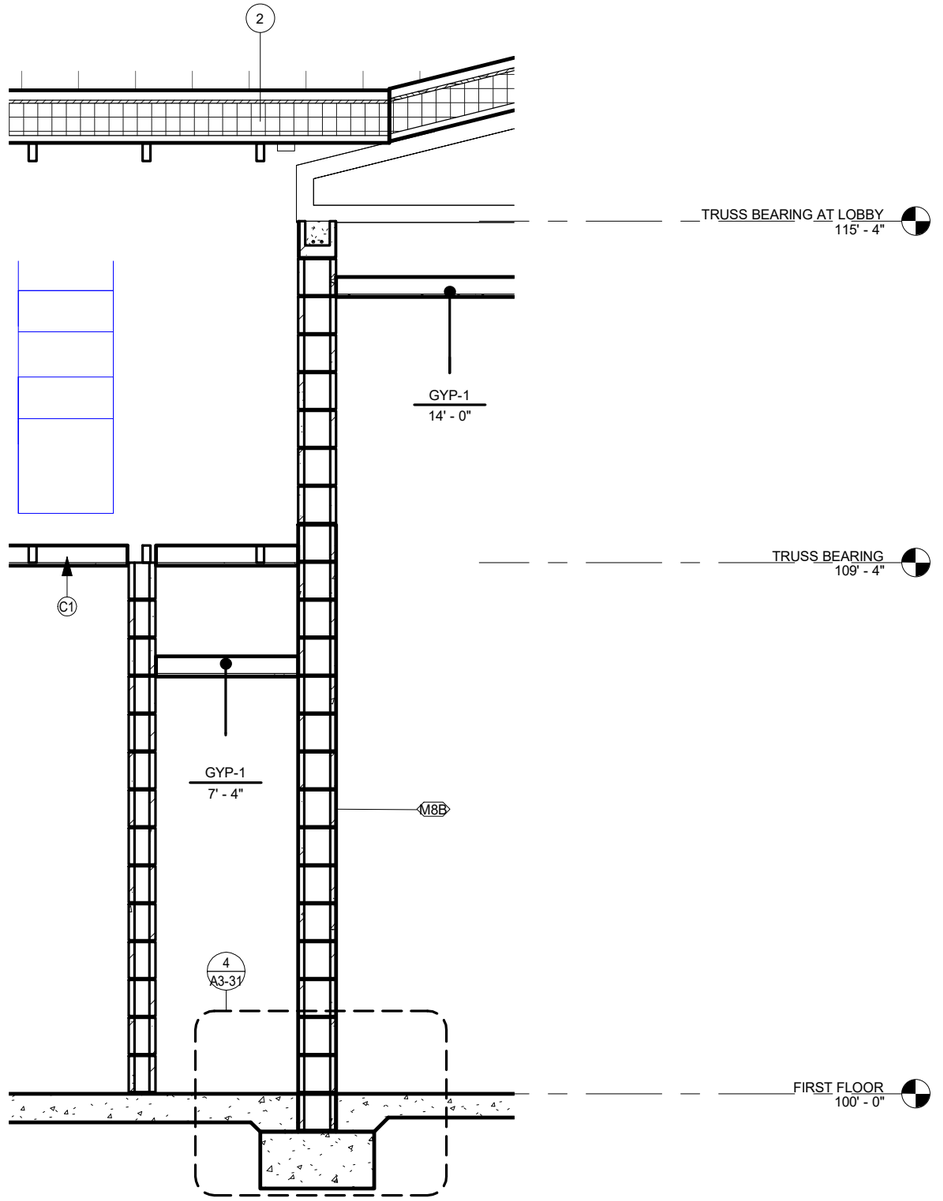
3 WALL SECTION
3/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	WALL SECTIONS	SHEET NO: A3-21

PLOT DATE: 1/26/2024 2:25:38 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



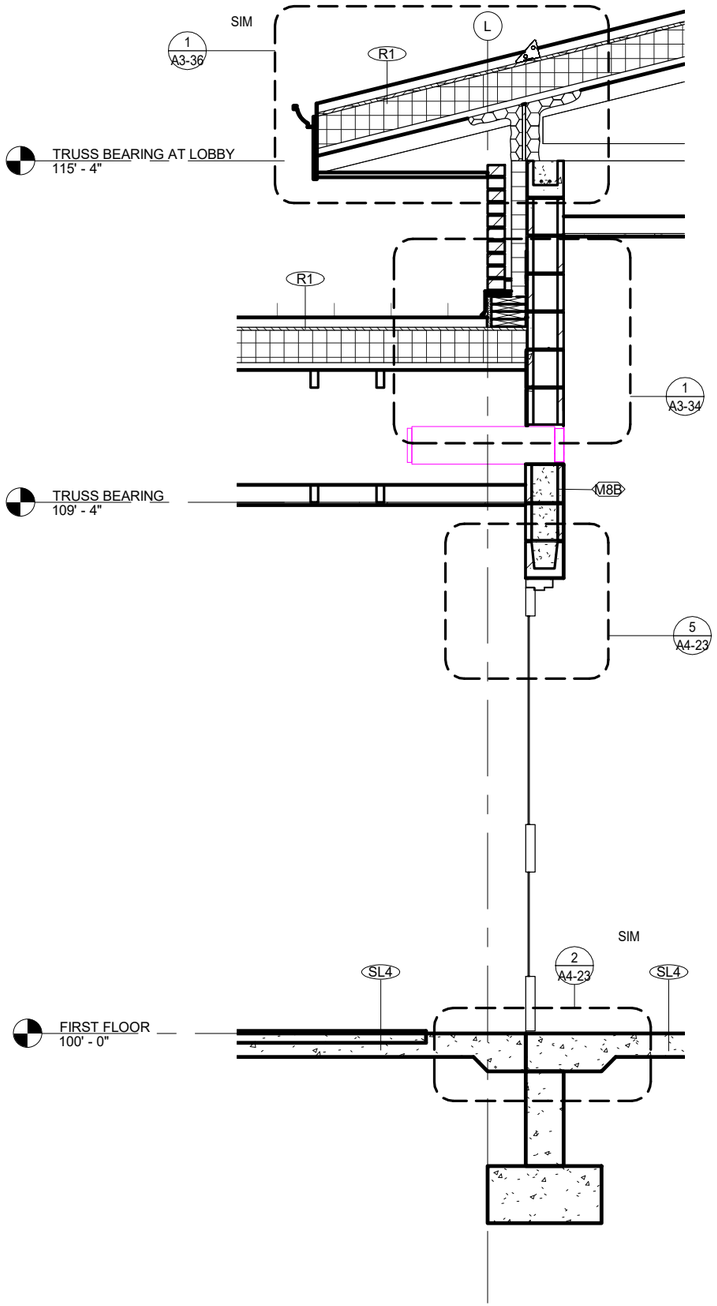
1 WALL SECTION
3/8" = 1'-0"



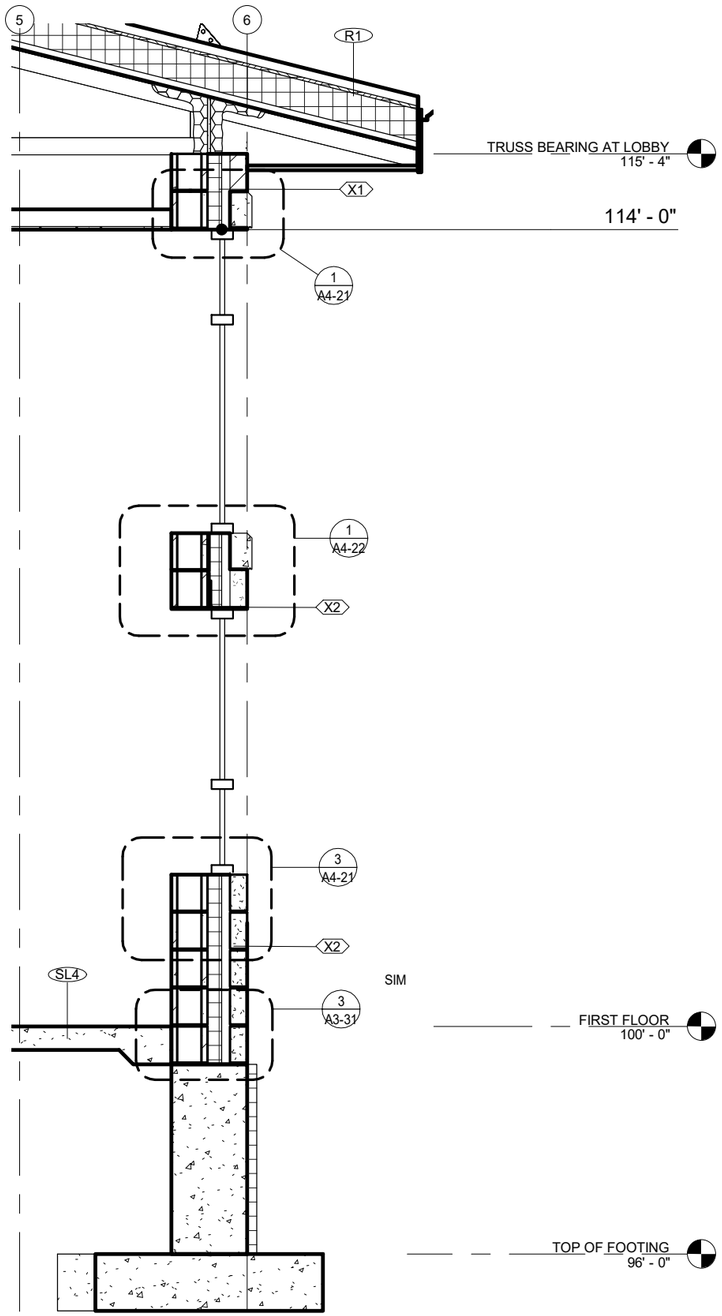
2 WALL SECTION
3/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	WALL SECTIONS	SHEET NO: A3-22

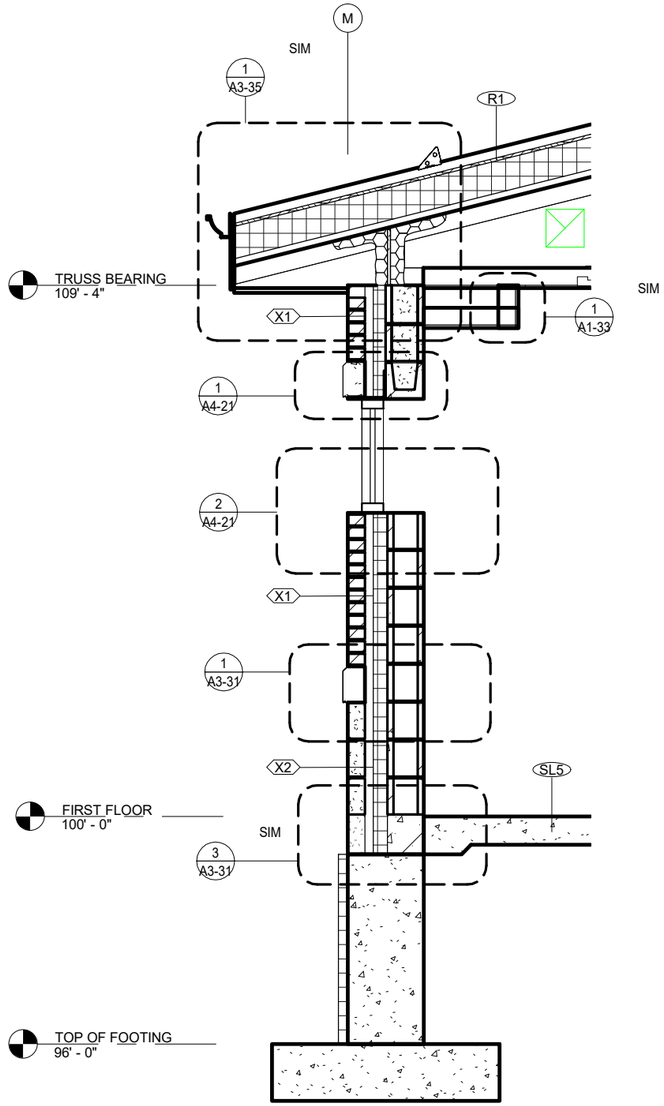
PLOT DATE: 1/26/2024 2:25:39 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



1 WALL SECTION
3/8" = 1'-0"



2 WALL SECTION
3/8" = 1'-0"

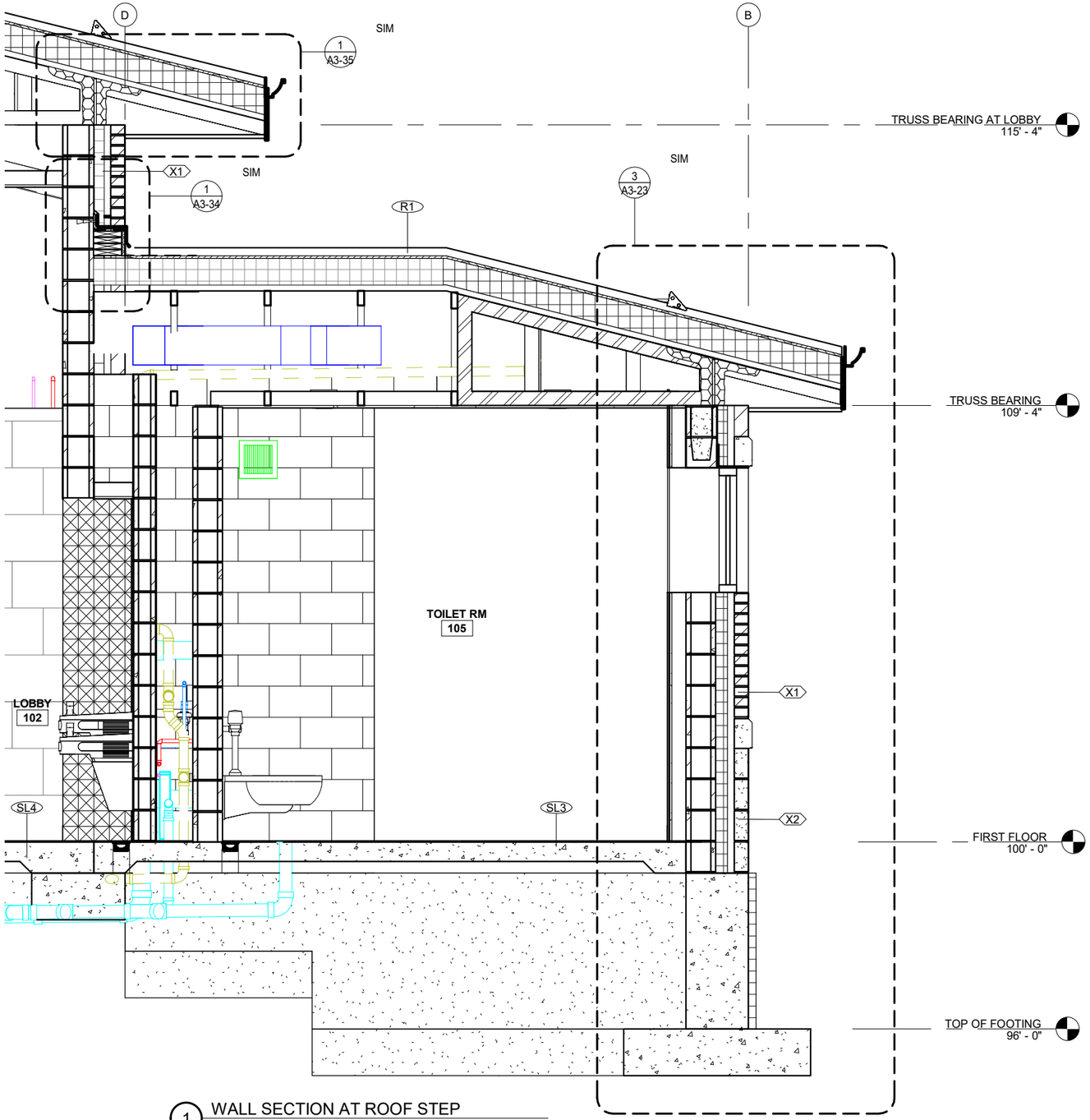


3 WALL SECTION
3/8" = 1'-0"

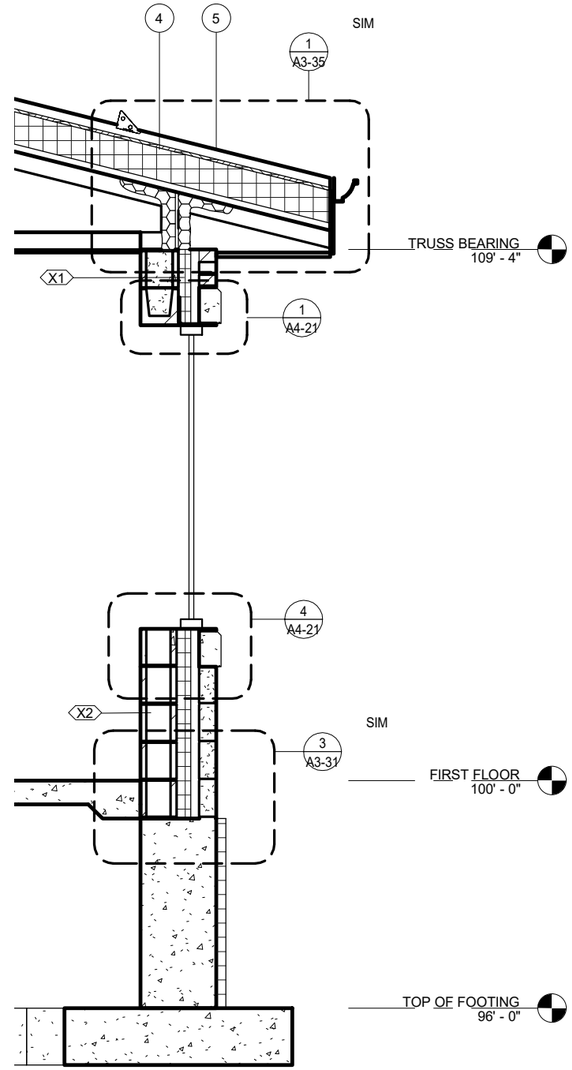
2

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	WALL SECTIONS	SHEET NO: A3-23

PLOT DATE: 1/26/2024 2:25:42 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



1 WALL SECTION AT ROOF STEP
3/8" = 1'-0"



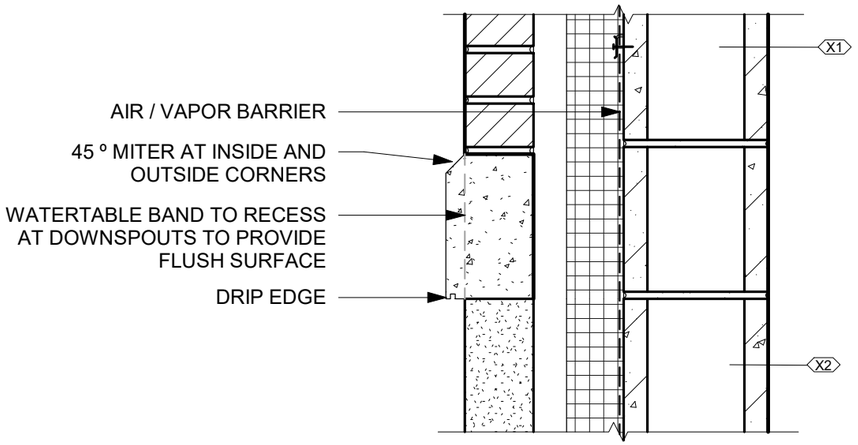
2 WALL SECTION
3/8" = 1'-0"

2

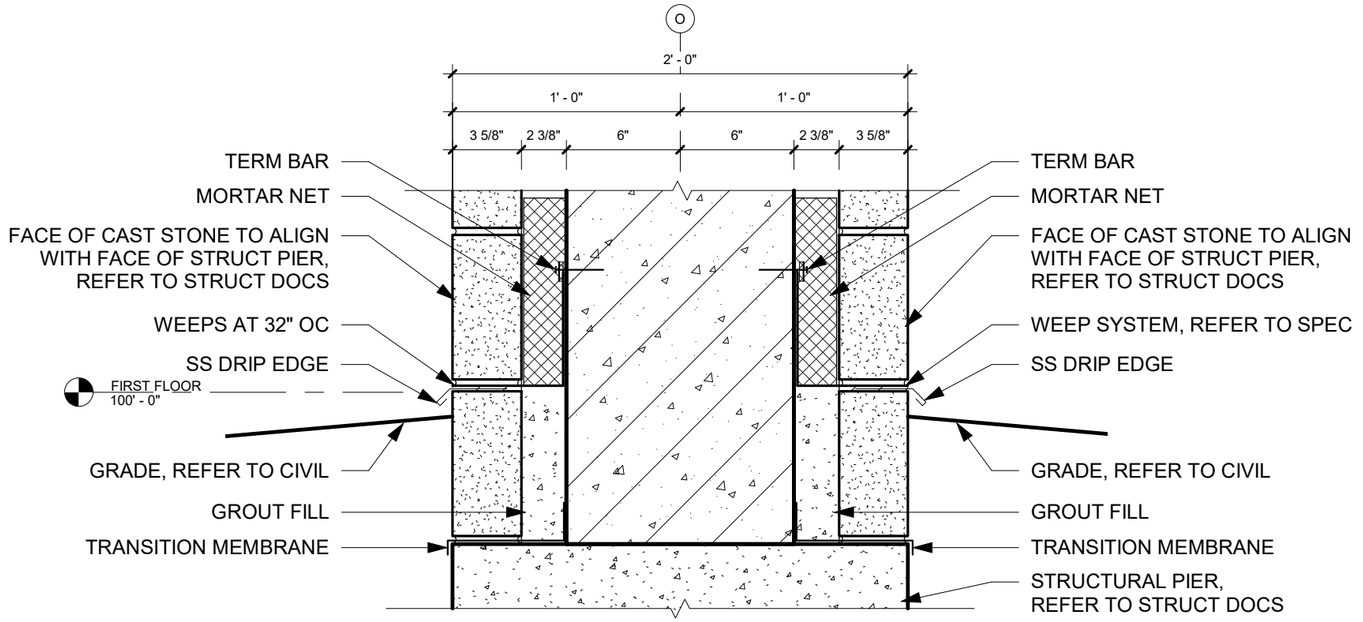
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	WALL SECTIONS	SHEET NO: A3-24

PLOT DATE: 1/26/2024 2:25:44 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

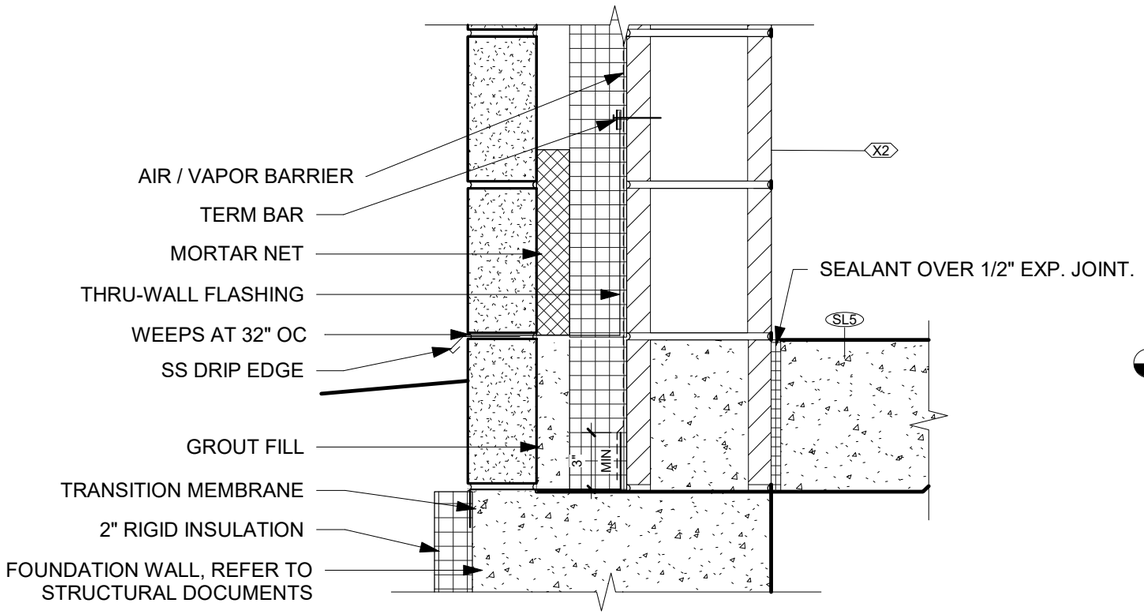
2



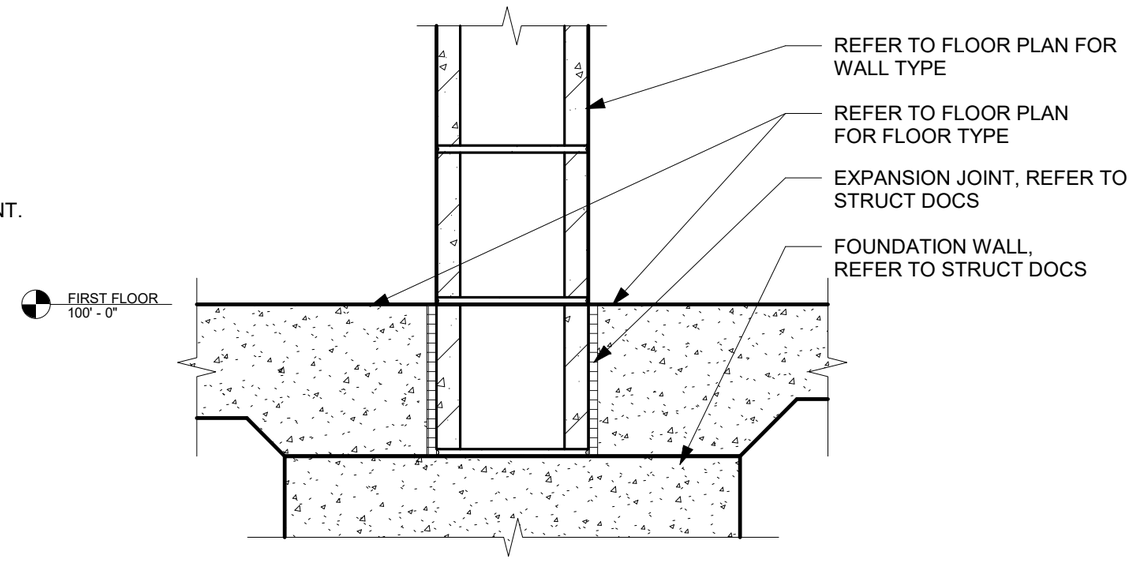
1 X1 AND X2 TRANSITION DETAIL
1 1/2" = 1'-0"



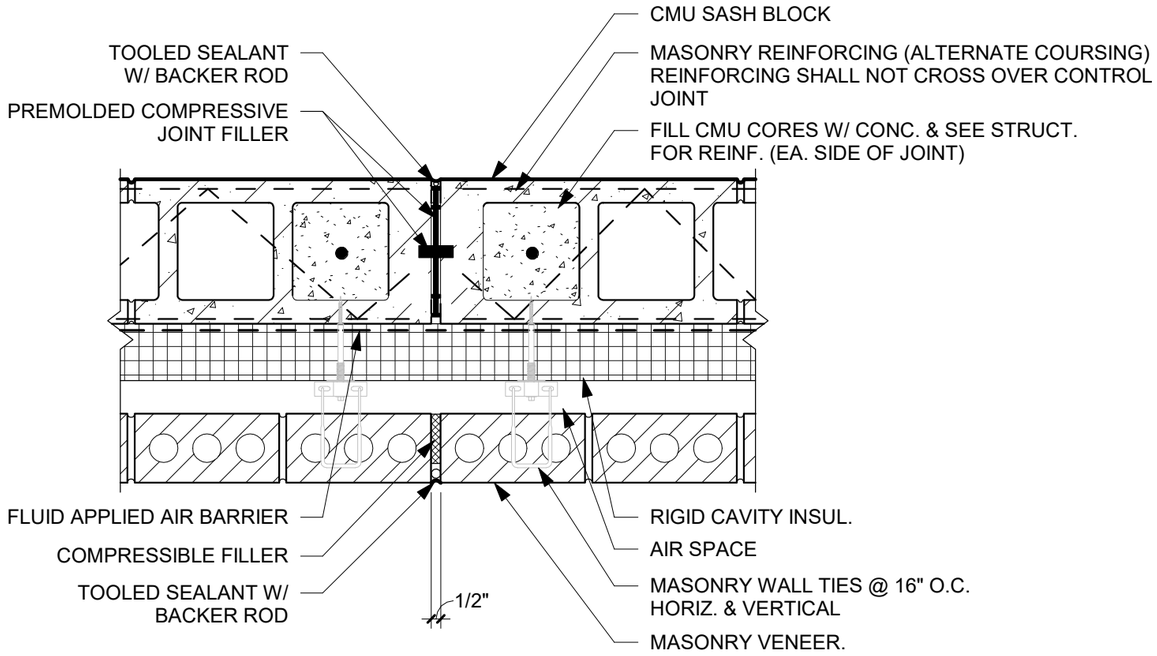
2 WALL BASE AT COLUMN DETAIL
1 1/2" = 1'-0"



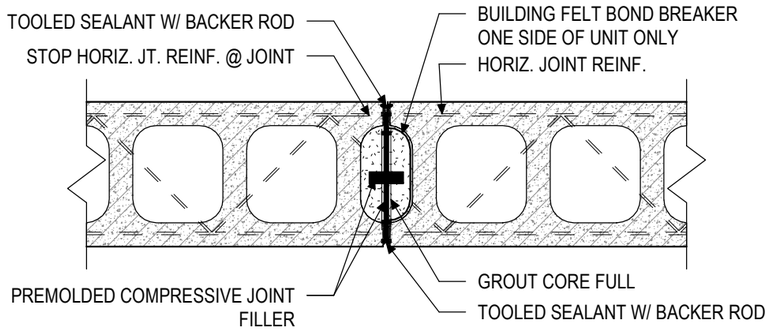
3 WALL BASE AT X2 DETAIL
1 1/2" = 1'-0"



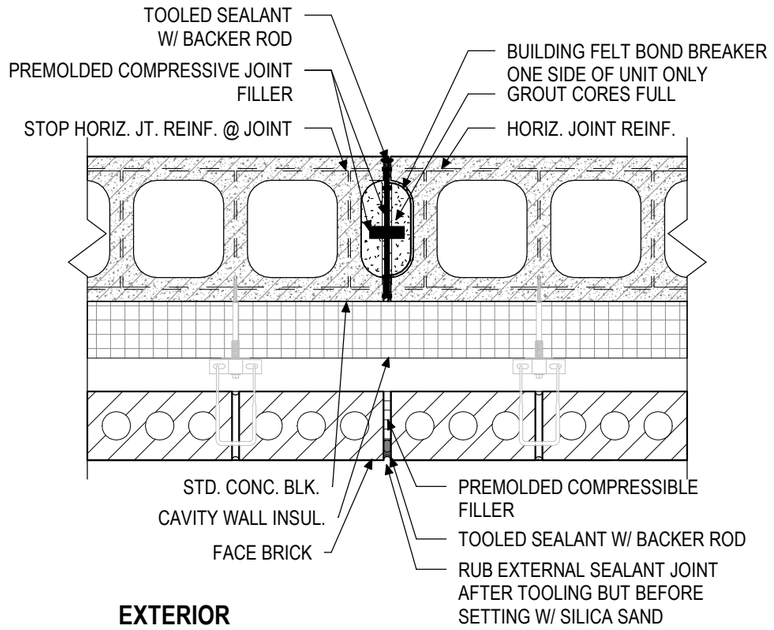
4 INTERIOR WALL AT FOUNDATION DETAIL
1 1/2" = 1'-0"



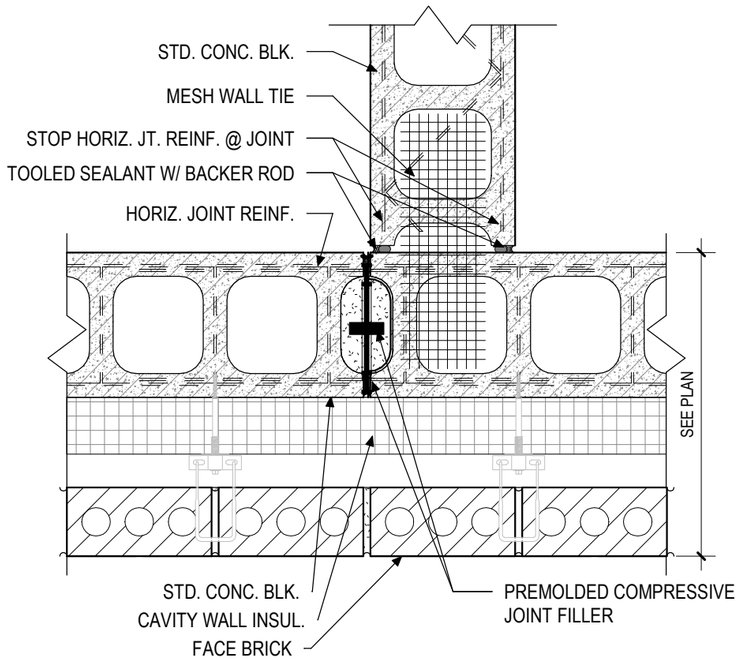
1 CAVITY WALL CONTROL JOINT DETAIL
1 1/2" = 1'-0"



INTERIOR



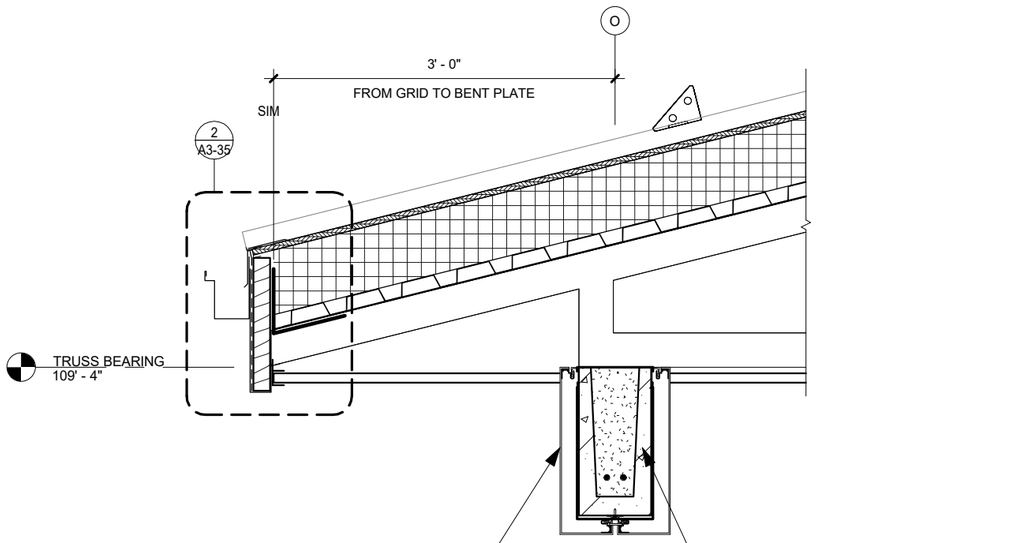
EXTERIOR



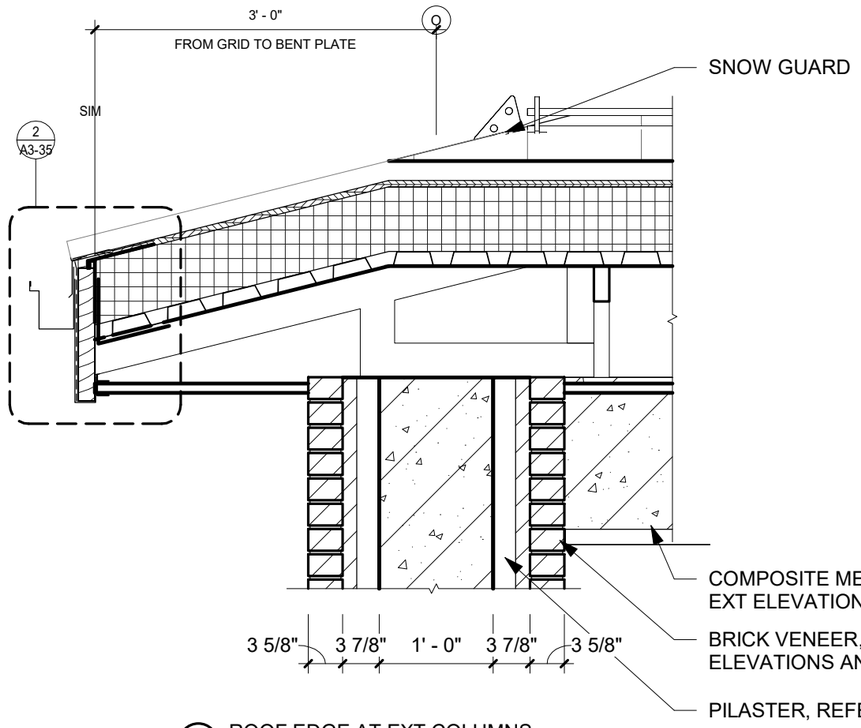
EXTERIOR / INTERIOR CONNECTION

2 WALL MOVEMENT JOINTS
1 1/2" = 1'-0"

2

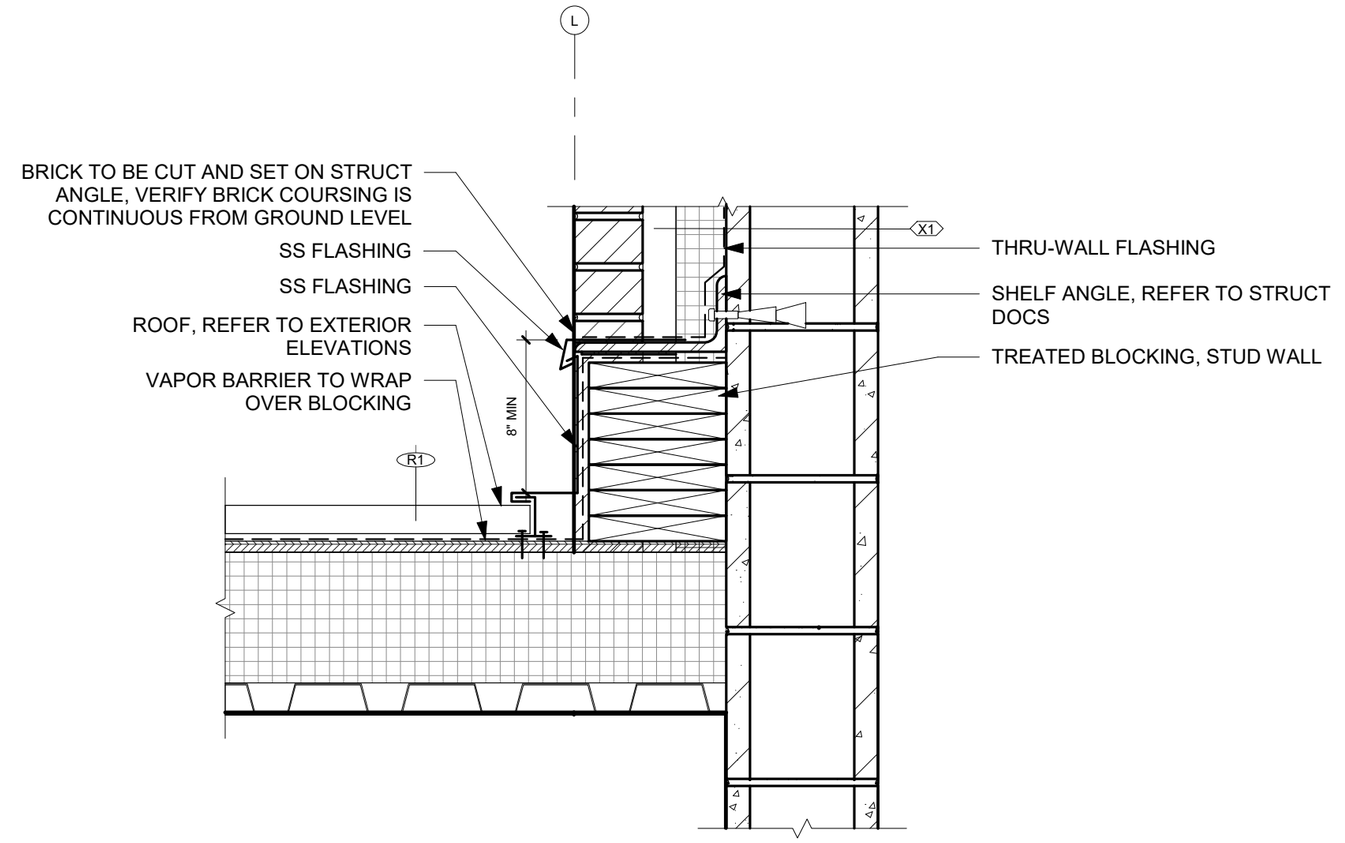


1 ROOF EDGE AT EXT COLUMN LINTEL
3/4" = 1'-0"



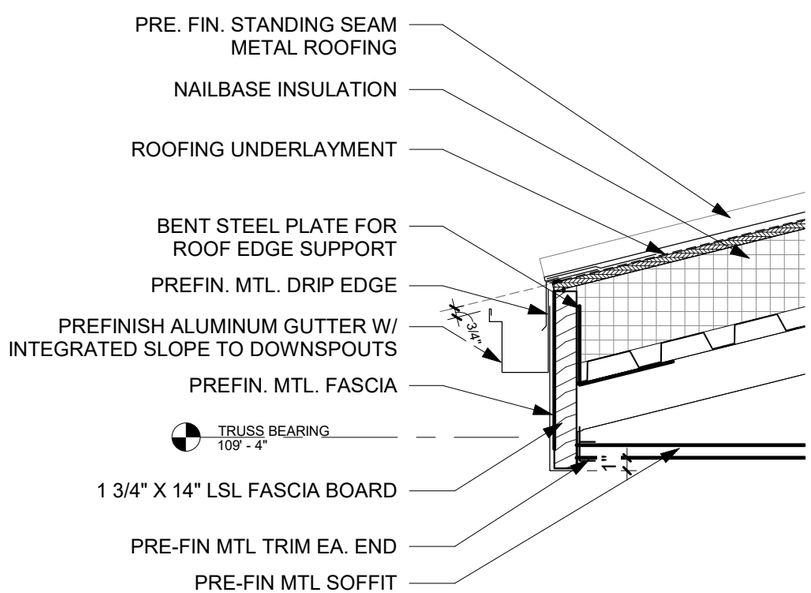
2 ROOF EDGE AT EXT COLUMNS
3/4" = 1'-0"

2

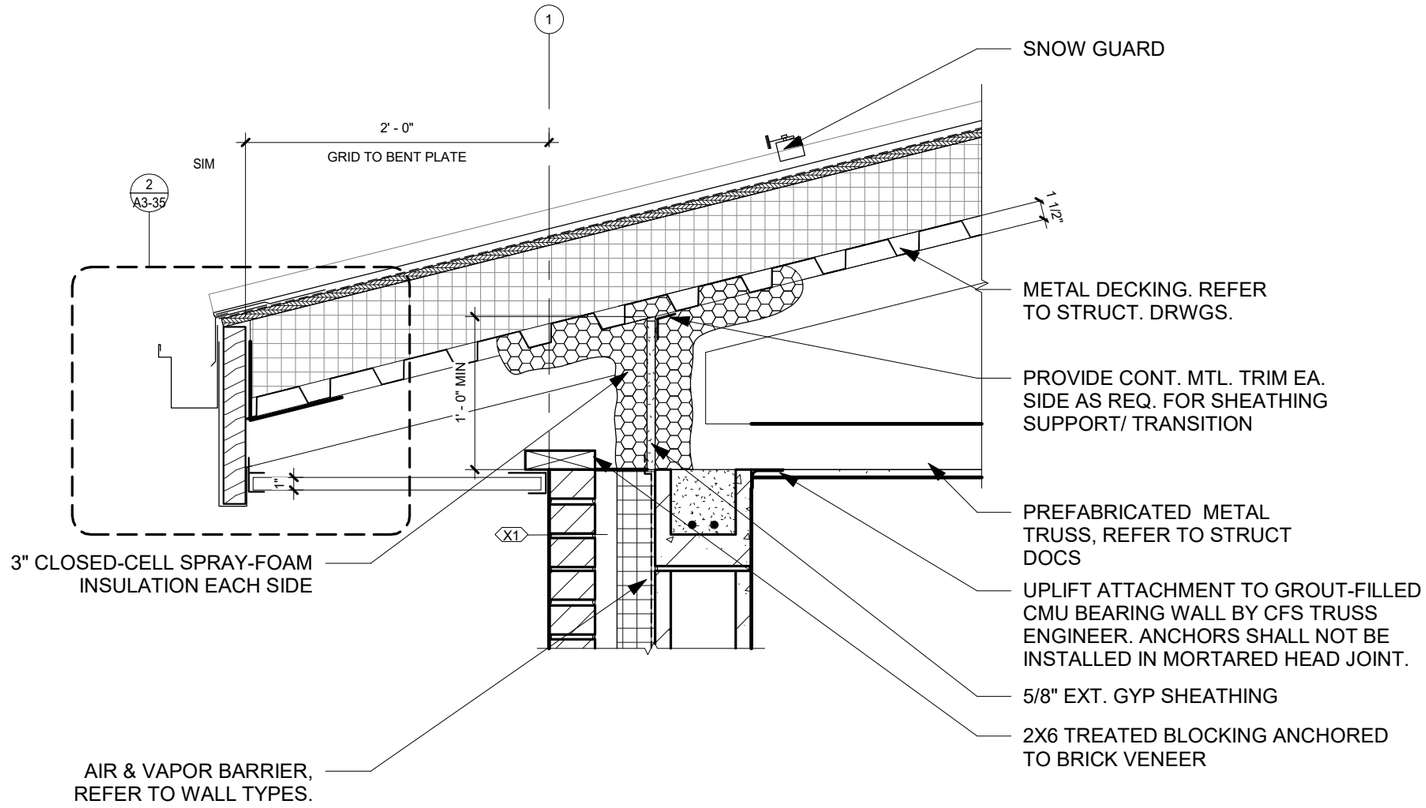


1 TYPICAL ANGLE AT ROOF AND EXTERIOR WALL
1 1/2" = 1'-0"

2



2 TYPICAL ROOF EDGE DETAIL
1" = 1'-0"

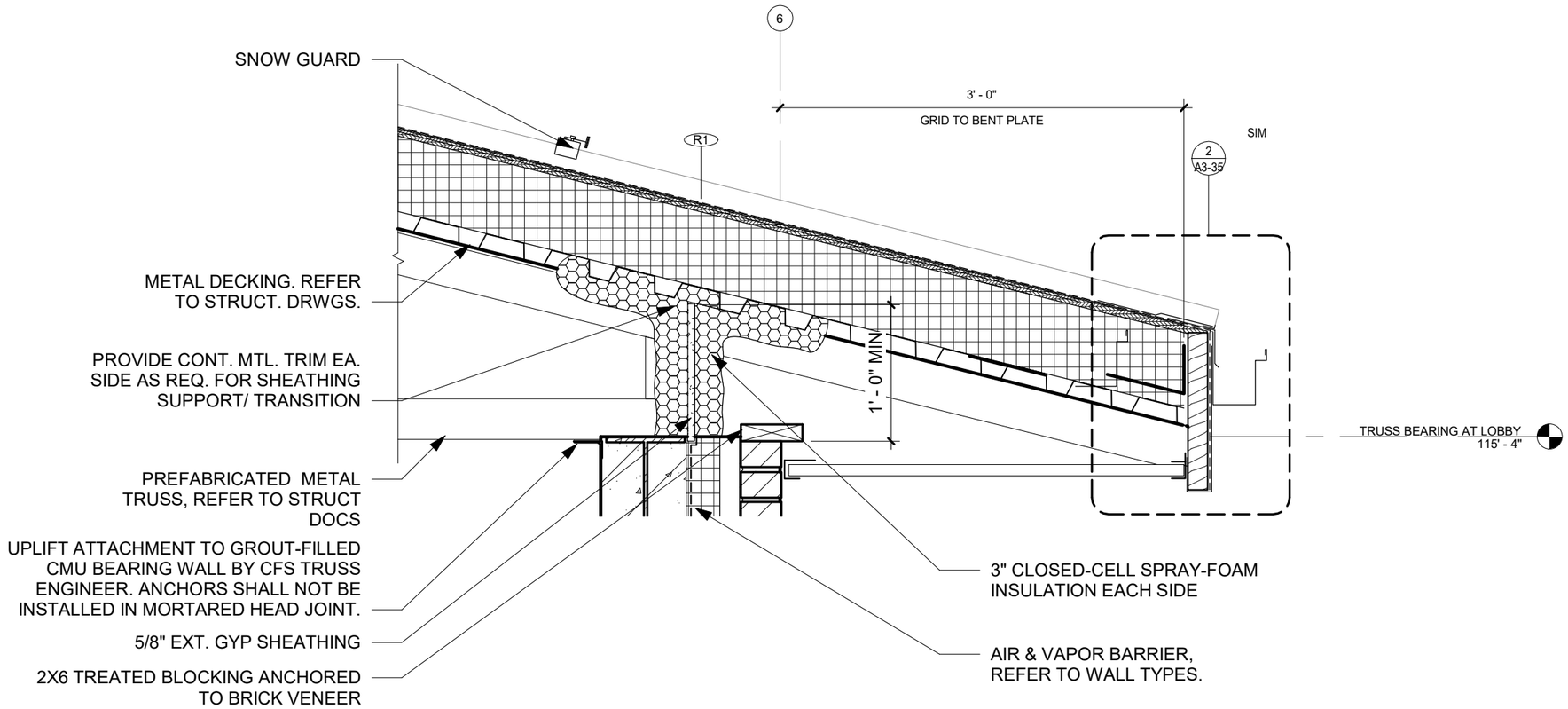


1 TYPICAL ROOF EDGE AT X1 WALL DETAIL
1" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ROOF DETAILS	SHEET NO: A3-35

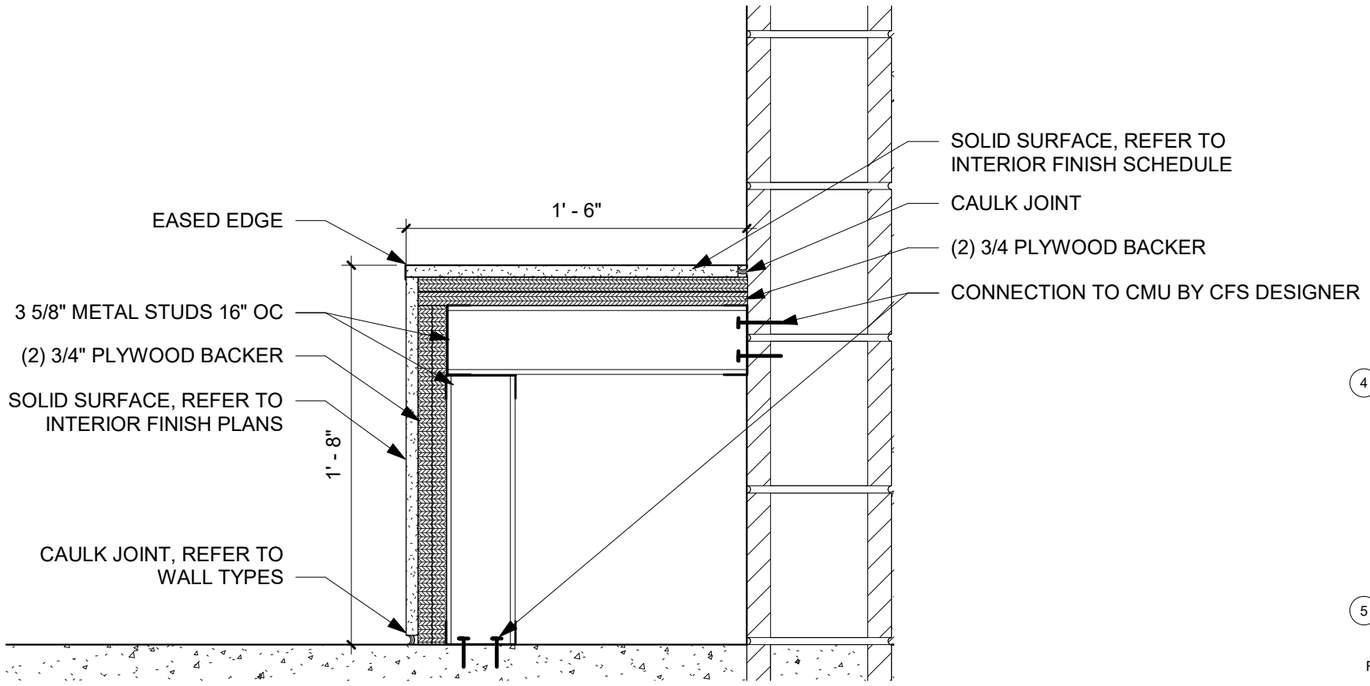
PLOT DATE: 1/26/2024 2:25:49 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2

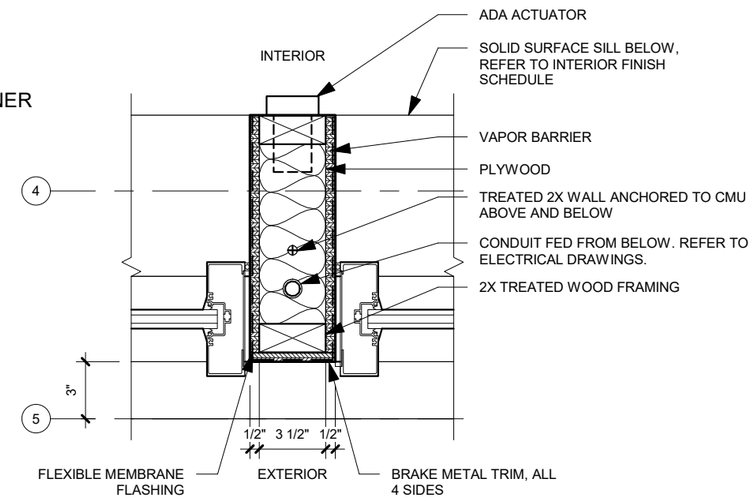


1 ROOF EDGE DETAIL AT UPPER ROOF
1" = 1'-0"

2

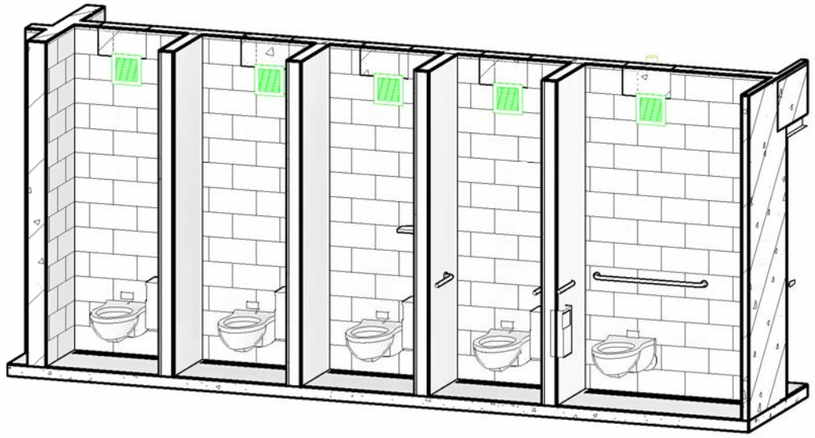


1 BUILT-IN BENCH DETAIL
1 1/2" = 1'-0"

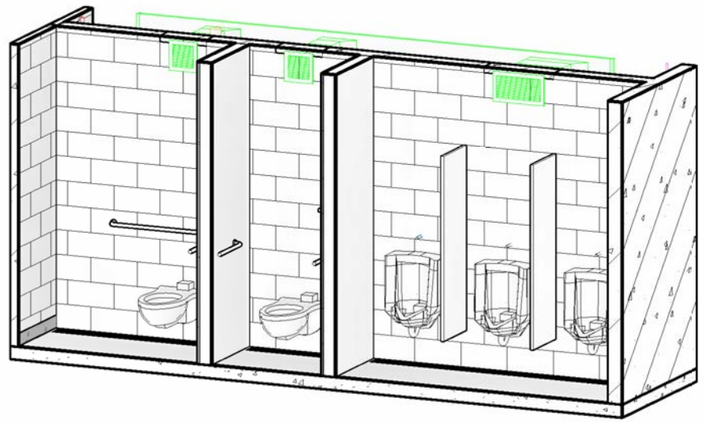


2 ADA ACTUATOR
1 1/2" = 1'-0"

2



1 108 WOMENS TRENCH DRAIN



2 109 MENS TRENCH DRAIN

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	RESTROOM TRENCH PERSPECTIVES	SHEET NO: A3-52

PLOT DATE: 1/26/2024 2:25:56 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

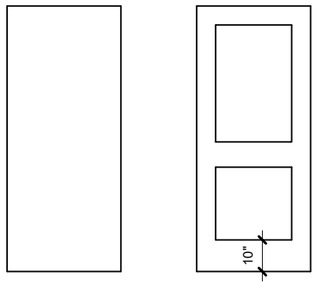
DOOR SCHEDULE

MARK	ROOM NAME	WIDTH	HEIGHT	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	AAOS Project HW Set	COMMENTS
001	CHASE	4' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	5.0	
101A	VESTIBULE	6' - 0"	7' - 10"	FG1	ALUMINUM	AL1	ALUMINUM	1.0	
101B	LOBBY	6' - 0"	7' - 10"	FG1	ALUMINUM	AL2	ALUMINUM	4.0	
103A	VESTIBULE	6' - 0"	7' - 10"	FG1	ALUMINUM	AL1	ALUMINUM	1.0	
103B	LOBBY	6' - 0"	7' - 10"	FG1	ALUMINUM	AL2	ALUMINUM	4.0	
104	TOILET RM	3' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	8.0	
105	TOILET RM	3' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	8.0	
106A	WOMEN	4' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	9.0	
106B	WOMEN	4' - 0"	7' - 0"			3	HOLLOW METAL		
107A	MEN	4' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	9.0	
107B	MEN	4' - 0"	7' - 0"			3	HOLLOW METAL		
108A	WOMEN	4' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	9.0	
108B	WOMEN	4' - 0"	7' - 0"			3	HOLLOW METAL		
109A	MEN	4' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	9.0	
109B	MEN	4' - 0"	7' - 0"			3	HOLLOW METAL		
110A	BREAKROOM	3' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	2.1	
110B	BREAKROOM	4' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	5.1	
111A	JANITOR	6' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	2.0	
111B	JANITOR	4' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	5.0	
112	TOILET RM	3' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	8.0	
113B	OFFICE	3' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	7.0	
114	OFFICE	3' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	7.0	
115	JANITOR	3' - 0"	7' - 0"	FL	HOLLOW METAL	2	HOLLOW METAL	6.1	

GLAZING SCHEDULE

MARK	MATERIAL	THICKNESS	COMMENTS
G-1	TEMPERED	1/4"	INTERIOR WINDOWS, UNO
IG-1	INSULATED, TEMPERED	1"	EXTERIOR WINDOWS, UNO
IG-2	INSULATED, TEMPERED, BIRD SAFE FILM	1"	VIRACON, 1% COVERAGE 51777 BIRD FRIENDLY
IG-3	INSULATED, TEMPERED, PRIVACY FILM	1"	VIRACON, VE1- 2M

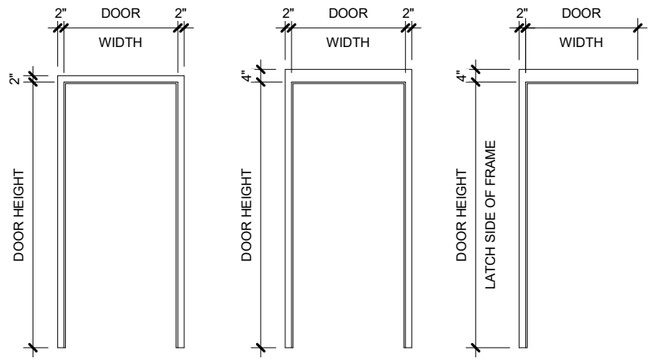
DOOR TYPE



FL
FLUSH

FG1
FULL GLASS W/ CENTER RAIL

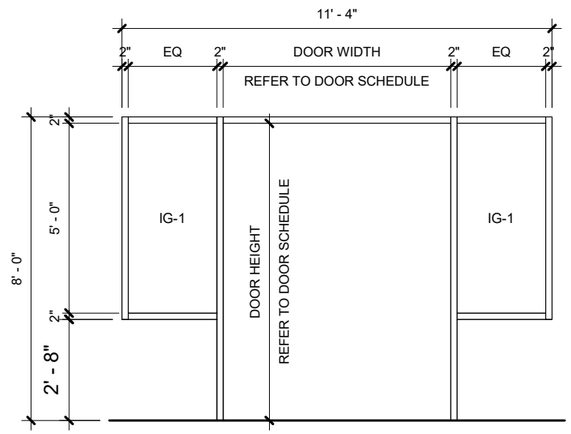
FRAME TYPES



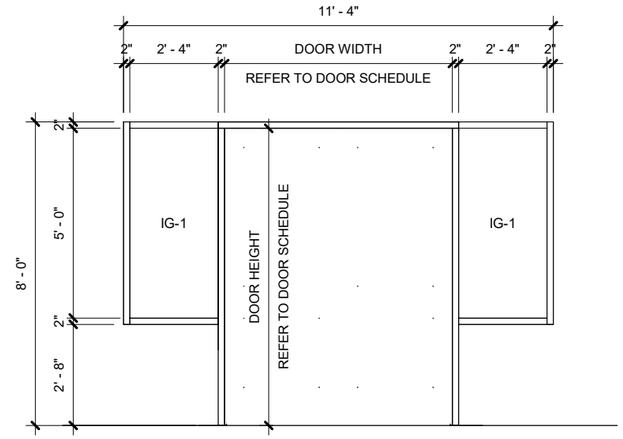
1
METAL FRAME

2
METAL FRAME W/ MASONRY HEAD

3
METAL FRAME W/ MASONRY HEAD



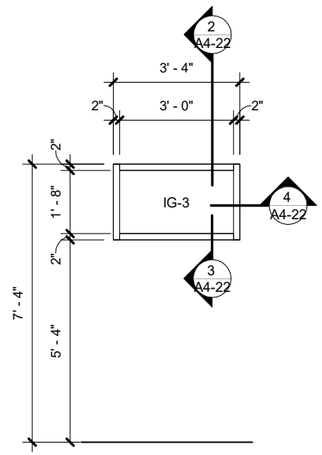
AL1



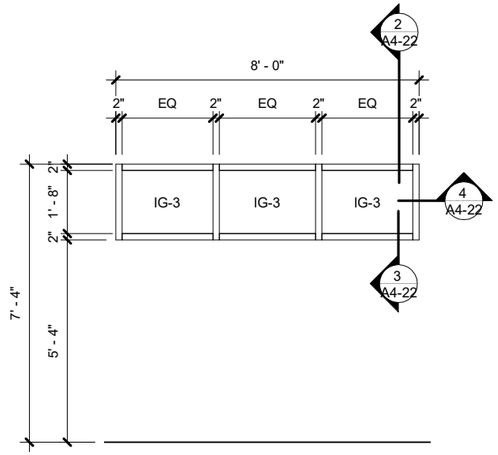
AL2

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	DOOR SCHEDULE, DOOR AND FRAME TYPES	SHEET NO: A4-11

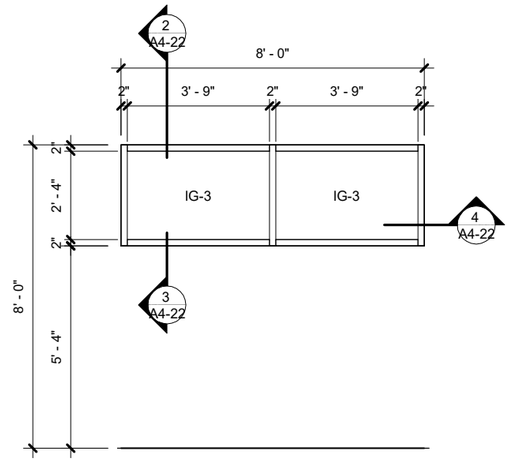
PLOT DATE: 1/26/2024 2:25:58 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



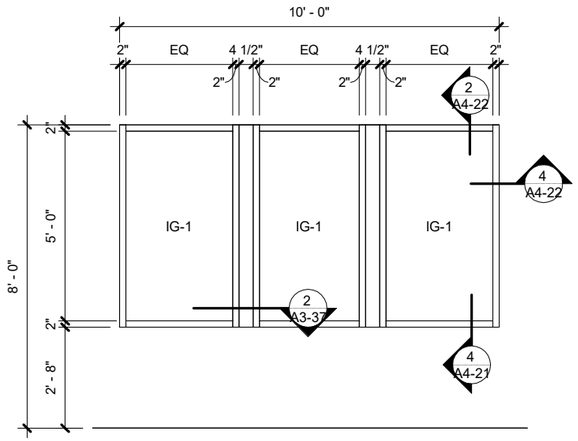
AL3



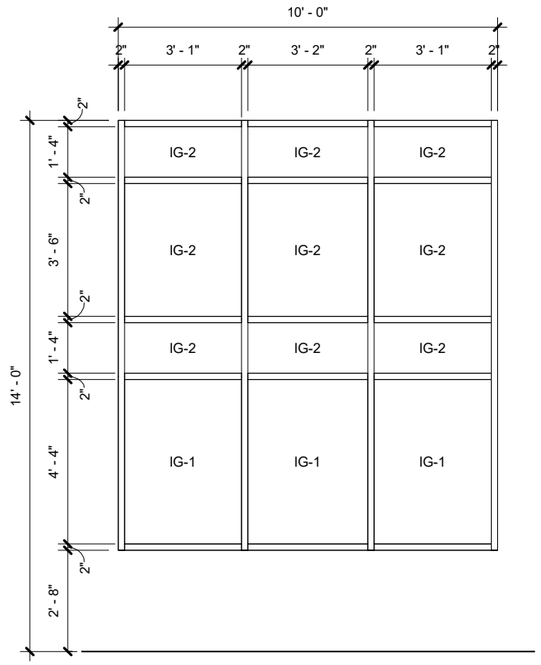
AL4



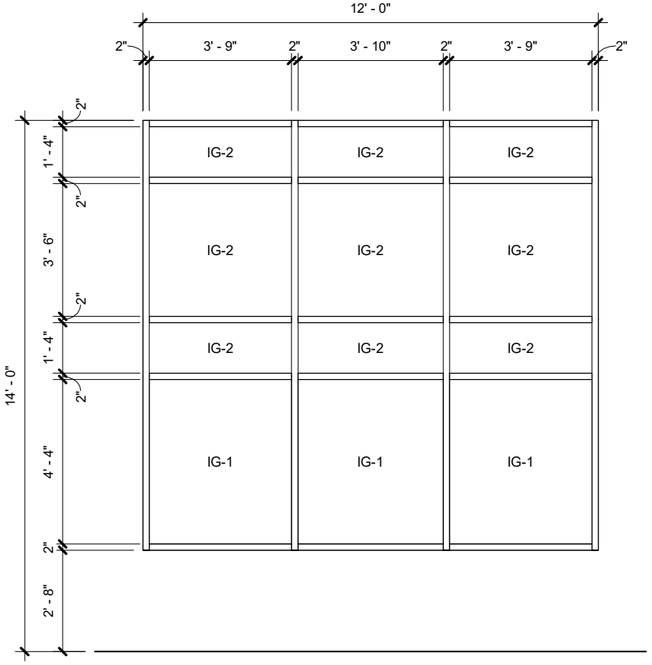
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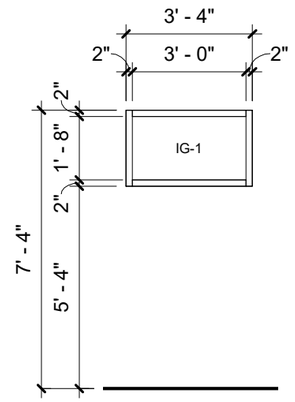
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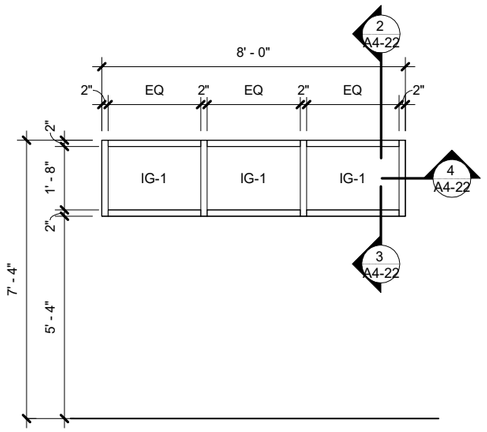
AL7



AL9



AL14

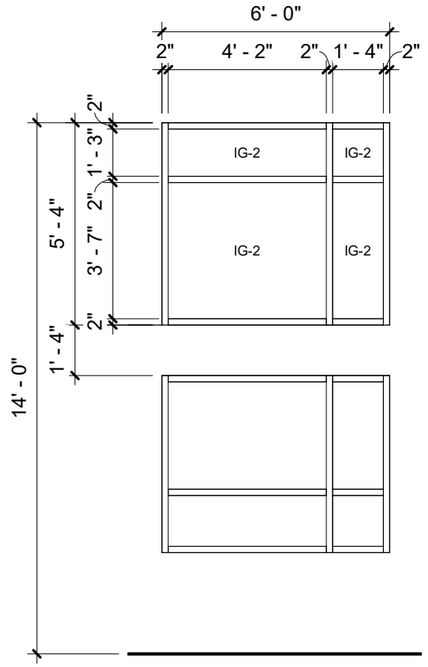


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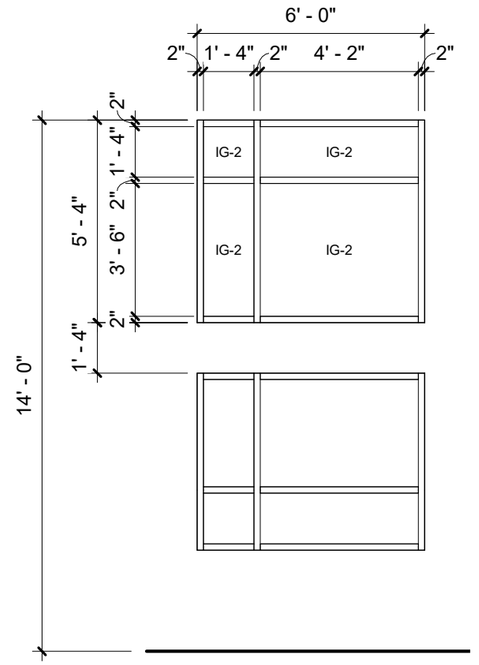
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STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	GLAZING ELEVATIONS	SHEET NO: A4-12

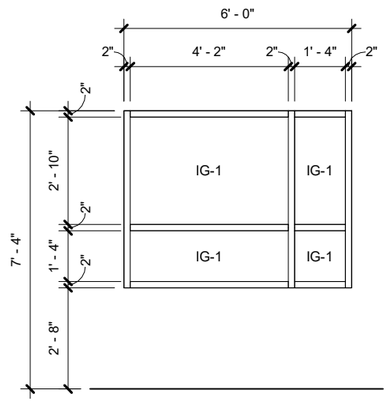
PLOT DATE: 1/26/2024 2:26:01 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



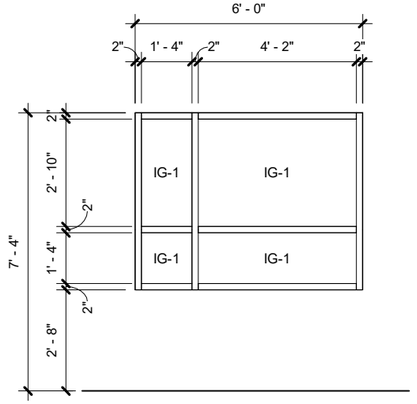
AL12



AL13



AL8

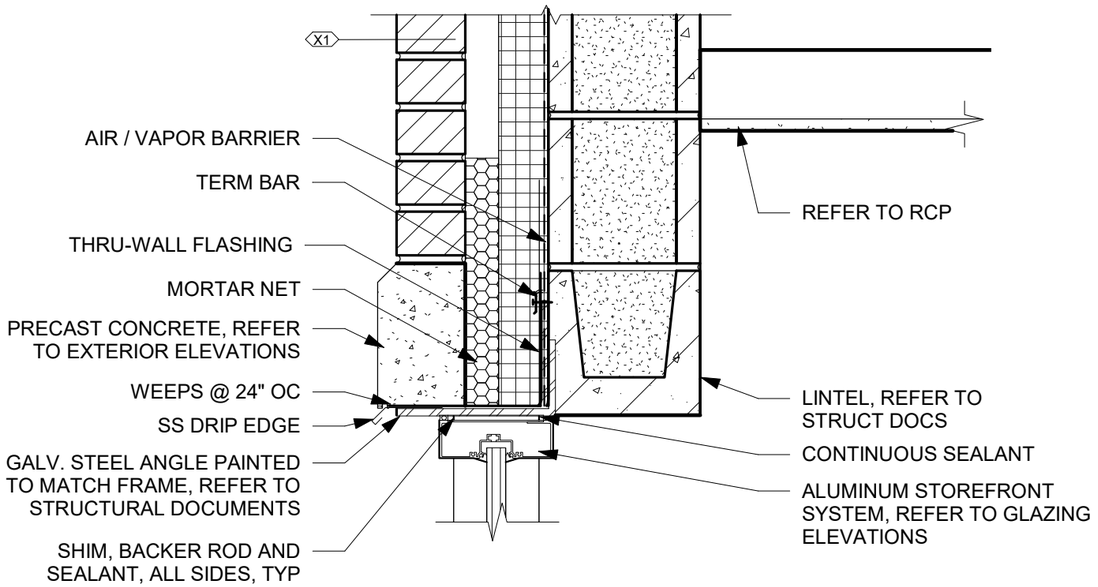


AL10

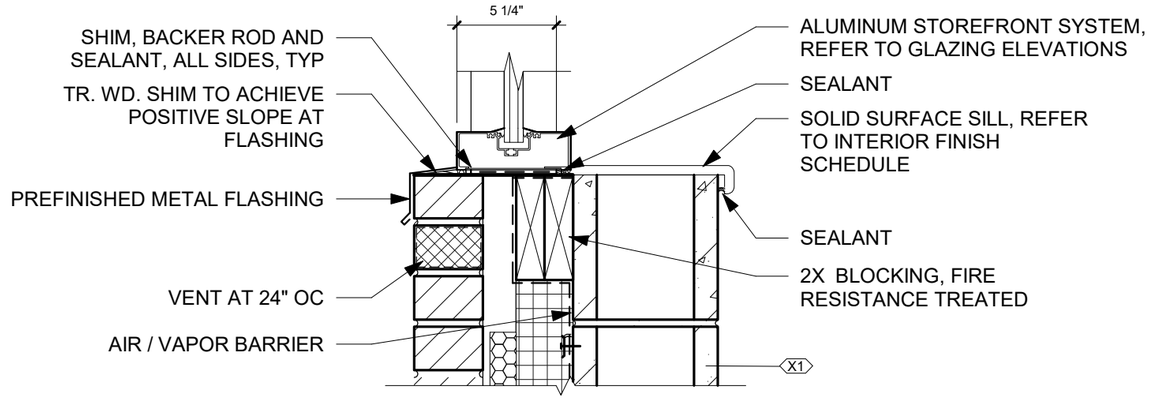
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	GLAZING ELEVATIONS	SHEET NO: A4-13

PLOT DATE: 1/26/2024 2:26:02 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

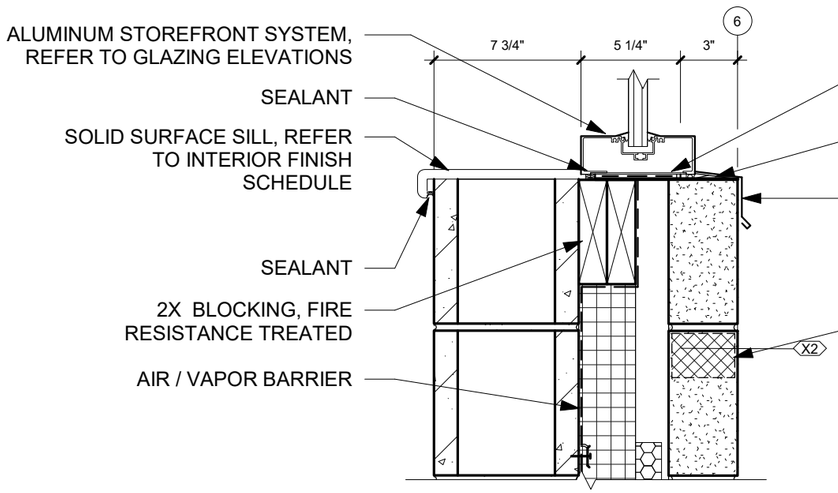
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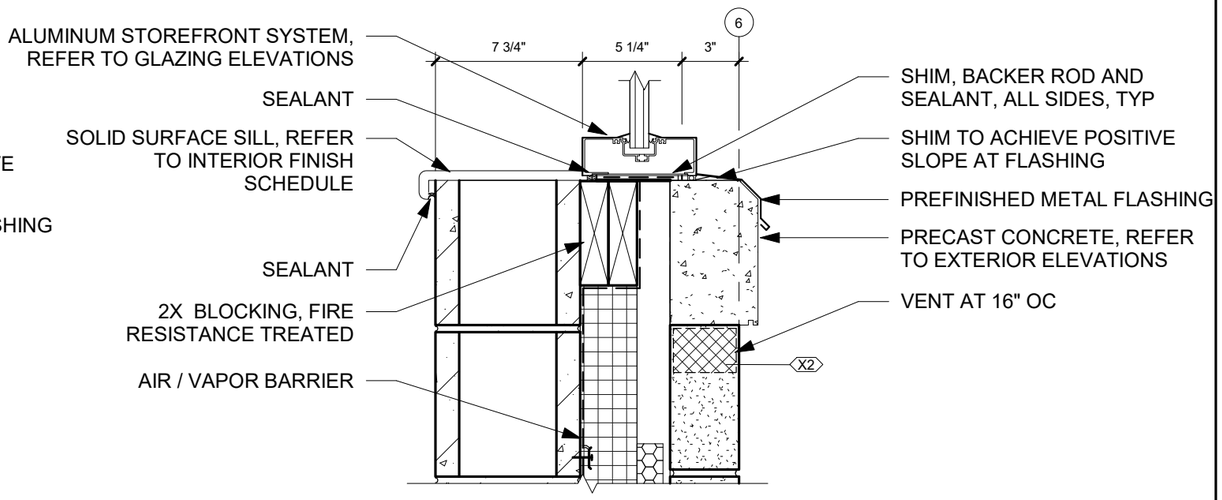
1 WINDOW HEAD AT X1 DETAIL
1 1/2" = 1'-0"



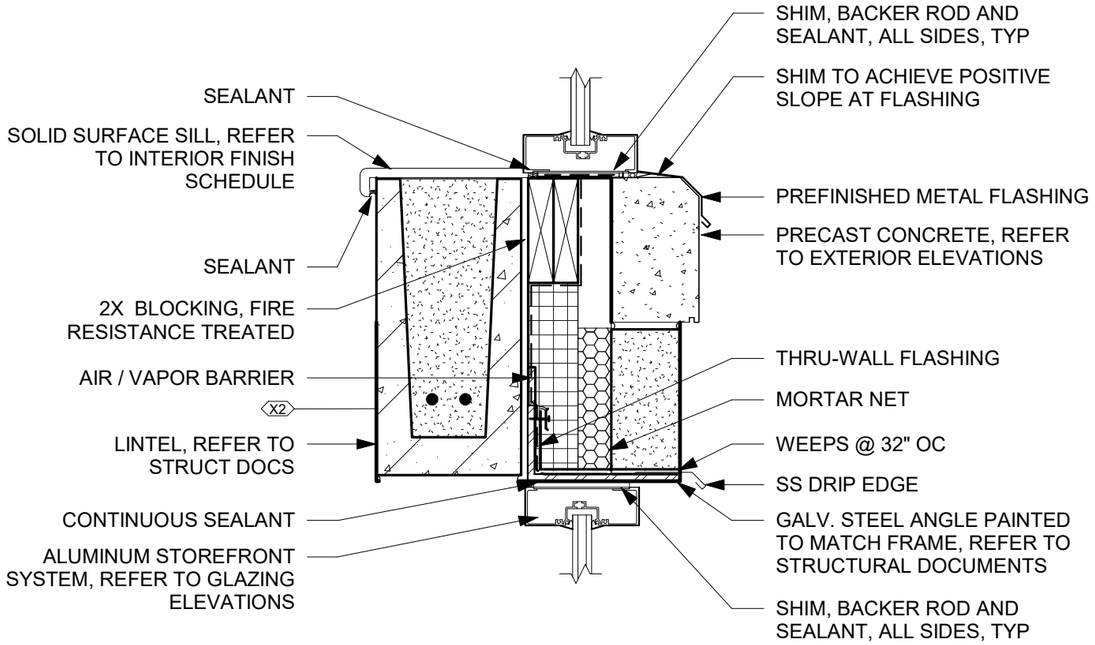
2 WINDOW SILL AT X1 DETAIL
1 1/2" = 1'-0"



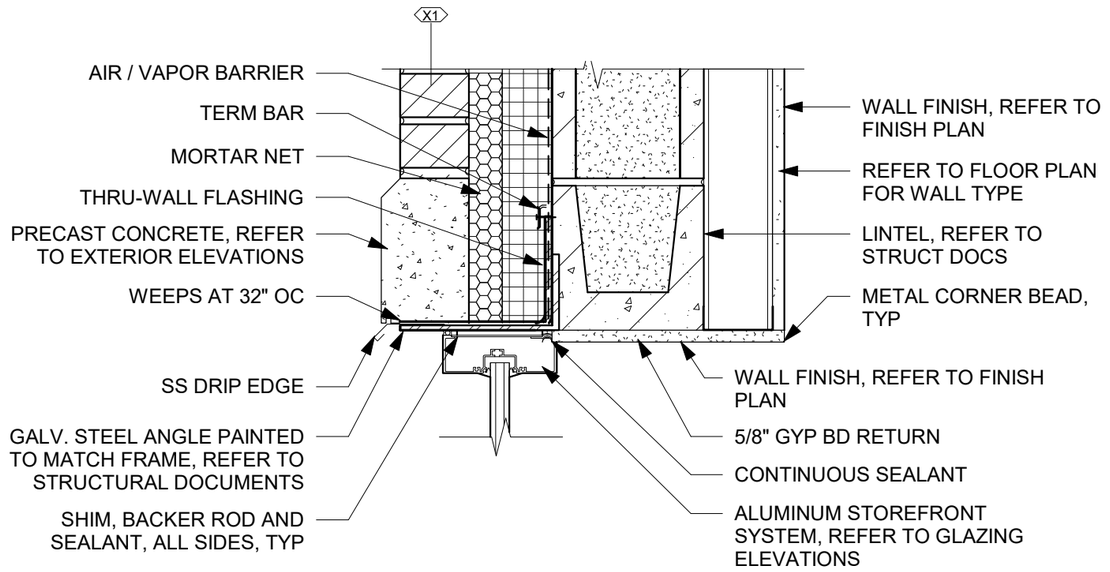
3 WINDOW SILL AT X2 DETAIL
1 1/2" = 1'-0"



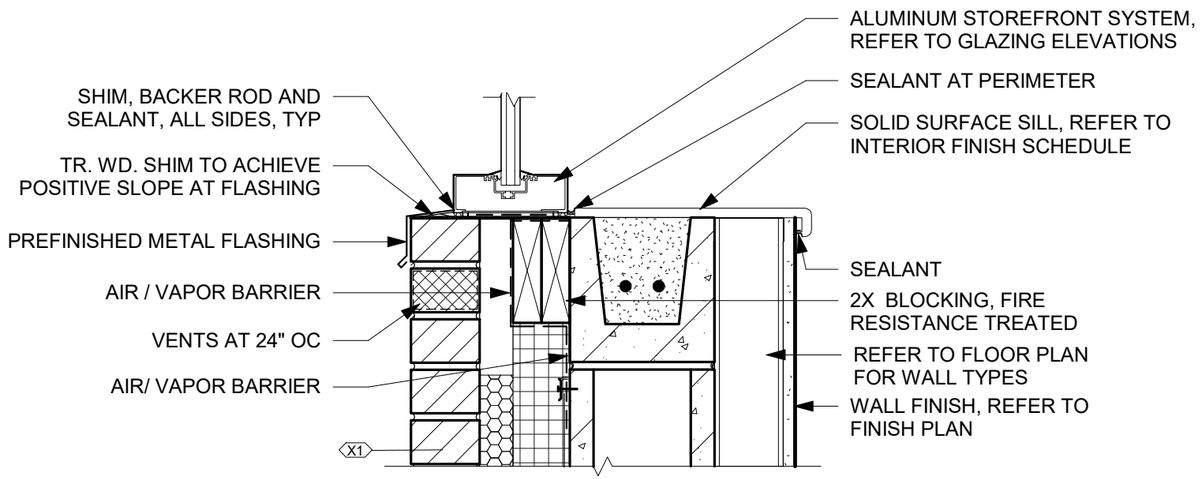
4 WINDOW SILL AT X2 TRANSITION DETAIL
1 1/2" = 1'-0"



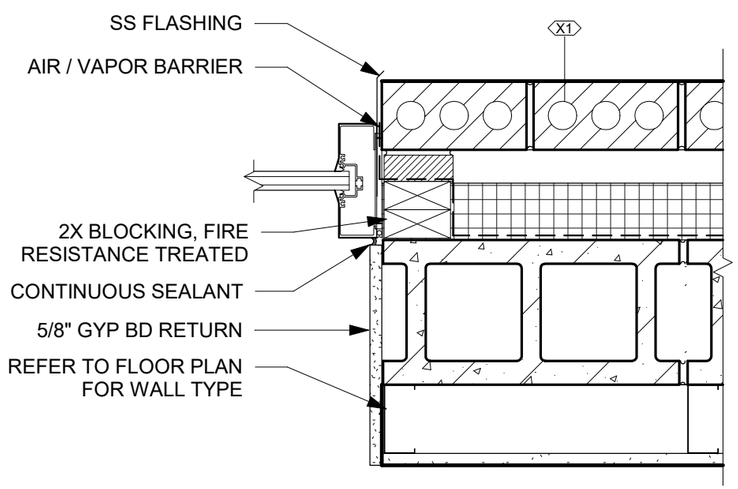
1 WINDOW HEAD AND WINDOW SILL AT X2 DETAIL
1 1/2" = 1'-0"



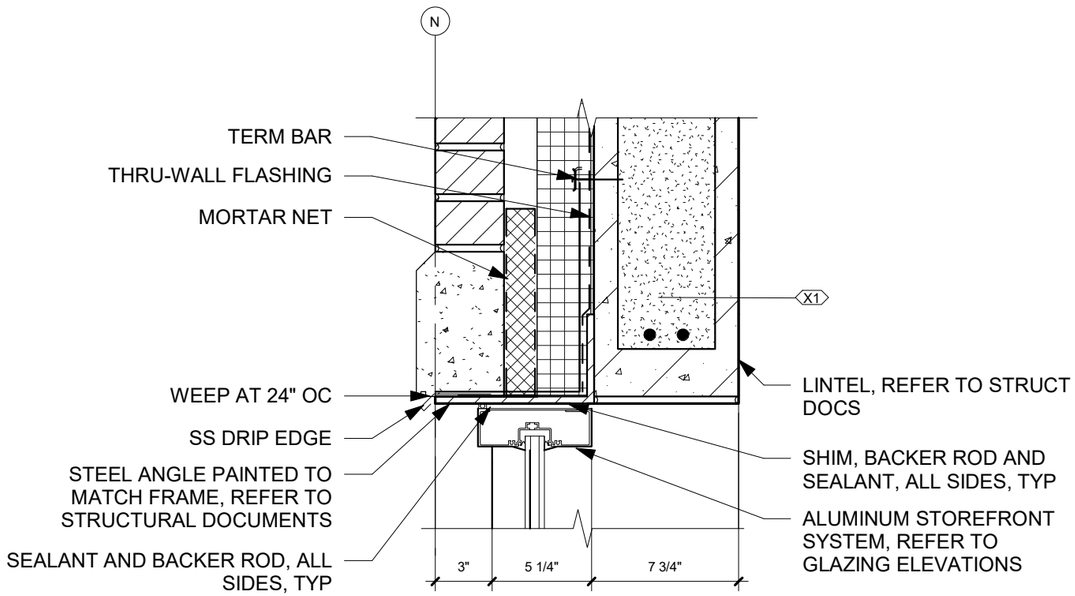
2 WINDOW HEAD AT X1 AND FURRED WALL DETAIL
1 1/2" = 1'-0"



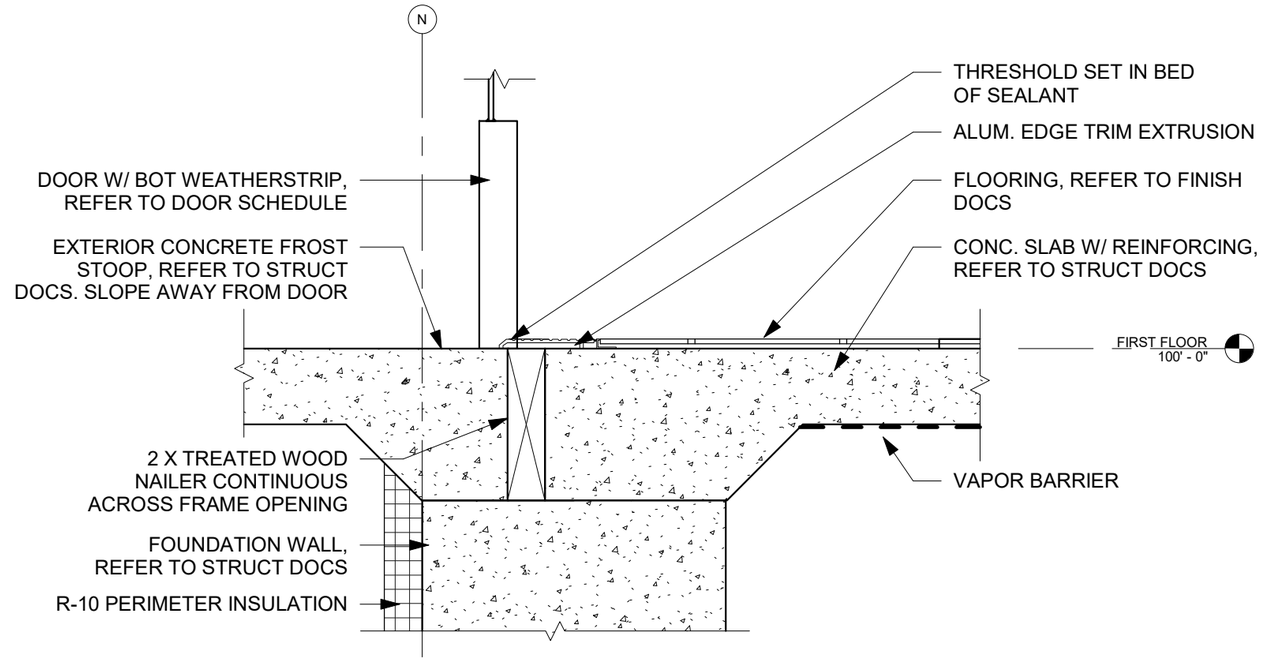
3 WINDOW SILL AT X1 AND FURRED WALL DETAIL
1 1/2" = 1'-0"



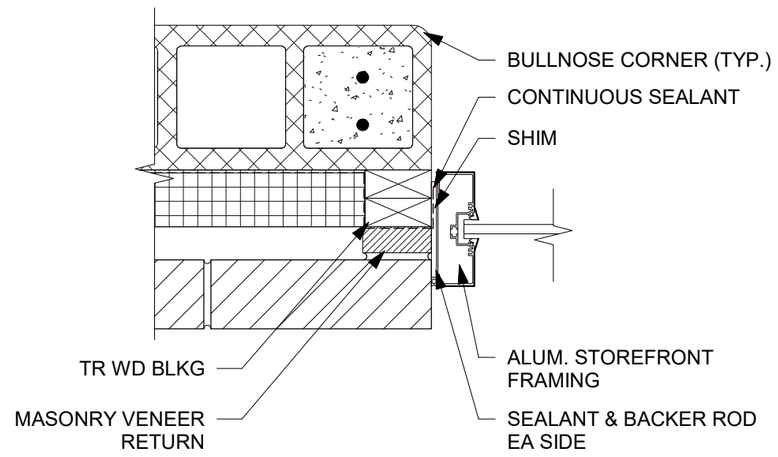
4 WINDOW JAMB AT Z1 AND FURRED WALL DETAIL
1 1/2" = 1'-0"



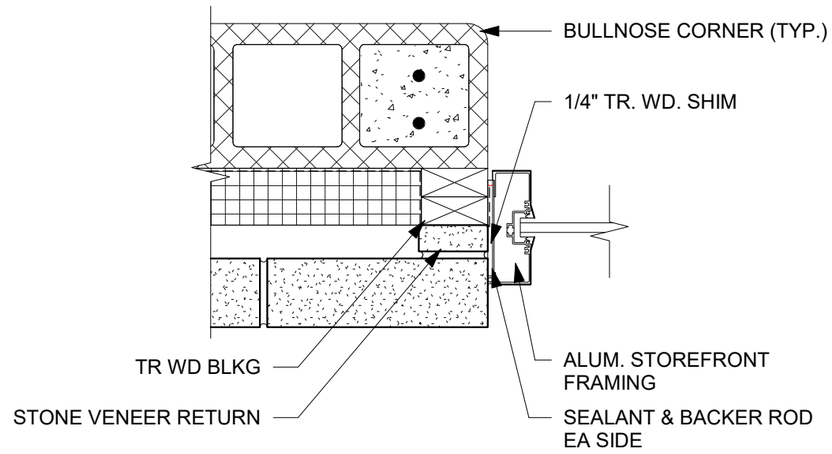
1 ALUMINUM STOREFRONT HEAD AT X1
1 1/2" = 1'-0"



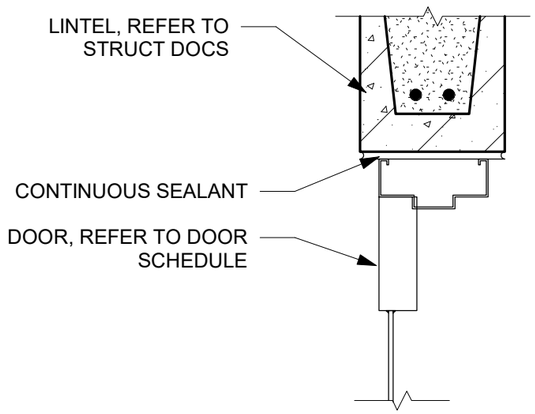
2 DOOR THRESHOLD
1 1/2" = 1'-0"



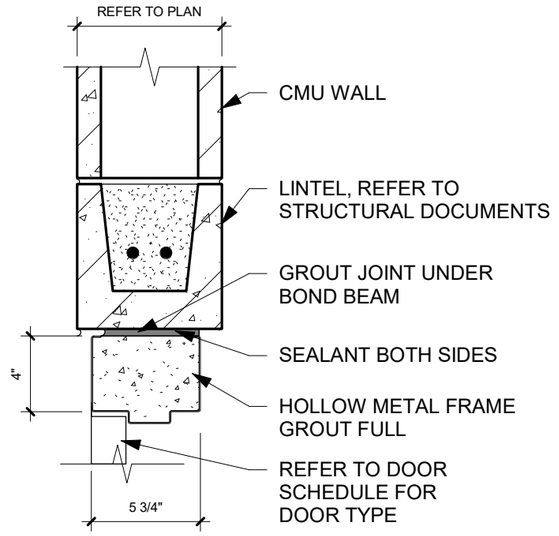
3 ALUMINUM STOREFRONT JAMB AT X1
1 1/2" = 1'-0"



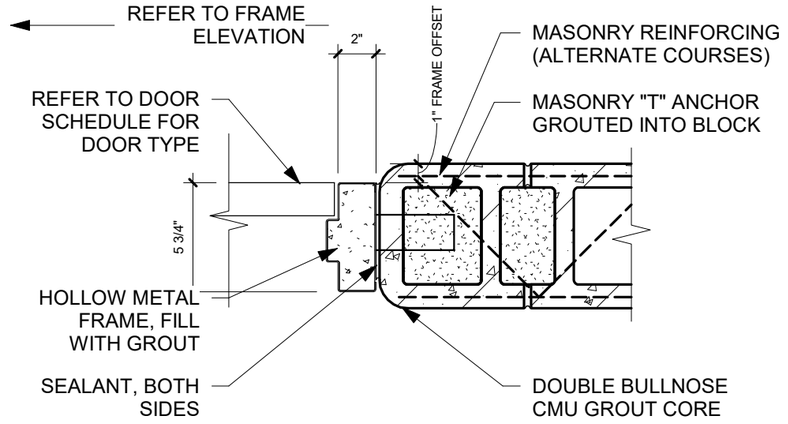
4 ALUMINUM STOREFRONT JAMB AT X2
1 1/2" = 1'-0"



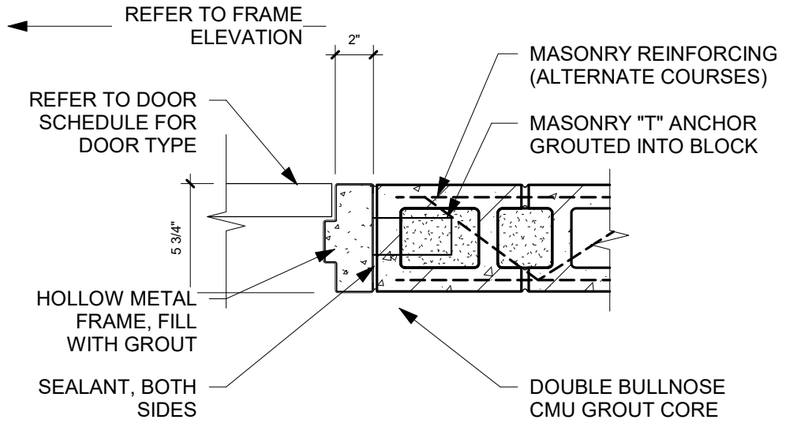
5 INTERIOR DOOR HEAD DETAIL
1 1/2" = 1'-0"



1 HM FRAME HEAD AT CMU - BOND BEAM DETAIL
1 1/2" = 1'-0"

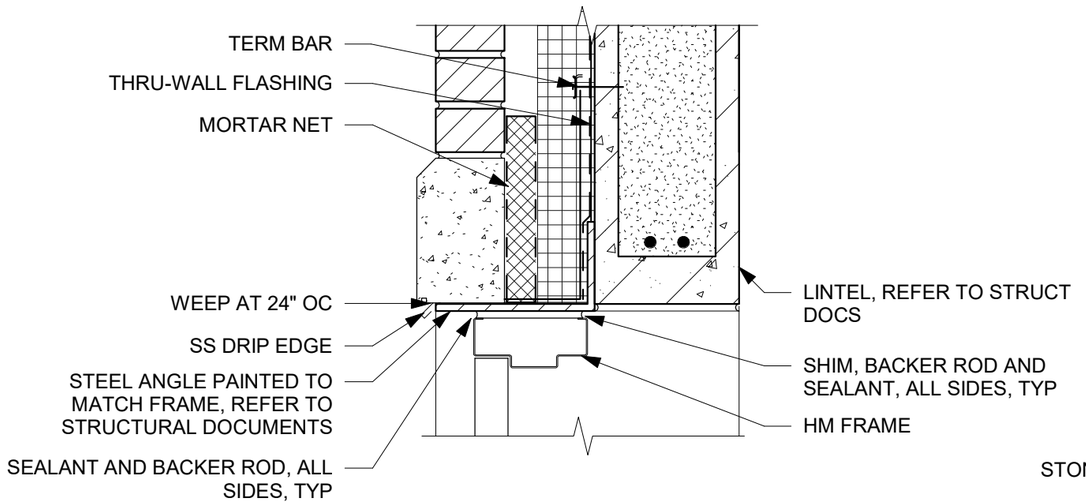


2 HM DOOR JAMB AT 8" CMU DETAIL
1 1/2" = 1'-0"

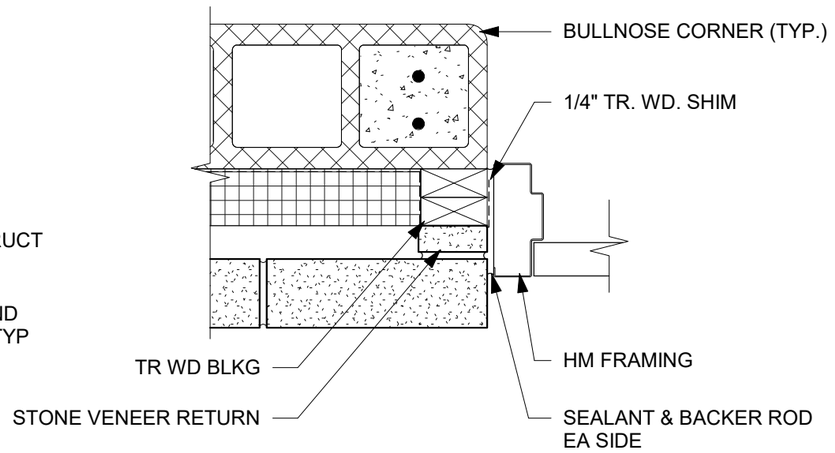


3 HM DOOR JAMB AT 6" CMU DETAIL
1 1/2" = 1'-0"

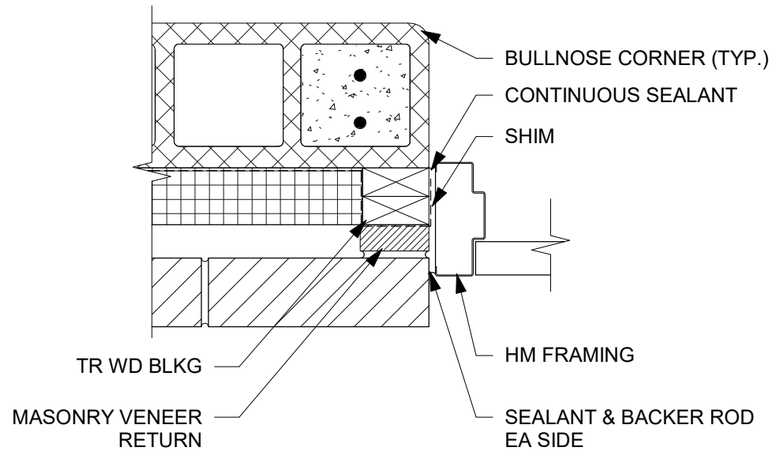
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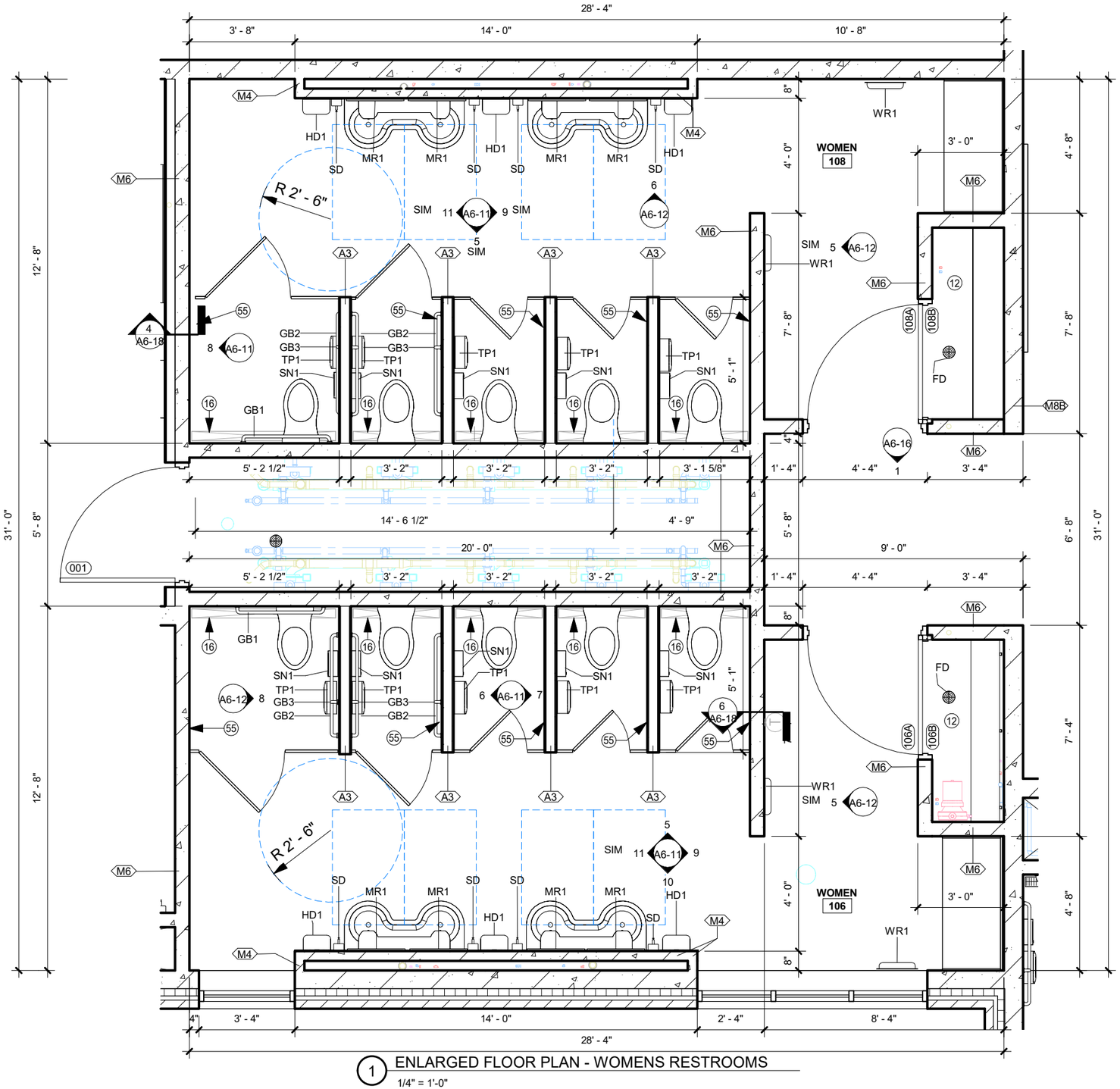
1 HOLLOW METAL HEAD AT X1
1 1/2" = 1'-0"



2 HOLLOW METAL JAMB AT X2
1 1/2" = 1'-0"



3 HOLLOW METAL JAMB AT X1
1 1/2" = 1'-0"



1 ENLARGED FLOOR PLAN - WOMENS RESTROOMS

1/4" = 1'-0"

EQUIPMENT SCHEDULE

MARK	DESCRIPTION	COMMENTS	PROVIDED BY	INSTALLED BY
CT	ADJUSTABLE HEIGHT CHANGING STATION	KB3000	CONTRACTOR	CONTRACTOR
GB1	GRAB BAR 36"		CONTRACTOR	CONTRACTOR
GB2	GRAB BAR 42"		CONTRACTOR	CONTRACTOR
GB3	GRAB BAR 18"		CONTRACTOR	CONTRACTOR
HD1	HAND DRYER - SURFACE MOUNTED	STAINLESS	OWNER	CONTRACTOR
MR1	MIRROR 2'W x 3'H	STAINLESS STELL SAFTEY MIRROR	CONTRACTOR	CONTRACTOR
SD	SOAP DISPENSER		OWNER	CONTRACTOR
SH	BOBRICK RECESSED SHARP DISPOSAL		CONTRACTOR	CONTRACTOR
SN1	SANITARY NAPKIN DISPOSAL - SURFACE MOUNTED		OWNER	CONTRACTOR
TP1	TOILET TISSUE DISPENSER	MULTI ROLL	OWNER	CONTRACTOR
WR1	WASTE - RECESS MOUNTED		CONTRACTOR	CONTRACTOR

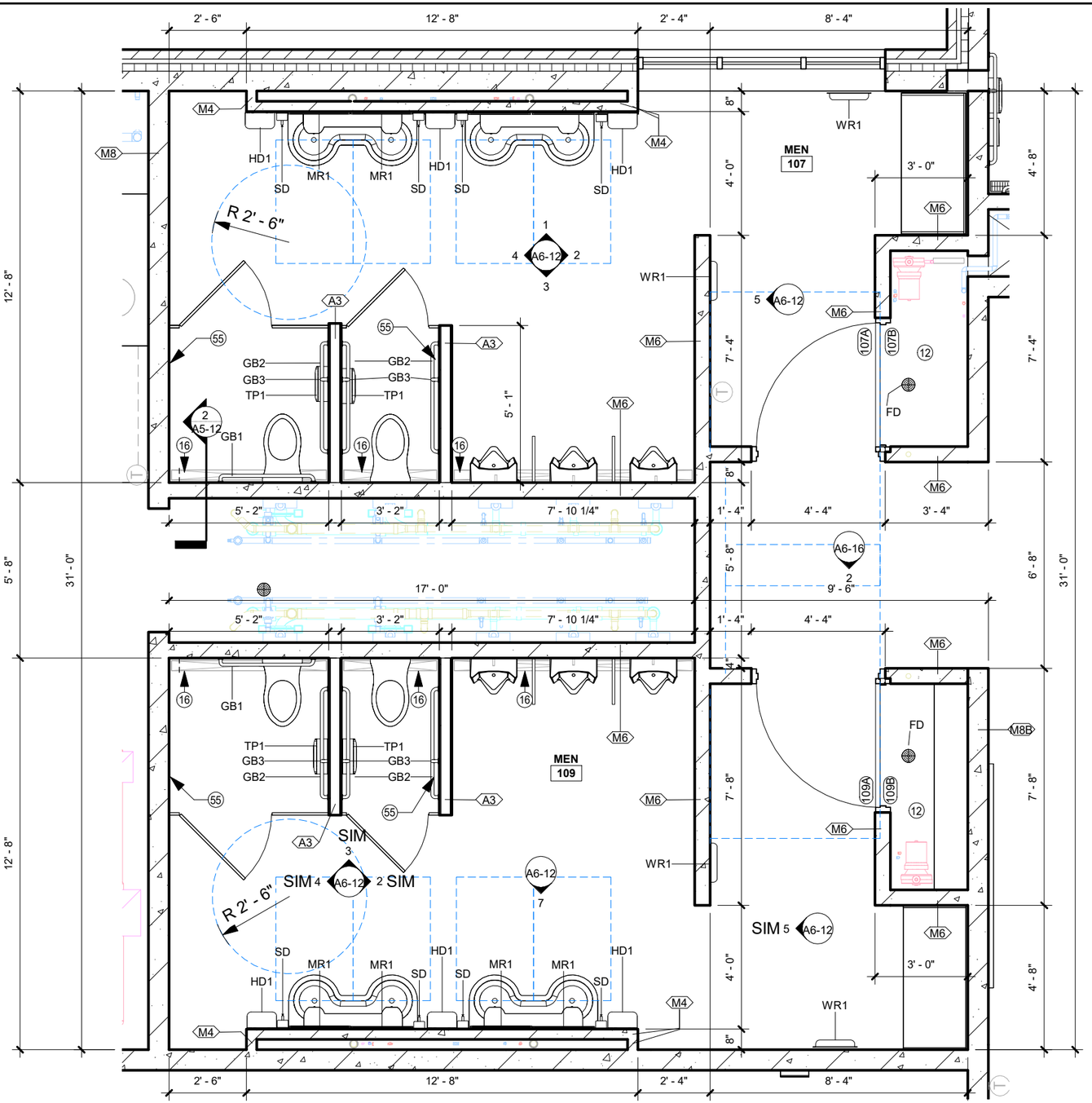
KEYNOTE LEGEND

12	HOSE BIBB (HOT AND COLD) IN CLOSET.
16	TRENCH DRAIN, SEE DETAIL 2 / A5-12. REFER TO PLUMBING DOCS FOR ADDITIONAL INFORMATION
55	COAT HOOK LOCATED IN NOOK. REFER TO ELEVATIONS AND INTERIOR DETATILS FOR ADDITIONAL INFORMATION.

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ENLARGED FLOOR PLAN - WOMENS RESTROOM	SHEET NO: A5-11

PLOT DATE: 1/26/2024 2:26:15 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



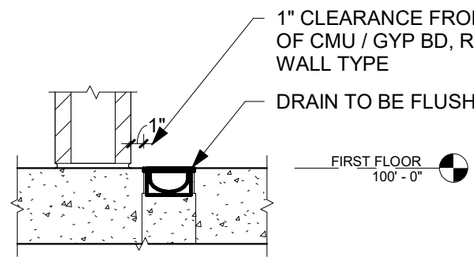
1 ENLARGED FLOOR PLAN - MENS RESTROOMS
1/4" = 1'-0"

EQUIPMENT SCHEDULE

MARK	DESCRIPTION	COMMENTS	PROVIDED BY	INSTALLED BY
CT	ADJUSTABLE HEIGHT CHANGING STATION	KB3000	CONTRACTOR	CONTRACTOR
GB1	GRAB BAR 36"		CONTRACTOR	CONTRACTOR
GB2	GRAB BAR 42"		CONTRACTOR	CONTRACTOR
GB3	GRAB BAR 18"		CONTRACTOR	CONTRACTOR
HD1	HAND DRYER - SURFACE MOUNTED	STAINLESS	OWNER	CONTRACTOR
MR1	MIRROR 2'W x 3'H	STAINLESS STELL SAFTEY MIRROR	CONTRACTOR	CONTRACTOR
SD	SOAP DISPENSER		OWNER	CONTRACTOR
SH	BOBRICK RECESSED SHARP DISPOSAL		CONTRACTOR	CONTRACTOR
SN1	SANITARY NAPKIN DISPOSAL - SURFACE MOUNTED		OWNER	CONTRACTOR
TP1	TOILET TISSUE DISPENSER	MULTI ROLL	OWNER	CONTRACTOR
WR1	WASTE - RECESS MOUNTED		CONTRACTOR	CONTRACTOR

KEYNOTE LEGEND

12	HOSE BIBB (HOT AND COLD) IN CLOSET.
16	TRENCH DRAIN, SEE DETAIL 2 / A5-12. REFER TO PLUMBING DOCS FOR ADDITIONAL INFORMATION
55	COAT HOOK LOCATED IN NOOK. REFER TO ELEVATIONS AND INTERIOR DETATILS FOR ADDITIONAL INFORMATION.



2 TRENCH DRAIN DETAIL
1" = 1'-0"

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ENLARGED FLOOR PLAN - MENS RESTROOMS	SHEET NO: A5-12

PLOT DATE: 1/26/2024 2:26:19 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

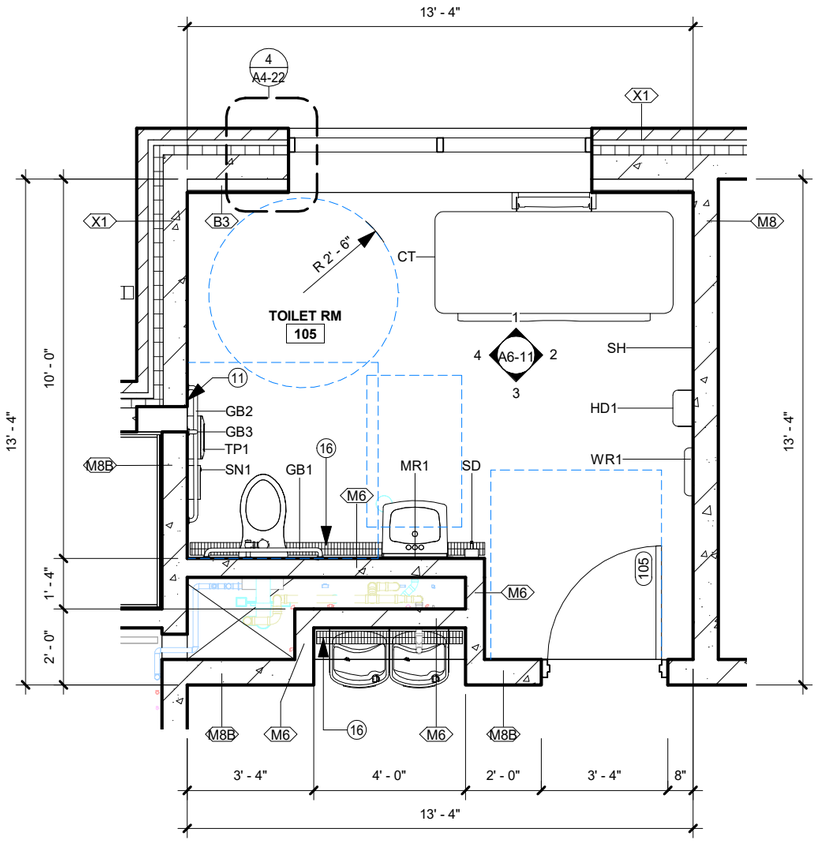
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KEYNOTE LEGEND

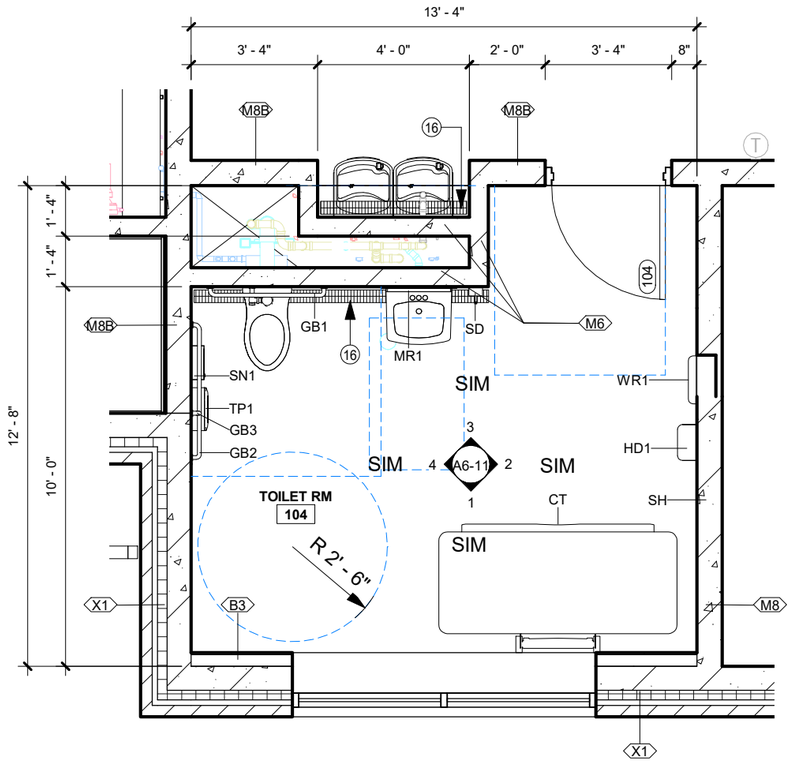
11	ALIGN EXTERIOR WALL FACE CMU WITH INTERIOR WALL FACE.
16	TRENCH DRAIN, SEE DETAIL 2 / A5-12. REFER TO PLUMBING DOCS FOR ADDITIONAL INFORMATION

EQUIPMENT SCHEDULE

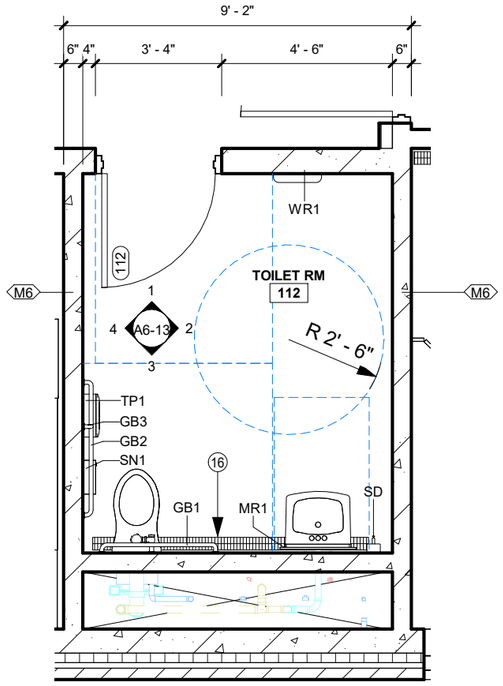
MARK	DESCRIPTION	COMMENTS	PROVIDED BY	INSTALLED BY
CT	ADJUSTABLE HEIGHT CHANGING STATION	KB3000	CONTRACTOR	CONTRACTOR
GB1	GRAB BAR 36"		CONTRACTOR	CONTRACTOR
GB2	GRAB BAR 42"		CONTRACTOR	CONTRACTOR
GB3	GRAB BAR 18"		CONTRACTOR	CONTRACTOR
HD1	HAND DRYER - SURFACE MOUNTED	STAINLESS	OWNER	CONTRACTOR
MR1	MIRROR 2'W x 3'H	STAINLESS STELL SAFTEY MIRROR	CONTRACTOR	CONTRACTOR
SD	SOAP DISPENSER		OWNER	CONTRACTOR
SH	BOBRICK RECESSED SHARP DISPOSAL		CONTRACTOR	CONTRACTOR
SN1	SANITARY NAPKIN DISPOSAL - SURFACE MOUNTED		OWNER	CONTRACTOR
TP1	TOILET TISSUE DISPENSER	MULTI ROLL	OWNER	CONTRACTOR
WR1	WASTE - RECESS MOUNTED		CONTRACTOR	CONTRACTOR



1 ENLARGED FLOOR PLAN - TOILET RM 105
1/4" = 1'-0"



2 ENLARGED FLOOR PLAN - TOILET RM 104
1/4" = 1'-0"



3 ENLARGED FLOOR PLAN - TOILET RM 112
1/4" = 1'-0"

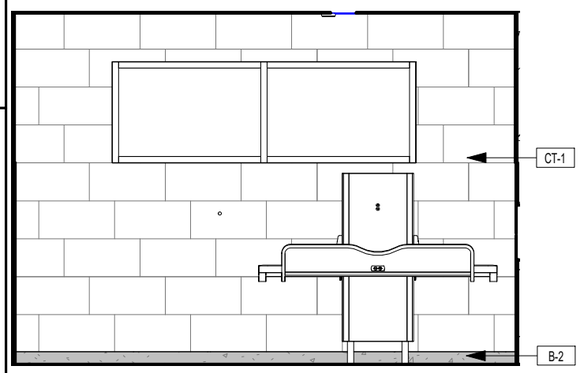
N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ENLARGED FLOOR PLANS	SHEET NO: A5-13

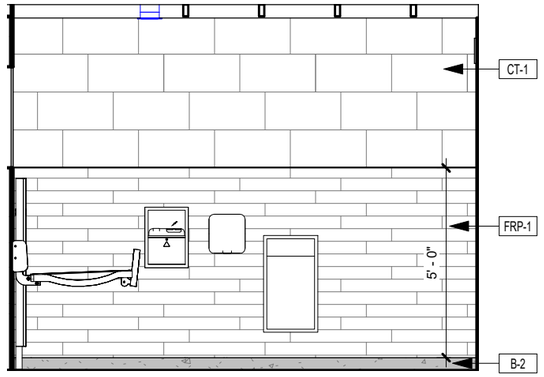
PLOT DATE: 1/26/2024 2:26:23 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

KEYNOTE LEGEND

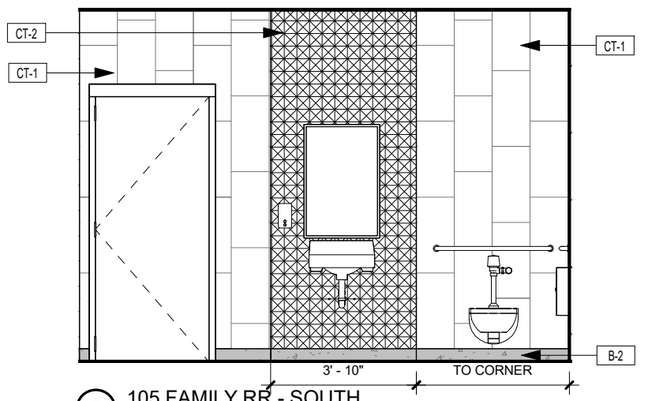
54	ALIGN TILE PATTERN WITH SIDE WALLS.



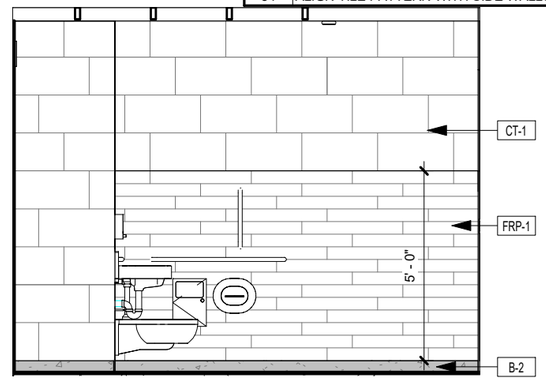
1 105 FAMILY RR - NORTH
1/4" = 1'-0"



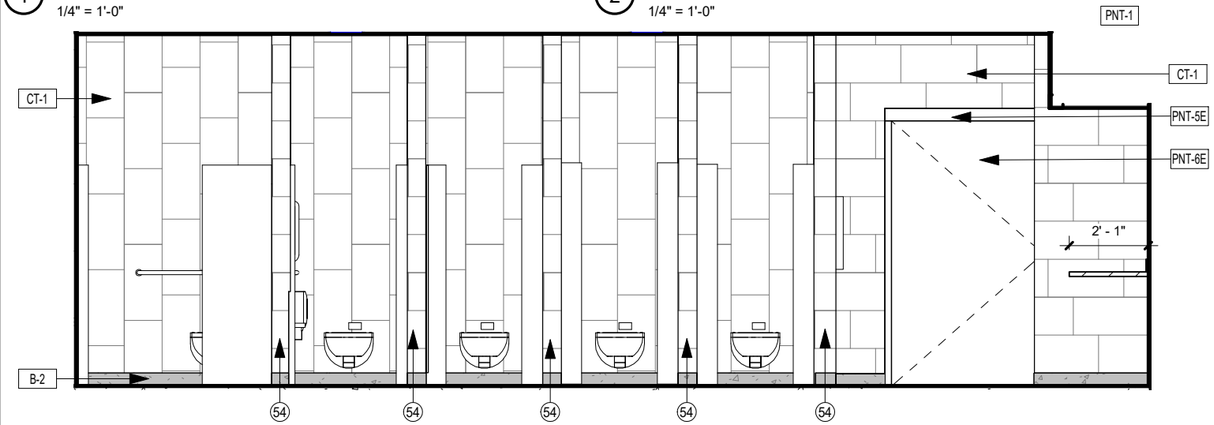
2 105 FAMILY RR - EAST
1/4" = 1'-0"



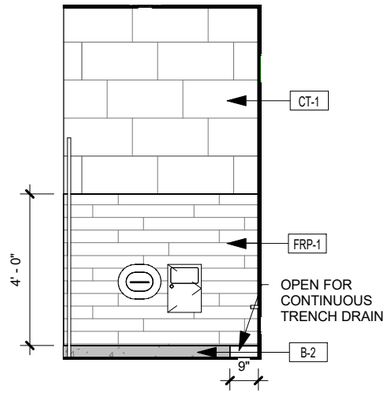
3 105 FAMILY RR - SOUTH
1/4" = 1'-0"



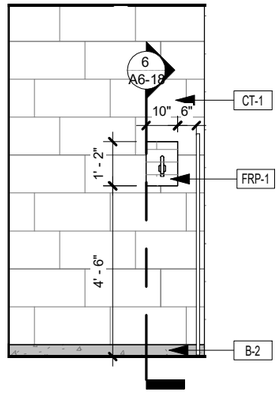
4 105 FAMILY RR - WEST
1/4" = 1'-0"



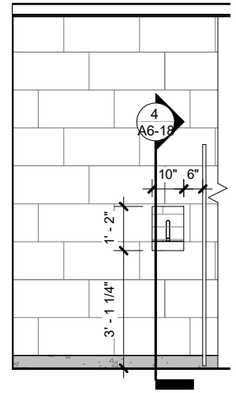
5 106 WOMEN - NORTH
1/4" = 1'-0"



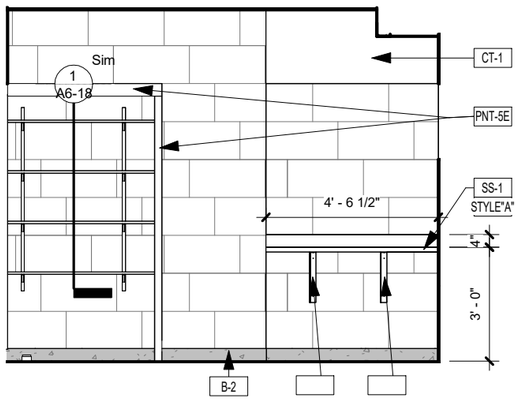
6 TYPICAL RR PARTITION WALL
1/4" = 1'-0"



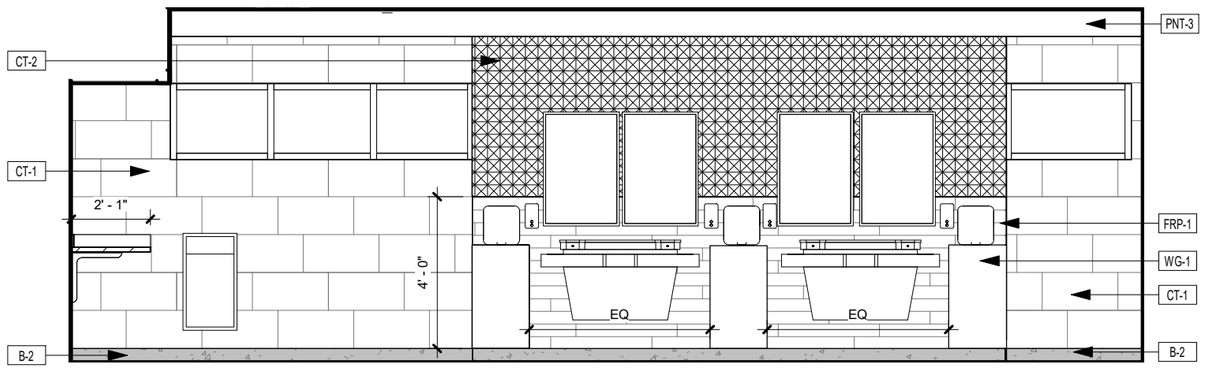
7 COAT HOOK TYPICAL ELEVATION
1/4" = 1'-0"



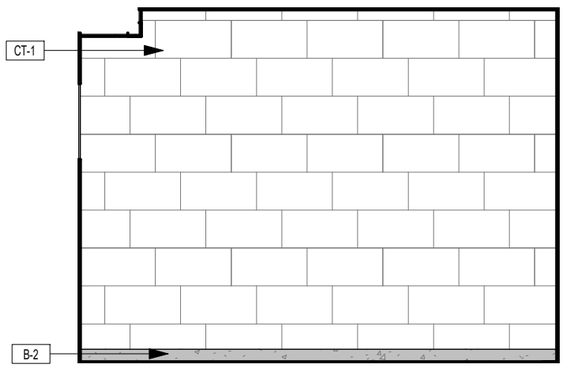
8 COAT HOOK ADA ELEVATION
1/4" = 1'-0"



9 106 WOMEN - EAST
1/4" = 1'-0"



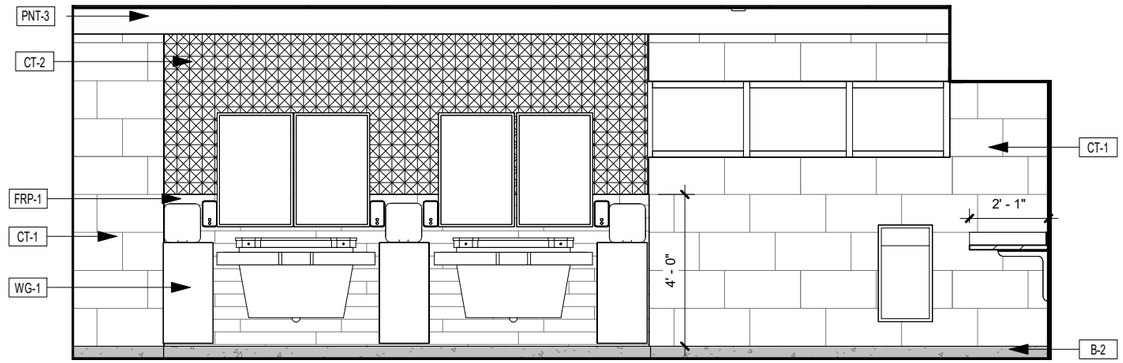
10 106 WOMEN - SOUTH
1/4" = 1'-0"



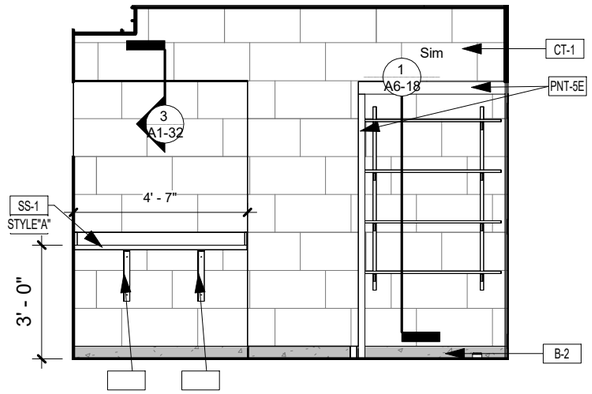
11 106 WOMEN - WEST
1/4" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	INTERIOR ELEVATIONS	SHEET NO: A6-11

PLOT DATE: 1/26/2024 2:26:30 PM PLOT BY: ISG INC. PLOT NAME: AMS PLOT SCALE: AS INDICATED



1 107 MENS - NORTH
1/4" = 1'-0"

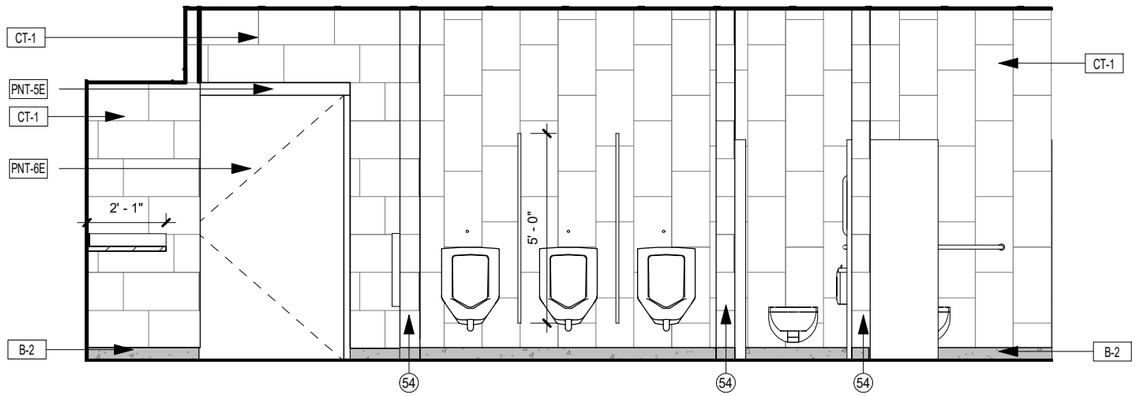


2 107 MENS - EAST
1/4" = 1'-0"

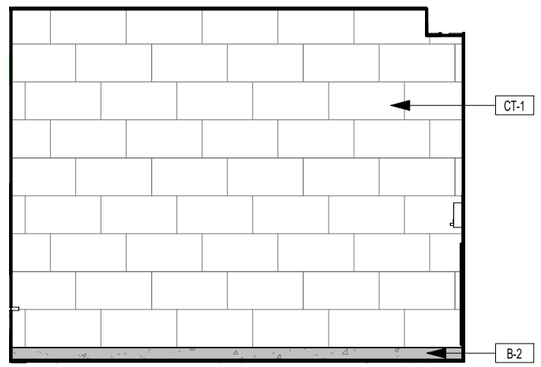
KEYNOTE LEGEND

54	ALIGN TILE PATTERN WITH SIDE WALLS.

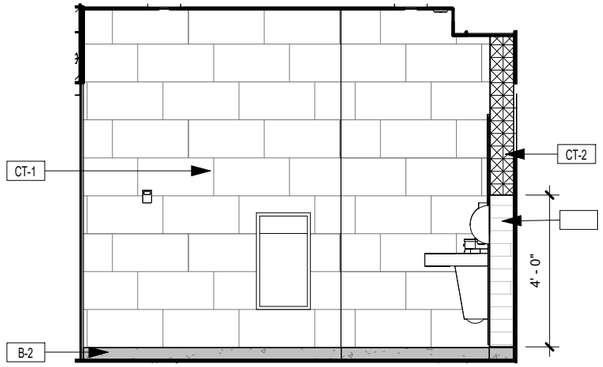
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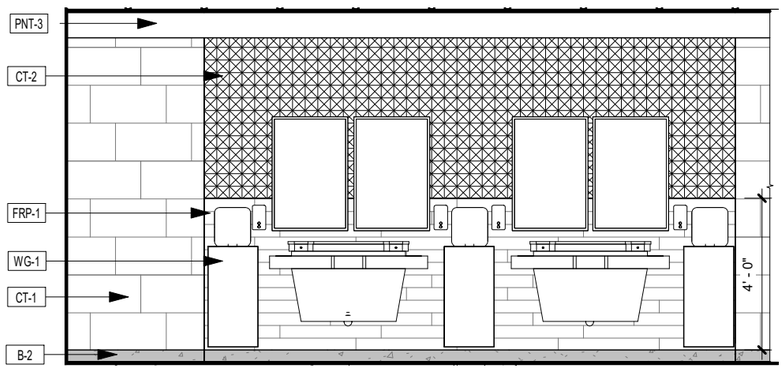
3 107 MENS - SOUTH
1/4" = 1'-0"



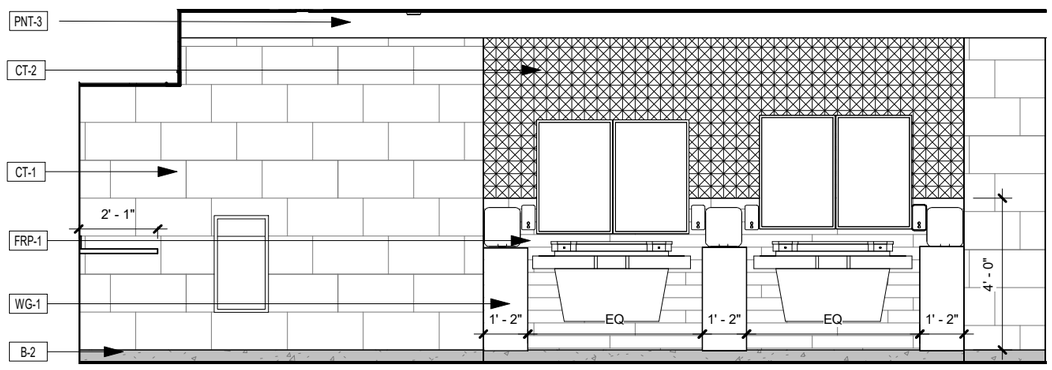
4 107 MENS - WEST 1
1/4" = 1'-0"



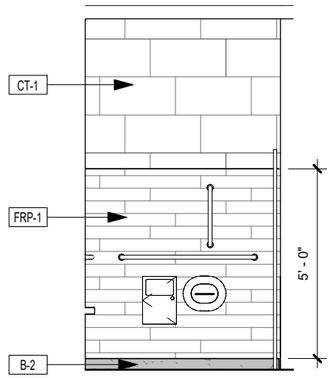
5 107 MENS - WEST 2
1/4" = 1'-0"



6 108 WOMEN - NORTH
1/4" = 1'-0"



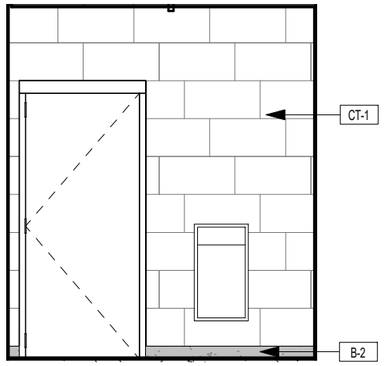
7 109 MENS - SOUTH
1/4" = 1'-0"



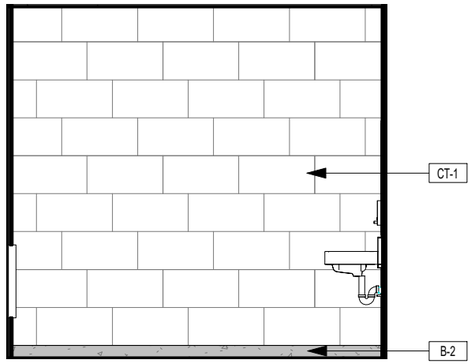
8 ADA BATHROOM PARTITION TYPICAL
1/4" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	INTERIOR ELEVATIONS	SHEET NO: A6-12

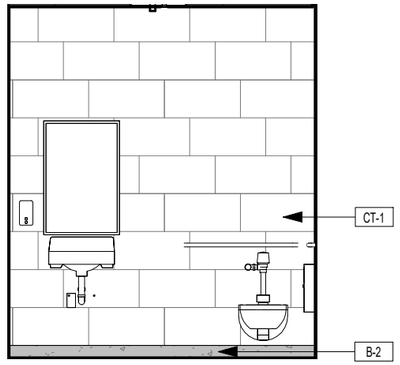
PLOT DATE: 1/26/2024 2:26:37 PM PLOT BY: ISG INC. PLOT NAME: AMS PLOT SCALE: AS INDICATED



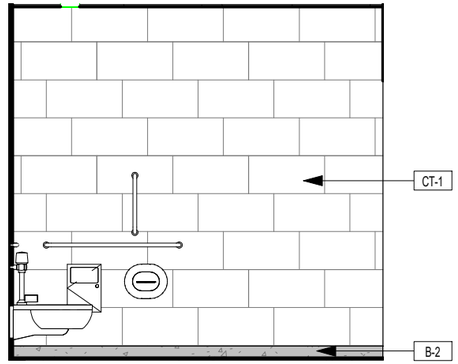
1 112 TOILET RM - NORTH
1/4" = 1'-0"



2 112 TOILET RM - EAST
1/4" = 1'-0"



3 112 TOILET RM - SOUTH
1/4" = 1'-0"

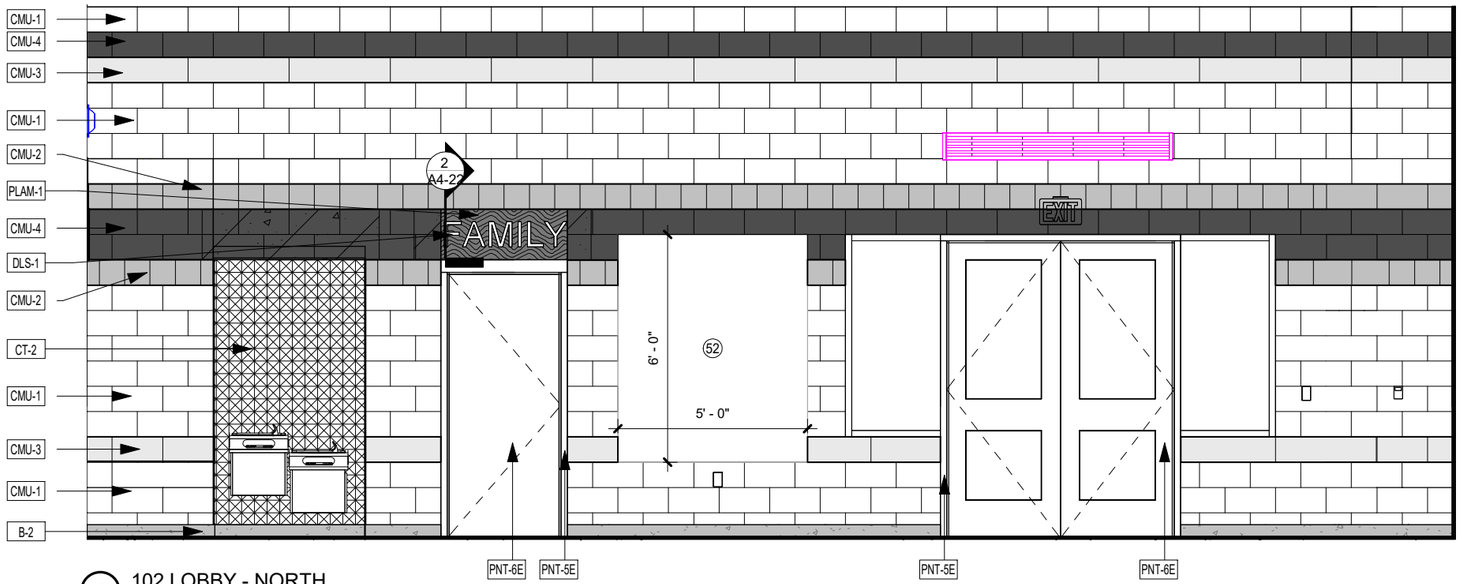


4 112 TOILET RM - WEST
1/4" = 1'-0"

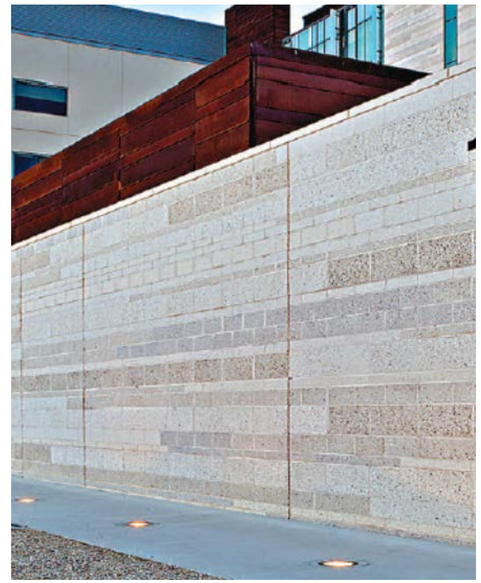
KEYNOTE LEGEND

2

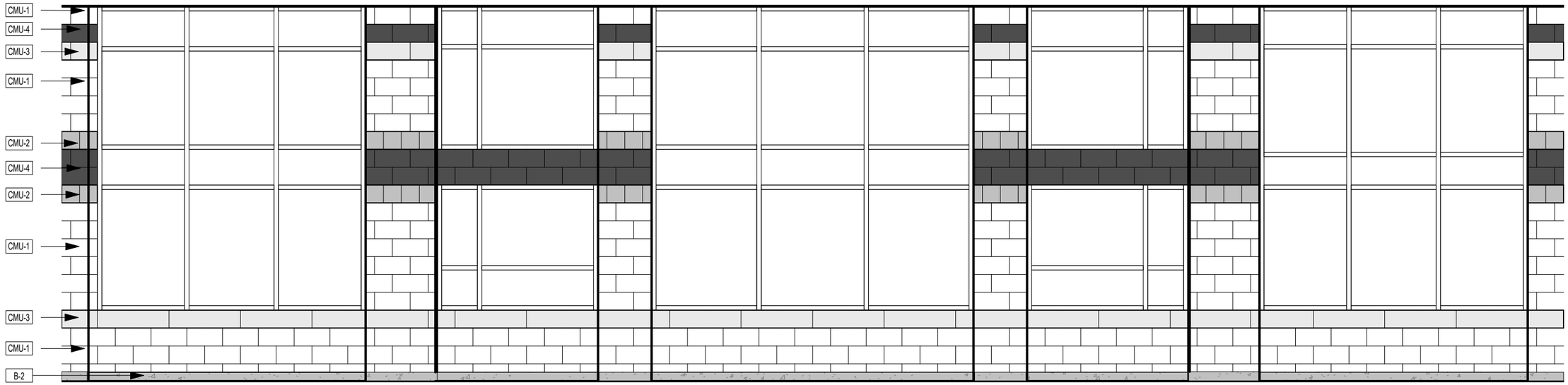
KEYNOTE LEGEND	
52	ART ON ACRYLIC STANDOFFS BY OWNER. IMAGES PROVIDED BY OTHER.



1 102 LOBBY - NORTH
1/4" = 1'-0"



LOBBY WALL PATTERN INTENT



2 102 LOBBY - EAST
1/4" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	INTERIOR ELEVATIONS	SHEET NO: A6-14

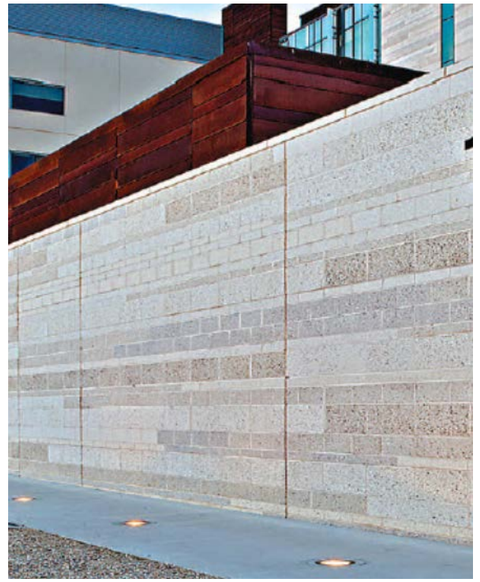
PLOT DATE: 1/26/2024 2:26:43 PM PLOT BY: ISG INC. PLOT NAME: AMS PLOT SCALE: AS INDICATED

2

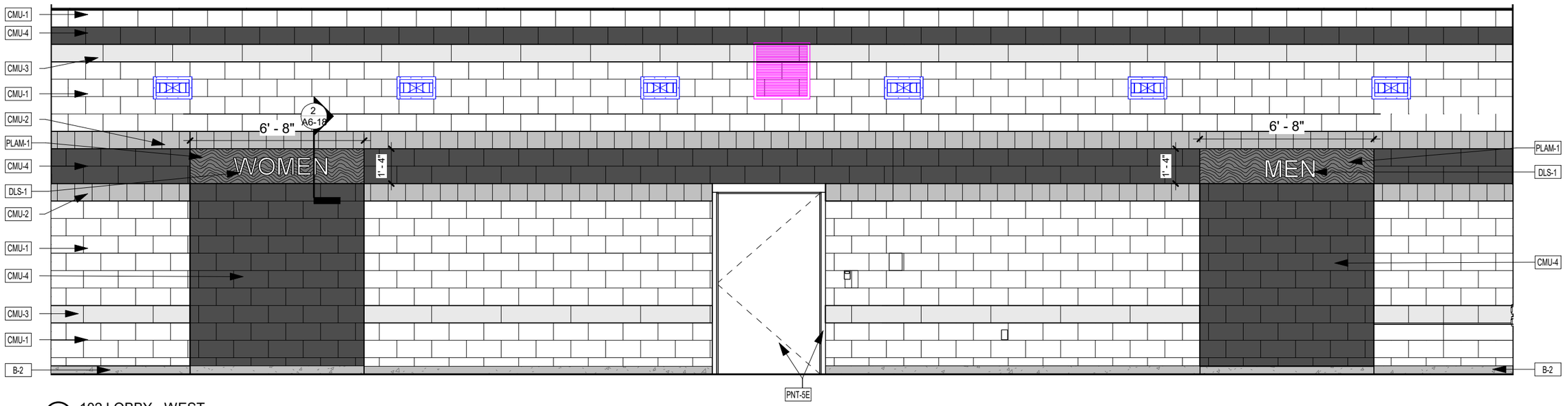
KEYNOTE LEGEND	
52	ART ON ACRYLIC STANDOFFS BY OWNER. IMAGES PROVIDED BY OTHER.



1 102 LOBBY - SOUTH
1/4" = 1'-0"



LOBBY WALL PATTERN INTENT

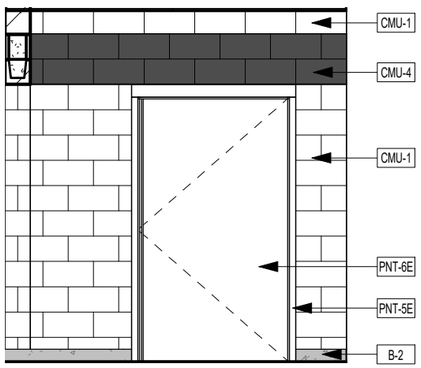


2 102 LOBBY - WEST
1/4" = 1'-0"

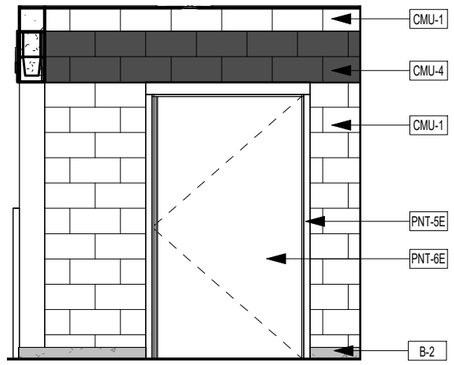
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	INTERIOR ELEVATIONS	SHEET NO: A6-15

PLOT DATE: 1/26/2024 2:26:46 PM PLOT BY: ISG INC. PLOT NAME: AMS PLOT SCALE: AS INDICATED

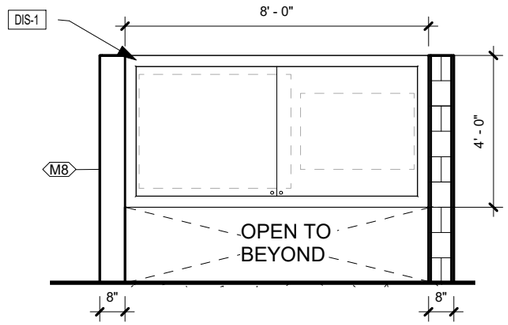
KEYNOTE LEGEND



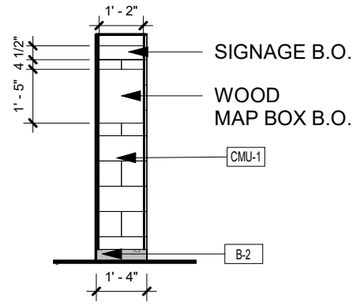
1 102 LOBBY - RR WOMENS ENTRY TYP.
1/4" = 1'-0"



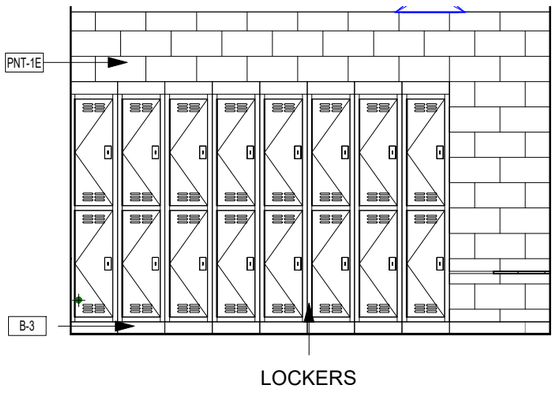
2 102 LOBBY - RR MENS ENTRY TYP.
1/4" = 1'-0"



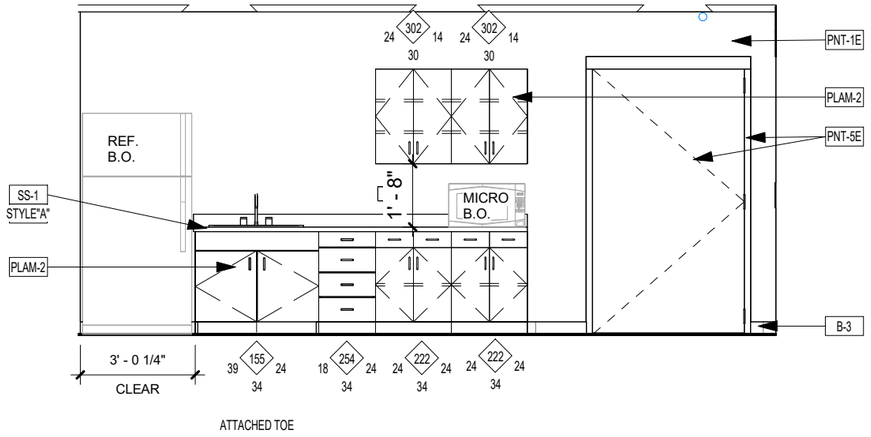
3 102 - LOBBY - DISPLAY CASE TYPICAL
1/4" = 1'-0"



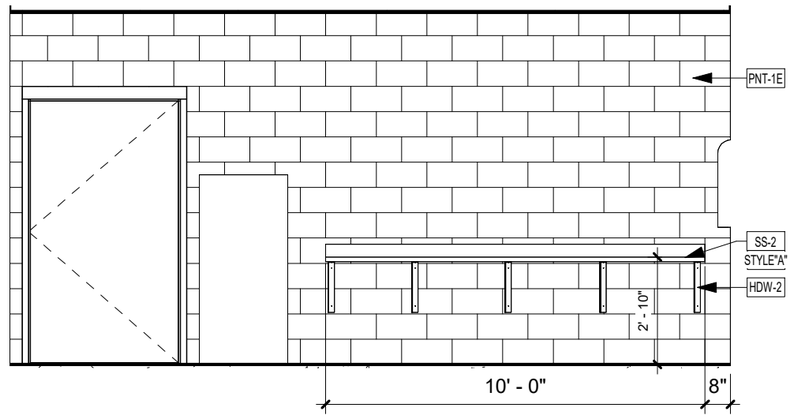
4 102 LOBBY - DISPLAY CASE SIDE
1/4" = 1'-0"



5 110 BREAKROOM - NORTH
1/4" = 1'-0"

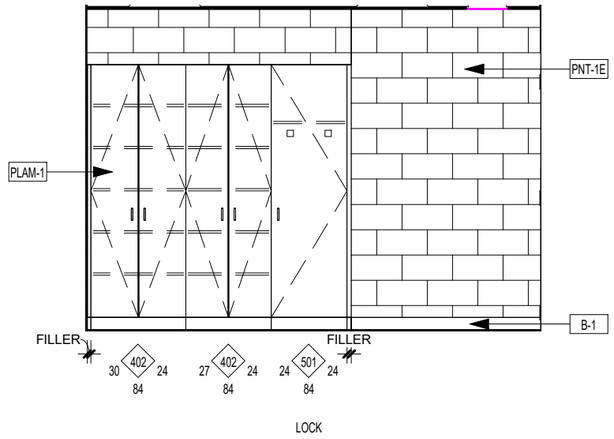


6 110 BREAKROOM - EAST
1/4" = 1'-0"

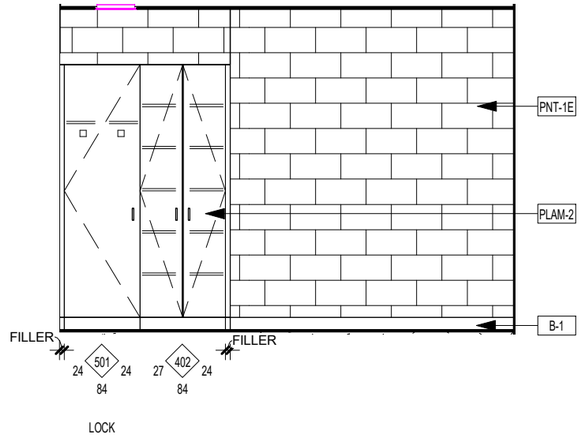


7 111 JANITOR - EAST
1/4" = 1'-0"

KEYNOTE LEGEND



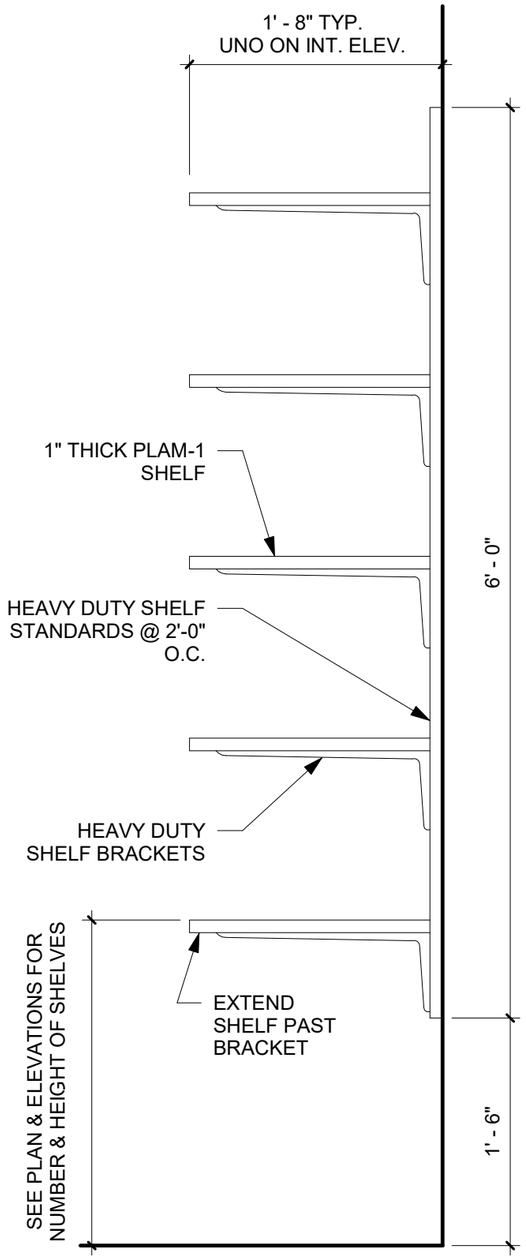
1 113 OFFICE - WEST
1/4" = 1'-0"



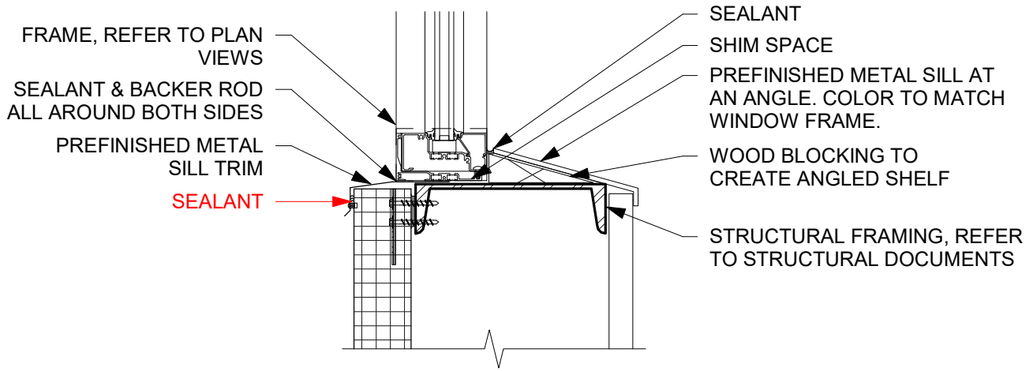
2 114 OFFICE - EAST
1/4" = 1'-0"

2

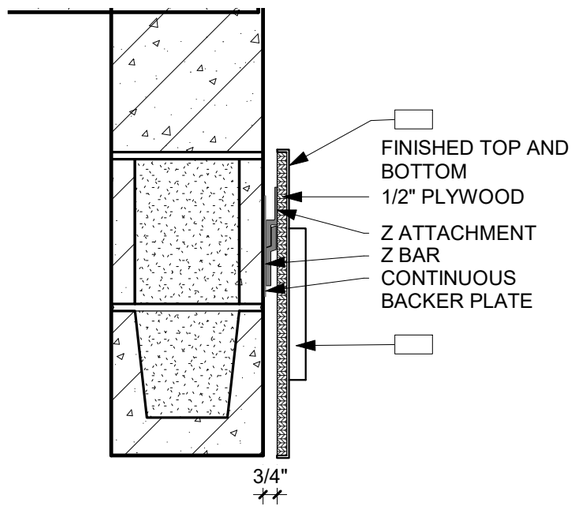
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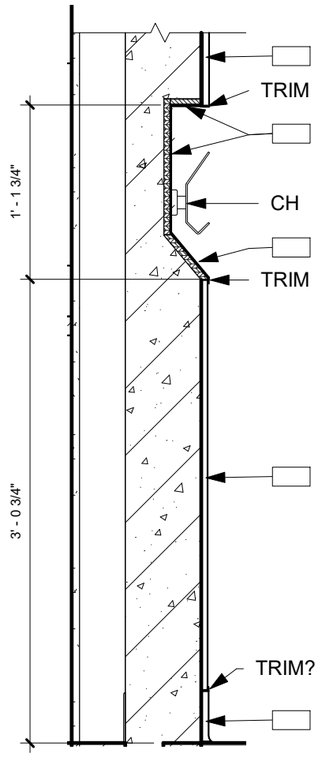
1 ADJUSTABLE SHELVING
1" = 1'-0"



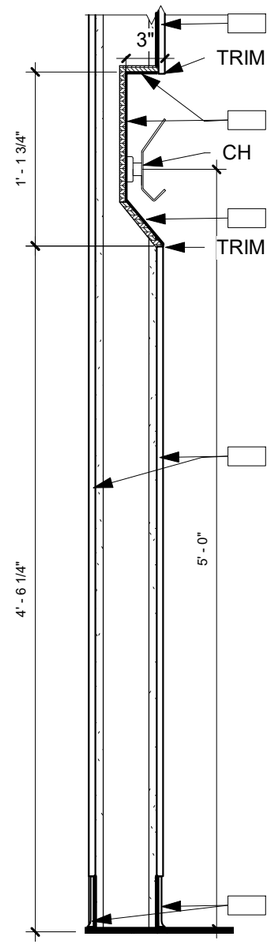
3 WINDOW SILL DETAIL
1 1/2" = 1'-0"



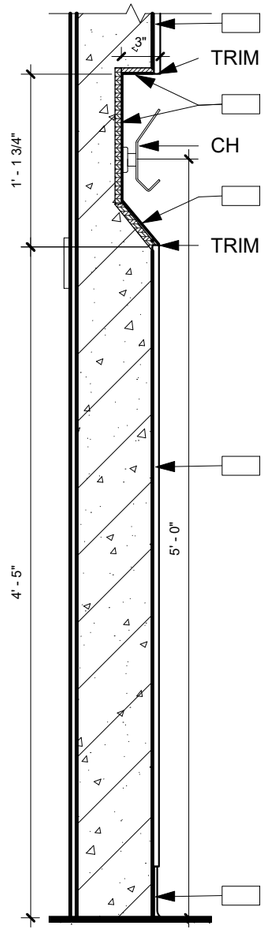
2 PLAM PANEL ATTACHMENT TYPICAL
1 1/2" = 1'-0"



4 COAT HOOK ADA SECTION
1" = 1'-0"



5 COAT HOOK SECTION
1" = 1'-0"



6 COAT HOOK SECTION 2
1" = 1'-0"

GENERAL NOTES

A. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER THESE STANDARD STRUCTURAL NOTES. TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE.

B. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK; AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED, IN WRITING, OF ANY DISCREPANCIES.

C. IN NO CASE SHALL DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THE STRUCTURAL DRAWINGS.

D. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF UTILITY SERVICES IN THE AREA TO BE EXCAVATED BEFORE BEGINNING EXCAVATION.

E. NO PIPES, DUCTS, SLEEVES, CHASES, ETC., SHALL BE PLACED IN SLABS OR WALLS, NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC.

F. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TEMPORARY SHORING AND BRACING OF EXISTING STRUCTURAL ELEMENTS DURING CONSTRUCTION. ALL SHORING SHALL BE ADEQUATE TO SUPPORT ALL STRUCTURAL LOADS DURING THE REMOVAL OF THE EXISTING STRUCTURE. TEMPORARY SHORING MUST REMAIN IN PLACE UNTIL ALL NEW STRUCTURAL ELEMENTS ARE SECURED INTO PLACE PER CONSTRUCTION DOCUMENTS.

G. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR REQUIREMENTS, DIMENSIONS AND EXACT LOCATIONS OF FLOOR DRAINS, TRENCHES, DRAIN TILE, PUMPS AND EQUIPMENT INCLUDING ANCHORING SYSTEMS AND HOUSEKEEPING PADS. GENERAL CONTRACTOR TO COORDINATE ALL OF THESE ITEMS WITH ALL DISCIPLINES INVOLVED.

H. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING CODES AND MANUALS (LATEST ADOPTED EDITION):
1. BUILDING CODE, WHEN APPLICABLE.
2. INTERNATIONAL BUILDING CODE (IBC).
3. AMERICAN CONCRETE INSTITUTE (ACI).
4. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE (FOR PLACING AND DETAILING OF ALL REINFORCING).
5. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
6. AMERICAN WELDING SOCIETY (AWS) STANDARDS FOR WELDING AS MODIFIED BY AISC SPECIFICATION.
7. MASONRY STANDARDS JOINT COMMITTEE (MSJC)
8. AMERICAN FOREST & PAPER ASSOCIATION NATIONAL DESIGN SPECIFICATION (AF & PA NDS)

DESIGN LOADS CRITERIA

A. CODES USED:
1. 2015 INTERNATIONAL BUILDING CODE
2. 2010 AMERICAN SOCIETY OF CIVIL ENGINEERS STANDARD 7 (ASCE 7-10)

B. RISK CATEGORY: II

1. WIND LOAD CRITERIA:
2. ULTIMATE WIND SPEED. V = 115 MPH (3 SECOND GUST)
3. NOMINAL WIND SPEED, V = 90 MPH (3 SECOND GUST)
4. WIND LOAD EXPOSURE: C
5. INTERNAL PRESSURE COEFFICIENT: +/- 0.18 (ENCLOSED BUILDING)
6. WIND TOPOGRAPHIC FACTOR: K_{ZT} = 1.0
7. C & C WIND WALL PRESSURE: REFER TO COMPONENT AND CLADDING WIND PRESSURE TABLE
8. WIND NET UPLIFT: 15 PSF (NOMINAL)

C. SNOW LOAD CRITERIA:
1. GROUND SNOW LOAD, P_G = 40 PSF
2. FLAT-ROOF SNOW LOAD (BALANCED), P_F = 31 PSF
3. COVERED ENTRY FLAT-ROOF SNOW LOAD (BALANCED), P_F = 34 PSF
4. SNOW LOAD IMPORTANCE FACTOR, I_S = 1.0
5. SLOPE FACTOR, C_S = 1.0
6. THERMAL FACTOR, C_T = 1.1
7. COVERED ENTRY THERMAL FACTOR, C_T = 1.2
8. SNOW EXPOSURE FACTOR, C_E = 1.0
9. UNBALANCED SNOW LOAD: SHALL BE CONSIDERED

D. EARTHQUAKE LOAD CRITERIA
1. SEISMIC IMPORTANCE FACTOR: I_E = 1.0
2. MAPPED SPECTRAL RESPONSE ACCELERATIONS:
   - S_S = 5.4% g
   - S_1 = 3.6% g

E. SOIL SITE CLASS: D
1. SPECTRAL RESPONSE COEFFICIENT:
   - S_{DS} = 0.058
   - S_{D1} = 0.057
2. SEISMIC DESIGN CATEGORY = A
3. ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL-FORCE ANALYSIS

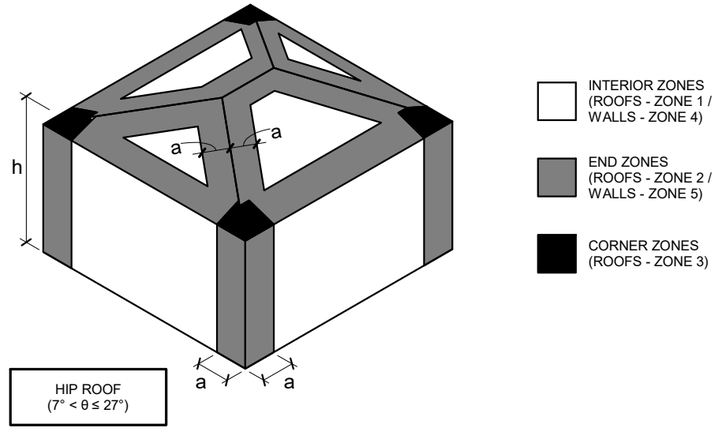
F. LIVE LOADS
1. ROOF: 20 PSF

G. DEAD LOADS
1. ROOF: 20 PSF
   A. TOP CHORD: 10 PSF
   B. BOTTOM CHORD: 10 PSF
2. FRAMING: ACTUAL
3. MECHANICAL: SEE PLAN

COMPONENTS AND CLADDING WIND PRESSURES (PSF)

ZONE	TRIBUTARY AREA				
	10 sf or smaller	20 sf	50 sf	100 sf	150 sf or greater
WALL INTERIOR	+30.0 / -32.5	+28.6 / -31.1	+26.8 / -29.4	+25.5 / -28.0	+24.7 / -27.2
WALL END	+30.0 / -40.1	+28.6 / -37.4	+26.8 / -33.8	+25.5 / -31.1	+24.7 / -29.6
ROOF INTERIOR	+17.3 / -27.4	+16.0 / -26.7	+16.0 / -25.6	+16.0 / -24.9	+16.0 / -24.9
ROOF END	+17.3 / -47.7	+16.0 / -43.9	+16.0 / -38.9	+16.0 / -35.0	+16.0 / -35.0
ROOF CORNER	+17.3 / -70.6	+16.0 / -66.0	+16.0 / -59.9	+16.0 / -55.3	+16.0 / -55.3
PARAPET END	NA / NA	NA / NA	NA / NA	NA / NA	NA / NA
PARAPET CORNER	NA / NA	NA / NA	NA / NA	NA / NA	NA / NA
OVERHANG INTERIOR	-16	-16	-16	-16	-16
OVERHANG END	-55.8	-55.8	-55.8	-55.8	-55.8
OVERHANG CORNER	-93.9	-84.8	-72.6	-63.5	-63.5

NOTES:
1. REFER TO DESIGN CRITERIA FOR INFORMATION REGARDING GOVERNING BUILDING CODE.
2. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE SURFACES, RESPECTIVELY.
3. LINEAR INTERPOLATION IS PERMITTED FOR TRIBUTARY AREAS NOT SHOWN.
4. REFER TO FIGURE BELOW FOR ZONE DEFINITIONS.



HIP ROOF
(7° < θ ≤ 27°)

NOTATION
a = 10% OF LEAST HORIZONTAL DIMENSION OR 0.4h, WHICHEVER IS SMALLER, BUT NOT LESS THAN EITHER 4% OF LEAST HORIZONTAL DIMENSION OR 3 FEET.
h = MEAN ROOF HEIGHT, IN FEET, EXCEPT THAT EAVE HEIGHT SHALL BE USED FOR ROOF ANGLES < 10°.
θ = ANGLE OF PLANE OF ROOF FROM HORIZONTAL, IN DEGREES.

2

SHOP DRAWINGS

A. SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR APPROVAL, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER RESPONSIBLE FOR ITS PREPARATION, WHO IS REGISTERED IN THE STATE WHICH THE PROJECT IS LOCATED.

B. PRIOR TO SUBMITTAL, THE CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS AND MAKE ANY CORRECTIONS REQUIRED. THE CONTRACTOR SHALL STAMP AND SIGN THE SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ENGINEER.

C. THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS FOR GENERAL CONFORMANCE OF THE DESIGN CONCEPT. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHOP DRAWING SUBMITTALS THAT IS ACCEPTABLE TO BOTH CONTRACTOR AND ENGINEER. AFTER THE CONTRACTOR HAS REVIEWED THE SHOP DRAWINGS, PROMPT REVIEW BY THE ENGINEER WILL BE MADE OF ALL SUBMITTALS.

D. FOR LARGE SUBMITTALS, REASONABLE REVIEW TIME SHALL BE ALLOWED AND MAY EXCEED TWO WEEKS. THE CONTRACTOR SHALL SUBMIT NECESSARY REQUEST FOR INFORMATION (RFI's) DURING THE DETAILING PROCESS TO AVOID SUBMITTALS THAT ARE INCOMPLETE OR NEED SIGNIFICANT VERIFICATIONS. THE CONCURRENT SUBMITTAL OF MULTIPLE SHOP DRAWINGS ("DUMPING") WILL FURTHER EXTEND THE REVIEW PROCESS AND TIME FRAME NECESSARY TO PROPERLY REVIEW EACH SUBMITTAL.

E. UNLESS INDICATED OTHERWISE, THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE FOLLOWING ITEMS FOR STRUCTURAL REVIEW. REFER TO SPECIFIC SECTION OF STRUCTURAL NOTES FOR ANY ADDITIONAL CRITERIA:
   1. RAMMED-AGGREGATE PIER & STONE COLUMN FOUNDATIONS
   2. CONCRETE MIX DESIGNS
   3. SLAB CONTROL JOINT LAYOUT
   4. REINFORCING STEEL
   5. STRUCTURAL STEEL
   6. STEEL ROOF DECK
   7. PRE-FABRICATED COLD-FORMED STEEL TRUSSES
   8. ADDITIONAL STRUCTURAL SHOP DRAWINGS REQUESTED IN THE SPECIFICATIONS

F. A COPY OF ALL SHOP DRAWINGS SHALL BE MAINTAINED ON SITE AT ALL TIMES.

G. SHOP DRAWINGS SHALL INCLUDE COMPLETE DETAIL SCHEDULES, PROCEDURES, AND DIAGRAMS FOR FABRICATION AND ASSEMBLY OF STRUCTURAL MEMBERS AND SUBMIT PRIOR TO FABRICATION.

H. ERECTION PLANS ARE THE RESPONSIBILITY OF THE FABRICATOR.

FOOTINGS AND FOUNDATIONS

A. SOIL BEARING DESIGN VALUE:
   1. 4000 PSF (PRESUMED AFTER INSTALLATION OF RAMMED AGGREGATE PIERS).
   2. BEARING VALUE TO BE VERIFIED IN FIELD BY GEOTECHNICAL ENGINEER.

B. PROTECT FOUNDATION EXCAVATIONS FROM FROST; DO NOT PLACE CONCRETE ON FROZEN GROUND.

C. FOUNDATION EXCAVATIONS SHALL BE KEPT FREE OF LOOSE MATERIAL AND STANDING WATER AND SHALL BE CHECKED AND APPROVED BY THE ENGINEER BEFORE THE PLACEMENT OF ANY CONCRETE.

D. DESIGN FROST PENETRATION DEPTH: 48 INCHES (HEATED) OR 60 INCHES (UNHEATED)

E. REFER TO GEOTECHNICAL REPORT FOR REQUIRED COMPACTED GRANULAR SUBGRADE BELOW SLABS.

MATERIAL COMPACTION CRITERIA	
LOCATION	MINIMUM RELATIVE COMPACTION PERCENTAGE (ASTM D698 STANDARD PROCTOR DENSITY (SPD))
1'-0" BELOW FOUNDATION AND SLAB SUBGRADE ELEVATIONS	98%
ABOVE BOTTOM OF FOUNDATIONS AND BELOW SLAB SUBGRADE ELEVATIONS	95%
BELOW EXTERIOR SLAB, WITHIN 1'-0" OF SUBGRADE ELEVATIONS	98%
BELOW EXTERIOR SLAB, MORE THAN 1'-0" BELOW SUBGRADE ELEVATIONS	95%

CONCRETE

A. CONCRETE SHALL BE STANDARD WEIGHT MIX UNLESS NOTED OTHERWISE AND MEET THE FOLLOWING CRITERIA:

LOCATIONS	f'c @ 28 DAYS	AIR ENTRAINMENT	MAX. WATER/CEMENT RATIO
FOOTINGS	4500 PSI	6% ± 1.5%	0.50
FLOORS ON GRADE	4000 PSI		0.45
EXTERIOR SLABS ON GRADE	5000 PSI	6% ± 1.5%	0.40
EXTERIOR FOUNDATION WALLS	4500 PSI	6% ± 1.5%	0.45

B. CEMENT SHALL CONFORM TO ASTM C150, TYPE I / II OR ASTM C595 TYPE IL.

C. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.

D. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 (LATEST EDITION) "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THESE NOTES.

E. ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER. ADMIXTURES SHALL COMPLY WITH ASTM C494 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE, BUT SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT (CALCIUM CHLORIDE SHALL NOT BE USED).

F. CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR APPROVAL 10 DAYS PRIOR TO FABRICATION AND INSTALLATION. ALL CONCRETE MIXES SHALL BE DESIGNED AND CERTIFIED BY A MATERIALS TESTING COMPANY.

G. PROJECTING CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS DETAILED OR NOTED OTHERWISE.

H. PLACE 15 MIL VAPOR BARRIER DIRECTLY BELOW FLOOR SLAB.

I. CONCRETE FLOOR SHALL BE CURED IN ACCORDANCE WITH ASTM C309. CONCRETE FLOOR SHALL BE PROTECTED FROM MOISTURE LOSS FOR A MINIMUM OF 14 DAYS, USING AN APPROVED SHEET MEMBRANE IN ACCORDANCE WITH C171.

J. FLOOR FLATNESS AND LEVELNESS TOLERANCES:

K. UNLESS NOTED OTHERWISE, FLOORS SHALL CONFORM TO THE FOLLOWING SURFACE PROFILE TOLERANCES:
   a. FLOOR FLATNESS NUMBER (F_F)
      - SPECIFIED OVERALL VALUE = 20
      - MINIMUM LOCAL VALUE = 15
   b. FLOOR LEVELNESS NUMBER (F_L)
      - SPECIFIED OVERALL VALUE = 20
      - MINIMUM LOCAL VALUE = 15

L. FLOOR TOLERANCE (F_F AND F_L) MEASUREMENTS SHALL BE TESTED IN ACCORDANCE WITH ASTM E 1155. ACTUAL OVERALL F-NUMBERS SHALL BE CALCULATED USING THE INFERIOR / SUPERIOR AREA METHOD.

M. CORRECT DEFECTIVE SLABS BY GRINDING OR REMOVING AND REPLACING DEFECTIVE WORK. RE-MEASURE CORRECTED AREAS BY THE SAME PROCESS.

ANCHOR BOLTS

A. ALL ANCHOR RODS SHALL BE SUPPLIED AND INSTALLED BY THE CONCRETE CONTRACTOR, UNLESS NOTED OTHERWISE.

B. ALL ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 HEX-HEAD, UNLESS NOTED OTHERWISE. NUTS SHALL BE ASTM A563 GRADE A HEAVY HEX. OVER-SIZED PLATE WASHERS SHALL BE ASTM A36.

C. ALL ANCHOR RODS SHALL BE SET WITH TEMPLATES.

D. POST-INSTALLED ANCHORS SHALL BE ADHESIVE ANCHORING SYSTEM PROVIDED AND INSTALLED BY FRAMING CONTRACTOR. ADHESIVE ANCHORS SHALL BE "HILTI HIT-HY 200 ADHESIVE ANCHOR SYSTEM" OR APPROVED ALTERNATE. ANCHORS SHALL BE "HILTI HAS-E" THREADED ROD CONFORMING TO ISO 898-1 CLASS 5.8 OR SHALL BE MADE FROM ALL-THREADED ROD CONFORMING TO ASTM A572 GRADE 60, OR APPROVED ALTERNATE, UNLESS NOTED OTHERWISE.

STEEL DECKING AND ACCESSORIES

A. QUALITY ASSURANCE AND SHOP DRAWINGS:
   1. DESIGN METAL DECKING IN ACCORDANCE WITH SDI DESIGN MANUAL FOR ROOF DECKS.
   2. DESIGN DECK LAYOUT, SPANS, FASTENINGS, AND JOINTS UNDER DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER.
   3. SUBMIT SHOP DRAWINGS.

B. MATERIALS:
   1. METAL DECK SHALL BE AS INDICATED ON THE CONSTRUCTION DOCUMENT DETAILS.
   2. FASTENERS: MILD STEEL WELD WASHERS, HARDENED STEEL SELF-TAPPING SCREWS.
   3. STEEL DECK MATERIAL SHALL CONFORM TO ASTM A653 FOR GALVANIZED DECK AND ASTM A1008 FOR PAINTED DECK.

C. INSTALLATION:
   1. ERECT METAL DECKING IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) FOR ROOF DECKS.
   2. BEAR DECKING ON WOOD SUPPORT SURFACES WITH A 4" MINIMUM BEARING AND ON STEEL SUPPORTS WITH A MINIMUM OF 1-1/2" BEARING.
   3. FASTEN RIBBED DECK TO STEEL SUPPORT MEMBERS AT ENDS AND INTERMEDIATE SUPPORTS WITH MECHANICAL FASTENERS AT 12 INCHES O.C. AND AT EVERY OTHER TRANSVERSE FLUTE, UNLESS NOTED OTHERWISE.
   4. REINFORCE STEEL DECK OPENINGS WITH COLD-FORMED METAL FRAMING STANDARD C-SHAPED STEEL SECTIONS PER MANUFACTURED COLD-FORMED STEEL TRUSS DESIGN ENGINEER.
   5. UNLESS INDICATED OTHERWISE, PROVIDE PL3/16 x 6" x 6" GALVANIZED BENT PLATE DECK SUPPORT ANGLES AROUND PERIMETER OF ROOF DECK.

2

REINFORCING STEEL

A. BAR REINFORCEMENT SHALL BE ASTM A615, GRADE 60.

B. MINIMUM DEVELOPMENT LENGTH OF REINFORCING BARS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE.

MINIMUM LENGTH FOR STANDARD UN-COATED BARS IN NORMAL WEIGHT CONCRETE						
CONCRETE STRENGTH f'c IN PSI	DEVELOPMENT LENGTH (Ld) FOR STRAIGHT BARS (MIN. OF 12 INCHES)					FOR 90 DEGREE HOOKED BARS, HOOK DEVELOPMENT LENGTH
	TENSION CLASS A		TENSION CLASS B		COMPRESSION	
	#6 AND SMALLER	#7 TO #11	#6 & SMALLER	#7 TO #11	#18, #14, & #11 AND SMALLER	
3000	44 Db	55 Db	57 Db	71 Db	30 Db	22 Db
3500	41 Db	51 Db	53 Db	66 Db	30 Db	20 Db
4000	38 Db	47 Db	49 Db	62 Db	30 Db	19 Db
4500	36 Db	45 Db	47 Db	58 Db	30 Db	18 Db
5000	34 Db	42 Db	44 Db	55 Db	30 Db	17 Db
NOTE: Db = DIAMETER OF REINFORCEMENT. Ld = DEVELOPMENT LENGTH						

C. TYPICAL SPLICES: CLASS B AS DEFINED IN ACI 318, UNLESS NOTED OTHERWISE

D. ADJUSTMENT FACTORS FOR STRAIGHT BARS IN TENSION
E. LIGHTWEIGHT CONCRETE = 1.3.
F. EPOXY COATED = 1.2.
G. EPOXY COATED WITH COVER LESS THAN 3DB OR CLEAR SPACING LESS THAN 6 DB = 1.5.
H. HORIZONTAL "TOP" BARS WITH 12" OF CONCRETE CAST BELOW = 1.3
I. EPOXY COATED HORIZONTAL "TOP" BARS WITH 12" OF CONCRETE CAST BELOW = NOT GREATER THAN 1.7.
J. ADJUSTMENT FACTORS FOR STRAIGHT HOOKS IN TENSION
K. LIGHTWEIGHT CONCRETE = 1.3.
L. EPOXY COATED = 1.2.
M. REINFORCING STEEL SHALL BE PROVIDED WITH THE FOLLOWING AMOUNTS OF COVER FOR CAST-IN-PLACE CONCRETE UNLESS NOTED OTHERWISE:

MINIMUM CLEAR CONCRETE COVER FOR REINFORCING STEEL	
CONCRETE ON SOIL (DIRECT CONTACT)	3"
SLAB ON GRADE	CENTERED
WALLS, STRUCTURAL SLABS EXPOSED TO SOIL OR WEATHER	
#6 TO #18 REBAR	2"
#5 AND SMALLER REBAR	1 1/2"
WALLS, STRUCTURAL SLABS NOT EXPOSED TO EARTH OR WEATHER	
#11 AND SMALLER REBAR	3/4"
COLUMNS AND PIERS (COVER TO STIRRUPS AND TIES)	1 1/2"

G. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND INSERTS SHALL BE SECURED IN POSITION WITH WIRE POSITIONERS, OR EQUAL, BEFORE PLACING CONCRETE OR GROUT.

H. DOWELS BETWEEN FOOTINGS AND WALLS SHALL BE THE SAME GRADE, SIZE, AND SPACING AS VERTICAL WALL REINFORCING.

I. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR APPROVAL A MINIMUM OF 10 DAYS PRIOR TO FABRICATION AND INSTALLATION.

J. BARS TO BE WELDED SHALL BE ASTM A706, GRADE 60. WELDING OF REINFORCING BARS SHALL CONFORM TO AWS D1.4.

CONCRETE MASONRY

A. FURNISH AND CONSTRUCT MASONRY IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES AND COMMENTARY AS REPORTED BY MSJC (TMS 402 & 602 / ACI 530 & 530.1 / ASCE 5 & 6).

MASONRY MATERIAL STRENGTHS		
LOCATIONS	TYPE	MINIMUM STRENGTH
HOLLOW CONCRETE MASONRY	NORMAL WEIGHT ASTM C90 GRADE N	f'c = 2,150 PSI
MASONRY CORE AND BOND BEAMS	CONCRETE FILL, ASTM C476	f'g = 2,000 PSI
EXTERIOR AND LOAD-BEARING WALLS, WALLS EXPOSED TO EARTH BELOW GRADE	TYPE M MORTAR, ASTM C270	fm = 2,500 PSI
LOAD-BEARING WALLS ABOVE GRADE	TYPE S MORTAR, ASTM C270	fm = 1,800 PSI
INTERIOR NON-LOAD-BEARING WALLS	TYPE N MORTAR, ASTM C270	fm = 750 PSI
STEEL DEFORMED REINFORCEMENT	ASTM A615, GRADE 60	Fy = 60,000 PSI
STEEL DEFORMED REINFORCEMENT FOR WELDING	ASTM A706	Fy = 60,000 PSI
JOINT REINFORCEMENT	LADDER TYPE, HOT-DIPPED GALVANIZED, ASTM A951/A153	Fy = 70,000 PSI
WIRE REINFORCEMENT FOR CMU	W1.7 (9 GAGE), HOT-DIPPED GALVANIZED, ASTM A82/A153	Fy = 75,000 PSI

B. CONCRETE MASONRY WALLS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF f'm = 2,000 PSI.

C. SEE PLANS FOR LOCATION OF REINFORCED WALLS.

D. MINIMUM VERTICAL REINFORCEMENT SHALL CONSIST OF (1) #5 BAR PROVIDED AT CORNERS, WITHIN 16" OF EACH SIDE OF OPENINGS, WITHIN 8" OF EACH SIDE OF MOVEMENT JOINTS, WITHIN 8" OF THE ENDS OF WALLS, AND AT A MAXIMUM SPACING OF 24" ON-CENTER, UNLESS NOTED OTHERWISE.

E. MINIMUM HORIZONTAL REINFORCEMENT SHALL BE 9 GA LADDER MESH REINFORCEMENT AT 16" ON-CENTER, UNLESS NOTED OTHERWISE. WHERE HORIZONTAL BOND BEAMS ARE REQUIRED (1) #5 BAR HORIZONTAL SHALL BE PROVIDED IN WALLS 6" WIDE OR LESS AND (2) #5 BARS HORIZONTAL SHALL BE PROVIDED IN WALLS 8" WIDE OR GREATER, UNLESS NOTED OTHERWISE. CONTINUOUS HORIZONTAL BOND BEAMS SHALL BE PROVIDED AT THE BOTTOM AND TOP OF WALLS, TYPICAL.

F. HORIZONTAL BOND BEAMS SHALL BE PROVIDED AT THE BOTTOM AND TOP OF WALL OPENINGS AND SHALL EXTEND NOT LESS THAN 48 BAR DIAMETERS PAST THE OPENINGS, CONTINUOUSLY AT STRUCTURALLY CONNECTED ROOF AND FLOOR LEVELS, AND WITHIN 16" OF THE TOP OF WALLS.

G. CLEAR DISTANCE BETWEEN PARALLEL REINFORCEMENT SHALL NOT BE LESS THAN 2.5 x BAR DIAMETER.

H. CONNECTION OF INTERSECTING WALLS SHALL CONSIST OF REINFORCED BOND BEAMS WITH (2) #5 HORIZONTAL REINFORCEMENT AT 48" ON-CENTER MAXIMUM, AND (1) #5 VERTICAL REINFORCEMENT WITHIN 12" OF INTERSECTING WALLS, UNLESS NOTED OTHERWISE.

I. VERTICAL STEEL SHALL BE CONTINUOUS WITH 24" LAP AT SPLICES, UNLESS NOTED OTHERWISE.

J. IN COLUMNS, PIERS, AND PILASTERS, THE CLEAR DISTANCE BETWEEN VERTICAL BARS SHALL NOT BE LESS THAN 3 BAR DIAMETERS, NOR LESS THAN 1 1/2".

K. HORIZONTAL JOINT REINFORCEMENT SHALL BE CONTINUOUS WITH 8" LAP SLICES, WHERE USED.

L. CONCRETE BLOCK WALL LINTELS:
1. EXTEND ALL LINTELS A MINIMUM OF 8" BEYOND EACH EDGE OF OPENING, UNLESS NOTED OTHERWISE. WHERE LINTEL BEARS ON CONCRETE BLOCK, FILL TWO COURSES OF BLOCK MINIMUM WITH CONCRETE.
2. IF THE OPENING OCCURS NEXT TO CONCRETE WALL OR COLUMN, BOLT ANGLE TO COLUMN AND REST LINTEL ON ANGLE. OBTAIN ANGLE SIZE AND BOLT REQUIREMENTS FROM ENGINEER.
3. IF OPENING OCCURS NEXT TO STEEL COLUMN, WELD ANGLE TO COLUMN AND REST LINTEL ON ANGLE. OBTAIN ANGLE SIZE AND WELD REQUIREMENTS FROM ENGINEER.

M. WALL CONSTRUCTION SHALL NOT EXCEED HEIGHTS OF 4'-8" BEFORE PLACEMENT OF CORE GROUT UNLESS CLEANOUT HOLES ARE PROVIDED AT THE BOTTOM OF EACH GROUT LIFT, THEN A MAXIMUM HEIGHT OF 8'-0" BEFORE PLACEMENT OF CORE GROUT.

N. SEE PLANS FOR SIZE AND LOCATION OF CONDUITS, PIPES, AND SLEEVES THROUGH MASONRY WALLS.

O. FOLLOW COLD WEATHER CONSTRUCTION WHEN AMBIENT AIR TEMPERATURE IS BELOW 40° F.

P. FOLLOW HOT WEATHER CONSTRUCTION PROCEDURES WHEN AMBIENT AIR TEMPERATURE EXCEEDS 90° F WITH WIND VELOCITY GREATER THAN 8 MPH.

Q. ALL VISIBLE, NON-VISIBLE, ABOVE-GRADE AND BELOW-GRADE JOINTS SHALL BE TOOLED IN A CONCAVE CONFIGURATION UNLESS SPECIFIED OTHERWISE BY ARCHITECT.

STRUCTURAL STEEL

A. SPECIFICATIONS:
1. DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE "STEEL CONSTRUCTION MANUAL", 14TH EDITION, BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, UNLESS NOTED OTHERWISE.
2. STEEL MATERIALS SHALL MEET THE REQUIREMENTS OF THE FOLLOWING SPECIFICATIONS, UNLESS NOTED OTHERWISE:

STRUCTURAL TYPE/SHAPE	ASTM DESIGNATION	MATERIAL STRENGTH
ANCHOR BOLTS	F1554 GRADE 36	Fy = 36 KSI
W-SHAPE	A992	Fy = 50 KSI
M, S, C, MC, AND L-SHAPES, PLATES AND BARS	A36	Fy = 36 KSI
STAIR STEEL PLATE	A283 GRADE C	Fy = 30 KSI
STAIR SHEET STEEL	A653 GRADE C	Fy = 36 KSI
HP-SHAPE	A572 GRADE 50	Fy = 50 KSI
PIPES	A53 GRADE B	Fy = 35 KSI
HSS RECTANGULAR	A500 GRADE C	Fy = 50 KSI
HSS ROUND	A500 GRADE C	Fy = 46 KSI
FASTENERS	A325N A325X A490N A490X	Fnv = 48 KSI, Fnt = 90 KSI Fnv = 60 KSI, Fnt = 90 KSI Fnv = 60 KSI, Fnt = 113 KSI Fnv = 75 KSI, Fnt = 113 KSI
CONNECTION NUTS	A563	
WASHERS	F436	
WELDS		
E70XX ELECTRODES	A233	FU = 70 KSI
COLD ROLLED E60XX ELECTRODES	A233	FU = 60 KSI
STUD ANCHORS	A108	FU = 65 KSI

3. TWO COPIES OF CERTIFIED MILL TEST REPORTS ON ALL ASTM MATERIALS USED IN THIS WORK SHALL BE FURNISHED TO THE ENGINEER.
4. ALL STAINLESS STEEL SHALL BE TYPE S30400/S30403 DUAL CERTIFIED OR S30403 (S304L), UNLESS NOTED OTHERWISE.
5. ALL ASTM A325 BOLTS EXPOSED TO EXTERIOR CONDITIONS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123; ASTM 490 BOLTS SHALL NOT BE GALVANIZED.
6. CLEAN ALL EXTERIOR FIELD WELDS AND MEMBERS PER SSPC-SP3 AND PRIME PAINT WITH GRAY INORGANIC ZINC TO A 3-5 MIL THICKNESS.

B. DESIGN STRESS:
1. MINIMUM BEAM CONNECTIONS SHALL NOT BE SMALLER THAN THOSE LISTED IN PART 10 OF THE AISC MANUAL.
2. UNLESS DETAILED OTHERWISE, MAKE CONNECTIONS WITH E70XX ELECTRODES OR BOLTED WITH 3/4" A325 BOLTS IN BEARING-TYPE CONNECTIONS WITH THREADS IN THE SHEAR PLANE (A325N).

C. WELDING:
1. ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1 STRUCTURAL WELDING CODE.
2. WELDER CERTIFICATION PROCEDURES SHALL BE AS FOLLOWS:
   a. ALL WELDERS SHALL BE CURRENTLY CERTIFIED AND REGISTERED BY THE LOCAL OFFICIALS AND/OR THE AMERICAN WELDING SOCIETY AND, IF REQUIRED, ALL WELDERS SHALL HAVE THEIR CERTIFICATION AVAILABLE TO THE ENGINEER.
3. ALL WELD FILLER METAL SHALL BE AWS E70XX WITH A MINIMUM CHARPY V-NOTCH (CVN TOUGHNESS OF 20FT-LB AT 0 DEG F, AS DETERMINED BY THE APPROPRIATE AWS A5 CLASSIFICATION TEST METHOD OR MANUFACTURER CERTIFICATION, UNLESS NOTED OTHERWISE.
4. WELDS DESIGNATED AS DEMAND CRITICAL (DC) SHALL BE MADE WITH A FILLER METAL CAPABLE OF PROVIDING A MINIMUM CVN TOUGHNESS OF 20 FT-LB AT -20 DEG F AND 40 FT-LB AT A TEMPERATURE OF 70DEG F AS DETERMINED BY THE MANUFACTURER'S CERTIFICATION, AISC 341-05 APPENDIX X, OR OTHER APPROVED METHOD. WELD FILLER METALS SHALL NOT BE USED FROM PACKAGING THAT HAS BEEN PUNCTURED OR TORN, OR IF THE MANUFACTURER'S RECOMMENDATIONS FOR EXPOSURE TIME OR DRYING PROCEDURES HAVE NOT BEEN FOLLOWED.
5. ALL BUTT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) WELDS, UNLESS NOTED OTHERWISE.
6. ALL GROOVE WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) WELDS, UNLESS NOTED OTHERWISE.
7. WELDING PROCEDURE AND SEQUENCES SHALL BE PLANNED TO MINIMIZE WELD SHRINKAGE THAT COULD RESULT IN LAMELLAR TEARING.
8. FIELD WELDING WILL BE ALLOWED ONLY WHERE SHOWN ON THE DRAWINGS.
9. EXISTING AND NEW STEEL SURFACES TO BE WELDED SHALL BE CLEANED OR PAINT, GREASE, SCALE, OR OTHER FOREIGN MATERIAL REMOVED.
10. ALL FIELD WELDS SHALL BE WIRE BRUSHED AND CLEANED, THEN TOUCHED-UP PAINTED.

D. MISCELLANEOUS METAL
1. WORK INCLUDES LINTELS, STAIRS, PANS, HANDRAILS, GUARDRAILS, POSTS, ETC.
2. FABRICATION:
   a. FABRICATE STAIRS WITH CLOSED RISERS AND TREADS OF METAL PAN CONSTRUCTION READY TO RECEIVE CONCRETE, UNLESS NOTED OR DETAILED OTHERWISE IN THE CONSTRUCTION DOCUMENTS.
   b. FORM LANDINGS WITH SHEET STEEL STOCK.
   c. FORM STRINGERS WITH STEEL PLATE OR CHANNELS.
   d. FIT AND SHOP ASSEMBLE HANDRAIL COMPONENTS WHERE POSSIBLE. GRIND EXPOSED JOINTS FLUSH AND SMOOTH.
   e. SHOP PRIME WITH TWO COATS.

E. STRUCTURAL STEEL SHOP DRAWINGS SHALL INCLUDE CALCULATIONS THAT SUMMARIZE ANY CONNECTION REVISIONS.

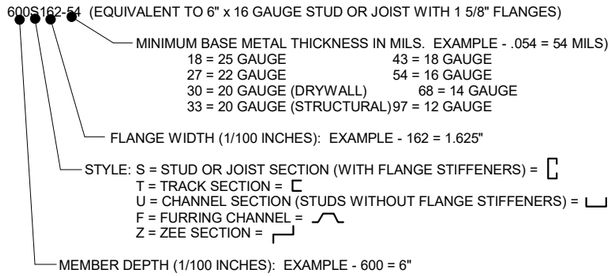
COLD-FORMED STEEL - LIGHT FRAME CONSTRUCTION

A. QUALITY ASSURANCE AND SHOP DRAWINGS:
B. DESIGN COLD FORMED STEEL FRAMING ACCORDING TO AISI'S "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS."
C. FOR COLD-FORMED METAL FRAMING INDICATED TO COMPLY WITH DESIGN LOADS, INCLUDE STRUCTURAL ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.
D. SHOP DRAWINGS:
   A. SHOW LAYOUT, SPACINGS, SIZES, THICKNESSES, AND TYPES OF COLD-FORMED METAL FRAMING, FABRICATION, AND FASTENING AND ANCHORAGE DETAILS, INCLUDING MECHANICAL FASTENERS.
   B. SHOW REINFORCING CHANNELS, OPENING FRAMING, SUPPLEMENTAL FRAMING, STRAPPING, BRACING, BRIDGING, SPLICES, ACCESSORIES, CONNECTION DETAILS AND ATTACHMENT TO ADJOINING WORK.

E. MATERIALS:
F. ALL MEMBERS SHALL BE COLD-FORMED FROM STRUCTURAL QUALITY SHEET STEEL MEETING THE REQUIREMENTS OF ASTM A-446 GRADE A, MINIMUM YIELD OF 33,000 PSI FOR 18 GAGE AND LIGHTER AND MEETING THE REQUIREMENTS OF ASTM A-446 GRADE D, MINIMUM YIELD OF 50,000 PSI FOR 16 GAGE AND HEAVIER.
G. ALL MEMBERS SHALL BE MARKED SO THAT SUPPLIED MATERIALS CAN BE FIELD VERIFIED.
H. ALL MEMBERS SHALL HAVE A GALVANIZED FINISH COMPLYING WITH ASTM A-535, G60 COATING.

I. CONNECTIONS:
J. WELDS: WELDING SHALL BE IN CONFORMANCE WITH AWS D 1.3 UTILIZING E60XX OR E70XX ELECTRODES. THE PROJECT ENGINEER MAY REQUEST NON-DESTRUCTIVE TEST TO VERIFY PROPER WELDS.
K. SCREWS: SELF-DRILLING AND SELF-TAPPING, CADMIUM PLATED FOR ALL EXTERIOR USES, OF THE SIZE REQUIRED FOR LOADINGS.
L. POWER DRIVEN SHOTS: SIZE AND SPACING AS REQUIRED TO PROPERLY ANCHOR THE FRAMING MEMBERS. USE CHARGE AS APPROPRIATE FOR ACTUAL USE.
M. CRIMPING AND POP-RIVETING: USE ONLY WITH THE APPROVAL OF THE ENGINEER.
N. WIRE TYING: NOT PERMITTED.

O. LIGHT GAUGE STEEL FRAMING MEMBER DESIGNATION SYSTEM:



E. MANUFACTURED COLD-FORMED STEEL TRUSSES
1. COLD-FORMED STEEL TRUSS DESIGN SHALL BE DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE IBC COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION SECTION.
2. COLD-FORMED STEEL FOR TRUSSES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. TRUSS, BRIDGING, BRACING AND/OR BLOCKING, TO PREVENT ROTATION AND PROVIDE LATERAL STABILITY, SHALL BE SUBMITTED BY TRUSS MANUFACTURER FOR ENGINEER'S REVIEW.
4. LOCATIONS FOR LATERAL RESTRAINT SHALL BE IDENTIFIED ON THE TRUSS DESIGN DRAWINGS.
5. ROOF REINFORCEMENT AT STEEL DECK OPENINGS SHALL BE SUBMITTED BY TRUSS MANUFACTURER FOR ENGINEERS REVIEW.
6. NO CUTTING, NOTCHING, AND/OR FIELD MODIFICATIONS OR REPAIRS OF TRUSSES WITHOUT ENGINEER OF RECORD AND TRUSS MANUFACTURER ENGINEER'S WRITTEN APPROVAL.
7. DAMAGED TRUSSES, INCLUDING DAMAGED AND/OR LOOSE TRUSS CONNECTORS, MAY NOT BE USED.
8. GABLE END TRUSS KNEE BRACING PER MANUFACTURER'S RECOMMENDATIONS.
9. PROVIDE BALLOON-FRAMED GABLE END WALL FOR DIAPHRAGM FORCE TRANSFER AND TRUSS STABILITY.
10. TOTAL LOAD DEFLECTION LIMITATIONS:
    a. ROOF TRUSSES LESS THAN L/240.
11. SUBMIT COMPLETE SHOP DRAWINGS FOR APPROVAL, SHOWING THE ERECTION PLAN, ALL BEARING CONDITIONS, AND CONNECTIONS. CALCULATIONS CERTIFIED BY A PROFESSIONAL ENGINEER SHALL BE REQUIRED FOR ALL COLD-FORMED METAL TRUSSES.
12. DESIGN OF BOTH TEMPORARY AND PERMANENT TRUSS MEMBER RESTRAINING FOR ALL TRUSSES SHALL BE PROVIDED BY TRUSS SUPPLIER.
13. GENERAL CONTRACTOR TO COORDINATE TRUSS AND FRAMING LAYOUT WITH MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS. CONTRACTORS TO ACCOUNT FOR ALL POTENTIAL INTERFERENCES BETWEEN STRUCTURE AND PLUMBING, FIXTURES, ETC. PRIOR TO FABRICATION AND ERECTION.
14. SHOP DRAWINGS: INDICATE CONFIGURATION, SIZES, SPACING, LOCATIONS OF TRUSSES, BRIDGING, AND CONNECTIONS.
15. EXECUTION:
    A. VERIFY THAT FIELD CONNECTIONS ARE ACCEPTABLE AND ARE READY TO RECEIVE WORK.
    B. ERECT AND BEAR TRUSSES ON SUPPORTS.
    C. ALLOW FOR ERECTION LOADS. PROVIDE TEMPORARY BRACING TO MAINTAIN FRAMING IN ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRIDGING AND BRACING.
    D. AFTER TRUSS ALIGNMENT, SECURE TRUSSES TO BEARING SURFACES.
    E. FRAME ROOF OPENINGS GREATER THAN 18 INCHES WITH SUPPLEMENTARY FRAMING.
    F. UNLESS NOTED OTHERWISE, TRUSS CONNECTIONS SHALL BE MADE PER TRUSS SUPPLIER STANDARD RECOMMENDATIONS.

REQUIRED INSPECTIONS

1. SPECIAL INSPECTION PROGRAM SHALL CONFORM TO CHAPTER 17 OF THE IBC.
2. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM THE REQUIRED TESTS AND SPECIAL INSPECTIONS WITH QUALIFICATIONS DESCRIBED PER IBC CHAPTER 17 AND THE PROJECT SPECIFICATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING INSPECTIONS AND TESTS. SUFFICIENT NOTICE AND LEAD TIME MUST BE ALLOWED FOR THE INSPECTION AND TESTING TO BE PERFORMED WITHOUT IMPEDING CONSTRUCTION OPERATIONS.
4. SPECIAL INSPECTION REPORTS SHALL BE FURNISHED TO BUILDING OFFICIAL, OWNER, ARCHITECT, STRUCTURAL ENGINEER, AND CONTRACTOR.
5. WHEN DEFICIENCIES ARE IDENTIFIED, THE CONTRACTOR MUST TAKE CORRECTIVE ACTIONS TO COMPLY WITH THE CONTRACT DOCUMENTS OR REMEDY THE DEFICIENCIES AS DIRECTED BY THE REGISTERED DESIGN PROFESSIONAL.
6. THE SPECIAL INSPECTION AND QUALITY ASSURANCE PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITY TO PERFORM QUALITY CONTROL.
7. THE CONTRACTOR IS RESPONSIBLE FOR TESTING SERVICES THAT ARE REQUIRED FOR MATERIAL SUBMITTALS AND THAT ARE NOT PART OF THE SPECIAL INSPECTION PROGRAM (E.G. AGGREGATE TESTS, CONCRETE MIX DESIGNS, TESTING OF CONTROLLED FILL MATERIALS, ETC.).
8. SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING THAT THE STRUCTURAL WORK WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.

FABRICATED ITEMS (IBC 1704.2)

SPECIAL INSPECTION TYPE: **FABRICATOR APPROVAL**
SPECIAL INSPECTION IS NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM WORK WITHOUT SPECIAL INSPECTION PROVIDED THE FABRICATOR COMPLIES WITH IBC.

STRUCTURAL STEEL (IBC 1705.2)

SPECIAL INSPECTION TYPE	**FREQUENCY**
FABRICATOR CERTIFICATION/QUALITY CONTROL PROCEDURES: REVIEW SHOP FABRICATION AND QUALITY CONTROL PROCEDURES. AISC CERTIFICATION (TYPE BU) OF STEEL FABRICATOR REQUIRED	FABRICATOR EXEMPT
MATERIAL VERIFICATION OF STRUCTURAL STEEL. REVIEW CERTIFIED MILL TEST REPORTS AND IDENTIFICATION MARKING ON WIDE FLANGE SHAPES, HIGH STRENGTH BOLTS, NUTS AND WELDING ELECTRODES.	PERIODIC
SHOP AND FIELD WELDING: WELDING INSPECTION TO BE IN COMPLIANCE WITH AWS D1.1. ALL WELDS SHALL BE VISUALLY INSPECTED. ALL MATERIALS, WELDING PROCEDURES, AND QUALIFICATIONS OF WELDERS SHALL BE VERIFIED PRIOR TO THE START OF WORK.	
SINGLE PASS FIELD WELD LESS THAN OR EQUAL TO 5/16"	PERIODIC
FIELD WELDS GREATER THAN 5/16"	CONTINUOUS
MULTI-PASS FILLET WELDS	CONTINUOUS
PARTIAL/COMPLETE PENETRATION WELDS TESTED ULTRASONICALLY OR BY ANOTHER APPROVED METHOD	CONTINUOUS
LIGHT GAUGE METAL FRAMING WELDING	PERIODIC
FLOOR AND ROOF DECK WELDING	PERIODIC
INSPECT MECHANICAL FASTENERS AT FLOOR AND ROOF DECK. INSPECT FLOOR AND ROOF DECK SIDE SEAM CONNECTIONS AND/OR BUTTON PUNCHES.	PERIODIC
INSPECT INSTALLATION AND TIGHTENING OF HIGH-STRENGTH BOLTS. VERIFY THAT SPLINES HAVE SEPARATED FROM TENSION CONTROL BOLTS. VERIFY PROPER TIGHTENING SEQUENCE. (NOTE THAT CONTINUOUS INSPECTION OF BOLTS IN SLIP-CRITICAL CONNECTIONS IS REQUIRED UNLESS USING TURN-OF-THE-NUT METHOD WITH MATCH MARKING TECHNIQUES)	PERIODIC
INSPECT STEEL FRAME FOR COMPLIANCE WITH STRUCTURAL DRAWINGS, INCLUDING BRACING, MEMBER CONFIGURATION, AND CONNECTION DETAILS.	PERIODIC

COLD-FORMED STEEL TRUSSES (IBC 1705.2.4)

SPECIAL INSPECTION TYPE	**FREQUENCY**
WHERE COLD-FORMED STEEL TRUSS CLEAR SPAN IS 60 FEET OF GREATER, VERIFY THAT THE TEMPORARY INSTALLATION RESTRAINT/BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE	CONTINUOUS

CAST-IN-PLACE CONCRETE (IBC 1705.3)

SPECIAL INSPECTION TYPE	**FREQUENCY**
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	PERIODIC
REINFORCING BAR WELDING:	
VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706.	PERIODIC
INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16".	PERIODIC
INSPECT ALL OTHER WELDS.	CONTINUOUS
INSPECT ANCHORS CAST IN CONCRETE.	PERIODIC
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	
ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	CONTINUOUS
MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE.	PERIODIC
VERIFY USE OF REQUIRED DESIGN MIX.	PERIODIC
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	CONTINUOUS
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC
FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE. SAMPLE FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5,000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS. A MINIMUM OF FIVE STRENGTH TESTS SHOULD BE MADE FOR A GIVEN PROJECT.	CONTINUOUS AT TIME OF TESTING

2

MASONRY (IBC 1705.4)

REQUIRED INSPECTION LEVEL: LEVEL 2

SPECIAL INSPECTION TYPE	FREQUENCY
PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS AND VERIFICATION OF f'_m.	REQUIRED
AT BEGINNING OF CONSTRUCTION, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:	
PROPORTIONS OF SITE PREPARED MORTAR.	PERIODIC
GRADE, TYPE, AND SIZE OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS.	PERIODIC
SAMPLE PANEL CONSTRUCTION.	PERIODIC
PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:	
GROUT SPACE.	PERIODIC
PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS.	PERIODIC
PROPORTIONS OF SITE PREPARED GROUT.	PERIODIC
VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:	
MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS.	PERIODIC
PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION.	PERIODIC
SIZE AND LOCATION OF STRUCTURAL MEMBERS.	PERIODIC
TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	PERIODIC
WELDING OF REINFORCEMENT.	CONTINUOUS
PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER OR HOT WEATHER.	PERIODIC
PLACEMENT OF GROUT.	CONTINUOUS
OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS.	PERIODIC

SOILS (IBC 1705.6)

SPECIAL INSPECTION TYPE	FREQUENCY
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	PERIODIC
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	PERIODIC
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	PERIODIC
VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	CONTINUOUS
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	PERIODIC

RAMMED AGGREGATE PIERS & STONE COLUMN FOUNDATIONS (IBC 1705.11)

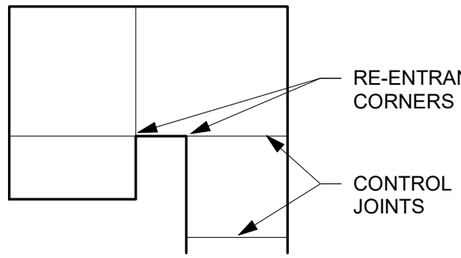
SPECIAL INSPECTION TYPE	FREQUENCY
VERIFY THAT THE PIER INSTALLATION PROGRAM AND SOIL PARAMETERS ARE IN ACCORDANCE WITH THE APPROVED SOILS REPORT AND THE CONSTRUCTION DOCUMENTS	CONTINUOUS
DURING INSTALLATION, VERIFY THE AGGREGATE PROPERTIES, TYPE AND NUMBER OF LIFTS OF AGGREGATE, PIER SIZE, INSTALLED DEPTH, TOP ELEVATION, AND APPLIED RAM ENERGY.	PERIODIC
REVIEW THE MODULUS LOAD TEST, UPLIFT PULLOUT TESTING, BOTTOM OR CROWD STABILIZATION TESTS AND DYNAMIC CONE PENETRATION TESTS RESULTS FROM PRODUCTION PIER ELEMENTS AND VERIFY THAT ALL COMPLY WITH THE DESIGN SPECIFICATIONS.	CONTINUOUS

SPECIAL INSPECTIONS FOR WIND RESISTANCE (IBC 1705.11)

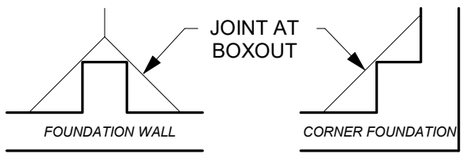
SPECIAL INSPECTION TYPE	FREQUENCY
WIND-RESISTING COMPONENTS:	
INSPECT FASTENING OF THE ROOF COVERING, ROOF DECK, AND ROOF FRAMING CONNECTIONS.	PERIODIC
INSPECT FASTENING OF THE EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING.	PERIODIC

CONTROL JOINT PLACEMENT GUIDELINES

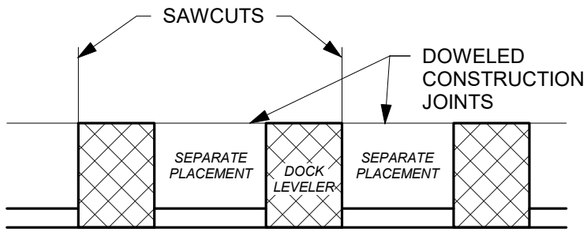
1. SPACE JOINTS (IN FEET) NO MORE THAN 2-3 TIMES THE SLAB THICKNESS (IN INCHES). FOR EXAMPLE, A 4" SLAB SHOULD HAVE JOINTS 8' TO 12' APART.
2. CUT JOINTS 25% OF THE DEPTH OF SLAB, MIN.
3. CUT JOINTS USING GROOVING TOOLS IN FRESH CONCRETE OR SAW CUTTING JOINTS AS SOON AS THE CONCRETE IS HARD ENOUGH THAT THE EDGES ABUTTING THE CUT DON'T CHIP FROM THE SAW BLADE.
4. IN HOT WEATHER, CONCRETE MIGHT CRACK IF JOINTS ARE NOT CUT WITHIN 6-12 HOURS AFTER FINISHING CONCRETE. PLAN ALTERNATE JOINT CUTTING EQUIPMENT ACCORDINGLY.
5. WHERE POSSIBLE, PLACE JOINTS UNDER PROPOSED NON-LOAD-BEARING WALL LOCATIONS OR UNDER CARPET AREAS.
6. MINIMIZE RE-ENTRANT CORNERS AND AVOID WHERE POSSIBLE.
7. WHERE POSSIBLE, ALIGN JOINTS TO INTERSECT COLUMN ISOLATION JOINTS.
8. CONTROL JOINT LOCATIONS SHALL BE COORDINATED WITH RAMMED AGGREGATE PIER LOCATIONS.



EXAMPLE CONTROL JOINT PLAN



EXAMPLE PILASTER JOINT PLAN



EXAMPLE MULTIPLE DOCK LEVELER JOINT PLAN

FOOTING SCHEDULE

MARK	LENGTH	WIDTH	THICKNESS	REINFORCEMENT	COMMENTS
F1	4' - 0"	4' - 0"	1' - 0"	(4) #5 BARS E/W BOT	
F2	4' - 8"	4' - 8"	1' - 0"	(5) #5 BARS E/W BOT	
F3	5' - 4"	4' - 8"	1' - 0"	(5) #5 BARS E/W BOT	
TS1	3' - 0"	3' - 0"	0' - 8"	REFER TO DETAIL	THICKENED SLAB
WF1		1' - 4"	1' - 0"	(2) #5 BARS CONTINUOUS W/ #5 BARS TRANSVERSE @ 12" OC	
WF2		2' - 0"	1' - 0"	(2) #5 BARS CONTINUOUS W/ #5 BARS TRANSVERSE @ 12" OC	
WF3		4' - 0"	1' - 0"	(4) #5 BARS CONTINUOUS W/ #5 BARS TRANSVERSE @ 12" OC	

FOUNDATION WALL SCHEDULE

MARK	WIDTH	REINFORCEMENT	COMMENTS
FDN1	0' - 8"	#5 BARS @ 12" OCEW CENTERED	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG
FDN2	1' - 4"	#5 BARS VERT @ 12" OC (OUTER) & #5 BARS HORIZ @ 12" OC (INNER)	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG

CMU WALL SCHEDULE

MARK	WIDTH	REINFORCEMENT	COMMENTS
M4	4"	HORIZONTAL LADDER REINFORCEMENT @ 16" OC	SOLID BLOCKS
M6	6"	#3 BARS VERTICAL @ 48" OC IN CORES GROUTED SOLID W/ HORIZONTAL LADDER REINFORCEMENT @ 16" OC	GROUT SOLID @ LOBBY DISPLAY CASE
M8	8"	#3 BARS VERTICAL @ 48" OC IN CORES GROUTED SOLID W/ HORIZONTAL LADDER REINFORCEMENT @ 16" OC	
M8B	8"	#5 BARS VERTICAL @ 24" OC IN CORES GROUTED SOLID W/ HORIZONTAL LADDER REINFORCEMENT @ 16" OC	
X1	8"	#5 BARS VERTICAL @ 24" OC IN CORES GROUTED SOLID W/ HORIZONTAL LADDER REINFORCEMENT @ 16" OC	
X2	8"	#5 BARS VERTICAL @ 24" OC IN CORES GROUTED SOLID W/ HORIZONTAL LADDER REINFORCEMENT @ 16" OC	

PIER AND PILASTER SCHEDULE

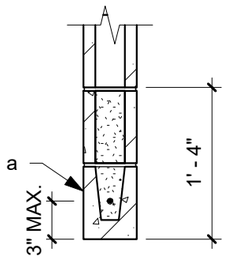
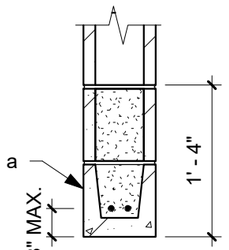
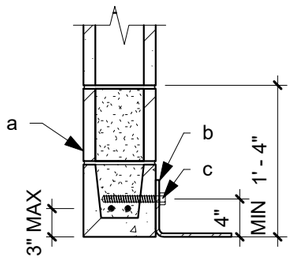
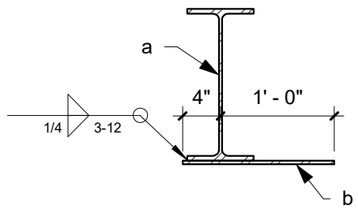
MARK	LENGTH	WIDTH	DIAMETER	REINFORCEMENT	COMMENTS
MP1	0' - 8"	1' - 4"		REFER TO DETAILS	CMU PILASTER - GROUT SOLID
MP2	1' - 0"	1' - 0"		REFER TO DETAILS	CMU PILASTER - GROUT SOLID
MP3	1' - 4"	1' - 4"		REFER TO DETAILS	CMU PILASTER - GROUT SOLID
MP4	1' - 4"	1' - 4"		REFER TO DETAILS	CMU PILASTER - GROUT SOLID
MP5	1' - 4"	2' - 0"		REFER TO DETAILS	CMU PILASTER - GROUT SOLID
MP6	1' - 4"	2' - 0"		REFER TO DETAILS	CMU PILASTER - GROUT SOLID
MP7	1' - 4"	2' - 8"		REFER TO DETAILS	CMU PILASTER - GROUT SOLID
P1	1' - 4"	1' - 4"		REFER TO DETAILS	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG
P2	1' - 4"	1' - 4"		REFER TO DETAILS	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG
P3	1' - 4"	2' - 0"		REFER TO DETAILS	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG
P4	1' - 4"	2' - 0"		REFER TO DETAILS	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG
P5	1' - 4"	2' - 8"		REFER TO DETAILS	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG
P6	2' - 0"	2' - 0"		REFER TO DETAILS	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG

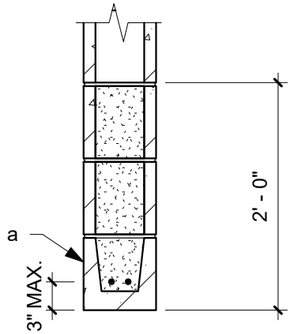
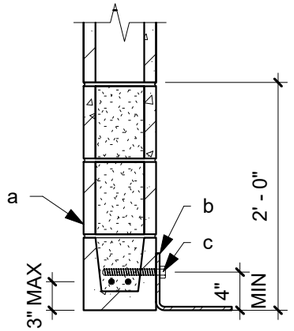
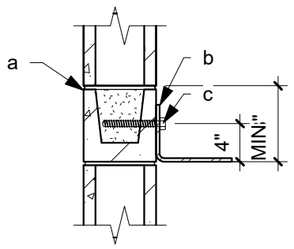
SLAB SCHEDULE

MARK	THICKNESS	REINFORCEMENT	COMMENTS
SL1	4"		HOUSEKEEPING PAD - REFER TO DETAIL
SL2	5"	#3 BARS EPOXY COATED @ 12" OCEW, CENTERED	PROVIDE 8" THICKENED SLAB EDGES, LIGHT BROOM FINISH & SEALER. TYPICAL AT STOOP SLABS. REFER TO DETAIL.
SL3	5"	SYNTHETIC MACRO FIBERS AS RECOMMENDED BY MANUFACTURER. DOSAGE TO BE DESIGNED FOR REPLACEMENT OF REINFORCEMENT RATIO OF 0.22% BUT NO LESS THAN 4 LB/CYD	PROVIDE 8" THICKENED SLAB EDGES, TYPICAL. COORDINATE FINISH W/ ARCHITECTURAL DOCUMENTS.
SL4	5"	SYNTHETIC MACRO FIBERS AS RECOMMENDED BY MANUFACTURER. DOSAGE TO BE DESIGNED FOR REPLACEMENT OF REINFORCEMENT RATIO OF 0.22% BUT NO LESS THAN 4 LB/CYD. PROVIDE 2" MESH REBAR STANDS W/ 4x4-W2.9/W2.9 WELDED WIRE MESH TO SUPPORT HYDRONIC (IN-FLOOR) TUBING.	PROVIDE 60 PSI 2" RIGID INSULATION R-15 BENEATH SLAB AND 8" THICKENED SLAB EDGES, TYPICAL. COORDINATE FINISH W/ ARCHITECTURAL DOCUMENTS.
SL5	6"	SYNTHETIC MACRO FIBERS AS RECOMMENDED BY MANUFACTURER. DOSAGE TO BE DESIGNED FOR REPLACEMENT OF REINFORCEMENT RATIO OF 0.22% BUT NO LESS THAN 4 LB/CYD	PROVIDE 8" THICKENED SLAB EDGES, TYPICAL. COORDINATE FINISH W/ ARCHITECTURAL DOCUMENTS.

2

LINTEL SCHEDULE

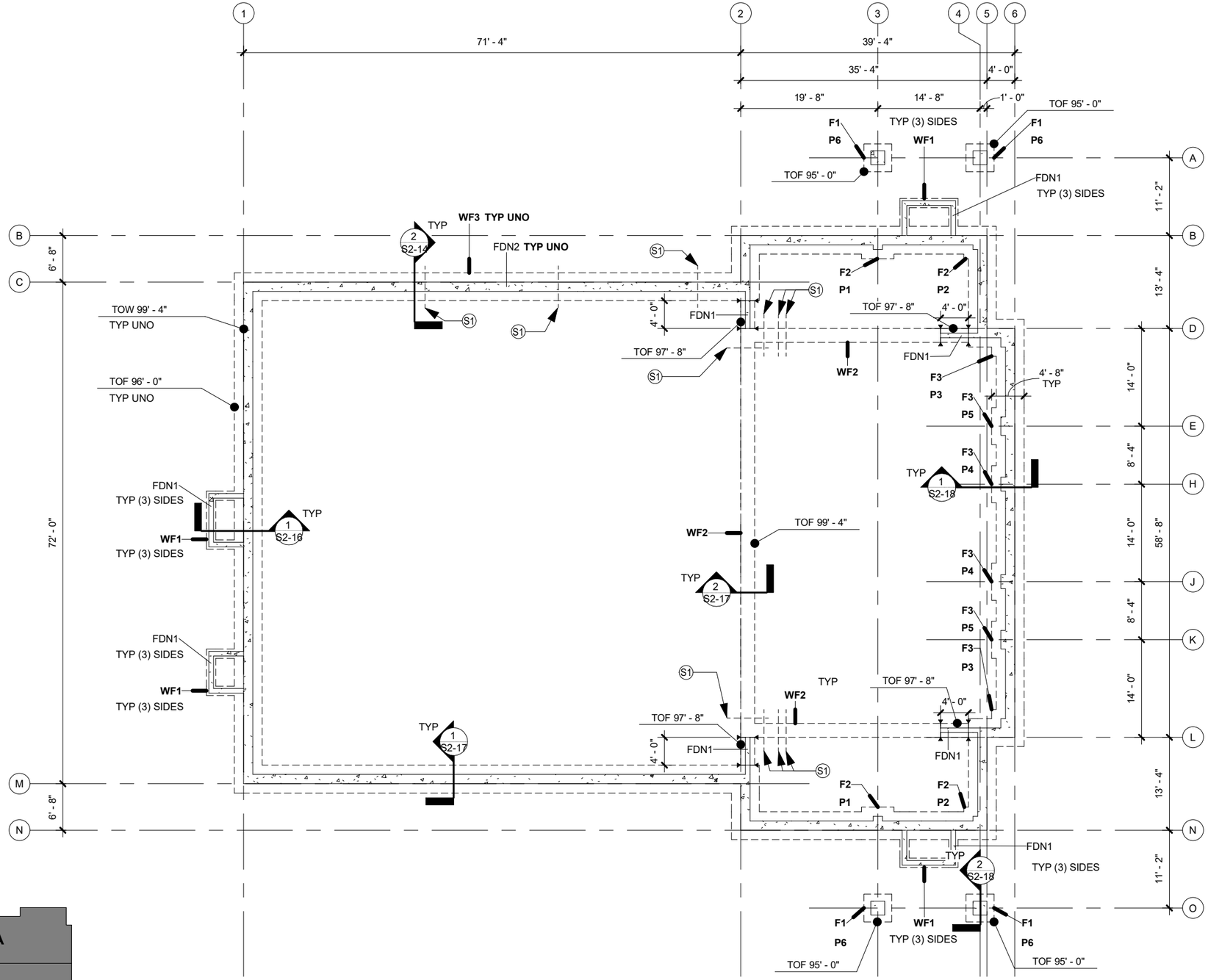
TYPE	MATERIAL	CONFIGURATION	REMARKS
L1	a. 6" WIDE x 1'-4" DEEP BOND BEAM W/ (1) #5 CONT.		• HOOK REINFORCING INTO PILASTER AND LAP WITH PILASTER VERTICAL REINFORCEMENT
L2	a. 8" WIDE x 1'-4" DEEP BOND BEAM W/ (2) #5 CONT.		• EXTEND REINFORCING 12" BEYOND VERTICAL REINFORCEMENT
L3	a. 8" WIDE X 1'-4" DEEP BOND BEAM W/ (2) #5 CONT. b. PL3/8x8x6 (LLH) BENT PLATE GALVANIZED c. 5/8"Ø x 5" GALVANIZED CMU SCREW ANCHORS (SIMPSON THDB62600H OR EQUAL) @ 2'-0" OC MAX (4 1/2" EMBED) IN LONG SLOTTED HOLES HORIZONTAL.		• EXTEND REINFORCING 12" BEYOND VERTICAL REINFORCEMENT • BENT PLATE TO END 1/4" SHORT OF MASONRY ON BOTH ENDS
L4	a. W16x40 GALVANIZED b. PL3/8x1'-4" GALVANIZED		• 8" MINIMUM BEARING REQUIRED • BOTTOM PLATE TO END 1/4" SHORT OF MASONRY ON BOTH ENDS • GALVANIZE BEAM AND PLATE AS A SINGLE UNIT AFTER SHOP WELDING • REFER TO DETAILS

TYPE	MATERIAL	CONFIGURATION	REMARKS
L5	8" WIDE X 2'-0" DEEP BOND BEAM W/ (2) #5 CONT.		• EXTEND REINFORCING 12" BEYOND VERTICAL REINFORCEMENT
L6	a. 8" WIDE X 2'-0" DEEP BOND BEAM W/ (2) #5 CONT. b. PL3/8x8x6 (LLH) BENT PLATE GALVANIZED c. 5/8"Ø x 5" GALVANIZED CMU SCREW ANCHORS (SIMPSON THDB62600H OR EQUAL) @ 2'-0" OC MAX (4 1/2" EMBED) IN LONG SLOTTED HOLES HORIZONTAL.		• EXTEND REINFORCING 12" BEYOND VERTICAL REINFORCEMENT • BENT PLATE TO END 1/4" SHORT OF MASONRY ON BOTH ENDS
L7	a. CMU CORE GROUTED SOLID b. PL3/8x8x4 (LLH) BENT PLATE GALVANIZED c. 5/8"Ø x 5" GALVANIZED CMU SCREW ANCHORS (SIMPSON THDB62600H OR EQUAL) @ 2'-0" OC MAX (4 1/2" EMBED) IN LONG SLOTTED HOLES HORIZONTAL.		• TYPICAL AT BRICK ABOVE LOW ROOF

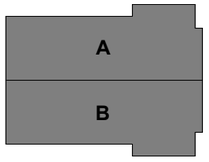
NOTES:

1. MINIMUM BEARING FOR ALL LINTELS SHALL BE 8" EACH END UNLESS OTHERWISE NOTED.
2. CMU WALLS SHALL BE GROUTED SOLID THREE COURSES BELOW LINTEL BEARING POINT AS MINIMUM.
3. REFER TO ARCHITECTURAL & MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF WALL OPENINGS.
4. GALVANIZE ALL STEEL LINTELS AT EXTERIOR WALLS.
5. FOR MASONRY LINTELS GROUT ALL CORES SOLID, CONTINUE VERTICAL WALL REINFORCEMENTS (AND SPACING) AT ALL LINTELS.
6. SOLID MASONRY " BOND BEAM" LINTELS AND ITS GROUTED COURSES SHALL NOT BE PENETRATED UNLESS APPROVED BY ENGINEER.
7. BRICK SHALL NOT OVERHANG THE EDGE OF LINTELS GREATER THAN 1/3 THE WIDTH OF BRICK (1 3/16" FOR STANDARD 3 5/8" WIDTH BRICK.)
8. FOR LINTELS REQUIRED AT OPENINGS DIFFERENT THAN ABOVE, CONTACT STRUCTURAL ENGINEER.
9. FOR ALL LINTELS IN EXISTING WALLS, REMOVE EXISTING CMU/BRICK AS REQUIRED FOR LINTEL INSTALLATION. SHORE EXISTING CMU/BRICK PATCH CMU/BRICK AS REQUIRED.

2



1 OVERALL FOUNDATION PLAN
1/16" = 1'-0"



KEYPLAN

SHEET NOTES

A. REFER TO GEOTECHNICAL EVALUATION REPORT FOR REQUIRED RECCOMENDATIONS FOR FOUNDATION OPTION #2: RAMMED-AGGREGATE PIER GROUND IMPROVEMENT.

B. ALL FOUNDATIONS SHALL BE SUPPORTED ON RAMMED-AGGREGATE PIER GROUND IMPROVEMENT. RAMMED-AGGREGATE PIER DESIGN AND LAYOUT SHALL BE BY OTHERS.

C. REFER TO STRUCTURAL NOTES FOR EXPECTATIONS ON FOUNDATION PROTECTION DURING WINTER CONDITIONS. FOUNDATIONS SHALL NOT BE POURED ON FROZEN SOIL AND FOUNDATIONS THAT HAVE BEEN POURED THAT SOIL HAS FROZEN BELOW SHALL BE REMOVED AND RECONSTRUCTED WITH NEWLY COMPACTED FILL PER GEOTECHNICAL RECOMMENDATIONS.

D. PIER REINFORCEMENT CAGES ALONG FOUNDATION WALLS SHALL WRAP INTERIOR MAT OF WALL REINFORCEMENT.

E. REFER TO CIVIL DOCUMENTS FOR ALL EXTERIOR CONCRETE WORK, EXCEPT FOR CONCRETE STOOPS AND EXTERIOR CONCRETE FOUNDATIONS.

F. COORDINATE GROUNDING ELECTRODE LOCATION REQUIREMENTS WITH ELECTRICAL DOCUMENTS. INSTALL PER TYPICAL GROUNDING ELECTRODE DETAIL.

G. COORDINATE ALL DOOR OPENING LOCATIONS AND WIDTHS WITH ARCHITECTURAL DOCUMENTS.

H. REFER TO FOUNDATION DETAILS FOR TYPICAL CONSTRUCTION JOINT AND CONTROL JOINT DETAILS.

I. COORDINATE ALL OPENINGS AND PENETRATIONS THRU FOUNDATION WALLS PRIOR TO POURING CONCRETE.

J. COORDINATE GROUNDING ELECTRODE LOCATION REQUIREMENTS WITH ELECTRICAL DOCUMENTS. INSTALL PER GROUNDING ELECTRODE DETAIL.

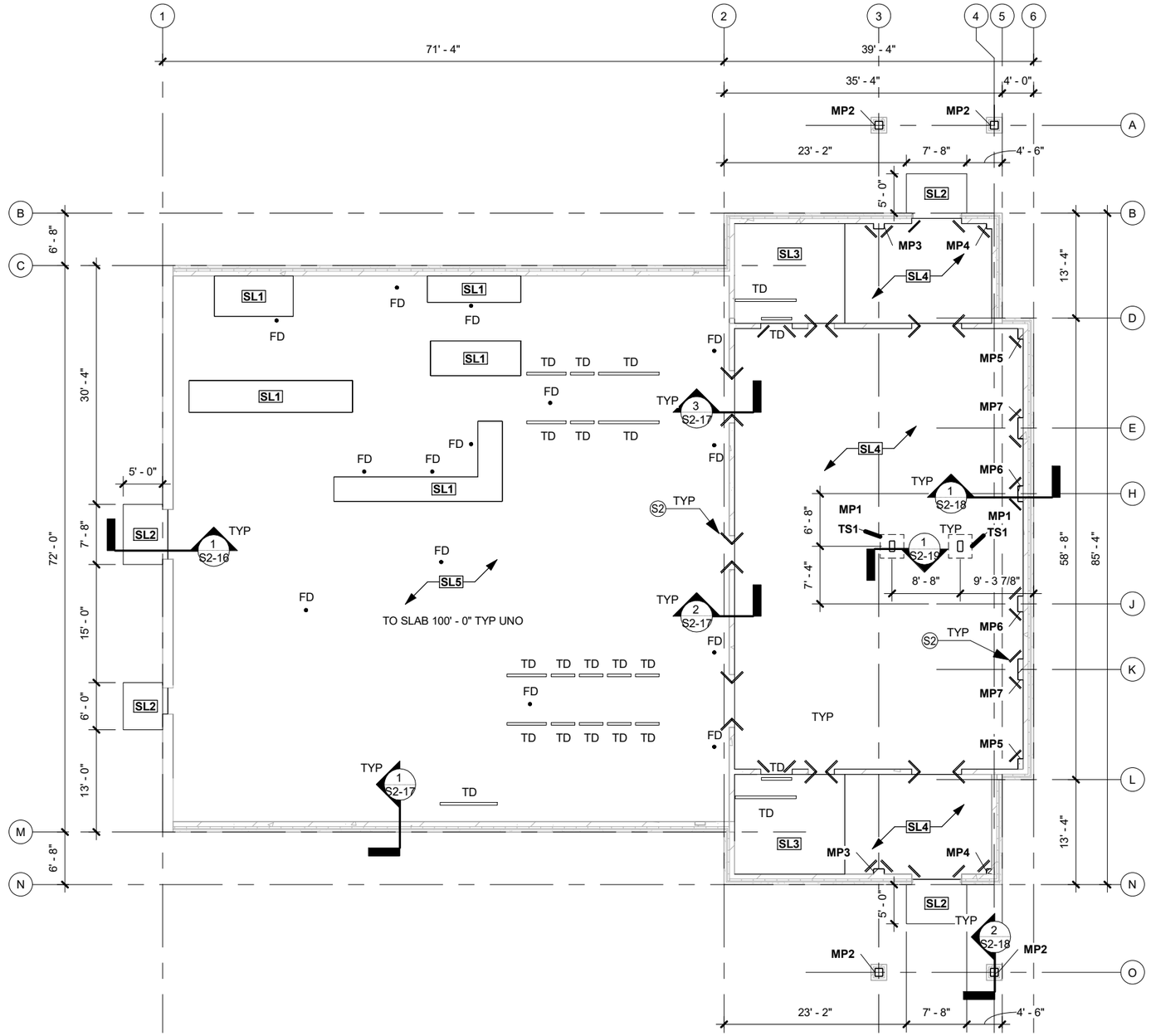
KEYNOTE LEGEND

S1	PIPE THRU/BELOW FOUNDATION WALL. PROVIDE SLEEVE AS REQUIRED. REFER TO DETAILS. REFER TO PLUMBING DOCUMENTS FOR PIPE SIZE, ELEVATION, AND LOCATION.

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FOUNDATION PLAN	SHEET NO: S1-11

PLOT DATE: 1/26/2024 2:27:23 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



SHEET NOTES

A. REFER TO GEOTECHNICAL EVALUATION REPORT FOR REQUIRED RECCOMENDATIONS FOR FOUNDATION OPTION #2: RAMMED-AGGREGATE PIER GROUND IMPROVEMENT.

B. ALL SLABS-ON-GRADE SHALL BE SUPPORTED ON RAMMED-AGGREGATE PIER GROUND IMPROVEMENT. RAMMED-AGGREGATE PIER DESIGN AND LAYOUT SHALL BE BY OTHERS.

C. REFER TO STRUCTURAL NOTES FOR EXPECTATIONS ON FOUNDATION PROTECTION DURING WINTER CONDITIONS. FOUNDATIONS SHALL NOT BE POURED ON FROZEN SOIL AND FOUNDATIONS THAT HAVE BEEN POURED THAT SOIL HAS FROZEN BELOW SHALL BE REMOVED AND RECONSTRUCTED WITH NEWLY COMPACTED FILL PER GEOTECHNICAL RECOMMENDATIONS.

D. REFER TO CIVIL DOCUMENTS FOR ALL EXTERIOR CONCRETE WORK, EXCEPT FOR CONCRETE STOOPS AND EXTERIOR CONCRETE FOUNDATIONS.

E. COORDINATE GROUNDING ELECTRODE LOCATION REQUIREMENTS WITH ELECTRICAL DOCUMENTS. INSTALL PER TYPICAL GROUNDING ELECTRODE DETAIL.

F. COORDINATE ALL DOOR OPENING LOCATIONS AND WIDTHS WITH ARCHITECTURAL DOCUMENTS.

G. REFER TO MECHANICAL DOCUMENTS FOR HYDRONIC (IN-FLOOR) TUBING LAYOUT. PROVIDE RIGID INSULATION ON COMPACTED GRANULAR FILL BENEATH SLAB.

H. CONTRACTOR SHALL PROVIDE ADDITIONAL SLAB REINFORCING AT ALL REENTRANT CORNERS, TYPICAL. REFER TO DETAIL FOR BAR SIZE AND LAYOUT.

I. REFER TO FOUNDATION & SLAB DETAILS FOR SLOPE AT FLOOR DRAIN LOCATIONS. CONTRACTOR TO COORDINATE FINAL FLOOR DRAIN LOCATIONS. REFER TO PLUMBING DRAWINGS.

J. REFER TO FOUNDATION & SLAB DETAILS FOR TYPICAL CONSTRUCTION JOINT AND CONTROL JOINT DETAILS.

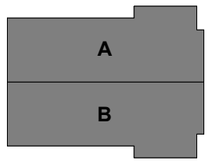
K. CONTRACTOR SHALL SELECT FLOOR SLAB CONTROL JOINTS AND HAVE THEM SHOWN ON REINFORCEMENT SHOP DRAWINGS. REFER TO STRUCTURAL SCHEDULES FOR JOINT PLACEMENT GUIDELINES.

L. ALL DISCONTINUOUS CONTROL JOINTS SHALL HAVE (2) #5 x 2'-0" BARS PERPENDICULAR AT JOINT END.

M. HOUSEKEEPING SLAB SIZE AND LOCATION FOR ALL EQUIPMENT SHALL BE VERIFIED WITH THE EQUIPMENT CUTSHEETS AND MECHANICAL DOCUMENTS PRIOR TO CONSTRUCTION. REFER TO DETAILS.

KEYNOTE LEGEND

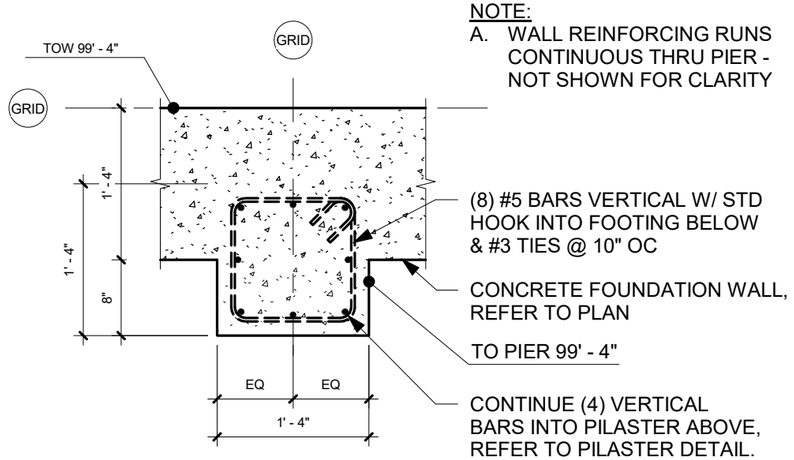
S2	CONTRACTOR SHALL PROVIDE ADDITIONAL SLAB REINFORCING AT ALL REENTRANT CORNERS, TYPICAL. REFER TO DETAIL FOR BAR SIZE AND LAYOUT.



KEYPLAN

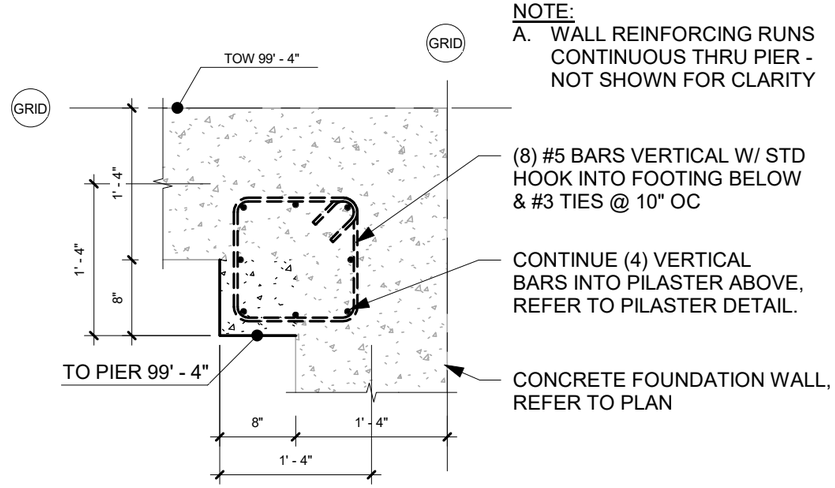
1 SLAB PLAN
1/16" = 1'-0"

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NOTE:
A. WALL REINFORCING RUNS CONTINUOUS THRU PIER - NOT SHOWN FOR CLARITY

1 PIER P1
3/4" = 1'-0"

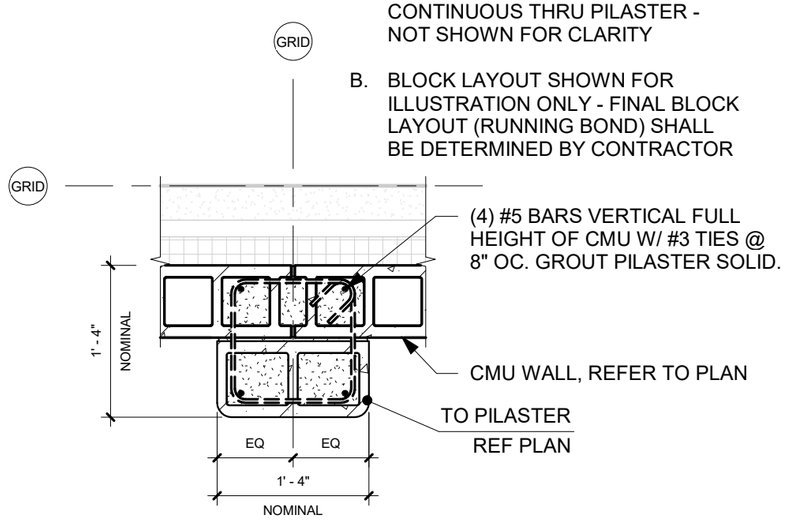


NOTE:
A. WALL REINFORCING RUNS CONTINUOUS THRU PIER - NOT SHOWN FOR CLARITY

3 PIER P2
3/4" = 1'-0"

NOTES:
A. WALL REINFORCING RUNS CONTINUOUS THRU PILASTER - NOT SHOWN FOR CLARITY

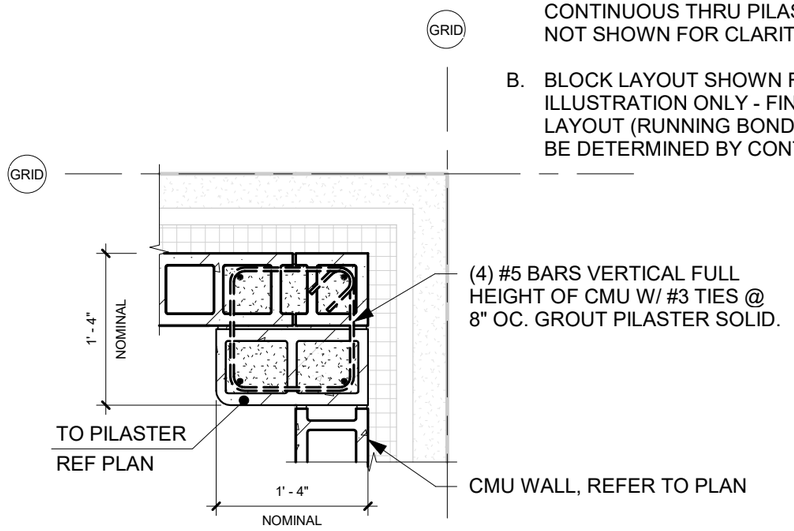
B. BLOCK LAYOUT SHOWN FOR ILLUSTRATION ONLY - FINAL BLOCK LAYOUT (RUNNING BOND) SHALL BE DETERMINED BY CONTRACTOR



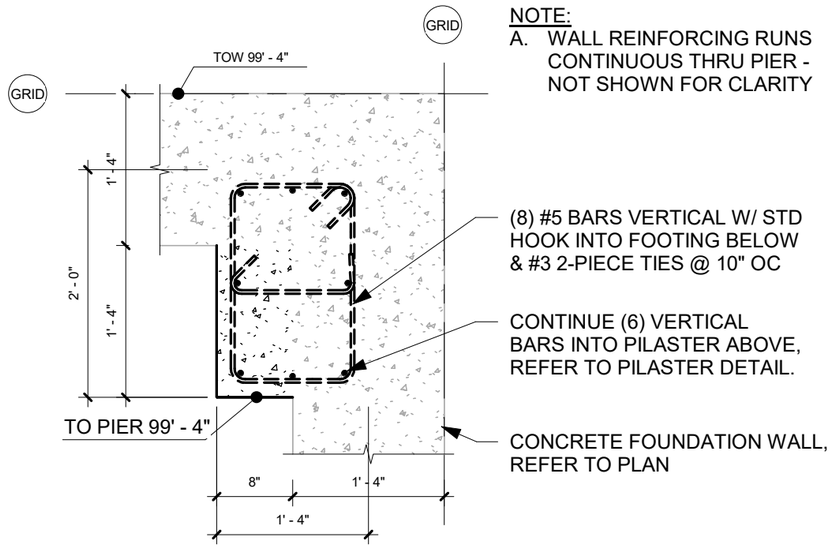
2 PILASTER MP3
3/4" = 1'-0"

NOTES:
A. WALL REINFORCING RUNS CONTINUOUS THRU PILASTER - NOT SHOWN FOR CLARITY

B. BLOCK LAYOUT SHOWN FOR ILLUSTRATION ONLY - FINAL BLOCK LAYOUT (RUNNING BOND) SHALL BE DETERMINED BY CONTRACTOR



4 PILASTER MP4
3/4" = 1'-0"



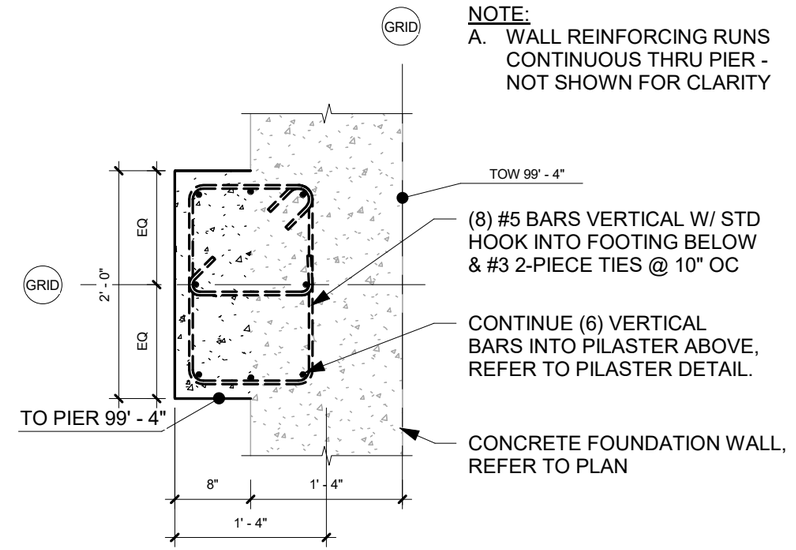
NOTE:
A. WALL REINFORCING RUNS CONTINUOUS THRU PIER - NOT SHOWN FOR CLARITY

(8) #5 BARS VERTICAL W/ STD HOOK INTO FOOTING BELOW & #3 2-PIECE TIES @ 10" OC

CONTINUE (6) VERTICAL BARS INTO PILASTER ABOVE, REFER TO PILASTER DETAIL.

CONCRETE FOUNDATION WALL, REFER TO PLAN

1 PIER P3
3/4" = 1'-0"



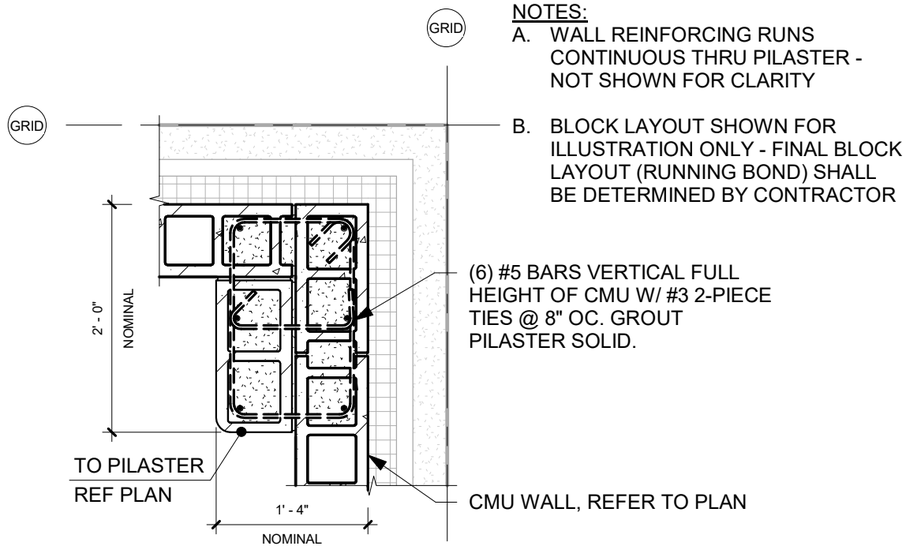
NOTE:
A. WALL REINFORCING RUNS CONTINUOUS THRU PIER - NOT SHOWN FOR CLARITY

(8) #5 BARS VERTICAL W/ STD HOOK INTO FOOTING BELOW & #3 2-PIECE TIES @ 10" OC

CONTINUE (6) VERTICAL BARS INTO PILASTER ABOVE, REFER TO PILASTER DETAIL.

CONCRETE FOUNDATION WALL, REFER TO PLAN

3 PIER P4
3/4" = 1'-0"



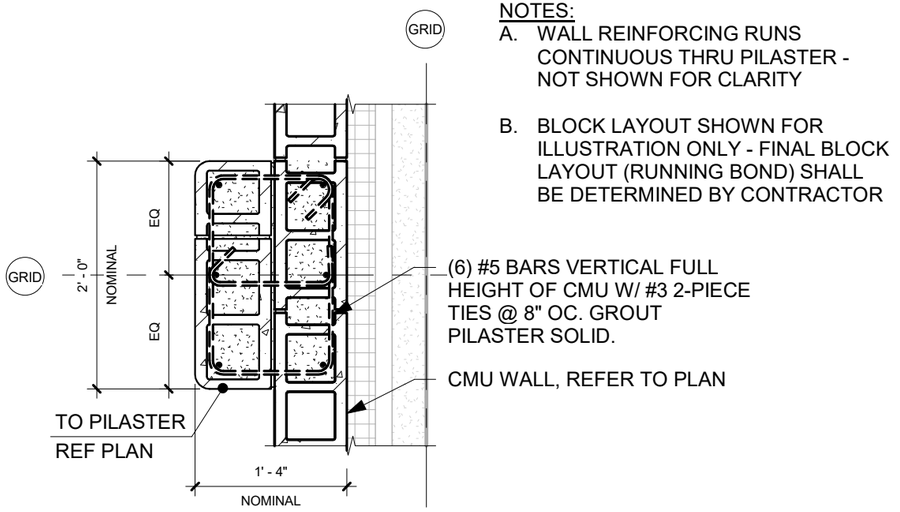
NOTES:
A. WALL REINFORCING RUNS CONTINUOUS THRU PILASTER - NOT SHOWN FOR CLARITY

B. BLOCK LAYOUT SHOWN FOR ILLUSTRATION ONLY - FINAL BLOCK LAYOUT (RUNNING BOND) SHALL BE DETERMINED BY CONTRACTOR

(6) #5 BARS VERTICAL FULL HEIGHT OF CMU W/ #3 2-PIECE TIES @ 8" OC. GROUT PILASTER SOLID.

CMU WALL, REFER TO PLAN

2 PILASTER MP5
3/4" = 1'-0"



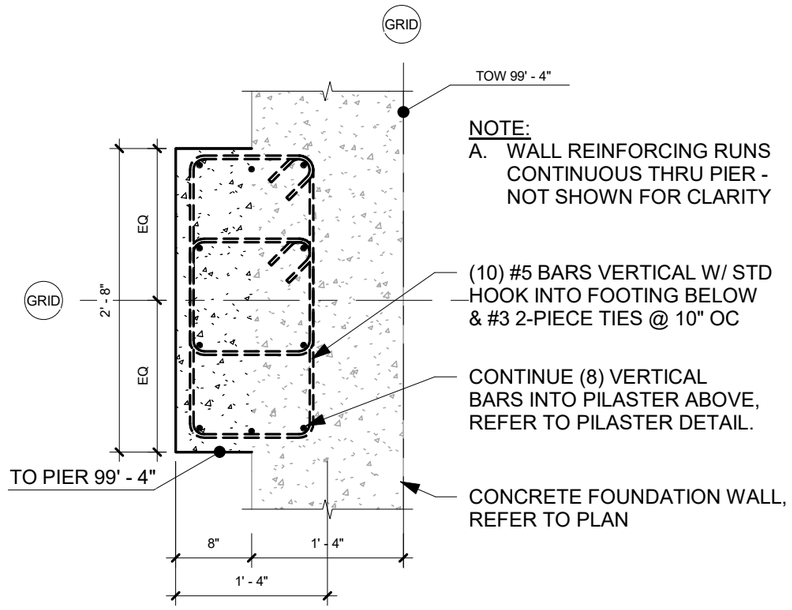
NOTES:
A. WALL REINFORCING RUNS CONTINUOUS THRU PILASTER - NOT SHOWN FOR CLARITY

B. BLOCK LAYOUT SHOWN FOR ILLUSTRATION ONLY - FINAL BLOCK LAYOUT (RUNNING BOND) SHALL BE DETERMINED BY CONTRACTOR

(6) #5 BARS VERTICAL FULL HEIGHT OF CMU W/ #3 2-PIECE TIES @ 8" OC. GROUT PILASTER SOLID.

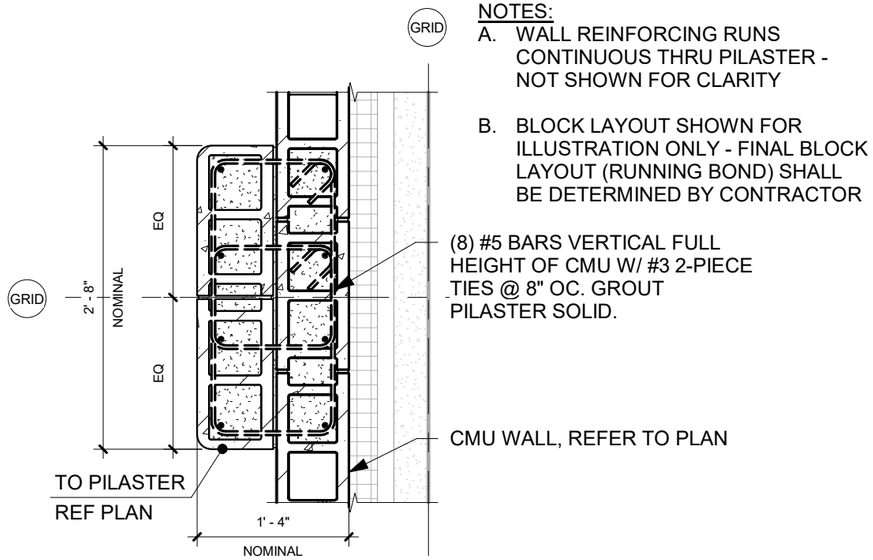
CMU WALL, REFER TO PLAN

4 PILASTER MP6
3/4" = 1'-0"



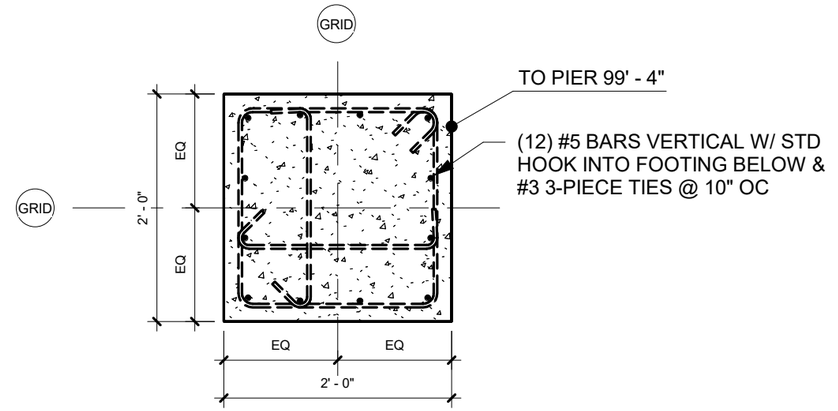
1 PIER P5

3/4" = 1'-0"



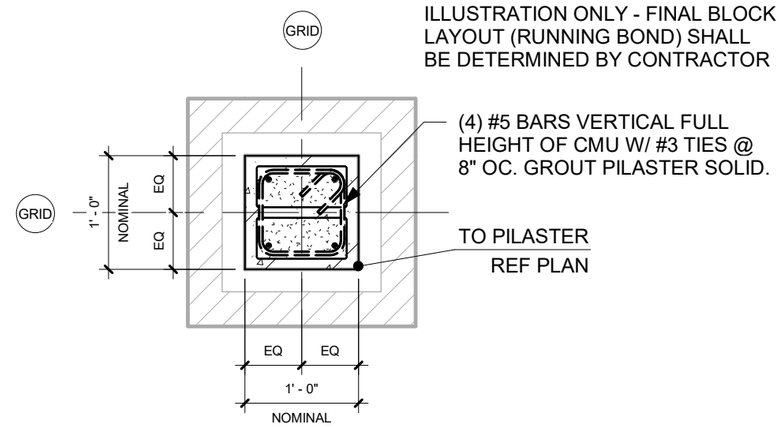
2 PILASTER MP7

3/4" = 1'-0"



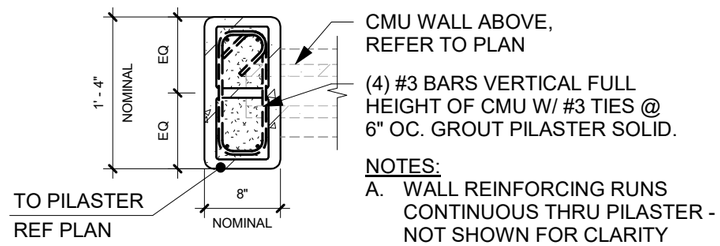
3 PIER P6

3/4" = 1'-0"



4 PILASTER MP2

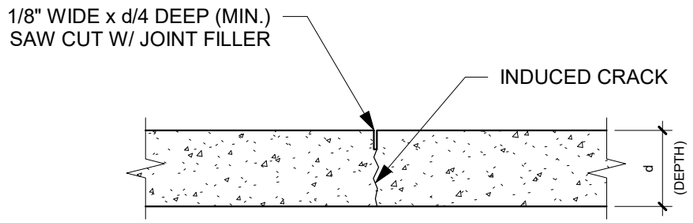
3/4" = 1'-0"



5 PILASTER MP1

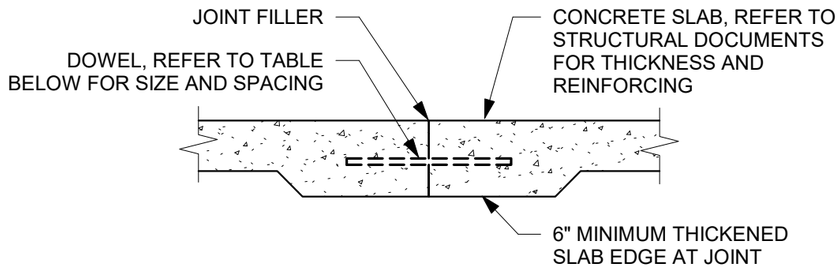
3/4" = 1'-0"

2



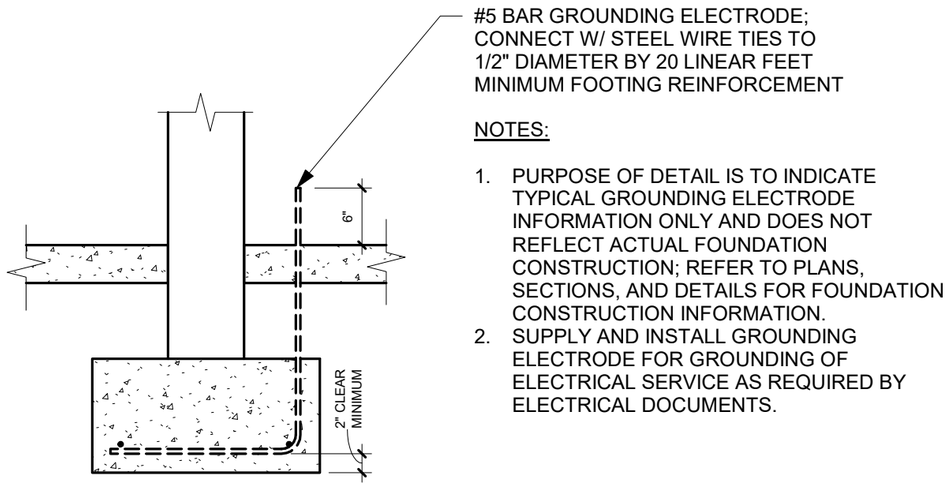
TYPICAL CONTROL JOINT SPACING AND JOINT DEPTH		
REINFORCED SLAB DEPTH	PREFERRED SPACING	CONTROL JOINT DEPTH (MIN.)
4"	8' TO 12'	1"
5"	10' TO 15'	1.25"
6"	12' TO 18'	1.5"
7"	14' TO 21'	1.75"
≥ 8"	16' TO 24'	2"
REFER TO CONTROL JOINT PLACEMENT GUIDE FOR ADDITIONAL CONTROL JOINT INFORMATION.		

1 TYPICAL CONTROL JOINT DETAIL
1" = 1'-0"



DOWEL SIZE AND SPACING FOR CONSTRUCTION JOINTS		
SLAB DEPTH	PLATE DOWEL	PLATE DOWEL SPACING (CENTER-TO-CENTER)
5" TO 6"	M/R*	18"
7" TO 8"	M/R*	18"
9" TO 11"	M/R*	18"
*M/R = MANUFACTURER'S RECOMMENDATIONS. BECAUSE OF THE VARIOUS PLATE DOWEL GEOMETRIES AND INSTALLATION DEVICES AVAILABLE FROM DIFFERENT MANUFACTURERS, THE MANUFACTURERS SHOULD BE CONSULTED FOR THEIR RECOMMENDED PLATE DOWEL SIZE.		

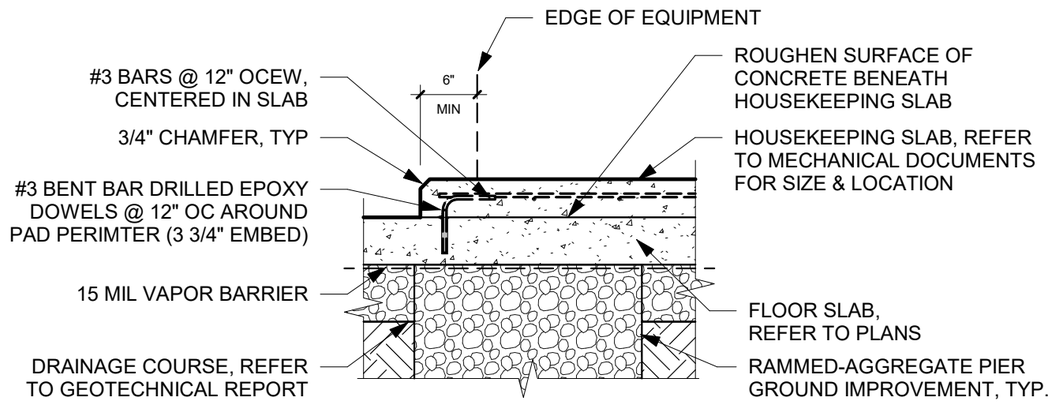
2 TYPICAL CONSTRUCTION JOINT DETAIL
1" = 1'-0"



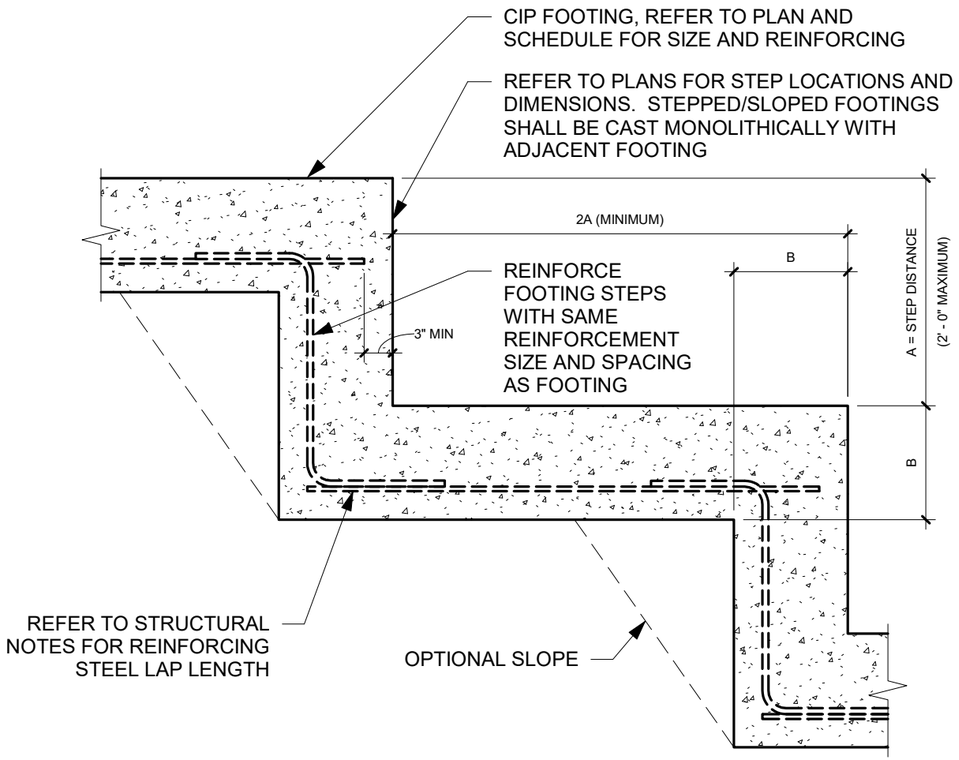
NOTES:

1. PURPOSE OF DETAIL IS TO INDICATE TYPICAL GROUNDING ELECTRODE INFORMATION ONLY AND DOES NOT REFLECT ACTUAL FOUNDATION CONSTRUCTION; REFER TO PLANS, SECTIONS, AND DETAILS FOR FOUNDATION CONSTRUCTION INFORMATION.
2. SUPPLY AND INSTALL GROUNDING ELECTRODE FOR GROUNDING OF ELECTRICAL SERVICE AS REQUIRED BY ELECTRICAL DOCUMENTS.

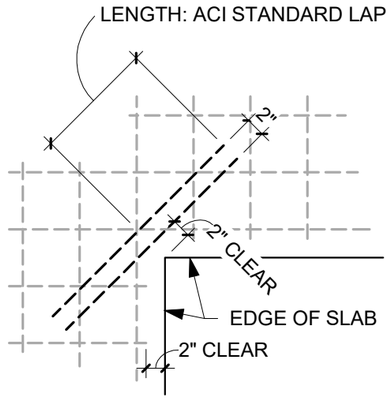
3 GROUNDING ELECTRODE DETAIL
3/4" = 1'-0"



4 TYPICAL HOUSEKEEPING PAD DETAIL
3/4" = 1'-0"



1 STEPPED FOOTING DETAIL
3/4" = 1'-0"

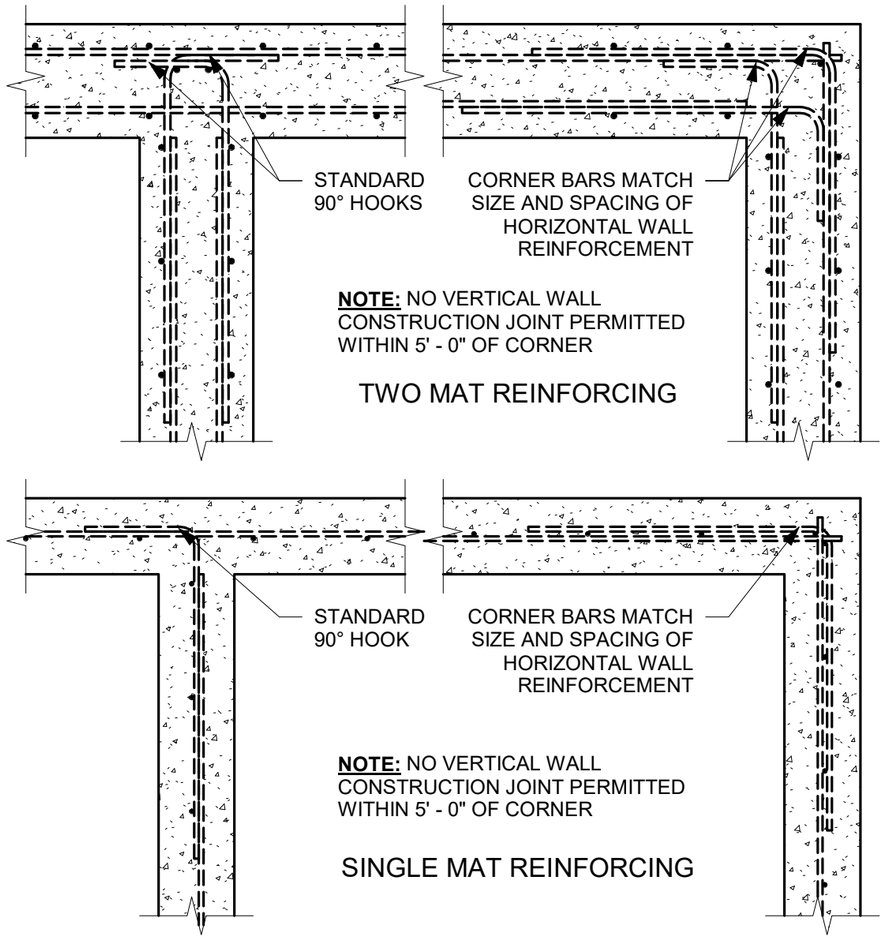


SLAB REINFORCEMENT	ADDITIONAL CORNER BARS
WWF / FIBER	(2) #4
#4	(2) #4
#5	(2) #5
#6	(2) #6
*USE LARGEST DIAMETER BAR IN EITHER DIRECTION FOR DETERMINING CORNER BARS.	

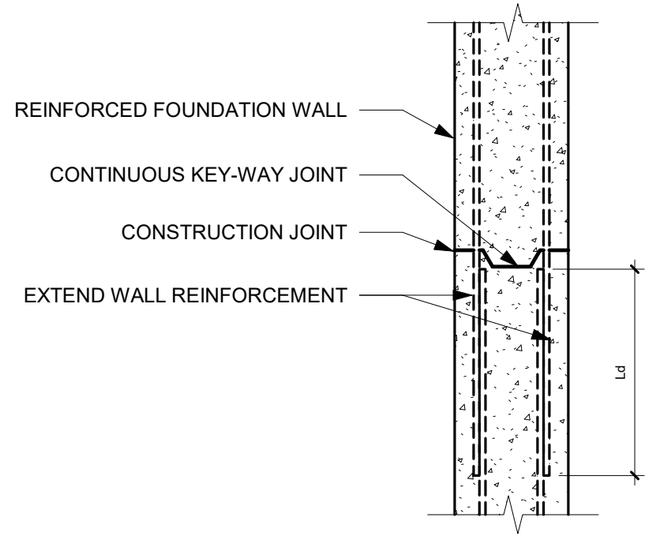
NOTE:
PROVIDE 2" CLEAR COVER OVER ALL BARS AT OPENINGS

ADDITIONAL CORNER BARS:
- WHEN SLAB HAS BOTTOM REINFORCEMENT LAYER ONLY, PLACE DIAGONAL BARS AT MID-DEPTH.
- WHEN SLAB HAS TOP REINFORCEMENT LAYER ONLY, PLACE DIAGONAL BARS BELOW TOP REINFORCEMENT.
- WHEN SLAB HAS TOP & BOTTOM REINFORCEMENT LAYERS, PLACE DIAGONAL BARS BETWEEN TOP & BOTTOM REINFORCEMENT (2-LAYERS)

2 SLAB REENTRANT CORNER DETAIL
3/4" = 1'-0"



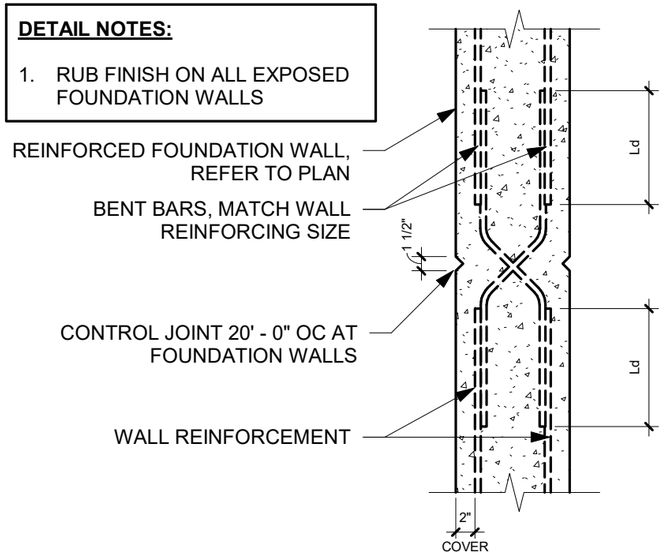
1 TYPICAL WALL CORNER REINFORCEMENT
3/4" = 1'-0"



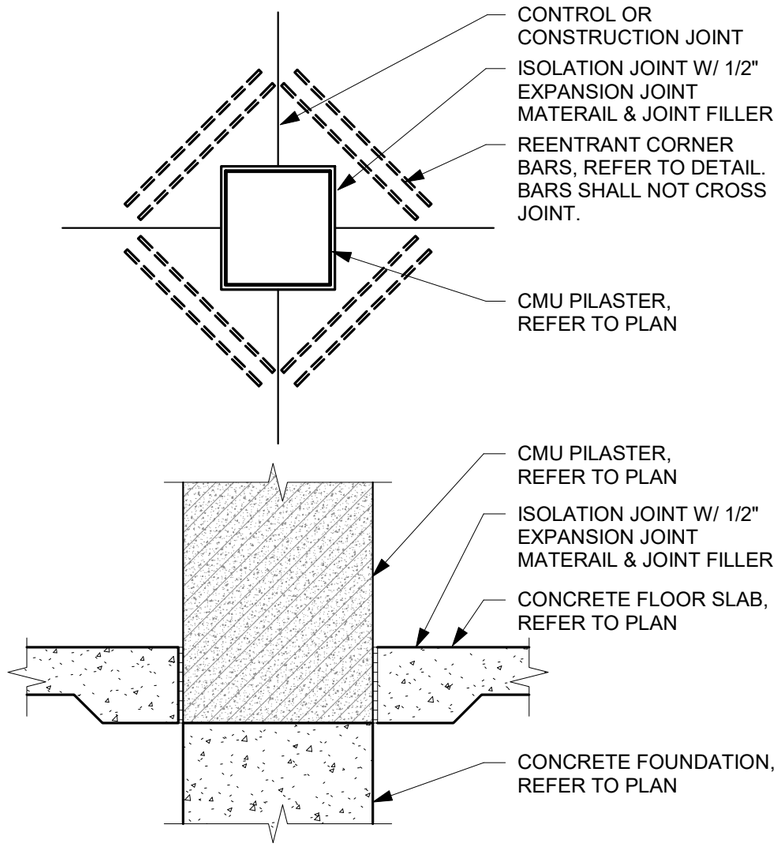
2 CIP CONCRETE
CONSTRUCTION JOINT DETAIL
3/4" = 1'-0"

DETAIL NOTES:

1. RUB FINISH ON ALL EXPOSED FOUNDATION WALLS

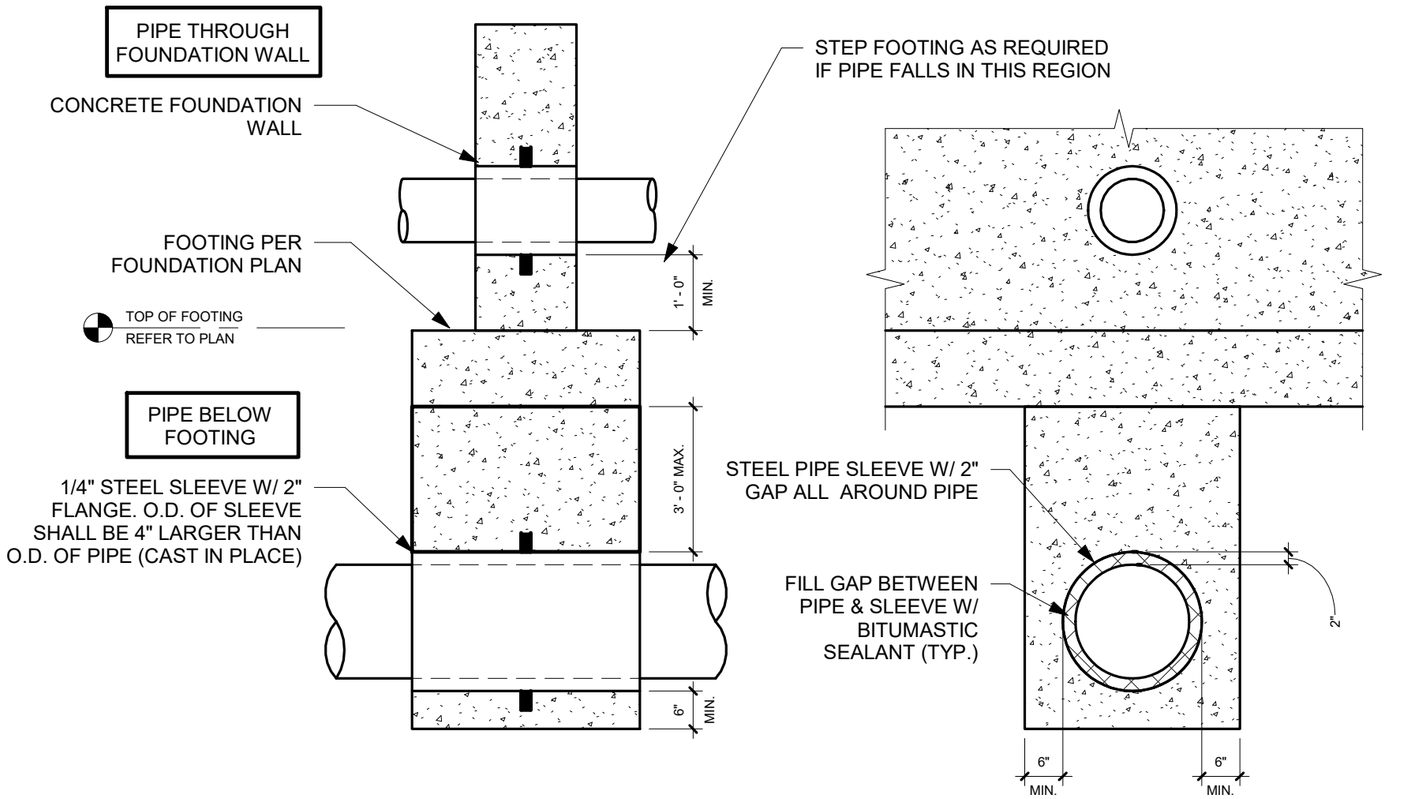


3 CIP CONCRETE
CONTROL JOINT DETAIL
3/4" = 1'-0"



1 TYPICAL ISOLATION JOINT DETAIL

3/4" = 1'-0"

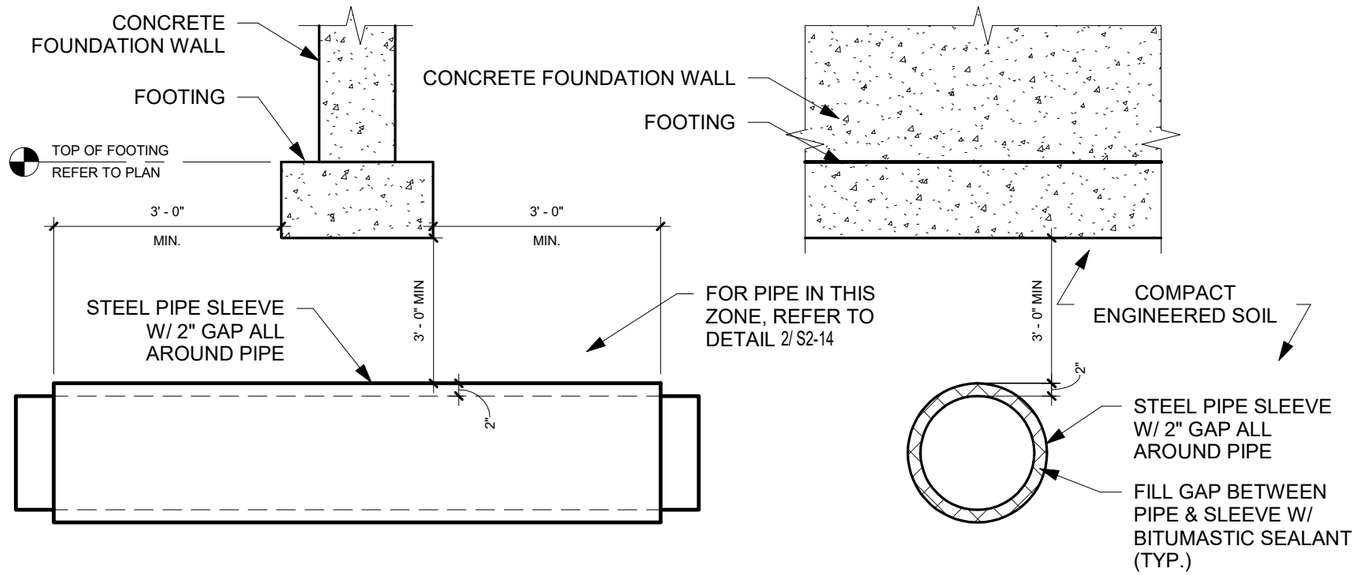


2 MECHANICAL LINE UNDER FOOTING DETAIL

1/2" = 1'-0"

DETAIL NOTES:

1. COORDINATE LOCATION OF PIPES W/ CIVIL & MECHANICAL DRAWINGS.
2. PIPES THROUGH FOOTING ARE NOT PERMITTED. STEP FOOTING AS REQUIRED

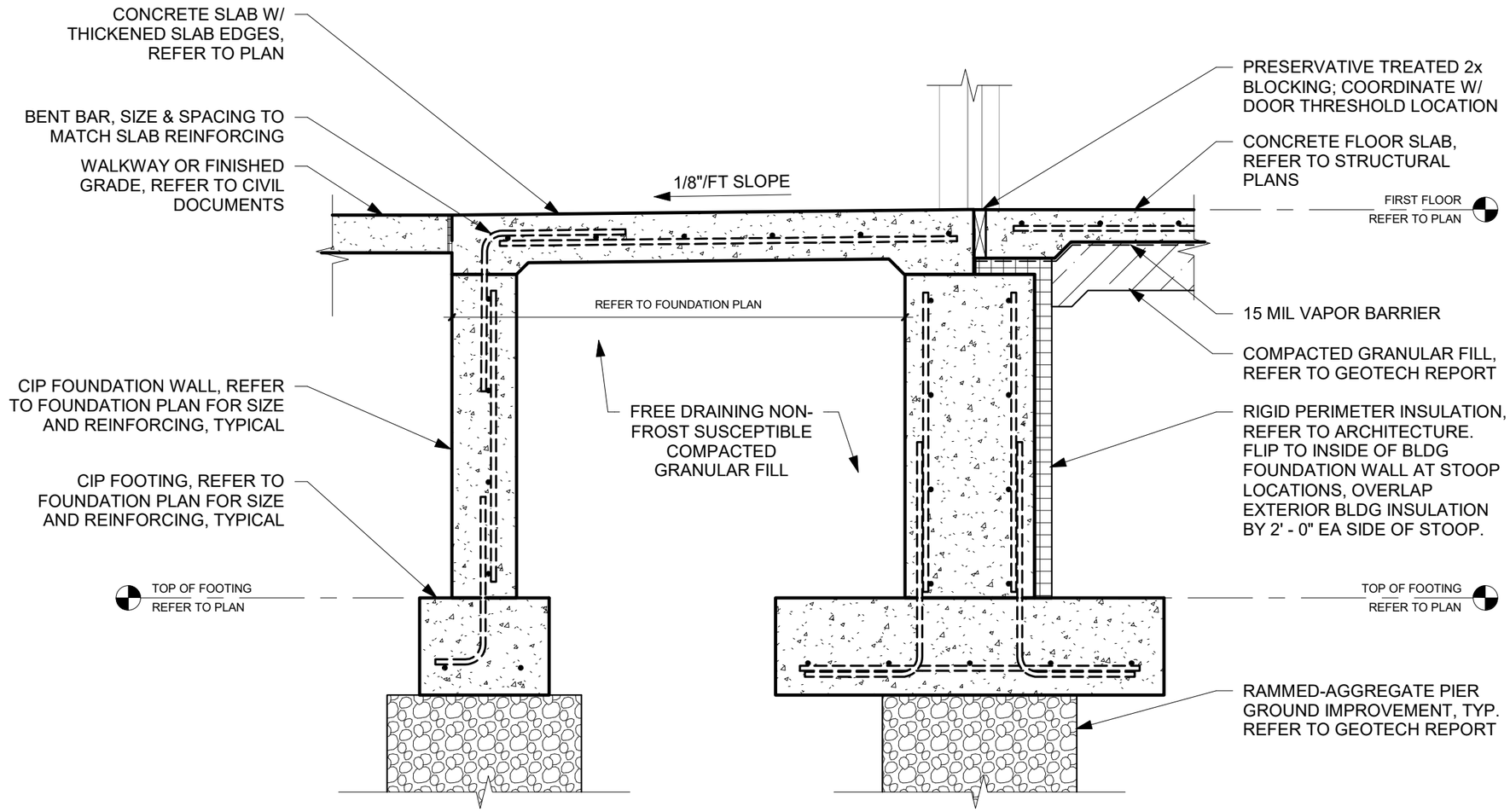


1 MECHANICAL LINE OVER 3' UNDER FOOTING DETAIL
1/2" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FOUNDATION & SLAB DETAILS	SHEET NO: S2-15

PLOT DATE: 1/26/2024 2:27:37 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2

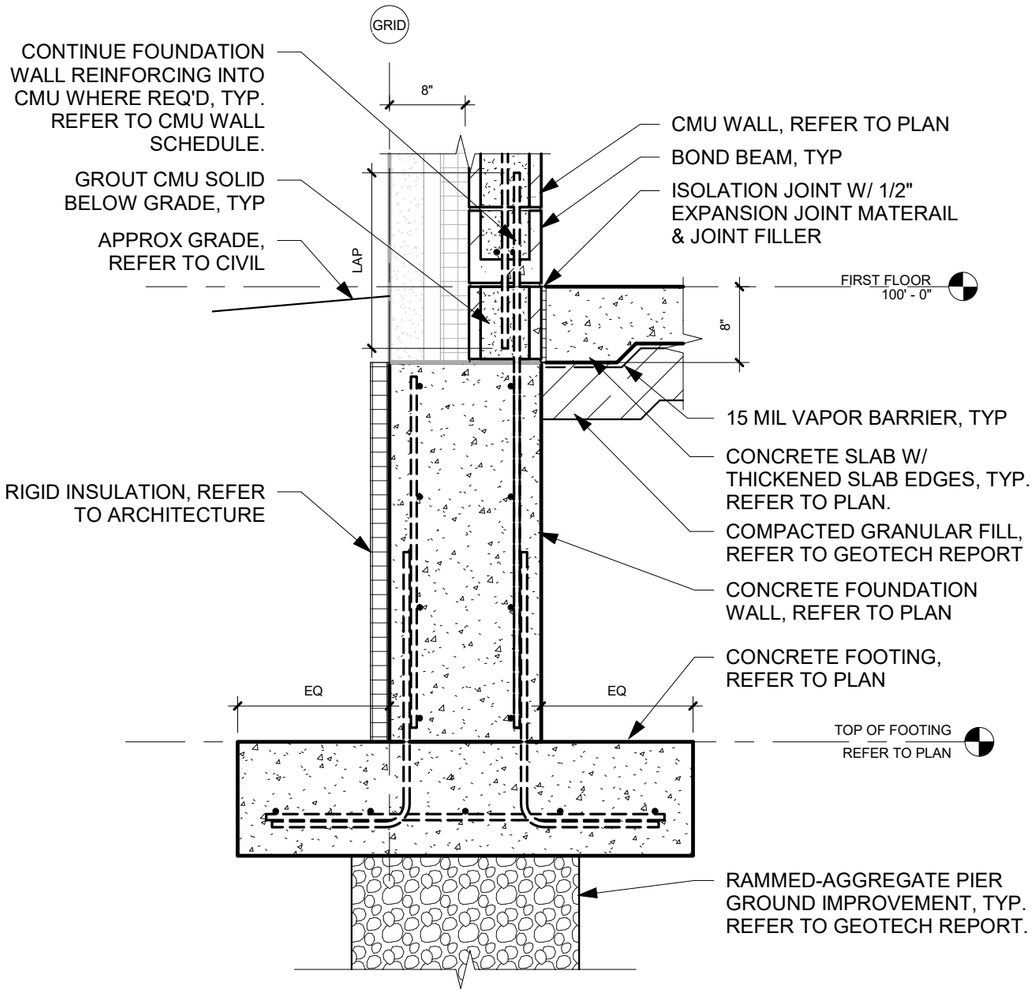


1 TYPICAL CIP STOOP DETAIL
3/4" = 1'-0"

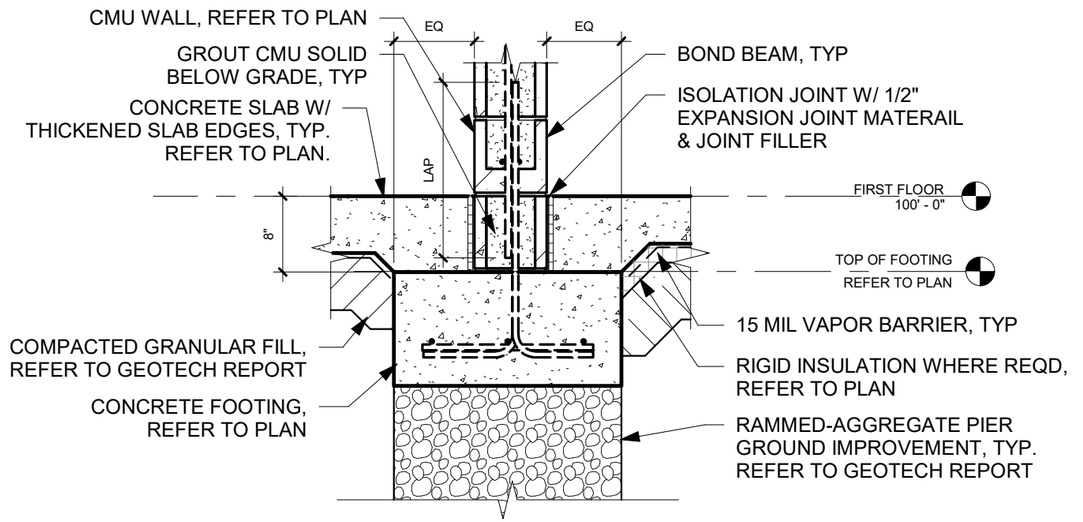
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FOUNDATION & SLAB DETAILS	SHEET NO: S2-16

PLOT DATE: 1/26/2024 2:27:37 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

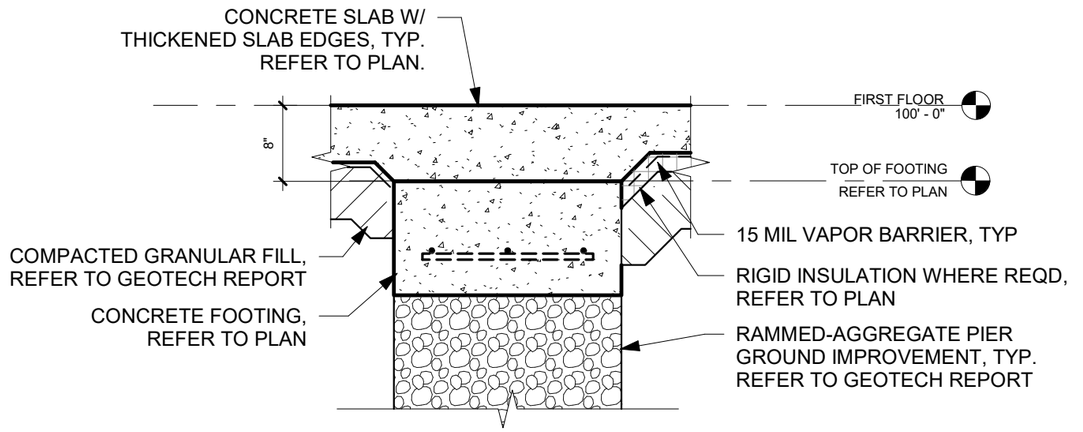
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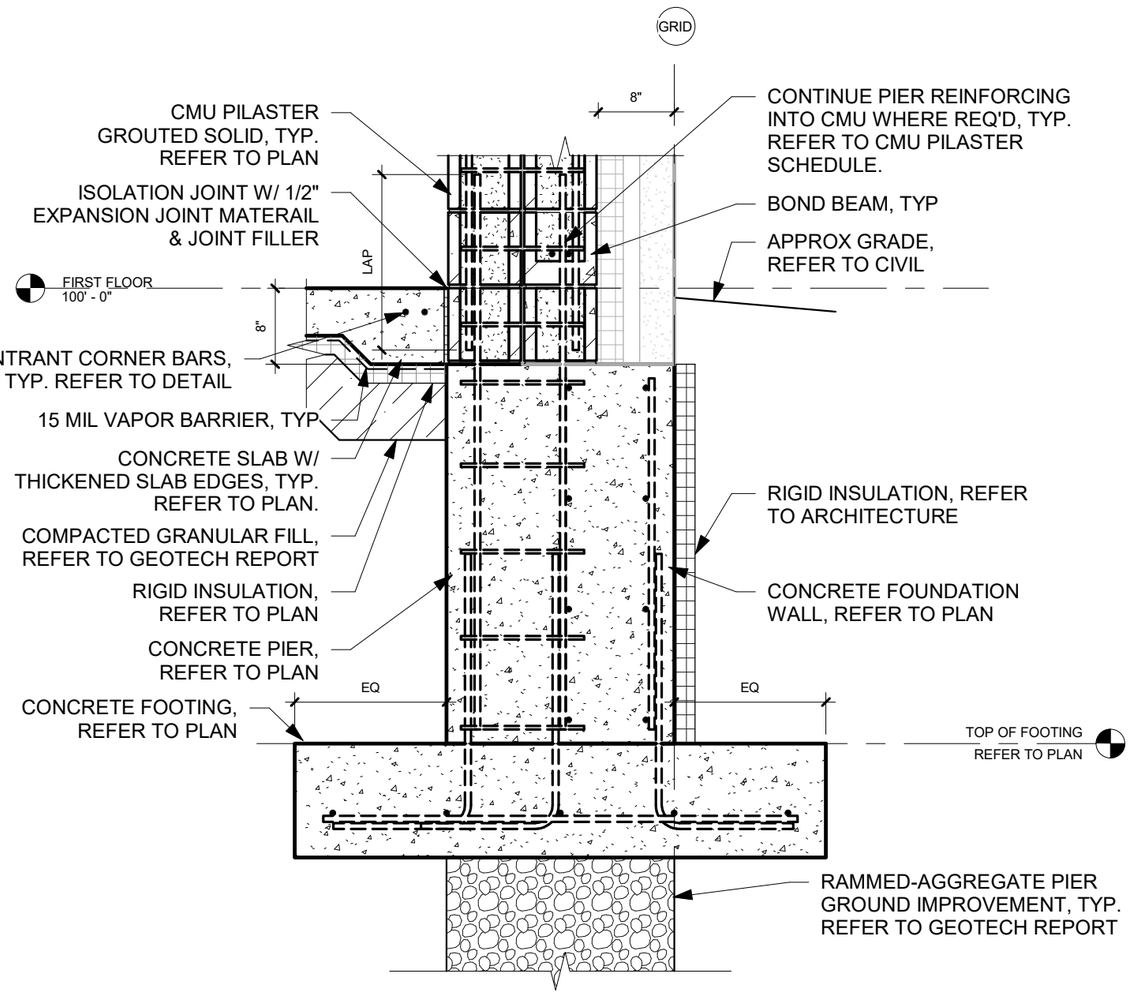
1 PERIMETER FOUNDATION WALL - TYPICAL
3/4" = 1'-0"



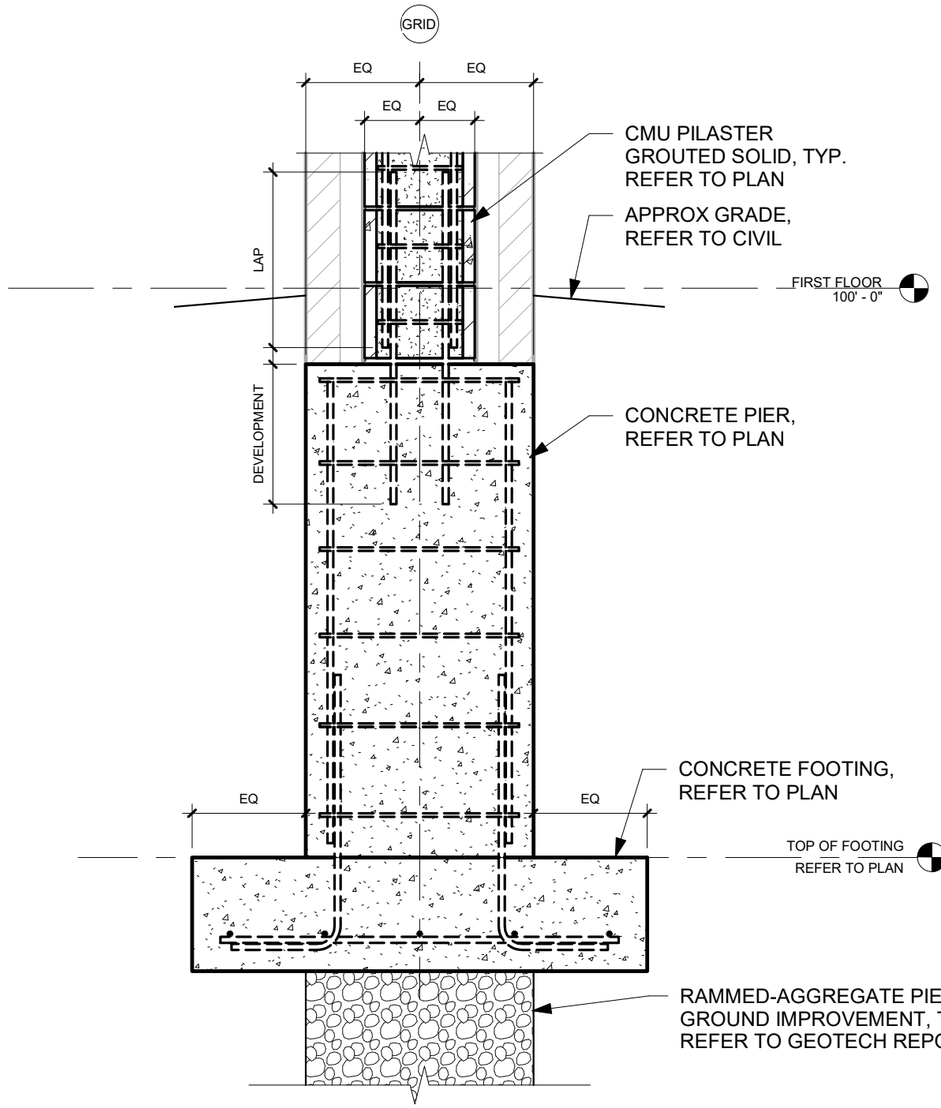
2 INTERIOR WALL FOOTING TYPICAL
3/4" = 1'-0"



3 INTERIOR SLAB POUR THRU TYPICAL
3/4" = 1'-0"

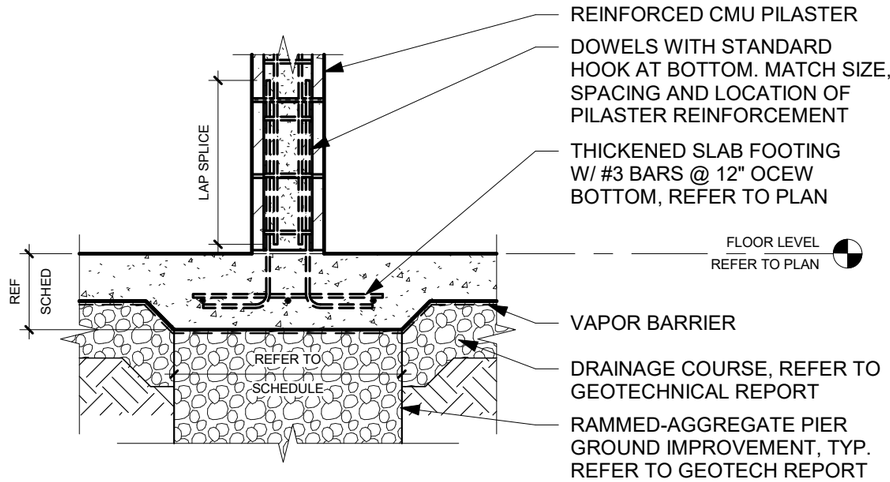


1 PERIMETER PIER - TYPICAL
3/4" = 1'-0"



2 EXTERIOR PIER - TYPICAL
3/4" = 1'-0"

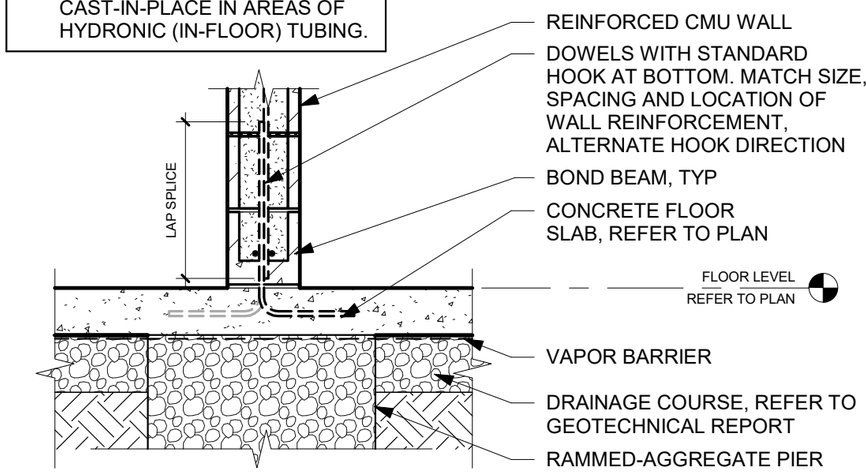
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1 8" CMU PILASTER BASE DETAIL

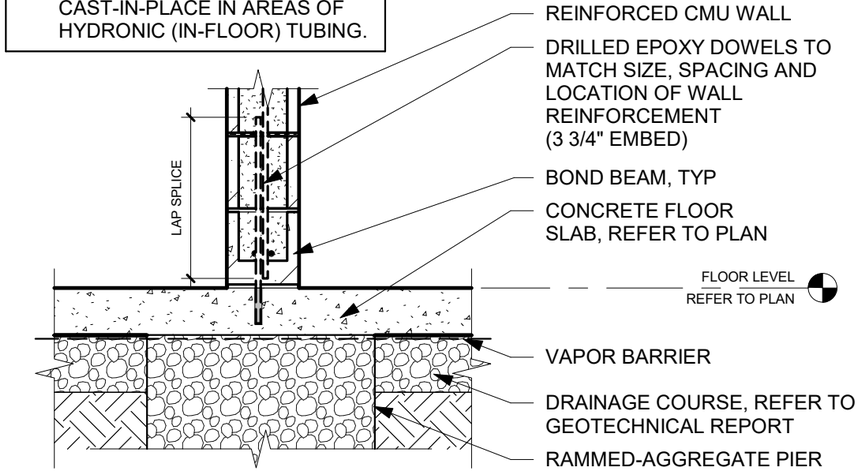
3/4" = 1'-0"

NOTE:
A. WALL REINFORCING SHALL BE CAST-IN-PLACE IN AREAS OF HYDRONIC (IN-FLOOR) TUBING.



CAST-IN-PLACE

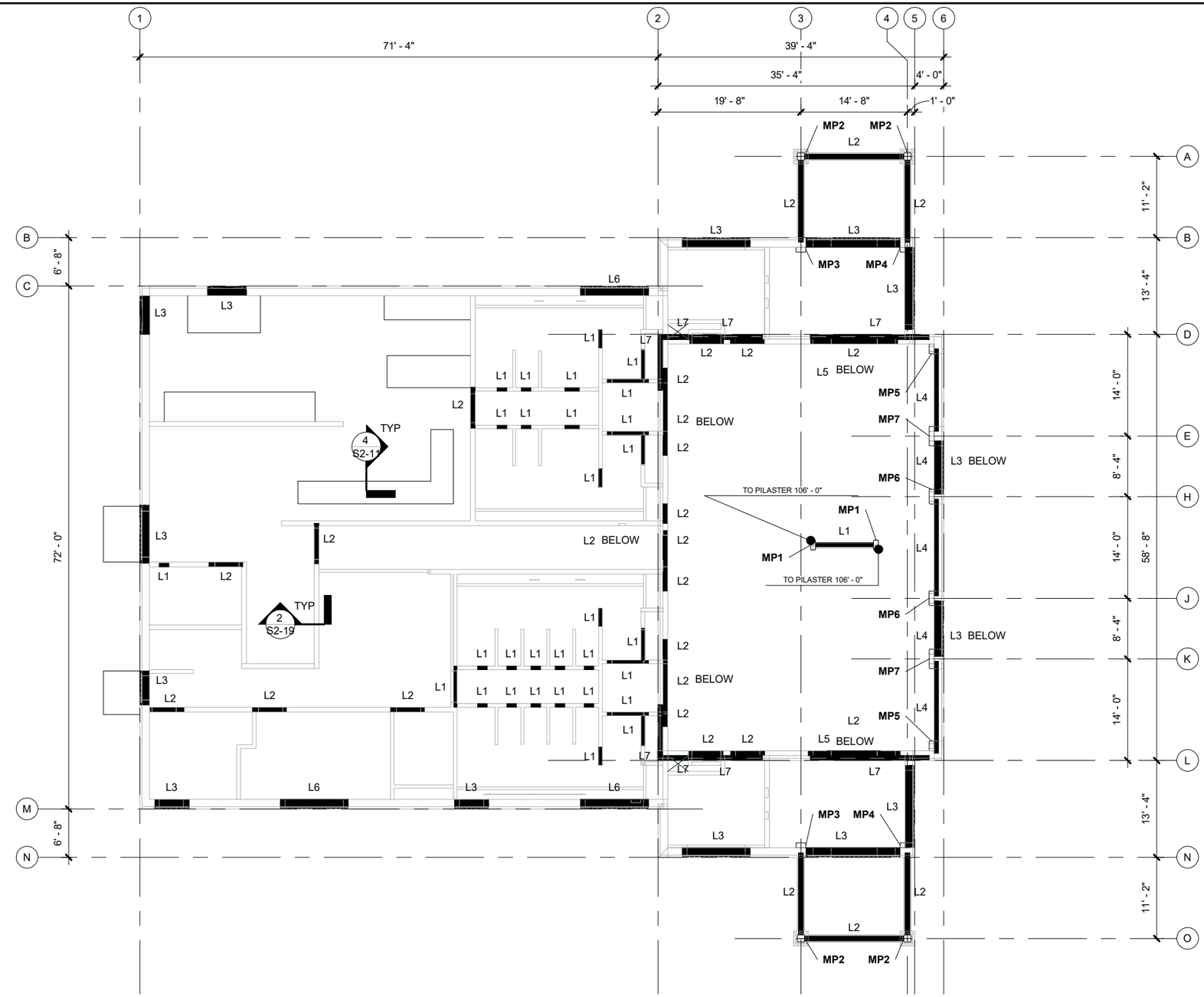
NOTE:
A. WALL REINFORCING SHALL BE CAST-IN-PLACE IN AREAS OF HYDRONIC (IN-FLOOR) TUBING.



POST INSTALLED

2 NON-BEARING CMU WALL BASE DETAIL TYPICAL

3/4" = 1'-0"

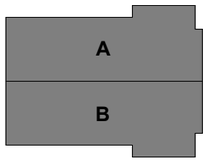


SHEET NOTES

A. ALL EQUIPMENT, PIPING, AND DUCTWORK SHALL BE ROUTED TO AVOID CONFLICTS WITH STRUCTURE, OTHER EQUIPMENT, ETC. UNLESS SPECIFICALLY DIMENSIONED, ANY PIPING AND DUCTWORK SHOWN INDICATE GENERAL LOCATION ONLY. CONTRACTOR SHALL COORDINATE. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS.

B. CONTINUOUS HORIZONTAL BOND BEAMS SHALL BE PROVIDED AT THE BOTTOM AND TOP OF WALLS, TYPICAL.

C. TOP OF MASONRY PILASTERS SHALL MATCH TRUSS BEARING ELEVATION, TYP UNO. REFER TO ROOF FRAMING PLAN.



KEYPLAN

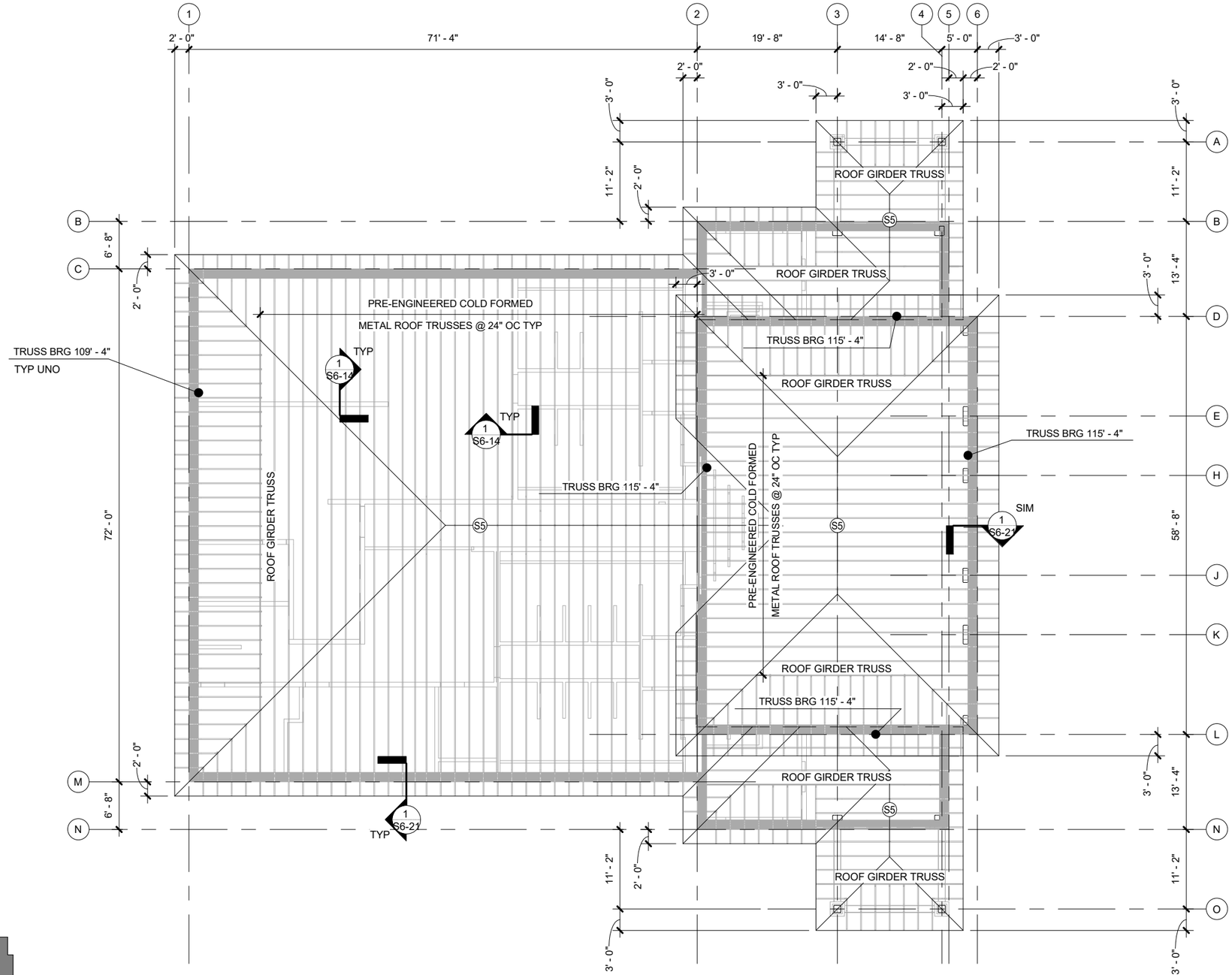
1 LINTEL LAYOUT PLAN

1/16" = 1'-0"

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	LINTEL LAYOUT PLAN	SHEET NO: S3-11

PLOT DATE: 1/26/2024 2:27:43 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



SHEET NOTES

A. CONTINUOUS HORIZONTAL BOND BEAMS SHALL BE PROVIDED AT THE BOTTOM AND TOP OF WALLS, TYPICAL.

B. ALL ROOF TRUSSES SHALL BE PRE-ENGINEERED COLD FORMED METAL ROOF TRUSSES SPACED AT 24" OC MAX.

C. REFER TO ARCHITECTURAL DOCUMENTS FOR TRUSS HEEL HEIGHT REFERENCE.

D. ROOF TRUSS DESIGN, LAYOUT, BRACING, BRIDGING, AND ATTACHMENT TO CMU BEARING WALLS BY COLD-FORMED METAL TRUSS SUPPLIER. COORDINATE TRUSS ATTACHMENT W/ MASONRY CONTRACTOR.

E. REFER TO STRUCTURAL NOTES FOR ALL LOADING REQUIREMENTS. UNBALANCED SNOW LOADS SHALL BE CONSIDERED IN TRUSS DESIGN.

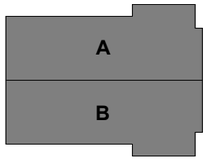
F. WALLS PERMITED TO BE USED FOR STRUCTURAL LOAD BEARING PURPOSES ARE INDICATED BY SOLID HATCH.

G. DECK SUPPORT AT LOCATIONS WHERE THE STEEL DECK CHANGES DIRECTION AND AT UNSUPPORTED STEEL DECK EDGES, SUCH AS AT VALLEYS, HIPS, EAVES, RIDGES, PENETRATIONS AND OPENINGS SHALL BE ACCOUNTED FOR. THE STEEL ROOF DECK SUPPLIER SHALL PROVIDE ADDITIONAL BENT PLATES AS REQUIRED TO PROVIDE ADEQUATE DECK BEARING AT THESE LOCATIONS.

H. ALL EQUIPMENT, PIPING, AND DUCTWORK SHALL BE ROUTED TO AVOID CONFLICTS WITH STRUCTURE, OTHER EQUIPMENT, ETC. UNLESS SPECIFICALLY DIMENSIONED, ANY PIPING AND DUCTWORK SHOWN INDICATE GENERAL LOCATION ONLY. CONTRACTOR SHALL COORDINATE. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS.

KEYNOTE LEGEND

S5	1 1/2" TYPE B 22 GA GR 50 GALVANIZED G60 METAL DECK. SPAN DIRECTION SHALL BE PERPENDICULAR TO ROOF TRUSSES.



KEYPLAN

1 ROOF FRAMING PLAN

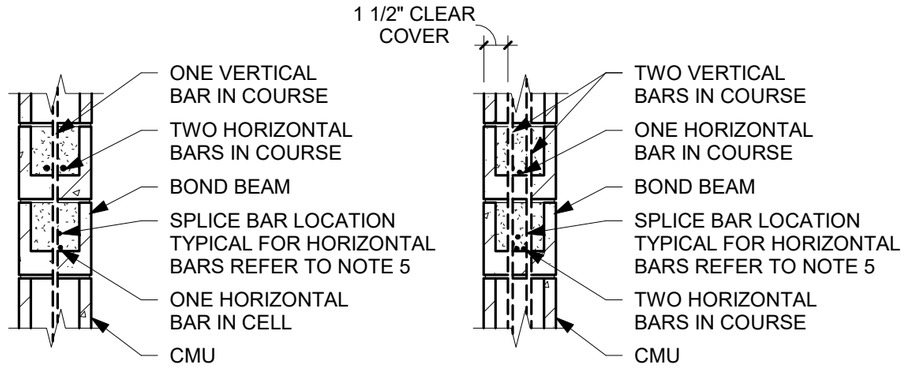
1/16" = 1'-0"

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ROOF FRAMING PLAN	SHEET NO: S4-11

PLOT DATE: 1/26/2024 2:27:43 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

CMU LAP SPLICE AND TENSION EMBEDMENT LENGTH (f'm = 2000 PSI & fy = 60 ksi)			
SCHEDULED REINFORCEMENT CONDITION	BAR SIZE		
	#3	#4	#5
ONE BAR IN CELL OR COURSE (NOTE 1)	18"	24"	30"
TWO BARS IN CELL OR COURSE	18"	24"	30"



REINFORCEMENT CONDITIONS

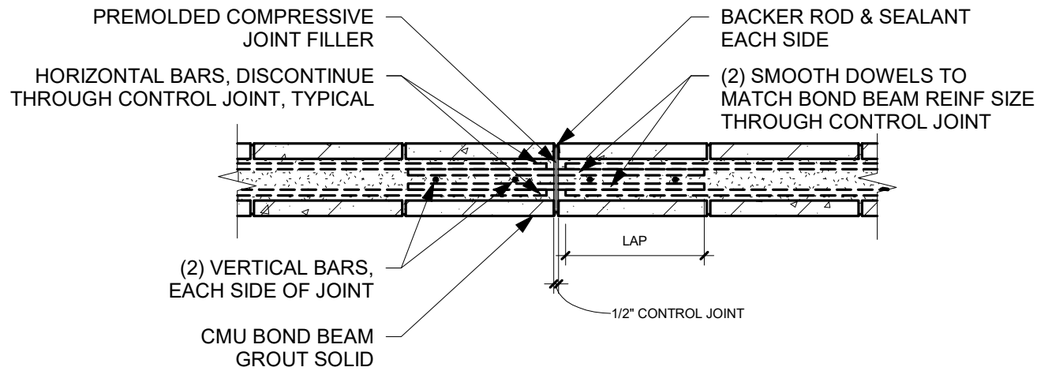
DETAIL NOTES:

1. FOR 6" AND 8" WALLS WITH ONE HORIZONTAL BAR IN COURSE, USE SPLICE LENGTHS FOR TWO BARS IN CELL OR COURSE
2. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS CONTAINING TWO BARS PER COURSE SHALL BE STAGGERED
3. WHERE BARS OF DIFFERENT SIZES ARE TO BE SPLICED. THE SPLICE LENGTH SHALL BE THAT REQUIRED FOR THE LARGEST
4. REFER TO TYPICAL REBAR LAYOUT DETAIL FOR MINIMUM CLEAR COVER TO INSIDE OF FACESHELL
5. SPLICES OF HORIZONTAL REINFORCEMENT SHOULD BE PLACED VERTICALLY OVER MAIN BAR

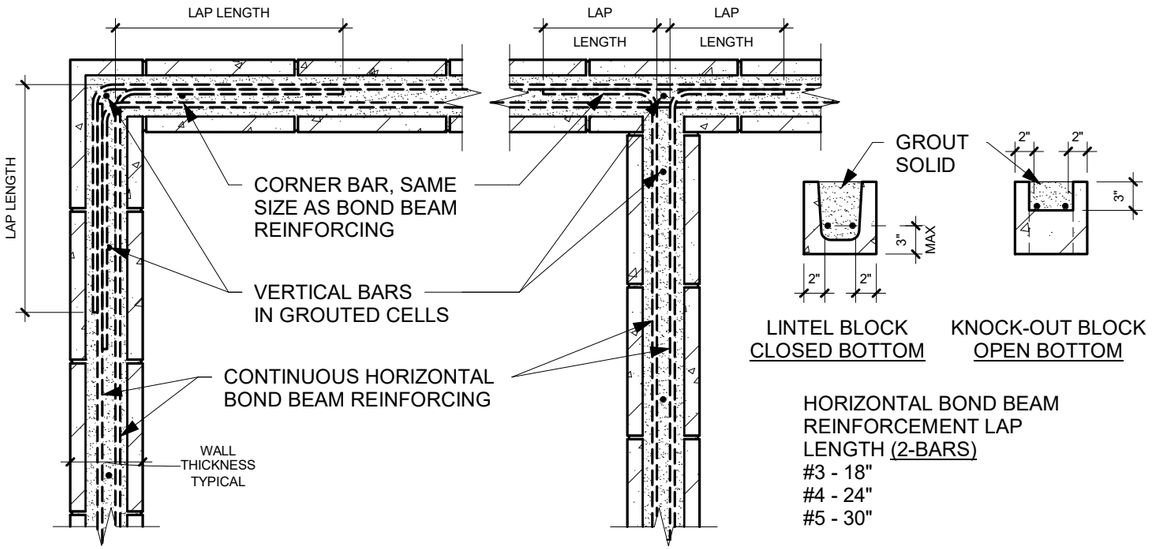
1 REINFORCEMENT CONDITIONS
3/4" = 1'-0"

DETAIL NOTES:

1. RAKE OUT CONTROL JOINT TO ENSURE THAT IT IS NOT CONTAMINATED WITH MORTAR OR DEBRIS



2 BOND BEAM CONTROL JOINT DETAIL
3/4" = 1'-0"



NOTE:

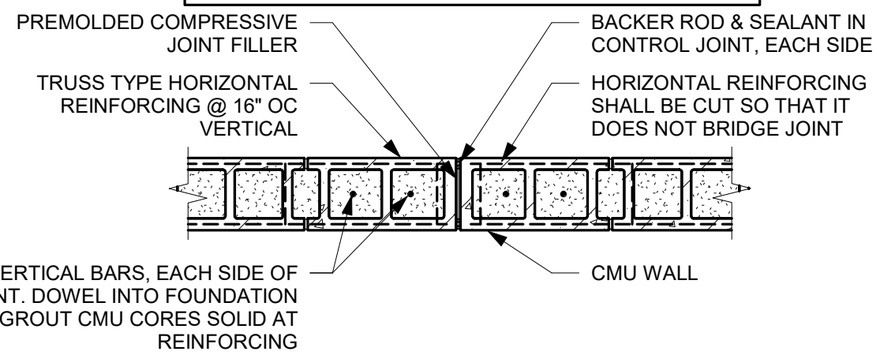
1. VERTICAL REINFORCEMENT CONTINUOUS THROUGH INTERMEDIATE BOND BEAMS AND 6" MINIMUM INTO TOP BOND BEAM, OR AS SHOWN ON OTHER SECTIONS AND DETAILS.
2. AT 6" CMU BOND BEAMS ONLY (1) HORIZONTAL BAR REQUIRED. USE LAP LENGTH FOR 2-BARS IN CELL.

4 TYPICAL CMU BOND BEAM REINFORCING DETAILS
3/4" = 1'-0"

2

DETAIL NOTES:

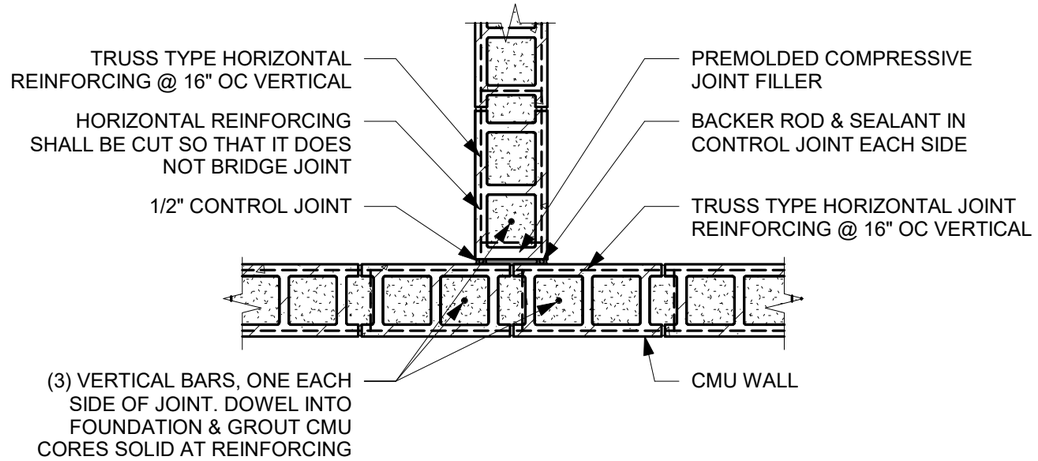
1. RAKE OUT CONTROL JOINT TO ENSURE THAT IT IS NOT CONTAMINATED WITH MORTAR OR DEBRIS



1 CMU CONTROL JOINT DETAIL
3/4" = 1'-0"

DETAIL NOTES:

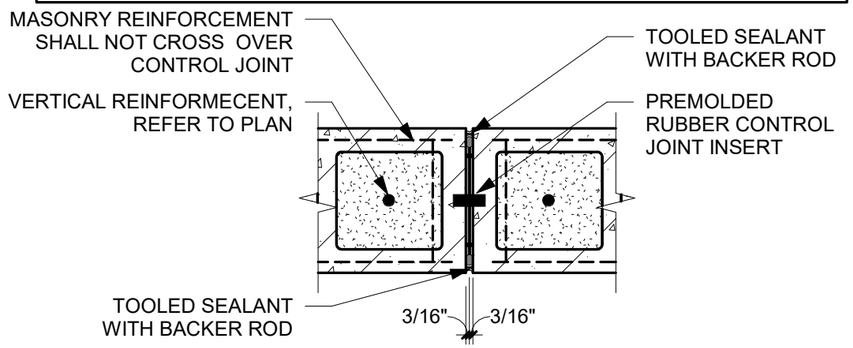
1. RAKE OUT CONTROL JOINT TO ENSURE THAT IT IS NOT CONTAMINATED WITH MORTAR OR DEBRIS



2 CMU CORNER CONTROL JOINT DETAIL
3/4" = 1'-0"

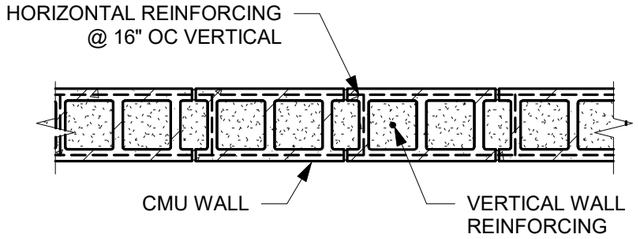
DETAIL NOTES:

1. PROVIDE AT ALL CONCRETE FLOOR COLD JOINTS & SAWCUTS.
2. RAKE OUT CONTROL JOINT TO ENSURE THAT IT IS NOT CONTAMINATED WITH MORTAR OR DEBRIS.

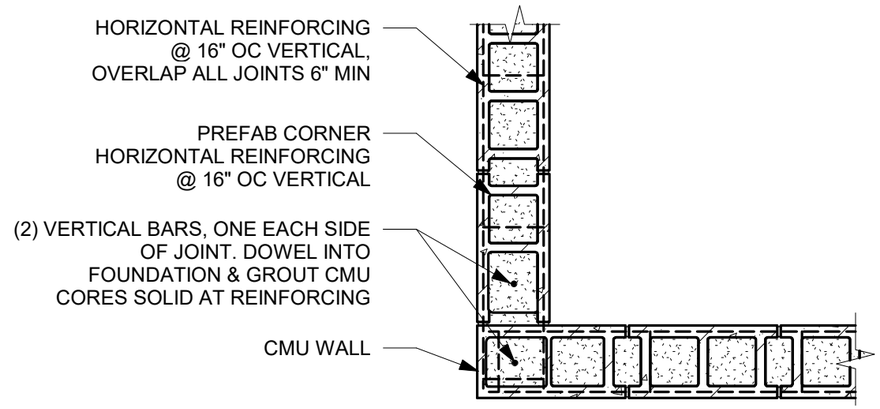


3 ENLARGED CONTROL JOINT DETAIL
1 1/2" = 1'-0"

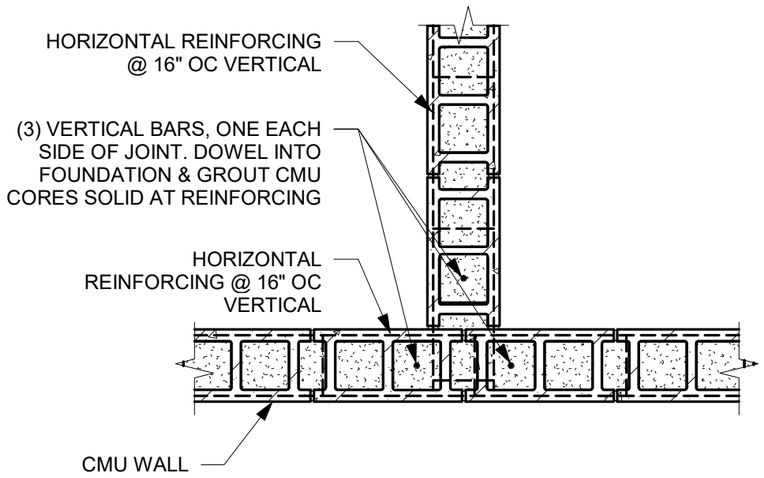
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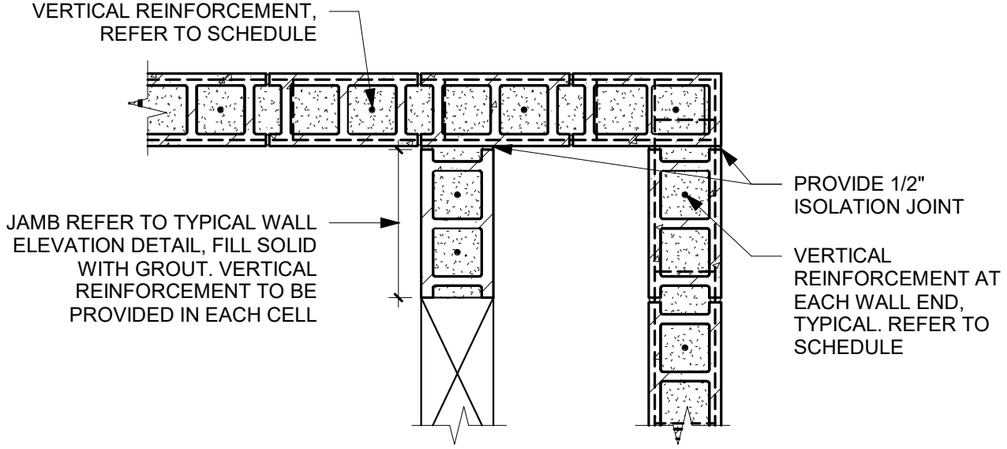
1 CMU HORIZONTAL REINFORCING DETAIL
3/4" = 1'-0"



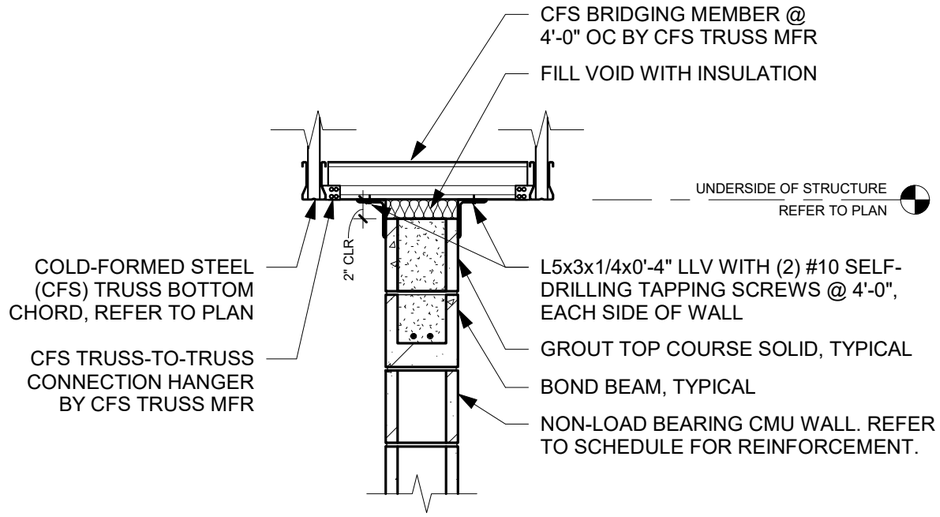
2 CMU CORNER HORIZONTAL REINFORCING PLAN DETAIL
3/4" = 1'-0"



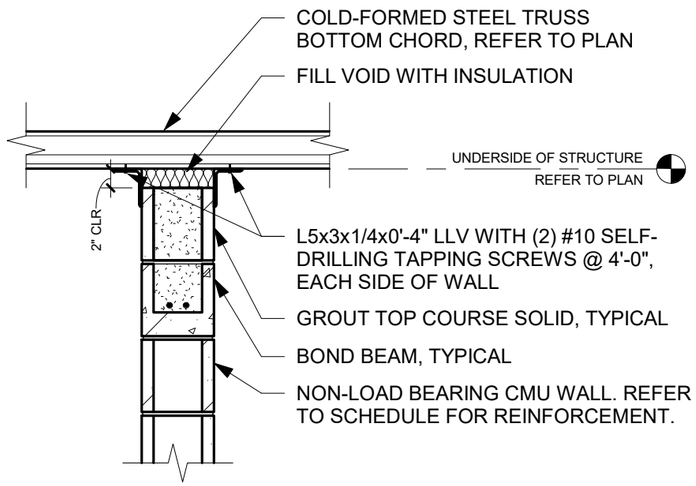
3 CMU INTERSECTING WALL HORIZONTAL REINFORCING DETAIL
3/4" = 1'-0"



4 TYPICAL FULL HEIGHT MASONRY WALL INTERSECTION DETAIL
3/4" = 1'-0"

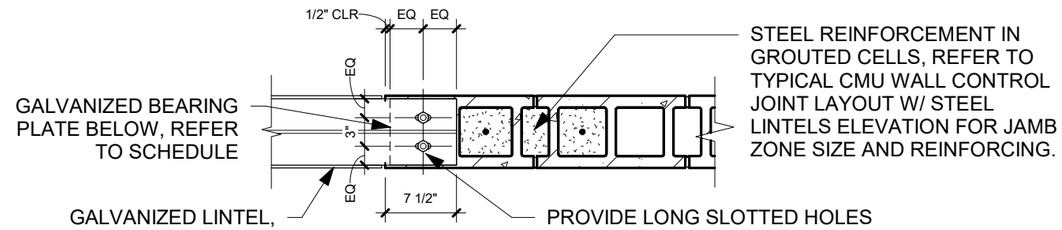


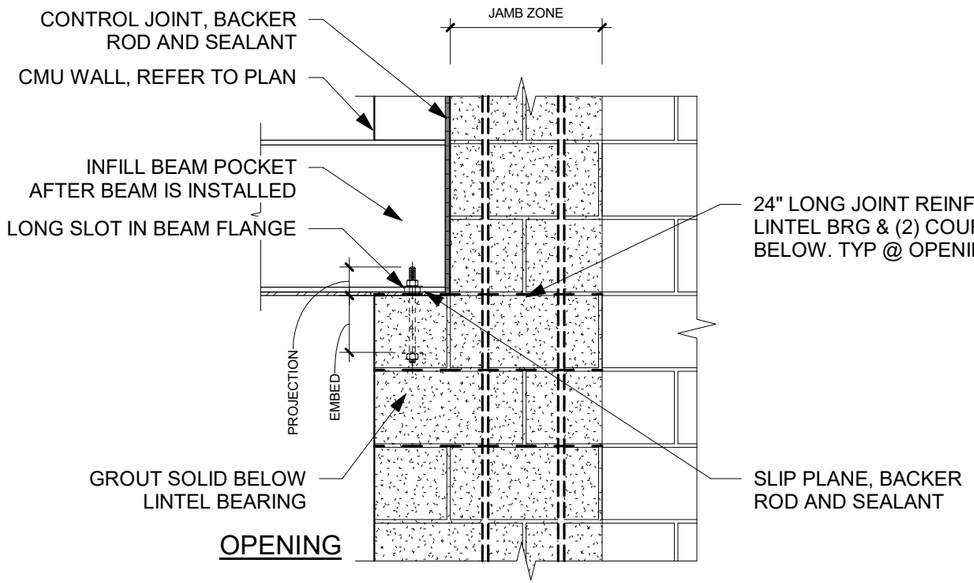
PARALLEL TO TRUSS



PERPENDICULAR TO TRUSS

1 NON-BEARING CMU PARTITION WALL BRACING
3/4" = 1'-0"





GALVANIZED BEARING PLATE SCHEDULE

NOMINAL CMU SIZE	PLATE SIZE	GALVANIZED ANCHOR BOLTS	PROJECTION
8"	PL3/8x7x0'-7"	(2) 5/8" DIA x 6" EMBED	3"

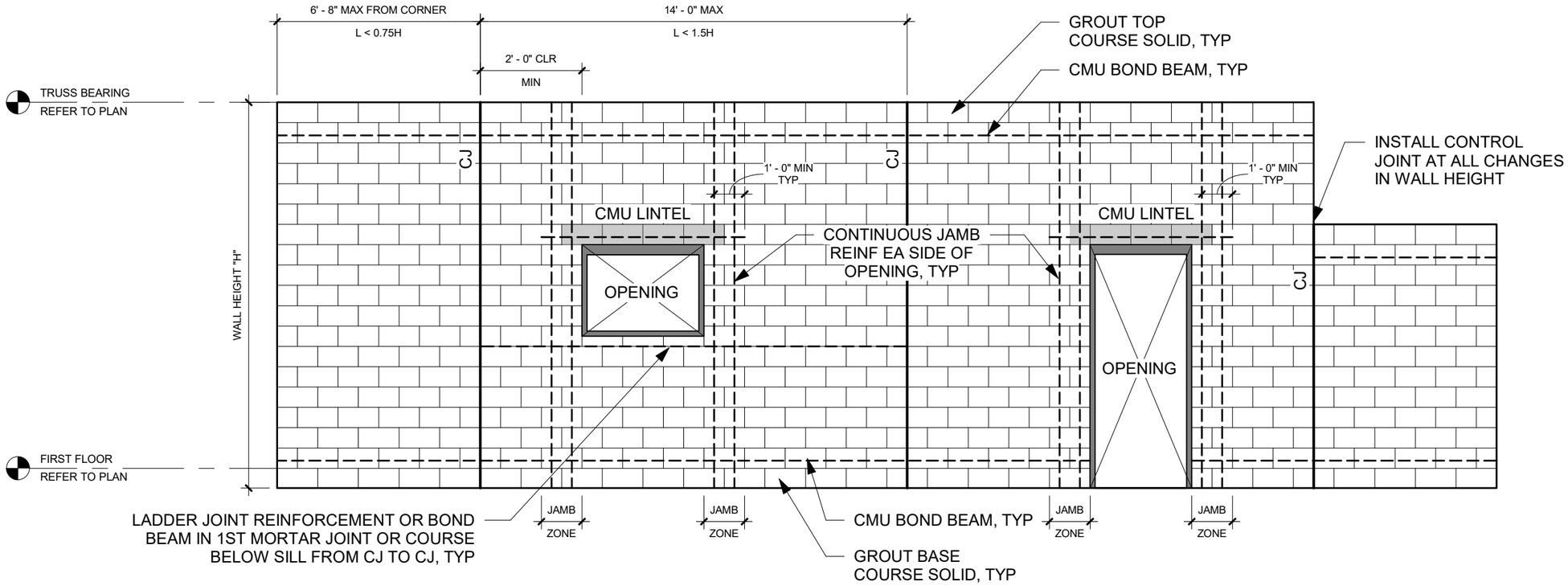
NOTES:
A. PROVIDE LONG SLOTTED HOLES IN BEAM FLANGE FOR ANCHOR BOLTS.
B. NUTS TO BE LEFT LOOSE TO ALLOW FOR IN-PLANE MOVEMENT.
C. DO NOT WELD LINTEL TO BEARING PLATE (TYP BOTH SIDES).
D. STEEL BEAM SHALL HAVE SLOTS IN BOTTOM FLANGES TO ALLOW FOR IN-PLANE MOVEMENT.

2 STEEL BEAM SLIP CONNECTIONS
3/4" = 1'-0"

2

DETAIL NOTES:

1. FOR WALL INFORMATION NOT SHOWN, REFER TO CMU WALL CONTROL JOINT LAYOUT W/ **STEEL** LINTELS
2. CJ - CONTROL JOINT (LOCATED AWAY FROM EDGE OF WALL OPENINGS)
3. HORIZONTAL MASONRY JOINT TO BE INTERRUPTED AT CONTROL JOINT
4. ALL BAR REINFORCEMENT SHALL BE CORES GROUTED SOLID
5. CONTRACTOR TO PROVIDE SEALANT AND FIRE-SAFING AT RATED WALL CONTROL JOINT
6. REFER TO LINTEL SCHEDULE FOR LINTEL INFORMATION
7. JAMB ZONES SHALL BE REINFORCED AS FOLLOWS, REINFORCING NOTED SHALL EXTEND FULL HEIGHT OF WALL
   A. OPENINGS LESS THAN 4' - 0" WIDE SHALL BE REINFORCED WITH (1) FULLY GROUT-FILLED CELL CONTAINING (1) #5 BAR
   B. OPENINGS 4' - 0" TO 8' - 0" WIDE SHALL BE REINFORCED WITH (2) FULLY GROUT-FILLED CELLS CONTAINING (1) #5 BAR
   C. OPENINGS 8' - 0" TO 14' - 0" WIDE SHALL BE REINFORCED WITH (3) FULLY GROUT-FILLED CELLS CONTAINING (1) #5 BAR

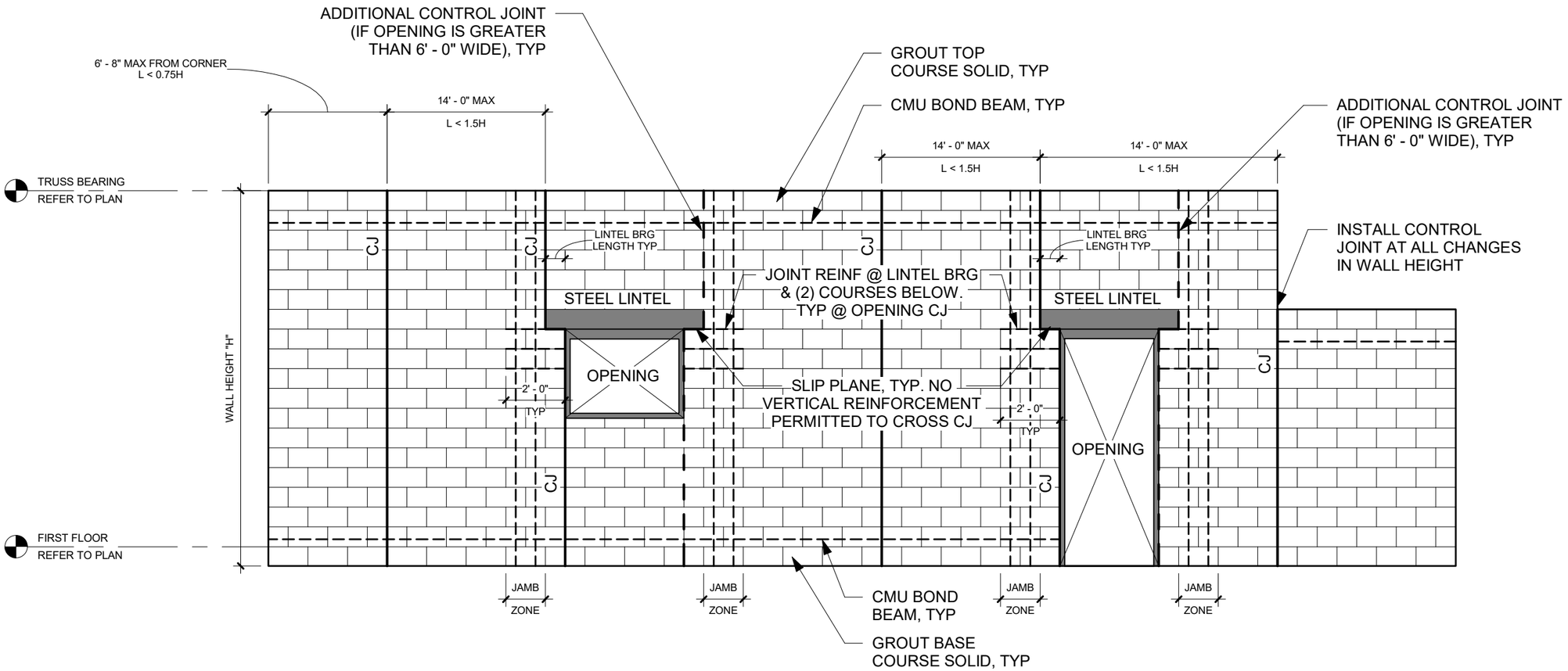


1 CMU WALL CONTROL JOINT LAYOUT W/ CMU LINTELS
1/4" = 1'-0"

2

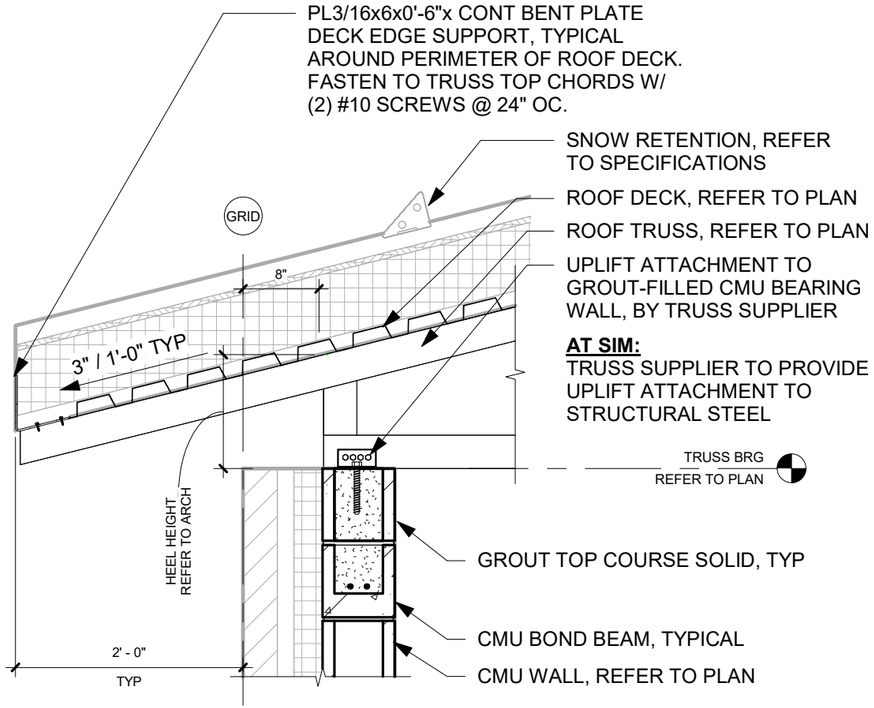
DETAIL NOTES:

1. FOR WALL INFORMATION NOT SHOWN, REFER TO CMU WALL CONTROL JOINT LAYOUT W/ **STEEL** LINTELS
2. CJ - CONTROL JOINT (LOCATED AWAY FROM EDGE OF WALL OPENINGS)
3. HORIZONTAL MASONRY JOINT TO BE INTERRUPTED AT CONTROL JOINT
4. ALL BAR REINFORCEMENT SHALL BE CORES GROUTED SOLID
5. CONTRACTOR TO PROVIDE SEALANT AND FIRE-SAFING AT RATED WALL CONTROL JOINT
6. REFER TO LINTEL SCHEDULE FOR LINTEL INFORMATION
7. JAMB ZONES SHALL BE REINFORCED AS FOLLOWS, REINFORCING NOTED SHALL EXTEND FULL HEIGHT OF WALL
   A. OPENINGS LESS THAN 4' - 0" WIDE SHALL BE REINFORCED WITH (1) FULLY GROUT-FILLED CELL CONTAINING (1) #5 BAR
   B. OPENINGS 4' - 0" TO 8' - 0" WIDE SHALL BE REINFORCED WITH (2) FULLY GROUT-FILLED CELLS CONTAINING (1) #5 BAR
   C. OPENINGS 8' - 0" TO 14' - 0" WIDE SHALL BE REINFORCED WITH (3) FULLY GROUT-FILLED CELLS CONTAINING (1) #5 BAR

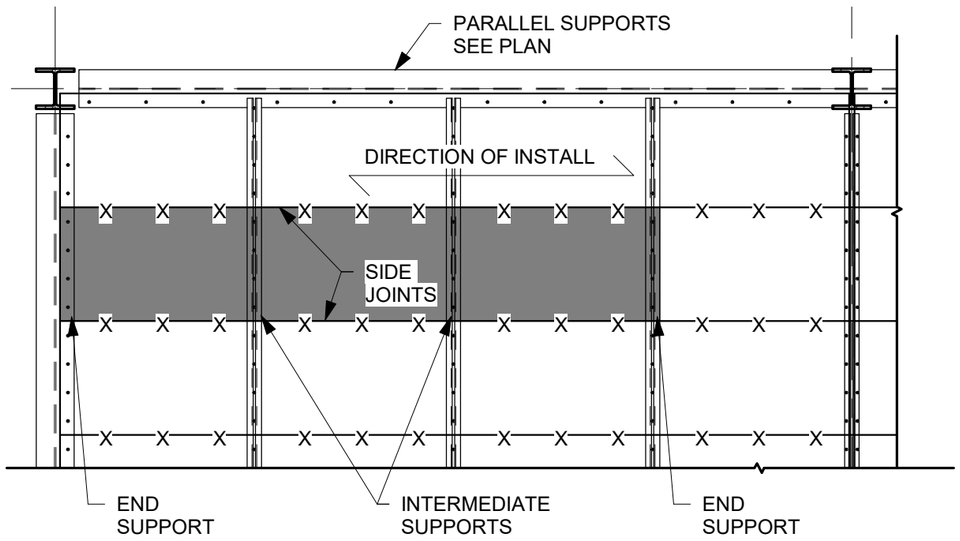


1 CMU WALL CONTROL JOINT LAYOUT W/ STEEL LINTELS

1/4" = 1'-0"



1 TRUSS BEARING TYPICAL
3/4" = 1'-0"



FASTENING REQUIREMENTS

PANEL END CONNECTION PATTERN.....36/4
PANEL INTERMEDIATE CONNECTION PATTERN.....36/4
PANEL END CONNECTION AT PERIMETER WALLS.....36/7
PARALLEL SUPPORTS.....12" OC
SIDE LAP JOINTS.....12" OC

NOTES:

1. FASTENING SHALL BE #12 DRILL SCREWS
2. SIDE JOINTS SHALL BE FASTENED W/ #10 DRILL SCREWS.
3. AVOID SINGLE-SPAN DECK CONDITIONS.
4. X INDICATES SIDE LAP FASTENERS.
5. • INDICATES SUPPORT FASTENERS.

2 DECK ATTACHMENT PATTERN
3/8" = 1'-0"

2

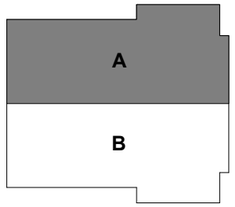
GENERAL MECHANICAL / PLUMBING NOTES:

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE LOCAL, STATE, AND NATIONAL LAWS, CODES, ORDINANCES, AND REGULATIONS, AS WELL AS LOCAL UTILITY REQUIREMENTS. PROVIDE ALL ADDITIONAL ACCESSORIES EQUIPMENT AND OTHER WORK NECESSARY FOR A PROPER AND OPERATIONAL INSTALLATION, TO SATISFY WARRANTY REQUIREMENTS, CODES OR STANDARDS. VERIFY THAT ALL EQUIPMENT PROVIDED IS SUITABLE FOR INTENDED USE. INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. MECHANICAL / PLUMBING DRAWINGS ARE DIAGRAMMATIC IN NATURE. ADDITIONAL OFFSETS, FITTINGS, AND ACCESSORIES MAY BE NEEDED FOR INSTALLATION OF NEW ELEMENTS.
3. WORK NOT SPECIFICALLY SHOWN IN DETAIL, INDICATED BY REFERENCE, OR OTHERWISE IMPLIED, SHALL BE PROVIDED IN ACCORDANCE WITH THE TRADE OR INDUSTRY BEST STANDARD PRACTICE TO PROVIDE A COMPLETE INSTALLATION.
4. COORDINATE CLOSELY BETWEEN MECHANICAL AND PLUMBING CONTRACTORS TO UTILIZE THE SAME SUPPORTS WHERE POSSIBLE.
5. ALL EQUIPMENT, PIPING, AND DUCTWORK SHALL BE ROUTED TO AVOID CONFLICTS WITH STRUCTURE, OTHER PIPING, ETC. UNLESS SPECIFICALLY DIMENSIONED THE PIPE AND DUCTWORK SHOWN INDICATES GENERAL LOCATION ONLY, CONTRACTOR SHALL COORDINATE.
6. PIPING:
   A. ROUTE PIPING IN ORDERLY MANNER AND MAINTAIN GRADIENT. ROUTE PARALLEL AND PERPENDICULAR TO WALLS. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED. INSULATED PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE: INSULATE ENTIRE SYSTEM INCLUDING FITTINGS, VALVES, UNIONS, FLANGES, STRAINERS, FLEXIBLE CONNECTIONS, PUMP BODIES, AND EXPANSION JOINTS. CONTINUE INSULATION THROUGH WALLS, SLEEVES, PIPE HANGERS, AND OTHER PIPE PENETRATIONS.
   B. PIPING ABOVE SUSPENDED CEILINGS SHALL BE INSTALLED A MINIMUM OF 6" ABOVE THE CEILING LEVEL.
   C. PIPING SIZES TO EQUIPMENT, AND EQUIPMENT SUPPORTS SHALL BE VERIFIED AND ADJUSTED TO MATCH THE ACTUAL EQUIPMENT PROVIDED.
7. DUCTWORK:
   A. INSTALL, SUPPORT, AND SEAL DUCTS IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. FLEXIBLE DUCTS: CONNECT TO METAL DUCTS WITH LIQUID ADHESIVE PLUS TAPE. VERIFY THAT DUCTS HAVE BEEN TESTED BEFORE APPLYING INSULATION MATERIALS.
   B. PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AT FIRE DAMPERS, COMBINATION FIRE AND SMOKE DAMPERS, AND ELSEWHERE AS INDICATED.
   C. AT FANS AND MOTORIZED EQUIPMENT ASSOCIATED WITH DUCTS, PROVIDE FLEXIBLE DUCT CONNECTIONS IMMEDIATELY ADJACENT TO THE EQUIPMENT.
   D. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, GRILLES, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER, GRILLE, OR REGISTER ASSEMBLY. PROVIDE ADDITIONAL BALANCING DAMPERS WHERE NECESSARY TO BALANCE DIFFUSER AIR FLOWS.
8. PROVIDE PHASING SCHEDULE TO OWNERS SHOWING AREAS OF WORK AND HVAC INTERRUPTIONS TO MINIMIZE DOWNTIME.
9. SEAL AND FIRE CAULK ALL PENETRATIONS AS NECESSARY TO MAINTAIN FIRE RATING.
10. ALL FIELD CHANGES ARE TO BE PRE-APPROVED.
11. ALL TRADES SHALL HAVE PRE-WORK CONFERENCE AND COORDINATION TO SCHEDULE WORK, PLAN WORK, DETAIL WORK TO PROVIDE CLEAN, COMPACT, AND THOUGHTFUL CONSIDERED LAYOUT OF EQUIPMENT, DUCT, CONDUIT, PIPE, ETC.

PLUMBING SYMBOL SCHEDULE

	BALL VALVE
	BUTTERFLY VALVE
	GATE VALVE
	GAS COCK
	CHECK VALVE
	IN LINE PUMP
	STRAINER
	MANUAL FLOW CONTROL VALVE
	UNION
M	METER
	PIPING DROP
	INLINE PIPING DROP
	PIPING RISE
	PIPE CAP
	PIPE BREAK
	WALL CLEANOUT/ END FERRULE CLEANOUT
	CONNECT TO EXISTING
T	THERMOMETER
	CLEAN OUT
	FLOOR DRAIN
	FLOOR SINK
	WALL HYDRANT/ HOSE BIBB
	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER

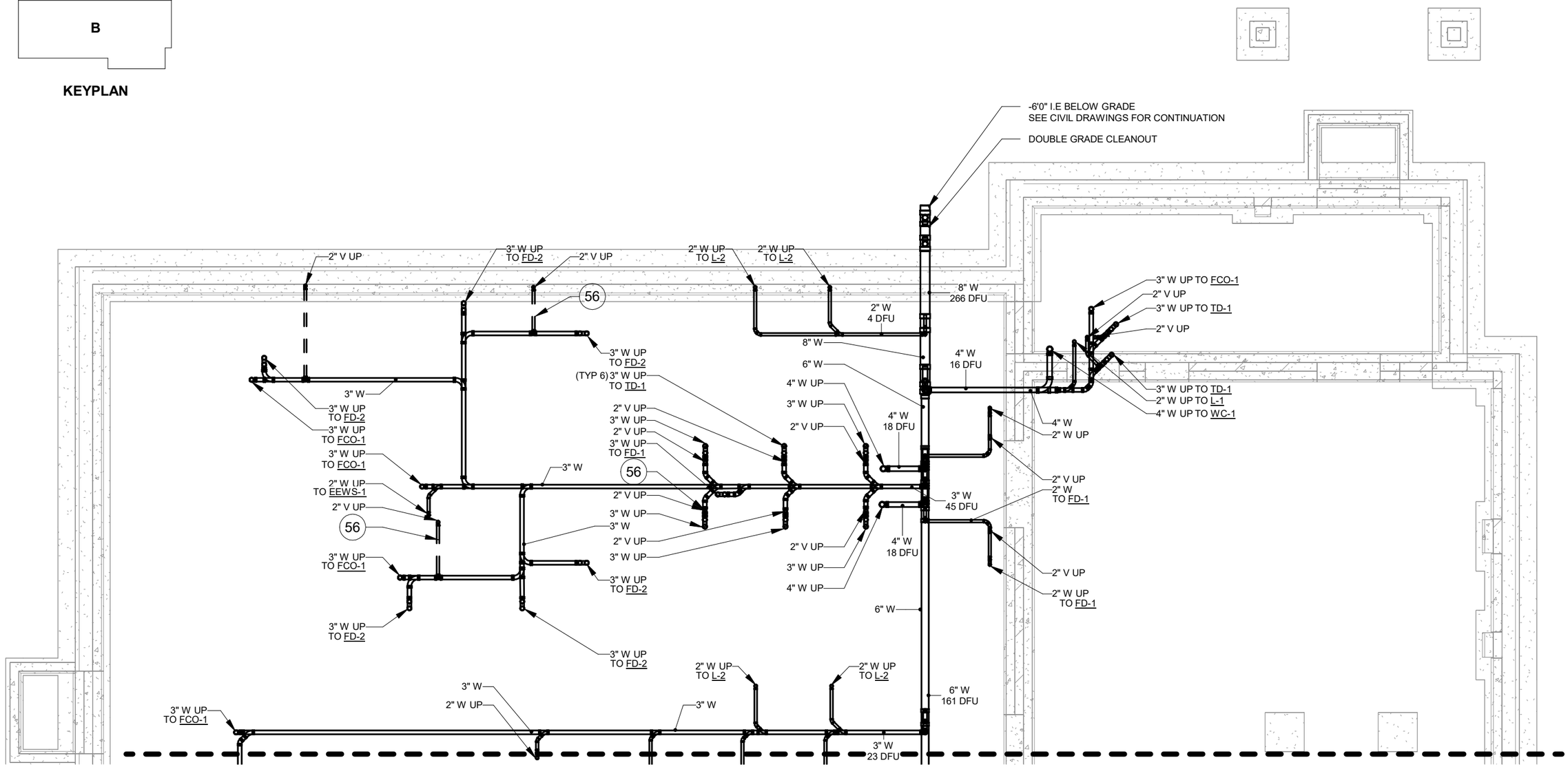
W	SANITARY WASTE
A	COMPRESSED AIR PIPING
G	GAS
V	VENT
DCW	COLD WATER
DHW	HOT WATER
DHWR	HOT WATER RECIRC
FCO-	FLOOR CLEANOUT
WHTR-	ELECTRIC WATER HEATER
FD-	FLOOR DRAIN
HB-	HOSE BIBB
LAV-	LAVATORY
MB-	MOP BASIN
RPBP-	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER
SK-	SINK
UR-	URINAL
VTR-	VENT THROUGH ROOF
WSB-	WATER SUPPLY BOX
WC-	WATER CLOSET
NFWH-	FIRE CONNECTION / WALL HYDRANT
WCO-	WALL CLEANOUT
A.F.F.	ABOVE FINISHED FLOOR



KEYPLAN

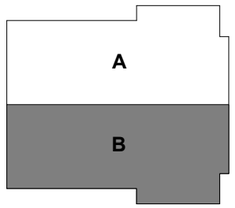
KEYNOTE LEGEND

56	CIRCUIT VENT.



1 UNDERFLOOR SANITARY PLUMBING PLAN - AREA A

1/8" = 1'-0"

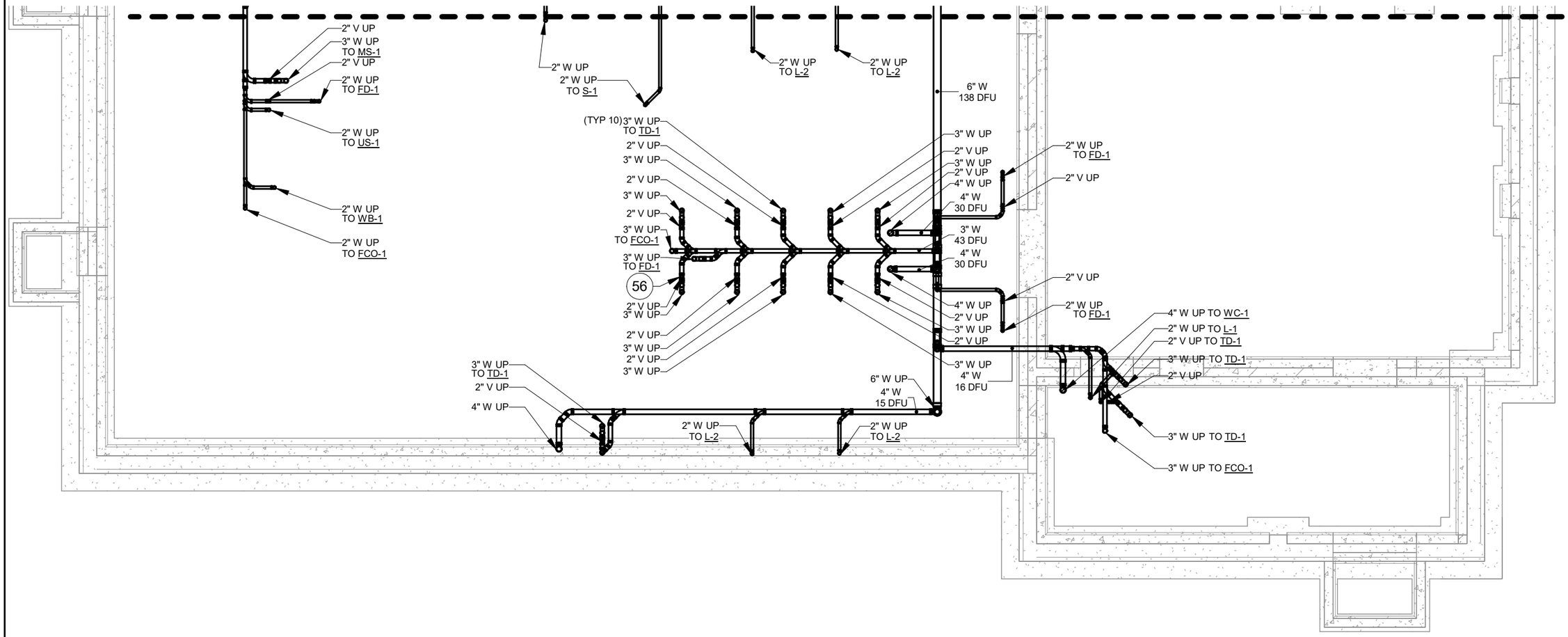


KEYPLAN

KEYNOTE LEGEND

56	CIRCUIT VENT.

2

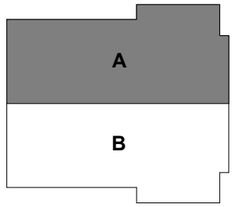


1 UNDERFLOOR SANITARY PLUMBING PLAN - AREA B

1/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		UNDERFLOOR SANITARY PLUMBING PLAN - AREA B	SHEET NO: P2-10B

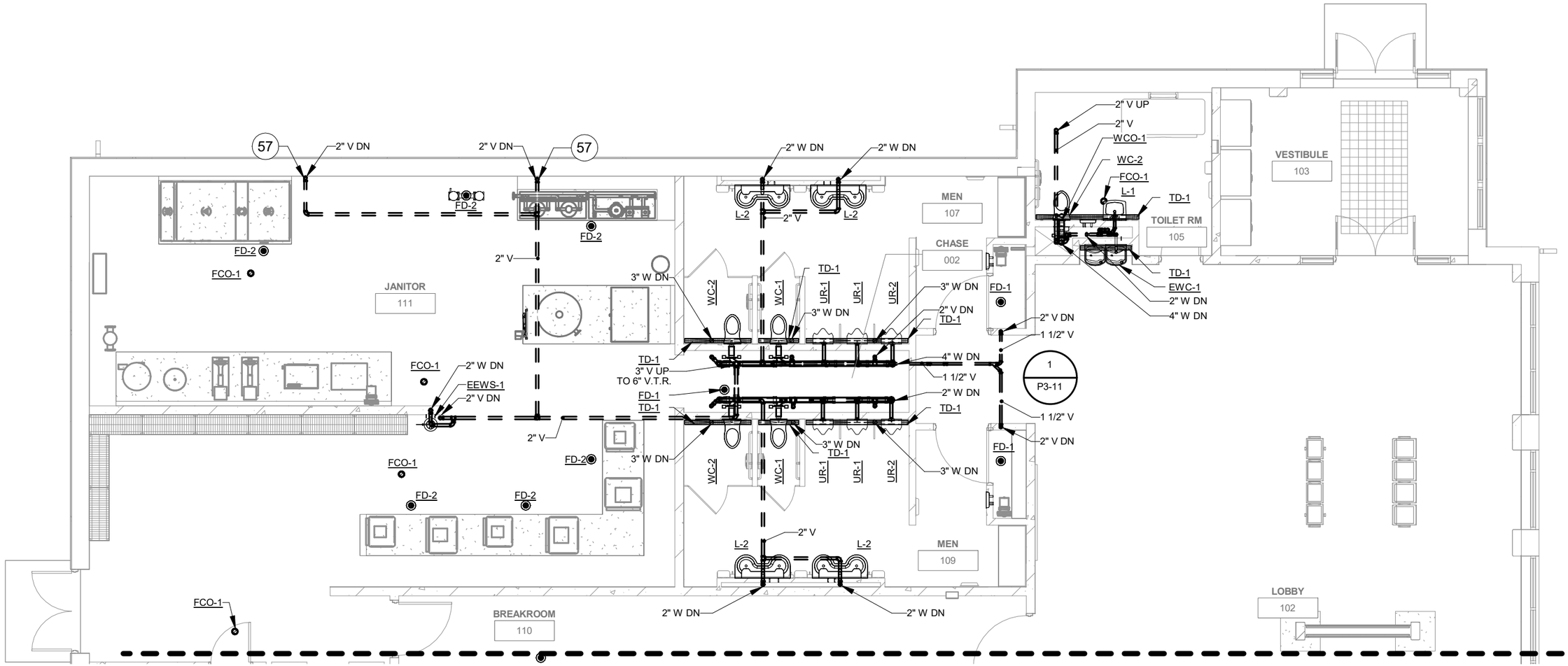
PLOT DATE: 1/26/2024 4:26:04 PM PLOT BY: ISG INC. PLOT NAME: ACH PLOT SCALE: AS INDICATED



KEYPLAN

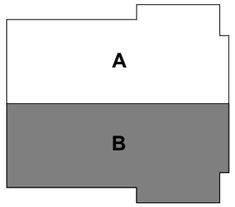
KEYNOTE LEGEND

55	SEE ISOMETRIC FOR DETAILED PIPE SIZES.
57	PROVIDE CLEANOUT 1'0" A.F.F.



1 FIRST FLOOR SANITARY PLAN - AREA A

1/8" = 1'-0"

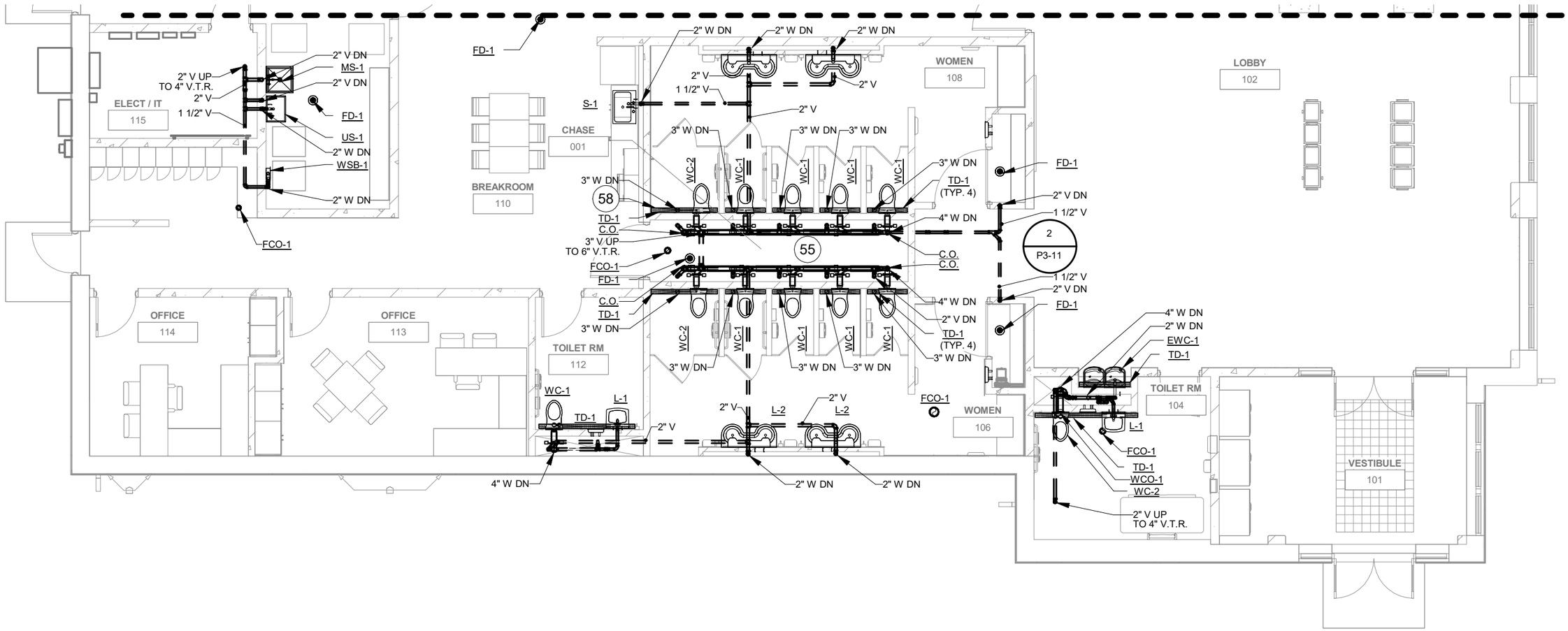


KEYPLAN

KEYNOTE LEGEND

55	SEE ISOMETRIC FOR DETAILED PIPE SIZES.

2

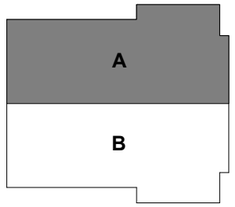


1 FIRST FLOOR SANITARY PLAN - AREA B

1/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		FIRST FLOOR SANITARY PLUMBING PLAN - AREA B	SHEET NO: P2-11B

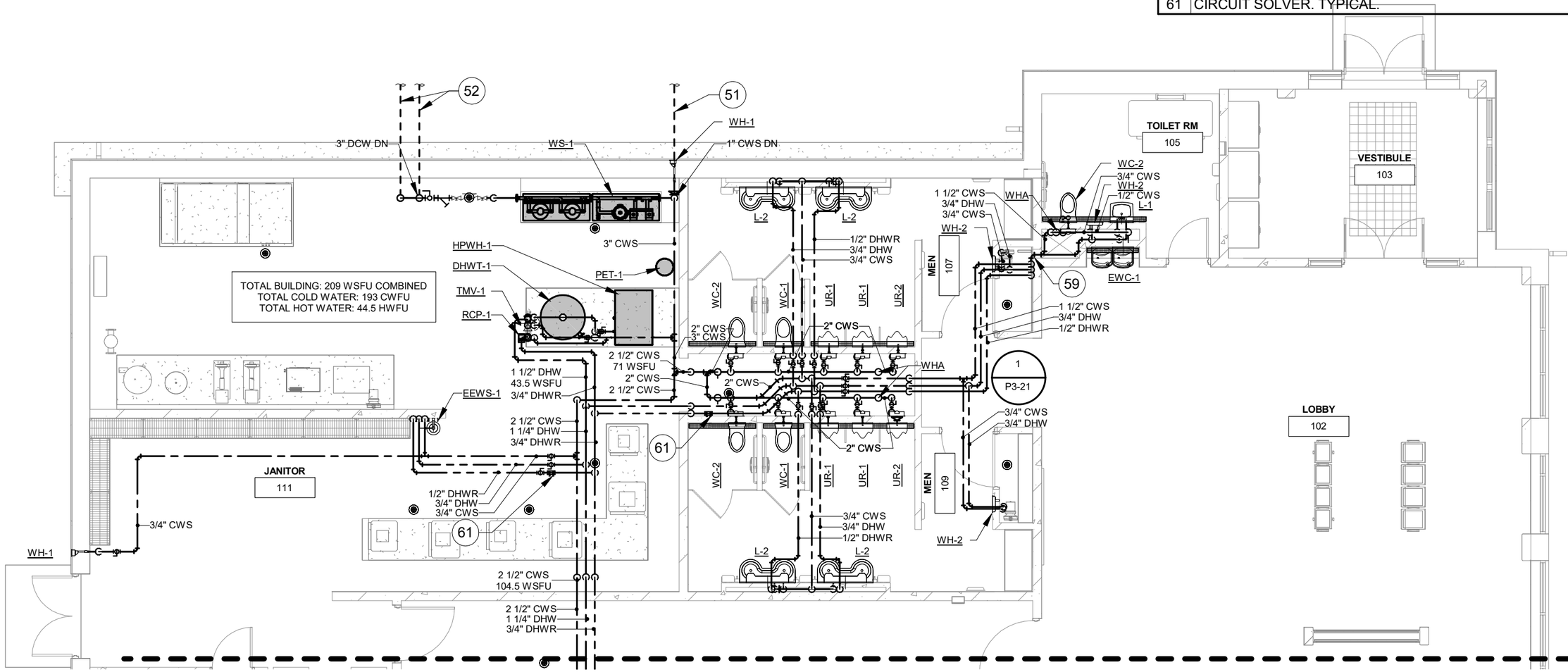
PLOT DATE: 1/26/2024 4:26:14 PM PLOT BY: ISG INC. PLOT NAME: ACH PLOT SCALE: AS INDICATED



KEYPLAN

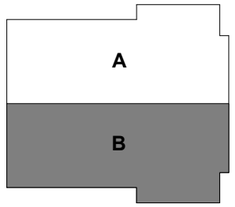
KEYNOTE LEGEND

51	1" CWS TO MAINTENANCE BUILDING. INSTALL PIPE 5'0" OUTSIDE BUILDING AND -6'0" BELOW GRADE. COORDINATE WITH CIVIL PLANS FOR CONTINUATION.
52	INSTALL PIPE 5'0" OUTSIDE BUILDING AND -6'0" BELOW GRADE. COORDINATE WITH CIVIL PLANS FOR CONTINUATION.
59	ROUTE CWS, DHW & DHWR THROUGH CMU WALL AND INTO CHASE. CONNECT DHWR LOOP WITHIN 2'0" OF L-1, PER IECC 2015.
61	CIRCUIT SOLVER. TYPICAL.



1 FIRST FLOOR POTABLE WATER PLUMBING PLAN - AREA A

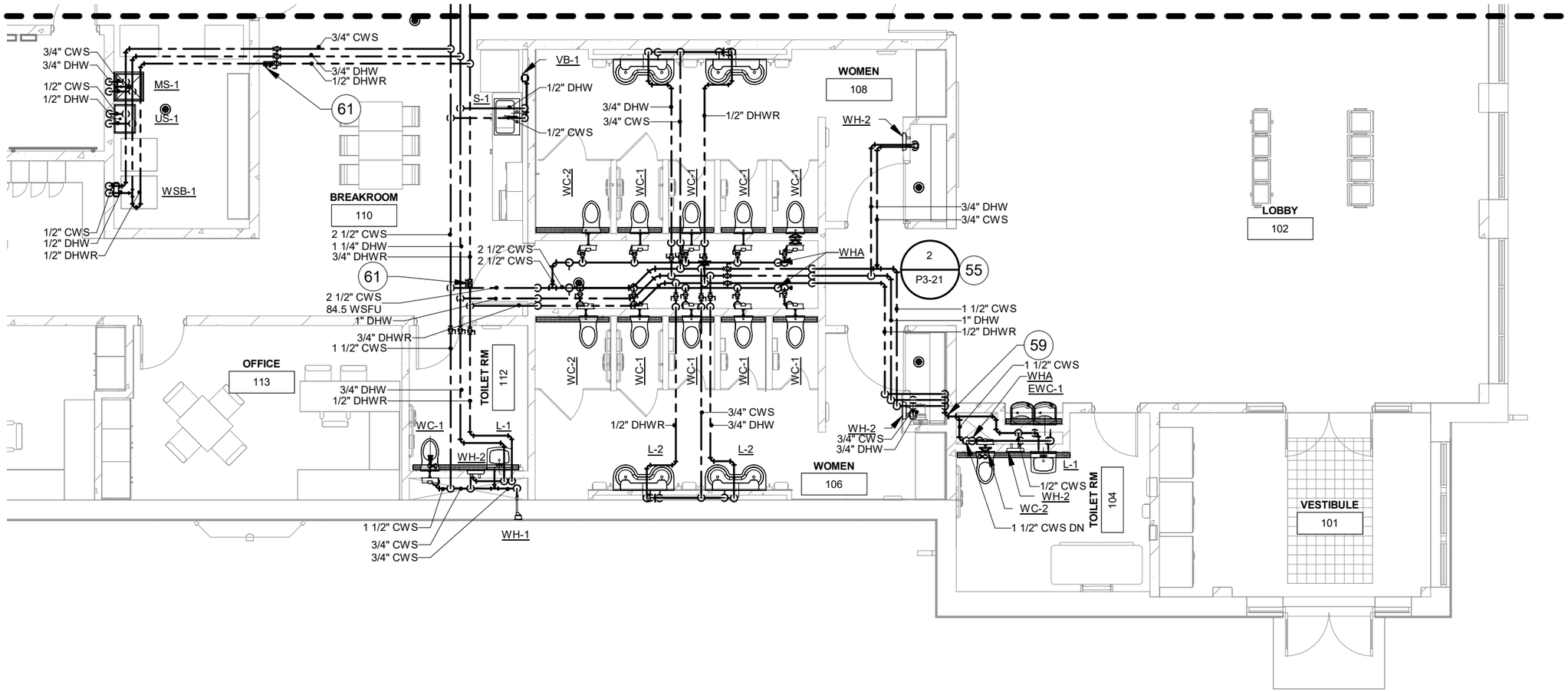
1/8" = 1'-0"



KEYPLAN

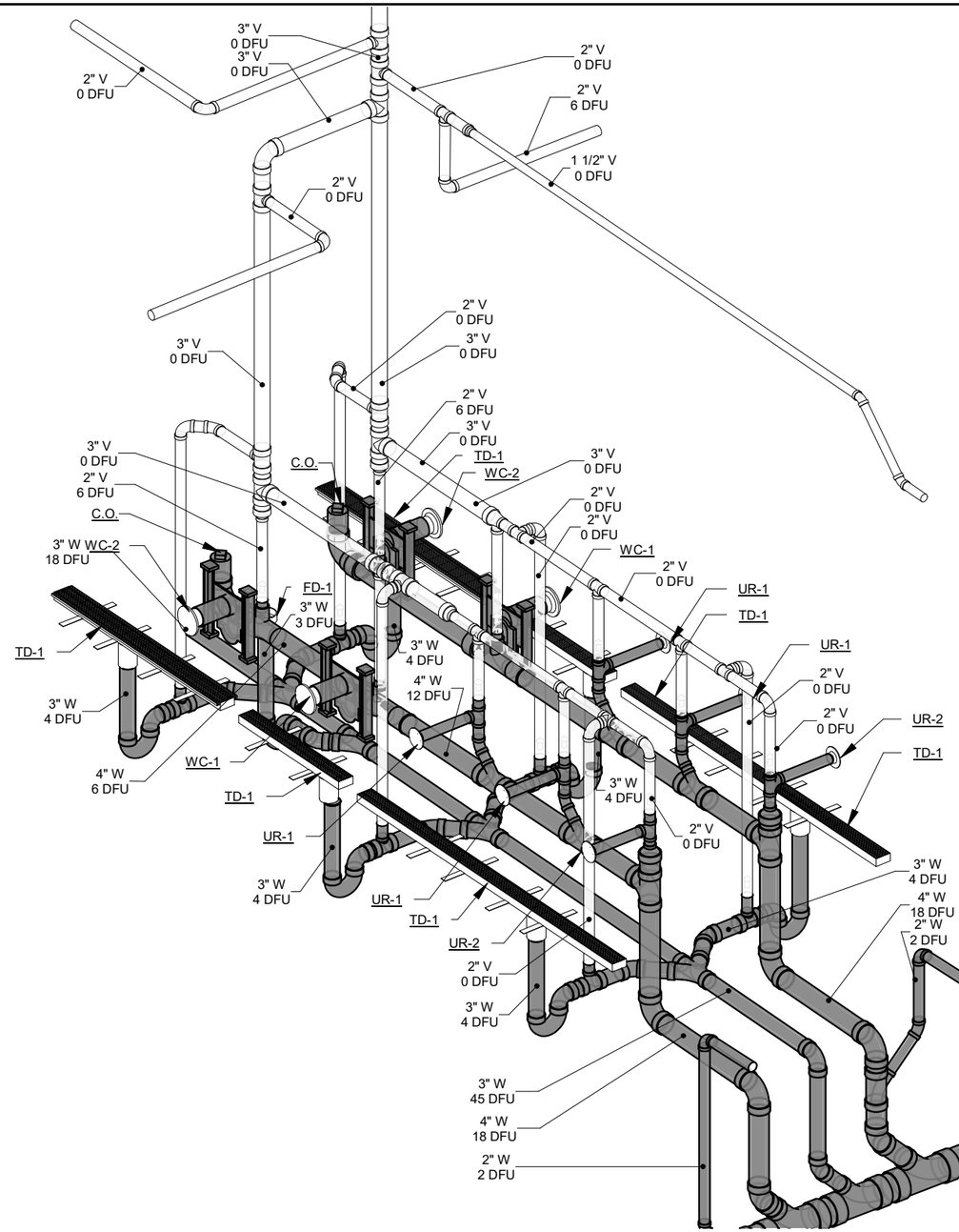
KEYNOTE LEGEND

55	SEE ISOMETRIC FOR DETAILED PIPE SIZES.
59	ROUTE CWS, DHW & DHWR THROUGH CMU WALL AND INTO CHASE. CONNECT DHWR LOOP WITHIN 2'0" OF L-1, PER IECC 2015.
61	CIRCUIT SOLVER. TYPICAL.

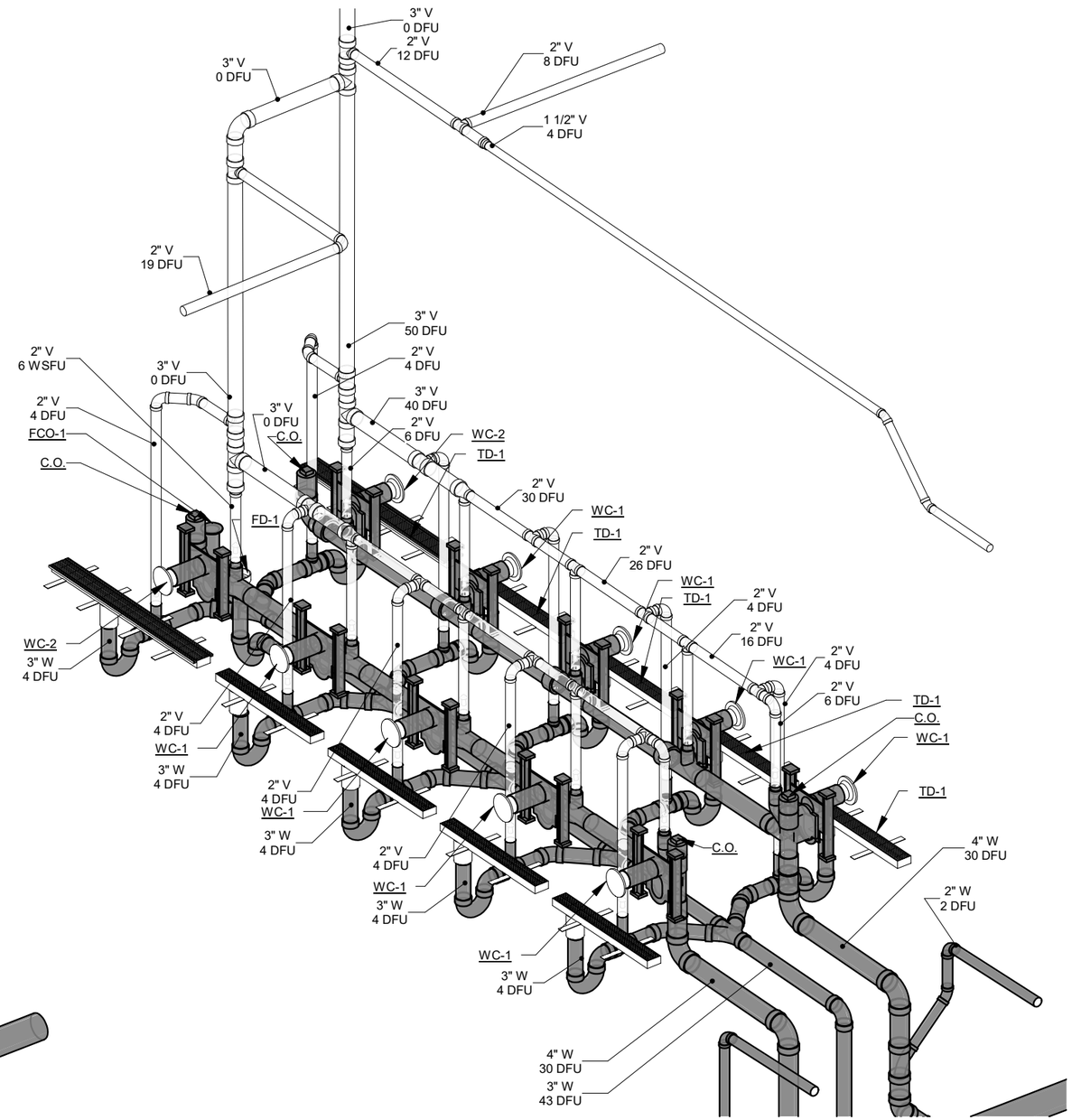


1 FIRST FLOOR POTABLE WATER PLUMBING PLAN - AREA B

1/8" = 1'-0"



1 SANITARY ISOMETRIC - MENS RESTROOM GROUP

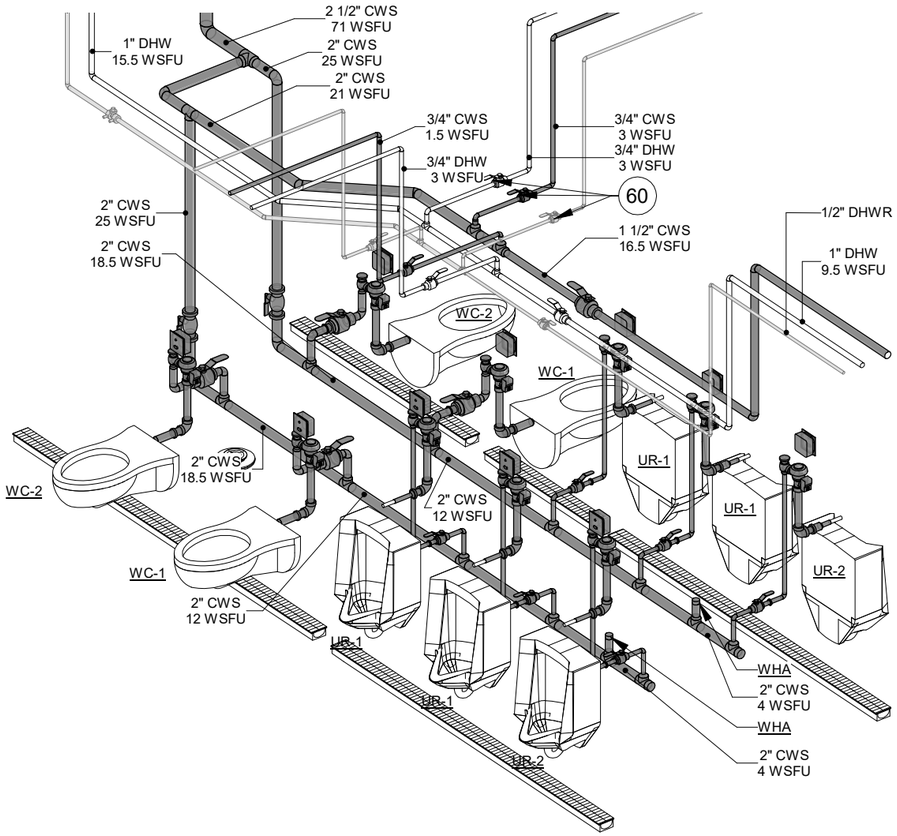


2 SANITARY ISOMETRIC - WOMENS RESTROOM GROUP

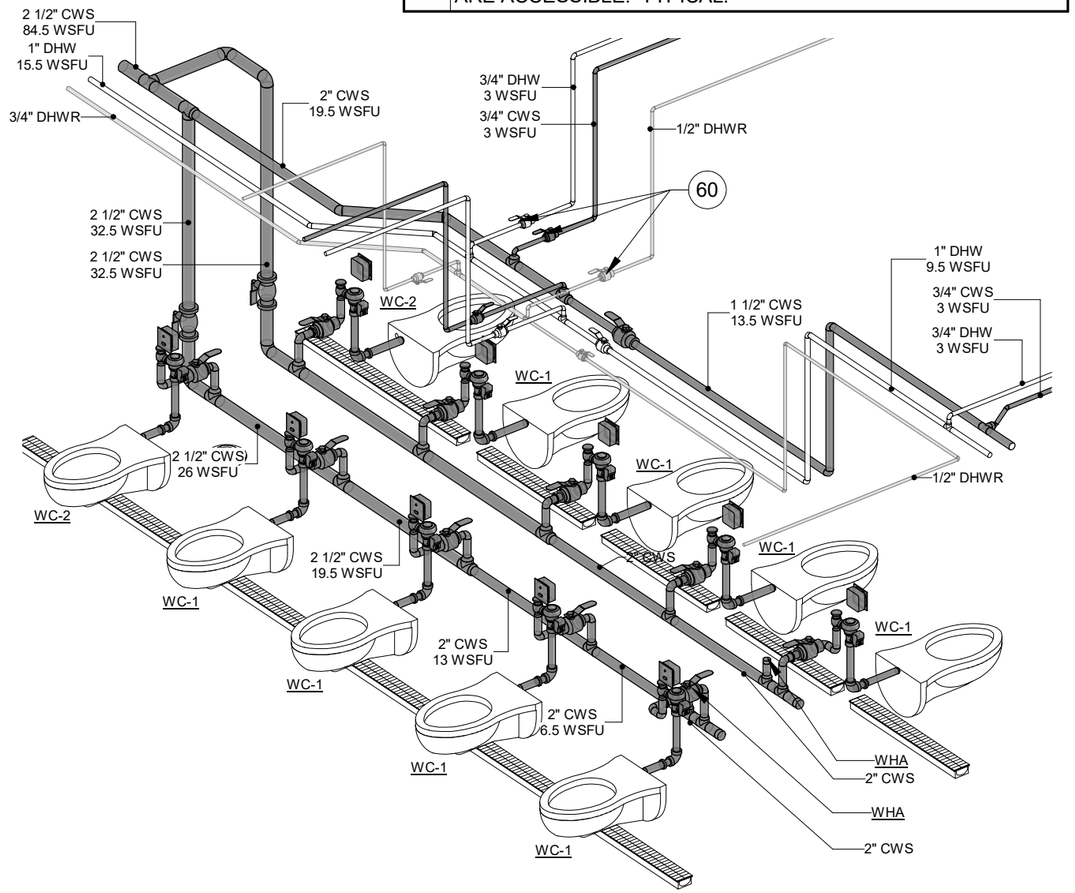
2

KEYNOTE LEGEND

60	BRANCH ISOLATION VALVES LOCATED IN CHASE. COORDINATE WITH HVAC DUCTWORK TO ENSURE VALVES ARE ACCESSIBLE. TYPICAL.



1 DOMESTIC WATER ISOMETRIC - MEN'S RESTROOM GROUP

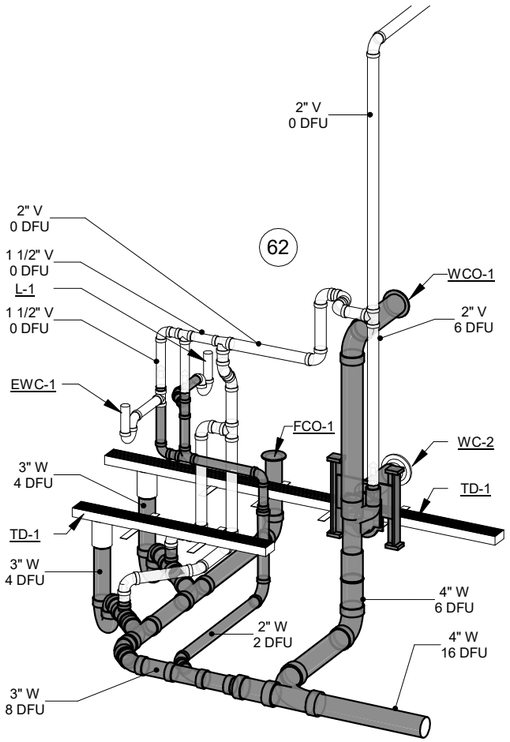


2 DOMESTIC WATER ISOMETRIC - WOMENS RESTROOM GROUP

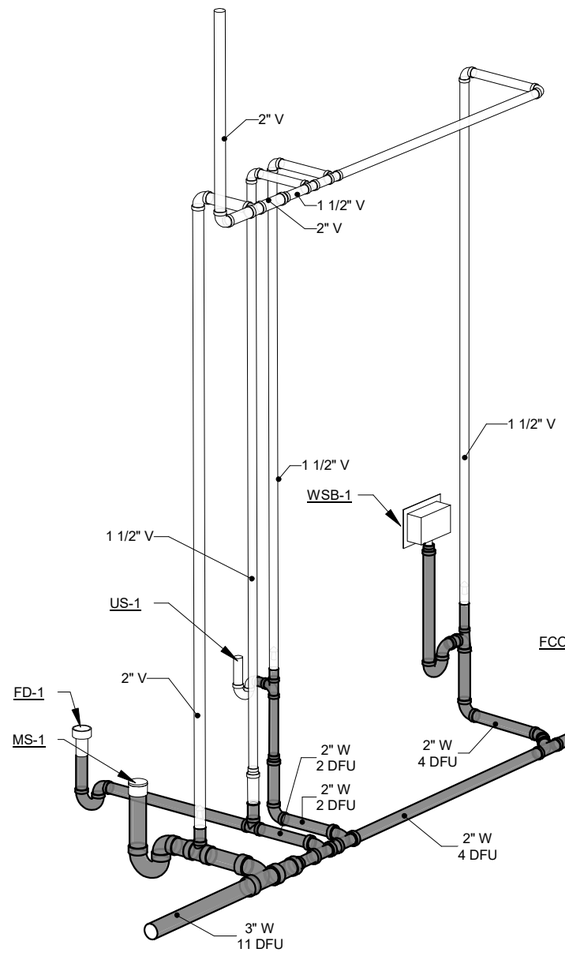
KEYNOTE LEGEND

62	PIPE SIZES AND LAYOUT ARE MIRRORED TO TOILET ROOM 105.

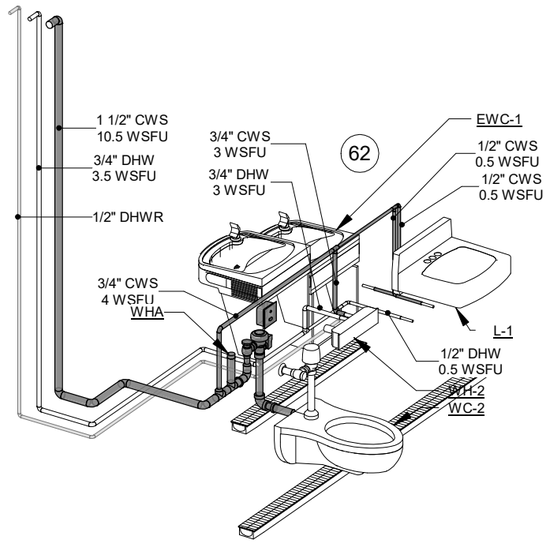
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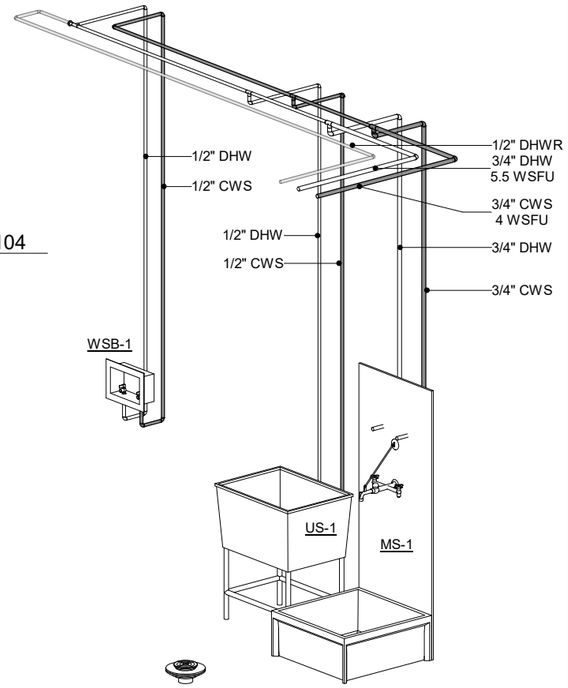
1 SANITARY ISOMETRIC - TOILET ROOM 104



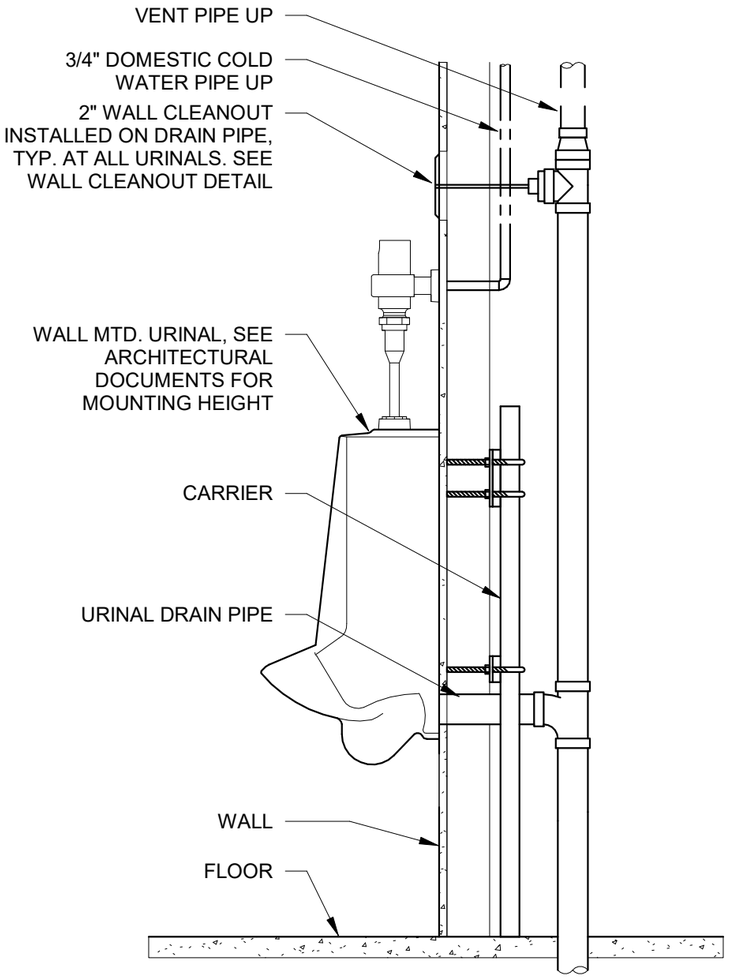
3 SANITARY ISOMETRIC - MOP SINK AND LAUNDRY



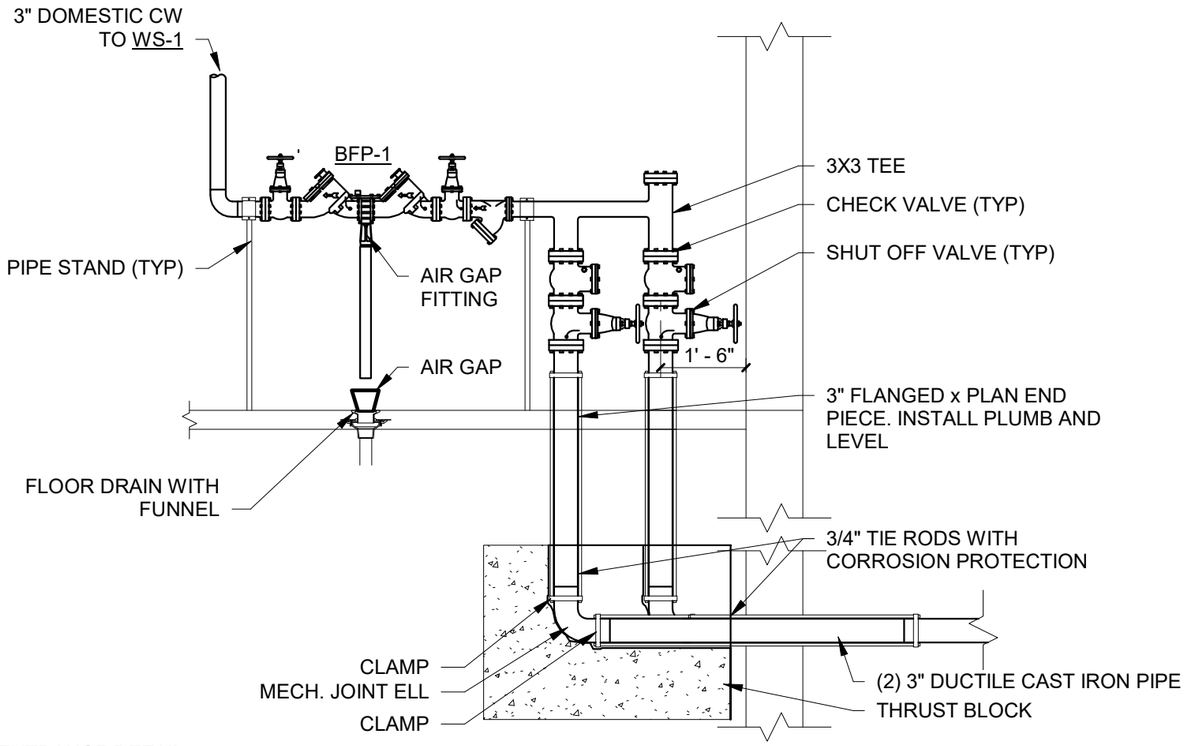
2 DOMESTIC WATER ISOMETRIC - TOILET ROOM 104



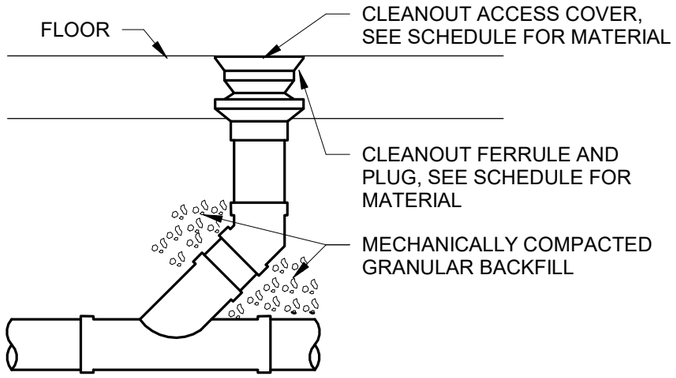
4 DOMESTIC WATER ISOMETRIC - MOP SINK AND LAUNDRY



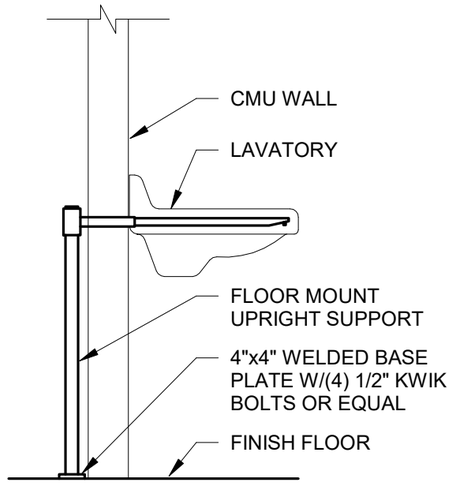
1 URINAL INSTALLATION DETAIL - TYPICAL
NOT TO SCALE



2 WATER ENTRANCE DETAIL
NOT TO SCALE

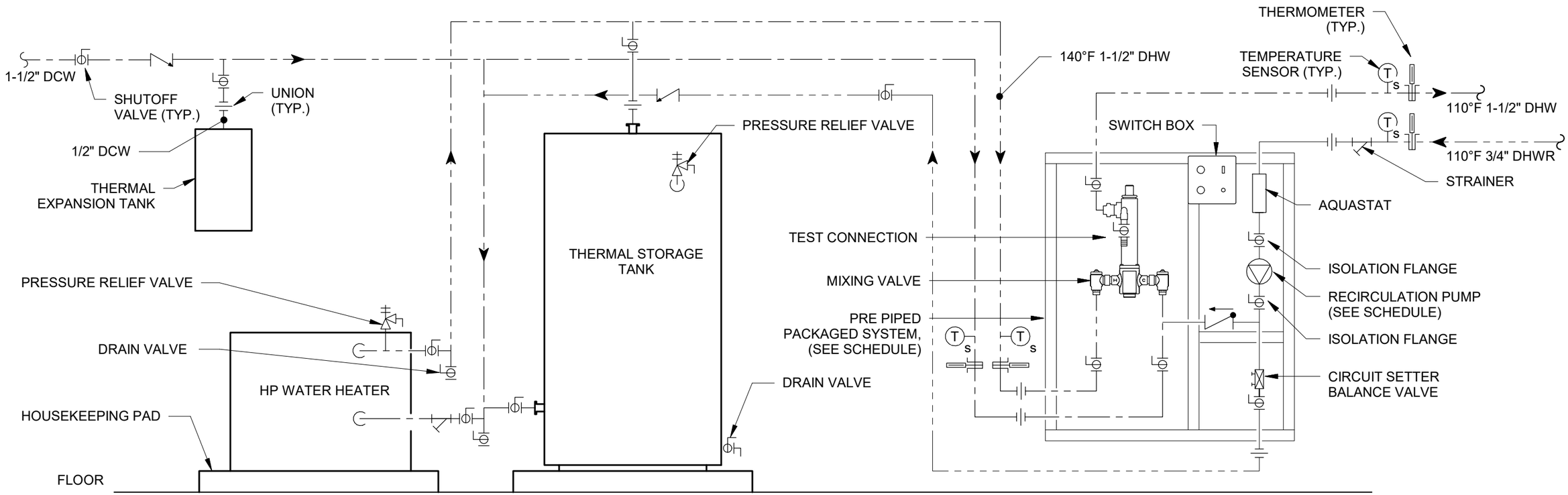


3 CLEANOUT DETAIL
NOT TO SCALE



4 LAVATORY WALL SUPPORT DETAIL
NOT TO SCALE

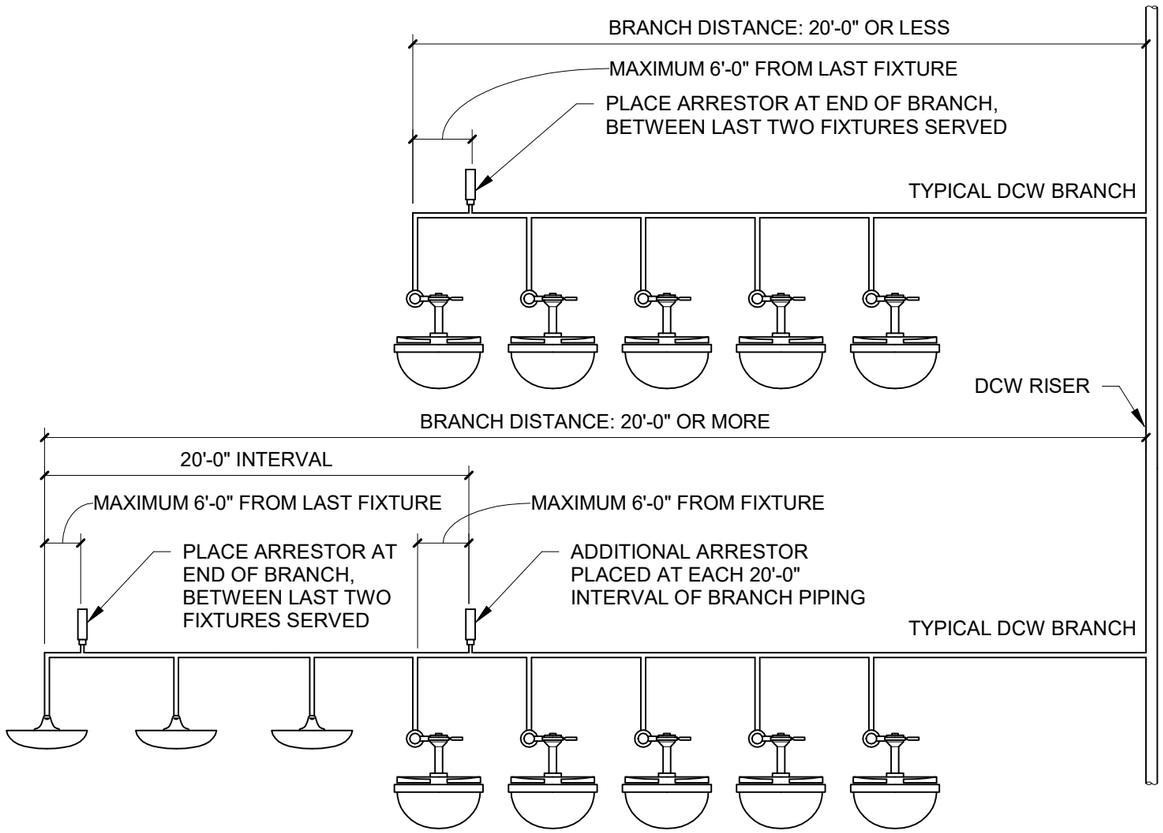
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1 HEAT EXCHANGER AND STORAGE TANK PIPING DETAIL WITH MIXING VALVE

NOT TO SCALE

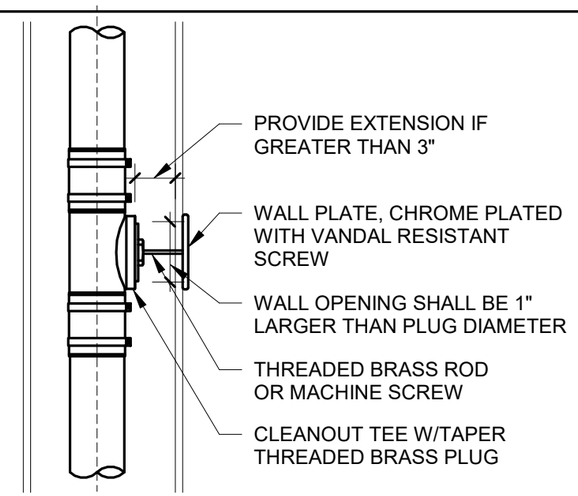
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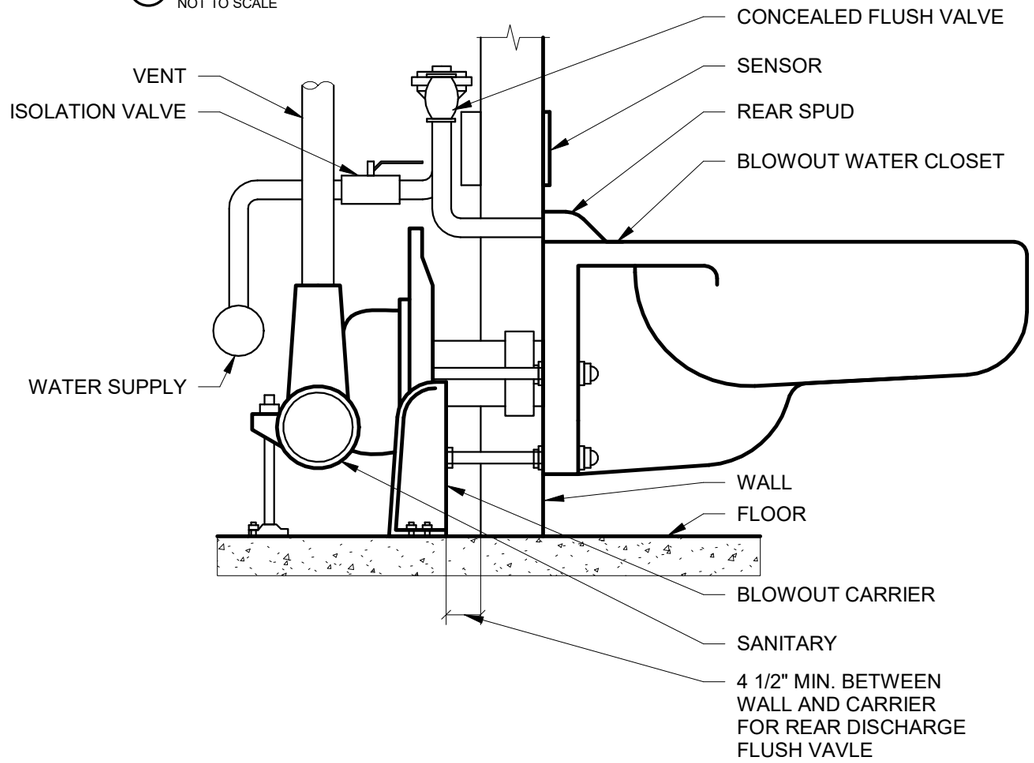
WATER HAMMER ARRESTOR CAPACITIES							
ARRESTOR SIZE	AA	A	B	C	D	E	F
FIXTURE UNITS	1-4	5-11	12-32	33-60	61-113	114-154	155-330

NOTE: ARRESTOR CAPACITIES BASED ON SIOUX CHIEF MODELS. VERIFY EQUIVALENT ARRESTOR'S FIXTURE UNIT CAPACITY IF USING DIFFERENT MANUFACTURER.

1 WATER HAMMER ARRESTOR PLACEMENT DETAIL
NOT TO SCALE



3 WALL CLEANOUT DETAIL
NOT TO SCALE



2 WATER CLOSET AND CARRIER DETAIL
NOT TO SCALE

PLUMBING FIXTURE SCHEDULE

FIXTURE	MFG	MODEL	FINISH / COLOR	TRIM			WASTE	VENT	COLD WATER	HOT WATER	NOTES
				MFG	MODEL	TYPE					
BFP-1	WATTS	LF909L-FS					0"	0"	3"	0"	PROVIDE AND INSTALL BACKFLOW PREVENTOR ASSE 1013 RATED. 3" BACKFLOW NON RISING STEM.
BFP-2	WATTS	LF909S-FS					0"	0"	3/4"	0"	PROVIDE AND INSTALL BACKFLOW PREVENTOR ASSE 1013 RATED. 3/4" BACKFLOW NON RISING STEM.
EEWS-1	BRADLEY	S19224DCRPT	STAINLESS STEEL	BRADLEY	NAVIGATOR EFX8	TMV	1 1/2"	1 1/2"	1/2"	1/2"	PROVIDE AND INSTALL TMV SET TO 85°F. INCLUDE STAINLESS STEEL DUST COVER AND P-TRAP.
EWC-1	ELKAY	LZSTL8WSLK	LIGHT GREY				1 1/2"	1 1/2"	1/2"		VERIFY REQUIRED MOUNTING HARDWARE FOR EACH TYPE OF WALL. COORDINATE WITH G.C. FOR ANY BLOCKING REQUIRED. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS.
FD-1	ZURN	Z415B	NICKEL BRONZE	ZURN	TYPE 'B'	ROUND GRID TOP	VARIES				PROVIDE AND INSTALL UNIT FOR FINISHED FLOOR, ROUND NICKEL BRONZE TOP. PROVIDE AND INSTALL UNIT WITH NICKEL BRONZE STRAINER. FLOOR DRAINS SHALL BE SIZED PER PLANS.
FD-2	ZURN	Z415I	NICKEL BRONZE	ZURN	TYPE 'I'	ROUND GRID TOP	3"				PROVIDE AND INSTALL UNIT FOR FINISHED FLOOR, ROUND NICKEL BRONZE TOP. PROVIDE AND INSTALL UNIT WITH NICKEL BRONZE STRAINER. FLOOR DRAINS SHALL BE SIZED PER PLANS.
L-1	KOHLER	K-2005	WHITE	SLOAN	ETF-600	SENSOR FAUCET	1 1/2"	1 1/2"	1/2"	1/2"	PROVIDE AND INSTALL WITH PVC P-TRAP, ANGLE STOPS WITH LOOSE KEY HANDLES AND POP UP. LAV FAUCET TO BE 0.5 GPM. PROVIDE AND INSTALL UNIT WITH PIPE WRAP KIT EQUAL TO TRUBRO OR PLUMBEREX PRO. PROVIDE AND INSTALL JAY R. SMITH SERIES 0700 FLOOR MOUNTED CONCEALED ARM CARRIER. PROVIDE LAWLER MODEL# TMM-1070 MIXING VALVE. MIXING VALVE TO BE ASSE 1070 APPROVED AND WATER TEMP TO BE SET AT 105°F. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS.
L-2	BRADLEY	SS-2N	EMPIRE GRAY				2"	2"	1/2"	1/2"	PROVIDE UNIT WITH INFRARED SENSOR, THERMOSTATIC MIXING VALVE, AND TYPE 'A' DRAIN CONFIGURATION. INSTALL WITH PVC P-TRAP, AND ANGLE STOPS. WATER TEMP TO BE SET AT 105°F.
MS-1	FIAT	MSB 2424	WHITE	CHICAGO	897-CP	WALL MOUNT FAUCET	3"	1 1/2"	3/4"	3/4"	PROVIDE AND INSTALL VACUUM BREAKER ASSE 1020 RATED, PAIL HOOK, MOP HANGER AND STRAINER.
S-1	ELKAY	CR3122	STAINLESS STEEL	CHICAGO FAUCETS	431-ABCP	LEVER HANDLE FAUCET	1 1/2"	1 1/2"	1/2"	1/2"	PROVIDE AND INSTALL WITH ELKAY LK-18 DRAIN, PVC P-TRAP AND ANGLE STOPS WITH LOOSE KEY HANDLES. PROVIDE AND INSTALL 4 HOLE PUNCH WITH 8" CENTERS AND ADA DECK MOUNT HANDLE. PROVIDE DISHWASHER AIR GAP IN 4TH HOLE. CONNECT DISHWASHER TO P-TRAP TEE.
SOI-1	STRIEM	OS-75					4"	3"	0"	0"	PROVIDE AND INSTALL SAND INTERCEPTOR STRIEM OS-75. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
TD-1	ZURN	Z899-THR	STAINLESS STEEL				3"	0"	0"	0"	PROVIDE AND INSTALL PER MANUFACTURER'S INSTRUCTIONS.COORDINATE CONNECTION POINT BASED ON PLAN DRAWINGS. PROVIDE WITH NO HUB BOTTOM OUTLET, FABRICATED STAINLESS STEEL SLOTTED GRATE.
TD-2	ZURN	Z884	CAST IRON				4"	0"	0"	0"	PROVIDE AND INSTALL PER MANUFACTURER'S INSTRUCTIONS.COORDINATE CONNECTION POINT BASED ON PLAN DRAWINGS. PROVIDE WITH NO HUB BOTTOM OUTLET, CLASS-B CAST IRON SLOTTED BAR GRATE.
TMV-1	BRADLEY CORP.	NRS-4									FIXTURE: HIGH LOW RECIRCULATION STATION, MIXING VALVE, AQUASTAT, STANDARD RANGE THERMOMETER.
UR-1	KOHLER	BARDON - K-4991-ER	WHITE	SLOAN	ROYAL 195 ESS	AUTOFLUSH VALVE	2"	1 1/2"	3/4"		PROVIDE URINAL CARRIER JAY R. SMITH MODEL #0636. PROVIDE CLEANOUT 12" A.F.F. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS.
UR-2	KOHLER	BARDON - K-4991-ER	WHITE	SLOAN	ROYAL 195 ESS	AUTOFLUSH VALVE	2"	1 1/2"	3/4"		PROVIDE URINAL CARRIER JAY R. SMITH MODEL #0636. PROVIDE CLEANOUT 12" A.F.F. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS.
US-1	MUSTEE	17F	WHITE	MUSTEE	93.600	MANUAL FAUCET	1 1/2"	1 1/2"	1/2"	1/2"	PROVIDE AND INSTALL WITH PVC P-TRAP, ANGLE STOPS WITH LOOSE KEY HANDLES AND POP UP. PROVIDE AND INSTALL UNIT WITH PIPE WRAP KIT EQUAL TO TRUBRO OR PLUMBEREX PRO. PROVIDE AND INSTALL JAY R. SMITH SERIES 0700 FLOOR MOUNTED CONCEALED ARM CARRIER. PROVIDE LAWLER MODEL# TMM-1070 MIXING VALVE. MIXING VALVE TO BE ASSE 1070 APPROVED AND WATER TEMP TO BE SET AT 105°F. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS.
VB-1	GUY GRAY	METAL FR-12 IMOB	WHITE	GUY GRAY		WATER HAMMER ARRESTOR			1/2"		FIRE RATED UNIT. PROVIDE UNIT WITH MOUNTING BRACKETS, PVC FACEPLATE AND 1/4 TURN SUPPLY VALVE. MOUNT TOP OF UNIT AT 16" A.F.F.
WC-1	KOHLER	K-4460-C	WHITE	SLOAN	ROYAL 195 ESS	AUTOFLUSH VALVE	4"	2"	1"		PROVIDE HEAVY DUTY ELONGATED WHITE OPEN FRONT PLASTIC SEAT, CHURCH 9500C OR EQUIVALENT.
WC-2	KOHLER	K-4460-C	WHITE	SLOAN	ROYAL 195 ESS	AUTOFLUSH VALVE	4"	2"	1"		PROVIDE HEAVY DUTY ELONGATED WHITE OPEN FRONT PLASTIC SEAT, CHURCH 9500C OR EQUIVALENT.
WH-1	WOODFORD	B67	NICKEL BRONZE	WOODFORD		REMOVABLE KEY			3/4"		FREEZELESS LOCKABLE BOX WALL HYDRANT W/DOUBLE CHECK BACKFLOW PREVENTER. LOCATE AT 2'-0" ABOVE F.G.
WH-2	WOODFORD	HCB67	CHROME	WOODFORD		REMOVABLE KEY	0"	0"	3/4"	3/4"	LOCKABLE WALL HYDRANT W/DOUBLE CHECK BACKFLOW PREVENTER. LOCATE AT 2'- 0" ABOVE FINISH FLOOR.
WSB-1	OATEY	2x4 WMOB	WHITE				1 1/2"	1 1/2"	1/2"	1/2"	PROVIDE UNIT WITH MOUNTING BRACKETS, PVC FACEPLATE, 1/4 TURN SUPPLY VALVES WITH COLORED VALVE CLIP, AND CONDENSATE LINE CONNECTOR. MOUNT VALVE OUTLETS AT 36" A.F.F.

HYDRONIC AND PLUMBING INSULATION SCHEDULE

NOTES:
1.) PVC JACKET ON ALL PIPING IN MECHANICAL ROOMS AND ANY EXPOSED PIPING BELOW 10 FEET ABOVE FINISHED FLOOR.
2.) VENT PIPING WITHIN 10 FEET OF AN EXTERIOR CONNECTION.

SYSTEM	INSULATION TYPE	THICKNESS	NOTES
DOMESTIC HOT WATER < 1 1/2"	FIBERGLASS	1"	1
DOMESTIC HOT WATER 1 1/2" AND UP	FIBERGLASS	1 1/2"	1
DOMESTIC HOT WATER RETURN	FIBERGLASS	1"	1
DOMESTIC COLD WATER EXPOSED	FIBERGLASS	1"	1
DOMESTIC COLD WATER CONCEALED	FLEXIBLE ELASTOMERIC	1"	1
GEOTHERMAL SUPPLY/RETURN	POLYISOCYANURATE/ FLEXIBLE ELASTOMERIC	1"	1
VENT < 3"	FIBERGLASS	1"	2
VENT > 3"	FIBERGLASS	2"	2
AIR SERAPATOR	FLEXIBLE ELASTOMERIC	1"	
EXPANSION TANK	FLEXIBLE ELASTOMERIC	1"	
PUMP BODIES	FLEXIBLE ELASTOMERIC	1"	

WATER SOFTENER SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.

MARK	MFG	MODEL	LOCATION	GPM	SCALE PREVENTION TANK		CARTRIDGE FILTER			UV		CONN. SIZE	WEIGHT	NOTES
					QTY	SIZE	QTY	MICRON	TYPE	QTY	UV TRANSMITTANCE (UVT)			
WS-1	LYNC	WQAS-100-D	MECH RM	100	2	14"X65"	1	5	PLEATED	2	95%	2"	1100 lb	1

HOT WATER RECIRCULATING PUMP SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.

MARK	MFG	MODEL#	LOCATION	SERVICE	PUMP CONSTRUCTION	CONNECTION SIZE	GPM	HEAD LOSS (IN FEET)	ELECTRICAL		RPM	IMPELLER SIZE	NOTES
									HP	VOLTAGE / PH.			
RCP-1	BELL & GOSSETT	ECOCIRC 19-16	MECH RM	DHWR	BRONZE	3/4"	2	8	1/12	120/1	--	--	1

PLUMBING EXPANSION TANK SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.

MARK	MFG	MODEL	LOCATION	SERVICE	TANK VOL.	TANK ACCEPTANCE	FITTING SIZE	DIAMETER	LENGTH	WEIGHT	NOTES
PET-1	BELL & GOSSETT	PT-25V	MECH RM	DHW	10.3	10.3	1"	15 3/8"	19 1/4"	23 lb	1
PET-2	BELL & GOSSETT	PT-5	MAINTENANCE BUILDING	DHW	2	2	3/4"	8"	12 5/8"	5 lb	1

ELECTRIC WATER HEATER SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.
2. SET AT 110°F MAXIMUM

MARK	MFG	MODEL#	LOCATION	RECOVERY GPH TEMPERATURE RISE	NOMINAL CAPACITY	WATTS	VOLTAGE / PH.	WEIGHT	NOTES
EWH-1	AO SMITH	DEL-30	MECAHNICAL ROOM	18GPH @ 100°	36 GAL	4500 W	208	118 lb	1,2

STORAGE TANK SCHEDULE

NOTES:
1. INSTALL AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.

MARK	MFG	MODEL	LOCATION	SERVICE	WEIGHT	TANK VOL.	FITTING SIZE	DIAMETER	LENGTH	NOTES
DHWT-1	LOCHINVAR	HP250G	MECH RM	DHW	1180 lb	250	3"	40"	95"	1

HEAT PUMP WATER HEATER SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.
2. SET AT 140°F MAXIMUM.
3. PROVIDE INTEGRAL HOT WATER PUMP WITH UNIT.

MARK	MFG	MODEL#	LOCATION	NOMINAL RECOVERY RATE GPH	NOMINAL CAPACITY MBH	SOURCE COIL		CONNECTION SIZE	ELECTRICAL			WEIGHT	NOTES
						GPM	WPD (FT HEAD)		VOLTAGE / PH.	MCA	MOCP		
HPWH-1	LOCHINVAR	WHP125	MECH RM	174	147	20	3.79	1" FPT	208 / 3	65	70	525 lb	1,2,3

TYPICAL HVAC ANNOTATION, SYMBOLS, AND DETAIL LEGEND

ANNOTATION LEGEND

- AHU-# - AIR HANDLING UNIT
- B-# - BOILER
- C-# - CHILLER
- CC-# - COOLING COIL
- CU-# - CONDENSING UNIT
- CUH-# - CABINET UNIT HEATER
- EB-# - ELECTRIC BASEBOARD
- EF-# - EXHAUST FAN (CABINET OR CEILING)
- ERV-# - ENERGY RECOVERY VENTILATOR
- EWH-# - ELECTRIC WALL HEATER
- EXP-# - EXPANSION TANK
- FT-# - FINNED TUBE RADIATION
- HRV-# - HEAT RECOVERY VENTILATOR
- HVAC-# - HEATING, VENTILATION, AIR CONDITIONER UNIT
- L-# - LOUVER
- MAU-# - MAKE-UP AIR UNIT
- MS-# - MINISPLIT UNIT
- P-# - PUMP
- PRV-# - POWER ROOF VENTILATOR
- PTAC-# - PACKAGE TERMINAL AIR CONDITIONER
- RIH-# - ROOF INTAKE HOOD
- RRH-# - ROOF RELIEF HOOD
- RTU-# - ROOF TOP UNIT
- UH-# - UNIT HEATER
- A.F.F. - ABOVE FINISH FLOOR
- EA - EXHAUST AIR
- MA - MAKE UP AIR (CONDITIONED)
- N.I.C. - NOT IN CONTRACT
- OA - OUTSIDE AIR (UNCONDITIONED)
- RA - RETURN AIR
- SA - SUPPLY AIR
- TO - TRANSFER OPENING
- TA - TRANSFER AIR
- TG - TRANSFER GRILLE

SYMBOL LEGEND

- CONNECT TO EXISTING
- (T) - THERMOSTAT*
- (T)S - TEMPERATURE SENSOR*
- (H) - HUMIDITY SENSOR*
- SD - DUCT SMOKE DETECTOR
- CO - CARBON MONOXIDE SENSOR*
- CO^2 - CARBON DIOXIDE SENSOR*
- NO^2 - NITROGEN DIOXIDE SENSOR*
- (P) - PRESSURE SENSOR

* LOCATE WALL MOUNTED NON-ADJUSTABLE SENSORS @ 58" A.F.F. TO CENTER AND 48" TO TOP OF ALL ADJUSTABLE SENSORS AND STATS, (UNO).

DUCTWORK LEGEND

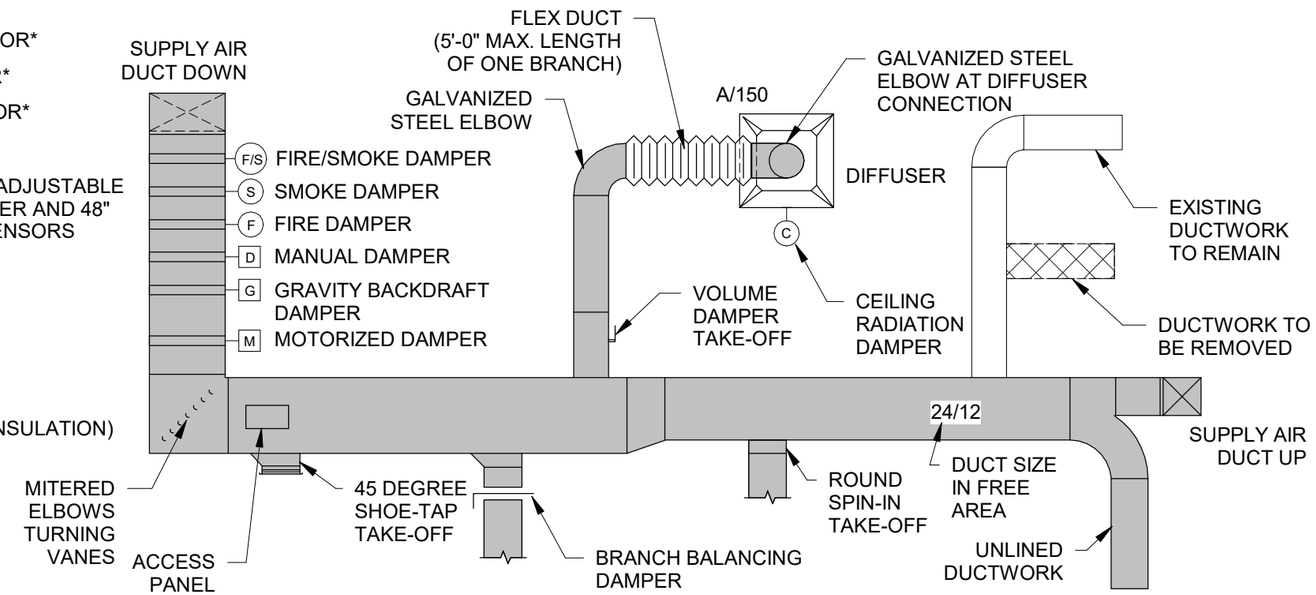
- DUCTWORK (UNLINED)
- DUCTWORK (LINED)
- DUCTWORK (EXTERNAL INSULATION)
- EXISTING DUCTWORK
- NEW DUCTWORK
- DEMOLISH DUCTWORK
- XX/XX - RECTANGULAR DUCT SIZE
- X"Ø - ROUND DUCT SIZE
- XX/XX"Ø - FLAT OVAL DUCT SIZE

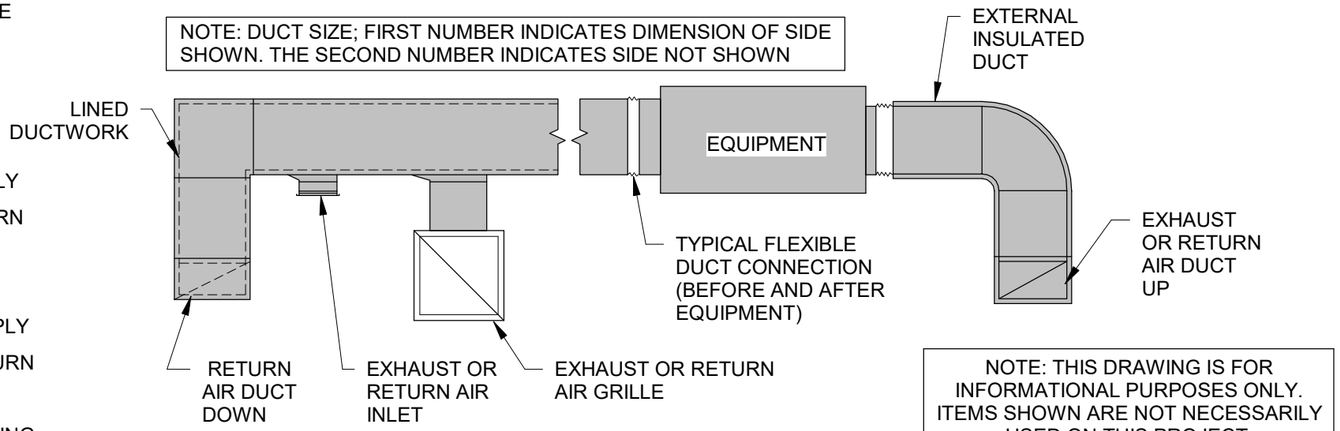
PIPING LEGEND

- ——HWS—— - HYDRONIC WATER SUPPLY
- – – –HWR– – – - HYDRONIC WATER RETURN
- ——LPS—— - LOW PRESSURE STEAM
- – – –CD– – – - CONDENSATE RETURN
- ——HPS—— - HEAT PUMP WATER SUPPLY
- – – –HPR– – – - HEAT PUMP WATER RETURN
- ——NG—— - NATURAL GAS PIPING
- ——LP—— - LIQUID PROPANE (LP) PIPING

GRILLE, REGISTER, DIFFUSER TAGS



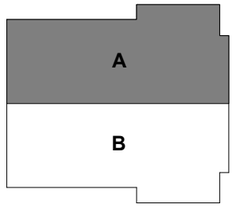




NOTE: THIS DRAWING IS FOR INFORMATIONAL PURPOSES ONLY. ITEMS SHOWN ARE NOT NECESSARILY USED ON THIS PROJECT.

REST AREA VENTILATION CALCULATIONS								
				VENTILATION = 1568CFM		EXHAUST = 1875 CFM		
ROOM #	ROOM NAME	SF	ROOM CLASSIFICATION	AIR CHANGES PER HOUR	TOTAL CFM	CFM/SF	TOTAL CFM	NOTES
101	VESTIBULE	237	No Occupancy	0	0	0	0	
102	LOBBY	2177	Lobby	2	1249	0	0	
103	VESTIBULE	247	No Occupancy	0	0	0	0	
104	TOILET RM	144	Toilet Room	0	0	0	75	
105	TOILET RM	144	Toilet Room	0	0	0	75	
106	WOMEN	348	Toilet Room	0	0	0	375	
107	MEN	316	Toilet Room	0	0	0	375	
108	WOMEN	348	Toilet Room	0	0	0	375	
109	MEN	316	Toilet Room	0	0	0	375	
110	BREAKROOM	834	Dining Rooms	2	235	0	0	
111	JANITOR	1714	Janitor Closet	0	0	0	150	
112	TOILET RM	82	Toilet Room	0	0	0	75	
113	OFFICE	237	Office	1.5	51	0	0	
114	OFFICE	154	Office	1.5	33	0	0	
115	ELECTRICAL/IT	102	Janitor Closet	0	0	0	0	

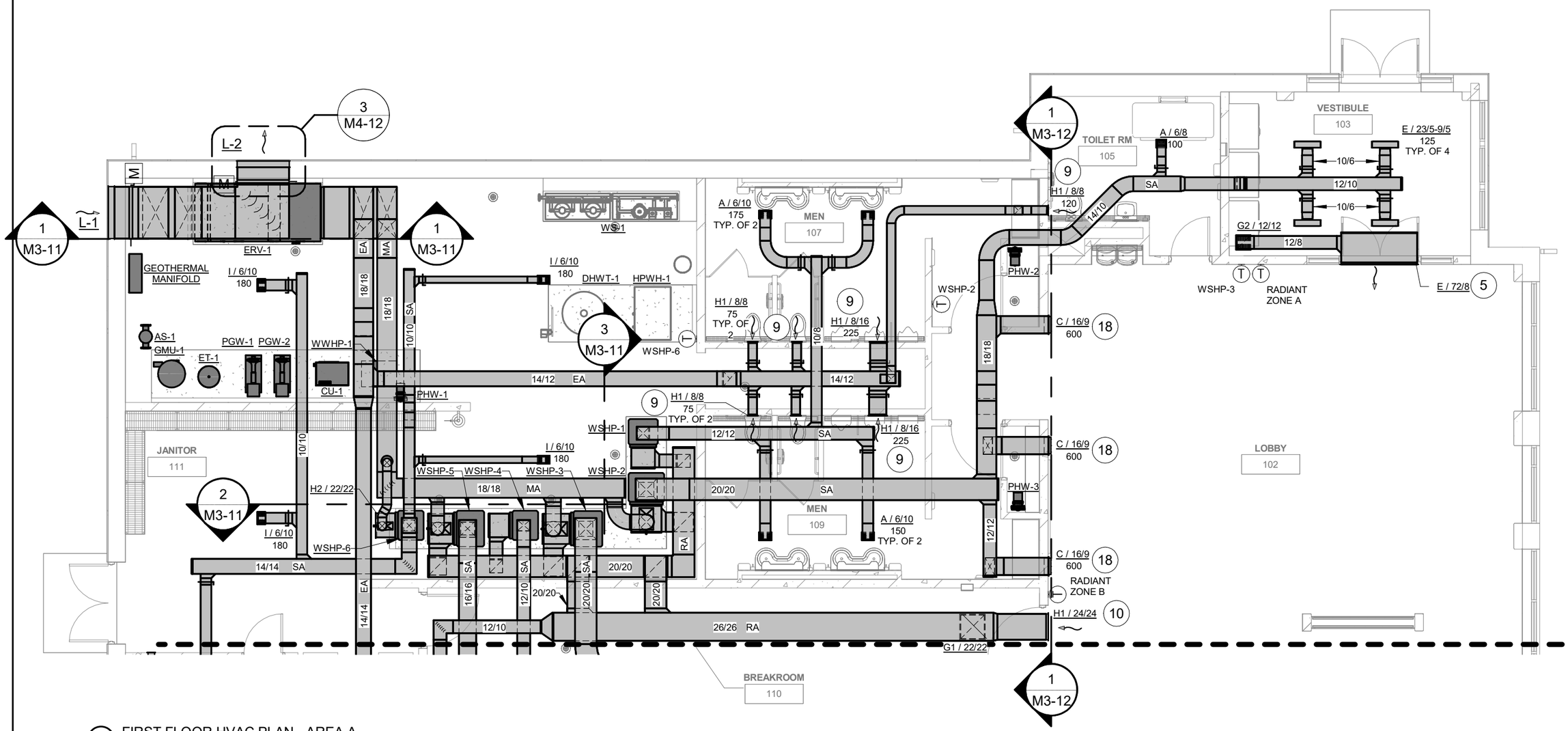
REST AREA VENTILATION CALCULATIONS								
				VENTILATION = 0 CFM		EXHAUST = 336 CFM		
ROOM #	ROOM NAME	SF	ROOM CLASSIFICATION	AIR CHANGES PER HOUR	TOTAL CFM	CFM/SF	TOTAL CFM	NOTES
101	MAINTENANCE	678	Automotive Service Garage	0	0	0.5	335.5	



KEYPLAN

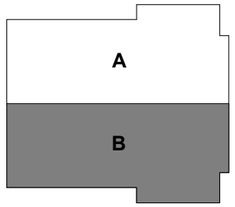
KEYNOTE LEGEND

5	LOCATE BOTTOM OF TRANSFER GRILLE AT 10'-0" ABOVE FINISHED FLOOR.
9	LOCATE BOTTOM OF EXHUAST GRILLES AT 7'-4" ABOVE FINISHED FLOOR ALIGNED WITH BRICK.
10	LOCATE BOTTOM OF RETURN GRILLE AT 10'-6" ABOVE FINISHED FLOOR.
18	LOCATE BOTTOM OF SUPPLY AIR DRUM DIFFUSER AT 10'-6" ABOVE FINISHED FLOOR.



1 FIRST FLOOR HVAC PLAN - AREA A

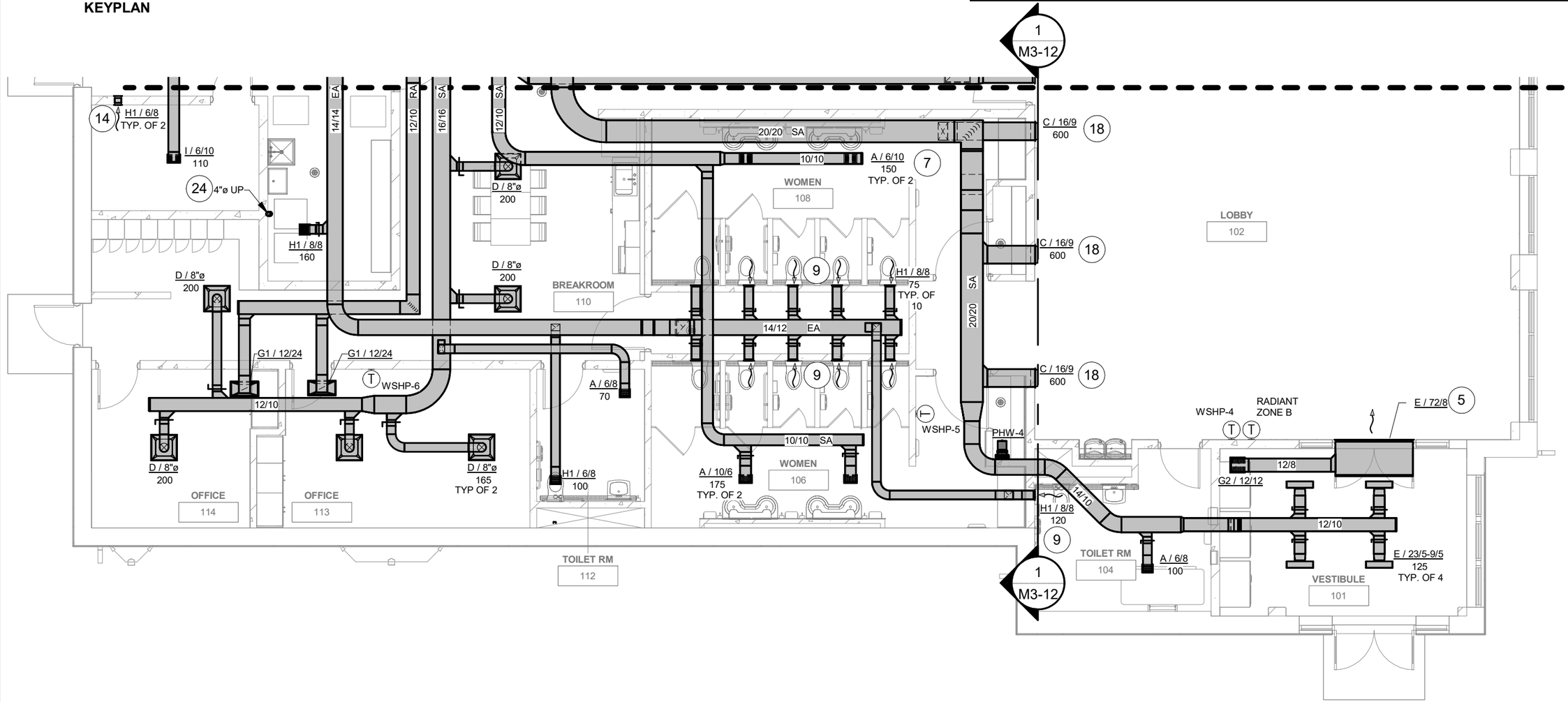
1/8" = 1'-0"



KEYPLAN

KEYNOTE LEGEND

5	LOCATE BOTTOM OF TRANSFER GRILLE AT 10'-0" ABOVE FINISHED FLOOR.
7	LOCATE BALANCING DAMPER IN TAKEOFF OF VERTICAL DROP TO GRILLE.
9	LOCATE BOTTOM OF EXHUAST GRILLES AT 7'-4" ABOVE FINISHED FLOOR ALIGNED WITH BRICK.
14	LOCATE BOTTOM OF TRANSFER DUCT 8'-0" ABOVE FINISHED FLOOR.
18	LOCATE BOTTOM OF SUPPLY AIR DRUM DIFFUSER AT 10'-6" ABOVE FINISHED FLOOR.
24	TERMINATE DRYER VENT WITH DRYERJACK MODEL 486 OR SIMILAR.

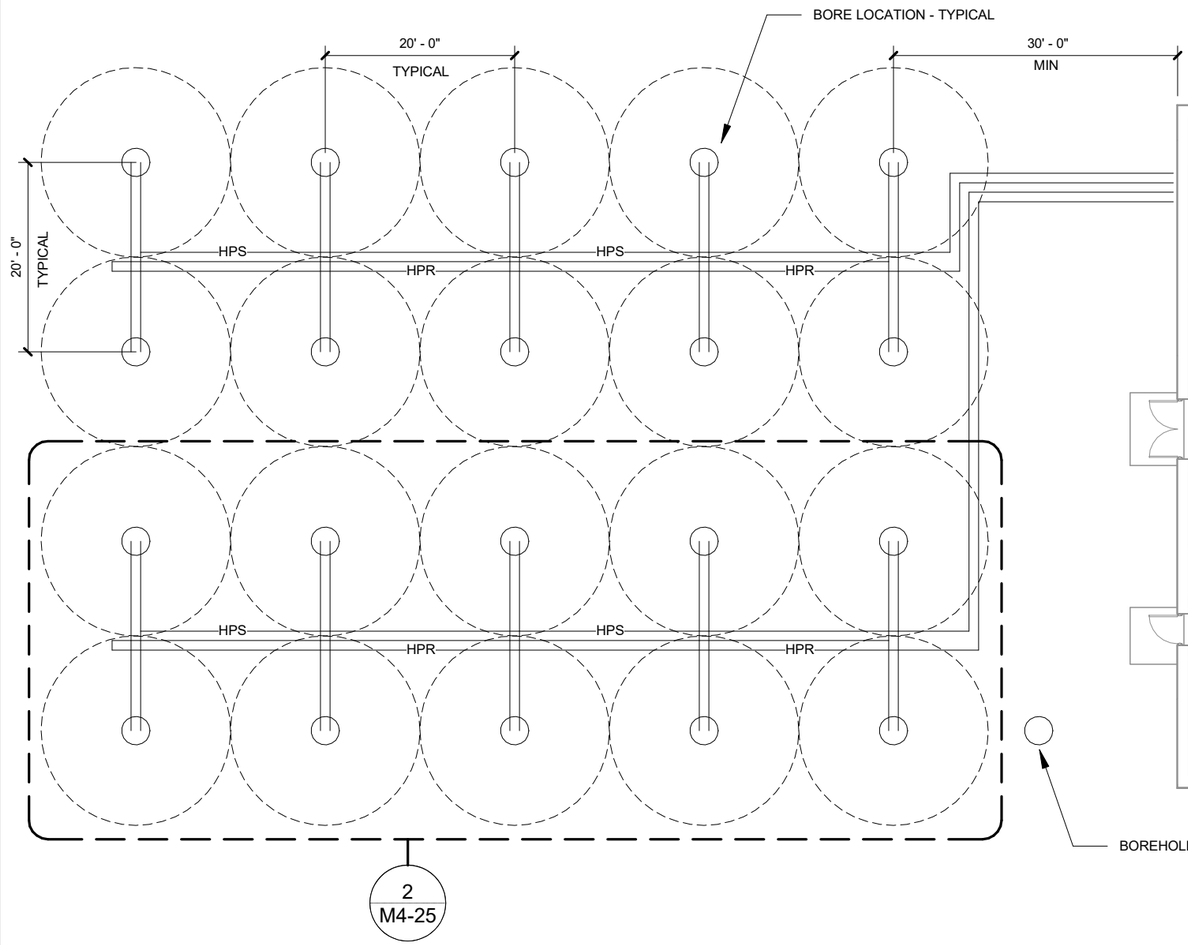


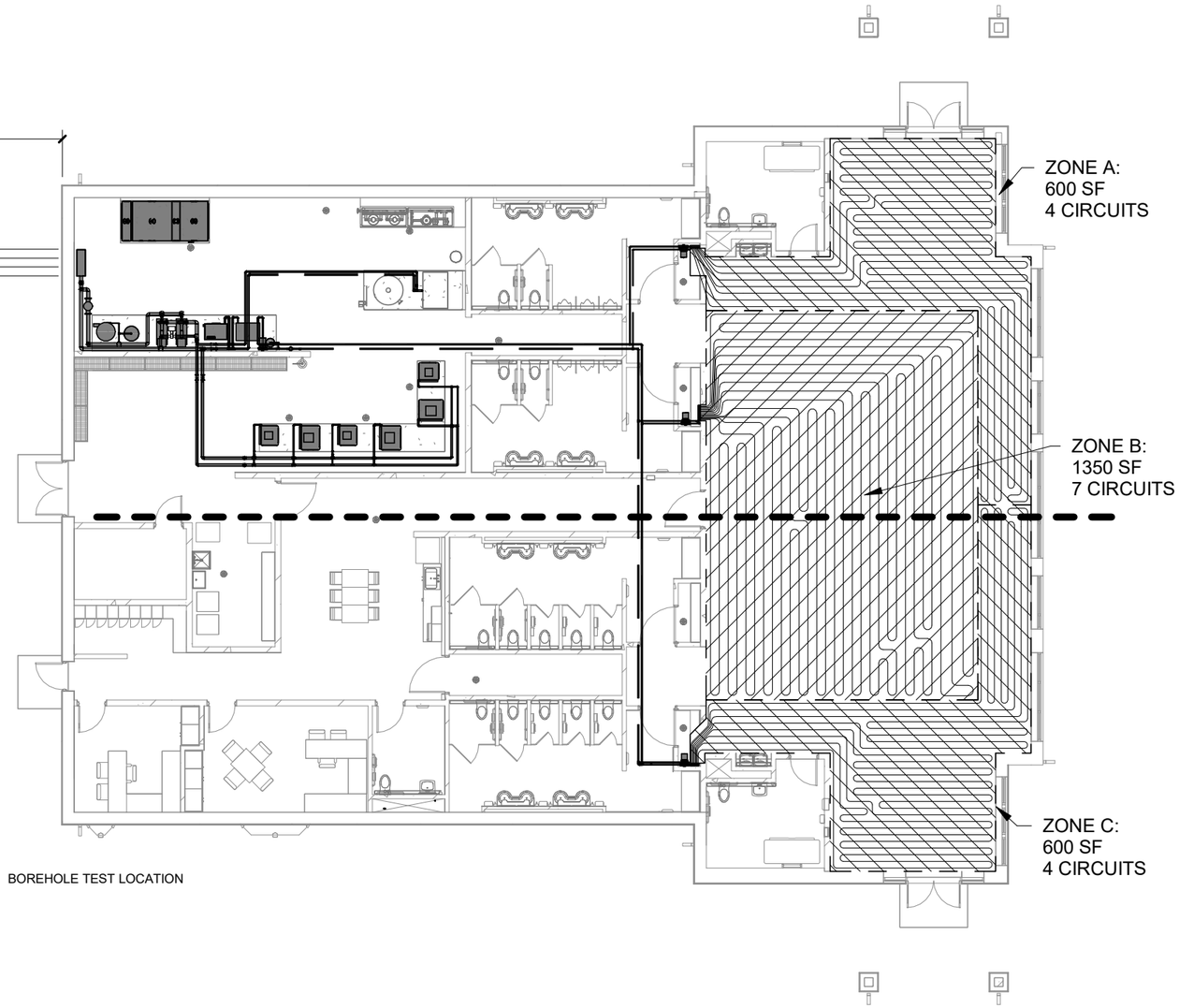
1 FIRST FLOOR HVAC PLAN - AREA B

1/8" = 1'-0"

KEYNOTE LEGEND

NOTE: SEE CIVIL PLANS FOR EXACT LOCATION OF GEOTHERMAL FIELD.



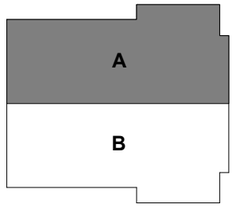


1 FIRST FLOOR HYDRONIC PLAN

1/16" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		FIRST FLOOR HYDRONIC PLAN - OVERALL	SHEET NO: M2-21

PLOT DATE: 1/26/2024 4:25:14 PM PLOT BY: ISG INC. PLOT NAME: CPO PLOT SCALE: AS INDICATED

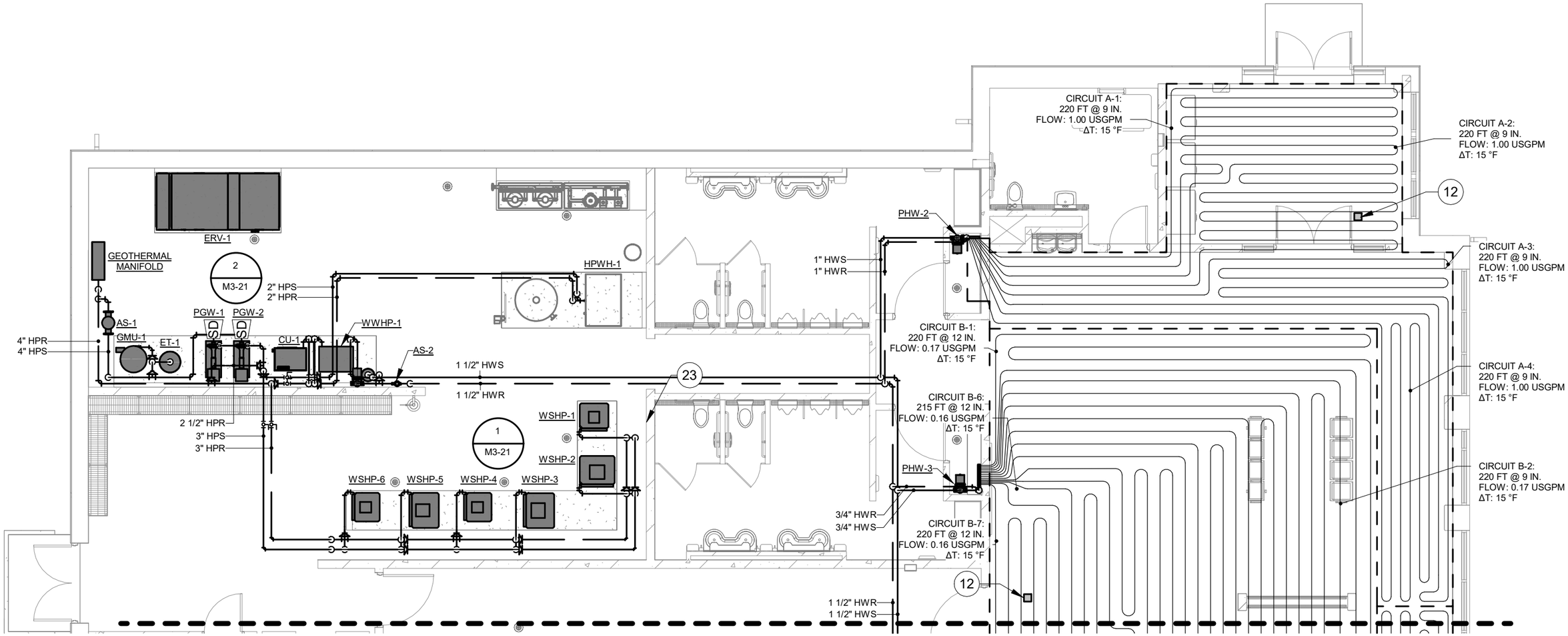


KEYPLAN

KEYNOTE LEGEND

12	LOCATION OF IN SLAB THERMOSTAT FOR RADIANT FLOOR HEATING.
23	DIFFERENTIAL PRESSURE TO BE WALL MOUNTED. REFERENCE 1/M4-25.

2

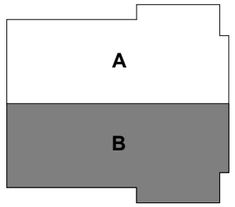


1 FIRST FLOOR HYDRONIC PLAN - AREA A

1/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		FIRST FLOOR HYDRONIC PLAN - AREA A	SHEET NO: M2-21A

PLOT DATE: 1/26/2024 4:25:20 PM PLOT BY: ISG INC. PLOT NAME: CPO PLOT SCALE: AS INDICATED

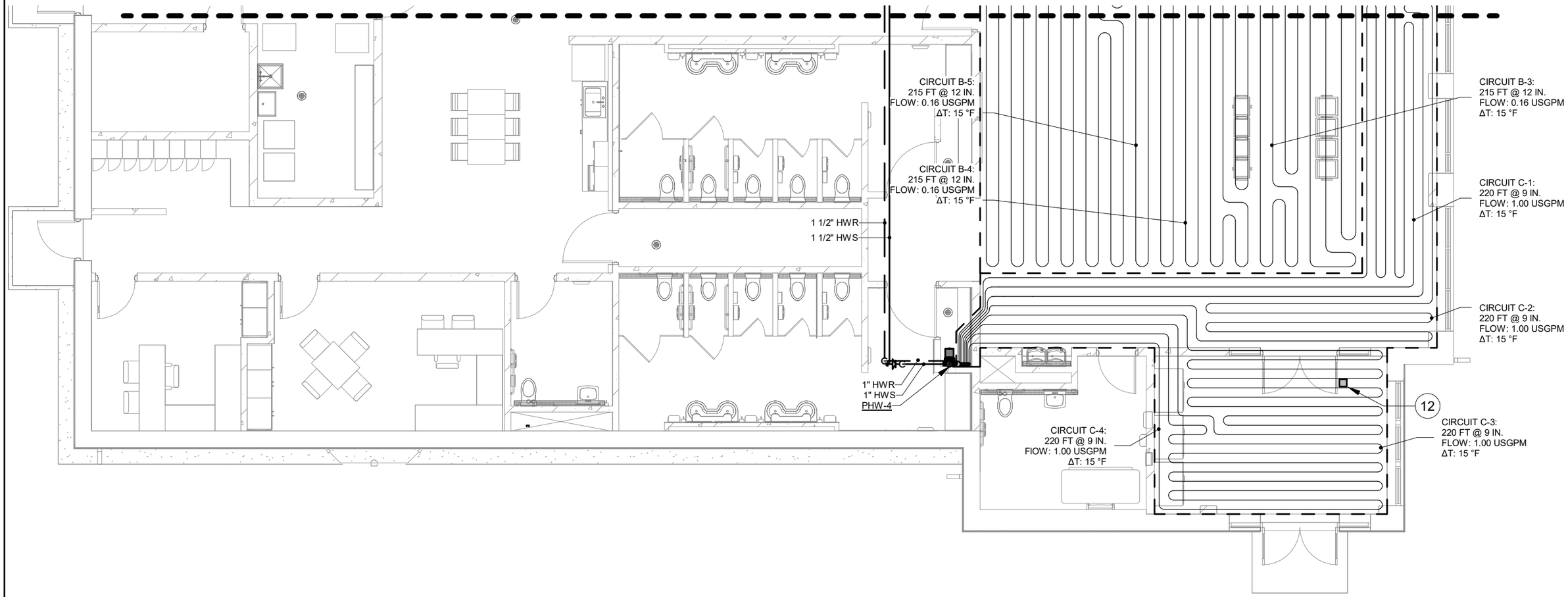


KEYPLAN

KEYNOTE LEGEND

12	LOCATION OF IN SLAB THERMOSTAT FOR RADIANT FLOOR HEATING.

2

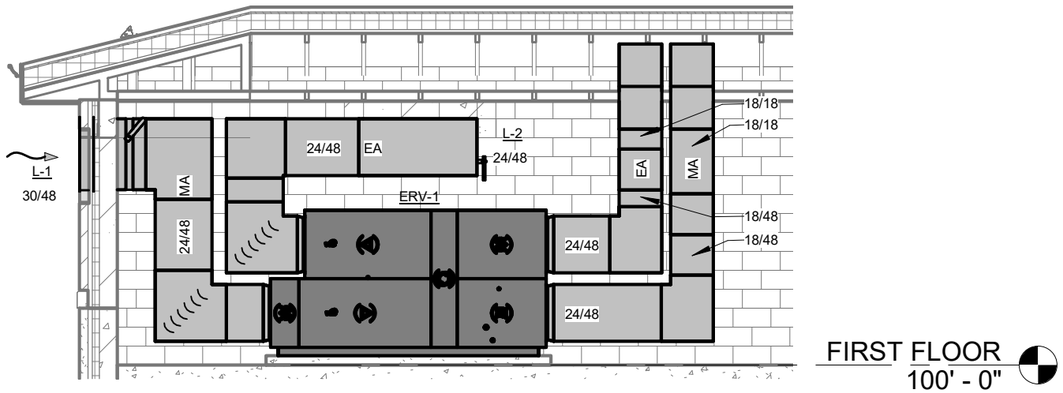


1 FIRST FLOOR HYDRONIC PLAN - AREA B

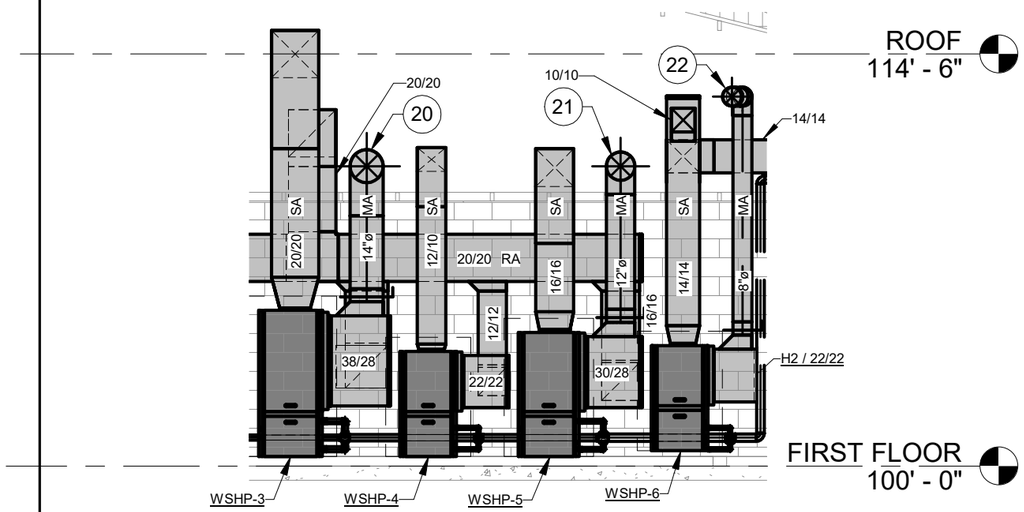
1/8" = 1'-0"

2

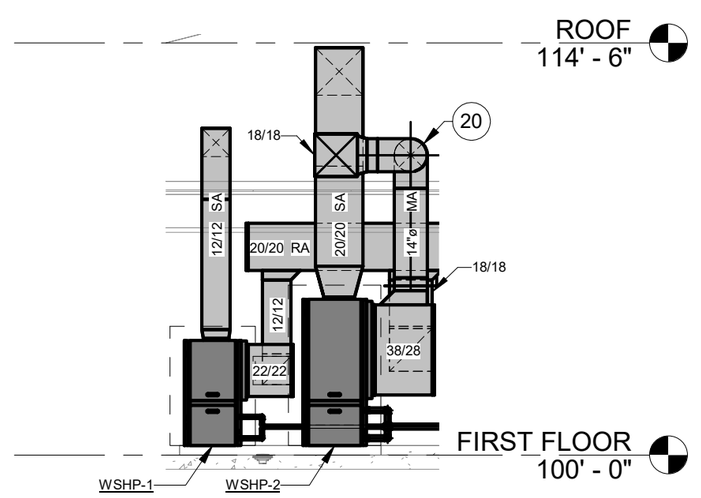
KEYNOTE LEGEND	
20	BALANCE OUTDOOR AIR TO PROVIDE 720 CFM.
21	BALANCE OUTDOOR AIR TO PROVIDE 410 CFM.
22	BALANCE OUTDOOR AIR TO PROVIDE 150 CFM.



1 ERV LOOKING NORTH
3/16" = 1'-0"

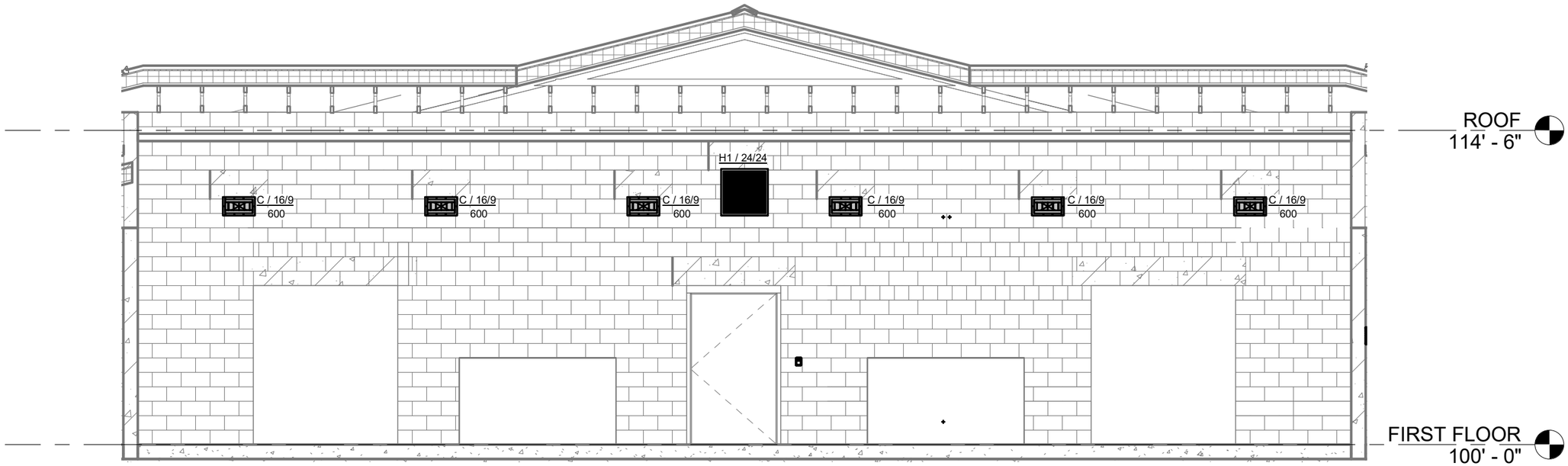


2 AIR-SIDE HEAT PUMPS LOOKING SOUTH
3/16" = 1'-0"



3 AIR-SIDE HEAT PUMPS LOOKING EAST
3/16" = 1'-0"

2



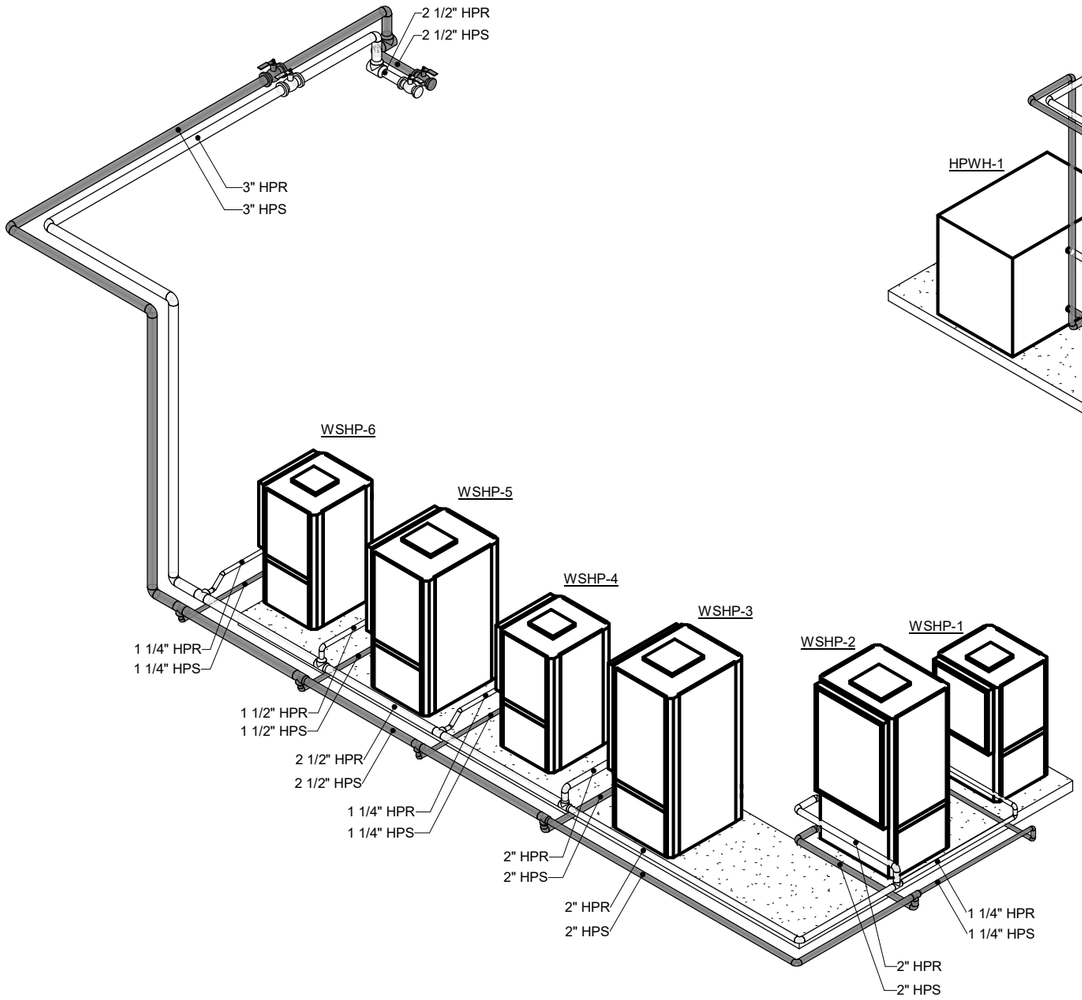
1 LOBBY LOOKING WEST

3/16" = 1'-0"

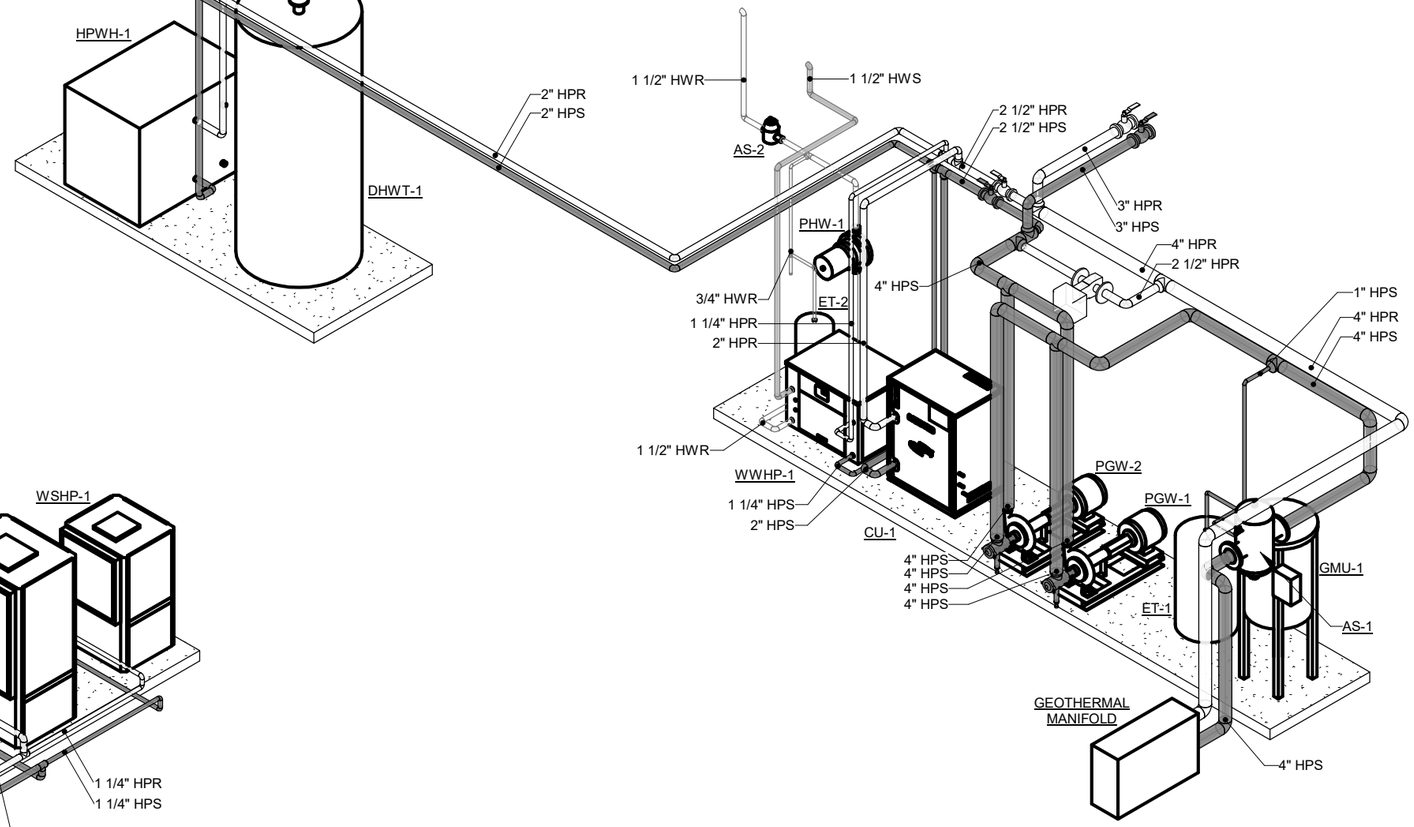
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		HVAC SECTIONS	SHEET NO: M3-12

PLOT DATE: 1/26/2024 4:25:30 PM PLOT BY: ISG INC. PLOT NAME: CPO PLOT SCALE: AS INDICATED

2



1 WSHP HYDRONIC PIPING ISOMETRIC

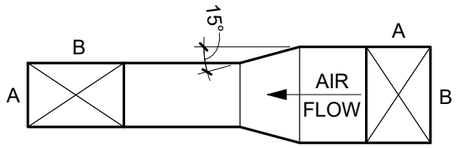


2 HYDRONIC EQUIPMENT ISOMETRIC

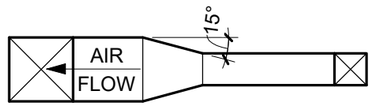
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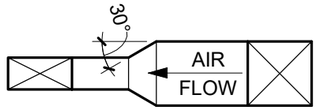
2



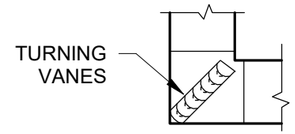
TRANSFORMATION



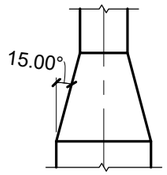
EXPANSION



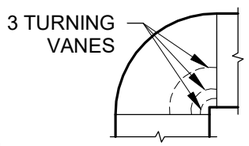
CONTRACTION



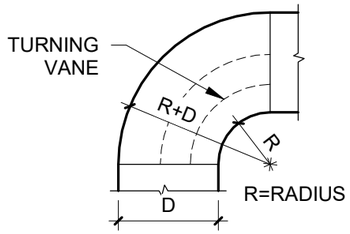
90° ELBOW
(45° SIMILAR)



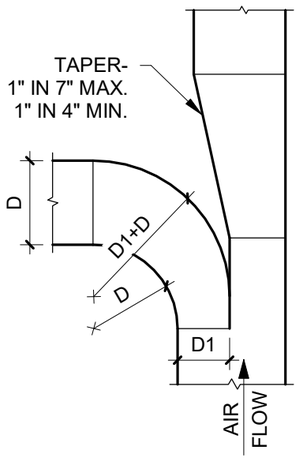
SUPPLY OR RETURN
TRANSITION
(ROUND DUCT)



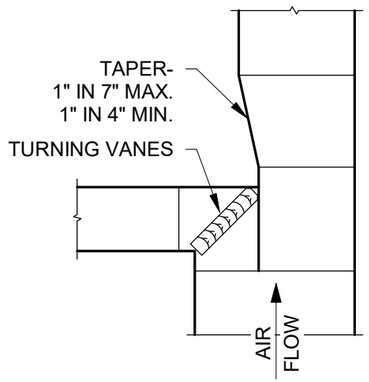
NO THROAT RADIUS



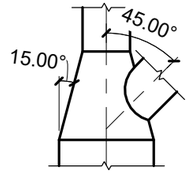
SHORT RADIUS



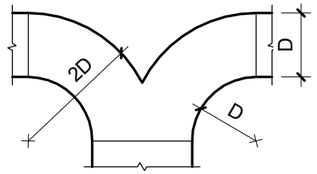
FULL RADIUS ELBOW TAKE-OFF



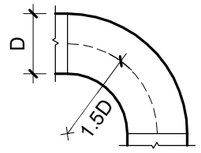
90° ELBOW TAKE-OFF
(USE ONLY WHERE
SPACE IS LIMITED)



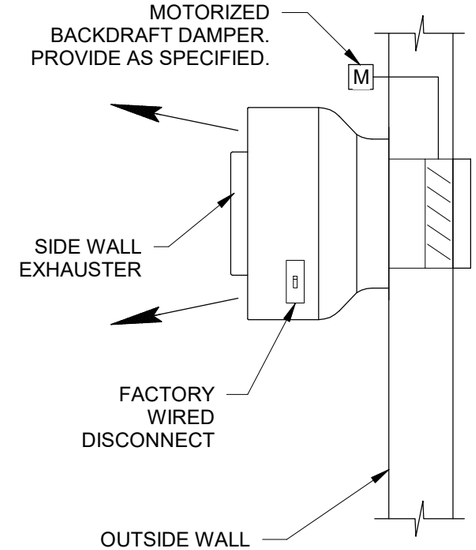
SUPPLY OR RETURN
LATERAL WYE
(ROUND DUCT)



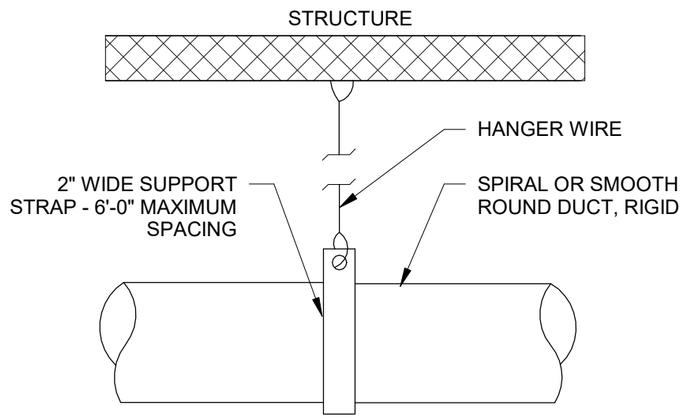
SUPPLY OR RETURN WYE
(RECTANGULAR DUCT)



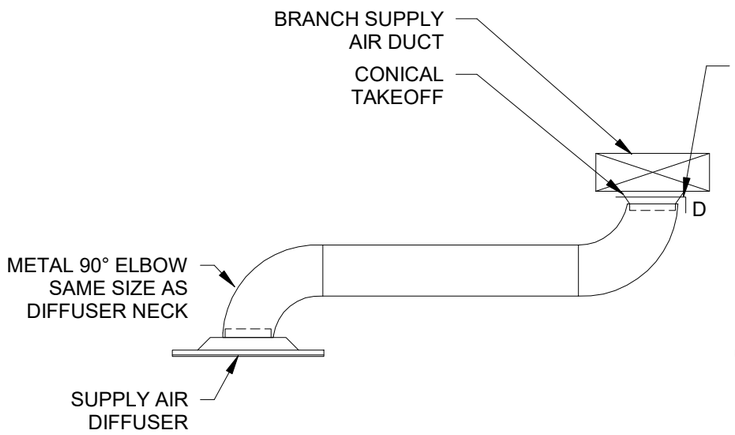
FULL RADIUS



1 DUCT TRANSITIONS AND ELBOWS
NOT TO SCALE

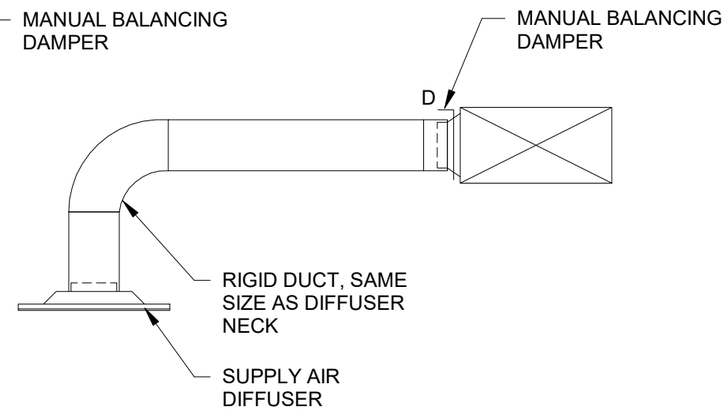


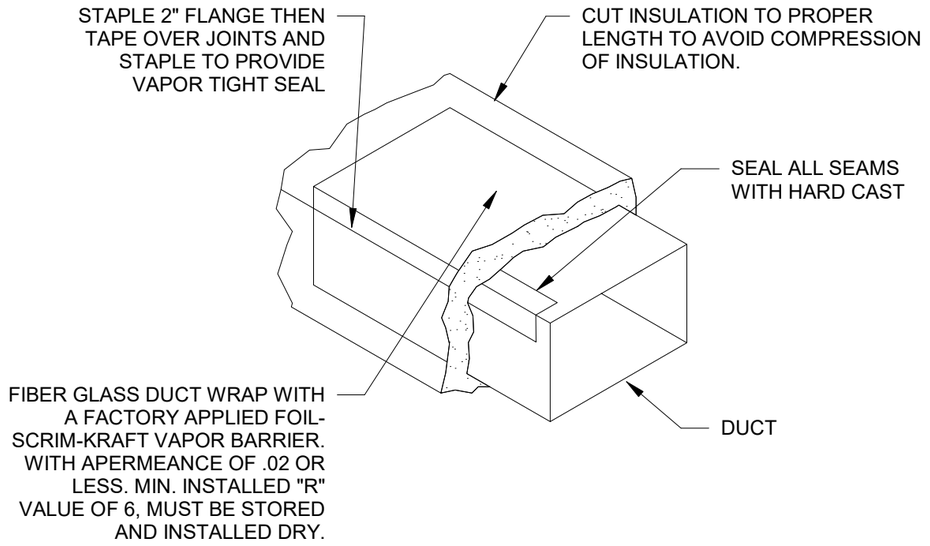
3 ROUND DUCT SUPPORT
NOT TO SCALE



4 RIGID DUCT CONNECTION
NOT TO SCALE

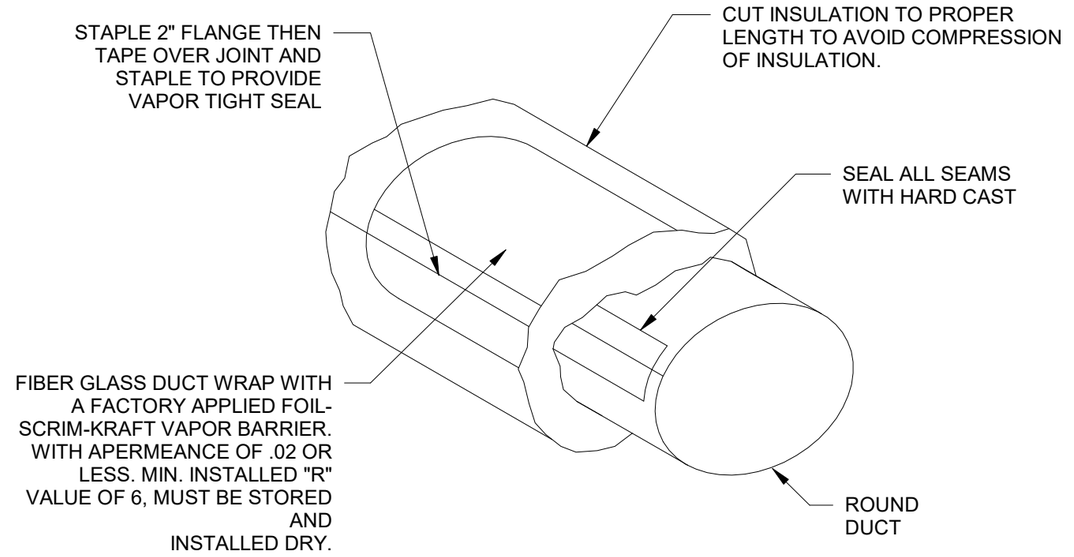
2 SIDEWALL EXHAUST FAN
NOT TO SCALE





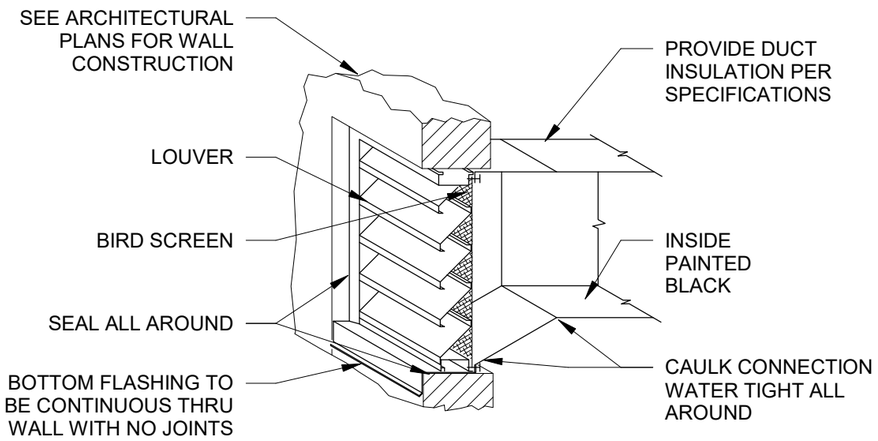
NOTE: SECURE INSULATION WITH WELDED STICK PINS ON DUCTWORK 24" AND LARGER

1 RECTANGULAR DUCT WRAPPING DETAIL - TYPICAL
NOT TO SCALE



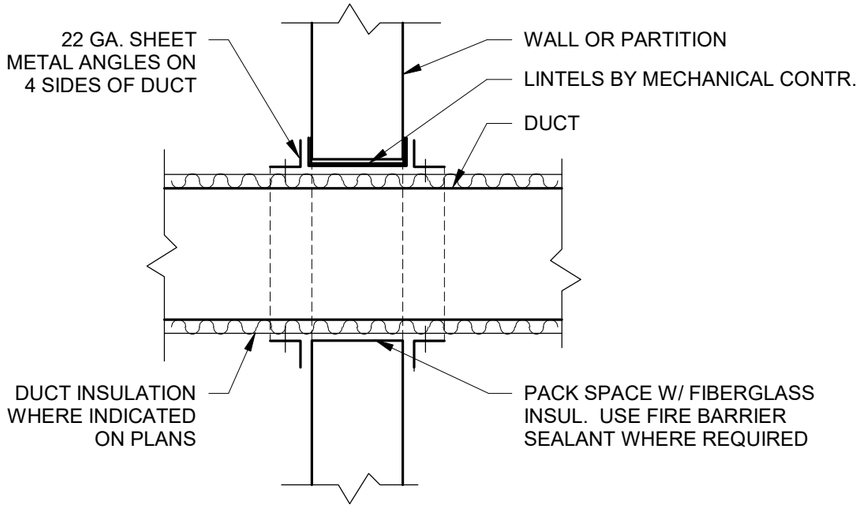
NOTE: SECURE INSULATION WITH WELDED STICK PINS ON DUCTWORK 24" AND LARGER

2 ROUND DUCT WRAPPING DETAIL - TYPICAL
NOT TO SCALE

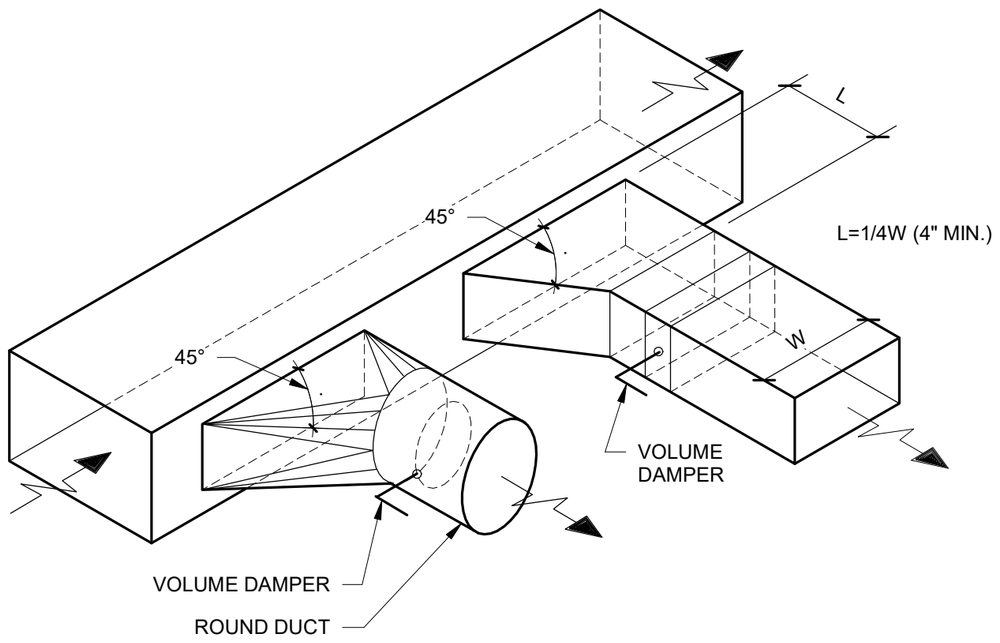


3 LOUVER DETAIL
NOT TO SCALE

2

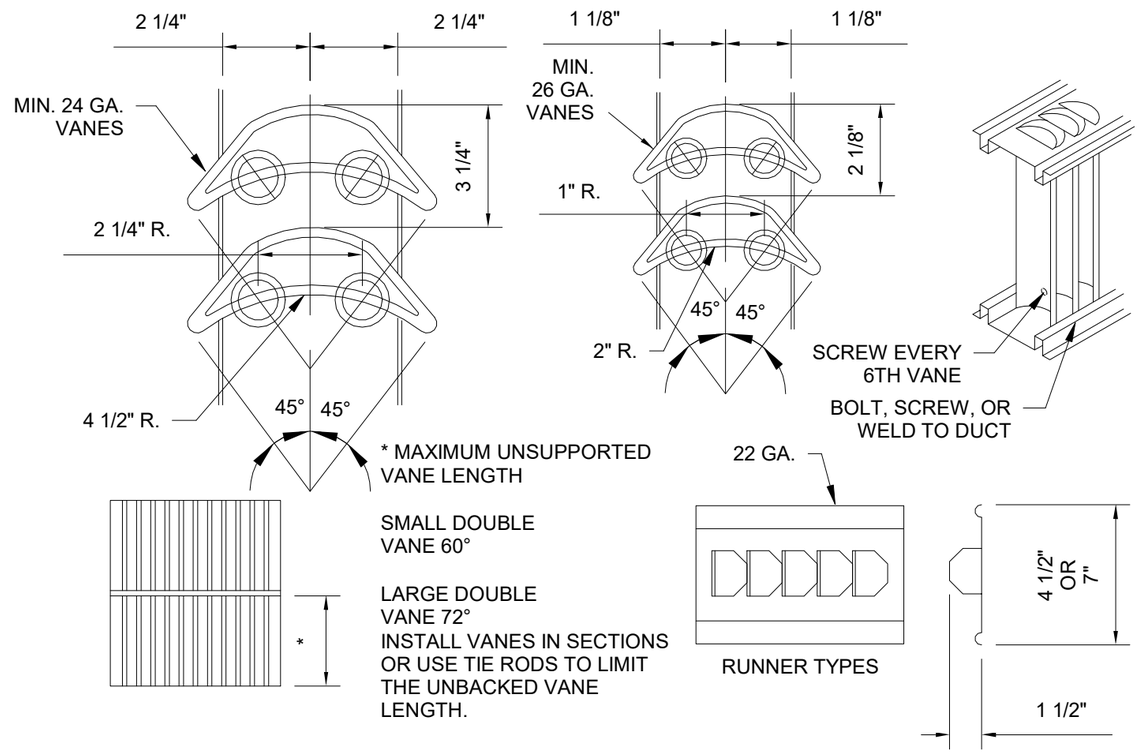


1 DUCT PENETRATION THROUGH WALL
NOT TO SCALE



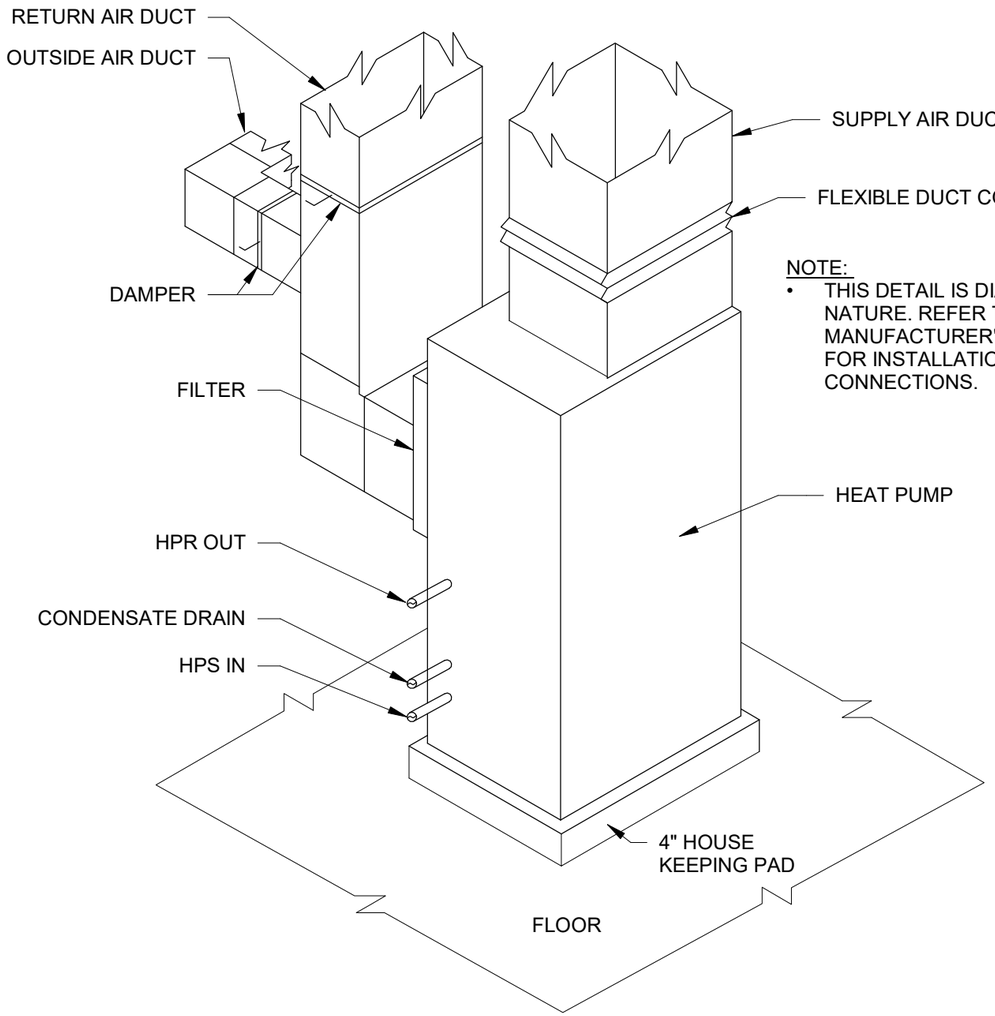
2 BEVELED DUCT TAKEOFFS
NOT TO SCALE

ALL VANES SHALL BE SECURE AND STABLE, VANES SHALL BE SECURELY INSTALLED IN OPERATING POSITION, FASTENED TO RUNNERS



3 TURNING VANES DETAIL
NOT TO SCALE

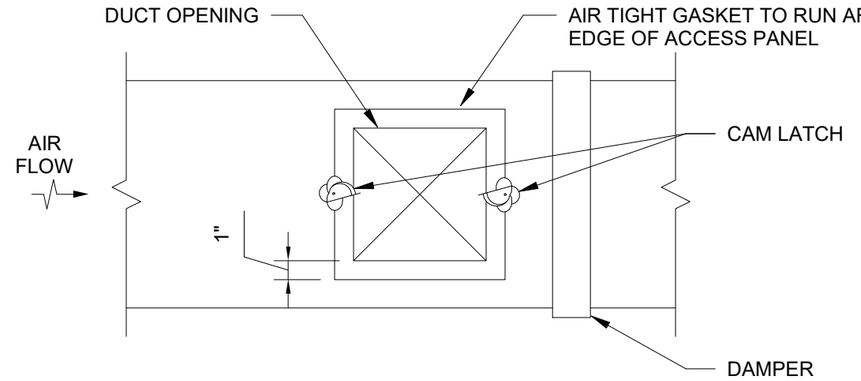
2



NOTE:

- THIS DETAIL IS DIAGRAMMATIC IN NATURE. REFER TO PLANS AND MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION AND CONNECTIONS.

1 HEAT PUMP TYPICAL INSTALL DETAIL
NOT TO SCALE



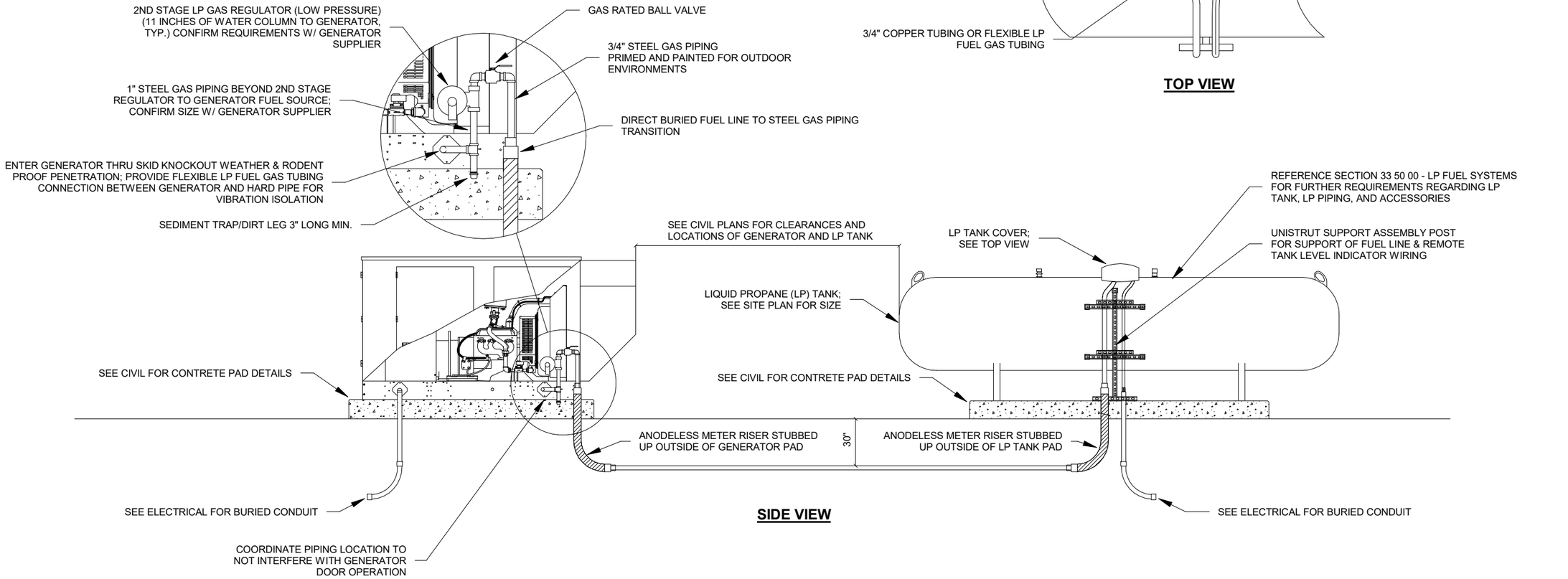
ACCESS PANEL SIZE SCHEDULE

DUCT SIZE	ACCESS PANEL SIZE
6" TO 15"	10" W x (DAMPER DEPTH-2") D
15" TO 21"	12" W x (DAMPER DEPTH-2") D
21" AND ABOVE	18" W x (DAMPER DEPTH-2") D

ALL OTHER ACCESS PANELS TO BE A MINIMUM OF 15"x15" WHERE DUCT SIZE ALLOWS. USE FOUR CAM LATCHES ON PANELS LARGER THAN 18"x18" SIZE.

2 ACCESS PANEL DETAIL
NOT TO SCALE

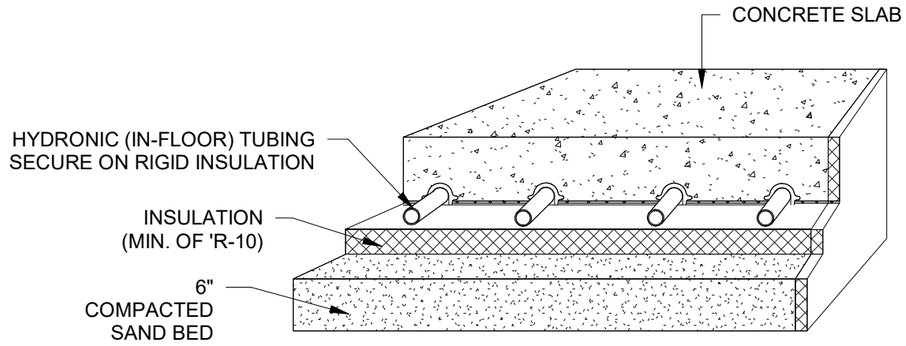
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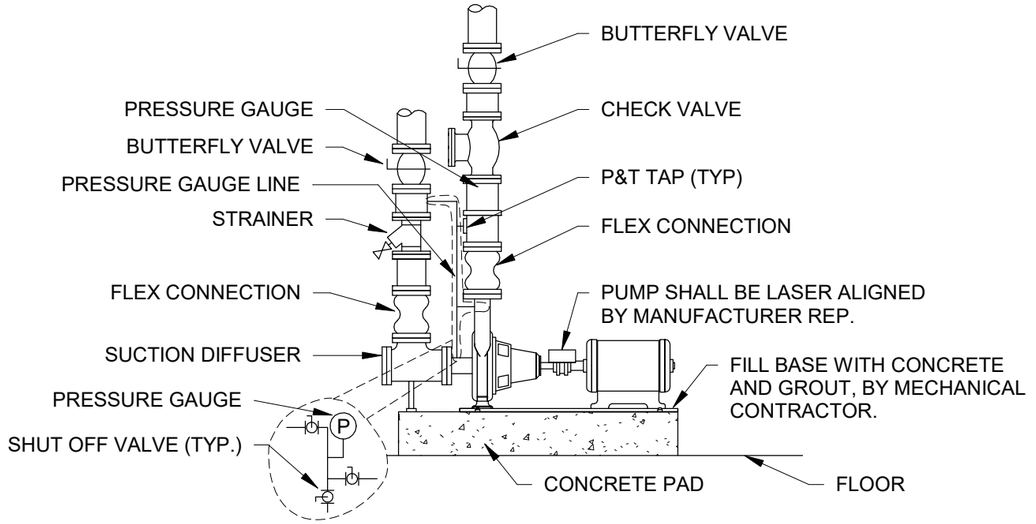
1 LP FUEL SYSTEM PIPING DETAIL

NOT TO SCALE

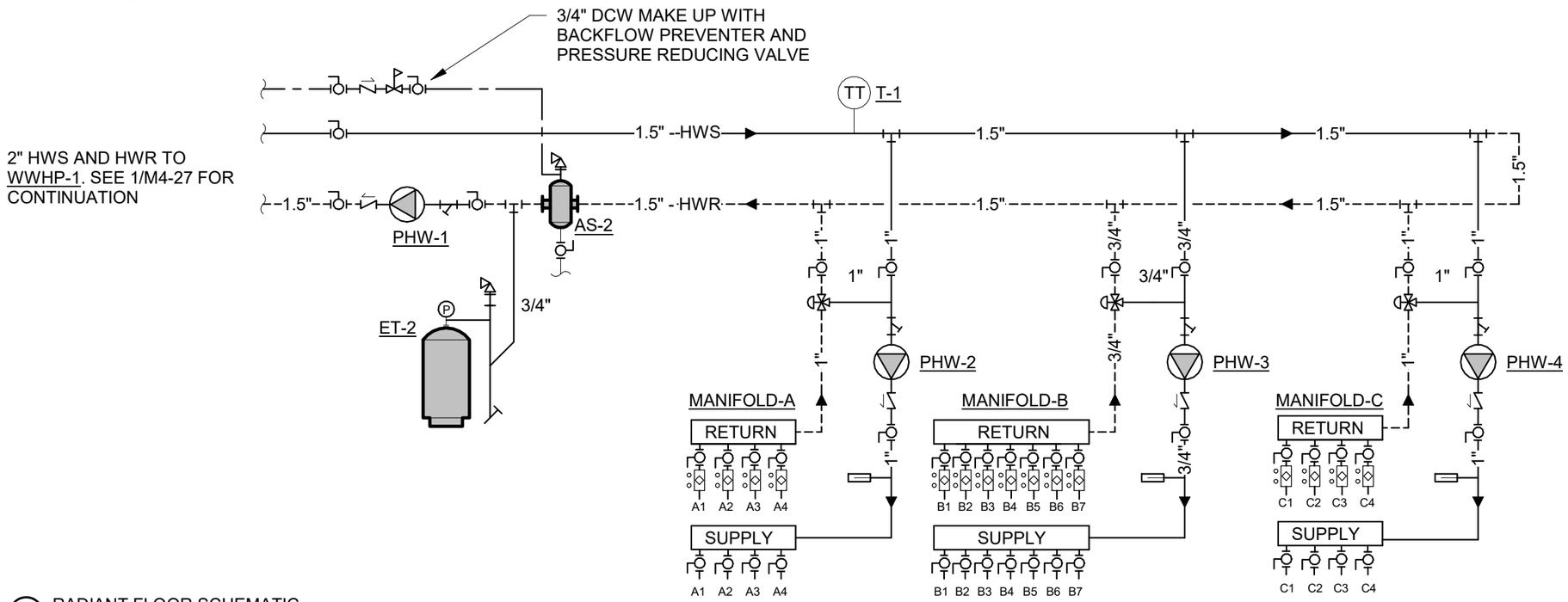
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1 INFLOOR HEAT SLAB ON GRADE DETAIL
NOT TO SCALE

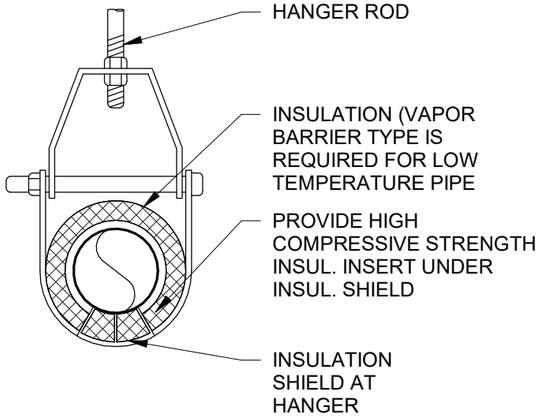


2 BASE MOUNTED PUMP ON CONRETE PAD DETAIL
NOT TO SCALE

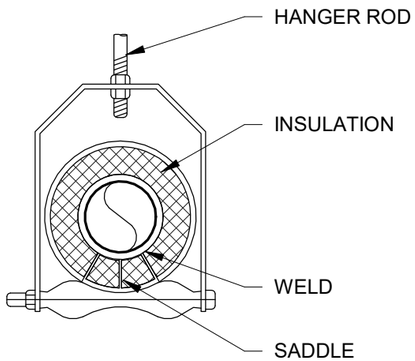


3 RADIANT FLOOR SCHEMATIC
NOT TO SCALE

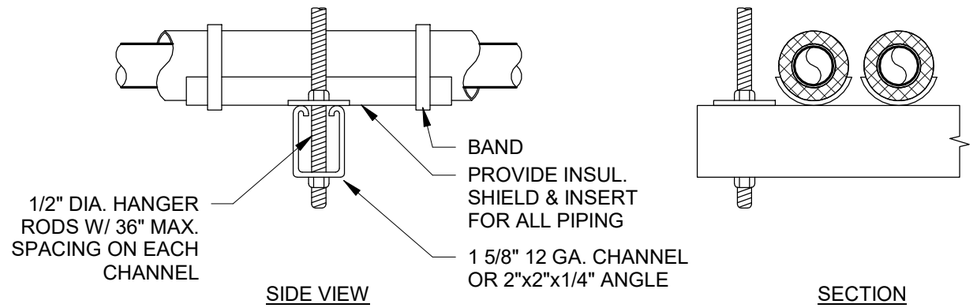
2



ADJUSTABLE CLEVIS HANGER



ADJUSTABLE ROLLER HANGER



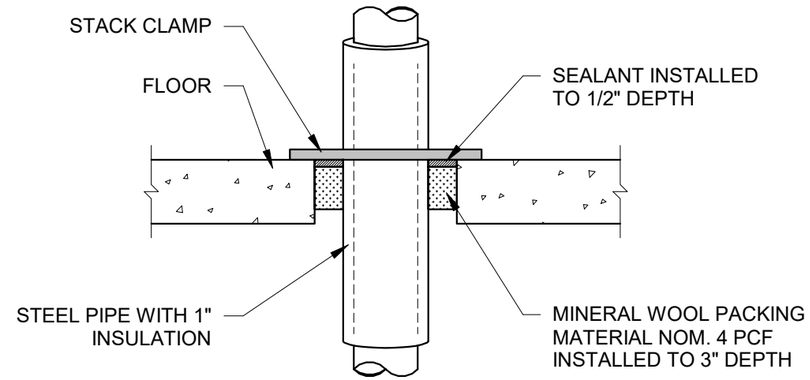
SIDE VIEW SECTION

TRAPEZE HANGER FOR UP TO 800 LB. UNIFORM LOAD

NOTE: SEE MFGR. THREADED ROD DATA FOR LOAD CARRYING CAPACITIES
ROD: ASTM.A36

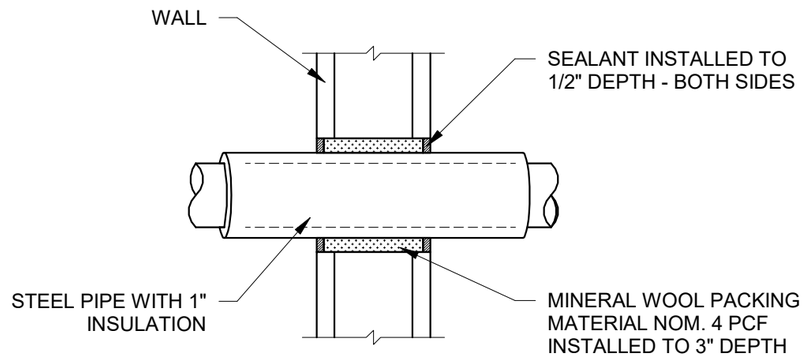
MAXIMUM PIPE SUPPORT SPACING - FEET																		
NOMINAL SIZE	THRU 3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
STEEL PIPE - STD. WT.	7 FT.	7	7	9	10	11	12	12	12	12	12	12	12	12	12	12	12	12
COPPER PIPE	5 FT.	6	7	8	8	9	10	12	12	12	12	--	--	--	--	--	--	--
SCH. 40 PVC (100')	4 FT.	4	4	4	4	4	4	4	4	4	--	--	--	--	--	--	--	--
NOTE: FOR TRAPEZE HANGER, TAKE SPACING OF SMALLEST SIZE ON TRAPEZE																		

1 PIPE SUPPORT
NOT TO SCALE



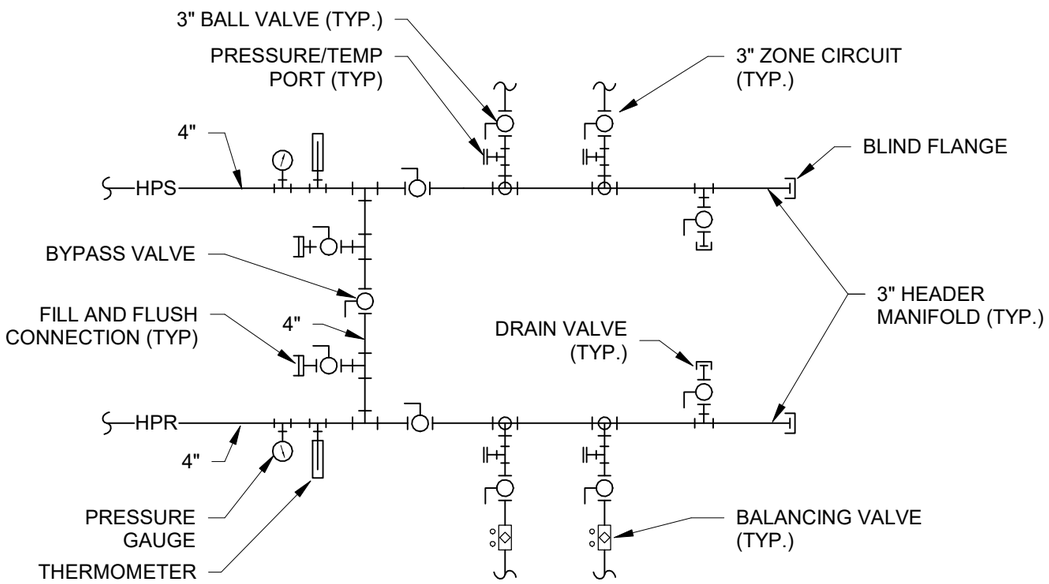
NOTES:
- BASIC DETAILS FOR HPWS, HPWR AND CONDENSATE WITH UNINTERRUPTED INSULATION.
- REFER TO UL LISTING OF ASSEMBLY FOR PROPER INSTALLATION.

2 PIPE WITH INSULATION FLOOR PENETRATION DETAIL
NOT TO SCALE

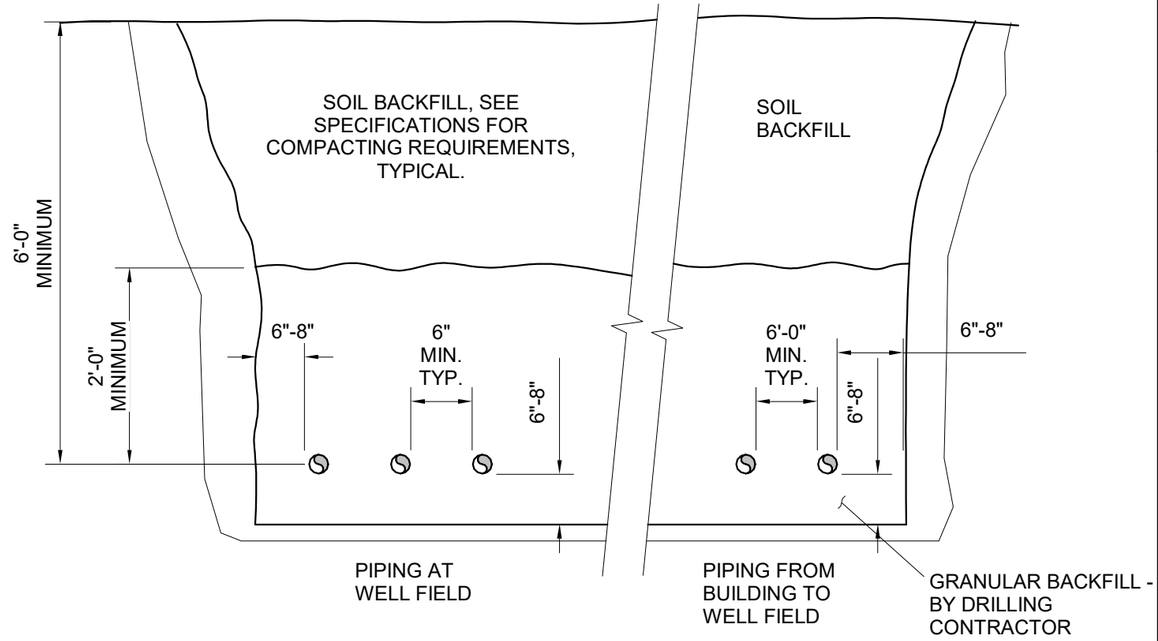


NOTE:
- BASIC DETAILS FOR HPWS, HPWR AND CONDENSATE WITH UNINTERRUPTED INSULATION. REFER TO UL LISTING OF ASSEMBLY FOR PROPER INSTALLATION.

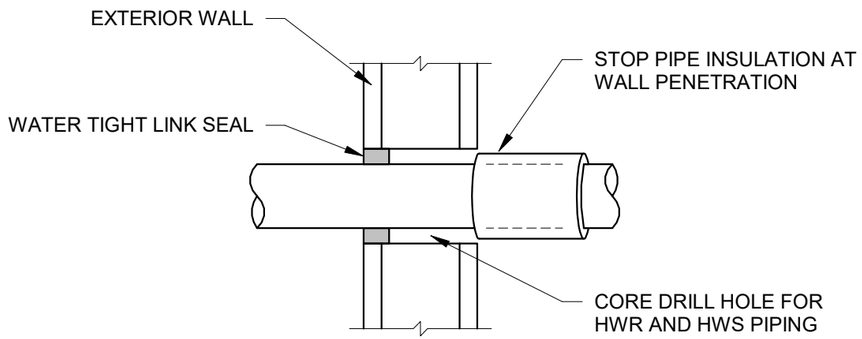
3 PIPE WITH INSULATION WALL PENETRATION DETAIL
NOT TO SCALE



1 HEAT PUMP LOOP MANIFOLD DETAIL
NOT TO SCALE

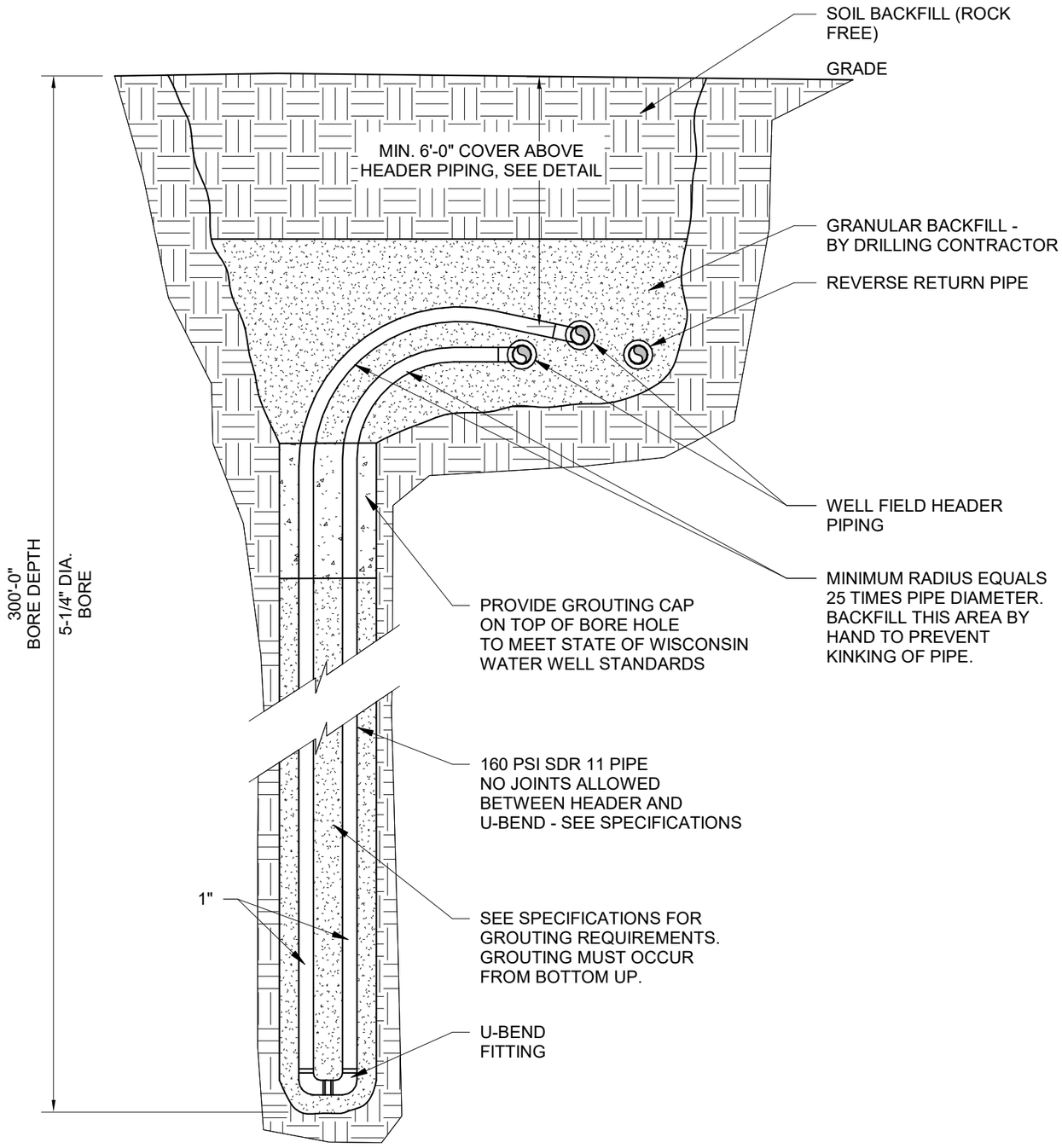


2 GROUND SOURCE WELL TRENCH DETAIL
NOT TO SCALE



3 PIPE EXTERIOR WALL PENETRATION DETAIL
NOT TO SCALE

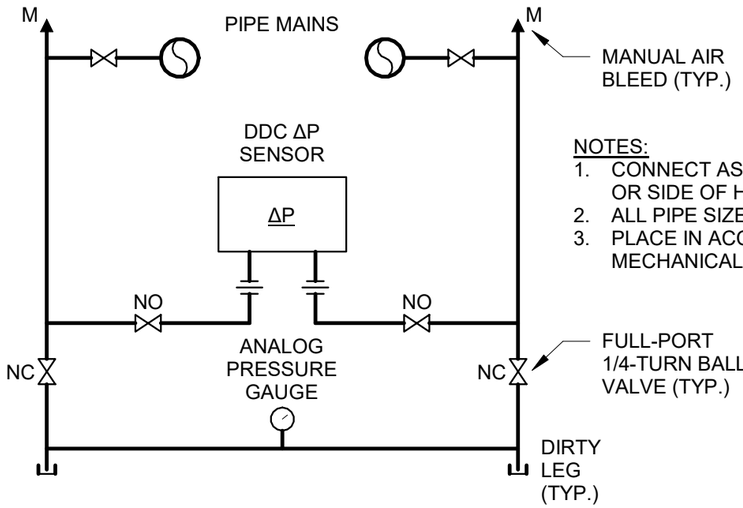
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1 GROUND SOURCE WELL DETAIL
NOT TO SCALE

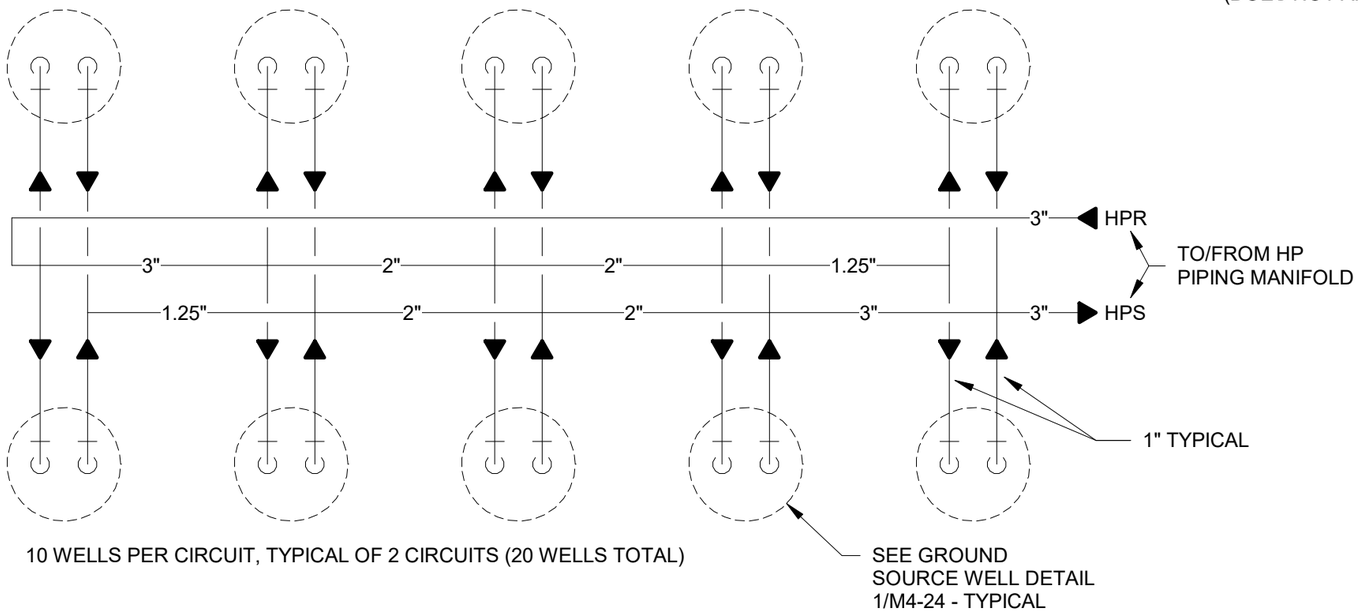
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		HYDRONIC DETAILS	SHEET NO: M4-24

PLOT DATE: 1/26/2024 4:25:42 PM PLOT BY: ISG INC. PLOT NAME: TKK PLOT SCALE: AS INDICATED

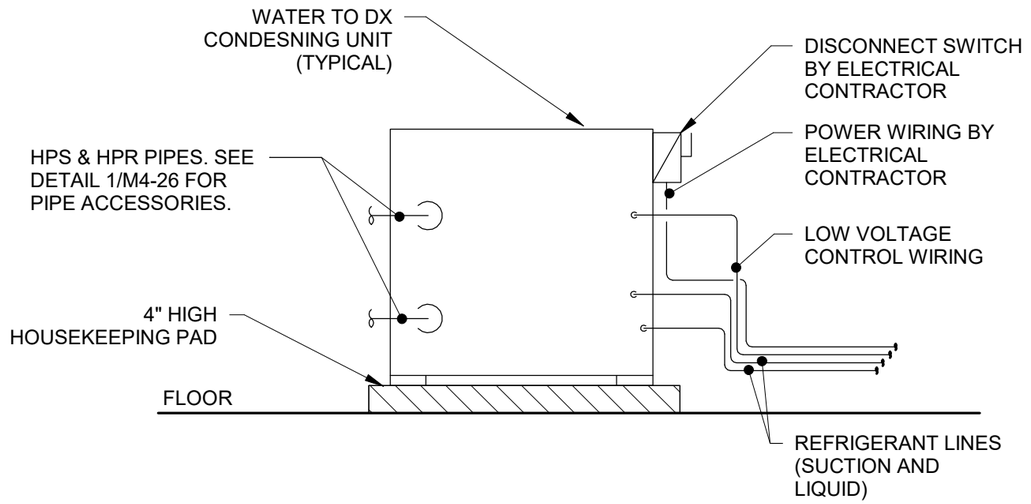


NOTES:
1. CONNECT ASSEMBLY TO VERTICAL MAINS OR SIDE OF HORIZONTAL MAINS.
2. ALL PIPE SIZES SHALL BE 1/2".
3. PLACE IN ACCESSIBLE LOCATION IN AREA A MECHANICAL ROOM 1027.

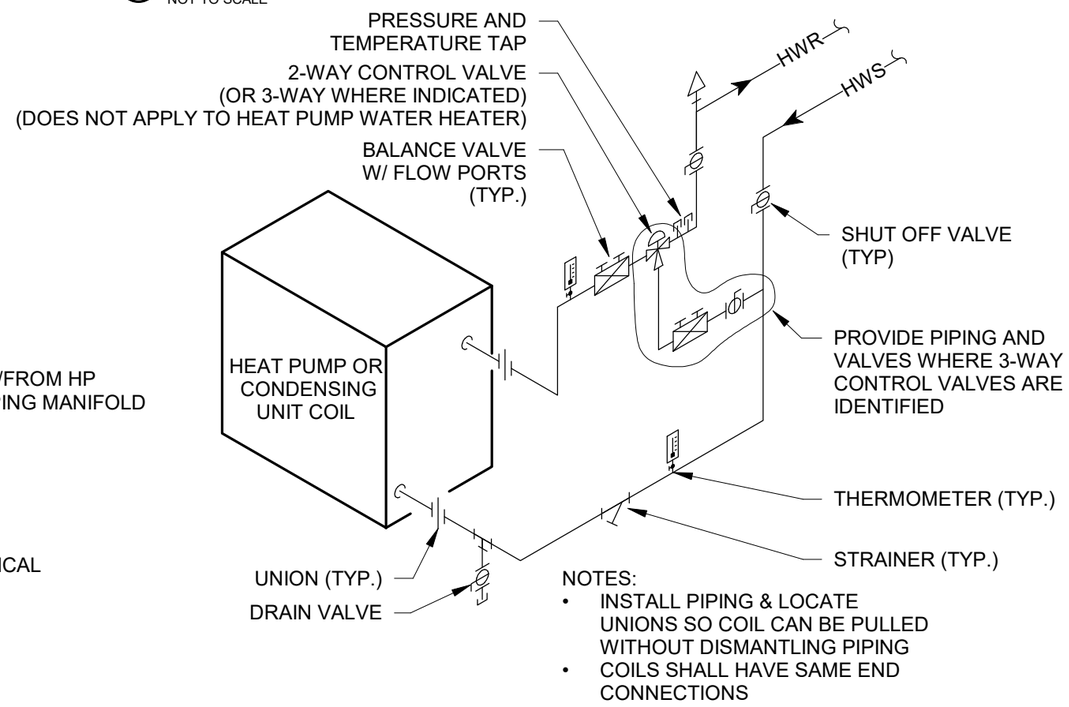
1 HYDRONIC SYSTEM DIFFERENTIAL PRESSURE SENSOR PIPING DETAIL
NOT TO SCALE



2 WELL AREA PIPING DETAIL
NOT TO SCALE



3 CONDENSING UNIT DETAIL - TYPICAL
NOT TO SCALE



NOTES:
- INSTALL PIPING & LOCATE UNIONS SO COIL CAN BE PULLED WITHOUT DISMANTLING PIPING
- COILS SHALL HAVE SAME END CONNECTIONS

4 COIL DETAIL WITH 2-WAY OR 3-WAY VALVE
NOT TO SCALE

2

FLUSHING PIPING CONNECTION NOTES

THIS DETAIL IS NOT TO BE USED AS THE PIPING CONNECTION DETAIL FOR THE HEAT PUMP UNITS. THE PURPOSE OF THIS DETAIL IS TO ILLUSTRATE THE PROCEDURE TO BE USED FOR BYPASSING THE HEAT PUMP UNITS DURING THE FLUSHING AND CLEANING OF THE HYDRONIC SYSTEM. THIS IS METHODOLOGY AS OUTLINED BY GRISWOLD CONTROLS. REFER TO DETAIL 1/M5 FOR HEAT PUMP CONNECTION.

CLEANING AND DRAINING THE SYSTEM

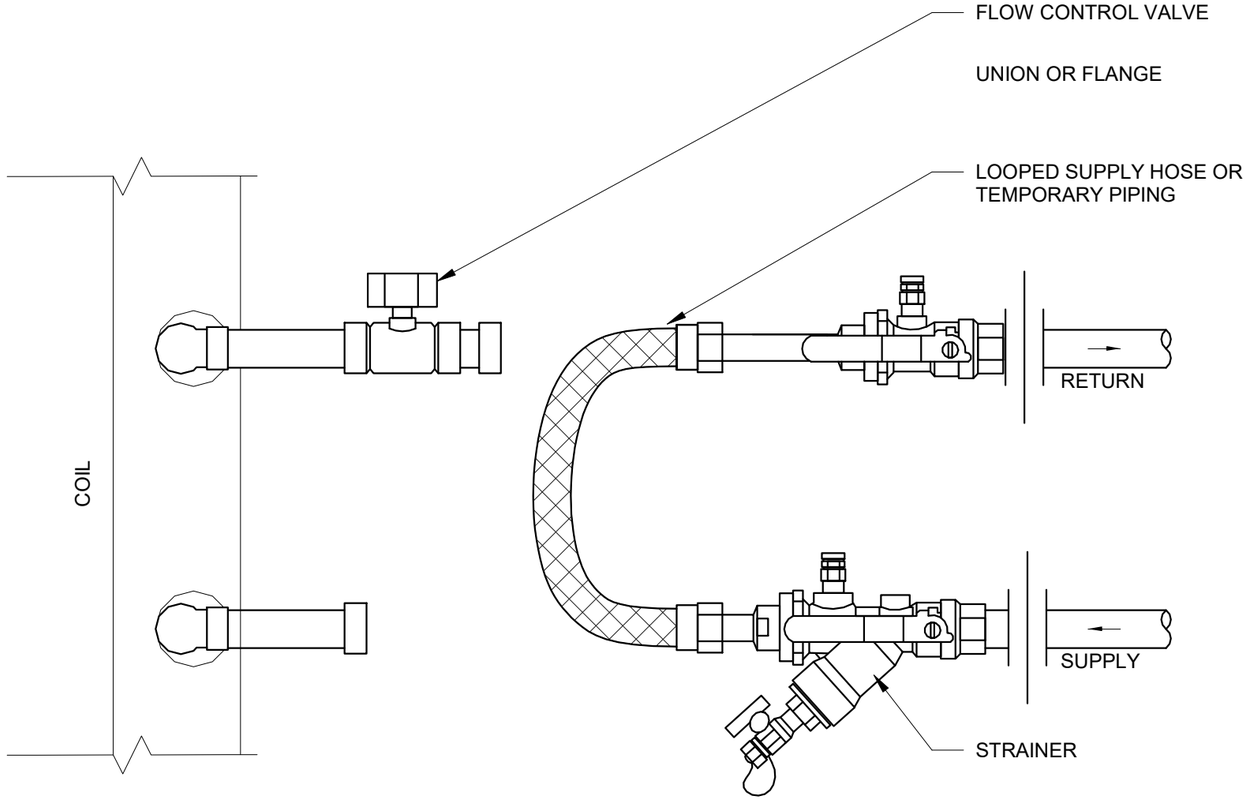
PRIOR TO FULL SYSTEM START-UP, ALL PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE DIRT AND DEBRIS. TO FLUSH OUT THE PIPING SYSTEM PROPERLY, THE HOSE KITS SHALL BE MODIFIED AS SHOWN ON THE DETAIL BY "LOOPING" THE SUPPLY HOSE AND RETURN PIPING TOGETHER, THUS BY-PASSING THE TERMINAL UNIT (HEAT PUMP), AND FLOW CONTROL VALVE. THIS PROCEDURE SHALL BE USED TO PROTECT THE TERMINAL UNITS FROM CONTAMINATION.

PROCEDURE FOR "LOOPING" HOSES:

1. DISASSEMBLE THE RETURN SIDE HOSE KIT ASSEMBLY, BUT LEAVE THE BALL VALVE CONNECTED TO THE RETURN PIPE.
2. REMOVE THE INTERNAL SCREEN FROM THE Y-STRAINER WHILE FLUSHING THE SYSTEM.
3. LOOSEN THE SUPPLY SIDE HOSE FROM THE TERMINAL UNIT, AND "LOOP" IT DIRECTLY TO THE BALL VALVE CONNECTION TYPE).
4. AFTER ALL HOSES HAVE BEEN "LOOPED", START THE SYSTEM PUMP TO CLEAN THE PIPING SYSTEM OF PARTICLES LARGER THEN APPROXIMATELY 1/16" IN DIAMETER (I.E., WELD SPLATTER, MILL SCALE, AND OTHER CONTAMINANTS).

FINAL CONNECTIONS:

1. SHUT OFF BOTH BALL VALVES ON THE SUPPLY AND RETURN CONNECTIONS TO THE UNITS. IF A STRAINER AND DRAIN VALVE ARE INSTALLED, OPEN THE DRAIN VALVE TO REMOVE THE FLUSHING WATER FROM THE CONNECTION HOSE.
2. BREAK THE TEMPORARY "LOOP", AND REINSTALL THE FLOW CONTROL VALVE AND THE RETURN SIDE HOSE.
3. CONNECT BOTH HOSES TO THE TERMINAL UNIT
4. REINSTALL THE INTERNAL SCREEN IN THE Y-STRAINER.
5. OPEN BOTH SUPPLY AND RETURN BALL VALVES, AND FILL THE SYSTEM WITH FLUID.
6. BLEED ANY ENTRAINED AIR SO THAT THE FLOW CONTROL VALVE WILL REMAIN FULL OF FLUID DURING OPERATION.



1 HYDRONIC SYSTEM FLUSHING TYPICAL DETAIL
NOT TO SCALE

2

4" HPS AND HPR TO MANIFOLD HEADERS FOR GEO FIELD. SEE 1/M4-24 FOR CONTINUATION

SIZE CONTROL VALVE FOR 60 GPM

TT T-3 — 4" HPS — CV-1 2.5" — TT T-1 — 4" — P-2 PT — PHP-1 3"x4" / PHP-2 3"x4" — P-1 PT — 4" HPS — AS-1 — 4"

TT T-4 — 4" HPR — FM-1 — TT T-5 — 4" — 4" HPR — 4"

1" — 0.75" — GMU-1 — ET-1

THERMOMETER (TYP.)

PRESSURE GAUGE (TYP.)

CU-1 21.1 GPM — 3 / M4-25

WWHP-1 8 GPM — 1.5" HWS AND 1.5" HWR TO IN FLOOR RADIANT HEAT MANIFOLDS. SEE 3/M4-21 FOR CONT.

HPWH-1 20 GPM — 1" DHWR AND 1" DHW TO HOT WATER STORAGE TANK. SEE 1/P5-13 FOR CONT.

4" — 4" — 3" — 3"

2.5" — 2" — 2" — 2" — 2.5" — 2" — 2"

1 / M4-14

WSHP-6 6 GPM — WSHP-5 9 GPM — WSHP-4 6 GPM — WSHP-3 18 GPM — WSHP-2 18 GPM — WSHP-1 6 GPM

3" — 2.5" — 2.5" — 2" — 1.25" — 3" — 2.5" — 2.5" — 2" — 1.25"

DP-1 DP

1 MECHANICAL PIPING FLOW DIAGRAM

NOT TO SCALE

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		HYDRONIC DETAILS	SHEET NO: M4-27

PLOT DATE: 1/26/2024 4:25:43 PM PLOT BY: ISG INC. PLOT NAME: TKK PLOT SCALE: AS INDICATED

ENERGY RECOVERY VENTILATOR SCHEDULE

NOTES:
1. PROVIDE UNIT MOUNTED CONVENIENCE RECEPTACLE ON SEPARATE 120/1 CIRCUIT.
2. PROVIDE UNIT WITHOUT FACTORY CONTROLS. PROVIDE TERMINAL STRIP FOR CONTROLS CONTRACTOR TO CONNECT INTO.
3. PROVIDE 2" MERV 8 FILTERS FOR OUTSIDE AIR AND RETURN AIR STREAMS. PROVIDE ADDITIONAL 4" MERV 13 FILTER FOR OUTSIDE AIR. PROVIDE TEMPORARY FILTERS FOR STARTUP.
4. SMOKE DETECTOR IN RETURN DUCT BY ELECTRICAL CONTRACTOR. FIRE ALARM SHALL SHUT DOWN UNIT UPON SMOKE DETECTION.
5. SUPPLY FAN, EXHAUST FAN, AND WHEEL VFDS TO BE FACTORY MOUNTED. ELECTRICAL DISCONNECT BY ELECTRICAL CONTRACTOR.
6. PROVIDE UNIT WITH 4" RAILS.
7. PROVIDE LIGHTING ON INSIDE OF ALL ACCESSIBLE DOORS.

				SUPPLY FAN								EXHAUST FAN									VARIABLE REFRIGERANT DX COIL												
								ELECTRICAL DATA								ELECTRICAL DATA						COOLING							HEATING					
MARK	MFG	MODEL	WEIGHT (LBS)	CFM	ESP (IN WC)	RPM	HP	VOLT/PH.	FLA	MCA	MOCP	CFM	ESP (IN WC)	RPM	HP	VOLT/PH.	FLA	MCA	MOCP	CONDENSING UNIT	MBH	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	FPM	APD (IN WC)	MBH	EAT DB (°F)	LAT DB (°F)	COIL ROWS	REFRIGERANT
ERV-1	VTS	AVS030	1250	2000	1	1932	2	208/3	6.6	8.3	15	2000	2	1980	2	208/3	6.6	8.3	15	CU-1	71.3	77.9	64.5	53	52.3	297	.18	84	56.3	95	4	R410A

ENERGY RECOVERY VENTILATOR SCHEDULE CONTINUED

		ENERGY RECOVERY WHEEL																			
		SUMMER								WINTER								ELECTRICAL DATA				
		OUTSIDE AIR		EXHAUST AIR		SUPPLY AIR				OUTSIDE AIR		EXHAUST AIR		SUPPLY AIR								
MARK	CFM	EAT DB (°F)	EAT WB (°F)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	MBH	EFF	EAT DB (°F)	EAT WB (°F)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	MBH	EFF	HP	VOLT/PH	FLA	MCA	NOTES
ERV-1	2000	95	78	75	62	77.9	64.5	102	85	-15	-15	70	52	56.3	44.7	186	84	1	208/3	0.7	0.8	1,2,3,4,5,6,7

EXHAUST FAN SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE UNIT WITH GRAVITY BACKDRAFT DAMPER.

									ELECTRICAL				
MARK	MFG	MODEL	LOCATION/SERVES	DRIVE	CFM	E.S.P.	SONES	FRPM	HP	VOLTAGE / PH.	TERMINATION	WEIGHT	NOTES
EF-1	GREENHECK	CUE-090-VG	MAINTENANCE BUILDING	DIRECT	340	.5	6.6	1424	1/6	208/1	WALL	31 lb	1,2

DIFFUSER, REGISTER AND GRILLE SCHEDULE

MARK	MFG	MODEL #	MOUNTING	MATERIAL	FINISH	DESCRIPTION
A	TITUS	301FL	SURFACE	ALUMINUM	WHITE	SINGLE DEFLECTION SUPPLY GRILLE, 3/4" BLADE SPACING, BLADES PARALLEL TO LONG DIMENSION.
C	TITUS	DL	SURFACE	ALUMINUM	WHITE	INDUSTRIAL SUPPLY DRUM GRILLE.
D	TITUS	OMNI-AA	LAY-IN	ALUMINUM	WHITE	ROUND NECK, SQUARE PLAQUE FACED DIFFUSER.
E	TITUS	ML - 38	SURFACE	ALUMINUM	WHITE	LINEAR SLOT SUPPLY DIFFUSER. 4 SLOT 3/4" SPACING WIDTH.
F	TITUS	MLR - 39	SURFACE	ALUMINUM	WHITE	LINEAR SLOT RETURN DIFFUSER. 4 SLOT 1" SPACING WIDTH.
G1	TITUS	50F	LAY-IN	ALUMINUM	WHITE	1/2" X 1/2" X 1/2" EGGCRATE RETURN GRILLE.
G2	TITUS	50F	SURFACE	ALUMINUM	WHITE	1/2" X 1/2" X 1/2" EGGCRATE RETURN GRILLE.
H	TITUS	350FL	SURFACE	ALUMINUM	WHITE	ALUMINUM, 3/4" BLADE SPACING, 35° FIXED DEFLECTION, SURFACE MOUNT.
H1	TITUS	350FL	SURFACE	ALUMINUM	WHITE	SINGLE DEFLECTION RETURN GRILLE, 3/4" BLADE SPACING, BLADES PARALLEL TO LONG DIMENSION.
H2	TITUS	350FL	DUCT	ALUMINUM	WHITE	SINGLE DEFLECTION RETURN GRILLE, 3/4" BLADE SPACING, BLADES PARALLEL TO LONG DIMENSION.
I	TITUS	300FL	SURFACE	ALUMINUM	WHITE	DOUBLE DEFLECTION SUPPLY GRILLE, 3/4" BLADE SPACING, FRONT BLADES PARALLEL TO LONG DIMENSION.

ELECTRIC UNIT HEATER SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE WITH NON-FUSED DISCONNECT.
3. PROVIDE ADJUSTABLE, INTEGRAL THERMOSTAT SET TO 60°F (ADJ.).
4. PROVIDE UNIT WITH CEILING MOUNTING KIT.

MARK	MFG	MODEL	LOCATION	CFM	KW	MBH	VOLTAGE / PH.	NOTES
EUH-1	REZNOR	EGHB15	MAINTENANCE 101	1300	15	51	208/3	1,2,3
EUH-2	REZNOR	EGHB15	MAINTENANCE 101	1300	15	51	208/3	1,2,3

LOUVER SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE UNIT WITH OPTIONAL BIRD SCREEN.
3. PROVIDE UNIT WITH MOTORIZED DAMPER.

MARK	MFG	MODEL	LOCATION	SIZE (H"xW")	FREE AREA (SQ. FT.)	UNIT SERVICE	AIR FLOW	MAX FPM (INTAKES)	ACTUAL FPM	DAMPER	DAMPER VOLTAGE	NOTES
L-1	GREENHECK	ESD-635	JANITORS ROOM	30x48	5.1	ERV-1	2000	500	390	MOTORIZED	120/1	1,2,3
L-2	GREENHECK	ESD-635	JANITORS ROOM	24x48	3.8	ERV-1	2000		530	MOTORIZED	120/1	1,2,3
L-3	GREENHECK	ESD-635	MAINTENANCE BUILDING	18x18	0.8	EF-1	340	500	432	MOTORIZED	120/1	1,2,3

WATER SOURCE HEAT PUMP SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE OPEN CONTROLLER WITH BACNET INTERFACE.
3. PROVIDE FACTORY-WIRED DISCONNECT.
4. PROVIDE TEMPORARY FILTER DURING CONSTRUCTION. REMOVE AFTER CLEANING AT SUBSTANTIAL COMPLETION. PROVIDE AND INSTALL 2" MERV 13 FILTER AT SUBSTANTIAL COMPLETION.
5. CONTROLS CONTRACTOR TO PROVIDE 2-WAY CONTROL VALVE.
6. CONTROLS CONTRACTOR TO PROVIDE 3-WAY CONTROL VALVE.
7. PROVIDE HOT GAS REHEAT.

								COOLING								HEATING							HEAD LOSS		ELECTRICAL				
MARK	MFG	MODEL	LOCATION	SERVICE	CFM (SUPPLY)	CFM (OUTSIDE AIR)	E.S.P.	CAP. (MBH)	E.A.T. DB	E.A.T. WB	L.A.T. DB	L.A.T. WB	E.W.T.	L.W.T.	EER	HEATING (MBH)	E.A.T. DB	L.A.T. DB	E.W.T.	L.W.T.	C.O.P.	GPM	(IN FEET)	GLYCOL	VOLTAGE / PH.	MCA	MOCP	WEIGHT	NOTES
WSHP-1	CARRIER	50PTV024	MECH RM	MEN TOILET RM	650	0	0.7	21.1	75 °F	62 °F	52 °F	50 °F	85	99	12	19.5	68 °F	97 °F	40 °F	34 °F	3.5	4.5	5.4	30% PG	208/3	11	15	260 lb	1,2,3,4,5,7
WSHP-2	CARRIER	50PTV070	MECH RM	LOBBY/VESTIBULE	2400	720	0.73	63.7	75 °F	62 °F	55 °F	53 °F	85	95.7	13	59.6	68 °F	91 °F	40 °F	35 °F	3.8	18	11.1	30% PG	208/3	30	45	460 lb	1,2,3,4,5,7
WSHP-3	CARRIER	50PTV070	MECH RM	LOBBY/VESTIBULE	2400	720	0.73	63.7	75 °F	62 °F	55 °F	53 °F	85	95.7	13	59.6	68 °F	91 °F	40 °F	35 °F	3.8	18	11.1	30% PG	208/3	30	45	460 lb	1,2,3,4,5,7
WSHP-4	CARRIER	50PTV024	MECH RM	WOMEN TOILET RM	650	0	0.7	21.1	75 °F	62 °F	52 °F	50 °F	85	99	12	19.5	68 °F	97 °F	40 °F	35 °F	3.5	4.5	5.4	30% PG	208/3	11	15	260 lb	1,2,3,4,5,7
WSHP-5	CARRIER	50PTV036	MECH RM	OFFICES/BREAKROOM	1254	410	0.6	36.2	75 °F	62 °F	53 °F	52 °F	85	96.6	15	32	68 °F	97 °F	40 °F	35 °F	4	9	16.9	30% PG	208/3	21	30	360 lb	1,2,3,4,5,7
WSHP-6	CARRIER	50PTV024	MECH RM	MECH RM	830	150	0.7	22.7	75 °F	62 °F	54 °F	52 °F	85	96.3	13	20.7	68 °F	91 °F	40 °F	35 °F	3.8	6	9	30% PG	208/3	11	15	260 lb	1,2,3,4,6,7

DUCTWORK INSULATION SCHEDULE

NOTES:
1.) FIBERGLASS WRAP SHALL NOT BE USED IN MECHANICAL ROOM.

SYSTEM	INSULATION TYPE	THICKNESS	NOTES
SUPPLY AIR (DIRECT DUCTED RETURN)	FIBERGLASS WRAP	2"	1
SUPPLY AIR	FIBERGLASS BOARD	1 1/2"	
MAKEUP AIR (DIRECT DUCTED RETURN)	FIBERGLASS WRAP	2"	1
MAKEUP AIR	FIBERGLASS BOARD	1 1/2"	
RETURN AIR	NONE	-	
EXHAUST AIR FROM ERV	FIBERGLASS BOARD	2"	
TEMPERED OUTSIDE AIR	FIBERGLASS BOARD	1 1/2"	
OUTSIDE AIR TO ERV	FIBERGLASS BOARD	2"	

AIR SEPARATOR SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.

MARK	MFG	MODEL	LOCATION	SERVICE	GPM	WEIGHT	FITTING SIZE	NOTES
AS-1	BELL & GOSSETT	CRSN-4F	MECH RM	HPS	115	122 lb	4"	1
AS-2	BELL & GOSSETT	EAS-1-1/2	MECH RM	HWR	9.4	8 lb	1-1/2"	1

CONDENSING UNIT SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.

							COOLING		HEATING		CONDENSER				ELECTRICAL				
MARK	MFG	MODEL	LOCATION	REFRIGERANT	CHARGE (LB)	SERVES	CAP. (MBH)	EER	CAP. (MBH)	C.O.P.	FLUID	CONNECTION	GPM	WPD (FT)	VOLTAGE / PH.	MCA	MOCP	WEIGHT	NOTES
CU-1	CARRIER	AM072HXWAFR/AA	MECH RM	R410A	12.1	ERV-1	72	18	81	5.9	30% PG	1 1/4"	21.1	7.3	208 / 3	16	25	353 lb	1

EXPANSION TANK SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.

MARK	MFG	MODEL	LOCATION	SERVICE	TANK VOL.	WEIGHT	TANK ACCEPTANCE	FITTING SIZE	DIAMETER	LENGTH	NOTES
ET-1	BELL & GOSSETT	D-80	MECH RM	HPS	70	842 lb	56.5	1.5"	24"	46"	1
ET-2	BELL & GOSSETT	D-15	MECH RM	HWR	7.8	107 lb	6.3	.75"	12"	19"	1

GLYCOL MAKEUP UNIT SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.

						ELECTRICAL				
MARK	MFG	MODEL	LOCATION	SERVICE	TANK VOL.	HP	VOLTAGE / PH.	RPM	WEIGHT	NOTES
GMU-1	JL WINGERT	GL50-E1	MECH RM	HPS	50	1/3	120 / 1	1725	150 lb	1

PUMP SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.
2. VERIFY CONTROL AND POWER BEFORE COMMENCING WORK.
3. PUMP FURNISHED AS PART OF BOILER INSTALLATION PACKAGE. COORDINATE INSTALLATION WITH FINAL BOILER MANUFACTURER.
4. PROVIDE VFD CONTROL AND DISCONNECT. PROVIDED AND MOUNTED BY CONTROLS CONTRACTOR, WIRED BY ELECTRICAL PROVIDE VFD GROUNDING RINGS.
5. DISCONNECT PROVIDED, MOUNTED, AND WIRED BY ELECTRICAL CONTRACTOR.

										ELECTRICAL				
MARK	MFG	MODEL#	LOCATION	SERVICE	FLUID	PUMP CONSTRUCTION	CONNECTION SIZE	GPM	HEAD LOSS (IN FEET)	HP	VOLTAGE / PH.	RPM	IMPELLER SIZE	NOTES
PGW-1	BELL & GOSSETT	1.5 BC	MECH RM	HPS	WATER	END SUCTION	2"	116	101	7.5	208/3	1742	9.5	1,2,4
PGW-2	BELL & GOSSETT	1.5 BC	MECH RM	HPS	WATER	END SUCTION	2"	116	101	7.5	208/3	1742	9.5	1,2,4
PHW-1	BELL & GOSSETT	ECOCIRC XL 55-45	MECH RM	HWR	WATER	IN-LINE	1.25"	9.4	40	1/2	208/1	3986	-	1,2,5
PHW-2	BELL & GOSSETT	ECOCIRC XL 55-45	MECH RM	HWR	WATER	IN-LINE	1"	4	50	1/2	208/1	4368	-	1,2,5
PHW-3	BELL & GOSSETT	PL-36	MECH RM	HWR	WATER	IN-LINE	3/4"	1.4	30	1/6	120 / 1	3300	-	1,2,5
PHW-4	BELL & GOSSETT	ECOCIRC XL 55-45	MECH RM	HWR	WATER	IN-LINE	1"	4	50	1/2	208/1	4368	-	1,2,5

WATER TO WATER HEAT PUMP SCHEDULE

NOTES:
1. INSTALL UNIT AS SHOWN AND AS PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE OPEN CONTROLLER WITH BACNET INTERFACE.

					HEATING		LOAD COIL					SOURCE COIL					ELECTRICAL				
MARK	MFG	MODEL	LOCATION	SERVICE	CAP (MBH)	C.O.P.	FLUID	EWT	LWT	GPM	WPD (FT)	FLUID	EWT	LWT	GPM	WPD (FT)	VOLTAGE / PH.	MCA	MOCP	WEIGHT	NOTES
WWHP-1	CARRIER	50PSW061	MECH RM	HWS	45.7	2.8	WATER	110.3 °F	120 °F	9.4	2.9	30% PG	40 °F	32.2 °F	8	6.9	208/3	21	35	310 lb	1,2

2

SEQUENCE

Application
- ERV-1

System Description:
Energy Recovery Ventilator unit with DX coil, supply and relief fans, total energy recovery wheel, and filters. Graphics shall match final equipment layout. Schematic is used to indicate equipment and points.

Run Conditions:
The unit shall be enabled based on a time of day schedule.

Unit Protections:
Freeze Protection:
The unit shall shut down and generate an alarm upon activation of the freezestat.

Return Air Smoke Detection:
The unit shall shut down and generate an alarm upon receiving a return air smoke detector status. Shut down command shall come from the fire alarm panel.

Outside Air Damper:
The outside air damper shall open anytime the unit runs and shall close anytime the unit stops. The supply fan shall start only after the damper status has proven the damper is open. The outside air damper shall close 4 sec (adj.) after the supply fan stops.

Alarms shall be provided as follows:
- Outside Air Damper Failure: Damper status different than command.

Supply Fan - FAN-1:
The supply fan shall run anytime the unit is commanded to run, and set at a constant speed during balancing. To prevent short cycling, the supply fan shall have a user definable (adj.) minimum runtime.

Alarms shall be provided as follows:
- Supply Fan Failure: Supply fan status different than command.
- Supply Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).
- Supply Fan VFD Fault.

Relief Fan - FAN-2:
The relief fan shall run anytime the unit is commanded to run, and set at a constant speed during balancing. To prevent short cycling, the supply fan shall have a user definable (adj.) minimum runtime.

Alarms shall be provided as follows:
- Relief Fan Failure: Fan status is different than command.
- Relief Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).
- Relief Fan VFD Fault.

Relief Air Damper:
The relief air damper shall open anytime the unit runs and shall close anytime the unit stops. The relief fan shall start only after the damper status has proven the damper is open. The relief air damper shall close 4 sec (adj.) after the relief fan stops.

Alarms shall be provided as follows:
- Relief Air Damper Failure: Damper status is different than command.

Heat Recovery Wheel:
Cooling Recovery Mode:
The controller shall measure the heat wheel discharge air temperature and modulate the heat wheel to maintain a setpoint 2°F (adj.) less than the unit supply air temperature setpoint. The heat wheel shall run for cool recovery whenever:
- The unit return air temperature is 5°F (adj.) or more below the outside air temperature.
- AND the unit is in a cooling mode.
- AND the supply fan is on.

Heating Recovery Mode:
The controller shall measure the heat wheel discharge air temperature and modulate the heat wheel to maintain a setpoint 2°F (adj.) greater than the unit supply air temperature setpoint or to maintain a minimum relief air temperature of 20° F (adj.). The heat wheel shall run for heat recovery whenever:
- The unit return air temperature is 5°F (adj.) or more above the outside air temperature.
- AND the unit is in a heating mode.
- AND the economizer (if present) is off.
- AND the supply fan is on.

Periodic Self-Cleaning:
The heat wheel shall run for 10sec (adj.) every 4hr (adj.) the unit runs.

Alarms shall be provided as follows:
- Heat Wheel Rotation Failure: Wheel status is different than command.
- Heat Wheel Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

Supply Air Temperature Setpoint Control:
The controller shall monitor the supply air temperature and shall maintain a supply air temperature setpoint reset based on zone cooling and heating requirements

The supply air temperature setpoint shall be reset based on zone requirements as follows:
- The initial supply air temperature setpoint shall be 60°F (adj.).
- As cooling demand increases, the setpoint shall incrementally reset down to a minimum of 53°F (adj.).
- As heating demand increases, the setpoint shall incrementally reset up to a maximum of 72°F (adj.).

Direct Expansion Coil Control:
The controller shall measure the supply air temperature and modulate the condensing unit speed to maintain its temperature setpoint.

The cooling shall be enabled whenever:
- Supply air temperature is more than 5°F (adj.) above setpoint.
- AND the supply fan status is on.

The heating shall be enabled whenever:
- Supply air temperature is more than 5°F (adj.) below setpoint.
- AND the supply fan status is on.

Alarms shall be provided for each pump:
- High Supply Air Temp: If the supply air temperature is 5°F (adj.) greater than setpoint for 5 minutes (adj.).
- Low Supply Air Temp: If the supply air temperature is 5°F (adj.) less than setpoint for 5 minutes (adj.).
- Condensing Unit Failure: Condensing unit status different than commanded.
- Condensing Unit Runtime Exceeded: Runtime exceeds a user definable limit.

Heat Pump Water Valve Control:
The controller shall open the heat pump water valve associated with each condensing unit whenever the condensing unit is enabled.

Alarms shall be provided as follows:
- Valve Failure: Valve status is different than command.

Filter Differential Pressure Monitoring:
The controller shall monitor the differential pressure across all filters.

Alarms shall be provided as follows:
- Exhaust Filter Change Required: Exhaust filter differential pressure exceeds a user definable limit (adj.).
- Outside Air Filter Change Required: Outside air filter differential pressure exceeds a user definable limit (adj.).

Miscellaneous Unit Sensors:

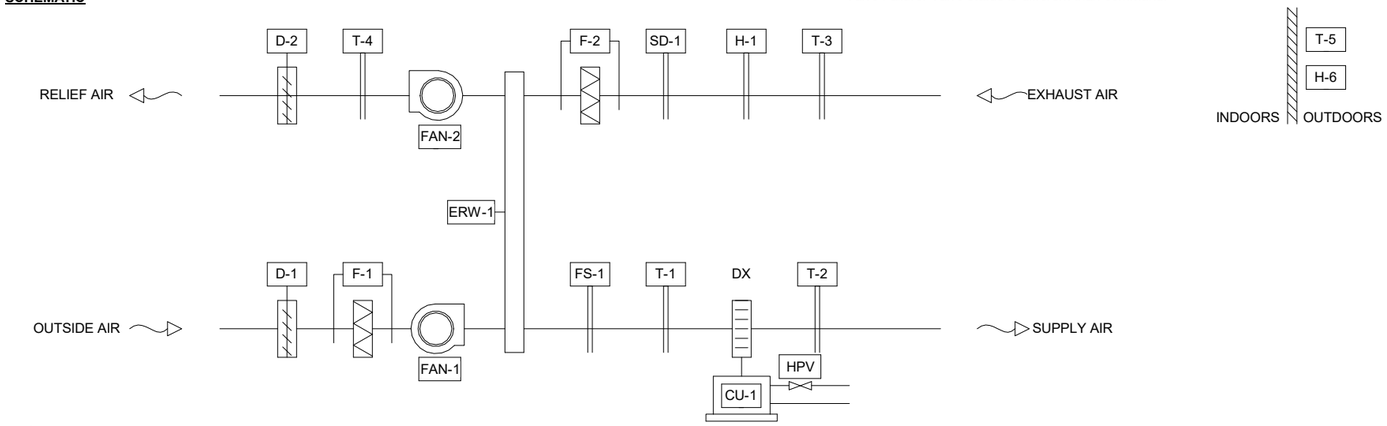
Return Air Temperature:
The controller shall monitor the return air temperature and use as required for setpoint control.

Alarms shall be provided as follows:
- High Return Air Carbon Dioxide Concentration: If the return air CO_2 concentration is greater than 1000ppm (adj.) when in the unit is running.
- High Return Air Humidity: If the return air humidity is greater than 70% (adj.).
- High Return Air Temp: If the return air temperature is greater than 90°F (adj.).
- Low Return Air Temp: If the return air temperature is less than 45°F (adj.).

Central Station Outdoor Sensors:
Central Station Outdoor Air Humidity:
The controller shall monitor outdoor air humidity.

Central Station Outdoor Air Temperature:
The controller shall monitor the outdoor air temperature and use as required for setpoint control.

SCHEMATIC



1 ERV CONTROLS
NOT TO SCALE

POINTS LIST

POINTS LIST									
Control Device	Point Description	AI	AO	BI	BO	TO/FROM BAS	Trend	Show On Graphic	Alarm
CU-1	CU-1 Speed		X				X	X	
CU-1	CU-1 Status			X			X	X	X
CU-1	CU-1 Start/Stop				X		X	X	
CU-1	CU-1 Reversing Valve				X		X	X	
D-1	Outside Air Damper Status	X					X	X	X
D-1	Outside Air Damper Command		X				X	X	
D-2	Relief Air Damper Status	X					X	X	X
D-2	Relief Air Damper Command		X				X	X	
ERW-1	Energy Recovery Wheel Speed		X				X	X	
ERW-1	Energy Recovery Wheel Status			X			X	X	X
ERW-1	Energy Recovery Wheel Start/Stop				X		X	X	
F-1	Outside Air Filter Dif. Pressure	X					X	X	X
F-2	Return Air Filter Dif. Pressure	X					X	X	X
FAN-1	Supply Fan Status			X			X	X	X
FAN-1	Supply Fan Start/Stop				X		X	X	
FAN-2	Relief Fan Status			X			X	X	X
FAN-2	Relief Fan Start/Stop				X		X	X	
FS-1	Freeze Stat			X					X
H-1	Return Air Humidity Sensor	X					X	X	X
H-1	Return Air Humidity Setpoint		X				X	X	
H-2	Outside Air Humidity Sensor	X					X	X	
HPV-1	Heat Pump Coil Valve Status			X			X	X	X
HPV-1	Heat Pump Coil Valve Command				X		X	X	
SD-1	Smoke Detector			X					X
T-1	Heat Recovery Air Temperature	X					X	X	
T-2	Supply Air Temperature	X					X	X	X
T-2	Supply Air Temperature Setpoint	X					X	X	
T-3	Return Air Temperature	X					X	X	X
T-4	Relief Air Temperature	X					X	X	
T-5	Outside Air Temperature	X					X	X	

2

SEQUENCE

Application
- All WSHPs

System Description:
Packaged water-source heat pump with filter, coil, PSC or ECM constant torque fan, and compressor(s).

Run Conditions - Automatic Operation:
The unit shall run continuously. The unit shall maintain:
1. A 75°F (adj.) cooling setpoint.
2. A 70°F (adj.) heating setpoint.

The unit shall run subject to its own internal safeties and controls.

Alarms shall be provided as follows:
- High Zone Temp: If the zone temperature is 2°F (adj.) greater than the cooling setpoint for more than 60 minutes (adj.).
- Low Zone Temp: If the zone temperature is 2°F (adj.) less than the heating setpoint for more than 60 minutes (adj.).

Zone Setpoint Adjust:
The occupant shall be able to adjust the zone temperature heating and cooling setpoints at the zone sensor.

Fan:
The fan shall run anytime the unit is commanded to run, unless shutdown on safeties. The fan speeds shall automatically be indexed as follows:
- Low speed shall run anytime the zone temperature is within setpoints.
- Medium speed shall run anytime the zone temperature is outside of setpoints.
- High speed shall run anytime the zone temperature is outside of setpoints by more than 2°F (adj.).

WSHP-1 & WSHP-4 shall be set to the scheduled supply air cfm and not modulate as described above.

Alarms shall be provided as follows:
- Fan Failure: Fan status is different than command.
- Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

Heating and Cooling:
The BAS shall measure the zone temperature and stage the compressors (if applicable) to maintain its setpoint. The unit shall run subject to its own internal safeties.

The heating shall be enabled whenever:
- The zone temperature is above cooling setpoint.
- AND The fan is on.
- AND the reversing valve is in heat mode.
- AND flow switch has proven flow.

The cooling shall be enabled whenever:
- The zone temperature is below heating setpoint.
- AND the fan is on.
- AND the reversing valve is in cool mode.
- AND flow switch has proven flow.

On mode change, the compressor shall be disabled and remain off until after the reversing valve has changed position.

Alarms shall be provided as follows:
- Compressor Runtime Exceeded: The compressor runtime exceeds a user definable limit (adj.).

Dehumidification:
The controller shall measure the zone humidity and override the cooling sequence to maintain zone humidity at or below 50% RH (adj.). The controller shall modulate the hot gas reheat valve to maintain zone temperature setpoint.

Discharge Air Temperature:
The controller shall monitor the discharge air temperature.

Alarms shall be provided as follows:
- High Discharge Air Temp: If the discharge air temperature is greater than 120°F (adj.).
- Low Discharge Air Temp: If the discharge air temperature is less than 40°F (adj.).

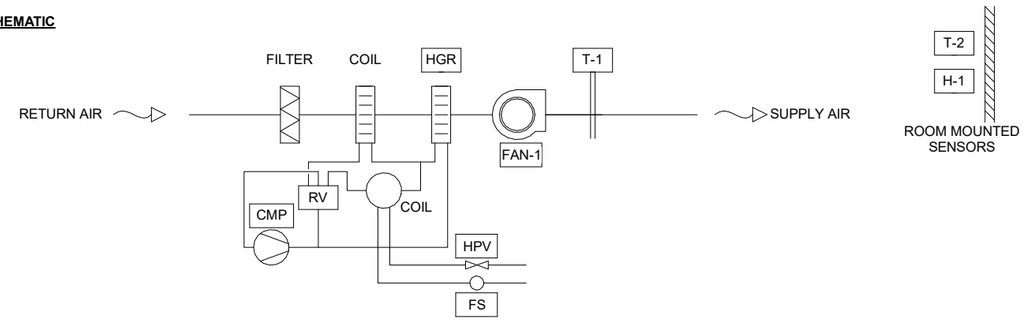
Heat Pump Coil Valve Control:
The BAS shall open the heat pump coil valve when either cooling or heating is enabled and close when both cooling and heating are disabled.

Alarms shall be provided as follows:
- Valve Failure: Valve status is different than command.

POINTS LIST

POINTS LIST									
Control Device	Point Description	AI	AO	BI	BO	TO/FROM BAS	Trend	Show On Graphic	Alarm
CMP-1	Compressor Stage 1 Command				X	X	X	X	X
CMP-2	Compressor Stage 2 Command				X	X	X	X	X
FAN-1	Fan Speed Low				X	X	X	X	
FAN-1	Fan Speed Medium				X	X	X	X	
FAN-1	Fan Speed High				X	X	X	X	
FS-1	Flow Switch	X						X	
H-1	Zone Humidity	X				X	X	X	
H-1	Zone Humidity Setpoint		X			X	X	X	
HGR	Hot Gas Reheat Valve Command		X			X	X	X	
HPV	Heat Pump Water Valve Status			X			X	X	X
HPV	Heat Pump Water Valve Command				X		X	X	
RV	Reversing Valve Command				X	X	X	X	
T-1	Supply Air Temperature	X					X	X	X
T-2	Zone Temperature	X				X	X	X	X
T-2	Zone Temperature Setpoint		X			X	X	X	

SCHEMATIC



1 WSHP CONTROLS
NOT TO SCALE

SEQUENCE

Application
- EF-1

System Description:
System consists of an exhaust fan, motorized intake damper, motorized exhaust damper, carbon monoxide detector, and nitrogen dioxide detector.

Run Conditions:
The unit shall run in three distinct modes:
- Normal:
  - The unit shall be enabled at a user adjustable speed to maintain code requirement of 0.05 cfm/sqft, but shall not be set lower than the fan minimum speed.
- High Harmful Gases:
  - A carbon monoxide sensor shall monitor carbon monoxide levels within the zone and a nitrogen dioxide sensor shall monitor nitrogen dioxide levels within the zone. If either detector measures levels that exceed those deemed to be safe for human occupancy the unit shall be enabled at 100% (adj.) speed. An audible and visual alarm shall be enabled by the gas sensor.
- High Temperature:
  - When the temperature rises above 85°F (adj.), the unit shall be enabled at 100% (adj.) speed.

The fan shall have a user definable (adj.) minimum runtime. The controller shall monitor the fan status.

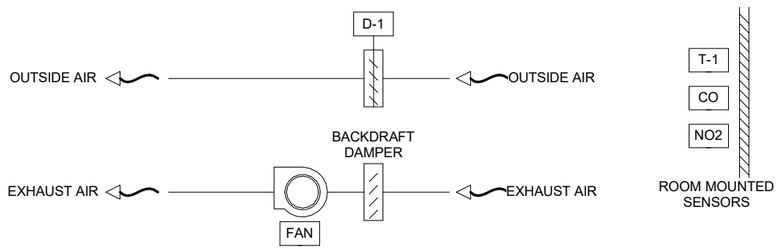
Intake Air Damper:
The outside air damper shall open anytime the unit is enabled and shall close anytime the unit is disabled. The outside air damper shall close 30 sec (adj.) after the fan stops.

Alarms shall be provided as follows:
- Damper Failure: Damper status is different than command.
- Fan Failure: Fan status is different than command.
- Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).
- VFD Fault.
- Low Zone Temp: If the zone temperature is less than 50°F (adj.).

POINTS LIST

POINTS LIST									
Control Device	**Point Description**	**AI**	**AO**	**BI**	**BO**	**TO/FROM BAS**	**Trend**	**Show On Graphic**	**Alarm**
CO	Carbon Monoxide Sensor			X			X	X	
D-1	Outside Air Damper Status			X			X	X	X
D-1	Ouside Air Damper Command				X		X	X	
FAN	Exhaust Fan Speed		X				X	X	
FAN	Exhaust Fan Status			X			X	X	X
FAN	Exhaust Fan Start/Stop				X		X	X	
NO2	Nitrogen Dioxide Sensor			X			X	X	
T-1	Zone Temperature	X					X	X	X
T-1	Zone Temperature Setpoint		X				X	X	

SCHEMATIC



1 EXHAUST FAN CONTROLS
NOT TO SCALE

SEQUENCE

Application
- EUH-1
- EUH-2

System Description:
System consists of an electric heater.

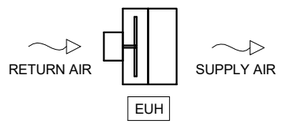
Run Conditions - Continuous:
The unit shall be enabled with an integral thermostat. The unit shall run subject to its own internal safeties and controls.

Alarms shall be provided as follows:
- Unit Failure: Unit status is different than command.

POINTS LIST

POINTS LIST									
Control Device	**Point Description**	**AI**	**AO**	**BI**	**BO**	**TO/FROM BAS**	**Trend**	**Show On Graphic**	**Alarm**
EUH	Electric Heater Status			X			X	X	X

SCHEMATIC



2 ELECTRIC HEATER CONTROLS
NOT TO SCALE

2

SEQUENCE

Application
- All equipment associated with the heat pump water system.

System Description:
System consists of a geothermal field, variable primary pumps, flow meter, and glycol makeup unit. Graphics shall match final equipment layout. Schematic is used to indicate equipment and points.

Geothermal Pump Control:
The geothermal water pumps shall be enabled whenever any equipment control valve is open.

Hot Water Pump Lead/Standby Operation:
The two variable speed hot water pumps shall operate in a lead/standby fashion. The lead pump shall run first. On failure of the lead pump, the standby pump shall run and the lead pump shall turn off.

The designated lead pump shall rotate upon one of the following conditions (user selectable):
- Manually through a software switch
- If pump runtime (adj.) is exceeded
- Daily
- Weekly
- Monthly

Alarms shall be provided for each pump:
- Pump failure: Pump status different than commanded.
- Pump runtime exceeded: Runtime exceeds a user definable limit.
- VFD Fault.

The BAS shall measure heat pump water differential pressure and modulate the pump VFD speed to maintain its differential pressure setpoint..The controller shall modulate pumps speeds to maintain a differential pressure of 12 psig (adj.). The VFDs minimum speed shall not drop below 20% (adj.). These setpoints are recommended values. All sepoints shall be field adjusted during the commissioning period to meet the requirements of actual field conditions.

Alarms shall be provided as follows:
- High heat pump water differential pressure: If 25% (adj.) greater than setpoint.
- Low heat pump water differential pressure: If 25% (adj.) less than setpoint.

Heat Pump Water Supply Temperature Monitoring:
The following temperatures shall be monitored:
- Heat pump water supply from geothermal field
- Heat pump water supply to heat pumps.
- Heat pump water return from heat pumps.
- Heat pump water return to geothermal field.

Alarms shall be provided as follows:
- High heat pump water supply temp: If greater than 95°F (adj.) for 5 minutes (adj.).
- Low heat pump water supply temp: If less than 32°F (adj.) for 5 minutes (adj.).

Geothermal Water Pressure Monitoring:
The following pressures shall be monitored:
- Heat pump water pump suction
- Heat pump water pump discharge

Alarms shall be provided as follows:
- High heat pump water discharge pressure: If greater than 120 psi (adj.) for 5 minutes (adj.)
- Low heat pump water suction pressure: If less than 12 psi (adj.) for 5 minutes (adj.)

Bypass Control Valve Control:
The BAS shall monitor the reading in the flow meter (FM-1) and modulate the bypass valve (CV-1) to maintain a minimum of 60 GPM (adj.).

Alarms shall be provided as follows:
- Valve failure: Valve status different than commanded.
- Low heat pump water flow: Heat pump water flow is more than 5% (adj.) below minimum flow setpoint for 5 minutes (adj.).

Glycol Makeup Unit Control:
The BAS shall monitor the glycol makeup unit status.

Alarms shall be provided as follows:
- Glycol pump is running: Glycol makeup unit status is on.
- Volume low: Low level switch is on.

POINTS LIST

POINTS LIST									
Control Device	**Point Description**	**AI**	**AO**	**BI**	**BO**	**TO/FROM BAS**	**Trend**	**Show On Graphic**	**Alarm**
CV-1	Bypass Control Valve Status	X					X	X	X
CV-1	Bypass Control Valve Command		X				X	X	
DP-1	Heat Pump Water Differential Pressure	X					X	X	X
FM-1	Geothermal Flow Meter	X					X	X	X
GMU-1	Glycol Make Up Unit Status			X				X	X
P-1	Heat Pump Water Pump Suction Pressure	X					X	X	X
P-2	Heat Pump Water Pump Discharge Pressure	X					X	X	X
PHP-1	Heat Pump Water Pump VFD Speed		X				X	X	X
PHP-1	Heat Pump Water Pump Status			X			X	X	X
PHP-1	Heat Pump Water Pump Start/Stop				X		X	X	
PHP-2	Heat Pump Water Pump VFD Speed		X				X	X	X
PHP-2	Heat Pump Water Pump Status			X			X	X	X
PHP-2	Heat Pump Water Pump Start/Stop				X		X	X	
T-1	Heat Pump Water Field Supply Temperature	X					X	X	X
T-2	Heat Pump Water Supply Temperature	X					X	X	
T-3	Heat Pump Water Return Temperature	X					X	X	
T-4	Heat Pump Water Field Return Temperature	X					X	X	

SCHEMATIC

SEE HYDRONIC SCHEMATIC M4-27

1 GEOTHERMAL WATER SYSTEM CONTROLS
NOT TO SCALE

SEQUENCE

Application
- All equipment associated with hot water system.

System Description:
System consists of a water-to-water heat pump, four constant speed pumps, and three radiant heat manifolds.

Water-to-Water Heat Pump Control:
The heat pump shall be set to heating and cycle to maintain a hot water temperature setpoint of 120°F (adj.). To prevent short cycling, the heat pump shall have a user definable (adj.) minimum runtime. The heat pump shall run subject to its own internal safeties and controls. The heat pump shall be enabled whenever:
- The outside air temperature is less than 65°F (adj.).
- AND a manifold pump is enabled.
- AND the WWHP-1 primary pump is enabled.
- AND the hot water supply temperature drops below 100°F (adj.).

Alarms shall be provided as follows:
- Heat Pump Failure: Heat Pump status is different than command.
- Heat Pump Runtime Exceeded: Status runtime exceeds a user definable limit.
- High hot water supply temp: If greater than 5°F (adj.) above setpoint or greater than 180°F (adj.) for 5 minutes (adj.).
- Low hot water supply temp: If less than less than 100°F (adj.) for 5 minutes (adj.).

WWHP-1 Primary Pump Control:
The primary pump shall be enabled whenever the outside air temperature is less than 65°F (adj.).

Alarms shall be provided for each pump:
- Pump failure: Pump status is different than commanded.
- Pump runtime exceeded: Runtime exceeds a user definable limit.

WWHP-1 Heat Pump Water Valve Control:
The BAS shall open the heat pump water valve when heat pump is enabled.

Alarms shall be provided as follows:
- Valve Failure: Valve status is different than command.

Radiant Heat Floor Temperature Control:
The BAS shall monitor zone temperature and modulate the 3-way valve to maintain zone temperature setpoint of 70°F (adj.). The BAS shall modulate the 3-way valve to not allow a zone floor temperature to rise above:
- Manifold A: 85°F (adj.)
- Manifold B: 75°F (adj.)
- Manifold C: 85°F (adj.)

Alarms shall be provided as follows:
- High floor temperature: The floor temperature is above the maximum floor temprature for 5 minutes (adj.).
- Low Zone Temp: If the zone temperature is 2°F (adj.) less than the heating setpoint for more than 15 minutes (adj.)

Radiant Heat Manifold Pump Control:
The manifold pump shall be enabled when:
- The outside air temperature is less than 65°F (adj.).
- AND the zone temperature is below heating setpoint.

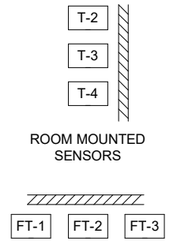
Alarms shall be provided as follows:
- Pump Failure: Pump status is different than commanded.
- Pump Runtime Exceeded: Status runtime exceeds a user definable limit.

POINTS LIST

POINTS LIST									
Control Device	Point Description	AI	AO	BI	BO	TO/FROM BAS	Trend	Show On Graphic	Alarm
CMP-1	Compressor Status			X			X	X	X
CMP-1	Compressor Start/Stop				X		X	X	
FT-1	Manifold A Floor Temperature	X					X	X	X
FT-2	Manifold B Floor Temperature	X					X	X	X
FT-3	Manifold C Floor Temperature	X					X	X	X
PHW-1	Hot Water Primary Pump Status			X			X	X	X
PHW-1	Hot Water Primary Pump Start/Stop				X		X	X	
PHW-2	Manifold A Pump Status			X			X	X	X
PHW-2	Manifold A Pump Start/Stop				X		X	X	
PHW-3	Manifold B Pump Status			X			X	X	X
PHW-3	Manifold B Pump Start/Stop				X		X	X	
PHW-4	Manifold C Pump Status			X			X	X	X
PHW-4	Manifold C Pump Start/Stop				X		X	X	
RV	Reversing Valve				X		X	X	
T-1	Hot Water Supply Temperature	X					X	X	X
T-1	Hot Water Supply Temperature Setpoint		X				X	X	
T-2	Manifold A Zone Temperature	X					X	X	
T-2	Manifold A Zone Temperature Setpoint		X				X	X	
T-3	Manifold B Zone Temperature	X					X	X	
T-3	Manifold B Zone Temperature Setpoint		X				X	X	
T-4	Manifold C Zone Temperature	X					X	X	
T-4	Manifold C Zone Temperature Setpoint		X				X	X	

SCHEMATIC

SEE HYDRONIC SCHEMATICS M4-21



1 HOT WATER SYSTEM CONTROLS
NOT TO SCALE

SEQUENCE

Application
- All recirculation pumps.

System Description:
System consists of a recirculation pump

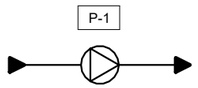
Recirculation Pump Control:
The BAS shall enable the recirculation pump based on time of day schedule (adj.).

Alarms shall be provided as follows:
- Recirculation Pump Failure: Status is different than command.

POINTS LIST

POINTS LIST									
Control Device	Point Description	AI	AO	BI	BO	TO/FROM BAS	Trend	Show On Graphic	Alarm
P-1	Recirculation Pump Status			X			X	X	X
P-1	Recirculation Pump Start/Stop				X		X	X	

SCHEMATIC



2 RECIRCULATION PUMP CONTROLS
NOT TO SCALE

SEQUENCE

Application
- HPWH-1.
- EWH-1.

System Description:
System consists of an electric water heater or heat pump water heater.

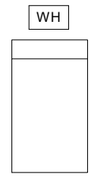
Sump Pump Status Monitoring:
The BAS shall monitor water heater status.

Alarms shall be provided as follows:
- Water Heater Failure: If the water heater status is off.

POINTS LIST

POINTS LIST									
Control Device	Point Description	AI	AO	BI	BO	TO/FROM BAS	Trend	Show On Graphic	Alarm
WH	Water Heater Status			X			X	X	X

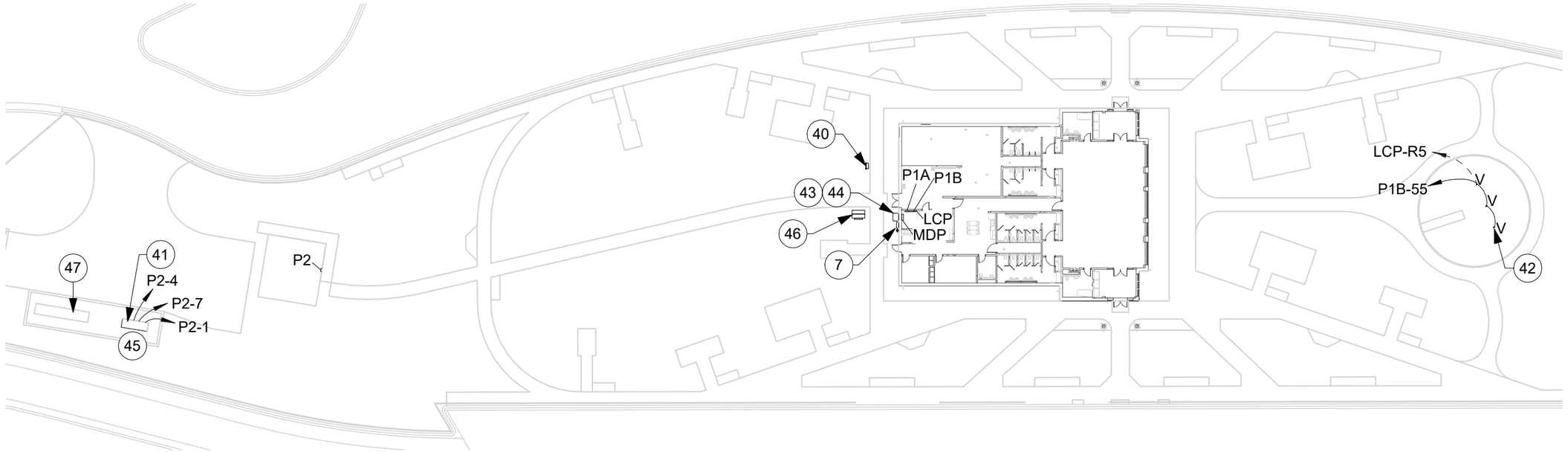
SCHEMATIC



3 DOMESTIC WATER HEATER CONTROLS
NOT TO SCALE

ELECTRICAL KEYNOTE LEGEND

7	PROPOSED CT CABINET AND METER LOCATION. REFER TO ELECTRICAL RISER FOR DETAILS.
40	PROPOSED LOCATION FOR SITE LIGHTING CONTROL CABINET. REFER TO RISER DIAGRAM FOR CIRCUIT REQUIREMENTS. SEE CIVIL EXTERIOR LIGHTING DRAWINGS FOR CABINET REQUIREMENTS AND DETAILS.
41	F&I LPG GENERATOR. COORDINATE FINAL SITE LOCATION WITH CIVIL DRAWINGS AS LOCATION SHOWN IS DIAGRAMMATIC TO SHOW CONNECTIONS ONLY. REFER TO RISER AND SPECIFICATIONS FOR REQUIREMENTS.
42	F&I FLOOD LIGHTS FOR FLAG POLE LOCATIONS. MOUNTING BASE SHALL BE OFFSET 5' FROM FLAG POLE BASE. CIRCUIT TO BE ROUTED THROUGH LIGHTING CONTACTOR. SEE DETAILS FOR MOUNTING BASE REQUIRMENTS.
43	EXTERIOR BUILDING MOUNTED AUTOMATIC TRANSFER SWITCH. REFER TO ELECTRICAL RISER AND SPECIFICATIONS FOR REQUIREMENTS.
44	PROVIDE 1" CONDUIT WITH GENERATOR SUPPLIER RECOMMENDED WIRING FOR START/STOP SIGNAL FROM ATS TO GENERATOR CONTROLS.
45	PROVIDE CIRCUITS FOR GENERATOR CIRCUIT BREAKER, BATTERY CHARGER, AND ENGINE BLOCK HEATER.
46	PROPOSED UTILITY TRANSFORMER LOCATION. CONFIRM LOCATION WITH CIVIL DRAWINGS. PROVIDE CONCRETE MOUNTING PAD PER UTILITY REQUIREMENTS.
47	PROVIDE 1" CONDUIT WITH (2) #18 AWG SHIELDED TWISTED PAIR, BELDEN 8770 OR EQUAL, AND (4) #14 AWG CONDUCTORS FROM LP TANK SENSOR TO REMOTE MOUNTED CONTROLS IN REST AREA BUILDING. CONFIRM WIRES/CABLES NEEDED WITH LP MONITOR AND CONTROLS SUPPLIER. CONFIRM MOUNTED LOCATION OF CONTROLS WITHIN REST AREA BUILDING WITH SYSTEM INSTALLER.



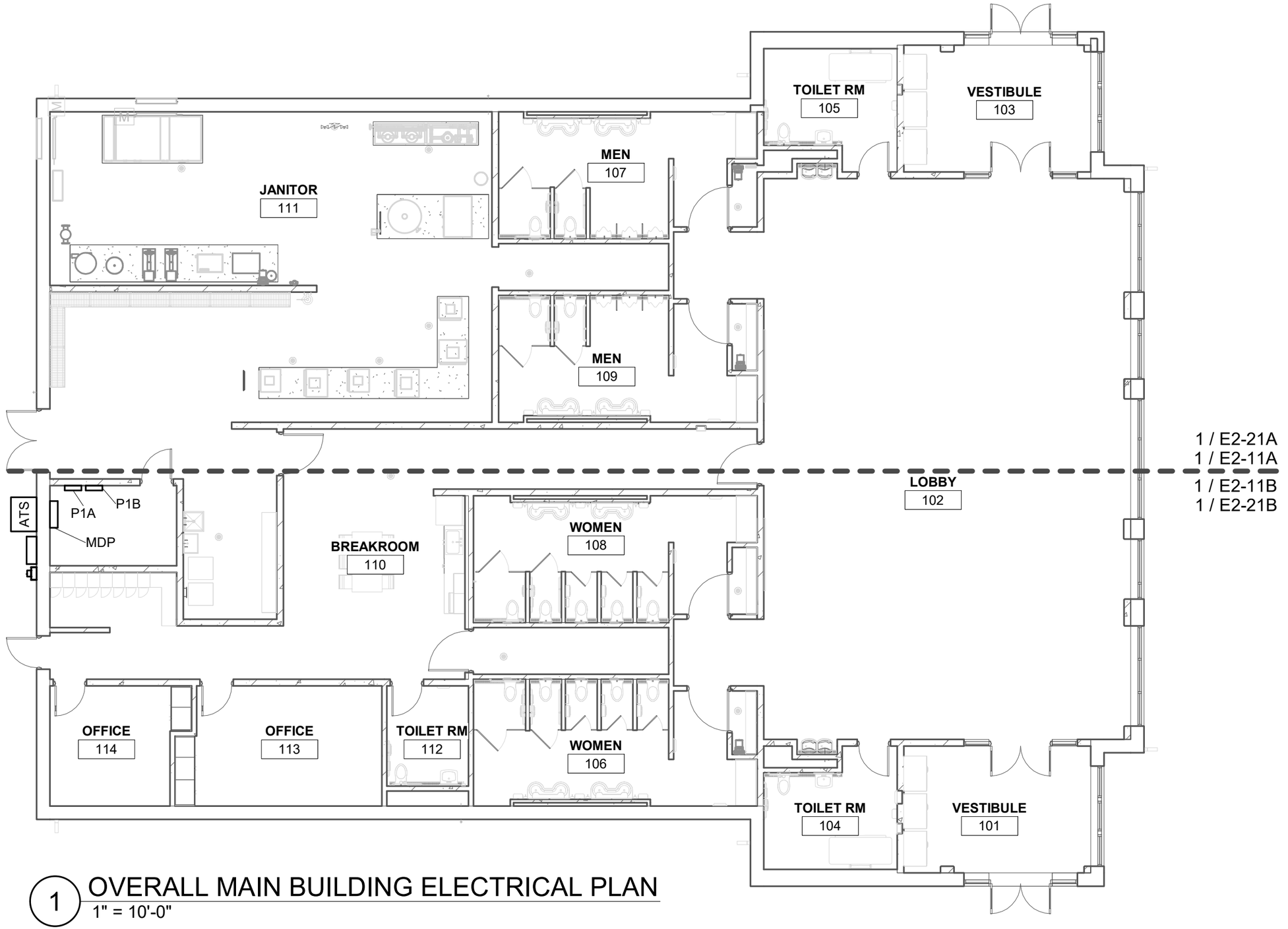
N

1 ELECTRICAL SITE PLAN

1" = 50'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ELECTRICAL SITE PLAN	SHEET NO: E2-00	E

PLOT DATE: 2/1/2024 1:59:57 PM PLOT BY: ISG INC. PLOT NAME: RDS PLOT SCALE: AS INDICATED



1 OVERALL MAIN BUILDING ELECTRICAL PLAN

1" = 10'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	OVERALL MAIN BUILDING ELECTRICAL PLAN	SHEET NO: E2-01

PLOT DATE: 1/26/2024 3:00:03 PM PLOT BY: ISG INC. PLOT NAME: RDS PLOT SCALE: AS INDICATED

SHEET NOTES

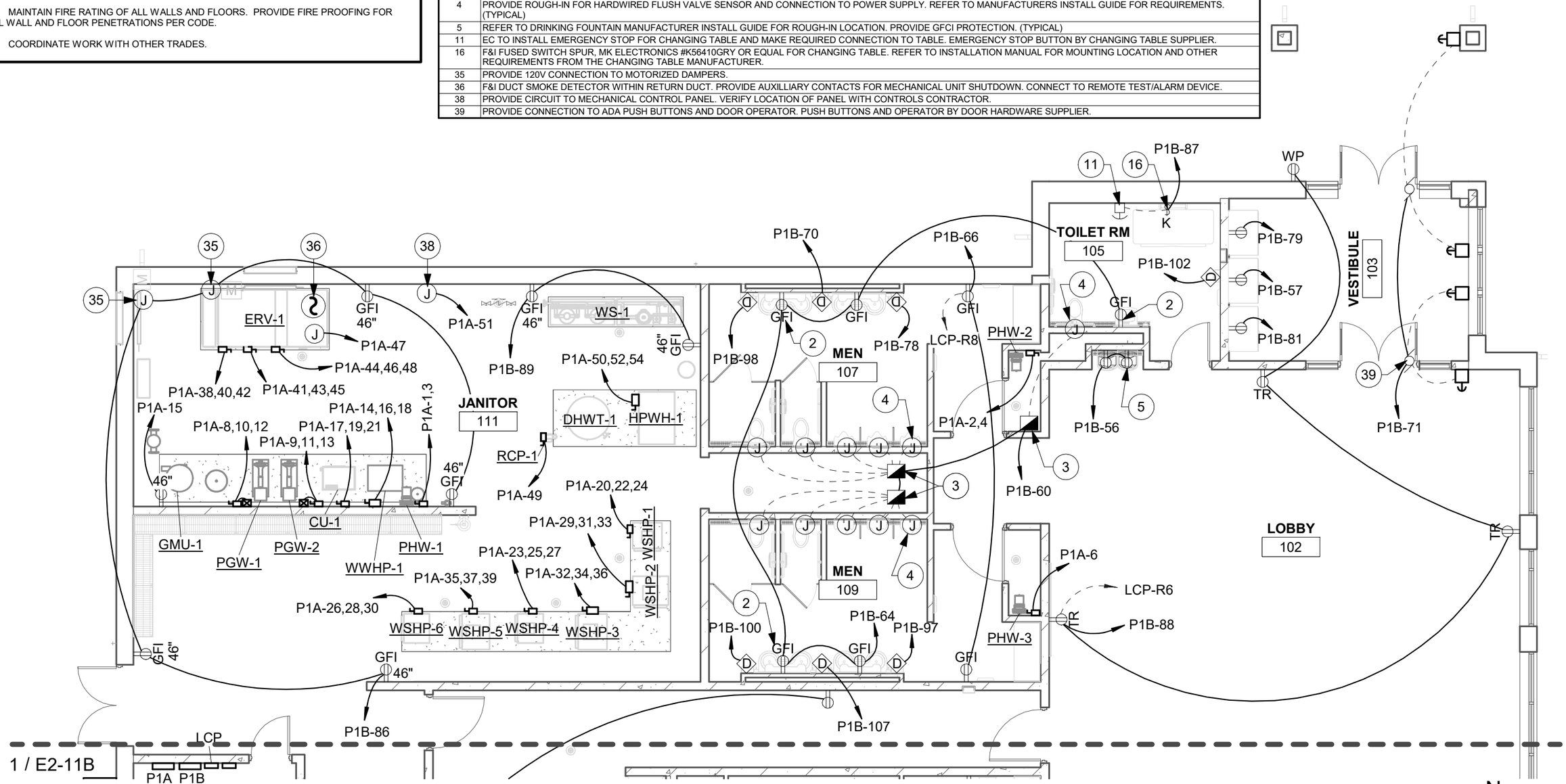
1. ALL 15A & 20A CONVENIENCE RECEPTACLES INSTALLED WITHIN PUBLIC SPACE SHALL BE TAMPER RESISTANT.

2. MAINTAIN FIRE RATING OF ALL WALLS AND FLOORS. PROVIDE FIRE PROOFING FOR ALL WALL AND FLOOR PENETRATIONS PER CODE.

3. COORDINATE WORK WITH OTHER TRADES.

ELECTRICAL KEYNOTE LEGEND

2	PROVIDE GFCI RECEPTACLE BELOW SINK FOR AUTOMATIC FAUCET POWER SUPPLY. REFER TO SINK MANUFACTURER INSTALL GUIDE FOR ROUGH-IN LOCATION. (TYPICAL)
3	CONTRACTOR TO INSTALL PLUMBING CONTRACTOR PROVIDED TRANSFORMER FOR HARDWIRED FLUSH VALVES. PROVIDE CIRCUIT TO TRANSFORMER AND CONNECTION FROM TRANSFORMER TO VALVE LOCATED IN RESTROOM(S).
4	PROVIDE ROUGH-IN FOR HARDWIRED FLUSH VALVE SENSOR AND CONNECTION TO POWER SUPPLY. REFER TO MANUFACTURERS INSTALL GUIDE FOR REQUIREMENTS. (TYPICAL)
5	REFER TO DRINKING FOUNTAIN MANUFACTURER INSTALL GUIDE FOR ROUGH-IN LOCATION. PROVIDE GFCI PROTECTION. (TYPICAL)
11	EC TO INSTALL EMERGENCY STOP FOR CHANGING TABLE AND MAKE REQUIRED CONNECTION TO TABLE. EMERGENCY STOP BUTTON BY CHANGING TABLE SUPPLIER.
16	F&I FUSED SWITCH SPUR, MK ELECTRONICS #K56410GRY OR EQUAL FOR CHANGING TABLE. REFER TO INSTALLATION MANUAL FOR MOUNTING LOCATION AND OTHER REQUIREMENTS FROM THE CHANGING TABLE MANUFACTURER.
35	PROVIDE 120V CONNECTION TO MOTORIZED DAMPERS.
36	F&I DUCT SMOKE DETECTOR WITHIN RETURN DUCT. PROVIDE AUXILLIARY CONTACTS FOR MECHANICAL UNIT SHUTDOWN. CONNECT TO REMOTE TEST/ALARM DEVICE.
38	PROVIDE CIRCUIT TO MECHANICAL CONTROL PANEL. VERIFY LOCATION OF PANEL WITH CONTROLS CONTRACTOR.
39	PROVIDE CONNECTION TO ADA PUSH BUTTONS AND DOOR OPERATOR. PUSH BUTTONS AND OPERATOR BY DOOR HARDWARE SUPPLIER.



1 MAIN BUILDING POWER PLAN - AREA A

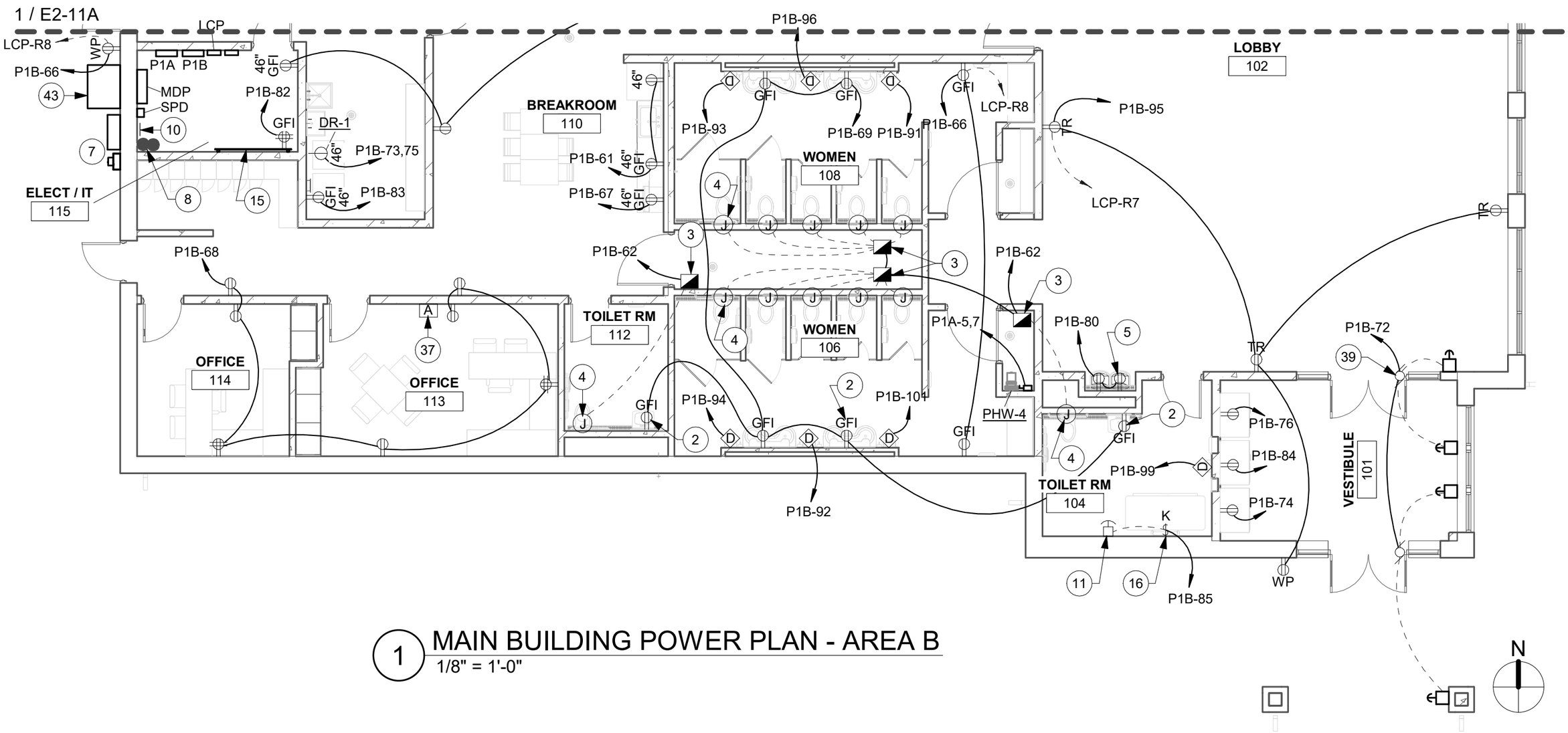
1/8" = 1'-0"

ELECTRICAL KEYNOTE LEGEND

2	PROVIDE GFCI RECEPTACLE BELOW SINK FOR AUTOMATIC FAUCET POWER SUPPLY. REFER TO SINK MANUFACTURER INSTALL GUIDE FOR ROUGH-IN LOCATION. (TYPICAL)
3	CONTRACTOR TO INSTALL PLUMBING CONTRACTOR PROVIDED TRANSFORMER FOR HARDWIRED FLUSH VALVES. PROVIDE CIRCUIT TO TRANSFORMER AND CONNECTION FROM TRANSFORMER TO VALVE LOCATED IN RESTROOM(S).
4	PROVIDE ROUGH-IN FOR HARDWIRED FLUSH VALVE SENSOR AND CONNECTION TO POWER SUPPLY. REFER TO MANUFACTURERS INSTALL GUIDE FOR REQUIREMENTS. (TYPICAL)
5	REFER TO DRINKING FOUNTAIN MANUFACTURER INSTALL GUIDE FOR ROUGH-IN LOCATION. PROVIDE GFCI PROTECTION. (TYPICAL)
7	PROPOSED CT CABINET AND METER LOCATION. REFER TO ELECTRICAL RISER FOR DETAILS.
8	PROVIDE (2) 2" SPARE CONDUITS NEAR PANEL P1 TO GREENSPACE OUTSIDE BUILDING. PROVIDE WITH PULL STRINGS AND TRACER WIRE. CAP TERMINATIONS.
10	PROPOSED GROUND BAR LOCATION. REFER TO GROUNDING DETAILS.
11	EC TO INSTALL EMERGENCY STOP FOR CHANGING TABLE AND MAKE REQUIRED CONNECTION TO TABLE. EMERGENCY STOP BUTTON BY CHANGING TABLE SUPPLIER.
15	TELEPHONE/TV BACKBOARD. PROVIDE 6'x6'x3/4" PLYWOOD BACKBOARD PAINTED WITH 3 COATS OF FIRE RETARDANT PAINT AND QUADRUPLEX RECEPTACLE FOR EQUIPMENT POWER.
16	F&I FUSED SWITCH SPUR, MK ELECTRONICS #K56410GRY OR EQUAL FOR CHANGING TABLE. REFER TO INSTALLATION MANUAL FOR MOUNTING LOCATION AND OTHER REQUIREMENTS FROM THE CHANGING TABLE MANUFACTURER.
37	F&I HONEYWELL REMOTE TEST AND ALARM DEVICE #RTS151 AND CONNECTION TO ERV-1 DUCT SMOKE DETECTOR.
39	PROVIDE CONNECTION TO ADA PUSH BUTTONS AND DOOR OPERATOR. PUSH BUTTONS AND OPERATOR BY DOOR HARDWARE SUPPLIER.
43	EXTERIOR BUILDING MOUNTED AUTOMATIC TRANSFER SWITCH. REFER TO ELECTRICAL RISER AND SPECIFICATIONS FOR REQUIREMENTS.

SHEET NOTES

1. ALL 15A & 20A CONVENIENCE RECEPTACLES INSTALLED WITHIN PUBLIC SPACE SHALL BE TAMPER RESISTANT.
2. MAINTAIN FIRE RATING OF ALL WALLS AND FLOORS. PROVIDE FIRE PROOFING FOR ALL WALL AND FLOOR PENETRATIONS PER CODE.
3. COORDINATE WORK WITH OTHER TRADES.



1 MAIN BUILDING POWER PLAN - AREA B

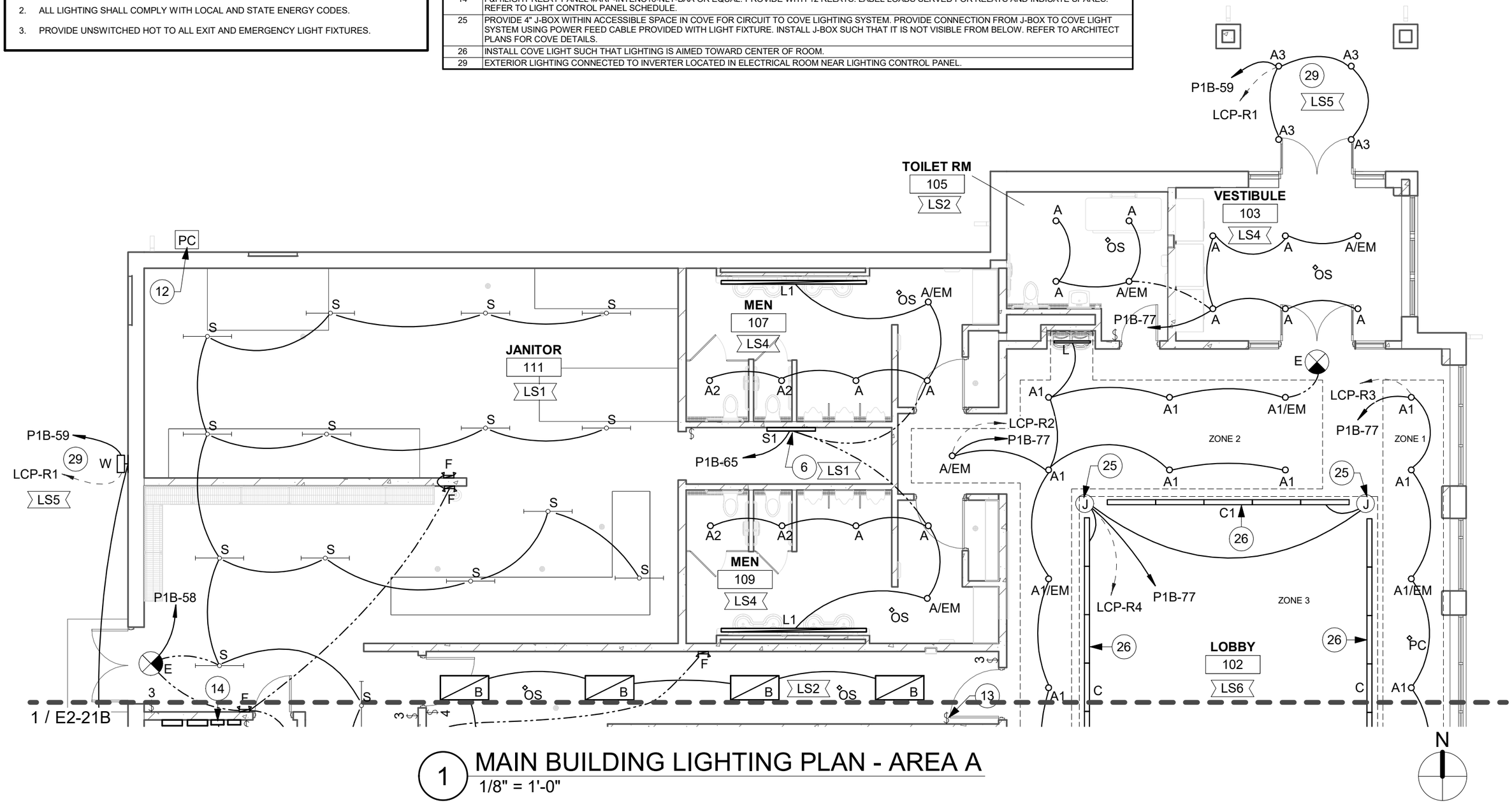
1/8" = 1'-0"

SHEET NOTES

1. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE COMPATIBLE LIGHTING CONTROL DEVICES ARE SUPPLIED WITH LIGHTING PACKAGE.
2. ALL LIGHTING SHALL COMPLY WITH LOCAL AND STATE ENERGY CODES.
3. PROVIDE UNSWITCHED HOT TO ALL EXIT AND EMERGENCY LIGHT FIXTURES.

ELECTRICAL KEYNOTE LEGEND

6	SURFACE MOUNT AT 7' AFF. COORDINATE WITH MECHANICAL FOR PIPING LOCATIONS PRIOR TO ROUGH-IN.
12	F&I PHOTOEYE ON EXTERIOR OF BUILDING AND CONNECT TO LIGHTING CONTROL PANEL.
13	MANUAL OVERRIDE SWITCH FOR LOBBY AREA LIGHTING CONTROLS.
14	F&I nLIGHT RELAY PANEL #ARP-INTENC16-NLT-BAA OR EQUAL. PROVIDE WITH 12 RELAYS. LABEL LOADS SERVED FOR RELAYS AND INDICATE SPARES. REFER TO LIGHT CONTROL PANEL SCHEDULE.
25	PROVIDE 4" J-BOX WITHIN ACCESSIBLE SPACE IN COVE FOR CIRCUIT TO COVE LIGHTING SYSTEM. PROVIDE CONNECTION FROM J-BOX TO COVE LIGHT SYSTEM USING POWER FEED CABLE PROVIDED WITH LIGHT FIXTURE. INSTALL J-BOX SUCH THAT IT IS NOT VISIBLE FROM BELOW. REFER TO ARCHITECT PLANS FOR COVE DETAILS.
26	INSTALL COVE LIGHT SUCH THAT LIGHTING IS AIMED TOWARD CENTER OF ROOM.
29	EXTERIOR LIGHTING CONNECTED TO INVERTER LOCATED IN ELECTRICAL ROOM NEAR LIGHTING CONTROL PANEL.



1 MAIN BUILDING LIGHTING PLAN - AREA A

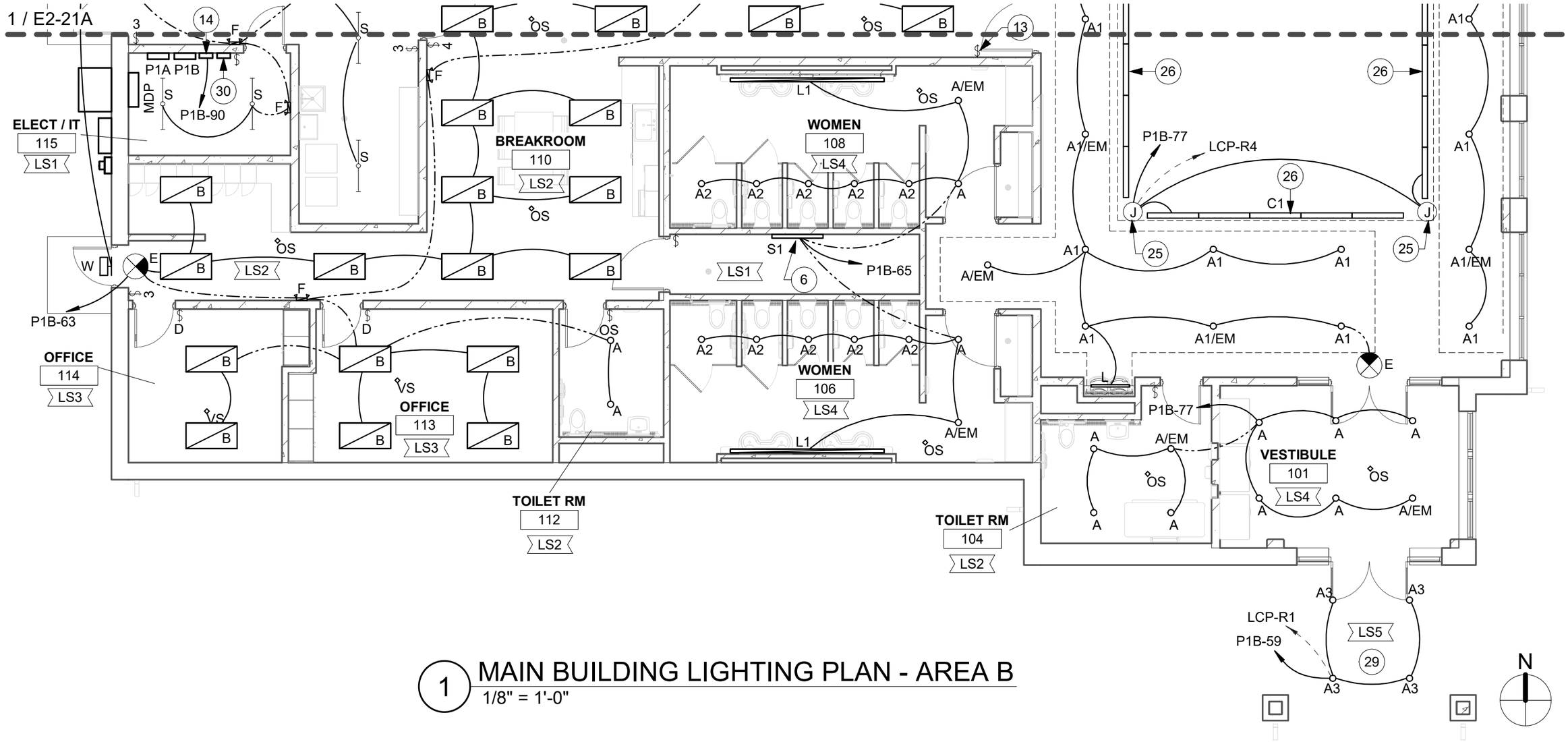
1/8" = 1'-0"

ELECTRICAL KEYNOTE LEGEND

6	SURFACE MOUNT AT 7' AFF. COORDINATE WITH MECHANICAL FOR PIPING LOCATIONS PRIOR TO ROUGH-IN.
13	MANUAL OVERRIDE SWITCH FOR LOBBY AREA LIGHTING CONTROLS.
14	F&I nLIGHT RELAY PANEL #ARP-INTENC16-NLT-BAA OR EQUAL. PROVIDE WITH 12 RELAYS. LABEL LOADS SERVED FOR RELAYS AND INDICATE SPARES. REFER TO LIGHT CONTROL PANEL SCHEDULE.
25	PROVIDE 4" J-BOX WITHIN ACCESSIBLE SPACE IN COVE FOR CIRCUIT TO COVE LIGHTING SYSTEM. PROVIDE CONNECTION FROM J-BOX TO COVE LIGHT SYSTEM USING POWER FEED CABLE PROVIDED WITH LIGHT FIXTURE. INSTALL J-BOX SUCH THAT IT IS NOT VISIBLE FROM BELOW. REFER TO ARCHITECT PLANS FOR COVE DETAILS.
26	INSTALL COVE LIGHT SUCH THAT LIGHTING IS AIMED TOWARD CENTER OF ROOM.
29	EXTERIOR LIGHTING CONNECTED TO INVERTER LOCATED IN ELECTRICAL ROOM NEAR LIGHTING CONTROL PANEL.
30	F&I BODINE INVERTER #ELIS250 AND MOUNT NEAR LIGHT CONTROL RELAY PANEL. INVERTER TO BE CONNECTED TO EXTERIOR EGRESS LIGHTING.

SHEET NOTES

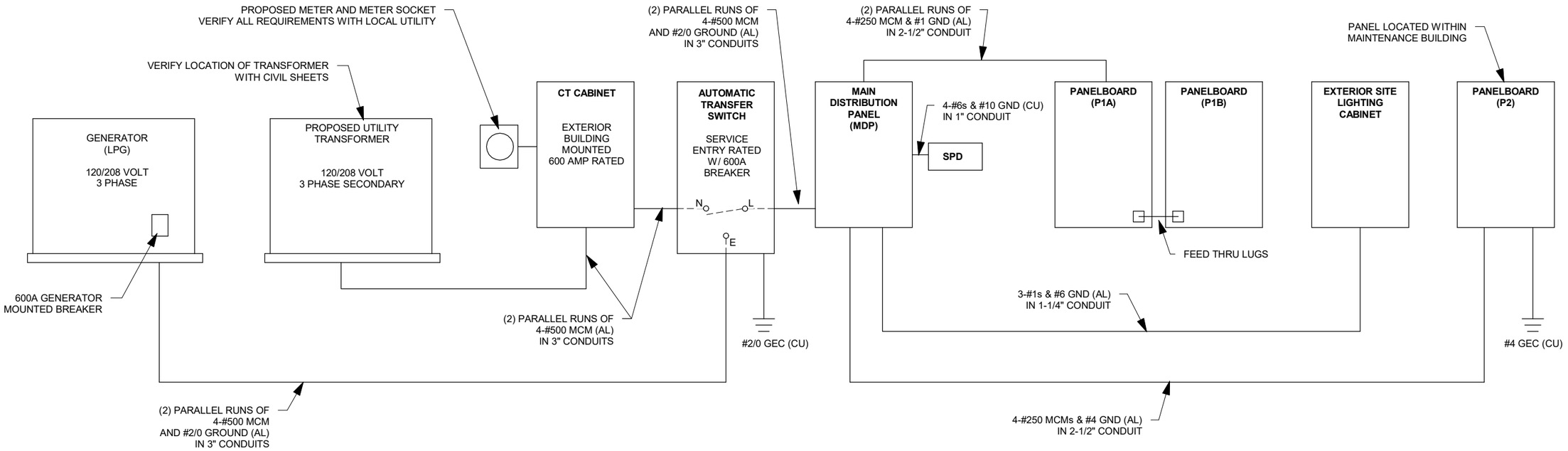
1. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE COMPATIBLE LIGHTING CONTROL DEVICES ARE SUPPLIED WITH LIGHTING PACKAGE.
2. ALL LIGHTING SHALL COMPLY WITH LOCAL AND STATE ENERGY CODES.
3. PROVIDE UNSWITCHED HOT TO ALL EXIT AND EMERGENCY LIGHT FIXTURES.



1 MAIN BUILDING LIGHTING PLAN - AREA B

1/8" = 1'-0"

2

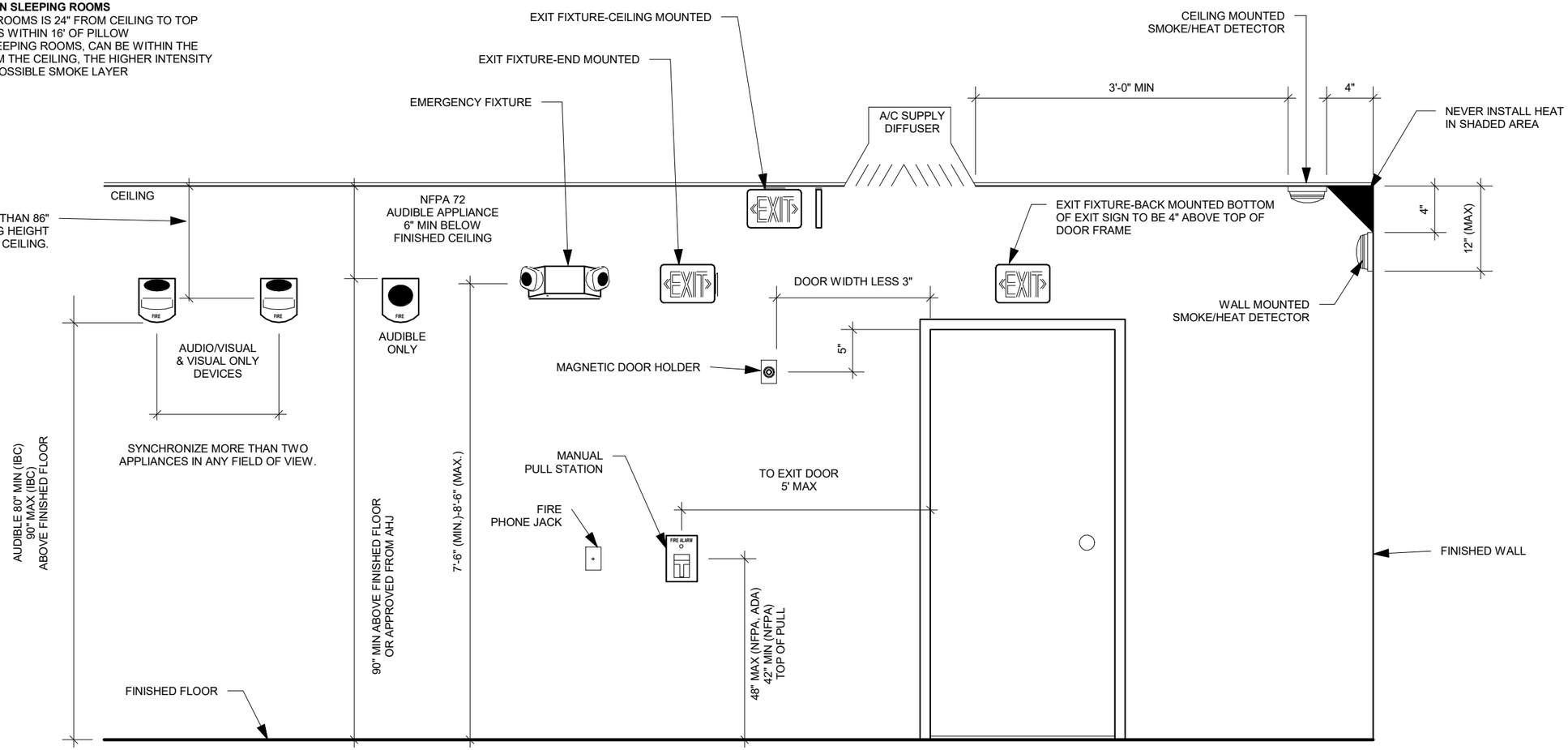


1 ELECTRICAL RISER DIAGRAM
NOT TO SCALE

2

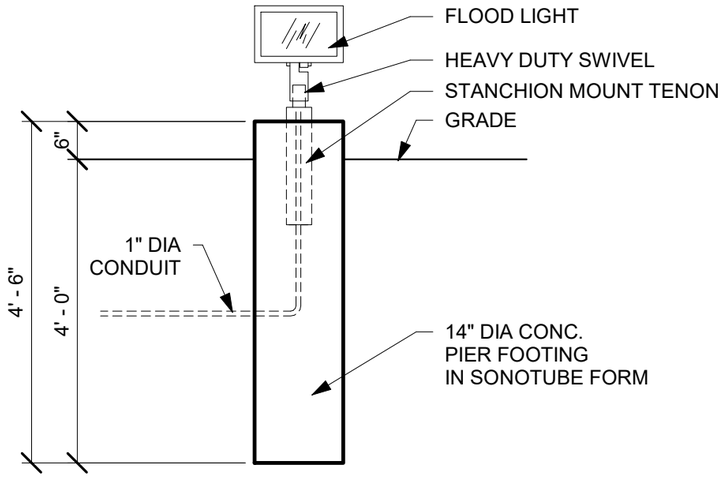
VISUAL APPLIANCE MOUNTING HEIGHT IN SLEEPING ROOMS

1. MIN DISTANCE IN SLEEPING ROOMS IS 24" FROM CEILING TO 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



1 TYPICAL MOUNTING HEIGHTS
NOT TO SCALE

2



** BASE INSTALLED AND PROVIDED BY ELECTRICAL CONTRACTOR

1 FLAG POLE FLOOD LIGHT DETAIL

NOT TO SCALE

2

ELECTRICAL SYMBOLS LEGEND

RECEPTACLES		SWITCHES		MISC. POWER SYMBOLS		FIRE PROTECTION SYSTEM		ELECTRICAL PANELS		TAG DESCRIPTIONS	
	SIMPLEX	$	SINGLE POLE		DISCONNECT	FACP	FIRE ALARM CONTROL PANEL	P1	FLUSH MOUNT PANELBOARD	LS?	LIGHTING SCENARIO
	DUPLEX	$2	DOUBLE POLE		FUSED DISCONNECT	FAAP	FIRE ALARM ANNUNCIATOR PNL	P1	SURFACE MT PANELBOARD	#	KEYNOTE
IG	ISOLATED GROUND	$3	3-WAY		FAN		SMOKE DETECTOR	PHONE	PHONE SYSTEM		
TR	TAMPER RESISTANT	$4	4-WAY		ELECT. CONTROLLED VALVE		HEAT DETECTOR				
WP	WEATHER PROOF W/GFI	$E	EMERGENCY	F	FUSESTAT	F	HORN STROBE			WIRE TYPES	
GFI	GROUND FAULT INTERRUPT	$F	FAN	D	HAND DRYER		HORN ONLY				
CR	CONTROLLED RECEPTACLE	$K	KEY OPERATED	H	HAIR DRYER	C	STROBE ONLY (C = CLG MTD)				STANDARD
CTR	COUNTERTOP RECEPTACLE	$LV	LOW VOLTAGE	H	HEATER	S C	SPKR STROBE (C = CLG MTD)				LOW-VOLTAGE
USB	COMBO RECEPTACLE / USB	$P	PILOT LIGHT	J	JUNCTION BOX	F	EXTERIOR HORN W/ STROBE				UN-SWITCHED HOT
	HIGH VOLTAGE	$T	TIMER		MOTOR	M	MINI HORN				
	SPLIT WIRE	$CB	CIRCUIT BREAKER		MOTOR WITH DISCONNECT	A	ANSUL TIE				
	DOUBLE DUPLEX	$D	DIMMER	R	RELAY	TS	SPRINKLER TAMPER SWITCH				
	220 VOLT	$H	ILLUMINATED HANDLE		SOLENOID VALVE	FS	SPRINKLER FLOW SWITCH				
	SPECIAL PURPOSE	$M	MOTOR		COMBINATION STARTER & DISC	WS F	WALL SPEAKER - FIRE				
	CEILING MOUNTED RECPT	$SC	SPEED CONTROLLER		MOTOR STARTER	S FA	CEILING SPEAKER - FIRE				
	CEILING MOUNTED SP RECPT	$W	SPRING WOUND TIMER	T	THERMOSTAT		MAGNETIC DOOR HOLDER				
	FLOOR BOX RECEPTACLE	$MC	MOMENTARY CONTACT	SD	DUCT-TYPE SMOKE DETECTOR	F	MANUAL PULL STATION				
		$WP	WEATHER PROOF		USB CHARGING STATION	AIM	ADDRESSABLE INPUT MODULE				
		$OS	OCCUPANCY SENSOR-WALL			AOM	ADDRESSABLE OUTPUT MOD.				
		$VS	VACANCY SENSOR-WALL				ABORT SWITCH				
		◇OS	OCCUPANCY SENSOR-CLG			C	BELL-CHIME				
		◇VS	VACANCY SENSOR-CLG			EOLD	END OF LINE RESISTOR				
		PC	PHOTO CELL			F/S	FIRE/SMOKE DAMPER				
			3-BUTTON SWITCH			S	SMOKE DAMPER				
		$L?	LOW VOLTAGE SWITCH / TYPE			CO	CARBON MONOXIDE DETECTOR				

2

Distrib. Panel: MDP

Location: ELECT / IT 115
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 35 kAIC
Mains Type: MLO
Mains Rating: 600 A
MCB Rating: 600 A

Notes:

CKT	Circuit Description	Trip	Pole	A		B		C		Pole	Trip	Circuit Description	CKT
1	PANELS P1A & P1B	400 A	3	50103	13920					3	200 A	PANEL P2	2
3						50152	13699						4
5								49826	13781				6
7	SURGE PROTECTIVE DEVICE (SPD)	60 A	3	0	5000					2	100 A	EXTERIOR LIGHTING CABINET	8
9						0	5000						10
11								0	--	1	--	BLANK	12
13	BLANK	--	1	--	--					1	--	BLANK	14
15	BLANK	--	1			--	--			1	--	BLANK	16
17	BLANK	--	1					--	--	1	--	BLANK	18
		Total Load:		69023 VA		68849 VA		63607 VA					
		Total Amps:		582 A		580 A		530 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	101151 VA	100.00%	101151 VA		
Heating	34500 VA	100.00%	34500 VA	**Total Conn. Load:**	201475 VA
Lighting	4785 VA	100.00%	4785 VA	**Total Est. Demand:**	197035 VA
Lighting - Exterior	76 VA	100.00%	76 VA	**Total Conn.:**	559 A
Motor	3000 VA	100.00%	3000 VA	**Total Est. Demand:**	547 A
Other	2706 VA	100.00%	2706 VA		
Power	26550 VA	100.00%	26550 VA		
Receptacle	18880 VA	76.48%	14440 VA		
Spare	10000 VA	100.00%	10000 VA		

Branch Panel: P1A

Location: ELECT / IT 115
Supply From: MDP
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22 kAIC
Mains Type: MLO
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	Circuit Description	Trip	Pole	A		B		C		Pole	Trip	Circuit Description	CKT
1	PUMP (PHW-1)	15 A	2	563	563					2	15 A	PUMP (PHW-2)	2
3						563	563						4
5	PUMP (PHW-4)	15 A	2					563	528	1	15 A	PUMP (PHW-3)	6
7				563	2882								8
9	PUMP (PGW-2)	35 A	3			2882	2882			3	35 A	PUMP (PGW-1)	10
11								2882	2882				12
13				2882	2522								14
15	RCPT - GLYCOL MAKEUP...	20 A	1			180	2522			3	35 A	HEAT PUMP (WWHP-1)	16
17	CONDENSING UNIT (CU-1)	25 A	3					1921	2522				18
19				1921	1321					3	15 A	WATER SOURCE HEAT PUMP (WSHP-1)	20
21						1921	1321						22
23	WATER SOURCE HEAT PUMP (WSHP-4)	15 A	3					1321	1321				24
25				1321	1321					3	15 A	WATER SOURCE HEAT PUMP (WSHP-6)	26
27						1321	1321						28
29	WATER SOURCE HEAT PUMP (WSHP-2)	45 A	3					3602	1321				30
31				3602	3602					3	45 A	WATER SOURCE HEAT PUMP (WSHP-3)	32
33						3602	3602						34
35	WATER SOURCE HEAT PUMP (WSHP-5)	30 A	3					2522	3602				36
37				2522	793								38
39						2522	793			3	15 A	ERV-1 SUPPLY FAN	40
41	ERV-1 RETURN FAN	15 A	3					793	793				42
43				793	84								44
45						793	84			3	15 A	ERV-1 ENERGY WHEEL	46
47	ERV-1 RCPT AND LIGHTING	20 A	1					500	84				48
49	RECIRC PUMP (RCP-1)	15 A	1	60	6365								50
51	MECH/BLDG CONTROL PANEL	20 A	1			500	6365			3	70 A	WATER HEAT PUMP (HPWH-1)	52
53	SPARE	20 A	1					0	6365				54
		Total Load:		50103 VA		50152 VA		49826 VA					
		Total Amps:		418 A		418 A		415 A					

Legend:

Branch Panel: P1B

Location: ELECT / IT 115
Supply From: P1A
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22 kAIC
Mains Type: MLO
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	Circuit Description	Trip	Pole	A		B		C		Pole	Trip	Circuit Description	CKT
55	FLAG POLE LIGHTING	20 A	1	126	360					1	20 A	(GFCI) NORTH DRINK...	56
57	(GFCI) RCPT - VENDING...	20 A	1			180	545			1	20 A	LTG - MECH/ELEC ROOMS	58
59	LTG - EXTERIOR BLDG...	20 A	1					186	600	1	20 A	FLUSH VALVE POWER...	60
61	RCPTS - BRKROOM...	20 A	1	680	800					1	20 A	FLUSH VALVE POWER...	62
63	LTG - OFFICES/CORRIDOR	20 A	1			708	900			1	20 A	NORTH RESTROOMS FAUC...	64
65	LTG - MENS/WOMENS...	20 A	1					767	900	1	20 A	RCPTS - RESTROOMS	66
67	RCPT - MICROWAVE	20 A	1	1500	1620					1	20 A	RCPTS - OFFICE...	68
69	SOUTH RESTROOMS FAUC...	20 A	1			1080	1725			1	20 A	HAND DRYER - MENS 107	70
71	ADA DOOR OPERATORS -...	20 A	1					1000	1000	1	20 A	ADA DOOR OPERATORS -...	72
73	(GFCI) ELEC. DRYER RCPT	30 A	2	2500	180					1	20 A	(GFCI) RCPT - VENDING...	74
75						2500	180			1	20 A	(GFCI) RCPT - VENDING...	76
77	LTG - LOBBY/VESTIBULES	20 A	1					1432	1725	1	20 A	HAND DRYER - MENS 107	78
79	(GFCI) RCPT - VENDING...	20 A	1	180	360					1	20 A	(GFCI) SOUTH DRINK...	80
81	(GFCI) RCPT - VENDING...	20 A	1			180	360			1	20 A	RCPT - PHONEBOARD	82
83	RCPT - WASHING MACHINE	20 A	1					180	180	1	20 A	(GFCI) RCPT - VENDING...	84
85	CHANGING TABLE - TOILET...	20 A	1	500	720					1	20 A	RCPTS - MECHANICAL ROOM	86
87	CHANGING TABLE - TOILET...	20 A	1			500	720			1	20 A	RCPTS - NORTH LOBBY	88
89	RCPTS - WATER SOFTENER	20 A	1					360	500	1	20 A	LIGHT CONTROL PANEL	90
91	HAND DRYER - WOMENS 108	20 A	1	1725	1725					1	20 A	HAND DRYER - WOMENS 106	92
93	HAND DRYER - WOMENS 108	20 A	1			1725	1725			1	20 A	HAND DRYER - WOMENS 106	94
95	RCPTS - SOUTH LOBBY	20 A	1					720	1725	1	20 A	HAND DRYER - WOMENS 108	96
97	HAND DRYER - MENS 109	20 A	1	1725	1725					1	20 A	HAND DRYER - MENS 107	98
99	HAND DRYER - RESTROOM...	20 A	1			1725	1725			1	20 A	HAND DRYER - MENS 109	100
101	HAND DRYER - WOMENS 106	20 A	1					1725	1725	1	20 A	HAND DRYER - RESTROOM...	102
103	SPARE	20 A	1	0	0					1	20 A	SPARE	104
105	SPARE	20 A	1			0	0			1	20 A	SPARE	106
107	HAND DRYER - MENS 109	20 A	1					1725	0	1	20 A	SPARE	108
		Total Load:		16426 VA		16420 VA		16321 VA					
		Total Amps:		137 A		137 A		136 A					

Legend:

2

Branch Panel: P2

Location: Space 11
Supply From: MDP
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10 kAIC
Mains Type: MCB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Trip	Pole	A		B		C		Pole	Trip	Circuit Description	CKT
1	RCPT - GENERATOR	20 A	1	180	500					1	20 A	MECH/BLDG CONTROL PANEL	2
3	LIGHTING	20 A	1			270	1200			1	20 A	GEN ENGINE HEATER	4
5	RCPTS - EAST WALL/EXT.	20 A	1					540	1000	1	20 A	GARAGE DOOR	6
7	GENERATOR BATTERY...	20 A	1	1200	540					1	20 A	RCPTS - NORTH WALL	8
9	EXHAUST FAN	15 A	2			250	540			1	20 A	RCPTS - SOUTH WALL	10
11								250	540	1	20 A	RCPTS - SW WALL/EXTERIOR	12
13	ELECTRIC WATER HEATER (EWH-1)	20 A	3	1500	5000					3	60 A	ELECTRIC UNIT HEATER (EUH-1)	14
15						1500	5000						16
17								1500	5000				18
19	ELECTRIC UNIT HEATER (EUH-2)	60 A	3	5000	0					1	20 A	SPARE	20
21						5000	0			1	20 A	SPARE	22
23								5000	0	1	20 A	SPARE	24
25	BLANK	--	1	--	--					1	--	BLANK	26
27	BLANK	--	1			--	--			1	--	BLANK	28
29	BLANK	--	1					--	--	1	--	BLANK	30
		Total Load:		13920 VA		13699 VA		13781 VA					
		Total Amps:		116 A		114 A		115 A					

Legend:

ELECTRICAL EQUIPMENT SCHEDULE

ITEM#	DESCRIPTION	POWER REQUIREMENTS					WIRE #SIZE, GND, MINIMUM CONDUIT	STARTER		DISCONNECT		NOTES
		HP	VOLTS	POLES	FLA	VA		TYPE	BY	TYPE	BY	
CU-1	CONDENSING UNIT		208 V	3	16.0 A	5764 VA	3/4"C, 3- 10's, 10GND	(none)	(none)	NF	EC	
DR-1	ELECTRIC DRYER		208 V	2	0.0 A	5000 VA	3/4"C, 3- 10's, 10GND	(none)	(none)	(none)	(none)	
EF-1	EXHAUST FAN	1/6	208 V	2	0.0 A	500 VA	3/4"C, 2- 12's, 12GND	COMB	EC	NF	EC	INTERLOCK WITH CO/NO CONTROLS AND LOUVER
ERV-1R	ENERGY RECOVERY UNIT RETURN FAN		208 V	3	6.6 A	2378 VA	3/4"C, 3- 12's, 12GND	(none)	(none)	NF	EC	
ERV-1S	ENERGY RECOVERY UNIT SUPPLY FAN		208 V	3	6.6 A	2378 VA	3/4"C, 3- 12's, 12GND	(none)	(none)	NF	EC	
ERV-1W	ENERGY RECOVERY UNIT ENERGY WHEEL		208 V	3	0.7 A	252 VA	3/4"C, 3- 12's, 12GND	(none)	(none)	NF	EC	
EUH-1	ELECTRIC UNIT HEATER		208 V	3	0.0 A	15000 VA	1"C, 3- 6's, 10GND	(none)	(none)	NF	ES	
EUH-2	ELECTRIC UNIT HEATER		208 V	3	0.0 A	15000 VA	1"C, 3- 6's, 10GND	(none)	(none)	NF	ES	
EWH-1	ELECTRIC WATER HEATER		208 V	3	0.0 A	4500 VA	3/4"C, 3- 12's, 12GND	(none)	(none)	NF	EC	
HPWH-1	WATER HEAT PUMP		208 V	3	53.0 A	19094 VA	1-1/4"C, 3- 4's, 8GND	(none)	(none)	NF	EC	
PGW-1	GEO PUMP	7-1/2	208 V	3	0.0 A	8646 VA	3/4"C, 3- 8's, 10GND	VFD	ES	NF	ES	INSTALL SUPPLIER PROVIDED VFD AND DISCONNECT. PROVIDE ALL TERMINATIONS/CONNECTIONS.
PGW-2	GEO PUMP	7-1/2	208 V	3	0.0 A	8646 VA	3/4"C, 3- 8's, 10GND	VFD	ES	NF	ES	INSTALL SUPPLIER PROVIDED VFD AND DISCONNECT. PROVIDE ALL TERMINATIONS/CONNECTIONS.
PHW-1	HOT WATER PUMP	1/2	208 V	2	0.0 A	1125 VA	3/4"C, 2- 12's, 12GND	(none)	(none)	NF	EC	
PHW-2	HOT WATER PUMP	1/2	208 V	2	0.0 A	1125 VA	3/4"C, 2- 12's, 12GND	(none)	(none)	NF	EC	
PHW-3	HOT WATER PUMP	1/6	120 V	1	0.0 A	528 VA	3/4"C, 2- 12's, 12GND	(none)	(none)	NF	EC	
PHW-4	HOT WATER PUMP	1/2	208 V	2	0.0 A	1125 VA	3/4"C, 2- 12's, 12GND	(none)	(none)	NF	EC	
RCP-1	HOT WATER RECIRC PUMP	1/12	120 V	1	0.0 A	60 VA	3/4"C, 2- 12's, 12GND	(none)	(none)	NF	EC	
WSHP-1	WATER SOURCE HEAT PUMP		208 V	3	11.0 A	3962 VA	3/4"C, 3- 12's, 12GND	(none)	(none)	NF	WU	
WSHP-2	WATER SOURCE HEAT PUMP		208 V	3	30.0 A	10807 VA	3/4"C, 3- 8's, 10GND	(none)	(none)	NF	WU	
WSHP-3	WATER SOURCE HEAT PUMP		208 V	3	30.0 A	10807 VA	3/4"C, 3- 8's, 10GND	(none)	(none)	NF	WU	
WSHP-4	WATER SOURCE HEAT PUMP		208 V	3	11.0 A	3962 VA	3/4"C, 3- 12's, 12GND	(none)	(none)	NF	WU	
WSHP-5	WATER SOURCE HEAT PUMP		208 V	3	21.0 A	7565 VA	3/4"C, 3- 10's, 10GND	(none)	(none)	NF	WU	
WSHP-6	WATER SOURCE HEAT PUMP		208 V	3	11.0 A	3962 VA	3/4"C, 3- 12's, 12GND	(none)	(none)	NF	WU	
WWHP-1	WATER TO WATER HEAT PUMP		208 V	3	21.0 A	7565 VA	3/4"C, 3- 8's, 10GND	(none)	(none)	NF	EC	

STARTER TYPE	
COMB	COMBINATION STARTER
ECM	ELECTRONICALLY CONTROLLED MOTOR
MAG	MAGNETIC STARTER
MAN	MANUAL STARTER
SS	SOFT STARTER
VFD	VARIABLE FREQUENCY DRIVE

STARTER BY	
EC	ELECTRICAL CONTRACTOR
ES	EQUIPMENT SUPPLIER
MC	MECHANICAL CONTRACTOR
WU	WITH UNIT

DISCONNECT TYPE	
BO	BY OTHERS
F	FUSED DISCONNECT
NF	NON-FUSED DISCONNECT

DISCONNECT BY	
EC	ELECTRICAL CONTRACTOR
ES	EQUIPMENT SUPPLIER
MC	MECHANICAL CONTRACTOR
WU	WITH UNIT

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	MODEL	LAMP	TYPE COMMENTS
A	4" RECESS CAN	LITHONIA	LDN4-40/15-LO4-WR-MVOLT-GZ1-BAA	17.5W LED	
A1	4" RECESS CAN	LITHONIA	LDN4-40/30-LO4-WR-MVOLT-GZ1-BAA	32W LED	
A1/EM	4" RECESS CAN	LITHONIA	LDN4-40/30-LO4-WR-MVOLT-GZ1-EL-BAA	32W LED	INTEGRAL BATTERY. PROVIDE WITH INTEGRAL TEST SWITCH
A2	4" RECESS CAN	LITHONIA	LDN4-40/07-LO4-WR-MVOLT-GZ1-BAA	9W LED	
A3	4" RECESS CAN - WET LISTED	LITHONIA	LDN4-30/10-LO4-AR-LSS-MVOLT-GZ1-BAA	17.5W LED	
A/EM	4" RECESS CAN	LITHONIA	LDN4-40/15-LO4-WR-MVOLT-GZ1-EL-BAA	17.5W LED	INTEGRAL BATTERY. PROVIDE WITH INTEGRAL TEST SWITCH
B	2x4 FLAT PANEL	LITHONIA	CPX-2X4-4000LM-80CRI-40K-SWL-MIN1-ZT-MVOLT-BAA	37W LED	
C	COVE LIGHT - 28' RUN	MARK ARCHITECTURAL LIGHTING	MCV504-LSL-28FT-MSL4-MCFMC-80CRI-40K-400LMF-ASYM-MIN1-MVOLT-SGW-ZT -MFCLC10R	14W/4' LED	PROVIDE WITH MOUNTING CLIP #MCFMC (2 FOR EACH 4' SEGMENT).CONTINUOUS ROW MOUNTED. REFER TO ARCHITECTURAL COVE DETAIL FOR FIXTURE LOCATION
C1	COVE LIGHT - 20' RUN	MARK ARCHITECTURAL LIGHTING	MCV504-LSL-20FT-MSL4-MCFMC-80CRI-40K-400LMF-ASYM-MIN1-MVOLT-SGW-ZT -MFCLC10R	14W/4' LED	PROVIDE WITH MOUNTING CLIP #MCFMC (2 FOR EACH 4' SEGMENT).CONTINUOUS ROW MOUNTED. REFER TO ARCHITECTURAL COVE DETAIL FOR FIXTURE LOCATION
E	EXIT SIGN	LITHONIA	LE-S-1-R-ELN-SD-BAA	3W LED	
F	EMERGENCY LIGHT	LITHONIA	ELM4L-LTP-BAA	3W LED	
L	3' RECESSED LINEAR	MARK ARCHITECTURAL LIGHTING	FCL-LOP-3FT-FLP-GB-80CRI-40K-400LMF-MIN1-120-ZT	10W LED	CENTER FIXTURE IN SOFFIT ABOVE DRINKING FOUNTATIN. DRYWALL SPACKLE FLANGED. BAA CERTIFIED.
L1	12' RECESSED LINEAR	MARK ARCHITECTURAL LIGHTING	FCL-LOP-12FT-FLP-GB-80CRI-40K-800LMF-MIN1-120-ZT	97W LED	CENTER FIXTURE WITHIN SOFFIT OVER WASH STATIONS. GYP FLANGE KIT. BAA CERTIFIED
S	4' STRIP LIGHT	LITHONIA	ZL1D-L48-3000LM-FST-MVOLT-40K-80CRI-BAA-WH	30W LED	SURFACE MOUNTED TO CEILING
S1	4' STRIP LIGHT	LITHONIA	ZL1D-L48-5000LM-FST-MVOLT-40K-80CRI-BAA-WH	40W LED	SURFACE MOUNTED TO CEILING
V	FLOOD LIGHT	LITHONIA	DSXF1-LED-P2-40K-MFL-MVOLT-THK-VG-DDBXD-BAA	42W LED	
W	EXTERIOR WALL PACK	LITHONIA	WDGE2-LED-P3-30K-80CRI-VW-MVOLT-SRM-BAA-PIR-DDBXD	23W LED	ROUGH-IN CENTER OF BOX AT 8'-6" AFG
W1	EXTERIOR WALL PACK	LITHONIA	WDGE2-LED-P2-30K-80CRI-VW-MVOLT-SRM-BAA-PIR1FC3V-DDBXD	15W LED	ROUGH-IN CENTER OF BOX 1'-6" ABOVE DOOR. INTEGRAL PHOTOEYE.

LIGHTING SCENARIO SCHEDULE

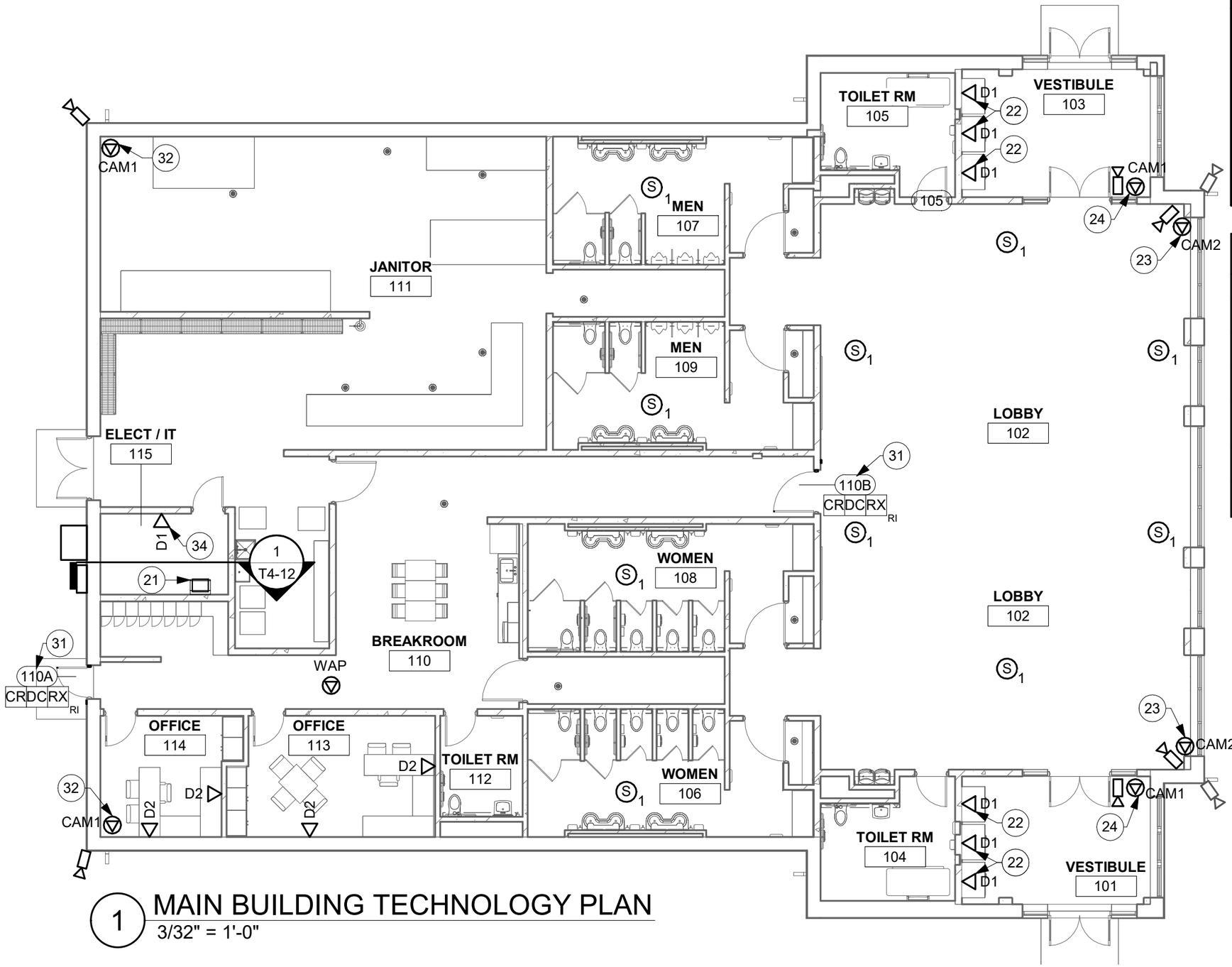
SCENARIO#	LIGHTING SCENARIO DESCRIPTION
LS1	MANUAL ON/OFF CONTROL ONLY
LS2	AUTOMATIC & MANUAL CONTROL OF FIXTURES BASED UPON THE FOLLOWING SCHEDULE: SWITCH #1: MANUAL ON/OFF CONTROL OCCUPIED AND UNOCCUPIED HOURS: LIGHTING SET TO ALL ON WHEN OCCUPANCY IS SENSED. UPON EXITING ROOM, SENSOR TO TRIGGER ROOM TO OFF AFTER 20 MINUTES OF NO OCCUPANCY SENSED. NOTE: THERE MAY BE MULTIPLE SWITCH LOCATIONS FOR MANUAL LIGHT CONTROL.
LS3	AUTOMATIC & MANUAL CONTROL OF DIMMED FIXTURES BASED UPON THE FOLLOWING SCHEDULE: SWITCH #1: MANUAL ON/OFF WITH DIMMING CONTROL UPON EXITING ROOM, SENSOR TO TRIGGER ROOM TO OFF POSITION AFTER 20 MINUTES OF NO OCCUPANCY SENSED AND RETURN SYSTEM TO A MANUAL ON CONDITION. NOTE: THERE MAY BE MULTIPLE SWITCH LOCATIONS FOR MANUAL LIGHT CONTROL.
LS4	AUTOMATIC CONTROL OF FIXTURES BASED UPON THE FOLLOWING SCHEDULE: OCCUPIED AND UNOCCUPIED HOURS: LIGHTING SET TO ON WHEN OCCUPANCY IS SENSED. UPON EXITING SPACE, SENSOR TO TRIGGER SPACE TO OFF AFTER 20 MINUTES OF NO OCCUPANCY SENSED.
LS5	AUTOMATIC CONTROL OF EXTERIOR FIXTURES BASED UPON THE FOLLOWING SCHEDULE: LIGHTS TO BE AUTOMATICALLY TURNED ON AND OFF BY LIGHT LEVELS SENSED FROM PHOTOCELL. CIRCUIT TO BE ROUTED THROUGH LIGHTING CONTROL PANEL.
LS6	AUTOMATIC CONTROL OF LIGHT FIXTURES BASED UPON THE FOLLOWING SCHEDULE: LIGHTING TO BE ROUTED THROUGH THE LIGHTING CONTROL PANEL AND CONTROLLED VIA TIMECLOCK SIGNAL. SET DEFAULT TIMECLOCK FOR 24/7 FUNCTION. ZONE 1: RECESSED LIGHTING: DAYLIGHTING ZONE ZONE 2: RECESSED LIGHTING: NON-DAYLIGHTING ZONE ZONE 3: COVE LIGHTING: NON-DAYLIGHTING ZONE LIGHTS LOCATED WITHIN DAYLIGHT ZONE WILL BE CONTROLLED WITH A DAYLIGHT SENSOR. LIGHTS WILL TRACK AT REDUCED PERCENTAGE BASED UPON THE DESIRED LIGHT LEVELS IN THE SPACE. PROVIDE SWITCH FOR MANUAL OVERRIDE OF THE TIMECLOCK SYSTEM.
LS7	AUTOMATIC CONTROL OF EXTERIOR FIXTURES BASED UPON THE FOLLOWING SCHEDULE: FIXTURES SHALL HAVE INTEGRAL PHOTOEYE FOR DUSK TO DAWN OPERATION.

RELAY / CIRCUIT		CONTROL				LOAD CIRCUITS		NOTES
RELAY NO.	DESCRIPTION	TIMER	PHOTO CONTROL	LOCAL SWITCH	OCC SENSOR	RELAY POLE	PANEL-BOARD	
1	EXTERIOR BLDG/CANOPY LIGHTS		X			1	P1B	
2	LOBBY LIGHTING - ZONE 2	X				1	P1B	
3	LOBBY LIGHTING - ZONE 1	X				1	P1B	DAYLIGHT HARVEST
4	LOBBY LIGHTING - ZONE 3	X				1	P1B	
5	EXTERIOR FLAG POLE LIGHTS	X				1	P1B	
6	LOBBY RECEPTACLES - NORTH	X				1	P1B	
7	LOBBY RECEPTACLES - SOUTH	X				1	P1B	
8	RESTROOMS & WEST EXT. RECEPTACLES	X				1	P1B	
9	SPARE					1		
10	SPARE					1		
11	SPARE					1		
12	SPARE					1		
13	BLANK							
14	BLANK							
15	BLANK							
16	BLANK							

* REFER TO LIGHTING SCENARIOS FOR CONTROL SPECIFICS RELATED TO SPACES

1 LIGHT CONTROL PANEL SCHEDULE
NOT TO SCALE

2



1 MAIN BUILDING TECHNOLOGY PLAN
3/32" = 1'-0"

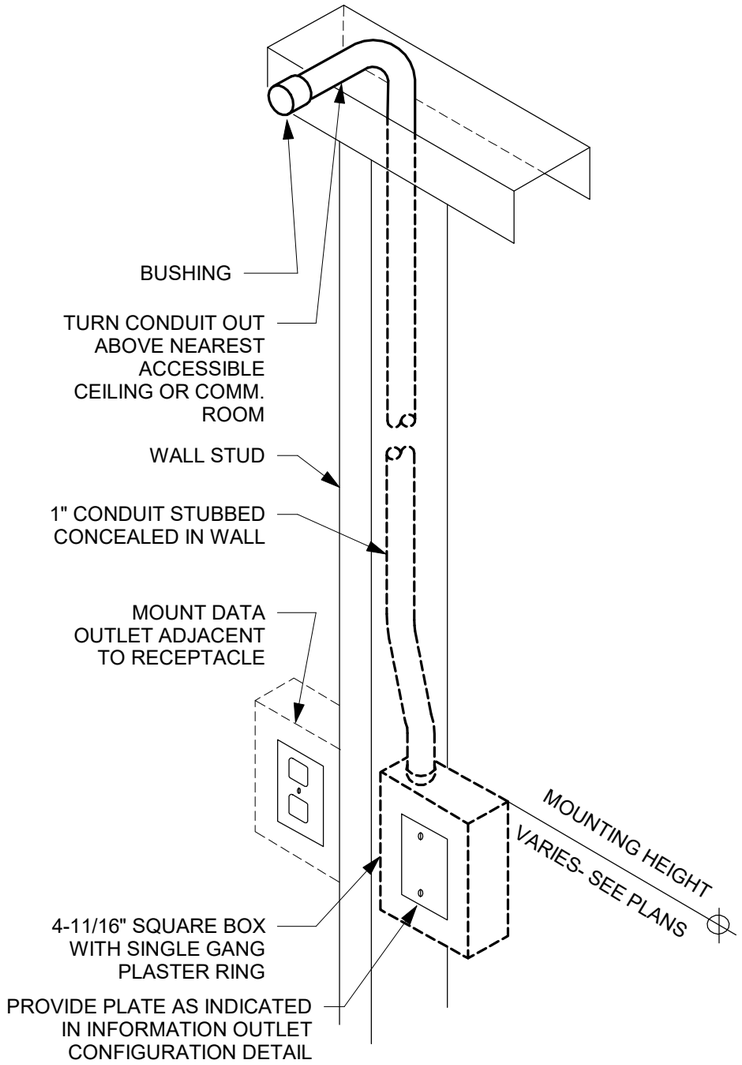
SHEET NOTES

1. WALL INFORMATION OUTLETS SHALL BE LOCATED NEXT TO POWER RECEPTACLES. COORDINATE LOCATIONS WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN
2. ROVIDE QUANTITIES AS REQUIRED BASED ON DEVICE COUNTS. REFER TO FLOOR PLANS AND SPECIFICATION FOR ADDITIONAL INFORMATION.
3. ALL ROUGH-IN BOXES AND CONDUIT SHALL BE RECESSED WHERE POSSIBLE. REFER TO ELECTRICAL PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. BACKGROUND MUSIC (BGM) SPEAKERS ARE SHOWN FOR GENERAL DESIGN INTENT. CONTRACTOR SHALL PROVIDE MANUFACTURER RECOMMENDED LAYOUT BASED ON SPECIFIC MODEL SELECTED. REFER TO PUBLIC ADDRESS SYSTEMS SPECIFICATIONS FOR ADDITIONAL INFORMATION.

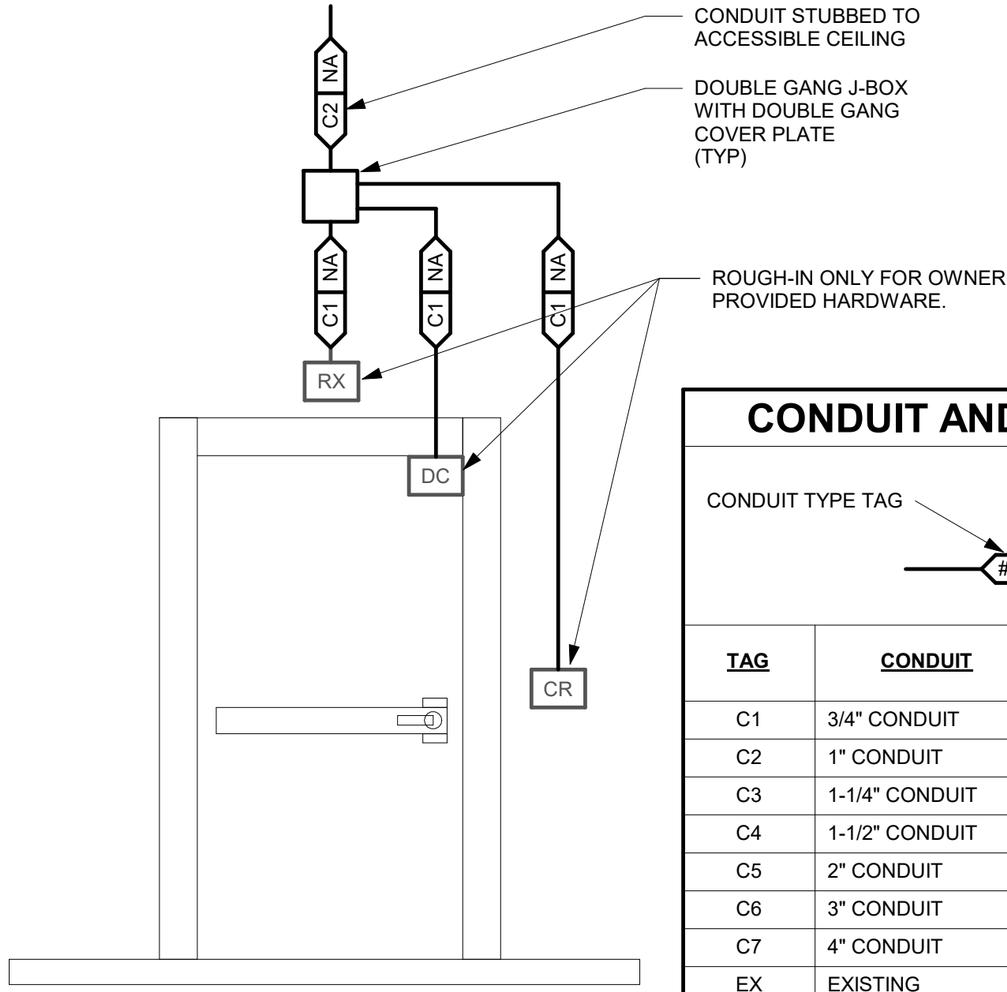
TECH KEYNOTE LEGEND

21	APPROXIMATE LOCATION OF WALL MOUNTED IT CABINET (SC-CAB-01) AND ASSOCIATED IT EQUIPMENT.
22	WALL INFORMATION OUTLET (D1) FOR OWNER PROVIDED VENDING MACHINE. COORDINATE FINAL OUTLET LOCATION WITH OWNER PRIOR TO ROUGH-IN.
23	CEILING INFORMATION OUTLET (CAM) FOR INTERIOR & EXTERIOR MOUNTED SECURITY CAMERA. COORDINATE FINAL OUTLET LOCATION WITH OWNER.
24	CEILING INFORMATION OUTLET (CAM) FOR INTERIOR MOUNTED SECURITY CAMERA IN VESTIBULE. COORDINATE FINAL OUTLET LOCATION WITH OWNER.
31	FUTURE ACCESS CONTROLLED DOORWAY. PROVIDE ALL NECESSARY PATHWAYS & ROUGH-INS FOR FUTURE OWNER PROVIDED CARD READER, DOOR CONTACTS, & REQUEST TO EXITS. PROVIDE BLANK PLATES ON BOXES WHERE NECESSARY. COORDINATE WITH OWNER.
32	CEILING INFORMATION OUTLET (CAM) FOR EXTERIOR MOUNTED SECURITY CAMERA. COORDINATE FINAL OUTLET LOCATION WITH OWNER. PROVIDE FIRE PROOFING AS REQUIRED.
34	PROVIDE DATA CONNECTION TO LIGHTING CONTROL PANEL. COORDINATE FINAL LOCATION & ADDITIONAL REQUIREMENTS WITH PANEL PROVIDER PRIOR TO ROUGH-IN & INSTALLATION.

N



1 DATA/COMM ROUGH-IN FOR DATA CABLING
NOT TO SCALE



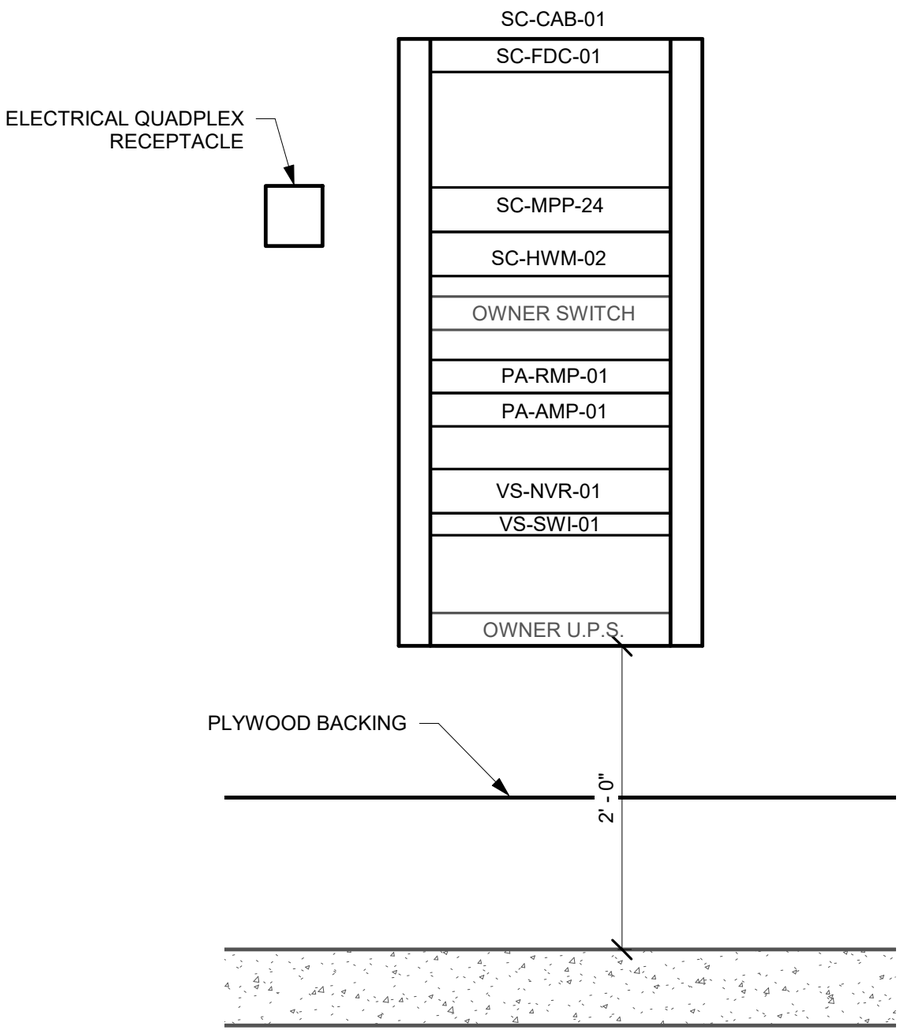
2 SINGLE DOOR - CARD READER - ROUGH-IN ONLY
NOT TO SCALE

CONDUIT AND CABLING TYPES

CONDUIT TYPE TAG — CABLING TYPE TAG

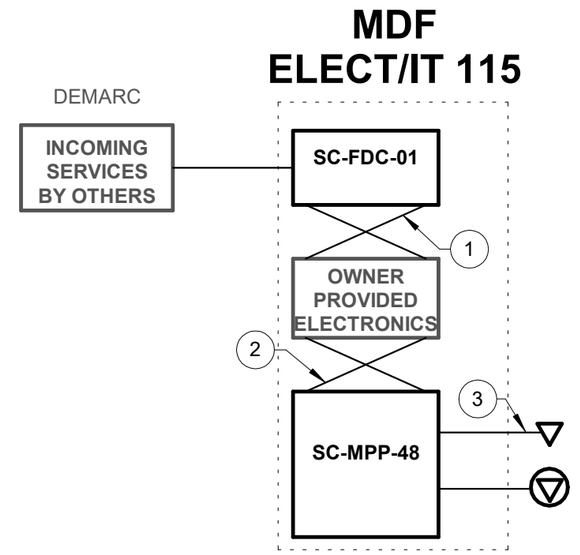


TAG	CONDUIT	TAG	CABLE(S)
C1	3/4" CONDUIT	01	4 - #22
C2	1" CONDUIT	02	2 - #18
C3	1-1/4" CONDUIT	03	6 - #22
C4	1-1/2" CONDUIT	04	CAT6
C5	2" CONDUIT	05	4 - #22; 2 - #18; 6 - #22; 2 - #22
C6	3" CONDUIT		
C7	4" CONDUIT		
EX	EXISTING	NA	NOT APPLICABLE



1 MDF - IT 115 - WALL MOUNTED CABINET ELEVATION

1" = 1'-0"



GENERAL NOTES

1. TYPICAL DEVICES SHOWN. REFER TO FLOOR PLANS FOR QUANTITIES AND LOCATIONS
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

KEYNOTES

1. LC-LC FIBER PATCH CORDS BY CONTRACTOR
2. RJ-45 PATCH CORD BY CONTRACTOR.
3. CATEGORY CABLE TO DEVICES BY CONTRACTOR. REFER TO INFORMATION OUTLET CONFIGURATIONS FOR ADDITIONAL INFORMATION.

2 DATA RISER DIAGRAM

NOT TO SCALE

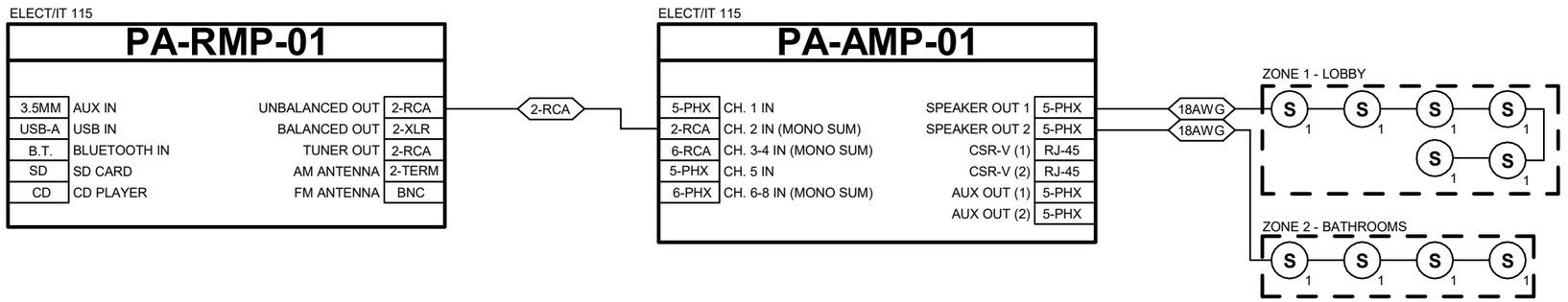
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CABLING TYPES

CABLING TYPE TAG



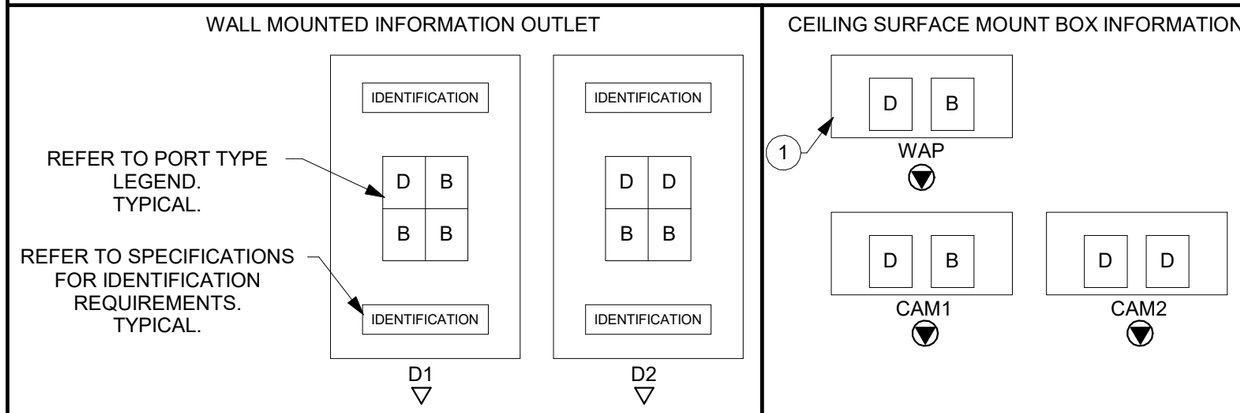
TAG	CONDUIT
18AWG	(2) 18 AWG CONDUCTORS
2-RCA	STEREO RCA CABLING



1 BACKGROUND MUSIC RISER DIAGRAM

NOT TO SCALE

INFORMATION OUTLET CONFIGURATIONS



PORT TYPE LEGEND	
(B) BLANK	FILLER MODULE
(C) COAX	F-CONNECTOR
(D) DATA	CAT6(A) TO MDF/IDF
(H) HDMI	HDMI FEMALE JACK

NOTES:

1. PROVIDE REMOVABLE BLANK (B) INSERTS FOR ALL UNUSED PORTS.

KEYNOTES:

(1) LOCATION OF CEILING OUTLET FOR WIRELESS ACCESS POINTS. PROVIDE A 20FT SLACK LOOP COIL AT NEAREST CABLE SUPPORT FOR FUTURE RELOCATION AS REQUIRED.

(1) LOCATION OF CEILING OUTLET FOR CAMERA. PROVIDE A 20FT SLACK LOOP COIL AT NEAREST CABLE SUPPORT FOR FUTURE RELOCATION AS REQUIRED.

TECHNOLOGY SYMBOLS	
CR RI	AC-CR-RI
DC RI	AC-DC-RI
RX RI	AC-RX-RI
(S)	PA-SPK-01
▽	SC-IO-WALL
▽	SC-IO-CLG
▭◁	SC-CAM-01

VIDEO SURVEILLANCE SCHEDULE

DEVICE	DESCRIPTION	MODEL
VS-CAM-01	PTZ CAMERA - INDOOR	HANWHA
VS-CAM-02	PTZ CAMERA - OUTDOOR	HANWHA
VS-NVR-01	NETWORK VIDEO RECORDER AND SERVER. PROVIDE STORAGE NECESSARY FOR 30 DAYS STORAGE. PROVIDE ALL NECESSARY COMPONENTS FOR A FULL FUNCTIONING VIDEO SURVEILLANCE SYSTEM.	MILESTONE
VS-SWI-48	VIDEO PoE SWITCH	ARUBA

ACCESS CONTROL SCHEDULE

DEVICE	DESCRIPTION	MODEL
AC-CR-RI	CARD READER - ROUGH-IN ONLY	
AC-DC-RI	DOOR CONTACT - ROUGH-IN ONLY	
AC-RX-RI	REQUEST TO EXIT - ROUGH-IN ONLY	

STRUCTURED CABLING SCHEDULE

DEVICE	DESCRIPTION	MODEL
SC-CAB-01	WALL CABINET	CHATSWORTH PRODUCTS
SC-FDC-01	FIBER DISTRIBUTION CABINET 1RU. PROVIDE ADAPTER PANELS AS NECESSARY.	CORNING CCH-01U
SC-HWM-02	HORIZONTAL CABLE MANAGER 2 RACK UNIT, T-SHAPED CABLE GUIDES (FINGERS), SNAP-ON COVER THAT CAN BE HINGED FROM TOP OR BOTTOM.	CHATSWORTH PRODUCTS INC 13930-702
SC-IO-CLG	INFORMATION OUTLET - CEILING	REFER TO INFORMATION OUTLET CONFIGURATIONS FOR ADDITIONAL INFORMATION.
SC-IO-WALL	INFORMATION OUTLET - WALL	REFER TO INFORMATION OUTLET CONFIGURATIONS FOR ADDITIONAL INFORMATION.
SC-MPP-48	48-PORT MODULAR PATCH PANEL	PANDUIT CPPA48FMWWH

PAGING AND BGM SCHEDULE

DEVICE	DESCRIPTION	MODEL
PA-AMP-01	2-CHANNEL RACK MOUNT AMPLIFIER AND COMMERCIAL MIXER WITH 8 TOTAL INPUTS. LOW-Z AND 70V CAPABLE.	JBL CSMA 2120
PA-RMP-01	RACK MOUNT MEDIA PLAYER WITH UN-BALANCED AND BALANCED AUDIO OUTPUTS, BLUETOOTH RECEIVER, AM/FM TUNER, CD, SD AND USB INPUTS.	DENON DN-300Z
PA-SPK-01	SPEAKER - BACKGROUND MUSIC (BGM) COMPACT IN-CEILING SPEAKER, 80W, LOW-Z AND 70V CAPABLE. IN ADDITION TO SPEAKER, PROVIDE ALL NECESSARY PARTS AND ACCESSORIES FOR MOUNTING TO GYPSUM CEILING. CONTRACTOR TO VERIFY LOUD-SPEAKER CATALOG NUMBER AND INSTALLATION REQUIREMENTS PRIOR TO ORDERING. PROVIDE MANUFACTURER RECOMMENDED CABLING BASED ON POWER AND DISTANCE OF FINAL CONFIGURATION.	JBL CONTROL 24CT

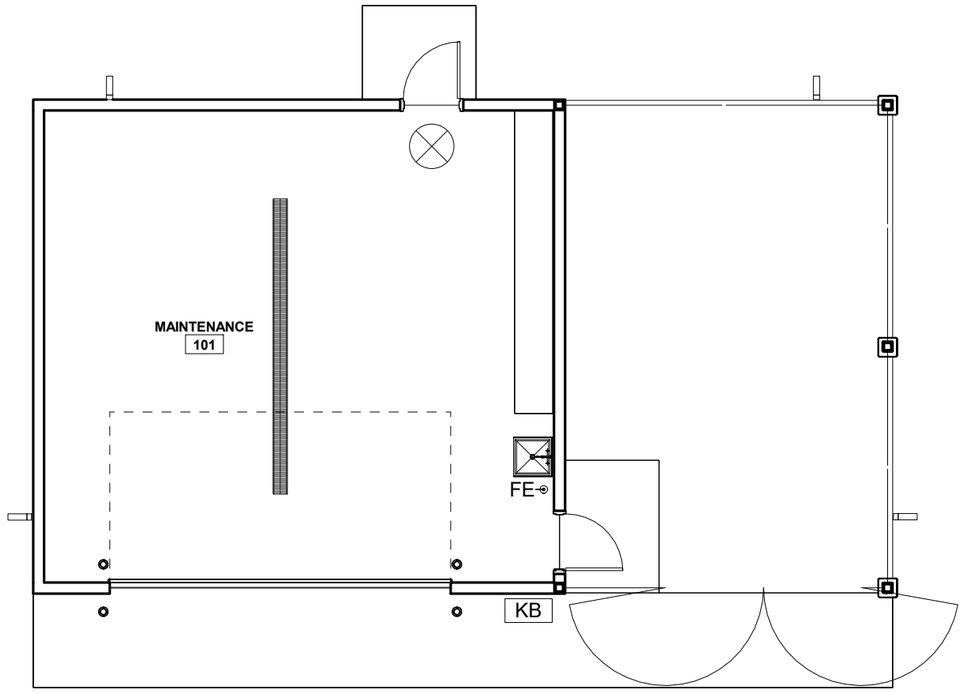
2

CODE DATA PLAN KEY

⊗	EXIT
FE#	FIRE EXTINGUISHER
KB	KNOX BOX

FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING. SUCH IDENTIFICATION SHALL:

1. BE LOCATED IN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACES
2. BE LOCATED WITHIN 15 FEET OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION, AND
3. INCLUDE LETTERING NOT LESS THAN 3 INCHES IN HEIGHT WITH A MINIMUM 3/8" STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS" OR OTHER SIMILAR WORDING.



1 CODE DATA PLAN
1/8" = 1'-0"

GENERAL CODE DATA

BUILDING #2 (MAINTENANCE GARAGE)

OCCUPANCY CLASSIFICATION AND USE

STORAGE GROUP S-1
STORAGE GROUP S-2

FIRE PROTECTION SYSTEMS

NONSPRINKLERED

MIXED USE AND OCCUPANCY

NONSEPARATED OCCUPANCIES

CONSTRUCTION TYPE

TYPE VB
PRIMARY STRUCTURAL FRAME: 0 HOUR RATED
EXTERIOR BEARING WALLS: 0 HOUR RATED
INTERIOR BEARING WALLS: 0 HOUR RATED
EXTERIOR NONBEARING WALLS (BASED ON FIRE SEPARATION DISTANCE): 0 HOUR RATED
INTERIOR NONBEARING WALLS: 0 HOUR RATED
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 0 HOUR RATED
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 0 HOUR RATED

BUILDING HEIGHT

TABULAR ALLOWABLE HEIGHT: 1 STORY / 40 FEET ABOVE GRADE PLANE
ACTUAL HEIGHT: 1 STORY / 15 FEET ABOVE GRADE PLANE

BUILDING AREA

TABULAR ALLOWABLE AREA FACTOR (A_t): 9,000 SF
TABULAR ALLOWABLE AREA FACTOR FOR NONSPRINKLERED BUILDING (NS): 9,000 SF
AREA FACTOR INCREASE DUE TO FRONTAGE (I_f) = [(F / P) – 0.25] (W / 30)
[(143 / 143) – 0.25] (30 / 30) = 0.75
ALLOWABLE AREA (A_a) = [A_t + (NS)(I_f)]
[9,000 + (9,000)(0.75)] = 15,750 SF
ACTUAL AREA: 1,137 SF

OCCUPANT LOAD

STORAGE / MECHANICAL: 1,137 SF / 300 GROSS SF = 4 OCCUPANTS

MEANS OF EGRESS

MINIMUM NUMBER OF EXITS REQUIRED (BASED ON OCCUPANT LOAD): 1
ACTUAL NUMBER OF EXITS: 1
MINIMUM EGRESS WIDTH REQUIRED: (4 OCCUPANTS)(0.20) = 0.80 INCHES
ACTUAL EGRESS WIDTH: 33 INCHES (1 EXTERIOR EXIT DOOR)
COMMON PATH OF EGRESS TRAVEL DISTANCE: 100 FEET MAXIMUM
EXIT ACCESS TRAVEL DISTANCE: 200 FEET MAXIMUM

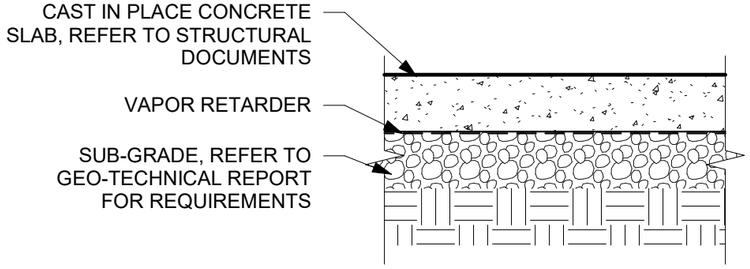
PLUMBING FIXTURES REQUIRED

4 OCCUPANTS / 2 = 2 MEN AND 2 WOMEN
2 / 100 = 0.02 (1) WATER CLOSET FOR MEN
2 / 100 = 0.02 (1) WATER CLOSETS FOR WOMEN
2 / 100 = 0.02 (1) LAVATORY FOR MEN
2 / 100 = 0.02 (1) LAVATORY FOR WOMEN
4 / 1,000 = 0.01 (2) ACCESSIBLE DRINKING FOUNTAINS (1 HIGH SPOUT AND SPOUT)
1 SERVICE SINK

PLUMBING FIXTURES PROVIDED

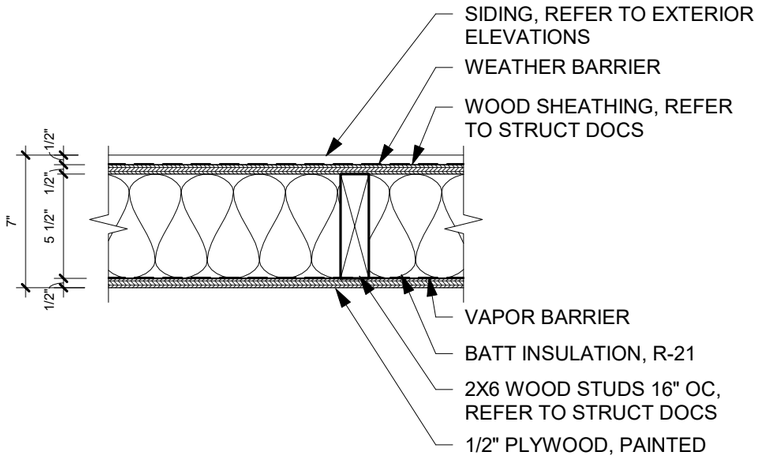
WATER CLOSETS, LAVATORIES AND DRINKING FOUNTAINS PROVIDED IN BUILDING #1
1 SERVICE SINK PROVIDED IN BUILDING #2

N



SECTION

1 SLAB ON GRADE ASSEMBLY SL1
1 1/2" = 1'-0"



2 TYP EXTERIOR WALL - X3
1 1/2" = 1'-0"

WALL ASSEMBLY KEY NOTES:

NOT ALL KEY NOTES APPLY TO PROJECT. VERIFY WITH SPECIFIC WALL TYPE.

A. PROVIDE DOUBLE TOP PLATES AT ALL LOAD BEARING WALLS.

B. WOOD FRAMING MEMBERS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.

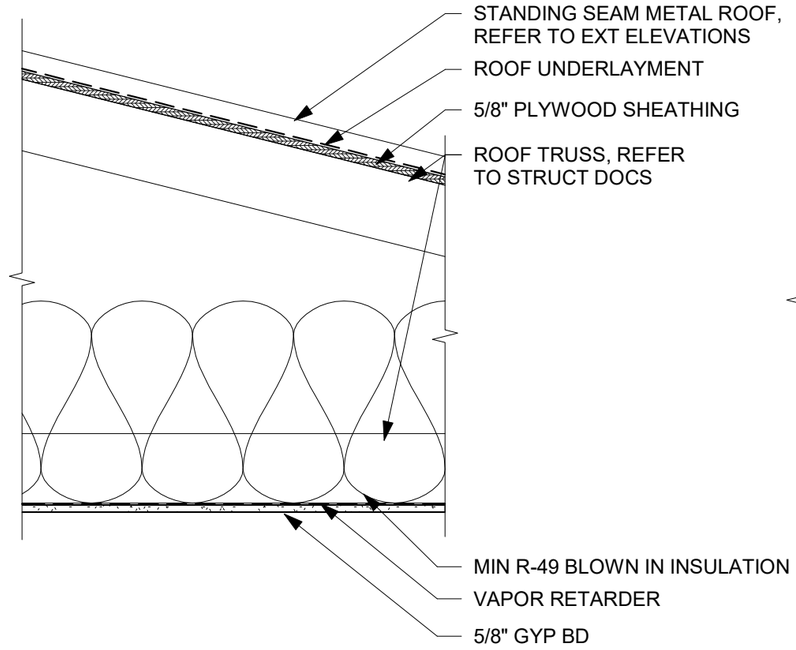
GENERAL WALL ASSEMBLY NOTES:

A. REFERENCE FLOOR FINISH PLANS AND WALL FINISH PLANS FOR ADDITIONAL FINISHES NOT INDICATED ON PARTITION TYPES.

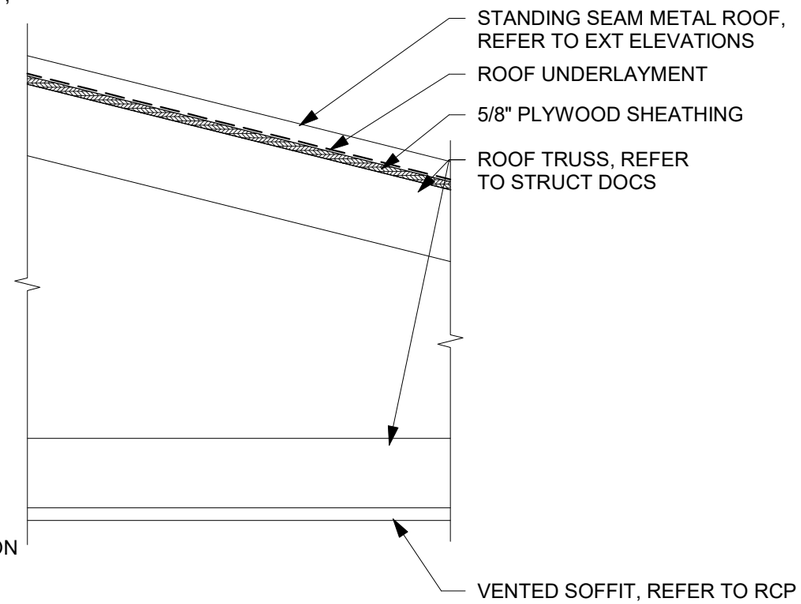
B. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF WALL PENETRATIONS. SEAL ALL OPENINGS WITH ACOUSTICAL SEALANT.

C. PROVIDE WOOD OR STEEL BACKING FOR ALL WALL-MOUNTED FINISH CARPENTRY, ARCHITECTURAL WOODWORK, TOILET PARTITIONS, ACCESSORIES AND OTHER SIMILAR ITEMS.

D. REFER TO STRUCTURAL DOCUMENTS FOR SHEAR WALL CRITERIA.



3 ROOF ASSEMBLY - R2
1" = 1'-0"

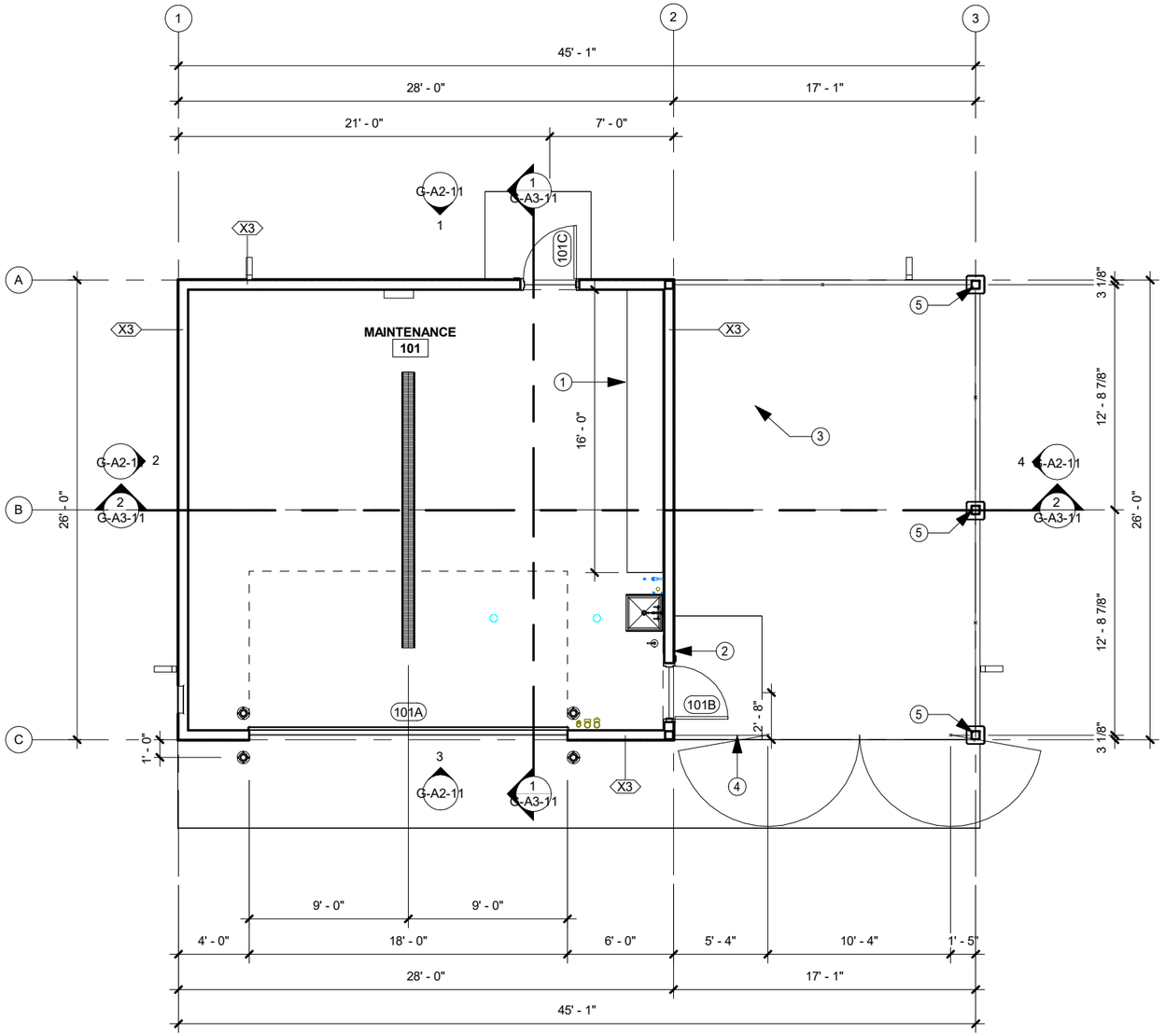


4 ROOF ASSEMBLY - R3
1" = 1'-0"

2

DOOR SCHEDULE

MARK	ROOM NAME	WIDTH	HEIGHT	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	AAOS Shared HW Set	COMMENTS
101A	MAINTENANCE	18' - 0"	8' - 0"	OHD	INSULATED STEEL	-	-		
101B	MAINTENANCE	3' - 0"	7' - 0"	FL	HOLLOW METAL	1	HOLLOW METAL	1.0	
101C	MAINTENANCE	3' - 0"	7' - 0"	FL	HOLLOW METAL	1	HOLLOW METAL	1.0	



1 FLOOR PLAN
1/8" = 1'-0"

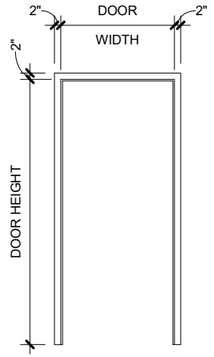
SHEET NOTES

A. ALL EXTERIOR WALLS SHALL BE WALL TYPE X4, UNLESS OTHERWISE NOTED.

KEYNOTE LEGEND

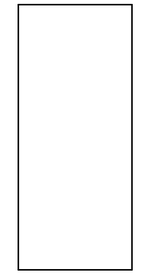
1	24" DEEP COUNTERTOP W/ BRACKETS 36" OC AND EA END.
2	HOSE BIBB
3	COVERED OUTDOOR STORAGE AREA
4	FENCE W/ PRIVACY SLATS
5	WOOD POSTS ON CONCRETE BASE. POST BRACKETS TO BE GALVANIZED AND PAINTED.

FRAME TYPES

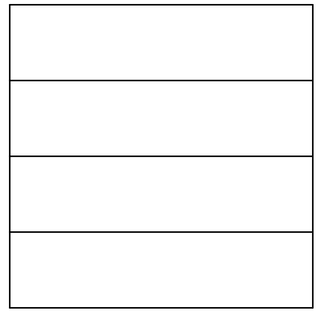


1
METAL FRAME

DOOR TYPES



FL
FLUSH



OHD
OVERHEAD DOOR

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FLOOR PLAN	SHEET NO: G-A1-21

PLOT DATE: 1/26/2024 2:39:34 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2

SHEET NOTES - RCP

A. COORDINATE WITH MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL FOR EXACT LOCATIONS OF CEILNG FIXTURES, DIFFUSERS, SPRINKLER HEADS, ETC.
B. REFER TO HVAC PLANS FOR THE LOCATION OF ANY AND ALL PLENUM CEILING SPACES. ALL WALLS AND SOFFITS CREATING THE PLENUM SHALL EXTEND TO THE UNDERSIDE OF STRUCTURE ABOVE AND BE SEALED.
C. ALL WALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK ABOVE, UNLESS NOTED OTHERWISE.

KEYNOTE LEGEND

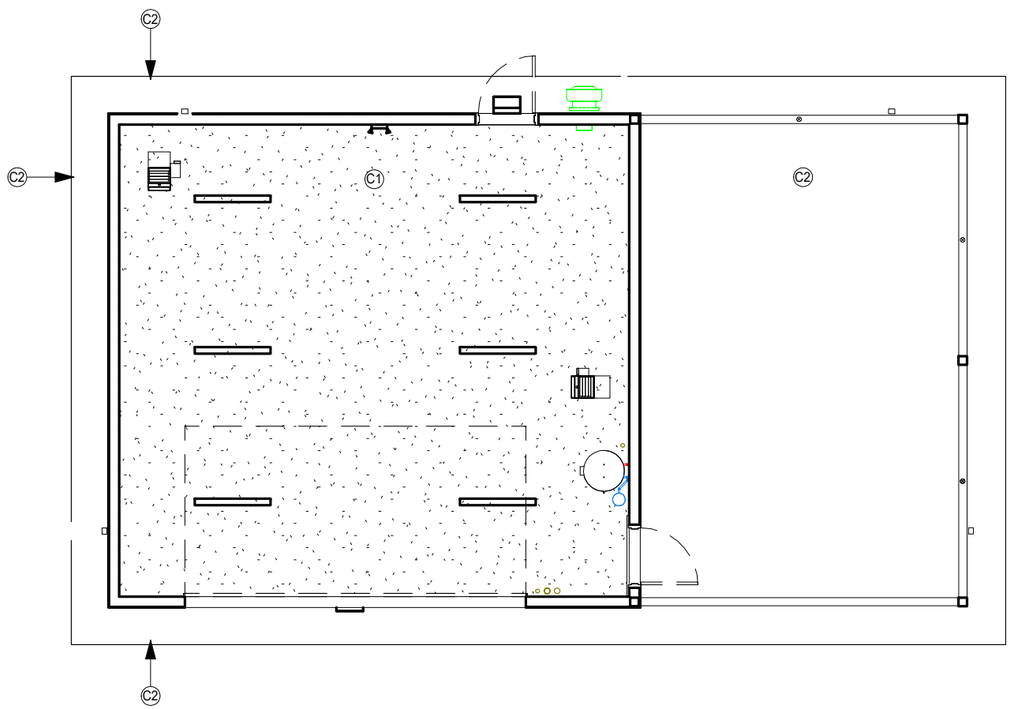
6	PREFINISHED METAL DOWNSPOUT. REFER TO CIVIL DOCUMENTS FOR DRAINAGE ROUTING.
C1	5/8" GYPSUM BOARD TO UNDERSIDE OF FRAMING OR TRUSS, PAINT. REFER TO FINISH DOCUMENTS.
C2	PRE-FINISHED METAL SOFFIT.

SHEET NOTES - ROOF PLAN

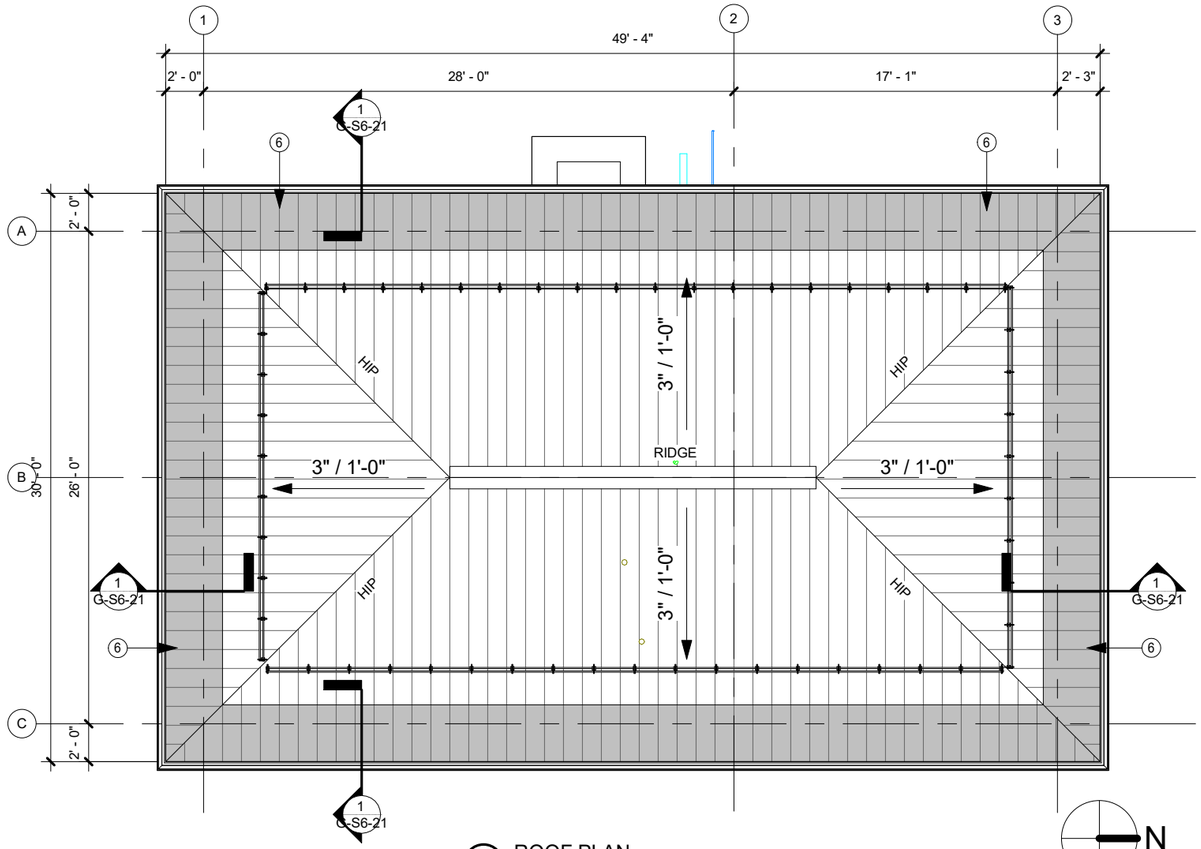
A. ICE AND WATERSHIELD LOCATIONS INSTALL 3' - 0" FROM EXTERIOR FACE OF WALL STUD, VALLEYS, AND POTENTIAL ICE AREAS.
B. FIELD VERIFY EXACT QUANTITY, SIZE AND LOCATIONS OF ROOF HOODS, VENTS, DRAINS, EQUIMENT, ETC.
C. ALL VENT-THRU PIPES SHALL BE EXTENDED, AS NECESSARY, TO PROTECT MINIMUM OF 12" ABOVE FINISHED ELEVATION OF ROOFING. FLASH ALL VENTS WITH PREMOLDED PIPE BOOTS WITH STAINLESS STEEL CLAMPING RING. ANY THAT EXTEND ABOVE THE PARAPET HEIGHT AND ARE VISIBLE FROM GROUND LEVEL SHALL BE PAINTED, UNLESS NOTED OTHERWISE.
D. FLASH DRAINS, CURBS, VENTS AND STACKS PER MANUFACTURER'S RECOMMENDATIONS IF DETAIL NOT SHOWN ON PLANS.
E. FIELD VERIFY CONDITIONS PRIOR TO FABRICATION.

ROOF LEGEND

ICE AND WATER SHIELD LOCATIONS



1 REFLECTED CEILING PLAN
1/8" = 1'-0"



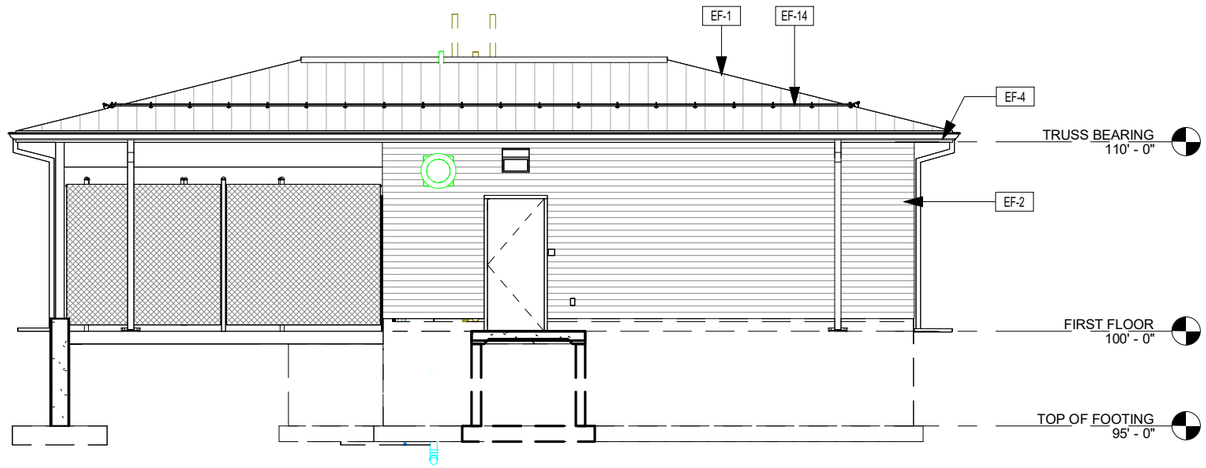
2 ROOF PLAN
1/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REFLECTED CEILING PLAN AND ROOF PLAN	SHEET NO: G-A1-31

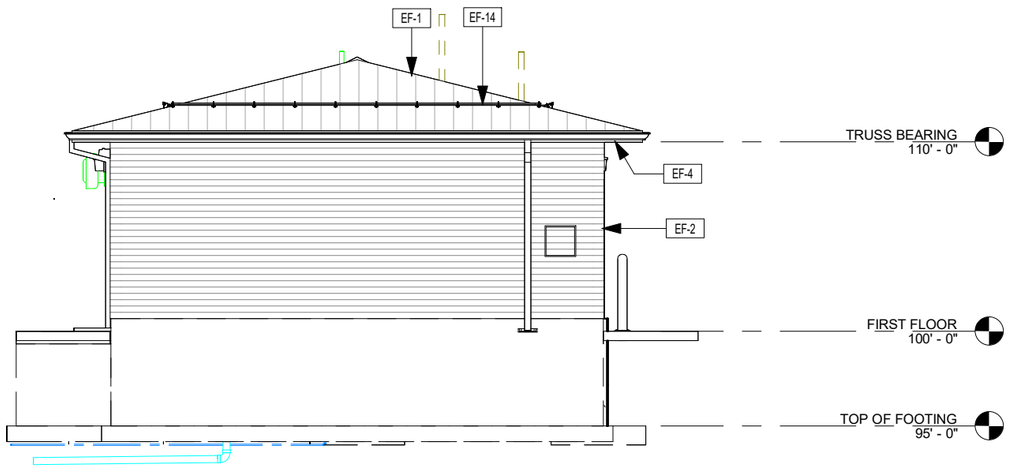
PLOT DATE: 1/26/2024 2:39:35 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

EXTERIOR FINISH SCHEDULE

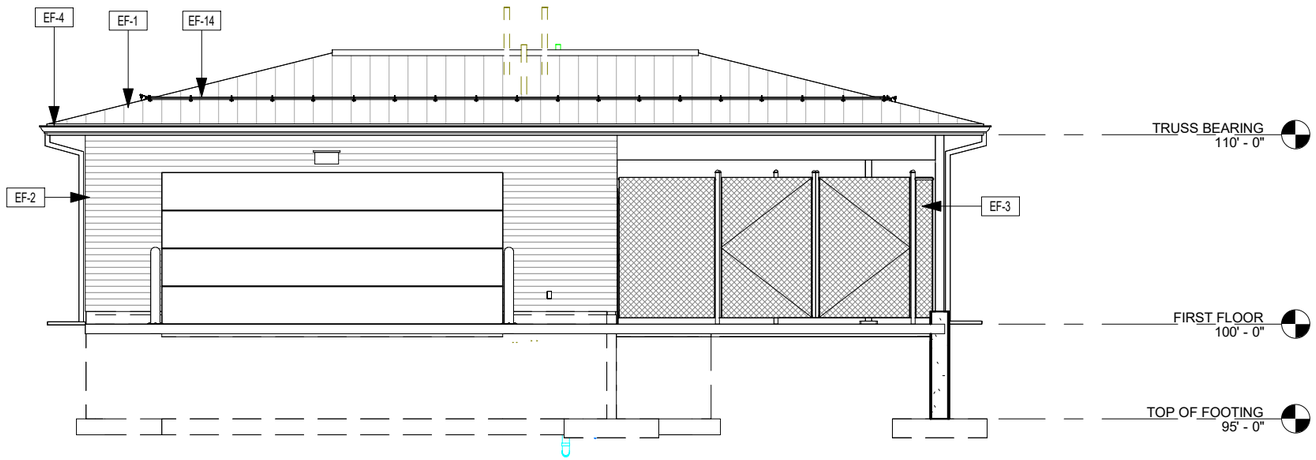
MARK	MATERIAL TYPE	MANUFACTURER	MODEL / SIZE	COLOR	ADDITIONAL INFORMATION	COMMENTS
EF-1	STANDING SEAM	UNACLAD	PENCIL RIBBED / UC 6	SLATE GREY		
EF-2	LP SMARTSIDE	LP SMARTSIDE		DESSERT STONE		
EF-3	CHAIN LINK FENCE					
EF-4	FASICA					
EF-14	SNOW GUARD	-	-	BLACK		REFER TO ROOF PLAN



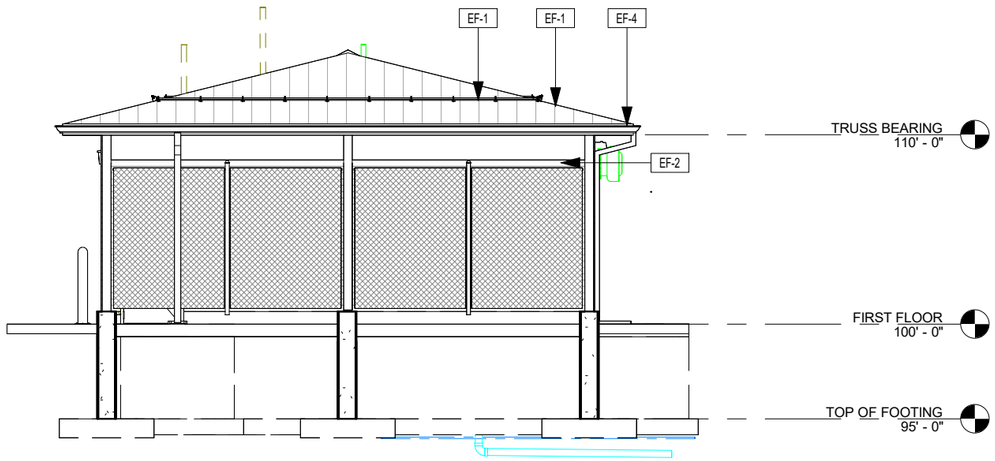
1 BACK ELEVATION
1/8" = 1'-0"



2 SIDE ELEVATION
1/8" = 1'-0"



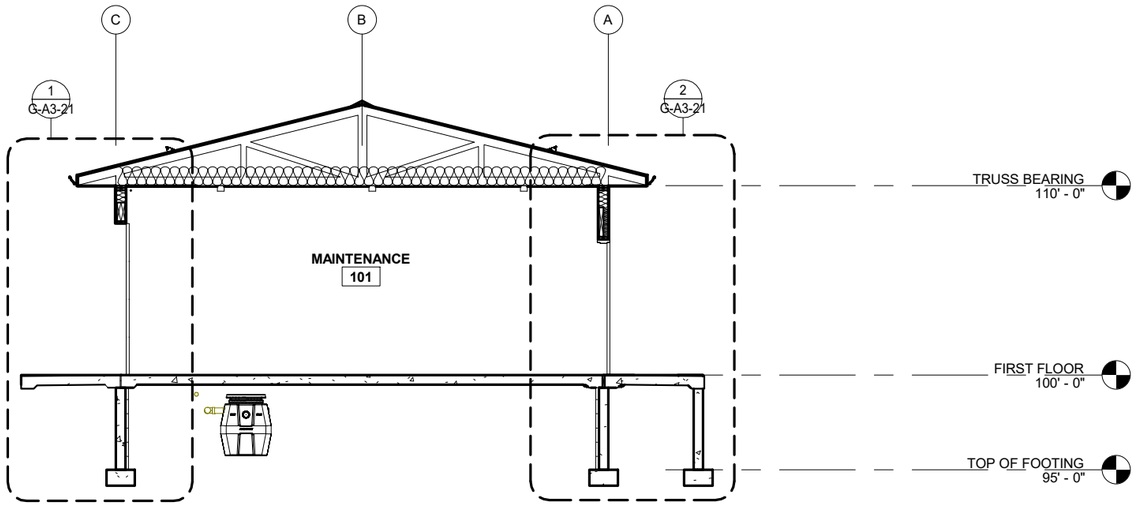
3 FRONT ELEVATION
1/8" = 1'-0"



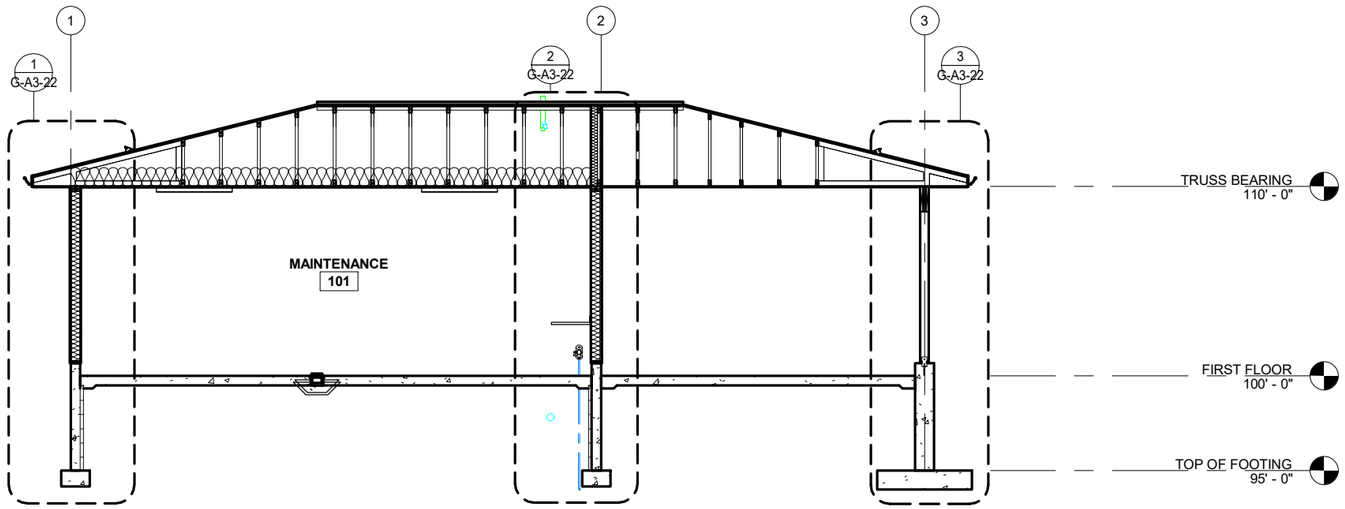
4 SIDE ELEVATION
1/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	EXTERIOR ELEVATIONS	SHEET NO: G-A2-11

PLOT DATE: 1/26/2024 2:39:39 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



1 BUILDING SECTION
1/8" = 1'-0"

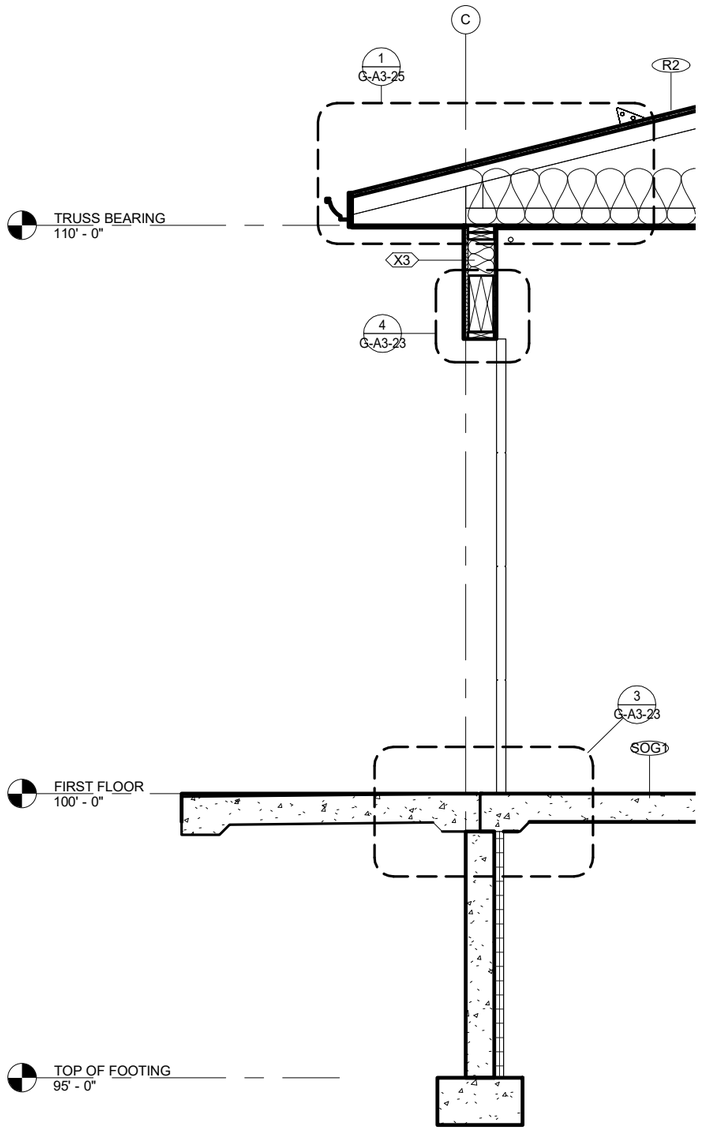


2 BUILDING SECTION
1/8" = 1'-0"

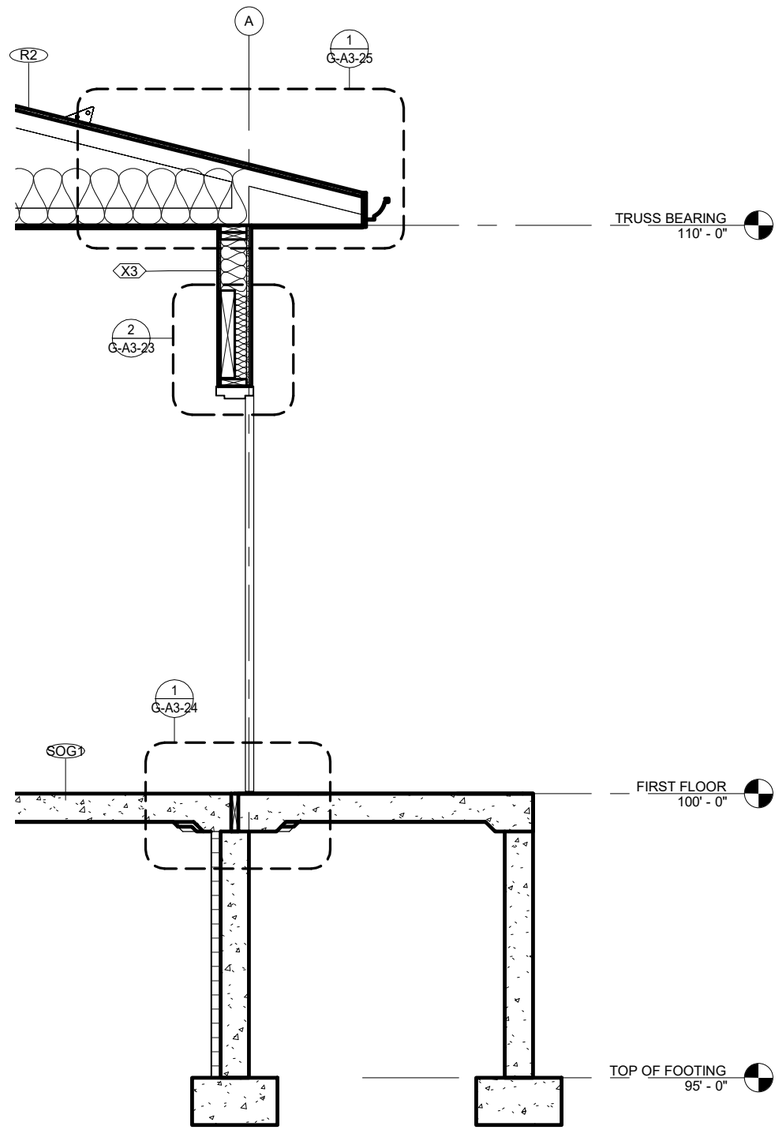
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	BUILDING SECTIONS	SHEET NO: G-A3-11

PLOT DATE: 1/26/2024 2:39:42 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2



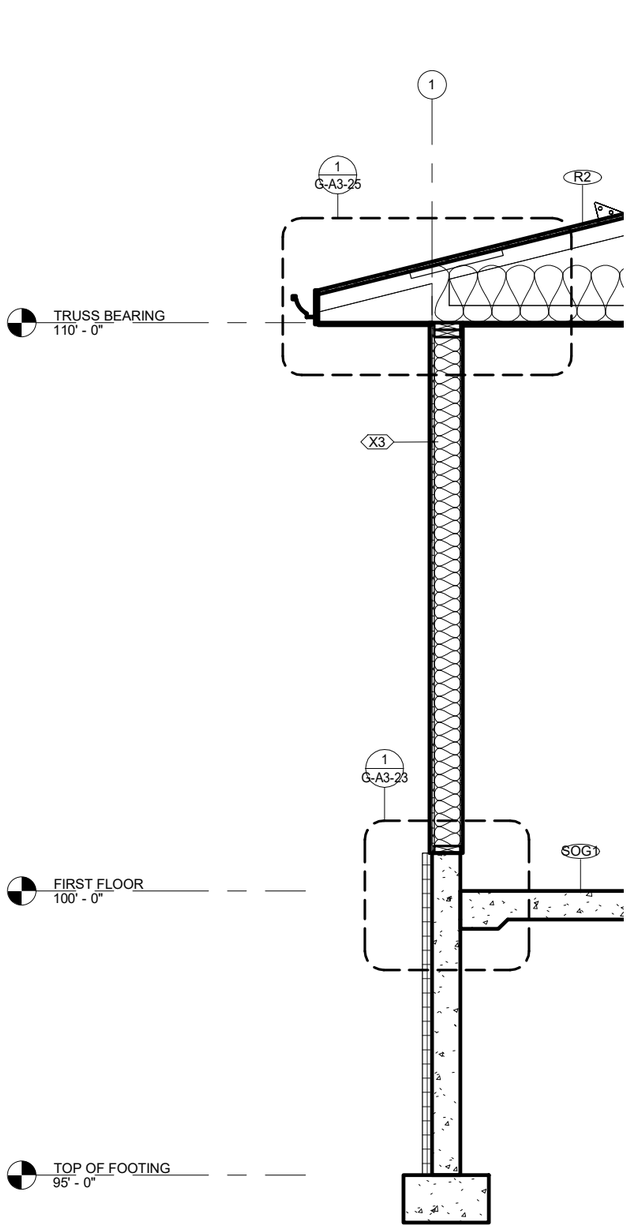
1 WALL SECTION
3/8" = 1'-0"



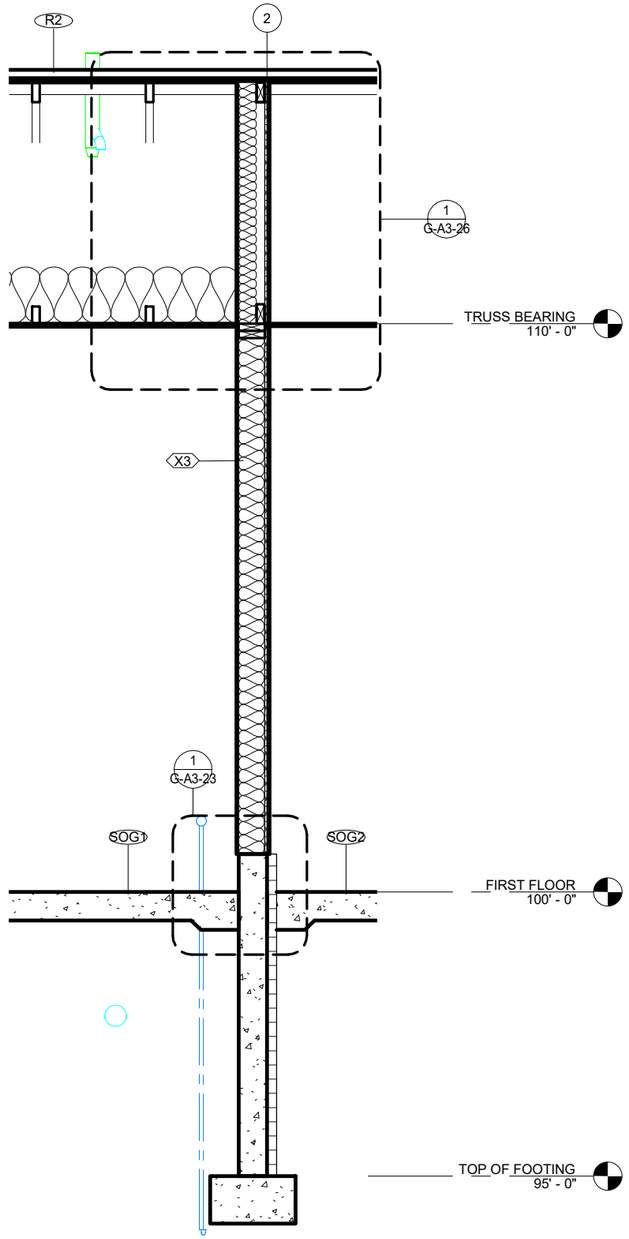
2 WALL SECTION
3/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	WALL SECTIONS	SHEET NO: G-A3-21

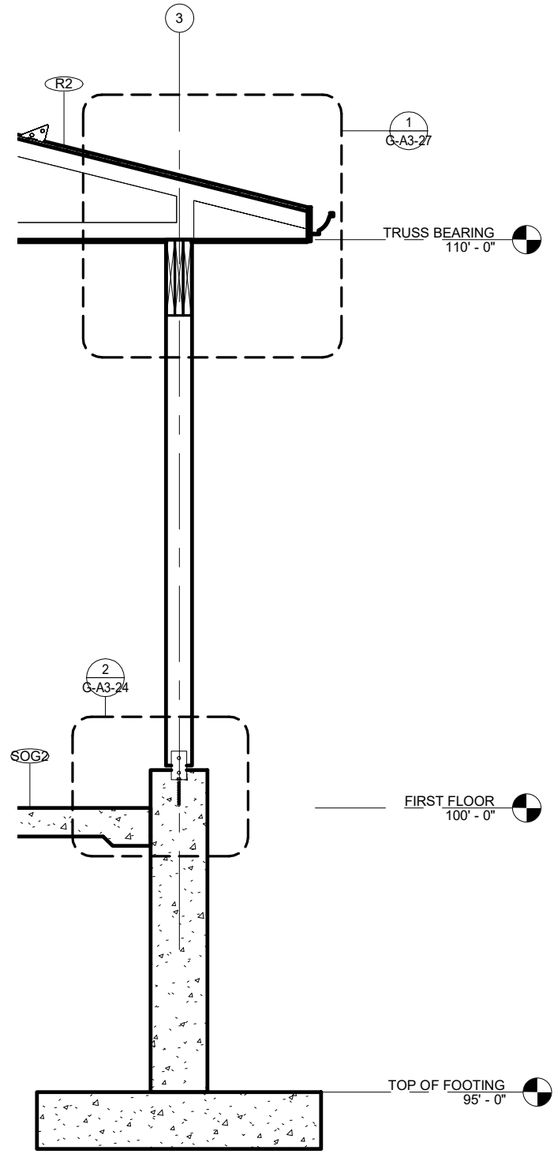
PLOT DATE: 1/26/2024 2:39:42 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED



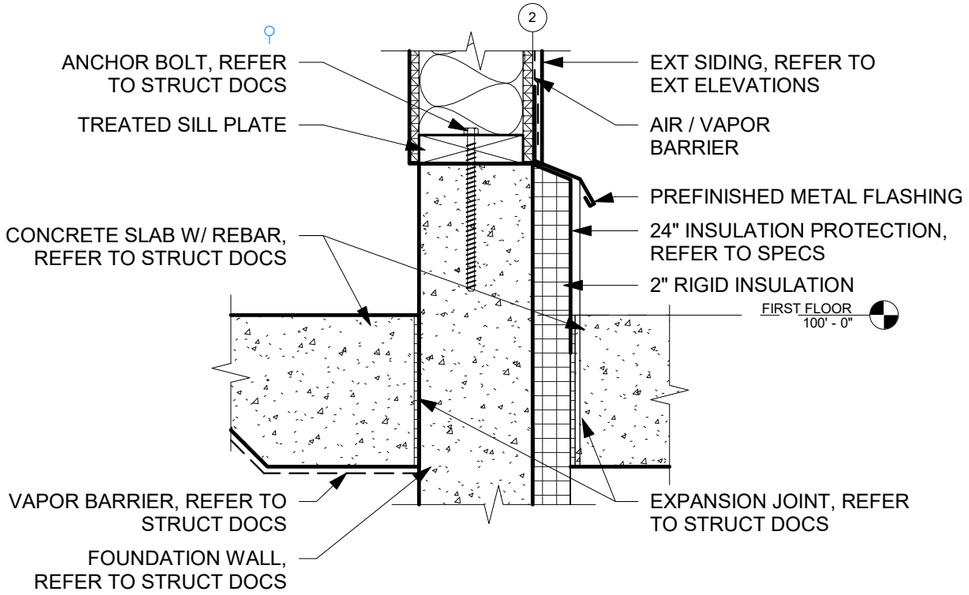
1 WALL SECTION
3/8" = 1'-0"



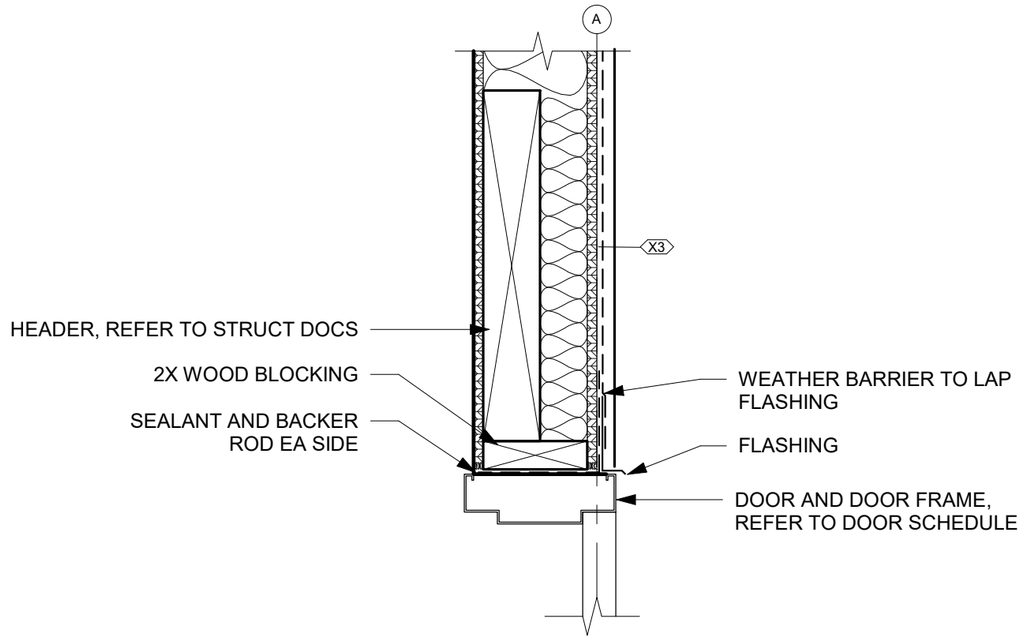
2 WALL SECTION
3/8" = 1'-0"



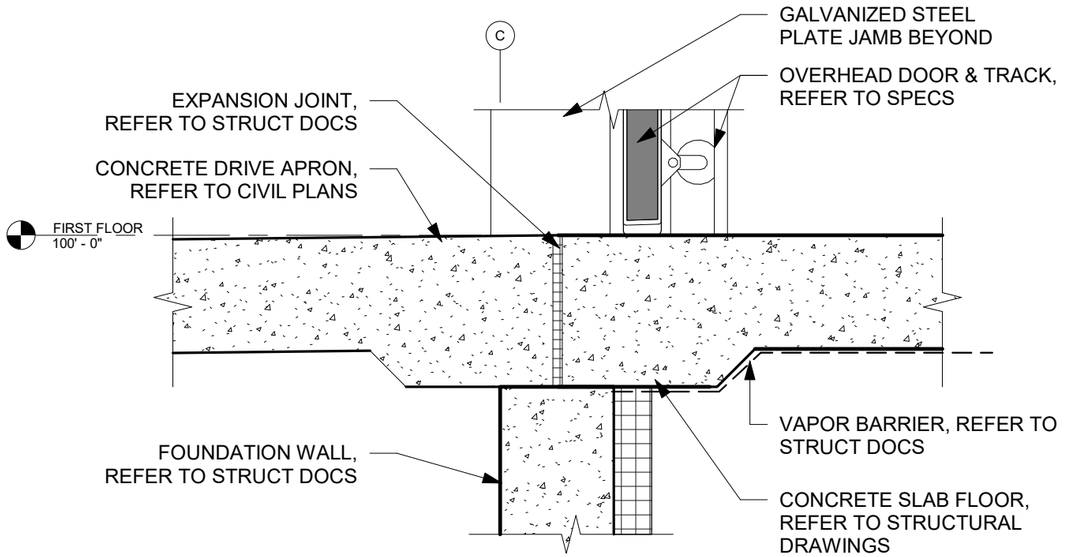
3 WALL SECTION
3/8" = 1'-0"



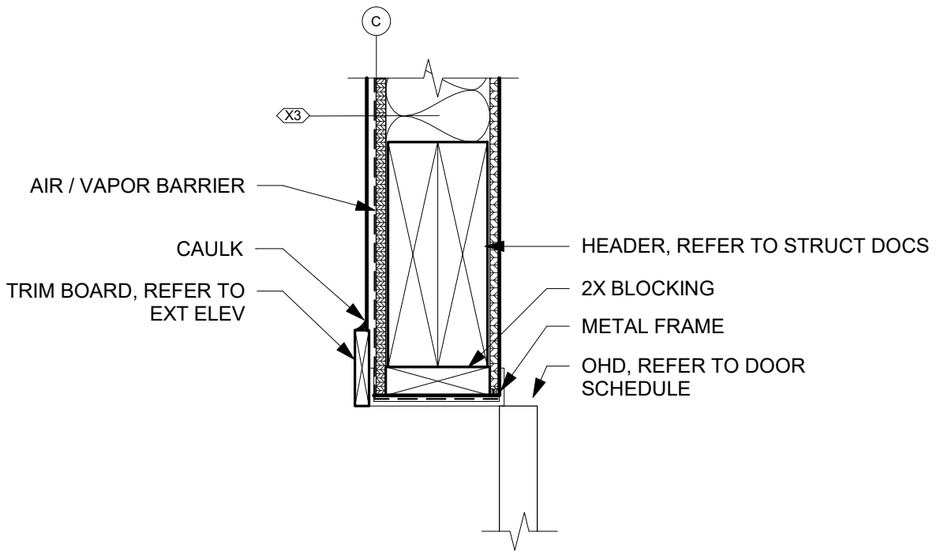
1 DOOR THRESHOLD DETAIL
1 1/2" = 1'-0"



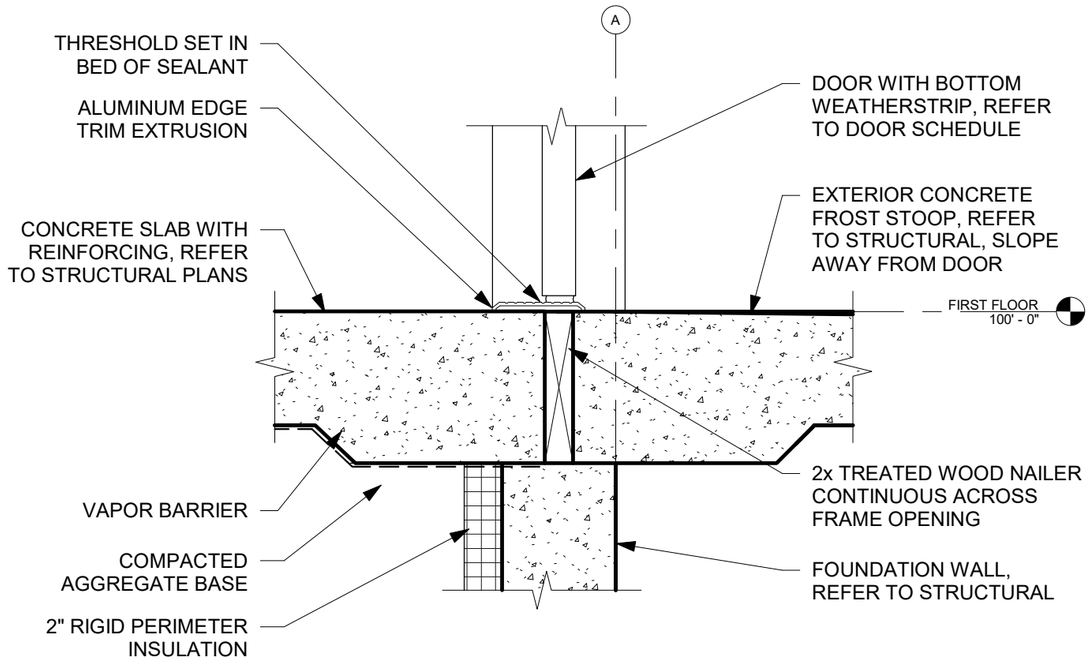
2 DOOR HEAD DETAIL
1 1/2" = 1'-0"



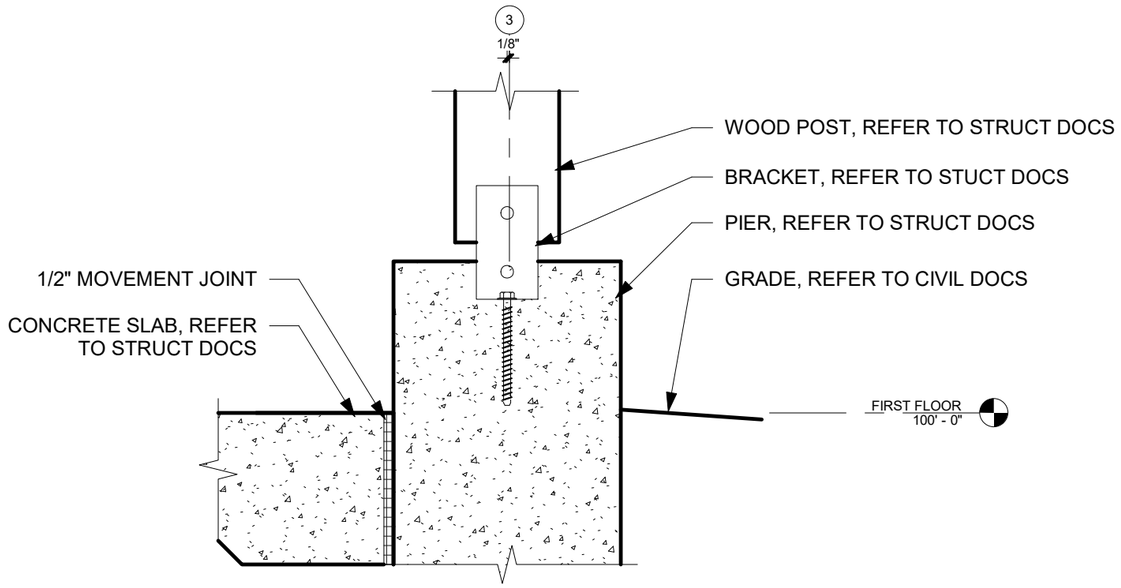
3 OVERHEAD DOOR THRESHOLD DETAIL
1 1/2" = 1'-0"



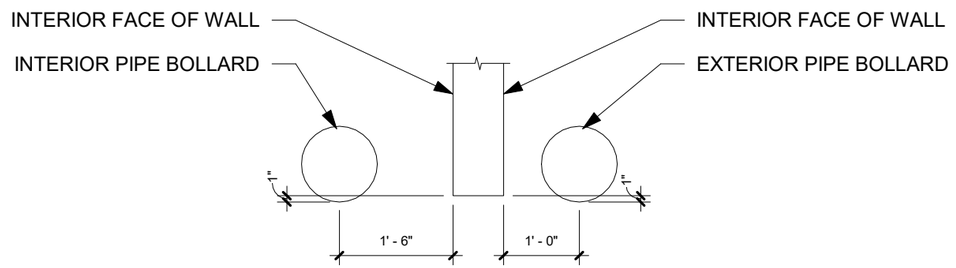
4 OVERHEAD DOOR HEAD DETAIL
1 1/2" = 1'-0"



1 TYP DOOR THRESHOLD DETAIL
1 1/2" = 1'-0"



2 POST AT PIER DETAIL
1 1/2" = 1'-0"

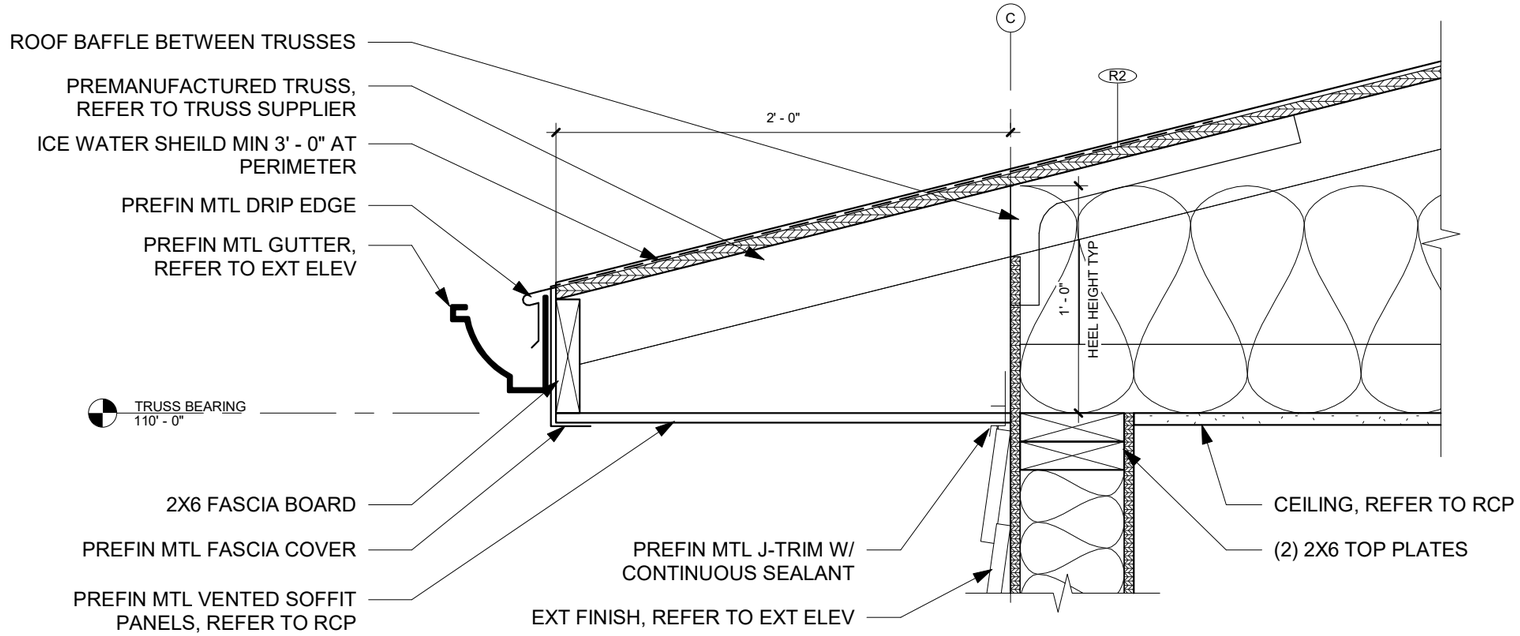


3 TYPICAL BOLLARD DETAIL
1/2" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	DETAILS	SHEET NO: G-A3-24

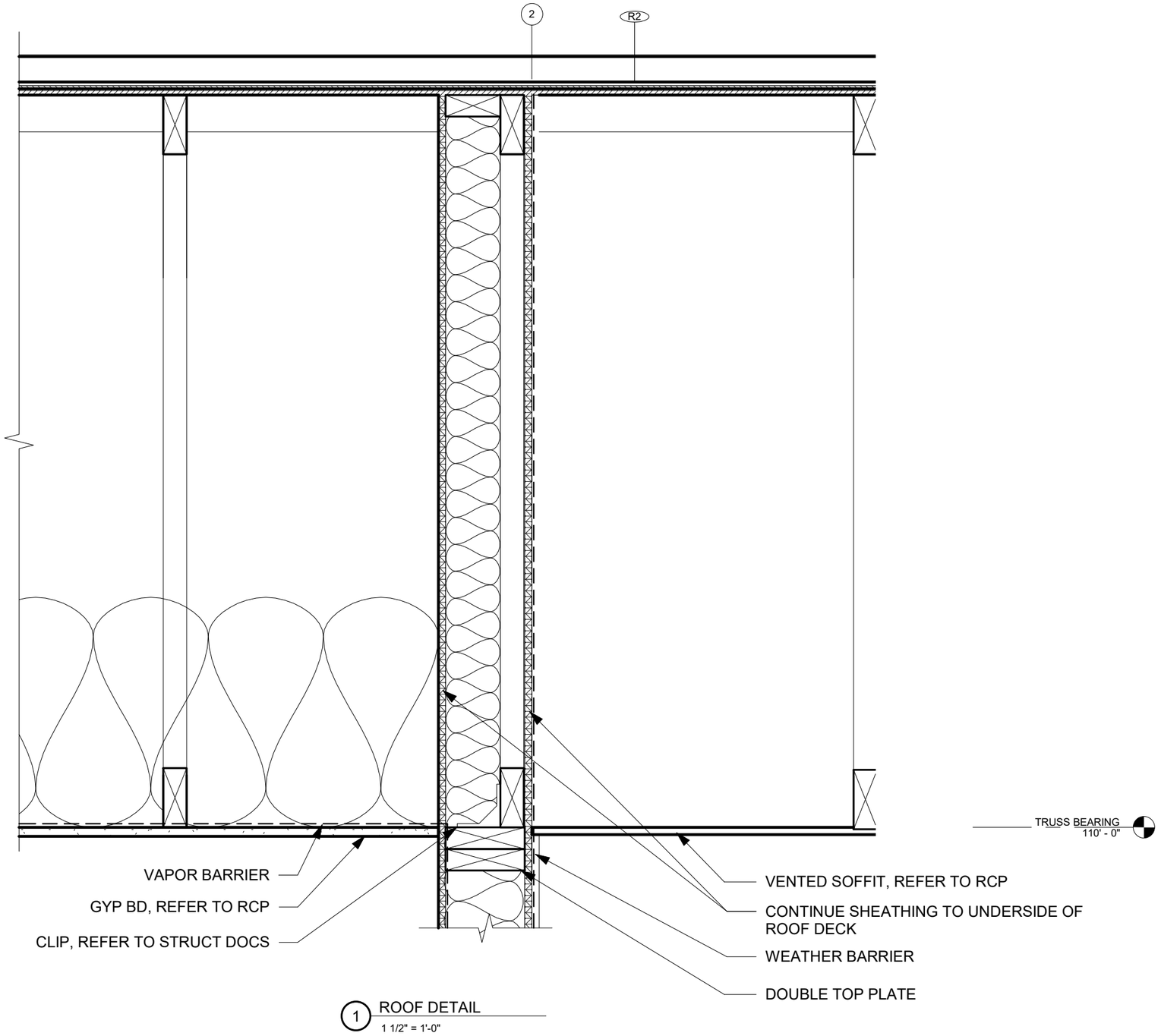
PLOT DATE: 1/26/2024 2:39:45 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2



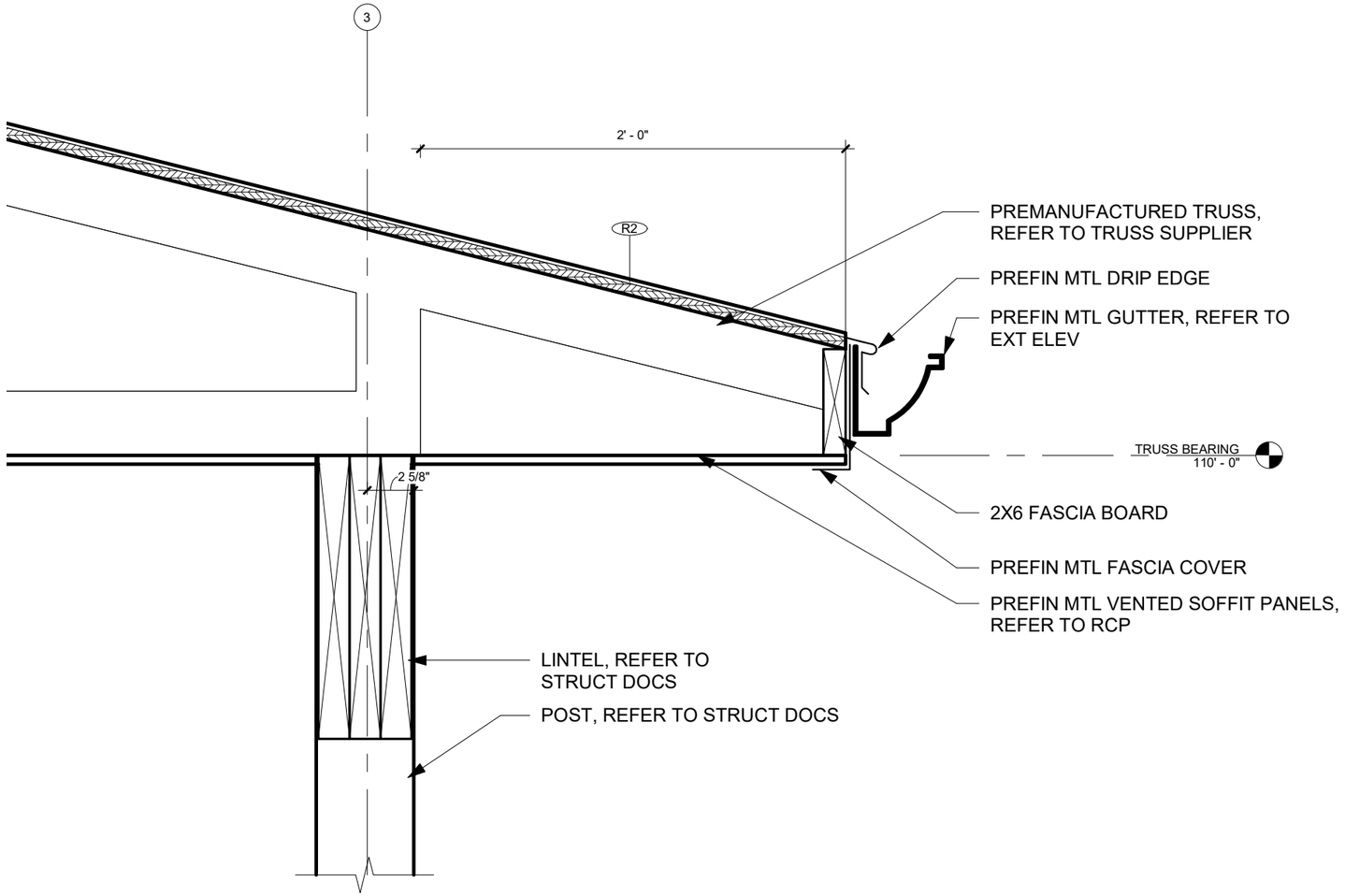
1 TYP ROOF EDGE DETAIL
1 1/2" = 1'-0"

2



1 ROOF DETAIL
1 1/2" = 1'-0"

2



1 ROOF EDGE AT LINTEL AND POST

1 1/2" = 1'-0"

GENERAL NOTES

1. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER THESE STANDARD STRUCTURAL NOTES. TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK; AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED, IN WRITING, OF ANY DISCREPANCIES.
3. IN NO CASE SHALL DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THE STRUCTURAL DRAWINGS.
4. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF UTILITY SERVICES IN THE AREA TO BE EXCAVATED BEFORE BEGINNING EXCAVATION.
5. NO PIPES, DUCTS, SLEEVES, CHASES, ETC., SHALL BE PLACED IN SLABS OR WALLS, NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TEMPORARY SHORING AND BRACING OF EXISTING STRUCTURAL ELEMENTS DURING CONSTRUCTION. ALL SHORING SHALL BE ADEQUATE TO SUPPORT ALL STRUCTURAL LOADS DURING THE REMOVAL OF THE EXISTING STRUCTURE. TEMPORARY SHORING MUST REMAIN IN PLACE UNTIL ALL NEW STRUCTURAL ELEMENTS ARE SECURED INTO PLACE PER CONSTRUCTION DOCUMENTS.
7. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR REQUIREMENTS, DIMENSIONS AND EXACT LOCATIONS OF FLOOR DRAINS, TRENCHES, DRAIN TILE, PUMPS AND EQUIPMENT INCLUDING ANCHORING SYSTEMS AND HOUSEKEEPING PADS. GENERAL CONTRACTOR TO COORDINATE ALL OF THESE ITEMS WITH ALL DISCIPLINES INVOLVED.
8. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING CODES AND MANUALS (LATEST ADOPTED EDITION):
9. STATE BUILDING CODE, WHEN APPLICABLE.
    1. INTERNATIONAL BUILDING CODE (IBC).
    2. AMERICAN CONCRETE INSTITUTE (ACI).
    3. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE (FOR PLACING AND DETAILING OF ALL REINFORCING).
    4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
    5. AMERICAN WELDING SOCIETY (AWS) STANDARDS FOR WELDING AS MODIFIED BY AISC SPECIFICATION.
    6. MASONRY STANDARDS JOINT COMMITTEE (MSJC)
    7. AMERICAN FOREST & PAPER ASSOCIATION NATIONAL DESIGN SPECIFICATION (AF & PA NDS)

DESIGN LOADS CRITERIA

A. CODES USED:
    1. 2015 INTERNATIONAL BUILDING CODE
    2. 2010 AMERICAN SOCIETY OF CIVIL ENGINEERS STANDARD 7 (ASCE 7-10)

B. RISK CATEGORY: II

C. WIND LOAD CRITERIA:
    1. ULTIMATE WIND SPEED. V = 115 MPH (3 SECOND GUST)
    2. NOMINAL WIND SPEED, V = 90 MPH (3 SECOND GUST)
    3. WIND LOAD EXPOSURE: C
    4. INTERNAL PRESSURE COEFFICIENT: +/- 0.55 (PARTIALLY ENCLOSED BUILDING)
    5. WIND TOPOGRAPHIC FACTOR: K_{ZT} = 1.0
    6. C & C WIND WALL PRESSURE: REFER TO COMPONENT AND CLADDING WIND PRESSURE TABLE
    7. WIND NET UPLIFT: 20 PSF (NOMINAL)

D. SNOW LOAD CRITERIA:
    1. GROUND SNOW LOAD, P_G = 40 PSF
    2. FLAT-ROOF SNOW LOAD (BALANCED), P_F = 34 PSF
    3. SNOW LOAD IMPORTANCE FACTOR, I_S = 1.0
    4. SLOPE FACTOR, C_S = 1.0
    5. THERMAL FACTOR, C_T = 1.2
    6. SNOW EXPOSURE FACTOR, C_E = 1.0
    7. UNBALANCED SNOW LOAD SHALL BE CONSIDERED

E. EARTHQUAKE LOAD CRITERIA
    1. SEISMIC IMPORTANCE FACTOR: I_E = 1.0
    2. MAPPED SPECTRAL RESPONSE ACCELERATIONS:
        - S_S = 5.4% g
        - S_1 = 3.6% g
    3. SOIL SITE CLASS: D
    4. SPECTRAL RESPONSE COEFFICIENT:
        - S_{DS} = 0.058
        - S_{D1} = 0.057
    5. SEISMIC DESIGN CATEGORY = A

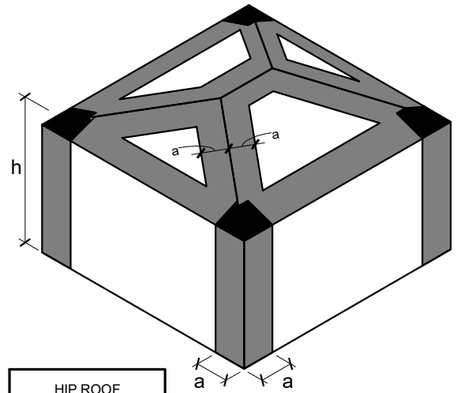
F. LIVE LOADS
    1. ROOF: 20 PSF

G. DEAD LOADS
    1. ROOF: 20 PSF
        A. 10 PSF TOP CHORD
        B. 10 PSF BOTTOM CHORD
    2. FRAMING: ACTUAL
    3. MECHANICAL: SEE PLAN

COMPONENTS AND CLADDING WIND PRESSURES (PSF)

ZONE	TRIBUTARY AREA				
	10 sf or smaller	20 sf	50 sf	100 sf	150 sf or greater
WALL INTERIOR	+30.0 / -32.5	+28.6 / -31.1	+26.8 / -29.4	+25.5 / -28.0	+24.7 / -27.2
WALL END	+30.0 / -40.1	+28.6 / -37.4	+26.8 / -33.8	+25.5 / -31.1	+24.7 / -29.6
ROOF INTERIOR	+17.3 / -27.4	+16.0 / -26.7	+16.0 / -25.6	+16.0 / -24.9	+16.0 / -24.9
ROOF END	+17.3 / -47.7	+16.0 / -43.9	+16.0 / -38.9	+16.0 / -35.0	+16.0 / -35.0
ROOF CORNER	+17.3 / -70.6	+16.0 / -66.0	+16.0 / -59.9	+16.0 / -55.3	+16.0 / -55.3
PARAPET END	NA / NA	NA / NA	NA / NA	NA / NA	NA / NA
PARAPET CORNER	NA / NA	NA / NA	NA / NA	NA / NA	NA / NA
OVERHANG INTERIOR	-16	-16	-16	-16	-16
OVERHANG END	-55.8	-55.8	-55.8	-55.8	-55.8
OVERHANG CORNER	-93.9	-84.8	-72.6	-63.5	-63.5

NOTES:
1. REFER TO DESIGN CRITERIA FOR INFORMATION REGARDING GOVERNING BUILDING CODE.
2. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE SURFACES, RESPECTIVELY.
3. LINEAR INTERPOLATION IS PERMITTED FOR TRIBUTARY AREAS NOT SHOWN.
4. REFER TO FIGURE BELOW FOR ZONE DEFINITIONS.



HIP ROOF
(7° < θ ≤ 27°)

INTERIOR ZONES (ROOFS - ZONE 1 / WALLS - ZONE 4)

END ZONES (ROOFS - ZONE 2 / WALLS - ZONE 5)

CORNER ZONES (ROOFS - ZONE 3)

NOTATION
a = 10% OF LEAST HORIZONTAL DIMENSION OR 0.4h, WHICHEVER IS SMALLER, BUT NOT LESS THAN EITHER 4% OF LEAST HORIZONTAL DIMENSION OR 3 FEET.
h = MEAN ROOF HEIGHT, IN FEET, EXCEPT THAT EAVE HEIGHT SHALL BE USED FOR ROOF ANGLES < 10°.
θ = ANGLE OF PLANE OF ROOF FROM HORIZONTAL, IN DEGREES.

2

SHOP DRAWINGS

A. SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR APPROVAL, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER RESPONSIBLE FOR ITS PREPARATION, WHO IS REGISTERED IN THE STATE WHICH THE PROJECT IS LOCATED.

B. PRIOR TO SUBMITTAL, THE CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS AND MAKE ANY CORRECTIONS REQUIRED. THE CONTRACTOR SHALL STAMP AND SIGN THE SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ENGINEER.

C. THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS FOR GENERAL CONFORMANCE OF THE DESIGN CONCEPT. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHOP DRAWING SUBMITTALS THAT IS ACCEPTABLE TO BOTH CONTRACTOR AND ENGINEER. AFTER THE CONTRACTOR HAS REVIEWED THE SHOP DRAWINGS, PROMPT REVIEW BY THE ENGINEER WILL BE MADE OF ALL SUBMITTALS.

D. FOR LARGE SUBMITTALS, REASONABLE REVIEW TIME SHALL BE ALLOWED AND MAY EXCEED TWO WEEKS. THE CONTRACTOR SHALL SUBMIT NECESSARY REQUEST FOR INFORMATION (RFI's) DURING THE DETAILING PROCESS TO AVOID SUBMITTALS THAT ARE INCOMPLETE OR NEED SIGNIFICANT VERIFICATIONS. THE CONCURRENT SUBMITTAL OF MULTIPLE SHOP DRAWINGS ("DUMPING") WILL FURTHER EXTEND THE REVIEW PROCESS AND TIME FRAME NECESSARY TO PROPERLY REVIEW EACH SUBMITTAL.

E. UNLESS INDICATED OTHERWISE, THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE FOLLOWING ITEMS FOR STRUCTURAL REVIEW. REFER TO SPECIFIC SECTION OF STRUCTURAL NOTES FOR ANY ADDITIONAL CRITERIA:
   1. CONCRETE MIX DESIGNS
   2. SLAB CONTROL JOINT LAYOUT
   3. REINFORCING STEEL
   4. PRE-FABRICATED WOOD TRUSSES
   5. WOOD CONSTRUCTION CONNECTORS
   6. RAMMED AGGREGATE PIERS
   7. ADDITIONAL STRUCTURAL SHOP DRAWINGS REQUESTED IN THE SPECIFICATIONS

F. A COPY OF ALL SHOP DRAWINGS SHALL BE MAINTAINED ON SITE AT ALL TIMES.

G. SHOP DRAWINGS SHALL INCLUDE COMPLETE DETAIL SCHEDULES, PROCEDURES, AND DIAGRAMS FOR FABRICATION AND ASSEMBLY OF STRUCTURAL MEMBERS AND SUBMIT PRIOR TO FABRICATION.

H. ERECTION PLANS ARE THE RESPONSIBILITY OF THE FABRICATOR.

FOOTINGS AND FOUNDATIONS

A. SOIL BEARING DESIGN VALUE:
   1. 4000 PSF (PRESUMED AFTER INSTALLATION OF RAMMED AGGREGATE PIERS)
   2. BEARING VALUE TO BE VERIFIED IN FIELD BY GEOTECHNICAL ENGINEER.

B. PROTECT FOUNDATION EXCAVATIONS FROM FROST; DO NOT PLACE CONCRETE ON FROZEN GROUND.

C. FOUNDATION EXCAVATIONS SHALL BE KEPT FREE OF LOOSE MATERIAL AND STANDING WATER AND SHALL BE CHECKED AND APPROVED BY THE ENGINEER BEFORE THE PLACEMENT OF ANY CONCRETE.

D. DESIGN FROST PENETRATION DEPTH: 60 INCHES (UNHEATED)

E. REFER TO GEOTECH REPORT FOR COMPACTED GRANULAR SUBGRADE BELOW SLABS RECCOMENDATIONS.

MATERIAL COMPACTION CRITERIA	
LOCATION	MINIMUM RELATIVE COMPACTION PERCENTAGE (ASTM D698 STANDARD PROCTOR DENSITY (SPD))
1'-0" BELOW FOUNDATION AND SLAB SUBGRADE ELEVATIONS	98%
ABOVE BOTTOM OF FOUNDATIONS AND BELOW SLAB SUBGRADE ELEVATIONS	95%
BELOW EXTERIOR SLAB, WITHIN 1'-0" OF SUBGRADE ELEVATIONS	98%
BELOW EXTERIOR SLAB, MORE THAN 1'-0" BELOW SUBGRADE ELEVATIONS	95%

CONCRETE

A. CONCRETE SHALL BE STANDARD WEIGHT MIX UNLESS NOTED OTHERWISE AND MEET THE FOLLOWING CRITERIA:

LOCATIONS	f'c @ 28 DAYS	AIR ENTRAINMENT	MAX. WATER/CEMENT RATIO
FOOTINGS	4500 PSI	6% ± 1.5%	0.50
FLOORS ON GRADE	4000 PSI		0.45
EXTERIOR SLABS ON GRADE	5000 PSI	6% ± 1.5%	0.40
EXTERIOR SLABS ON GRADE	4500 PSI	6% ± 1.5%	0.45

B. CEMENT SHALL CONFORM TO ASTM C150, TYPE I / II OR ASTM C595 TYPE IL.

C. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.

D. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 (LATEST EDITION) "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THESE NOTES.

E. ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER. ADMIXTURES SHALL COMPLY WITH ASTM C494 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE, BUT SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT (CALCIUM CHLORIDE SHALL NOT BE USED).

F. CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR APPROVAL 10 DAYS PRIOR TO FABRICATION AND INSTALLATION. ALL CONCRETE MIXES SHALL BE DESIGNED AND CERTIFIED BY A MATERIALS TESTING COMPANY.

G. PROJECTING CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS DETAILED OR NOTED OTHERWISE.

H. PLACE 15 MIL VAPOR BARRIER DIRECTLY BELOW FLOOR SLAB.

I. CONCRETE FLOOR SHALL BE CURED IN ACCORDANCE WITH ASTM C309. CONCRETE FLOOR SHALL BE PROTECTED FROM MOISTURE LOSS FOR A MINIMUM OF 14 DAYS, USING AN APPROVED SHEET MEMBRANE IN ACCORDANCE WITH C171.

J. FLOOR FLATNESS AND LEVELNESS TOLERANCES:

K. UNLESS NOTED OTHERWISE, FLOORS SHALL CONFORM TO THE FOLLOWING SURFACE PROFILE TOLERANCES:
   a. FLOOR FLATNESS NUMBER (F_F)
      - SPECIFIED OVERALL VALUE = 20
      - MINIMUM LOCAL VALUE = 15
   b. FLOOR LEVELNESS NUMBER (F_L)
      - SPECIFIED OVERALL VALUE = 20
      - MINIMUM LOCAL VALUE = 15

L. FLOOR TOLERANCE (F_F AND F_L) MEASUREMENTS SHALL BE TESTED IN ACCORDANCE WITH ASTM E 1155. ACTUAL OVERALL F-NUMBERS SHALL BE CALCULATED USING THE INFERIOR / SUPERIOR AREA METHOD.

M. CORRECT DEFECTIVE SLABS BY GRINDING OR REMOVING AND REPLACING DEFECTIVE WORK. RE-MEASURE CORRECTED AREAS BY THE SAME PROCESS.

ANCHOR BOLTS

A. ALL ANCHOR RODS SHALL BE SUPPLIED AND INSTALLED BY THE CONCRETE CONTRACTOR, UNLESS NOTED OTHERWISE.

B. ALL ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 HEX-HEAD, UNLESS NOTED OTHERWISE. NUTS SHALL BE ASTM A563 GRADE A HEAVY HEX. OVER-SIZED PLATE WASHERS SHALL BE ASTM A36.

C. ALL ANCHOR RODS SHALL BE SET WITH TEMPLATES.

D. POST-INSTALLED ANCHORS SHALL BE ADHESIVE ANCHORING SYSTEM PROVIDED AND INSTALLED BY FRAMING CONTRACTOR. ADHESIVE ANCHORS SHALL BE "HILTI HIT-HY 200 ADHESIVE ANCHOR SYSTEM" OR APPROVED ALTERNATE. ANCHORS SHALL BE "HILTI HAS-E" THREADED ROD CONFORMING TO ISO 898-1 CLASS 5.8 OR SHALL BE MADE FROM ALL-THREADED ROD CONFORMING TO ASTM A572 GRADE 60, OR APPROVED ALTERNATE, UNLESS NOTED OTHERWISE.

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REINFORCING STEEL

A. BAR REINFORCEMENT SHALL BE ASTM A615, GRADE 60.

B. MINIMUM DEVELOPMENT LENGTH OF REINFORCING BARS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE.

MINIMUM LENGTH FOR STANDARD UN-COATED BARS IN NORMAL WEIGHT CONCRETE						
CONCRETE STRENGTH f'c IN PSI	DEVELOPMENT LENGTH (Ld) FOR STRAIGHT BARS (MIN. OF 12 INCHES)					FOR 90 DEGREE HOOKED BARS, HOOK DEVELOPMENT LENGTH
	TENSION CLASS A		TENSION CLASS B		COMPRESSION	
	#6 AND SMALLER	#7 TO #11	#6 & SMALLER	#7 TO #11	#18, #14, & #11 AND SMALLER	
3000	44 Db	55 Db	57 Db	71 Db	30 Db	22 Db
3500	41 Db	51 Db	53 Db	66 Db	30 Db	20 Db
4000	38 Db	47 Db	49 Db	62 Db	30 Db	19 Db
4500	36 Db	45 Db	47 Db	58 Db	30 Db	18 Db
5000	34 Db	42 Db	44 Db	55 Db	30 Db	17 Db
NOTE: Db = DIAMETER OF REINFORCEMENT. Ld = DEVELOPMENT LENGTH						

C. TYPICAL SPLICES: CLASS B AS DEFINED IN ACI 318, UNLESS NOTED OTHERWISE

D. ADJUSTMENT FACTORS FOR STRAIGHT BARS IN TENSION
1. LIGHTWEIGHT CONCRETE = 1.3.
2. EPOXY COATED = 1.2.
3. EPOXY COATED WITH COVER LESS THAN 3DB OR CLEAR SPACING LESS THAN 6 DB = 1.5.
4. HORIZONTAL "TOP" BARS WITH 12" OF CONCRETE CAST BELOW = 1.3
5. EPOXY COATED HORIZONTAL "TOP" BARS WITH 12" OF CONCRETE CAST BELOW = NOT GREATER THAN 1.7.

E. ADJUSTMENT FACTORS FOR STRAIGHT HOOKS IN TENSION
1. LIGHTWEIGHT CONCRETE = 1.3.
2. EPOXY COATED = 1.2.

F. REINFORCING STEEL SHALL BE PROVIDED WITH THE FOLLOWING AMOUNTS OF COVER FOR CAST-IN-PLACE CONCRETE UNLESS NOTED OTHERWISE:

MINIMUM CLEAR CONCRETE COVER FOR REINFORCING STEEL	
CONCRETE ON SOIL (DIRECT CONTACT)	3"
SLAB ON GRADE	CENTERED
WALLS, STRUCTURAL SLABS EXPOSED TO SOIL OR WEATHER	
#6 TO #18 REBAR	2"
#5 AND SMALLER REBAR	1 1/2"
WALLS, STRUCTURAL SLABS NOT EXPOSED TO EARTH OR WEATHER	
#11 AND SMALLER REBAR	3/4"
COLUMNS AND PIERS (COVER TO STIRRUPS AND TIES)	1 1/2"

G. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND INSERTS SHALL BE SECURED IN POSITION WITH WIRE POSITIONERS, OR EQUAL, BEFORE PLACING CONCRETE OR GROUT.

H. DOWELS BETWEEN FOOTINGS AND WALLS SHALL BE THE SAME GRADE, SIZE, AND SPACING AS VERTICAL WALL REINFORCING.

I. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR APPROVAL A MINIMUM OF 10 DAYS PRIOR TO FABRICATION AND INSTALLATION.

J. BARS TO BE WELDED SHALL BE ASTM A706, GRADE 60. WELDING OF REINFORCING BARS SHALL CONFORM TO AWS D1.4.

WOOD

1. GENERAL:
A. ALL WOOD MEMBERS SHALL BE AS FOLLOWS (UNLESS APPROVED BY THE ENGINEER):
   a. STUDS - SPRUCE PINE FIR (SPF) STUD GRADE OR SOUTHERN PINE STUD GRADE.
   b. HEADERS/JOISTS - DOUGLAS FIR-LARCH (DF-L) NO. 2 OR BETTER, HEM-FIR NO. 2 OR BETTER, OR SOUTHERN PINE NO. 2 OR BETTER.
B. ALL SHEATHING SHALL BE APA RATED SHEATHING.
C. CUTTING, NOTCHING, OR DRILLING OF BEAMS OR JOISTS SHALL BE PERMITTED ONLY AS DETAILED OR APPROVED BY THE ENGINEER.
D. ALL NAILING SHALL CONFORM TO THE NAILING SCHEDULE GIVEN IN THE IBC, UNLESS NOTED OTHERWISE.
E. ALL SILLS OR PLATES RESTING ON CONCRETE OR MASONRY, WHICH IS IN CONTACT WITH EARTH OR RESTING ON FOUNDATIONS, SHALL BE PRESSURE TREATED SOUTHERN PINE NO. 2.
F. ALL MEMBER SIZES GIVEN ON DRAWINGS ARE NOMINAL DIMENSIONS.
G. SPACING OF BRIDGING FOR JOISTS SHALL NOT EXCEED 8'.
H. WOOD LINTELS AND HEADERS SHALL HAVE A FULL 3" LENGTH OF BEARING AT EACH END.
I. DOUBLE ALL JOISTS UNDER PARALLEL PARTITIONS.
J. ALL BEAMS AND JOISTS NOT BEARING ON SUPPORTING MEMBERS SHALL BE FRAMED WITH JOIST HANGERS.
K. WOOD JOISTS SHALL BEAR THE FULL WIDTH OF SUPPORTING MEMBERS (STUD WALLS, BEAMS, ETC. UNLESS OTHERWISE NOTED).
L. PRE-BORE HOLES FOR ALL FASTENERS GREATER THAN 1/4" Ø PER MANUFACTURER'S RECOMMENDATIONS.
M. GENERAL CONTRACTOR TO COORDINATE TRUSS AND FRAMING LAYOUT WITH MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS. NOTIFY ENGINEER IMMEDIATELY FOR ANY POTENTIAL INTERFERENCES BETWEEN STRUCTURE, PLUMBING, HVAC AND OTHER BUILDING TRADES PRIOR TO FABRICATION AND ERECTION.

2. SILL PLATES
A. UNLESS NOTED OTHERWISE, SILL PLATES SHALL BE BOLTED TO FOUNDATION WALL WITH 5/8"Øx8" G185 HOT-DIPPED GALVANIZED, TYPE 304 OR TYPE 316 STAINLESS SCREW ANCHORS (SIMPSON THDB62800H OR EQUAL). TYPICAL FOR ALL FASTENERS / CONNECTORS IN CONTACT WITH ACQ TREATED LUMBER AT 4'-0" MAXIMUM O.C. EACH SILL PLATE TO HAVE A MINIMUM OF TWO BOLTS WITH ONE BOLT LOCATED WITHIN 12" OF EACH END OF EACH PIECE.

B. MANUFACTURED WOOD TRUSSES
C. WOOD TRUSS DESIGN SHALL BE DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE IBC WOOD SECTION.
D. LUMBER FOR WOOD TRUSSES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
E. TRUSS, BRIDGING, BRACING AND/OR BLOCKING, TO PREVENT ROTATION AND PROVIDE LATERAL STABILITY, SHALL BE SUBMITTED BY TRUSS MANUFACTURER FOR ENGINEER'S REVIEW.
F. LOCATIONS FOR LATERAL RESTRAINT SHALL BE IDENTIFIED ON THE TRUSS DESIGN DRAWINGS.
G. NO CUTTING, NOTCHING, AND/OR FIELD MODIFICATIONS OR REPAIRS OF TRUSSES WITHOUT ENGINEER OF RECORD AND TRUSS MANUFACTURER ENGINEER'S WRITTEN APPROVAL.
H. DAMAGED TRUSSES, INCLUDING DAMAGED AND/OR LOOSE TRUSS METAL-PLATE-CONNECTORS, MAY NOT BE USED.
I. GABLE END TRUSS KNEE BRACING PER MANUFACTURER'S RECOMMENDATIONS.
J. PROVIDE BALLOON-FRAMED GABLE END WALL FOR DIAPHRAGM FORCE TRANSFER AND TRUSS STABILITY.
K. TOTAL LOAD DEFLECTION LIMITATIONS:
   a. ROOF TRUSSES LESS THAN L/240.
L. SUBMIT COMPLETE SHOP DRAWINGS FOR APPROVAL, SHOWING THE ERECTION PLAN, ALL BEARING CONDITIONS, AND CONNECTIONS. CALCULATIONS CERTIFIED BY A PROFESSIONAL ENGINEER SHALL BE REQUIRED FOR ALL WOOD TRUSSES.
M. WOOD TRUSS SUPPLIER SHALL DETAIL BEARING OF TRUSSES SO AS NOT TO EXCEED STRESS PERPENDICULAR TO GRAIN OF WOOD PLATES THAT SUPPORT THE TRUSSES.
N. DESIGN OF BOTH TEMPORARY AND PERMANENT TRUSS MEMBER RESTRAINING FOR ALL TRUSSES WHICH CLEAR SPAN 60 FEET OR GREATER SHALL BE PROVIDED BY TRUSS SUPPLIER.
O. GENERAL CONTRACTOR TO COORDINATE TRUSS AND FRAMING LAYOUT WITH MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS. CONTRACTORS TO ACCOUNT FOR ALL POTENTIAL INTERFERENCES BETWEEN STRUCTURE AND PLUMBING, FIXTURES, ETC. PRIOR TO FABRICATION AND ERECTION.

3. LAMINATED VENEER LUMBER (LVL):
A. DESIGN STRESSES:
   a. E = 2,000,000 PSI
   b. F_b = 2,600 PSI
   c. F_v = 285 PSI

4. MULTIPLE MEMBER BEAMS SHALL BE ASSEMBLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, BUT NOT LESS THAN NAILING SPECIFIED IN DIMENSIONAL LUMBER SECTION OF THESE NOTES.

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FASTENING SCHEDULE BASED ON THE INTERNATIONAL BUILDING CODE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
ROOF		
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	3-8D COMMON (21/2″ × 0.131″); OR 3-10D BOX (3″ × 0.128″); OR 3-3″ × 0.131″ NAILS; OR 3-3″14 GAGE STAPLES, 7/16″ CROWN	EACH END, TOE NAIL
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2-8D COMMON (21/2″ × 0.131″) 2-3″ × 0.131″ NAILS 2-3″ 14 GAGE STAPLES	EACH END, TOE NAIL
	2-16D COMMON (31/2″ × 0.162″) 3-3″ × 0.131″ NAILS 3-3″ 14 GAGE STAPLES	END NAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	16D COMMON (31/2″ × 0.162″) @ 6″ O.C. 3″ × 0.131″ NAILS @ 6″ O.C. 3″ × 14 GAGE STAPLES @ 6″ O.C.	FACE NAIL
2. CEILING JOISTS TO TOP PLATE	3-8D COMMON (21/2″ × 0.131″); OR 3-10D BOX (3″ × 0.128″); OR 3-3″ × 0.131″ NAILS; OR 3-3″ 14 GAGE STAPLES, 7/16″ CROWN	EACH JOIST, TOE NAIL
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	3-16D COMMON (31/2″ × 0.162″); OR 4-10D BOX (3″ × 0.128″); OR 4-3″ × 0.131″ NAILS; OR 4-3″ 14 GAGE STAPLES, 7/16″ CROWN	FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	PER TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER	3-10D COMMON (3″ × 0.148″); OR 4-10D BOX (3″ × 0.128″); OR 4-3″ × 0.131″ NAILS; OR 4-3″ 14 GAGE STAPLES, 7/16″ CROWN	FACE NAIL
6. RAFTER OR ROOF TRUSS TO TOP PLATE (SEE SECTION 2308.7.5, TABLE 2308.7.5)	3-10 COMMON (3″ × 0.148″); OR 3-16D BOX (31/2″ × 0.135″); OR 4-10D BOX (3″ × 0.128″); OR 4-3″ × 0.131 NAILS; OR 4-3″ 14 GAGE STAPLES, 7/16″ CROWN	TOE NAIL (FOOTNOTE C)
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	2-16D COMMON (31/2″ × 0.162″); OR 3-10D BOX (3″ × 0.128″); OR 3-3″ × 0.131″ NAILS; OR 3-3″ 14 GAGE STAPLES, 7/16″ CROWN; OR	END NAIL
	3-10D COMMON (31/2″ × 0.148″); OR 3-16D BOX (31/2″ × 0.135″); OR 4-10D BOX (3″ × 0.128″); OR 4-3″ × 0.131″ NAILS; OR 4-3″ 14 GAGE STAPLES, 7/16″ CROWN	TOE NAIL

FOOTNOTES:

A. NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
B. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
C. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.

FASTENING SCHEDULE BASED ON THE INTERNATIONAL BUILDING CODE (CONTINUED)

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
WALL		
8. STUD TO STUD (NOT AT BRACED WALL PANELS)	16D COMMON (31/2″ × 0.162″)	24″ O.C. FACE NAIL
	10D BOX (3″ × 0.128″); OR 3″ × 0.131″ NAILS; OR 3-3″ 14 GAGE STAPLES, 7/16″ CROWN	16″ O.C. FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16D COMMON (31/2″ × 0.162″); OR	24″ O.C. FACE NAIL
	16D BOX (31/2″ × 0.135″); OR	12″ O.C. FACE NAIL
	3″ × 0.131″ NAILS; OR 3-3″ 14 GAGE STAPLES, 7/16″ CROWN	12″ O.C. FACE NAIL
10. BUILT-UP HEADER (2″ TO 2″ HEADER)	16D COMMON (31/2″ × 0.162″); OR	16″ O.C. EACH EDGE, FACE NAIL
	16D BOX (31/2″ × 0.135″)	12″ O.C. EACH EDGE, FACE NAIL
11. CONTINUOUS HEADER TO STUD	4-8D COMMON (21/2″ × 0.131″); OR 4-10D BOX (3″ × 0.128″)	TOE NAIL
12. TOP PLATE TO TOP PLATE	16D COMMON (31/2″ × 0.162″); OR	16″ O.C. FACE NAIL
	10D BOX (3″ × 0.128″); OR 3″ × 0.131″ NAILS; OR 3″ 14 GAGE STAPLES, 7/16″ CROWN	12″ O.C. FACE NAIL
13. TOP PLATE TO TOP PLATE, AT END JOINTS	8-16D COMMON (31/2″ × 0.162″); OR 12-10D BOX (3″ × 0.128″); OR 12-3″ × 0.131″ NAILS; OR 12-3″ 14 GAGE STAPLES, 7/16″ CROWN	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24″ LAP SPLICE LENGTH EACH SIDE OF END JOINT)
14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16D COMMON (31/2″ × 0.162″); OR	16″ O.C. FACE NAIL
	16D BOX (31/2″ × 0.135″); OR 3″ × 0.131″ NAILS; OR 3″ 14 GAGE STAPLES, 7/16″ CROWN	12″ O.C. FACE NAIL
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	2-16D COMMON (31/2″ × 0.162″); OR 3-16D BOX (31/2″ × 0.135″); OR 4-3″ × 0.131″ NAILS; OR 4-3″ 14 GAGE STAPLES, 7/16″ CROWN	16″ O.C. FACE NAIL
16. STUD TO TOP OR BOTTOM PLATE	4-8D COMMON (21/2″ × 0.131″); OR 4-10D BOX (3″ × 0.128″); OR 4-3″ × 0.131″ NAILS; OR 4-3″ 14 GAGE STAPLES, 7/16″ CROWN; OR	TOE NAIL
	2-16D COMMON (31/2″ × 0.162″); OR 3-10D BOX (3″ × 0.128″); OR 3-3″ × 0.131″ NAILS; OR 3-3″ 14 GAGE STAPLES, 7/16″ CROWN	END NAIL
17. TOP OR BOTTOM PLATE TO STUD	2-16D COMMON (31/2″ × 0.162″); OR 3-10D BOX (3″ × 0.128″); OR 3-3″ × 0.131″ NAILS; OR 3-3″ 14 GAGE STAPLES, 7/16″ CROWN	END NAIL
18. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2-16D COMMON (31/2″ × 0.162″); OR 3-10D BOX (3″ × 0.128″); OR 3-3″ × 0.131″ NAILS; OR 3-3″ 14 GAGE STAPLES, 7/16″ CROWN	FACE NAIL
19. 1″ BRACE TO EACH STUD AND PLATE	2-8D COMMON (21/2″ × 0.131″); OR 2-10D BOX (3″ × 0.128″); OR 2-3″ × 0.131″ NAILS; OR 2-3″ 14 GAGE STAPLES, 7/16″ CROWN	FACE NAIL
20. 1″ × 6″ SHEATHING TO EACH BEARING	2-8D COMMON (21/2″ × 0.131″); OR 2-10D BOX (3″ × 0.128″)	FACE NAIL
21. 1″ × 8″ AND WIDER SHEATHING TO EACH BEARING	3-8D COMMON (21/2″ × 0.131″); OR 3-10D BOX (3″ × 0.128″)	FACE NAIL

FASTENING SCHEDULE BASED ON THE INTERNATIONAL BUILDING CODE (CONTINUED)

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
FLOOR		
22. JOIST TO SILL, TOP PLATE, OR GIRDER	3-8D COMMON (21/2″ × 0.131″); OR FLOOR 3-10D BOX (3″ × 0.128″); OR 3-3″ × 0.131″ NAILS; OR 3-3″ 14 GAGE STAPLES, 7/16″ CROWN	TOE NAIL
23. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8D COMMON (21/2″ × 0.131″); OR 10D BOX (3″ × 0.128″); OR 3″ × 0.131″ NAILS; OR 3″ 14 GAGE STAPLES, 7/16″ CROWN	6″ O.C., TOENAIL
24. 1″ × 6″ SUBFLOOR OR LESS TO EACH JOIST	2-8D COMMON (21/2″ × 0.131″); OR 2-10D BOX (3″ × 0.128″)	FACE NAIL
25. 2″ SUBFLOOR TO JOIST OR GIRDER	2-16D COMMON (31/2″ × 0.162″)	FACE NAIL
26. 2″ PLANKS (PLANK & BEAM – FLOOR & ROOF)	2-16D COMMON (31/2″ × 0.162″)	EACH BEARING, FACE NAIL
27. BUILT-UP GIRDERS AND BEAMS, 2″ LUMBER LAYERS	20D COMMON (4″ × 0.192″)	32″ O.C., FACE NAIL AT TOP AND BOTTOM, STAGGERED ON OPPOSITE SIDES
	10D BOX (3″ × 0.128″); OR 3″ × 0.131″ NAILS; OR 3″ 14 GAGE STAPLES, 7/16″ CROWN	24″ O.C. FACE NAIL AT TOP AND BOTTOM, STAGGERED ON OPPOSITE SIDES
	AND: 2-20D COMMON (4″ × 0.192″); OR 3-10D BOX (3″ × 0.128″); OR 3-3″ × 0.131″ NAILS; OR 3-3″ 14 GAGE STAPLES, 7/16″ CROWN	ENDS AND AT EACH SPLICE, FACE NAIL
28. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3-16D COMMON (31/2″ × 0.162″); OR 4-10D BOX (3″ × 0.128″); OR 4-3″ × 0.131″ NAILS; OR 4-3″ 14 GAGE STAPLES, 7/16″ CROWN	EACH JOIST OR RAFTER, FACE NAIL
29. JOIST TO BAND JOIST OR RIM JOIST	3-16D COMMON (31/2″ × 0.162″); OR 4-10D BOX (3″ × 0.128″); OR 4-3″ × 0.131″ NAILS; OR 4-3″ 14 GAGE STAPLES, 7/16″ CROWN	END NAIL
30. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	2-8D COMMON (21/2″ × 0.131″); OR 2-10D BOX (3″ × 0.128″); OR 2-3″ × 0.131″ NAILS; OR 2-3″ 14 GAGE STAPLES, 7/16″ CROWN	EACH END, TOENAIL

FOOTNOTES:

A. NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
B. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
C. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.

FASTENING SCHEDULE BASED ON THE INTERNATIONAL BUILDING CODE (CONTINUED)

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION	
WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF & INTERIOR WALL SHEATHING TO FRAMING & PARTICLEBOARD WALL SHEATHING TO FRAMING (FOOTNOTE A)			
		EDGES (INCHES)	INTERMEDIATE SUPPORTS (INCHES)
31. 3/8″ – 1/2″	6D COMMON OR DEFORMED (2″ × 0.113″) (SUBFLOOR AND WALL)	6	12
	8D BOX OR DEFORMED (21/2″ × 0.113″) (ROOF)	6	12
	2 3/8″ × 0.113″ NAIL (SUBFLOOR AND WALL)	6	12
	1 3/4″ 16 GAGE STAPLE, 7/16″ CROWN (SUBFLOOR AND WALL)	4	8
	2 3/8″ × 0.113″ NAIL (ROOF)	4	8
	1 3/4″ 16 GAGE STAPLE, 7/16″ CROWN (ROOF)	4	8
32. 19/32″ – 3/4″	8D COMMON (21/2″ × 0.131″); OR 6D DEFORMED (2″ × 0.113″)	6	12
	2 3/8″ × 0.113″ NAIL; OR 2″ 16 GAGE STAPLE, 7/16″ CROWN	4	8
33. 7/8″ – 1 1/4″	10D COMMON (3″ × 0.148″); OR 8D DEFORMED (21/2″ × 0.131″)	6	12
OTHER EXTERIOR WALL SHEATHING			
34. 1/2″ FIBERBOARD SHEATHING (FOOTNOTE B)	1 1/2″ GALVANIZED ROOFING NAIL (7/16″ HEAD DIAMETER); OR 1 1/4″ 16 GAGE STAPLE WITH 7/16″ OR 1″ CROWN	3	6
35. 25/32″ FIBERBOARD SHEATHING (FOOTNOTE B)	1 3/4″ GALVANIZED ROOFING NAIL (7/16″ DIAMETER HEAD); OR 1 1/2″ 16 GAGE STAPLE WITH 7/16″ OR 1″ CROWN	3	6
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
36. 3/4″ AND LESS	8D COMMON (21/2″ × 0.131″); OR 6D DEFORMED (2″ × 0.113″)	6	12
37. 7/8″ – 1″	8D COMMON (21/2″ × 0.131″); OR 8D DEFORMED (21/2″ × 0.131″)	6	12
38. 1 1/8″ – 1 1/4″	10D COMMON (3″ × 0.148″); OR 8D DEFORMED (21/2″ × 0.131″)	6	12
PANEL SIDING TO FRAMING			
39. 1/2″ OR LESS	6D CORROSION-RESISTANT SIDING (17/8″ × 0.106″); OR 6D CORROSION-RESISTANT CASING (2″ × 0.099″)	6	12
40. 5/8″	8D CORROSION-RESISTANT SIDING (23/8″ × 0.128″); OR 8D CORROSION-RESISTANT CASING (21/2″ × 0.113″)	6	12
INTERIOR PANELING			
41. 1/4″	4D CASING (11/2″ × 0.080″); OR 4D FINISH (11/2″ × 0.072″)	6	12
42. 3/8″	6D CASING (2″ × 0.099″); OR 6D FINISH (PANEL SUPPORTS AT 24 INCHES)	6	12

REQUIRED INSPECTIONS

1. SPECIAL INSPECTION PROGRAM SHALL CONFORM TO CHAPTER 17 OF THE IBC.
2. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM THE REQUIRED TESTS AND SPECIAL INSPECTIONS WITH QUALIFICATIONS DESCRIBED PER IBC CHAPTER 17 AND THE PROJECT SPECIFICATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING INSPECTIONS AND TESTS. SUFFICIENT NOTICE AND LEAD TIME MUST BE ALLOWED FOR THE INSPECTION AND TESTING TO BE PERFORMED WITHOUT IMPEDING CONSTRUCTION OPERATIONS.
4. SPECIAL INSPECTION REPORTS SHALL BE FURNISHED TO BUILDING OFFICIAL, OWNER, ARCHITECT, STRUCTURAL ENGINEER, AND CONTRACTOR.
5. WHEN DEFICIENCIES ARE IDENTIFIED, THE CONTRACTOR MUST TAKE CORRECTIVE ACTIONS TO COMPLY WITH THE CONTRACT DOCUMENTS OR REMEDY THE DEFICIENCIES AS DIRECTED BY THE REGISTERED DESIGN PROFESSIONAL.
6. THE SPECIAL INSPECTION AND QUALITY ASSURANCE PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITY TO PERFORM QUALITY CONTROL.
7. THE CONTRACTOR IS RESPONSIBLE FOR TESTING SERVICES THAT ARE REQUIRED FOR MATERIAL SUBMITTALS AND THAT ARE NOT PART OF THE SPECIAL INSPECTION PROGRAM (E.G. AGGREGATE TESTS, CONCRETE MIX DESIGNS, TESTING OF CONTROLLED FILL MATERIALS, ETC.).
8. SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING THAT THE STRUCTURAL WORK WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.

CAST-IN-PLACE CONCRETE (IBC 1705.3)

SPECIAL INSPECTION TYPE	FREQUENCY
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	PERIODIC
REINFORCING BAR WELDING: VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16". INSPECT ALL OTHER WELDS.	 PERIODIC PERIODIC CONTINUOUS
INSPECT ANCHORS CAST IN CONCRETE.	PERIODIC
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE.	 CONTINUOUS PERIODIC
VERIFY USE OF REQUIRED DESIGN MIX.	PERIODIC
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	CONTINUOUS
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC
FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE. SAMPLE FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5,000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS. A MINIMUM OF FIVE STRENGTH TESTS SHOULD BE MADE FOR A GIVEN PROJECT.	CONTINUOUS AT TIME OF TESTING

SOILS (IBC 1705.6)

SPECIAL INSPECTION TYPE	FREQUENCY
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	PERIODIC
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	PERIODIC
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	PERIODIC
VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	CONTINUOUS
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	PERIODIC

RAMMED AGGREGATE PIERS & STONE COLUMN FOUNDATIONS (IBC 1705.1.1)

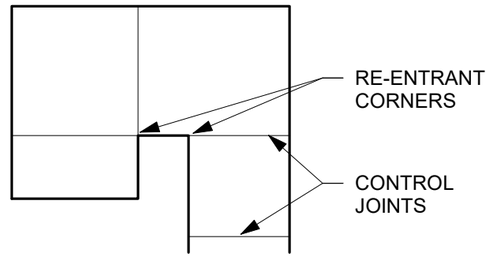
SPECIAL INSPECTION TYPE	FREQUENCY
VERIFY THAT THE PIER INSTALLATION PROGRAM AND SOIL PARAMETERS ARE IN ACCORDANCE WITH THE APPROVED SOILS REPORT AND THE CONSTRUCTION DOCUMENTS.	CONTINUOUS
DURING INSTALLATION, VERIFY HE AGGREGATE PROPERTIES, TYPE AND NUMBER OF LIFTS OF AGGREGATE, PIER SIZE, STALLED DEPTH, TOP ELEVATION, AND APPLIED RAM ENERGY	PERIODIC
REVIEW THE MODULUS LOAD TESTING, UPLIFE PULLOUT TESTING, BOTTOM OR CROWD STABILIZATION TESTS AND DYNAMIC CONE PENETRATION TESTS RESULTS FOM PRODUCTION PIER ELEMENTS AND VERIFY THAT ALL COMPLY WITH THE DESIGN SPECIFICATIONS.	CONTINUOUS

SPECIAL INSPECTIONS FOR WIND RESISTANCE (IBC 1705.11)

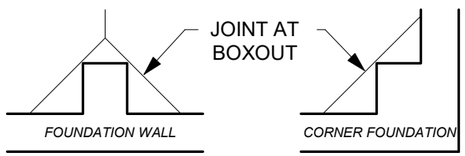
SPECIAL INSPECTION TYPE	FREQUENCY
WIND-RESISTING COMPONENTS: INSPECT FASTENING OF THE ROOF COVERING, ROOF DECK, AND ROOF FRAMING CONNECTIONS. INSPECT FASTENING OF THE EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING.	 PERIODIC PERIODIC

CONTROL JOINT PLACEMENT GUIDELINES

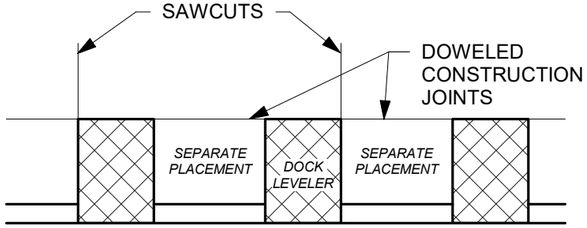
1. SPACE JOINTS (IN FEET) NO MORE THAN 2-3 TIMES THE SLAB THICKNESS (IN INCHES). FOR EXAMPLE, A 4" SLAB SHOULD HAVE JOINTS 8' TO 12' APART.
2. CUT JOINTS 25% OF THE DEPTH OF SLAB, MIN.
3. CUT JOINTS USING GROOVING TOOLS IN FRESH CONCRETE OR SAW CUTTING JOINTS AS SOON AS THE CONCRETE IS HARD ENOUGH THAT THE EDGES ABUTTING THE CUT DON'T CHIP FROM THE SAW BLADE.
4. IN HOT WEATHER, CONCRETE MIGHT CRACK IF JOINTS ARE NOT CUT WITHIN 6-12 HOURS AFTER FINISHING CONCRETE. PLAN ALTERNATE JOINT CUTTING EQUIPMENT ACCORDINGLY.
5. WHERE POSSIBLE, PLACE JOINTS UNDER PROPOSED NON-LOAD-BEARING WALL LOCATIONS OR UNDER CARPET AREAS.
6. MINIMIZE RE-ENTRANT CORNERS AND AVOID WHERE POSSIBLE.
7. WHERE POSSIBLE, ALIGN JOINTS TO INTERSECT COLUMN INSOLATION JOINTS.
8. CONTROL JOINT LOCATIONS SHALL BE COORDINATED WITH RAMMED AGGREGATE PIER LOCATIONS



EXAMPLE CONTROL JOINT PLAN



EXAMPLE PILASTER JOINT PLAN



EXAMPLE MULTIPLE DOCK LEVELER JOINT PLAN

FOUNDATION WALL SCHEDULE

MARK	WIDTH	REINFORCEMENT	COMMENTS
FDN1	0' - 6"	#4 BARS @ 18" OCEW CENTERED IN WALL	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG

FOOTING SCHEDULE

MARK	LENGTH	WIDTH	THICKNESS	REINFORCEMENT	COMMENTS
F1	5' - 0"	5' - 0"	1' - 0"	(7) #4 BARS OCEW TOP AND BOTTOM	
WF1		1' - 6"	0' - 10"	(2) #4 BARS CONTINUOUS W/ #4 BARS TRANSVERSE @ 48" OC	

PIER AND PILASTER SCHEDULE

MARK	LENGTH	WIDTH	DIAMETER	REINFORCEMENT	COMMENTS
P1	1' - 0"	1' - 0"		(4) #4 BARS VERTICAL W/ #4 TIES @ 8" OC + (2) PAIR IN TOP 5"	PROVIDE STD 90 DEG HOOK @ VERT BARS INTO BOT OF FTG

SLAB SCHEDULE

MARK	THICKNESS	REINFORCEMENT	SURFACE FINISH	COMMENTS
SOG1	6"	SYNTHETIC MACRO FIBERS AS RECOMMENDED BY MANUFACTURER. DOSAGE TO BE DESIGNED FOR REPLACEMENT OF REINFORCEMENT RATIO OF 0.22% BUT NO LESS THAN 4 LB/CYD.	NORMAL STEEL-TROWELED (NONSLIP) FINISH AND SEALER	PROVIDE 8" THICKENED SLAB EDGES, TYPICAL. COORDINATE FINISH W/ ARCHITECTURAL DOCUMENTS.
SOG2	6"	#4 BARS EPOXY COATED @ 12" OCEW	LIGHT BROOM FINISH AND SEALER	TYPICAL @ EXTERIOR SLABS-ON-GRADE, PROVIDE 8" THICKENED SLAB EDGES

CAP PLATE SCHEDULE

MARK	TYPE
CP1	6x6 END COLUMN CAP GALVANIZED (SIMPSON ECCQ66-SDS2.5HDG OR EQUAL)
CP2	6x6 END COLUMN CAP L-SHAPE, LEFT GALVANIZED (SIMPSON ECCLLQ666SDSHDG OR EQUAL)
CP3	6x6 END COLUMN CAP L-SHAPE, RIGHT GALVANIZED (SIMPSON ECCLRQ666SDSHDG OR EQUAL)
CP4	6x6 COLUMN CAP GALVANIZED (SIMPSON CCQ66-SDS2.5HDG OR EQUAL)

COLUMN SCHEDULE

MARK	TYPE	Base Plate Type
C1	6x6 #2 SOUTHERN YELLOW PINE (TREATED)	6x6 GALVANIZED COLUMN BASE W/ 1" STANDOFF (SIMPSON CBS66DG OR EQUAL)

LINTEL SCHEDULE

MARK	MEMBER TYPES	BEARING
L1	(2) 2x6	(1) JACK AND (1) KING STUD EACH SIDE
L2	(3-Ply) LVL 2.0E 2600 Fb 1/34x16	(3) JACK AND (3) KING STUD EACH SIDE
L3	(3-PLY) TREATED LVL 2.0E 2600 Fb 1/3/4x16	

SHEAR WALL SCHEDULE

MARK	SHEATHING	HOLDOWN	ANCHOR	SILL PLATE FASTENING	ENDWALL STUDS
SW1	1/2" APA RATED SHEATING ONE SIDE w/ 10d NAILS @ 6" OC @ PANEL EDGES	2 1/2"x12 3/8" GALVANIZED TENSION TIE W/ (18) 10d 1 1/2" NAILS (SIMPSON HTT4 OR EQUAL)	5/8" GALVANIZED CONCRETE SCREW ANCHOR @ 4'-0" OC (SIMPSON THDB62800H OR EQUAL)	5/8" GALVANIZED CONCRETE SCREW ANCHORS @ 4'-0" OC (SIMPSON THDB62800H OR EQUAL)	(2)

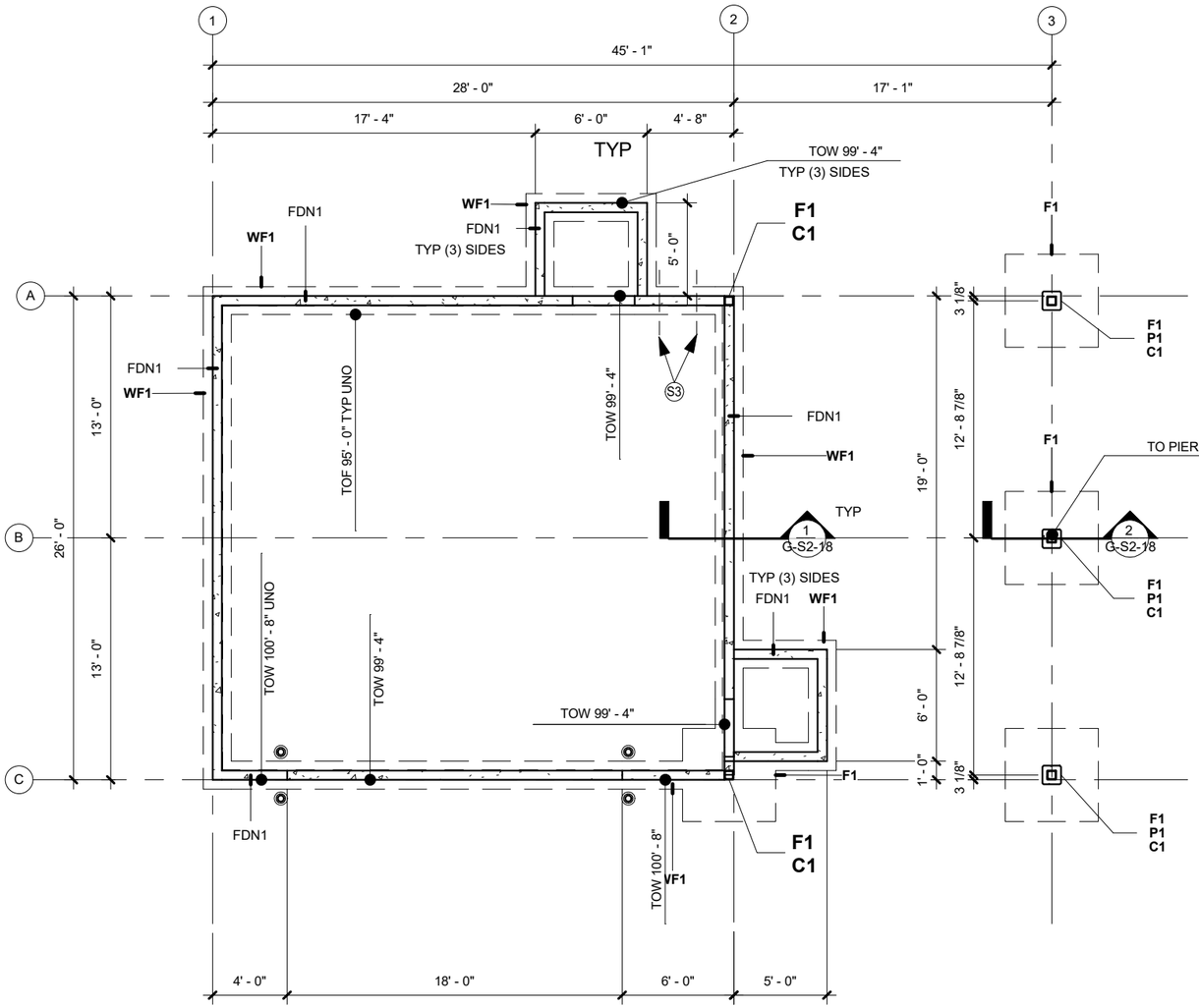
NOTES:
- ALL SHEAR WALLS ARE TO BE BLOCKED @ PANEL EDGES
- FULLY THREADED RODS TO BE MIN. MATERIAL ASTM F1554 GR.36
- ALL NON-LOAD BEARING SHEAR WALLS TO BE GRADE SPF#1#2 (OR BETTER) AND TO HAVE MAX STUD SPACING @ 16" OC
- WHERE NAIL SPACING IS 3" OC FOR 10d NAIL, PROVIDE MIN. 3" NOMINAL WIDTH OF BLOCKING ((2) 2X MEMBERS IS ADEQUATE)
- WHERE NAIL SPACING IS 3" OC OR LESS, NAILS MUST BE STAGGERED @ PANEL EDGES

SHEET NOTES

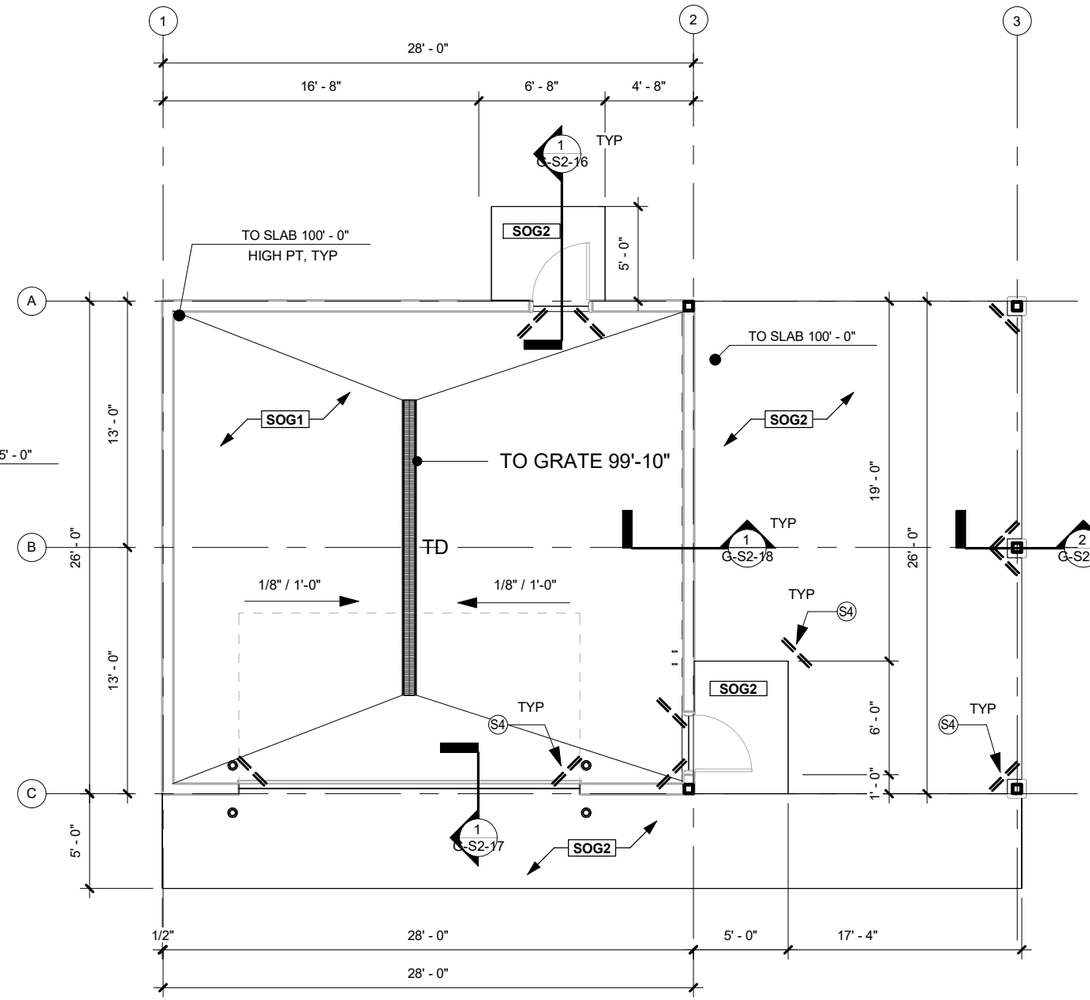
A. REFER TO GEOTECHNICAL EVALUATION REPORT FOR REQUIRED RECCOMENDATIONS FOR FOUNDATION OPTION #2 RAMMED-AGGREGATE PIER GROUND IMPROVEMENT.
B. ALL SLABS-ON-GRADE SHALL BE SUPPORTED ON RAMMED-AGGREGATE PIER GROUND IMPROVEMENT. RAMMED-AGGREGATE PIER DESIGN AND LAYOUT SHALL BE BY OTHERS.
C. REFER TO STRUCTURAL NOTES FOR EXPECTATIONS ON FOUNDATION PROTECTION DURING WINTER CONDITIONS. FOUNDATIONS SHALL NOT BE POURED ON FROZEN SOIL AND FOUNDATIONS THAT HAVE BEEN POURED THAT SOIL HAS FROZEN BELOW SHALL BE REMOVED AND RECONSTRUCTED WITH NEWLY COMPACTED FILL PER GEOTECHNICAL RECOMMENDATIONS.
D. REFER TO CIVIL DOCUMENTS FOR ALL EXTERIOR CONCRETE WORK, EXCEPT FOR STOOPS, APRONS, AND CONCRETE FOUNDATIONS.
E. COORDINATE GROUNDING ELECTRODE LOCATION REQUIREMENTS WITH ELECTRICAL DOCUMENTS. INSTALL PER TYPICAL GROUNDING ELECTRODE DETAIL.
F. COORDINATE ALL OPENINGS AND PENETRATIONS THRU FOUNDATION WALLS PRIOR TO POURING CONCRETE.
G. COORDINATE ALL DOOR OPENING LOCATIONS AND WIDTHS WITH ARCHITECTURAL DOCUMENTS.
H. CONTRACTOR SHALL PROVIDE ADDITIONAL SLAB REINFORCING AT ALL REENTRANT CORNERS, TYPICAL. REFER TO DETAIL FOR BAR SIZE AND LAYOUT.
I. REFER TO FOUNDATION AND SLAB DETAILS FOR TYPICAL CONSTRUCTION JOINT AND CONTROL JOINT DETAILS.
J. CONTRACTOR SHALL SELECT FLOOR SLAB CONTROL JOINTS AND HAVE THEM SHOWN ON REINFORCEMENT SHOP DRAWINGS. REFER TO CONTROL JOINT PLACEMENT GUIDELINES.
K. ALL DISCONTINUOUS CONTROL JOINTS SHALL HAVE (2) #4 x 2'-0" BARS PERPENDICULAR AT JOINT END.

KEYNOTE LEGEND

S3	PIPE THRU/BELOW FOUNDATION WALL. PROVIDE SLEEVE AS REQUIRED. REFER TO DETAILS. REFER TO PLUMBING DOCUMENTS FOR PIPE SIZE, ELEVATION, AND LOCATION.
S4	CONTRACTOR SHALL PROVIDE ADDITIONAL SLAB REINFORCING AT ALL REENTRANT CORNERS, TYPICAL. REFER TO DETAIL FOR BAR SIZE AND LAYOUT.



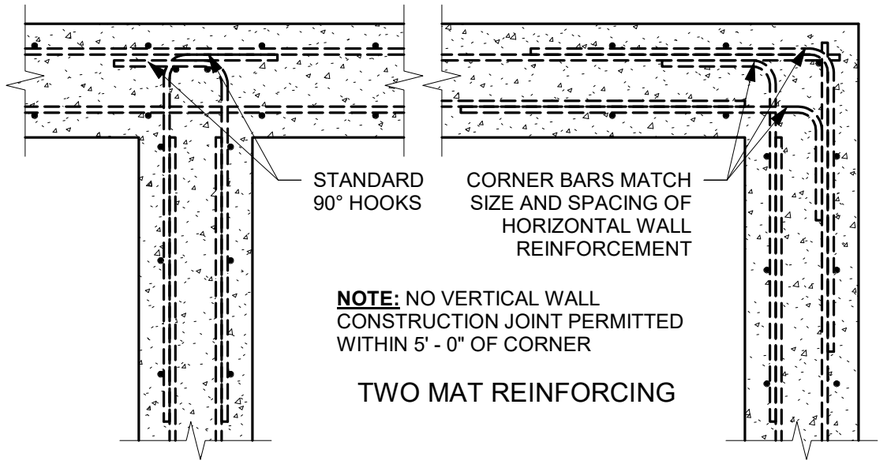
1 FOUNDATION PLAN
1/8" = 1'-0"

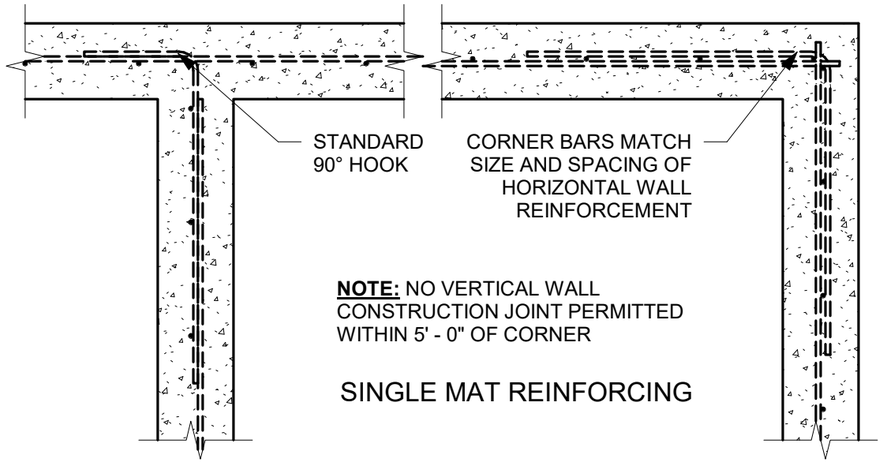


2 SLAB PLAN
1/8" = 1'-0"

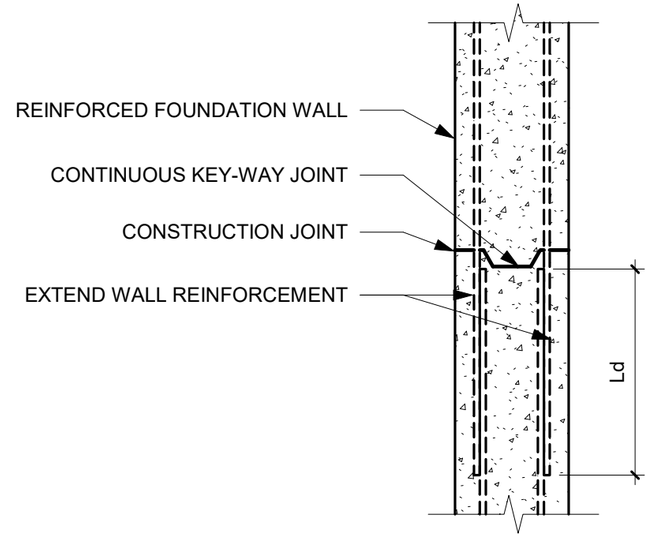
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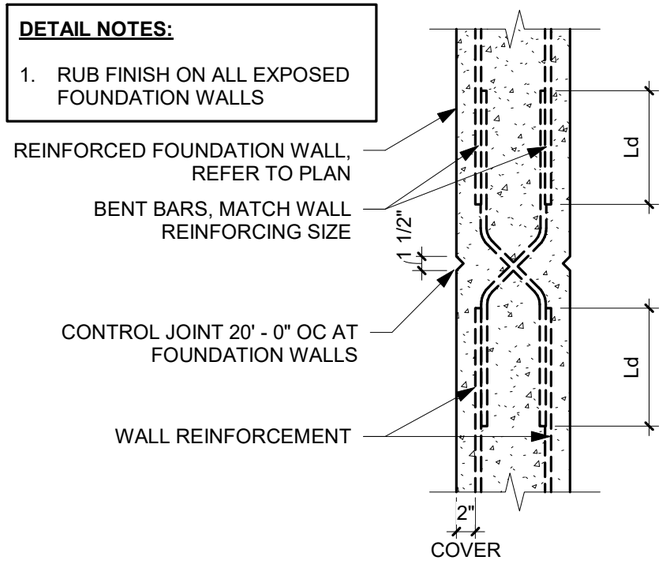
1 TYPICAL WALL CORNER REINFORCEMENT
3/4" = 1'-0"



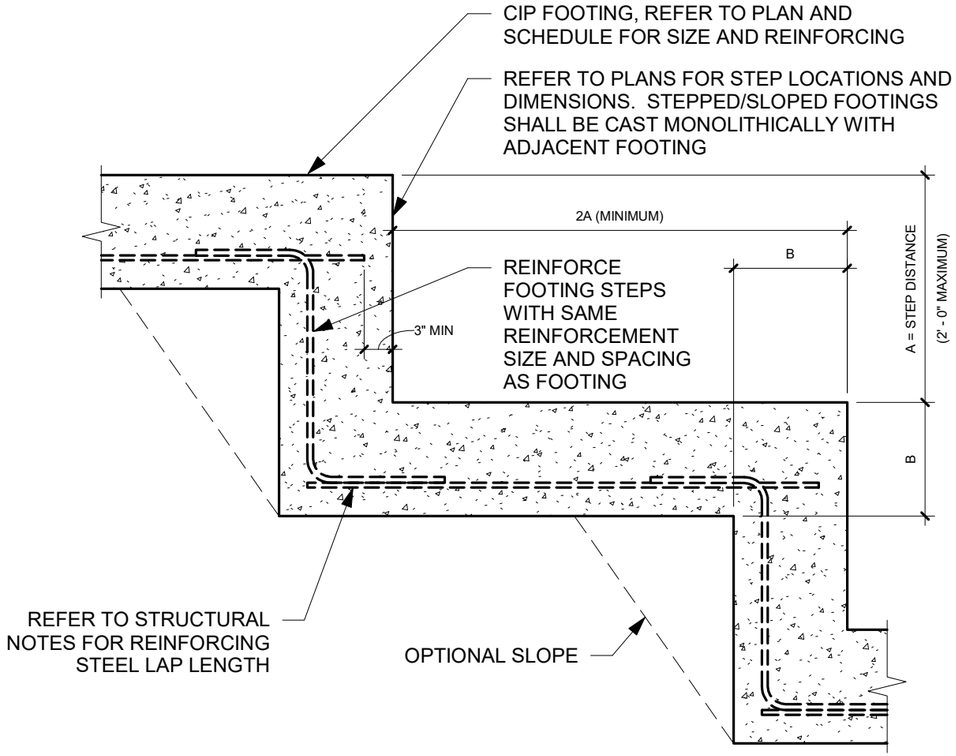
2 CIP CONCRETE
CONSTRUCTION JOINT DETAIL
3/4" = 1'-0"

DETAIL NOTES:

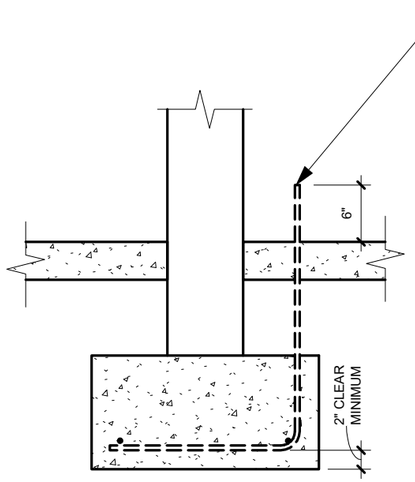
1. RUB FINISH ON ALL EXPOSED FOUNDATION WALLS



3 CIP CONCRETE
CONTROL JOINT DETAIL
3/4" = 1'-0"



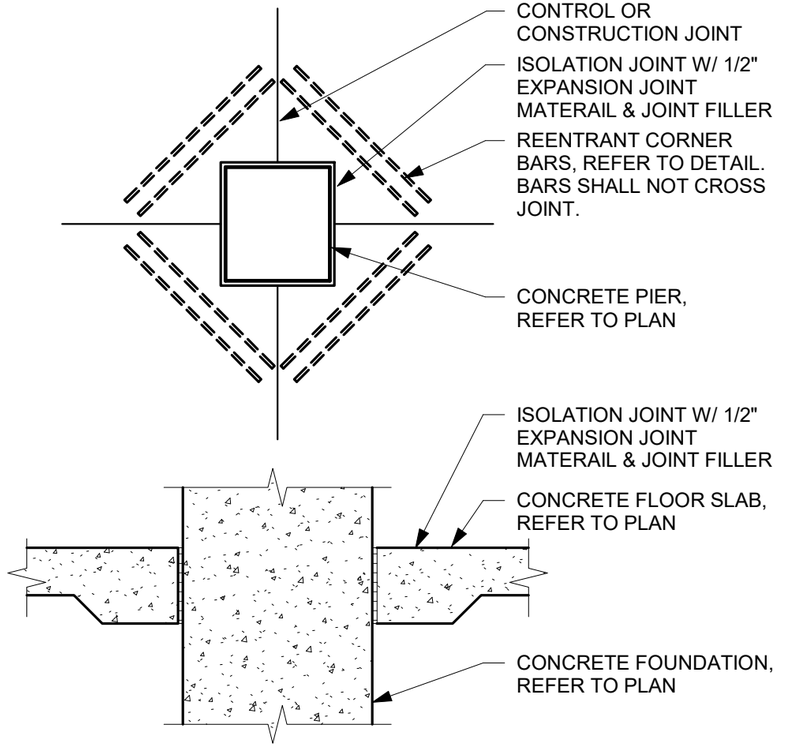
1 STEPPED FOOTING DETAIL
3/4" = 1'-0"



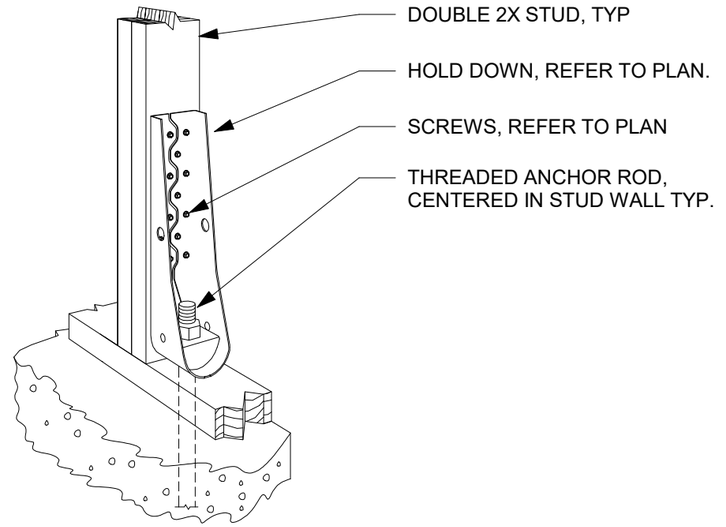
NOTES:

1. PURPOSE OF DETAIL IS TO INDICATE TYPICAL GROUNDING ELECTRODE INFORMATION ONLY AND DOES NOT REFLECT ACTUAL FOUNDATION CONSTRUCTION; REFER TO PLANS, SECTIONS, AND DETAILS FOR FOUNDATION CONSTRUCTION INFORMATION.
2. SUPPLY AND INSTALL GROUNDING ELECTRODE FOR GROUNDING OF ELECTRICAL SERVICE AS REQUIRED BY ELECTRICAL DOCUMENTS.

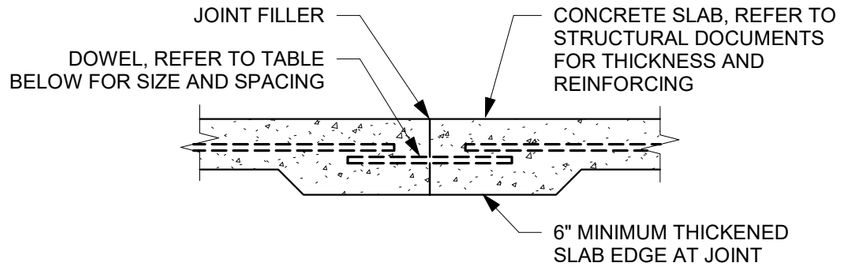
3 GROUNDING ELECTRODE DETAIL
3/4" = 1'-0"



2 TYPICAL ISOLATION JOINT DETAIL
3/4" = 1'-0"

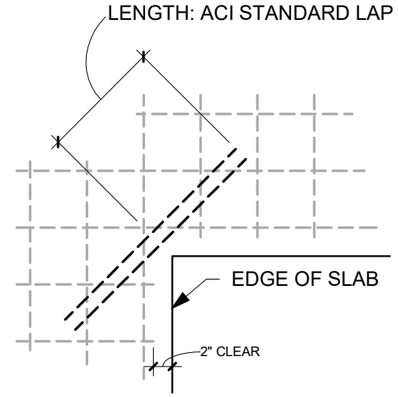


4 TYPICAL HOLD DOWN DETAIL
1 1/2" = 1'-0"



DOWEL SIZE AND SPACING FOR CONSTRUCTION JOINTS						
	DOWEL DIMENSIONS			DOWEL SPACING (CENTER-TO-CENTER)		
SLAB DEPTH	ROUND	SQUARE	PLATE DOWEL	ROUND	SQUARE	PLATE DOWEL
5" TO 6"	3/4"Ø x 10"	3/4" x 10"	M/R*	12"	14"	18"
7" TO 8"	1"Ø x 13"	1" x 13"	M/R*	12"	14"	18"
9" TO 11"	1 1/4"Ø x 15"	1 1/4" x 15"	M/R*	12"	12"	18"
*M/R = MANUFACTURER'S RECOMMENDATIONS. BECAUSE OF THE VARIOUS PLATE DOWEL GEOMETRIES AND INSTALLATION DEVICES AVAILABLE FROM DIFFERENT MANUFACTURERS, THE MANUFACTURERS SHOULD BE CONSULTED FOR THEIR RECOMMENDED PLATE DOWEL SIZE.						

1 TYPICAL CONSTRUCTION JOINT DETAIL
1" = 1'-0"

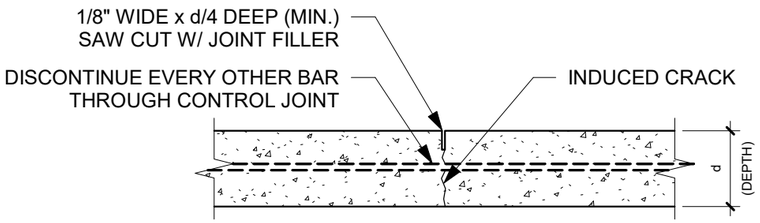


SLAB REINF BARS	ADDITIONAL CORNER BARS
WWF / FIBER	(2) #4
#4	(2) #4
#5	(2) #5
#6	(2) #5
#7	(2) #5
#8	(2) #6
*USE LARGEST DIAMETER BAR IN EITHER DIRECTION FOR DETERMINING CORNER BARS.	

NOTE:
PROVIDE 2" CLEAR COVER OVER ALL BARS AT OPENINGS

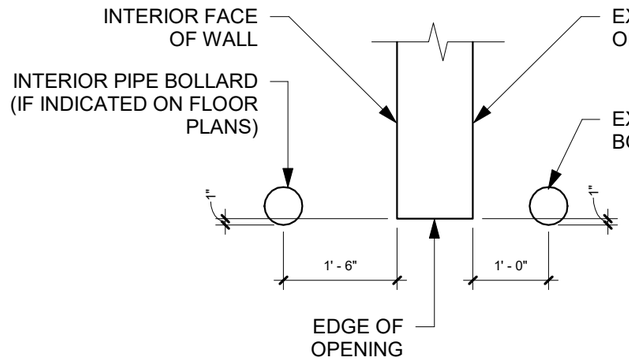
ADDITIONAL CORNER BARS:
- WHEN SLAB HAS BOTTOM REINFORCEMENT LAYER ONLY, PLACE DIAGONAL BARS AT MID-DEPTH.
- WHEN SLAB HAS TOP REINFORCEMENT LAYER ONLY, PLACE DIAGONAL BARS BELOW TOP REINFORCEMENT.
- WHEN SLAB HAS TOP & BOTTOM REINFORCEMENT LAYERS, PLACE DIAGONAL BARS BETWEEN TOP & BOTTOM REINFORCEMENT (2-LAYERS)

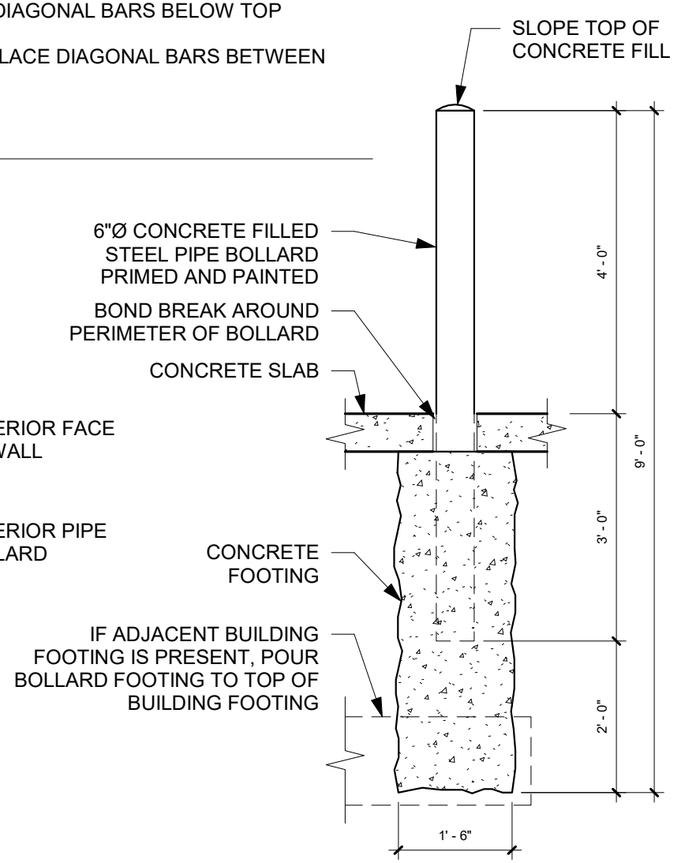
2 SLAB REENTRANT CORNER DETAIL
3/4" = 1'-0"



TYPICAL CONTROL JOINT SPACING AND JOINT DEPTH		
REINFORCED SLAB DEPTH	PREFERRED SPACING	CONTROL JOINT DEPTH (MIN.)
4"	8' TO 12'	1"
5"	10' TO 15'	1.25"
6"	12' TO 18'	1.5"
7"	14' TO 21'	1.75"
≥ 8"	16' TO 24'	2"
REFER TO CONTROL JOINT PLACEMENT GUIDE FOR ADDITIONAL CONTROL JOINT INFORMATION.		

3 TYPICAL CONTROL JOINT DETAIL
1" = 1'-0"



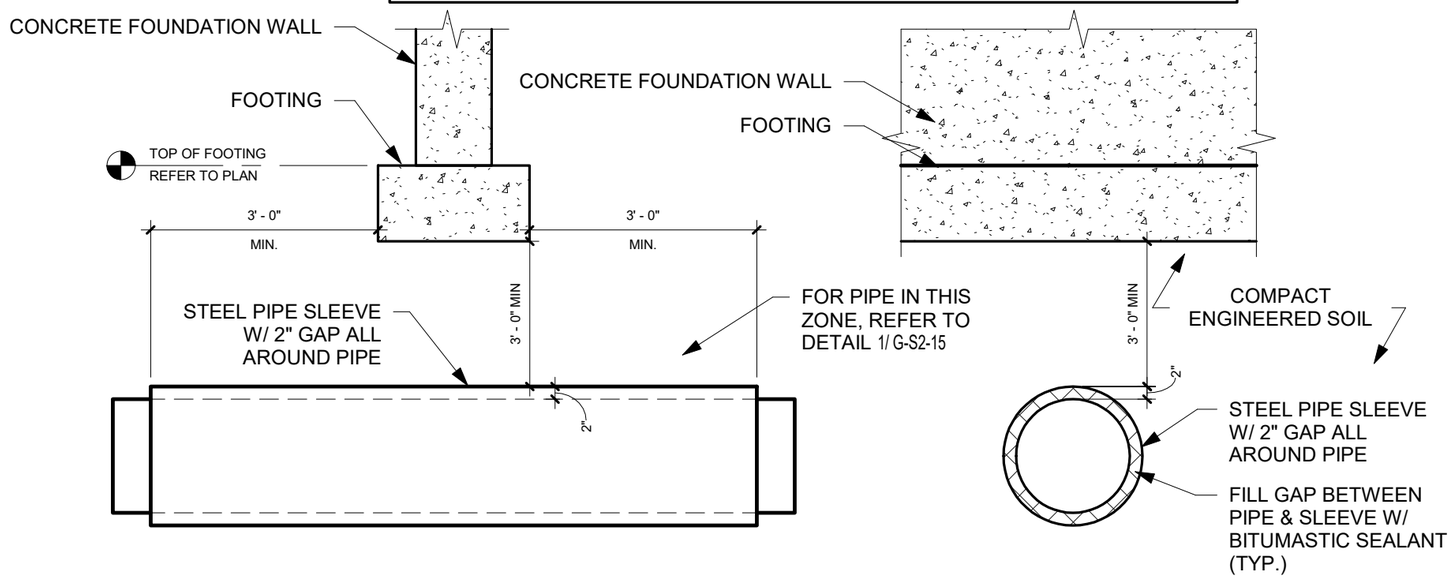


4 PIPE BOLLARD DETAIL
1/2" = 1'-0"

2

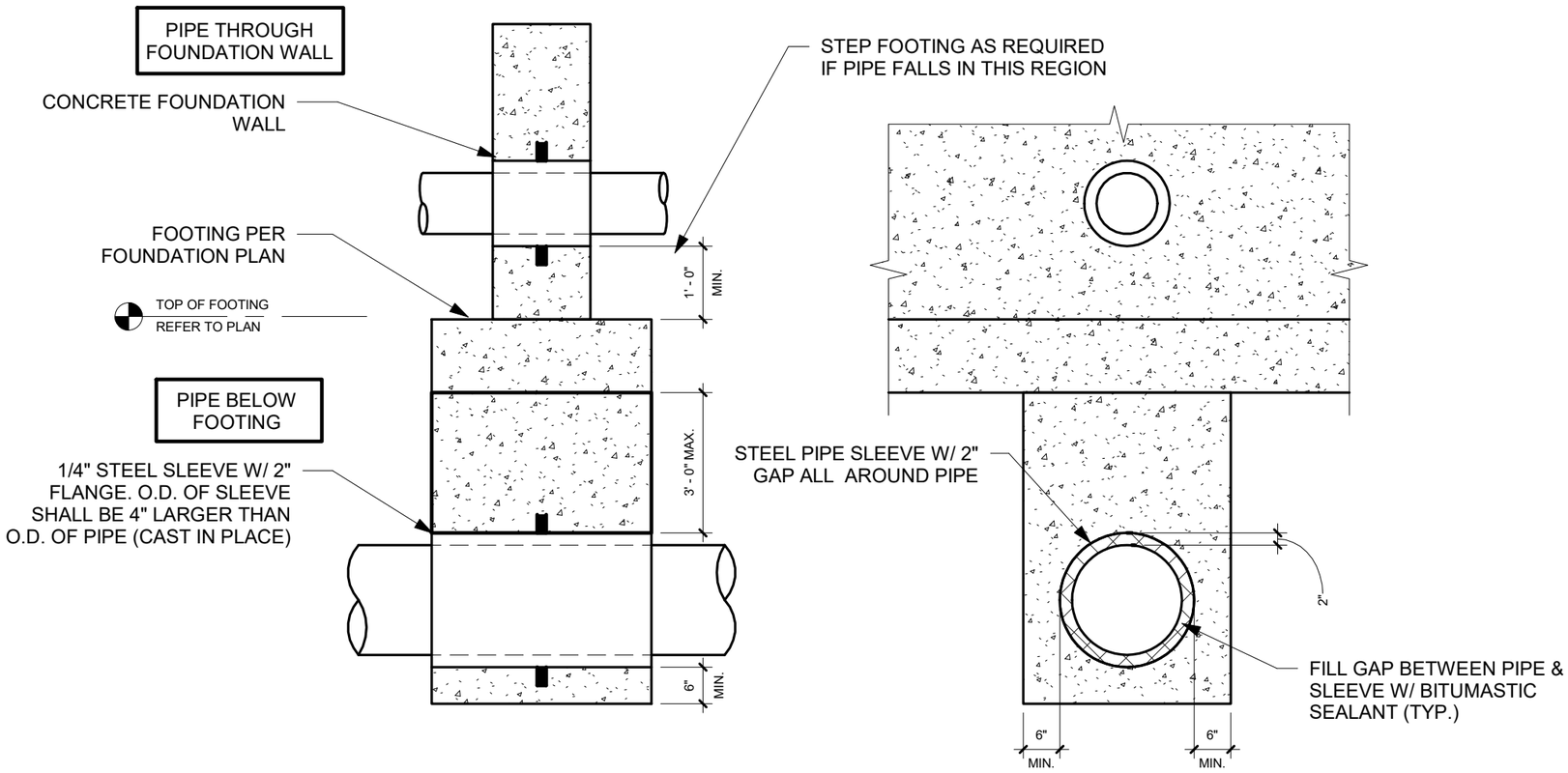
DETAIL NOTES:

1. COORDINATE LOCATION OF PIPES W/ CIVIL & MECHANICAL DRAWINGS.
2. PIPES THROUGH FOOTING ARE NOT PERMITTED. STEP FOOTING AS REQUIRED



1 MECHANICAL LINE OVER 3' UNDER FOOTING DETAIL
1/2" = 1'-0"

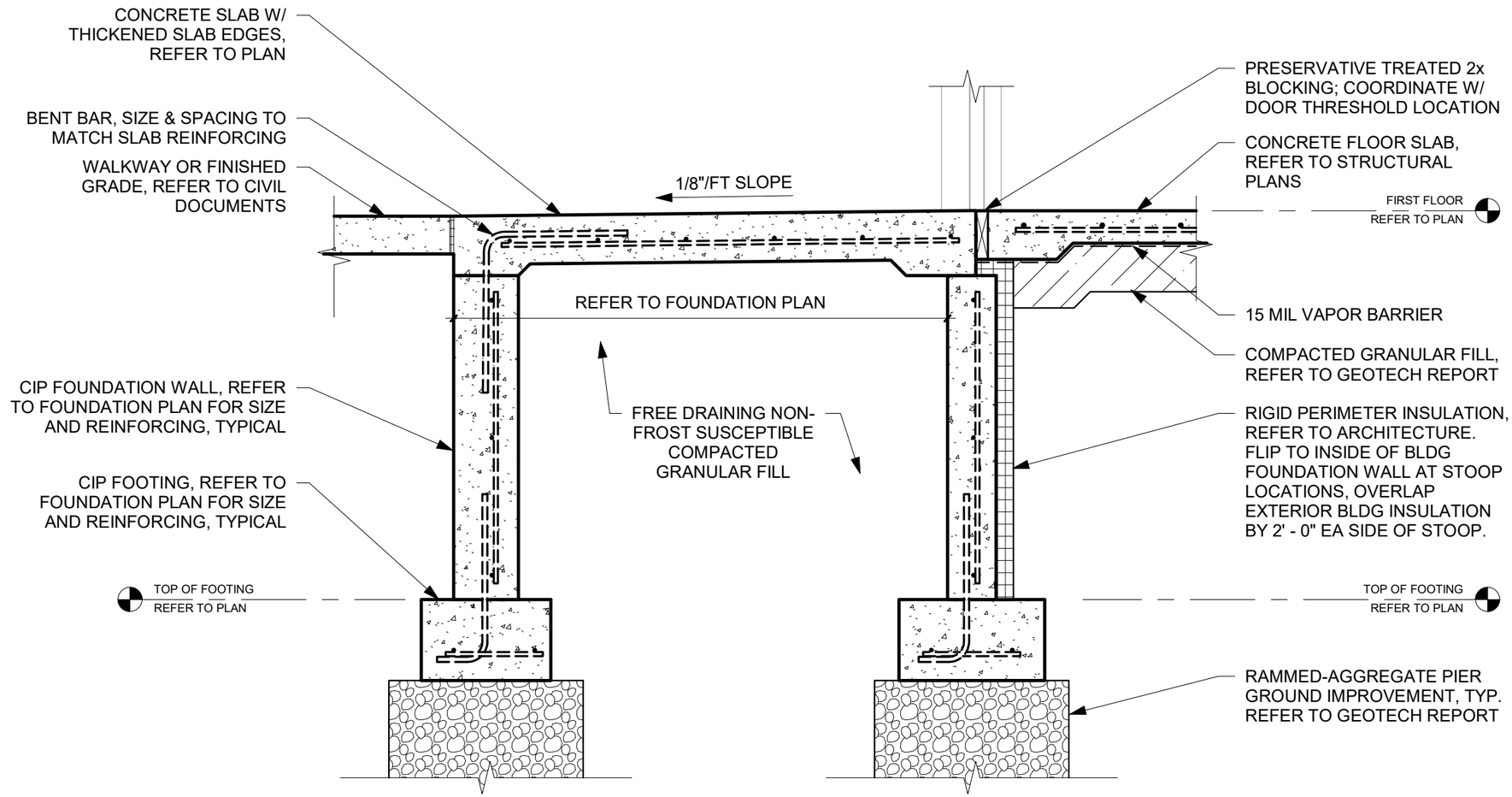
2



1 MECHANICAL LINE UNDER FOOTING DETAIL

1/2" = 1'-0"

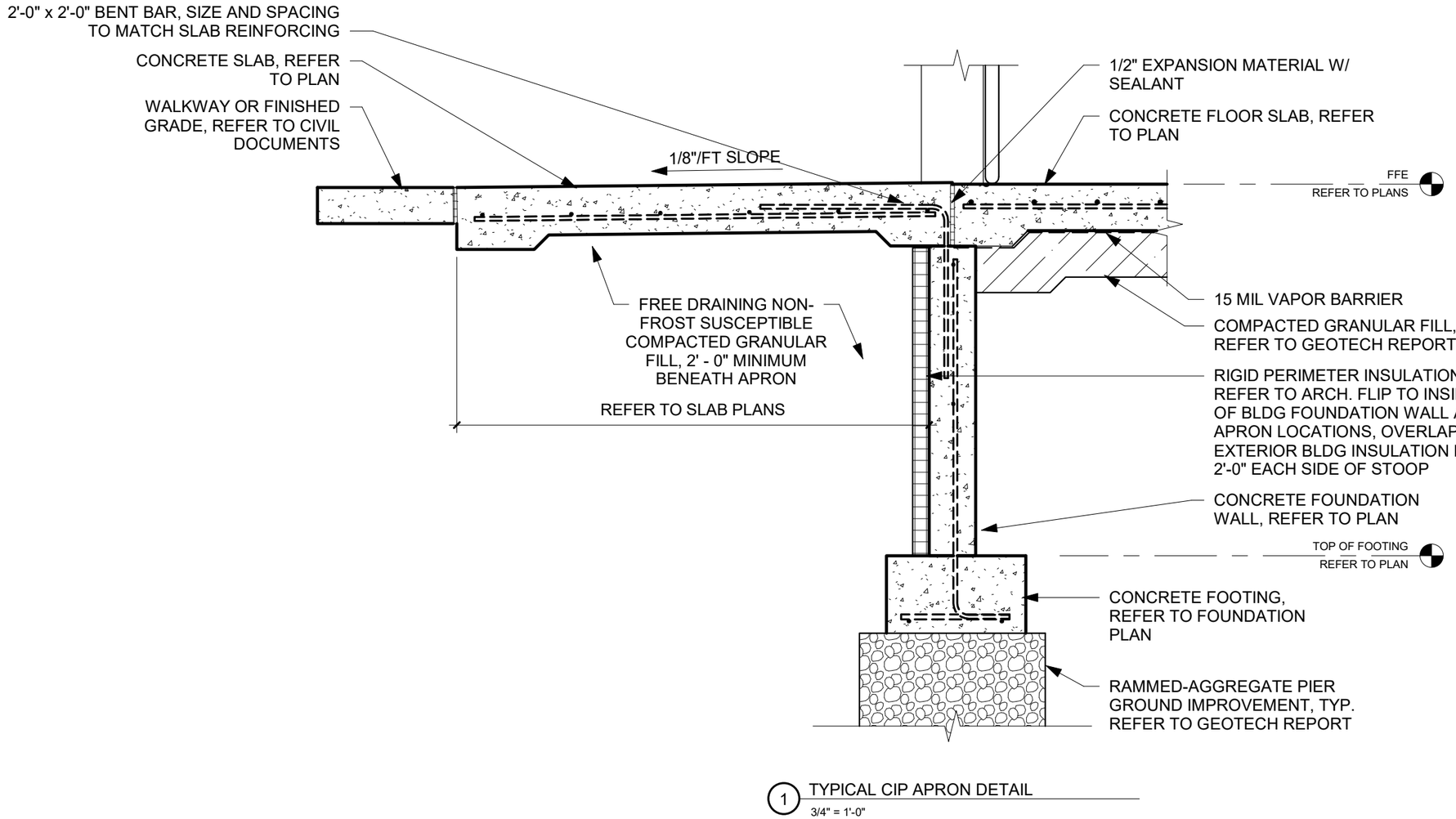
2



1 TYPICAL CIP STOOP DETAIL

3/4" = 1'-0"

2



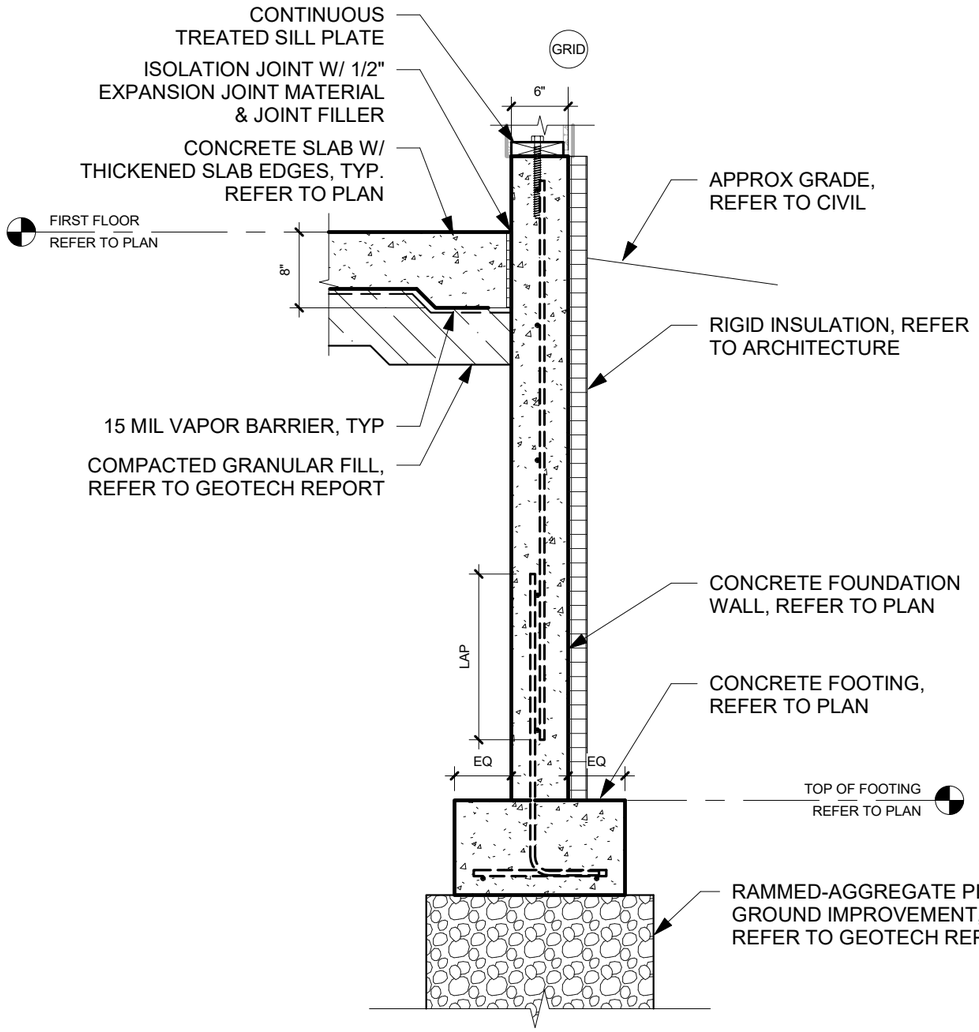
1 TYPICAL CIP APRON DETAIL

3/4" = 1'-0"

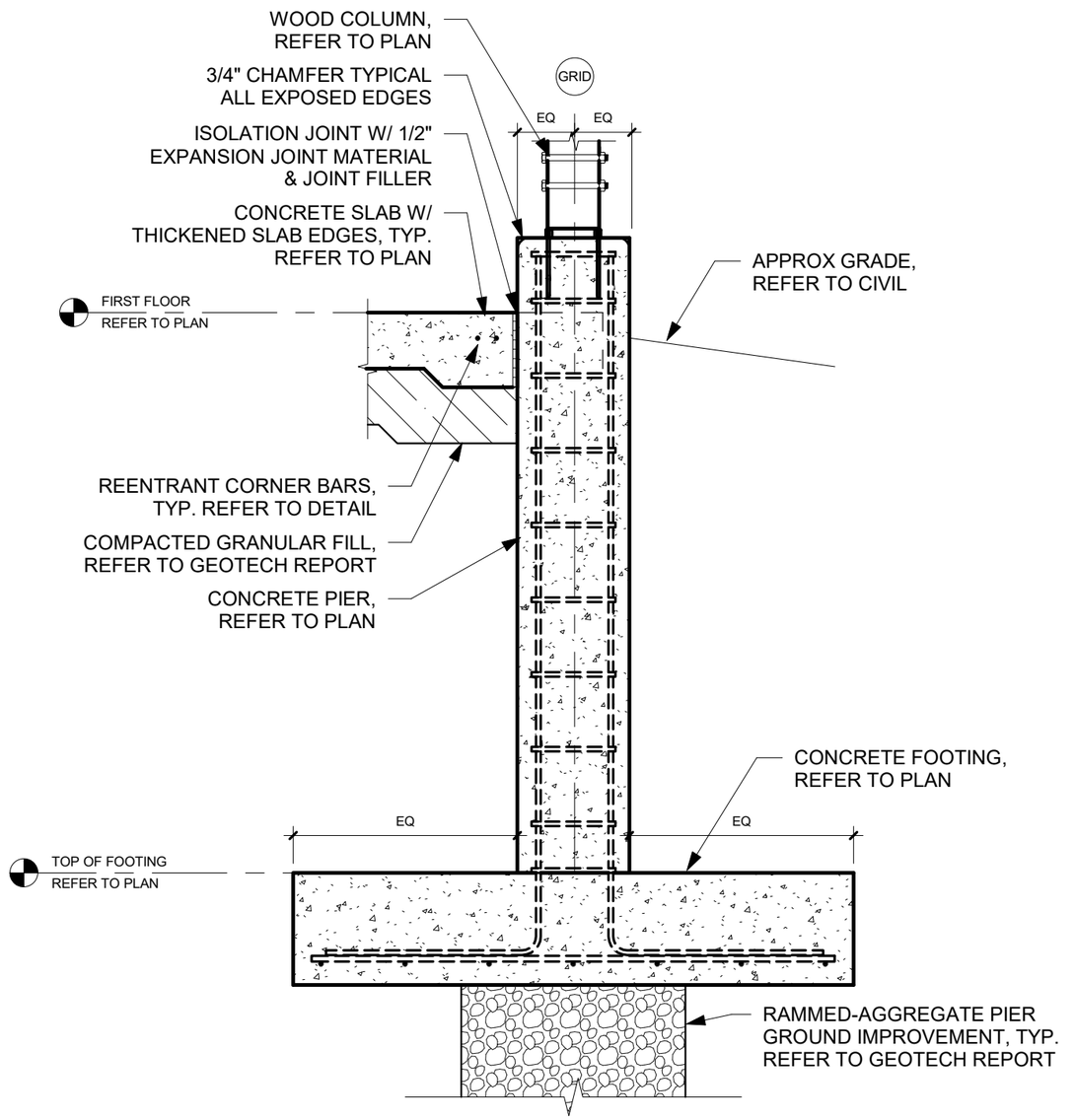
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	FOUNDATION & SLAB DETAILS	SHEET NO: G-S2-17

PLOT DATE: 1/26/2024 2:40:01 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2



1 WALL FOUNDATION AND FOOTING DETAIL
3/4" = 1'-0"



2 POST PIER AND FOOTING DETAIL
3/4" = 1'-0"

SHEET NOTES

A. ALL ROOF TRUSSES SHALL BE PRE-ENGINEERED WOOD ROOF TRUSSES SPACED AT 24" OC MAX.

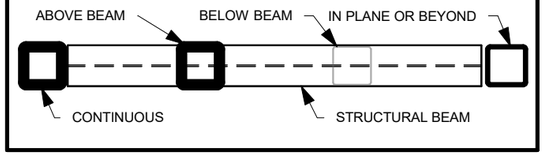
B. REFER TO ARCHITECTURAL DOCUMENTS FOR TRUSS HEEL HEIGHT REFERENCE.

C. ROOF TRUSS DESIGN, LAYOUT, BRACING, BRIDGING, AND ATTACHMENT TO WOOD BEARING WALLS BY WOOD TRUSS SUPPLIER. COORDINATE TRUSS ATTACHMENT W/ CONTRACTOR.

D. REFER TO STRUCTURAL NOTES FOR ALL LOADING REQUIREMENTS. UNBALANCED SNOW LOADS SHALL BE CONSIDERED IN TRUSS DESIGN.

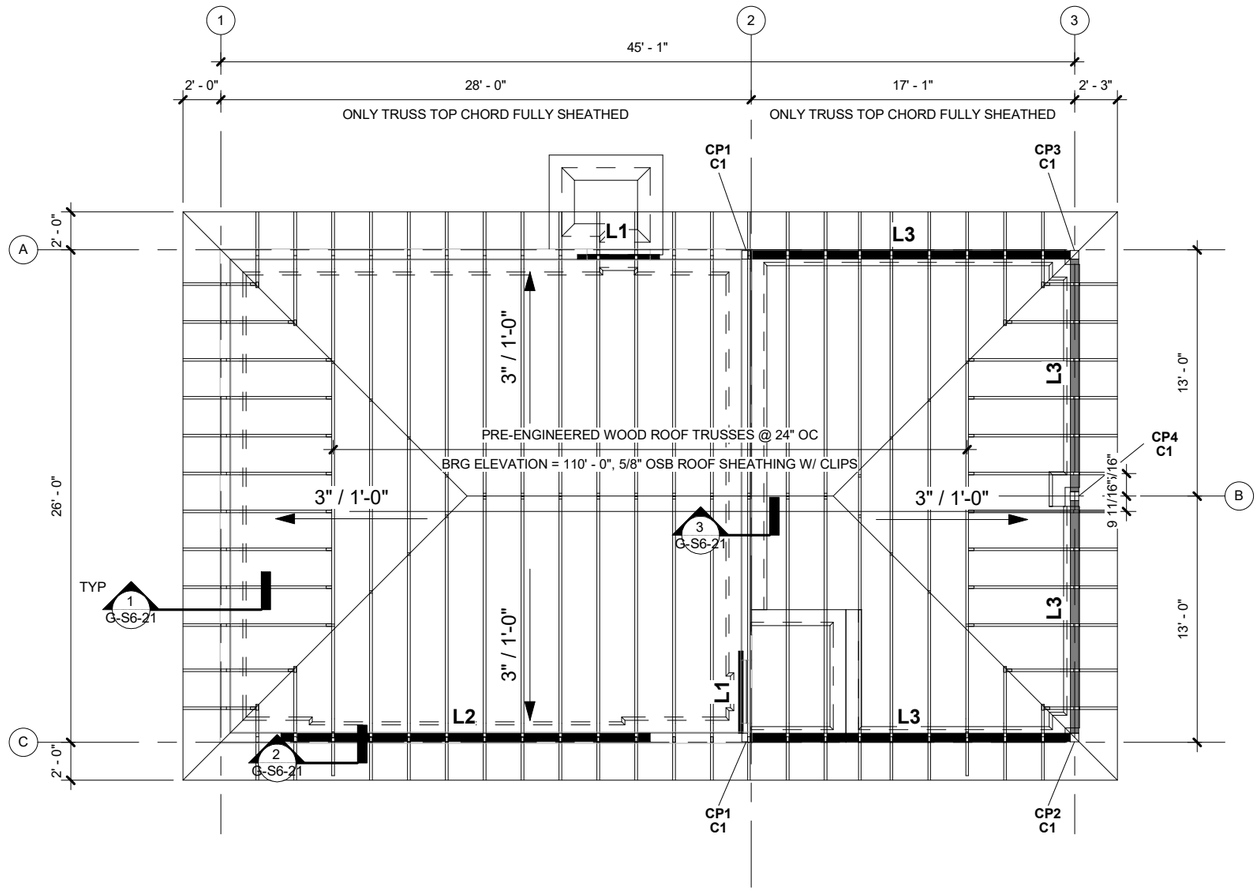
E. ALL EQUIPMENT, PIPING, AND DUCTWORK SHALL BE ROUTED TO AVOID CONFLICTS WITH STRUCTURE, OTHER EQUIPMENT, ETC. UNLESS SPECIFICALLY DIMENSIONED, ANY PIPING AND DUCTWORK SHOWN INDICATE GENERAL LOCATION ONLY. CONTRACTOR SHALL COORDINATE. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS.

COLUMN GRAPHICS LEGEND

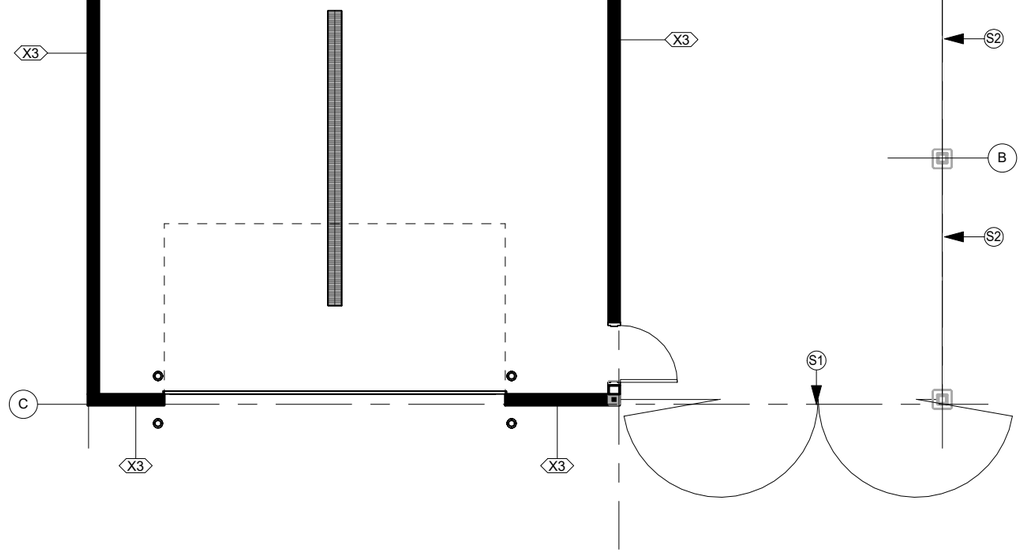


KEYNOTE LEGEND

S1	SWING GATE WITH PRIVACY SLATS AND LATCH. REFER TO CIVIL.
S2	FENCE WITH PRIVACY SLATS, REFER TO CIVIL.



1 ROOF FRAMING PLAN
1/8" = 1'-0"



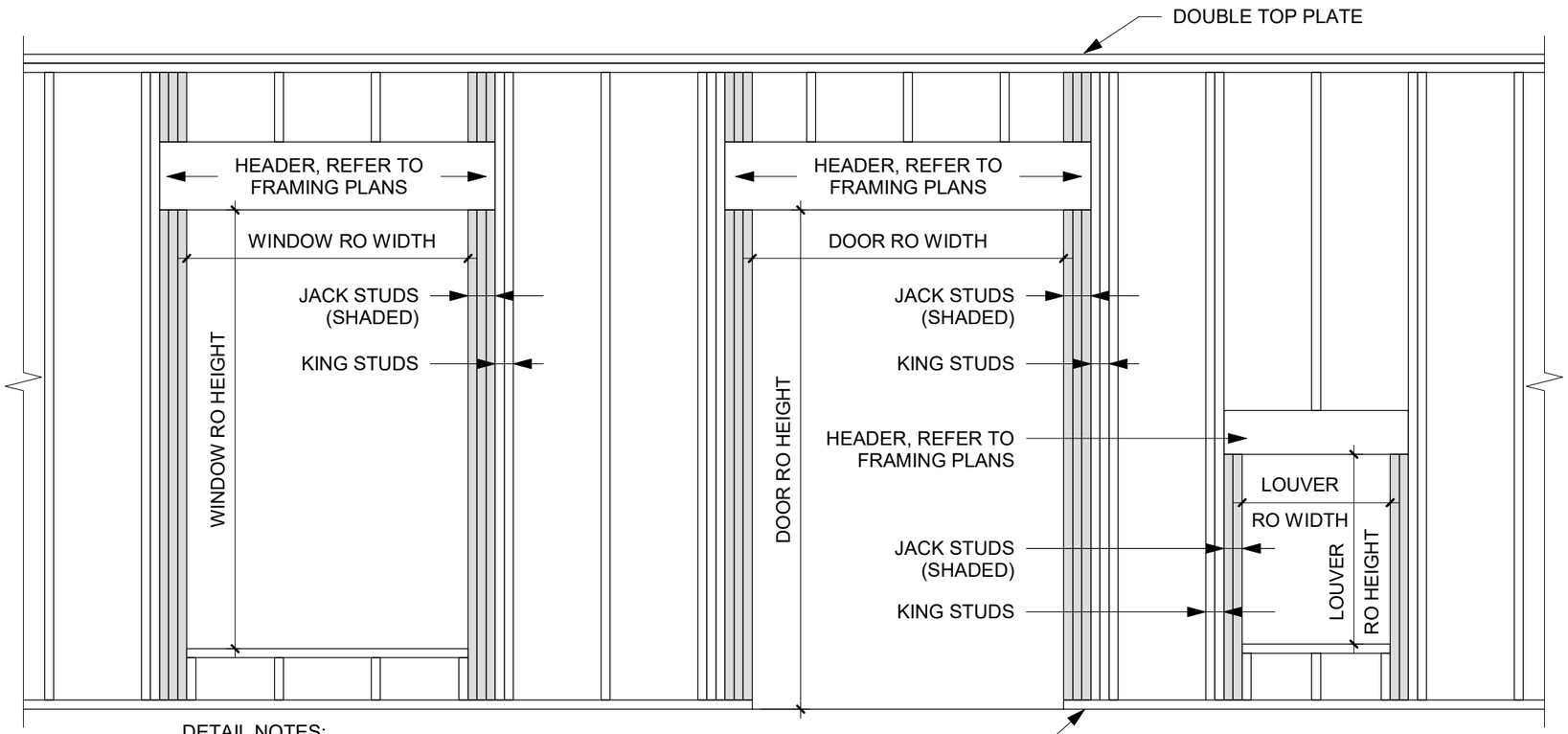
2 SHEAR WALL PLAN
1/8" = 1'-0"

N

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ROOF FRAMING PLAN AND SHEAR WALL PLAN	SHEET NO: G-S4-11

PLOT DATE: 1/26/2024 2:40:02 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

2

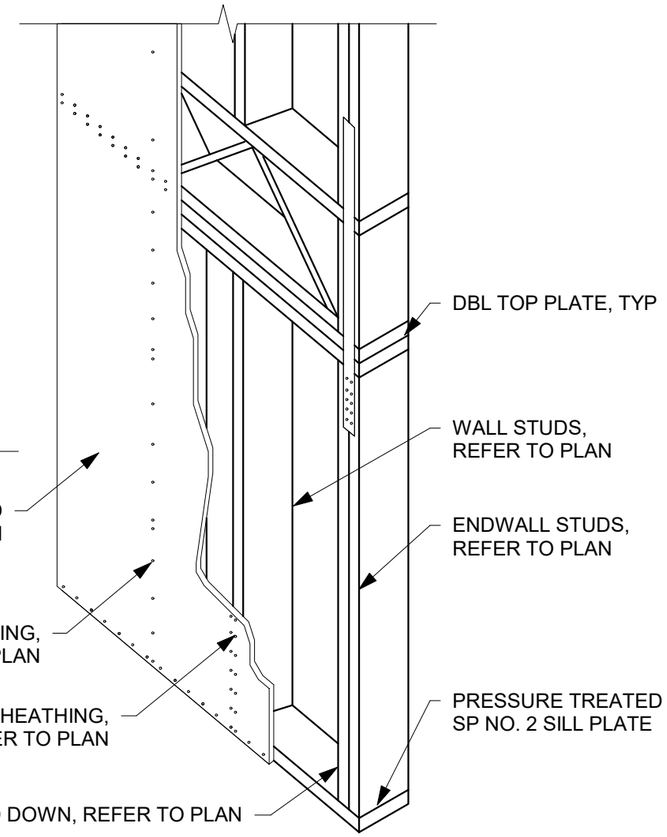


DETAIL NOTES:

1. FOR ALL JACK AND KING STUD REQUIREMENTS:
   - REFER TO THE STRUCTURAL FRAMING PLANS FOR LINTEL TYPE.
   - REFER TO SCHEDULES FOR STUD QUANTITIES.

1 TYPICAL WALL FRAMING ELEVATION

1/2" = 1'-0"



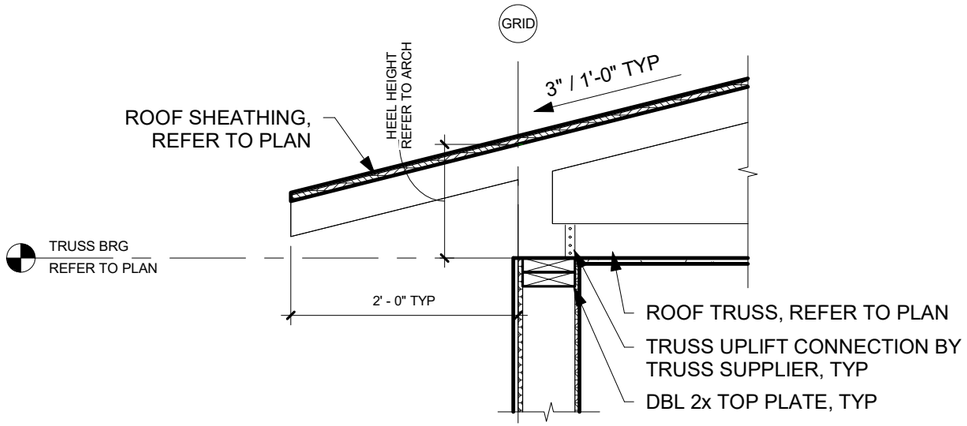
2 TYPICAL SHEAR WALL ISOMETRIC

3/4" = 1'-0"

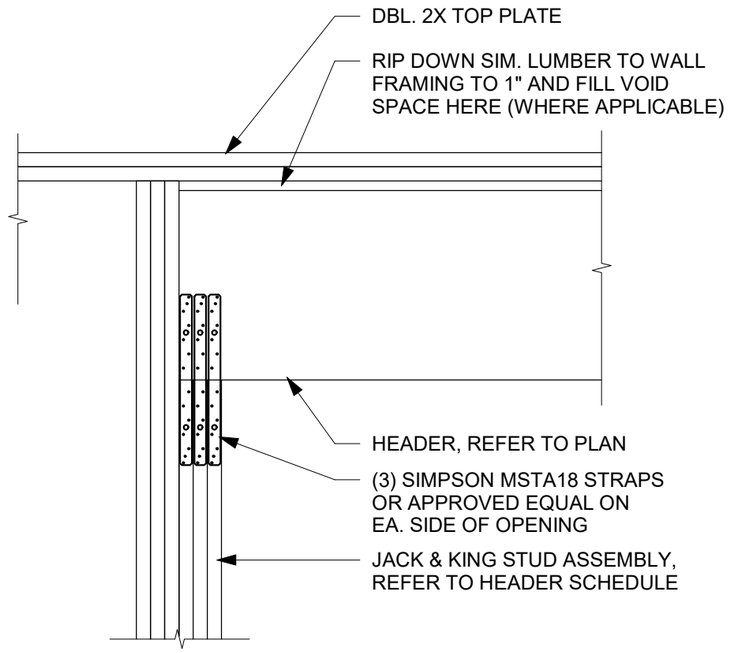
STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90	COUNTY: MONROE	WALL FRAMING DETAILS	SHEET NO: G-S6-11

PLOT DATE: 1/26/2024 2:40:03 PM PLOT BY: ISG INC. PLOT NAME: KSS PLOT SCALE: AS INDICATED

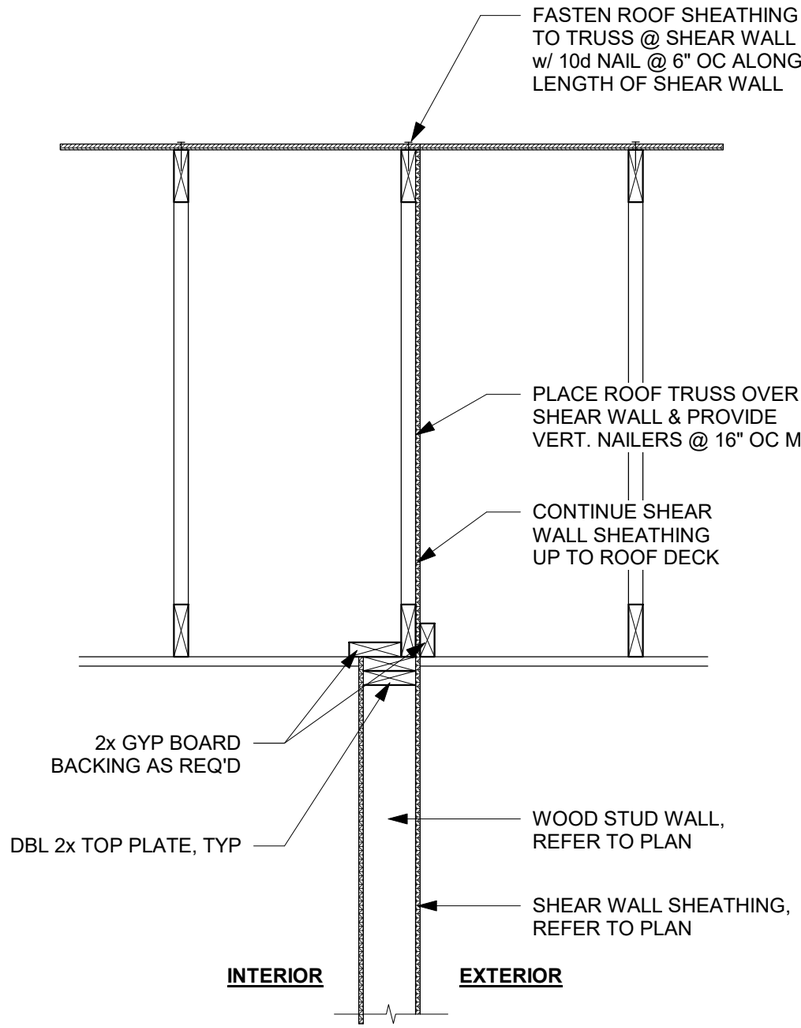
2



1 TYPICAL ROOF TRUSS BEARING DETAIL
3/4" = 1'-0"



2 UPLIFT STRAP CONNECTION @ OHD HEADER
3/4" = 1'-0"

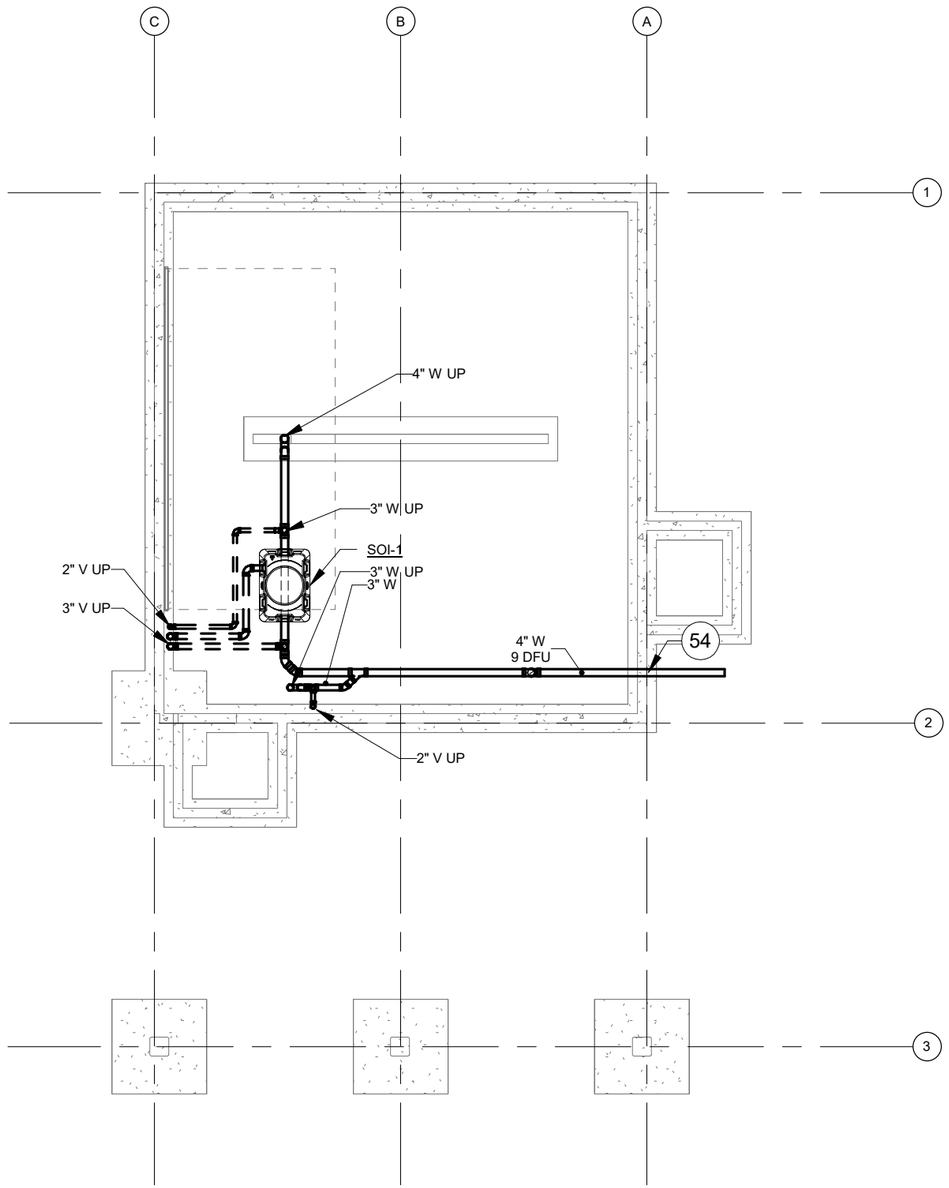


3 INTERMEDIATE SHEAR WALL FRAMING DETAIL
3/4" = 1'-0"

2

KEYNOTE LEGEND

54	-6' 0" BELOW GRADE. 4" W TO MANHOLE AND SUMP PUMP. COORDINATE WITH CIVIL PLANS FOR CONTINUATION.

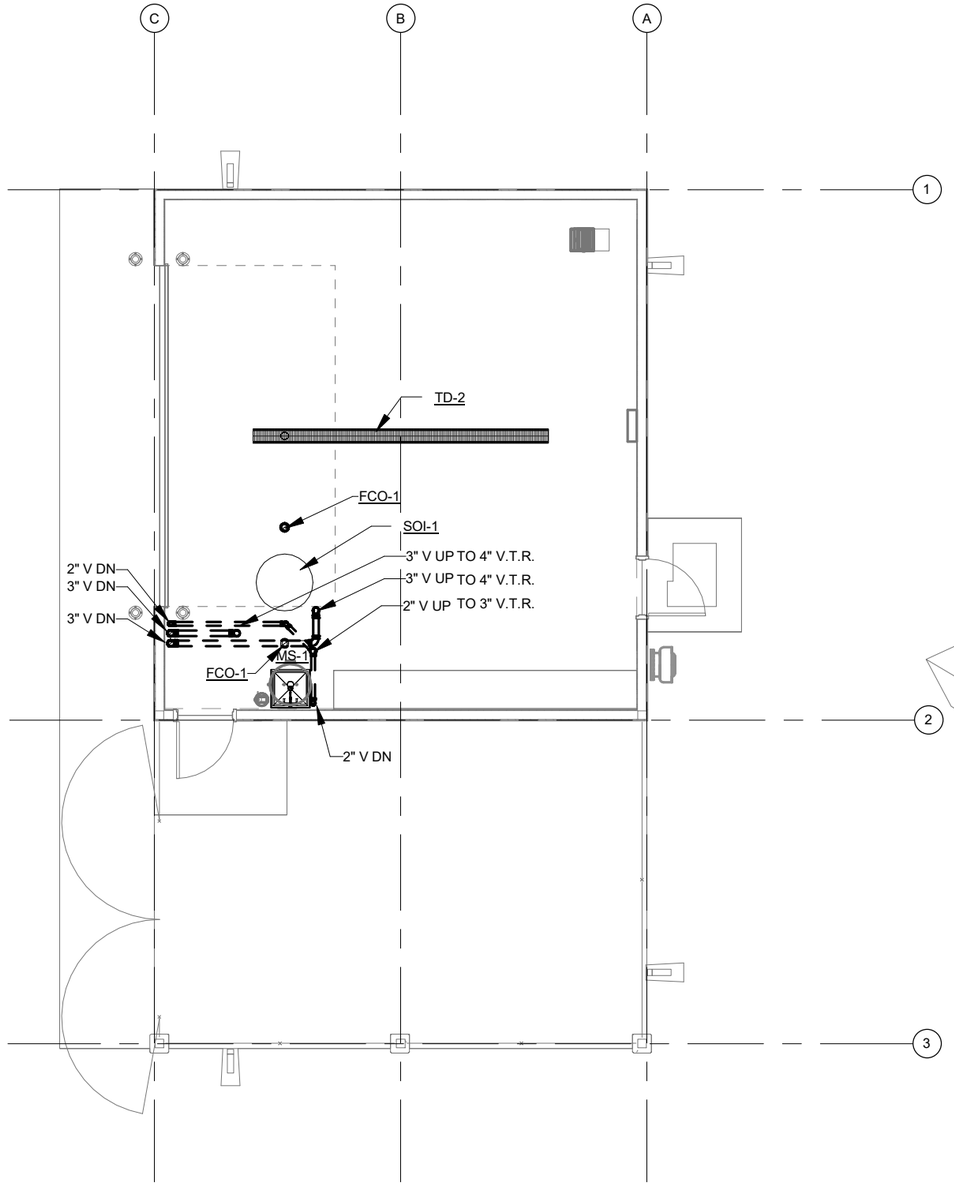


1 UNDERFLOOR SANITARY PLUMBING PLAN - MAINTANENCE BUILDING
1/8" = 1'-0"

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		UNDERFLOOR SANITARY PLUMBING PLAN - MAINTENANCE BUILDING	SHEET NO: G-P2-00

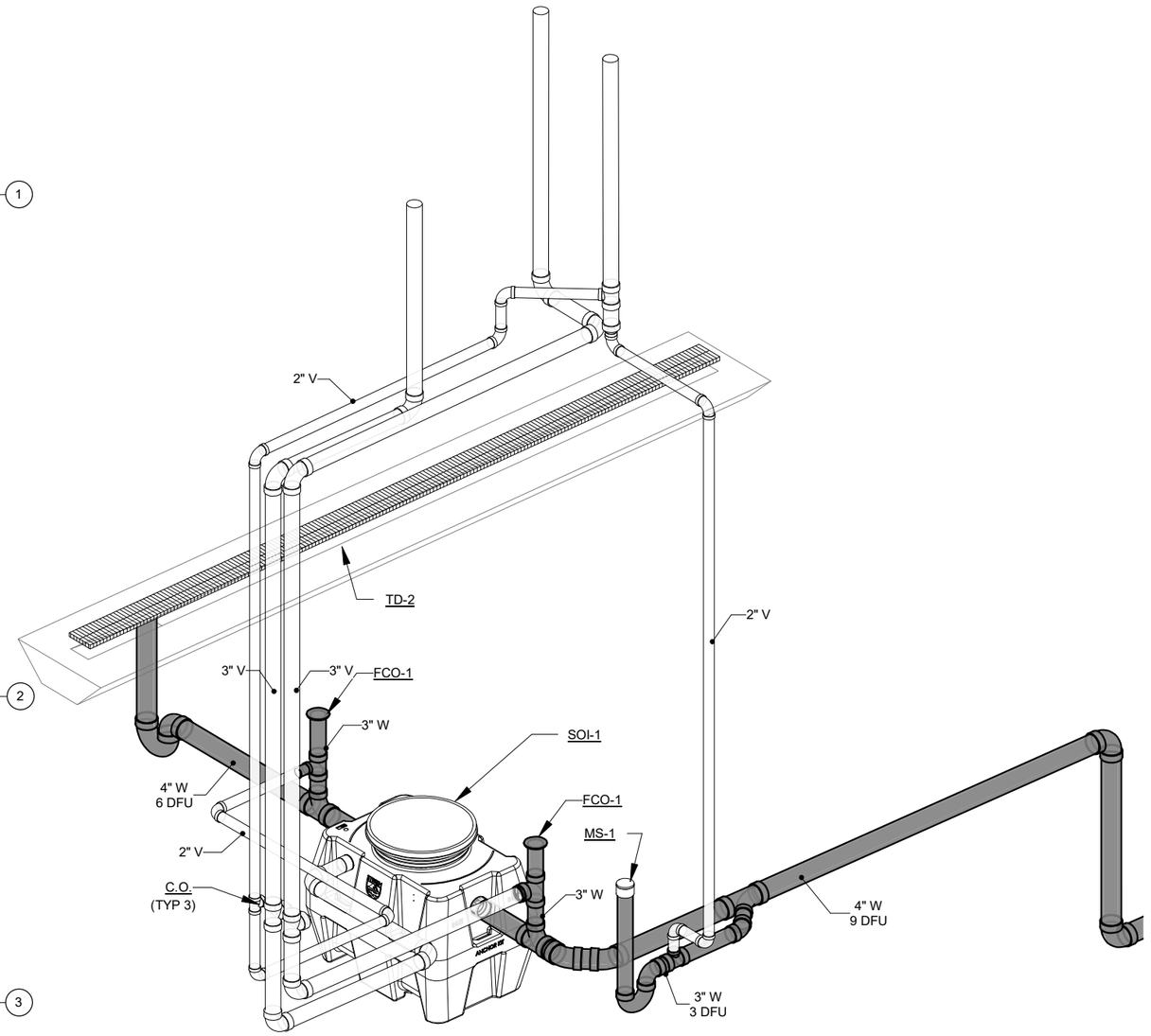
PLOT DATE: 1/26/2024 4:24:51 PM PLOT BY: ISG INC. PLOT NAME: ACH PLOT SCALE: AS INDICATED

KEYNOTE LEGEND



1 FIRST FLOOR SANITARY PLAN - MAINTENANCE BUILDING

1/8" = 1'-0"



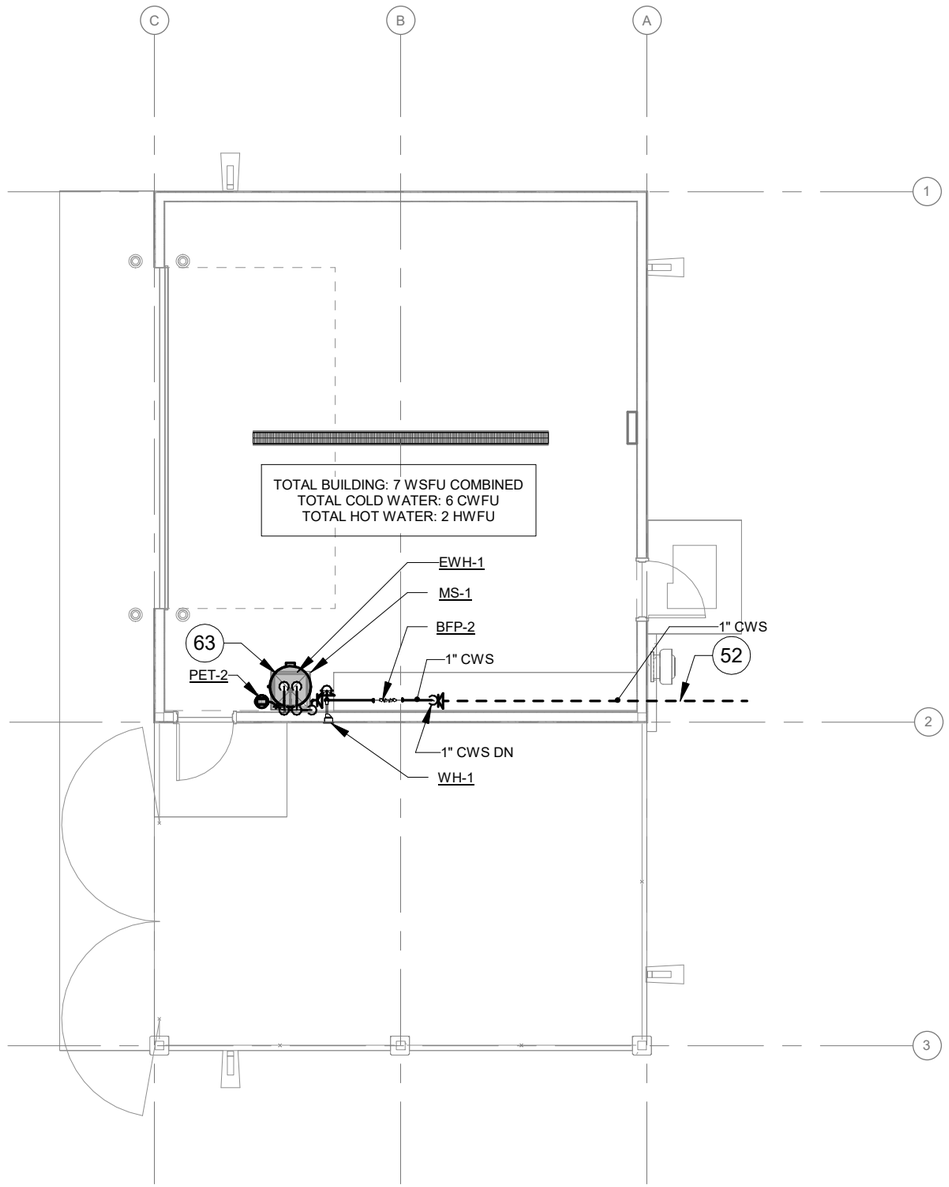
2 SANITARY ISOMETRIC - MAINTENANCE BUILDING

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		FIRST FLOOR SANITARY PLUMBING PLAN - MAINTENANCE BUILDING	SHEET NO: G-P2-11

PLOT DATE: 1/26/2024 4:24:54 PM PLOT BY: ISG INC. PLOT NAME: ACH PLOT SCALE: AS INDICATED

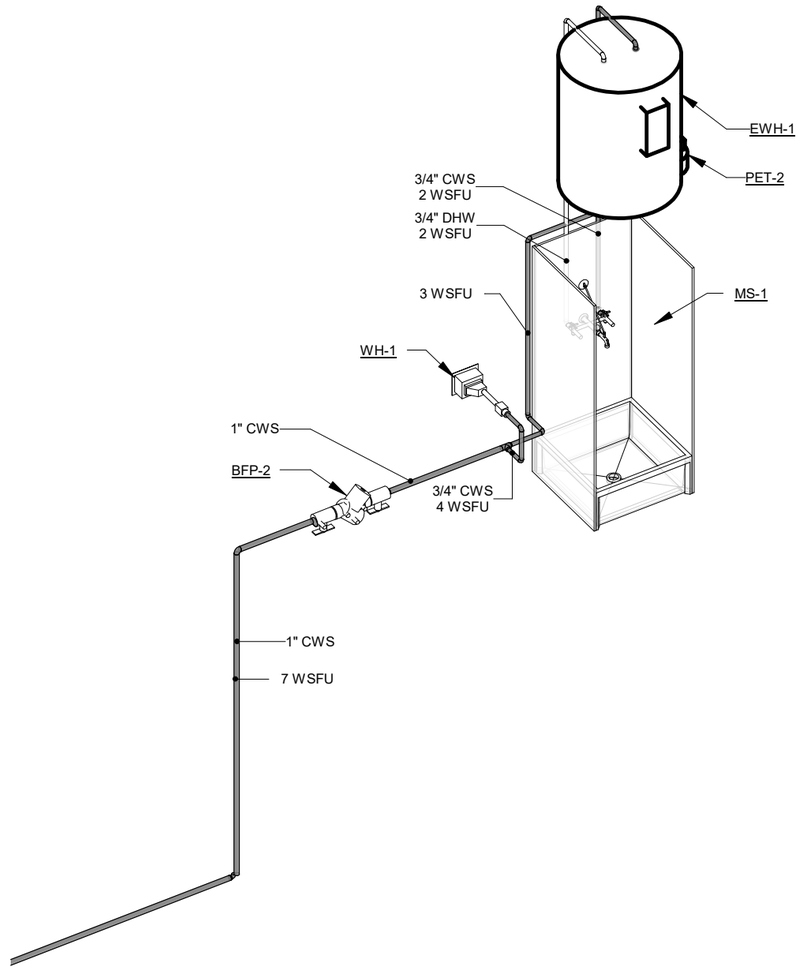
KEYNOTE LEGEND

52	INSTALL PIPE 5'0" OUTSIDE BUILDING AND -6'0" BELOW GRADE. COORDINATE WITH CIVIL PLANS FOR CONTINUATION.
63	MOUNT EWH-1 6' 10" A.F.F. AND ON WALL STAND.



1 FIRST FLOOR POTABLE WATER PLUMBING PLAN - MAINTENANCE BUILDING

1/8" = 1'-0"



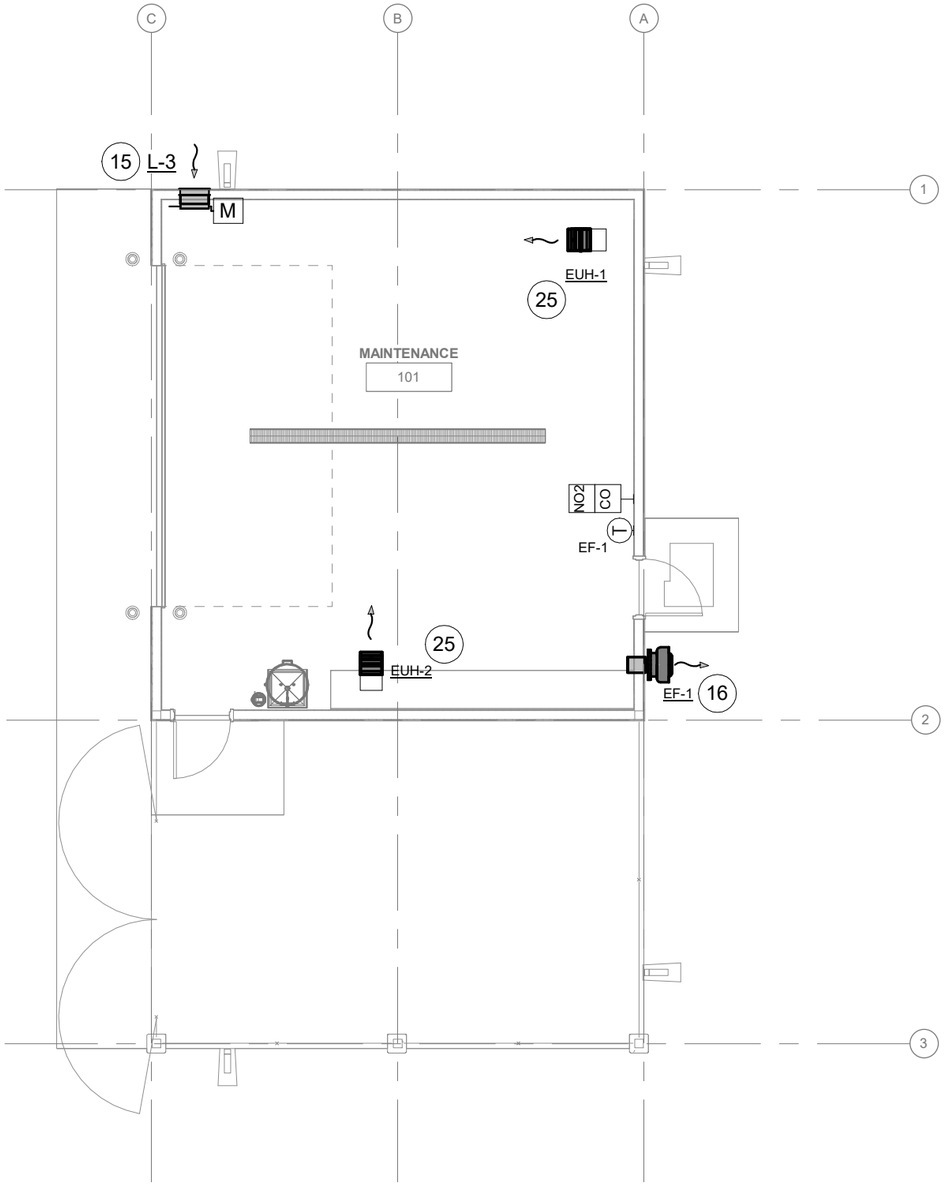
2 DOMESTIC WATER ISOMETRIC - MAINTENANCE BUILDING

STATE PROJECT NUMBER: 1071-07-79	HWY: IH 90		FIRST FLOOR POTABLE WATER PLUMBING PLAN - MAINTENANCE BUILDING	SHEET NO: G-P2-21

PLOT DATE: 1/26/2024 4:24:55 PM PLOT BY: ISG INC. PLOT NAME: ACH PLOT SCALE: AS INDICATED

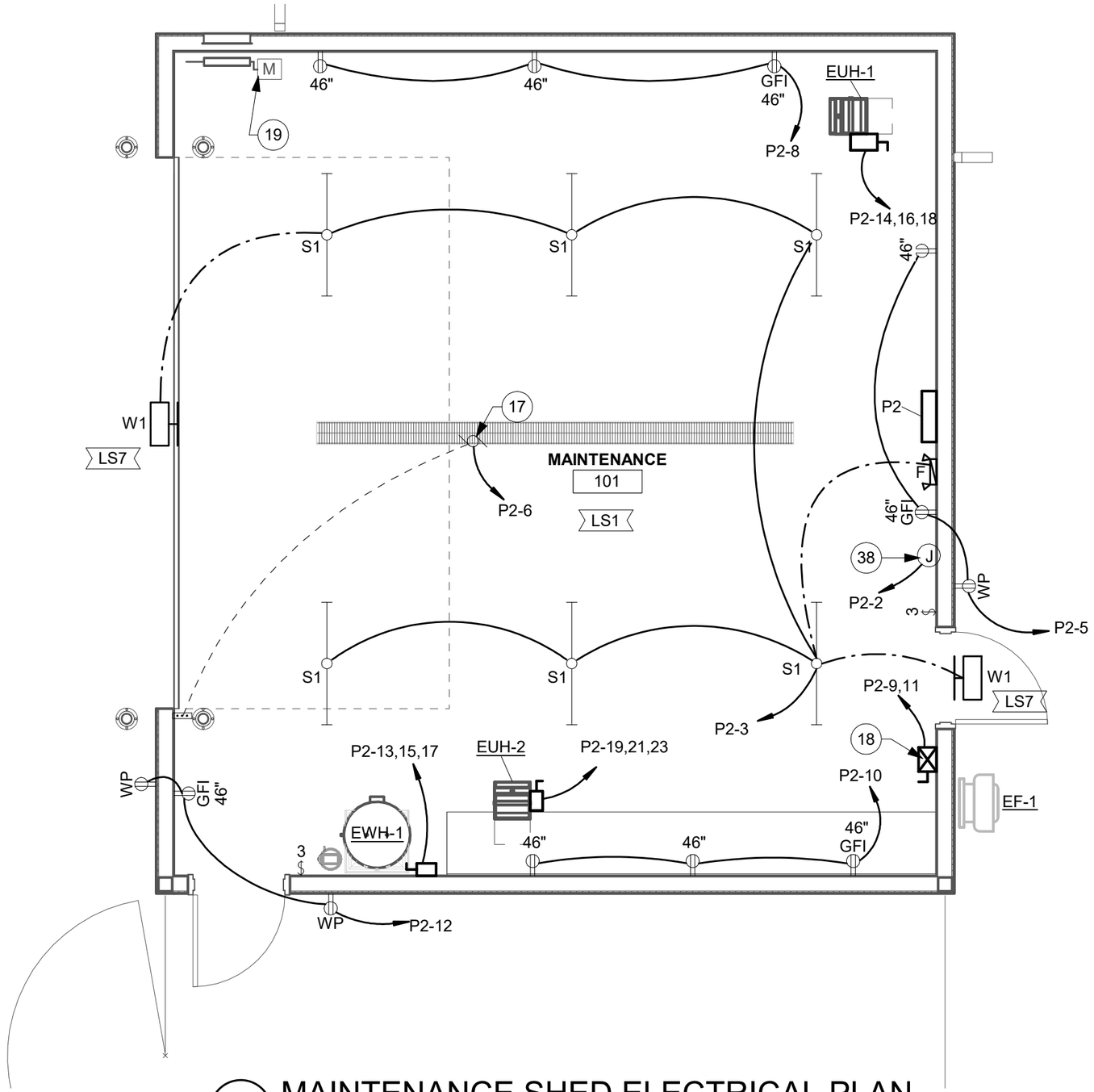
2

KEYNOTE LEGEND	
15	LOCATE BOTTOM OF LOUVER AT 4'-0" ABOVE FINISHED FLOOR.
16	LOCATE BOTTOM OF EXHAUST FAN 7'-0" ABOVE FINISHED FLOOR.
25	CEILING MOUNT ELECTRIC UNIT HEATER.



1 FIRST FLOOR HVAC PLAN - MAINTENANCE BUILDING

1/8" = 1'-0"



1 MAINTENANCE SHED ELECTRICAL PLAN
1/4" = 1'-0"

SHEET NOTES

1. ALL 15A & 20A CONVENIENCE RECEPTACLES INSTALLED WITHIN PUBLIC SPACE SHALL BE TAMPER RESISTANT.

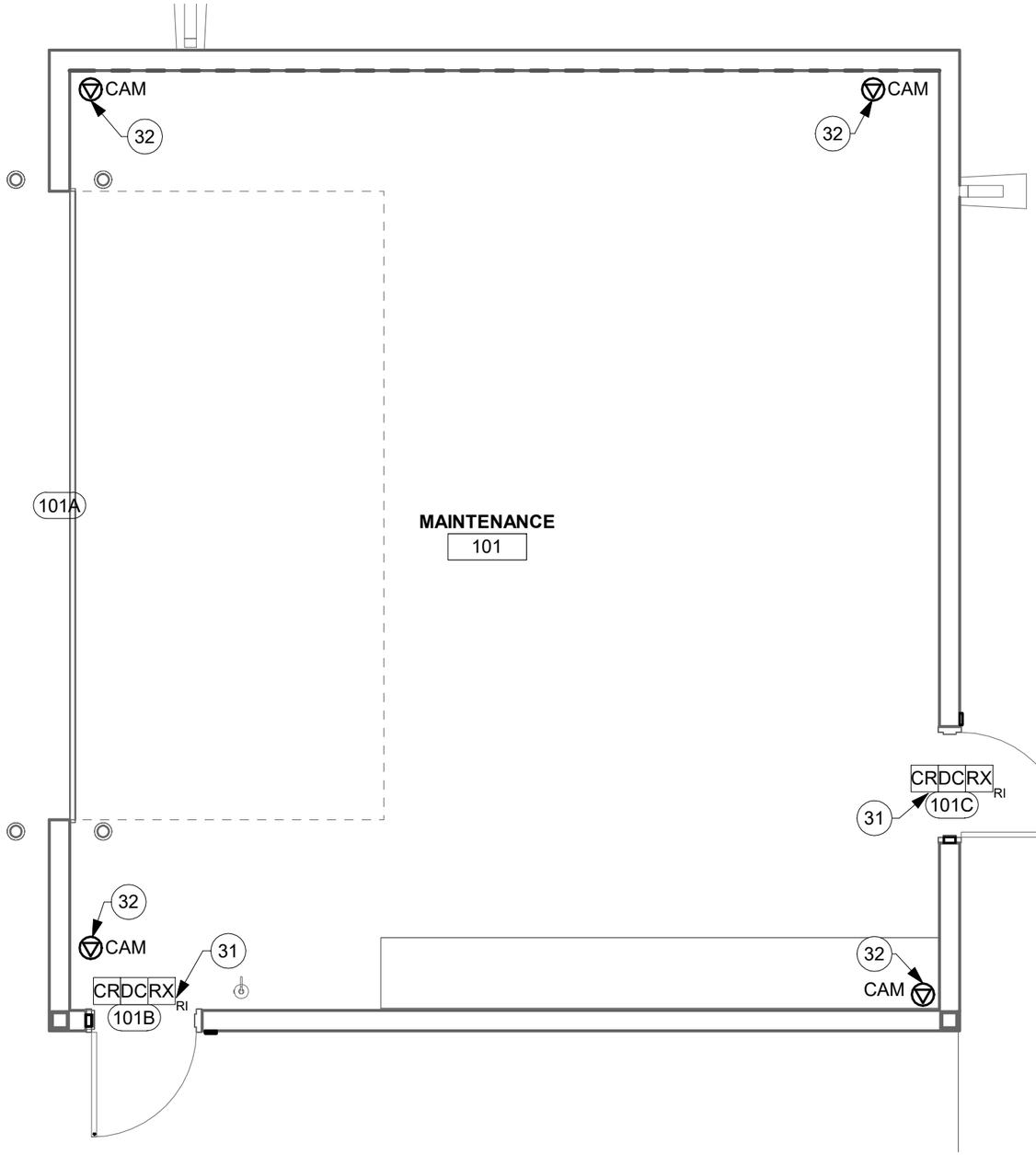
2. MAINTAIN FIRE RATING OF ALL WALLS AND FLOORS. PROVIDE FIRE PROOFING FOR ALL WALL AND FLOOR PENETRATIONS PER CODE.

3. COORDINATE WORK WITH OTHER TRADES.

ELECTRICAL KEYNOTE LEGEND

17	PROVIDE CIRCUIT TO OVERHEAD DOOR MOTOR AND MAKE CONNECTIONS TO REMOTE SWITCH AND PHOTOEYES. ALL CABLING TO BE INSTALLED WITHIN CONDUIT.
18	F&I COMBINATION MOTOR STARTER DISCONNECT FOR EXHAUST FAN. CONNECT TO CO/NO CONTROLLER. ACTIVATION OF CONTROLS SHALL ENERGIZE EXHAUST FAN. VERIFY COIL VOLTAGE WITH MECHANICAL PROVIDED CONTROL PANEL.
19	PROVIDE AN UNSWITCHED HOT TO MOTORIZED DAMPER FROM NEARBY AVAILABLE CIRCUIT. INTERLOCK DAMPER WITH EF-1.
38	PROVIDE CIRCUIT TO MECHANICAL CONTROL PANEL. VERIFY LOCATION OF PANEL WITH CONTROLS CONTRACTOR.

2



1 MAINTENANCE SHED TECHNOLOGY PLAN
1/4" = 1'-0"

SHEET NOTES

1. WALL INFORMATION OUTLETS SHALL BE LOCATED NEXT TO POWER RECEPTACLES. COORDINATE LOCATIONS WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN
2. ROVIDE QUANTITIES AS REQUIRED BASED ON DEVICE COUNTS. REFER TO FLOOR PLANS AND SPECIFICATION FOR ADDITIONAL INFORMATION.
3. ALL ROUGH-IN BOXES AND CONDUIT SHALL BE RECESSED WHERE POSSIBLE. REFER TO ELECTRICAL PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. BACKGROUND MUSIC (BGM) SPEAKERS ARE SHOWN FOR GENERAL DESIGN INTENT. CONTRACTOR SHALL PROVIDE MANUFACTURER RECOMMENDED LAYOUT BASED ON SPECIFIC MODEL SELECTED. REFER TO PUBLIC ADDRESS SYSTEMS SPECIFICATIONS FOR ADDITIONAL INFORMATION.

TECH KEYNOTE LEGEND

31	FUTURE ACCESS CONTROLLED DOORWAY. PROVIDE ALL NECESSARY PATHWAYS & ROUGH-INS FOR FUTURE OWNER PROVIDED CARD READER, DOOR CONTACTS, & REQUEST TO EXITS. PROVIDE BLANK PLATES ON BOXES WHERE NECESSARY. COORDINATE WITH OWNER.
32	CEILING INFORMATION OUTLET (CAM) FOR EXTERIOR MOUNTED SECURITY CAMERA. COORDINATE FINAL OUTLET LOCATION WITH OWNER. PROVIDE FIRE PROOFING AS REQUIRED.

N

2

TRUCK PARKING

1190+00 RA

1185+00 RA

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

6-08 — PET WALKING AREA — R55-64B-L 24"X24"

6-12 — PET WALKING AREA — R55-64B-L 24"X24"

6-15 — PET WALKING AREA — R55-64B-L 24"X24"

6-17 — PET WALKING AREA — R55-64B-L 24"X24"

6-06 — PET WALKING AREA — R55-64B-L 24"X24"

6-01 — PET WALKING AREA — R55-64B-L 24"X24"

6-02 — NO OVERNIGHT CAMPING — R55-51 18"X18"

WISCONSIN HISTORICAL MARKER "DIMENSIONED POST CONSTRUCTION"

6-18 — PET WALKING AREA — R55-65 24"X24"

6-19 — NO OVERNIGHT CAMPING — R55-51 18"X18"

6-22 — PET WALKING AREA — R55-65 24"X24"

6-23 — NO OVERNIGHT CAMPING — R55-51 18"X18"

PET WALKING AREA — R55-64B-R 24"X24"

6-16

6-20 — PET WALKING AREA — R55-65 24"X24"

6-21 — NO OVERNIGHT CAMPING — R55-51 18"X18"

1071-07-79/80
PROJECT BOUNDARY

1185+00 RB

1190+00 RB

CAR PARKING

6-07 — PET WALKING AREA — R55-64B-R 24"X24"

6-09 — R7-8A 12"X18"

6-10 — R7-8A 12"X18"

6-11

6-13 — R7-8A 12"X18"

6-14 — PET WALKING AREA — R55-64B-R 24"X24"

6-05 — PET WALKING AREA — R55-64B-R 24"X24"

6-03 — PET WALKING AREA — R55-64B-R 24"X24"

6-04 — NO OVERNIGHT CAMPING — R55-51 18"X18"

LEGEND

- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON POST(S)
- X-XX — PROPOSED SIGN NUMBER
- XM-X — SIGN AND SUPPORT(S) TO BE MOVED
- XR-X — SIGN AND SUPPORT(S) TO BE REMOVED
- (X) — INDICATES SIGN SIZE
- DELINEATOR SINGLE (WHITE)

N

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PERMANENT SIGNING	SHEET 256	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - PLAZA(PS)

PLOT DATE : 1/28/2024 9:33 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ############

2

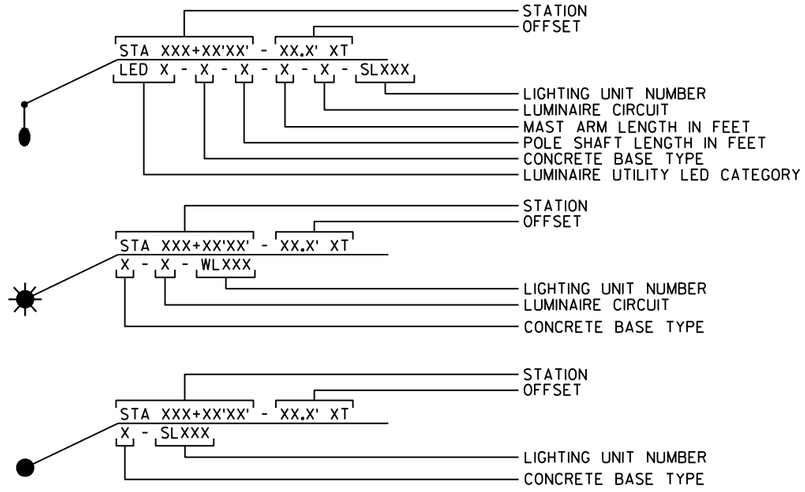
GENERAL STREET LIGHTING NOTES:

1) THE ENGINEER SHALL APPROVE THE FINAL LOCATION FOR ALL CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION.

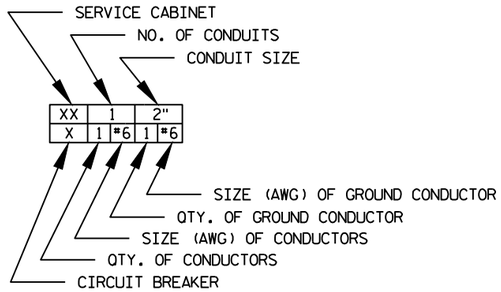
2) THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

3) NO SPLICES ALLOWED IN PULLBOXES.

4) PHOTOCONTROL ON LIGHTING CABINET.



CONDUIT/CONDUCTOR LEGEND



PWO = PULL/TRACER WIRE ONLY

NEU = NEUTRAL

CONTROL CABINET LEGEND
CB100

LIGHTING CONDUCTORS
A - BLUE & NEUTRAL B - BROWN & NEUTRAL C - NOT USED
120V PHASE TO NEUTRAL

LEGEND:

- SINGLE ARM LIGHTING UNIT
- CONCRETE BASE ONLY
- LIGHTING UNIT WALKWAY
- CONCRETE CONTROL CABINET BASE/ELECTRICAL SERVICE
- PULL BOX NON-CONDUCTIVE (24"X42")
- LIGHTING CONDUIT (2" SCHEDULE 40 PVC UNLESS NOTED)
- GEOTHERMAL FIELD BORE LOCATION
- HIGH MAST LIGHTING UNIT

SHEET 1 OF 6

GENERAL NOTES (APPLIES TO THIS CONSTRUCTION DETAIL)

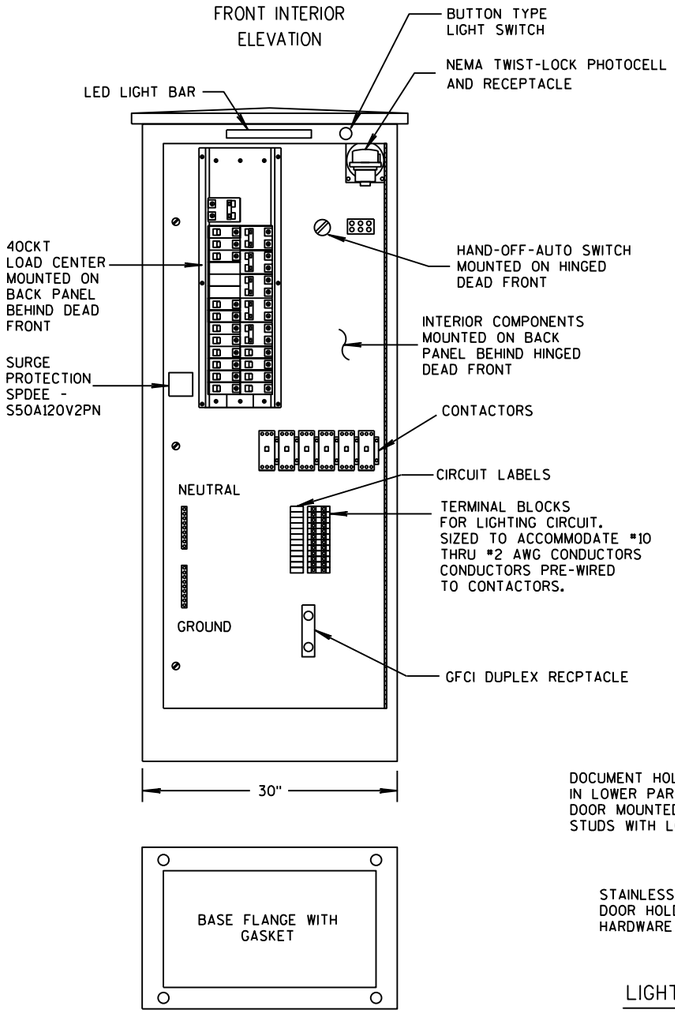
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

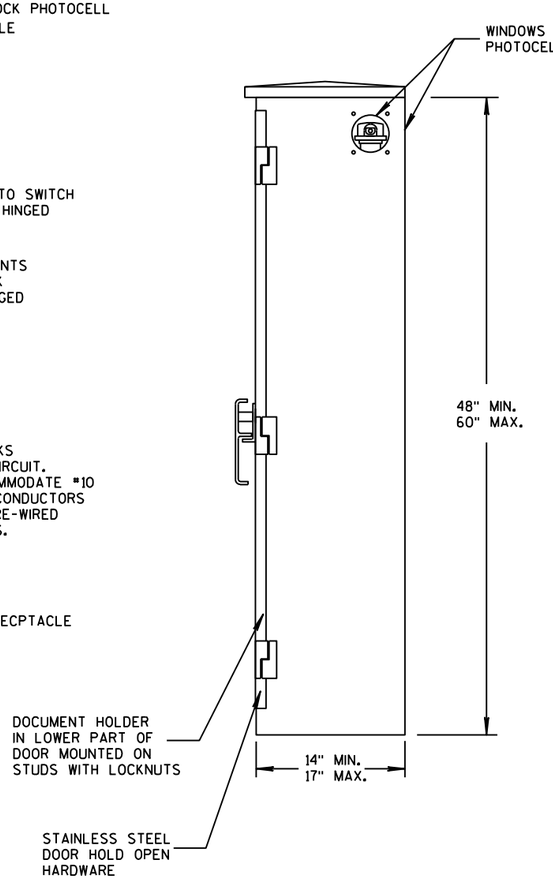
ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE-WIRED BY THE CABINET FABRICATOR.

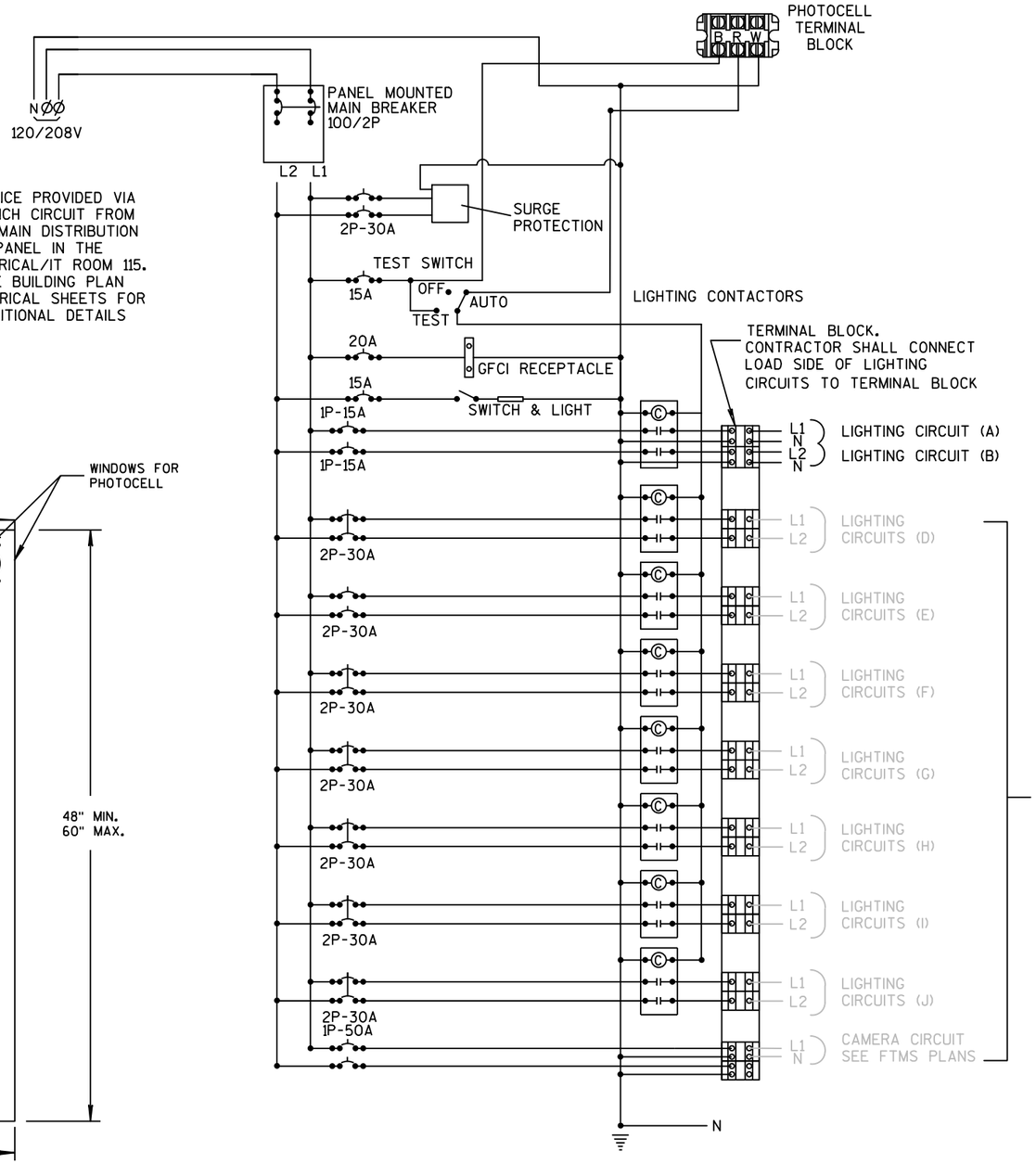
ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.







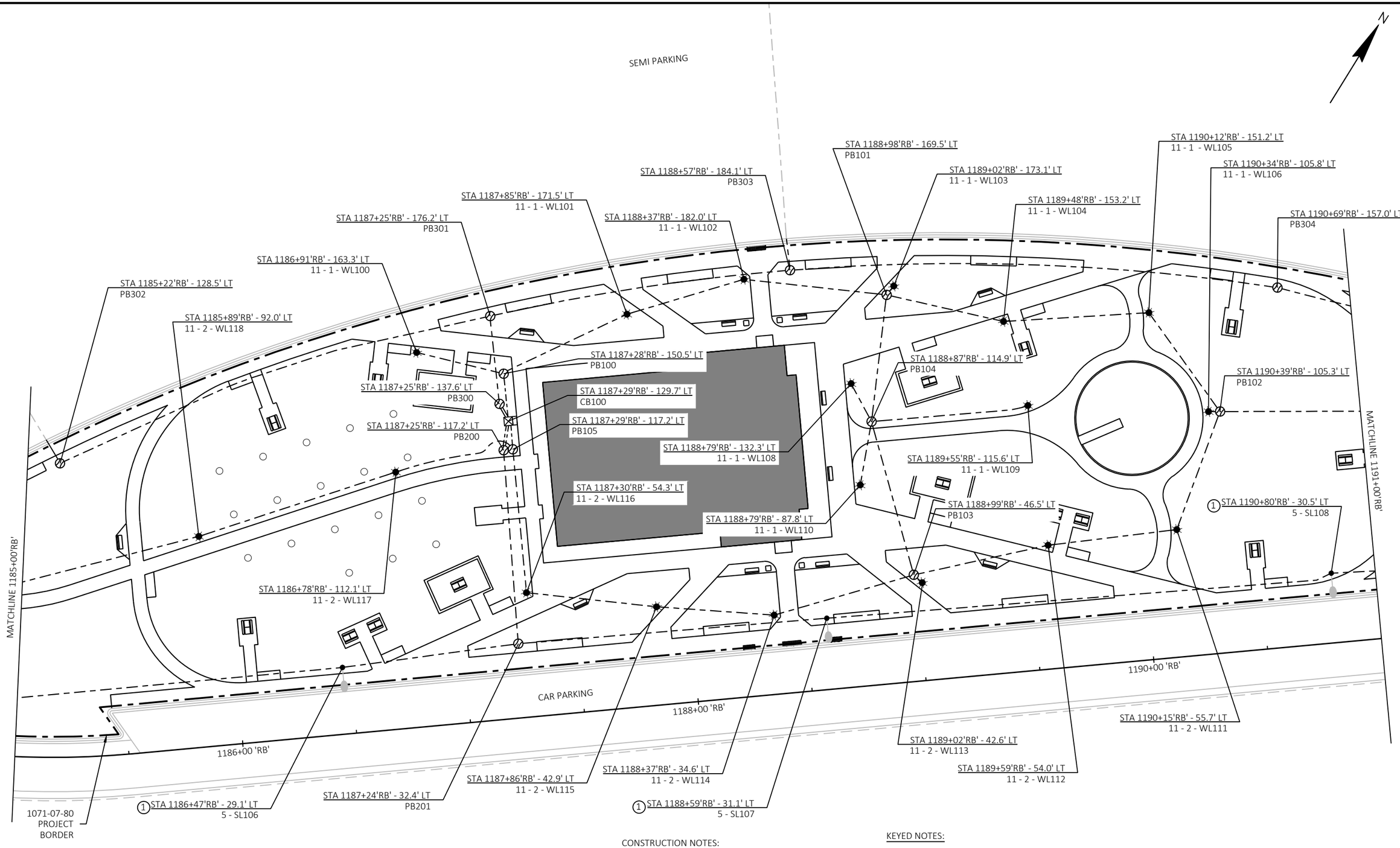
* CIRCUIT C IS NOT USED

LIGHTING CONTROL CABINET - SCHEMATICS

CB100 659.2130

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	LIGHTING PLANS - CONTROL CABINET SCHEMATICS	SHEET 258	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\021002-CD_CONTROL CABINET SCHEMATICS.DWG
LAYOUT NAME - CONTROL CABINET - 79
PLOT DATE : 1/31/2024 9:45 AM PLOT BY : ANDREW LOBDELL PLOT NAME : PLOT SCALE : XXXXXX
WISDOT/CADDS SHEET 42



CONSTRUCTION NOTES:

1) LIGHTING INFRASTRUCTURE SHOWN IN GRAY TO BE INSTALLED WITH PROJECT 1071-07-80

KEYED NOTES:

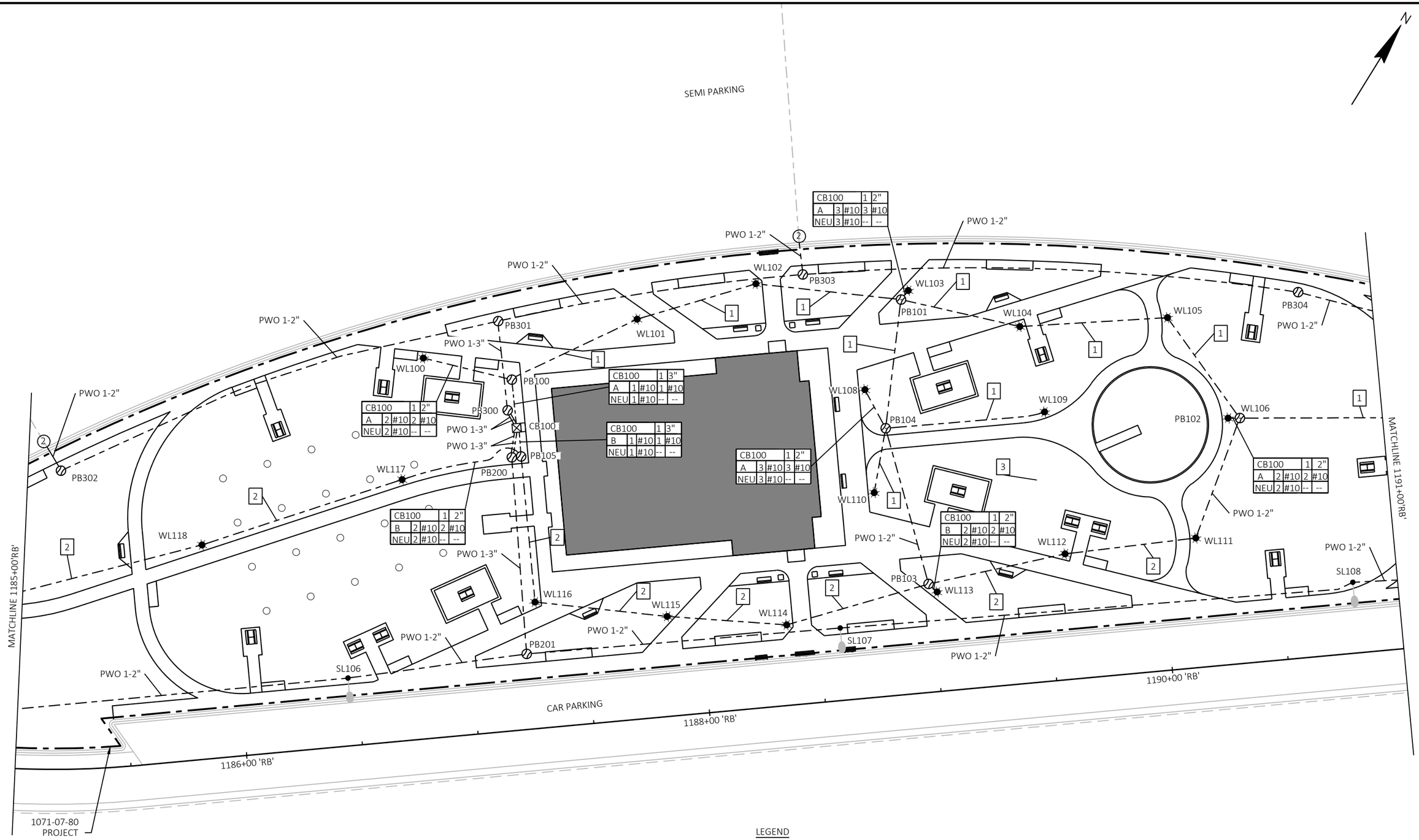
(1) INSTALL CONCRETE BASE ONLY. POLE, ARM, LUMINAIRE TO BE INSTALLED WITH PROJECT 1071-07-80

SHEET 3 OF 6

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	LIGHTING PLANS	SHEET 259	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\023601-LP.DWG
LAYOUT NAME - WALKWAY - 79

PLOT DATE : 1/31/2024 3:35 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT



CONSTRUCTION NOTES:

1) LIGHTING INFRASTRUCTURE SHOWN IN GRAY TO BE INSTALLED WITH PROJECT 1071-07-80

LEGEND

[1] = CB100 | 1 | 2" | A | 1 | #10 | 1 | #10 | NEU | 1 | #10 | -- | --

[2] = CB100 | 1 | 2" | B | 1 | #10 | 1 | #10 | NEU | 1 | #10 | -- | --

KEYED NOTES:

(2) STUB AND CAP CONDUIT FOR FUTURE CONNECTION WITH PROJECT 1071-07-80

SHEET 4 OF 6

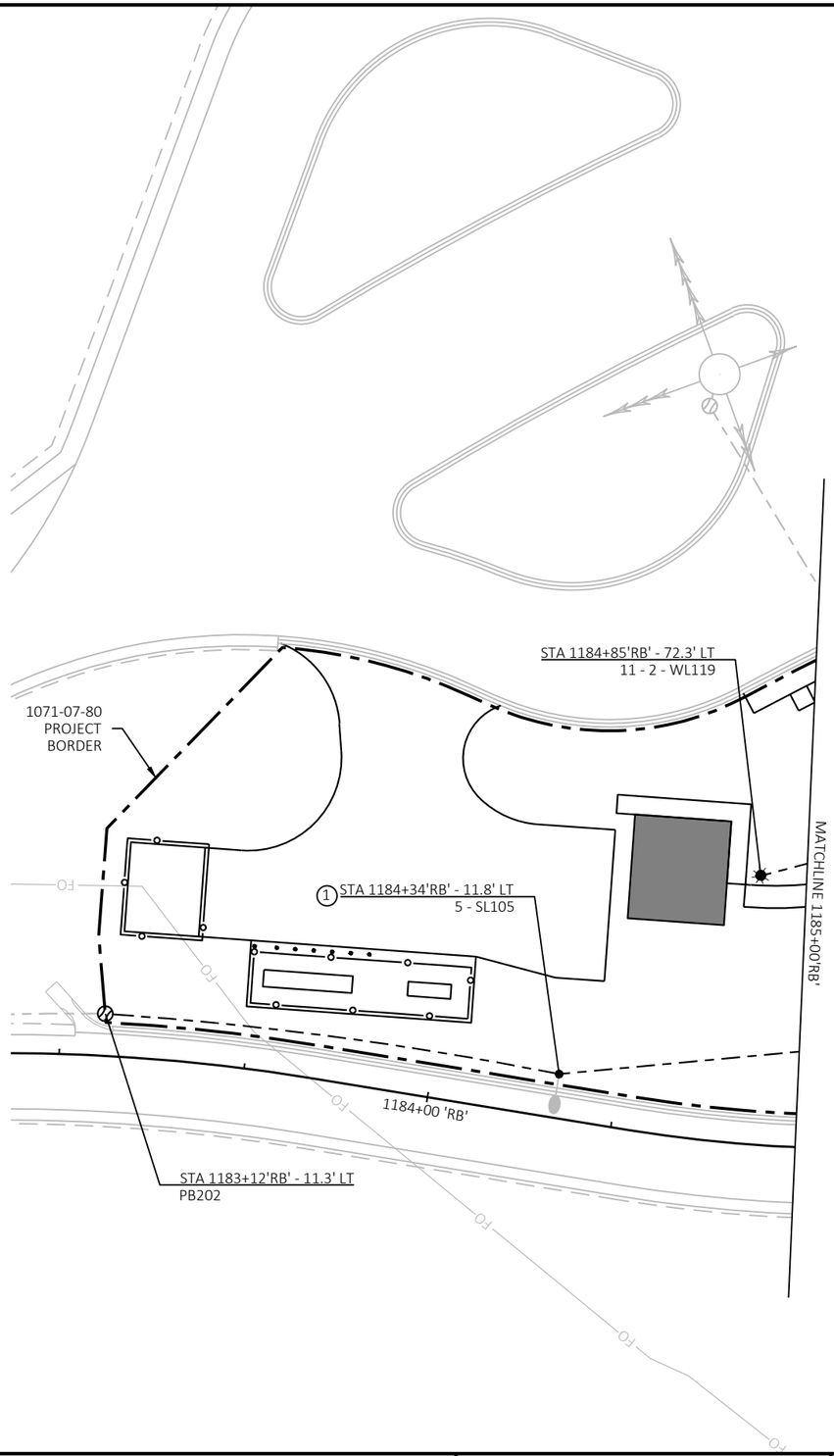
PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	LIGHTING PLANS - WIRING SHEET	SHEET 260	E

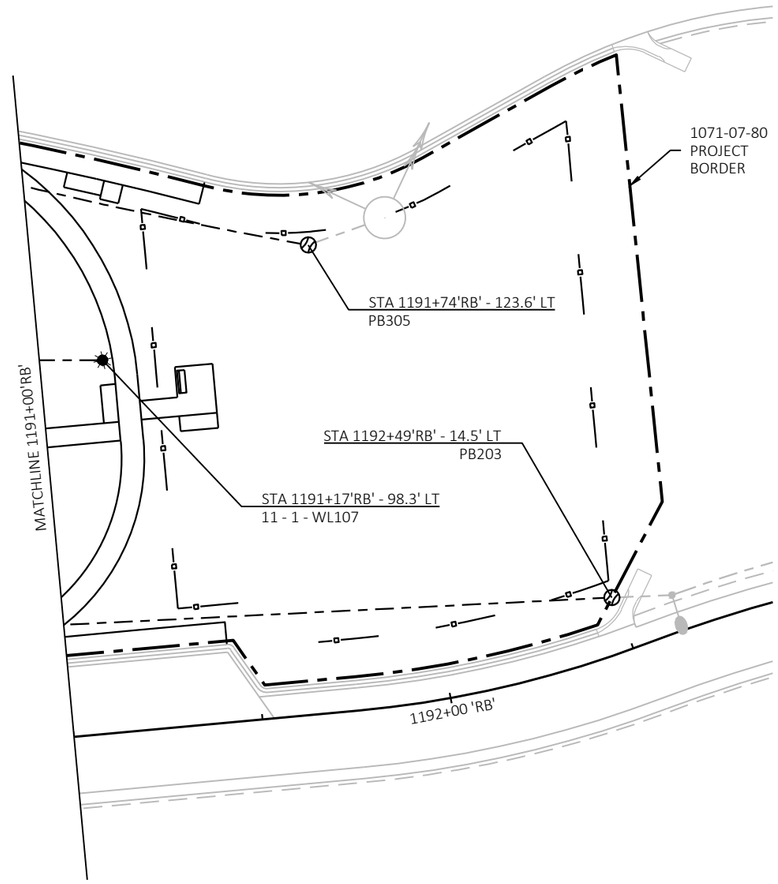
CONSTRUCTION NOTES:

1) LIGHTING INFRASTRUCTURE SHOWN IN GRAY TO BE INSTALLED WITH PROJECT 1071-07-80

KEYED NOTES:

① INSTALL CONCRETE BASE ONLY. POLE, ARM, LUMINAIRE TO BE INSTALLED WITH PROJECT 1071-07-80





SHEET 5 OF 6

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	LIGHTING PLANS	SHEET 261	E

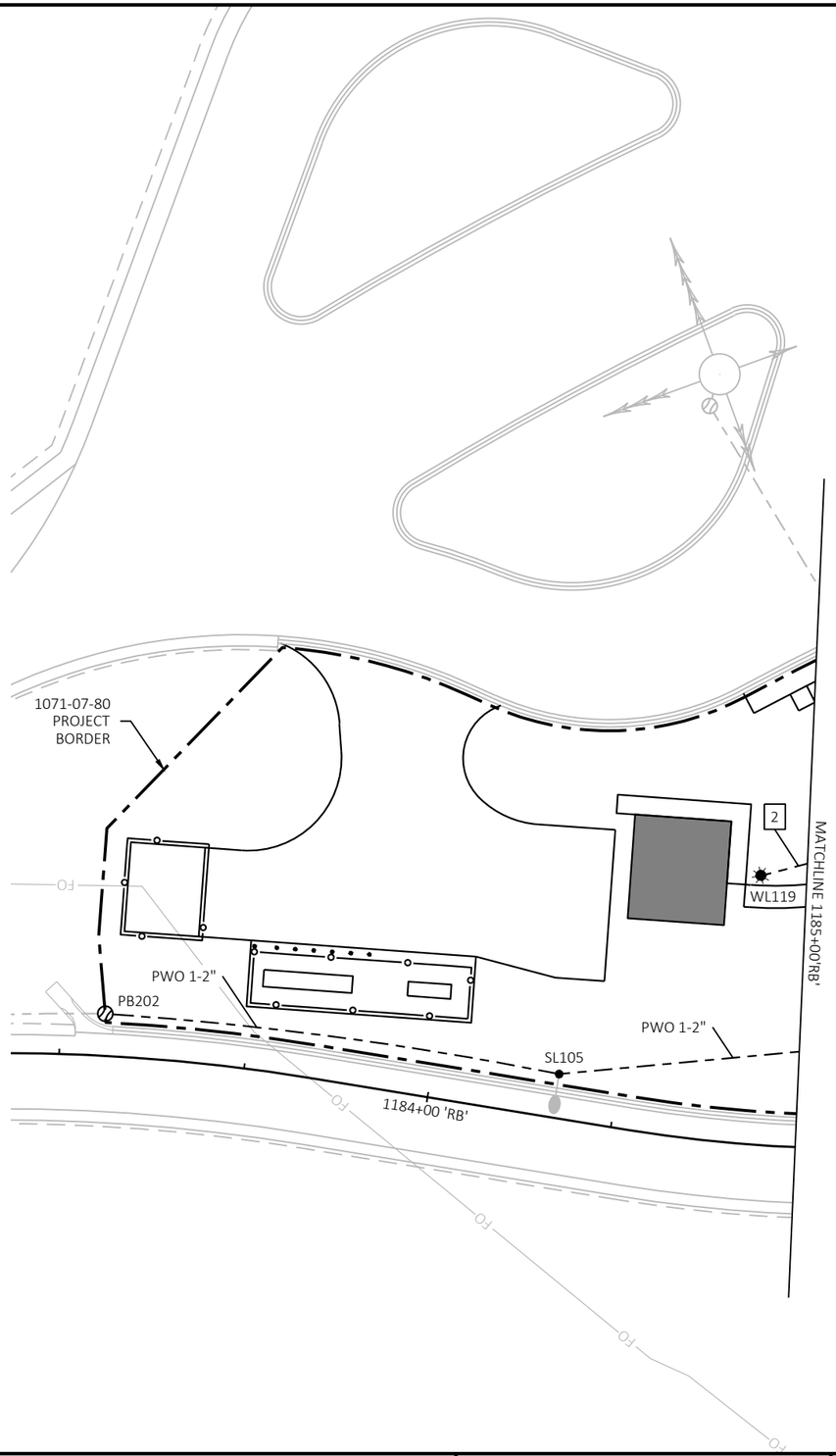
FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\023601-LP.DWG
LAYOUT NAME - WALKWAY - 79 (2)

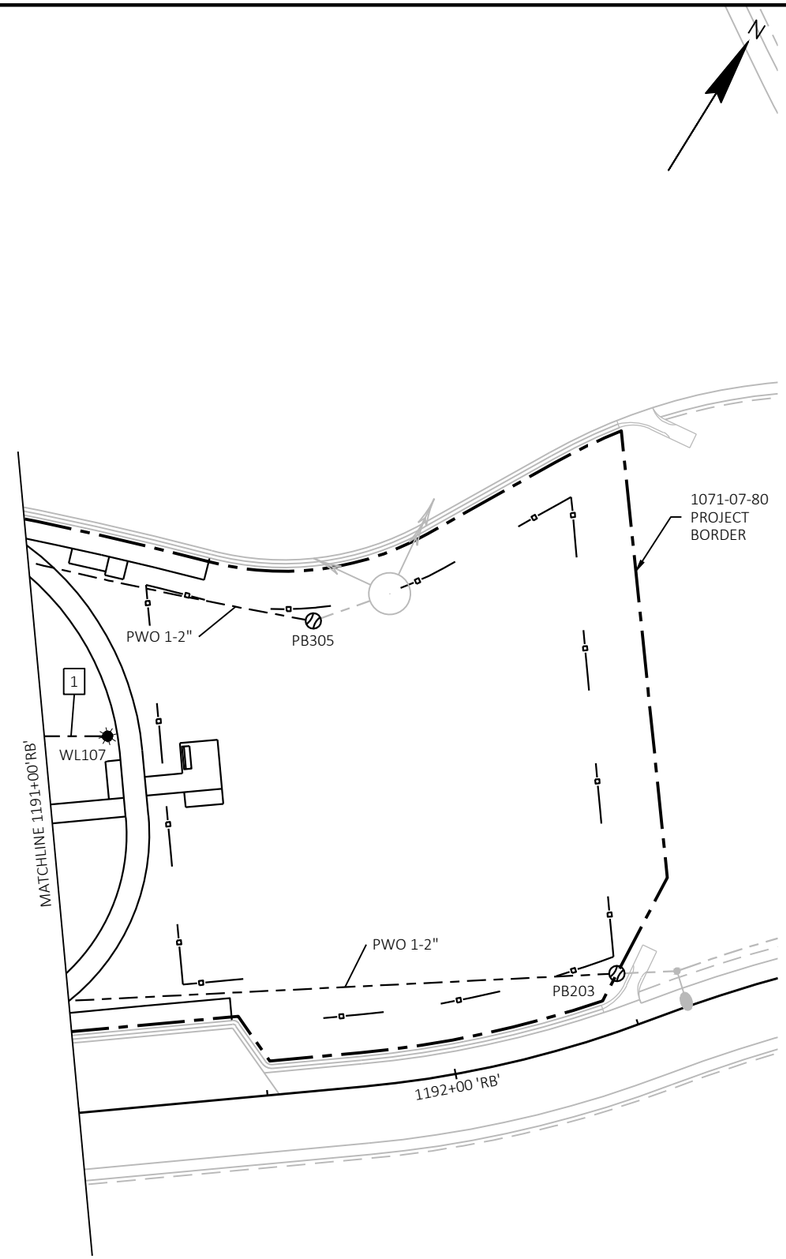
PLOT DATE : 1/31/2024 3:36 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

CONSTRUCTION NOTES:

1) LIGHTING INFRASTRUCTURE SHOWN IN GRAY TO BE INSTALLED WITH PROJECT 1071-07-80





LEGEND

1 =

CB100		1	2"
A	1	#10	1	#10
NEU	1	#10	--	--

2 =

CB100		1	2"
B	1	#10	1	#10
NEU	1	#10	--	--

SHEET 6 OF 6

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	LIGHTING PLANS - WIRING SHEET	SHEET 262	E

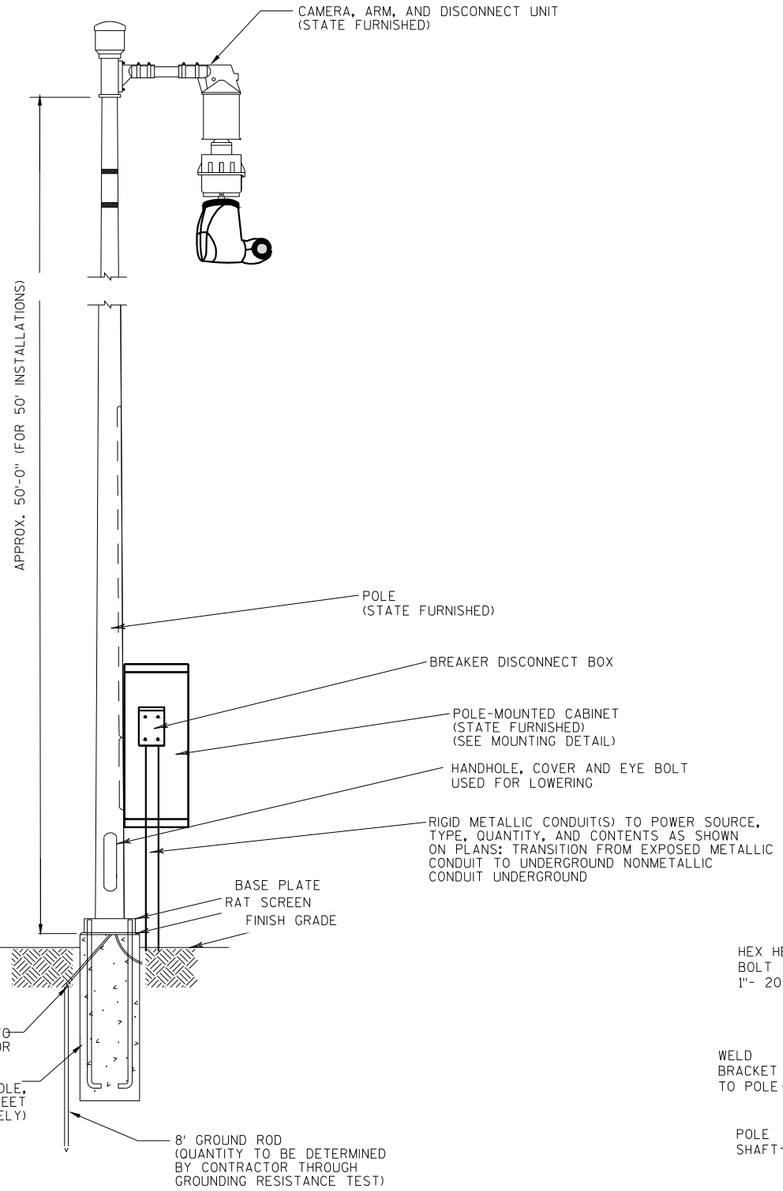
LEGEND

FTMS CONVENTIONAL SYMBOLS	CONSTRUCTED IN 1071-07-79	BY OTHERS
POLE MOUNTED CABINET		
24" X 42" CSCP PULL BOX		
FTMS (ITS) CONDUIT		
BREAKER DISCONNECT BOX		
CCTV BASE, POLE, AND CAMERA		
MICROWAVE VEHICLE DETECTOR		
TYPE 5 CONCRETE BASE AND POLE		

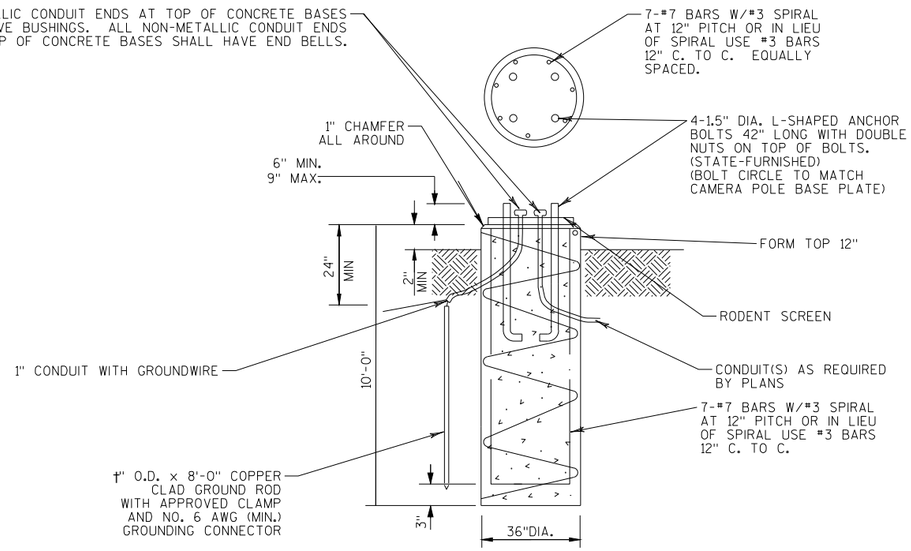
FTMS STANDARD ABBREVIATIONS

CCTV	CLOSED CIRCUIT TELEVISION SITE
PB	PULL BOX
DP	DETECTOR POLE
S-F	STATE-FURNISHED

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414)227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.



CAMERA POLE WITH CAMERA LOWERING HARDWARE



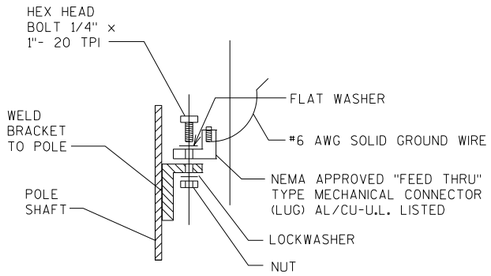
MATERIALS DATA

CONCRETE f'c=3,500 psi

HIGH STRENGTH BAR STEEL REINFORCEMENT fy = 60,000 psi

CONCRETE BASE, 50' CAMERA POLE

NOT TO SCALE



FIELD INSTALLED GROUNDING LUG

NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE FURNISHED. BASE TO BE CONTRACTOR DESIGNED.
3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN

CAMERA POLES & FOUNDATIONS

2

2

N

(1) 2-INCH HDPE DUCT
(CABLING BY OTHERS)

PB1184

1185+00.00

RAMP FROM TRUCK PARKING LOT

RAMP FROM CAR PARKING LOT

1180

1180

DP1183
(BY OTHERS)

PB1183
(BY OTHERS)

(CONDUIT AND CABLING
BY OTHERS)

POST

POST

POST

I 90

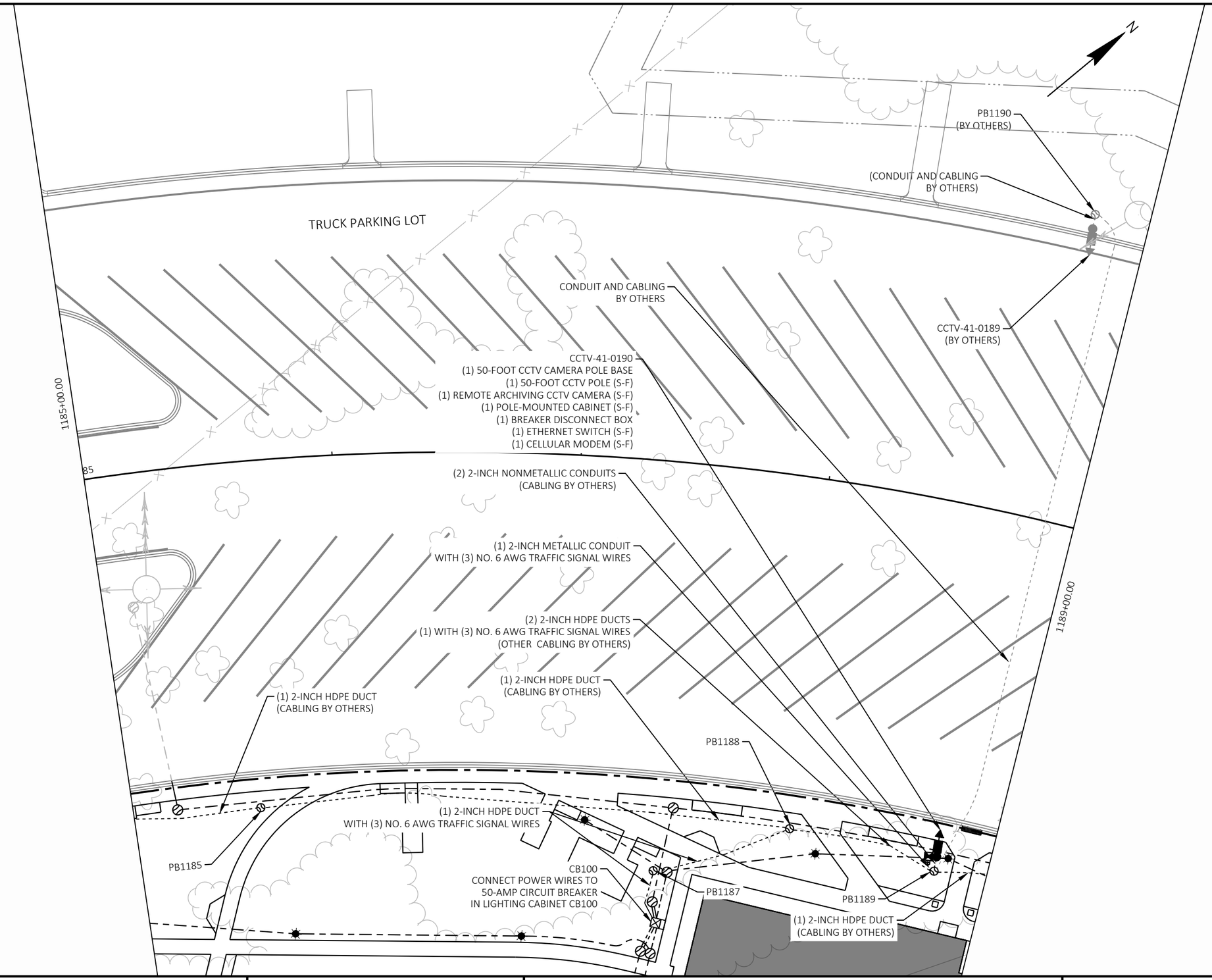
PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REST AREA 16 FTMS DESIGN	SHEET 265	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\FTMS\10710779_RESTARE16_FM.DWG
LAYOUT NAME - Sheet - (26)

PLOT DATE : 2/1/2024 4:10 PM PLOT BY : JOSHUA MELBY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REST AREA 16 FTMS DESIGN	SHEET 266	E

2

2

SEPV

N

TRUCK PARKING LOT

MH

DP1195
(BY OTHERS)

NWS

1190

RAMP TO TRUCK PARKING LOT

1195

PB1195
(BY OTHERS)

PB1194

(CONDUIT AND CABLING
BY OTHERS)

(CONDUIT AND CABLING
BY OTHERS)

1189+00.00

PB1193

(1) 2-INCH HDPE DUCT
(CABLING BY OTHERS)

RAMP TO CAR PARKING LOT

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	REST AREA 16 FTMS DESIGN	SHEET 267	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\FTMS\10710779_RESTARE16_FM.DWG
LAYOUT NAME - Sheet - (28)

PLOT DATE : 2/1/2024 4:11 PM PLOT BY : JOSHUA MELBY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

MAINTENANCE OF TRAFFIC:

IH 90
- IH 90 WILL BE OPEN TO ALL LANES AT ALL TIMES EXCEPT FOR RAMP CLOSURES AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.

REST AREA #16
- REST AREA AND REST AREA RAMPS TO BE CLOSED TO TRAFFIC DURING CONSTRUCTION.
- COORDINATION WITH PROJECT 1071-07-80 REQ'D TO MAINTAIN ACCESS TO PROJECT SITE.

CONSTRUCTION TO BE COMPLETED:

REST AREA #16
- CONSTRUCT NEW REST AREA BUILDINGS AND PLAZA AREA

NOTES:

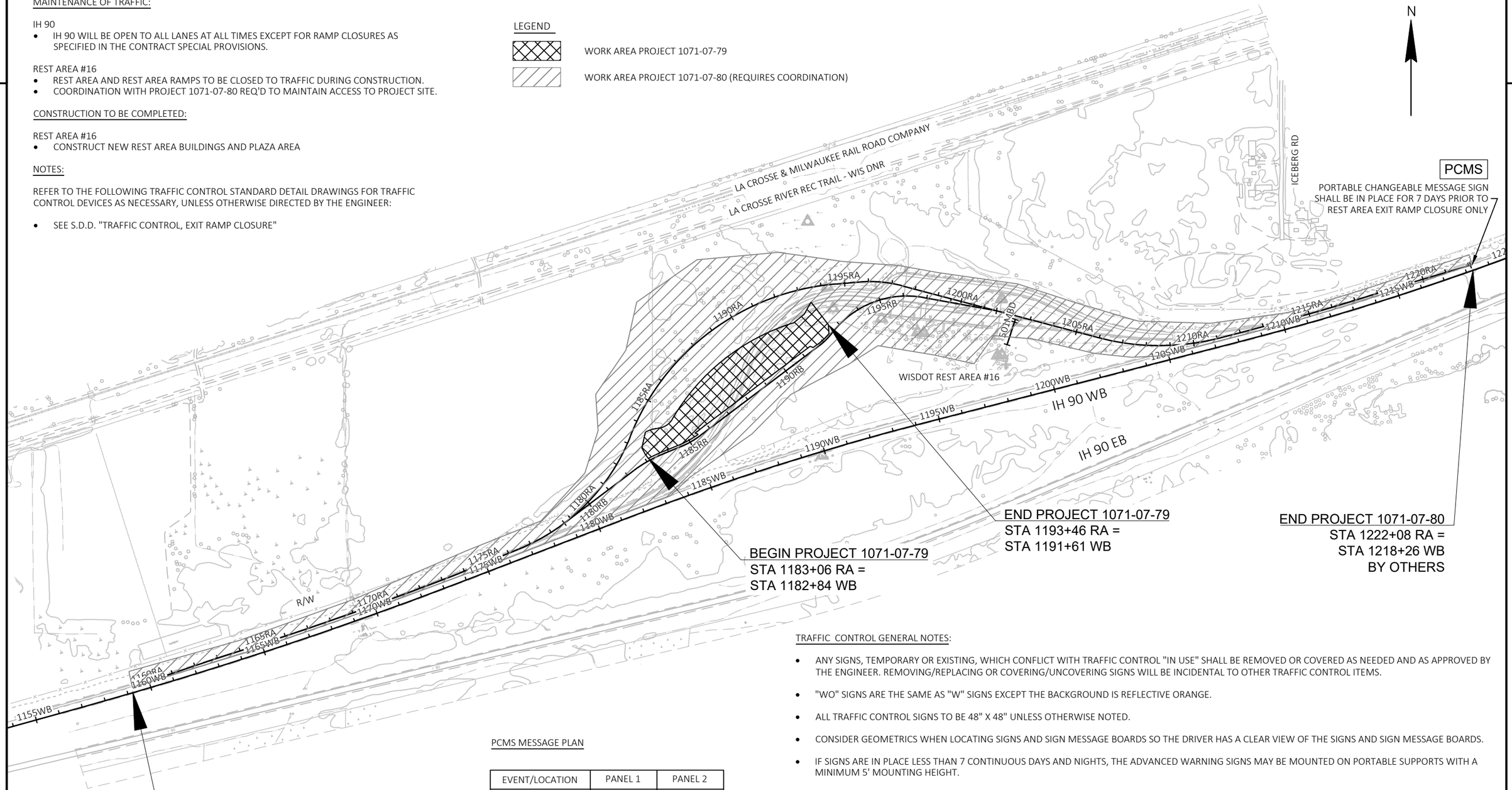
REFER TO THE FOLLOWING TRAFFIC CONTROL STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

- SEE S.D.D. "TRAFFIC CONTROL, EXIT RAMP CLOSURE"

LEGEND

WORK AREA PROJECT 1071-07-79

WORK AREA PROJECT 1071-07-80 (REQUIRES COORDINATION)



PCMS MESSAGE PLAN

EVENT/LOCATION	PANEL 1	PANEL 2
IH 90 REST AREA CLOSURE	REST AREA CLOSED	BEGINS XXXXDAY XX/XX

TRAFFIC CONTROL GENERAL NOTES:

- ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. REMOVING/REPLACING OR COVERING/UNCOVERING SIGNS WILL BE INCIDENTAL TO OTHER TRAFFIC CONTROL ITEMS.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
- ALL TRAFFIC CONTROL SIGNS TO BE 48" X 48" UNLESS OTHERWISE NOTED.
- CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND SIGN MESSAGE BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE SIGNS AND SIGN MESSAGE BOARDS.
- IF SIGNS ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS WITH A MINIMUM 5' MOUNTING HEIGHT.
- ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, TRAFFIC ENGINEERING, OPERATIONS AND SAFETY MANUAL, AND OTHER CONTRACT DOCUMENTS.
- THE TURNING OF TRAFFIC CONTROL DEVICES WHEN NOT IN USE TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.
- MOVE, REMOVE OR INSTALL ROUTE MARKER SIGNS AS REQUIRED TO MAINTAIN NECESSARY ROUTE GUIDANCE THROUGHOUT CONSTRUCTION.
- CONTRACTORS EQUIPMENT AND MATERIAL STOCKPILES MAY NOT BE STORED WITHIN THE CONSTRUCTION CLEAR ZONE WHILE THE CONTRACTOR IS NOT WORKING, UNLESS THEY ARE PROTECTED BY CONCRETE BARRIER TEMPORARY PRECAST.

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC

N

RAMP CLOSED 1000 FT W20-53E

PLACE AS PER S.D.D. "TRAFFIC CONTROL, EXIT RAMP CLOSURE"

RAMP CLOSED AHEAD W20-53A

PLACE AS PER S.D.D. "TRAFFIC CONTROL, EXIT RAMP CLOSURE"

ROAD WORK AHEAD W20-1A

PLACE AS PER S.D.D. "TRAFFIC CONTROL, EXIT RAMP CLOSURE"

SEE S.D.D. "TRAFFIC CONTROL, EXIT RAMP CLOSURE" FOR SIGNS AND DETAILS NOT SHOWN

COVERING SIGN

COVERING SIGN

COVERING SIGN (REST AREA 1 MILE SIGN - OFF SHEET)

200' TAPER

25' (TYP.)

1205+00 WB

1210+00 RA

1210+00 WB

1215+00 RA

1215+00 WB

1220+00 RA

IH 90 WB

1220+00

TEMPORARY MARKING LINE EPOXY 6-INCH

R11-2R 48"X30"

RAMP CLOSED

TYPE III BARRICADE

IH 90 EB

I 90

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	TRAFFIC CONTROL - EXIT RAMP CLOSURE	SHEET 269	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\025102-TC_79.DWG
LAYOUT NAME - 03

PLOT DATE : 1/25/2024 11:16 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

N

R/L RB
STA = 1178+67.68 RB
Y=366455.3176
X=606427.4265

PI STA = 1183+02.00 RB
Y = 366717.390
X = 606773.764
DELTA = 14°38'14" RT
D = 10°54'49"
T = 67.43'
L = 134.12'
R = 525.00'
PC STA = 1182+34.57 RB
PT STA = 1183+68.69 RB
DB = N52°53'07"E
DA = N67°31'21"E

PI STA = 1185+03.56 RB
Y = 366794.733
X = 606960.692
DELTA = 14°31'51" LT
D = 15°04'40"
T = 48.45'
L = 96.37'
R = 380.00'
PC STA = 1184+55.12 RB
PT STA = 1185+51.49 RB
DB = N67°31'21"E
DA = N52°59'30"E

PI STA = 1189+63.92 RA
Y = 367407.778
X = 606938.158
DELTA = 63°40'33" RT
D = 5°37'12"
T = 633.05'
L = 1133.02'
R = 1019.50'
PC STA = 1183+30.87 RA
PT STA = 1194+63.89 RA
DB = N21°39'30"E
DA = N85°20'03"E

PI STA = 1180+08.24 RA
Y = 366482.731
X = 606570.814
DELTA = 46°10'01" LT
D = 6°44'26"
T = 362.26'
L = 684.90'
R = 850.00'
PC STA = 1176+45.97 RA
PT STA = 1183+30.87 RA
DB = N67°49'31"E
DA = N21°39'30"E

R/L RA
STA = 1159+36.30 RA
Y=365770.9915
X=604625.8169

R/L RA
STA = 1162+96.40 RA
Y=365887.0035
X=604966.7199

PI STA = 1168+21.54 RA
Y = 366044.788
X = 605467.600
DELTA = 3°30'26" LT
D = 0°20'02"
T = 525.14'
L = 1049.96'
R = 17153.16'
PC STA = 1162+96.40 RA
PT STA = 1173+46.36 RA
DB = N72°30'53"E
DA = N69°00'28"E

R/L RA
STA = 1173+46.36 RA
Y=366232.9170
X=605957.8903

MAINTENANCE
GARAGE DRIVEWAY R/L

PRC: 1183+30.87 RA

N62°23'09"E
184.86'

BP: 300+00.00 MG

MAINTENANCE
GARAGE R/L

BP: 400+00.00 MGD

S35°37'13"E
153.11'

EP: 301+84.86 MG

N52°59'30"E
624.00'

REST AREA
RAMP B R/L

BP: 1159+36.30 RA

PC: 1162+96.40 RA

PT: 1173+46.36 RA

PC: 1176+45.97 RA

BP: 1178+67.68 RB

1160RA

N71°12'22"E
360.10'

1165RA

1170RA

REST AREA
RAMP A R/L

1175RA

N67°49'31"E
299.61'

1180RA

1180RB

N52°53'07"E
366.89'

1185RA

1185RB

1190RA

PC: 1182+34.57 RB

PT: 1183+68.69 RB

PC: 1184+55.12 RB

PT: 1185+51.49 RB

N67°31'21"E
86.42'

EP: 401+53.11 MGD

MATCH LINE 0+00 WB

R/L MGD
STA = 400+00.00 MGD
Y=366871.6812
X=606780.3881

R/L MGD
STA = 401+53.11 MGD
Y=366747.2182
X=606869.5619

R/L MG
STA = 300+00.00 MG
Y=366738.6033
X=606749.9732

R/L MG
STA = 301+84.86 MG
Y=366824.2873
X=606913.7736

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ALIGNMENT DIAGRAM	SHEET 270	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\027201-AD_79.DWG
LAYOUT NAME - AD (1)

PLOT DATE : 1/25/2024 11:33 AM PLOT BY : BRIAN ST. VINCENT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

N

PI STA = 1196+53.95 RA
Y = 367474.731
X = 607758.536
DELTA = 19°27'27" RT
D = 10°54'49"
T = 90.01'
L = 178.29'
R = 525.00'
PC STA = 1195+63.94 RA
PT STA = 1197+42.23 RA
DB = N85°20'03"E
DA = S75°12'29"E

R/L RB
STA = 1199+97.58 RB
Y=367346.7433
X=608243.2312

PI STA = 1192+14.33 RB
Y = 367222.878
X = 607528.690
DELTA = 15°31'17" LT
D = 20°06'14"
T = 38.84'
L = 77.21'
R = 285.00'
PC STA = 1191+75.49 RB
PT STA = 1192+52.70 RB
DB = N52°59'30"E
DA = N37°28'13"E

PI STA = 1194+93.56 RB
Y = 367444.869
X = 607698.847
DELTA = 62°44'52" RT
D = 14°30'19"
T = 240.86'
L = 432.59'
R = 395.00'
PC STA = 1192+52.70 RB
PT STA = 1196+85.28 RB
DB = N37°28'13"E
DA = S79°46'55"E

PI STA = 1208+58.45 RA
Y = 367166.771
X = 608924.790
DELTA = 29°13'26" LT
D = 5°43'46"
T = 260.70'
L = 510.05'
R = 1000.00'
PC STA = 1205+97.74 RA
PT STA = 1211+07.79 RA
DB = S75°12'29"E
DA = N75°34'05"E

PI STA = 1215+49.40 RA
Y = 367341.806
X = 609604.932
DELTA = 3°35'46" LT
D = 0°30'06"
T = 358.63'
L = 717.03'
R = 11424.16'
PC STA = 1211+90.76 RA
PT STA = 1219+07.79 RA
DB = N75°34'05"E
DA = N71°58'19"E

R/L RA
STA = 1219+07.79 RA
Y=367452.7972
X=609945.9587

PT: 1194+63.89 RA
PC: 1195+63.94 RA
PT: 1197+42.23 RA
1195RA
N85°20'03"E
100.04'
REST AREA RAMP A R/L
1195RB
REST AREA RAMP B R/L
1200RA
S75°12'29"E
855.51'
1190RB
PC: 1191+75.49 RB
PRC: 1192+52.70 RB
PT: 1196+85.28 RB
S79°46'55"E
312.30'
EP: 1199+97.58 RB
1205RA
PC: 1205+97.74 RA
N75°34'05"E
82.97'
PT: 1211+07.79 RA
PC: 1211+90.76 RA
1210RA
1215RA
PT: 1219+07.79 RA
N73°30'31"E
300.41'
1220RA
IH 90 WB R/L
MATCH LINE 0+00 WB
MATCH LINE 0+00 WB

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ALIGNMENT DIAGRAM	SHEET 271	E

2

2

N

R/L RA
STA = 1222+08.21 RA
Y=367538.0756
X=610234.0136

EP: 1222+08.21 RA

MATCH LINE 0+00 WB

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ALIGNMENT DIAGRAM	SHEET 272	E

2

PI STA = 702+65.05 PC
Y = 367003.816
X = 607048.180
DELTA = 12°58'48" RT
D = 28°41'28"
T = 22.72'
L = 45.24'
R = 199.70'
PC STA = 702+42.33 PC
PT STA = 702+87.57 PC
DB = N40°07'30"E
DA = N53°06'17"E

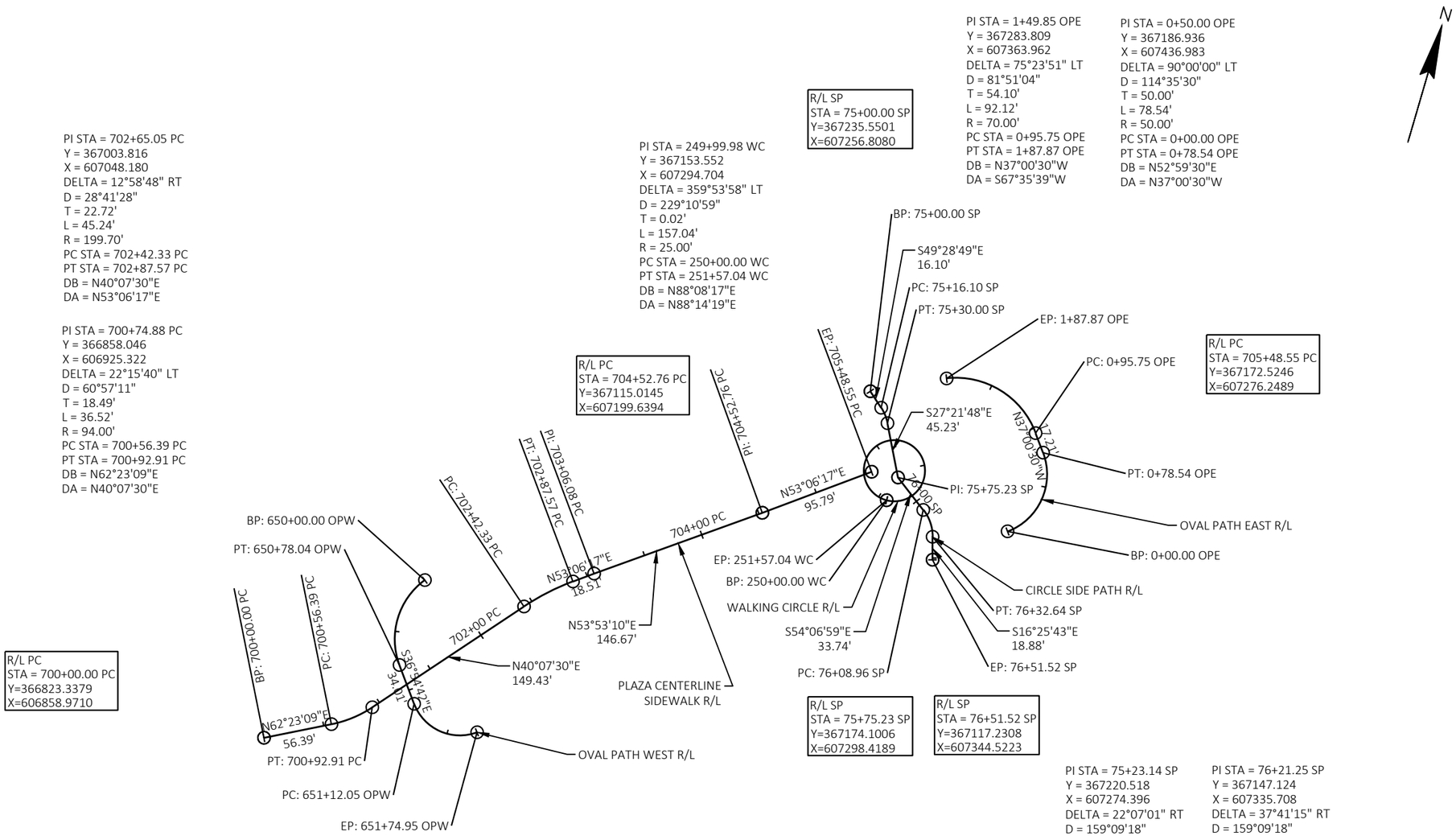
PI STA = 700+74.88 PC
Y = 366858.046
X = 606925.322
DELTA = 22°15'40" LT
D = 60°57'11"
T = 18.49'
L = 36.52'
R = 94.00'
PC STA = 700+56.39 PC
PT STA = 700+92.91 PC
DB = N62°23'09"E
DA = N40°07'30"E

PI STA = 249+99.98 WC
Y = 367153.552
X = 607294.704
DELTA = 359°53'58" LT
D = 229°10'59"
T = 0.02'
L = 157.04'
R = 25.00'
PC STA = 250+00.00 WC
PT STA = 251+57.04 WC
DB = N88°08'17"E
DA = N88°14'19"E

R/L SP
STA = 75+00.00 SP
Y=367235.5501
X=607256.8080

PI STA = 1+49.85 OPE
Y = 367283.809
X = 607363.962
DELTA = 75°23'51" LT
D = 81°51'04"
T = 54.10'
L = 92.12'
R = 70.00'
PC STA = 0+95.75 OPE
PT STA = 1+87.87 OPE
DB = N37°00'30"W
DA = S67°35'39"W

PI STA = 0+50.00 OPE
Y = 367186.936
X = 607436.983
DELTA = 90°00'00" LT
D = 114°35'30"
T = 50.00'
L = 78.54'
R = 50.00'
PC STA = 0+00.00 OPE
PT STA = 0+78.54 OPE
DB = N52°59'30"E
DA = N37°00'30"W



R/L SP
STA = 75+75.23 SP
Y=367174.1006
X=607298.4189

R/L SP
STA = 76+51.52 SP
Y=367117.2308
X=607344.5223

PI STA = 650+45.64 OPW
Y = 366948.316
X = 606921.519
DELTA = 74°31'18" LT
D = 95°29'35"
T = 45.64'
L = 78.04'
R = 60.00'
PC STA = 650+00.00 OPW
PT STA = 650+78.04 OPW
DB = S37°36'36"W
DA = S36°54'42"E

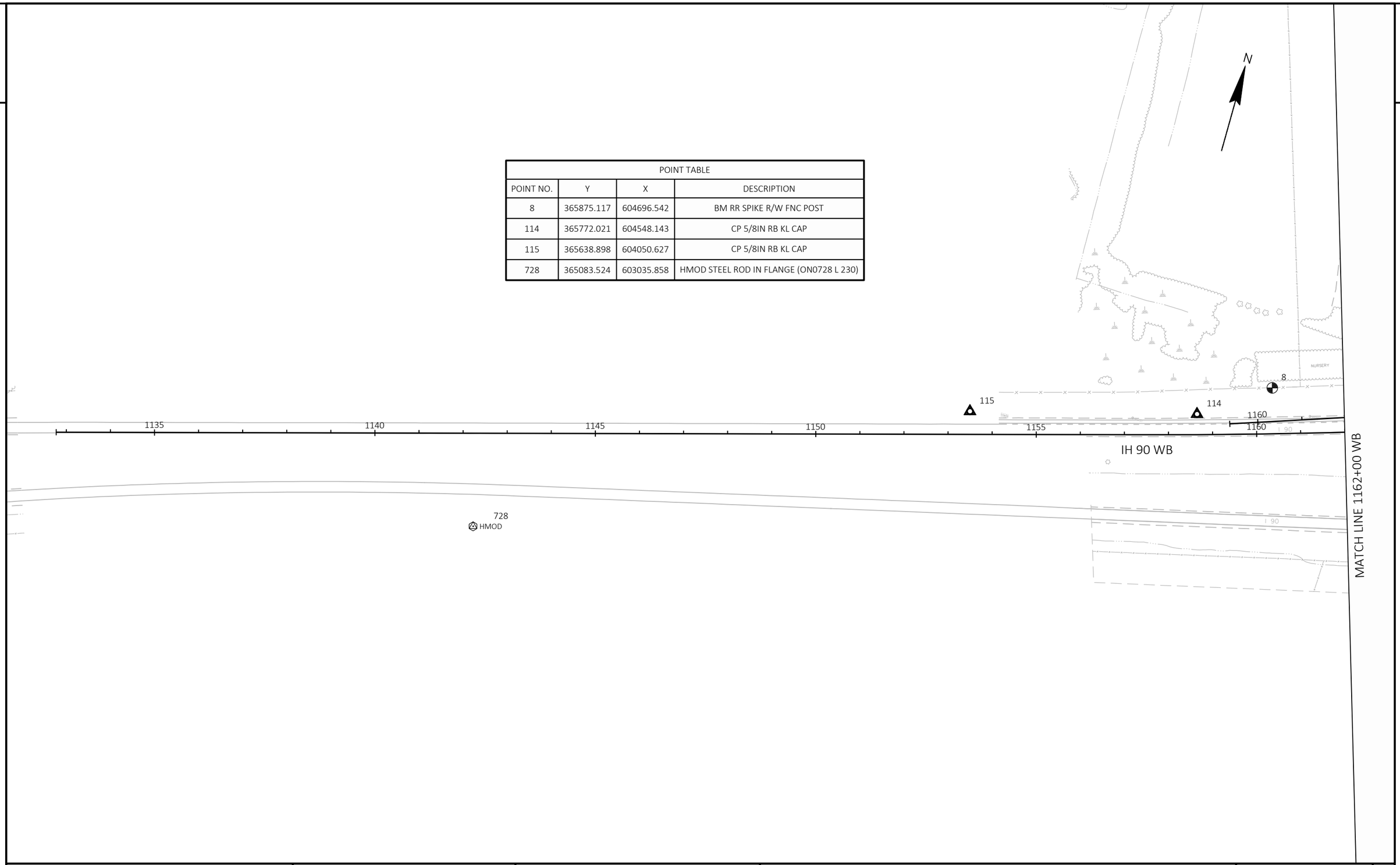
PI STA = 651+52.12 OPW
Y = 366852.589
X = 606993.423
DELTA = 90°05'48" LT
D = 143°14'22"
T = 40.07'
L = 62.90'
R = 40.00'
PC STA = 651+12.05 OPW
PT STA = 651+74.95 OPW
DB = S36°54'42"E
DA = N52°59'30"E

PI STA = 75+23.14 SP
Y = 367220.518
X = 607274.396
DELTA = 22°07'01" RT
D = 159°09'18"
T = 7.04'
L = 13.90'
R = 36.00'
PC STA = 75+16.10 SP
PT STA = 75+30.00 SP
DB = S49°28'49"E
DA = S27°21'48"E

PI STA = 76+21.25 SP
Y = 367147.124
X = 607335.708
DELTA = 37°41'15" RT
D = 159°09'18"
T = 12.29'
L = 23.68'
R = 36.00'
PC STA = 76+08.96 SP
PT STA = 76+32.64 SP
DB = S54°06'59"E
DA = S16°25'43"E

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	ALIGNMENT DIAGRAM - PLAZA	SHEET 273	E

POINT TABLE			
POINT NO.	Y	X	DESCRIPTION
8	365875.117	604696.542	BM RR SPIKE R/W FNC POST
114	365772.021	604548.143	CP 5/8IN RB KL CAP
115	365638.898	604050.627	CP 5/8IN RB KL CAP
728	365083.524	603035.858	HMOD STEEL ROD IN FLANGE (ON0728 L 230)



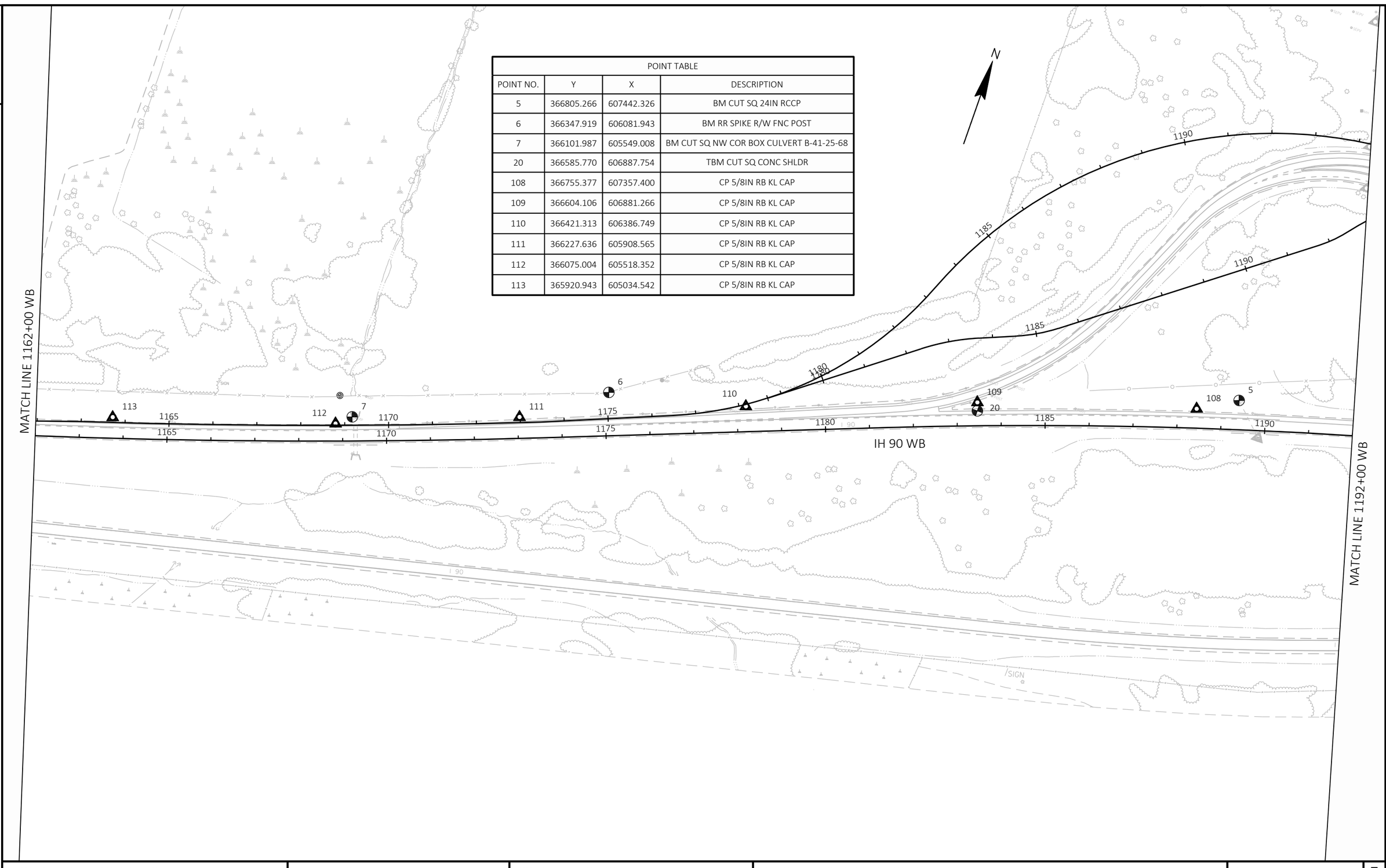
PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	BENCHMARKS AND CONTROL POINTS	SHEET 274	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\027301-CP_79.DWG
LAYOUT NAME - CP1

PLOT DATE : 1/15/2024 4:49 PM PLOT BY : BRIAN ST. VINCENT PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

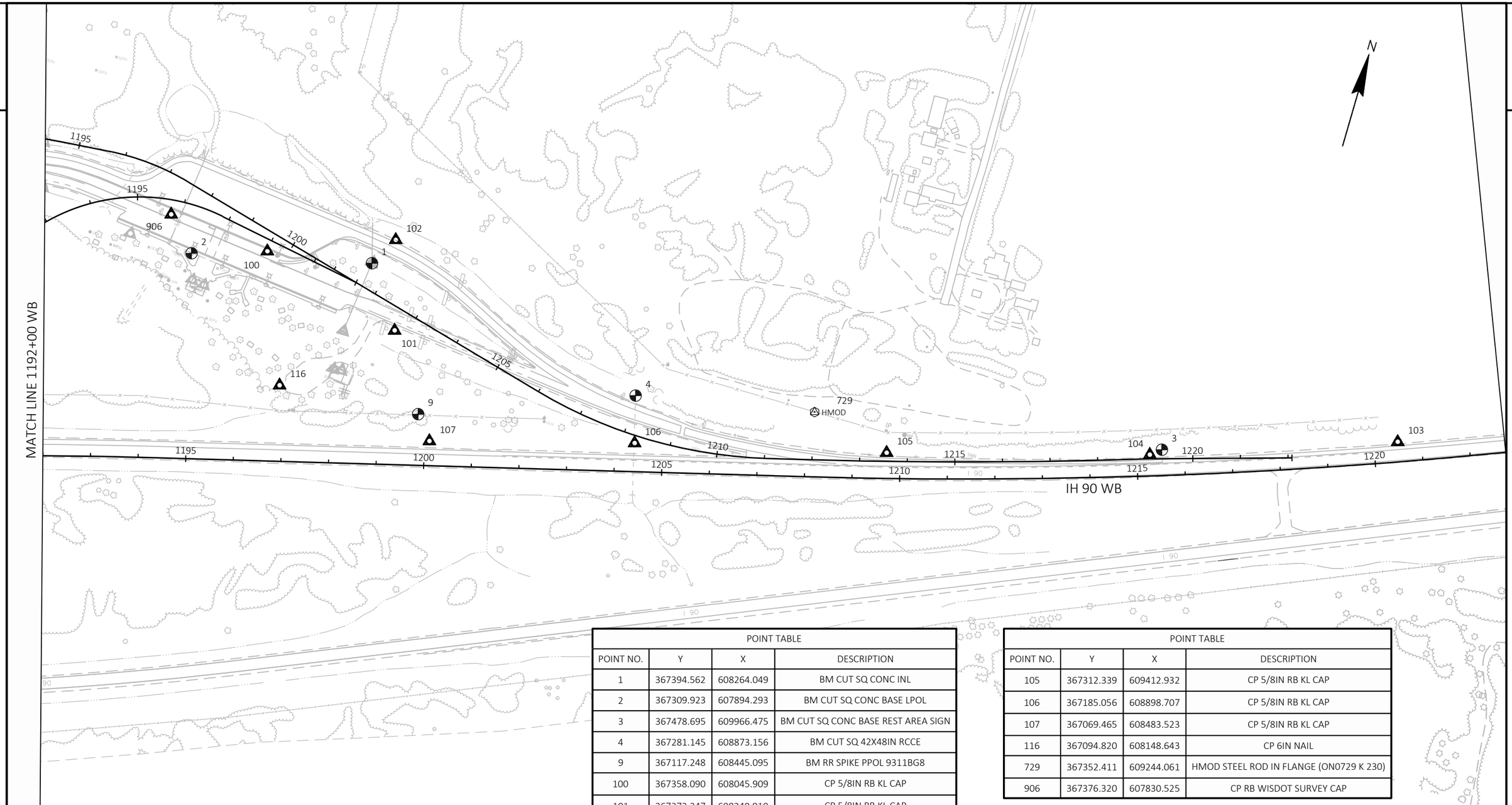
POINT TABLE			
POINT NO.	Y	X	DESCRIPTION
5	366805.266	607442.326	BM CUT SQ 24IN RCCP
6	366347.919	606081.943	BM RR SPIKE R/W FNC POST
7	366101.987	605549.008	BM CUT SQ NW COR BOX CULVERT B-41-25-68
20	366585.770	606887.754	TBM CUT SQ CONC SHLDR
108	366755.377	607357.400	CP 5/8IN RB KL CAP
109	366604.106	606881.266	CP 5/8IN RB KL CAP
110	366421.313	606386.749	CP 5/8IN RB KL CAP
111	366227.636	605908.565	CP 5/8IN RB KL CAP
112	366075.004	605518.352	CP 5/8IN RB KL CAP
113	365920.943	605034.542	CP 5/8IN RB KL CAP



PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	BENCHMARKS AND CONTROL POINTS	SHEET 275	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\027301-CP_79.DWG
LAYOUT NAME - CP2

PLOT DATE : 1/15/2024 4:49 PM PLOT BY : BRIAN ST. VINCENT PLOT NAME : PLOT SCALE : 1 IN:200 FT



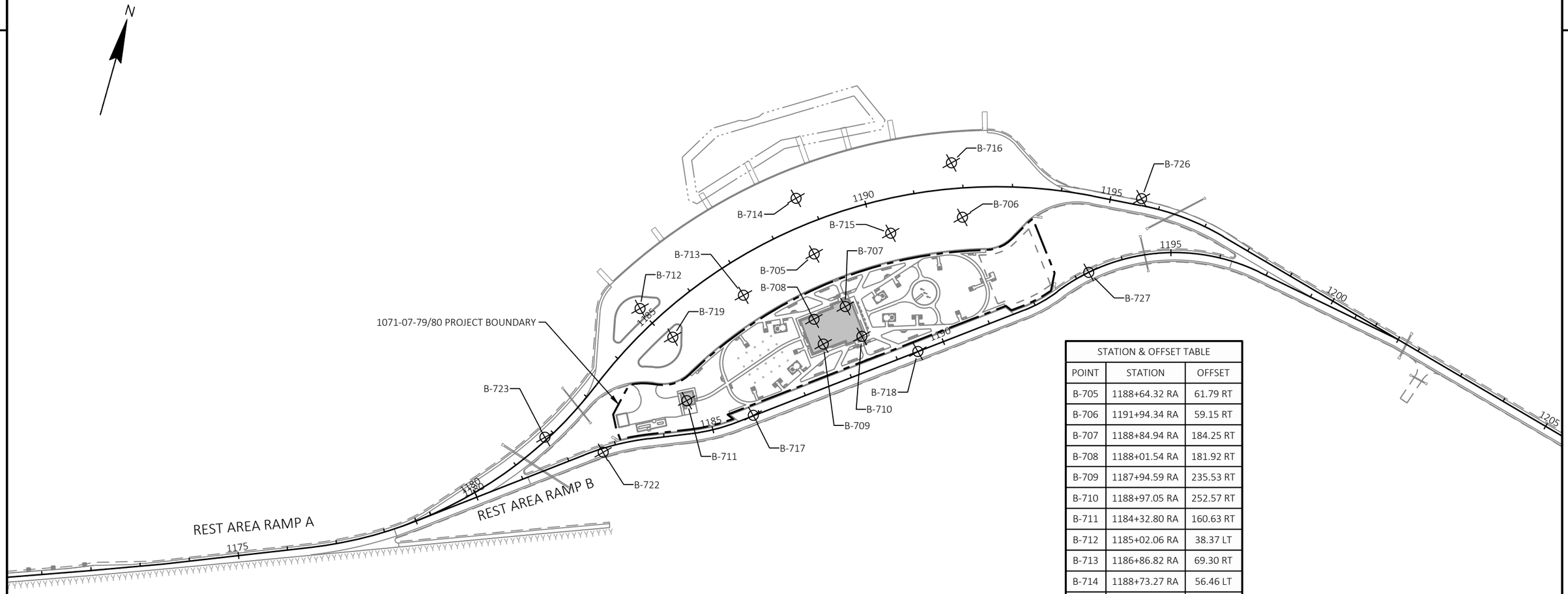
POINT TABLE			
POINT NO.	Y	X	DESCRIPTION
1	367394.562	608264.049	BM CUT SQ CONC INL
2	367309.923	607894.293	BM CUT SQ CONC BASE LPOL
3	367478.695	609966.475	BM CUT SQ CONC BASE REST AREA SIGN
4	367281.145	608873.156	BM CUT SQ 42X48IN RCCE
9	367117.248	608445.095	BM RR SPIKE PPOL 9311BG8
100	367358.090	608045.909	CP 5/8IN RB KL CAP
101	367272.347	608348.910	CP 5/8IN RB KL CAP
102	367455.670	608298.497	CP 5/8IN RB KL CAP
103	367631.858	610437.994	CP 5/8IN RB KL CAP
104	367461.563	609945.312	CP 5/8IN RB KL CAP

POINT TABLE			
POINT NO.	Y	X	DESCRIPTION
105	367312.339	609412.932	CP 5/8IN RB KL CAP
106	367185.056	608898.707	CP 5/8IN RB KL CAP
107	367069.465	608483.523	CP 5/8IN RB KL CAP
116	367094.820	608148.643	CP 6IN NAIL
729	367352.411	609244.061	HMOD STEEL ROD IN FLANGE (ON0729 K 230)
906	367376.320	607830.525	CP RB WISDOT SURVEY CAP

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	BENCHMARKS AND CONTROL POINTS	SHEET 276	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\027301-CP_79.DWG
LAYOUT NAME - CP3
PLOT DATE : 1/15/2024 4:49 PM
PLOT BY : BRIAN ST. VINCENT
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2



STATION & OFFSET TABLE		
POINT	STATION	OFFSET
B-705	1188+64.32 RA	61.79 RT
B-706	1191+94.34 RA	59.15 RT
B-707	1188+84.94 RA	184.25 RT
B-708	1188+01.54 RA	181.92 RT
B-709	1187+94.59 RA	235.53 RT
B-710	1188+97.05 RA	252.57 RT
B-711	1184+32.80 RA	160.63 RT
B-712	1185+02.06 RA	38.37 LT
B-713	1186+86.82 RA	69.30 RT
B-714	1188+73.27 RA	56.46 LT
B-715	1190+35.84 RA	69.34 RT
B-716	1191+80.71 RA	52.55 LT
B-717	1185+29.12 RA	275.92 RT
B-718	1190+35.23 RA	315.30 RT
B-719	1185+11.19 RA	49.14 RT
B-722	1182+41.00 RA	98.89 RT
B-723	1181+81.64 RA	5.53 LT
B-726	1195+61.87 RA	13.91 LT
B-727	1194+85.40 RA	153.07 RT

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	SOIL BORINGS	SHEET 277	E

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-705 (p. 1 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **774.5** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1–3	771.5	FILL, sand with silt and organics, fine to medium grained, dark brown, moist (SP-SM)	TOPSOIL / FILL	2	M	SS	15					
3–4	770.0	FILL, sand with silt, fine to medium grained, brown, moist, with trace organics (SP-SM)	FILL	3	M	SS	15					
5–9	765.0	FILL, sand, fine to medium grained, yellowish brown, moist (SP)	FILL	6	M	SS	17					
				10	M	SS	20					
10–11	762.5	SAND, fine grained, brown, moist to waterbearing, medium dense, possible fill (SP)	COARSE ALLUVIUM	20	M/W	SS	19					
12–13	760.0	SILT, brown, waterbearing, very loose (ML)	FINE ALLUVIUM	4	W	SS	24					
15–18	756.5	SILTY SAND, fine grained, grayish brown, waterbearing, medium dense, with laminations of sand (SM)	COARSE ALLUVIUM	12	W	SS	18	20				44
18–21		SAND, fine to medium grained, brown, waterbearing, medium dense (SP)		26	W	SS	12					

DEPTH: DRILLING METHOD	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA							
9.5-29.5' RD w/DM	**12/15/22**	**1000**	**11.5**	**9.5**	**10.2**	**None**	**10.2**
	12/15/22	**1025**	**11.5**	**9.5**	**10.2**	**None**	**10.2**
BORING COMPLETED: **12/15/22**							
DR: **GM** LG: **TT** Rig: **67**							

WATER LEVEL MEASUREMENTS

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-705 (p. 2 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23–28	746.5	SAND, fine to medium grained, brown, waterbearing, medium dense (SP) *(continued)*		28	W	SS	15					
28–31	743.0	SAND WITH SILT, fine grained, brown, waterbearing, medium dense (SP-SM)		15	W	SS	18					
		End of boring at 31.5 feet										

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-706 (p. 1 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **779.3** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	778.7 / 778.4	FILL, gravelly silty sand, fine to medium grained, brown to dark brown, moist (SM)	FILL	8	M	SS	18					
2		FILL, sand with silt, fine to medium grained, dark brown, moist (SP-SM)										
3		FILL, sand, fine to medium grained, yellowish brown, moist (SP-SM)		6	M	SS	21	4				1
4												
5				14	M	SS	24					
6												
7	772.3											
8		FILL, sand with silt, fine to medium grained, dark brown, moist (SP-SM)		22	M	SS	24					
9	769.8											
10		FILL, sand, fine to medium grained, yellowish brown, moist (SP)		11	M	SS	21					
11												
12	767.3											
13		FILL, sand, fine grained, brown, moist, with lenses of silt, possible coarse alluvium (SP)		11	M	SS	24					
14	764.8											
15		SILTY SAND, fine grained, brown, moist to waterbearing, loose, with laminations of sand (SM)	COARSE ALLUVIUM	7	M▼W	SS	24					
16												
17												
18	761.3											
19		SAND, fine grained, brown, waterbearing, medium dense (SP)										
20												
21				15	W	SS	21					

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-29.5' 3.25" HSA	**12/20/22**	**1200**	**31.5**	**29.5**	**27.1**	**None**	**17.3**
	12/20/22	**1215**	**31.5**	**29.5**	**25.2**	**None**	**15.6**
BORING COMPLETED: **12/20/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+OPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-706 (p. 2 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23	756.3	SAND, fine grained, brown, waterbearing, medium dense (SP) *(continued)*										
24		SAND, fine to medium grained, brown, waterbearing, loose to medium dense, with laminations of silt from 24.5 to 26.5 feet (SP)										
25				7	W	SS	24					
26												
27												
28												
29												
30				30	W	SS	24					
31	747.8	*End of boring at 31.5 feet*										

AET_CORP W-ELEV P-0018651.GPJ AET+OPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-707 (p. 1 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation 777.3 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
	776.8	FILL, sand with silt and organics, fine to medium grained, dark brown, moist (SP-SM)	TOPSOIL / FILL	2	M	SS	16					
1		FILL, sand, fine to medium grained, brown to yellowish brown, moist to waterbearing, with trace organics to 2 feet and lenses of silt from 12 to 14 feet (SP)	FILL									
2												
3				12	M	SS	18					
4												
5				10	M	SS	21					
6												
7												
8				15	M	SS	17					
9												
10				22	M	SS	21					
11												
12												
13				10	M/W	SS	19					
14	762.8											
15		SILT with sand, dark gray and brown, waterbearing, loose (ML)	FINE ALLUVIUM	8	W	SS	14	22				72
16												
17												
18	759.3											
19		SAND, fine to medium grained, brown, waterbearing, medium dense (SP)	COARSE ALLUVIUM									
20												
21				28	W	SS	20					

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-12.0' 3.25" HSA							
12.0-39.5' RD w/DM	**12/13/22**	**1206**	**14.0**	**12.0**	**12.4**	**None**	**12.4**
	12/13/22	**1231**	**14.0**	**12.0**	**12.3**	**None**	**12.3**
BORING COMPLETED: **12/13/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-707 (p. 2 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, brown, waterbearing, medium dense (SP) *(continued)*	COARSE ALLUVIUM *(continued)*									
24												
25				27	W	SS	17					
26												
27												
28												
29												
30				22	W	SS	20					
31												
32												
33	744.3											
34		SILTY SAND, fine grained, brown, waterbearing, medium dense (SM)										
35												
36				11	W	SS	6					
37												
38	739.3											
39		SILT with sand, dark gray, waterbearing, very loose (ML)	FINE ALLUVIUM									
40												
41				4	W	SS	22					
	735.8	*End of boring at 41.5 feet*										

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-708 (p. 1 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

Surface Elevation **780.9**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	779.9	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	5	M	SS	18					
		FILL, sand, fine to medium grained, brown to light brown, moist (SP)	FILL									
3				11	M	SS	18					
5				7	M	SS	17					
8				10	M	SS	16	2				3
10				13	M	SS	18					
12	768.9	FILL, sand with silt, fine grained, brown, moist (SP-SM)										
13	767.7	SILTY SAND, fine grained, gray and brown, moist, medium dense (SM)	COARSE ALLUVIUM	11	M	SS	16					
15	766.4	SILT, gray and brown, moist to waterbearing, very loose (ML)	FINE ALLUVIUM	3	M	SS	22					
18	762.9	SAND, fine to medium grained, brown, waterbearing, very loose to medium dense (SP)	COARSE ALLUVIUM	3	W	SS	15					

DEPTH: DRILLING METHOD	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-19.5' 3.25" HSA	**12/13/22**	**1557**	**21.5**	**19.5**	**19.3**	**None**	**17.3**
19.5-39.5' RD w/DM	**12/13/22**	**1615**	**21.5**	**19.5**	**18.5**	**None**	**17.1**
BORING COMPLETED: **12/13/22**							
DR: **GM** LG: **TT** Rig: **67**							

WATER LEVEL MEASUREMENTS

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-708 (p. 2 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, brown, waterbearing, very loose to medium dense (SP) *(continued)*	COARSE ALLUVIUM *(continued)*									
25				23	W	SS	14					
30				16	W	SS	16					
33	747.9	SILT, dark gray, waterbearing, loose, with trace organics (ML)	FINE ALLUVIUM	9	W	SS	24					
38	742.9	Weathered bedrock: gravelly SILTY SAND, fine to medium grained, brown, waterbearing, very dense (SM)	WEATHERED BEDROCK	50/.4	W	SS	6					
40	740.5	*End of boring at 40.4 feet*										

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-709 (p. 1 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **779.4** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	778.7	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	2	M	SS	19					
2		FILL, sand, fine to medium grained, brown, moist (SP)	FILL									
3				12	M	SS	21					
4												
5				11	M	SS	17					
6												
7	772.4	FILL, sand with silt, fine grained, brown, moist (SP-SM)		11	M	SS	18					
8												
9	769.9	FILL, sandy silt, gray and brown, moist, with lenses of sand (SM)		6	M	SS	20	18				51
10												
11												
12	767.4	FILL, sand with silt, fine grained, dark grayish brown, moist to waterbearing (SP-SM)		4	W	SS	24					
13												
14	764.9	SAND, fine to medium grained, brown, waterbearing, medium dense (SP)	COARSE ALLUVIUM	11	W	SS	16					
15												
16												
17												
18	761.4	SAND WITH SILT, fine to medium grained, brown, waterbearing, medium dense (SP-SM)		14	W	SS	21					
19												
20												
21												

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-14.5' 3.25" HSA	**12/13/22**	**1420**	**16.5**	**14.5**	**14.1**	**None**	**13.8**
14.5-39.5' RD w/DM	**12/13/22**	**1430**	**16.5**	**14.5**	**13.9**	**None**	**13.4**
BORING COMPLETED: **12/13/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-709 (p. 2 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23	756.4	SILTY SAND, fine grained, brown, waterbearing, loose (SM)		10	W	SS	24					
24												
25												
26												
27												
28	751.4	SAND, fine to medium grained, brown, waterbearing, medium dense (SP)		25	W	SS	17					
29												
30												
31												
32												
33	746.4	Weathered bedrock: SILTY SAND, fine to medium grained, reddish brown, waterbearing, very dense (SM)	WEATHERED BEDROCK	50/.4	W	SS	10					
34												
35												
36												
37												
38	741.4	Weathered bedrock: CLAYEY GRAVEL with sand, brown, waterbearing, very dense (GC)		50/.3	W	SS	2					
39	739.6	*End of boring at 39.8 feet*										

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-710 (p. 1 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **781.9** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	780.9	FILL (about 12 inches), gravelly silty sand, fine to medium grained, brown, moist (SM)	FILL	19	M	SS	17					
2	779.9	FILL, sand, fine to medium grained, yellowish brown, moist (SP)										
3		FILL, sand with silt, fine to medium grained, dark brown, moist (SP-SM)		15	M	SS	24					
4	777.4											
5		FILL, sand, fine grained, yellowish brown, moist (SP)		10	M	SS	24	3				1
6												
7												
8				6	M	SS	18					
9	772.4											
10		FILL, sand, fine to medium grained, brown, moist, possible coarse alluvium (SP)		14	M	SS	21					
11												
12												
13				19	M	SS	17					
14												
15	766.4											
16		Sandy SILT, gray and brown, wet, loose, with laminations of sand (ML)	FINE ALLUVIUM	9	M/W	SS	20					
17												
18	763.9	SAND, fine to medium grained, brown, waterbearing, medium dense to dense (SP)	COARSE ALLUVIUM									
19												
20												
21				15	W	SS	24					

DEPTH: DRILLING METHOD	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-19.5' 3.25" HSA							
19.5-39.5' RD w/DM	**12/13/22**	**1010**	**21.5**	**19.5**	**19.2**	**None**	**18.4**
	12/13/22	**1023**	**21.5**	**19.5**	**18.8**	**None**	**17.8**
BORING COMPLETED: **12/13/22**							
DR: **GM** LG: **TT** Rig: **67**							

WATER LEVEL MEASUREMENTS

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-710 (p. 2 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, brown, waterbearing, medium dense to dense (SP) *(continued)*	COARSE ALLUVIUM *(continued)*									
24												
25												
26				35	W	SS	10					
27												
28	753.9	SAND, fine grained, brown, waterbearing, medium dense to dense (SP)										
29												
30												
31				21	W	SS	15					
32												
33												
34												
35				35	W	SS	10					
36												
37												
38	743.9	SILT with sand, dark gray, waterbearing, loose, with trace organics (ML)	FINE ALLUVIUM									
39												
40												
41	740.4			6	W	SS	24					
		End of boring at 41.5 feet										

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-711 (p. 1 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

Surface Elevation **777.1**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1–2		FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	4	M	SS	21					
3	774.1	FILL, sand, fine to medium grained, brown, moist (SP)	FILL	3	M	SS	18					
4	772.6					PT						
5–6		FILL, sand with silt, fine grained, yellowish brown, moist (SP-SM)		6	M	SS	17	2				7
7						PT						
8				10	M	SS	24					
9	767.6					PT						
10–11		SAND, fine grained, brown, moist to waterbearing, loose, with lenses of silty sand (SP)	COARSE ALLUVIUM	7	M▼W	SS	18					
12	765.1					PT						
13–14		SAND, fine to medium grained, brown to greenish brown, waterbearing, loose to medium dense, with laminations of silty sand from 14.5 to 16.5 feet (SP)		7	W	SS	17					
15–16				15	W	SS	15					
17–18												
19–20				18	W	SS	17					
21	756.1											

DEPTH:	DRILLING METHOD	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-12.0'	**3.25" HSA**							
12.0-39.5'	**RD w/DM**	**12/14/22**	**1545**	**14.0**	**12.0**	**11.8**	**None**	**11.2**
		12/14/22	**1645**	**14.0**	**12.0**	**11.7**	**None**	**10.8**
BORING COMPLETED:	**12/14/22**							
DR: **GM** LG: **TT**	Rig: **67**							

WATER LEVEL MEASUREMENTS

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-711 (p. 2 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23	754.1	SAND WITH SILT, fine to medium grained, dark brown, waterbearing, medium dense (SP-SM) *(continued)*										
24–26		SAND, fine to medium grained, brown, waterbearing, medium dense to dense, with laminations of silty sand (SP)		30	W	SS	17					
27–29												
30				33	W	SS	16					
31–32												
33	744.1	Weathered bedrock: Gravelly SILTY SAND, fine to medium grained, yellowish brown, waterbearing, very dense (SM)	WEATHERED BEDROCK	50/.5	W	SS	8					
34–37												
38	739.1	Weathered bedrock: GRAVEL, brown, waterbearing, very dense (GP)		50/.2	W	SS	1					
39	737.4	*End of boring at 39.7 feet*										

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-712 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

Surface Elevation **771.8**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	770.3	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	3	M	SS	22					
2		FILL, sand with silt, fine to medium grained, dark brown, moist, with trace organics (SP-SM)	FILL									
3	768.8			4	M	SS	21					
4	767.3	FILL, sand, fine to medium grained, yellowish brown, moist (SP)										
5		SAND, fine grained, brown, moist to waterbearing, loose, with laminations of silty sand from 9.5 to 11.5 feet (SP)	COARSE ALLUVIUM	9	M	SS	24					
6												
7												
8				8	M	SS	16					
9												
10				6	M/W	SS	15					
11												
12	759.8	SAND, fine to medium grained, brown, waterbearing, medium dense (SP)		13	W	SS	24					
13												
14	757.3											
15		SAND, fine grained, brown, waterbearing, loose to medium dense (SP)		13	W	SS	17					
16												
17												
18												
19												
20				8	W	SS	17					
21	750.3											
		End of boring at 21.5 feet										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-19.5' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
	12/19/22	**1408**	**21.5**	**19.5**	**16.7**	**None**	**12.2**	
	12/19/22	**1428**	**21.5**	**19.5**	**14.0**	**None**	**5.5**	
BORING COMPLETED: **12/19/22**								
DR: **GM** LG: **TT** Rig: **67**								

AET_CORP W-ELEV P-0018651.GPJ AET+OPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-713 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

Surface Elevation **776.5**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	775.4	FILL, silty sand with organics, fine to medium grained, very dark brown, moist (SM)	TOPSOIL / FILL	1	M	SS	18					
2		FILL, sand with silt, fine to medium grained, brown, moist, with trace organics (SP-SM)	FILL									
3	773.5	FILL, sand, fine to medium grained, yellowish brown, moist (SP)		3	M	SS	18					
4												
5				5	M	SS	16					
6												
7												
8				13	M	SS	17					
9	767.0											
10	766.5	SAND, fine grained, brown, moist (SP)	COARSE ALLUVIUM									
11	766.0	Sandy SILT, gray and brown, moist, with trace organics (ML)	FINE ALLUVIUM	7	M/W	SS	24					
12	764.5	SAND, fine to medium grained, brown, moist to waterbearing (SP)	COARSE ALLUVIUM									
13	763.5	SILTY SAND, fine to medium grained, gray and brown, waterbearing, loose (SM)		7	W	SS	22					
14	762.0	SAND, fine to medium grained, brown, waterbearing, loose (SP)										
15		SAND, fine grained, brown, waterbearing, loose (SP)		10	W	SS	15					
16												
17												
18												
19												
20												
21	755.0			6	W	SS	21					
		End of boring at 21.5 feet										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-12.0' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
12.0-19.5' HSA w/DM	**12/14/22**	**1430**	**14.0**	**12.0**	**12.6**	**None**	**12.1**	
	12/14/22	**1515**	**14.0**	**12.0**	**11.9**	**None**	**11.3**	
BORING COMPLETED: **12/14/22**								
DR: **GM** LG: **TT** Rig: **67**								

AET_CORP W-ELEV P-0018651.GPJ AET+OPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-714 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

Surface Elevation **775.9**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	775.3	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	2	M	SS	24					
2	773.9	FILL, sand with silt, fine to medium grained, brown, moist (SP-SM)	FILL									
3		FILL, sand, fine to medium grained, light yellowish brown, moist (SP)		7	M	SS	18					
5				7	M	SS	24					
7	768.9	SAND, fine to medium grained, light grayish brown, moist, medium dense, with lenses of silty sand from 9.5 to 11.5 feet (SP)	COARSE ALLUVIUM	13	M	SS	20					
10				17	M	SS	21					
12	763.9	SAND, fine grained, grayish brown, moist to waterbearing, medium dense (SP)		12	M/W	SS	24					
14	761.4	SILT, gray and brown, waterbearing, very loose (ML)	FINE ALLUVIUM	2	W	SS	20					
18	757.9	SAND, fine to medium grained, brown, waterbearing, medium dense (SP)	COARSE ALLUVIUM	16	W	SS	18					
21	754.4	*End of boring at 21.5 feet*										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-19.5' 3.25" HSA	**12/19/22**	**1257**	**21.5**	**19.5**	**19.5**	**None**	**16.1**
	12/19/22	**1308**	**21.5**	**19.5**	**17.3**	**None**	**13.0**
BORING COMPLETED: **12/19/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-715 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

Surface Elevation **773.0**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	771.8	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	3	M	SS	24					
2	771.0	FILL, sand with silt, fine to medium grained, brown, moist, with trace organics (SP-SM)	FILL									
3		FILL, sand, fine to medium grained, light yellowish brown, moist (SP)		5	M	SS	18					
5	767.5	FILL, sand, fine grained, gray, moist, with trace organics (SP)		8	M	SS	21					
6	766.0	Sandy SILT, gray with brown mottling, moist, loose (ML)	FINE ALLUVIUM									
7	765.0	SILTY SAND, fine grained, gray with brown mottling, moist, loose, with laminations of sand (SM)	COARSE ALLUVIUM	9	M	SS	19					
8		SAND, fine to medium grained, brown, moist to waterbearing, loose (SP)										
10				10	M/W	SS	24					
13				10	W	SS	15					
14	758.5	SAND, fine grained, brown, waterbearing, loose (SP)		9	W	SS	15					
18	755.0	SAND, fine to medium grained, brown, waterbearing, loose (SP)		5	W	SS	19					
21	751.5	*End of boring at 21.5 feet*										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA							
9.5-19.5' HSA w/DM	**12/15/22**	**1100**	**11.5**	**9.5**	**9.7**	**None**	**9.6**
	12/15/22	**1202**	**11.5**	**9.5**	**9.6**	**None**	**9.6**
BORING COMPLETED: **12/15/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-716 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **774.6** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	773.9	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	2	M	SS	24					
2	772.6	FILL, sand with silt, fine to medium grained, brown, moist, with trace organics (SP-SM)	FILL									
3		FILL, sand, fine to medium grained, yellowish brown to light yellowish brown, with lenses of silty sand from 7 to 9 feet (SP)		2	M	SS	18					
4												
5				4	M	SS	21					
6												
7												
8				11	M	SS	19					
9	765.1											
10	764.1	SILT with sand, gray with brown mottling, moist to waterbearing, loose (ML)	FINE ALLUVIUM	5	M/W	SS	22					
11		SAND, fine to medium grained, brown, waterbearing, loose (SP)	COARSE ALLUVIUM									
12	762.6	SAND, fine grained, brown,										
13		waterbearing, medium dense (SP)		13	W	SS	14					
14												
15				15	W	SS	16					
16												
17												
18	756.6	SILT, dark gray, waterbearing, very loose (ML)	FINE ALLUVIUM									
19												
20				3	W	SS	13					
21	753.1	*End of boring at 21.5 feet*										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA							
9.5-19.5' HSA w/DM	**12/15/22**	**1315**	**11.5**	**9.5**	**10.2**	**None**	**10.2**
	12/15/22	**1335**	**11.5**	**9.5**	**10.2**	**None**	**10.2**
BORING COMPLETED: **12/15/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

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SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-717 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **778.5** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	778.0	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	3	M	SS	17					
2		FILL, sand, fine grained, brown to yellowish brown, moist, with lenses of silty sand from 4.5 to 6.5 feet (SP)	FILL									
3				10	M	SS	16	8				4
4												
5				10	M	SS	21					
6												
7	771.5											
8		FILL, sand, fine to medium grained, brown, moist to waterbearing, with lenses of silty sand from 9.5 to 11.5 feet (SP)		12	M	SS	24					
9												
10												
11				14	M/W	SS	24					
12	766.5											
13		SAND, fine grained, brown, waterbearing, medium dense, with laminations of sandy silt (SP)	COARSE ALLUVIUM	13	W	SS	18					
14	764.0											
15		SAND, fine to medium grained, grayish green to brown, waterbearing, medium dense (SP)										
16				13	W	SS	20					
17												
18												
19												
20												
21	757.0			18	W	SS	21					
		End of boring at 21.5 feet										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-14.5' 3.25" HSA							
14.5-19.5' HSA w/DM	**12/14/22**	**0835**	**16.5**	**14.5**	**13.6**	**None**	**13.3**
	12/14/22	**0945**	**16.5**	**14.5**	**13.5**	**None**	**11.0**
BORING COMPLETED: **12/14/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-718 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **778.1** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
	777.6	FILL, sand with silt and organics, fine to medium grained, dark brown, moist (SP-SM)	TOPSOIL									
1		FILL, sand with silt, fine grained, yellowish brown, moist, with lenses of silty sand from 2 to 4 feet (SP-SM)	FILL	4	M	SS	21					
2												
3				6	M	SS	16	4				7
4												
5												
6				7	M	SS	18					
7												
8				9	M	SS	21					
9	768.6											
10		SAND, fine grained, brown, moist, medium dense (SP)	COARSE ALLUVIUM	12	M	SS	17					
11												
12	766.1				▼							
13		SAND, fine to medium grained, brown, moist to waterbearing, loose (SP)		10	M/W	SS	18					
14	763.6											
15		SAND, fine grained, brown, waterbearing, loose, with laminations of sandy silt from 19.5 to 21.5 feet (SP)		6	W	SS	20					
16												
17												
18												
19												
20				7	W	SS	10					
21	756.6											
		End of boring at 21.5 feet										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-19.5' 3.25" HSA	**12/12/22**	**1445**	**14.0**	**12.0**	**12.3**	**None**	**12.3**
	12/12/22	**1500**	**16.5**	**14.5**	**14.5**	**None**	**14.1**
BORING COMPLETED: **12/12/22**	**12/12/22**	**1510**	**16.5**	**14.5**	**14.3**	**None**	**13.3**
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-719 (p. 1 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **774.2** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
	773.7	FILL, silty sand with organics, fine to medium grained, very dark brown, moist (SM)	TOPSOIL / FILL									
1		FILL, sand with silt, fine to medium grained, dark brown, moist, with trace organics to 2 feet (SP-SM)	FILL	WH	M	SS	16					
2												
3	771.2			3	M	SS	18					
4		FILL, sand with silt, fine grained, light brown and brown, moist to waterbearing, with lenses of silty sand from 4.5 to 6.5 feet (SP-SM)										
5												
6				7	M	SS	24	6				9
7												
8				10	M/W	SS	16					
9	764.7											
10		SAND, fine to medium grained, brown, waterbearing, loose (SP)	COARSE ALLUVIUM	10	W	SS	24					
11												
12	762.2											
13		SAND, fine grained, brown, waterbearing, loose to medium dense (SP)		13	W	SS	16					
14												
15				10	W	SS	15					
16												
17												
18												
19												
20												
21				18	W	SS	16					

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA							
9.5-29.5' RD w/DM	**12/14/22**	**1030**	**11.5**	**9.5**	**9.3**	**None**	**9.0**
	12/15/22	**1040**	**11.5**	**9.5**	**9.2**	**None**	**8.3**
BORING COMPLETED: **12/14/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-719 (p. 2 of 2)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine grained, brown, waterbearing, loose to medium dense (SP) *(continued)*										
24												
25	749.2											
25		Sandy SILT, brown, waterbearing, medium dense (ML)	FINE ALLUVIUM	11	W	SS	18					
26												
27												
28	746.2											
28		SAND WITH SILT, fine to medium grained, brown, waterbearing, dense (SP-SM)	COARSE ALLUVIUM									
29												
30				32	W	SS	17					
31	742.7											
		End of boring at 31.5 feet										

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-722 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **775.7** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1		FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	WH	M	SS	16					
2												
3	772.7											
3		FILL, sand, fine to medium grained, brown to light yellowish brown, moist, with trace organics to 4 feet (SP)	FILL	3	M	SS	18					
4												
5												
6				7	M	SS	22					
7	768.7											
8		SAND, fine grained, grayish brown, moist to waterbearing, medium dense (SP)	COARSE ALLUVIUM	12	M▼W	SS	17					
9	766.2											
10		SAND WITH SILT, fine to medium grained, brown, waterbearing, loose (SP-SM)		7	W	SS	17					
11												
12	763.7											
13		SAND, fine to medium grained, grayish brown, waterbearing, medium dense, with laminations of silt from 19.5 to 21.5 feet (SP)		15	W	SS	15					
14												
15				12	W	SS	16					
16												
17												
18												
19												
20												
21				14	W	SS	21					
	754.2											
		End of boring at 21.5 feet										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-9.5' 3.25" HSA								
9.5-19.5' HSA w/DM	**12/14/22**	**1245**	**11.5**	**9.5**	**9.3**	**None**	**8.8**	
	12/14/22	**1355**	**11.5**	**9.5**	**9.2**	**None**	**8.3**	
BORING COMPLETED: **12/14/22**								
DR: **GM** LG: **TT** Rig: **67**								

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

2

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-723 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation 772.1 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1		FILL, silty sand with organics, fine to medium grained, very dark brown, moist (SM)	TOPSOIL / FILL	3	M	SS	17					
2	770.1	FILL, sand, fine to medium grained, yellowish brown, moist (SP)	FILL	8	M	SS	16					
3												
4	767.6				▼							
5		SAND, fine to medium grained, gray, waterbearing, loose to medium dense (SP)	COARSE ALLUVIUM	14	W	SS	18					
6												
7												
8				19	W	SS	15					
9												
10				13	W	SS	17					
11												
12												
13				7	W	SS	15					
14												
15				10	W	SS	18					
16												
17												
18	754.1	SAND, fine grained, gray, waterbearing, loose (SP)										
19												
20				5	W	SS	15					
21	750.6											
		End of boring at 21.5 feet										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-19.5' 3.25" HSA	**12/14/22**	**1115**	**6.5**	**4.5**	**4.3**	**None**	**4.3**
	12/14/22	**1145**	**6.5**	**4.5**	**4.5**	**None**	**4.0**
BORING COMPLETED: **12/14/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-726 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation 774.8 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	774.2	FILL, silty sand with organics, fine to medium grained, very dark brown, moist (SM)	TOPSOIL / FILL	3	M	SS	18	11				3
2	772.8	FILL, sand, fine to medium grained, brown, moist (SP)	FILL									
3	772.3	FILL, sand with silt, fine to medium grained, dark brown and brown, moist (SP-SM)		14	M	SS	24					
4												
5		FILL, sand, fine to medium grained, grayish brown to yellowish brown, moist, with lenses of silty sand from 4.5 to 6.5 feet (SP)		11	M	SS	20					
6												
7	767.8											
8	766.3	SILT, gray with brown mottling, moist, loose, with trace organics (ML)	FINE ALLUVIUM	9	M	SS	24					
9		SAND, fine to medium grained, brown, moist to waterbearing, loose (SP)	COARSE ALLUVIUM									
10				10	M	SS	17					
11												
12					▼							
13				8	M/W	SS	16					
14	760.3											
15		SAND, fine grained, brown, waterbearing, loose (SP)		7	W	SS	14					
16												
17												
18	756.8	SAND, fine to medium grained, brown, waterbearing, medium dense, with laminations of silt (SP)										
19												
20				18	W	SS	18					
21	753.3											
		End of boring at 21.5 feet										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-19.5' 3.25" HSA	**12/20/22**	**0940**	**21.5**	**19.5**	**18.1**	**None**	**15.0**
	12/20/22	**1000**	**21.5**	**19.5**	**17.9**	**None**	**12.7**
BORING COMPLETED: **12/20/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0018651** Log of Boring No. **B-727 (p. 1 of 1)**

Project: **Project ID 1071-07-09; Sparta Rest Area No. 16; IH-90; Monroe County**

Surface Elevation **782.7**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	782.0 / 781.5	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	4	M	SS	16					
2		FILL, sand, fine to medium grained, brown, moist (SP)	FILL									
3	780.2	FILL, sand with silt, fine to medium grained, dark brown, moist, with trace organics (SP-SM)		13	M	SS	22					
4	778.2	FILL, sand with silt, fine to medium grained, brown, moist (SP-SM)										
5		FILL, sand, fine to medium grained, yellowish brown, moist, with lenses of silty sand (SP)		8	M	SS	18					
7	775.7	FILL, silty sand, fine grained, yellowish brown, moist, with trace roots (SM)		11	M	SS	19	7				22
9	773.2	FILL, sand, fine to medium grained, yellowish brown, moist, with lenses of silty sand (SP)		20	M	SS	18					
11	770.7	SAND, fine to medium grained, greenish brown to grayish brown and reddish brown, moist to waterbearing, loose to medium dense, with laminations of silty sand from 12 to 14 feet (SP)	COARSE ALLUVIUM	16	M	SS	16					
15				10	M	SS	17					
17					▼							
20				9	W	SS	21					
21	761.2	*End of boring at 21.5 feet*										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-19.5' 3.25" HSA	**12/12/22**	**1240**	**21.5**	**19.5**	**19.5**	**None**	**17.9**
	12/12/22	**1250**	**21.5**	**19.5**	**18.1**	**None**	**17.4**
BORING COMPLETED: **12/12/22**							
DR: **GM** LG: **TT** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0018651.GPJ AET+CPT+WELL.GDT 2/11/23

03/2011 01-DHR-060

Estimate Of Quantities

1071-07-79

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	10.000	10.000
0004	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0006	204.0100	Removing Concrete Pavement	SY	726.000	726.000
0008	204.0170	Removing Fence	LF	76.000	76.000
0010	204.0265	Abandoning Wells	EACH	1.000	1.000
0012	205.0100	Excavation Common	CY	2,961.000	2,961.000
0014	208.0100	Borrow	CY	10,324.000	10,324.000
0016	213.0100	Finishing Roadway (project) 01. 1071-07-79	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,080.000	1,080.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	290.000	290.000
0022	312.0110	Select Crushed Material	TON	182.000	182.000
0024	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	1.000	1.000
0026	531.2036	Drilling Shaft 36-Inch	LF	10.000	10.000
0028	531.4050	Foundation Camera Pole 50-FT	EACH	1.000	1.000
0030	601.0115	Concrete Curb Type G	LF	160.000	160.000
0032	602.0415	Concrete Sidewalk 6-Inch	SF	31,000.000	31,000.000
0034	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	52.000	52.000
0036	602.0815	Concrete Driveway 7-Inch	SY	770.000	770.000
0038	606.0200	Riprap Medium	CY	7.000	7.000
0040	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	162.000	162.000
0042	611.0645	Inlet Covers Type MS-A	EACH	2.000	2.000
0044	611.3901	Inlets Median 1 Grate	EACH	2.000	2.000
0046	615.1000	Wisconsin Historical Marker	EACH	1.000	1.000
0048	616.0206	Fence Chain Link 6-FT	LF	220.000	220.000
0050	616.0329	Gates Chain Link (width) 01. 6-FT	EACH	2.000	2.000
0052	616.0329	Gates Chain Link (width) 02. 4-FT	EACH	2.000	2.000
0054	616.0700.S	Fence Safety	LF	1,000.000	1,000.000
0056	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1071-07-79	EACH	1.000	1.000
0058	619.1000	Mobilization	EACH	1.000	1.000
0060	623.0200	Dust Control Surface Treatment	SY	5,300.000	5,300.000
0062	624.0100	Water	MGAL	24.000	24.000
0064	625.0100	Topsoil	SY	500.000	500.000
0066	625.0500	Salvaged Topsoil	SY	10,200.000	10,200.000
0068	627.0200	Mulching	SY	8,100.000	8,100.000
0070	628.1104	Erosion Bales	EACH	60.000	60.000
0072	628.1530.S	Silt Fence Heavy Duty	LF	3,000.000	3,000.000
0074	628.1535.S	Silt Fence Heavy Duty Maintenance	LF	9,000.000	9,000.000
0076	628.1905	Mobilizations Erosion Control	EACH	22.000	22.000
0078	628.1910	Mobilizations Emergency Erosion Control	EACH	16.000	16.000
0080	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0082	628.7020	Inlet Protection Type D	EACH	3.000	3.000
0084	628.7560	Tracking Pads	EACH	2.000	2.000
0086	629.0210	Fertilizer Type B	CWT	7.000	7.000
0088	630.0140	Seeding Mixture No. 40	LB	150.000	150.000
0090	630.0200	Seeding Temporary	LB	220.000	220.000
0092	630.0500	Seed Water	MGAL	190.000	190.000
0094	631.0300	Sod Water	MGAL	80.000	80.000
0096	631.1000	Sod Lawn	SY	3,450.000	3,450.000
0098	632.0101	Trees (species, root, size) 01. Overstory Tree, 2.5" Caliper, B&B	EACH	25.000	25.000
0100	632.0201	Shrubs (species, root, size) 01. Shrub, 12" Height, B&B	EACH	80.000	80.000

1071-07-79

Line	Item	Item Description	Unit	Total	Qty
0102	632.0201	Shrubs (species, root, size) 03. Perennial, DP50, CG	EACH	678.000	678.000
0104	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	24.000	24.000
0106	633.5200	Markers Culvert End	EACH	1.000	1.000
0108	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0110	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	14.000	14.000
0112	637.2210	Signs Type II Reflective H	SF	73.250	73.250
0114	639.0108	Drill Hole in Earth 8-Inch	LF	100.000	100.000
0116	639.0112	Drill Hole in Earth 12-Inch	LF	170.000	170.000
0118	639.1008	Well Casing Pipe 8-Inch	LF	182.000	182.000
0120	639.1700	Well Screen	LF	20.000	20.000
0122	639.2100	Grout for Sealing Well Casing	CF	54.000	54.000
0124	639.4000	Test Pumping	EACH	2.000	2.000
0126	642.5401	Field Office Type D	EACH	1.000	1.000
0128	643.0300	Traffic Control Drums	DAY	18,500.000	18,500.000
0130	643.0420	Traffic Control Barricades Type III	DAY	1,450.000	1,450.000
0132	643.0705	Traffic Control Warning Lights Type A	DAY	2,850.000	2,850.000
0134	643.0900	Traffic Control Signs	DAY	3,540.000	3,540.000
0136	643.0910	Traffic Control Covering Signs Type I	EACH	2.000	2.000
0138	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000
0140	643.1050	Traffic Control Signs PCMS	DAY	7.000	7.000
0142	643.3170	Temporary Marking Line Epoxy 6-Inch	LF	610.000	610.000
0144	643.5000	Traffic Control	EACH	1.000	1.000
0146	645.0120	Geotextile Type HR	SY	13.000	13.000
0148	650.4000	Construction Staking Storm Sewer	EACH	3.000	3.000
0150	650.4500	Construction Staking Subgrade	LF	1,110.000	1,110.000
0152	650.5000	Construction Staking Base	LF	300.000	300.000
0154	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	160.000	160.000
0156	650.7000	Construction Staking Concrete Pavement	LF	820.000	820.000
0158	650.8501	Construction Staking Electrical Installations (project) 01. 1071-07-79	EACH	1.000	1.000
0160	650.9000	Construction Staking Curb Ramps	EACH	4.000	4.000
0162	650.9500	Construction Staking Sidewalk (project) 01. 1071-07-79	EACH	1.000	1.000
0164	650.9911	Construction Staking Supplemental Control (project) 01. 1071-07-79	EACH	1.000	1.000
0166	650.9920	Construction Staking Slope Stakes	LF	1,110.000	1,110.000
0168	652.0125	Conduit Rigid Metallic 2-Inch	LF	30.000	30.000
0170	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	3,160.000	3,160.000
0172	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	215.000	215.000
0174	653.0140	Pull Boxes Steel 24x42-Inch	EACH	6.000	6.000
0176	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	16.000	16.000
0178	654.0105	Concrete Bases Type 5	EACH	4.000	4.000
0180	654.0111	Concrete Bases Type 11	EACH	20.000	20.000
0182	654.0230	Concrete Control Cabinet Bases Type L30	EACH	1.000	1.000
0184	655.0610	Electrical Wire Lighting 12 AWG	LF	1,440.000	1,440.000
0186	655.0615	Electrical Wire Lighting 10 AWG	LF	5,799.000	5,799.000
0188	655.0625	Electrical Wire Lighting 6 AWG	LF	450.000	450.000
0190	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. CB 100	EACH	1.000	1.000
0192	656.0501	Electrical Service Breaker Disconnect Box (location) 01. CCTV410190	EACH	1.000	1.000
0194	659.0700	Lighting Units Walkway	EACH	20.000	20.000
0196	659.2130	Lighting Control Cabinets 120/240 30-Inch	EACH	1.000	1.000
0198	670.0101	Field System Integrator	EACH	1.000	1.000
0200	670.0201	ITS Documentation	EACH	1.000	1.000

Estimate Of Quantities

1071-07-79

Line	Item	Item Description	Unit	Total	Qty
0202	671.0112	Conduit HDPE 1-Duct 2-Inch	LF	585.000	585.000
0204	671.0122	Conduit HDPE 2-Duct 2-Inch	LF	480.000	480.000
0206	673.1225.S	Install Pole Mounted Cabinet	EACH	1.000	1.000
0208	677.0150	Install Camera Pole 50-FT	EACH	1.000	1.000
0210	677.0200	Install Camera Assembly	EACH	1.000	1.000
0212	678.0600	Install Ethernet Switches	EACH	1.000	1.000
0214	690.0250	Sawing Concrete	LF	140.000	140.000
0216	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0218	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,500.000	2,500.000
0220	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	3,520.000	3,520.000
0222	SPV.0060	Special 01. Bench	EACH	13.000	13.000
0224	SPV.0060	Special 02. Litter Receptacle	EACH	33.000	33.000
0226	SPV.0060	Special 03. Recycling Receptacle	EACH	33.000	33.000
0228	SPV.0060	Special 04. Picnic Table	EACH	12.000	12.000
0230	SPV.0060	Special 05. ADA Picnic Table	EACH	4.000	4.000
0232	SPV.0060	Special 06. Flag Pole	EACH	3.000	3.000
0234	SPV.0060	Special 07. Planting Container	EACH	4.000	4.000
0236	SPV.0060	Special 08. Picnic Shelter	EACH	4.000	4.000
0238	SPV.0060	Special 09. Install Cellular Modem	EACH	1.000	1.000
0240	SPV.0060	Special 10. Ground Rod	EACH	1.000	1.000
0242	SPV.0060	Special 11. Rest Area Building General	EACH	1.000	1.000
0244	SPV.0060	Special 12. Rest Area Building Plumbing	EACH	1.000	1.000
0246	SPV.0060	Special 13. Rest Area Building HVAC	EACH	1.000	1.000
0248	SPV.0060	Special 14. Rest Area Building Electrical	EACH	1.000	1.000
0250	SPV.0060	Special 15. Maintenance Building General	EACH	1.000	1.000
0252	SPV.0060	Special 16. Maintenance Building Plumbing	EACH	1.000	1.000
0254	SPV.0060	Special 17. Maintenance Building HVAC	EACH	1.000	1.000
0256	SPV.0060	Special 18. Maintenance Building Electrical	EACH	1.000	1.000
0258	SPV.0060	Special 19. Electrical Service, Sparta Rest Area	EACH	1.000	1.000
0260	SPV.0060	Special 20. Sewage Ejector Pump and Controls	EACH	1.000	1.000
0262	SPV.0060	Special 21. Pitless Adapter	EACH	2.000	2.000
0264	SPV.0060	Special 22. Well Pump	EACH	2.000	2.000
0266	SPV.0060	Special 23. Sanitary Sewer Manhole 4-ft	EACH	3.000	3.000
0268	SPV.0060	Special 24. Coring Manhole	EACH	1.000	1.000
0270	SPV.0060	Special 25. Well System Controls	EACH	1.000	1.000
0272	SPV.0060	Special 26. Adjusting Manhole Covers with Rubber Rings	EACH	1.000	1.000
0274	SPV.0060	Special 27. Bollard	EACH	7.000	7.000
0276	SPV.0090	Special 01. Split Rail Fence	LF	260.000	260.000
0278	SPV.0090	Special 02. Pipe Underdrain (8-Inch) with Geotextile Fabric and Aggregate	LF	440.000	440.000
0280	SPV.0090	Special 03. Forcemain PVC, 2-Inch	LF	334.000	334.000
0282	SPV.0090	Special 04. Sanitary Sewer PVC 4-Inch	LF	42.000	42.000
0284	SPV.0090	Special 05. Sanitary Sewer PVC 8-Inch	LF	539.000	539.000
0286	SPV.0090	Special 06. Underground Copper Water Line 1-Inch	LF	390.000	390.000
0288	SPV.0090	Special 07. Underground Copper Water Line 3-Inch	LF	595.000	595.000
0290	SPV.0090	Special 08. Construction Staking Sanitary Sewer System	LF	915.000	915.000
0292	SPV.0165	Special 01. Unit Paving	SF	773.000	773.000

3

GRUBBING

PROJECT	CATEGORY	LOCATION	STATION - STATION	201.0205 GRUBBING (STA)
1071-07-79				
	0010	REST AREA PLAZA	1183+13 RB - 1192+70 RB	10
PROJECT 1071-07-79 TOTAL				10

REMOVING FENCE

PROJECT	CATEGORY	LOCATION	STATION - STATION	204.0170 REMOVING FENCE (LF)
1071-07-79				
	0010	REST AREA PLAZA	1183+22 RB - 1183+72 RB	76
PROJECT 1071-07-79 TOTAL				76

REMOVING SMALL PIPE CULVERTS

PROJECT	CATEGORY	LOCATION	STATION	OFFSET	203.0100 REMOVING SMALL PIPE CULVERTS (EACH)	NOTES
1071-07-79						
	0010	REST AREA PLAZA	1189+65 RB	LT	1	CPRC 24"
PROJECT 1071-07-79 TOTAL					1	

REMOVING CONCRETE PAVEMENT

PROJECT	CATEGORY	LOCATION	STATION - STATION	204.0100 REMOVING CONCRETE PAVEMENT (SY)
1071-07-79				
	0010	REST AREA PLAZA	1187+06 RB - 1192+88 RB	726
PROJECT 1071-07-79 TOTAL				726

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	REDUCED EBS IN FILL (9) FACTOR 0.80	312.0110 SELECT CRUSHED MATERIAL, EXPANDED EBS BACKFILL (11) FACTOR 1.30	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.30	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
1	1159+36 RA - 1222+08 RA	RAMP A	535	26	0	535	21	34	1,845	2,371	-1,836	0	1,836	
	1180+28 RB - 1198+09 RB	RAMP B	1,929	95	0	1,929	76	124	306	299	1,630	1,630	-1,630	EXCESS MATERIAL USED AS BORROW
	UNDISTRIBUTED	REST AREA PLAZA EW	0	0	181	-181	0	0	2,026	2,634	-2,815	0	2,815	
	300+25 MG - 301+60 MG	MAINTENANCE GARAGE	20	1	0	20	1	1	729	947	-927	0	927	
	700+56 PC - 705+36 PC	PLAZA CENTERLINE SIDEWALK	335	18	0	335	14	23	2,620	3,387	-3,052	0	3,052	
	250+00 WC - 251+57 WC	WALKING CIRCLE	2	0	0	2	0	0	2,558	3,325	-3,323	0	3,323	
DIVISION 1 SUBTOTAL			2,821	140	181	2,640	112	182	10,084	12,964	-10,324	1,630	10,324	
GRAND TOTAL			2,821	140	181	2,640	112	182	10,084	12,964	-10,324	1,630	**10,324**	
TOTAL COMMON EXC			**2,961**											

NOTES:
1 COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
2 SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3 EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL.
4 SALVAGED/UNUSABLE PAVEMENT MATERIAL
5 AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
6 REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.80
7 EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. EBS BACKFILL FACTOR = 1.30. ITEM NUMBER 312.0110
8 EXPANDED FILL FACTOR = 1.15, EXPANDED FILL = (UNEXPANDED FILL - REDUCED EBS) * FILL FACTOR
9 THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
10 FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

BASE AGGREGATE DENSE

PROJECT	CATEGORY	LOCATION	STATION - STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
1071-07-79					
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	1,080	-
		MAINTENANCE GARAGE	300+25 MG - 301+60 MG	-	290
PROJECT 1071-07-79 TOTAL				1,080	290

CONCRETE PAVEMENT ITEMS

PROJECT	CATEGORY	LOCATION	STATION - STATION	602.0815 CONCRETE DRIVEWAY 7-INCH (SY)
1071-07-79				
	0010	MAINTENANCE GARAGE	300+25 MG - 301+60 MG	770
PROJECT 1071-07-79 TOTAL				770

CONCRETE SIDEWALK

PROJECT	CATEGORY	LOCATION	STATION - STATION	602.0415 CONCRETE SIDEWALK 6-INCH (SF)	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW (SF)
1071-07-79					
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	31,000	52
PROJECT 1071-07-79 TOTAL				31,000	52

CONCRETE CURB & GUTTER

PROJECT	CATEGORY	LOCATION	STATION - STATION	601.0115 CONCRETE CURB TYPE G (LF)
1071-07-79				
	0010	WALKING CIRCLE	250+00 WC - 251+57 WC	160
PROJECT 1071-07-79 TOTAL				160

WISCONSIN HISOTRICAL MARKER

PROJECT	CATEGORY	LOCATION	STATION	OFFSET	615.1000* WISCONSIN HISTORICAL MARKER (EACH)
1071-07-79					
	0010	REST AREA PLAZA	1188+88 RB	143.4', LT	0.5
		REST AREA PLAZA	1188+89 RB	75.6' LT	0.5
PROJECT 1071-07-79 TOTAL					1

*EXISTING HISOTRICAL SIGN PLAQUES TO BE STORED BY DEPARTMENT, REINSTALLATION OF SIGN PLAQUES ON NEW HISTORICAL MARKERS SHALL BE INCIDENTAL TO ITEM 615.1000, SEE S.D.D. 14C2 "DIMENSIONED POST CONSTRUCTION"

STORM SEWER PIPES

CATEGORY	FROM STRUCT.	-	TO STRUCT.	INLET ELEV	OUTLET ELEV	SLOPE %	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	633.5200 MARKERS CULVERT END EACH	JOINT TIES* EACH
0010	1.1	-	1.0	778.23	776.95	1.00%	128	1	6
	1.2	-	1.1	778.56	778.23	0.97%	34	--	6
PROJECT 1071-07-79 TOTAL							162	1	

* NON-BID ITEM: FOR INFORMATION ONLY

STORM SEWER STRUCTURES

CATEGORY	STRUCTURE NO.	STATION*	OFFSET*	LOCATION	TOP STRUCTURE ELEV	LOW STRUCT INV	RIM ELEV	BOTTOM STRUCT ELEV	STRUCTURE DEPTH** (FT)	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	611.0645 INLET COVERS TYPE MS-A EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
0010	1.0	1188+87	34.7' RT	RB	--	776.95	--	--	--	1	--	--	1
	1.1	1188+88	93.0' LT	RB	782.82	778.23	782.82	778.02	4.80	--	1	1	1
	1.2	1188+89	126.8' LT	RB	782.80	778.56	782.80	778.35	4.45	--	1	1	1
PROJECT 1071-07-79 TOTAL										1	2	2	3

REMARKS
* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE FOR INLETS AND MANHOLES, TO END OF PIPE FOR ENDWALLS.
**STRUCTURE DEPTH = TOP STRUCTURE ELEV - BOTTOM STRUCT ELEV

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ROADWAY ITEMS

PROJECT	CATEGORY	LOCATION	213.0100 FINISHING ROADWAY (PROJECT) (EACH)	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (EACH)	619.1000 MOBILIZATION (EACH)	642.5401 FIELD OFFICE TYPE D (EACH)	643.5000 TRAFFIC CONTROL (EACH)
1071-07-79							
	0010	PROJECT	1	1	1	1	1
PROJECT 1071-07-79 TOTAL			1	1	1	1	1

FENCE SAFETY

PROJECT	CATEGORY	LOCATION	616.0700.S FENCE SAFETY (LF)	REMARKS
1071-07-79				
	0010	PROJECT	1,000	SITE DELINEATION
PROJECT 1071-07-79 TOTAL			1,000	

DUST CONTROL AND WATER

PROJECT	CATEGORY	LOCATION	STATION - STATION	623.0200 DUST CONTROL SURFACE TREATMENT (SY)	624.0100 WATER (MGAL)
1071-07-79					
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	4,600	20
		MAINTENANCE GARAGE	300+25 MG - 301+60 MG	700	4
PROJECT 1071-07-79 TOTAL				5,300	24

FENCING

PROJECT	CATEGORY	LOCATION	STATION - STATION	616.0206 FENCE CHAIN LINK 6-FT (LF)	616.0329.01 GATES CHAIN LINK (6-FT) (EACH)	616.0329.02 GATES CHAIN LINK (4-FT) (EACH)	SPV.0090.01 SPLIT RAIL FENCE (LF)
1071-07-79							
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	220	2	2	260
PROJECT 1071-07-79 TOTAL				220	2	2	260

3

EROSION CONTROL

PROJECT	CATEGORY	LOCATION	STATION - STATION	606.0200 RIPRAP MEDIUM (CY)	628.1104 EROSION BALES (EACH)	628.1530.S SILT FENCE HEAVY DUTY (LF)	628.1535.S SILT FENCE HEAVY DUTY MAINTENANCE (LF)	628.7005 INLET PROTECTION TYPE A (EACH)	628.7020 INLET PROTECTION TYPE D (EACH)	628.7560 TRACKING PADS (EACH)	645.0120 GEOTEXTILE TYPE HR (SY)
1071-07-79											
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	5	-	-	-	2	2	-	10
			UNDISTRIBUTED	2	60	3,000	9,000	1	1	2	3
PROJECT 1071-07-79 TOTAL				7	60	3,000	9,000	3	3	2	13

RESTORATION ITEMS

PROJECT	CATEGORY	LOCATION	STATION - STATION	625.0100 TOPSOIL (SY)	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0140 SEEDING MIXTURE NO. 40 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0500 SEED WATER (MGAL)	631.0300 SOD WATER (MGAL)	631.1000 SOD LAWN (SY)
1071-07-79												
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	-	9,193	6,441	5	117	174	145	62	2,731
			UNDISTRIBUTED	500	1,007	1,659	2	33	46	45	18	719
PROJECT 1071-07-79 TOTAL				500	10,200	8,100	7	150	220	190	80	3,450

LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES

				632.9101	
PROJECT	CATEGORY	LOCATION	NOTE	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES (EACH)	REMARKS
1071-07-79					
	0010	PROJECT	1 ST GROWING SEASON	8	CYCLES BASED ON ONE VISIT EVERY TWO
		PROJECT	2ND GROWING SEASON	8	WEEKS BETWEEN MAY 15 AND SEPTEMBER 15
		PROJECT	UNDISTRIBUTED	8	---
PROJECT 1071-07-79 TOTAL				24	

PLANTING ITEMS

				632.0101.01	632.0201.01	632.0201.03	SPV.0060.07	SPV.0165.01
PROJECT	CATEGORY	LOCATION	STATION - STATION	OVERSTORY TREE, 2.5" CALIPER, B&B (EA)	SHRUB, 12" HEIGHT, B&B (EA)	PERENNIAL, DP50, CG (EA)	PLANTING CONTAINER (EA)	UNIT PAVING (SF)
1071-07-79								
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	25	80	678	4	773
PROJECT 1071-07-79 TOTAL				25	80	678	4	773

MOBILIZATIONS EROSION CONTROL

			628.1905	628.1910
PROJECT	CATEGORY	LOCATION	MOBILIZATIONS EROSION CONTROL (EACH)	MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
1071-07-79				
	0010	PROJECT 1071-07-79	22	16
PROJECT 1071-07-79 TOTAL			22	16

TEMPORARY PAVEMENT MARKING

				643.3170
PROJECT	CATEGORY	LOCATION	STATION - STATION	TEMPORARY MARKING LINE EPOXY 6-INCH (WHITE) (LF)
1071-07-79				
	0010	IH 90	1209+51 WB - 1215+53 WB	610
PROJECT 1071-07-79 TOTAL				610

PERMANENT SIGNING TYPE II

					637.2210	634.0612	634.0614		
						POSTS WOOD 4X6-INCH			
SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE WXH IN	SIGNS TYPE II REFLECTIVE H SF	12 FT EACH	14 FT EACH	SIGN MOUNTED ON/SAME POST AS	REMARKS
CAT. 0010								
6-01	R55-64B	2S	24X24	4.00	---	1	6-02	PET WALKING AREA LEFT ARROW END OF PARKING AREA
6-02	R55-51	2S	18X18	2.25	---	---	6-01	NO OVERNIGHT CAMPING
6-03	R55-64BR	2S	24X24	4.00	---	1	6-04	PET WALKING AREA RIGHT ARROW END OF PARKING AREA
6-04	R55-51	2S	18X18	2.25	---	---	6-03	NO OVERNIGHT CAMPING
6-05	R55-64BR	2S	24X24	4.00	---	1	---	PET WALKING AREA RIGHT ARROW END OF PARKING AREA
6-06	R55-64B	2S	24X24	4.00	---	1	---	PET WALKING AREA LEFT ARROW END OF PARKING AREA
6-07	R55-64BR	2S	24X24	4.00	---	1	---	PET WALKING AREA RIGHT ARROW END OF PARKING AREA
6-08	R55-64B	2S	24X24	4.00	---	1	---	PET WALKING AREA LEFT ARROW END OF PARKING AREA
6-09	R7-8A	2S	12X18	1.50	1	---	---	RESERVED PARKING HANDICAPPED, THIS SPACE
6-10	R7-8A	2S	12X18	1.50	1	---	---	RESERVED PARKING HANDICAPPED, THIS SPACE
6-11	R7-8A	2S	12X18	1.50	1	---	---	RESERVED PARKING HANDICAPPED, THIS SPACE
6-12	R55-64B	2S	24X24	4.00	---	1	---	PET WALKING AREA LEFT ARROW END OF PARKING AREA
6-13	R7-8A	2S	12X18	1.50	1	---	---	RESERVED PARKING HANDICAPPED, THIS SPACE
6-14	R55-64BR	2S	24X24	4.00	---	1	---	PET WALKING AREA RIGHT ARROW END OF PARKING AREA
6-15	R55-64B	2S	24X24	4.00	---	1	---	PET WALKING AREA LEFT ARROW END OF PARKING AREA
6-16	R55-64BR	2S	24X24	4.00	---	1	---	PET WALKING AREA RIGHT ARROW END OF PARKING AREA
6-17	R55-64B	2S	24X24	4.00	---	1	---	PET WALKING AREA LEFT ARROW END OF PARKING AREA
6-18	R55-65	2S	24X24	4.00	---	1	6-19	PET WALKING AREA
6-19	R55-51	2S	18X18	2.25	---	---	6-18	NO OVERNIGHT CAMPING
6-20	R55-65	2S	24X24	4.00	---	1	6-21	PET WALKING AREA
6-21	R55-51	2S	18X18	2.25	---	---	6-20	NO OVERNIGHT CAMPING
6-22	R55-65	2S	24X24	4.00	---	1	6-23	PET WALKING AREA
6-23	R55-51	2S	18X18	2.25	---	---	6-22	NO OVERNIGHT CAMPING
				73.25	4	14		
PROJECT TOTALS:				**73.25**	**4**	**14**		

TRAFFIC CONTROL

PROJECT	CATEGORY	LOCATION	DAYS	643.0300 DRUMS (DAY)	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0900 SIGNS (DAY)	643.0910 COVERING SIGNS TYPE I (EACH)	643.0920 COVERING SIGNS TYPE II (EACH)	643.1050 TRAFFIC CONTROL SIGNS PCMS (DAY)	REMARKS
1071-07-79											
		IH EXIT RAMP CLOSURE	295	15,340	1,180	2,360	2,950	2	2	7	ONE CYCLE FOR COVERING SIGNS
		UNDISTRIBUTED	-	3,160	270	490	590	-	-	-	
PROJECT 1071-07-79 TOTAL				18,500	1,450	2,850	3,540	2	2	7	

CONSTRUCTION STAKING

PROJECT	CATEGORY	LOCATION	STATION - STATION	650.4500 CONSTRUCTION STAKING SUBGRADE (LF)	650.5000 CONSTRUCTION STAKING BASE (LF)	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER (LF)	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT (LF)	650.9000 CONSTRUCTION STAKING CURB RAMPS (EACH)	650.9500 CONSTRUCTION STAKING SIDEWALK (1071-07-79) (EACH)	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1071-07-79) (EACH)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)
1071-07-79											
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	1,110	300	160	820	4	-	-	1,110
		PROJECT		-	-	-	-	-	1	1	-
PROJECT 1071-07-79 TOTAL				1,110	300	160	820	4	1	1	1,110

SAWING

PROJECT	CATEGORY	LOCATION	STATION - STATION	690.0250 SAWING CONCRETE (LF)
1071-07-79				
	0010	REST AREA PLAZA	1187+00 RB - 1192+50 RB	140
PROJECT 1071-07-79 TOTAL				140

UNDERDRAIN

PROJECT	CATEGORY	LOCATION	STATION - STATION	SPV.0090.02 CONNECTED TO STORM SEWER STRUCTURE NO.	SPV.0090.02 PIPE UNDERDRAIN (8-INCH) WITH GEOTEXTILE FABRIC AND AGGREGATE (LF)
1071-07-79					
	0010	REST AREA PLAZA	1187+47 RB - 1188+89 RB	1.2	220
		REST AREA PLAZA	1187+47 RB - 1188+88 RB	1.1	220
PROJECT 1071-07-79 TOTAL					440

BUILDINGS

PROJECT	CATEGORY	NOTE	STATION	SPV.0060.11 REST AREA BUILDING GENERAL (EA)	SPV.0060.12 REST AREA BUILDING PLUMBING (EA)	SPV.0060.13 REST AREA BUILDING HVAC (EA)	SPV.0060.14 REST AREA BUILDING ELECTRICAL (EA)	SPV.0060.15 MAINTENANCE BUILDING GENERAL (EA)	SPV.0060.16 MAINTENANCE BUILDING PLUMBING (EA)	SPV.0060.17 MAINTENANCE BUILDING HVAC (EA)	SPV.0060.18 MAINTENANCE BUILDING ELECTRICAL (EA)
1071-07-79											
	0010	MAINTENANCE BUILDING	1184+60 RB	-	-	-	-	1	1	1	1
		REST AREA BUILDING	1188+00 RB	1	1	1	1	-	-	-	-
PROJECT 1071-07-79 TOTAL				1	1	1	1	1	1	1	1

SITE FURNISHING ITEMS

PROJECT	CATEGORY	LOCATION	STATION - STATION	SPV.0060.01 BENCH (EA)	SPV.0060.02 LITTER RECEPTACLE (EA)	SPV.0060.03 RECYCLING RECEPTACLE (EA)	SPV.0060.04 PICNIC TABLE (EA)	SPV.0060.05 ADA PICNIC TABLE (EA)	SPV.0060.06 FLAG POLE (EA)	SPV.0060.08 PICNIC SHELTER (EA)
1071-07-79										
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	13	33	33	12	4	3	4
PROJECT 1071-07-79 TOTAL				13	33	33	12	4	3	4

BOLLARDS

PROJECT	CATEGORY	LOCATION	STATION - STATION	SPV.0060.27 BOLLARD (EACH)
1071-07-79				
	0010	REST AREA PLAZA	1183+10 RB - 1192+70 RB	7
PROJECT 1071-07-79 TOTAL				7

BUILDING SERVICES

PROJECT	CATEGORY	LOCATION	SPV.0060.19 ELECTRICAL SERVICE, SPARTA REST AREA (EA)
1071-07-79			
	0010	PROJECT	1
PROJECT 1071-07-79 TOTAL			1

3

SANITARY SEWER ITEMS

PROJECT	CATEGORY	LOCATION	SPV.0060.23 SANITARY SEWER MANHOLE 4-FT (EA)	SPV.0060.24 CORING MANHOLE (EA)	SPV.0090.04 SANITARY SEWER PVC 4-INCH (LF)	SPV.0090.05 SANITARY SEWER PVC 8-INCH (LF)	SPV.0090.08 CONSTRUCTION STAKING SANITARY SEWER SYSTEM (LF)	SPV.0090.03 FORCEMAIN PVC, 2-INCH (LF)	SPV.0060.20 SEWAGE EJECTOR PUMP AND CONTROLS (EA)	SPV.0060.26 ADJUSTING MANHOLE COVERS WITH RUBBER RINGS (EA)
1071-07-79										
	0010	PROJECT	3	1	42	539	915	334	1	1
PROJECT 1071-07-79 TOTAL			3	1	42	539	915	334	1	1

WELL ITEMS

PROJECT	CATEGORY	LOCATION	204.0265 ABANDONING WELLS (EA)	639.0108 DRILL HOLE IN EARTH 8-INCH (LF)	639.0112 DRILL HOLE IN EARTH 12-INCH (LF)	639.1008 WELL CASING PIPE 8-INCH (LF)	639.1700 WELL SCREEN (LF)	639.2100 GROUT FOR SEALING WELL CASING (CF)	639.4000 TEST PUMPING (EA)	SPV.0060.21 PITLESS ADAPTER (EA)	SPV.0060.22 WELL PUMP (EA)	SPV.0090.06 UNDERGROUND COPPER WATER LINE 1-INCH (LF)	SPV.0090.07 UNDERGROUND COPPER WATER LINE 3-INCH (LF)	SPV.0060.25 WELL SYSTEM CONTROLS (EA)
1071-07-79														
	0010	PROJECT	1	100	170	182	20	54	2	2	2	390	595	1
PROJECT 1071-07-79 TOTAL			1	100	170	182	20	54	2	2	2	390	595	1

LIGHTING CONDUIT AND WIRE

FROM	-	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	REMARKS
CATEGORY 0010						
CB 100	-	PB 100	--	25	129	--
PB 100	-	WL 100	40	--	318	--
PB 100	-	WL 101	65	--	234	--
WL 101	-	WL 102	60	--	210	--
WL 102	-	PB 101	65	--	234	--
PB 101	-	WL 103	5	--	162	--
PB 101	-	PB 104	60	--	228	--
PB 101	-	WL 104	55	--	204	--
WL 104	-	WL 105	70	--	240	--
WL 105	-	PB 102	60	--	219	--
PB 102	-	WL 106	10	--	138	--
PB 102	-	WL 107	80	--	279	--
PB 102	-	WL 111	55	--	--	PULL WIRE ONLY
CB 100	-	PB 105	--	15	99	--
PB 105	-	WL 116	65	--	234	--
WL 116	-	WL 115	70	--	240	--
WL 115	-	WL 114	60	--	210	--
WL 114	-	PB 103	65	--	234	--
PB 103	-	WL 113	10	--	138	--
WL 113	-	WL 112	65	--	225	--
WL 112	-	WL 111	60	--	210	--
PB 103	-	PB 104	70	--	--	PULL WIRE ONLY
PB 104	-	WL 108	20	--	297	--
PB 104	-	WL 109	70	--	240	--
PB 104	-	WL 110	30	--	129	--
PB 105	-	WL 117	60	--	438	--
WL 117		WL 118	100	--	180	--
WL 118	-	WL 119	100	--	330	--
CB 100	-	PB 200	--	15	--	PULL WIRE ONLY
CB 100	-	PB 200	--	15	--	PULL WIRE ONLY
PB 200	-	PB 201	--	90	--	PULL WIRE ONLY
PB 201	-	SL 106	80	--	--	PULL WIRE ONLY
SL 106	-	SL 105	210	--	--	PULL WIRE ONLY
SL 105	-	PB 202	125	--	--	PULL WIRE ONLY
PB 201	-	SL 107	140	--	--	PULL WIRE ONLY
SL 107	-	SL 108	225	--	--	PULL WIRE ONLY
SL 108	-	PB 203	165	--	--	PULL WIRE ONLY
CB 100	-	PB 300	--	10	--	PULL WIRE ONLY
CB 100	-	PB 300	--	10	--	PULL WIRE ONLY
PB 300	-	PB 301	--	35	--	PULL WIRE ONLY
PB 301	-	PB 302	205	--	--	PULL WIRE ONLY
PB 302	-	STUB	15	--	--	PULL WIRE ONLY
PB 301	-	PB 303	135	--	--	PULL WIRE ONLY
PB 303	-	STUB	15	--	--	PULL WIRE ONLY
PB 303	-	PB 304	205	--	--	PULL WIRE ONLY
PB 304	-	PB 305	110	--	--	PULL WIRE ONLY
PROJECT TOTAL			**3100**	**215**	**5799**	

*ADDITIONAL QUANTITY FOUND IN FTMS CONDUIT AND WIRE TABLE

LIGHTING PULLBOXES

PULLBOX NUMBER	STATION	OFFSET	R/L	653.0164 PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH
CATEGORY 0010				
LPB 100	1187+28'RB'	150.5'	LT	1
LPB 101	1188+98'RB'	169.5'	LT	1
LPB 102	1190+39'RB'	105.3'	LT	1
LPB 103	1188+99'RB'	46.5'	LT	1
LPB 104	1188+87'RB'	114.9'	LT	1
LPB 105	1187+29'RB'	117.2'	LT	1
LPB 200	1187+25'RB'	117.2'	LT	1
LPB 201	1187+24'RB'	32.4'	LT	1
LPB 202	1183+12'RB'	11.3'	LT	1
LPB 203	1192+49'RB'	14.5'	LT	1
LPB 300	1187+25'RB'	137.6'	LT	1
LPB 301	1187+25'RB'	176.2'	LT	1
LPB 302	1185+22'RB'	128.5'	LT	1
LPB 303	1188+57'RB'	184.1'	LT	1
LPB 304	1190+69'RB'	157.0'	LT	1
LPB 305	1191+74'RB'	123.6'	LT	1
PROJECT TOTAL				**16**

3

LIGHTING CONTROL

CABINET NUMBER	STATION	OFFSET	R/L	650.8501 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (1071-07-79) EACH	654.0230 CONCRETE CONTROL CABINET BASES TYPE L30 EACH	656.0201.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL (CB100) EACH	659.2130 LIGHTING CONTROL CABINETS 120/240 30-INCH EACH
CATEGORY 0010							
CB100	1187+29'RB'	129.7'	LT	1	1	1	1
PROJECT TOTAL				**1**	**1**	**1**	**1**

STREET LIGHTS

LIGHT NUMBER	STATION	OFFSET	R/L	654.0105 CONCRETE BASES TYPE 5 EACH
CATEGORY 0010				
SL 105	1184+34'RB'	11.8'	LT	1
SL 106	1186+47'RB'	29.1'	LT	1
SL 107	1188+59'RB'	31.1'	LT	1
SL 108	1180+76'RA	30.5'	LT	1
PROJECT TOTAL				**4**

WALKWAY LIGHTING ITEMS

LIGHT UNIT	STATION	OFFSET	R/L	654.0111 CONCRETE BASES TYPE 11 EACH	659.0700 LIGHTING UNITS WALKWAY EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CATEGORY 0010						
WL 100	1186+91'RB'	163.3'	LT	1	1	72
WL 101	1187+85'RB'	171.5'	LT	1	1	72
WL 102	1188+37'RB'	182.0'	LT	1	1	72
WL 103	1189+02'RB'	173.1'	LT	1	1	72
WL 104	1189+48'RB'	153.2'	LT	1	1	72
WL 105	1190+12'RB'	151.2'	LT	1	1	72
WL 106	1190+34'RB'	105.8'	LT	1	1	72
WL 107	1191+17'RB'	98.3'	LT	1	1	72
WL 108	1188+79'RB'	132.3'	LT	1	1	72
WL 109	1189+55'RB'	115.6'	LT	1	1	72
WL 110	1188+79'RB'	87.8'	LT	1	1	72
WL 111	1190+15'RB'	55.7'	LT	1	1	72
WL 112	1189+59'RB'	54.0'	LT	1	1	72
WL 113	1189+02'RB'	42.6'	LT	1	1	72
WL 114	1188+37'RB'	34.6'	LT	1	1	72
WL 115	1187+86'RB'	42.9'	LT	1	1	72
WL 116	1187+30'RB'	54.3'	LT	1	1	72
WL 117	1186+78'RB	112.1'	LT	1	1	72
WL 118	1185+89'RB'	92.0'	LT	1	1	72
WL 119	1184+85'RB'	72.3'	LT	1	1	72
PROJECT TOTAL				**20**	**20**	**1,440**

FTMS BASES AND POLES

CATEGORY	ROADWAY	ITEM ID.	LOCATION STATION	LOCATION OFFSET	531.2036 DRILLING SHAFT 36-INCH LF	531.4050 FOUNDATION CAMERA POLE 50-FT EACH	653.0140 PULL BOXES STEEL 24 X 42 - INCH EACH	656.0501 SERVICE BREAKER DISCONNECT BOX (CCTV410190) EACH	673.1225.S INSTALL POLE MOUNTED CABINET EACH	677.0150 INSTALL CAMERA POLE 50-FT EACH	677.0200 INSTALL CAMERA ASSEMBLY EACH	678.0600 INSTALL ETHERNET SWITCHES EACH	SPV.0060.10 GROUND ROD EACH	SPV.0060.09 INSTALL CELLULAR MODEM EACH
0010	IH 90													
		PB1184	1183+63	54' RT	--	--	1	--	--	--	--	--	--	--
		PB1185	1185+59	155' RT	--	--	1	--	--	--	--	--	--	--
		PB1187	1187+44	165' RT	--	--	1	--	--	--	--	--	--	--
		PB1188	1188+05	141' RT	--	--	1	--	--	--	--	--	--	--
		PB1189	1188+75	147' RT	--	--	1	--	--	--	--	--	--	--
		CCTV-41-0190	1188+80	125' LT	10	1	--	1	1	1	1	1	1	1
		PB1193	1191+60	141' RT	--	--	1	--	--	--	--	--	--	--
		PB1194	1193+52	73' RT	--	--	1	--	--	--	--	--	--	--
		TOTALS			10	1	6	1	1	1	1	1	1	1

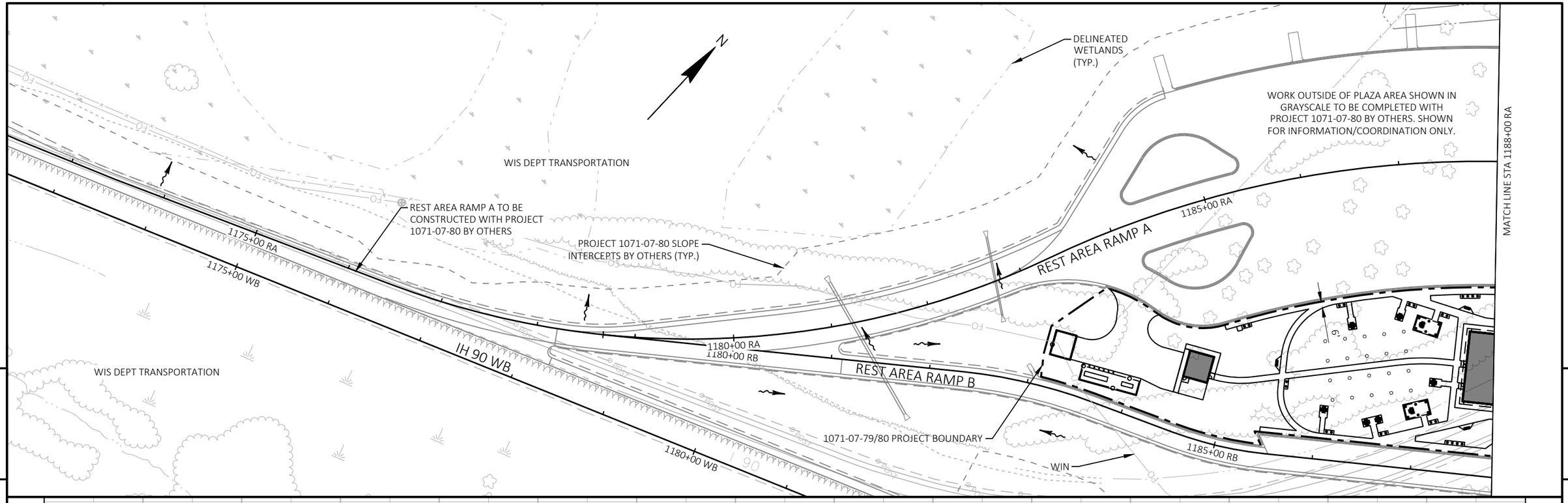
FTMS CONDUIT AND WIRE

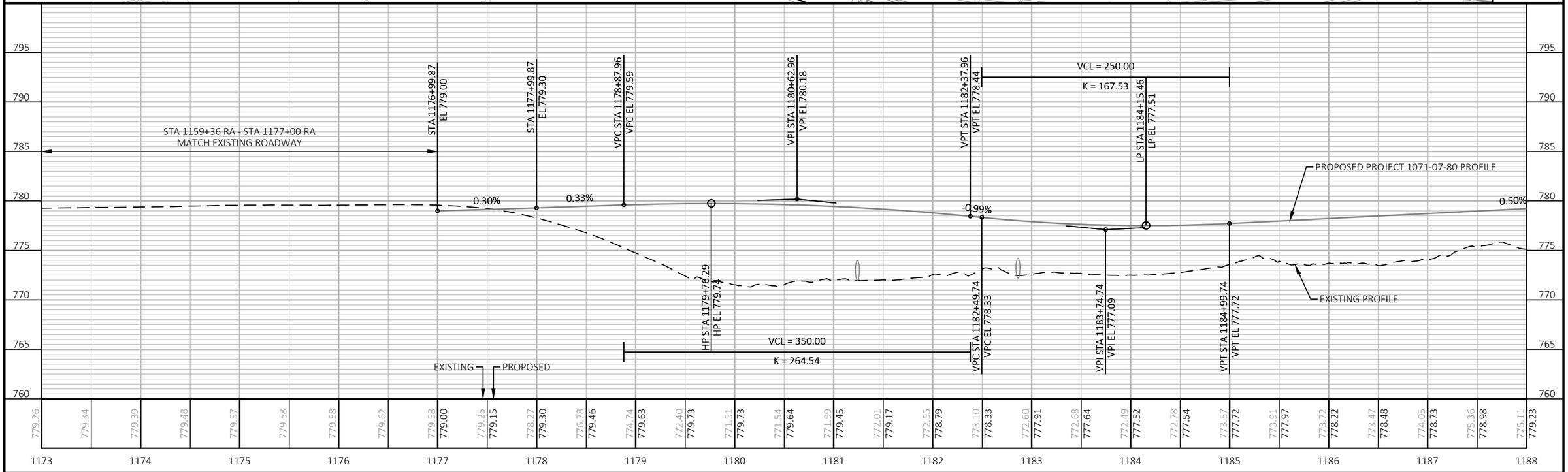
CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	652.0125 CONDUIT RIGID METALLIC 2-INCH LF	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	671.0112 CONDUIT HDPE 1-DUCT 2-INCH LF	671.0122 CONDUIT HDPE 2-DUCT 2-INCH LF
0010	IH 90							
		PB1184 - PB1185	205	--	--	--	--	205
		PB1185 - PB1188	215	--	--	--	--	215
		CB100 - PB1187	20	20	--	60	--	--
		PB1187 - PB1188	60	--	--	180	60	--
		PB1188 - PB1189	60	--	--	180	--	60
		PB1189 - CCTV-41-0190	10	10	20	30	--	--
		PB1189 - PB1193	245	--	--	--	245	--
		PB1193 - PB1194	190	--	40	--	190	--
		PB1193 - PB1195	90	--	--	--	90	--
		TOTALS		30	60	450	585	480

*ADDITIONAL QUANTITY FOUND IN LIGHTING CONDUIT AND WIRE TABLE

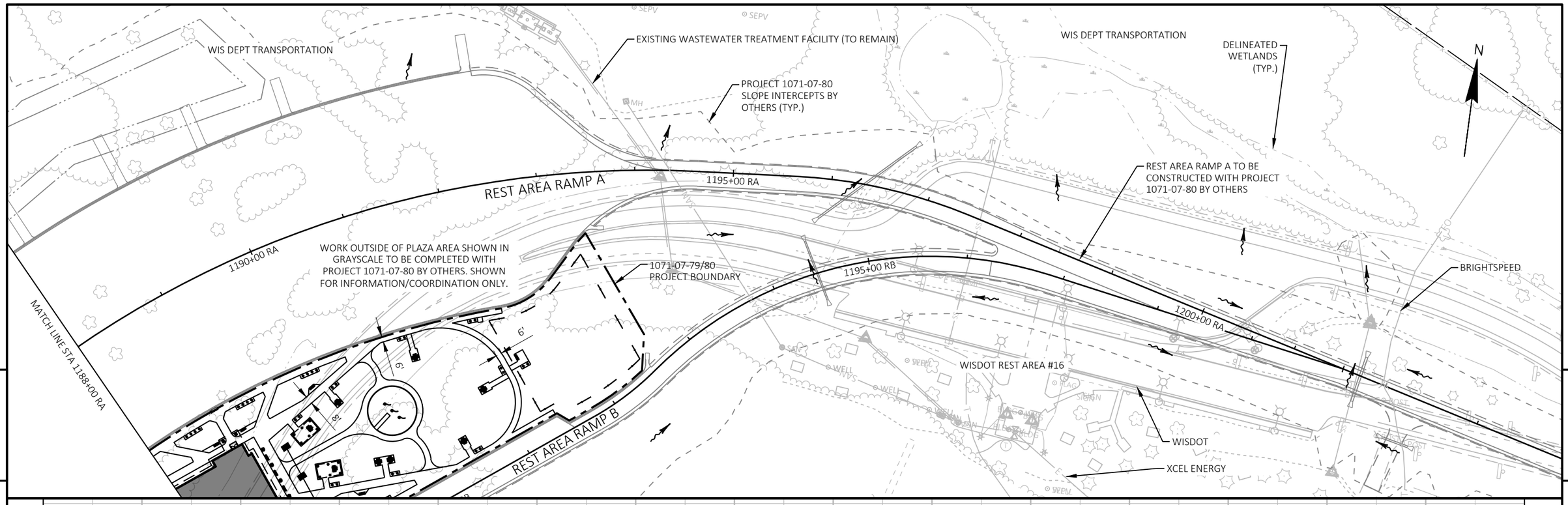
MISCELLANEOUS ITEMS

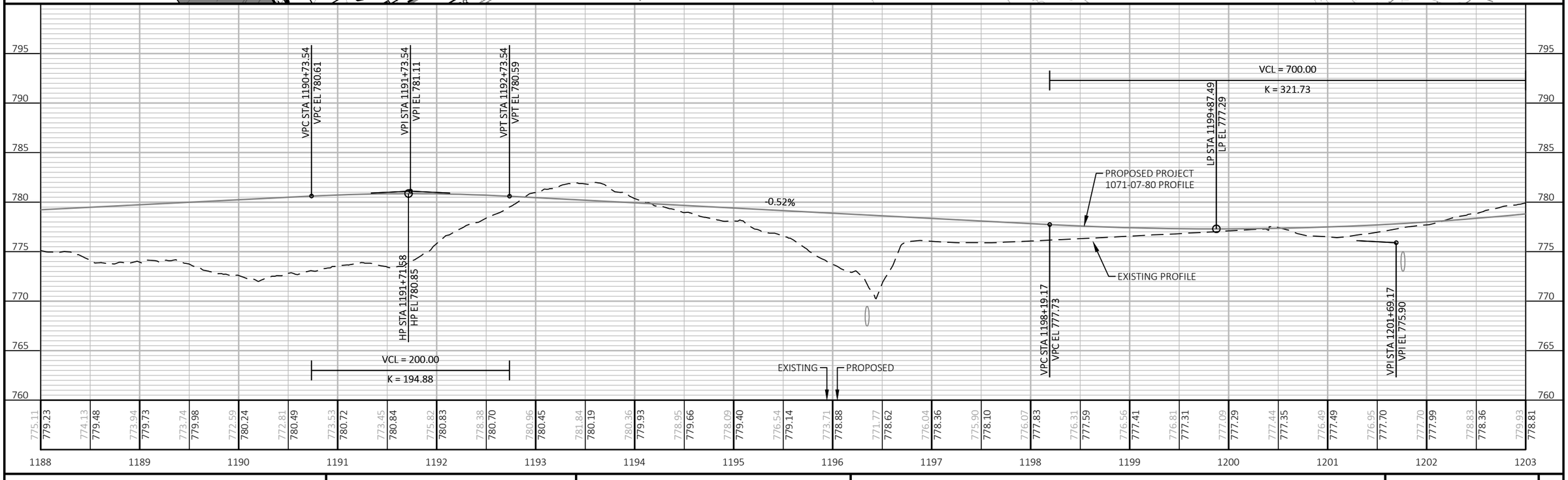
CATEGORY	ROADWAY	670.0101 FIELD SYSTEM INTEGRATOR EACH	670.0201 ITS DOCUMENTATION EACH
0010	IH 90		
	PROJECT	1	1
	TOTALS	1	1





PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: REST AREA RAMP A	SHEET 307	E

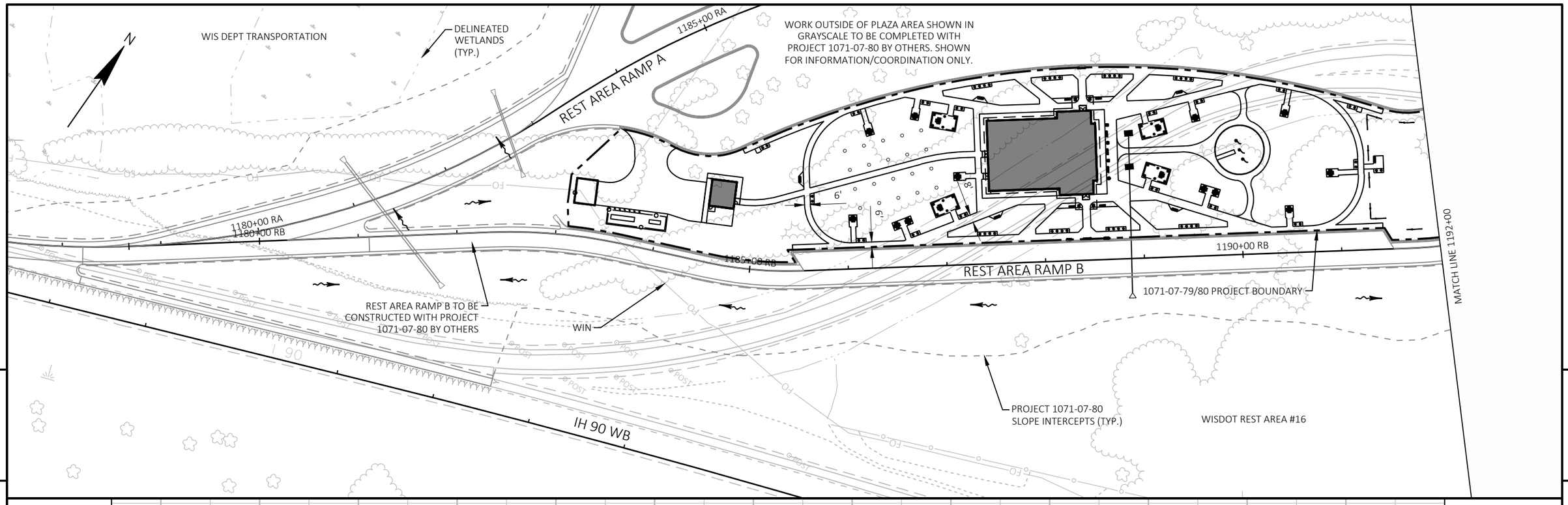


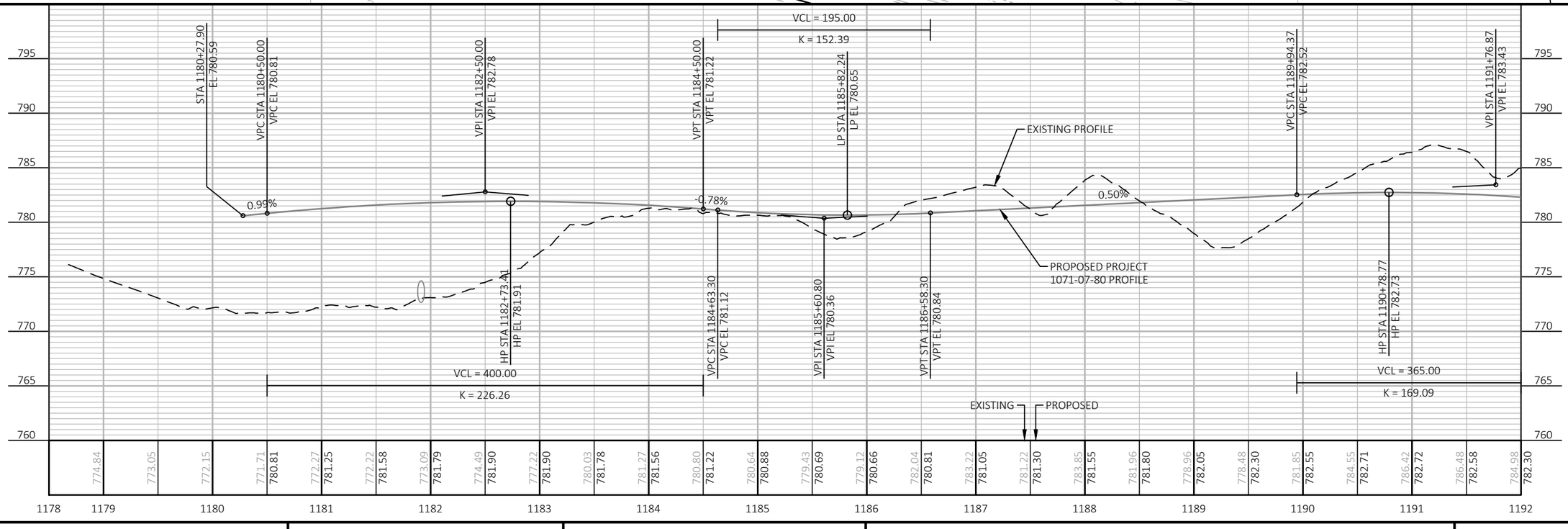


PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: REST AREA RAMP A	SHEET 308	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\050101_PP_79.DWG
LAYOUT NAME - PPA (2)

PLOT DATE : 1/31/2024 11:19 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT





PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: REST AREA RAMP B	SHEET 309	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\050102_PP_79.DWG
LAYOUT NAME - PP (4)

PLOT DATE : 1/31/2024 11:13 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

EXISTING WASTEWATER TREATMENT FACILITY (TO REMAIN)

1195+00 RA

1071-07-79/80 PROJECT BOUNDARY

REST AREA RAMP B

1195+00 RB

REST AREA RAMP A

1200+00 RA

MATCH LINE 1192+00

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

REST AREA RAMP B TO BE CONSTRUCTED WITH PROJECT 1071-07-80 BY OTHERS

XCEL ENERGY / WISDOT

WISDOT REST AREA #16

XCEL ENERGY

BRIGHTSPEED

DELINEATED WETLANDS (TYP.)

WIS DEPT TRANSPORTATION

ANNA & LEROY BORNTREGER

R/W

N

BRIGHTSPEED

PROJECT 1071-07-80 SLOPE INTERCEPTS (TYP.)

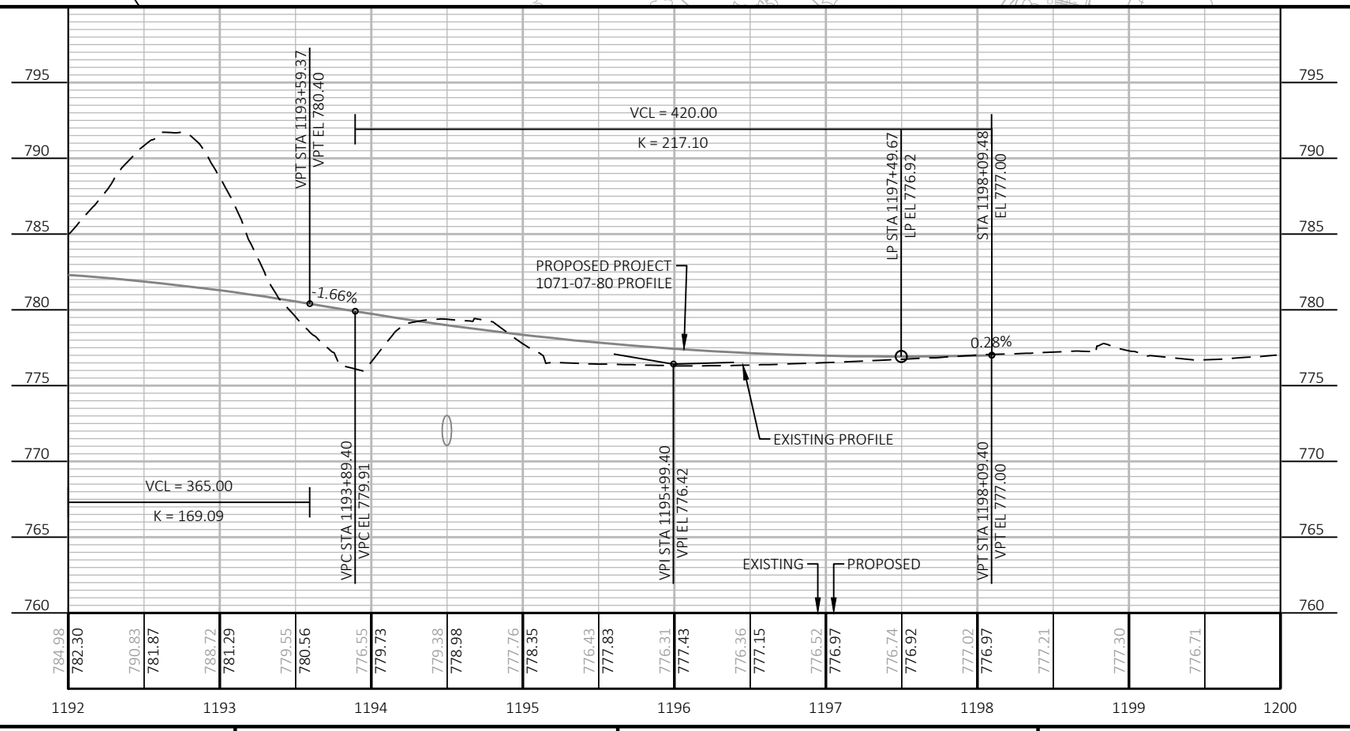
XCEL ENERGY

BRIGHTSPEED

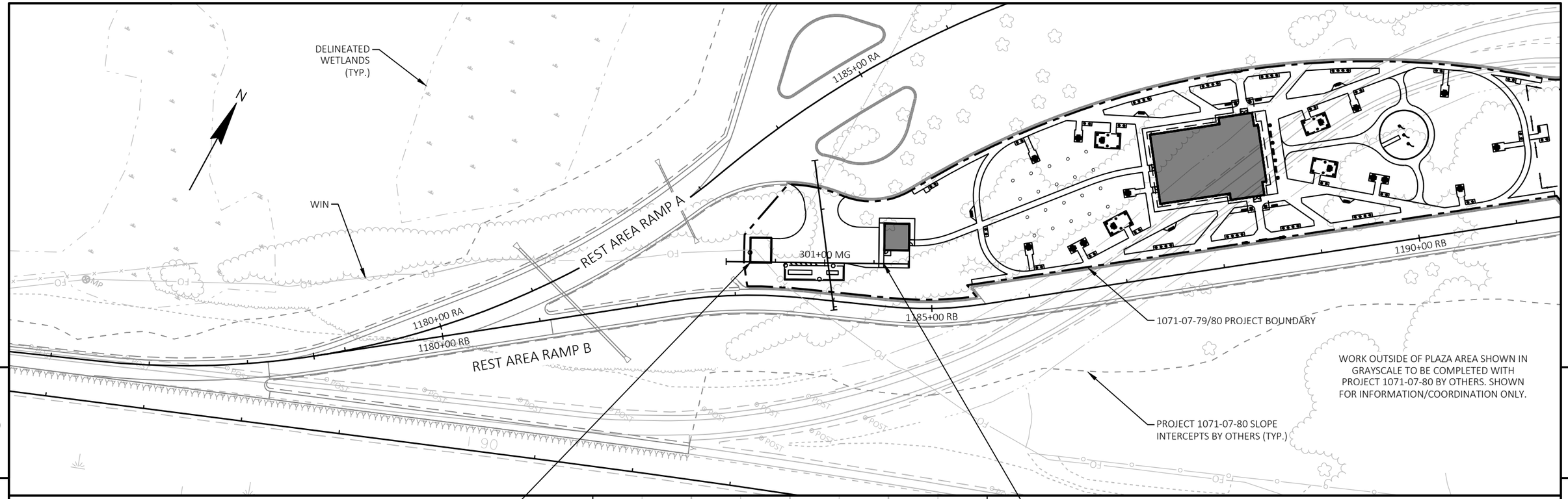
1205+00 RA

5

5



PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: REST AREA RAMP B	SHEET 310	E

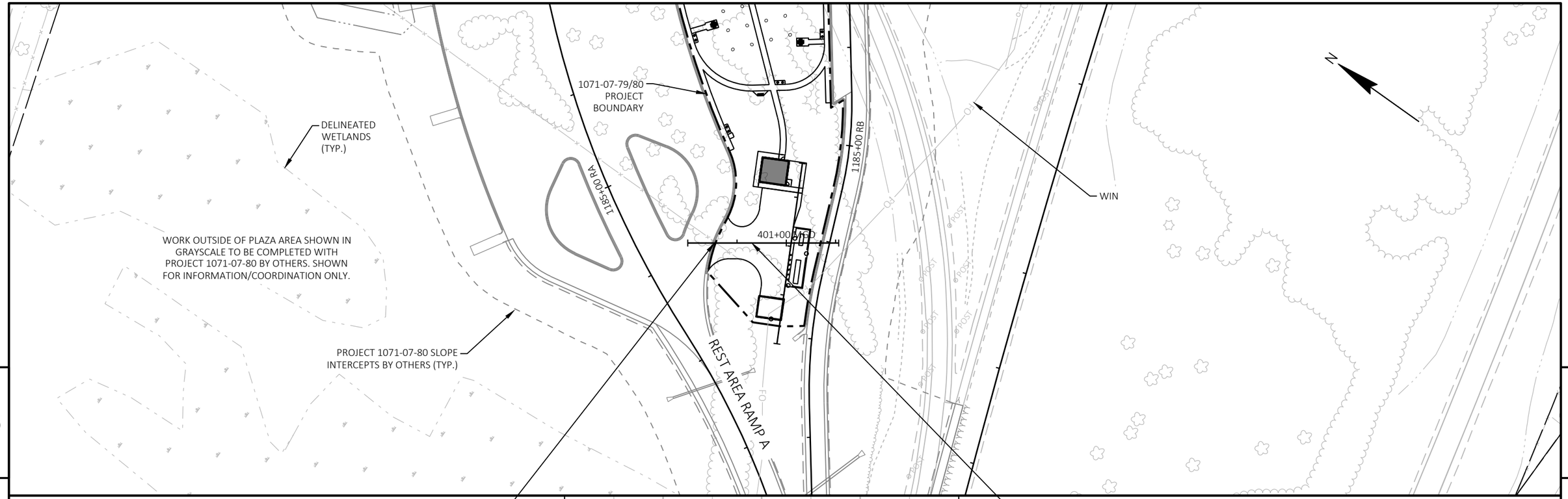


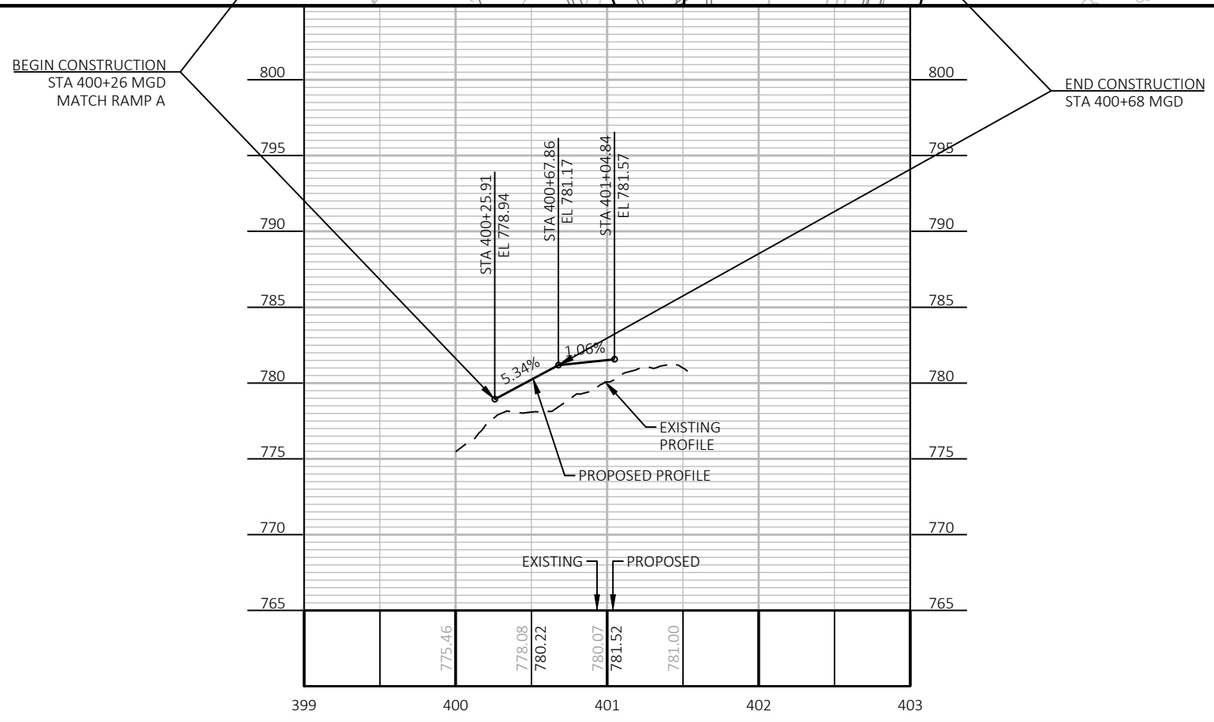
PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN AND PLOT: MAINTENANCE GARAGE	SHEET 311	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\050104_PP.DWG
LAYOUT NAME - PP (5)

PLOT DATE : 1/31/2024 11:11 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: MAINTENANCE GARAGE DRIVEWAY	SHEET 312	E

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

N

REST AREA RAMP A

1071-07-79/80 PROJECT BOUNDARY

OPW R/L

PC R/L

703+00 PC

704+00 PC

705+00 PC

WISDOT REST AREA #16

702+00 PC

701+00 PC

651+00 OPW

6'

9'

251+00 WC

OPE R/L

WC R/L

SP R/L

751+00 SP

1+00 OPE

1190+00 RB

1185+00 RB

REST AREA RAMP B

WIN

5

5

WC R/L PROFILE

BEGIN CONSTRUCTION
STA 250+00 WC

END CONSTRUCTION
STA 251+57 WC

STA 250+00.00 EL 784.35
STA 250+50.00 EL 784.75
STA 251+28.52 EL 784.12
STA 251+57.04 EL 784.35

0.80%
-0.80%
0.80%

PROPOSED PROFILE
EXISTING PROFILE

EXISTING
PROPOSED

790
785
780
775

776.51 784.35
776.86 784.75
778.87 784.35
776.02 784.29

249 250 251 252

BEGIN CONSTRUCTION
STA 75+06 SP
MATCH PROPOSED SIDEWALK

END CONSTRUCTION
STA 76+43 SP
MATCH PROPOSED SIDEWALK

STA 75+05.97 EL 783.83
STA 75+38.42 EL 784.39
STA 75+99.81 EL 784.47
STA 76+42.90 EL 783.68

MATCH WALKING CIRCLE

1.71%
0.13%
-1.84%

PROPOSED PROFILE
EXISTING PROFILE

EXISTING
PROPOSED

790
785
780
775

782.54
777.05 784.40
777.83 784.46
781.34

74 75 76 76

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: WALKING CIRCLE	SHEET 313	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\050107_PP.DWG
LAYOUT NAME - WC

PLOT DATE : 1/31/2024 11:32 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:50 FT

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

N

REST AREA RAMP A

1071-07-79/80 PROJECT BOUNDARY

OPW R/L

PC R/L

703+00 PC

704+00 PC

705+00 PC

WISDOT REST AREA #16

702+00 PC

701+00 PC

651+00 OPW

6'

9'

6'

251+00 WC

OPE R/L

WC R/L

1+00 OPE

SP

76+00

SP R/L

1190+00 RB

1185+00 RB

REST AREA RAMP B

WIN

BEGIN CONSTRUCTION
STA 700+56 PC
MATCH PROPOSED SIDEWALK

END CONSTRUCTION
STA 705+36 PC
MATCH WALKING CIRCLE

STA 700+24.01 EL 781.85
STA 700+50.00 EL 781.85
STA 700+56.00 EL 781.79
STA 701+20.77 EL 782.32
STA 701+26.93 EL 782.32
STA 702+98.42 EL 783.29
STA 704+42.76 EL 783.23
STA 704+52.76 EL 783.13
STA 704+94.30 EL 783.76
STA 705+35.85 EL 784.06

0.00% -1.00% 0.81% 0.00% 0.57% -0.04% -1.00% 1.50% 0.74%

MATCH BUILDING SIDEWALK

PROPOSED PROFILE

EXISTING PROFILE

EXISTING

PROPOSED

790 785 780 775

778.24 | 776.87 781.85 | 780.14 782.15 | 781.47 782.45 | 782.14 782.73 | 781.93 783.01 | 781.74 783.29 | 779.36 783.27 | 780.32 783.25 | 782.35 783.16 | 780.36 783.80

699 700 701 702 703 704 705 706

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: PLAZA CENTERLINE SIDEWALK	SHEET 314 E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\050107_PP.DWG
LAYOUT NAME - PC

PLOT DATE : 1/31/2024 11:32 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:50 FT

WORK OUTSIDE OF PLAZA AREA SHOWN IN GRAYSCALE TO BE COMPLETED WITH PROJECT 1071-07-80 BY OTHERS. SHOWN FOR INFORMATION/COORDINATION ONLY.

N

REST AREA RAMP A

1071-07-79/80 PROJECT BOUNDARY

OPW R/L

PC R/L

703+00 PC

704+00 PC

705+00 PC

702+00 PC

701+00 PC

651+00 OPW

WISDOT REST AREA #16

251+00 WC

OPE R/L

WC R/L

SP R/L

751+00 SP

651+00 OPE

6'

5

5

1185+00 RB

1190+00 RB

REST AREA RAMP B

WIN

BEGIN CONSTRUCTION
STA 650+26 OPW
MATCH PROPOSED SIDEWALK

END CONSTRUCTION
STA 651+54 OPW
MATCH PROPOSED SIDEWALK

STA 650+26.32
EL 781.33

STA 650+95.06
EL 782.31

STA 651+01.22
EL 782.33

STA 651+54.42
EL 781.71

1.43%

0.28%

-1.17%

EXISTING PROFILE

PROPOSED PROFILE

EXISTING

PROPOSED

790

785

780

775

777.68

778.13
781.67

781.70
782.33

782.27
781.76

649

650

651

652

BEGIN CONSTRUCTION
STA 0+23 OPE
MATCH PROPOSED SIDEWALK

END CONSTRUCTION
STA 1+59 OPE
MATCH PROPOSED SIDEWALK

STA 0+23.11
EL 783.79

STA 0+78.75
EL 784.37

STA 0+88.75
EL 784.47

STA 1+58.81
EL 784.03

1.04%

1.00%

-0.62%

EXISTING PROFILE

PROPOSED PROFILE

EXISTING

PROPOSED

784.83

785.38
784.07

783.29
784.40

777.84
784.09

-0

0

1

2

2

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: OVAL PATH	SHEET 315	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\050107_PP.DWG
LAYOUT NAME - OP

PLOT DATE : 1/31/2024 11:33 AM

PLOT BY : KL ENGINEERING

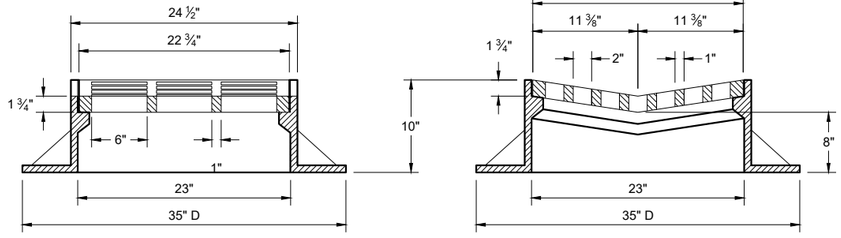
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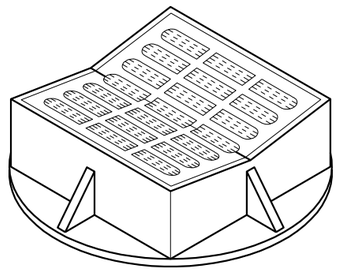
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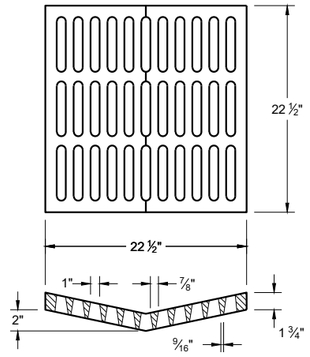
Standard Detail Drawing List

08A05-20B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-21A	CURB RAMPS TYPES 1 AND 1-A
08D05-21B	CURB RAMPS TYPES 2 AND 3
08D05-21C	CURB RAMPS TYPES 4A AND 4A1
08D05-21D	CURB RAMPS TYPE 4B AND 4B1
08D05-21E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-21F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-21G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D16-11	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D17-06	MANHOLES, MANHOLE & INLET COVERS
08D20-01	DRIVEWAYS WITH CURB & GUTTER RETURNS
08E05-02	SODDED BACKSLOPE FLUME AND INTERCEPTING EMBANKMENT
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B16-02	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C14-03	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D04-03	LIGHTING CONTROL CABINET 120/240 VOLT
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E04-06	WALKWAY LIGHTING UNIT AND CONCRETE BASE, TYPE 11
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-08F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
14A01-03	TREE PRESERVATION DETAILS
14A02-01	TREE PLANTING DETAIL
14C01-03	TIMBER RAIL GUARD FENCE, CURB AND GUARD POST AND MARKER POST
14C02-03	HISTORICAL MARKER CONSTRUCTION
14C07-04A	PICNIC TABLE, SINGLE PEDESTAL
14C07-04B	PICNIC TABLE, SINGLE PEDESTAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D16-06	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D29-06	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D47-03B	TRAFFIC CONTROL, INGRESS/EGRESS WITHOUT BARRIER

6





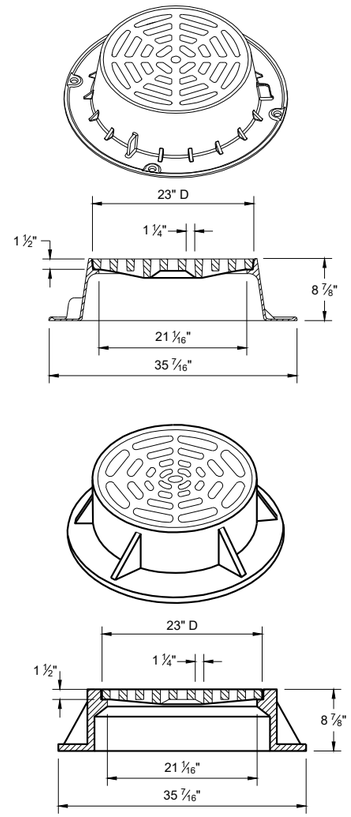


TYPE "B"

ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE

NOTED AS TYPE B - A ON THE DRAINAGE TABLE



TYPE "C"

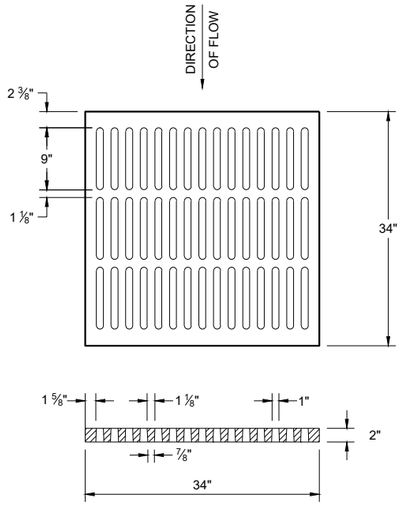
NOTE: EITHER CASTING IS ACCEPTABLE

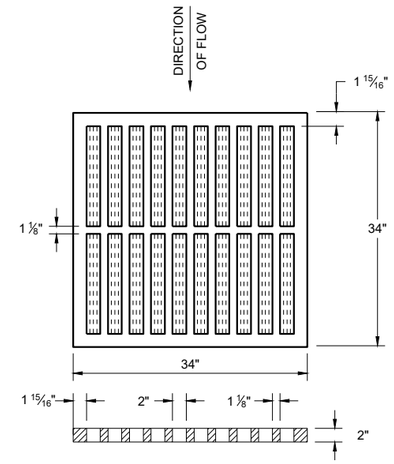
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.





ALTERNATIVE TYPE "MS"

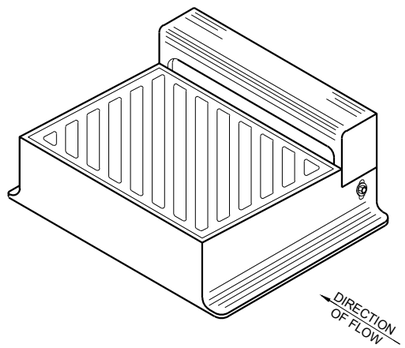
USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

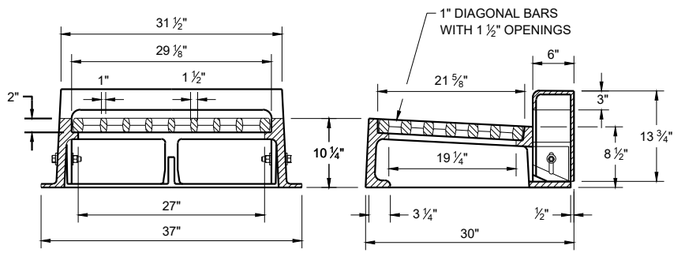
TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON THE DRAINAGE TABLE



DIAGONAL SLOTS SHALL BE ORIENTEDTO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



TYPE "WM"

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

INLET COVERS TYPES B, B-A, C, MS, MS-A AND WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 2023 — DATE

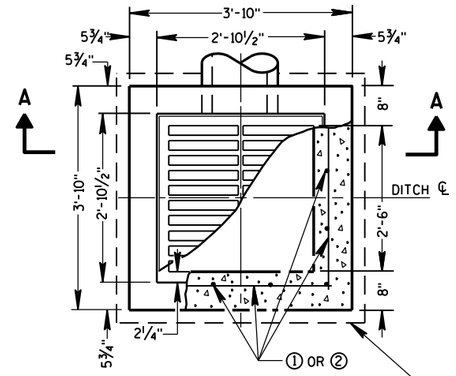
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

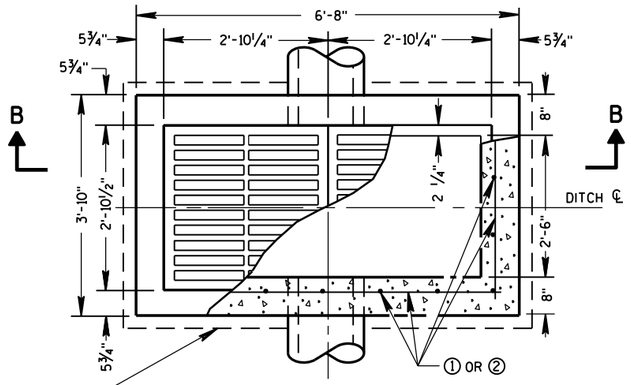
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SDD 08A05-20b

SDD 08A05-20b

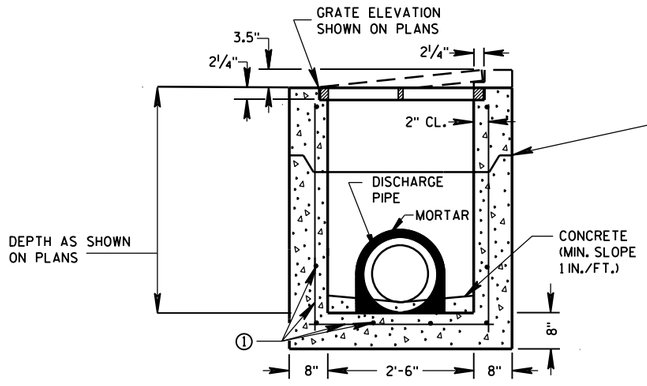


PLAN VIEW

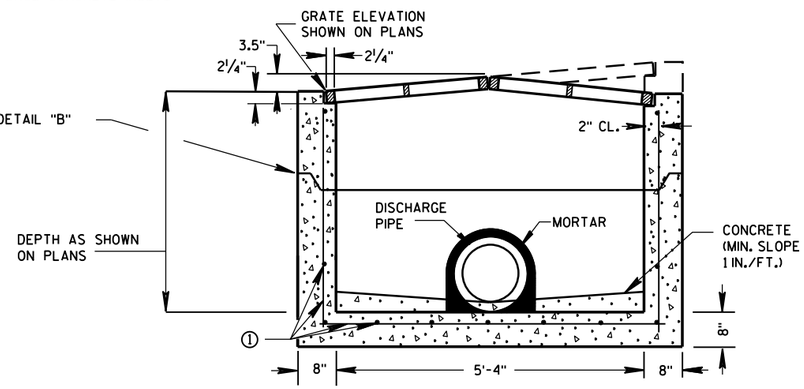


PLAN VIEW

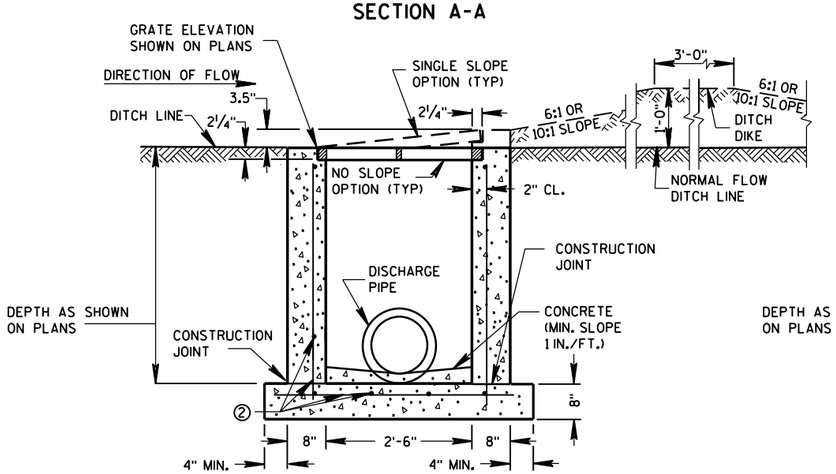
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



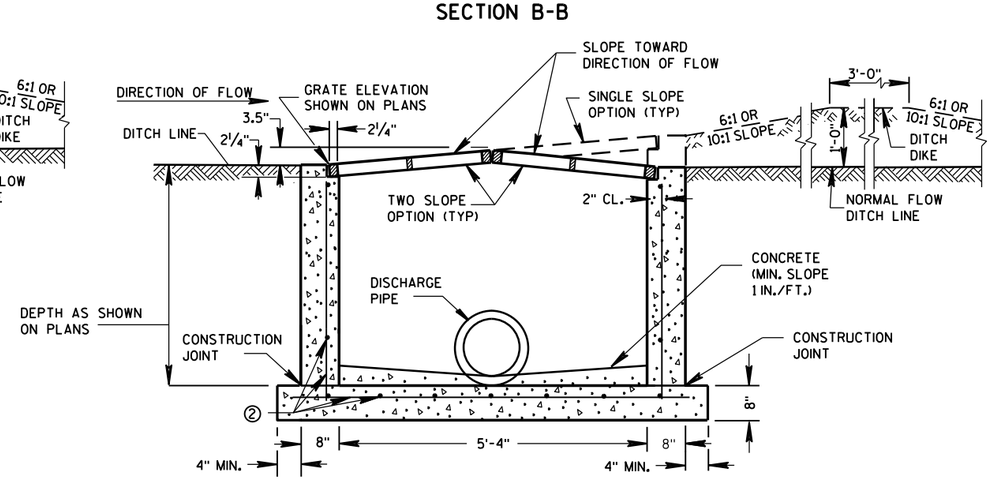
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

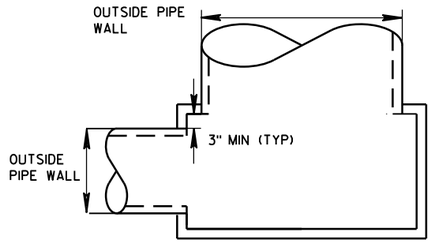
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

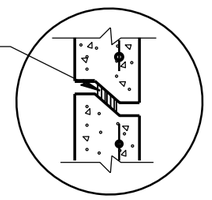
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



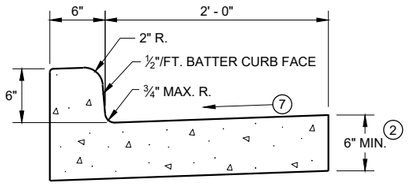
DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

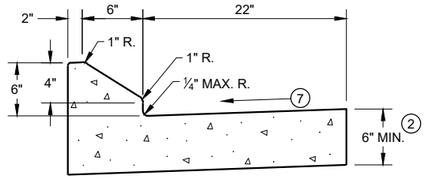
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

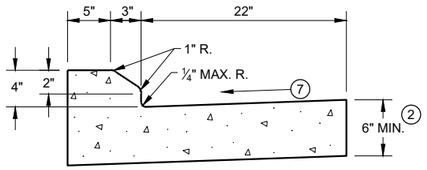
6
S.D.D. 8 C 8-2



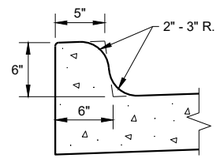
TYPES A (1) & D



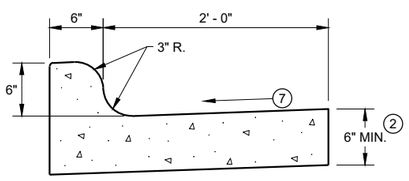
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

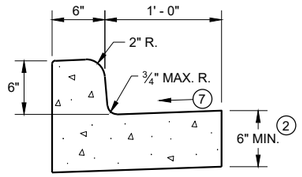


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



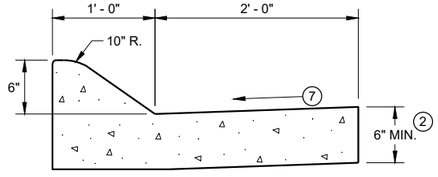
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

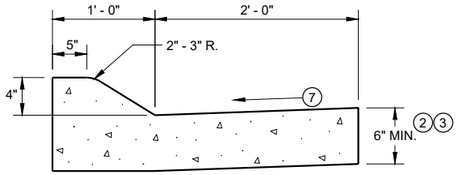


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

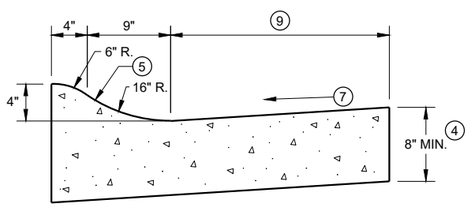


6" SLOPED CURB TYPES A (1) & D



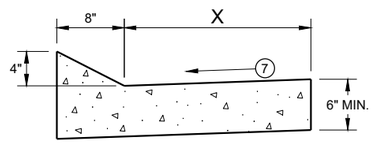
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

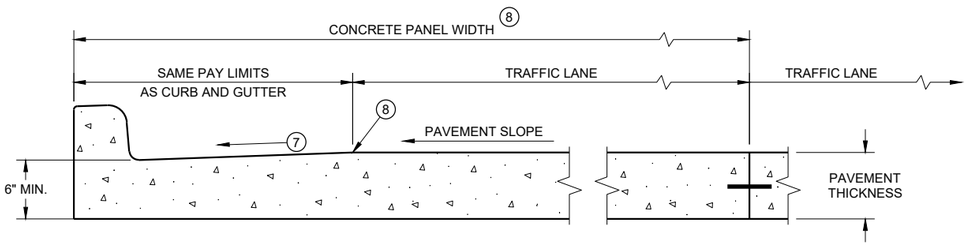


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

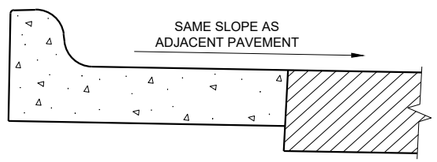
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

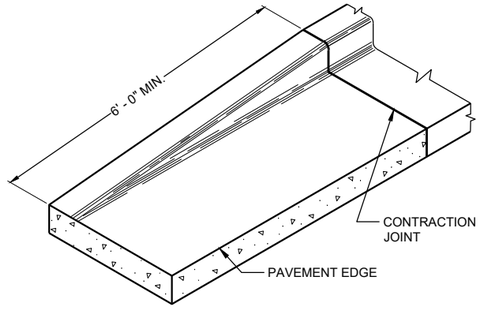
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

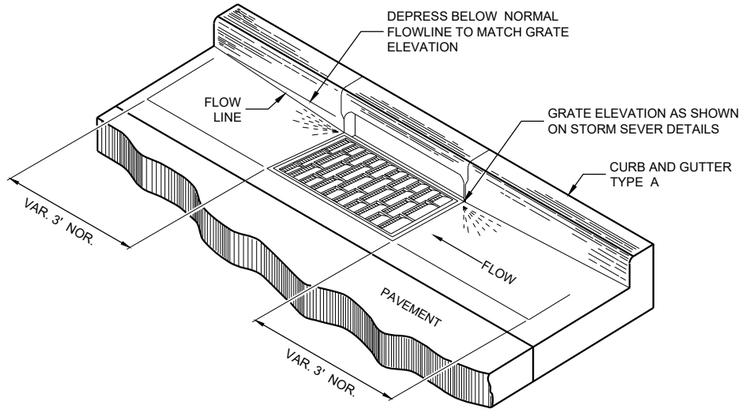
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 23a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

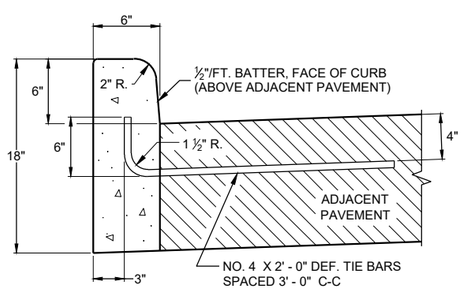
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

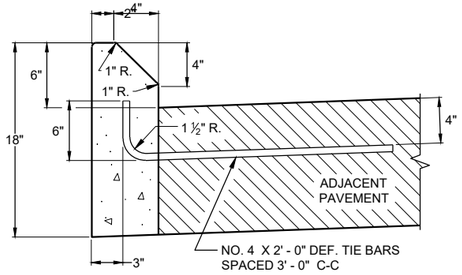
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

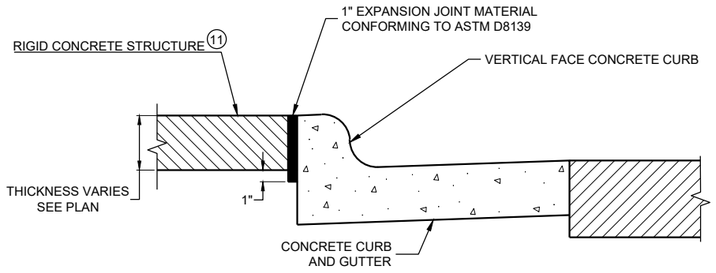


TYPES A (1) & D

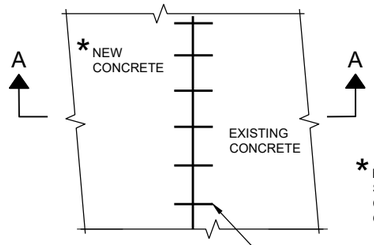


TYPES G (1) & J

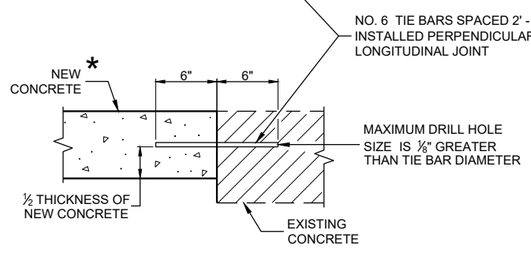
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)

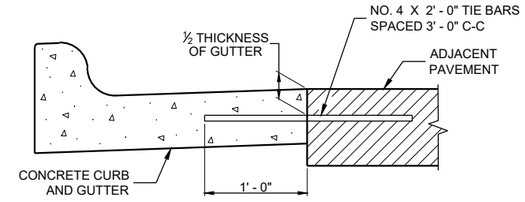


PLAN VIEW

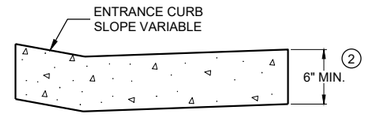


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

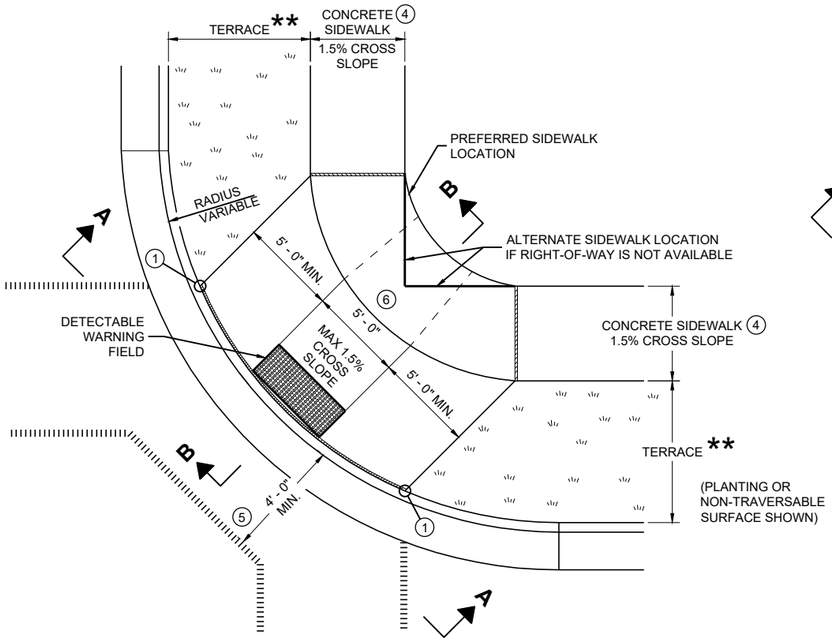
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

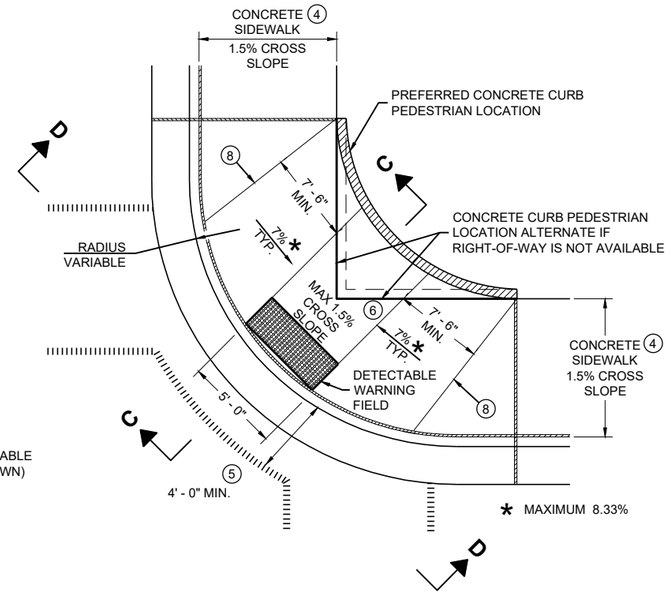
SDD08D01 - 23b



PLAN VIEW

CURB RAMP TYPE 1

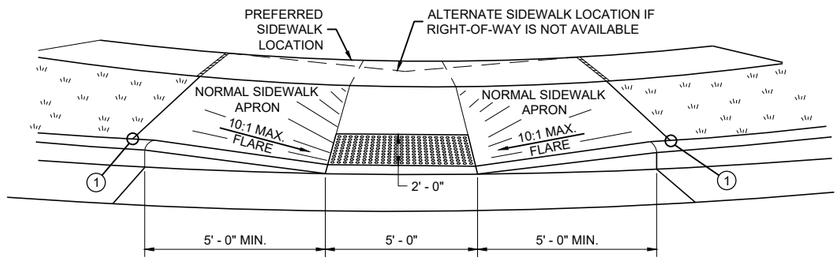
(CENTER OF CORNER RADIUS)



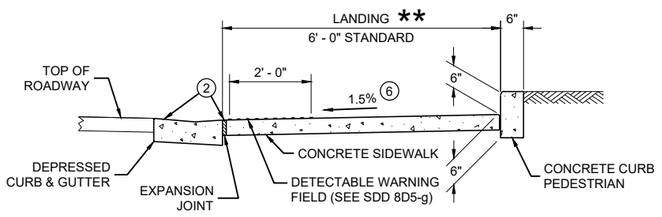
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

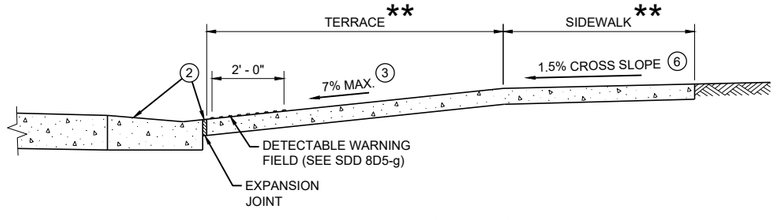


VIEW A - A FOR TYPE 1

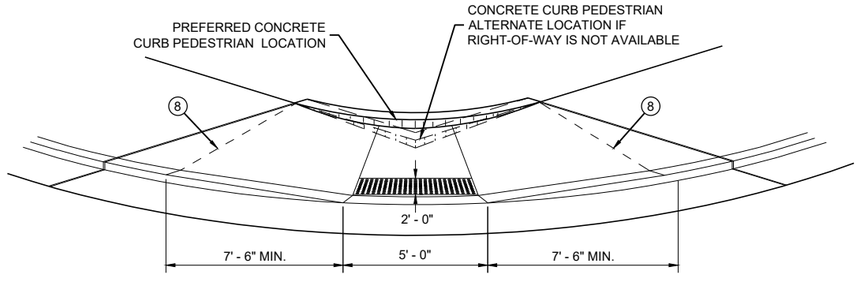


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA. 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

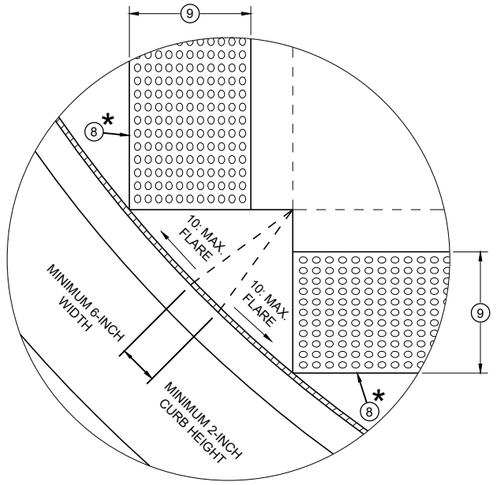
LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

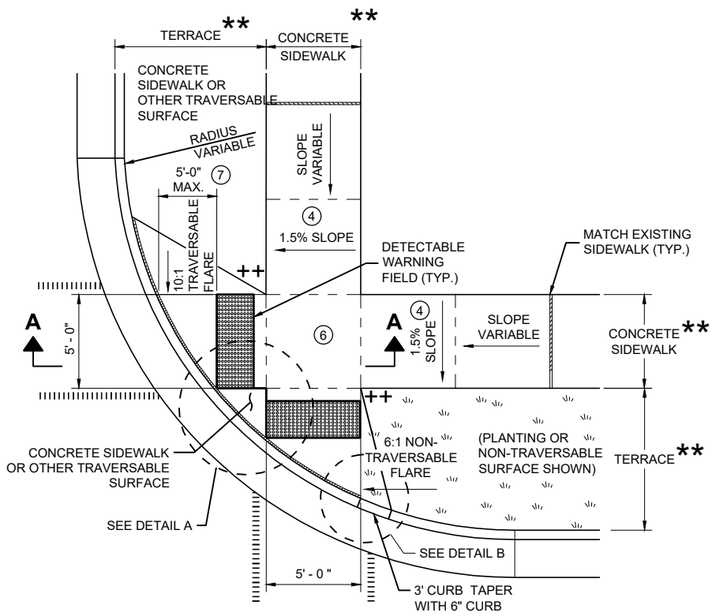
CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D05-21a



DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

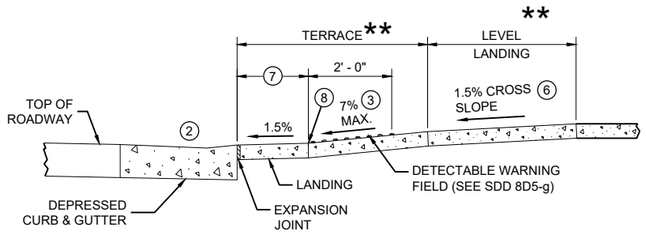
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

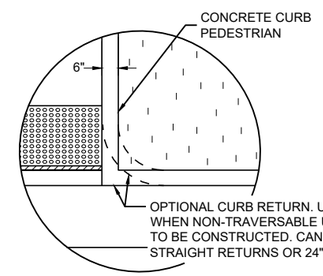


SECTION A - A FOR TYPE 2

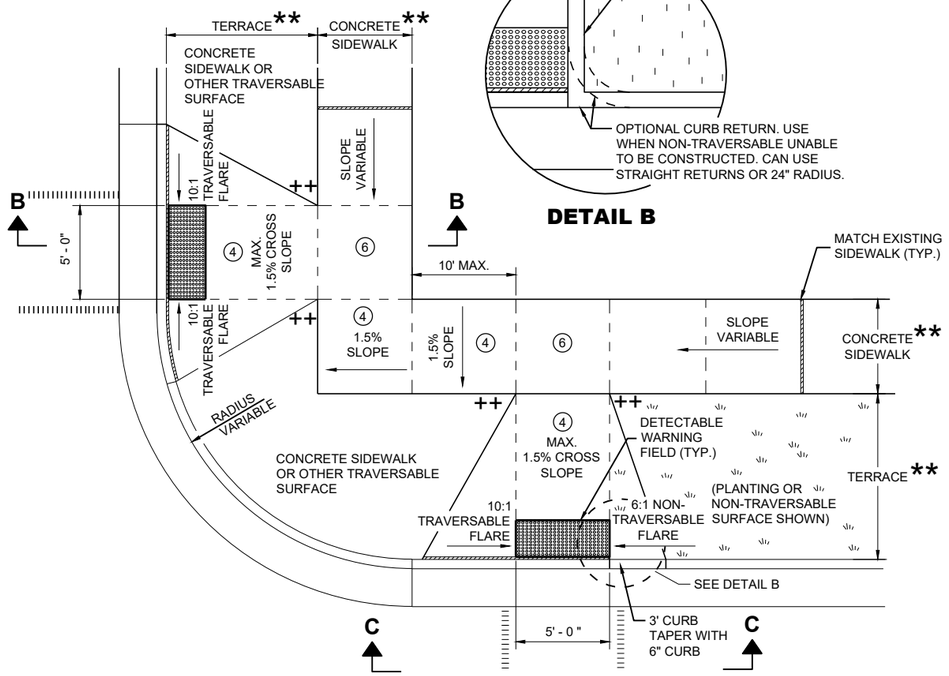
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

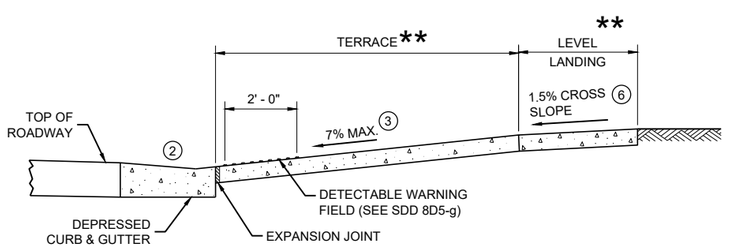
++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



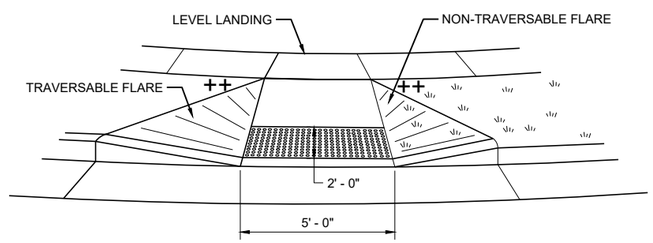
DETAIL B



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



SECTION B - B FOR TYPE 3



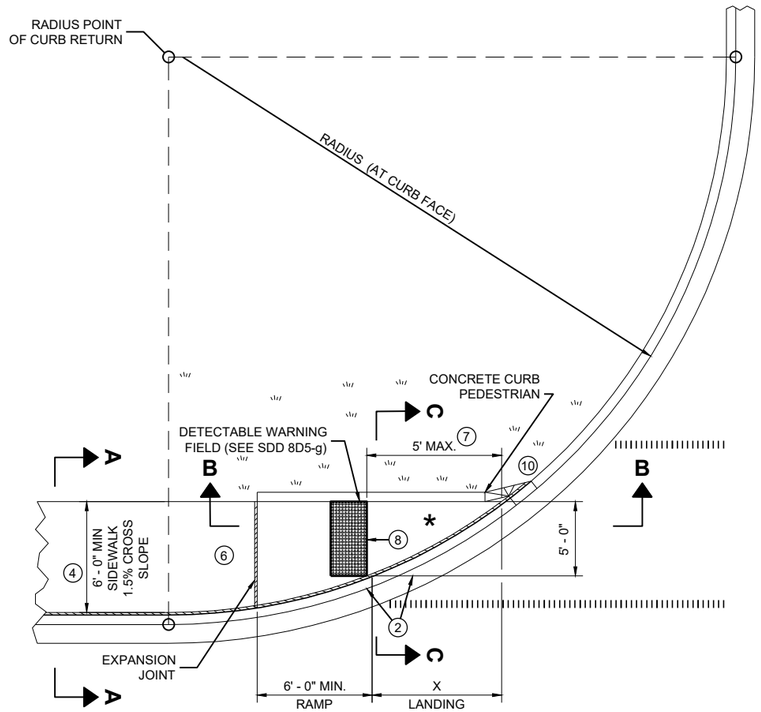
VIEW C - C FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

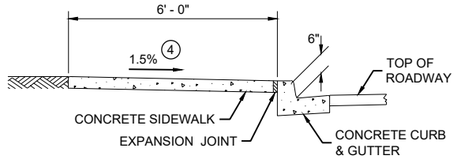


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

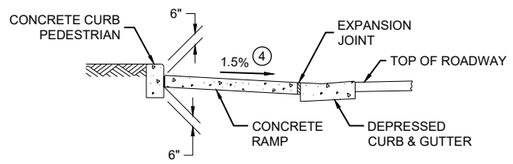
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

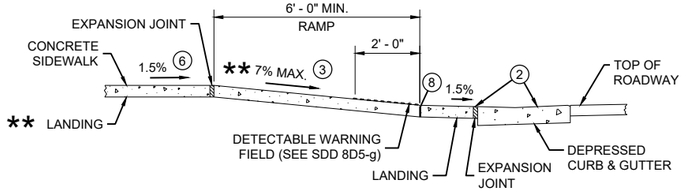
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)

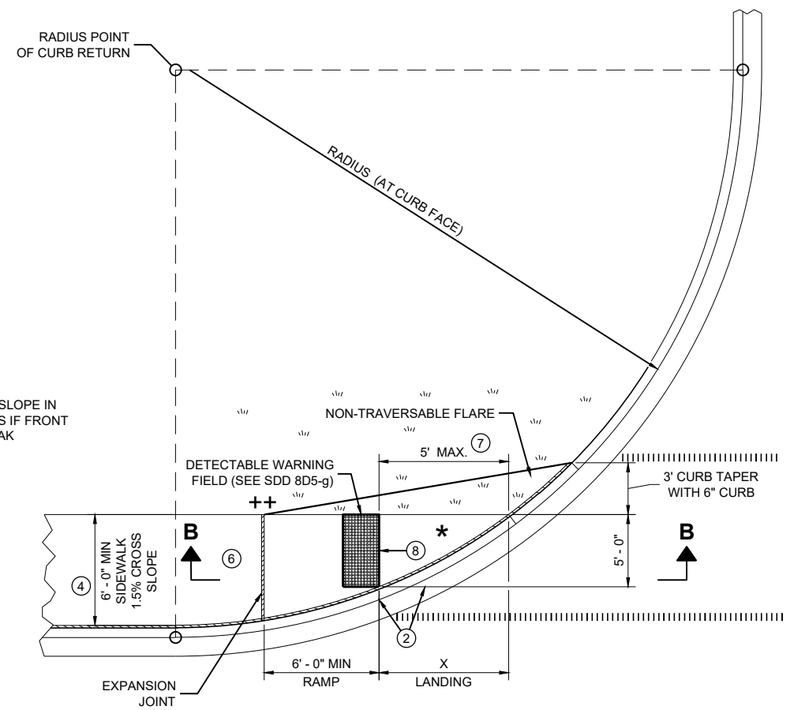


SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

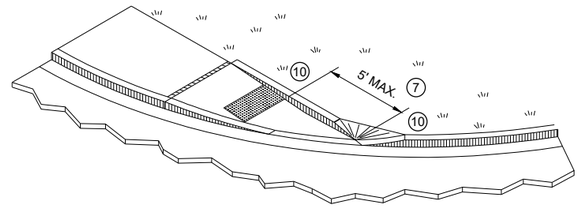


* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

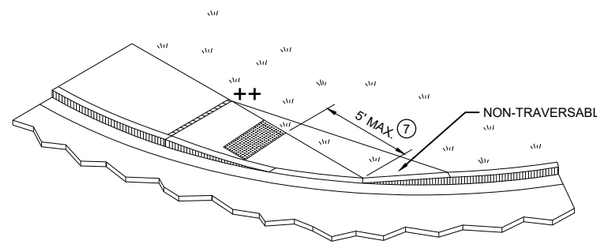
PLAN VIEW

CURB RAMP TYPE 4A1

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



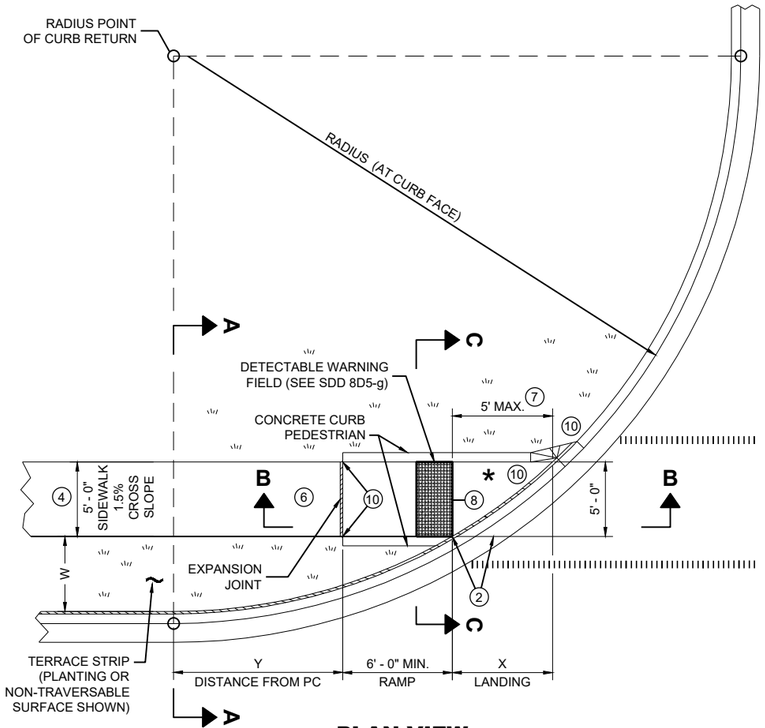
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

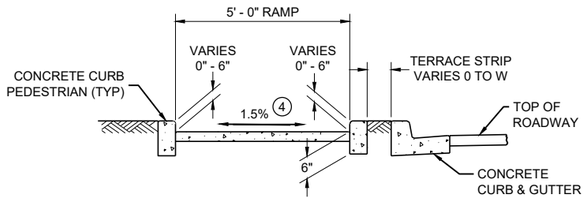
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET			4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET									4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET															4' - 10 3/4"	19' - 8 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

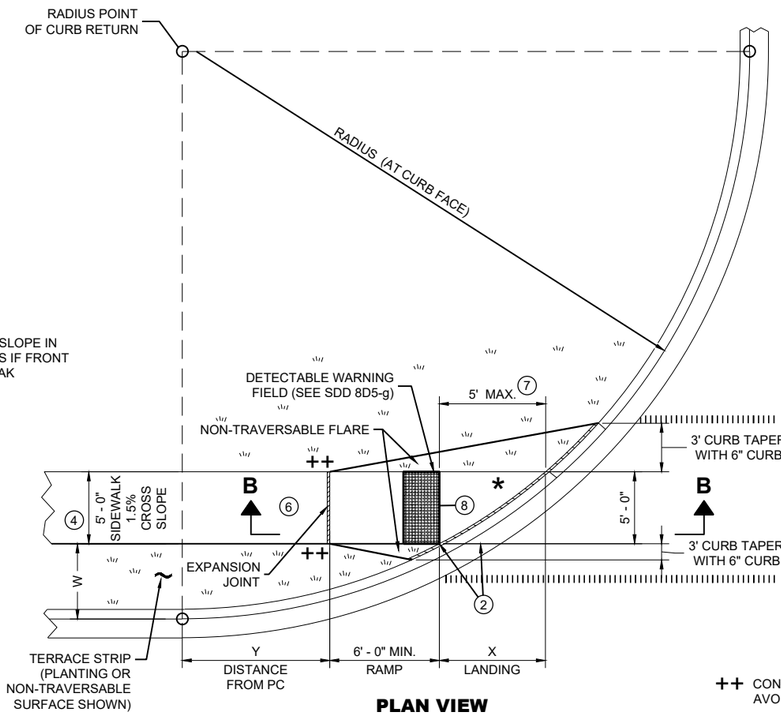
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

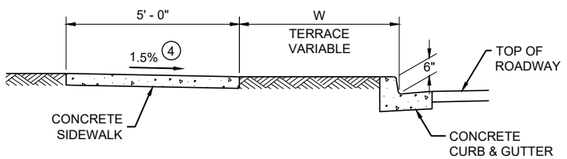
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

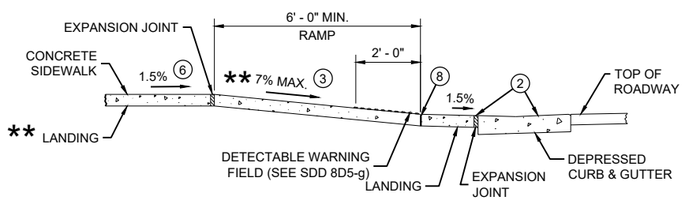
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



PLAN VIEW
CURB RAMP TYPE 4B1



SECTION A - A FOR TYPE 4B

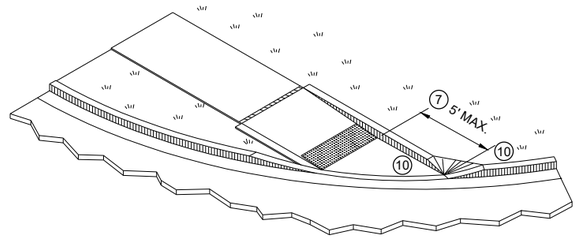


SECTION B - B FOR TYPE 4B AND TYPE 4B1

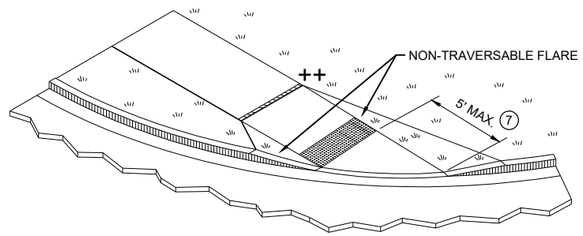
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



ISOMETRIC VIEW FOR TYPE 4B

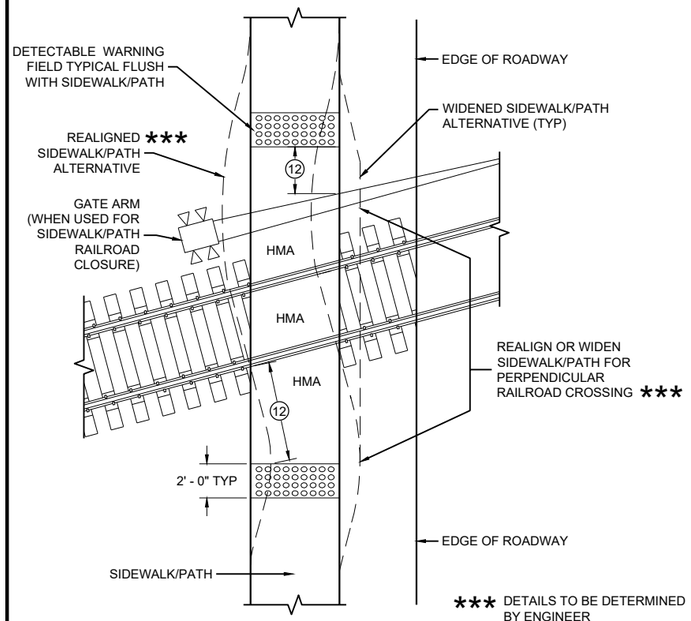


ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

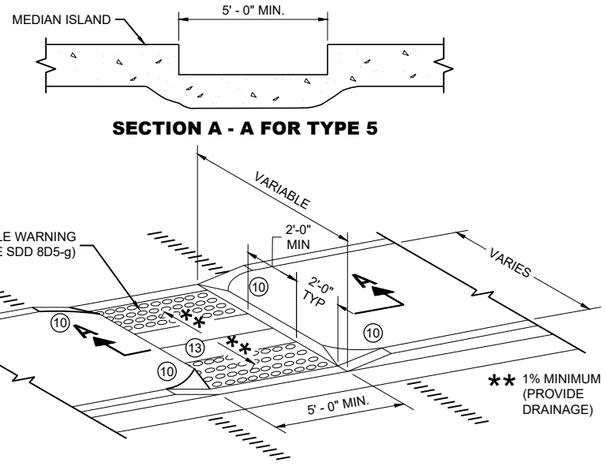
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05-21d



CURB RAMP TYPE 8

DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



SECTION A - A FOR TYPE 5

CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

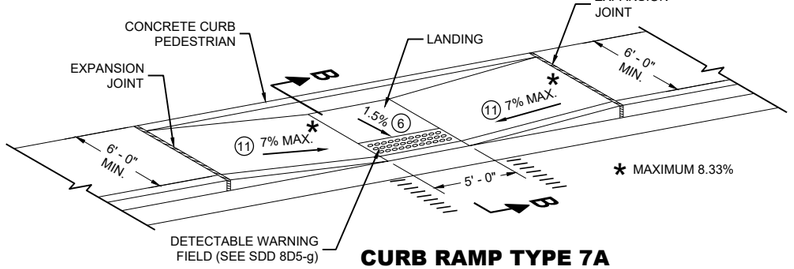
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

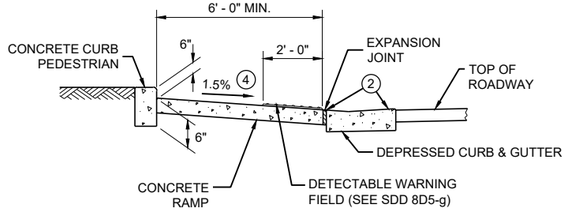
LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

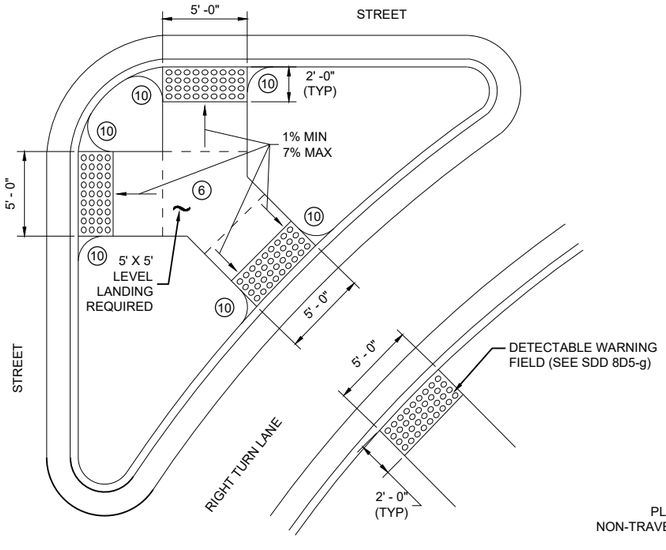


CURB RAMP TYPE 7A

FOR INTERSECTIONS AND MID BLOCK CROSSINGS



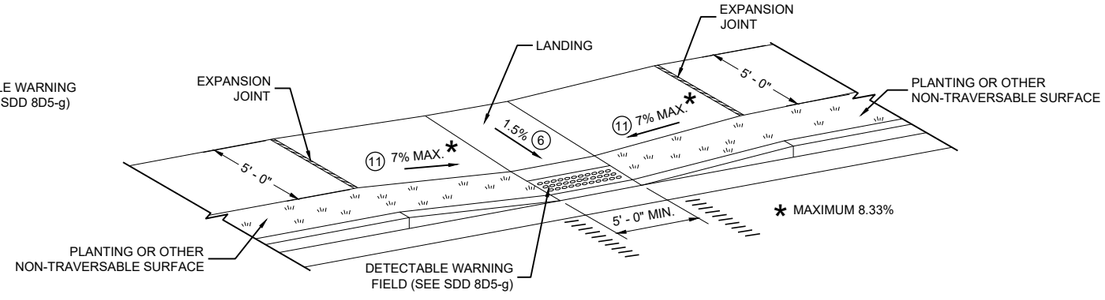
SECTION B - B FOR TYPE 7A



CURB RAMP TYPE 6

DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7B

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

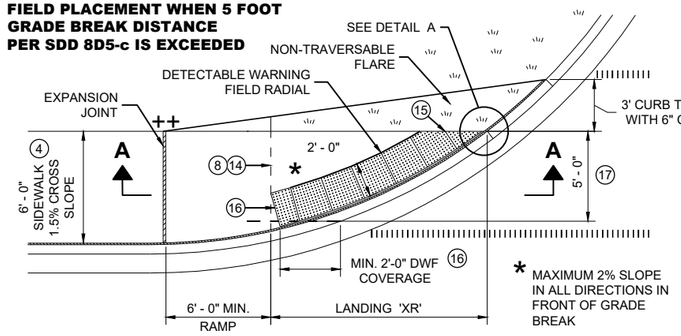
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

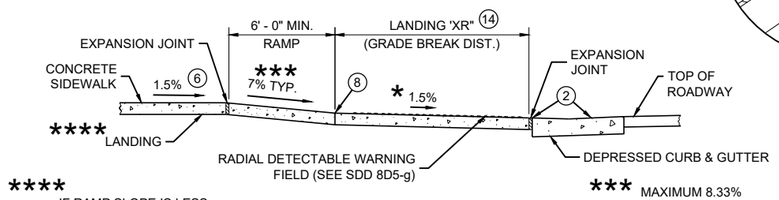
SDD 08D05-21e

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW

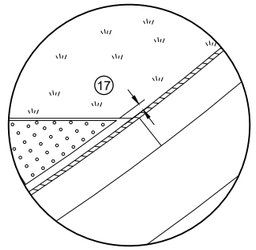
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1



DETAIL A

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AD ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

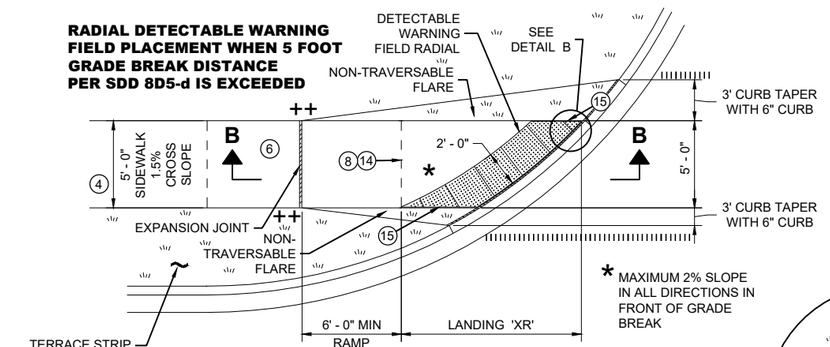
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

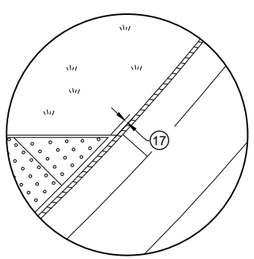
(17) A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED

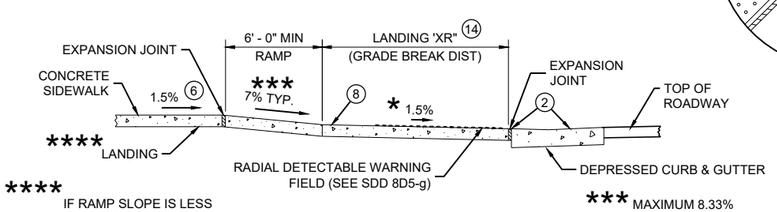


PLAN VIEW

CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B

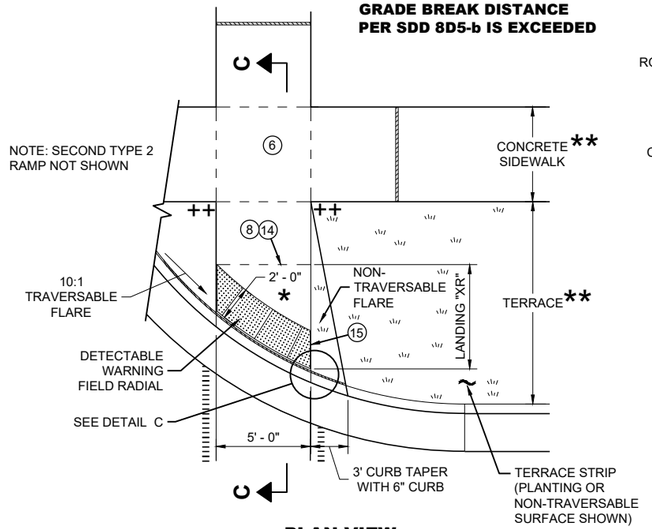


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

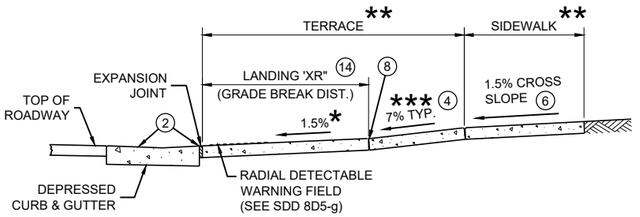
SECTION B - B FOR TYPE 4B1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

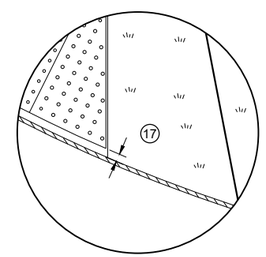


PLAN VIEW

CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)



SECTION C - C FOR TYPE 2



DETAIL C

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

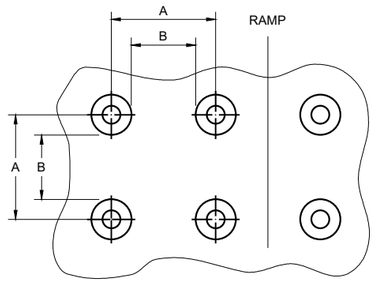
CURB RAMPS
RADIAL DETECTABLE WARNING

STATE OF WISCONSIN
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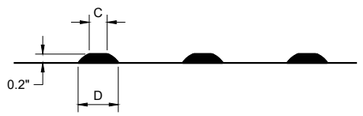
SDD 08D05-21f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

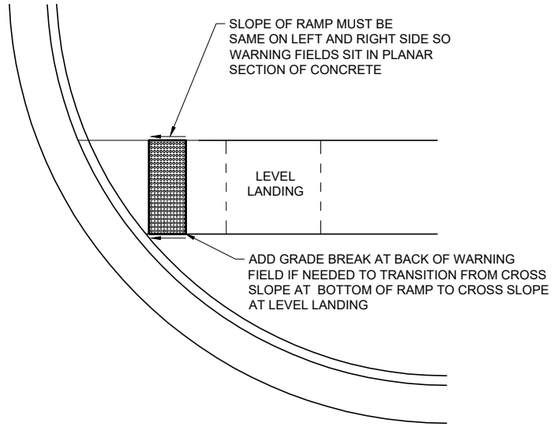
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW



DETECTABLE WARNING FIELD
PLANAR INSTALLATION

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

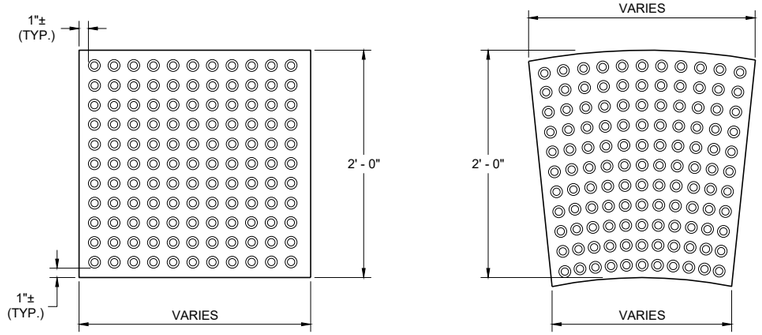
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

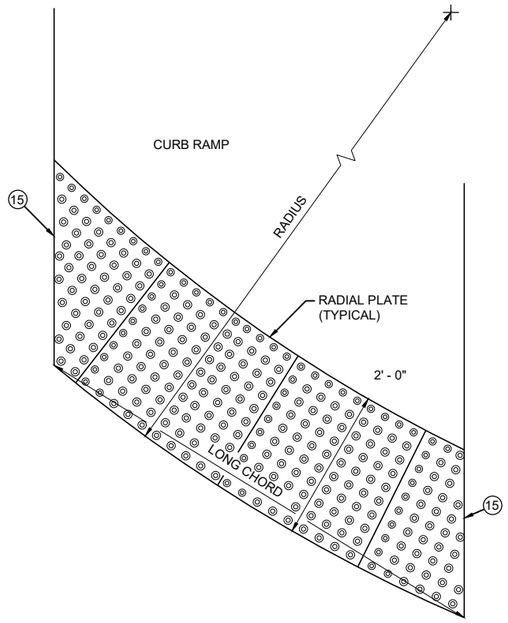
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



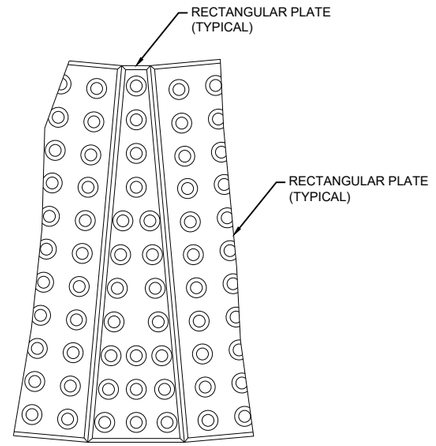
RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 2023 — DATE

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

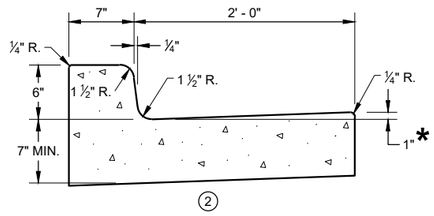
FHWA

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SDD 08D05-21g

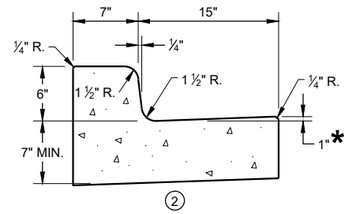
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SDD 08D05-21g

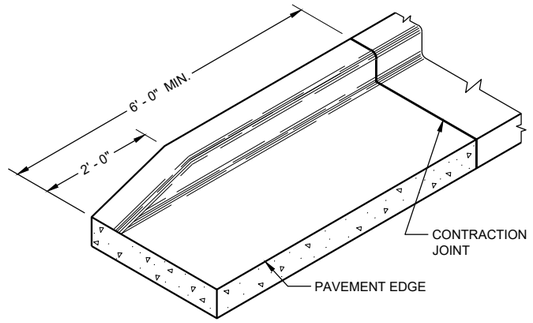


CONCRETE CURB AND GUTTER 31" ①

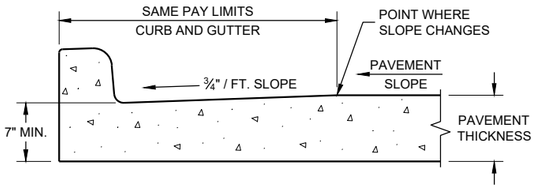
*TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



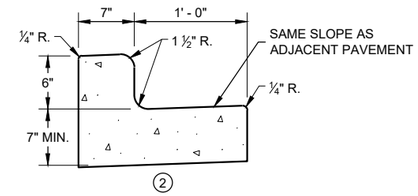
CONCRETE CURB AND GUTTER 22" ①



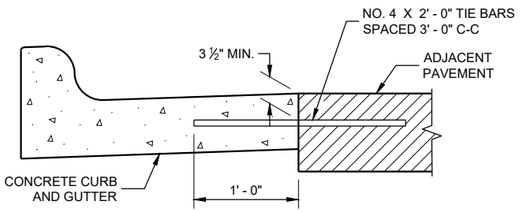
END SECTIONCURB AND GUTTER



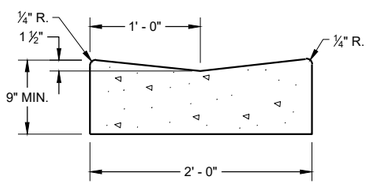
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER



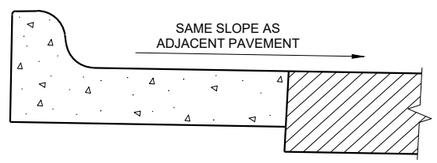
CONCRETE CURB AND GUTTER 19" ①



TYPICAL TIE BAR LOCATION ①



CONCRETE GUTTER 24" ①



HIGH SIDE SECTION ③

(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

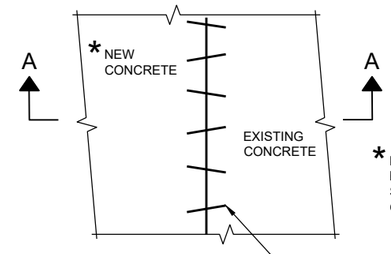
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUITED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

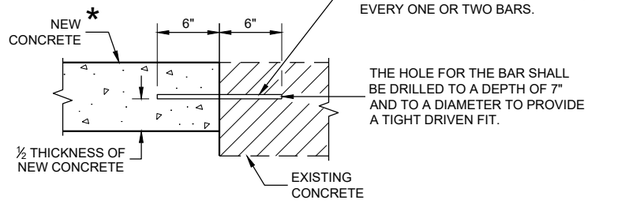
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLANS



PLAN VIEW

* EXISTING AND NEW CONCRETE MAY BE CURB AND GUTTER, SURFACE DRAINS, PAVEMENT OR OTHER CONCRETE STRUCTURE.



SECTION A - A

PAVEMENT TIES

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional use in Milwaukee Co. Only)

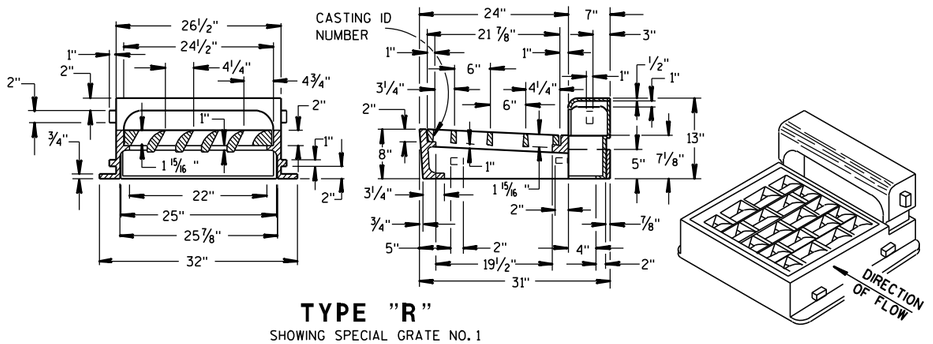
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

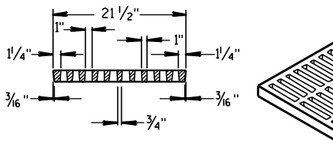
SDD 08D16 - 11
SDD 08D16 - 11

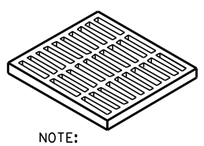
INLET COVERS



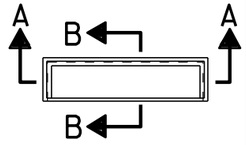
TYPE "R"

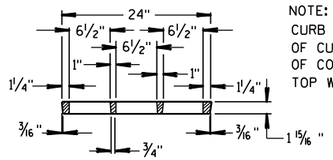
SHOWING SPECIAL GRATE NO. 1
(TO BE NOTED AS R-1 IN DRAINAGE TABLE)



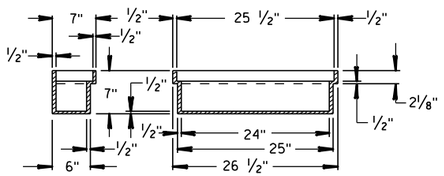


(APPROX. WEIGHT - 510 LBS.)
FRAME..... 245 LBS.
CURB..... 120 LBS.
GRATE..... 145 LBS.





NOTE:
CURB PLUG USED IN PLACE OF CURB BOX IN ABSENCE OF CONC. CURB. FILL TO TOP WITH CONCRETE.



GRATE FOR TYPE "R" INLET COVER

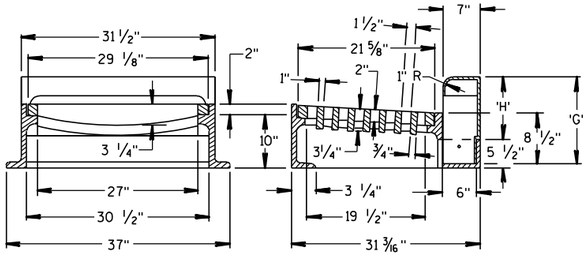
(GRATE..... 150 LBS.)
(TO BE USED UNLESS OTHERWISE NOTED IN DRAINAGE TABLE)

SECTION B-B SECTION A-A

SPECIAL CURB PLUG "P"

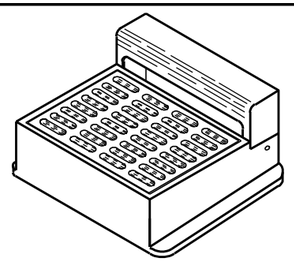
(CURB PLUG..... 85 LBS.)
(TO BE NOTED AS R-P IN DRAINAGE TABLE)

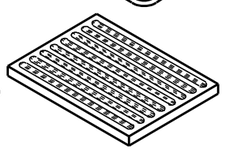
'H' = 9" FOR 6" CURB
'H' = 11" FOR 8" CURB
'G' = 13 3/4" FOR 6" CURB
'G' = 15 3/4" FOR 8" CURB



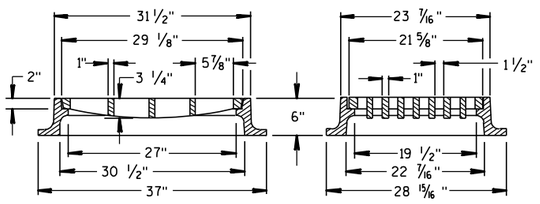
TYPE "W"

(APPROX. WEIGHT - 670 LBS.)
FRAME..... 350 LBS.
CURB BOX..... 135 LBS.
GRATE..... 185 LBS.





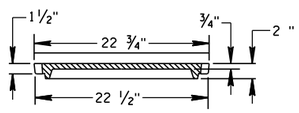
ALTERNATE GRATE
(FOR EXPRESSWAY RAMPS)
TYPES "W" & "X"



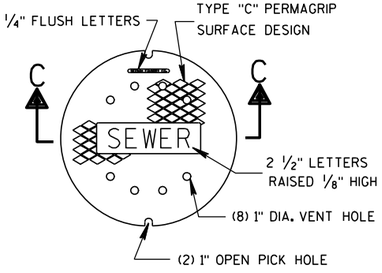
TYPE "X"

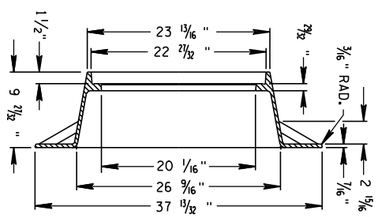
(APPROX. WEIGHT - 470 LBS.)

MANHOLE COVER



SECTION C-C

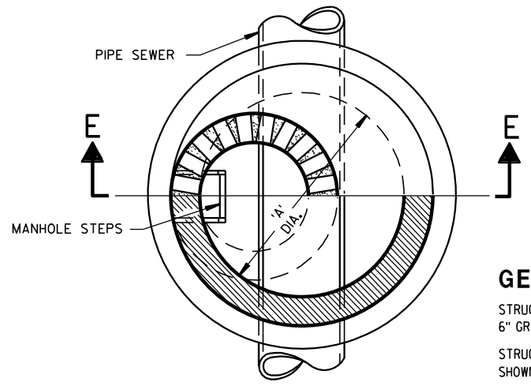




TYPE "Q"

(APPROX. WEIGHT - 290 LBS.)

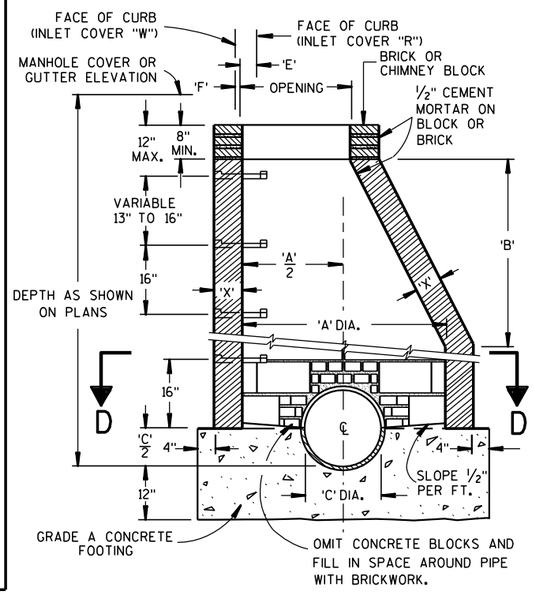
MANHOLE



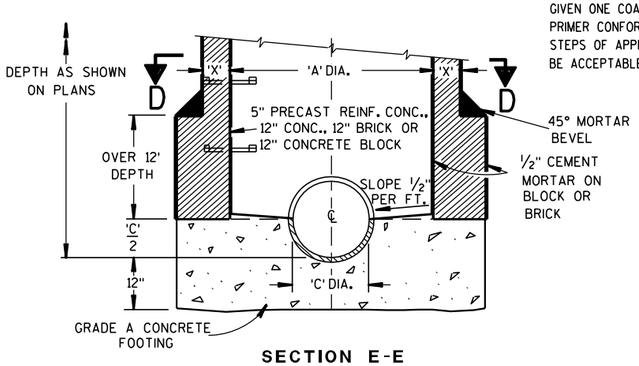
HALF SECTION D-D

TABLE OF OPENING DIMENSIONS

COVER TYPE	COVER DESCRIPTION	OPENING	'E'	'F'
"O"	ROUND	2'-2" DIA.	—	—
"W"	CURB BOX	1'-8" X 2'-6"	—	1"
"X"	INLET	1'-10" X 2'-6"	—	—
"R"	CURB BOX	2'-0" X 2'-1"	4"	—



SECTION E-E



SECTION E-E

TYPES 11, 12, 13 & 14

TABLE OF DIMENSIONS

TYPE	'A'	'B'	'C'
11	3'-6"	2'-8"	12" - 36"*
12	4'-0"	3'-8"	12" - 42"**
13	5'-0"	5'-8"	42" - 48"
14	6'-0"	7'-8"	54" - 60"

* 12" - 21" FOR PRECAST MANHOLES
** 12" - 24" FOR PRECAST MANHOLES

THE FIRST STEP SHALL BE PLACED 16" ABOVE THE BENCH.

GENERAL NOTES

STRUCTURE WALL THICKNESS 'X' TO BE 8" BRICK, 6" CONCRETE BLOCK, 6" GRADE A CONCRETE OR 5" PRECAST REINFORCED CONCRETE.

STRUCTURE FOOTINGS ARE TO BE GRADE A CONCRETE OF THE THICKNESS SHOWN IN THE DETAIL OR 5" PRECAST REINFORCED CONCRETE.

REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED SREEL WIRE FABRIC AND SHALL BE EMBEDDED 2" CLEAR.

PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6" IN DEPTH, WHICH MEETS THE REQUIREMENTS FOR GRANULAR BACK-FILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON THE PLANS.

THE CONTRACTOR MAY FORM AND POUR MONOLITHIC CONCRETE INVERT PROVIDED THE PIPE ENDS ARE EXTENDED INTO THE M.H. AND NOT TERMINATED WITHIN THE M.H. WALLS.

MANHOLE STEPS

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAX. SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM WALL EMBEDMENT OF 3 INCHES IN PRECAST MANHOLE AND 6 INCHES IN 8 INCH BRICK OR 6 INCH BLOCK MANHOLE; TREAD OF STEP SHALL HAVE A NON-SKID SURFACE AND BE FLANKED BY CLEATS, WITH A MINIMUM OF 10 INCHES CLEAR BETWEEN CLEATS, TO PREVENT FOOT SLIPPING OFF THE EDGE CLEATS SHALL BE A MINIMUM OF 3/4 INCH HIGH BY 3/4 INCH WIDE HAVING A MINIMUM THICKNESS OF 3/8 INCH. STEPS SHALL BE CAPABLE OF SUPPORTING A CONCENTRATED LOAD OF 300 LBS. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

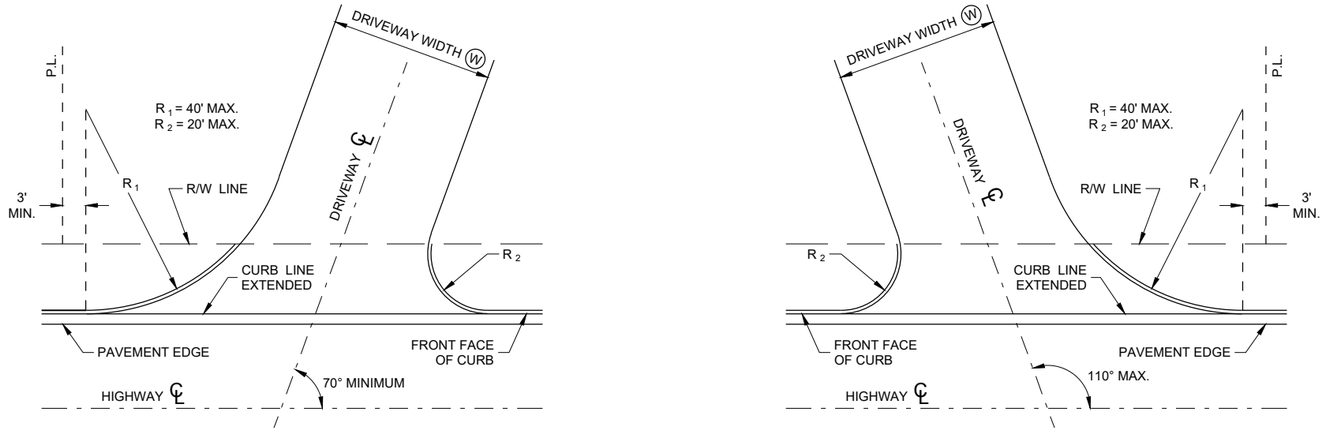
SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCING BAR WILL BE ACCEPTABLE.

MANHOLES, MANHOLE & INLET COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/12/2011 — DATE
/S/ Jerry H. Zogg — ROADSIDE STANDARDS ENGINEER
329
FHWA

6
S.D.D. 8 D 17-6



SKEWED DRIVEWAY DETAILS (COMMERCIAL AND NON-COMMERCIAL)

SIDEWALK NOT SHOWN

GENERAL NOTES

A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

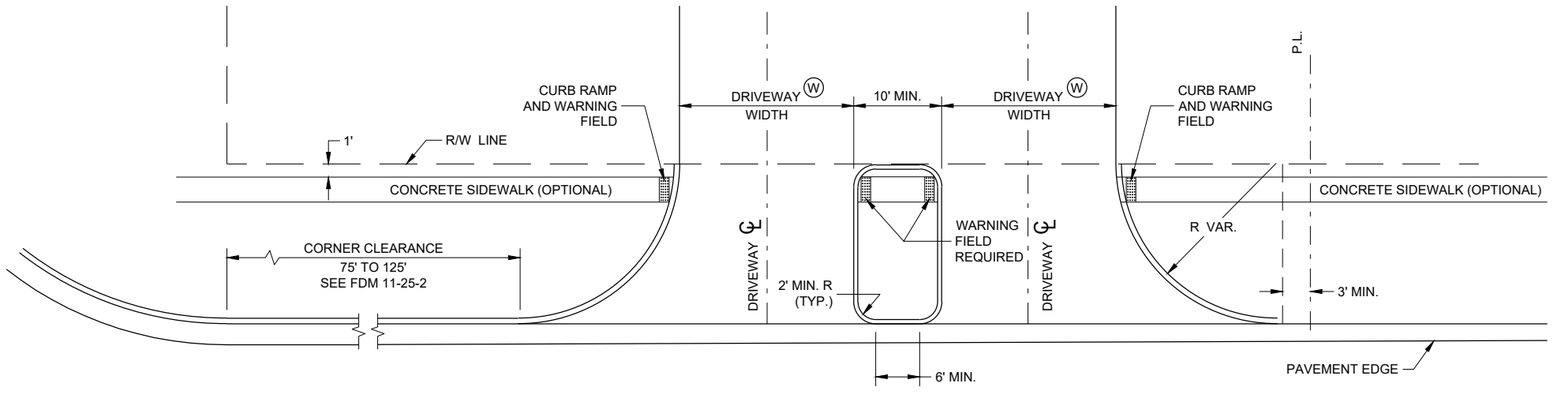
THE MINIMUM ANGLE OF INTERSECTION BETWEEN THE DRIVEWAY AND HIGHWAY CENTERLINES SHALL BE 70°.

ALL CURVILINEAR PRIVATE ENTRANCE OUTLINES SHALL BE CONTAINED WITHIN THE HIGHWAY R/W.

NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)



DRIVEWAY LOCATION AND SPACING DETAILS

SIDEWALK SHOWN

DRIVEWAYS WITH CURB AND GUTTER RETURNS

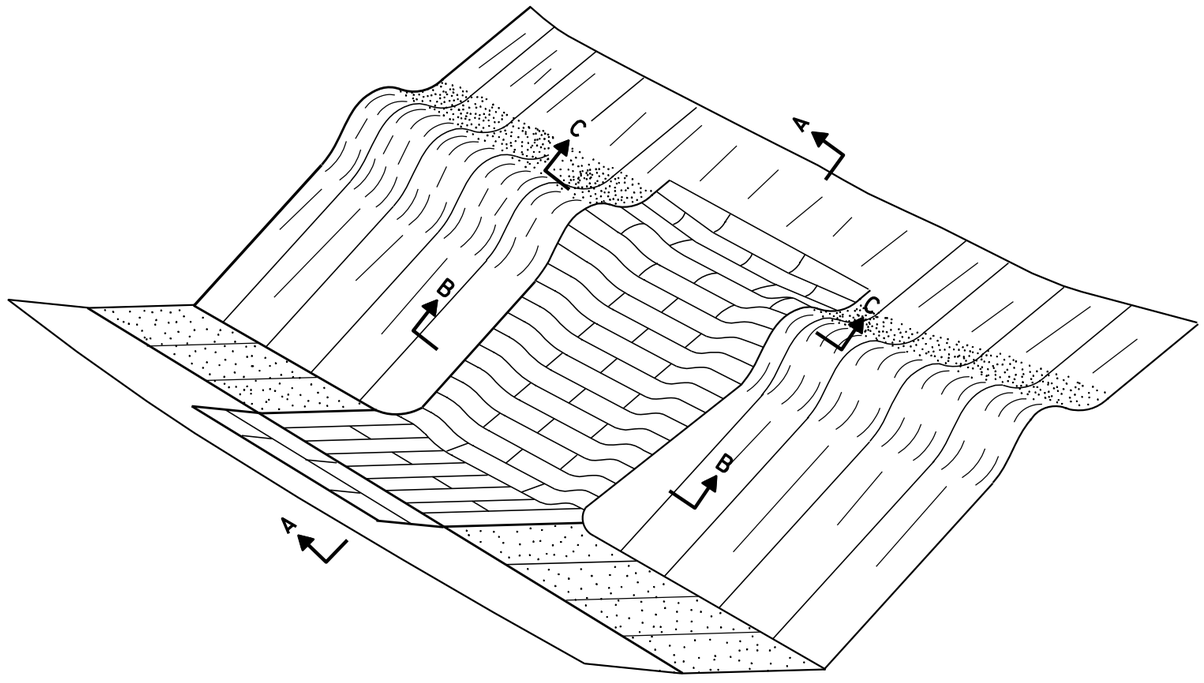
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
00-00-00 — DATE
/S/ <AUTHOR> — ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD 08D20 - 01

SDD 08D20 - 01



PERSPECTIVE

BACKSLOPE WITH FLUME AND INTERCEPTING EMBANKMENT

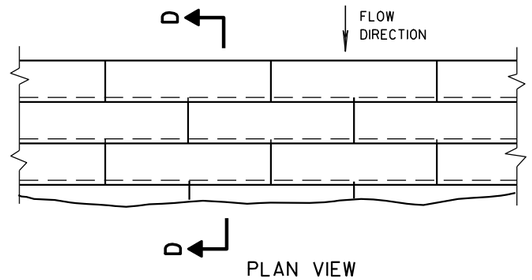
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

GRADING AND SHAPING INTERCEPTING EMBANKMENT WILL BE MEASURED AND PAID FOR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, SECTION 205, "ROADWAY AND DRAINAGE EXCAVATION".

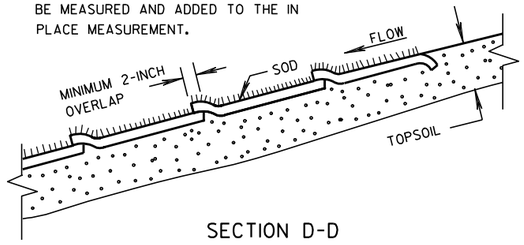
SOD STRIPS SHALL BE LAID TRANSVERSELY TO THE DIRECTION OF THE WATER FLOW.

DIMENSIONS SHALL BE ADJUSTED TO FIT SITE CONDITIONS AS DIRECTED BY THE ENGINEER.



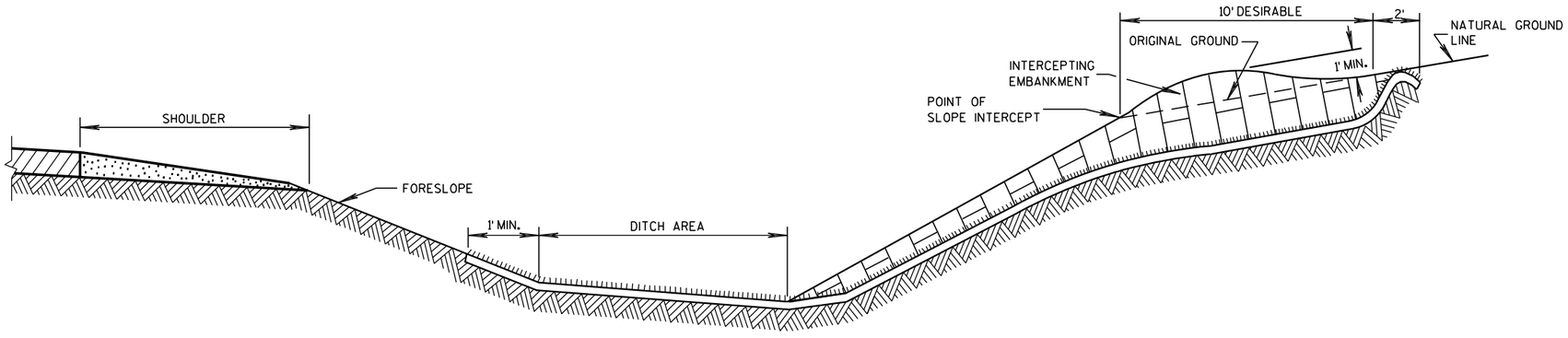
PLAN VIEW

NOTE:
SOD SHALL BE LAID AS SHOWN ON THE PLAN VIEW, AND AS DIRECTED BY THE ENGINEER. THE SOD OVERLAP WILL BE MEASURED AND ADDED TO THE IN PLACE MEASUREMENT.

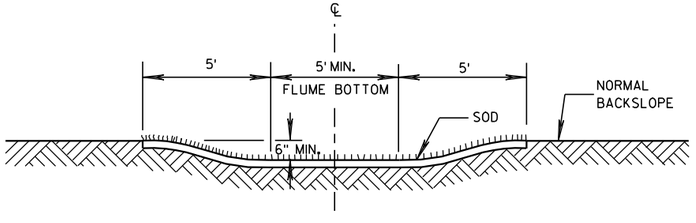


SECTION D-D

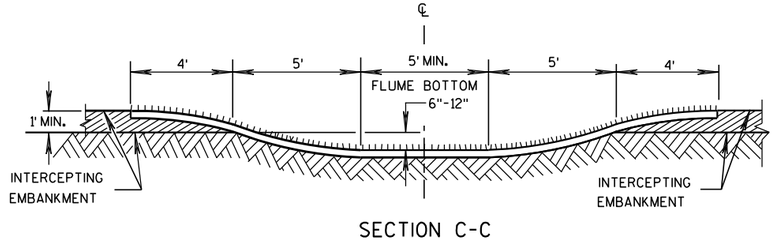
DETAIL FOR OVERLAP OF SOD STRIPS



SECTION A-A



SECTION B-B



SECTION C-C

SODDED BACKSLOPE FLUME AND INTERCEPTING EMBANKMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

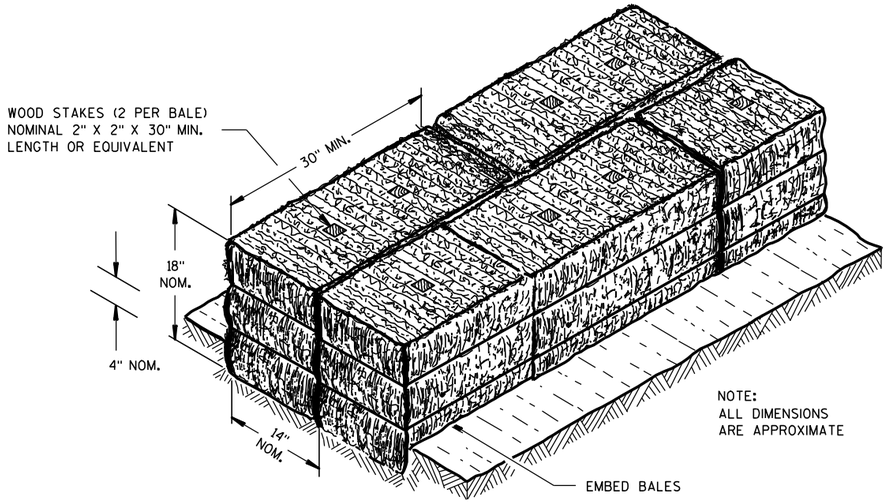
APPROVED
10/24/95 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

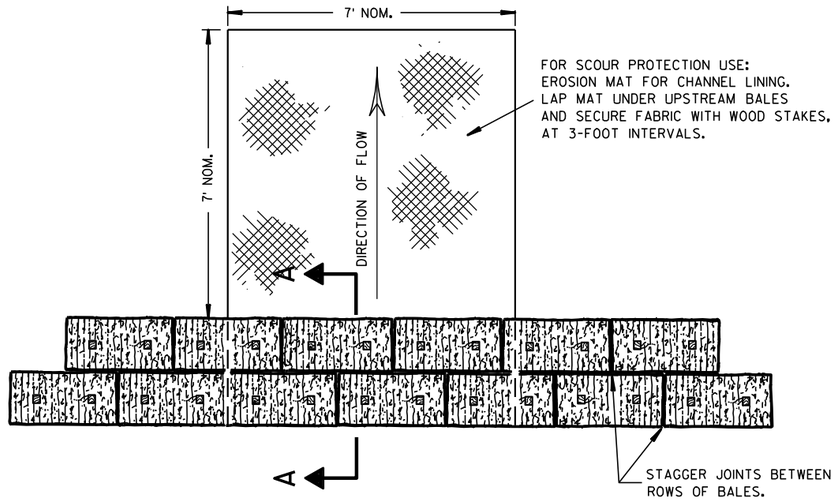
S.D.D. 8 E 5-2

6

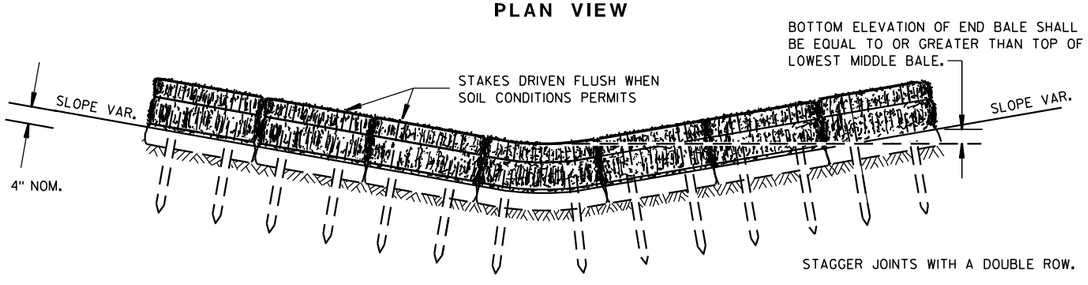
S.D.D. 8 E 5-2



SECTION A-A



PLAN VIEW



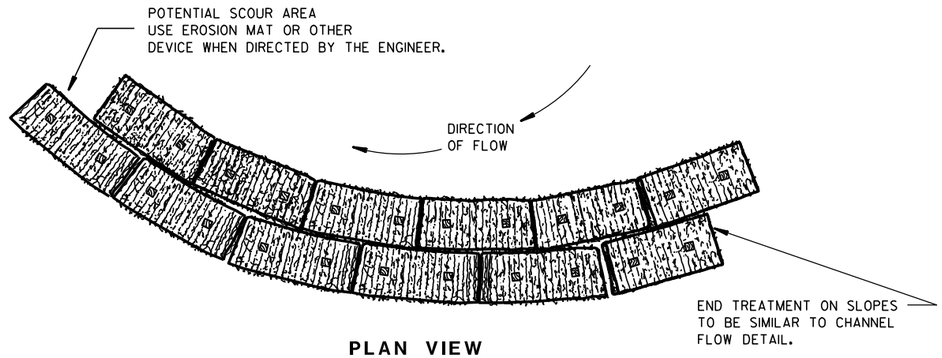
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

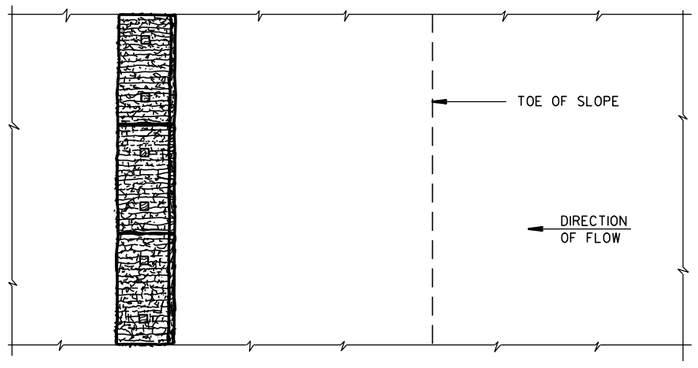
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

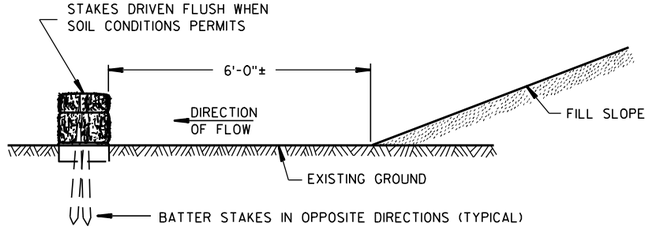


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

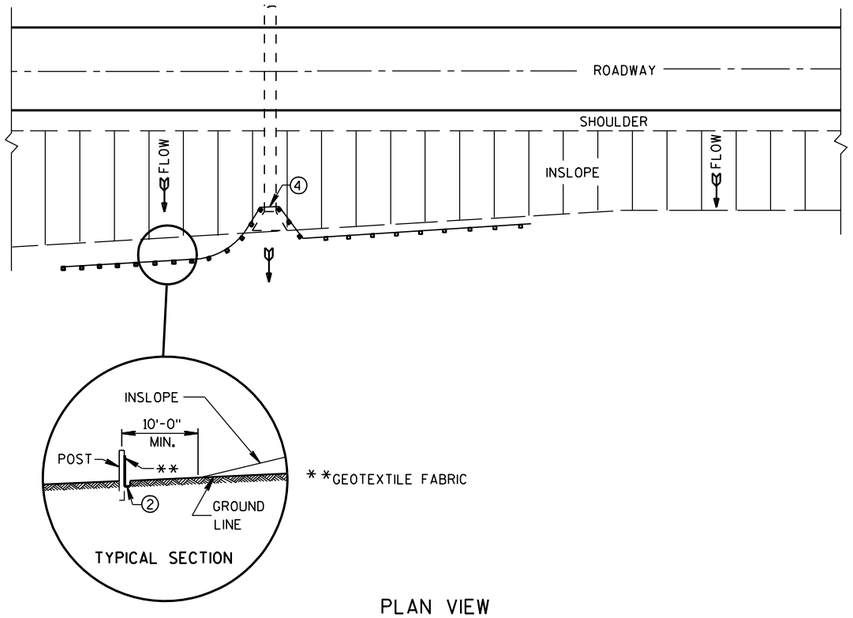
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

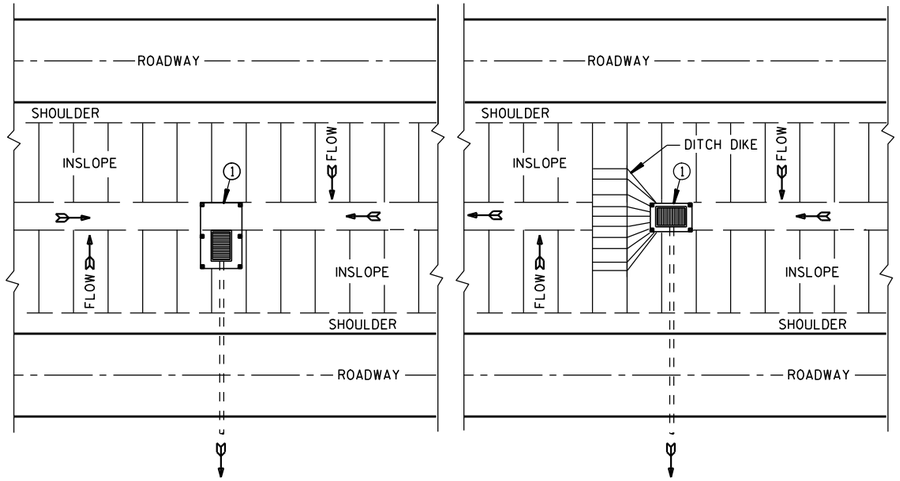
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



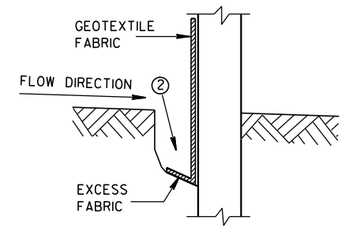
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

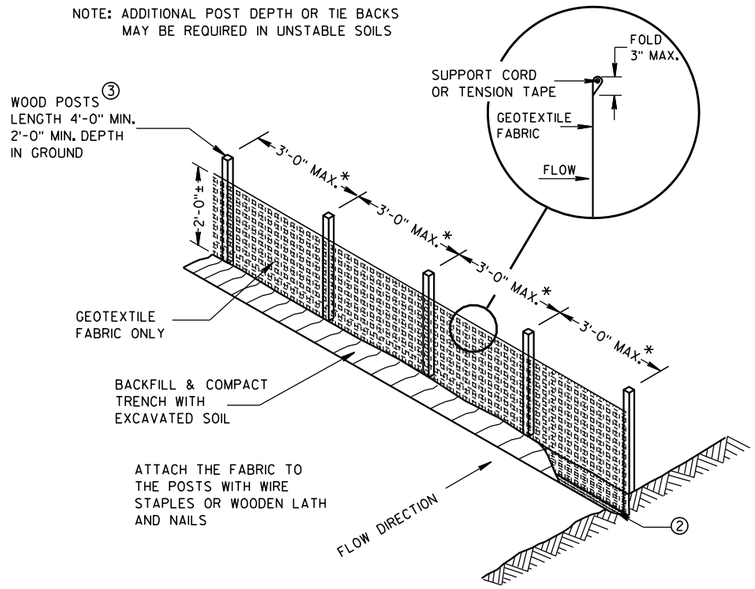
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

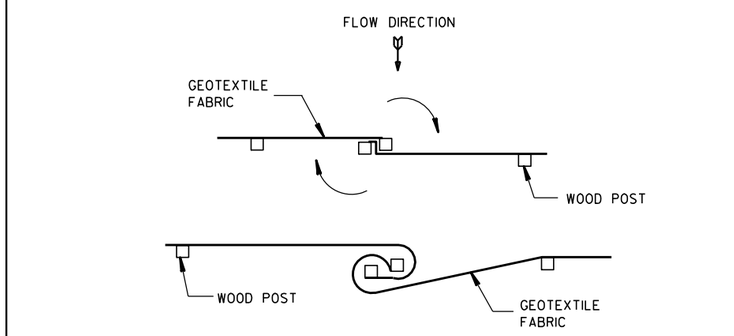
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



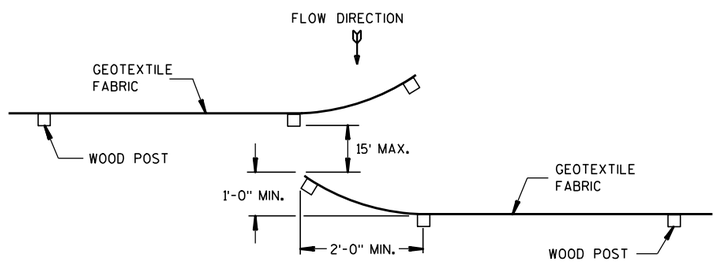
TRENCH DETAIL



SILT FENCE

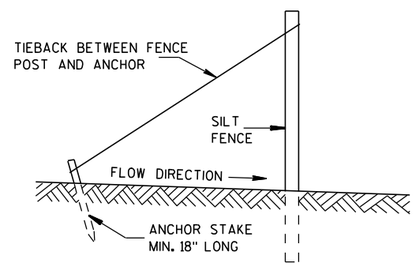


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

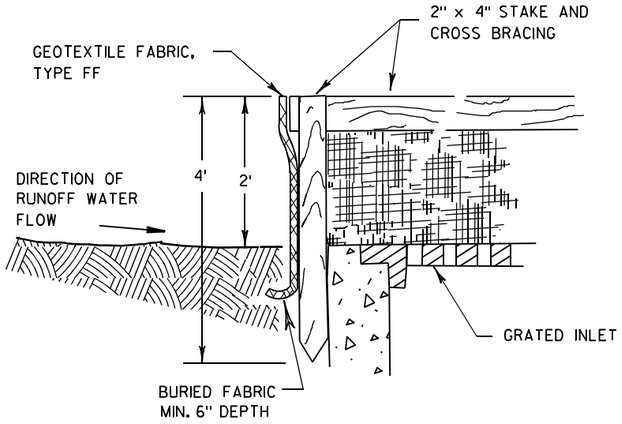
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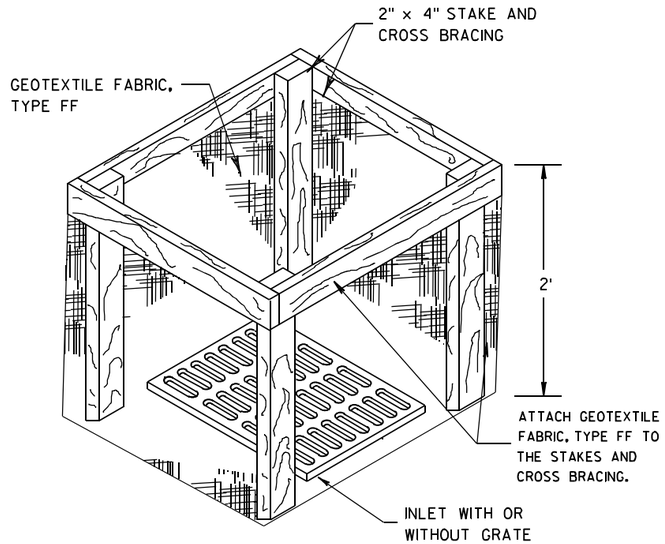
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S.D.D. 8 E 9-6

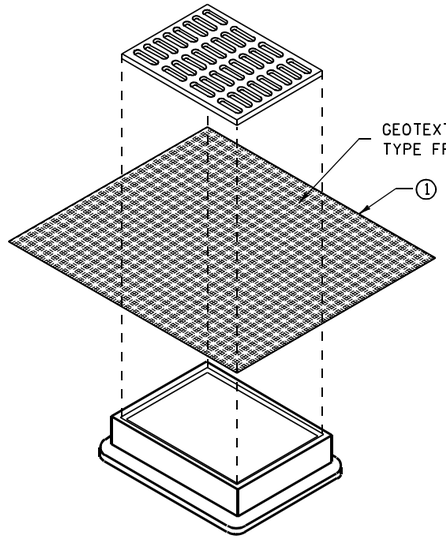
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S.D.D. 8 E 9-6



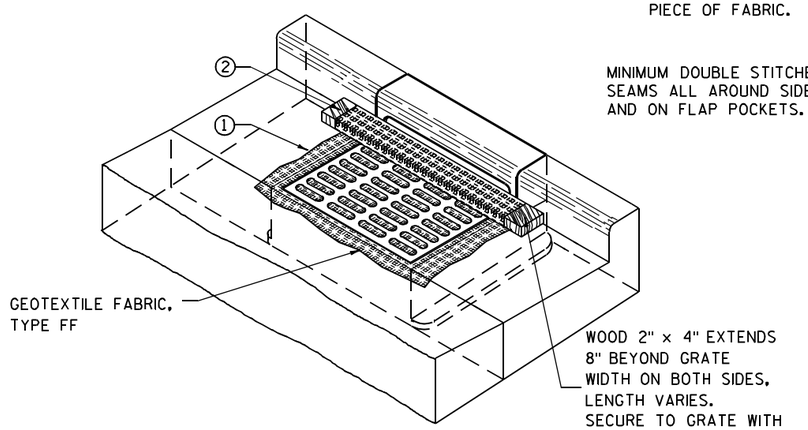


INLET PROTECTION, TYPE A

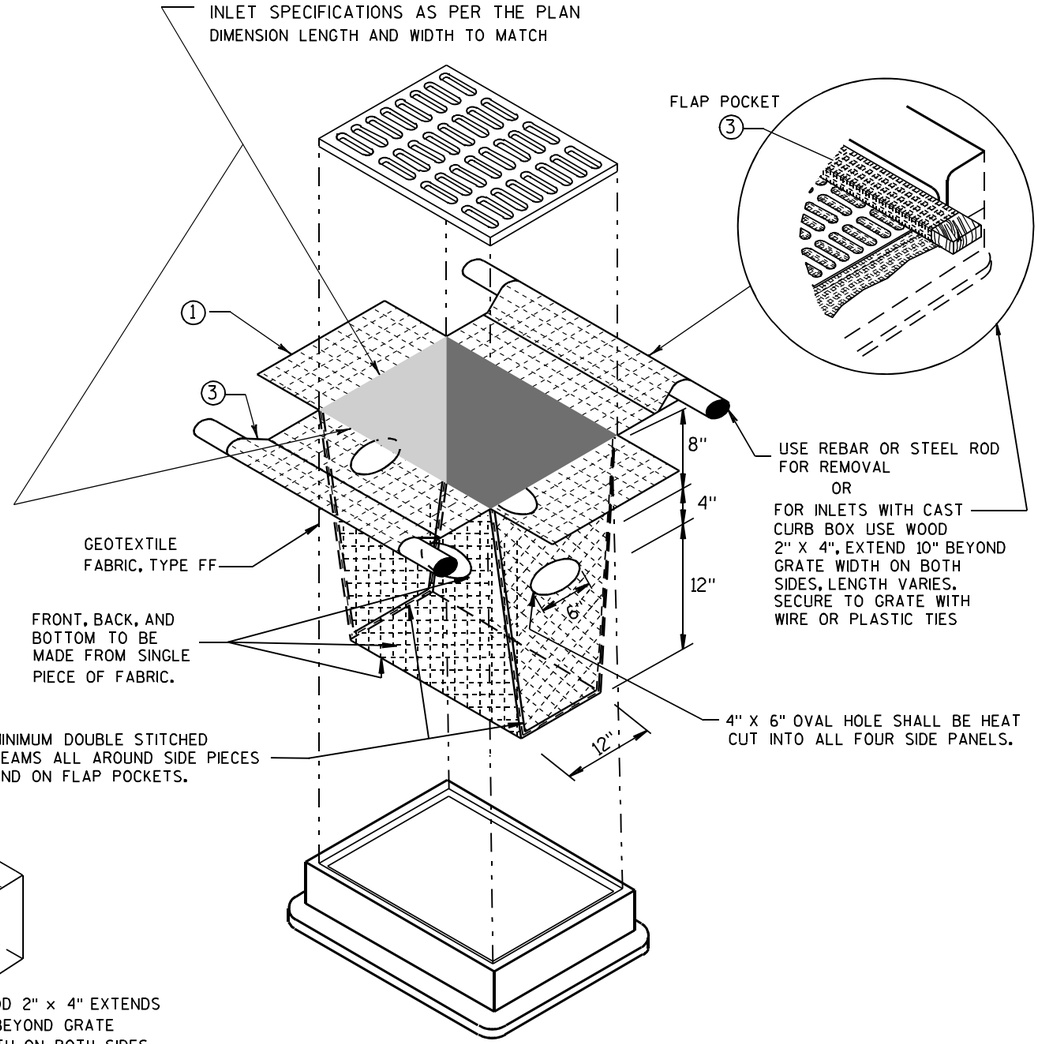


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

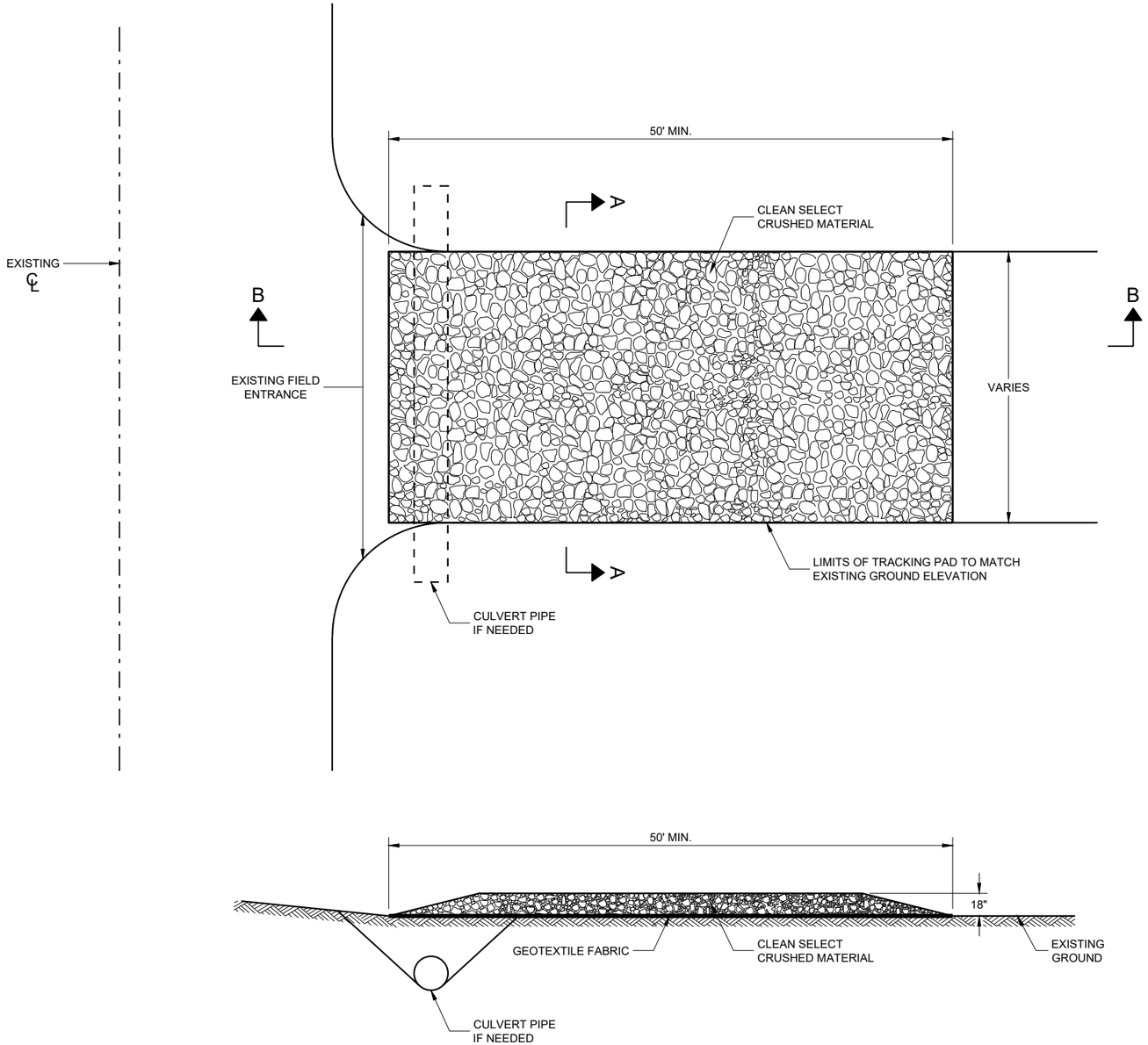
FHWA

6

S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2



SECTION B - B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

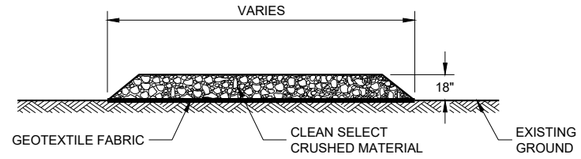
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 08E14 - 01

METAL APRON ENDWALLS

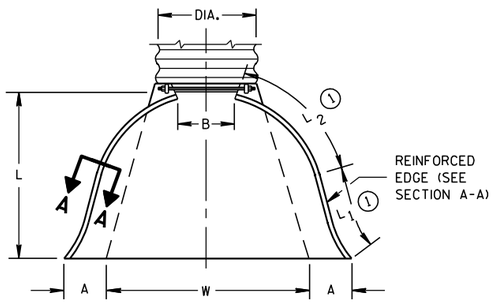
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

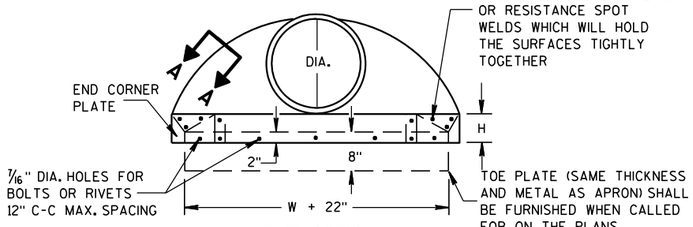
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

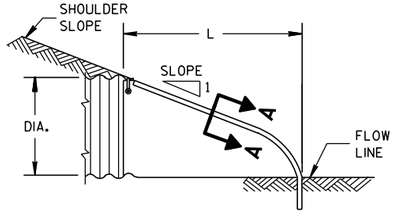
*MINIMUM
**MAXIMUM



PLAN VIEW

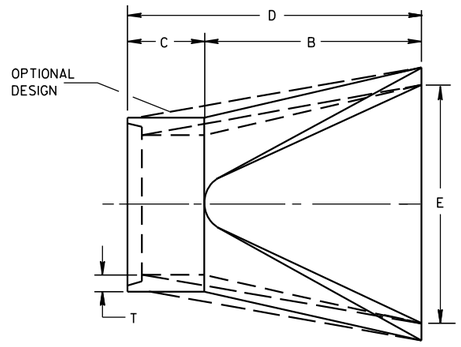


END VIEW

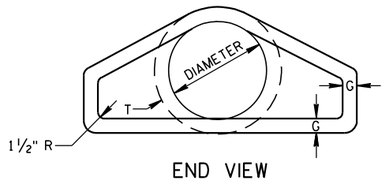


SIDE ELEVATION

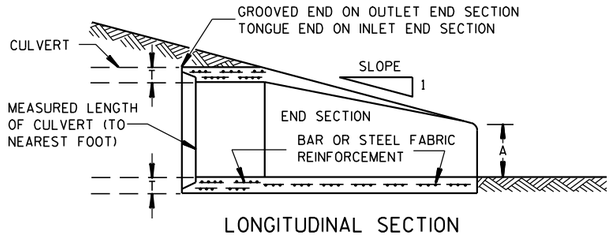
METAL ENDWALLS



PLAN

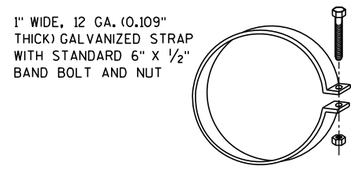


END VIEW



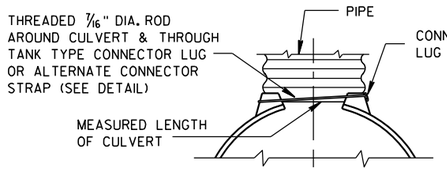
LONGITUDINAL SECTION

CONCRETE ENDWALLS

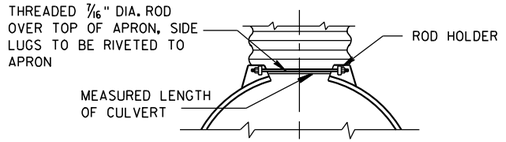


ALTERNATE FOR TYPE 1 CONNECTION

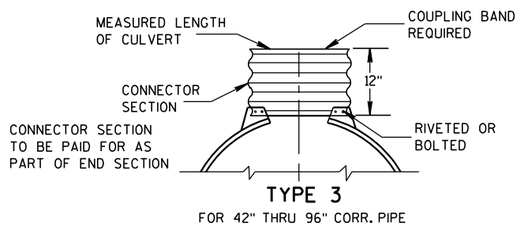
END SECTION CONNECTOR STRAP



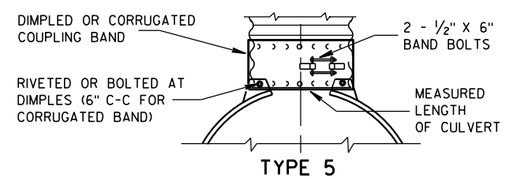
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

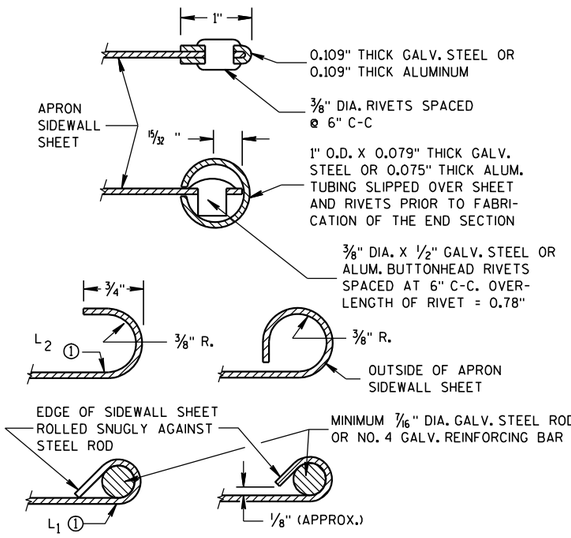
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

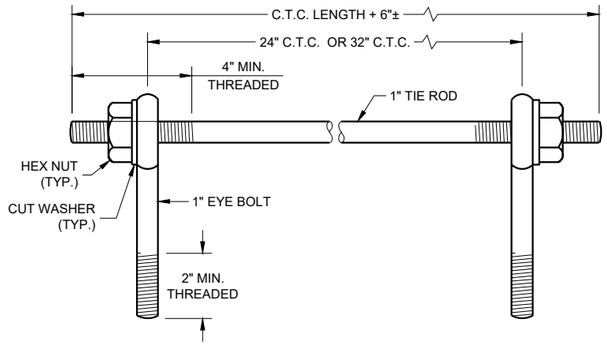
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

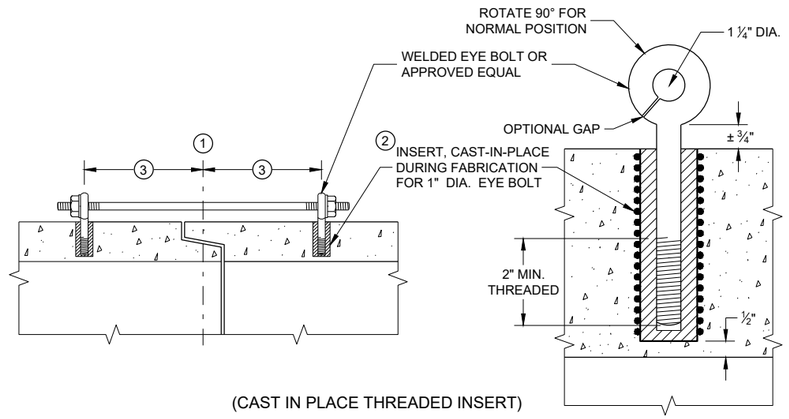
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

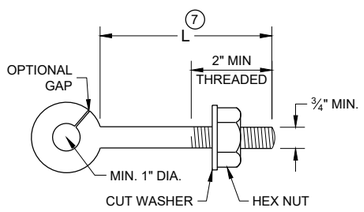
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

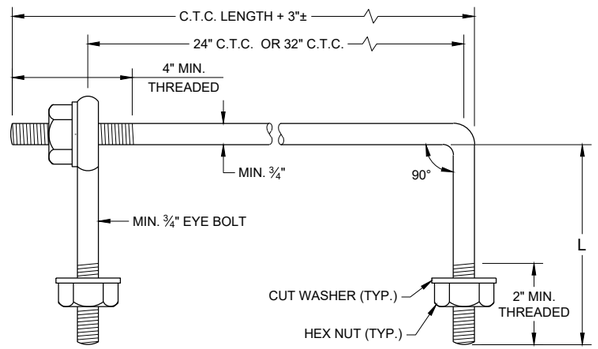
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

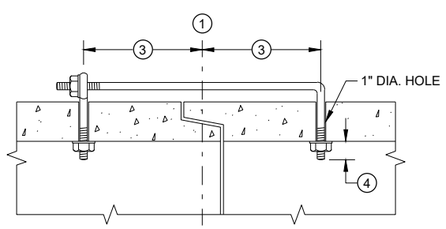


EYE BOLT (7)

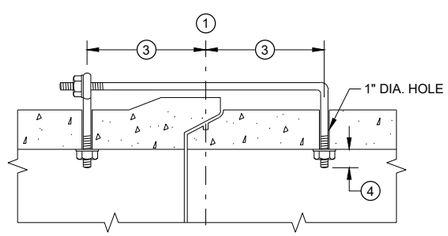
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

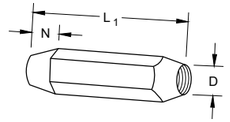
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

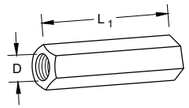
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



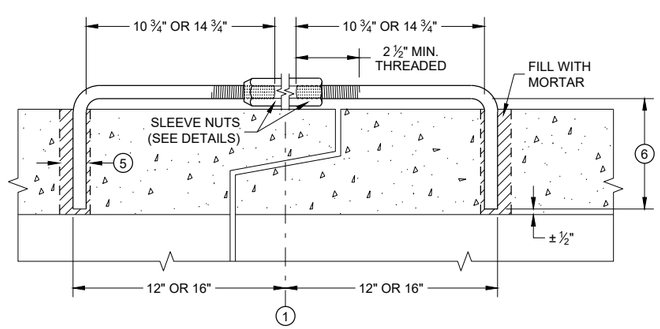
TAPERED



PLAIN

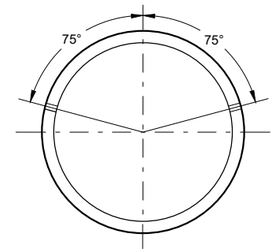
RIGHT AND LEFT THREADS

SLEEVE NUTS



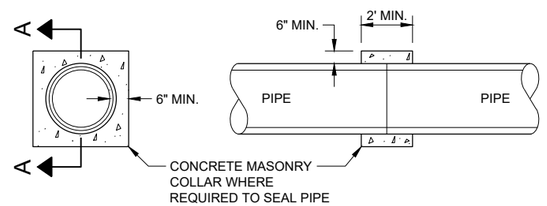
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

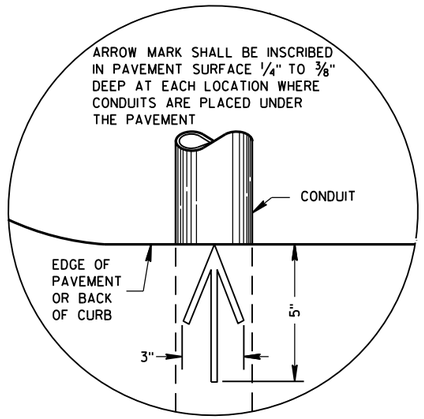
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

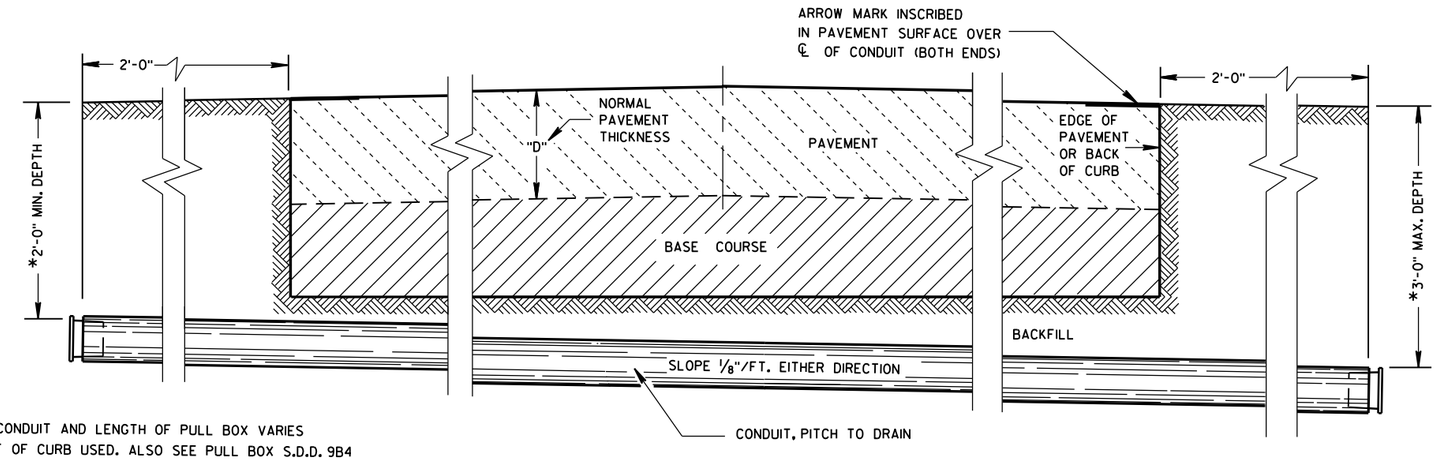
SDD 08F04 - 08

SDD 08F04 - 08



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL 338

FHWA

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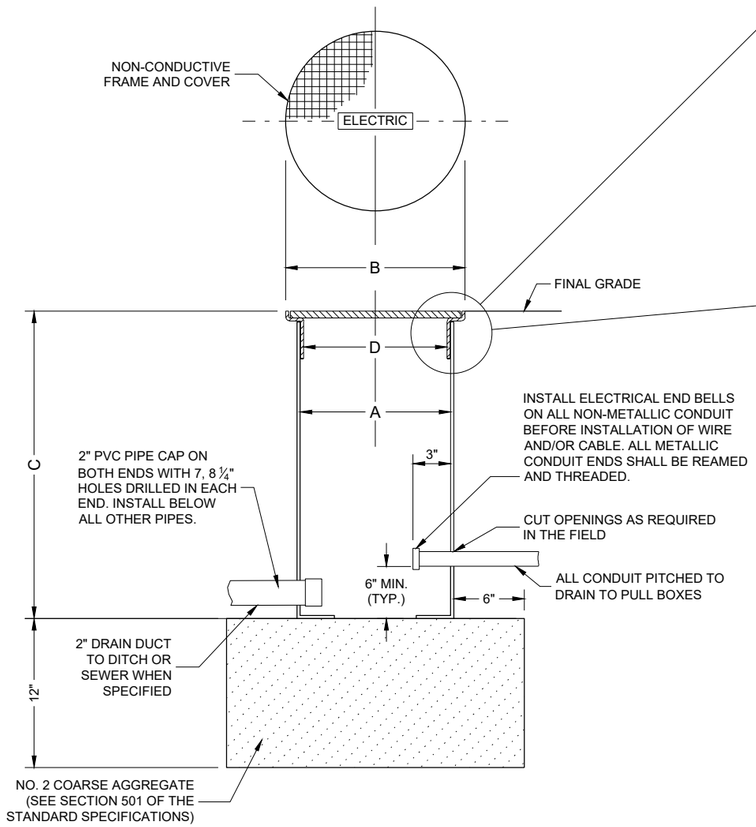
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

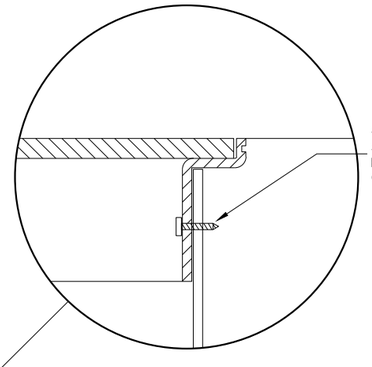
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 ½	22 ½
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

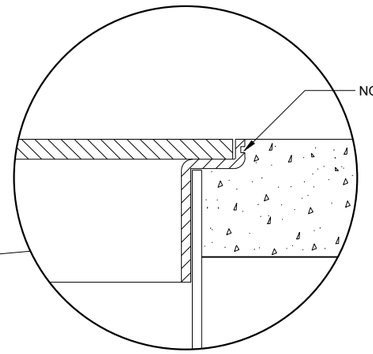
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



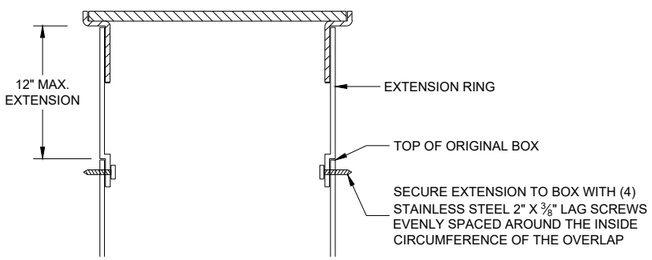
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN ½" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN ¼".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

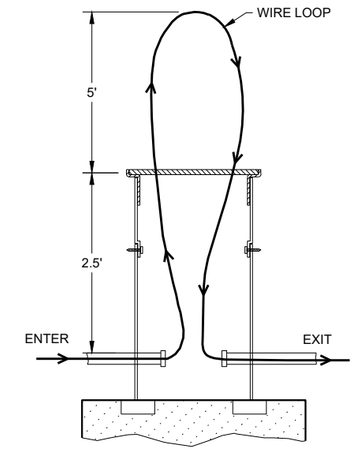
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

6

SDD 09B16 - 02

PULL BOXES NON-CONDUCTIVE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

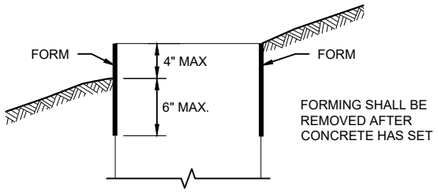
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FHWA

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SDD 09B16 - 02

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWINGSHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

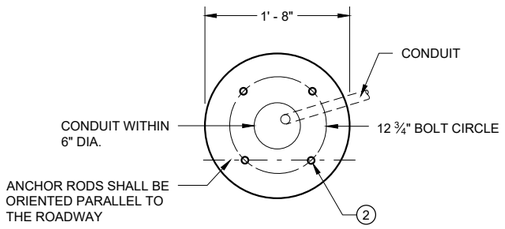
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

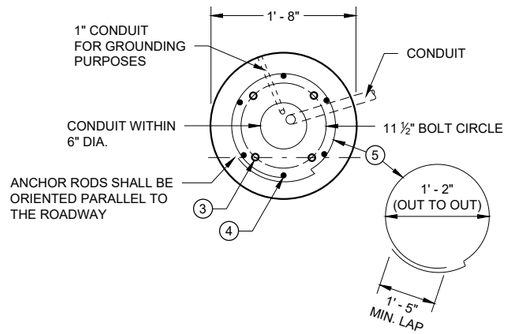
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

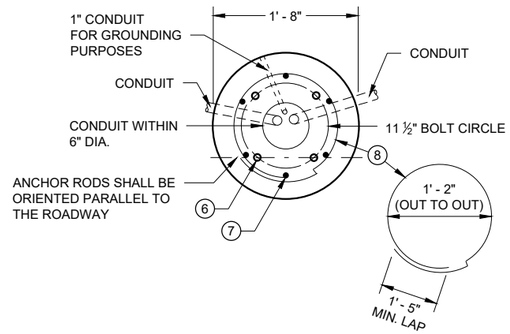
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).







1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

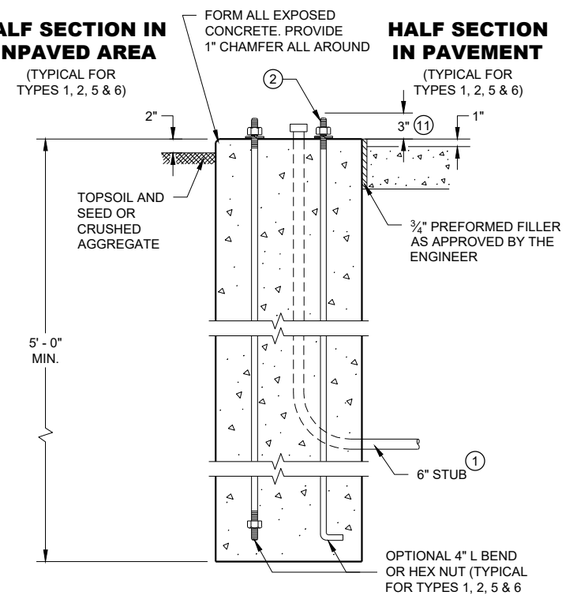
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

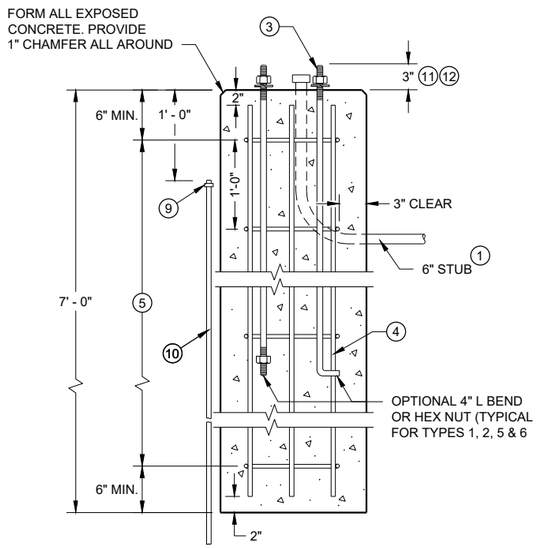
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

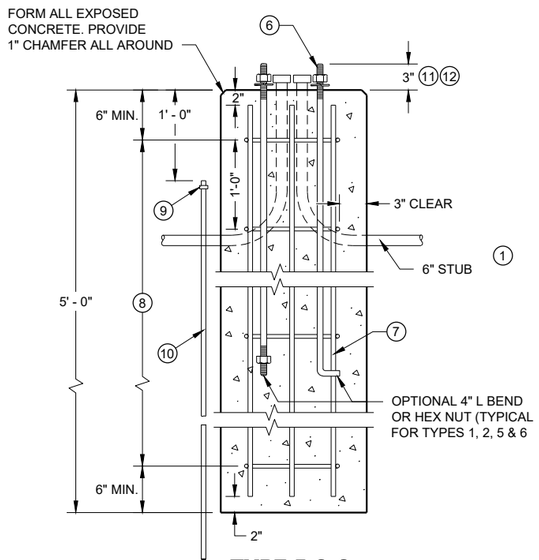
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

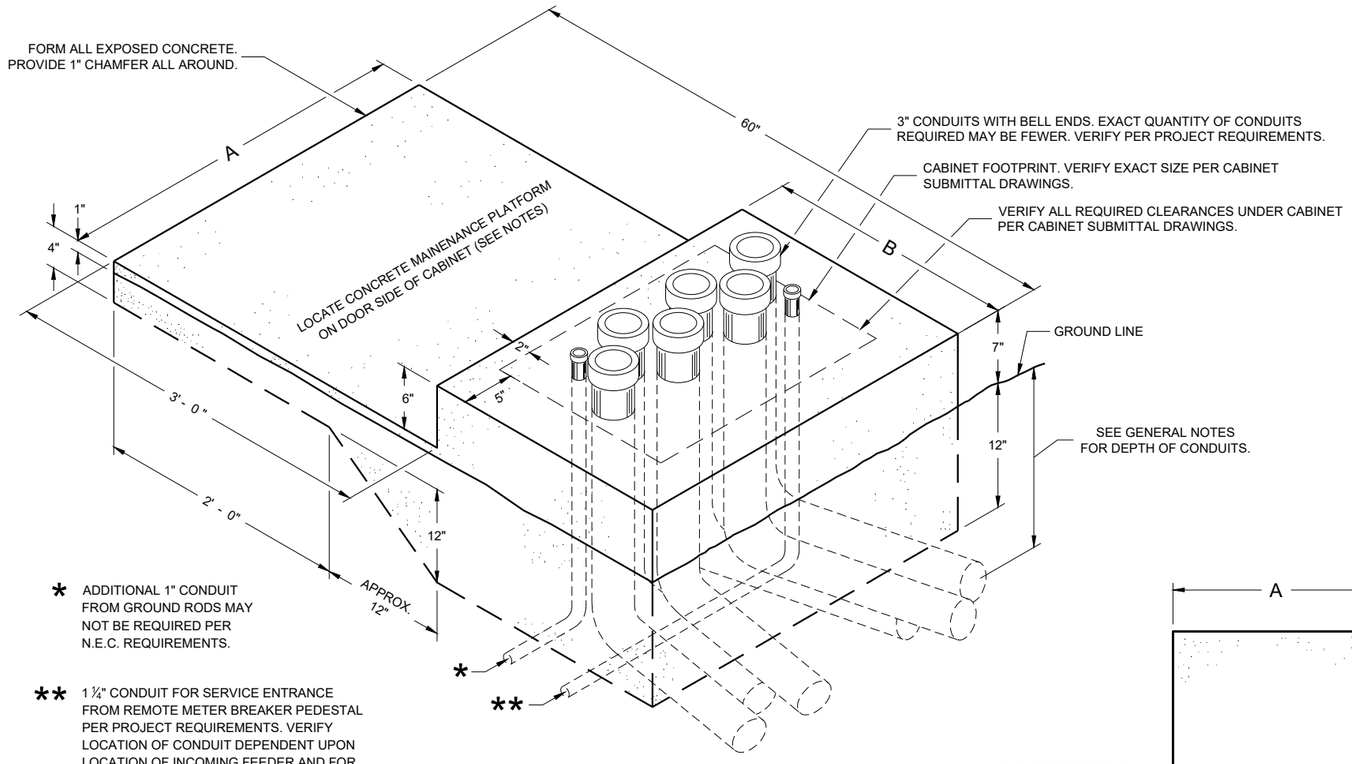
CONCRETE BASES

CONCRETE BASES
TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
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* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

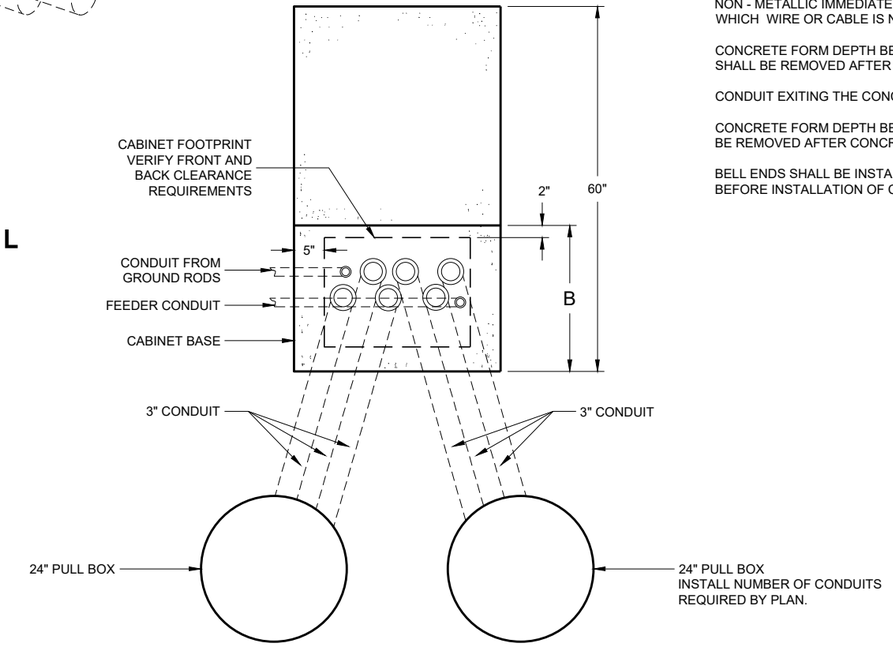
** 1 ¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

ISOMETRIC VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

(C.Y. CONCRETE = APPROX. 0.4)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS UNLESS DETERMINED BY THE ENGINEER IN THE FIELD.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE L

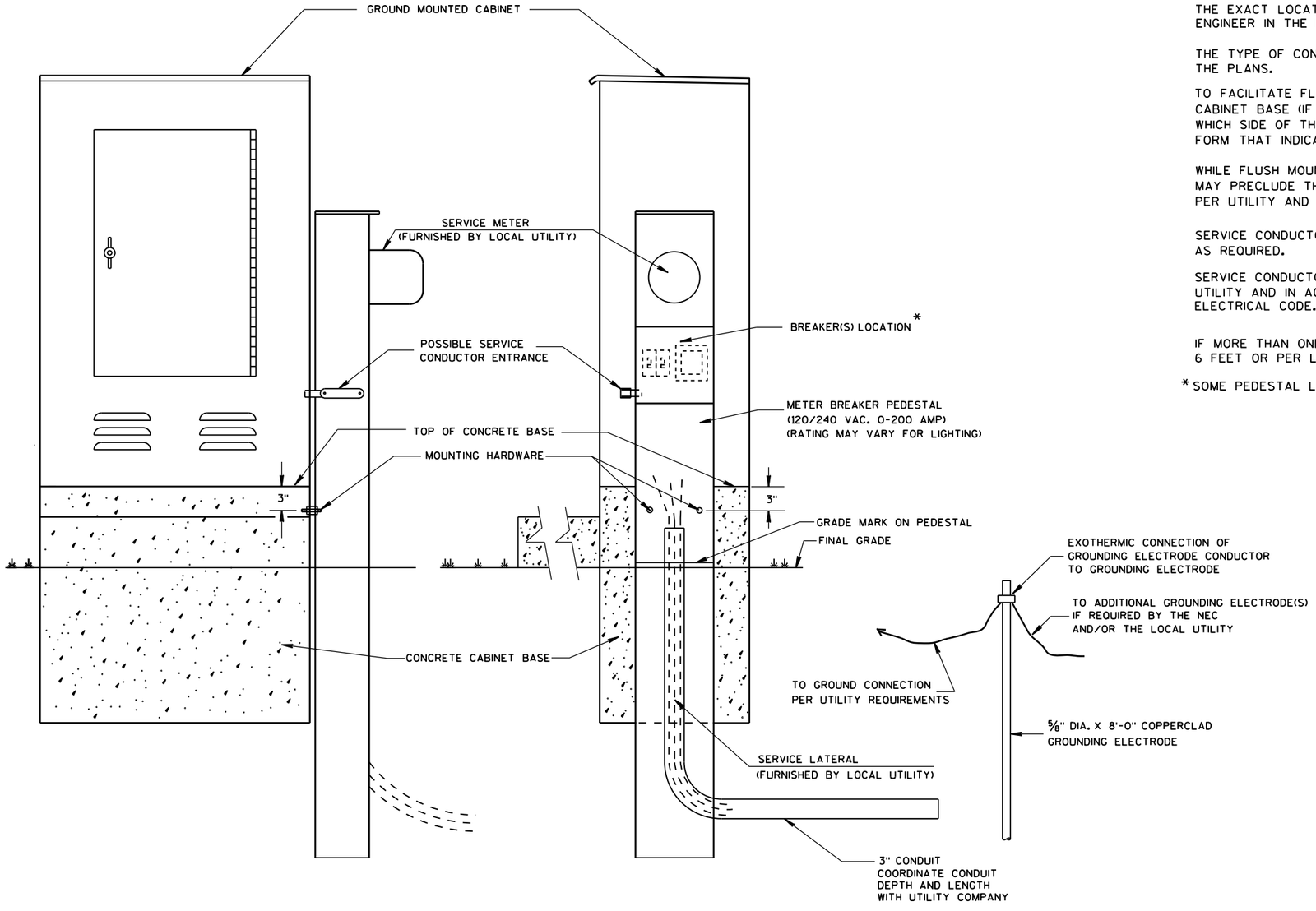
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November 2018
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TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

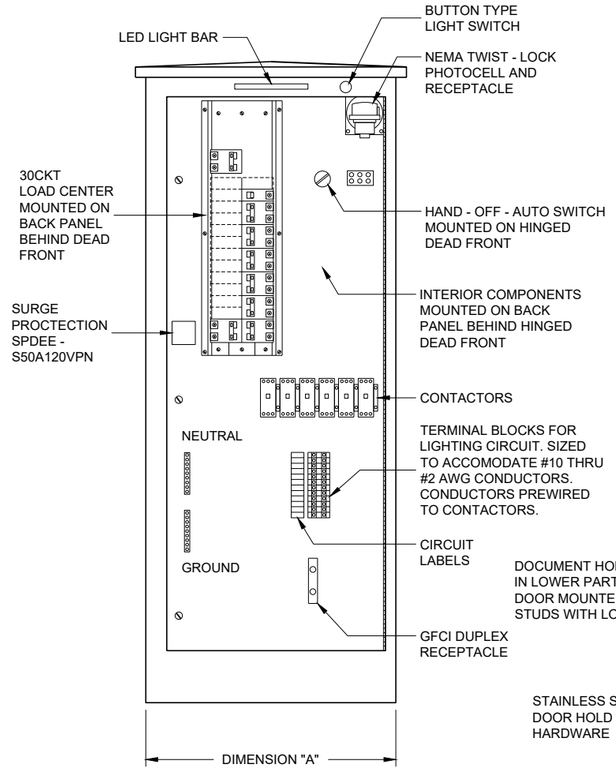
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

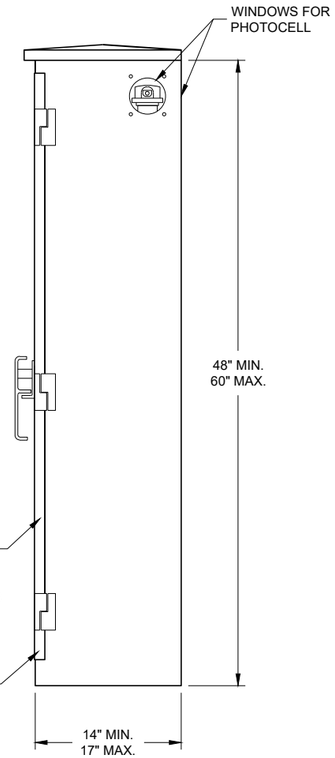
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FRONT INTERIOR ELEVATION



SIDE VIEW



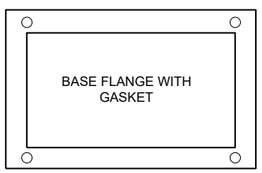
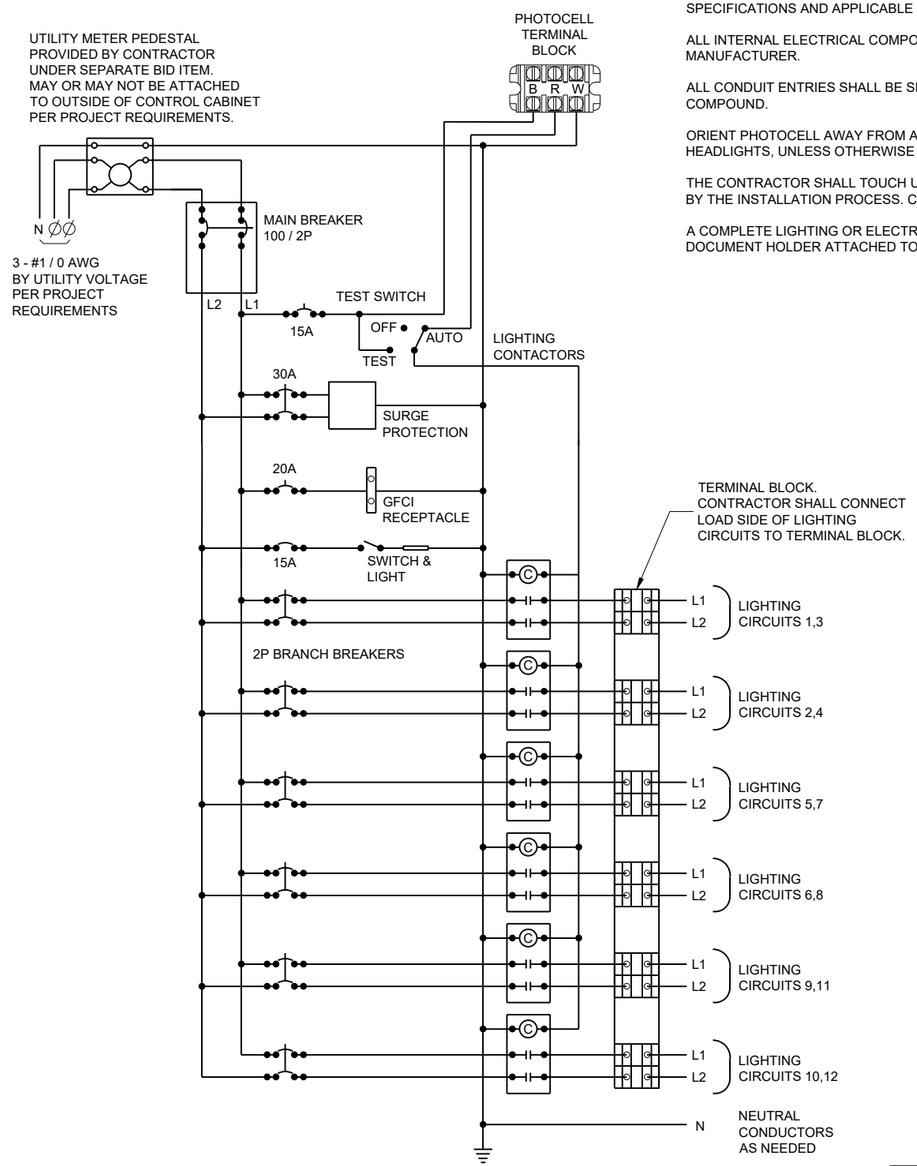


TABLE OF DIMENSIONS (INCHES)		
CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"

LIGHTING CONTROL CABINET



CONTROL CABINET SCHEMATIC

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE - WIRED BY THE CABINENT MANUFACTURER.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS, UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISION.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

LIGHTING CONTROL CABINET
120 / 240 VOLT

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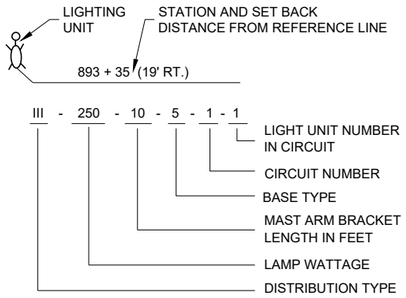
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GENERAL NOTES

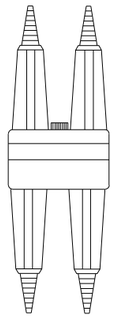
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

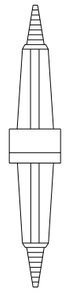
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



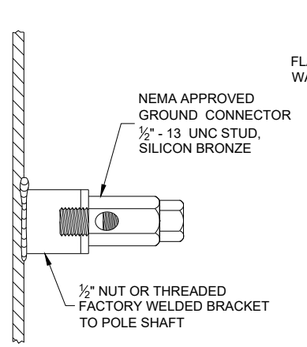
LIGHTING UNIT CODE
(TYPICAL)



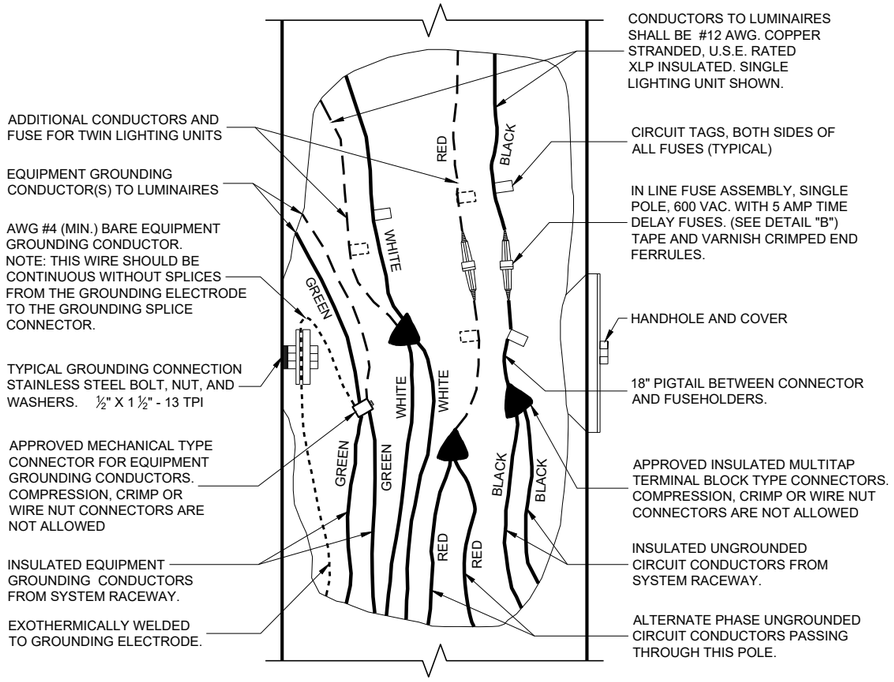
DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



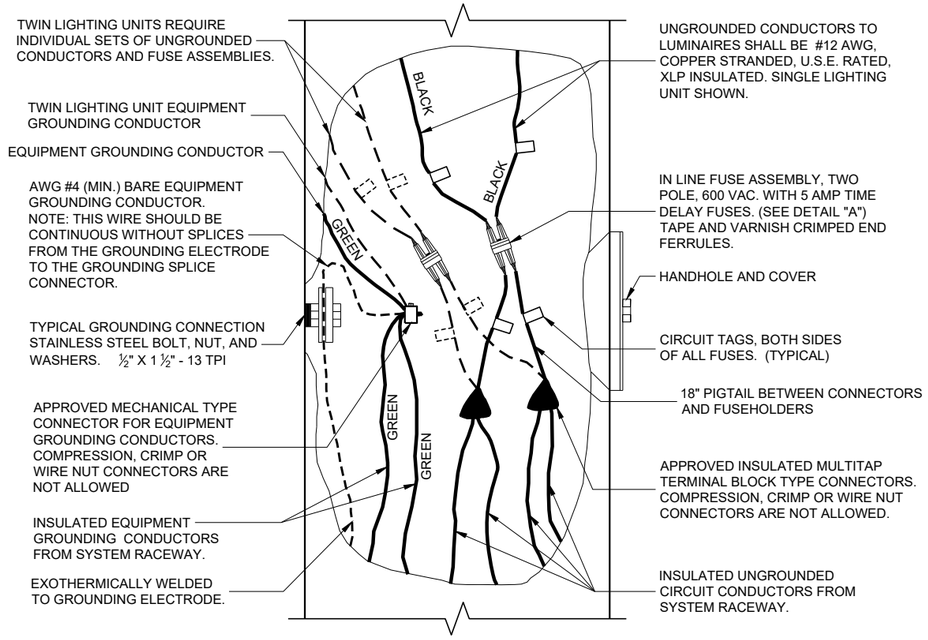
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR



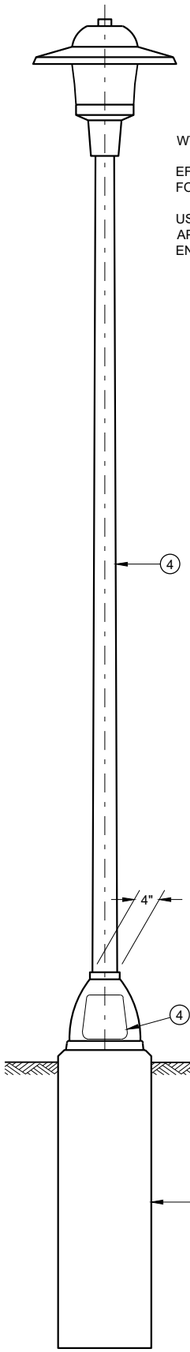
2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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WALKWAY LIGHTING UNIT DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR RODS STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT RUNS, NUMBER OF CONDUITS IN EACH CONCRETE BASE AND CONDUIT SIZE IS AS SHOWN ON THE PLANS. THE 1-INCH CONDUIT IS USED IN ALL BASES.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 TIMES THE DIAMETER OF THE CONDUIT.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1-INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

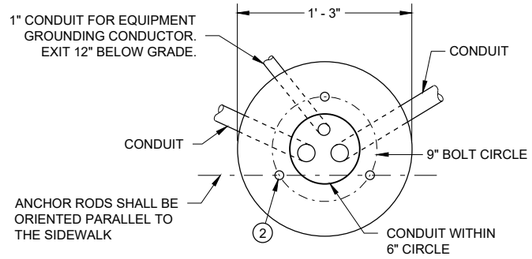
BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

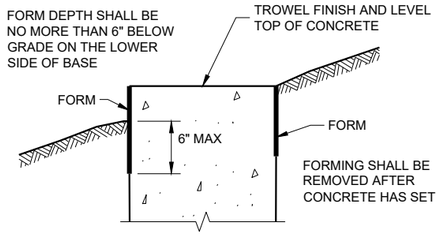
WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

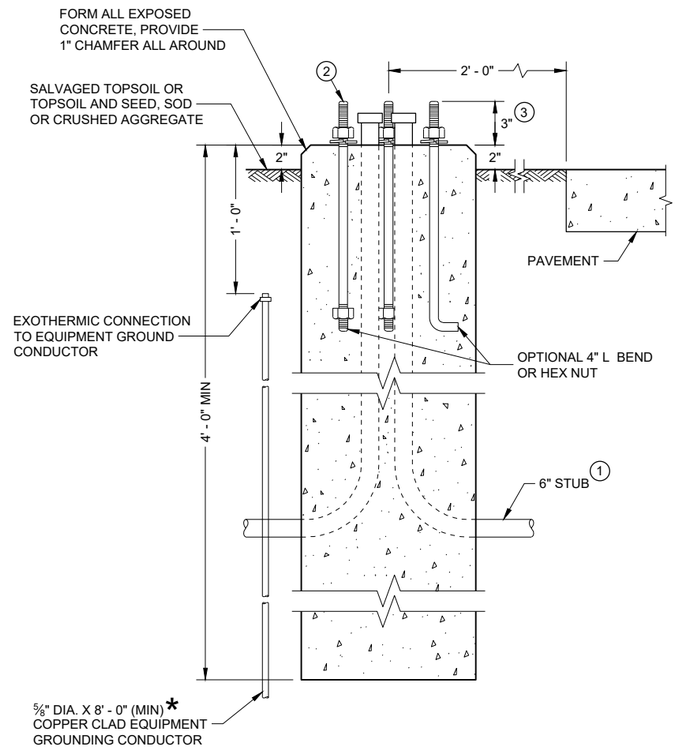
THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 2 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.



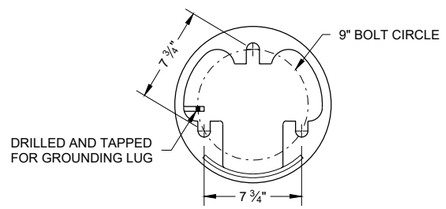


FORMING DETAIL

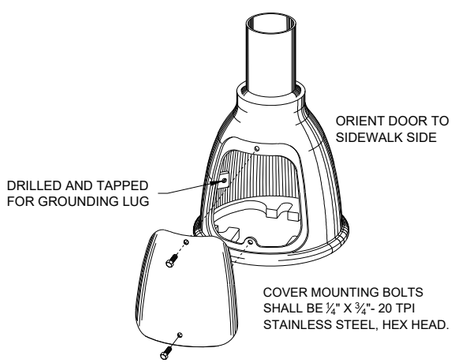


* GROUNDING ELECTRODE LENGTH MAY VARY, SEE SPECIAL PROVISIONS

CONCRETE BASE, TYPE 11



BOTTOM VIEW



WALKWAY PEDESTAL BASE, STANDARD DETAIL

1. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2. THREE (3) ¾ INCH DIA. X 15-INCH ANCHOR RODS OR ¾ INCH DIA. X 19-INCH ANCHOR RODS INCLUDING THE 4-INCH "L" BEND. THE "L" BEND SHALL NOT BE THREADED. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2 AND 531.2.2 OF THE STANDARD SPECIFICATIONS.

3. ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

4. PEDESTAL BASE-STANDARD:

   THE PEDESTAL BASE-STANDARD SHALL BE A ONE PIECE WELDED UNIT, WITH AN OVERALL HEIGHT OF TEN FEET.

   THE POLE SHALL BE ROUND, TAPERED, ALUMINUM WITH A 3-INCH OUTSIDE DIAMETER TOP AND 0.125 INCH WALL THICKNESS.

   HE BELL SHAPED BASE SHALL BE 12 ½ INCHES IN DIAMETER AND HAVE A 9-INCH BOLT CIRCLE. ANCHOR RODS SHALL BE INCLUDED WITH THE BASE.

   THE ACCESS DOOR OPENING SHALL BE APPROXIMATELY 7 ½ X 5 ¼ X 7 ½ -INCHES.

   THE FIXTURE AND PEDESTAL BASE-STANDARD SHALL BE PAINTED WITH AN EARTH COLORED THERMOSET POWDER COAT, ACRYLIC ENAMEL. THE ENAMEL SHALL BE FORMULATED TO SHOW NO APPRECIABLE FADING WITHIN FIVE YEARS.

   GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED BRASS OR COPPER TYPE. CONNECTION HARDWARE SHALL BE STAINLESS STEEL (BOLT, NUT, LOCK WASHER ¼" X ¾" - 20 TPI).

   ALL NONMETALLIC CONDUIT CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES (SEE NEC 347.5)

WALKWAY LIGHTING UNIT AND CONCRETE BASE, TYPE 11

STATE OF WISCONSIN
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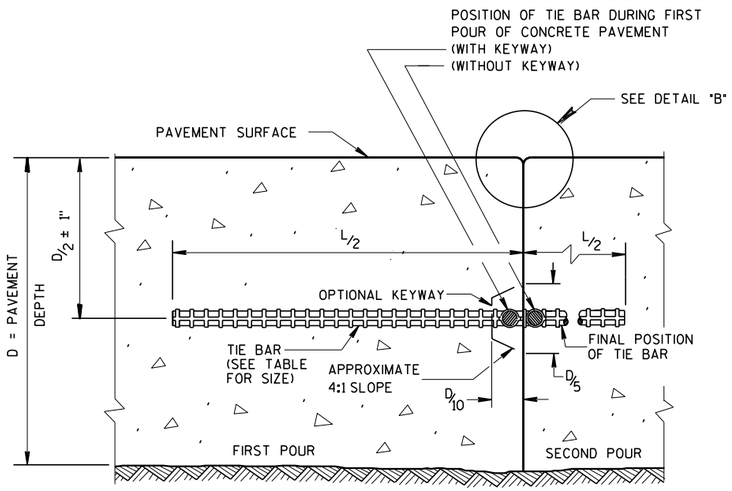
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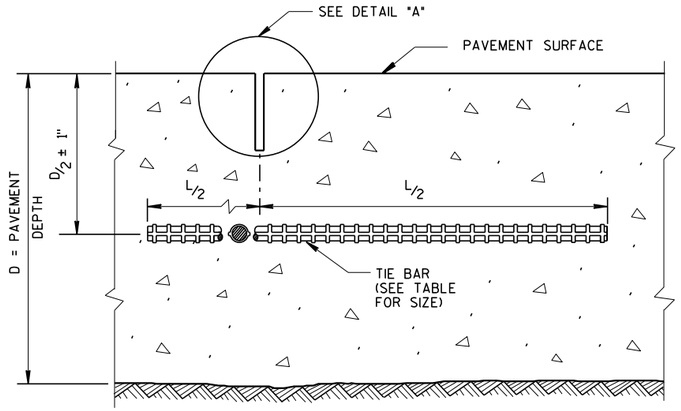
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CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
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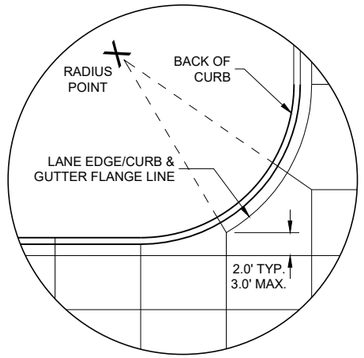
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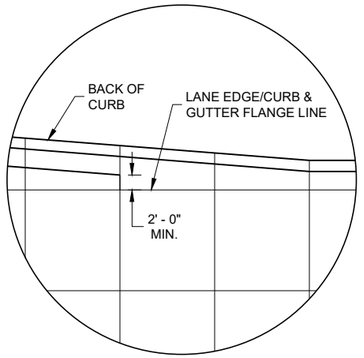
S.D.D. 13 C 1-19

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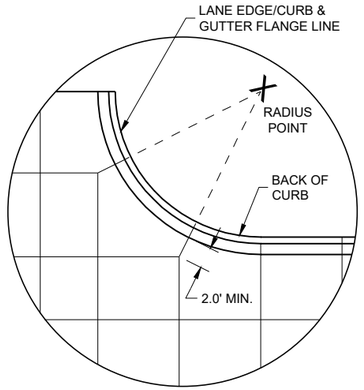
S.D.D. 13 C 1-19



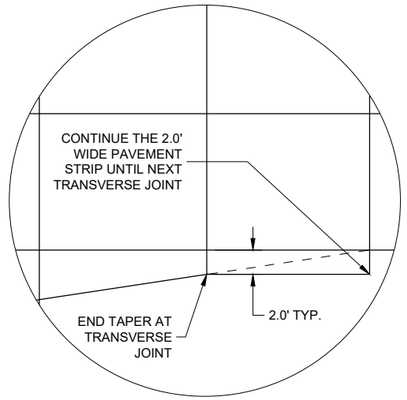
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

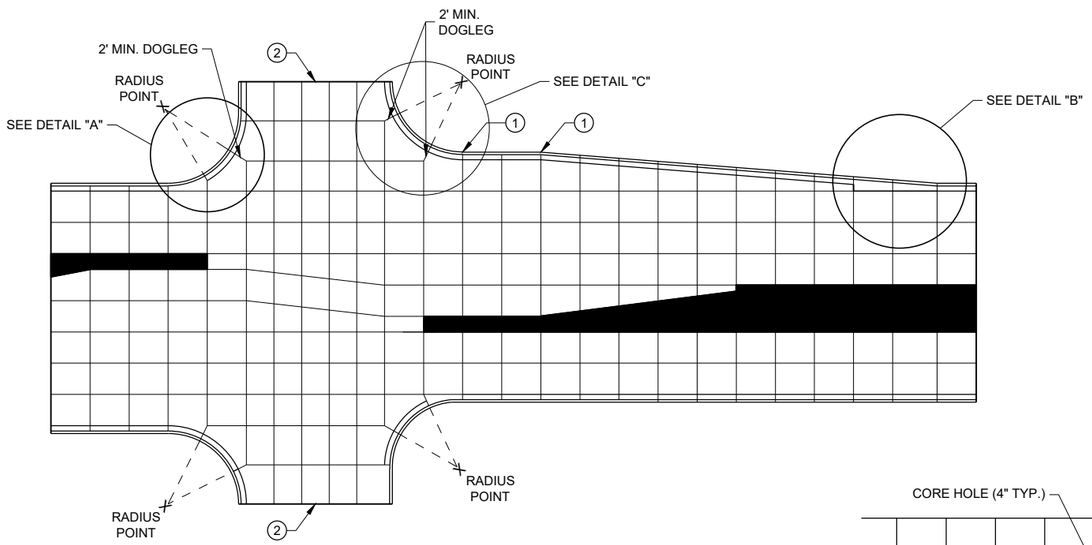
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

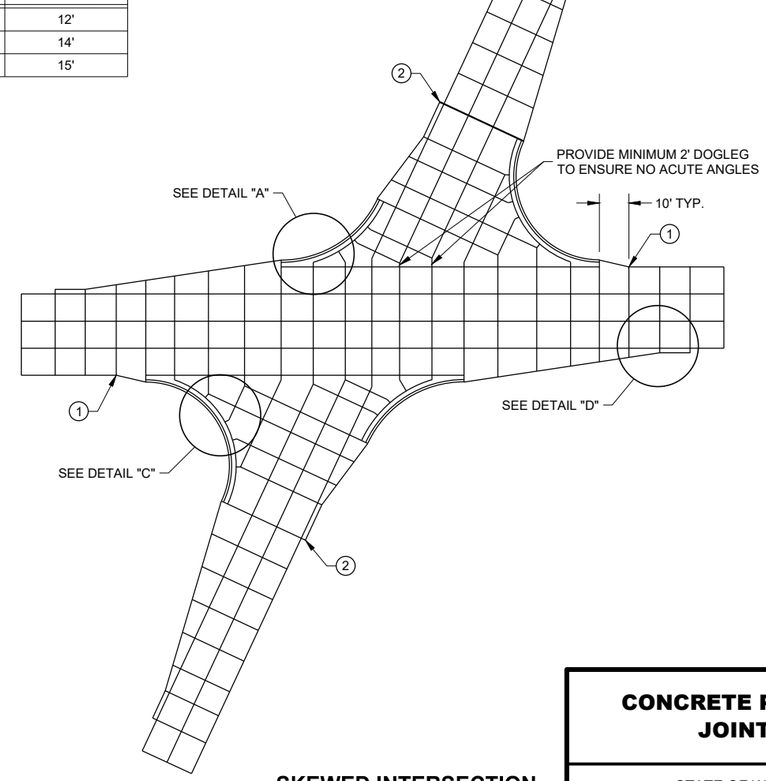
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



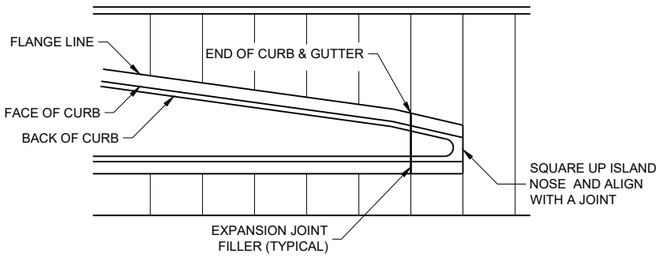
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

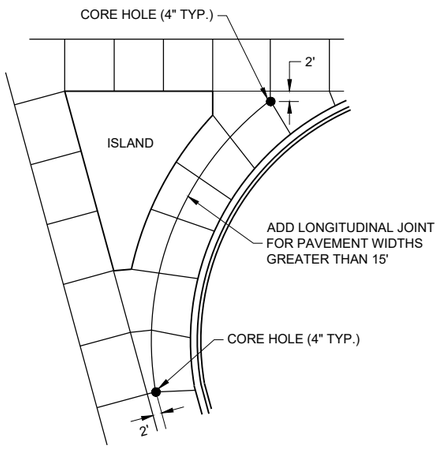
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 08a

6

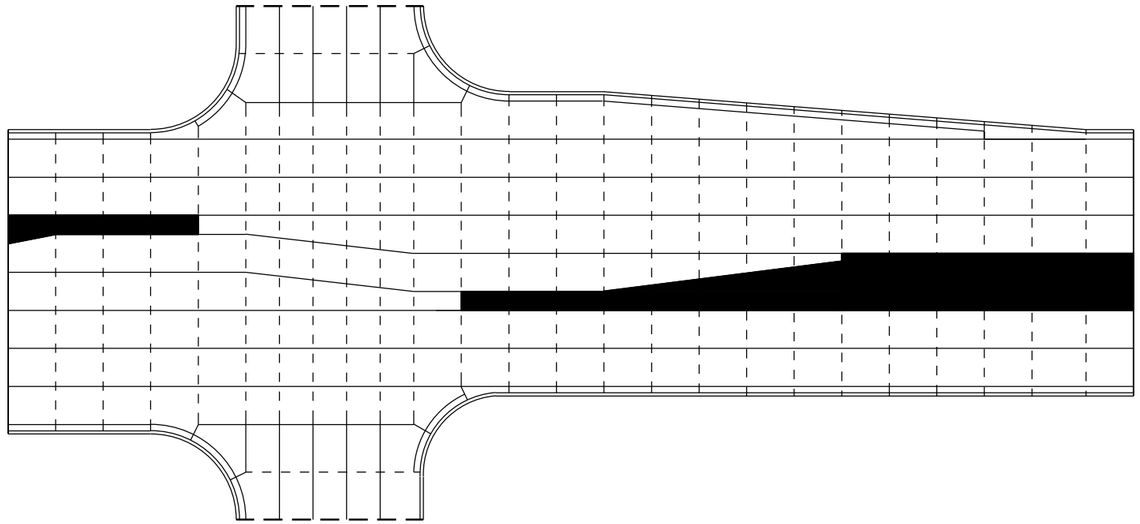
SDD 13C18 - 08a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

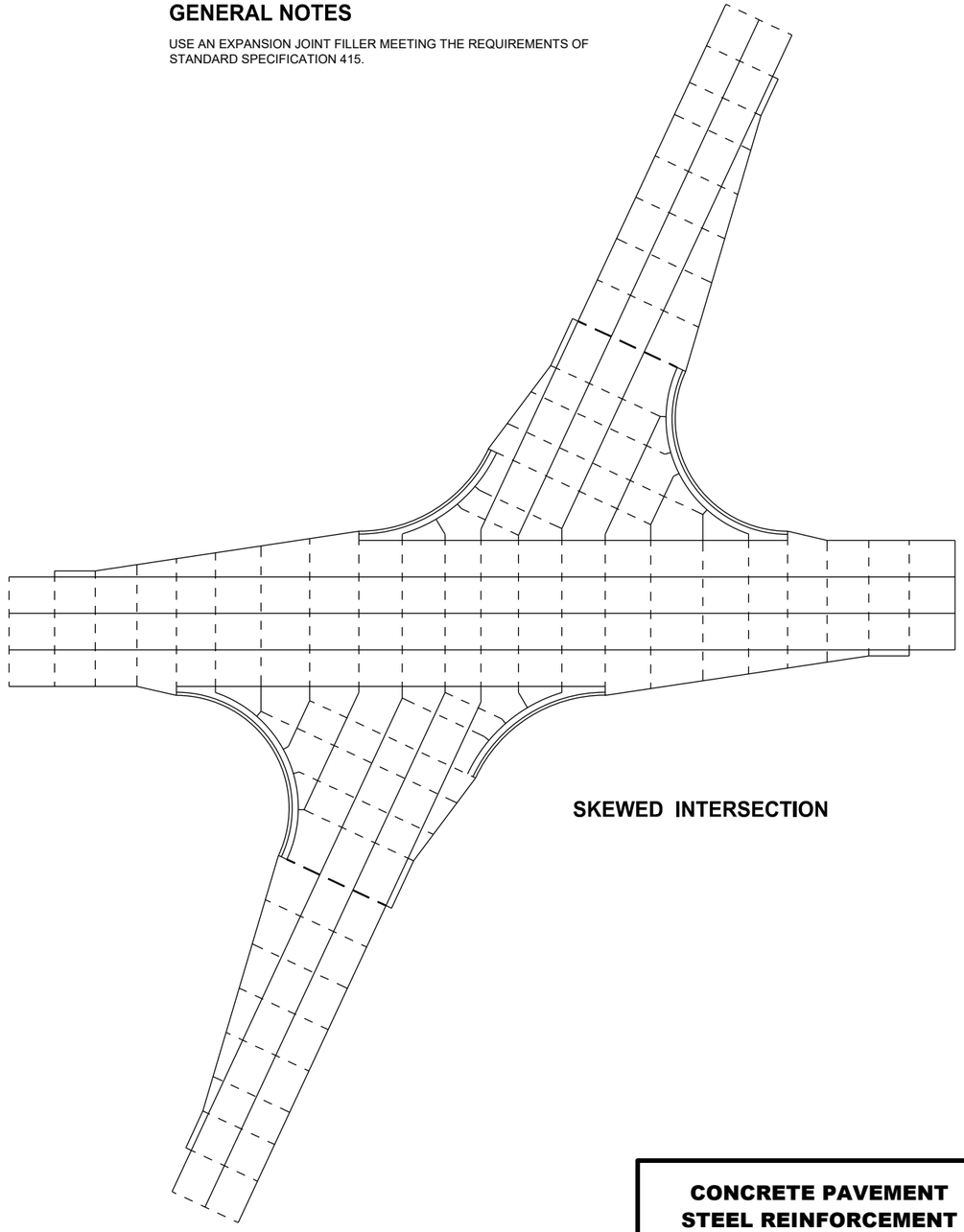
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

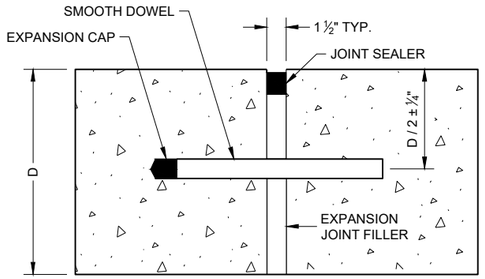
SDD 13C18 - 08b

CONCRETE PAVEMENT STEEL REINFORCEMENT

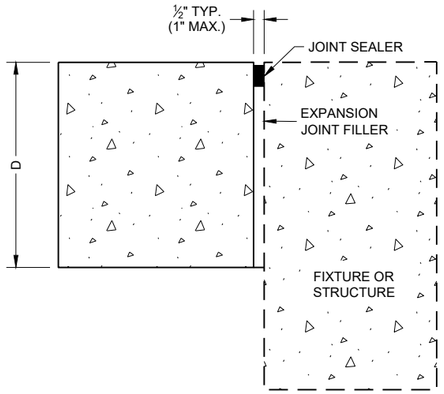
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 08b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

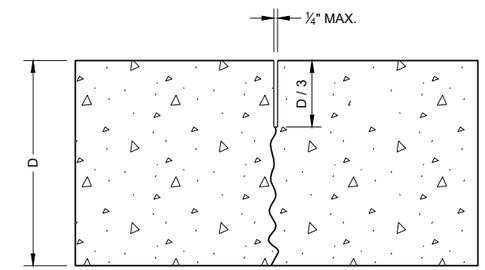
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

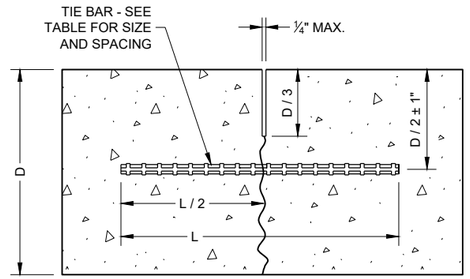
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

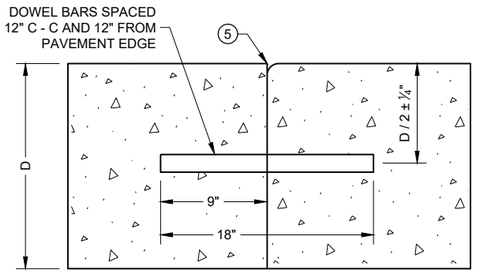
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



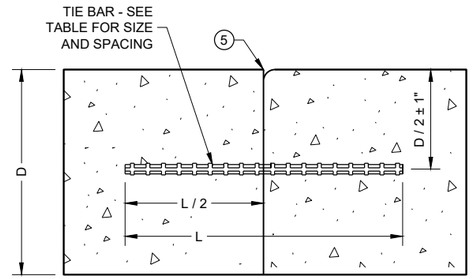
UNDOWELED TRANSVERSE



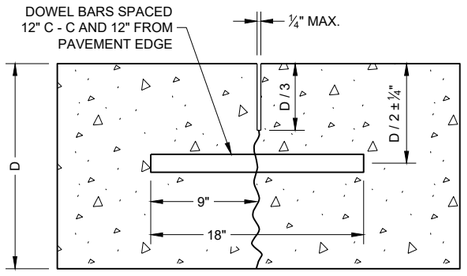
TIED LONGITUDINAL



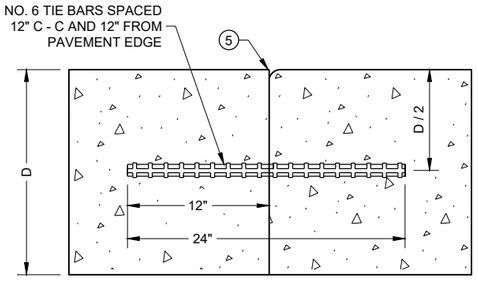
DOWELED TRANSVERSE (3)



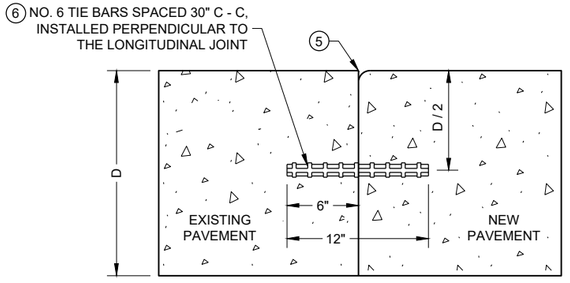
TIED LONGITUDINAL



DOWELED TRANSVERSE



TIED TRANSVERSE (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)

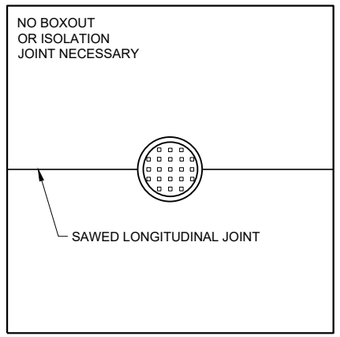


TIED LONGITUDINAL TO EXISTING

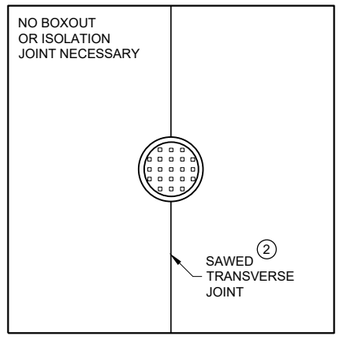
CONTRACTION JOINTS (2)

CONSTRUCTION JOINTS (4)

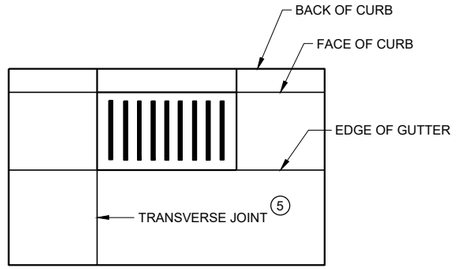
CONCRETE PAVEMENT JOINT TYPES



MANHOLE WITH LONGITUDINAL JOINT



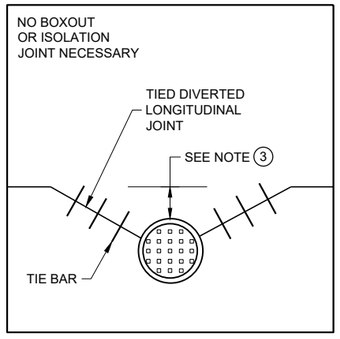
MANHOLE WITH TRANSVERSE JOINT



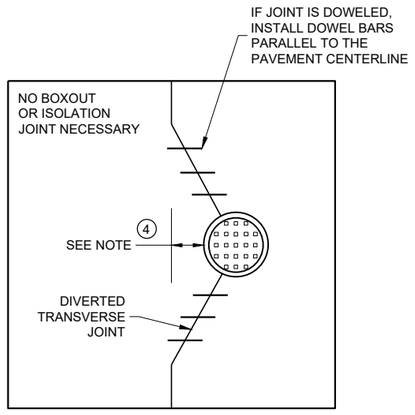
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

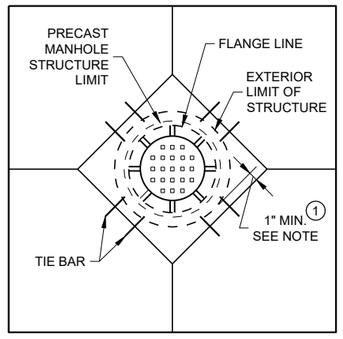
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
4. IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

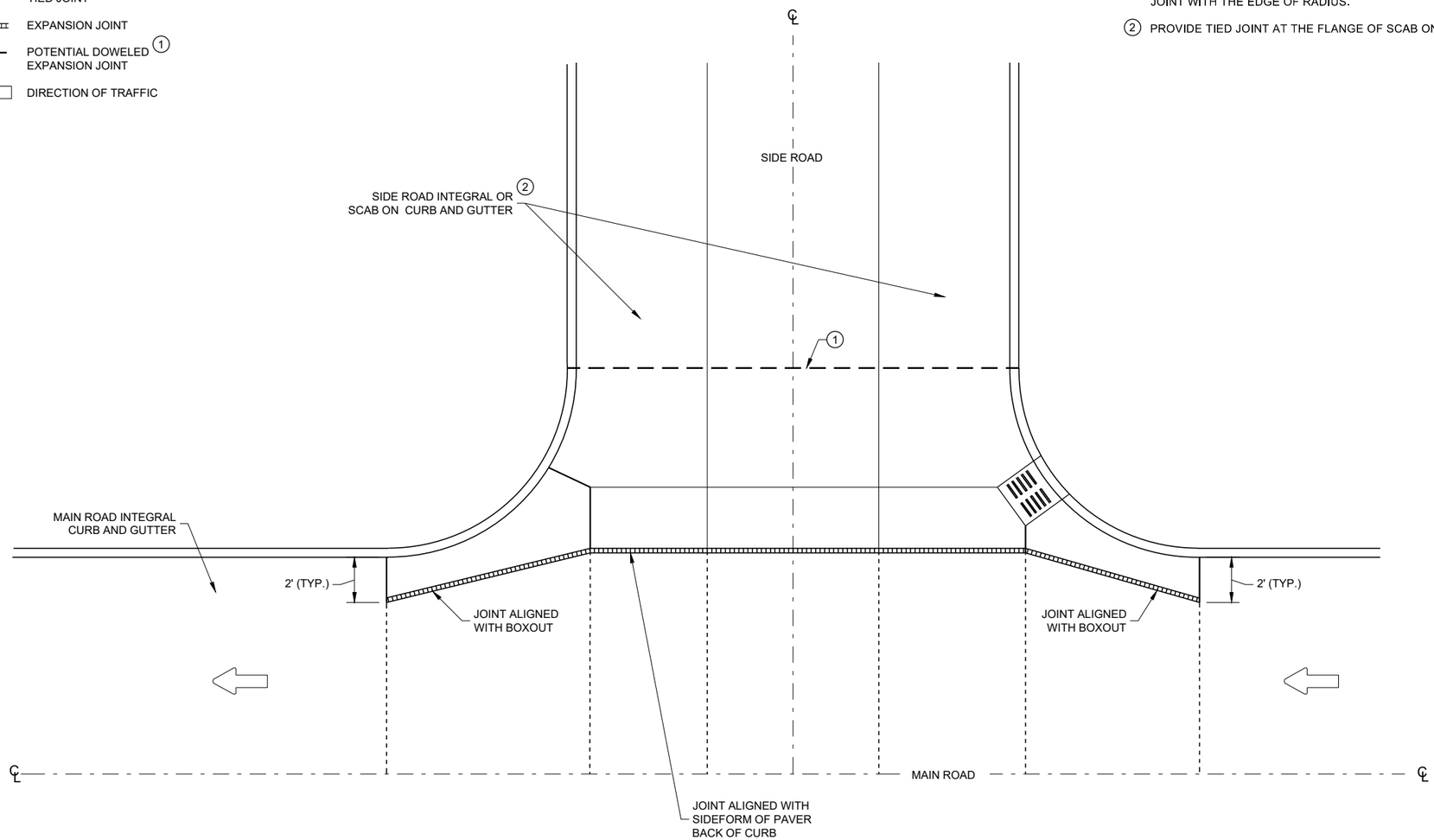
FHWA

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SDD13C18 - 08d
SDD13C18 - 08d

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT (1)
- DIRECTION OF TRAFFIC



GENERAL NOTES

(1) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.

(2) PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS 351

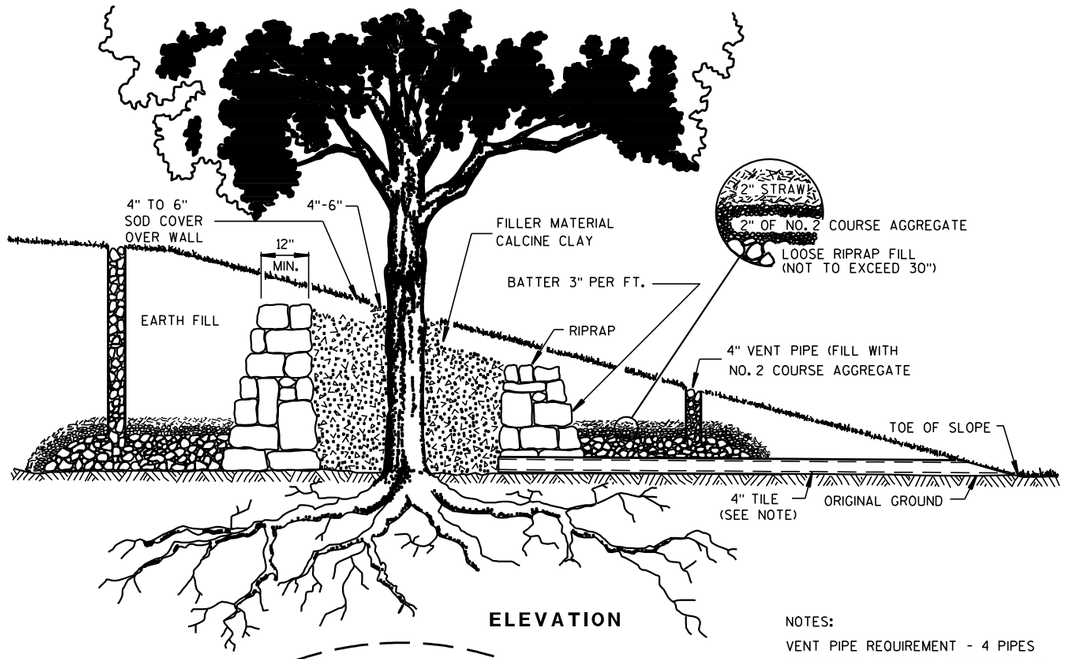
FHWA

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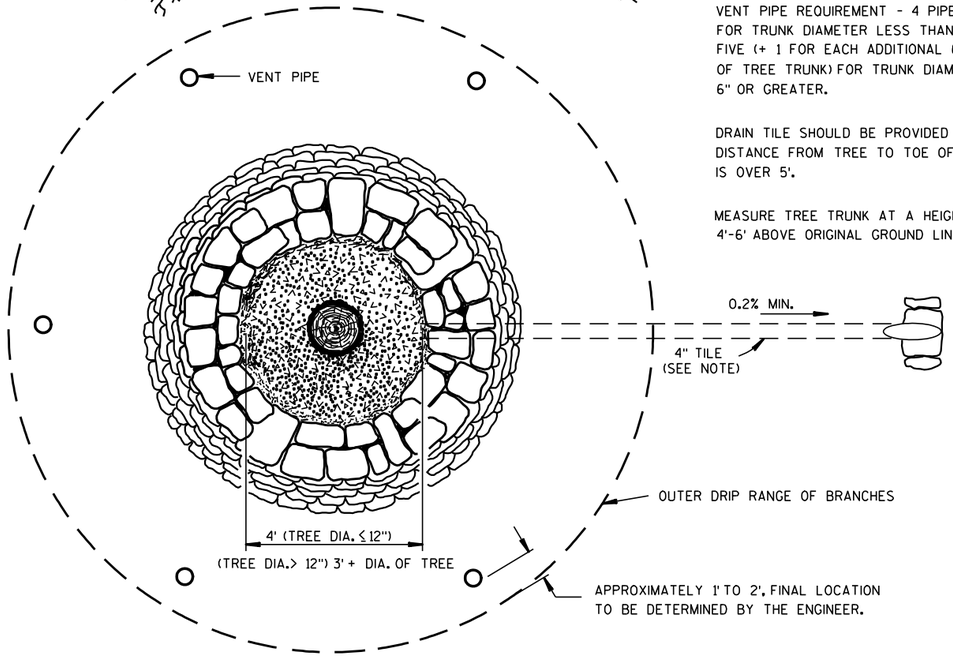
SDD 13C18 - 08f

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SDD 13C18 - 08f



ELEVATION



PLAN

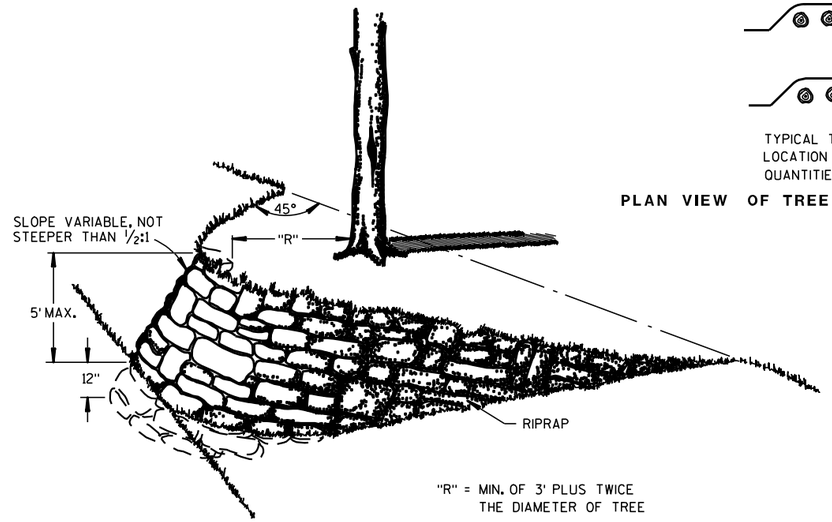
FULL TREE WELL WITH RIPRAP WALL

NOTES:

VENT PIPE REQUIREMENT - 4 PIPES FOR TRUNK DIAMETER LESS THAN 6". FIVE (+ 1 FOR EACH ADDITIONAL 6" OF TREE TRUNK) FOR TRUNK DIAMETER 6" OR GREATER.

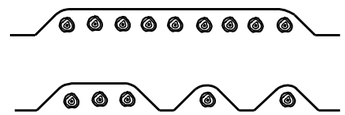
DRAIN TILE SHOULD BE PROVIDED IF DISTANCE FROM TREE TO TOE OF SLOPE IS OVER 5'.

MEASURE TREE TRUNK AT A HEIGHT 4'-6' ABOVE ORIGINAL GROUND LINE.



"R" = MIN. OF 3' PLUS TWICE THE DIAMETER OF TREE

DETAILS OF TREE ISLAND AND ROOT PROTECTION



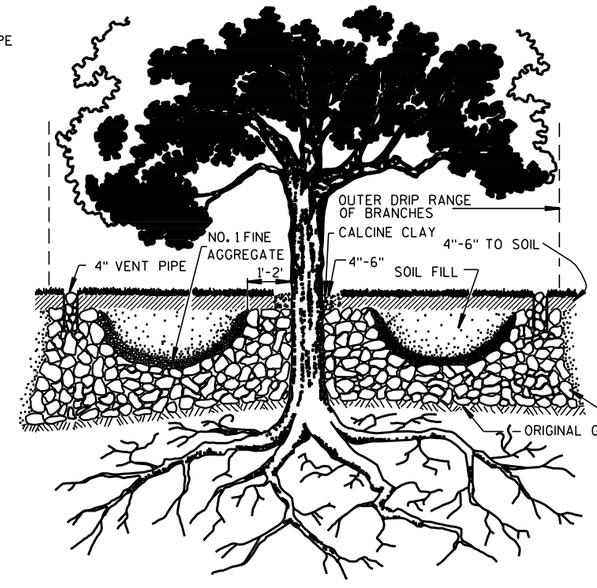
TYPICAL TREATMENTS OF ROOT PROTECTION. LOCATION SHOWN ON MISCELLANEOUS QUANTITIES SHEET.

PLAN VIEW OF TREE ISLANDS FOR ONE OR MORE TREES

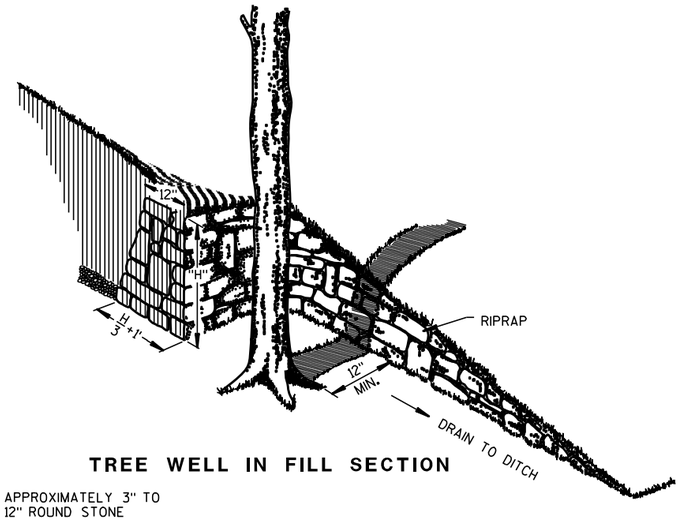
GENERAL NOTES

WALLS TO BE BUILT TO APPROXIMATE SHAPE AND DIMENSIONS SHOWN. STONE TO CONFORM TO SPECIFICATIONS FOR RIPRAP.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.



TREE WELL WITHOUT WALL



TREE WELL IN FILL SECTION

DETAILS FOR TREE WELLS

TREE PRESERVATION DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/25/76 DATE

/S/ D. L. Strand STATE DESIGN ENGINEER

352

WYS

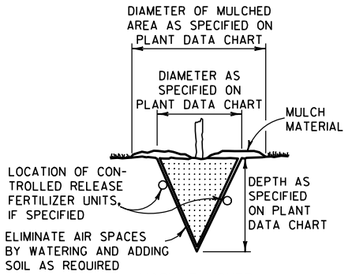
FHWA

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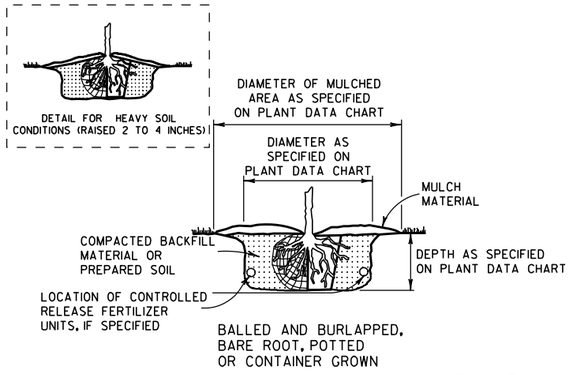
S.D.D. 14 A 1-3

6

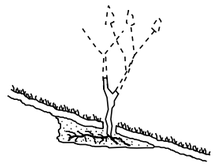
S.D.D. 14 A 1-3



MACHINE MOVED

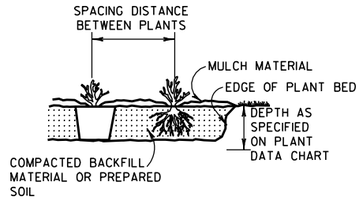


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



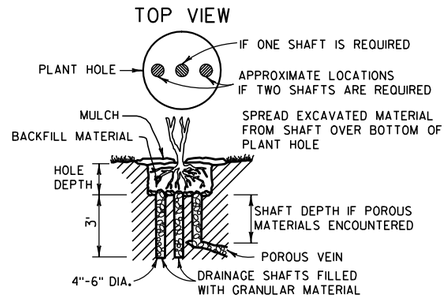
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



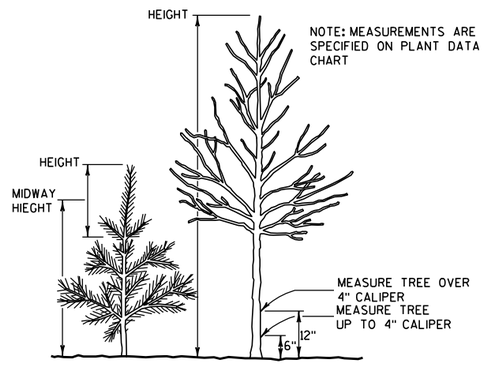
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

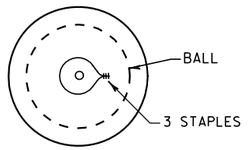


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

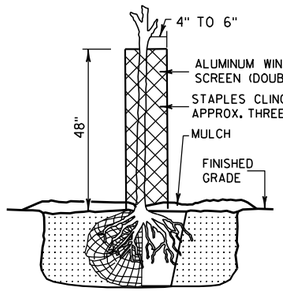
DRAINING



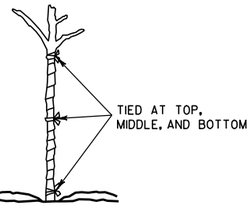
MEASURING



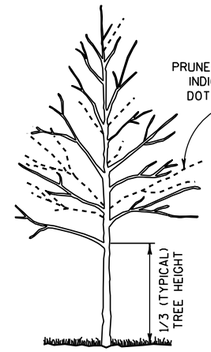
TOP VIEW



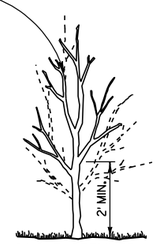
RODENT PROTECTION



WRAPPING



TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)



SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)



MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

PRUNE GROWTH AS INDICATED BY DOTTED LINES

1/3 (TYPICAL) TREE HEIGHT

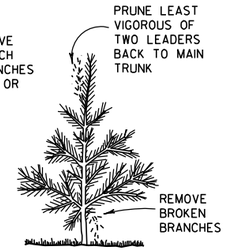
NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES



SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

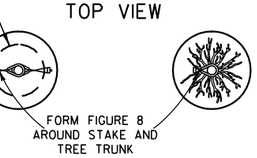


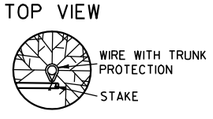
SUMAC

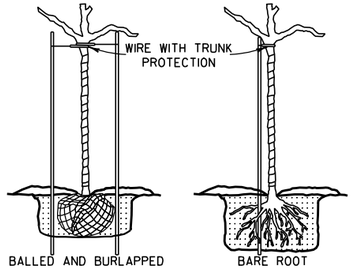


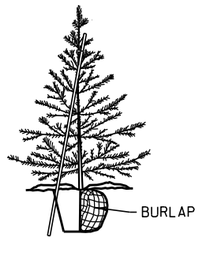
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



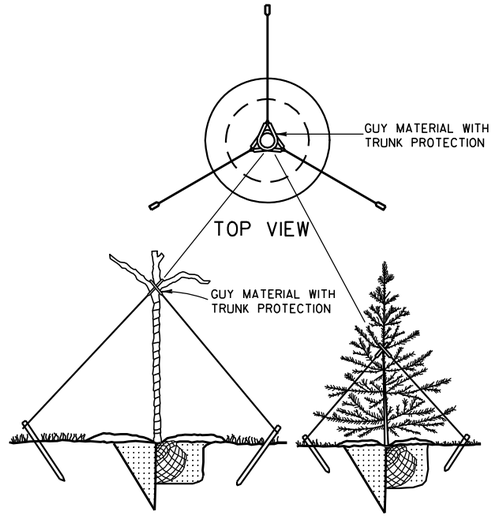






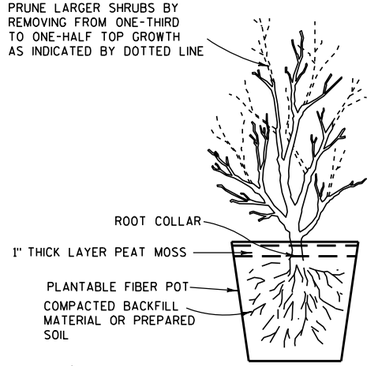
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

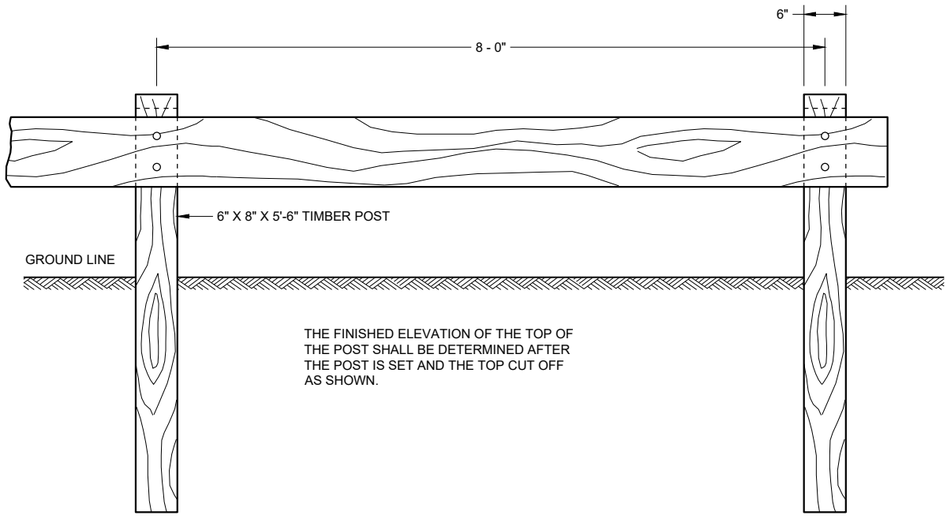
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

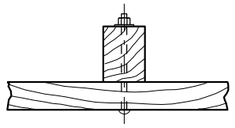
APPROVED
4/11/94 DATE
/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 A 2-1

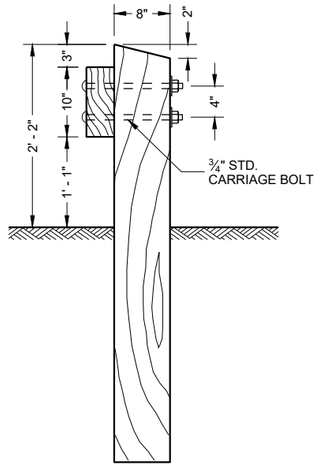
6
S.D.D. 14 A 2-1



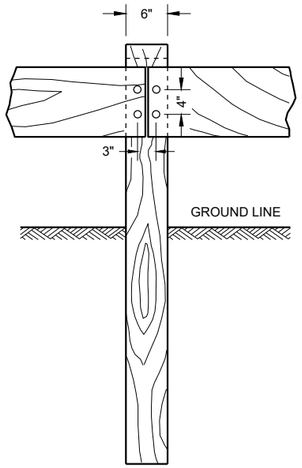
FRONT VIEW



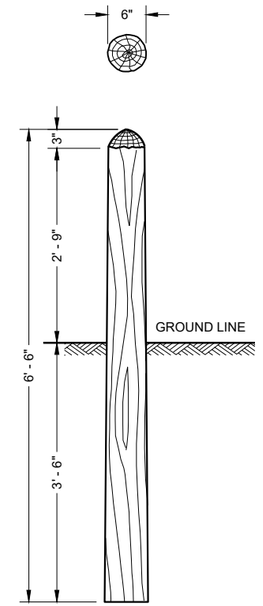
TOP VIEW



SIDE VIEW



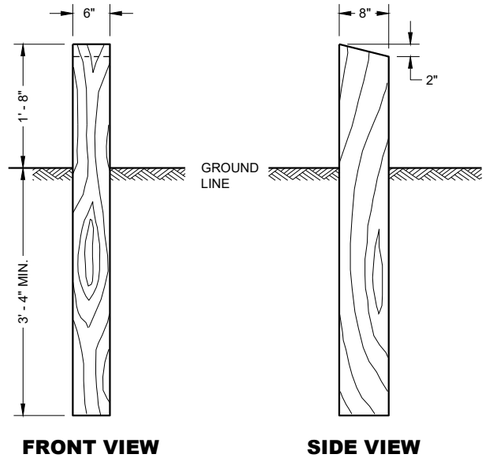
SPLICE POST



RUSTIC MARKER POST

TIMBER RAIL GUARD FENCE

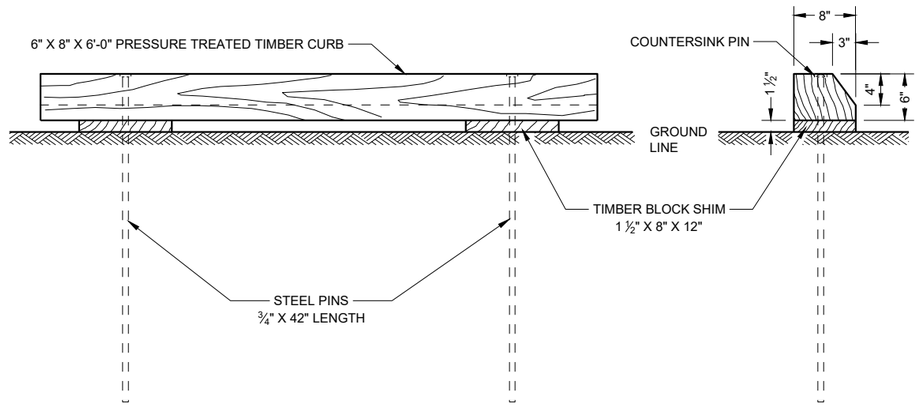
(PARKING LOT PROTECTION)



FRONT VIEW **SIDE VIEW**

TIMBER RAIL GUARD POST

(REQUIREMENTS SHALL BE THE SAME AS POSTS FOR TIMBER RAIL GUARD FENCE)



FRONT VIEW **SIDE VIEW**

TREATED TIMBER CURB

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATION SECTION 615. ALL POST AND RAIL DIMENSIONS ARE NOMINAL DIMENSIONS.

TIMBER RAIL GUARD FENCE, CURB AND GUARD POST AND MARKER POST

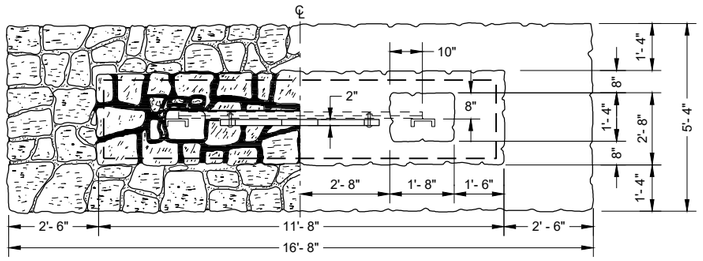
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Joseph Coughlin — ROADSIDE FACILITIES ENG

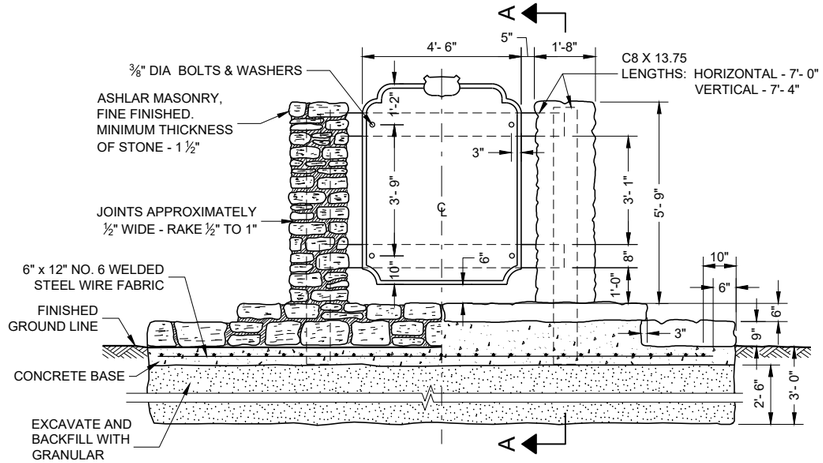
FHWA

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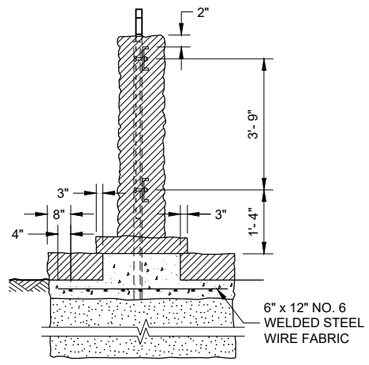
SDD 14C01 - 03



TOP VIEW

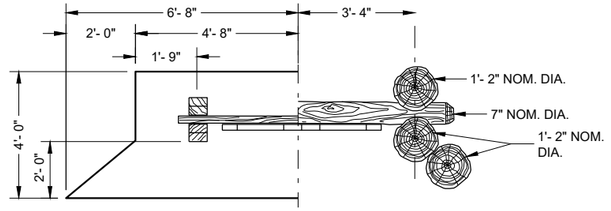


FRONT ELEVATION

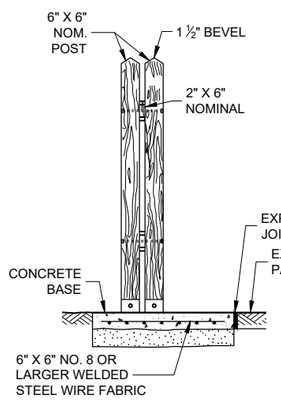


SECTION A - A

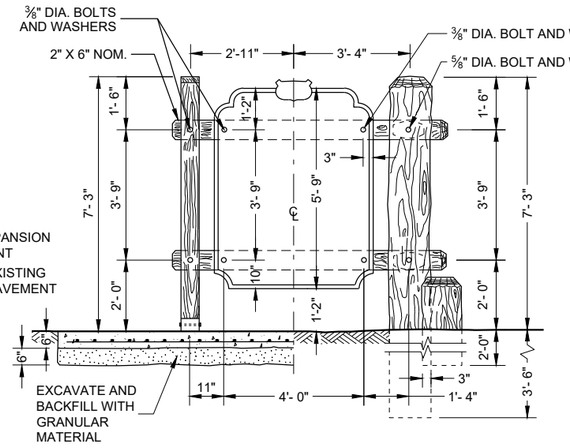
MASONRY CONSTRUCTION



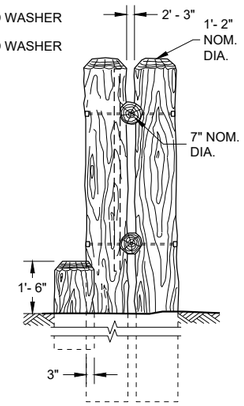
TOP VIEW



LEFT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION

DIMENSIONED POST CONSTRUCTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 615.

CAST ALUMINUM PLAQUE SHALL BE STATE FURNISHED.

ALL CARRIAGE BOLTS USED IN CONSTRUCTION SHALL BE CUT OFF FLUSH WITH THE NUTS AND ALL NUTS SHALL BE COUNTER SUNK, EXCEPT FOR THOSE FASTENED TO THE PLAQUE.

DIMENSIONED POSTS & RAILS

POSTS SHALL BE DOUGLAS FIR, CONSTRUCTION GRADE. CROSS MEMBERS SHALL BE DOUGLAS FIR, FINISHED LUMBER, GRADE "C" SELECT OR BETTER. POSTS AND CROSS MEMBERS SHALL BE PAINTED WITH TWO COATS OF BROWN WOOD STAIN.

WELDED STEEL POST BASES SHALL BE FABRICATED. BASES SHALL BE PAINTED WITH DARK BROWN PAINT. GENEROUSLY TREAT ALL END GRAIN, DRILLED HOLES AND CUT SURFACES.

RUSTIC POSTS AND RAILS

POSTS AND CROSS MEMBERS MAY BE FROM ONE OF THE FOLLOWING SPECIES (SALVAGED UTILITY POLES OR TREATED TIMBER PILINGS MAY BE USED).

- WHITE PINE
- RED (NORWAY) PINE
- NORTHERN RED CEDAR
- NORTHERN HEMLOCK OR OAK

THE ABOVE-GROUND PORTION OF THE TREATED AND UNTREATED POSTS AND RAILS SHALL BE PAINTED WITH TWO COATS OF BROWN WOOD STAIN.

BILL OF MATERIALS

DIMENSIONED POSTS CONSTRUCTION

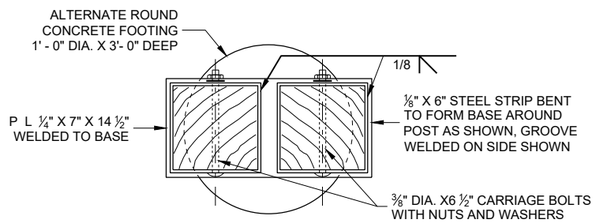
ITEM	UNIT	QUANTITY
CONCRETE (FLAT SLAB)	CY	0.80
WIRE FABRIC (FLAT SLAB)	SY	4.6
STEEL POST BASES	EA	2
POSTS	6" X 6" X 7' - 3"	4
LUMBER	2" X 6" X 6 - 10	2
ANCHOR BOLTS (FLAT SLAB)	⅜" X 5"	4
CARRIAGE BOLTS	⅜" X 4"	4
CARRIAGE BOLTS	⅜" X 14"	4
CARRIAGE BOLTS	⅜" X 6 ½"	4
ANCHOR BOLTS (ROUND FOOTING)	⅜" "U"	2
CONCRETE (ROUND FOOTING)	CY	0.17

RUSTIC POSTS CONSTRUCTION

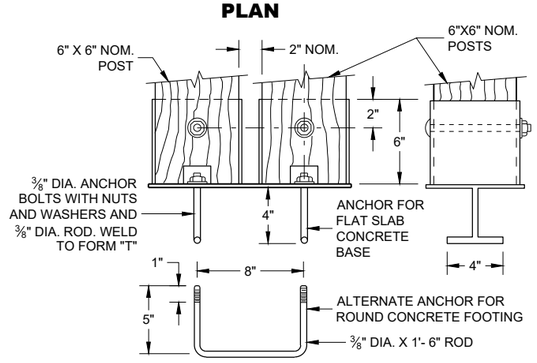
ITEM	UNIT	QUANTITY
POSTS	1' - 2" DIA. X 10' - 9"	4
POSTS	1' - 2" DIA. X 3' - 6"	2
RAILS	7" DIA. X 8' - 10"	2
CARRIAGE BOLTS	⅜" X 8"	4
CARRIAGE BOLTS	⅝" X 27"	4

MASONRY CONSTRUCTION

ITEM	UNIT	QUANTITY
CONCRETE (FLAT SLAB)	CY	2.3
ASHLAR MASONRY	CY	3.5
WIRE FABRIC (FLAT SLAB)	SY	9.8
CHANNEL STEEL	LBS	396
CARRIAGE BOLTS	⅜" X 2 ¾"	4



PLAN



POST BASE DETAIL

(DIMENSIONED POST CONSTRUCTION)

HISTORICAL MARKER CONSTRUCTION

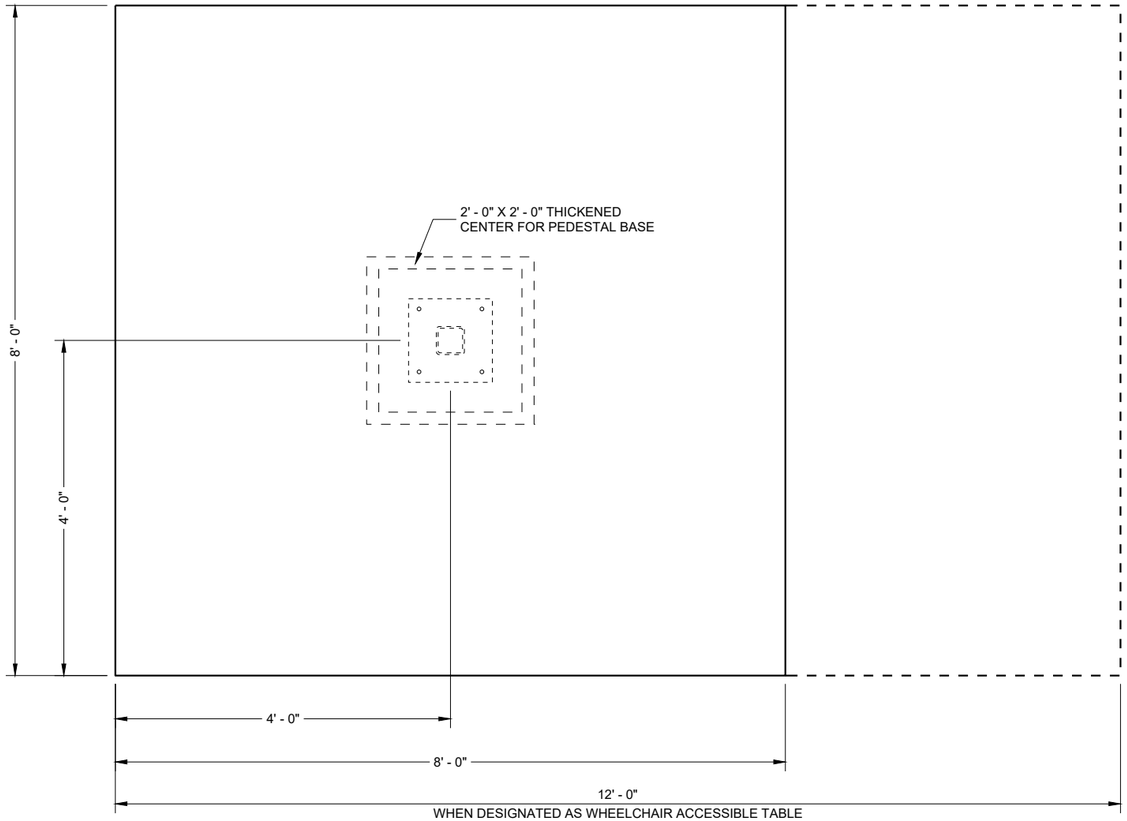
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

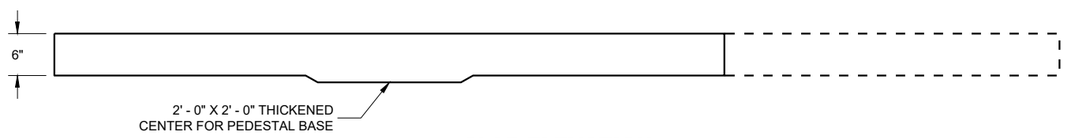
/S/ Joseph Coughlin
ROADSIDE FACILITIES ENG

FHWA

6
SDD 14C02 - 03



TOP VIEW



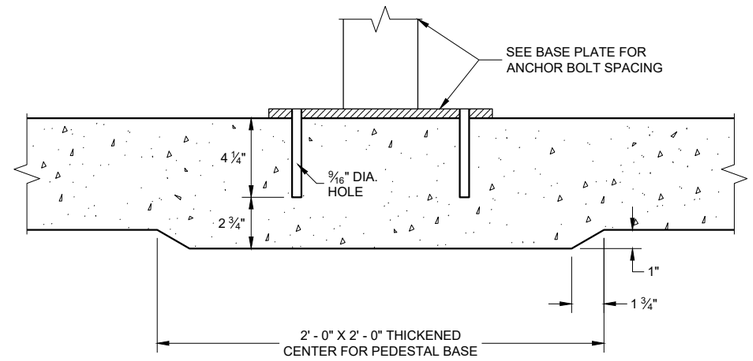
SLAB ELEVATION

GENERAL NOTES

PICNIC TABLE PAD SHALL BE PAID FOR AS CONCRETE SIDEWALK 6-INCH.

PICNIC TABLE PAD SHALL BE LEVEL.

WHEEL CHAIR ACCESSIBLE TABLES MUST HAVE SIDEWALK EXTENSION.



ANCHOR BOLT HOLE DETAIL

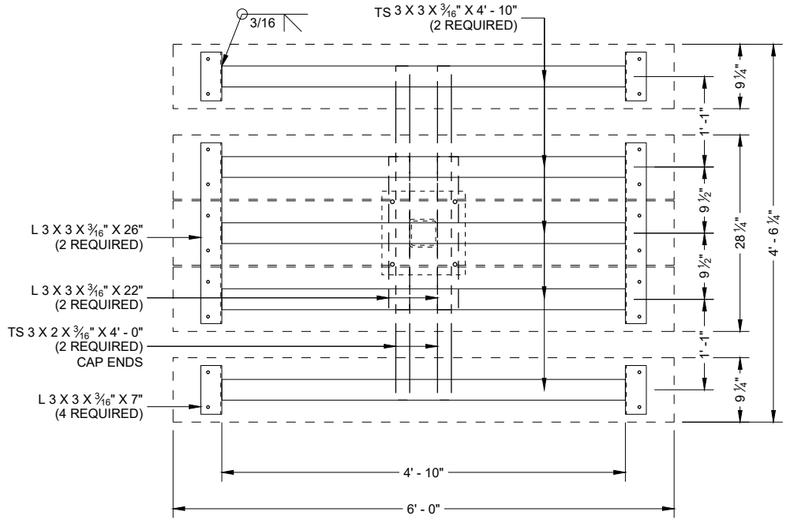
CONCRETE PAD FOR PICNIC TABLE

PICNIC TABLE
SINGLE PEDESTAL

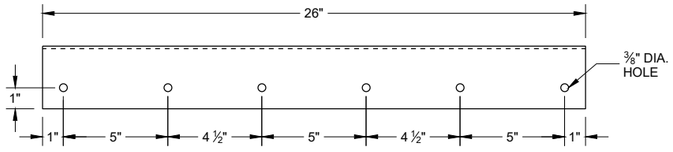
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14C07 - 04a

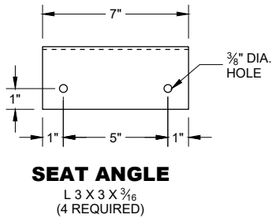


TOP VIEW



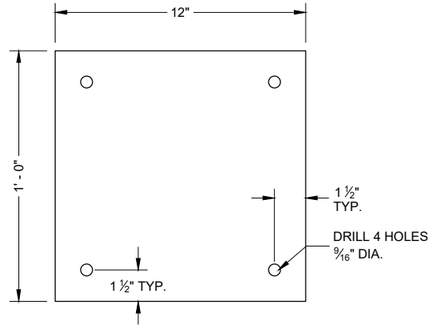
TOP ANGLE

L 3 X 3 X 3/16
(2 REQUIRED)



SEAT ANGLE

L 3 X 3 X 3/16
(4 REQUIRED)



BASE PLATE LAYOUT

GENERAL NOTES

ALL EDGES AND CORNERS OF CUT ANGLES TO BE ROUNDED TO PREVENT SHARP EDGES.

ALL STRUCTURAL TUBES TO BE 46 KSI YIELD, ALL OTHER STEEL TO BE 36 KSI YIELD MIN.

PLANKS TO BE MADE OF RECYCLED PLASTIC.

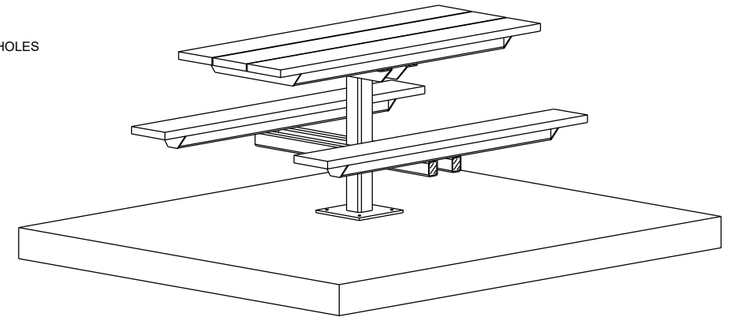
ACTUAL SIZE OF NOMINAL 2X10 PLANKS SHALL BE 1 ½" X 9 ¼".

ALL NUTS, BOLTS AND WASHERS SHALL BE ASTM A36.

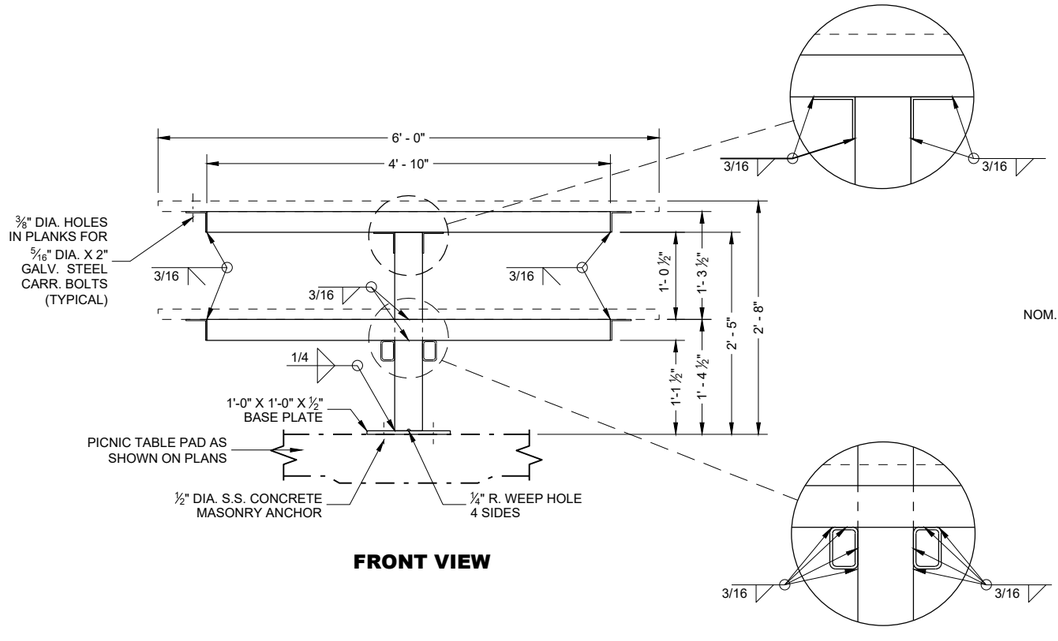
THE ½" DIA. STAINLESS STEEL CONCRETE MASONRY ANCHOR SHALL BE IN ACCORDANCE WITH SECTION 502.2.12 OF THE STANDARD SPECIFICATION.

THE TYPE "S" MASONRY ANCHOR SHALL DEVELOP A MIN. 2400 LBS. TENSION.

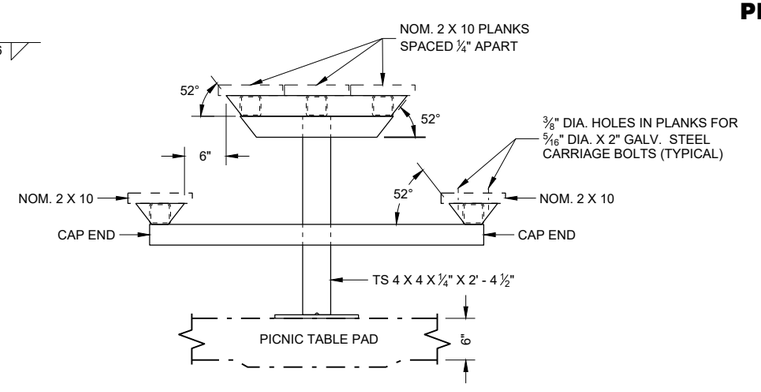
CONCRETE SHALL BE CURED A MINIMUM OF 7 DAYS PRIOR TO SETTING ANCHOR BOLTS.



PERSPECTIVE VIEW



FRONT VIEW



END VIEW

SINGLE PEDESTAL PICNIC TABLE

PICNIC TABLE
SINGLE PEDESTAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Joseph Coughlin
ROADSIDE FACILITIES ENG

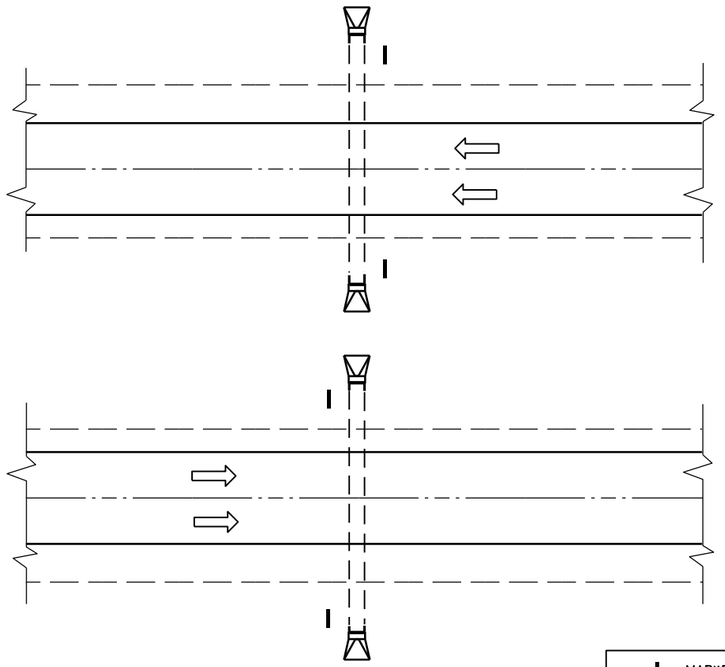
FHWA

6

SDD 14C07 - 04b

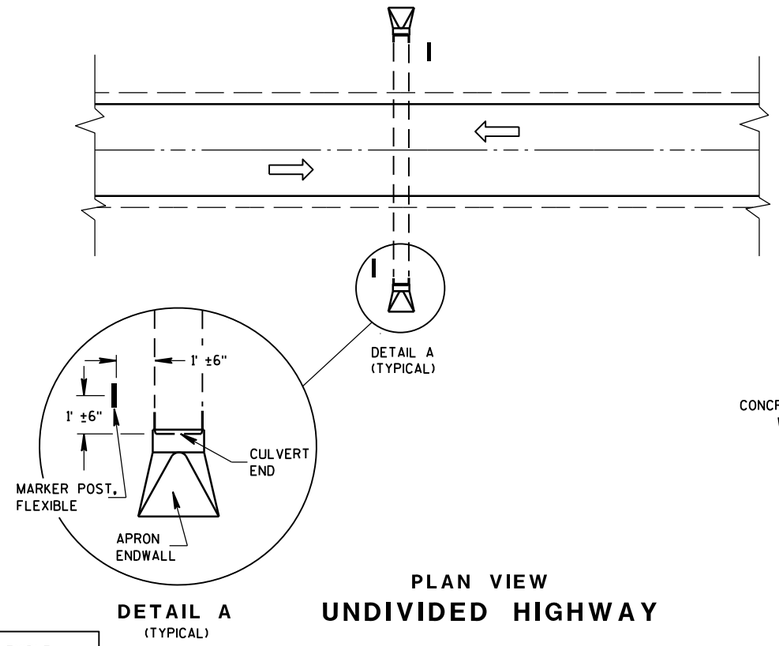
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SDD 14C07 - 04b



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

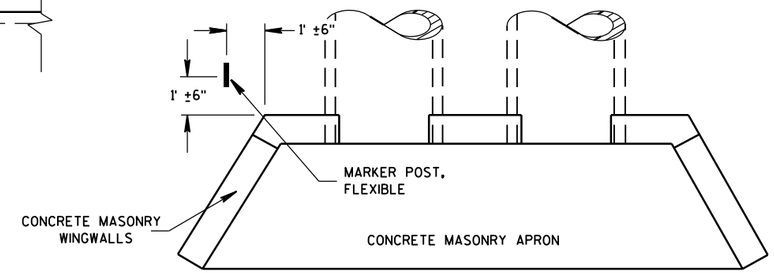
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

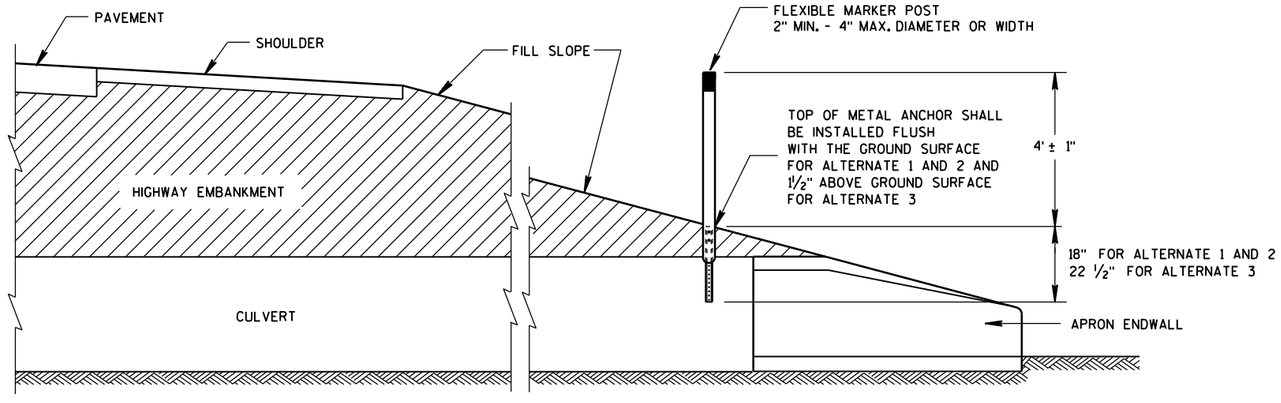
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

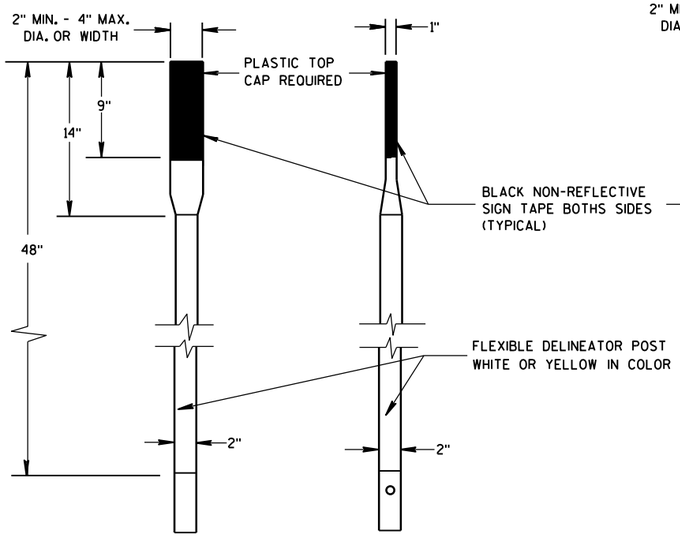
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

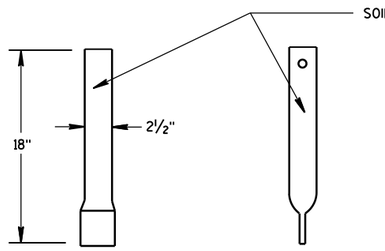
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S.D.D. 15 A 3-2a

6

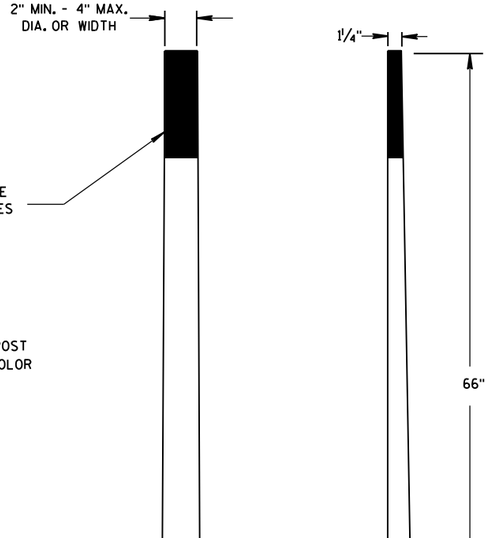
S.D.D. 15 A 3-2a





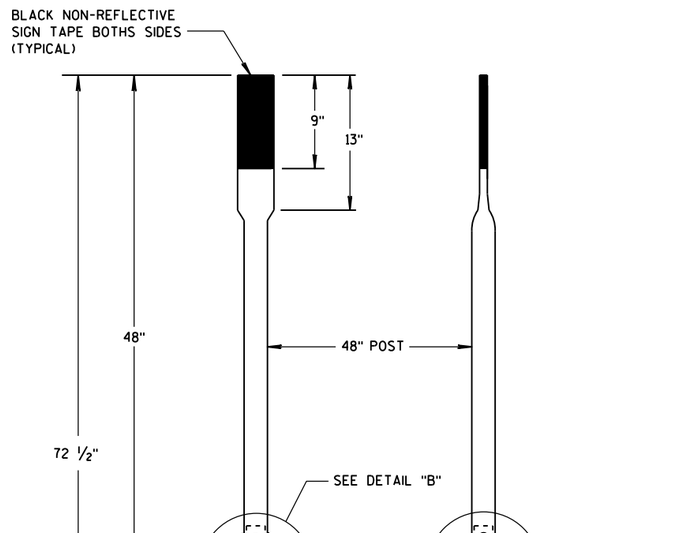
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

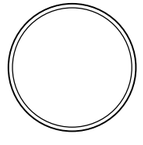
ALTERNATE 2



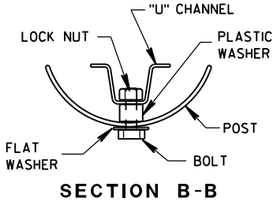
FRONT VIEW SIDE VIEW

ALTERNATE 3

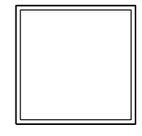
FLEXIBLE MARKER POSTS



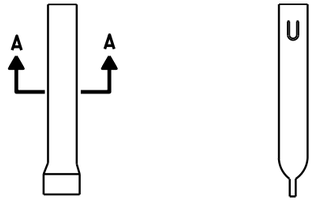
SECTION A-A



SECTION B-B

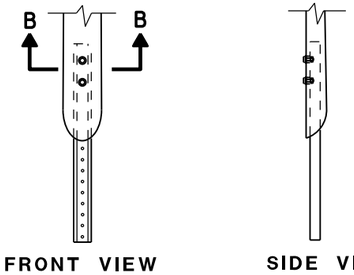


SECTION C-C



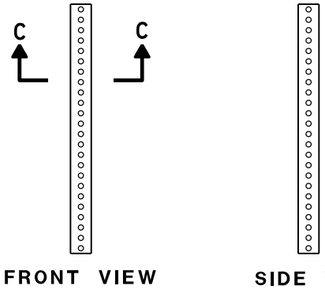
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

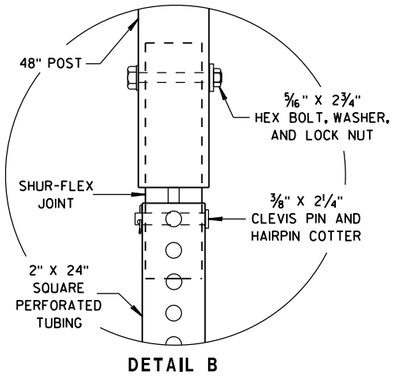
ALTERNATE 2



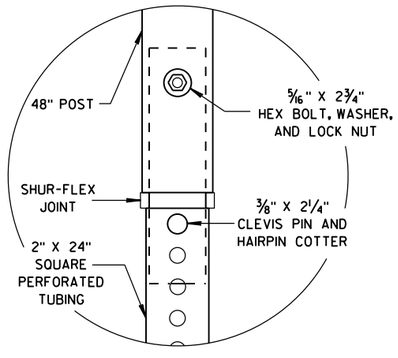
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

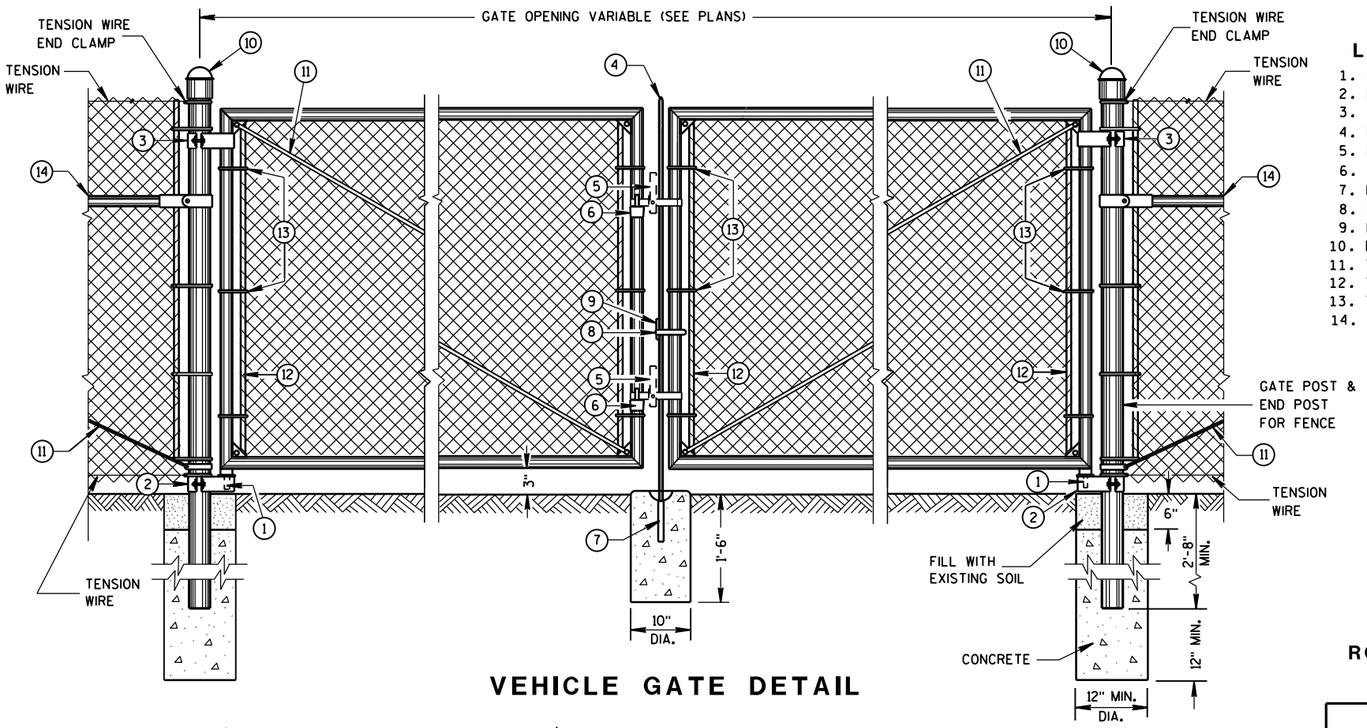
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

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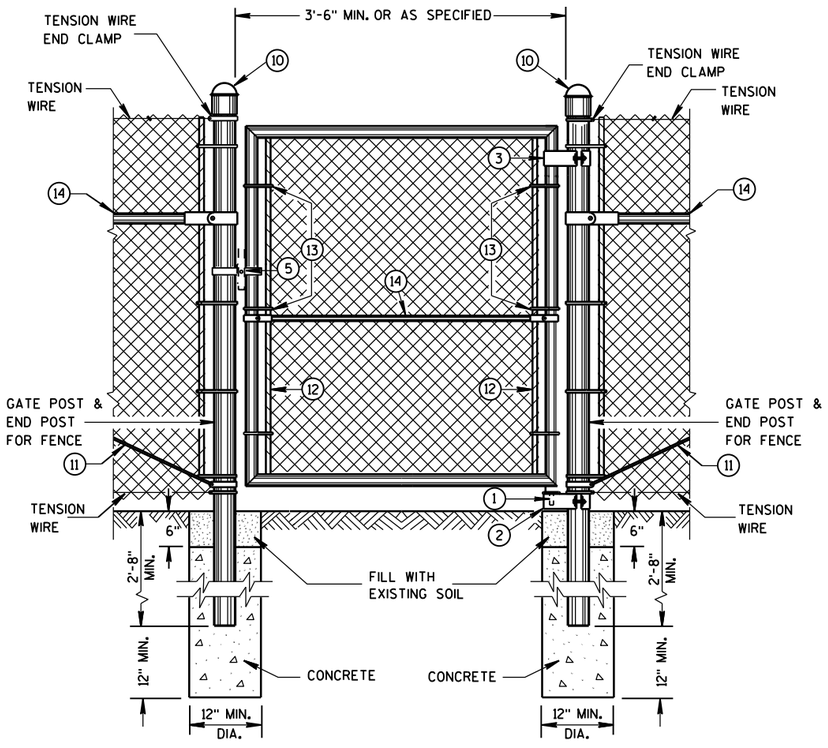
S.D.D. 15 A 3-2b

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S.D.D. 15 A 3-2b



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

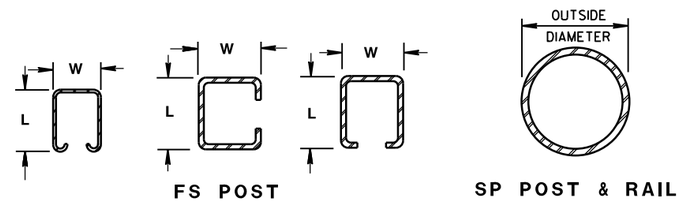
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

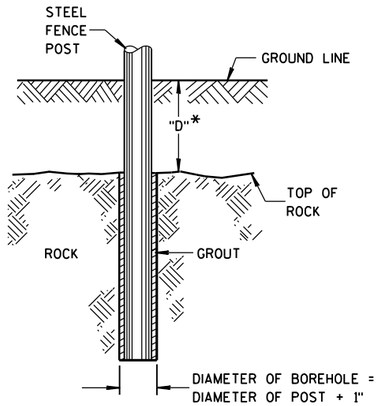
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

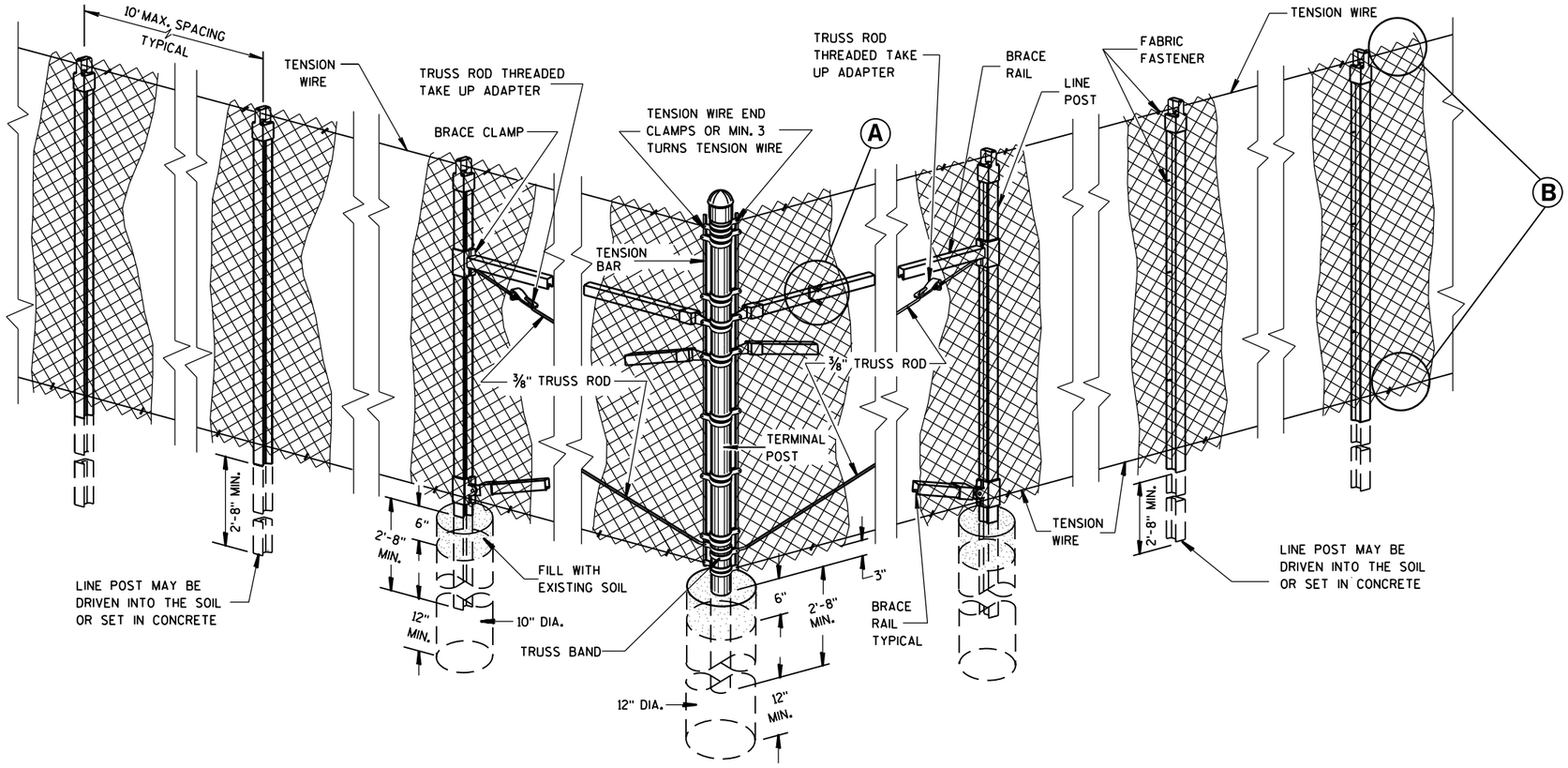
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S.D.D. 15 B 3-15a

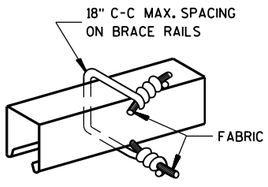


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



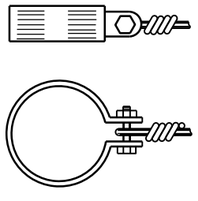
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



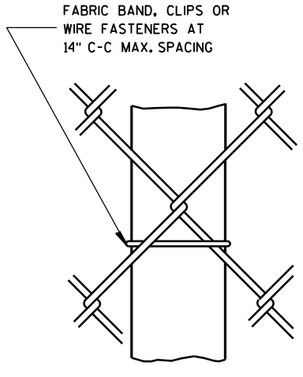
BRACE RAIL

FABRIC FASTENER

Ⓐ



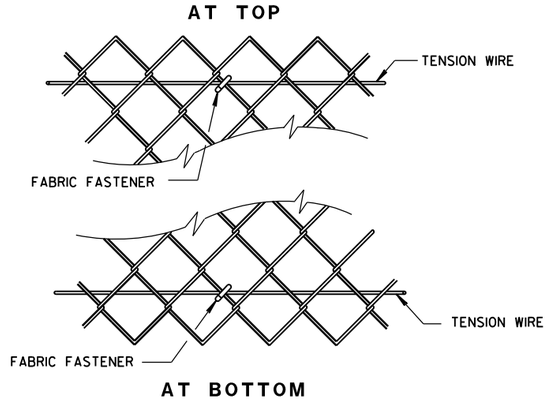
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

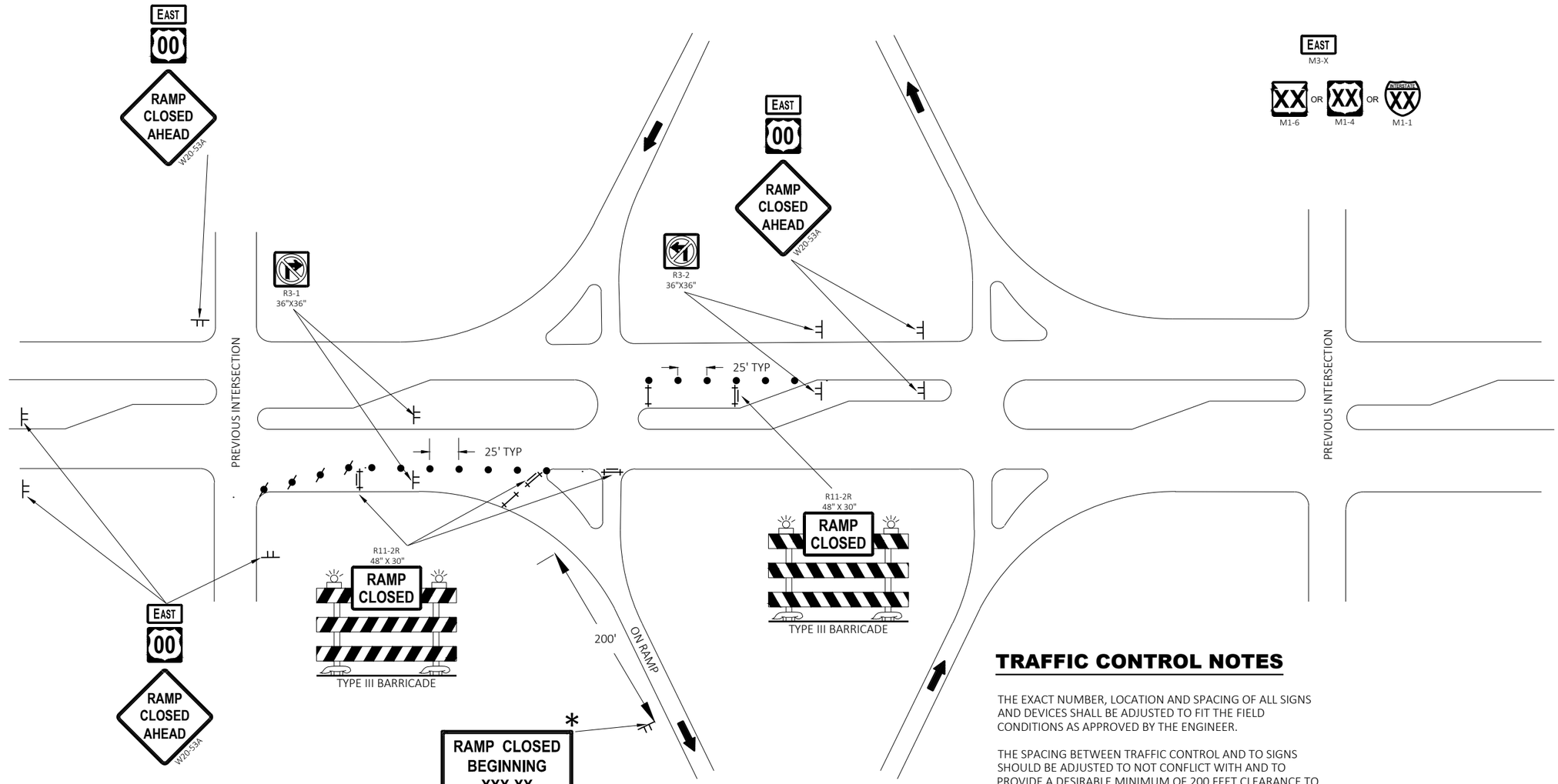
APPROVED
FEB. 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-15b

6

S.D.D. 15 B 3-15b



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT THE FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL AND TO SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT SHALL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
- W20-53A SHALL BE 48"X48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

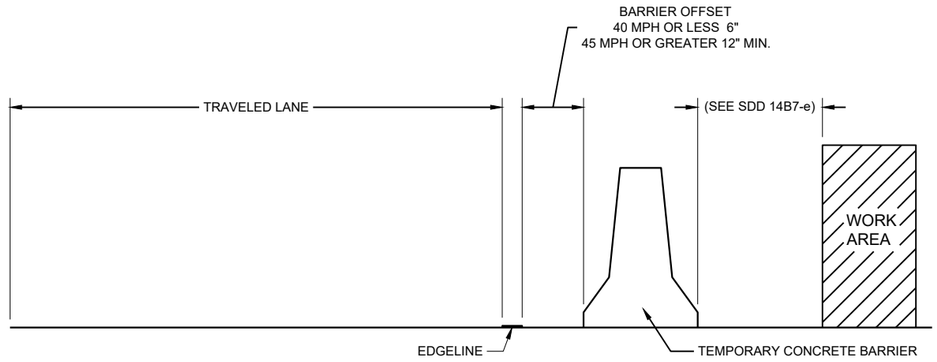
APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE
FHWA

6

SDD 15C02-09g

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SDD 15C02-09g



TEMPORARY BARRIER OFFSET FROM EDGELINE

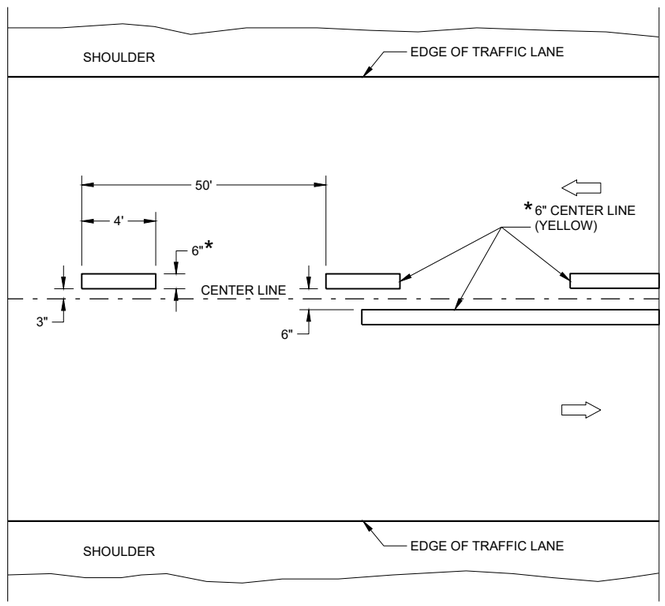
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

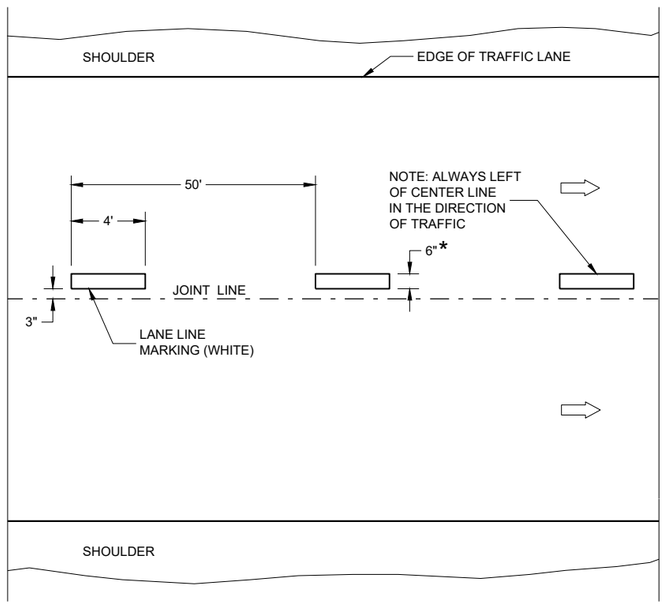
LEGEND

⇨ DIRECTION OF TRAFFIC

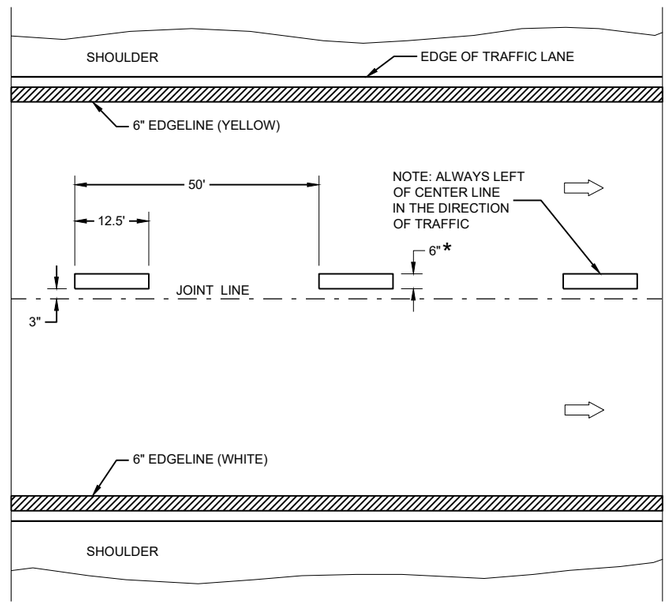
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

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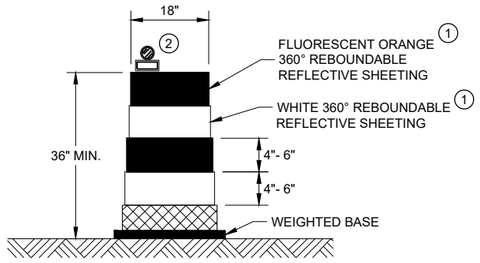
SDD 15C08-23b

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SDD 15C08-23b

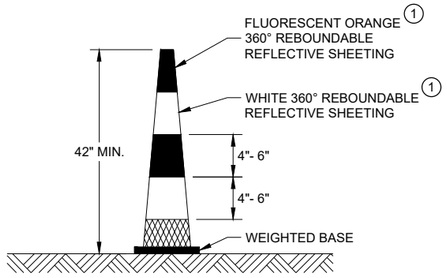
GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

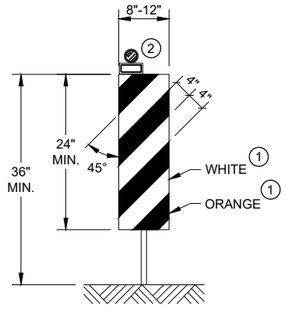
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

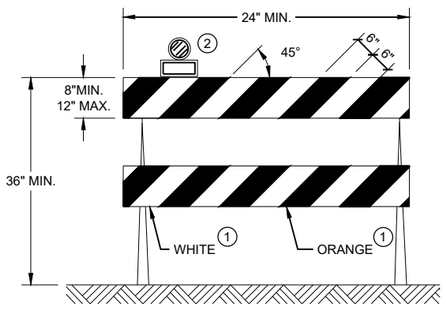
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



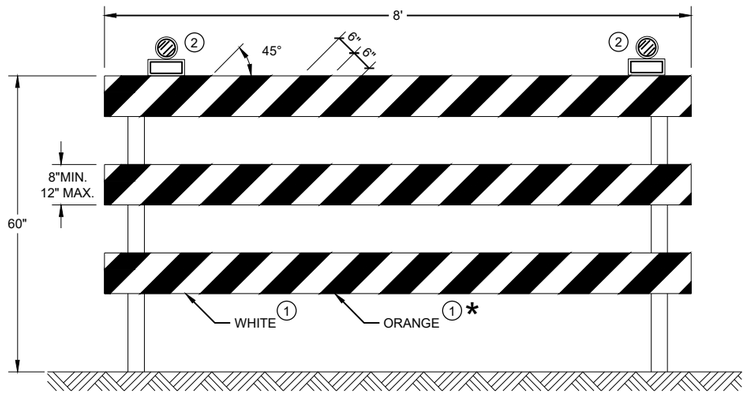
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

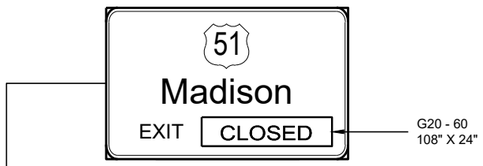
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

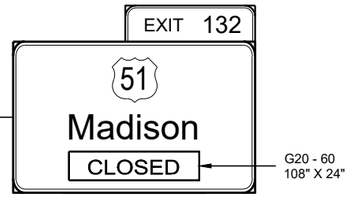
WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

(1) W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

(2) PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



OR

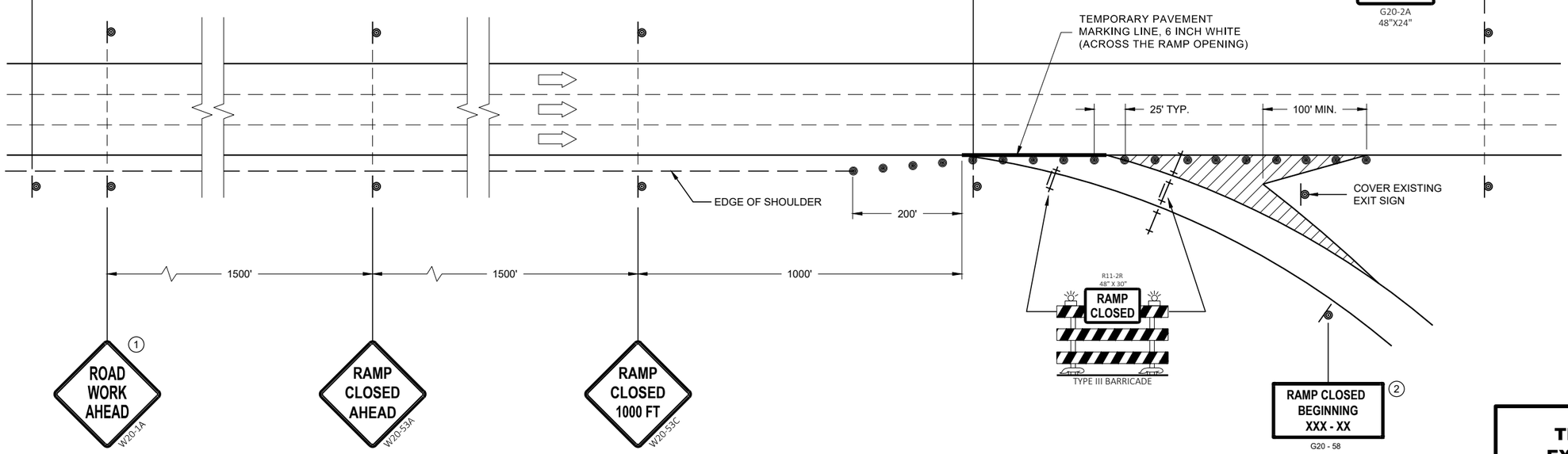


PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN



COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)

G20 - 61
120 ' X 30"



OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 15D16-06

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET
0-30	200'
35-40	350'
45-55	500'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

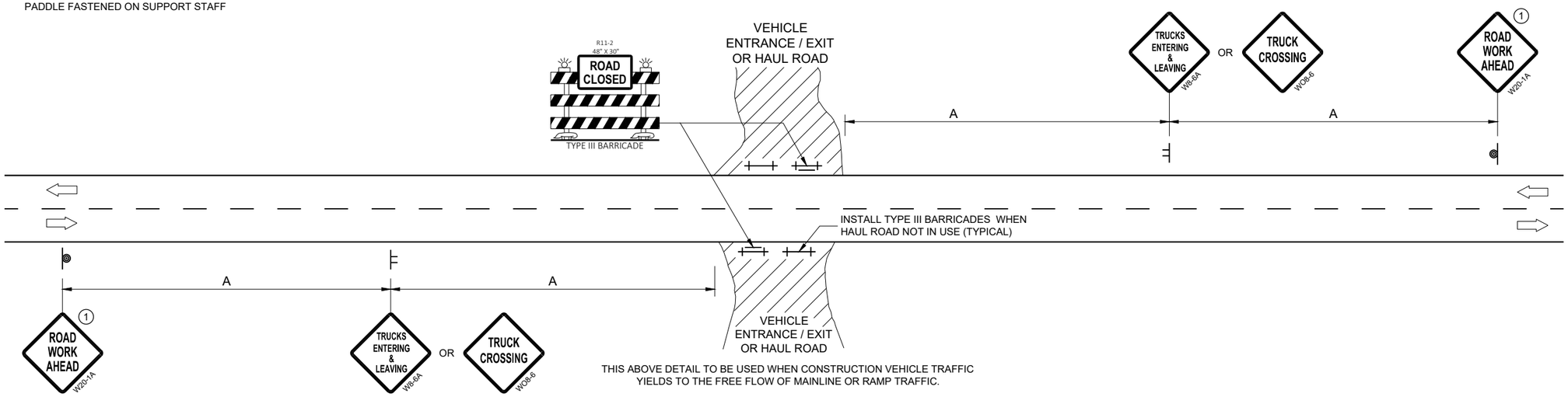
WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

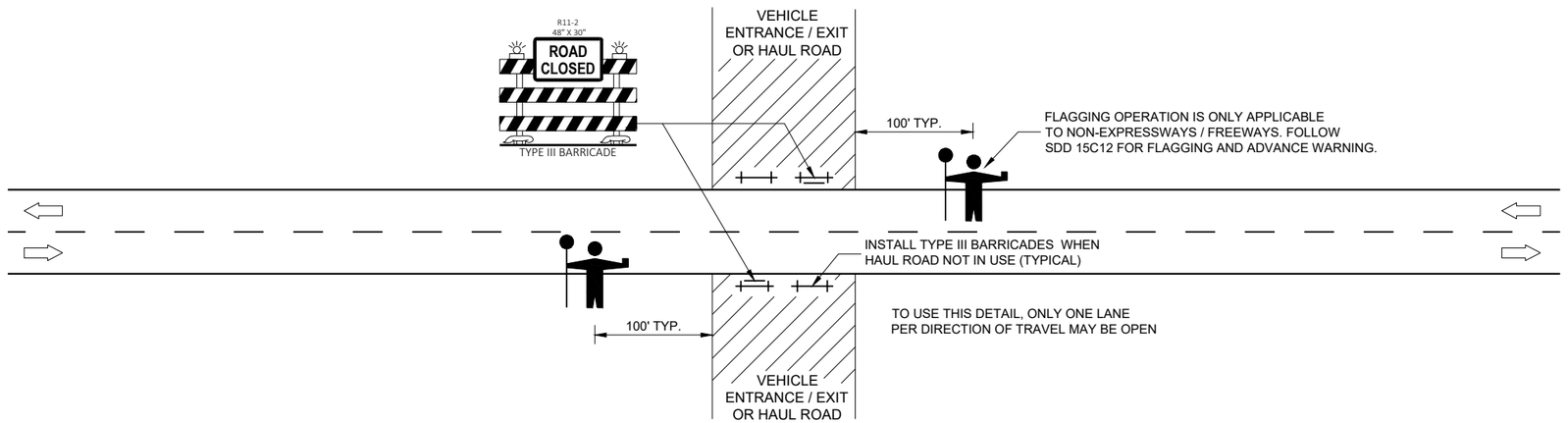
WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

(1) THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE / EXIT CONDITIONS ARE SEPARATED BY MORE THAN TWO MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.



THIS ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC.



TO USE THIS DETAIL, ONLY ONE LANE PER DIRECTION OF TRAVEL MAY BE OPEN

THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D29 - 06

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'

LEGEND

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.

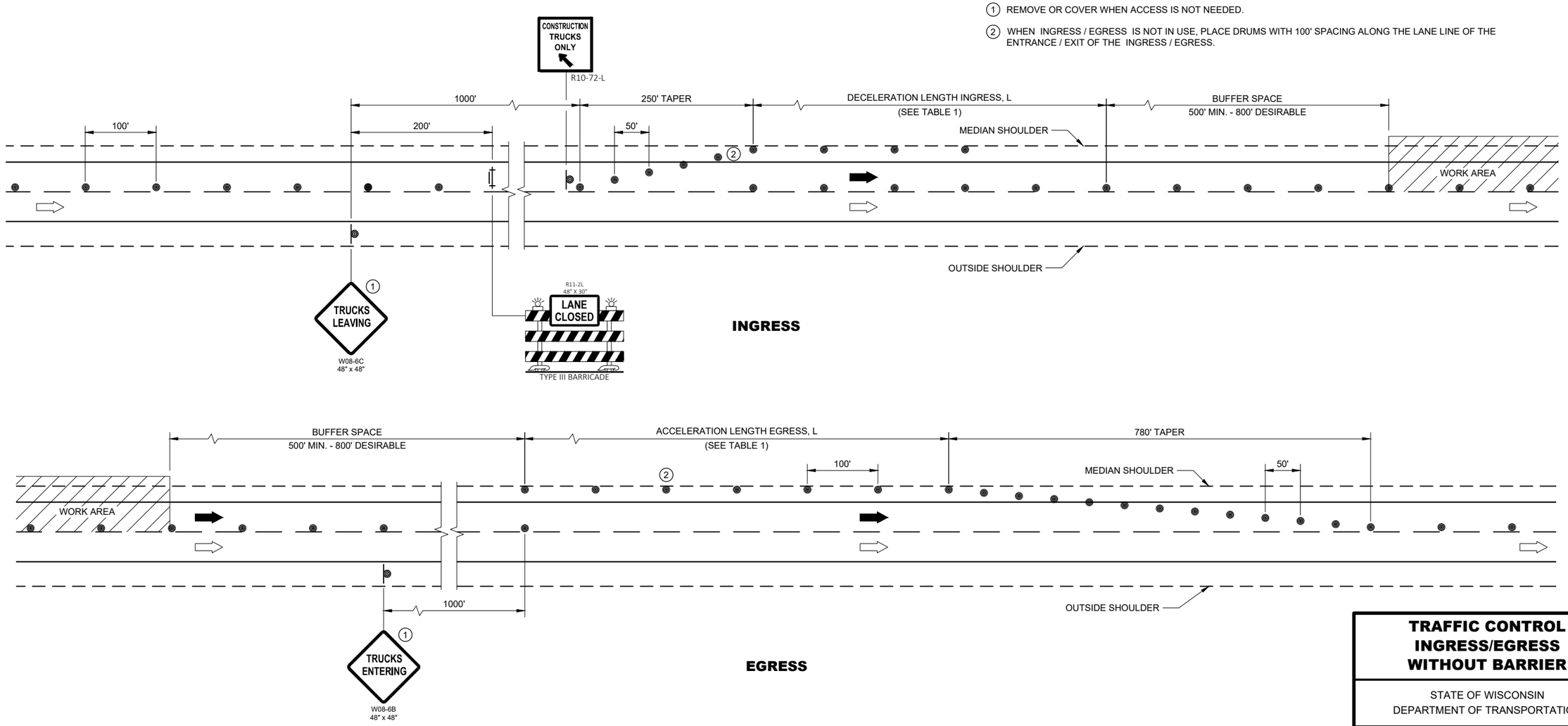
THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

(1) REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

(2) WHEN INGRESS / EGRESS IS NOT IN USE, PLACE DRUMS WITH 100' SPACING ALONG THE LANE LINE OF THE ENTRANCE / EXIT OF THE INGRESS / EGRESS.



TRAFFIC CONTROL INGRESS/EGRESS WITHOUT BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

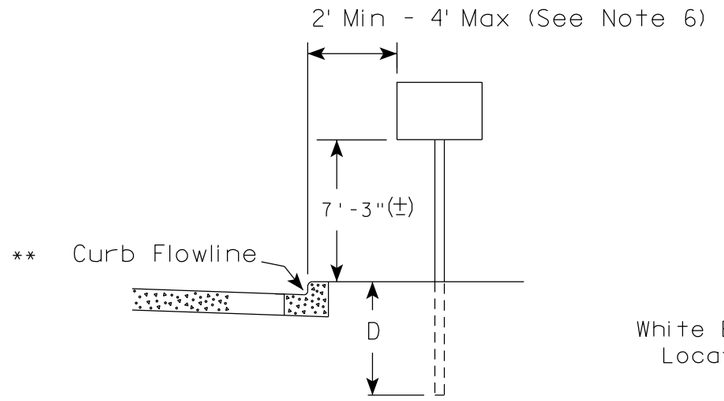
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SDD 15D47-03b

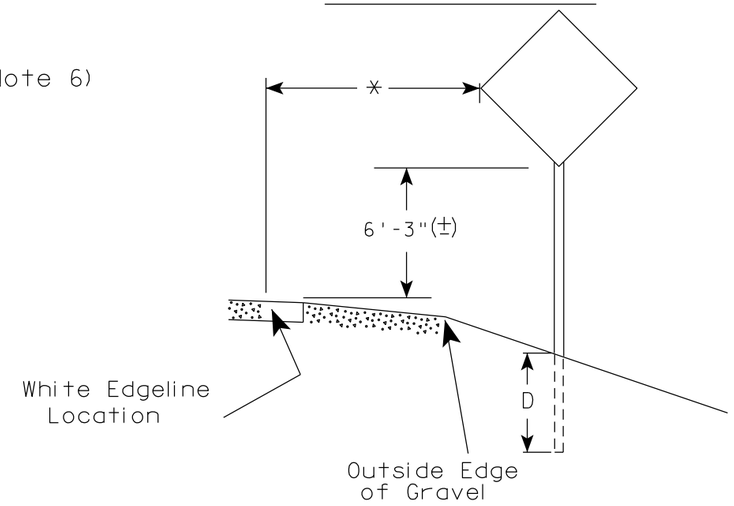
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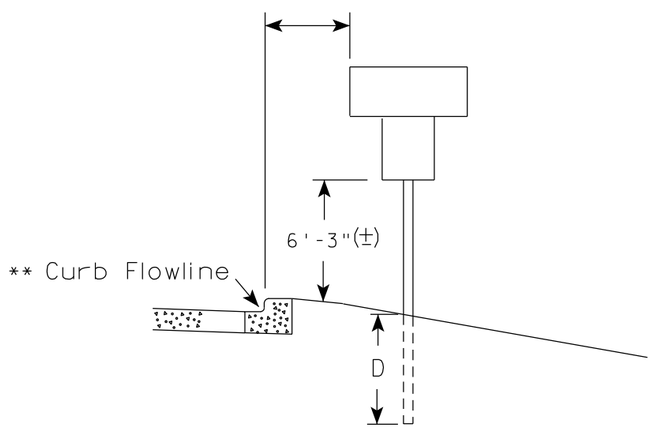
SDD 15D47-03b

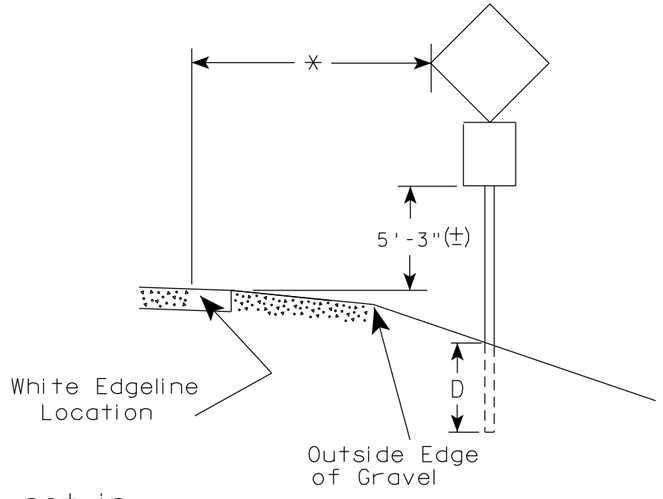
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

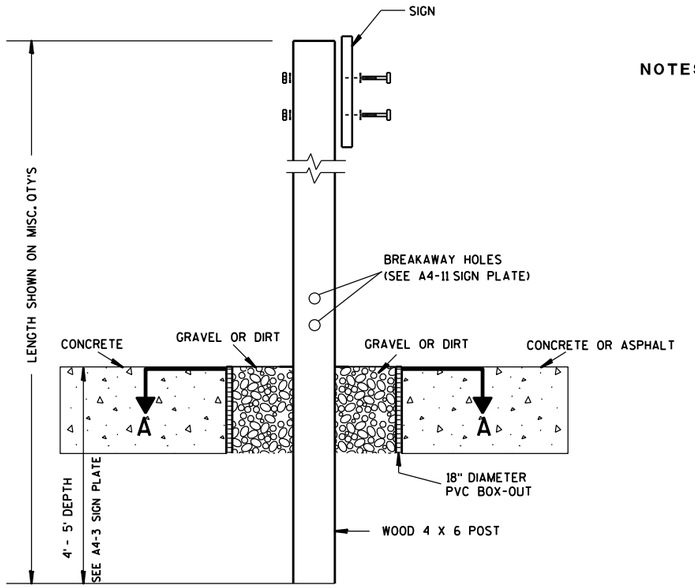
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

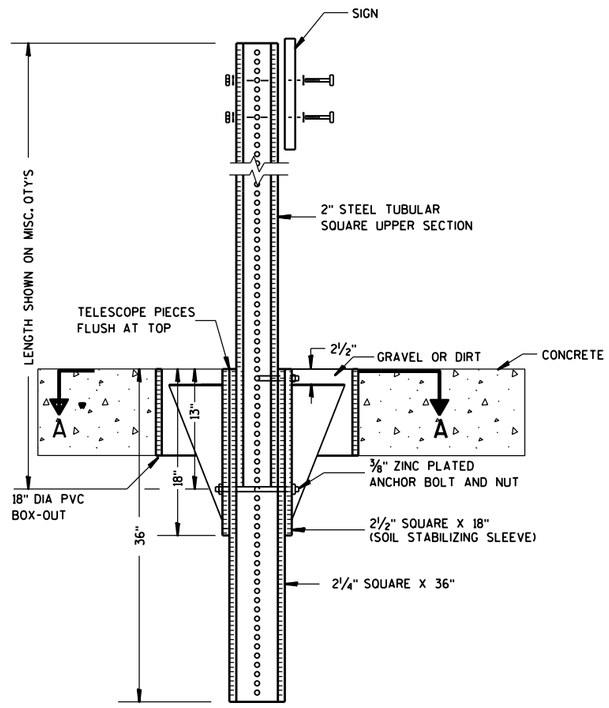
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 368	E



ELEVATION VIEW

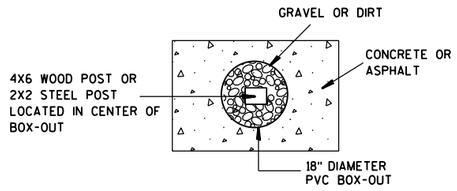
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

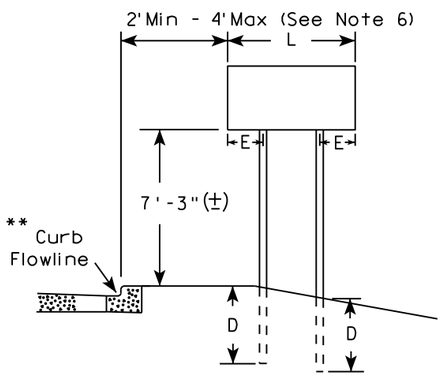
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

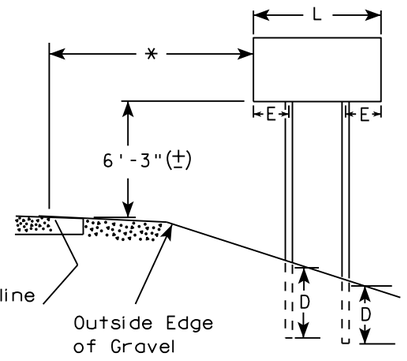
DATE 1/27/14 PLATE NO. A4-3B.1

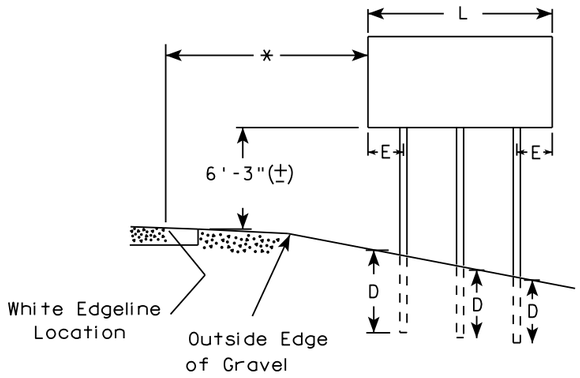
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

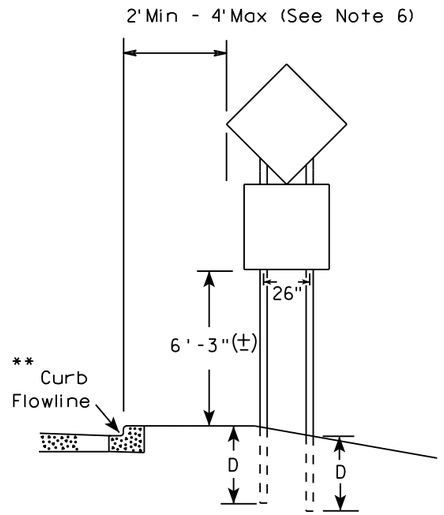
URBAN AREA



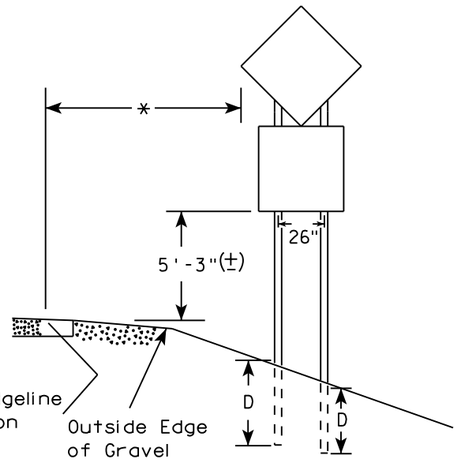
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

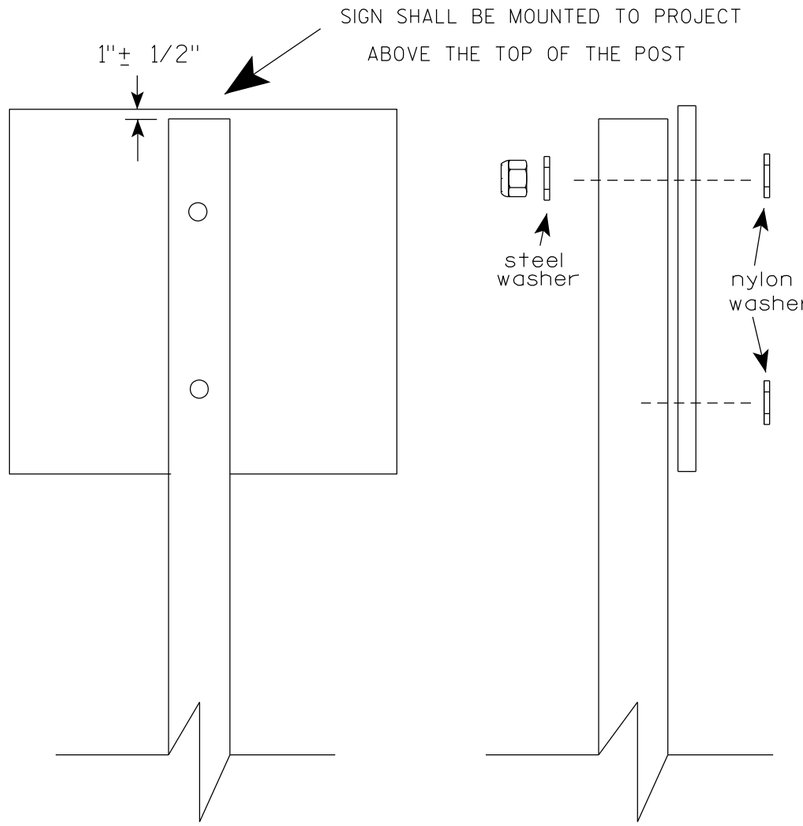
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

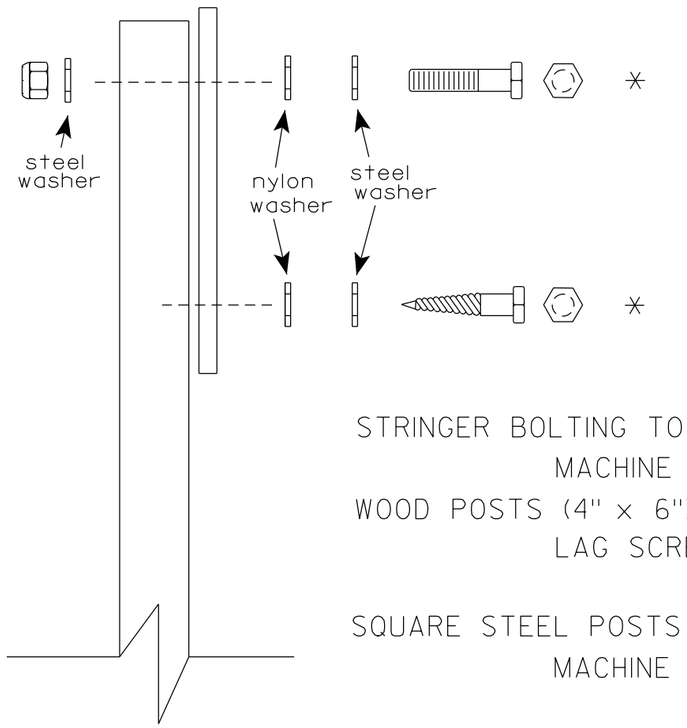
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 370	E





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

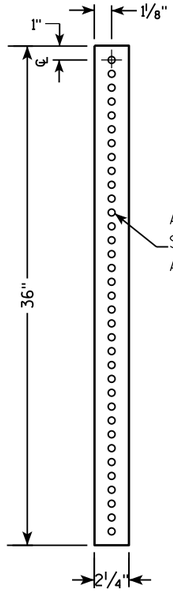
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

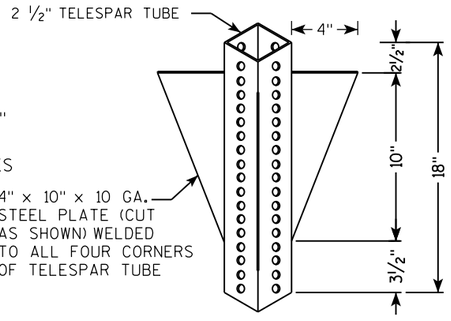
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

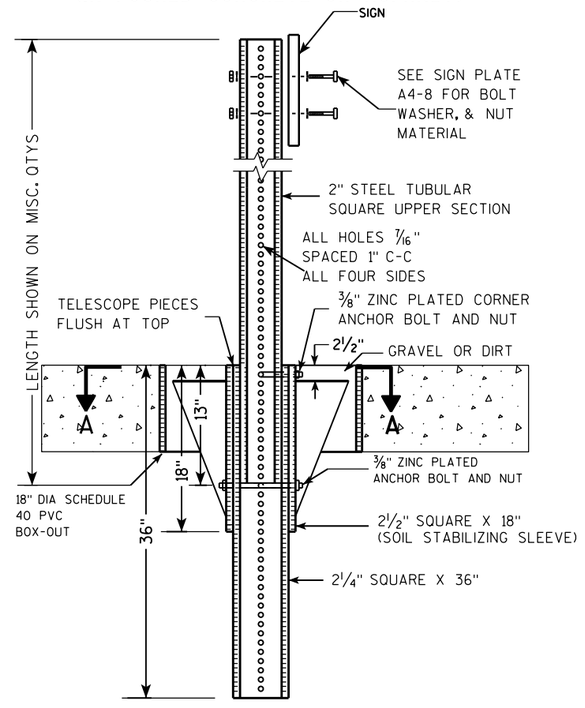
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



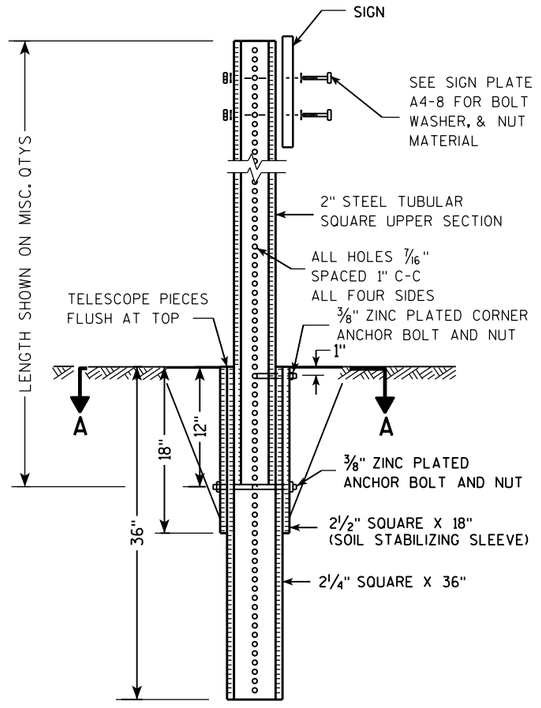
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

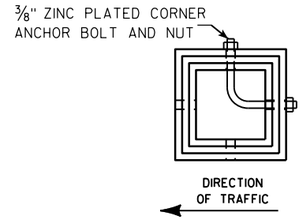


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

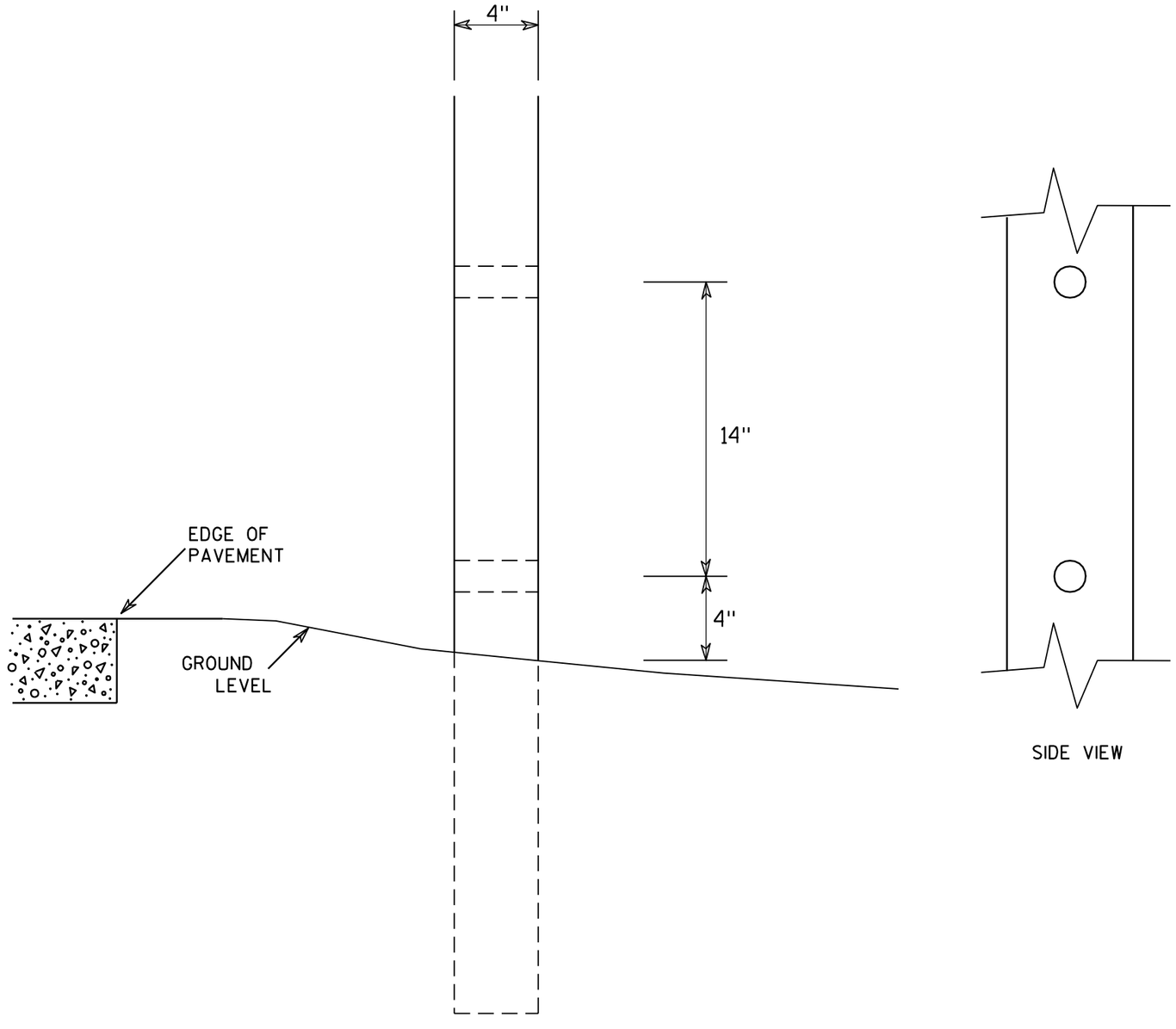
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 372 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

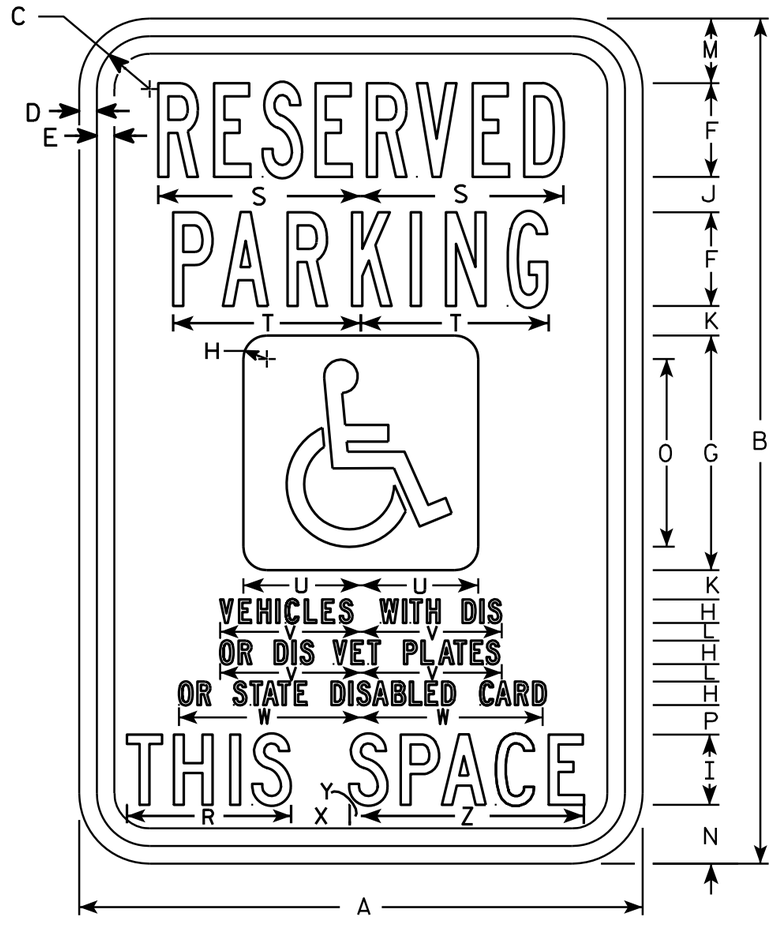
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 373	E



R7-8A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Sign is white Type H Reflective; paraplegic background is blue.
   Message - Legend and border are green; paraplegic symbol is white
3. Message Series - Lines 1 & 2 are Series B
   Lines 3, 4, 5 & 6 are Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	18	1 1/8	3/8	3/8	2	5	1/2	1 1/2	3/4	5/8	3/8	1 3/8	1 1/4	4	5/8		3 1/2	4 3/8	4	2 1/2	3	3 7/8	1 1/4	1/4	4 3/4	1.5
2M	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
3	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
4																											
5																											

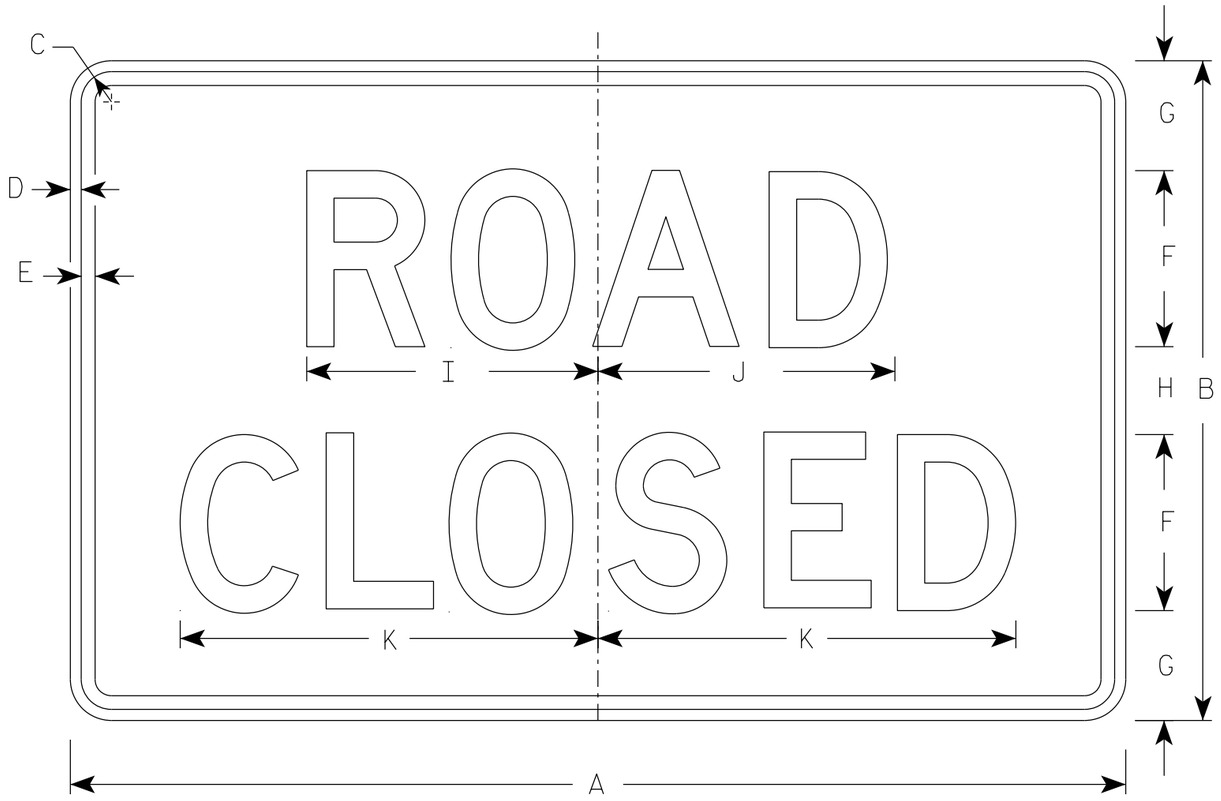
STANDARD SIGN
R7-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/25/2011 PLATE NO. R7-8A.6

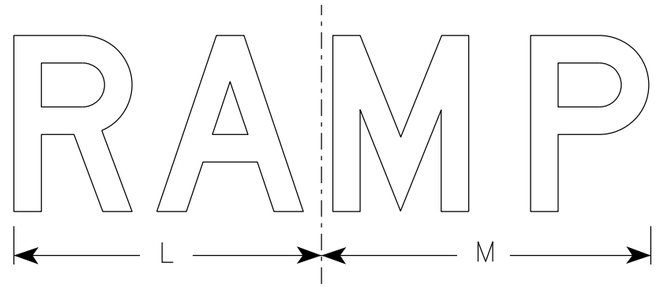
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 374 | E



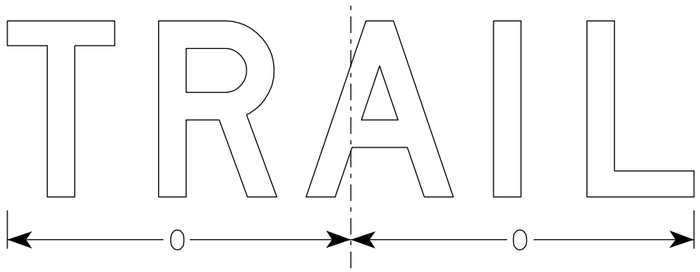
R11-2

NOTES

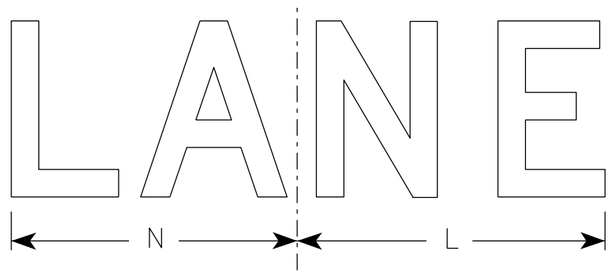
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 375 E



R55-51

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	18		1 1/2	3/8	3/8	4	3	2	1 1/2	2	2 1/8	6 7/8	7	7 1/4													2.25
2M	18		1 1/2	3/8	3/8	4	3	2	1 1/2	2	2 1/8	6 7/8	7	7 1/4													2.25
3																											
4																											
5																											

STANDARD SIGN
R55-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/30/11 PLATE NO. R55-51.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 376	E



R55-54

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	18	24	1 1/8	3/8	1/2	3	2	2 1/2	3 1/2	2 3/8	2 5/8	3 7/8	5	5 1/8	7 1/2												3.00
2M	18	24	1 1/8	3/8	1/2	3	2	2 1/2	3 1/2	2 3/8	2 5/8	3 7/8	5	5 1/8	7 1/2												3.00
3																											
4																											
5																											

STANDARD SIGN
R55-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/30/11 PLATE NO. R55-54.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 377	E



R55-65

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	3	4	5	3 1/2	8 3/4	5 1/2																4.0
2M	24		1 1/8	3/8	1/2	3	4	5	3 1/2	8 3/4	5 1/2																4.0
3																											
4																											
5																											

STANDARD SIGN
R55-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

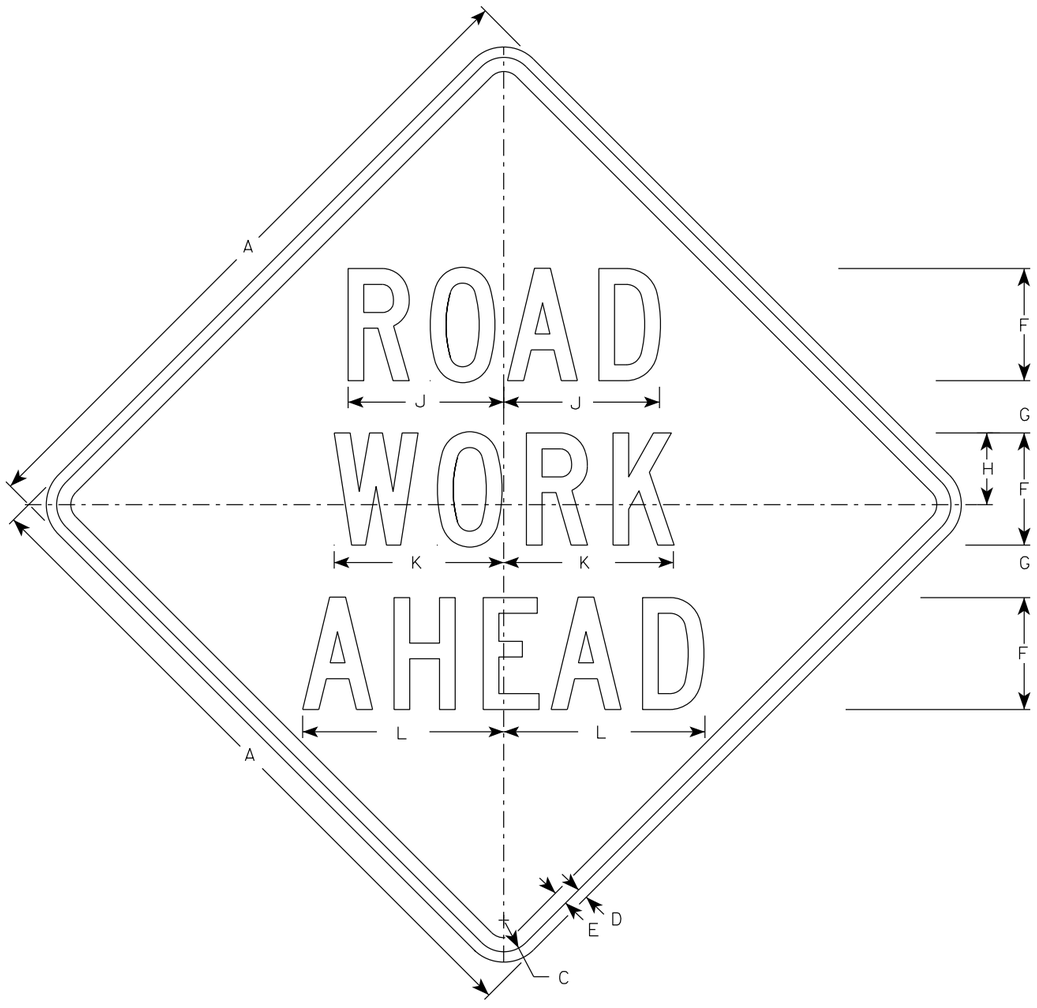
DATE 10/27/14 PLATE R55-65.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

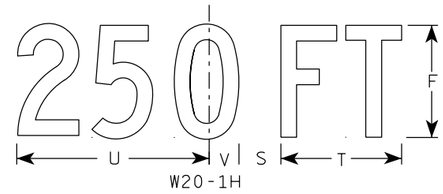
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R5565.DGN PLOT DATE : 27-OCT-2014 09:13 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.839926:1.000000
WISDOT/CADDS SHEET 42

NOTES

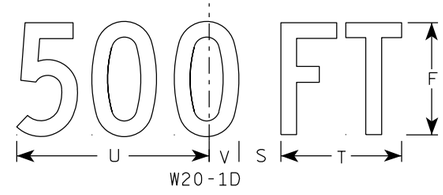
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A



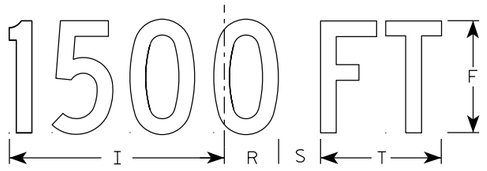
W20-1H



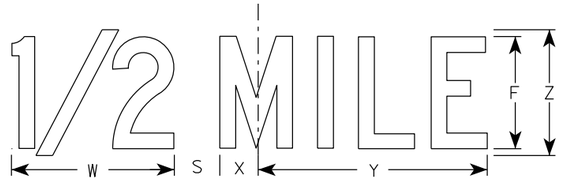
W20-1D



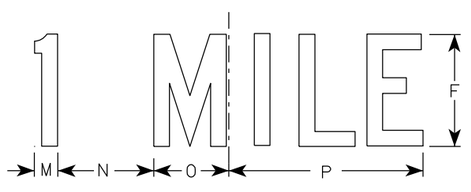
W20-1C



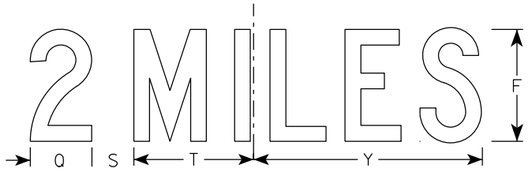
W20-1B



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

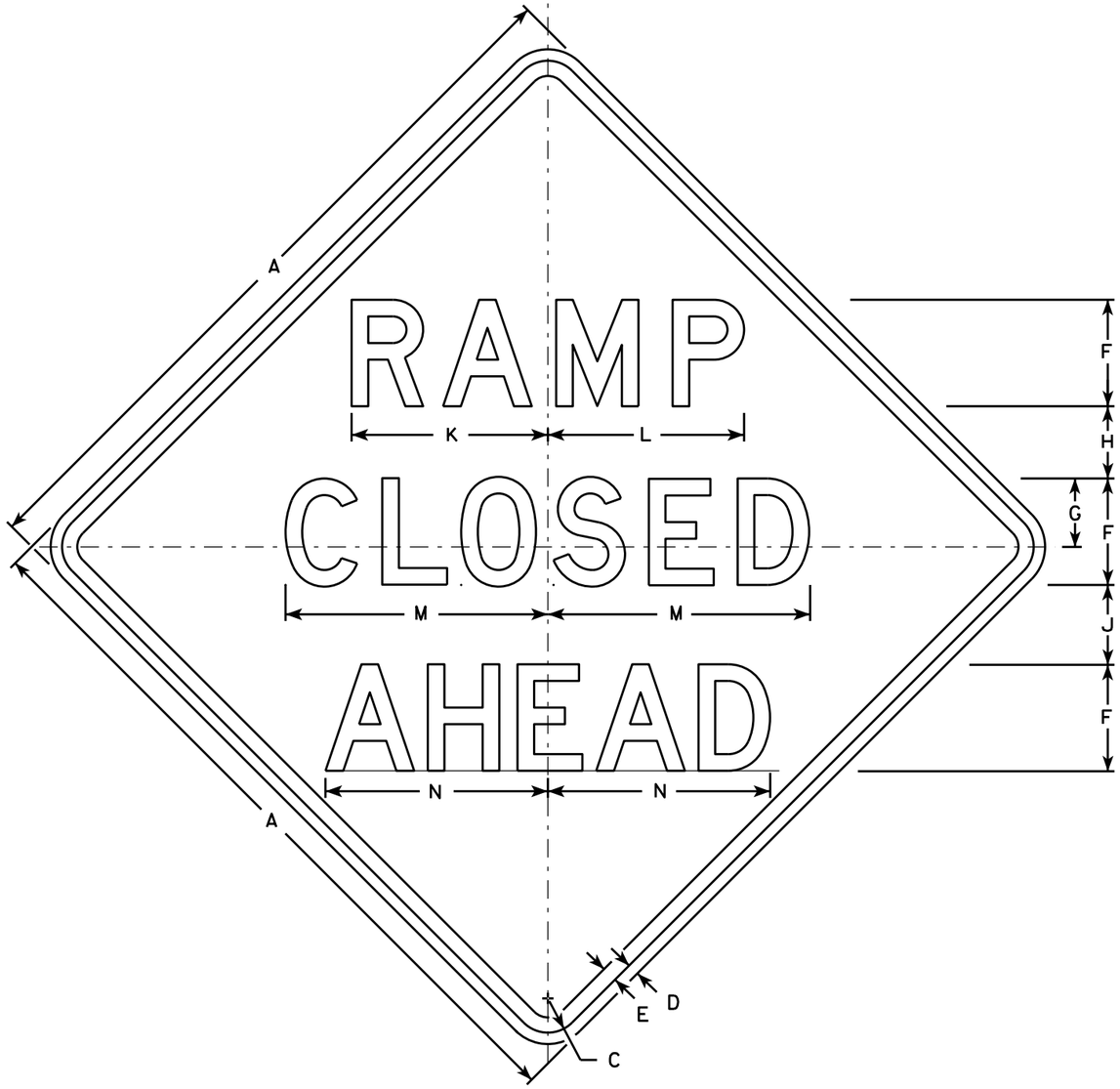
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

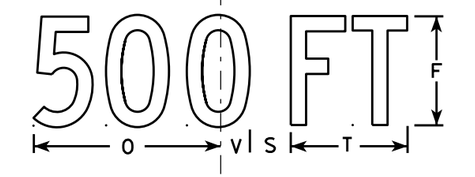
WISDOT/CADDS SHEET 42

7

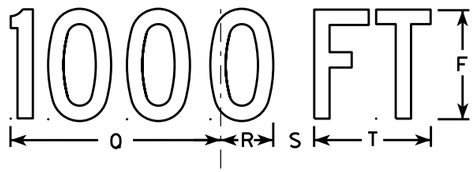
7



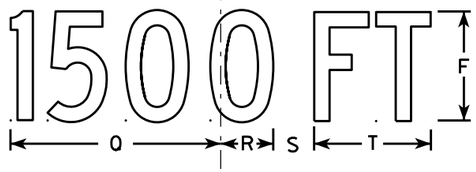
W20-53A



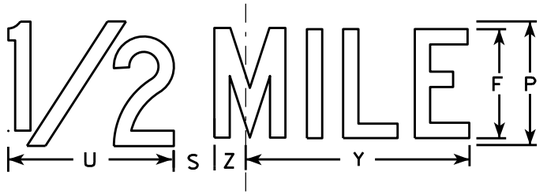
W20-53D



W20-53C



W20-53B



W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/27/15 PLATE NO. W20-53.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 27-MAY-2015 19:40 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.729210:1.000000
WISDOT/CADDS SHEET 42

DIVISION 1 - RAMP A														
STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
										1.00	1.30	1.30	0.80	
						NOTE 1	NOTE 2	NOTE 3		NOTE 1		NOTE 5	NOTE 7	NOTE 8
1183+05	0	0.00	0.00	23.12	0.00	0	0	0	0	0	0	0	0	0
1183+79	74	0.00	0.00	23.12	0.00	0	0	63	0	0	82	0	0	-82
1184+00	21	2.18	0.00	0.00	0.11	1	0	9	0	1	94	0	0	-93
1185+00	100	0.00	0.00	30.61	0.00	4	0	57	0	5	168	0	0	-163
1186+00	100	0.00	0.00	42.81	0.00	0	0	136	0	5	345	0	0	-340
1187+00	100	0.24	0.00	4.21	0.01	0	0	87	0	5	458	0	0	-453
1188+00	100	8.19	0.00	2.21	0.41	16	0	12	1	21	472	1	1	-451
1189+00	100	0.00	0.00	87.77	0.00	15	0	167	1	36	688	3	2	-652
1190+00	100	0.00	0.00	74.49	0.00	0	0	300	0	36	1,078	3	2	-1,042
1191+00	100	3.12	0.00	5.80	0.16	6	0	149	0	42	1,272	3	2	-1,230
1192+00	100	0.00	0.00	38.28	0.00	6	0	82	0	48	1,379	3	2	-1,331
1193+00	100	96.79	0.00	141.32	4.84	179	0	333	9	227	1,802	14	9	-1,575
1193+86	86	96.76	0.00	141.32	4.84	308	0	450	15	535	2,371	34	21	-1,836
						535	0	1,845	26					

NOTES:

1 - CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

2 - THIS DOES NOT SHOW UP IN CROSS SECTIONS

3 - DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

4 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

5 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

6 - REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

7 - REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL

8 - IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION 1 - RAMP B														
STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.30	1.30 NOTE 5	0.80 NOTE 7	NOTE 8
1183+10	0	38.25	0.00	51.42	1.91	0	0	0	0	0	0	0	0	0
1183+25	15	0.00	0.00	51.42	0.00	11	0	29	1	11	37	1	1	-26
1183+27	2	0.00	0.00	45.68	0.00	0	0	4	0	11	42	1	1	-31
1184+00	73	6.33	0.00	5.49	0.32	9	0	69	0	20	132	1	1	-112
1184+10	10	9.53	0.00	3.66	0.48	3	0	2	0	23	134	1	1	-111
1185+00	90	6.53	0.00	3.66	0.33	27	0	12	1	50	149	3	2	-99
1186+00	100	6.69	0.00	4.37	0.33	24	0	15	1	74	167	4	2	-93
1187+00	100	17.50	0.00	0.05	0.88	45	0	8	2	119	176	7	4	-57
1188+00	100	0.00	0.00	0.00	0.00	32	0	0	2	151	173	9	6	-22
1189+00	100	0.00	0.00	13.54	0.00	0	0	25	0	151	206	9	6	-55
1190+00	100	0.00	0.00	18.07	0.00	0	0	59	0	151	283	9	6	-132
1191+00	100	54.51	0.00	13.46	2.73	101	0	58	5	252	353	16	10	-101
1192+00	100	304.33	0.00	0.00	15.22	665	0	25	33	917	351	59	36	566
1192+14	14	399.79	0.00	0.00	19.99	183	0	0	9	1,100	342	70	43	758
1192+70	56	399.79	0.00	0.00	19.99	829	0	0	41	1,929	299	124	76	1,630
						1,929	0	306	95					

NOTES:

1 - CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

2 - THIS DOES NOT SHOW UP IN CROSS SECTIONS

3 - DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

4 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

5 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

6 - REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

7 - REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL

8 - IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION 1 - MAINTENANCE GARAGE DRIVEWAY

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.30	1.30 NOTE 5	0.80 NOTE 7	NOTE 8
300+25	0	0.00	0.00	144.12	0.00	0	0	0	0	0	0	0	0	0
300+50	25	0.00	0.00	144.12	0.00	0	0	133	0	0	173	0	0	-173
301+00	50	5.53	0.00	79.76	0.28	5	0	207	0	5	442	0	0	-437
301+50	50	7.35	0.00	243.18	0.37	12	0	299	1	17	830	1	1	-813
301+60	10	7.35	0.00	243.18	0.37	3	0	90	0	20	947	1	1	-927
						20	0	729	1					

NOTES:

1 - CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

2 - THIS DOES NOT SHOW UP IN CROSS SECTIONS

3 - DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

4 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

5 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

6 - REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

7 - REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL

8 - IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION 1 - PLAZA CENTERLINE SIDEWALK

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.30	1.30 NOTE 5	0.80 NOTE 7	NOTE 8
700+56	0	0.00	0.00	126.22	0.00	0	0	0	0	0	0	0	0	0
701+00	44	0.00	0.00	126.22	0.00	0	0	206	0	0	268	0	0	-268
701+50	50	75.91	0.00	107.62	3.80	70	0	217	4	70	546	5	3	-476
702+00	50	86.95	0.00	105.91	4.35	151	0	198	8	221	795	16	10	-574
702+50	50	12.35	0.00	114.34	0.62	92	0	204	5	313	1,055	22	14	-742
702+98	48	12.35	0.00	114.34	0.62	22	0	203	1	335	1,318	23	14	-983
704+43	0	0.83	0.00	392.93	0.04	0	0	0	0	335	1,318	23	14	-983
704+50	7	0.83	0.00	392.93	0.04	0	0	102	0	335	1,450	23	14	-1,115
704+54	4	0.29	0.00	398.85	0.01	0	0	59	0	335	1,527	23	14	-1,192
705+00	46	0.00	0.00	499.20	0.00	0	0	765	0	335	2,521	23	14	-2,186
705+36	36	0.00	0.00	499.20	0.00	0	0	666	0	335	3,387	23	14	-3,052
						335	0	2,620	18					

NOTES:

1 - CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

2 - THIS DOES NOT SHOW UP IN CROSS SECTIONS

3 - DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

4 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

5 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

6 - REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

7 - REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL

8 - IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION 1 - WALKING CIRCLE															
STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)					
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE	
						NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.30	1.30 NOTE 5	0.80 NOTE 7	NOTE 8	
250+00	0	0.00	0.00	418.46	0.00	0	0	0	0	0	0	0	0	0	
250+25	25	0.00	0.00	418.46	0.00	0	0	387	0	0	503	0	0	-503	
250+50	25	1.76	0.00	558.88	0.09	1	0	452	0	1	1,091	0	0	-1,090	
250+75	25	0.00	0.00	455.34	0.00	1	0	470	0	2	1,702	0	0	-1,700	
251+00	25	0.00	0.00	297.17	0.00	0	0	348	0	2	2,154	0	0	-2,152	
251+25	25	0.00	0.00	383.70	0.00	0	0	315	0	2	2,564	0	0	-2,562	
251+50	25	0.00	0.00	565.08	0.00	0	0	439	0	2	3,134	0	0	-3,132	
251+57	7	0.00	0.00	565.08	0.00	0	0	147	0	2	3,325	0	0	-3,323	
						2	0	2,558	0						

NOTES:

1 - CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

2 - THIS DOES NOT SHOW UP IN CROSS SECTIONS

3 - DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

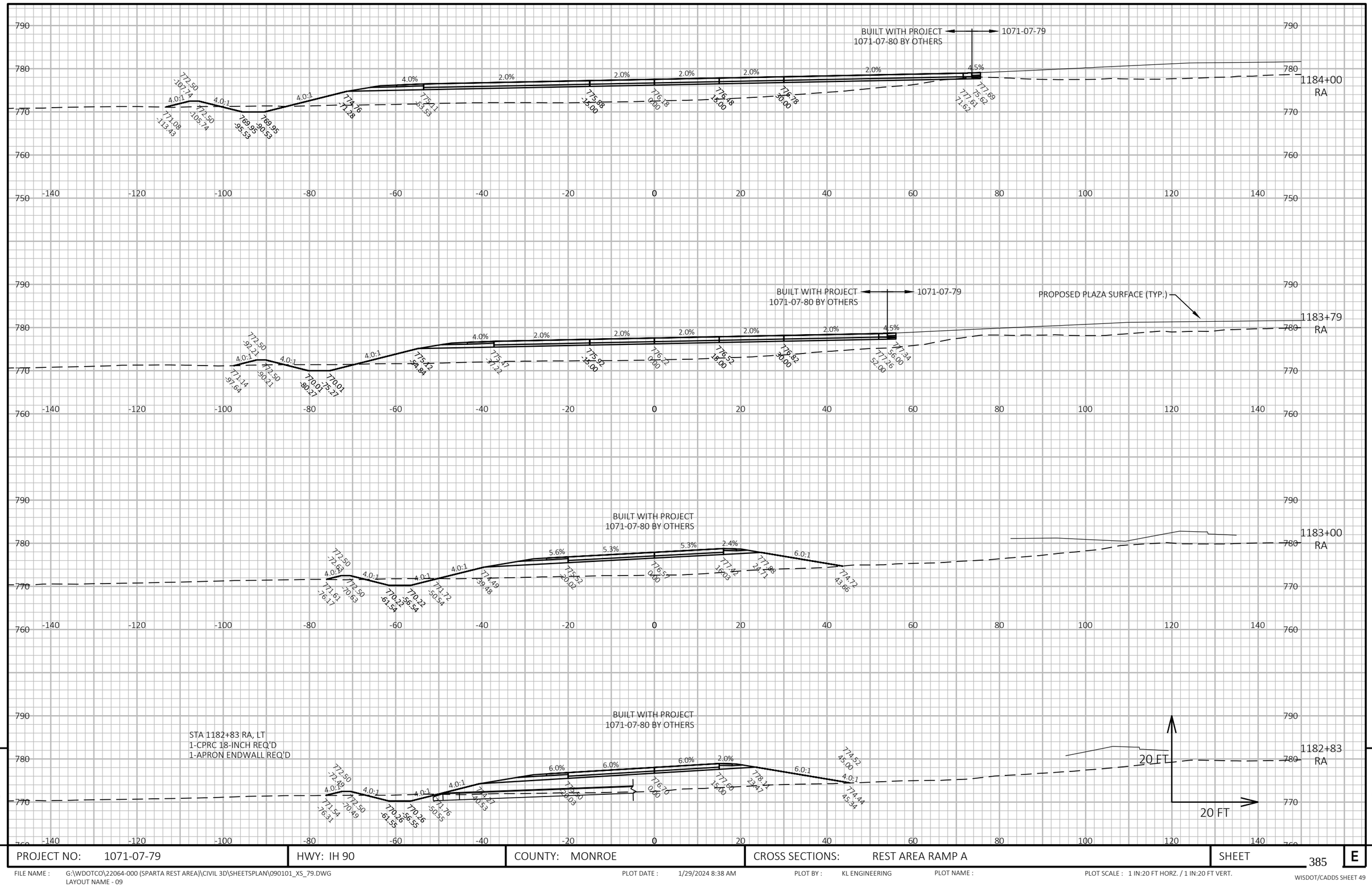
4 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

5 - WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)

6 - REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL

7 - REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL

8 - IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)



9

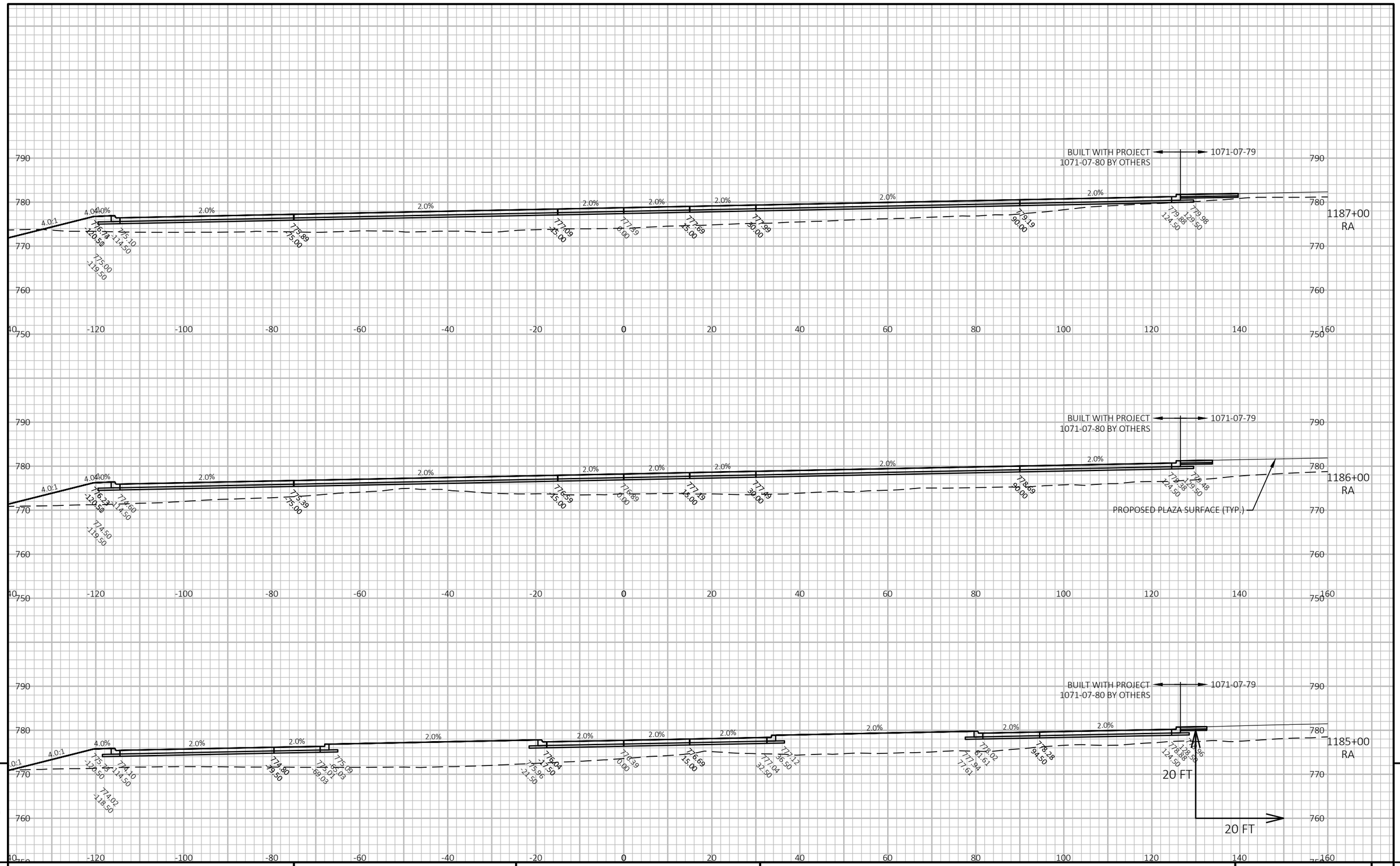
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PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: REST AREA RAMP A	SHEET 385	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\090101_XS_79.DWG
LAYOUT NAME - 09

PLOT DATE : 1/29/2024 8:38 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

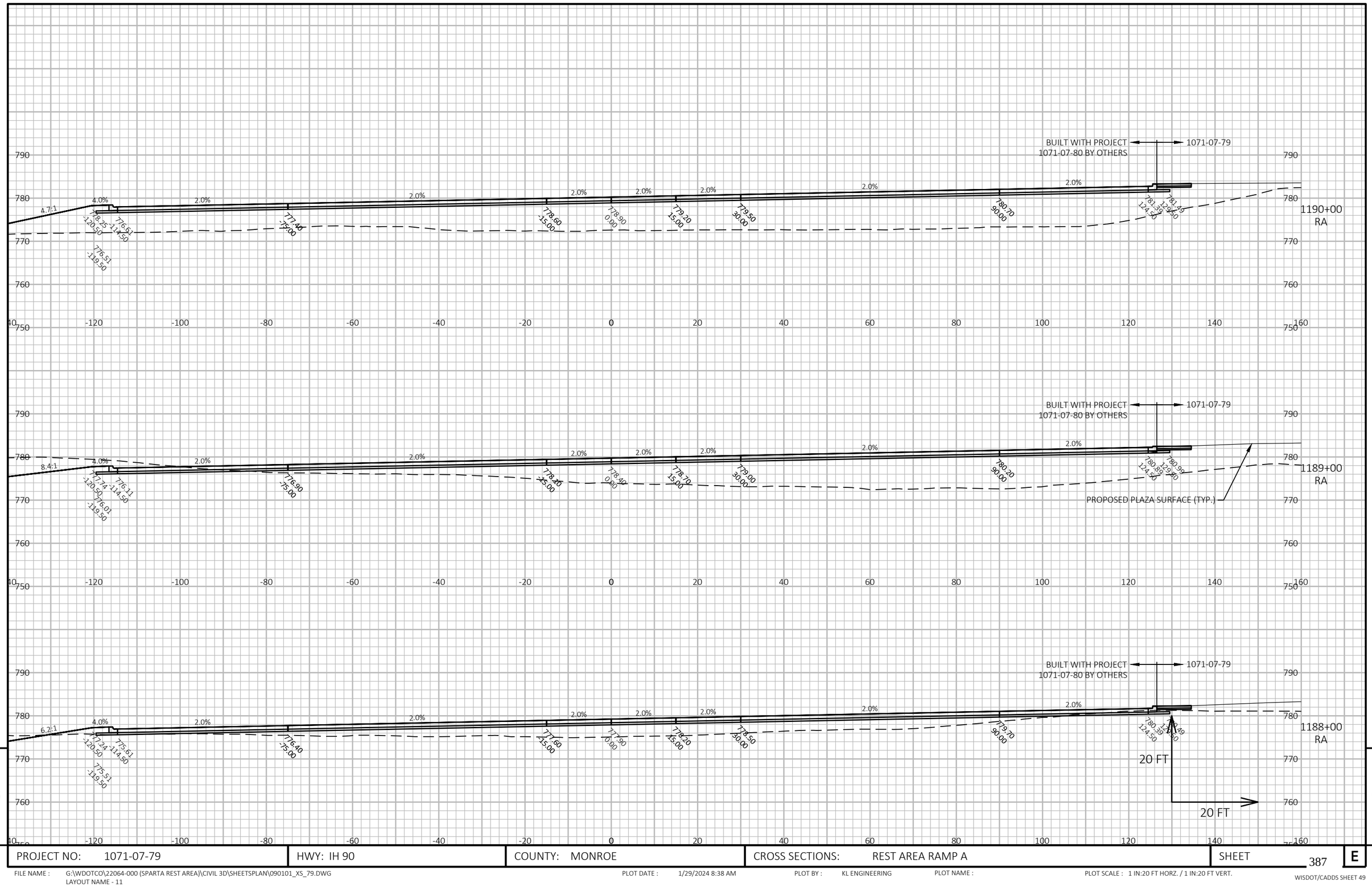
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PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: REST AREA RAMP A	SHEET 386	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\090101_XS_79.DWG
LAYOUT NAME - 10

PLOT DATE : 1/29/2024 8:38 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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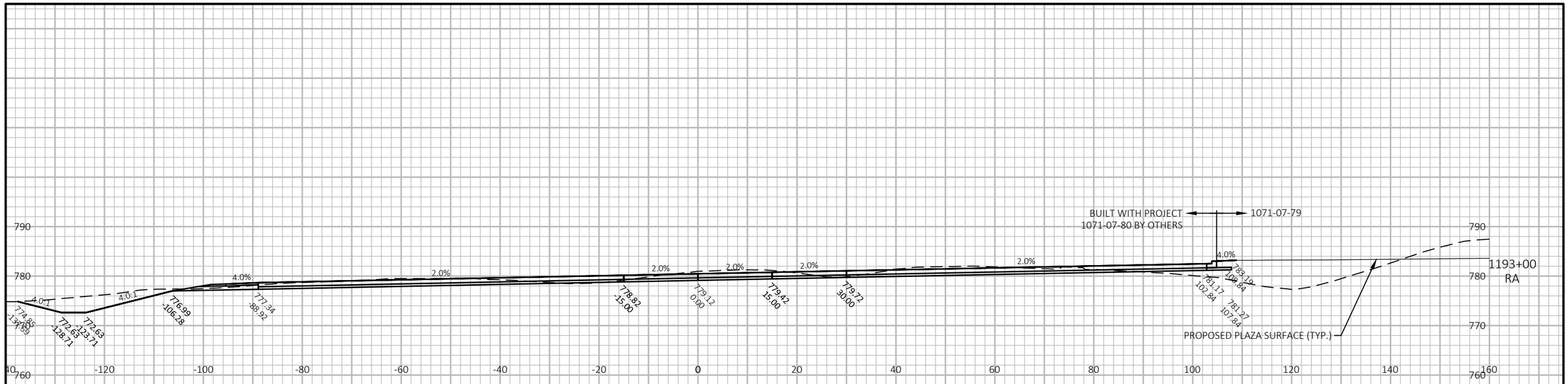
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PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: REST AREA RAMP A	SHEET 387	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\090101_XS_79.DWG
LAYOUT NAME - 11

PLOT DATE : 1/29/2024 8:38 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

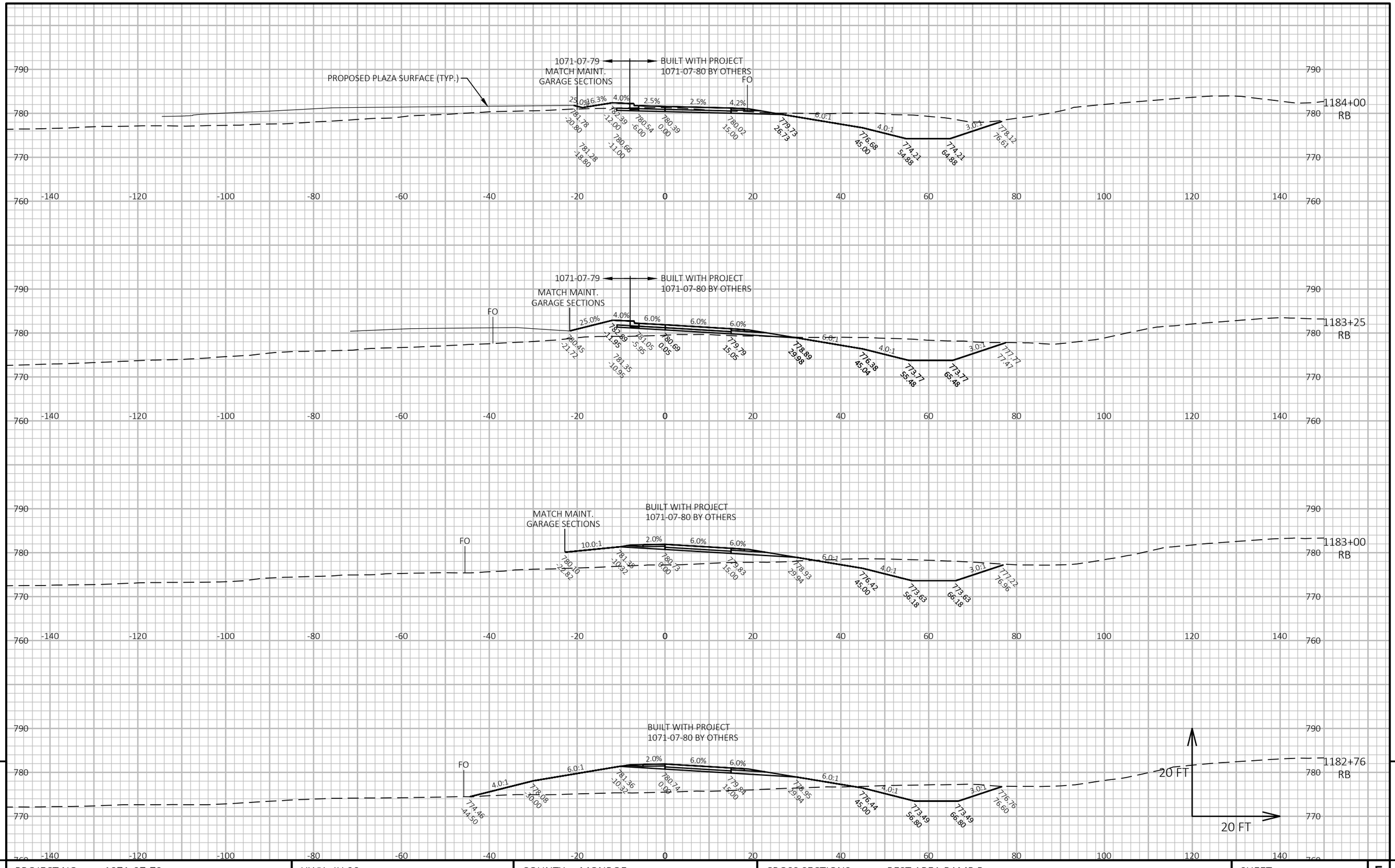
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PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: REST AREA RAMP A	SHEET 388	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\090101_XS_79.DWG
LAYOUT NAME - 12

PLOT DATE : 1/29/2024 8:38 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



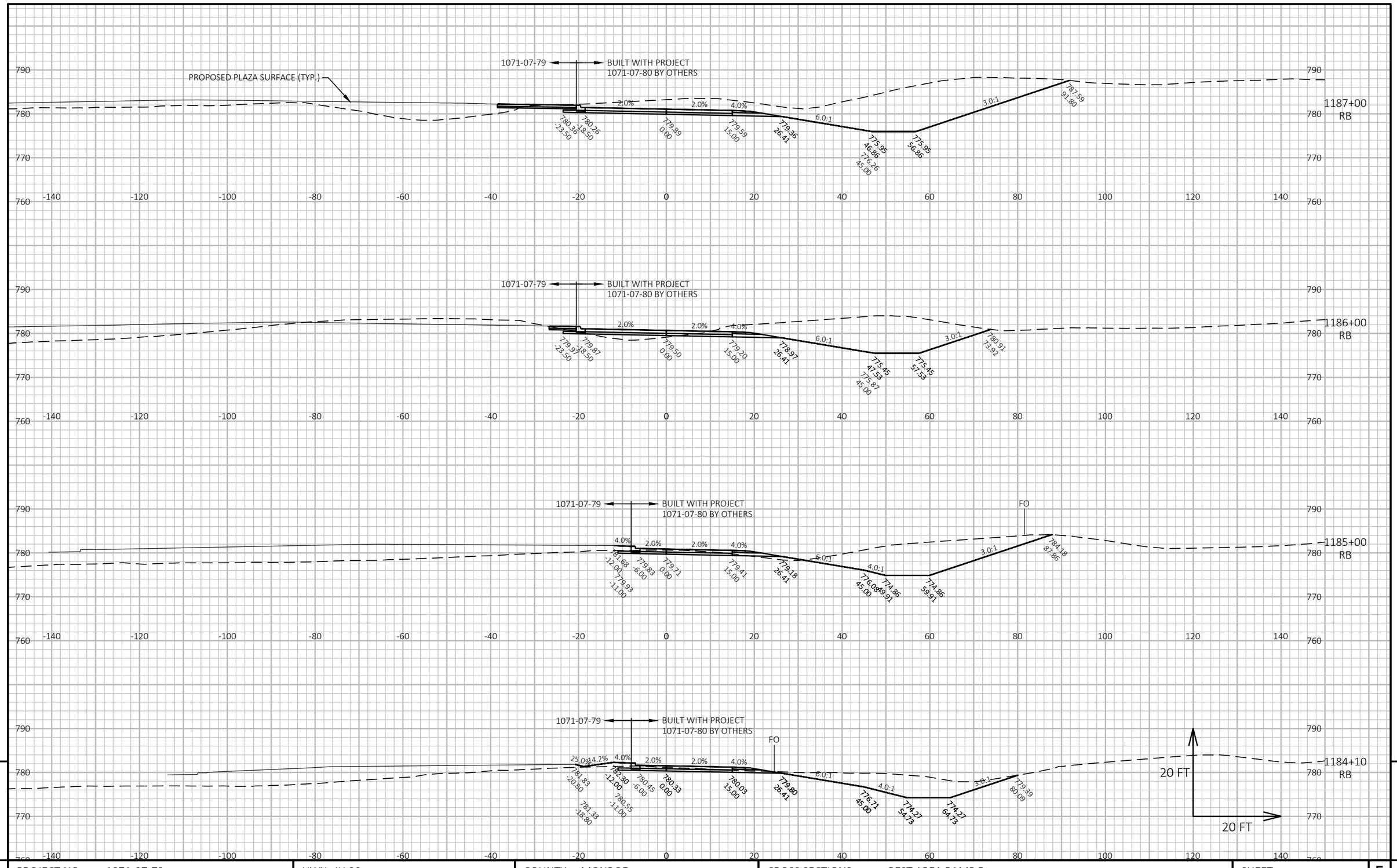
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PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: REST AREA RAMP B	SHEET 389	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\090102_XS_79.DWG
LAYOUT NAME - 17

PLOT DATE : 1/31/2024 11:41 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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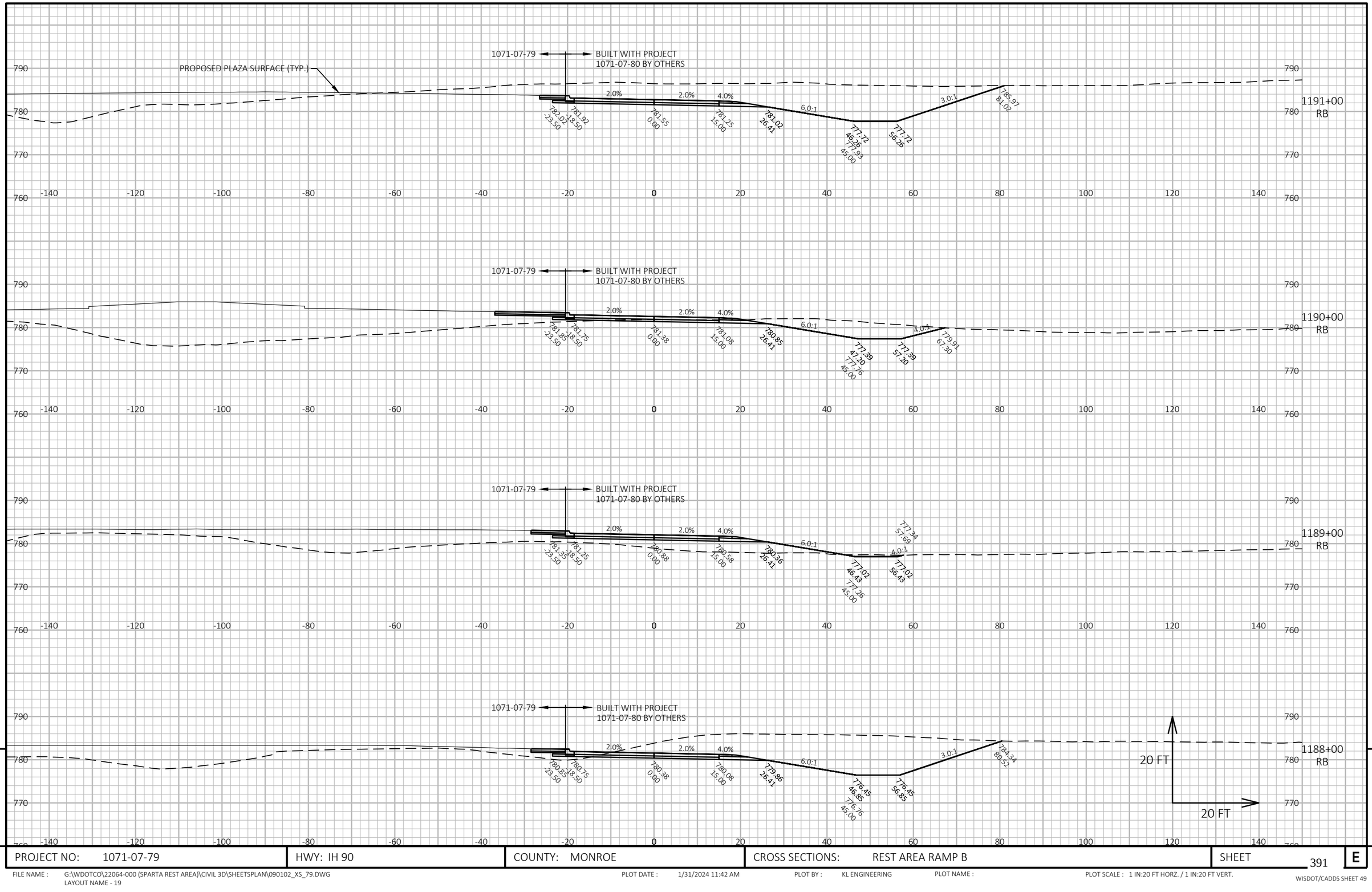
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PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: REST AREA RAMP B	SHEET 390	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\090102_XS_79.DWG
LAYOUT NAME - 18

PLOT DATE : 1/31/2024 11:41 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

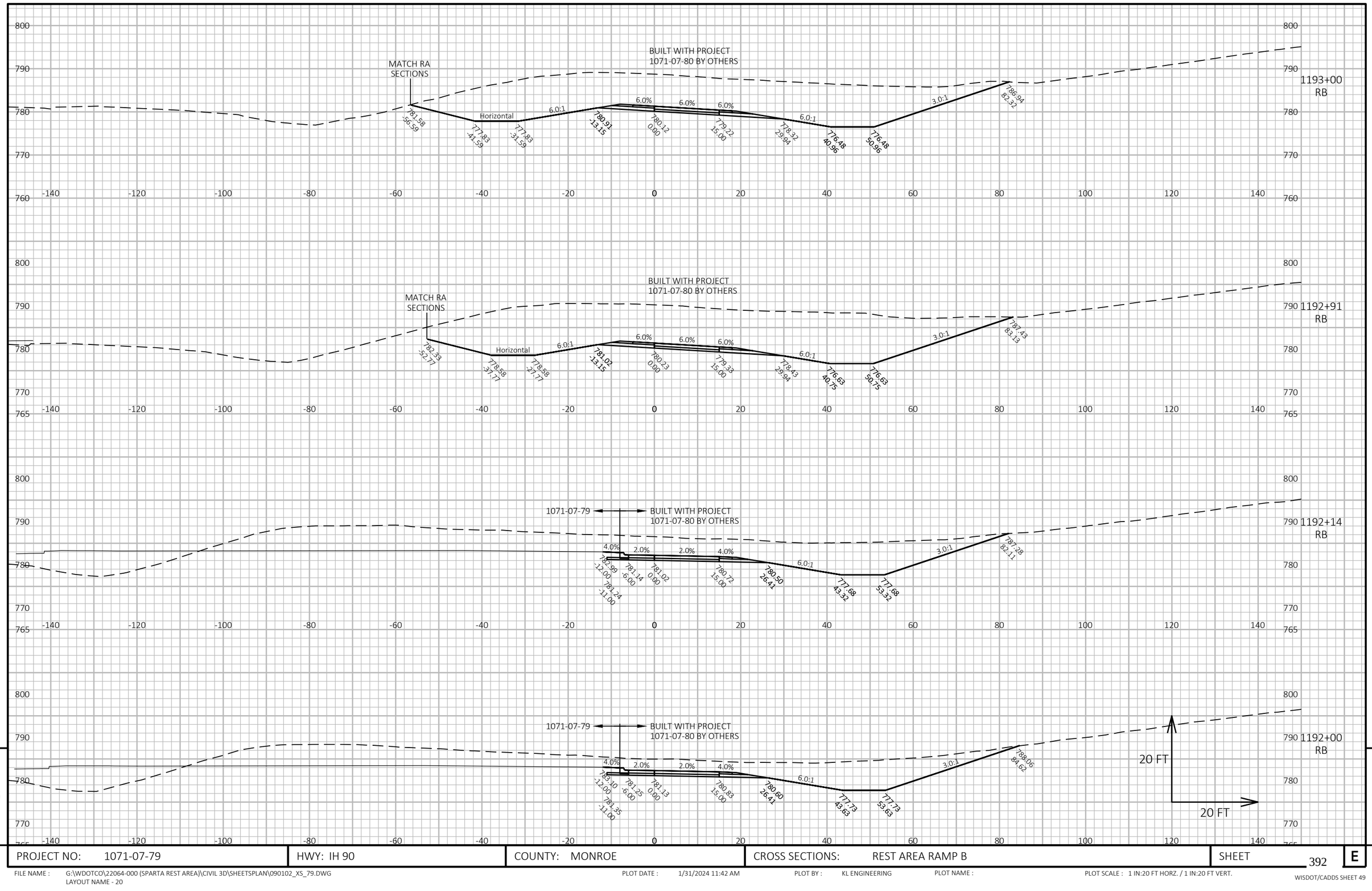


PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: REST AREA RAMP B	SHEET 391 E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\090102_XS_79.DWG
LAYOUT NAME - 19

PLOT DATE : 1/31/2024 11:42 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

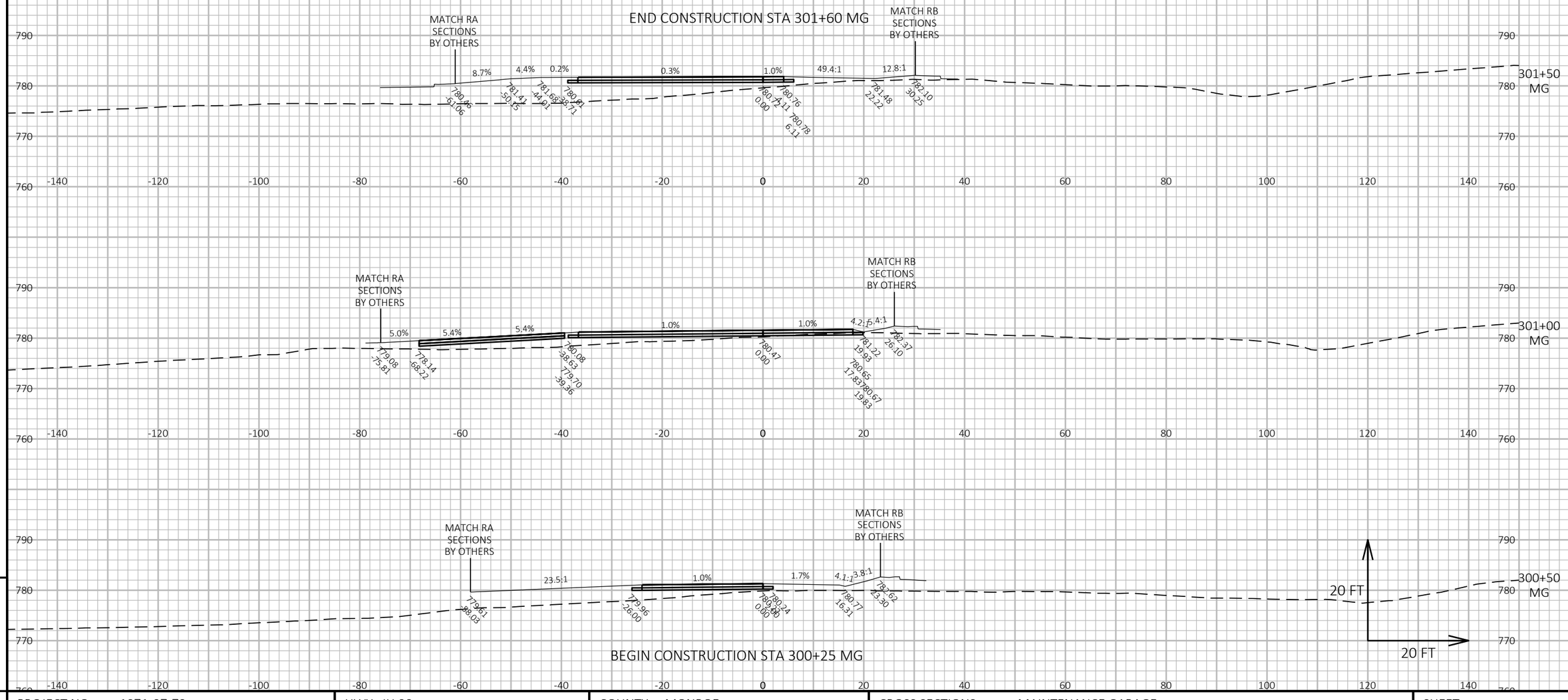


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LAYOUT NAME - 20

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WISDOT/CADDS SHEET 49

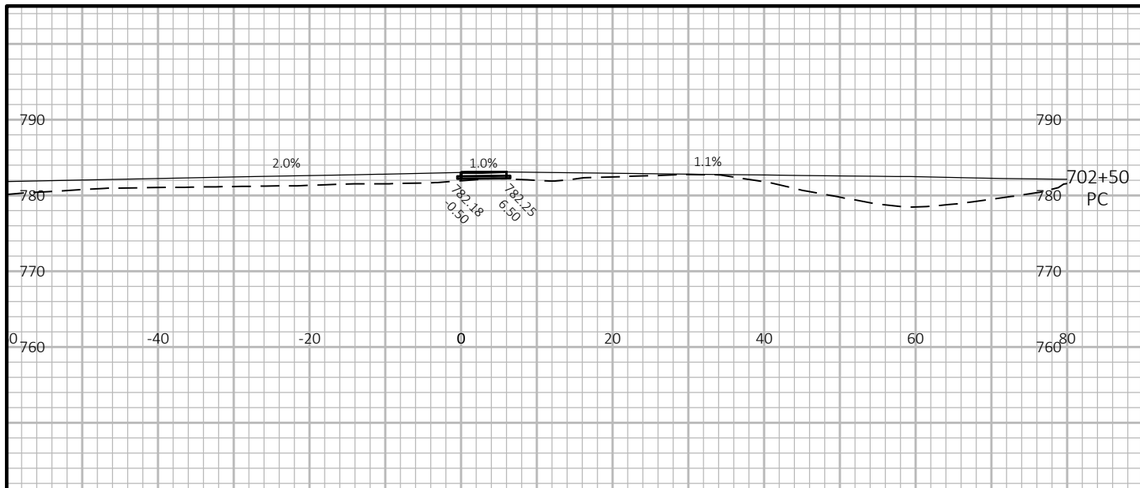


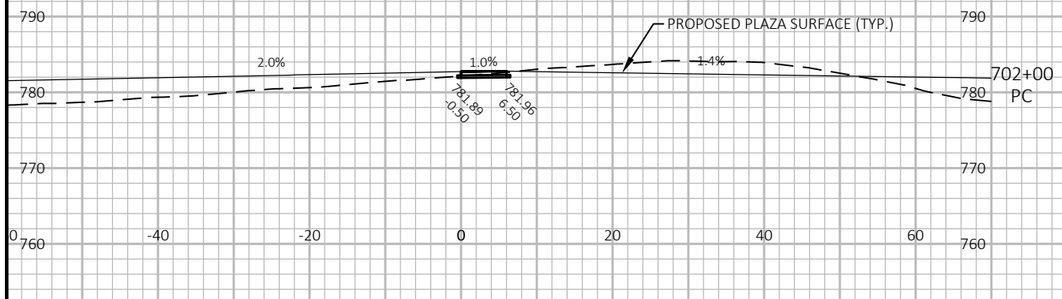
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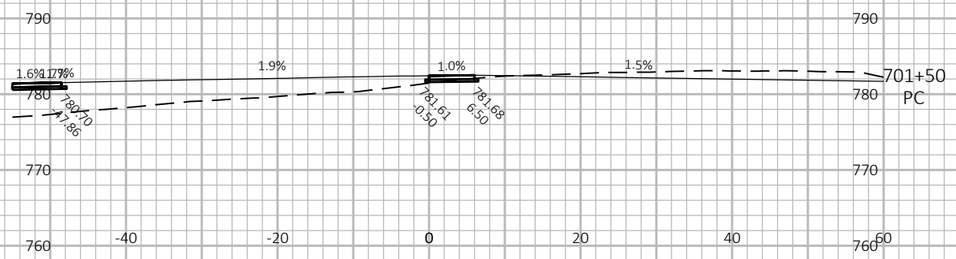
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LAYOUT NAME - 1 79

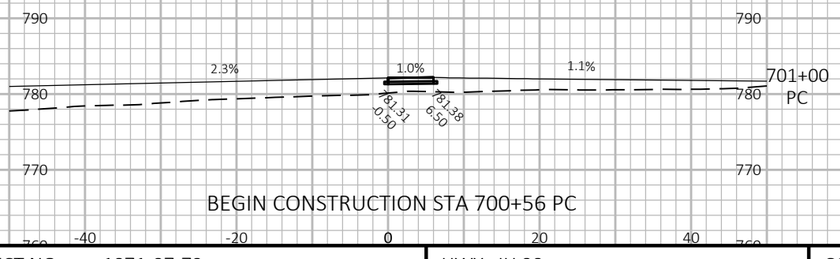
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WISDOT/CADDS SHEET 49

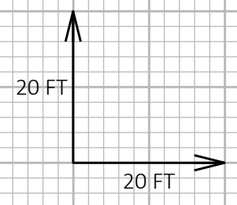








BEGIN CONSTRUCTION STA 700+56 PC



9

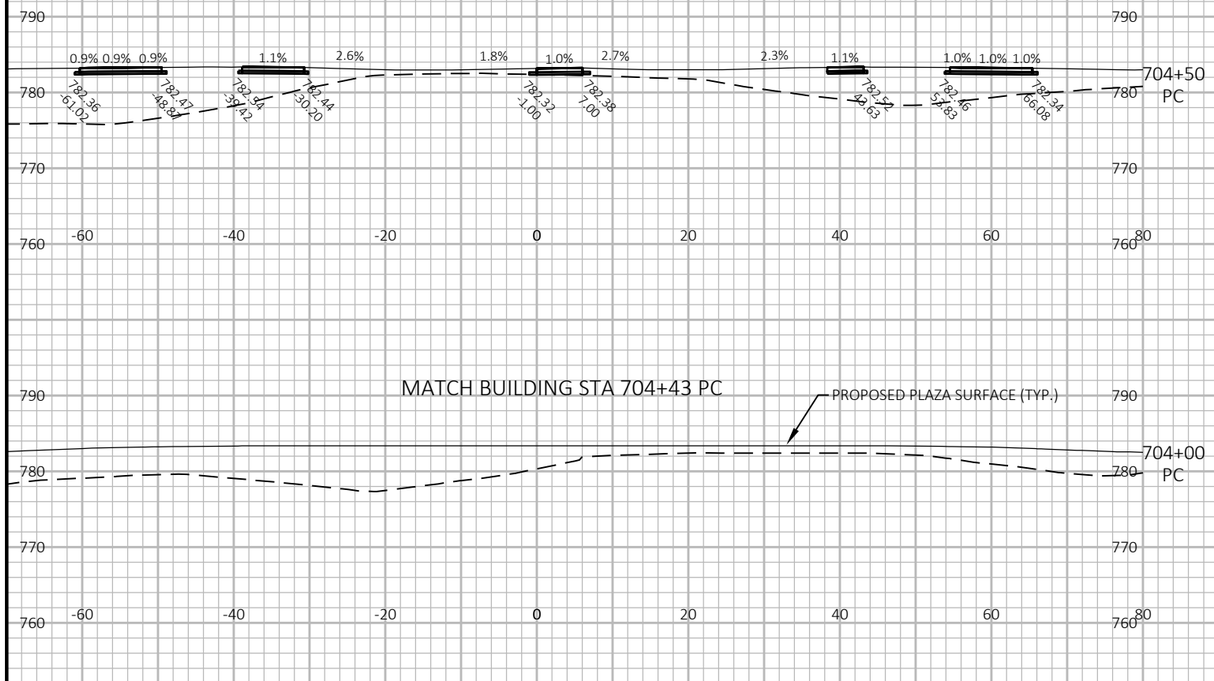
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PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PLAZA CENTERLINE SIDEWALK	SHEET 394	E

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LAYOUT NAME - 2 79

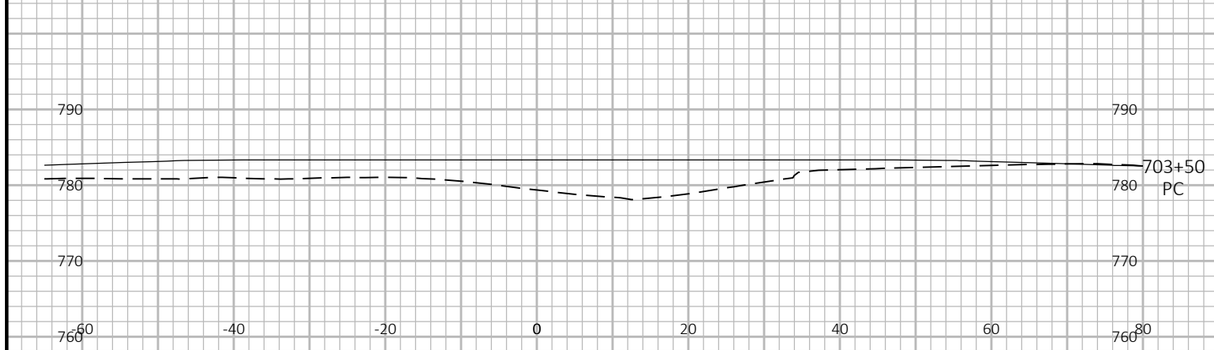
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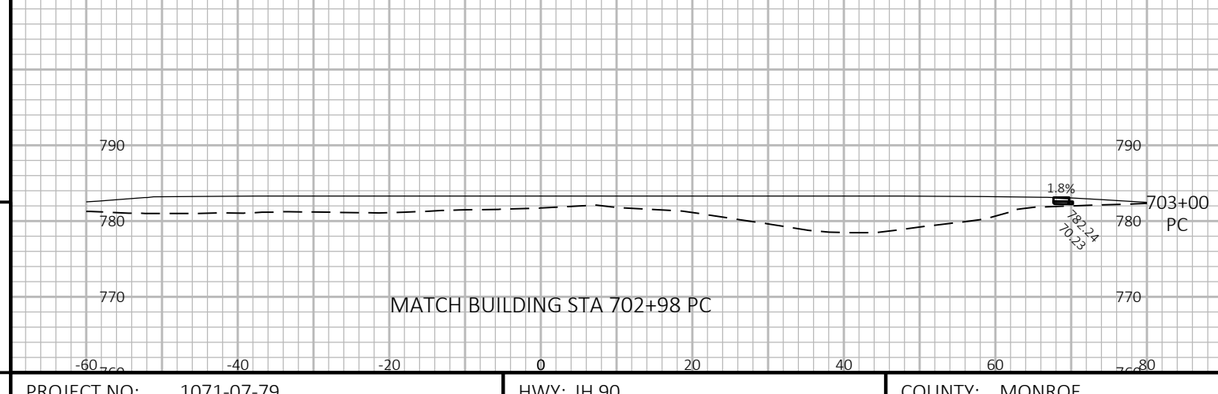
WISDOT/CADDS SHEET 49



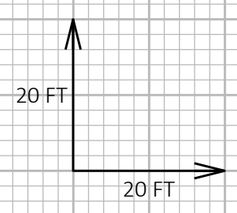
MATCH BUILDING STA 704+43 PC

PROPOSED PLAZA SURFACE (TYP.)





MATCH BUILDING STA 702+98 PC



9

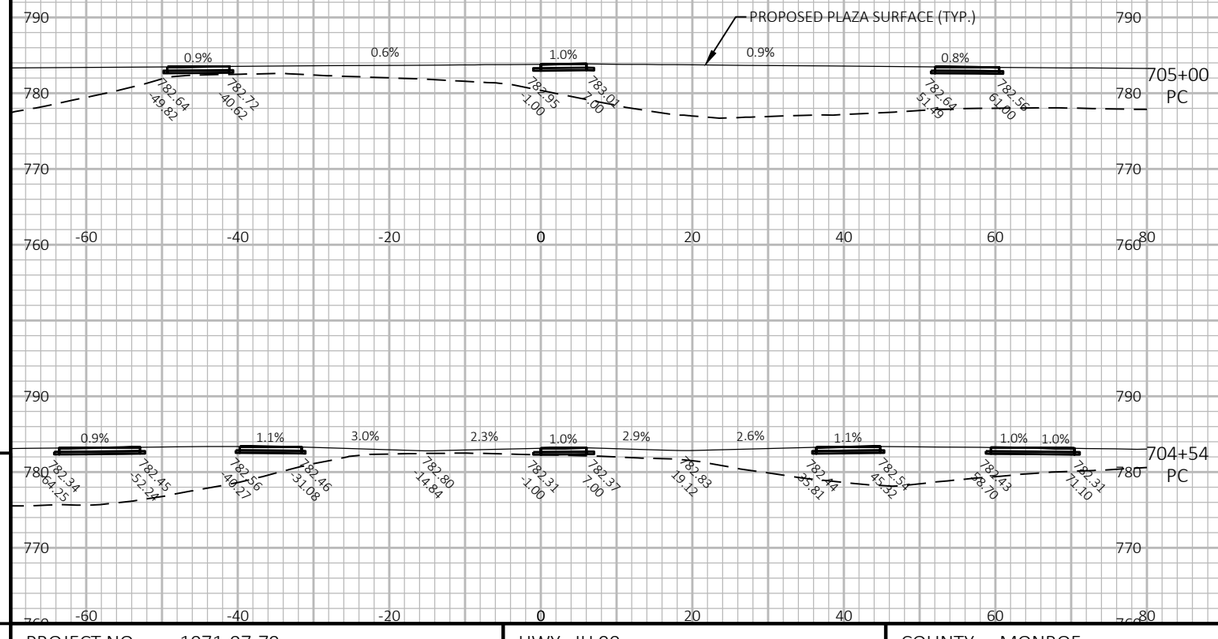
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PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PLAZA CENTERLINE SIDEWALK	SHEET 395	E

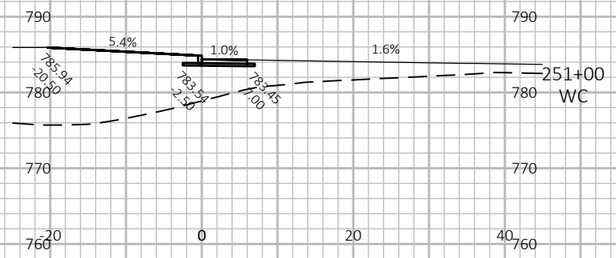
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LAYOUT NAME - 3 79

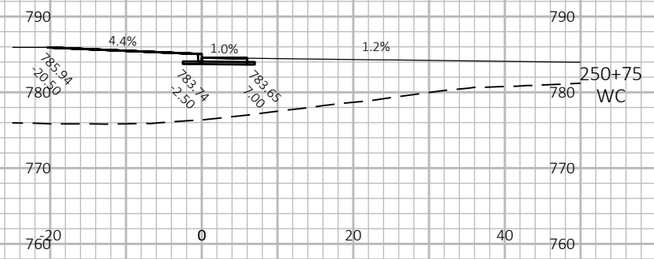
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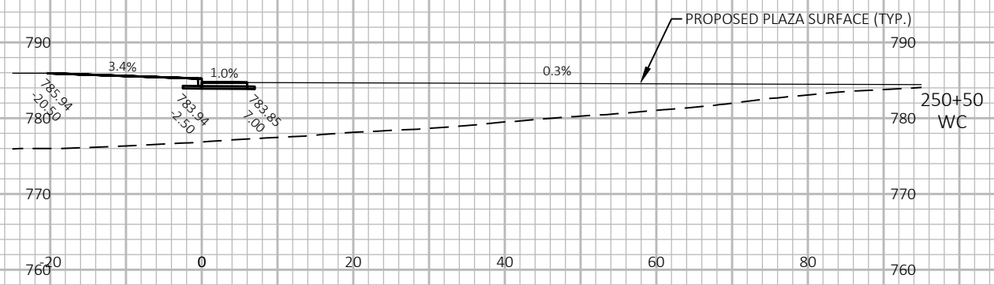
END CONSTRUCTION STA 705+36 PC

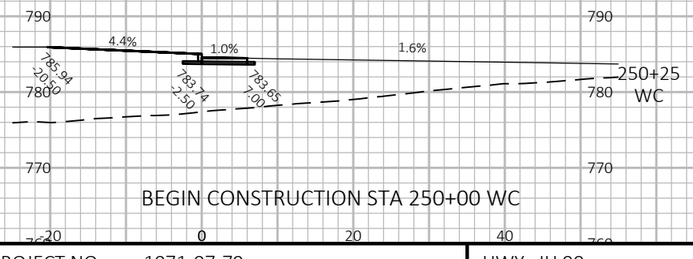


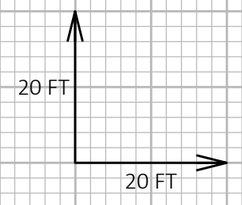
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9

9

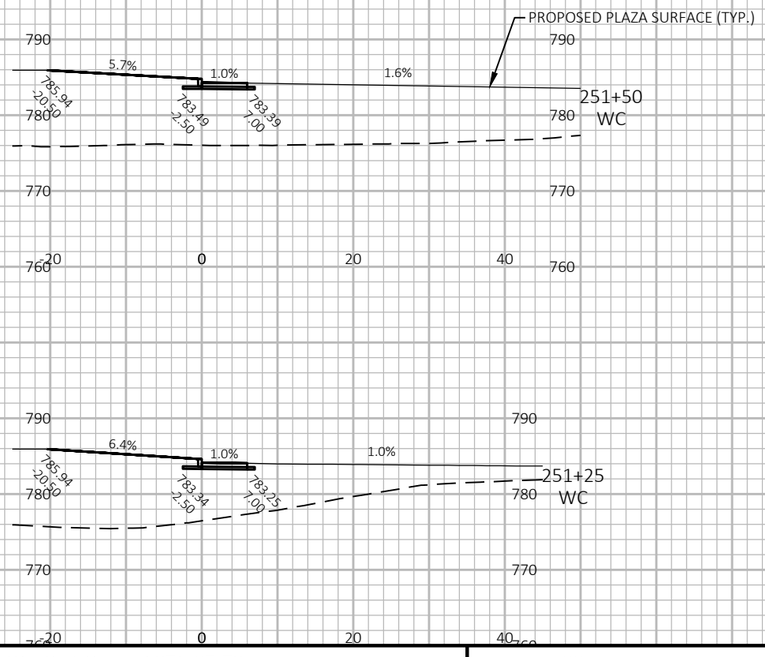
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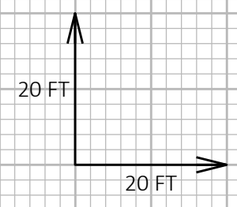
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LAYOUT NAME - 5 79

PLOT DATE : 1/31/2024 12:04 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION STA 251+57 WC





9

9

PROJECT NO: 1071-07-79	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: WALKING CIRCLE	SHEET 398	E

FILE NAME : G:\WDOTCO\22064-000 (SPARTA REST AREA)\CIVIL 3D\SHEETSPLAN\090103_XS.DWG
LAYOUT NAME - 6 79

PLOT DATE : 1/31/2024 12:05 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Notes

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