

GOVERNING SPECIFICATIONS

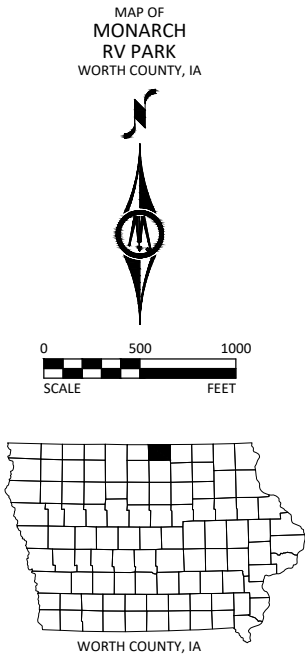
THE 2026 EDITION OF THE "IOWA STATEWIDE URBAN SPECIFICATIONS FOR PUBLIC IMPROVEMENTS" AND MUTCD 2009 AS ADOPTED BY IOWA DEPARTMENT OF TRANSPORTATION.

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITHIN THE CONSTRUCTION OF THIS PROJECT.



NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY IOWA ONE CALL 1-800-292-8989 OR 811

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES".



WORTH COUNTY CONSERVATION

CONSTRUCTION PLANS FOR

MONARCH RV PARK IMPLEMENTATION

JULY 2026



PROJECT LOCATION

Sheet Number	Sheet Title
A.01 - A.02	TITLE SHEET & LEGEND
A.03	GENERAL NOTES
B.01 - B.03	TYPICAL SECTIONS & DETAILS
C.01	ESTIMATED PROJECT QUANTITIES
C.02 - C.03	ESTIMATE REFERENCE NOTES
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D.03 - D.05	PLAN & PROFILE SHEETS
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M.01 - M.03	PROPOSED UTILITY SHEETS
R.01	GRADING & EROSION CONTROL
S.01 - S.03	STRUCTURAL FOUNDATION PLAN & DETAILS
U.01	SPECIAL DETAILS
THIS PLAN SET CONTAINS <u>28</u> SHEETS.	

	I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA. Robert A. Hedgepeth, P.E. LICENSE NUMBER: <u>14212</u> DATE: _____ MY LICENSE RENEWAL DATE IS <u>12/31/2027</u> PAGES OR SHEETS COVERED BY THIS SEAL: <u>'E' SERIES</u>
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WORTH COUNTY CONSERVATION, IOWA
MONARCH RV PARK IMPLEMENTATION

TITLE SHEET

SHEET

A.01

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EXISTING TOPOGRAPHIC SYMBOLS

	ACCESS GRATE		REGULATION STATION GAS
	AIR CONDITION UNIT		SATELLITE DISH
	ANTENNA		SIGN TRAFFIC
	AUTO SPRINKLER CONNECTION		SIGNAL CONTROL CABINET
	BARRICADE PERMANENT		SOIL BORING
	BASKETBALL POST		SIREN
	BENCH		TELEPHONE BOOTH
	BIRD FEEDER		TILE INLET
	BOLLARD		TILE OUTLET
	BUSH		TILE RISER
	CATCH BASIN RECTANGULAR CASTING		TRANSFORMER-ELECTRIC
	CATCH BASIN CIRCULAR CASTING		TREE-CONIFEROUS
	CURB STOP		TREE-DEAD
	CLEAN OUT		TREE-DECIDUOUS
	CULVERT END		TREE STUMP
	DRINKING FOUNTAIN		TRAFFIC ARM BARRIER
	DOWN SPOUT		TRAFFIC SIGNAL
	ELECTRIC CAR CHARGE STATION		TRASH CAN
	FILL PIPE		UTILITY MARKER
	FIRE HYDRANT		VALVE
	FLAG POLE		VALVE POST INDICATOR
	FLARED END / APRON		VALVE VAULT
	FUEL PUMP		VAULT
	GRILL		VENT PIPE
	GUY WIRE ANCHOR		WATER SPIGOT
	HANDHOLE		WELL
	HANDICAP SPACE		WETLAND DELINEATED MARKER
	IRRIGATION SPRINKLER HEAD		WETLAND
	IRRIGATION VALVE BOX		WET WELL
	LIFT STATION CONTROL PANEL		YARD HYDRANT
	LIFT STATION		
	LIGHT POLE		
	MAILBOX		
	MANHOLE-COMMUNICATION		
	MANHOLE-ELECTRIC		
	MANHOLE-GAS		
	MANHOLE-HEAT		
	MANHOLE-RECLAIMED WATER		
	MANHOLE-SANITARY SEWER		
	MANHOLE-STORM SEWER		
	MANHOLE-UTILITY		
	MANHOLE-WATER		
	METER		
	DRIVE-THRU MICROPHONE		
	PARKING METER		
	PAVEMENT MARKING		
	PEDESTAL-COMMUNICATION		
	PEDESTAL-ELECTRIC		
	PEDESTRIAN PUSH BUTTON		
	PICNIC TABLE		
	POLE-UTILITY		
	POST		
	RAILROAD SIGNAL POLE		

PROPOSED TOPOGRAPHIC SYMBOLS

	CLEANOUT
	MANHOLE
	LIFT STATION
	STORM SEWER CIRCULAR CASTING
	STORM SEWER RECTANGULAR CASTING
	STORM SEWER FLARED END / APRON
	STORM SEWER OUTLET STRUCTURE
	STORM SEWER OVERFLOW STRUCTURE
	CURB BOX
	FIRE HYDRANT
	WATER VALVE
	WATER REDUCER
	WATER BEND
	WATER TEE
	WATER CROSS
	WATER SLEEVE
	WATER CAP / PLUG
	RIP RAP
	DRAINAGE FLOW
	TRAFFIC SIGNS
	LIGHT POLE

SURVEY SYMBOLS

	BENCHMARK LOCATION		CAST IRON MONUMENT
	CONTROL POINT		STONE MONUMENT
	MONUMENT FOUND		

EXISTING TOPOGRAPHIC LINES

	RETAINING WALL
	FENCE
	FENCE-DECORATIVE
	GUARD RAIL
	TREE LINE
	BUSH LINE

SURVEY LINES

	CONTROLLED ACCESS
	BOUNDARY
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	SETBACK LINE
	SECTION LINE
	QUARTER LINE
	SIXTEENTH LINE
	TEMPORARY EASEMENT

EXISTING UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATER MAIN
	WATER SERVICE
	RECLAIMED WATER

PROPOSED UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATER MAIN
	WATER SERVICE
	PIPE CASING
	TRENCHLESS PIPE (PLAN VIEW)
	TRENCHLESS PIPE (PROFILE VIEW)

GRADING INFORMATION

	EXISTING CONTOUR MINOR
	EXISTING CONTOUR MAJOR
	PROPOSED CONTOUR MINOR
	PROPOSED CONTOUR MAJOR
	PROPOSED GRADING LIMITS / SLOPE LIMITS
	PROJECT LIMITS
	PROPOSED SPOT ELEVATION
	RISE:RUN (SLOPE)

EXISTING PRIVATE UTILITY LINES

NOTE:
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	UNDERGROUND FIBER OPTIC
	UNDERGROUND ELECTRIC
	UNDERGROUND GAS
	UNDERGROUND COMMUNICATION
	OVERHEAD ELECTRIC
	OVERHEAD COMMUNICATION
	OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL OTHER THAN D:

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-22.

UTILITY QUALITY LEVELS:

LEVEL D - INFORMATION COMES SOLELY FROM EXISTING UTILITY RECORDS.

LEVEL C - SURVEYING ABOVE GROUND UTILITY FACILITIES, SUCH AS MANHOLES, VALVE BOXES, ETC; AND CORRELATING THIS INFORMATION WITH EXISTING UTILITY RECORDS.

LEVEL B - THE USE OF SURFACE GEOPHYSICAL TECHNIQUES TO DETERMINE THE EXISTENCE AND HORIZONTAL POSITION OF UNDERGROUND UTILITIES.

LEVEL A - THE USE OF NONDESTRUCTIVE DIGGING EQUIPMENT AT HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GV	GATE VALVE	SAN	SANITARY SEWER
ADJ	ADJUST	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
ALT	ALTERNATE	HH	HANDHOLE	SERV	SERVICE
B-B	BACK TO BACK	HMA	HOT MIX ASPHALT	SHLD	SHOULDER
BLDG	BUILDING	HP	HIGH POINT	STA	STATION
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STD	STANDARD
BR	BEGIN RADIUS	HYD	HYDRANT	STM	STORM SEWER
BV	BUTTERFLY VALVE	I	INVERT	TC	TOP OF CURB
CB	CATCH BASIN	K	CURVE COEFFICIENT	TE	TEMPORARY EASEMENT
C&G	CURB AND GUTTER	L	LENGTH	TEMP	TEMPORARY
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TNH	TOP NUT HYDRANT
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TP	TOP OF PIPE
CL	CENTER LINE	LT	LEFT	TYP	TYPICAL
CL	CLASS	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CSP	CORRUGATED STEEL PIPE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CLVT	CULVERT	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL	WS	WATER SERVICE
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE		
E	EXTERNAL CURVE DISTANCE	PCC	PORTLAND CEMENT CONCRETE	AC	ACRES
ESMT	EASEMENT	PE	PERMANENT EASEMENT	CF	CUBIC FEET
ELEC	ELECTRIC	PED	PEDESTRIAN, PEDESTAL	CV	COMPACTED VOLUME
ELEV/EL	ELEVATION	PERF	PERFORATED PIPE	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERM	PERMANENT	EA	EACH
ER	END RADIUS	PI	POINT OF INTERSECTION	EV	EXCAVATED VOLUME
EX	EXISTING	PL	PROPERTY LINE	LB	POUND
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LF	LINEAR FEET
F-F	FACE TO FACE	PT	POINT OF TANGENT	LS	LUMP SUM
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	LV	LOOSE VOLUME
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SF	SQUARE FEET
FM	FORCEMAIN	R	RADIUS	SV	STOCKPILE VOLUME
FO	FIBER OPTIC	RCP	REINFORCED CONCRETE PIPE	SY	SQUARE YARD
F.O.	FIELD ORDER	RET	RETAINING		
GRAN	GRANULAR	R/W	RIGHT-OF-WAY		
GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT		
GU	GUTTER	RT	RIGHT		



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WORTH COUNTY CONSERVATION, IOWA

MONARCH RV PARK IMPLEMENTATION

LEGEND

SHEET

A.02

GENERAL NOTES

THE SITE SHALL BE MAINTAINED IN COMPLIANCE WITH ALL APPLICABLE COUNTY CODES.

INSPECTION: THE CONTRACTOR SHALL CONTACT THE ENGINEER 48 HOURS BEFORE BEGINNING CONSTRUCTION.
THE CONTRACTOR SHALL CONTACT JOHN ARP AT 641-425-5113 TO SCHEDULE AN ELECTRICAL INSPECTION AT LEAST 48 HOURS BEFORE COMPLETION OF THE ELECTRICAL WORK.
THE CONTRACTOR SHALL CONTACT AJ STONE AT 641-430-1410 TO SCHEDULE A PLUMBING INSPECTION AT LEAST 48 HOURS BEFORE COMPLETION OF PLUMBING WORK.
INSPECTION OF ITEMS WILL BE COMPLETED BY WORTH COUNTY CONSERVATION STAFF OR BY THE ENGINEERING CONSULTANT.

NO SMOKING: THERE IS NO SMOKING PERMITTED ON COUNTY PROPERTY.

REVIEW AND ACCEPTANCE: THE CONTRACTOR'S WORK SHALL MEET SPECIFICATION AND SHALL BE REVIEWED AND ACCEPTED BY THE ENGINEER. CONSTRUCTION ITEMS WHICH ARE SUBJECT TO ENHANCED SCRUTINY BY THE ENGINEER INCLUDE:

- PAVED SURFACES SHALL BE FREE OF DEPRESSIONS WHICH HOLD WATER.
- CONCRETE EDGES SHALL BE TRUE. CONCRETE EDGES WHICH ARE UNEVEN, WAVY, OR INCLUDE INCONSISTENT CHAMFERS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- JOINT WIDTH AND ALIGNMENT SHALL BE TRUE AND CONSISTENT.
- USE OF SELF-LEVELING GROUT OR OTHER METHODS TO REPAIR POOR WORKMANSHIP, SURFACE DEPRESSIONS, POOR FINISHING, ETC. SHALL NOT BE PERMITTED FOR NEWLY PAVED SURFACES.

UTILITIES: THE CONTRACTOR SHALL COORDINATE WORK WITH THE COUNTY AND UTILITY COMPANIES WITH RESPECT TO PROTECTING, RELOCATING, AND CONSTRUCTING UTILITY FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING EACH UTILITY'S GUIDELINES FOR PROTECTING ITS FACILITIES AND SHALL EXERCISE ALL DUE CAUTION, USING CONSTRUCTION METHODS AND EQUIPMENT TO COMPLETE THE WORK WITHOUT DAMAGING UTILITIES.

THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES, OTHER THAN THOSE SHOWN ON THE PLANS, MAY BE PRESENT.

CONSTRUCTION LIMITS: THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR SHALL NOT PARK, SERVICE VEHICLES AND EQUIPMENT, OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING, AND SERVICE AREA(S) WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER OR AS DESIGNATED IN THE PLANS. THE CONTRACTOR SHALL ACCESS THE SITE IN A MANNER THAT DOES NOT DAMAGE EXISTING PAVED SURFACES, SIDEWALKS, AND TRAILS THAT ARE NOT DESIGNATED TO BE REPLACED. ANY DAMAGE TO THESE SURFACES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOT DRIVE EQUIPMENT WITHIN THE DRIP LINE OF TREES.

WORK SEQUENCE: FINAL GRADING SHALL FOLLOW COMPLETION OF PAVING AS SOON AS POSSIBLE. IF THE ENGINEER DETERMINES THE PROGRESS OF THE WORK IS UNSATISFACTORY, PARTIAL PAYMENTS WILL BE WITHHELD IN FULL OR PART UNTIL SATISFACTORY PROGRESS IS MADE. CLEAN UP OF THE SITE IS REQUIRED WHEN WORK IS EITHER SUSPENDED OR COMPLETED.

PAVEMENT REMOVAL: EXISTING PAVEMENT TO BE REMOVED SHALL BE SAW-CUT AT REMOVAL LIMITS, FULL DEPTH, AND ALL PAVEMENT REMOVED UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. UNNECESSARY SURFACE BREAKS OR PREMATURE SPALLING THAT OCCURS DURING THE REMOVAL PROCESS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE REPAIR METHOD WILL BE SUBJECT TO THE ENGINEER'S APPROVAL. ALL ASPHALT AND CONCRETE REMOVED FOR THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR DISPOSAL UNLESS OTHERWISE SPECIFIED IN THE PLANS.

ABANDONED UTILITY LINES: ALL REMOVAL AND DISPOSAL OF ABANDONED UTILITY LINES INCLUDING GAS MAINS, WATER MAINS, TELEPHONE CONDUITS, SERVICE LINES, ETC., REQUIRED TO COMPLETE THE WORK SHALL BE INCIDENTAL TO THE CONTRACT.

BACKFILLING HOLES: ALL HOLES RESULTING FROM OPERATIONS OF THE CONTRACTOR, INCLUDING REMOVAL OF SIGN POSTS, FENCE POSTS, UTILITY POLES, ETC. SHALL BE FILLED AND CONSOLIDATED TO FINISHED GRADE, AS APPROVED BY THE ENGINEER, TO PREVENT FUTURE SETTLEMENT AND SHALL BE FILLED IMMEDIATELY. ANY PORTION OF THE PROJECT LIMITS DISTURBED BY ANY SUCH OPERATIONS SHALL BE RESTORED TO AN ACCEPTABLE CONDITION. THIS OPERATION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

FINAL INSPECTION: THE CONTRACTOR SHALL HAVE A REPRESENTATIVE AT THE FINAL INSPECTION AND WILL BE RESPONSIBLE FOR OPENING ALL MANHOLES AND INTAKES FOR INSPECTION BY COUNTY PERSONNEL.

A PUNCH LIST WILL BE ASSEMBLED, AND THE CONTRACTOR WILL BE GIVEN A SCHEDULE FOR COMPLETING THE ITEMS ON THE PUNCH LIST. IF THE PUNCH LIST ITEMS ARE NOT COMPLETED WITHIN THE SPECIFIED TIME, WORKING DAYS WILL RESUME.

ADA REQUIREMENTS: ALL WORK SHALL BE CONSTRUCTED TO MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA). ANY WORK THAT DOES NOT MEET THESE REQUIREMENTS WILL BE CONSIDERED DEFECTIVE AND SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. THE COUNTY OR CONTRACT-SPECIFIED CONSTRUCTION SURVEY SHALL PROVIDE SURVEY STAKING FOR THE GENERAL LAYOUT. PRIOR TO PLACEMENT OF THE SURFACE MATERIAL, THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING THAT THE SLOPES OF ALL SURFACES ARE WITHIN THE ALLOWABLE RANGES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF SLOPES CANNOT BE CONSTRUCTED WITHIN THE ALLOWABLE RANGE. FOLLOWING PLACEMENT OF THE SURFACE MATERIAL, THE CONTRACTOR SHALL MEASURE THE ACTUAL SURFACE SLOPE TO VERIFY THAT THE SLOPE IS WITHIN ALLOWABLE RANGES.

THE COUNTY RESERVES THE RIGHT TO MEASURE THE SLOPES OF ANY SURFACE AFTER CONSTRUCTION. THERE IS NO TOLERANCE FOR SURFACES TO EXCEED THE MAXIMUM ALLOWABLE SLOPE. SURFACES THAT EXCEED THE MAXIMUM ALLOWABLE SLOPE WILL BE CONSIDERED DEFECTIVE AND SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

SITE CLEANUP: THE CONTRACTOR SHALL CLEAN ALL SURFACES PRIOR TO OPENING THE PROJECT TO THE PUBLIC. A PICKUP BROOM OR STREET SWEEPER THAT GENERATES MINIMAL DUST SHALL BE USED TO CLEAN PAVEMENT SURFACES. ALL COSTS FOR CLEANING SHALL BE INCIDENTAL TO THE CONTRACT.

STREET/LANE CLOSURE: THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF FIVE BUSINESS DAYS PRIOR TO ANY WORK ALONG ADJACENT STREETS WHICH AFFECTS TRAFFIC, INCLUDING PAVEMENT REMOVAL, PATCHING, INSTALLATION OF THE WATER SERVICE TAP, ETC., AND SHALL RECEIVE APPROVAL BEFORE CLOSING ANY LANES TO TRAFFIC.

RESTORATION: THE CONTRACTOR SHALL CONFINE OPERATIONS TO WITHIN THE GRADING LIMITS AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER. ALL TREES, SHRUBS, GRASS OR TURF BEYOND THE GRADING LIMITS THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO CHARGE TO THE COUNTY, TO THE CONDITION THAT EXISTED PRIOR TO CONSTRUCTION.

ALL GRASS SURFACES DISTURBED BY CONSTRUCTION SHALL BE SEEDED AS DIRECTED BY THE PLANS. THIS INCLUDES TURF AREAS DAMAGED BY EITHER CONSTRUCTION ACCESS OR CONSTRUCTION ACTIVITIES. PAYMENT SHALL BE FOR THOSE DISTURBED AREAS WITHIN THE GRADING LIMITS. THERE SHALL BE NO VEHICLE LOADS ON NEW PAVEMENT WHILE PLACING AND/OR WATERING SEED. HOSES MAY BE USED.

WASTE SITES: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL, BROKEN PAVEMENT, ETC.) THAT IS NOT TO BE INCORPORATED INTO THE WORK ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN THE COUNTY PROPERTY, UNLESS SPECIFICALLY STATED IN THE PLANS OR APPROVED BY THE ENGINEER. NO EXTERIOR DUMPSTERS WILL BE PROVIDED ON SITE.

REINFORCING STEEL: ALL REINFORCING STEEL DOWELS AND TIE BARS SHALL BE EPOXY-COATED UNLESS OTHERWISE NOTED.

TEMPORARY TRAFFIC AND PEDESTRIAN CONTROL NOTES

- NO FIELD MEASUREMENT WILL BE MADE FOR THE TEMPORARY TRAFFIC AND PEDESTRIAN CONTROL BID ITEM; THE CONTRACTOR WILL BE PAID THE CONTRACT LUMP SUM PRICE. SITE SECURITY AND SAFETY ARE THE RESPONSIBILITY OF THE CONTRACTOR, AND ADDITIONAL MEASURES BEYOND THOSE SHOWN IN THE PLANS MAY BE INSTALLED AT THE CONTRACTOR'S EXPENSE WITH THE APPROVAL OF THE ENGINEER.
- BEFORE EACH DAY'S WORK BEGINS, ALL TRAFFIC/PEDESTRIAN CONTROL SIGNS SHALL BE IN PLACE.
- THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, MOVE, AND REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES ON THE PROJECT. ALL SIGNS SHALL BE REFLECTORIZED AND CONFORM TO GUIDELINES SPECIFIED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." SIGNS MAY BE INSTALLED ON PORTABLE MOUNTING DEVICES, IF DESIRED.
- NO PAYMENT WILL BE MADE FOR CONTRACT ITEMS THAT ARE DAMAGED PRIOR TO PROJECT ACCEPTANCE.

GRADING NOTES

- FOR ROUGH GRADING, THE PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ON THE DRAWINGS INDICATE PROPOSED FINISH GRADES. GRADE TO SUBGRADE ELEVATIONS, EXCEPT FOR GENERAL LANDSCAPE AREAS, WHICH SHALL BE GRADED TO FINISH GRADE WITH SPECIFIED TOPSOIL WHICH SHALL BE GRADED TO FINISH GRADE.
- PRIOR TO PLACING TOPSOIL, TILL ALL SUBGRADE SOILS THAT WILL RECEIVE TOPSOIL TO A MINIMUM DEPTH OF 8 INCHES.
- SCREEN ALL TOPSOIL, INCLUDING ON-SITE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL, THROUGH A 1-INCH SCREEN PRIOR TO PLACEMENT.
- SPREAD TOPSOIL TO A UNIFORM, MINIMUM 6-INCH DEPTH AFTER COMPACTION, OVER ALL TURFGRASS AND LANDSCAPE AREAS WITHIN THE GRADING LIMITS. SPREAD TOPSOIL AFTER CONSTRUCTION OF PAVEMENTS, CURBING, FENCING, MAINTENANCE STRIPS, AND WALKS. COMPLETE SITE GRADING AND BRING TURFGRASS AND LANDSCAPE AREAS TO FINISH ELEVATIONS.
- BLADE SMOOTH WITH LIGHTWEIGHT GRADING EQUIPMENT WITH LARGE, WIDE TIRES, TO MAINTAIN GRADE UNIFORMITY WITHOUT OVER-COMPACTING THE TOPSOIL.
- FINISH GRADE TOLERANCE FOR GENERAL TOPSOIL AREAS: SURFACES SHALL NOT VARY BY MORE THAN 0.08' (1 INCH) ABOVE OR BELOW FINISH GRADE ELEVATIONS.

CONSTRUCTION STAKING

- CONSTRUCTION STAKING SHALL BE PROVIDED BY OWNER FOR THE FOLLOWING ACTIVITIES. A TOTAL OF THREE (3) TRIPS WILL BE PROVIDED TO THE SUCCESSFUL CONTRACTOR. BOLTON & MENK WILL PROVIDE THREE STAKING TRIPS TO STAKE THE FOLLOWING. EACH WILL BE PROVIDED ONCE AND ANY STAKES THAT ARE DAMAGED OR DESTROYED WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR TO COMPENSATE FOR REPLACEMENT.

- EARTHWORK: GRADE STAKES.
 - LAYOUT: PROVIDE OFFSET STAKES FOR LAYOUT OF CAMPSITES AND PROPOSED ROADS, PAVED AREAS, AND SIDEWALKS.
 - SHOWER HOUSE: PROPOSED BUILDING CORNERS
 - UTILITIES: LAYOUT OF WATER, SANITARY AND ELECTRICAL LINES.
- ANY STAKING REQUIRED BEYOND THE THREE TRIPS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND THE CONTRACTOR SHALL COMPENSTATE BOLTON & MENK DIRECTLY.



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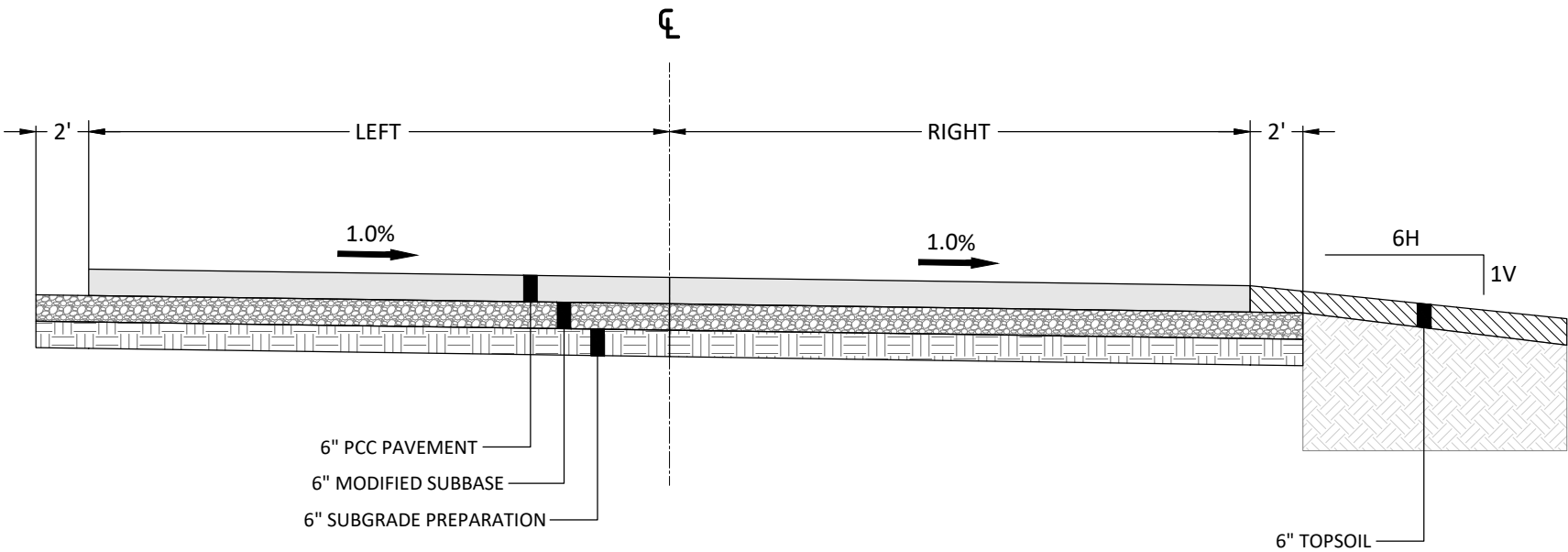
MONARCH RV PARK IMPLEMENTATION

GENERAL NOTES

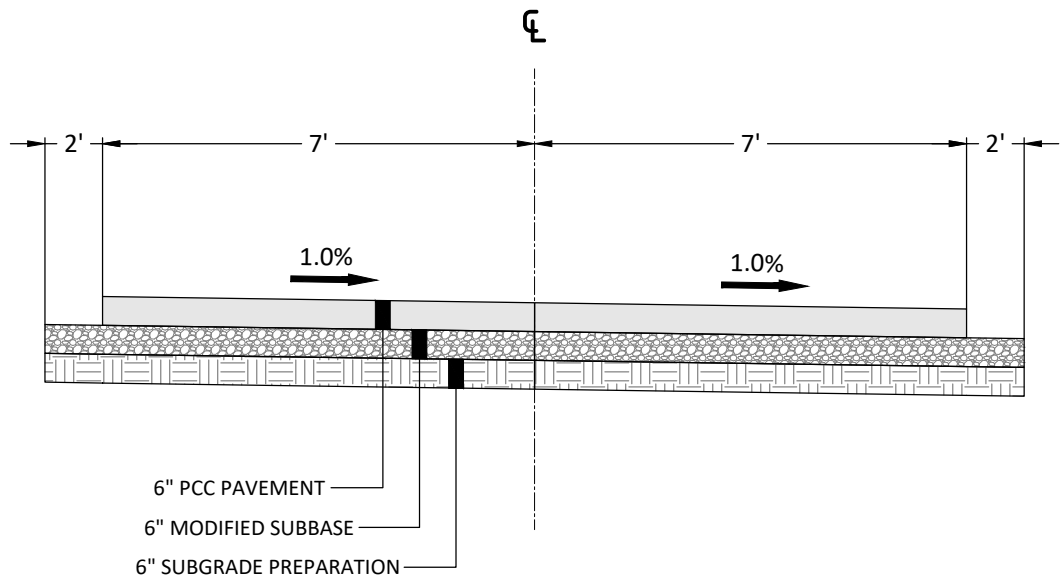
SHEET

A.03

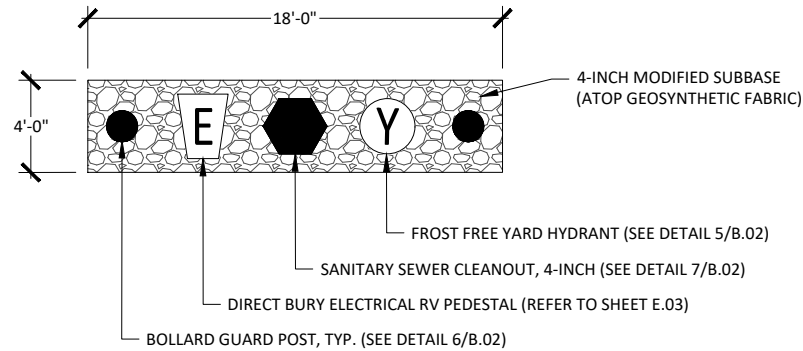
STATION		WIDTH (FT)	
BEGIN	END	LEFT	RIGHT
100+53.50	100+83.55	VARIES	VARIES
100+83.55	105+85.96	7.0	7.0
105+85.96	106+17.46	VARIES	VARIES
106+17.46	110+91.66	12.0	12.0
110+91.66	111+19.27	VARIES	VARIES



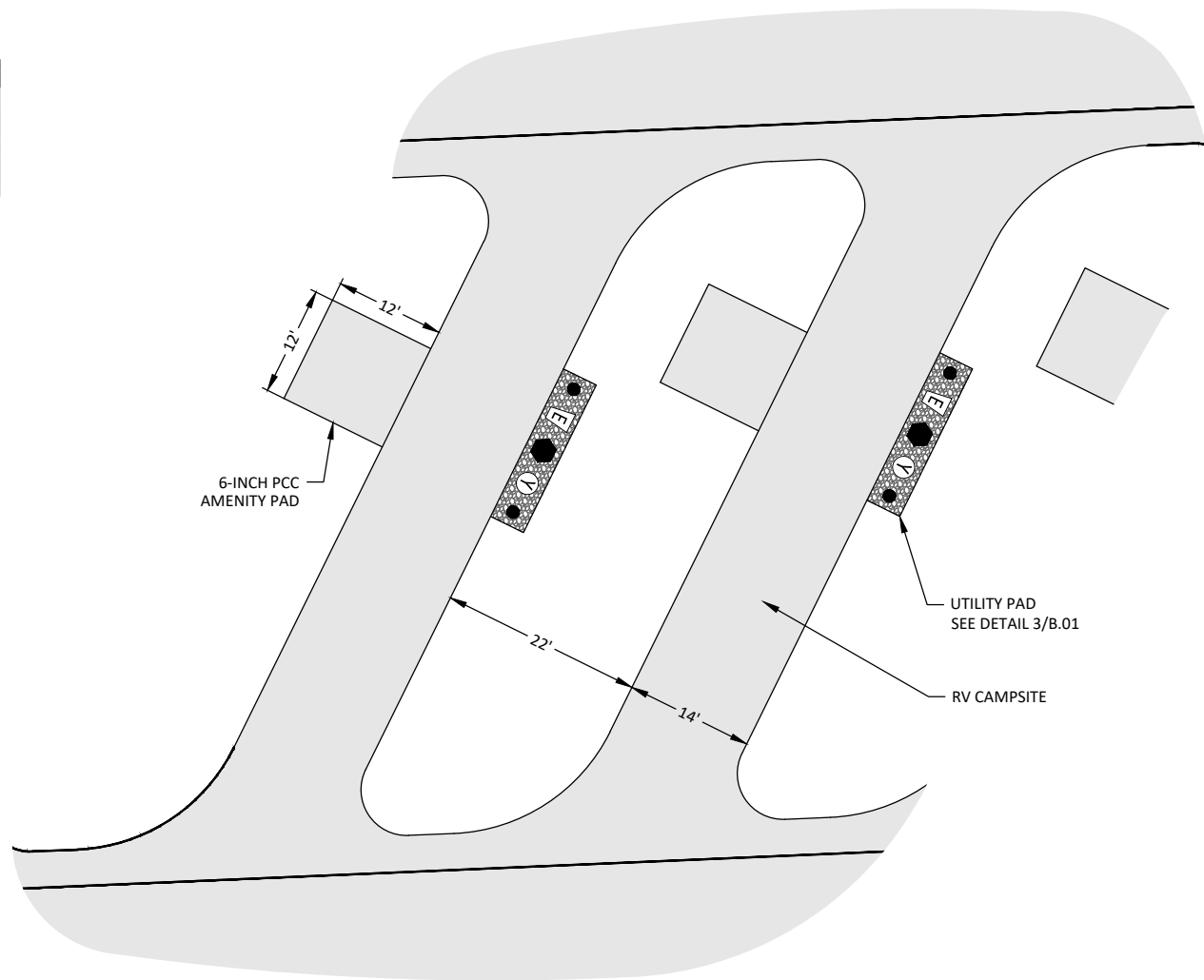
1
B.01
RV PARK ROAD - OUTER CENTERLINE
STA: 100+53.50 to 111+19.27
NOT TO SCALE



2
B.01
RV PARK ROAD - INNER CENTERLINE
STA: 200+26.16 to 204+00.00
NOT TO SCALE



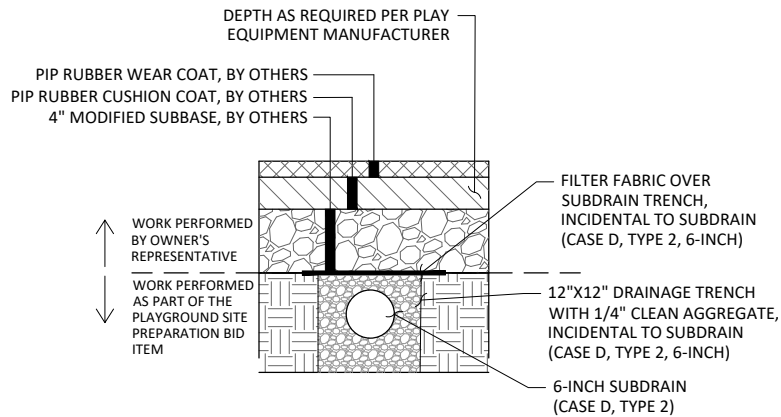
3
B.01
UTILITY PAD LAYOUT
NOT TO SCALE



4
B.01
PULL-THROUGH RV CAMPSITE
NOT TO SCALE

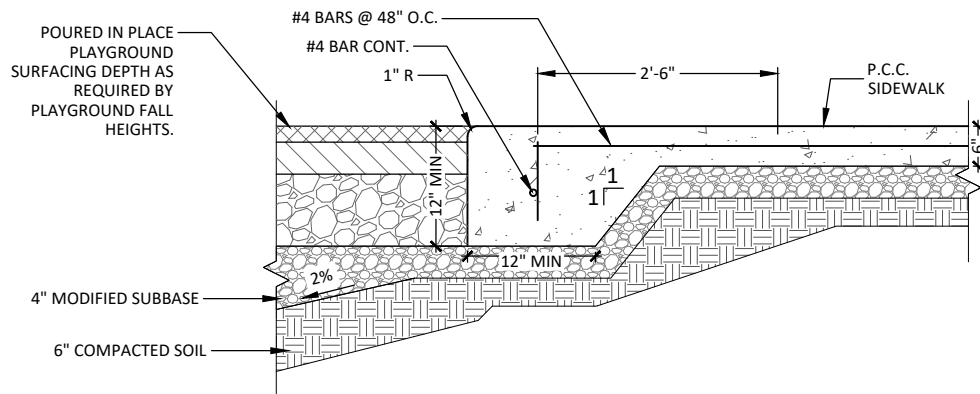
PRODUCT INFO:
SURFACING: POURED IN PLACE RUBBER SAFETY SURFACING, AS MANUFACTURED BY SURFACE AMERICA OR APPROVED EQUAL. COORDINATE PLAYGROUND SURFACING WITH LANDSCAPE STRUCTURES:
DIANE WITT
DIANE@OUTDOORREC.COM
402-289-0400

NOTE:
CONTRACTOR RESPONSIBLE FOR EARTHWORK AND DRAIN TILE BELOW SUBBASE. PLAYGROUND MANUFACTURER IS RESPONSIBLE FOR INSTALLATION OF PLAYGROUND SUBBASE, POURED IN PLACE SURFACING, AND EQUIPMENT. CONTRACTOR TO COORDINATE WITH PLAYGROUND MANUFACTURER.



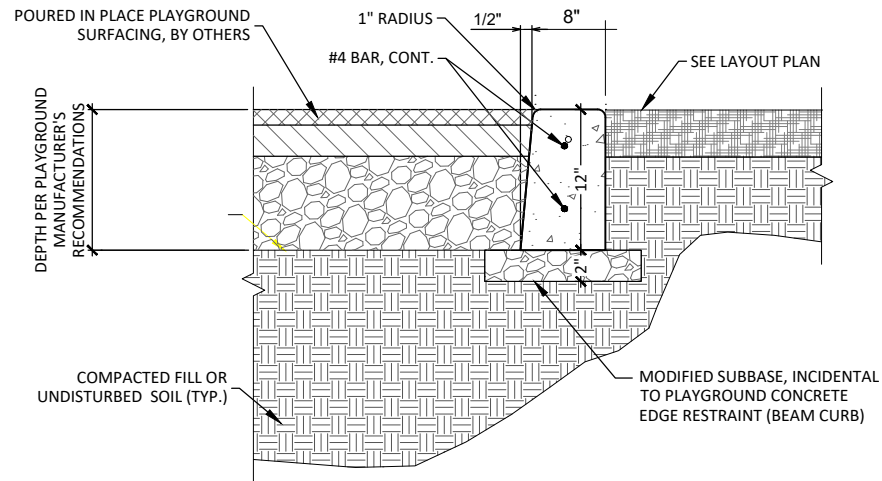
1
B.03
PLAYGROUND SITE PREPARATION

NOT TO SCALE



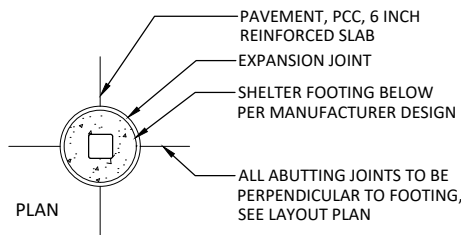
2
B.03
THICKENED SIDEWALK ADJACENT TO POURED-IN-PLACE RUBBER SURFACING

NOT TO SCALE

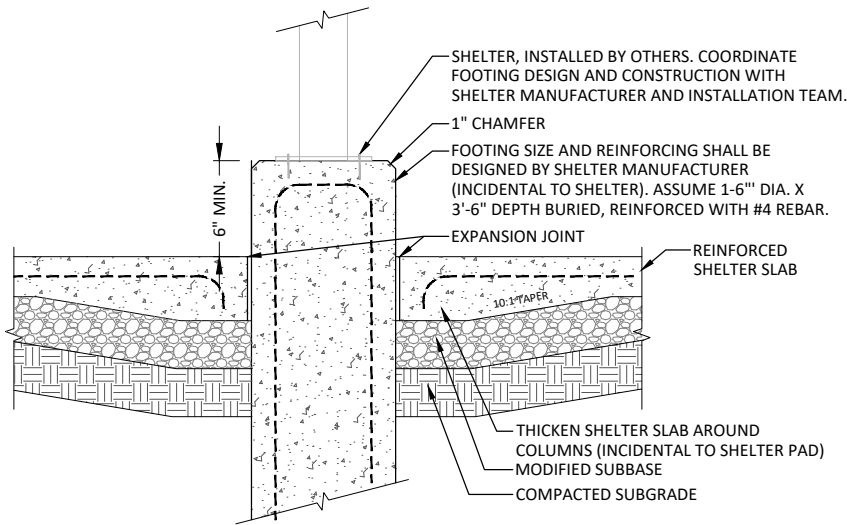


3
B.03
PLAYGROUND CONCRETE EDGE RESTRAINT

NOT TO SCALE

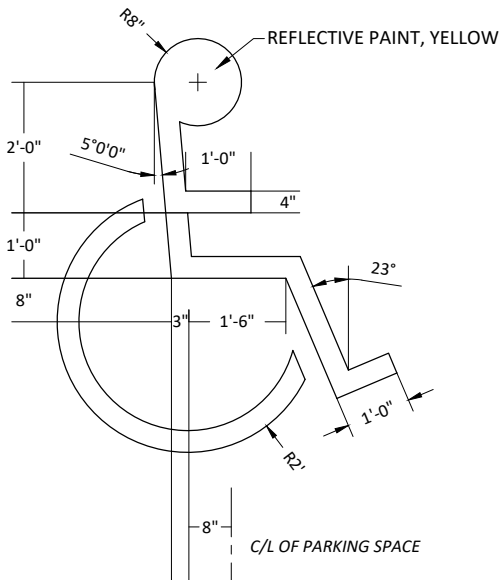


SHOP DRAWINGS STAMPED BY LICENSED STRUCTURAL ENGINEER REQUIRED FOR SHELTER FOOTINGS (INCIDENTAL TO SHELTER FOOTINGS).



4
B.03
SHELTER FOOTING

NOT TO SCALE



5
B.03
ADA PARKING SYMBOL

NOT TO SCALE

DESIGNED	REV	DESCRIPTION	DATE
RA/DM			
DRAWN			
DP/BK			
CHECKED			
EN/MC			
CLIENT PROJ. NO.			
24X.136996			

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ESTIMATED PROJECT QUANTITIES						
ITEM NO.	ITEM CODE	ITEM	UNIT	QUANTITY	AS BUILT QUANT.	TOTAL EST. QUANT.
1	2010-D-1	TOPSOIL, ON-SITE	CY	1100		1100
2	2010-E	EXCAVATION, CLASS 10	CY	3100		3100
3	2010-G	SUBGRADE PREPARATION	SY	6240		6240
4	2010-J	SUBBASE, MODIFIED, 4-INCH	SY	555		555
5	2010-J	SUBBASE, MODIFIED, 6-INCH	SY	6240		6240
6	4010-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 8-INCH	LF	136		136
7	4010-E	SANITARY SEWER SERVICE STUB, PVC, 4-INCH	LF	760		760
8	4010-E	SANITARY SEWER SERVICE STUB, PVC, 6-INCH	LF	324		324
9	4010-I	SANITARY SEWER CLEANOUT, 4-INCH	EA	16		16
10	4010-999-A	CLEANING, INSPECTION AND TESTING OF SEWERS, CONTRACTOR SUPPLIED WATER	MGAL	100		100
11	4020-A-1	STORM SEWER, TRENCHED, RCP, 15-INCH	LF	76		76
12	4020-A-1	STORM SEWER, TRENCHED, RCP, 18-INCH	LF	72		72
13	4030-B	PIPE APRON, RCP, 15-INCH	EA	1		1
14	4030-B	PIPE APRON, RCP, 18-INCH	EA	1		1
15	4030-C	FOOTING FOR CONCRETE PIPE APRON, RCP, 15-INCH	EA	1		1
16	4030-C	FOOTING FOR CONCRETE PIPE APRON, RCP, 18-INCH	EA	1		1
17	4030-D	PIPE APRON GUARD, 15-INCH	EA	1		1
18	4030-D	PIPE APRON GUARD, 18-INCH	EA	1		1
19	4040-A	SUBDRAIN, CASE D, TYPE 2, 6-INCH	LF	196		196
20	4040-C-1	SUBDRAIN CLEANOUT, TYPE A-2	EA	2		2
21	4040-C-1	SUBDRAIN CLEANOUT, TYPE B	EA	1		1
22	4040-D-1	SUBDRAIN OUTLET TO DITCH	EA	1		1
23	5010-E-1	WATER SERVICE PIPE, POLYETHYLENE CLASS 200, 1-INCH	LF	1040		1040
24	5010-E-1	WATER SERVICE PIPE, POLYETHYLENE CLASS 200, 2-INCH	LF	400		400
25	5010-E-3	WATER SERVICE CURB STOP AND BOX, 2-INCH	EA	2		2
26	5010-999-B	FROST FREE YARD HYDRANT	EA	17		17
27	5011-999-A	TESTING AND DISINFECTION, CONTRACTOR SUPPLIED WATER	MGAL	100		100
28	6010-A	SANITARY MANHOLE, SW-301, 60-INCH	EA	1		1
29	6010-A	STORM MANHOLE, SW-401, 48-INCH	EA	1		1
30	6010-B	INTAKE, SW-513, 48-INCH X 48-INCH	EA	1		1
31	6010-B	INTAKE, SW-513, OUTLET CONTROL STRUCTURE	EA	1		1
32	6010-F	INTAKE ADJUSTMENT, MAJOR	EA	2		2
33	6010-G	CONNECTION TO EXISTING MANHOLE	EA	1		1
34	6010-G	CONNECTION TO EXISTING INTAKE	EA	1		1
35	6010-999-A	YARD HYDRANT DRAIN POINT, GRADE ADJUSTING RING	EA	17		17
36	7010-A	PAVEMENT, PCC, 6-INCH, CLASS C	SY	5873		5873
37	7010-A	PAVEMENT, PCC, 6-INCH, CLASS C, AMENITY PAD	SY	268		268
38	7010-E	CURB AND GUTTER, DROP CURB, 3.5-FOOT WIDE, 6-INCH THICK	LF	165		165
39	7030-E	SIDEWALK, REINFORCED PCC, 6-INCH	SY	172		172
40	7040-I	CURB AND GUTTER REMOVAL, 3.5-FOOT WIDE	LF	165		165
41	8020-B	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT	LF	200		200
42	8020-G	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT	EA	1		1
43	8030-A	TEMPORARY TRAFFIC CONTROL	LS	1		1
44	8040-A	TRAFFIC SIGNS, TYPE A, 24-INCH X 24-INCH, R5-1 "DO NOT ENTER"	EA	1		1
45	8040-A	TRAFFIC SIGNS, TYPE A, 12-INCH X 18-INCH, R7-8 "RESERVED PARKING"	EA	1		1
46	8040-A	TRAFFIC SIGNS, TYPE A, 12-INCH X 6-INCH, R7-8AP "VAN ACCESSIBLE" PLAQUE	EA	1		1
47	8040-I	REMOVE AND REINSTALL TRAFFIC SIGNS	EA	1		1
48	9010-B	HYDRAULIC SEEDING, SEEDING, FERTILIZING, AND MULCHING, TYPE 1	AC	3		3
49	9010-B	HYDRAULIC SEEDING, SEEDING, FERTILIZING, AND MULCHING, TYPE 3	AC	0.25		0.25
50	9040-A-1	SWPPP PREPARATION	LS	1		1
51	9040-A-2	SWPPP MANAGEMENT	LS	1		1
52	9040-D-1	FILTER SOCK, 12-INCH	LF	209		209
53	9040-D-2	FILTER SOCK, REMOVAL	LF	209		209
54	9040-E	TEMPORARY RECP, 2.B	SY	736		736
55	9040-J	RIP RAP, CLASS E	TON	25		25
56	9040-N-1	SILT FENCE OR SILT FENCE DITCH CHECK	LF	1500		1500
57	9040-N-2	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF SEDIMENT	LF	1500		1500
58	9040-N-3	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE	LF	1500		1500
59	9040-T-1	INLET PROTECTION DEVICE, CULVERT	EA	2		2
60	9040-T-1	INLET PROTECTION DEVICE, INTAKE SEDIMENT FILTER	EA	2		2

61	9040-T-2	INLET PROTECTION DEVICE, MAINTENANCE	EA	12		12
62	11020-A	MOBILIZATION	LS	1		1
63	11050-A	CONCRETE WASHOUT	LS	1		1
64	11999-X	PARKING BUMPER	EA	5		5
65	11999-X	ELECTRICAL SYSTEM	LS	1		1
66	11999-X	RESTROOM AND SHOWER HOUSE	LS	1		1
67	11999-X	SHELTER FOOTINGS	LS	1		1
68	11999-X	PLAYGROUND SITE PREPARATION	LS	1		1
69	12020-A	BOLLARD GUARD POST	EA	32		32



**BOLTON
& MENK**

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Email: CedarRapids@bolton-menk.com
www.bolton-menk.com

DESIGNED RA/DM	REV	DESCRIPTION	DATE
DRAWN DP/BK			
CHECKED EN/MC			
CLIENT PROJ. NO. 24X.136996			

WORTH COUNTY CONSERVATION, IOWA

MONARCH RV PARK IMPLEMENTATION

ESTIMATED PROJECT QUANTITIES

SHEET

C.01

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ESTIMATE REFERENCE INFORMATION		
ITEM NO.	ITEM CODE	DESCRIPTION
1	2010-D-1	<u>TOPSOIL, ON-SITE</u> TOPSOIL WITHIN THE GRADING LIMITS OF THE PROJECT SHALL BE STRIPPED, SALVAGED, AND RESPREAD AT A MINIMUM DEPTH OF 6 INCHES. ITEM INCLUDES HAULING OFF-SITE TO STORE AND HAULING BACK IN, IF NEEDED. SALVAGED TOPSOIL SHALL REMAIN WITHIN THE RIGHT-OF-WAY UNLESS AGREEMENTS MADE WITH PROPERTY OWNER. CONTRACTOR TO PAY FOR RESTORATION COST IF LOCATED OUTSIDE OF THE RIGHT-OF-WAY. RAW CUT = 3100 CY, RAW FILL = 879 CY, ADJUSTED FILL (1.20 FACTOR) = 1054 CY RAW EARTHWORK QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY.
2	2010-E	<u>EXCAVATION, CLASS 10</u> THIS ITEM SHALL BE PLAN QUANTITY, NO MEASUREMENT WILL BE TAKEN FOR EXCAVATION. THIS ITEM SHALL INCLUDE THE REMOVAL OF EXISTING SOIL, HAULING, DISPOSAL/EXPORT AND RE-GRADING AS PER PLAN TO FACILITATE ALL PROPOSED SECTIONS. ALL BORROW SHALL BE PROVIDED BY THE CONTRACTOR. EXCESS OR UNSUITABLE EXCAVATED MATERIAL WILL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HAULED OFF-SITE INCIDENTAL TO THE ITEM. NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR OVERHAUL OF WASTE. RAW CUT = 3100 CY, RAW FILL = 879 CY, ADJUSTED FILL (1.20 FACTOR) = 1054 CY RAW EARTHWORK QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY.
3	2010-G	<u>SUBGRADE PREPARATION</u> THIS ITEM IS FOR 6-INCH SUBGRADE PREPARATION UNDERNEATH ROADWAY PAVEMENT AND 6-INCH MODIFIED SUBBASE, INCLUDING PULL-THROUGH RV CAMPSITES. SUBGRADE SHALL EXTEND 2 FEET BEYOND ALL ROADWAY PAVEMENT EDGES. REFER TO SHEET B.01 FOR TYPICAL SECTIONS.
4	2010-J	<u>SUBBASE, MODIFIED, 4-INCH</u> THIS ITEM IS FOR 4-INCH MODIFIED SUBBASE TO BE USED FOR CAMPSITE UTILITY BANDS AND TO BE PLACED UNDERNEATH 6-INCH PCC AMENITY PADS AND 6-INCH REINFORCED PCC SIDEWALK. GEOSYNTHETIC FABRIC SHALL BE INCIDENTAL TO THIS ITEM.
5	2010-J	<u>SUBBASE, MODIFIED, 6-INCH</u> THIS ITEM IS FOR 6-INCH MODIFIED SUBBASE UNDERNEATH ROADWAY PAVEMENT, INCLUDING PULL THROUGH STALLS. SUBBASE SHALL EXTEND 2 FEET BEYOND ALL ROADWAY PAVEMENT EDGES. REFER TO SHEET B.01 FOR TYPICAL SECTIONS.
6	4010-A-1	<u>SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 8-INCH</u> REFER TO SHEET M.01 FOR LOCATIONS AND LAYOUT. FUTURE STUB SHALL BE MARKED AT THE END WITH A 4"X4" STEEL POST PROTRUDING 4 FEET ABOVE FINISH GRADE.
7	4010-E	<u>SANITARY SEWER SERVICE STUB, PVC, 4-INCH</u> REFER TO SHEET M.01 FOR LOCATIONS AND LAYOUT. LINES RUNNING FROM THE INDIVIDUAL CAMPSITES TO THE SANITARY SEWER GRAVITY MAIN SHALL BE CONSIDERED 4-INCH SERVICE LINES. WYES AND OTHER FITTINGS, PIPE JOINTS AND PIPE CONNECTIONS SHALL BE INCIDENTAL TO THIS ITEM. PVC MATERIAL SHALL BE SDR 26. JOINTS SHALL BE GLUED.
8	4010-E	<u>SANITARY SEWER SERVICE STUB, PVC, 6-INCH</u> REFER TO SHEET M.01 FOR LOCATIONS AND LAYOUT. LINE RUNNING FROM THE SHOWER HOUSE TO THE SANITARY SEWER GRAVITY MAIN SHALL BE CONSIDERED 6-INCH SERVICE LINE. WYES AND OTHER FITTINGS, PIPE JOINTS AND PIPE CONNECTIONS SHALL BE INCIDENTAL TO THIS ITEM. PVC MATERIAL SHALL BE SDR 26. JOINTS SHALL BE GLUED.
9	4010-I	<u>SANITARY SEWER CLEANOUT, 4-INCH</u> THIS ITEM IS FOR SANITARY SEWER CLEANOUT WITHIN UTILITY BAND AT EACH INDIVIDUAL CAMPSITE. SAID UTILITY BAND WILL BE PAID FOR SEPARATELY. REFER TO SHEET B.02 FOR DETAIL. REFER TO SHEET M.01 FOR LOCATIONS. INSTALLATION OF SELF-CLOSING IRON AND BRONZE CAP SHALL BE INCIDENTAL TO THIS BID ITEM. SANITARY HATCH COVER PRODUCT CODE DSVGT2 FROM TRUMBULLRECREATION.COM 1-800-243-0134
10	4010-999-A	<u>CLEANING, INSPECTION AND TESTING OF SEWERS, CONTRACTOR SUPPLIED WATER</u> WATER NEEDED FOR CLEANING, INSPECTION AND TESTING OF SEWERS MAY NOT BE READILY AVAILABLE AT THE SITE. THIS BID ITEM IS INTENDED TO COMPENSATE THE CONTRACTOR, IF NECESSARY, FOR THE EXTRA EFFORT REQUIRED TO SUPPLY, DELIVER, AND PUMP ANY WATER NEEDED FOR CLEANING, INSPECTION, AND TESTING OF SEWERS. THIS ITEM SHALL BE USED FOR REASONABLE QUANTITIES OF WATER FOR CLEANING, INSPECTION AND TESTING OF SEWERS. CONTRACTOR SHALL BE CONCIIOUS OF THEIR USE AND NOT USE IN EXCESS. MEASUREMENT WILL BE BY METERING OF WATER USED. IF METERING IS NOT AVAILABLE, MEASUREMENT WILL BE BY COUNTING THE LOADS FROM A TRANSPORTING TANK OF KNOWN VOLUME AND GAUGING THE CONTENTS OF THE TRANSPORTING TRUCK FOR PARTIAL LOADS. PAYMENT WILL BE AT THE UNIT PRICE PER 1,000 GALLONS (MGAL) OF WATER USED. THIS ITEM INCLUDES BUT IS NOT LIMITED TO, WATER, PUMPS, METERS, EQUIPMENT, WATER TANK/CONTAINER, TRANSPORTATION, AND HOSES.
11	4020-A-1	<u>STORM SEWER, TRENCHED, RCP, 15-INCH</u> REFER TO 'M' SHEETS FOR LOCATIONS AND LAYOUT.

12	4020-A-1	<u>STORM SEWER, TRENCHED, RCP, 18-INCH</u> REFER TO 'M' SHEETS FOR LOCATIONS AND LAYOUT.
13	4030-B	<u>PIPE APRON, RCP, 15-INCH</u> REFER TO 'M' SHEETS FOR LOCATIONS.
14	4030-B	<u>PIPE APRON, RCP, 18-INCH</u> REFER TO 'M' SHEETS FOR LOCATIONS.
15	4030-C	<u>FOOTING FOR CONCRETE PIPE APRON, RCP, 15-INCH</u> REFER TO 'M' SHEETS FOR LOCATIONS.
16	4030-C	<u>FOOTING FOR CONCRETE PIPE APRON, RCP, 18-INCH</u> REFER TO 'M' SHEETS FOR LOCATIONS.
17	4030-D	<u>PIPE APRON GUARD, 15-INCH</u> REFER TO 'M' SHEETS FOR LOCATIONS.
18	4030-D	<u>PIPE APRON GUARD, 18-INCH</u> REFER TO 'M' SHEETS FOR LOCATIONS.
19	4040-A	<u>SUBDRAIN, CASE D, TYPE 2, 6-INCH</u> REFER TO SHEET B.03 FOR DETAIL. REFER TO SHEET D.02 FOR LAYOUT. ITEM INCLUDES ALL FITTINGS, COUPLINGS, BENDS, ENGINEERING FABRIC AND RODENT GUARDS. PRIOR TO INSTALLATION, REVIEW ALIGNMENT AND ELEVATIONS WITH ENGINEER FOR APPROVAL. INSTALLATION WILL BE PAID FOR AT THE BID UNIT PRICE, AND CHANGES IN ALIGNMENT WILL NOT BE GROUNDS FOR ADDITIONAL COSTS BEYOND PAYMENT AT THE BID UNIT PRICE.
20	4040-C-1	<u>SUBDRAIN CLEANOUT, TYPE A-2</u> REFER TO SHEET D.02 FOR LOCATIONS.
21	4040-C-1	<u>SUBDRAIN CLEANOUT, TYPE B</u> REFER TO SHEET D.02 FOR LOCATION.
22	4040-D-1	<u>SUBDRAIN OUTLET TO DITCH</u> REFER TO SHEET D.02 FOR LOCATION. RODENT GUARDS, NON-SHRINK GROUT SHALL BE INCIDENTAL.
23	5010-E-1	<u>WATER SERVICE PIPE, POLYETHYLENE CLASS 200, 1-INCH</u> REFER TO 'M' SHEETS FOR LAYOUT. LINES RUNNING FROM THE INDIVIDUAL CAMPSITES SHALL BE CONSIDERED 1-INCH SERVICE LINES AND SHALL BE INSTALLED AT LEAST 5.5 FEET BELOW GRADE. WYES AND OTHER FITTINGS, PIPE JOINTS AND PIPE CONNECTIONS SHALL BE INCIDENTAL TO THIS ITEM. INSTALLATION OF TRACER WIRE SYSTEM FOR NON-METALLIC SERVICE PIPE SHALL BE INCIDENTAL TO THIS BID ITEM. TEST AND DISINFECT ALL PIPE, VALVES, HYDRANTS, AND APPURTENANCES IN ACCORDANCES WITH SECTION 5030.
24	5010-E-1	<u>WATER SERVICE PIPE, POLYETHYLENE CLASS 200, 2-INCH</u> REFER TO 'M' SHEETS FOR LAYOUT. LINE RUNNING FROM THE SHOWER HOUSE SHALL BE CONSIDERED 2-INCH SERVICE LINE AND SHALL BE INSTALLED AT LEAST 5.5 FEET BELOW GRADE. WYES AND OTHER FITTINGS, PIPE JOINTS AND PIPE CONNECTIONS SHALL BE INCIDENTAL TO THIS ITEM. INSTALLATION OF TRACER WIRE SYSTEM FOR NON-METALLIC SERVICE PIPE SHALL BE INCIDENTAL TO THIS BID ITEM. BORING UNDERNEATH WHEELERWOOD COURT TO CONNECT TO EXISTING WATER MAIN SHALL BE INCIDENTAL TO THIS ITEM. TEST AND DISINFECT ALL PIPE, VALVES, HYDRANTS, AND APPURTENANCES IN ACCORDANCES WITH SECTION 5030.
25	5010-E-3	<u>WATER SERVICE CURB STOP AND BOX, 2-INCH</u> REFER TO 'M' SHEETS FOR LOCATIONS.
26	5010-999-B	<u>FROST FREE YARD HYDRANT</u> YARD HYDRANT SHALL BE A FROST FREE WOODFORD IOWA MODEL Y34 HYDRANT OR APPROVED EQUAL. REFER TO SHEET B.02 FOR DETAIL AND SHEET M.01 FOR LOCATIONS. REMOVE VALVES, HYDRANTS, AND APPURTENANCES CONTAMINATED WITH MUD AND SURFACE WATER FROM THE SITE. DO NOT USE IN CONSTRUCTION UNLESS THOUROUGHLY CLEANED, INSPECTED, AND APPROVED BY THE OWNER. EACH YARD HYDRANT ASSEMBLY WILL BE COUNTED FOR MEASUREMENT. PAYMENT WILL BE MADE AT THE UNIT PRICE FOR EACH FROST FREE YARD HYDRANT ASSEMBLY. UNIT PRICE INCLUDES, BUT IS NOT LIMITED TO THE HYDRANT, BARREL EXTENSIONS SUFFICIENT TO ACHIEVE PROPER BURY DEPTH OF ANCHORING PIPE AND HEIGHT OF HYDRANT ABOVE FINISHED GRADE, AND COMPONENTS TO CONNECT THE HYDRANT TO THE WATER SERVICE LINE, INCLUDING ANCHORING PIPE, FITTINGS, THRUST BLOCKS, PEA GRAVEL OR POROUS BACKFILL MATERIAL, AND HYDRANT VALVE AND APPURTENANCES. TEST AND DISINFECT ALL VALVES, HYDRANTS, AND APPURTENANCES AS COMPONENTS OF THE COMPLETED WATER MAIN ACCORDING TO SECTION 5030. COORDINATE INSTALLATION WITH TRACER WIRE INSTALLATION.

27	5011-999-A	<u>TESTING AND DISINFECTION, CONTRACTOR SUPPLIED WATER</u> WATER NEEDED FOR CLEANING, INSPECTION AND TESTING OF SEWERS MAY NOT BE READILY AVAILABLE AT THE SITE. THIS BID ITEM IS INTENDED TO COMPENSATE THE CONTRACTOR, IF NECESSARY, FOR THE EXTRA EFFORT REQUIRED TO SUPPLY, DELIVER, AND PUMP ANY WATER NEEDED FOR CLEANING, INSPECTION, AND TESTING OF SEWERS. THIS ITEM SHALL BE USED FOR REASONABLE QUANTITIES OF WATER FOR CLEANING, INSPECTION AND TESTING OF SEWERS. CONTRACTOR SHALL BE CONCIIOUS OF THEIR USE AND NOT USE IN EXCESS. MEASUREMENT WILL BE BY METERING OF WATER USED. IF METERING IS NOT AVAILABLE, MEASUREMENT WILL BE BY COUNTING THE LOADS FROM A TRANSPORTING TANK OF KNOWN VOLUME AND GAUGING THE CONTENTS OF THE TRANSPORTING TRUCK FOR PARTIAL LOADS. PAYMENT WILL BE AT THE UNIT PRICE PER 1,000 GALLONS (MGAL) OF WATER USED. THIS ITEM INCLUDES BUT IS NOT LIMITED TO, WATER, PUMPS, METERS, EQUIPMENT, WATER TANK/CONTAINER, TRANSPORTATION, AND HOSES.
28	6010-A	<u>SANITARY MANHOLE, SW-301, 60-INCH</u> REFER TO SHEET M.03 FOR LOCATION.
29	6010-A	<u>STORM MANHOLE, SW-401, 48-INCH</u> REFER TO SHEET M.02 FOR LOCATION.
30	6010-B	<u>INTAKE, SW-513, 48-INCH X 48-INCH</u> REFER TO SHEET M.02 FOR LOCATION.
31	6010-B	<u>INTAKE, SW-513, OUTLET CONTROL STRUCTURE</u> REFER TO SHEET U.01 FOR DETAIL AND SHEET M.02 FOR LOCATION.
32	6010-F	<u>INTAKE ADJUSTMENT, MAJOR</u> REFER TO SHEET F.01 AND M.01 FOR LOCATIONS. REPLACE EXISTING CURB INLET GRATE WITH SW-603 TYPE 'Q' DRIVEWAY GRATE, 2-INCH.
33	6010-G	<u>CONNECTION TO EXISTING MANHOLE</u> THIS ITEM IS FOR CONNECTING PROPOSED SANITARY SEWER GRAVITY MAIN INTO EXISTING SANITARY MANHOLE. REFER TO SHEET M.03 FOR LOCATION.
34	6010-G	<u>CONNECTION TO EXISTING INTAKE</u> THIS ITEM IS FOR CONNECTING PROPOSED 15-INCH RCP STORM SEWER INTO EXISTING STORM INTAKE. REFER TO SHEET M.02 FOR LOCATION.
35	6010-999-A	<u>YARD HYDRANT DRAIN POINT, GRADE ADJUSTING RING</u> GRADE ADJUSTING RING SHALL BE AN OLDCASTLE GRADE RING 2666 OR APPROVED EQUAL. MEASUREMENT WILL BE EACH GRADE ADJUSTING RING INSTALLED WILL BE COUNTED. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE FOR EACH GRADE ADJUSTING RING. REFER TO SHEET B.02 FOR DETAIL. ADDITIONAL MODIFIED SUBBASE USED TO FILL RING TO CREATE THE DRAIN POINT FOR THE YARD HYDRANT SHALL BE INCIDENTAL TO THIS BID ITEM.
36	7010-A	<u>PAVEMENT, PCC, 6-INCH, CLASS C</u> REFER TO 'B' SHEETS FOR TYPICAL SECTIONS AND DETAILS. REFER TO 'D' SHEETS FOR LAYOUT.
37	7010-A	<u>PAVEMENT, PCC, 6-INCH, CLASS C, AMENITY PAD</u> REFER TO 'B' SHEETS FOR TYPICAL SECTIONS AND DETAILS. REFER TO 'D' SHEETS FOR LAYOUT.
38	7010-E	<u>CURB AND GUTTER, DROP CURB, 3.5-FOOT WIDE, 6-INCH THICK</u> REFER TO SHEET D.01 FOR LAYOUT AND LOCATIONS.
39	7030-E	<u>SIDEWALK, REINFORCED PCC, 6-INCH</u> REFER TO SHEET B.02 FOR DETAIL. REFER TO 'D' SHEETS FOR LAYOUT AND LOCATIONS. THIS ITEM INCLUDES 12'X6' BENCH PAD ADJACENT TO PLAYGROUND, WHICH DOES NOT REQUIRE REINFORCING BAR. 6-INCH SUBGRADE PREPARATION FOR THIS ITEM SHALL BE INCIDENTAL.
40	7040-I	<u>CURB AND GUTTER REMOVAL, 3.5-FOOT WIDE</u> REFER TO SHEET F.01 FOR LOCATIONS.
41	8020-B	<u>PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT</u> REFER TO 'D' SHEETS FOR LAYOUT AND LOCATIONS.
42	8020-G	<u>PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT</u> REFER TO 'D' SHEETS FOR LAYOUT AND LOCATIONS.
43	8030-A	<u>TEMPORARY TRAFFIC CONTROL</u>



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MONARCH RV PARK IMPLEMENTATION

ESTIMATE REFERENCE NOTES

SHEET

C.02

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44	8040-A	<u>TRAFFIC SIGNS, TYPE A, 24-INCH X 24-INCH, R5-1 "DO NOT ENTER"</u> REFER TO SHEET D.03 FOR LOCATION.
45	8040-A	<u>TRAFFIC SIGNS, TYPE A, 12-INCH X 18-INCH, R7-8 "RESERVED PARKING"</u> REFER TO SHEET D.02 FOR LOCATION.
46	8040-A	<u>TRAFFIC SIGNS, TYPE A, 12-INCH X 6-INCH, R7-8AP "VAN ACCESSIBLE" PLAQUE</u> REFER TO SHEET D.02 FOR LOCATION.
47	8040-I	<u>REMOVE AND REINSTALL TRAFFIC SIGNS</u> REFER TO SHEET D.03 AND SHEET F.01 FOR LOCATION.
48	9010-B	<u>HYDRAULIC SEEDING, SEEDING, FERTILIZING, AND MULCHING, TYPE 1</u> SEED ALL AREAS DISTURBED BY CONSTRUCTION AS INDICATED ON PLANS. THE COST FOR WATERING UNTIL SEED ESTABLISHMENT IS ACCEPTED SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. ROCK PICKING, FINISH GRADING, SEED BED PREP AND RESEEDING ARE CONSIDERED INCIDENTAL TO THIS ITEM. SEED AND FERTILIZER SHALL BE APPLIED PRIOR TO MULCHING. THE CONTRACTOR IS RESPONSIBLE FOR MOWING AND MAINTAINING SEEDED AREAS UNTIL THE PROJECT IS ACCEPTED BY THE OWNER. SEEDING OF AREAS DISTURBED OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER. THE SEEDING RATE SHALL BE AT LEAST 260 LBS/ACRE. APPLY A 6-24-24, NITROGEN, PHOSPHATE, POTASH, COMMERCIAL FERTILIZER OR EQUIVALENT AT THE RATE OF 300 LBS PER ACRE. APPLY MULCHING PER MANUFACTURERS RECOMMENDATIONS. SEEDING AREAS ASSUMED FOR TWO APPLICATIONS OVER THE TOTAL AREA DISTURBED OF 1.5 ACRES. REFER TO SHEET R.01 FOR LOCATIONS.
49	9010-B	<u>HYDRAULIC SEEDING, SEEDING, FERTILIZING, AND MULCHING, TYPE 3</u> SEEDING AREA ASSUMED FOR TWO APPLICATIONS OVER THE TOTAL AREA DISTURBED OF 0.125 ACRES FOR DETENTION BASIN SIDE SLOPES. REFER TO SHEET R.01 FOR LOCATIONS.
50	9040-A-1	<u>SWPPP PREPARATION</u> CONTRACTOR SHALL BE RESPONSIBLE FOR THE SWPPP PREPARATION. THIS SHOULD INCLUDE COMPLETION OF THE NOTICE OF INTENT TO BE SUBMITTED TO THE IOWA DNR. NOTICE OF INTENT SHALL BE PROVIDED TO THE OWNER/ENGINEER PRIOR TO SUBMISSION FOR REVIEW.
51	9040-A-2	<u>SWPPP MANAGEMENT</u> CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGEMENT OF THE SWPPP IN ACCORDANCE WITH IOWA DNR SPECIFICATIONS.
52	9040-D-1	<u>FILTER SOCK, 12-INCH</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS.
53	9040-D-2	<u>FILTER SOCK, REMOVAL</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS.
54	9040-E	<u>TEMPORARY RECP, 2.B</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS. UNIT PRICE INCLUDES, BUT IS NOT LIMITED TO, ENGINEERING FABRIC.
55	9040-J	<u>RIP RAP, CLASS E</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS.
56	9040-N-1	<u>SILT FENCE OR SILT FENCE DITCH CHECK</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS.
57	9040-N-2	<u>SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF SEDIMENT</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS.
58	9040-N-3	<u>SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS.
59	9040-T-1	<u>INLET PROTECTION DEVICE, CULVERT</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS.
60	9040-T-1	<u>INLET PROTECTION DEVICE, INTAKE SEDIMENT FILTER</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS.
61	9040-T-2	<u>INLET PROTECTION DEVICE, MAINTENANCE</u> REFER TO SHEET R.01 FOR LAYOUT AND LOCATIONS.

62	11020-A	<u>MOBILIZATION</u> MISCELLANEOUS MINOR WORK ITEMS WITH NO BID ITEM IN THE PLANS AND WHICH HAVE NO STANDARD BID ITEM SHALL BE INCIDENTAL TO THIS ITEM. THIS ITEM SHALL INCLUDE SHUT DOWN OF CONTROLLING OPERATIONS FOR PRIVATE UTILITY RELOCATIONS. EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO: GRASS AND VEGETATION REMOVAL, GRAVEL SURFACING REMOVAL, SITE CLEANUP, ADDITIONAL CONSTRUCTION SAFETY FENCING, SCHEDULING OF WORK, MEETINGS, SECURING OF CITY WORK IN RIGHT OF WAY PERMIT, COORDINATION AND COOPERATION WITH UTILITY COMPANIES, COORDINATION WITH OTHER PROJECTS IN THE AREA, QUANTITY MEASUREMENT AND PAY APPLICATIONS, TESTING REPORTS, COOPERATION WITH AFFECTED ADJACENT PROPERTY OWNERS AND CONTRACTORS, AND CONSTRUCTION STAGING.
63	11050-A	<u>CONCRETE WASHOUT</u> THIS ITEM INCLUDES THE FURNISHING AND PERIODICAL CLEANOUT AND MAINTENANCE OF THE WASHOUT AREA AS DIRECTED BY THE ENGINEER.
64	11999-X	<u>PARKING BUMPER</u> REFER TO SHEET D.02 FOR LOCATIONS. PARKING BUMPERS SHALL BE 6 FEET LONG AND MADE OF PCC WITH A COMPRESSIVE STRENGTH OF 4,000 PSI, AND SIMILAR OR EQUAL TO LISTER CONCRETE CAR PARKING BUMPERS, 1-319-232-4727. THIS ITEM SHALL BE PAID BY EACH 6-FOOT PARKING BUMPER INSTALLED. PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE PER EACH PARKING BUMPER INSTALLED. THIS PAYMENT SHALL BE CONSIDERED FULL COMPENSATION FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO INSTALL EACH PARKING BUMPER.
65	11999-X	<u>ELECTRICAL SYSTEM</u> MEASUREMENT FOR THIS ITEM WILL NOT BE COMPLETED AS THIS ITEM IS INTENDED TO BE LUMP SUM AND INCLUSIVE OF ALL OF THE ITEMS NEEDED TO COMPLETE THE ELECTRICAL SCOPE OF WORK AS SHOWN IN THE CONTRACT DOCUMENTS. PAYMENT FOR THIS ITEM WILL BE AT THE LUMP SUM PRICE FOR ALL ELECTRICAL SYSTEM COMPONENTS AND LABOR. ITEMS INCLUDED AND/OR INCIDENTAL TO THIS BID ITEM CAN BE FOUND IN THE CONTRACT DOCUMENTS.
66	11999-X	<u>RESTROOM AND SHOWER HOUSE</u> MEASUREMENT FOR THIS ITEM WILL NOT BE COMPLETED AS THIS ITEM IS INTENDED TO BE LUMP SUM AND INCLUSIVE OF ALL OF THE ITEMS NEEDED TO COMPLETE THE RESTROOM AND SHOWER HOUSE SCOPE OF WORK AS SHOWN IN THE CONTRACT DOCUMENTS AND PER TECHNICAL SPECIFICATION 13 3423. PAYMENT FOR THIS ITEM WILL BE AT THE LUMP SUM UNIT PRICE FOR ALL SHOWER HOUSE STRUCTURE COMPONENTS AND LABOR. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS NECESSARY TO INSTALL FOOTINGS AND FOUNDATION, CONNECT UTILITIES, BRING EQUIPMENT NEEDED FOR PLACING/SETTING OF THE STRUCTURE. SEQUENCING OF THE RESTROOM AND SHOWER HOUSE PLACEMENT SHALL BE BY THE CONTRACTOR.
67	11999-X	<u>SHELTER FOOTINGS</u> MEASUREMENT FOR THIS ITEM WILL NOT BE COMPLETED AS THIS ITEM IS INTENDED TO BE LUMP SUM AND INCLUSIVE OF ALL OF THE ITEMS NEEDED TO COMPLETE THE INSTALLATION OF FOOTINGS FOR THE SHELTER. THE SHELTER SHALL BE PROVIDED BY AND INSTALLED BY OWNER. DETAIL 4 ON SHEET B.03 IS REPRESENTATIVE OF THE FOOTING REQUIRED BY THIS BID ITEM. THE FINAL DESIGN SHALL BE PROVIDED BY OR APPROVED BY THE SHELTER MANUFACTURER. PAYMENT FOR THIS ITEM WILL BE AT THE LUMP SUM UNIT PRICE FOR ALL COMPONENTS AND LABOR. ITEMS INCLUDED AND/OR INCIDENTAL TO THIS BID ITEM SHALL BE THE COORDINATION WITH THE OWNER'S SHELTER SUPPLIER AND INSTALLER AND SEQUENCING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS NECESSARY TO COMPLETE THE WORK IN PREPARATION FOR THE PLACEMENT OF THE SHELTER.
68	11999-X	<u>PLAYGROUND SITE PREPARATION</u> MEASUREMENT FOR THIS ITEM WILL NOT BE COMPLETED AS THIS ITEM IS INTENDED TO BE LUMP SUM AND INCLUSIVE OF ALL OF THE ITEMS NEEDED TO COMPLETE THE PLAYGROUND SITE PREPARATION SCOPE OF WORK WHICH INCLUDES FINAL GRADING, PERIMETER CURB, DRAINAGE TILE, AND COORDINATION WITH PLAYGROUND MANUFACTURER AND INSTALLER. PLAYGROUND EQUIPMENT, FOOTINGS AND INSTALLATION SHALL BE BY OWNER. INCIDENTAL TO THIS ITEM SHALL BE ALL MEANS AND METHODS NECESSARY TO COORDINATE WITH THE OWNER'S PLAYGROUND MANUFACTURER AND INSTALLER FOR SEQUENCING, ACCESS, AND STAGING RELATED TO PLAYGROUND.
69	12020-A	<u>BOLLARD GUARD POST</u> REFER TO SHEET B.02 FOR DETAIL. THIS ITEM INCLUDES A GALVANIZED STEEL BOLLARD WITH CONCRETE REINFORCEMENT SOURCE FROM RELIANCE FOUNDRY OR APPROVED EQUAL. INCIDENTAL TO THIS ITEM SHALL BE A 52" TALL REFLECTIVE YELLOW HDPE SLEEVE EQUAL MODEL H-7857 FROM ULINE, 1-800-295-5510.



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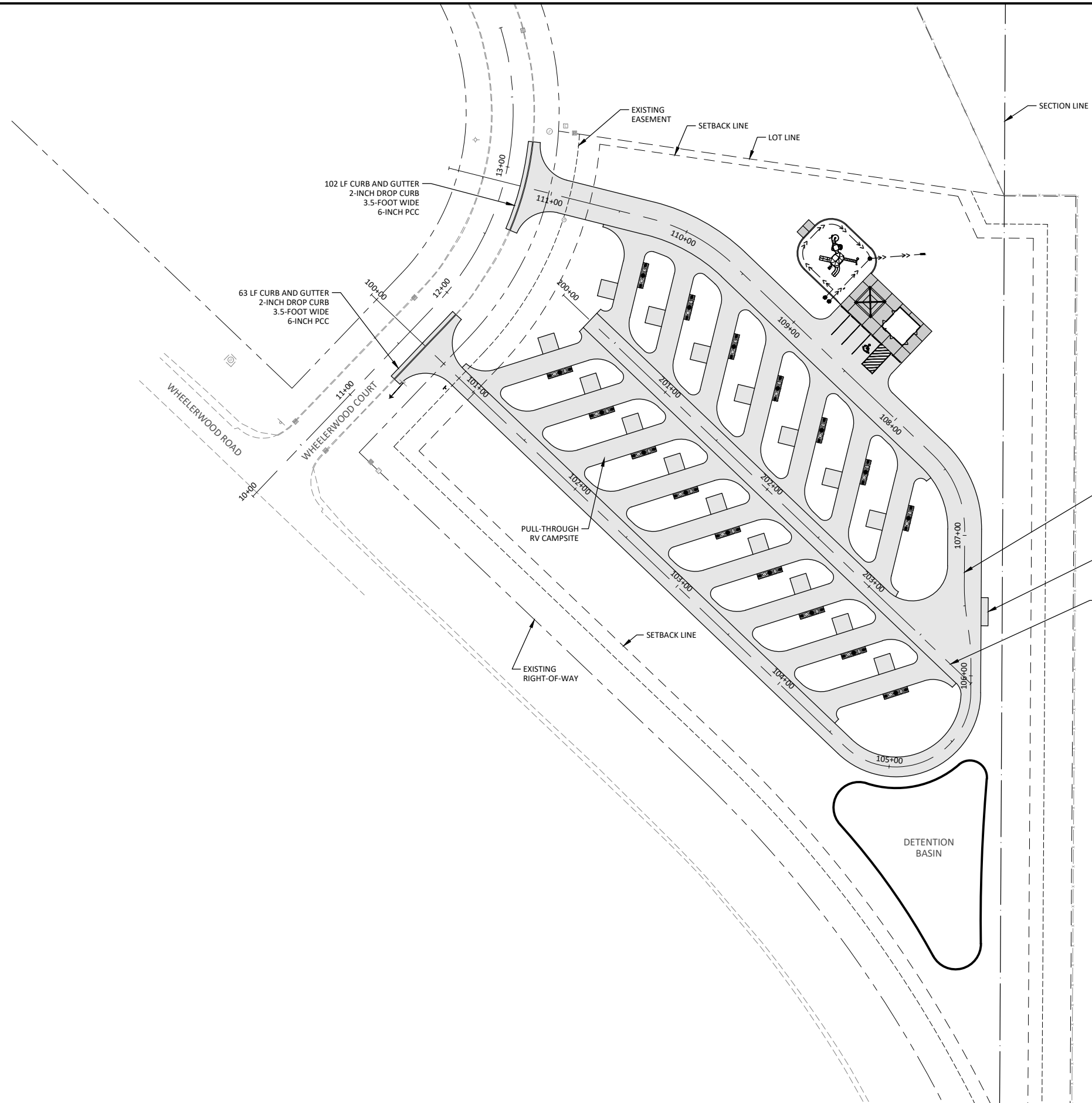
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MONARCH RV PARK IMPLEMENTATION

ESTIMATE REFERENCE NOTES

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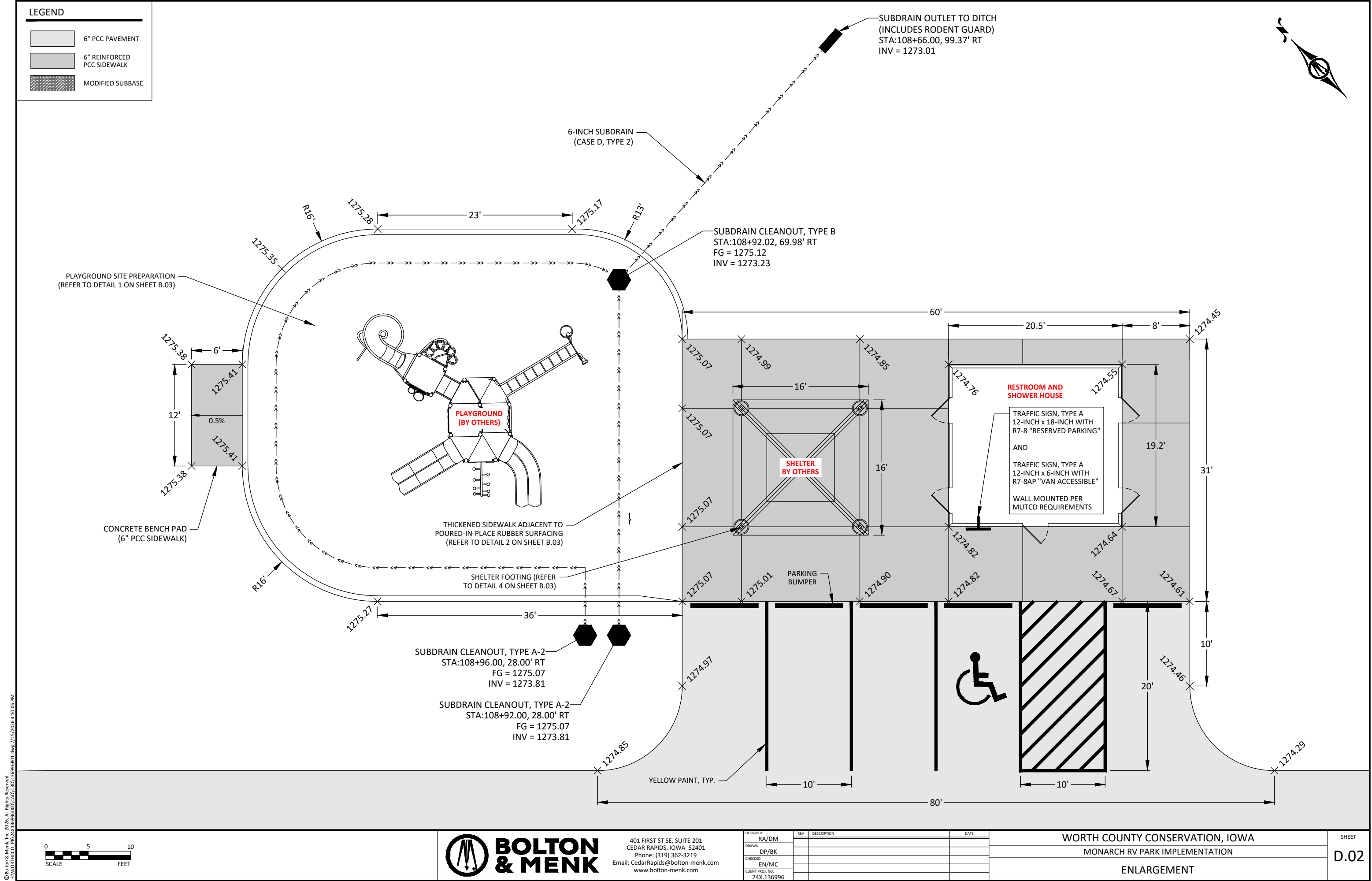
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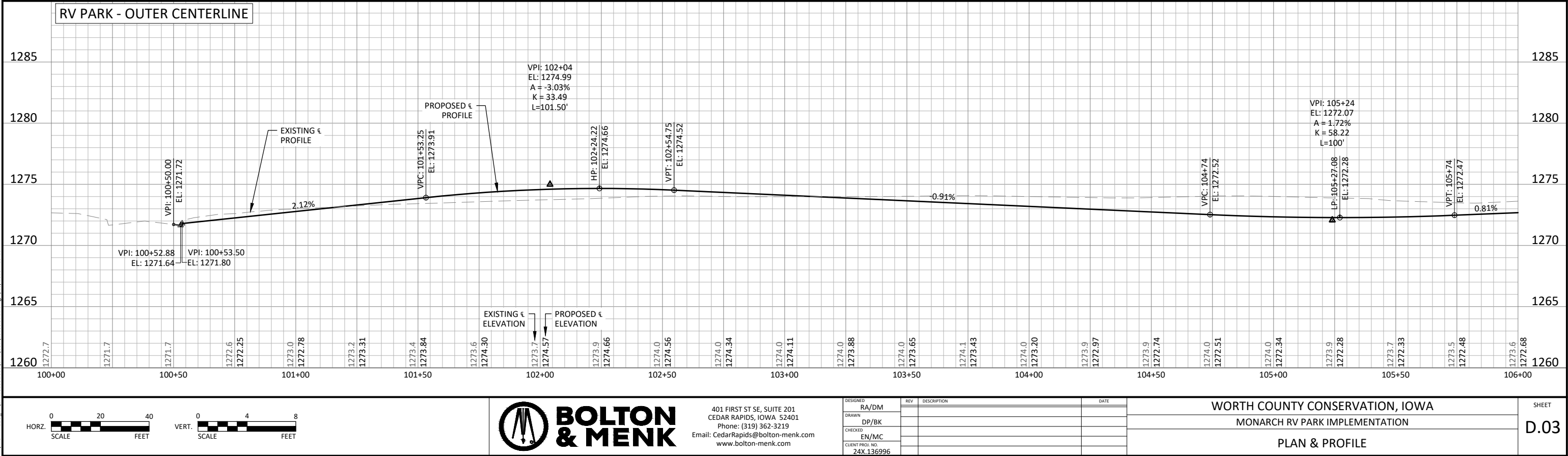
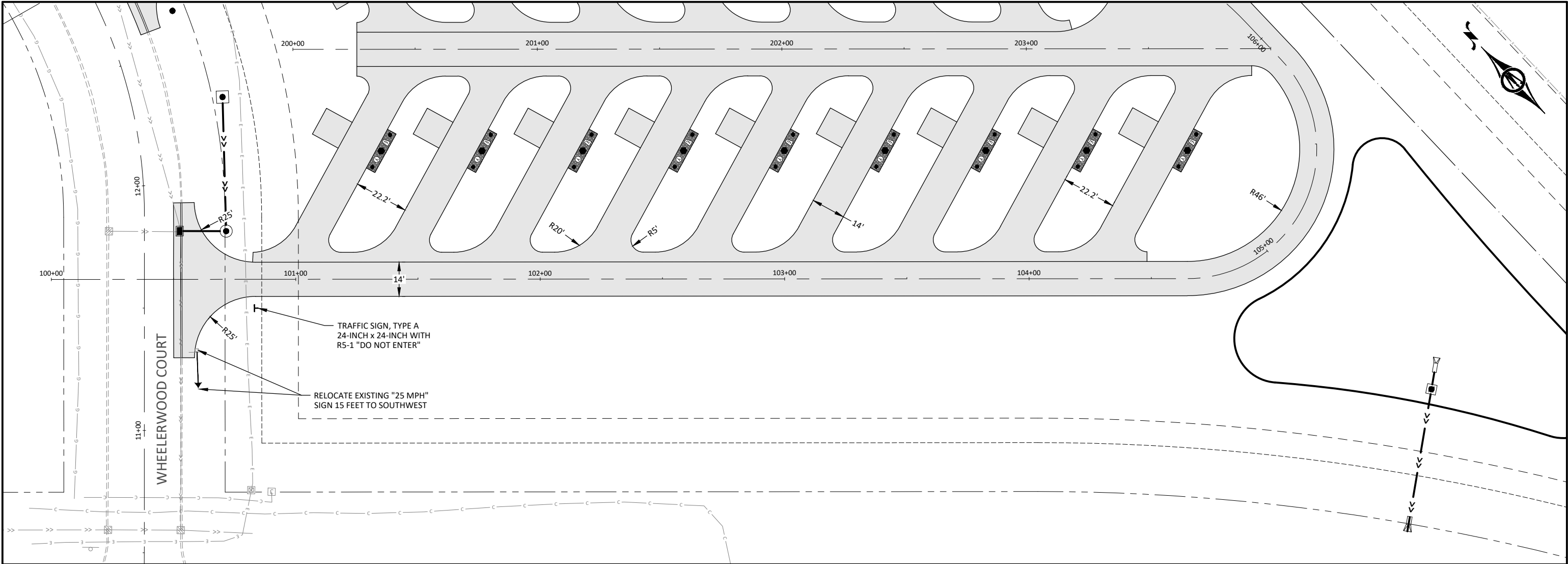
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	6" REINFORCED PCC SIDEWALK
	MODIFIED SUBBASE

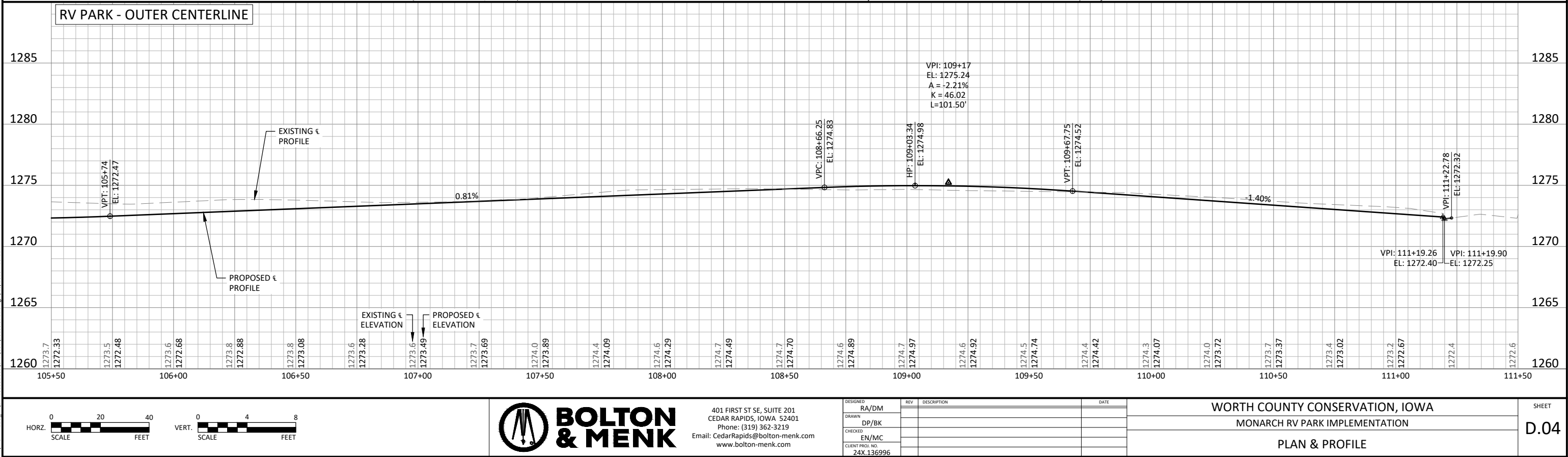
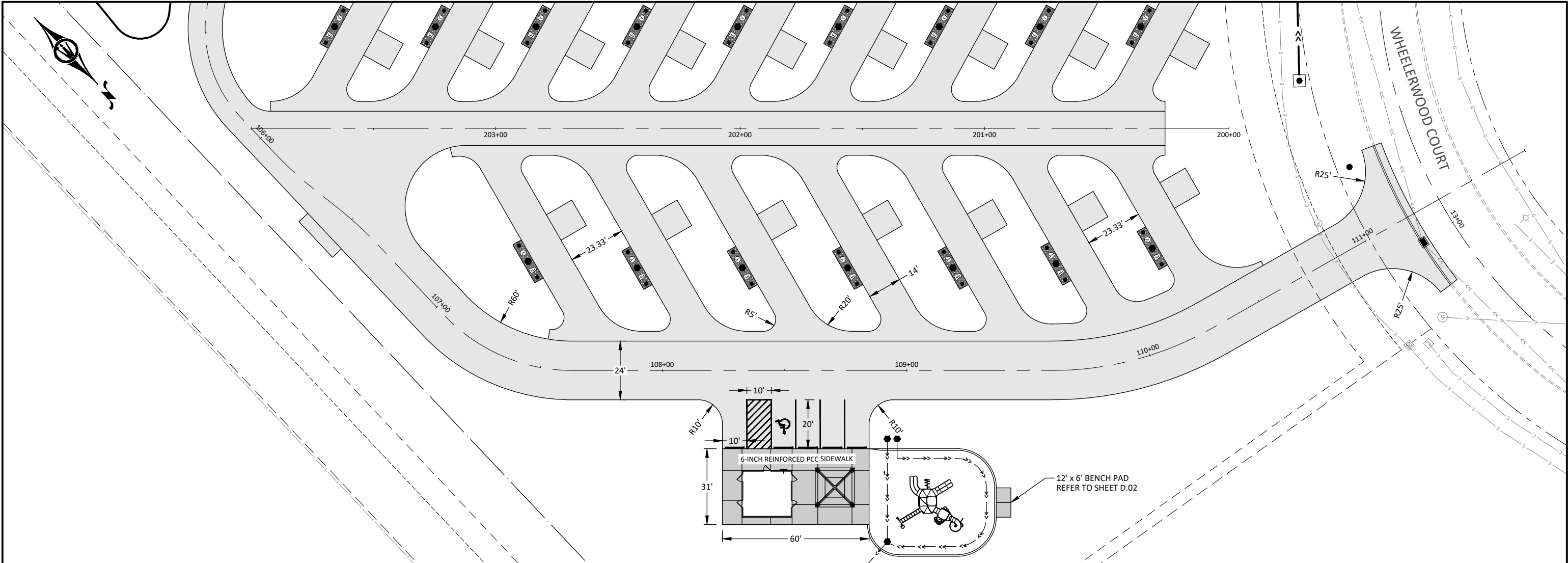


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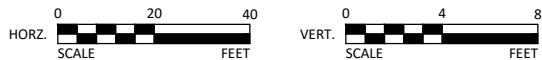
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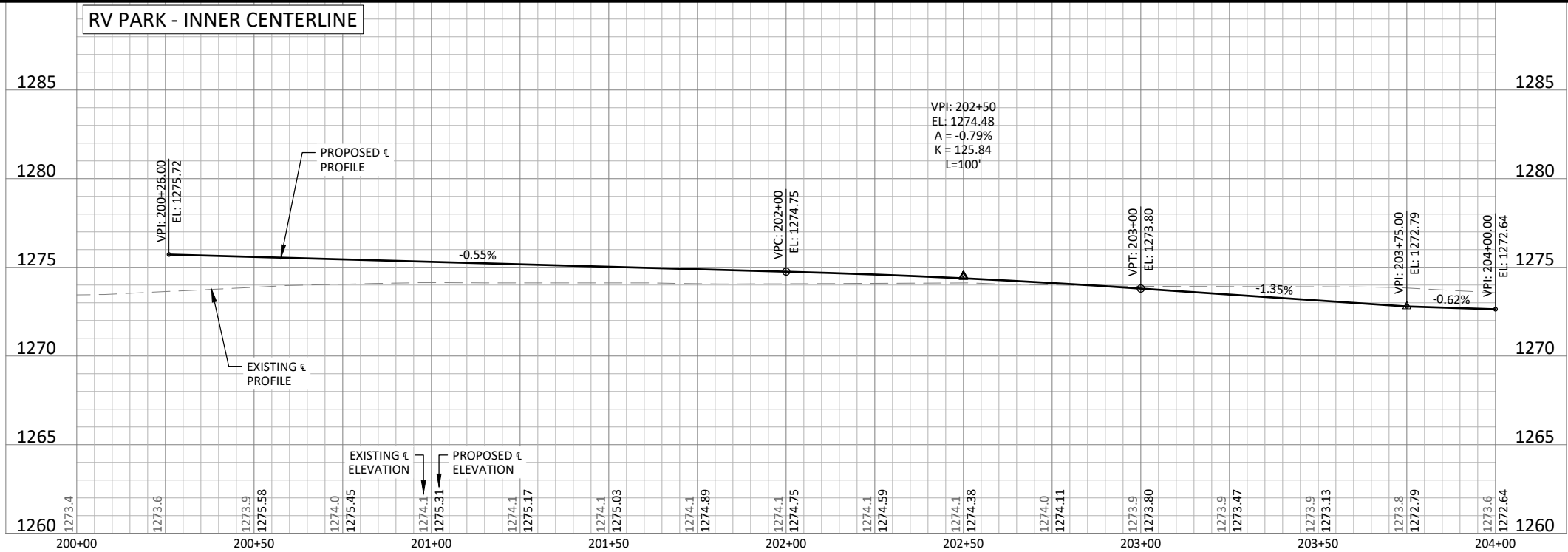
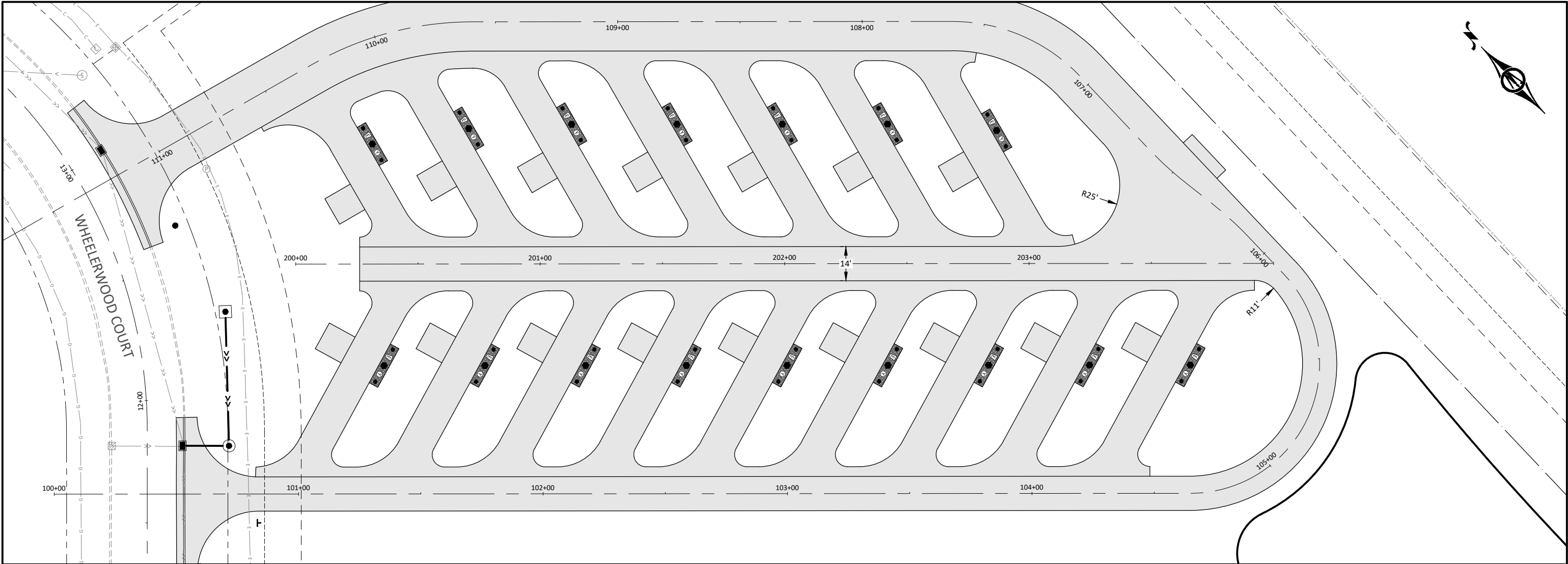
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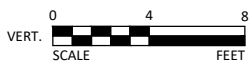
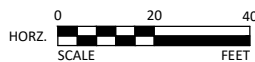
WORTH COUNTY CONSERVATION, IOWA
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PLAN & PROFILE

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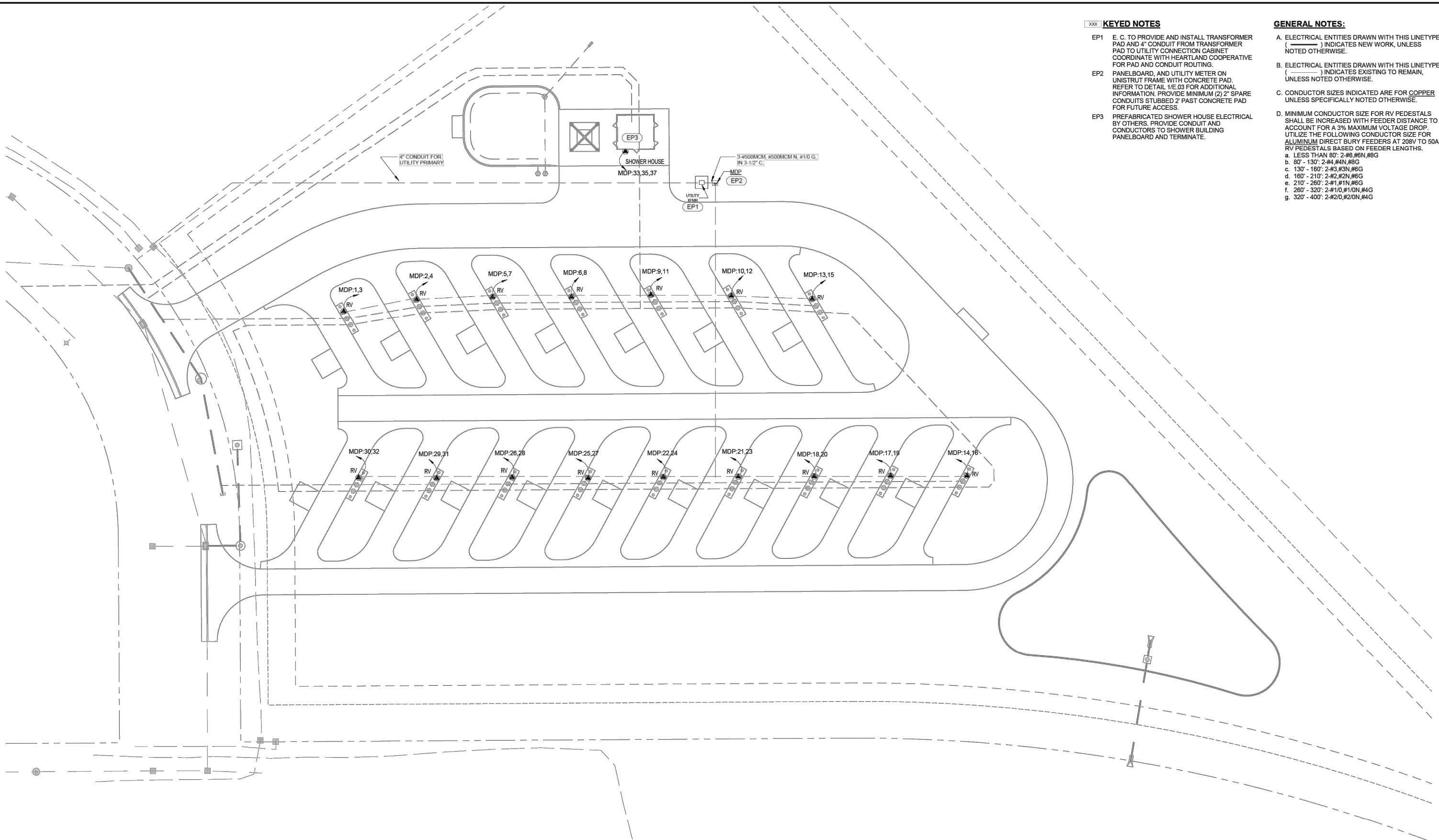
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SCHEMATIC/GENERAL	ELECTRICAL BOXES AND WIRING DEVICES	LIGHT CONTROLS	TELECOMMUNICATIONS	FIRE DETECTION AND NOTIFICATION	ABBREVIATIONS
 CABLE  CT RELAY  DISCONNECT SWITCH  DISCONNECT SWITCH WITH GROUND FAULT  CONNECTION POINT  FUSED DISCONNECT  GENERATOR  GROUND FAULT PROTECTION SYSTEM  GROUNDING ELECTRODE  HIGH VOLTAGE BREAKER  INTERLOCKED NORMALLY OPEN (NO) & NORMALLY CLOSED (NC) DISCONNECT SWITCHES  LOW VOLTAGE CIRCUIT BREAKER  UTILITY METER  MOTOR  POTENTIAL TRANSFORMER  POWER METER  POWER TRANSFORMER (DELTA WYE)  PUSHBUTTON SWITCH  CABLE SPLICE  UNINTERRUPTIBLE POWER SUPPLY  UNINTERRUPTIBLE POWER SUPPLY WITH BYPASS  INVERTER  RECTIFIER  CONVERTER  UTILITY FEED  TRANSFER SWITCH (N=NORMAL FEED) (E=EMERGENCY FEED)  LOAD BREAK ELBOW  RELAY  MOTOR OVERLOAD PROTECTION  SURGE PROTECTION DEVICE  POINT OF CONNECTION - NEW TO EXISTING  RELAY CONTACT - NORMALLY OPEN  RELAY CONTACT - NORMALLY CLOSED  BATTERY	 JUNCTION BOX - WALL MOUNTED  JUNCTION BOX - FLOOR MOUNTED  JUNCTION BOX - CEILING MOUNTED  JUNCTION BOX - SURFACE OR EQUIPMENT MOUNTED  SINGLE POLE SWITCH  ANNOTATIONS (X) TYP FOR ALL SWITCH TYPES • '2' - DOUBLE POLE SWITCH • '3' - THREE WAY SWITCH • '4' - FOUR WAY SWITCH • 'K' - KEYED SWITCH • 'P' - SWITCH WITH PILOT LIGHT • '3P' - THREE WAY SWITCH WITH PILOT LIGHT • 'T' - TIMER SWITCH • 'F' - FUSED SWITCH • 'CB' - CIRCUIT BREAKER SWITCH  SIMPLEX RECEPTACLE - WALL MOUNTED  SIMPLEX RECEPTACLE - FLOOR MOUNTED  SIMPLEX RECEPTACLE - CEILING MOUNTED  SIMPLEX RECEPTACLE - ABOVE COUNTERTOP  DUPLEX RECEPTACLE - WALL MOUNTED  DUPLEX RECEPTACLE - FLOOR MOUNTED  DUPLEX RECEPTACLE - CEILING MOUNTED  DUPLEX RECEPTACLE - ABOVE COUNTERTOP  QUADRAPLEX RECEPTACLE - WALL MOUNTED  QUADRAPLEX RECEPTACLE - FLOOR MOUNTED  QUADRAPLEX RECEPTACLE - CEILING MOUNTED  QUADRAPLEX RECEPTACLE - ABOVE COUNTERTOP  ANNOTATIONS (X) TYP FOR ALL RECEPTACLE TYPES • 'WP' - WEATHERPROOF • 'NL' - RECEPTACLE WITH NIGHT LIGHT • 'GF' - GROUND FAULT • 'IG' - ISOLATED GROUND • 'S' - SECURE  HIGH VOLTAGE RECEPTACLE - WALL MOUNTED  SPECIAL EQUIPMENT CONNECTION - WALL MOUNTED  SPECIAL EQUIPMENT CONNECTION - FLOOR MOUNTED  SPECIAL EQUIPMENT CONNECTION - CEILING OR EQUIPMENT MOUNTED	 LOW VOLTAGE SWITCH  LOW VOLTAGE MOMENTARY CONTROL SWITCH  ANNOTATIONS (X) DENOTES SWITCH ZONE. TYPICAL FOR ALL SWITCH TYPES.  OCCUPANCY SENSOR SWITCH.  LIGHTING CONTROL RELAY  ANNOTATIONS: CONTROL RELAYS ARE SHOWN SYMBOLICALLY ON FLOOR PLANS NEAR LIGHT FIXTURES OF THE ZONE THE RELAY CONTROLS. RELAYS WILL BE LOCATED/INSTALLED IN THE RELAY PANEL DESIGNATED BY THE TOP ANNOTATION (LP-XX), WHERE XX INDICATES THE PANEL ID. THE BOTTOM ANNOTATION (RP) INDICATES THE CONTROL PANEL RELAY POSITION NUMBER IN THE INDICATED PANEL. LOCATE THE ASSOCIATED LIGHTING FIXTURES WITH THE SAME RELAY NUMBER FOR CIRCUITING.  CEILING MOUNTED OCCUPANCY SENSOR  WALL MOUNTED OCCUPANCY SENSOR.  CEILING MOUNTED DAYLIGHTING SENSOR  WALL MOUNTED DAYLIGHTING SENSOR  EMERGENCY BYPASS RELAY  LIGHTING DIGITAL INPUT/OUTPUT DEVICE  LIGHTING POWER PACK  LIGHTING ROOM CONTROLLER  LIGHTING ZONE CONTROLLER  NETWORK BRIDGE CONTROLLER  PARTITION SENSOR  PHOTOCELL	 VOICE/DATA OUTLET-WALL MOUNTED  VOICE/DATA OUTLET-CEILING MOUNTED  VOICE/DATA OUTLET-FLOOR MOUNTED  ANNOTATIONS (X) TYP FOR ALL OUTLET TYPES IDENTIFIES QUANTITY OF CABLES/JACKS  WALL TELEPHONE  SPEAKER HORN  SPEAKER-CEILING MOUNTED  SPEAKER-WALL MOUNTED  PAGING SPEAKER  SOUND MASKING SPEAKER  SPEAKER VOLUME CONTROL  INTERCOM  REMOTE INTERCOM  PAGING STATION  MICROPHONE  AUDIO/VIDEO J-BOX  TV OUTLET  CLOSED CIRCUIT TV OUTLET  CLOCK - WALL MOUNT  CLOCK - WALL MOUNT DOUBLE SIDED  AMPLIFIER  WIRELESS ACCESS POINT - CEILING MOUNT  WIRELESS ACCESS POINT - WALL MOUNT  CABLE TRAY WITH SIZE NOTATION  J-HOOK COMMUNICATION PATHWAY WITH SIZE NOTATION	 FIRE FIGHTER JACK  MANUAL PULL STATION  FIRE ALARM HORN  FIRE ALARM SPEAKER  COMBINATION FIRE ALARM SPEAKER & STROBE LIGHT  COMBINATION FIRE ALARM HORN & STROBE LIGHT  FIRE ALARM STROBE LIGHT  HEAT DETECTOR  ANNOTATIONS (X) TYP FOR ALL DETECTOR TYPES • 'RF' COMBINATION RATE OF RISE & FIXED • 'R/C' RATE COMPENSATION • 'R' RATE OF RISE ONLY • 'T' THERMAL DETECTOR • '7' FIXED TEMPERATURE  SMOKE DETECTOR  ANNOTATIONS (X) TYP FOR ALL DETECTOR TYPES • 'P' PHOTOELECTRIC • 'AS' SAMPLING • 'I' IONIZATION  DUCT SMOKE DETECTOR  SMOKE BEAM DETECTOR  REMOTE TEST STATION  KNOX BOX  FIRE/SMOKE DAMPER  CHIME LIGHT  ELECTRIC BELL  FLOW SWITCH  TAMPER SWITCH  DOOR HOLDER-WALL MOUNTED  DOOR HOLDER-FLOOR MOUNTED  INDIVIDUAL ADDRESSABLE RELAY MODULE  ADDRESSABLE MONITORING MODULE  FIRE ALARM CONTROL PANEL  FIRE ALARM ANNUNCIATOR	GFCI GROUND FAULT CIRCUIT INTERRUPTER PT POTENTIAL TRANSFORMER EM EMERGENCY LS LIFE SAFETY VFD VARIABLE FREQUENCY DEVICE MSS MOTOR STARTER SWITCH V VOLTS A AMPS W WATTS VA VOLT-AMPS MCA MINIMUM CIRCUIT AMPS FLA FULL LOAD AMPS MCOP MINIMUM CIRCUIT OVERCURRENT PROTECTION SCCR SHORT CIRCUIT CURRENT RATING MLO MAIN LUG ONLY MCB MAIN CIRCUIT BREAKER C CONDUIT GND - GROUND GND - GROUND CRI COLOR RENDERING INDEX CCT COLOR CORRELATED TEMPERATURE LPD LIGHTING POWER DENSITY LPW LUMENS PER WATT FC FOOTCANDLE AFCI ARCH FAULT CIRCUIT INTERRUPTER ATS AUTOMATIC TRANSFER SWITCH CT CURRENT TRANSFORMER CR CARD READER DISC DISCONNECT DP DISTRIBUTION PANEL FACP FIRE ALARM CONTROL PANEL LCP LIGHTING CONTROL PANEL MCC MOTOR CONTROL CENTER MDP MAIN DISTRIBUTION FRAME PDU POWER DISTRIBUTION UNIT SWBD SWITCHBOARD SGR SWITCHGEAR CKT CIRCUIT PL PILOT LIGHT
TAGS / ANNOTATIONS  SPECIAL SERVICE EQUIPMENT ID  KEYNOTE IDENTIFIER  FEEDER REFERENCE TAG	GROUNDING AND LIGHTNING PROTECTION  LIGHTNING AIR TERMINAL  LIGHTNING CABLE THROUGH ROOF  LIGHTNING BIMETAL CONNECTOR  BONDING POINT  GROUND ROD  GROUNDING BUSBAR	LIGHT FIXTURES  SURFACE MOUNT LIGHT FIXTURE  RECESSED LIGHT FIXTURE  SURFACE MOUNT STRIP LIGHT FIXTURE  UNDER CABINET LIGHT FIXTURE  SUSPENDED MOUNT LIGHT FIXTURE  TRACK LIGHT  BOLLARD LIGHT  POLE MOUNTED LIGHT FIXTURE  RECESSED ROUND DOWNLIGHT FIXTURE  RECESSED SQUARE DOWNLIGHT FIXTURE  WALL MOUNT LIGHT FIXTURE  EXTERIOR WALL PACK LIGHT FIXTURE  TYPICAL FOR ALL LIGHT FIXTURES. A SHADED REGION INDICATES THE FIXTURE IS PART OF THE EMERGENCY EGRESS LIGHTING SYSTEM.  WALL (FLUSH) MOUNT, SINGLE FACE EXIT SIGN.  WALL (END) MOUNT, DOUBLE FACE EXIT SIGN  CEILING OR PENDANT MOUNT, SINGLE FACE EXIT SIGN  CEILING OR PENDANT MOUNT, DOUBLE FACE EXIT SIGN  TYPICAL FOR ALL EXIT SIGNS. ARROWS INDICATE DIRECTION OF TRAVEL. SHADED REGION INDICATES SIGN WITHOUT ARROWS.  CEILING MOUNTED DUAL HEAD EMERGENCY LIGHT  WALL MOUNTED DUAL HEAD EMERGENCY LIGHT  ANNOTATIONS: AN UPPER CASE LETTER 'F' FOLLOWED BY SERIES OF NUMBERS AND/OR LETTERS INDICATES THE FIXTURE ID, SEE LIGHT FIXTURE SCHEDULE FOR PRODUCT INFORMATION. AN UPPERCASE LETTER 'R' FOLLOWED BY A NUMBER INDICATES THE CONTROL PANEL RELAY # THE FIXTURE IS CONNECTED TO. LOCATE THE ASSOCIATED LIGHTING CONTROL RELAY DEVICE WITHIN THE ROOM FOR PANEL INFORMATION. A LOWERCASE LETTER INDICATES LOCAL CONTROL. LOCATE THE ASSOCIATE LIGHTING CONTROL DEVICES (SWITCHES, POWER PACKS, OCCUPANCY SENSORS, ETC.) FOR ZONE CONTROL.	NURSE CALL  BLANKET WARMER  DUPLEX GROUNDING MODULE  X-RAY EMERGENCY SHUTDOWN PUSHBUTTON  X-RAY RECEPTACLE AND INDICATOR MODULE  X-RAY VIEWING SCREEN  NURSE CALL ANNUNCIATOR  CODE BLUE  DOME LIGHT  DUTY STATION  MASTER CONTROL STATION  OPERATING ROOM STATION  PATIENT STATION  STAFF EMERGENCY STATION  STAFF EMERGENCY  TOILET SHOWER STATION  ZONE LIGHT	SECURITY  CARD READER  MOTION DETECTOR  DOOR ALARM  DOOR POSITION SWITCH  LATCH POSITION SWITCH  ELECTRIC DOOR STRIKE  ELECTRIC LATCH  DOOR OPERATOR  DOOR OPENER SWITCH  GLASS BREAKAGE DETECTOR  INFRARED DETECTOR  KEEPER SWITCH  KEY PAD  MAGNETIC LOCK  PANIC BUTTON  REQUEST TO EXIT  REQUEST TO EXIT BUTTON WITH TIMER SOUNDER  SECURITY CAMERA  WATCH STATION  DOOR BELL	
CIRCUITING  ELECTRICAL CIRCUITING IN WALL, UNDERFLOOR OR ABOVE CEILING  ELECTRICAL CIRCUITING UNDERGROUND  ELECTRICAL CIRCUITING FOR EMERGENCY SYSTEM IN WALL, UNDERFLOOR OR ABOVE CEILING  ELECTRICAL CIRCUITING "HOMERUN" TO PANELBOARD (TYPICAL FOR ALL TYPES)	ELECTRICAL EQUIPMENT  ELECTRICAL EQUIPMENT FOOTPRINT, TRANSFORMER, TRANSFER SWITCH, UPS, SWITCHBOARD, OR OTHER. SEE FOOT PRINT FOR EQUIPMENT ID AND CROSSREFERENCE THE EQUIPMENT DESCRIPTION IN THE ASSOCIATED KEYED NOTE OR EQUIPMENT SCHEDULE.  ELECTRIC MANHOLE				

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KEYED NOTES

- EP1 E. C. TO PROVIDE AND INSTALL TRANSFORMER PAD AND 4" CONDUIT FROM TRANSFORMER PAD TO UTILITY CONNECTION CABINET COORDINATE WITH HEARTLAND COOPERATIVE FOR PAD AND CONDUIT ROUTING.
- EP2 PANELBOARD, AND UTILITY METER ON UNISTRUT FRAME WITH CONCRETE PAD. REFER TO DETAIL 1/E.03 FOR ADDITIONAL INFORMATION. PROVIDE MINIMUM (2) 2" SPARE CONDUITS STUBBED 2' PAST CONCRETE PAD FOR FUTURE ACCESS.
- EP3 PREFABRICATED SHOWER HOUSE ELECTRICAL BY OTHERS. PROVIDE CONDUIT AND CONDUCTORS TO SHOWER BUILDING PANELBOARD AND TERMINATE.

GENERAL NOTES:

- A. ELECTRICAL ENTITIES DRAWN WITH THIS LINETYPE () INDICATES NEW WORK, UNLESS NOTED OTHERWISE.
- B. ELECTRICAL ENTITIES DRAWN WITH THIS LINETYPE () INDICATES EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
- C. CONDUCTOR SIZES INDICATED ARE FOR COPPER UNLESS SPECIFICALLY NOTED OTHERWISE.
- D. MINIMUM CONDUCTOR SIZE FOR RV PEDESTALS SHALL BE INCREASED WITH FEEDER DISTANCE TO ACCOUNT FOR A 3% MAXIMUM VOLTAGE DROP. UTILIZE THE FOLLOWING CONDUCTOR SIZE FOR ALUMINUM DIRECT BURY FEEDERS AT 208V TO 50A RV PEDESTALS BASED ON FEEDER LENGTHS.
- a. LESS THAN 80': 2-#6, #6N, #6G
 - b. 80' - 130': 2-#4, #4N, #4G
 - c. 130' - 160': 2-#3, #3N, #3G
 - d. 160' - 210': 2-#2, #2N, #2G
 - e. 210' - 260': 2-#1, #1N, #1G
 - f. 260' - 320': 2-#1/0, #1/0N, #1/0G
 - g. 320' - 400': 2-#2/0, #2/0N, #2/0G

1 SITE PLAN
1" = 25'-0"



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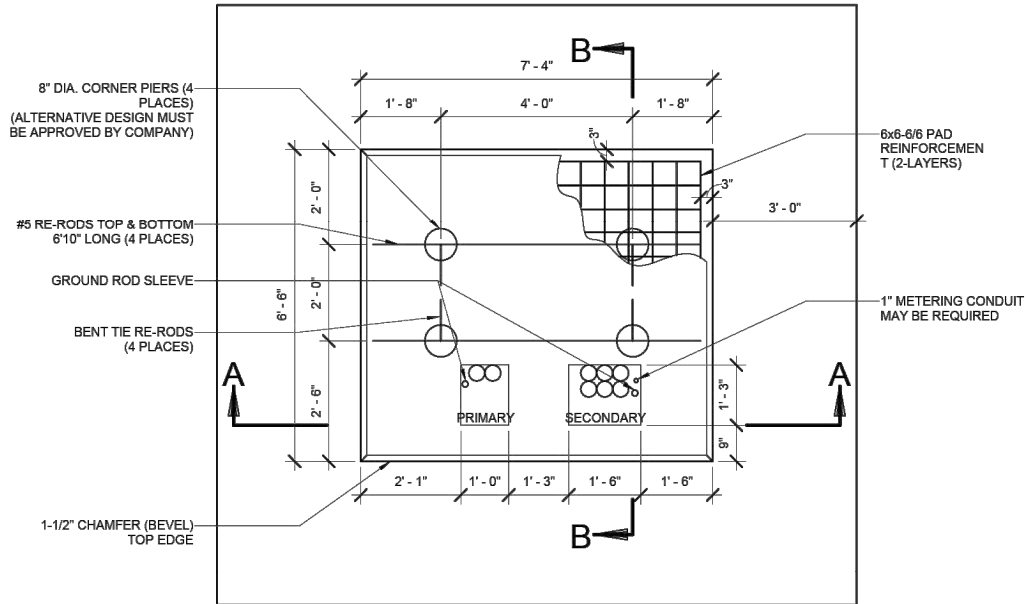
REV	DESCRIPTION	DATE

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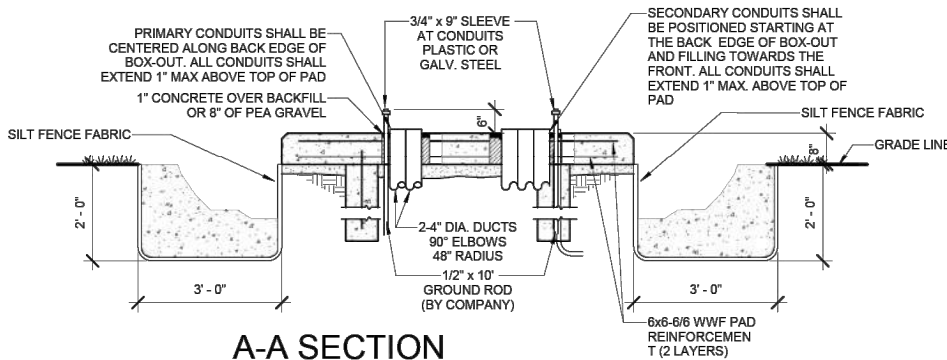
ELECTRICAL SITE PLAN

SHEET

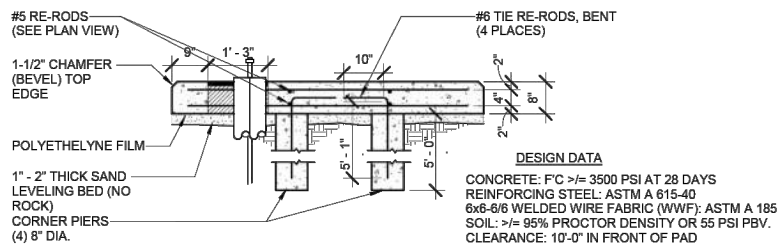
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PLAN

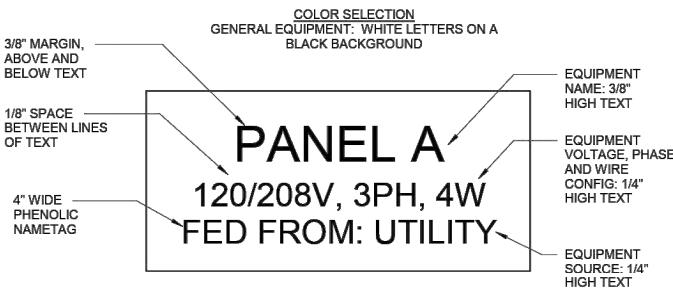


A-A SECTION



B-B SECTION

DESIGN DATA
CONCRETE: FC >= 3500 PSI AT 28 DAYS
REINFORCING STEEL: ASTM A 615-40
6x6-6/6 WELDED WIRE FABRIC (WWF): ASTM A 185
SOIL: >= 95% PROCTOR DENSITY OR 55 PSI PBV.
CLEARANCE: 10'-0" IN FRONT OF PAD



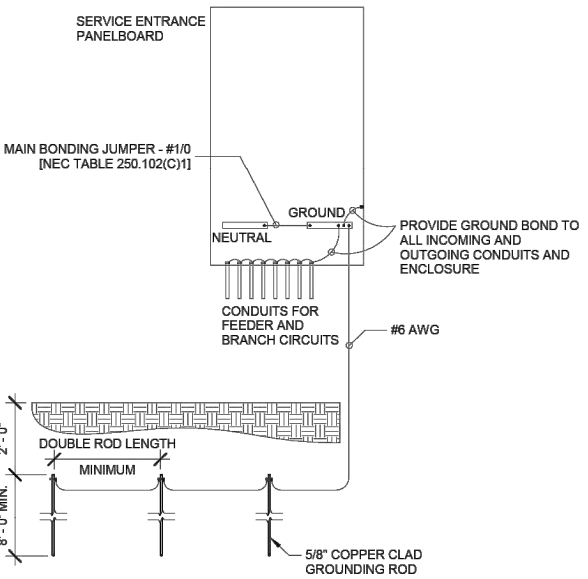
3 TYPICAL EQUIPMENT NAMEPLATE

ELECTRICAL EQUIPMENT SCHEDULE		
EQUIPMENT TAG	DESCRIPTION	MANUFACTURER / MODEL
RV	DIRECT BURY RV PEDESTAL, NEMA 3R RATED ENCLOSURE, 120/240V, 3-WIRE, SINGLE PHASE, 100A RATED, ONE 50A/2P BREAKER AND 14-50R RECEPTACLE, ONE 30A/1P BREAKER AND TT30R RECEPTACLE, ONE 20A/1P BREAKER AND 5-20R GFI RECEPTACLE, LOCKABLE HINGED COVER	MIDWEST U075CP6010 MILBANK

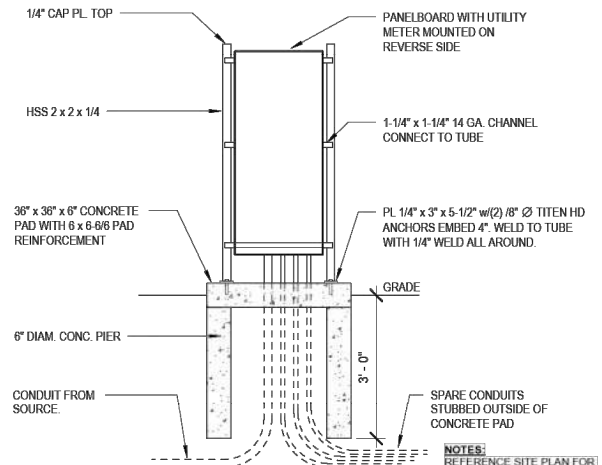
DISTRIBUTION EQUIPMENT	
CALCULATED LOAD - NEC 551.73(A)	
RV SITE QTY	16
VA PER SITE	12000
DEMAND FACTOR	47%
CALCULATED VA	90240
MISC EQUIPMENT VA	14436
TOTAL VA	104676
AMPS AT 208V-3PH	290.55

COPPER FEEDER SCHEDULE	
FEEDER KEY	CIRCUIT CONDUCTORS & CONDUIT
100A4G	(1) 4-#3, #8 G, 1 1/4" C.

MDP																					
SHORT CIRCUIT RATING: 22K AIC INSTALLATION: SURFACE BUS RATING: 400 A						FED FROM: UTILITY XFMR SERVICE ENTRANCE RATED						CONNECTED LOAD: 153556 VA (426 A) MAIN BREAKER: 400 A VOLTAGE: 208/120 V Wye CONFIGURATION: 3 PHASE, 4 WIRE									
CKT	CIRCUIT DESCRIPTION			FEEDER KEY	CIRCUIT BREAKER		A		B		C		CIRCUIT BREAKER		FEEDER KEY	CIRCUIT DESCRIPTION			CKT		
1	RV-01				2	50 A		4160	4160						50 A	2			RV-02	2	
3										4160	4160									4	
5	RV-03				2	50 A						4160	4160		50 A	2				RV-04	6
7								4160	4160												8
9	RV-05				2	50 A				4160	4160				50 A	2				RV-06	10
11												4160	4160								12
13	RV-07				2	50 A		4160	4160						50 A	2				RV-08	14
15										4160	4160										16
17	RV-09				2	50 A						4160	4160		50 A	2				RV-09	18
19								4160	4160												20
21	RV-11				2	50 A				4160	4160				50 A	2				RV-10	22
23												4160	4160								24
25	RV-13				2	50 A		4160	4160						50 A	2				RV-12	26
27										4160	4160										28
29	RV-15				2	50 A						4160	4160		50 A	2				RV-16	30
31								4160	4160												32
33										6812	--				--	1				SPACE	34
35	SHOWER HOUSE			100A4G	3	100 A						6812	--		--	1				SPACE	36
37								6812	--						--	1				SPACE	38
39	SPACE				1	--				--	--				--	1				SPACE	40
41	SPACE				1	--						--	--		--	1				SPACE	42
Total Load:								56732 VA		48412 VA		48412 VA									
Percent Balance:								110.836438		94.581781		94.581781									



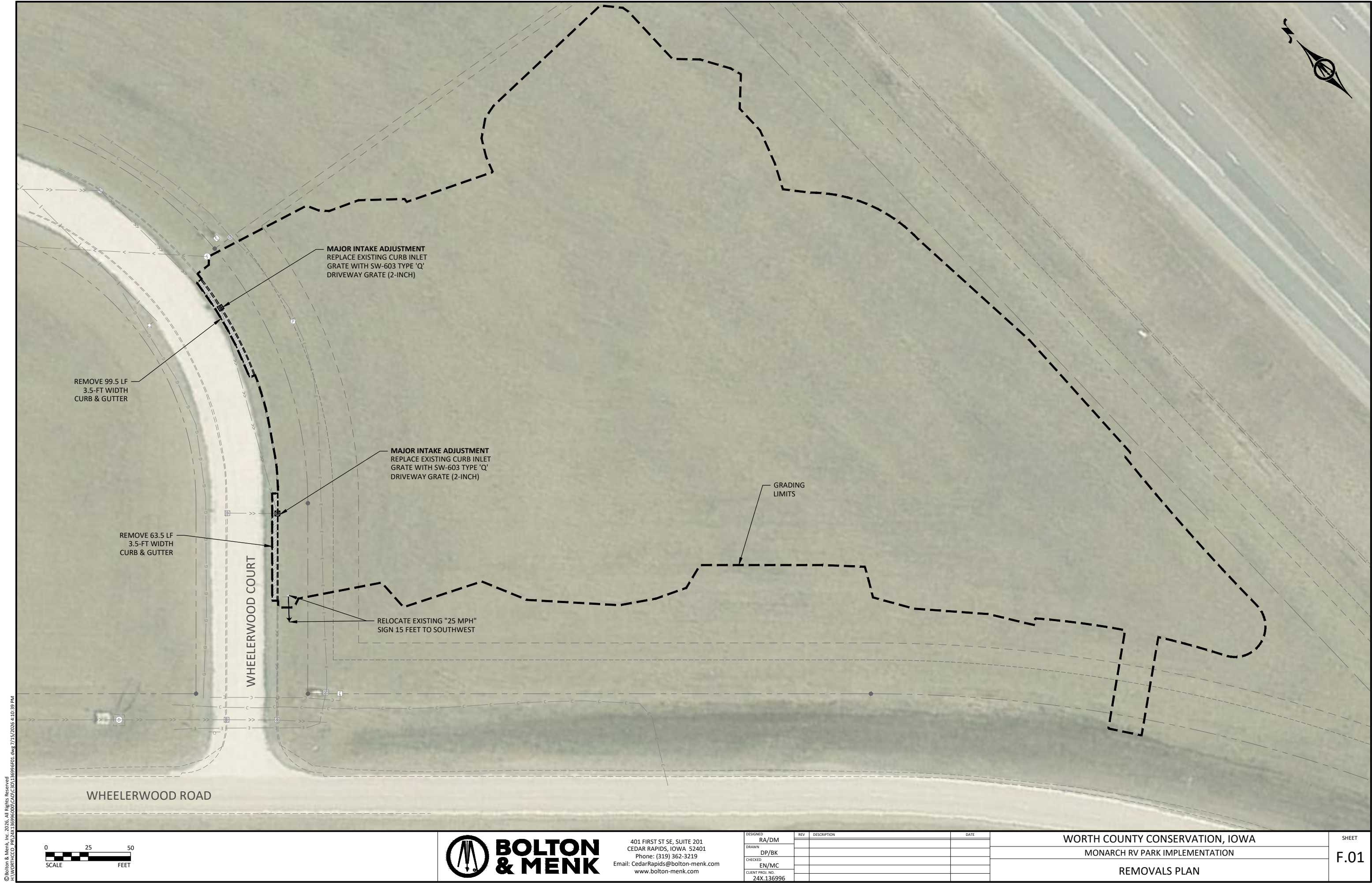
2 GROUNDING & BONDING DETAIL



1 PANELBOARD MOUNTING DETAIL

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4 TRANSFORMER PAD DETAIL



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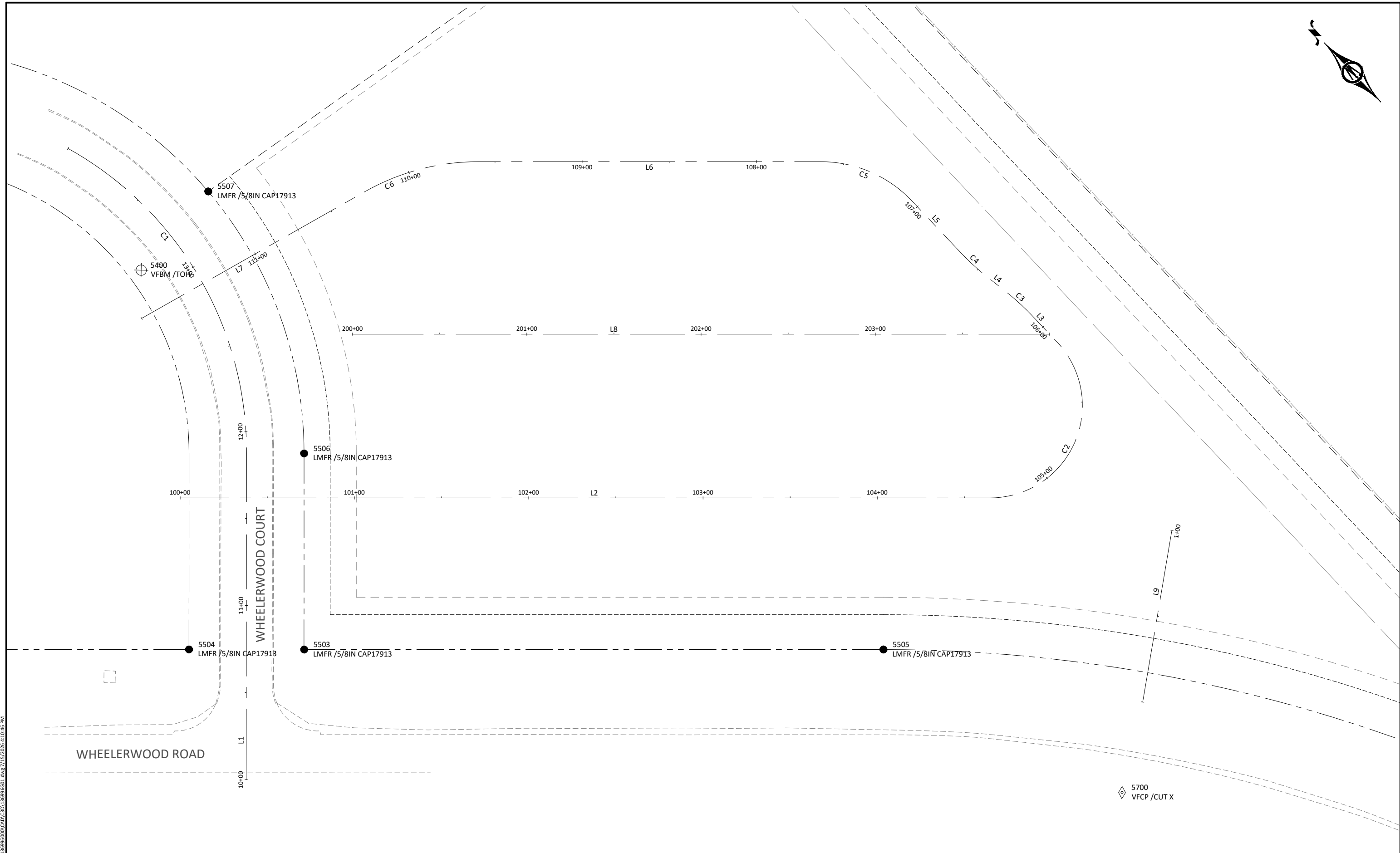
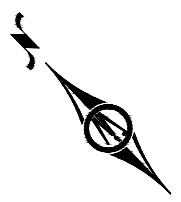
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MONARCH RV PARK IMPLEMENTATION

REMOVALS PLAN

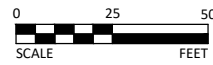
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VFCP /CUT X

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REFERENCES & BENCHMARKS

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SURVEY CONTROL POINT DATA [IARCS-2]				
POINT NUMBER	RAW DESCRIPTION	ELEVATION	NORTH	EAST
5400	VFBM /TOH	1275.731	9900652.73	12340172.43
5700	VFCP /CUT X	1271.215	9900047.35	12340372.84
5701	VFCP /CUT X	1273.730	9900804.83	12340128.26

MONUMENT PRESERVATION				
POINT NUMBER	RAW DESCRIPTION	ELEVATION	NORTH	EAST
5500	LMFR /5/8IN CAP17913	1265.502	9900612.59	12340598.95
5501	LMFD /RAIL	1264.980	9900614.23	12340599.73
5502	LMFD /RAIL	1267.014	9900612.90	12340548.05
5503	LMFR /5/8IN CAP17913	1271.843	9900430.61	12340089.82
5504	LMFR /5/8IN CAP17913	1272.020	9900476.26	12340042.03
5505	LMFR /5/8IN CAP17913	1267.267	9900201.24	12340330.39
5506	LMFR /5/8IN CAP17913	1272.573	9900512.12	12340167.48
5507	LMFR /5/8IN CAP17913	1273.223	9900658.89	12340231.44
5508	LMFR /5/8IN CAP17913	1265.433	9899879.76	12340544.33
5509	LMFR /5/8IN CAP17913	1264.037	9899692.51	12340593.10
5510	LMFD /CON MON RW	1268.288	9899916.59	12340597.93

WHEELERWOOD COURT - CENTERLINE											
NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START N	START E	END N	END E	LINE / CHORD DIRECTION
L1	10+00	11+87.51	187.51				9900399.48	12340014.22	9900535.03	12340143.78	N43° 42' 24"E
C1	11+87.51	14+00	212.49	60°52'29"	200.00	202.64	9900535.03	12340143.78	9900732.26	12340190.29	N13° 16' 10"E

WORTH RV PARK - OUTER CENTERLINE											
NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START N	START E	END N	END E	LINE / CHORD DIRECTION
L2	100+00	104+64.71	464.71				9900542.68	12340098.41	9900221.99	12340434.74	S46° 21' 48"E
C2	104+64.71	105+88.05	123.34	133°20'17"	53.00	97.33	9900221.99	12340434.74	9900260.08	12340524.31	N66° 58' 03"E
L3	105+88.05	106+08.32	20.27				9900260.08	12340524.31	9900280.35	12340524.42	N0° 17' 55"E
C3	106+08.32	106+30.46	22.14	8°27'25"	150.00	22.12	9900280.35	12340524.42	9900302.41	12340522.90	N3° 55' 48"W
L4	106+30.46	106+42.28	11.82				9900302.41	12340522.90	9900314.11	12340521.22	N8° 09' 30"W
C4	106+42.28	106+64.42	22.14	8°27'25"	150.00	22.12	9900314.11	12340521.22	9900336.18	12340519.71	N3° 55' 48"W
L5	106+64.42	107+04.48	40.06				9900336.18	12340519.71	9900376.24	12340519.92	N0° 17' 55"E
C5	107+04.48	107+63.12	58.64	46°39'43"	72.00	57.03	9900376.24	12340519.92	9900428.72	12340497.60	N23° 01' 57"W
L6	107+63.12	109+59.52	196.40				9900428.72	12340497.60	9900564.26	12340355.46	N46° 21' 48"W
C6	109+59.52	110+27.68	68.16	29°35'11"	132.00	67.41	9900564.26	12340355.46	9900596.78	12340296.42	N61° 09' 24"W
L7	110+27.68	111+75	147.32				9900596.78	12340296.42	9900632.54	12340153.51	N75° 56' 59"W

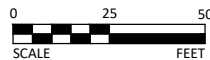
WORTH RV PARK - INNER CENTERLINE											
NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START N	START E	END N	END E	LINE / CHORD DIRECTION
L8	200+00	204+00	400.00				9900542.47	12340234.85	9900266.44	12340524.34	S46° 21' 48"E

FES - 01											
NUMBER	START STATION	END STATION	LENGTH	DELTA	RADIUS	CHORD	START N	START E	END N	END E	LINE / CHORD DIRECTION
L9	1+00	2+00	100.00				9900136.53	12340497.44	9900076.74	12340417.28	S53° 16' 42"W



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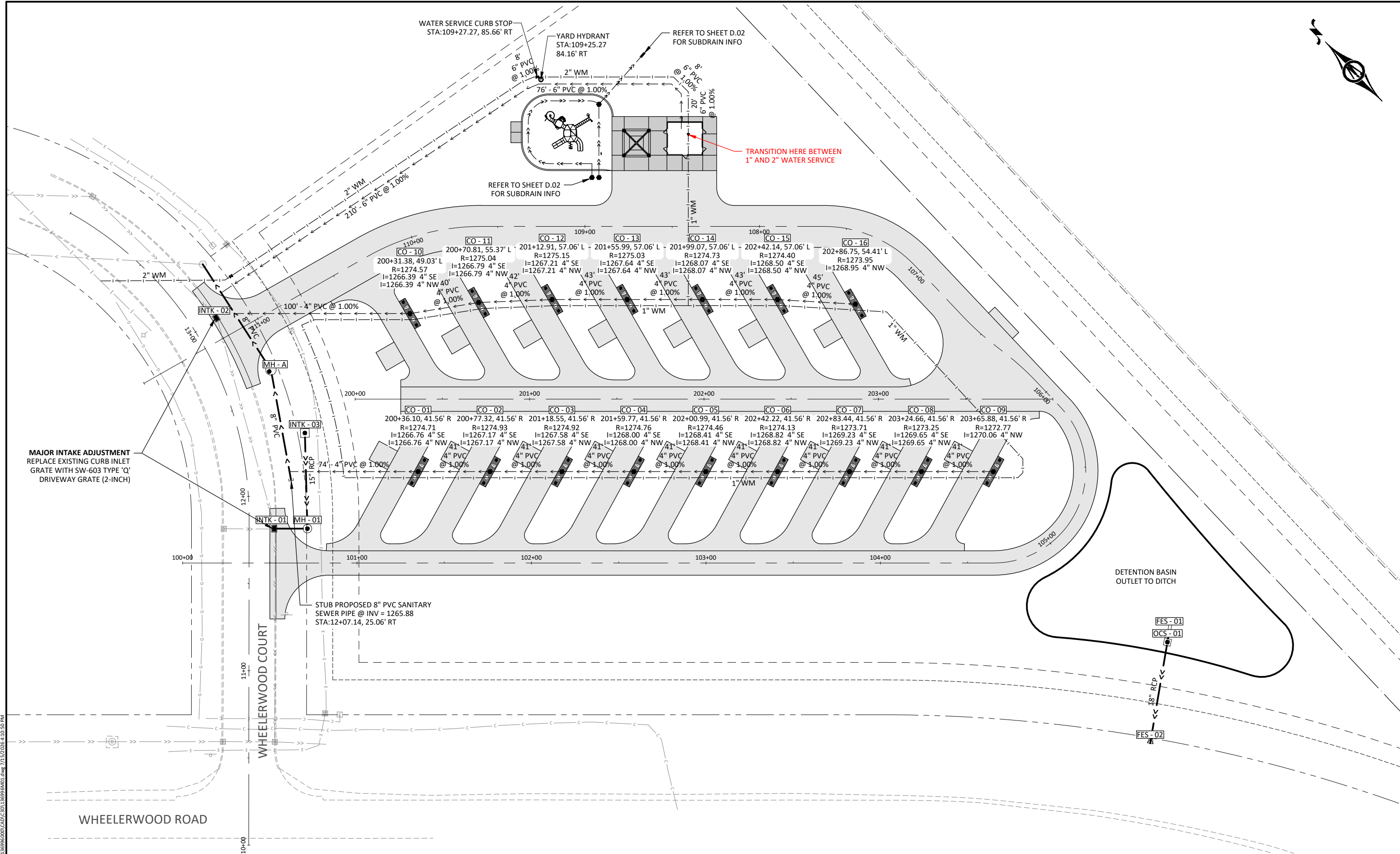
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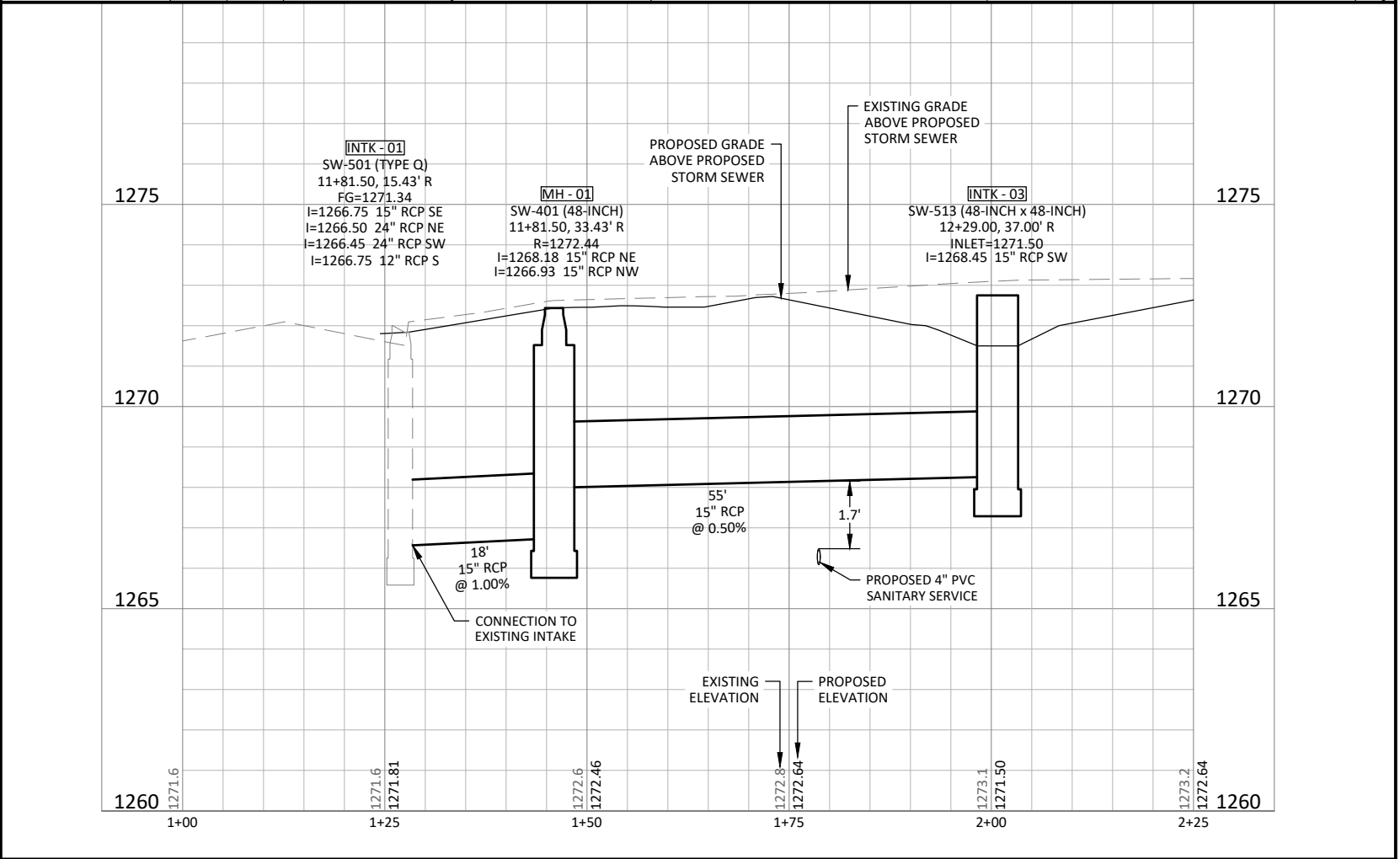
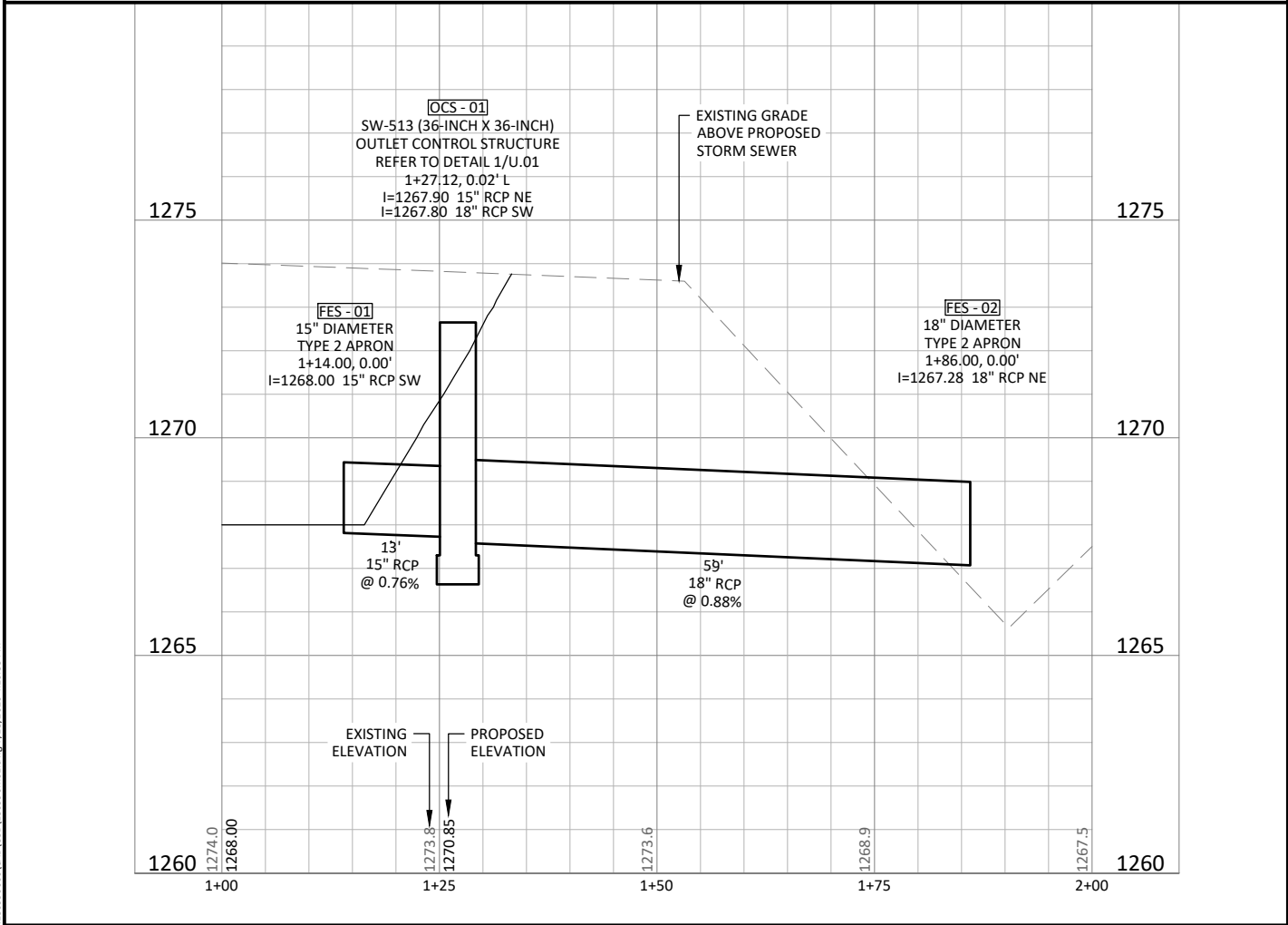
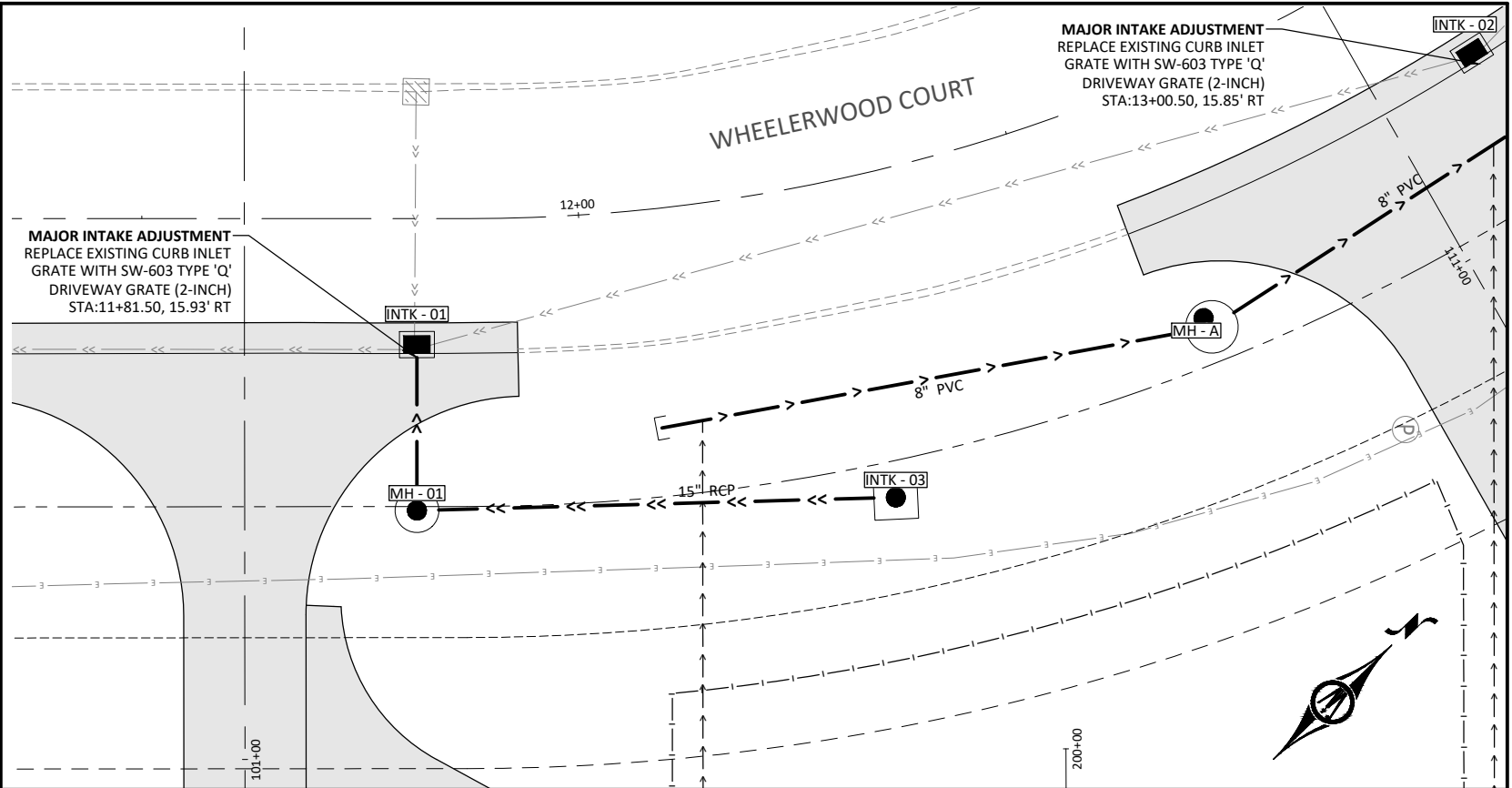
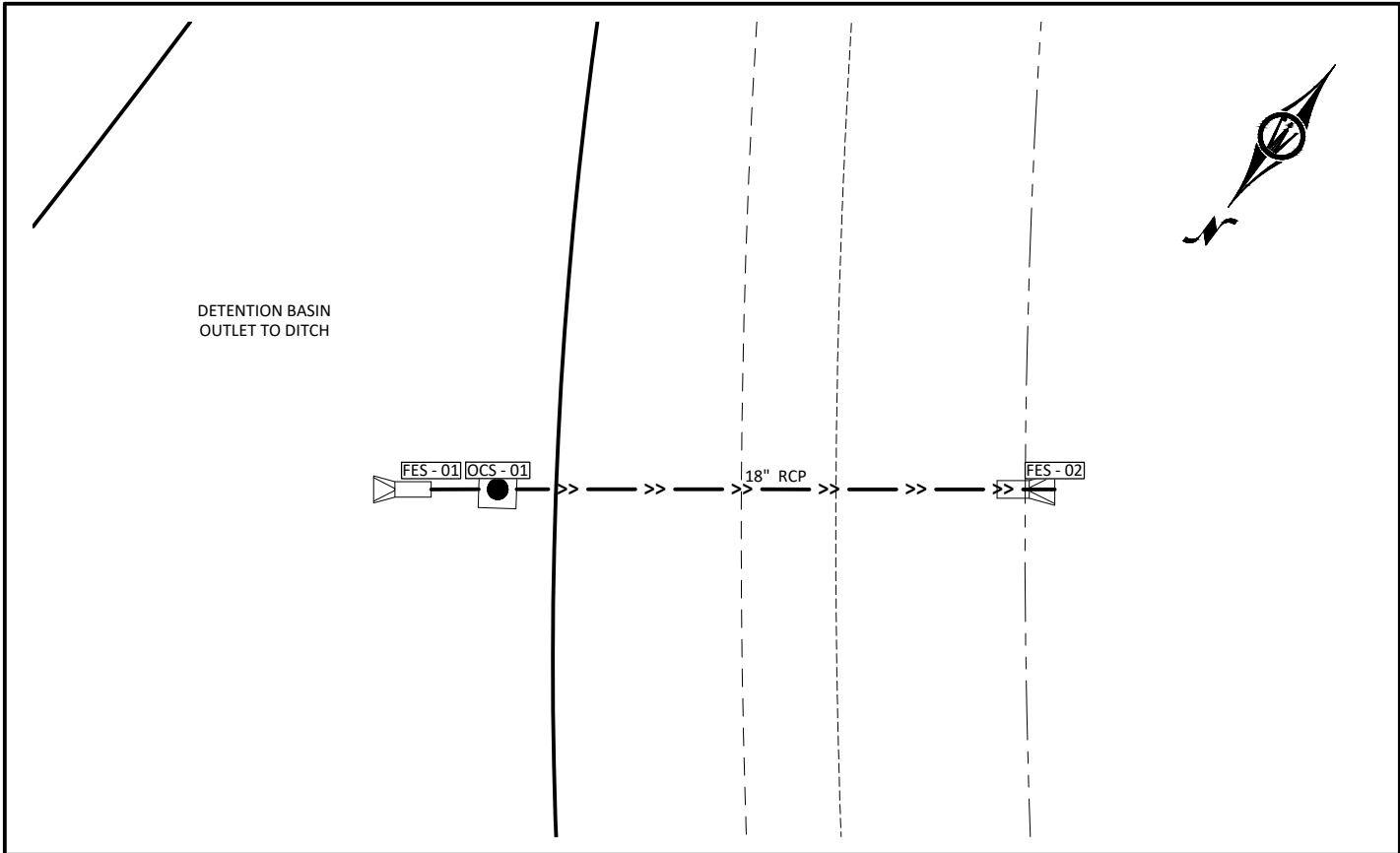
MONARCH RV PARK IMPLEMENTATION

PROPOSED UTILITY PLAN

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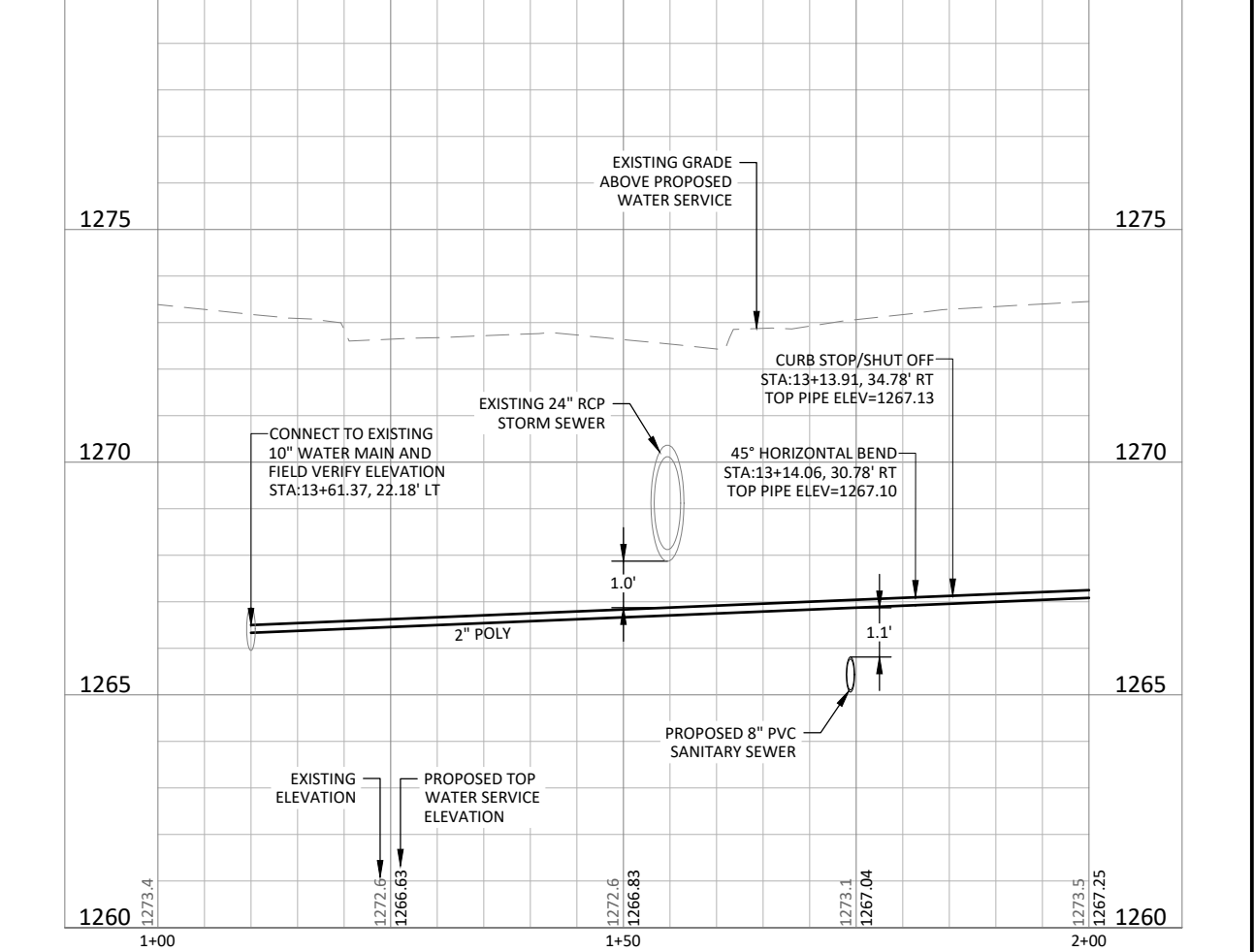
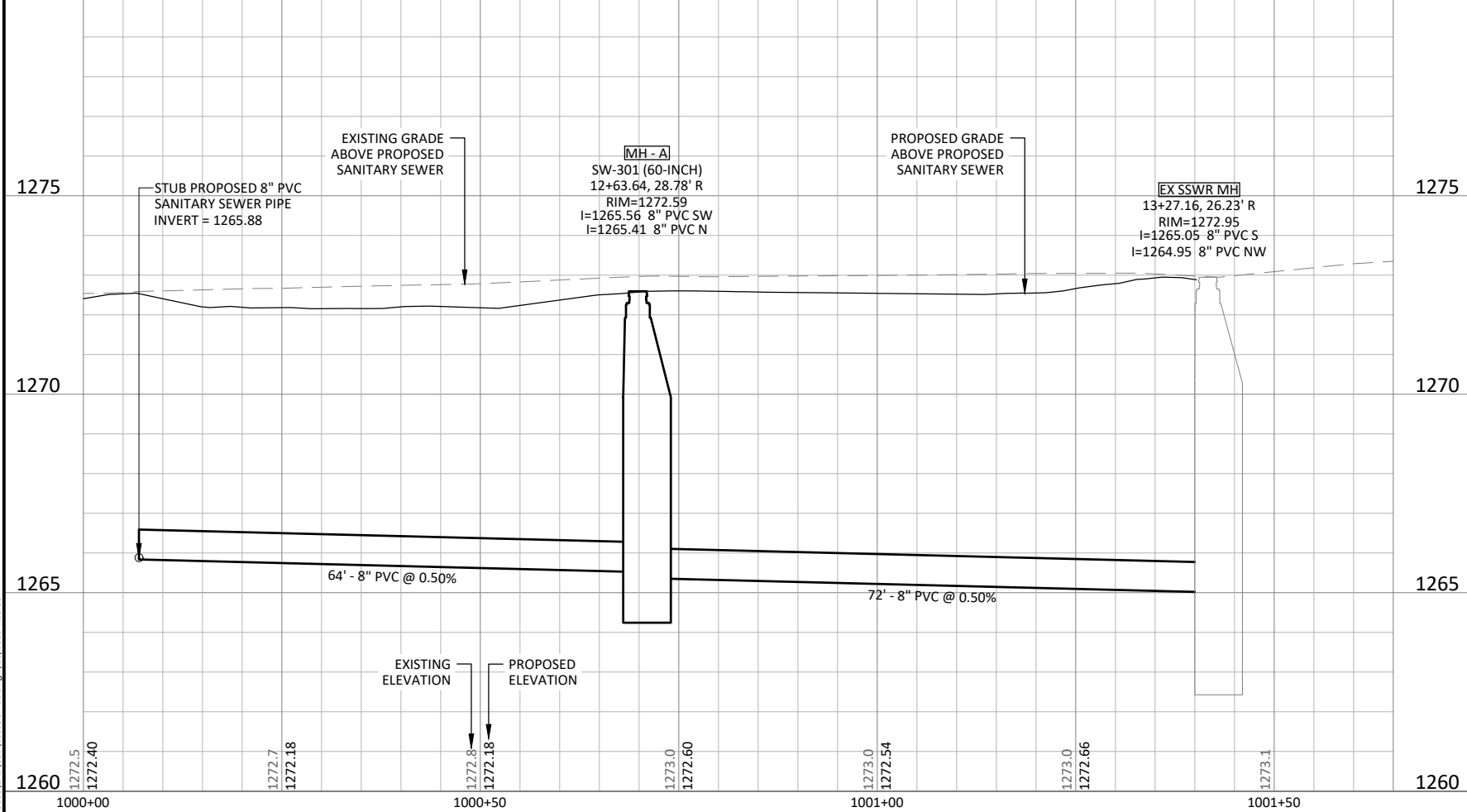
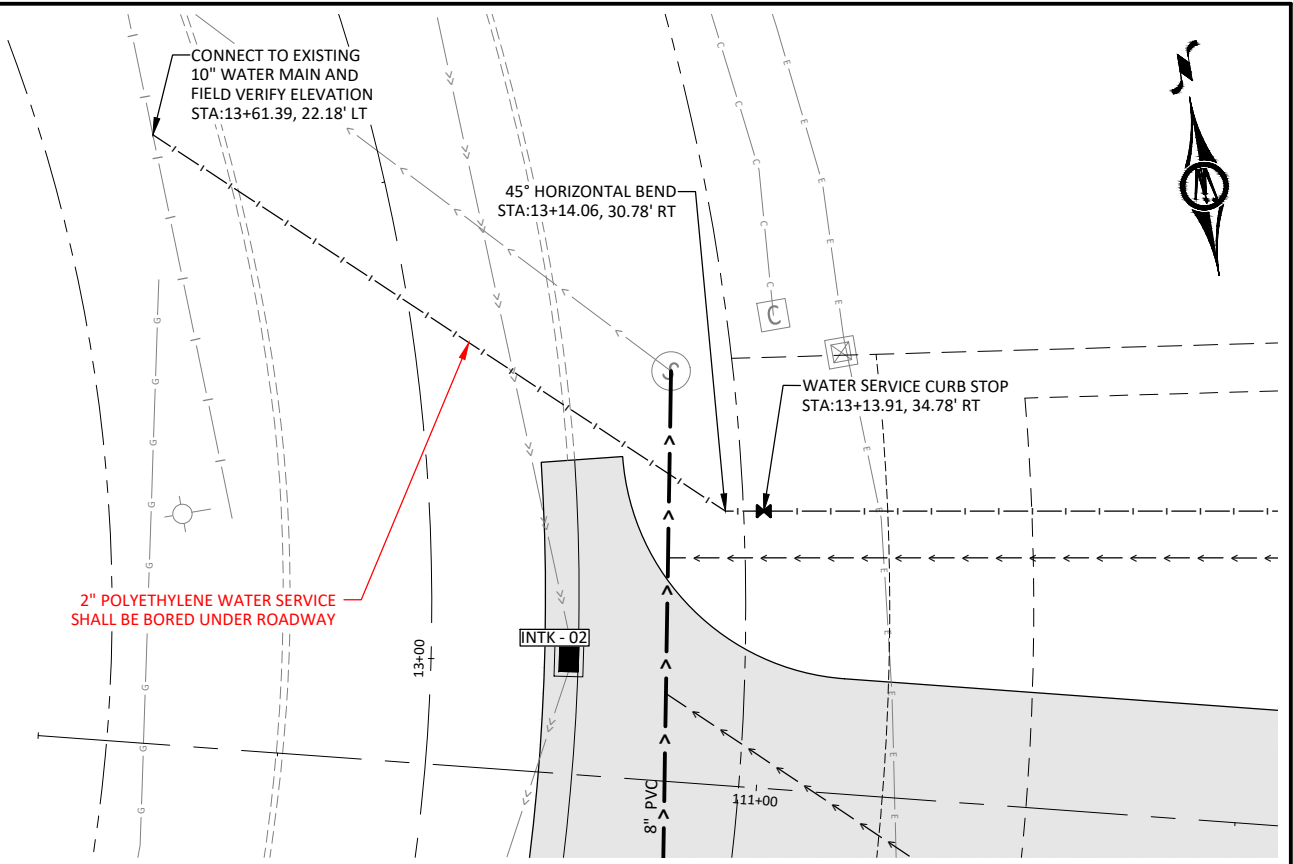
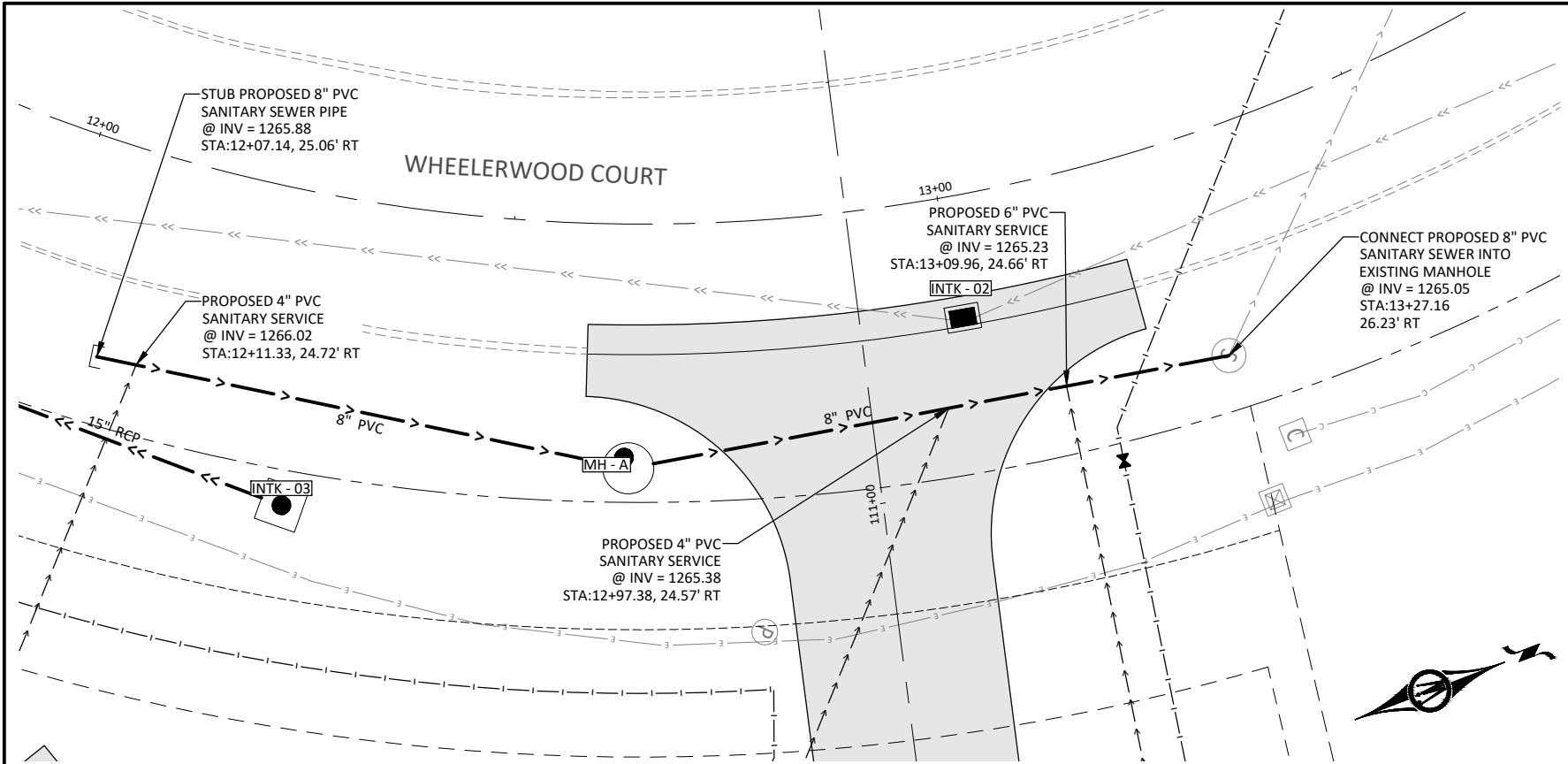


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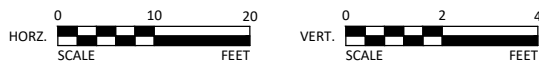
DESIGNED	RA/DM	REV	DESCRIPTION	DATE
DRAWN	DP/BK			
CHECKED	EN/MC			
CLIENT PROJ. NO.	24X.136996			

WORTH COUNTY CONSERVATION, IOWA
MONARCH RV PARK IMPLEMENTATION
PLAN & PROFILE - STORM SEWER

SHEET
M.02



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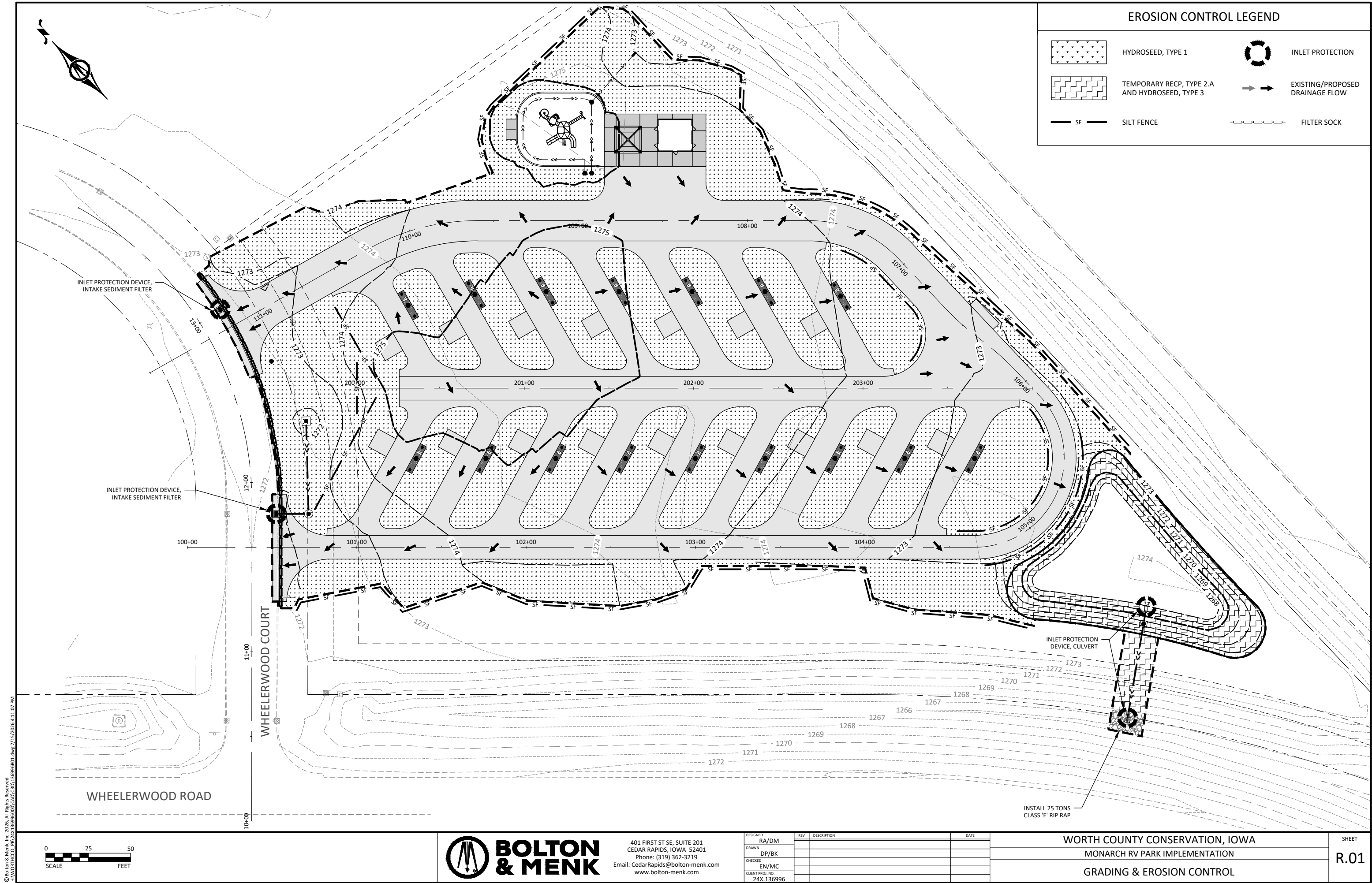
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REV	DESCRIPTION	DATE

WORTH COUNTY CONSERVATION, IOWA
MONARCH RV PARK IMPLEMENTATION
PLAN & PROFILE - SANITARY SEWER & WATER MAIN

SHEET
M.03



GENERAL NOTES:

1.

TYPICAL STRUCTURAL DETAILS AND NOTES SHALL APPLY UNLESS NOTED OTHERWISE ON THE DRAWINGS.
2.

EXAMINE SITE AND DRAWINGS TO DETERMINE LOCATIONS AND DIMENSIONS OF UTILITIES, AND SITE IMPROVEMENTS.
3.

BEFORE CONSTRUCTION FABRICATION AND ERECTION OF ANY MATERIALS, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELEVATIONS, DIMENSIONS AND CONDITIONS AS SHOWN ON THE DRAWINGS AND REPORT DISCREPANCIES TO THE ENGINEER AT ONCE FOR RESOLUTION.
4.

ALL DIMENSIONS, LOCATIONS, ELEVATIONS AND CONDITIONS OF EXISTING STRUCTURES SHOWN ON THE CONTRACT DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
5.

THE STRUCTURAL DESIGN IS BASED ONLY ON THE STRUCTURE IN ITS COMPLETED STATE. CONTRACTORS AND THEIR SUBCONTRACTORS SHALL TAKE WHATEVER PRECAUTIONS ARE NECESSARY TO WITHSTAND ALL HORIZONTAL AND VERTICAL LOADING THAT MAY BE ENCOUNTERED DURING THE CONSTRUCTION PROCESS PRIOR TO THE COMPLETION OF THE STRUCTURE.
6.

WRITTEN DISTANCES & ELEVATIONS SHALL GOVERN OVER SCALED DISTANCES & ELEVATIONS.
7.

ELEVATIONS ARE BASED ON THE BENCH MARKS NOTED ON THE DRAWINGS.

DESIGN CRITERIA & LOADING NOTES:

1.

CODE: 2024 INTERNATIONAL BUILDING CODE (IBC)
2.

DESIGN LOADING
- DEAD LOADS (D)

MATERIALS

CALCULATED
- LIVE LOADS (L)

FLOOR

RESTROOM/MECHANICAL

100 PSF
- ROOF LIVE LOADS (LLr)

ORDINARY GABLE ROOFS

20 PSF
- SNOW LOADS (S)

P_g

GROUND SNOW LOAD

46 PSF

P_f

FLAT-ROOF SNOW LOAD

34.8 PSF

P_f

UNBALANCED SNOW LOAD

46.0 PSF

C_e

SNOW EXPOSURE FACTOR

0.9

I_s

SNOW LOAD IMPORTANCE FACTOR

1.0

C_t

THERMAL FACTOR

1.2

C_s

SLOPE FACTOR

1.0
- WIND LOAD (W)

V

BASIC WIND SPEED

110 MPH (3 SECOND GUST)

V_{asd}

ASD WIND SPEED (V*v(0.6))

85 MPH

RISK (OCCUPANCY) CATEGORY

II

EXPOSURE CATEGORY

C

GC_{pi}

INTERNAL PRESSURE COEFFICIENT

+/- 0.18

C&C WIND PRESSURE

SEE BUILDING MANUFACTURER

MATERIAL NOTES:

- REINFORCED CONCRETE:

CONCRETE:

4000 PSI @ 28 DAYS

AIR CONTENT: 6.5% ± 1.5%

W/C+P: 0.42
- REINFORCEMENT BARS:

DEFORMED BARS

ASTM A615, GRADE 60

CONCRETE NOTES:

1.

LAP SPLICES AND 90 DEGREE END HOOKS SHALL BE AS SHOWN BELOW UNLESS NOTED. WHEN BARS OF TWO DIFFERENT SIZES ARE SPLICED, THE LONGER LAP LENGTH SHALL APPLY.
- F'c=4,000 PSI

SLAB, WALL, PIER

BEAM

90 DEGREE HOOK

BAR SIZE

BAR LAP

TOP BAR

BAR LAP

TOP BAR

#4

25 IN.

32 IN.

37 IN.

48 IN.

8 IN.

#5

31 IN.

40 IN.

46 IN.

60 IN.

10 IN.

#6

37 IN.

48 IN.

56 IN.

72 IN.

12 IN.
- *TOP BAR LAP SPLICES ARE HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 IN. OF CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE
2.

REINFORCING BARS SHALL HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED OTHERWISE.
- FOOTINGS AND OTHER UNFORMED SURFACES

3"

CONCRETE EXPOSED TO EARTH, WEATHER OR FLUIDS

#6 BARS OR LARGER

2"

#5 BARS OR SMALLER

1-1/2"

CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND

BEAMS, COLUMNS, TIES, SPIRALS AND STIRRUPS

1-1/2"

SLABS, WALLS & JOISTS

3/4"
3.

CONCRETE SHALL BE PLACED WITHOUT CONSTRUCTION JOINTS EXCEPT WHERE SPECIFICALLY SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.
4.

CAST-IN-PLACE CONCRETE SHALL NOT BE PLACED IN STANDING WATER, ON FROZEN SOIL OR ON FROZEN CONCRETE.
5.

FOR LOCATIONS AND DIMENSIONS OF SLEEVES, CURB, OPENINGS AND DEPRESSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE ARCHITECTURAL, CIVIL/MECHANICAL, YARDWORK, PLUMBING, HVAC AND ELECTRICAL DRAWINGS. CONTRACTOR SHALL VERIFY AND COORDINATE REQUIREMENTS FOR AND LOCATION OF ABOVE ITEMS WHETHER SHOWN ON THE STRUCTURAL DRAWINGS OR NOT.
6.

BEVEL ALL EXPOSED CORNERS OF CONCRETE 3/4" x 3/4".
7.

PROVIDE WELDED WIRE FABRIC IN FLAT SHEETS.

FOUNDATION & SOIL NOTES:

1.

A GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE FOUNDATION BEARING SURFACES PRIOR TO THE PLACEMENT OF FOOTINGS OR FOUNDATION.
2.

PROTECT FOUNDATION SOILS FROM FREEZING DURING CONSTRUCTION.
3.

PROVIDE A MINIMUM OF 3'-6" OF SOIL COVER AT STRUCTURE WALL FOOTINGS.
4.

PLACE FILL AND BACKFILL AND COMPACT TO FOLLOWING MAXIMUM STANDARD PROCTOR DENSITIES UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS:
- LOCATION

DENSITY

FILL BELOW FOOTINGS

100%

FILL BELOW SLABS ON GRADE

98%
5.

ASSUMED SOIL BEARING PRESSURES:
- ASSUMED ALLOWABLE SOIL BEARING PRESSURE: 1,500 PSF

COMPLETE REMOVAL AND REPLACEMENT OF FROST SUSCEPTIBLE SOILS
6.

COMPLETE REMOVAL OF UNSUITABLE MATERIALS FROM BELOW THE BUILDING'S FLOOR AND FOUNDATION.
- UNSUITABLE MATERIALS INCLUDE TOP SOIL, FROZEN MATERIALS, ORGANIC SOILS, EXISTING STRUCTURES, EXISTING UTILITIES, VEGETATION, AND SOFT/LOOSE SOILS.
7.

A GEOTECHNICAL REPRESENTATIVE IS TO OBSERVE THE EXCAVATIONS TO MAKE NECESSARY FIELD JUDGMENTS REGARDING THE SUITABILITY OF THE SOILS AND RELATIVE COMPACTION OF BOTTOM OF FOOTING GRADE.
8.

REMOVING UNSUITABLE MATERIALS BELOW THE BUILDING PER DETAIL 1 / S.03
9.

SLOPE THE BOTTOM OF THE EXCAVATION TOWARD ONE OR MORE COLLECTION POINTS TO REMOVE ANY WATER ENTERING THE ENGINEERED FILL. FOLLOW THE FROST PROTECTION DETAIL 2, THIS SHEET.
10.

STRUCTURAL FILL TO BE USED BELOW FOUNDATIONS, WITHIN OVERSIZING ZONES, AND WITHIN 3 FEET BELOW INTERIOR SLABS. STRUCTURAL FILL DESCRIPTIONS INCLUDE: SC, SM, SP, SW, SP-SM, SW-SM, GP- GW. STRUCTURAL GRADATION: 100% PASSING 2-INCH SIEVE, < 20% PASSING #200 SIEVE, < 2% ORGANIC CONTENT.
11.

SPREAD ENGINEERED FILL IN LOOSE LIFTS APPROXIMATELY 6 TO 8 INCHES THICK. COMPACT TO STANDARD PROCTOR DENSITIES.
12.

A REGISTERED LICENSED GEOTECHNICAL ENGINEER IS TO DIRECT THE SPECIAL INSPECTIONS OF ENGINEERED FILL PLACEMENT.
13.

VAPOR BARRIER REQUIRED BELOW INTERIOR FLOORS.

EXCAVATION NOTES:

1.

TEMPORARY GROUND CONTROL IS BY CONTRACTOR DESIGN.
2.

CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TEMPORARY SHEETING AND BRACING NECESSARY TO PROTECT PERSONNEL AND ADJACENT PROPERTY FROM INJURY OR DAMAGE DURING CONSTRUCTION OPERATION.
3.

EXCAVATIONS OR TRENCHING WITHIN CLOSE PROXIMITY TO UNDERGROUND STRUCTURES, UTILITIES, OR UTILITY POLES WILL REQUIRE PROTECTION AND SUPPORT TO PREVENT DAMAGE OR INTERRUPTION TO SERVICE. THE COST TO PROVIDE THIS PROTECTION SHALL BE INCLUDED IN THE CONTRACTOR'S TOTAL BASE BID PRICE.

INTERPRETATION OF CONFLICT NOTES:

1.

SHOULD CONFLICT OCCUR IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REQUEST INTERPRETATION BEFORE PROCEEDING WITH THE ASSOCIATED WORK. ALL SUCH REQUESTS SHALL FIRST BE PRECEDED BY A DILIGENT INVESTIGATION INTO THE CONTRACT DOCUMENTS. EVIDENCE OF SUCH INVESTIGATION SHALL BE COMBINED IN ALL REQUESTS FOR INTERPRETATIONS SUBMITTED.
2.

IF THE CONTRACTOR FAILS TO MAKE SUCH A REQUEST, NO EXCUSE WILL THEREAFTER BE ENTERTAINED FOR FAILURE TO CARRY OUT THE WORK IN A SATISFACTORY MANNER. SHOULD CONFLICTS OCCUR IN OR BETWEEN DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR IS DEEMED TO HAVE ESTIMATES ON THE MORE EXPENSIVE WAY OF DOING THE WORK UNLESS HAVING ASKED FOR, AND OBTAINED, WRITTEN DECISION BEFORE SUBMISSION OF PROPOSAL AS TO WHICH METHOD OF MATERIALS WILL BE REQUIRED.

SPECIAL INSPECTIONS NOTES:

1.

SPECIAL INSPECTIONS WILL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE IBC, THE DRAWINGS AND THE PROJECT SPECIFICATIONS, IF APPLICABLE. THE INSPECTIONS WILL BE PERFORMED BY A QUALIFIED INSPECTOR.
- A.

CONCRETE CONSTRUCTION
- B.

FABRICATORS, EXCEPT WHEN FABRICATOR MAINTAINS ONGOING INSPECTIONS BY AN APPROVED INDEPENDENT INSPECTION OR QUALITY CONTROL AGENCY.
- C.

SOILS
2.

CONTRACTOR SHALL REVIEW AND SIGN "STATEMENT OF SPECIAL INSPECTION AND TESTING" ACKNOWLEDGING THE SPECIAL INSPECTION AND TESTING REQUIREMENTS FOR THE PROJECT PRIOR TO CONSTRUCTION.
3.

CONTRACTOR SHALL PROVIDE ACCESS FOR SPECIAL INSPECTORS AND ALL OTHER PERTINENT PARTIES NECESSARY TO JOB SITE AND TO APPROVED DRAWINGS AND SPECIFICATIONS.
4.

CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING DEFICIENCIES IDENTIFIED IN THE INSPECTION AND/OR TESTING REPORTS IN A TIMELY MANNER.



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WORTH COUNTY CONSERVATION

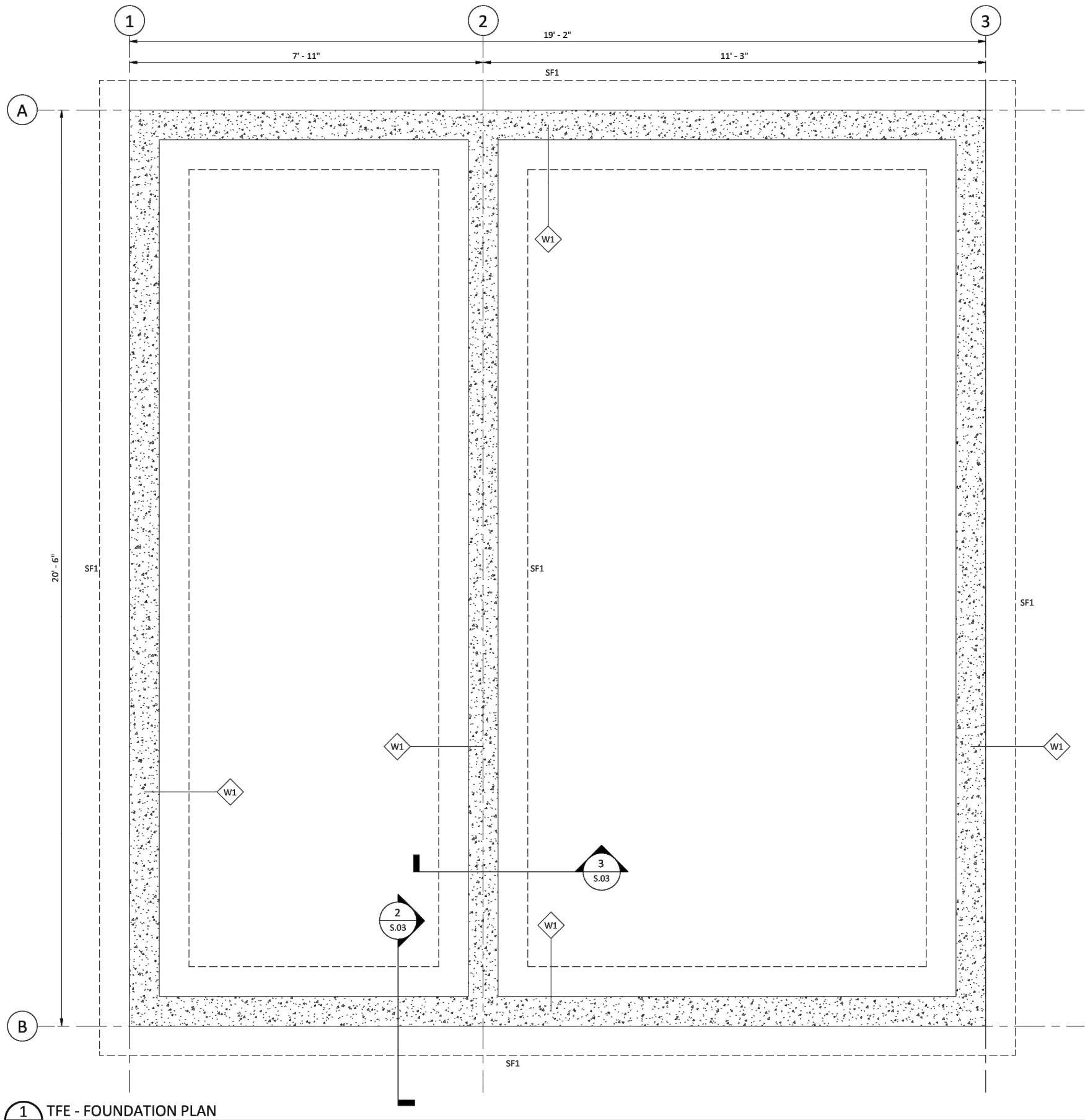
MONARCH RV PARK IMPLEMENTATION

GENERAL (DESIGN CRITERA & LOADING)

SHEET

S.01

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Project: 24X136996 / 100 of Iowa RV Park Structural Int.



1 TFE - FOUNDATION PLAN
S.02 SCALE: 3/4" = 1'-0"

GENERAL NOTES:

1. SCALES SHOWN ARE BASED ON FULL SIZE (22X34) DRAWINGS. REDUCE SCALES BY 2 FOR 11X17 DRAWINGS.
2. FOR GENERAL STRUCTURAL NOTES, SEE SHEET S.01
3. V.I.F. INDICATES FOR CONTRACTOR TO VERIFY IN FIELD.
4. FFE INDICATES FINISHED FLOOR ELEVATION.
5. TFE INDICATES TOP OF FOOTING ELEVATION.
6. TSE INDICATES TOP OF SLAB ELEVATION.
7. TWE INDICATES TOP OF WALL ELEVATION.
8. U.N.O. INDICATES UNLESS NOTED OTHERWISE.
9. VERIFY ALL SIZES AND LOCATIONS OF OPENINGS WITH HUFFCUTT & MEP DRAWINGS.
10. VERIFY ALL DIMENSIONS WITH HUFFCUTT DRAWINGS.

FOUNDATION PLAN NOTES:

1. FOR CONCRETE FOOTING SIZES AND REINFORCEMENT, SEE FOOTING SCHEDULE ON SHEET S.02
2. STRIP FOOTINGS ARE CENTERED ON WALLS, U.N.O.
3. FOR TYPICAL FOUNDATION WALL CORNER REINFORCING, SEE DTL 4 / S.03
4. FOR TYPICAL FOUNDATION WALL INTERSECTION REINFORCING, SEE DTL 5 / S.03
5. FOR FOUNDATION WALL CONSTRUCTION JOINT, SEE DTL 6 / S.03
6. FOR TYPICAL WALL PENETRATION REINFORCEMENT, SEE DTL 11 / S.03
7. FOR STEPPED FOOTING, SEE DTL 7 / S.03
8. FOR CONTRACTOR OPTIONS AT MECHANICAL LINES BENEATH FOOTING, SEE DTL 10 / S.03
9. FOR STEPPED FOOTING FOR PIPE, SEE DTL 9 / S.03
10. FOR STEPPED FOOTING FOR PIPE BELOW, SEE DTL 8 / S.03
11. CONNECTIONS OF CONCRETE PRECAST STRUCTURE TO CAST-IN-PLACE CONCRETE FOUNDATION WALL AND CONCRETE STRIP FOOTING, BY PRECAST STRUCTURE MANUFACTURER.
12. CONTRACTOR IS TO VERIFY ALL FOUNDATION PLAN DIMENSIONS WITH PRECAST MANUFACTURER DESIGN PLANS PRIOR TO CONSTRUCTION.

WALL SCHEDULE

Type Mark	Width	Description
W1	8"	#5 VERT BARS AT 12" OC, #5 HORIZ. BARS AT 12" OC

FOOTING SCHEDULE

MARK	LENGTH	WIDTH	THICKNESS	Reinforcing
SF1	CONT	2' - 0"	1' - 0"	(3)-#5 CONT BARS, #5 TRANS BARS @ 12" OC



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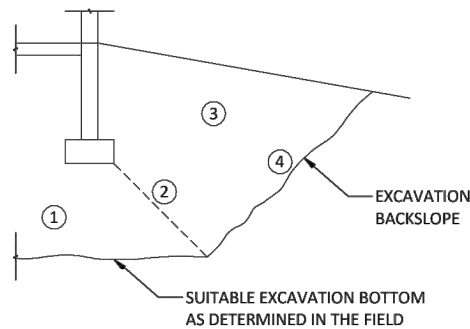
WORTH COUNTY CONSERVATION

MONARCH RV PARK IMPLEMENTATION

FOUNDATION PLANS

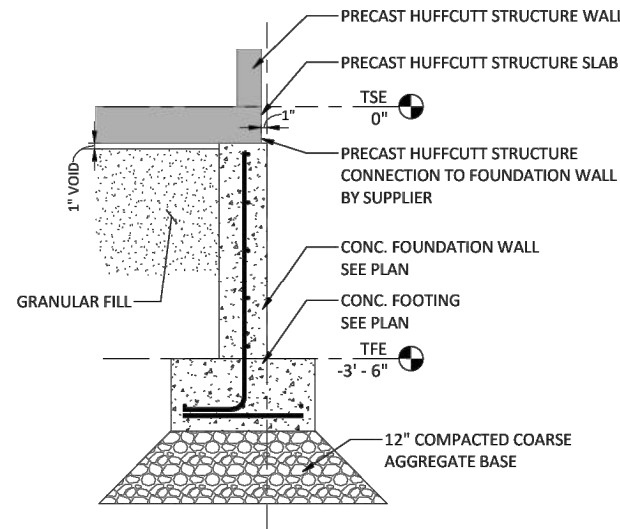
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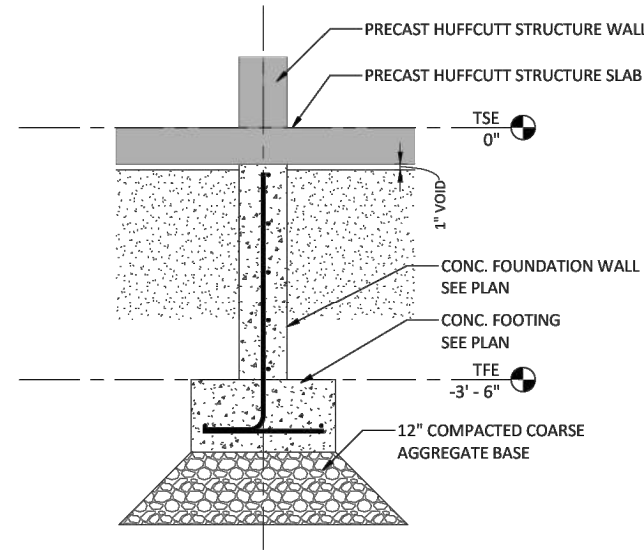


- NOTE:**
- ENGINEERED FILL AS DEFINED IN FOUNDATION & SOIL NOTES **OR** GEOTECHNICAL REPORT.
 - EXCAVATION OVERSIZING MINIMUM OF 1 TO 1 (HORIZONTAL TO VERTICAL) SLOPE OR FLATTER (INCIDENTAL).
 - ENGINEERED FILL AS REQUIRED TO MEET PAVEMENT SUPPORT OR LANDSCAPING REQUIREMENTS AS DEFINED IN THE FOUNDATION & SOIL NOTES **OR** GEOTECHNICAL REPORT.
 - BACKSLOPE TO OSHA REQUIREMENTS.

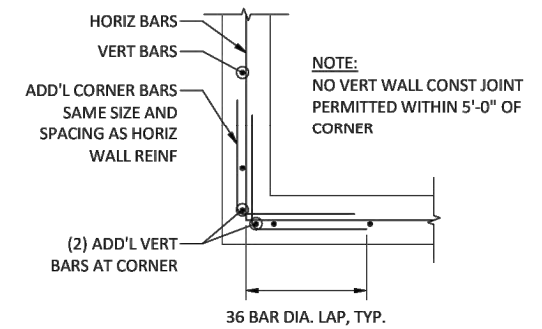
1 DETAIL - EXCAVATION OVERSIZING SKETCH
S.03 SCALE: 1/4" = 1'-0"



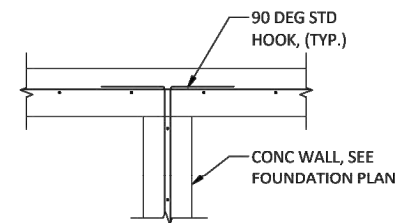
2 DETAIL - TYPICAL EXTERIOR FOUNDATION WALL
S.03 SCALE: 3/4" = 1'-0"



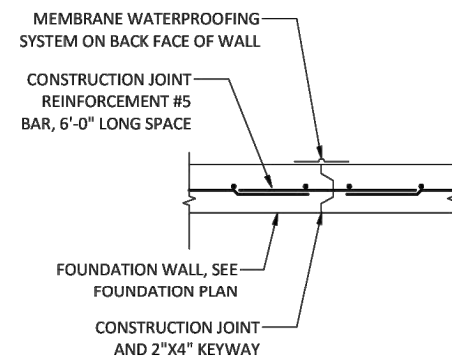
3 DETAIL - TYPICAL INTERIOR FOUNDATION WALL
S.03 SCALE: 3/4" = 1'-0"



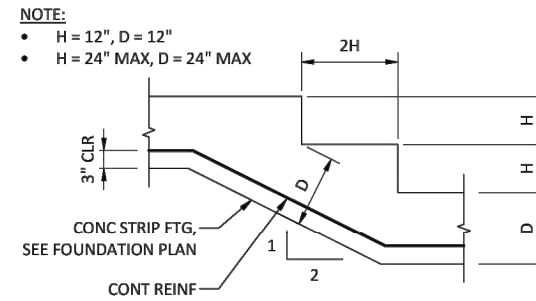
4 DETAIL - TYPICAL FOUNDATION WALL CORNER (1 LAYER)
S.03 SCALE: 3/4" = 1'-0"



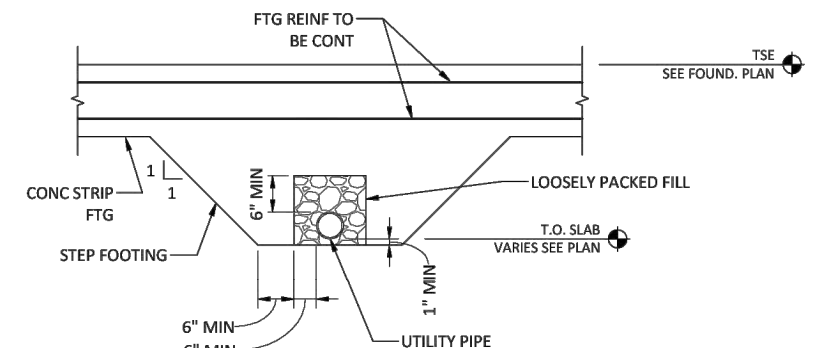
5 DETAIL - TYPICAL FOUND. WALL INTERSECTION
S.03 SCALE: 3/4" = 1'-0"



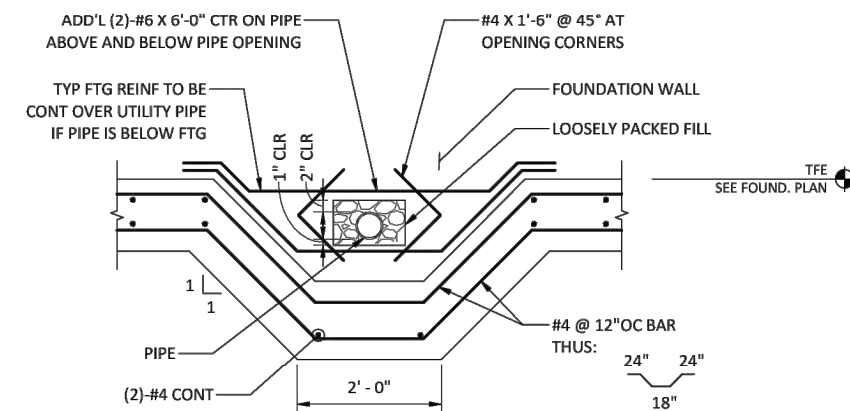
6 DETAIL - TYPICAL WALL CONSTRUCTION JOINT
S.03 SCALE: 3/4" = 1'-0"



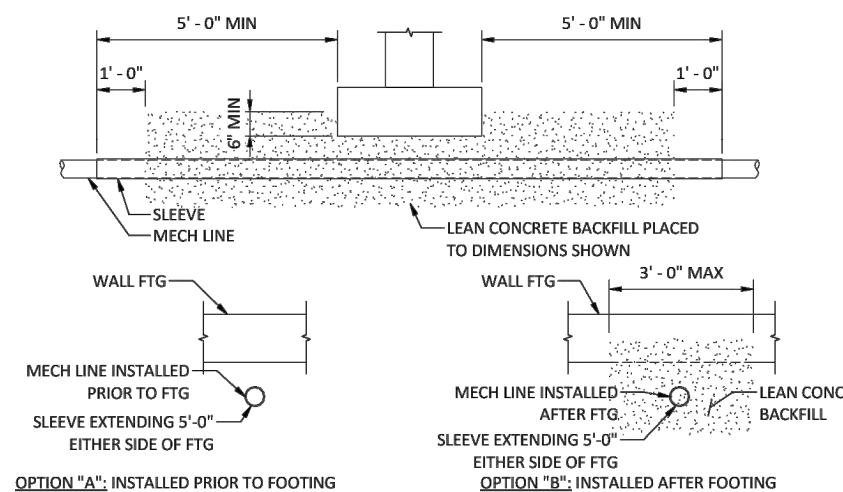
7 DETAIL - TYPICAL STEPPED FOOTING
S.03 SCALE: 3/4" = 1'-0"



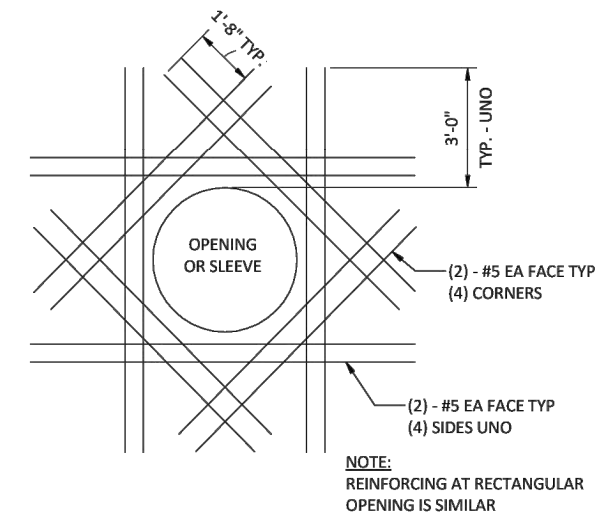
8 DETAIL - TYPICAL STEPPED FOOTING FOR PIPE BELOW WALL
S.03 SCALE: 3/4" = 1'-0"



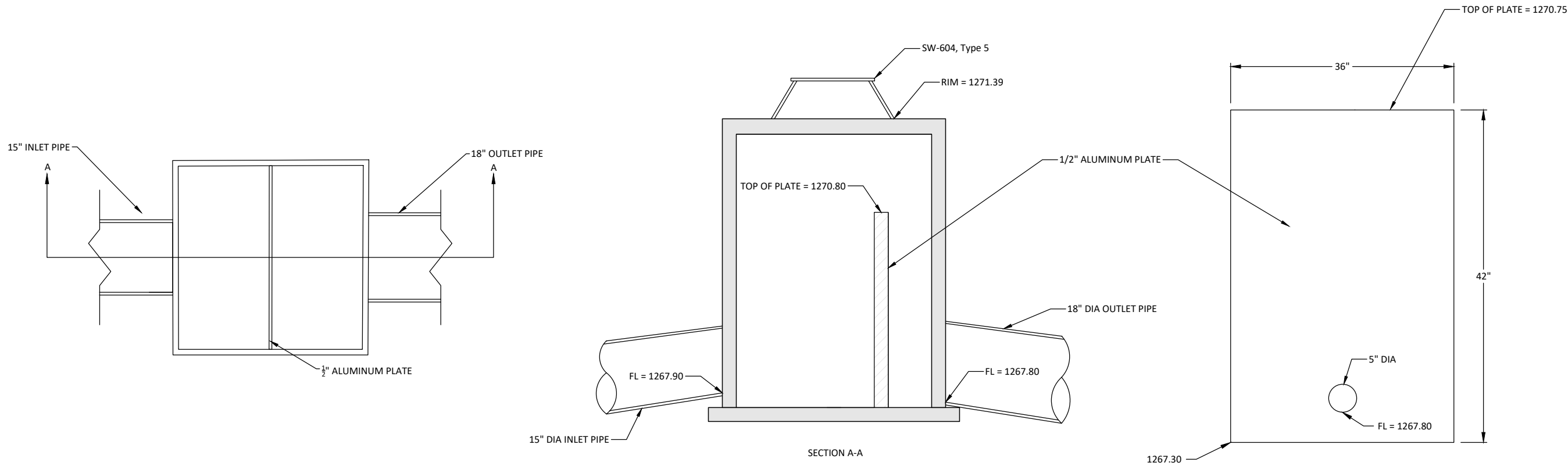
9 DETAIL - TYPICAL STEPPED FOOTING FOR PIPE THROUGH WALL
S.03 SCALE: 3/4" = 1'-0"



10 DETAIL - TYPICAL CONTRACTORS OPTIONS AT MECH LINES BENEATH FTG
S.03 SCALE: 1/2" = 1'-0"



11 DETAIL - TYPICAL CONCRETE WALL PENETRATION REINFORCEMENT
S.03 SCALE: 1 1/2" = 1'-0"



1 INTAKE, SW-513, OUTLET CONTROL STRUCTURE
U.01 NOT TO SCALE