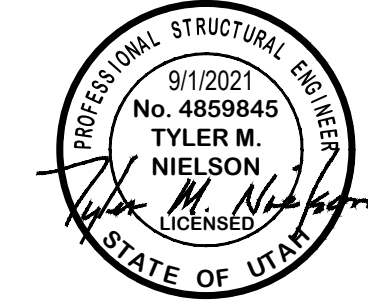


BUFFALO RUN ACRES SUBDIVISION



CONSTRUCTION DOCUMENTS TAYLOR CITY, WEBER COUNTY, UTAH

TRAFFIC CONTROL & SAFETY NOTES

1. BARRICADING AND DETOURING SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CURRENT STATE OF UTAH DEPARTMENT OF TRANSPORTATION MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, AND THE CURRENT WEBER COUNTY STANDARD DRAWING, AND SHALL BE APPROVED BY THE WEBER COUNTY ENGINEER PRIOR TO ANY WORK.
2. NO STREET SHALL BE CLOSED TO TRAFFIC WITHOUT WRITTEN PERMISSION FROM THE WEBER COUNTY TRAFFIC ENGINEER, EXCEPT WHEN DIRECTED BY LAW ENFORCEMENT OR FIRE OFFICIALS.
3. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE FOR SMOOTH TRAFFIC FLOW AND SAFETY. ACCESS SHALL BE MAINTAINED FOR ALL PROPERTIES ADJACENT TO THE WORK.
4. DETOURING OPERATIONS FOR A PERIOD OF SIX CONSECUTIVE CALENDAR DAYS, OR MORE, REQUIRE THE INSTALLATION OF TEMPORARY STREET STRIPING AND REMOVAL OF INTERFERING STRIPING BY SANDBLASTING. THE DETOURING STRIPING PLAN OR CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED TO THE WEBER COUNTY TRAFFIC ENGINEER FOR REVIEW AND APPROVAL.
5. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE WORK TO THE SATISFACTION OF THE WEBER COUNTY TRAFFIC ENGINEER.
6. TRAFFIC CONTROL DEVICES (TCDs) SHALL REMAIN VISIBLE AND OPERATIONAL AT ALL TIMES.

UTILITY DISCLAIMER

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT.

NOTICE TO CONTRACTOR

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF UTAH DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS". THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

CONTRACTOR FURTHER AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

SANITARY SEWER GENERAL NOTES

1. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN CONFORMANCE WITH CENTRAL DAVIS SEWER DISTRICT STANDARDS AND SPECIFICATIONS.
2. SEWER LINE CONSTRUCTION AND MATERIALS SHALL CONFORM TO ASTM STANDARDS AND SPECIFICATIONS.
3. ALL LOW PRESSURE SEWER LINES SHALL BE E-ONE LOW PRESSURE SEWER GRINDER PUMPS (SUPPLIED BY E-ONE). CONTACT KAPONO ISAACS AT DELCO WESTERN (801-608-1280) REGARDING.
4. DISTANCES SHOWN ON PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT.
5. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATION. PIPELINE CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS, GROUT AND STEEL SHIMS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS. ALL FRAMES SHALL BE ADJUSTED TO FINAL GRADE.
6. ALL SANITARY SEWER MAIN TESTING SHALL BE IN ACCORDANCE WITH THE CENTRAL DAVIS SEWER DISTRICT STANDARDS AND SPECIFICATIONS. COPIES OF ALL TEST RESULTS SHALL BE PROVIDED TO THE SEWER DISTRICT AND ENGINEER PRIOR TO FINAL ACCEPTANCE.
7. COMPACTION TESTING OF ALL TRENCHES WITH THE PROJECT SITE MUST BE ATTAINED AND RESULTS SUBMITTED TO DAVIS SEWER DISTRICT AND WEBER COUNTY ENGINEER PRIOR TO FINAL ACCEPTANCE.
7. CONTRACTOR IS RESPONSIBLE TO PROTECT ALL EXISTING STRUCTURES AND IMPROVEMENTS DURING INSTALLATION OF SANITARY SEWER LINE.
8. WHERE CONNECTION TO EXISTING UTILITY IS PROPOSED, CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION AND NOTIFY OWNER/ENGINEER IF LOCATION AND ELEVATION OF EXISTING UTILITY VARIES FROM THE DESIGN.
9. CAMERA TESTING AND PRESSURE TESTING PER CENTRAL DAVIS SEWER DISTRICT STANDARD.

SECONDARY WATER GENERAL NOTES

1. ALL SECONDARY WATER CONSTRUCTION SHALL BE IN CONFORMANCE WITH HOOPER WATER IMPROVEMENT DISTRICT STANDARDS AND SPECIFICATIONS.
2. FUTURE LOT OWNER TO PAY REQUIRED WATER FEES TO CONNECT TO HOOPER SECONDARY WATER.

GENERAL NOTES

1. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE WEBER COUNTY ENGINEER, PLANNING, CODES AND SPECIFICATIONS AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL NOTIFY THE DESIGNATED PUBLIC WORKS INSPECTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY, OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.
4. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH WEBER COUNTY AND ALL UTILITY COMPANIES INVOLVED WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH A MINIMUM DISRUPTION OF SERVICE.
5. THE CONTRACTOR SHALL HAVE ONE (1) COPY OF APPROVED PLANS, AND ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB, ON SITE AT ALL TIMES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
7. IF DURING THE CONSTRUCTION PROCESS CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES, WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
8. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, CONSTRUCTED, REMOVED AND RELOCATED UNLESS SPECIFICALLY NOTED OTHERWISE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT DRAWINGS ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE, AND AVAILABLE TO THE WEBER COUNTY INSPECTOR AT ALL TIMES.
11. THE CONTRACTOR SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF WATER LINES AND DRY UTILITIES.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS CONSISTENT WITH THE CONTRACTORS SCHEDULE FOR THIS PROJECT, WHETHER SHOWN OR NOT SHOWN AS IT RELATES TO THE CONSTRUCTION ACTIVITIES CONTEMPLATED IN THESE PLANS.

SWPPP GENERAL NOTES

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AS REQUIRED BY WEBER COUNTY AND STATE.
2. ALL STRUCTURAL EROSION MEASURES SHALL BE INSTALLED AS SHOWN ON THE SWPPP PLAN, PRIOR TO ANY OTHER GROUND-DISTURBING ACTIVITY. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR, UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS ARE STABILIZED WITH HARD SURFACE OR LANDSCAPING.

STORM SEWER GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:
A) OBTAIN ALL REQUIRED PERMITS FROM WEBER COUNTY OR REGULATORY AGENCIES, INCLUDING PERMITS TO WORK IN THE RIGHT-OF-WAY.
B) RESTORATION OF EXISTING IMPROVEMENTS INCLUDING BUT NOT LIMITED TO FENCES, SOD, LANDSCAPING, PAVEMENT, SPRINKLER SYSTEM.
C) VERIFICATION AND PROTECTION OF ALL EXISTING IMPROVEMENTS WITHIN THE LIMITS OF CONSTRUCTION.
D) PROVIDING AS-BUILT DRAWINGS TO WEBER COUNTY AND THE ENGINEER.
E) ALL PERMITTING, DEVELOPMENT, LOCATION, CONNECTION AND INSPECTION AND SCHEDULING FOR SUCH.
2. ALL STORM SEWER CONNECTIONS SHALL BE IN CONFORMANCE WITH COUNTY STANDARDS AND SPECIFICATIONS.
3. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATION. PIPELINE CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS, GROUT, AND STEEL SHIMS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE IN CONFORMANCE WITH WEBER COUNTY STANDARDS AND SPECIFICATIONS AND PLANS. ALL FRAMES SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO PLACEMENT OF ASPHALT PAVING.
4. COMPACTION OF ALL TRENCHES WITHIN THE PROJECT SITE MUST BE ATTAINED AND COMPACTION RESULTS SUBMITTED TO THE ENGINEER AND WEBER COUNTY PRIOR TO FINAL ACCEPTANCE.
5. ALL STORM DRAIN PIPES IN WEBER COUNTY RIGHT-OF-WAY SHALL BE RCP CL III.
6. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH THE PAVEMENT AND SHALL HAVE TRAFFIC BEARING LIDS. ALL STORM SEWER LIDS SHALL BE LABELED "STORM DRAIN".
7. WHERE CONNECTION TO EXISTING UTILITY IS PROPOSED, CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION AND NOTIFY OWNER/ENGINEER IF LOCATION AND ELEVATION OF EXISTING UTILITY VARIES FROM THE DESIGN.

GENERAL GRADING NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APWA STANDARDS AND SPECIFICATION FOR PUBLIC WORKS AND WEBER COUNTY STANDARDS. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS AND ENTRIES. FINISHED GRADE AT FOUNDATION FOR WOOD FRAMED STRUCTURES SHALL BE 8 INCHES BELOW TOP OF FOUNDATION AND DRAINAGE SHALL BE A MINIMUM OF 5% WITHIN 10 FEET FROM THE BUILDING.
2. MAXIMUM SLOPES SHALL BE 3:1 FOR CUT AND FILL UNLESS OTHERWISE NOTED.
3. COMPACTION REQUIREMENTS AND TESTING SHALL BE PERFORMED TO MEET WEBER COUNTY STANDARDS.
4. NO FILL SHALL BE PLACED UNTIL VEGETATION HAS BEEN REMOVED AND SUB-GRADE PREPARED PER THE SOILS REPORT.
5. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS.
6. CONTRACTOR SHALL COMPLY WITH STORM WATER POLLUTION PREVENTION PLAN BY INSTALLING BMP'S PRIOR TO COMMENCEMENT OF EXCAVATION ACTIVITIES. CONTACT THE WEBER COUNTY INSPECTOR FOR INSPECTION.
7. ALL RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ALL SUBSEQUENT REPORTS, ADDENDUM ETC. SHALL BE CONSIDERED A PART OF THIS GRADING PLAN AND SHALL BE COMPLIED WITH.
8. THE CONTRACTOR SHALL CONTACT BLUE STAKES FOR LOCATION MARKING PRIOR TO COMMENCING EXCAVATION ACTIVITIES.
9. WEBER COUNTY MAY REQUIRE A PRE-CONSTRUCTION MEETING BEFORE A PERMIT IS ISSUED.
10. STREETS ADJACENT TO THE PROJECT SHALL BE CLEAN AT ALL TIMES.
11. CONTRACTOR IS RESPONSIBLE FOR ARRANGING FOR ALL REQUIRED INSPECTIONS.
12. PRIOR TO TAKING WATER FROM A WEBER COUNTY FIRE HYDRANT, THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE WATER UTILITY TO OBTAIN A WATER METER.

CULINARY WATER GENERAL NOTES

1. ALL INSTALLATION AND MATERIALS SHALL CONFORM TO WATER UTILITY STANDARDS, SPECIFICATIONS AND PLANS.
2. THRUST BLOCKING IS REQUIRED AT ALL BENDS AND FITTINGS. THE RODS SHALL BE USED AT ALL BENDS AND FITTINGS WHERE THRUST BLOCKS DO NOT BEAR AGAINST UNDISTURBED SOIL.
3. ALL WATERLINES AT SEWER CROSSINGS SHALL BE LOCATED ABOVE AND HAVE AN 18-INCH VERTICAL SEPARATION FROM THE SEWER PIPE. IF THIS IS NOT PROVIDED, THE WATERLINE SHALL BE INSTALLED WITH 20 L.F. OF CONCRETE CASING CENTERED OVER THE SEWER PIPE.
4. DISINFECTION TESTS SHALL BE PERFORMED BY THE WATER UTILITY WITH COOPERATION FROM THE CONTRACTOR IN PERFORMING ANY NECESSARY EXCAVATION AND SUBSEQUENT BACKFILLING AT NO COST TO THE CITY.
5. CHLORINATION OF COMPLETED WATER LINE. THE NEW WATER LINES SHALL BE DISINFECTED BY CHLORINATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL RELATED COSTS AND FEES RELATED TO THE CHLORINATION OF THE COMPLETED WATER LINE. THIS TEST SHALL BE PERFORMED PRIOR TO CONNECTION OF THE NEW WATER LINES TO THE EXISTING WATER SYSTEM. THE CONTRACTOR SHALL NOTIFY THE WATER UTILITY AT LEAST 24 HOURS BEFORE THE CHLORINATION IS DESIRED.
6. A MINIMUM HORIZONTAL CLEARANCE OF 10 FEET SHALL BE MAINTAINED FROM SANITARY SEWER MAINS.
7. UNLESS OTHERWISE SPECIFIED, ALL WATERLINES SHALL BE AWWA C900 PVC CLASS 150, PER ASTM D2241.
8. CONTRACTOR SHALL LOCATE VALVES PRIOR TO CONNECTION WITH EXISTING SYSTEM, BUT SHALL NOT OPERATE ANY VALVE WITHOUT PERMISSION FROM THE WATER UTILITY.
9. ALL WATER MAINS, VALVES, FIRE HYDRANTS, SERVICES AND APPURTENANCES SHALL BE INSTALLED, TESTED, AND APPROVED PRIOR TO PAVING.
10. THERE SHALL BE A WATER SUPPLY TO THE DEVELOPMENT BEFORE ANY WOOD CONSTRUCTION STARTS.
11. THE WATER UTILITY REQUIRES THE USE OF CORROSION RESISTANT MATERIALS FOR ALL CULINARY WATER IMPROVEMENTS. SPECIFICALLY, ROMAC BLUE BOLTS OR STAINLESS STEEL BOLTS MUST BE USED ON ALL FITTINGS. FURTHER, ALL METAL FITTINGS SHALL BE POLY WRAPPED.

ALL IMPROVEMENTS TO CONFORM TO CURRENT WEBER COUNTY STANDARDS AND SPECIFICATIONS

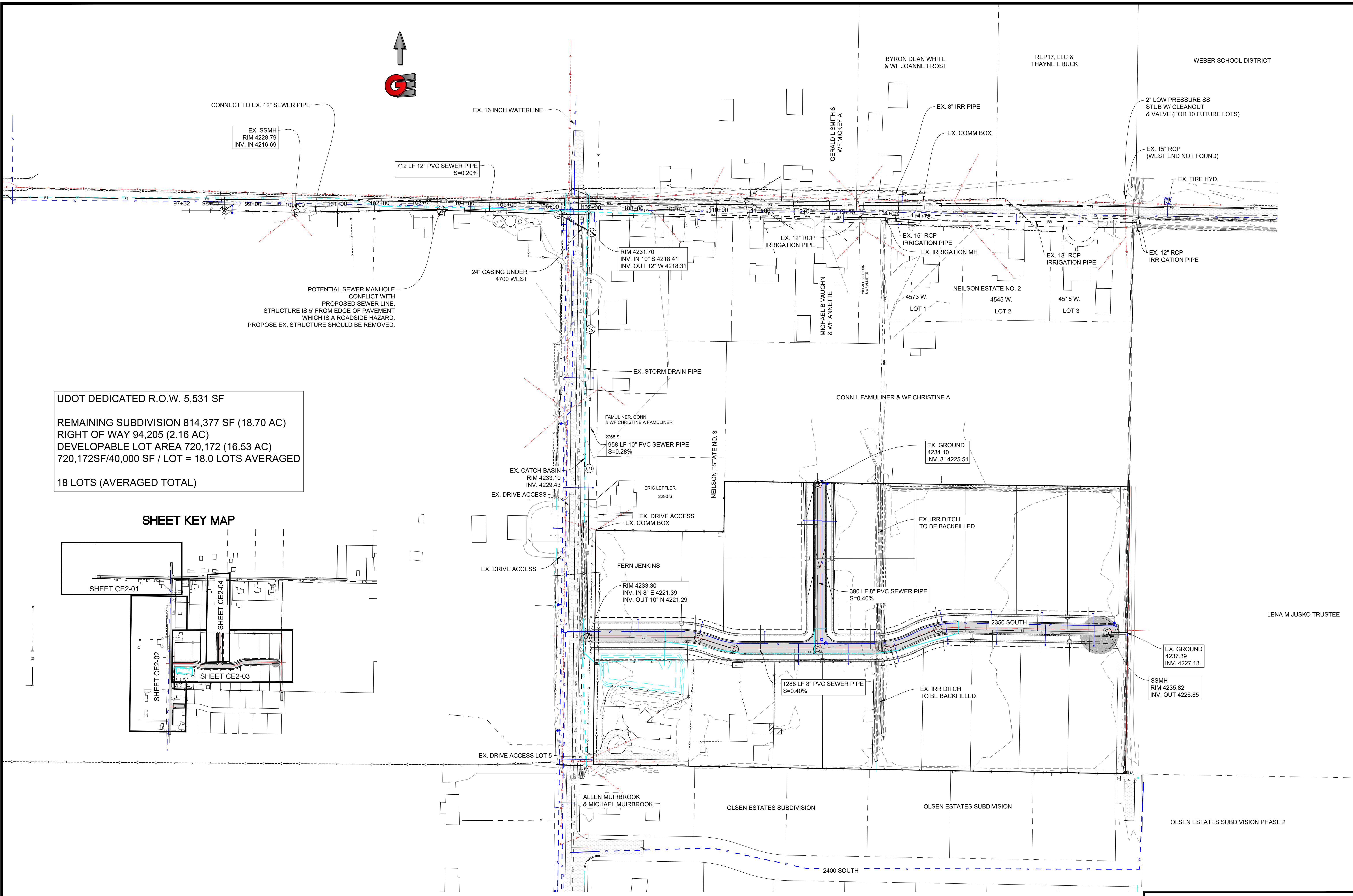
CULINARY WATER IMPROVEMENTS TO CONFORM TO CRIMSON RIDGE WATER COMPANY UTILITY STANDARDS AND SPECIFICATIONS

SHEET INDEX

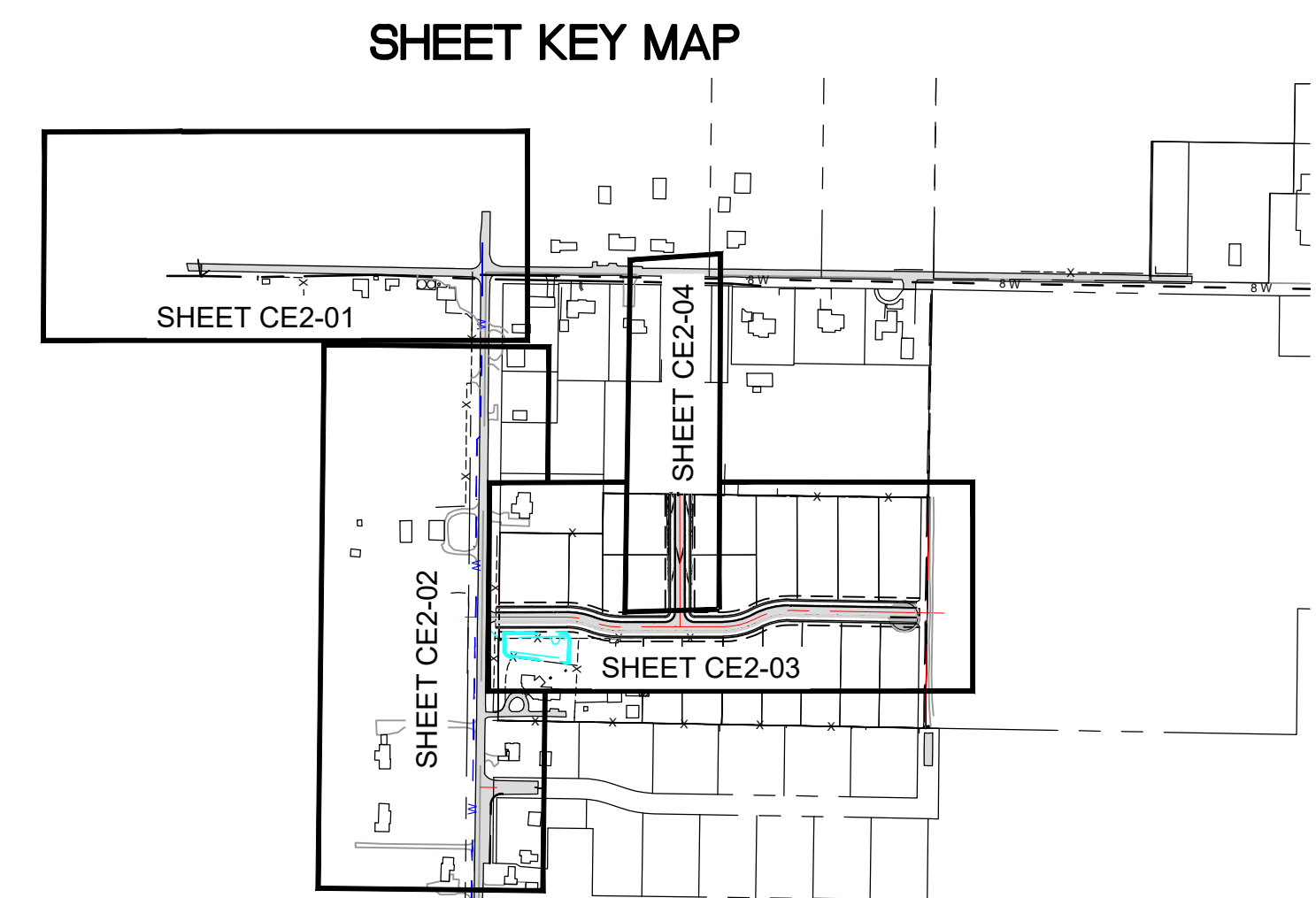
CE0-01 COVER SHEET
CE1-01 OVERALL UTILITY PLAN AND KEY MAP
CE1-02 SWPPP
CE2-01 PLAN AND PROFILE 2200 SOUTH (SEWER OUTFALL)
CE2-02 PLAN AND PROFILE 4700 WEST (SEWER OUTFALL)
CE2-03 PLAN AND PROFILE (2300 SOUTH)
CE2-04 PLAN AND PROFILE (4600 WEST)
CE3-01 STORM DRAIN CALCS



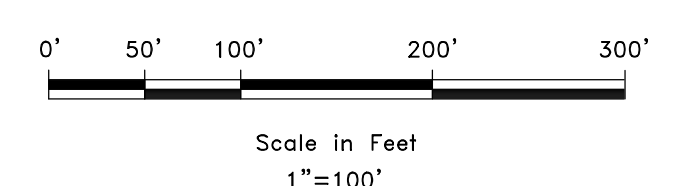
BUFFALO RUN ACRES SUBDIVISION
CONSTRUCTION DOCUMENTS



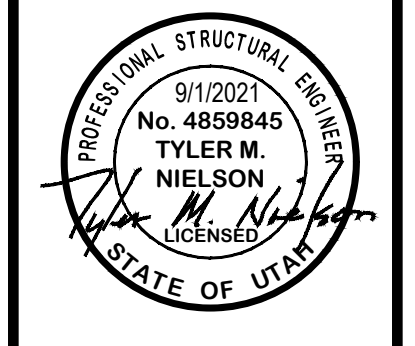
UDOT DEDICATED R.O.W. 5,531 SF
 REMAINING SUBDIVISION 814,377 SF (18.70 AC)
 RIGHT OF WAY 94,205 (2.16 AC)
 DEVELOPABLE LOT AREA 720,172 (16.53 AC)
 720,172SF/40,000 SF / LOT = 18.0 LOTS AVERAGED
 18 LOTS (AVERAGED TOTAL)



DEVELOPER:
 JAMES MARZIALE
 2360 S 4700 WEST
 TAYLOR
 1-801-420-5660



REVISIONS	DATE	DESCRIPTION



OVERALL UTILITY + KEY MAP
 BUFFALO RUN ACRES SUBDIVISION
 4700 WEST 2350 SOUTH
 TAYLOR, WEBER COUNTY, UTAH

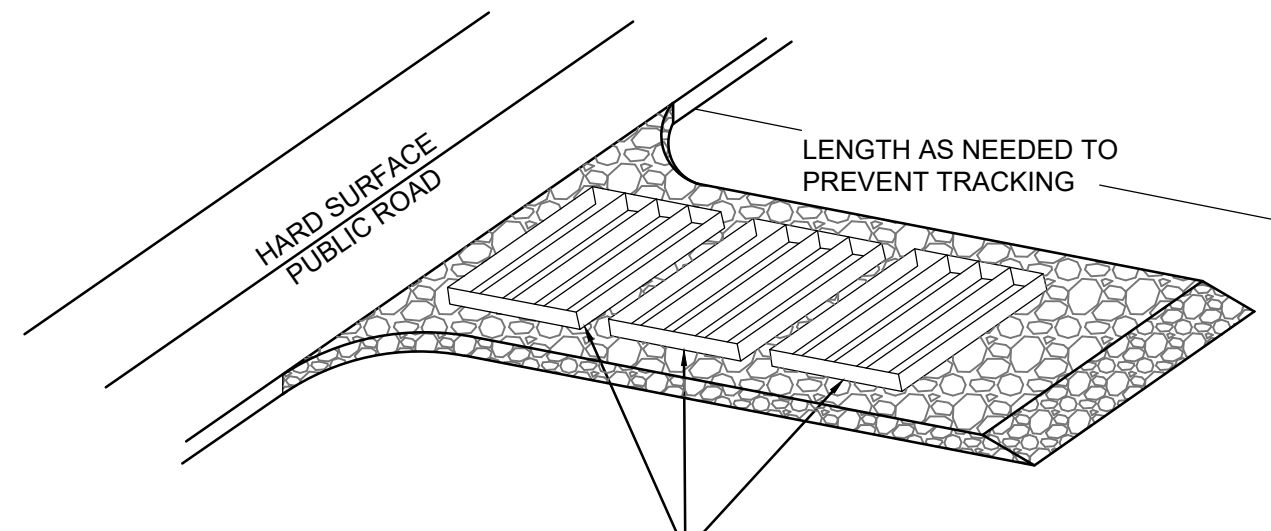
GARDNER ENGINEERING
 CIVIL-LAND PLANNING
 MUNICIPAL-LAND SURVEYING

5150 SOUTH 375 EAST OGDEN, UT
 OFFICE: 801-476-0202 FAX: 801-476-0066

CE1-01

EROSION CONTROL NOTES:

1. SANDBAGS WILL BE PLACED AT DISCHARGE LOCATIONS TO CONTAIN AND DIVERT STORM WATER THROUGH THE INLET PROTECTION.
2. AN EARTHEN BERM 6" HIGH WILL BE CONSTRUCTED TO CONTAIN THE STORM WATER AND DIVERT IT TO DISCHARGE AREAS.
3. STORM WATER WILL BE DISCHARGED INTO AN EXISTING DRAINAGE SYSTEM. EXISTING LINES SHALL BE INSPECTED PRIOR TO CERTIFICATE OF OCCUPANCY AND CLEANED IF NECESSARY.
4. THE STORM WATER POLLUTION PREVENTION PLAN SHALL CONFORM TO ALL STATE DIVISION OF ENVIRONMENTAL PROTECTION REGULATIONS.



A SERIES OF STEEL PLATES (3 OR MORE) WITH RUMBLE STRIPS OR MIN. 3" COARSE AGGREGATE.

ENTRANCE STABILIZATION NOTES:

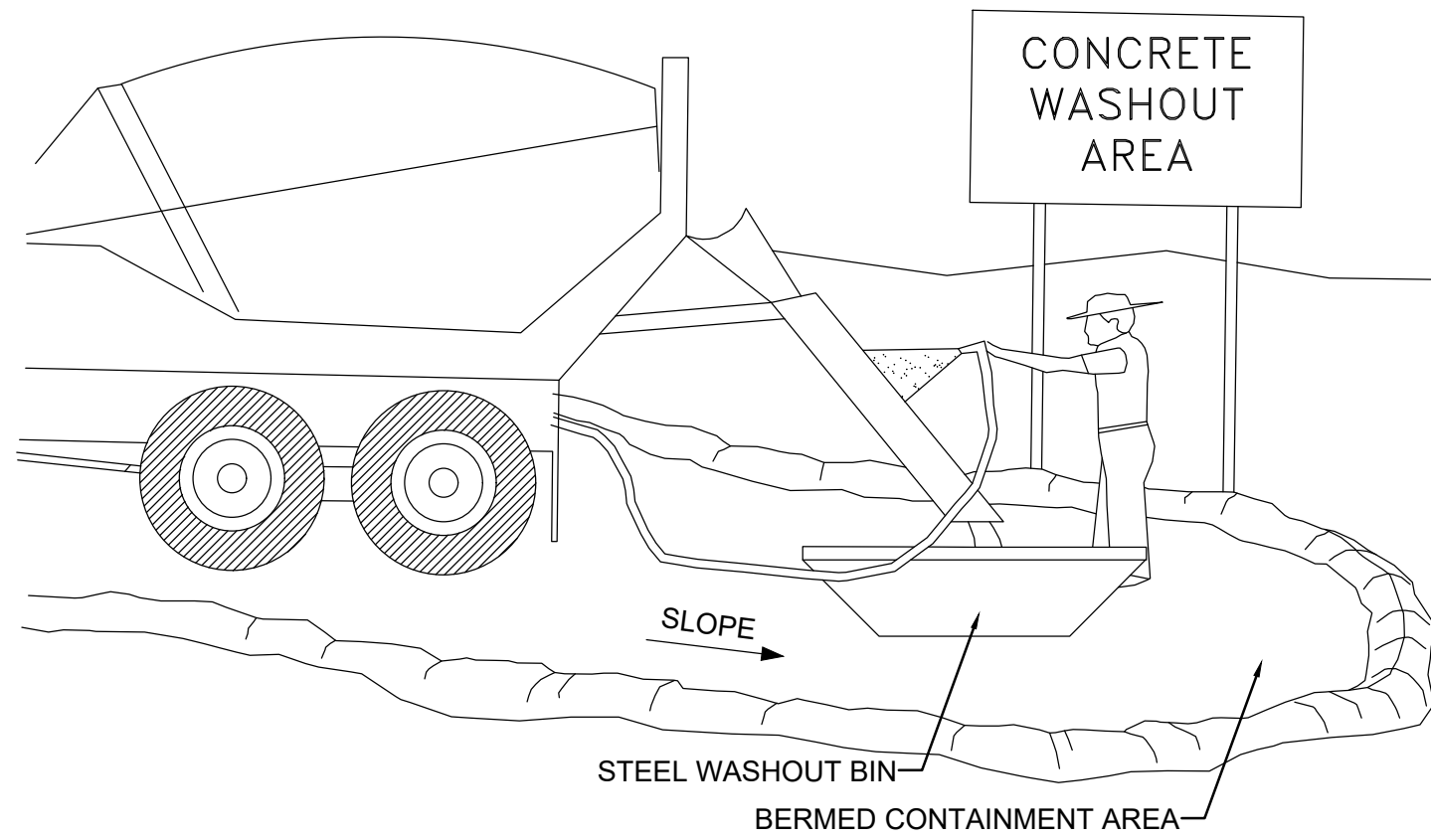
1. SEDIMENTS AND OTHER MATERIALS SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS SHALL BE STABILIZED SO AS TO PREVENT SEDIMENTS FROM BEING DEPOSITED INTO THE STORM DRAIN SYSTEMS. DEPOSITIONS MUST BE SWEEPED UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS INTO THE STORM DRAIN SYSTEM.
2. STABILIZED CONSTRUCTION ENTRANCE SHALL BE:
 - a. LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY AND SIDEWALK OR PARKING AREA.
 - b. A SERIES OF STEEL PLATES WITH "RUMBLE STRIPS", AND/OR MIN. 3" COARSE AGGREGATE WITH LENGTH, WIDTH AND THICKNESS AS NEEDED TO ADEQUATELY PREVENT ANY TRACKING ONTO PAVED SURFACES.
3. ADDING A WASH RACK WITH A SEDIMENT TRAP LARGE ENOUGH TO COLLECT ALL WASH WATER CAN GREATLY IMPROVE EFFICIENCY.
4. ALL VEHICLES ACCESSING THE CONSTRUCTION SITE SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE SITES.

STREET MAINTENANCE NOTES:

1. REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS IMMEDIATELY.
2. SWEEP PAVED AREAS THAT RECEIVE CONSTRUCTION TRAFFIC WHENEVER SEDIMENT BECOMES VISIBLE.
3. PAVEMENT WASHING WITH WATER IS PROHIBITED IF IT RESULTS IN A DISCHARGE TO THE STORM DRAIN SYSTEM.

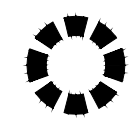
NOTE:

CONTRACTOR SHALL COMPLETE AND SUBMIT A STATE NOTICE OF INTENT (NOI) AND A STORM WATER POLLUTION PREVENTION PLAN BOOKLET



NOTES:

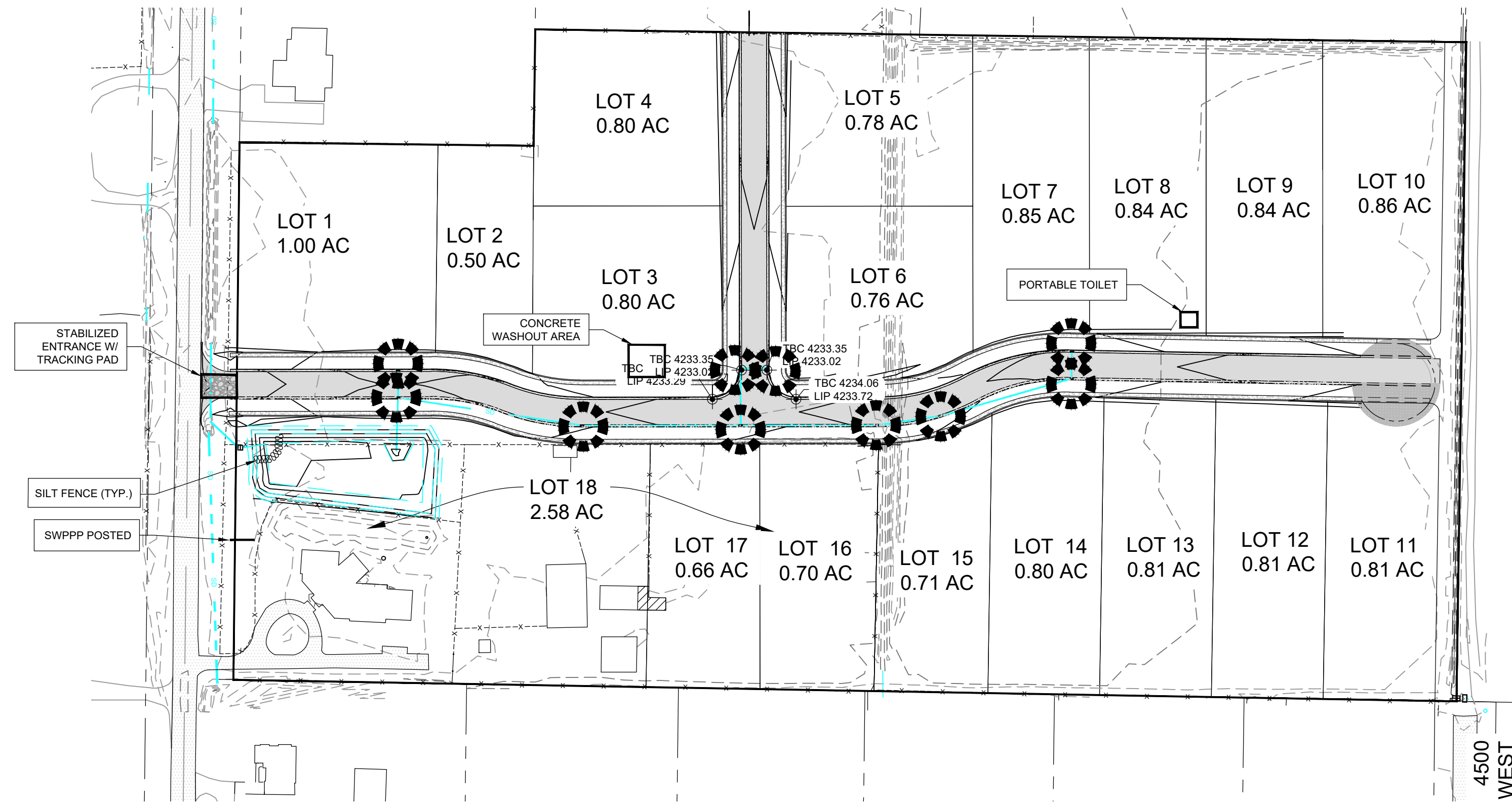
1. EXCESS AND WASTE CONCRETE SHALL BE DISPOSED OF OFF SITE OR AT DESIGNATED AREAS ONLY.
2. EXCESS AND WASTE CONCRETE SHALL NOT BE WASHED INTO THE STREET OR INTO A DRAINAGE SYSTEM.
3. FOR WASHOUT OF CONCRETE AND MORTAR PRODUCTS ONSITE, A DESIGNATED CONTAINMENT FACILITY OF SUFFICIENT CAPACITY TO RETAIN LIQUID AND SOLID WASTE SHALL BE PROVIDED.
4. ONSITE CONCRETE WASHOUT CONTAINMENT FACILITY SHALL BE A STEEL BIN OR APPROVED ALTERNATE.
5. SLURRY FROM CONCRETE AND ASPHALT SAW CUTTING SHALL BE VACUUMED OR CONTAINED, DRIED, PICKED UP AND DISPOSED OF PROPERLY.



INLET PROTECTION (EITHER OPTION)

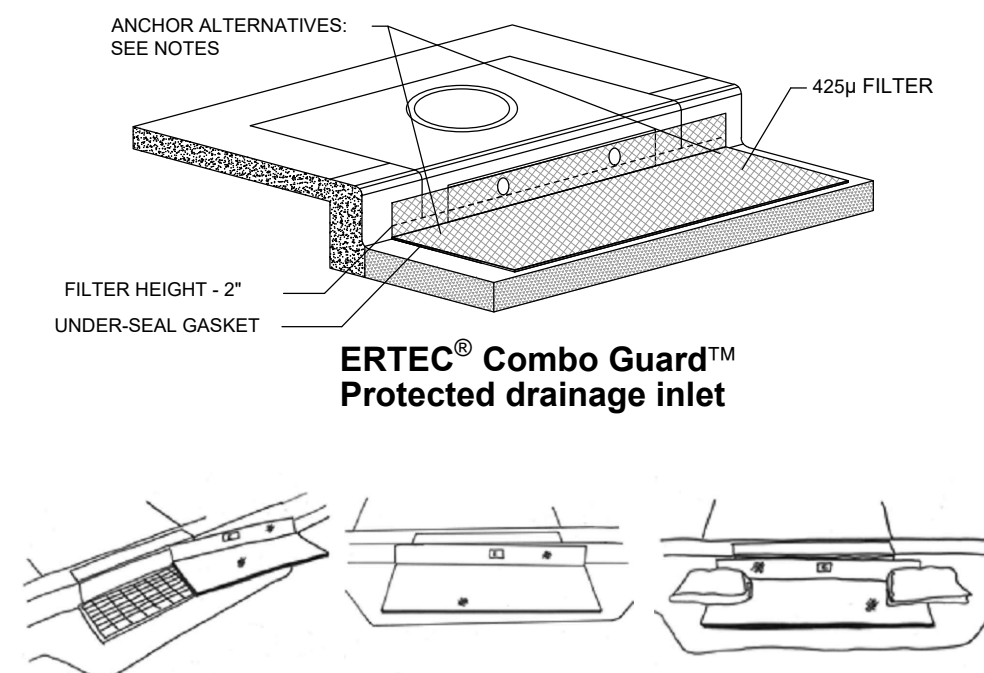


SILT FENCE



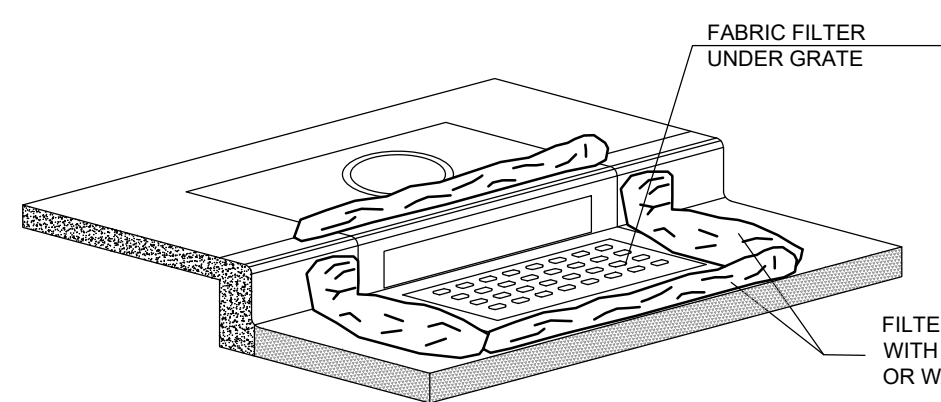
INSTALLATION NOTES

1. PLACEMENT: PLACE CG TIGHTLY AGAINST CURB OPENING AND COVER ENTIRE GRATE. CG SHOULD EXTEND AT LEAST 2 INCHES PAST GRATE TOWARDS STREET.
2. OVERLAP FOR LONG OPENINGS: OVERLAP CG UNITS AT LONGER OPENINGS.
3. ANCHOR: ANCHOR CG SO THAT WATER CANNOT FLOW BEHIND IT.
4. ALTERNATE ANCHOR METHODS: A) INSTALL GRAVEL BAGS AT EACH SIDE OF CG - HALF-ON AND HALF-OFF THE EDGES. USE HALF-FILLED GRAVEL BAGS (15 OR 20 LBS). ROUND ROCK IS RECOMMENDED. OR B) ATTACH WITH 16 GAUGE TIE-WIRE. CUT WIRE TO 18" LENGTH. AT EACH CORNER OF CG, FEED ONE END OF WIRE DOWN THROUGH CG, AROUND GRATE BAR, AND BACK UP THRU CG. ABOVE GROUND, TWIST WIRES SEVERAL TIMES, CUT-OFF EXCESS. OR C) FASTEN WITH CONCRETE ANCHORS/NAILS AT THE OUTSIDE EDGES OF CG.



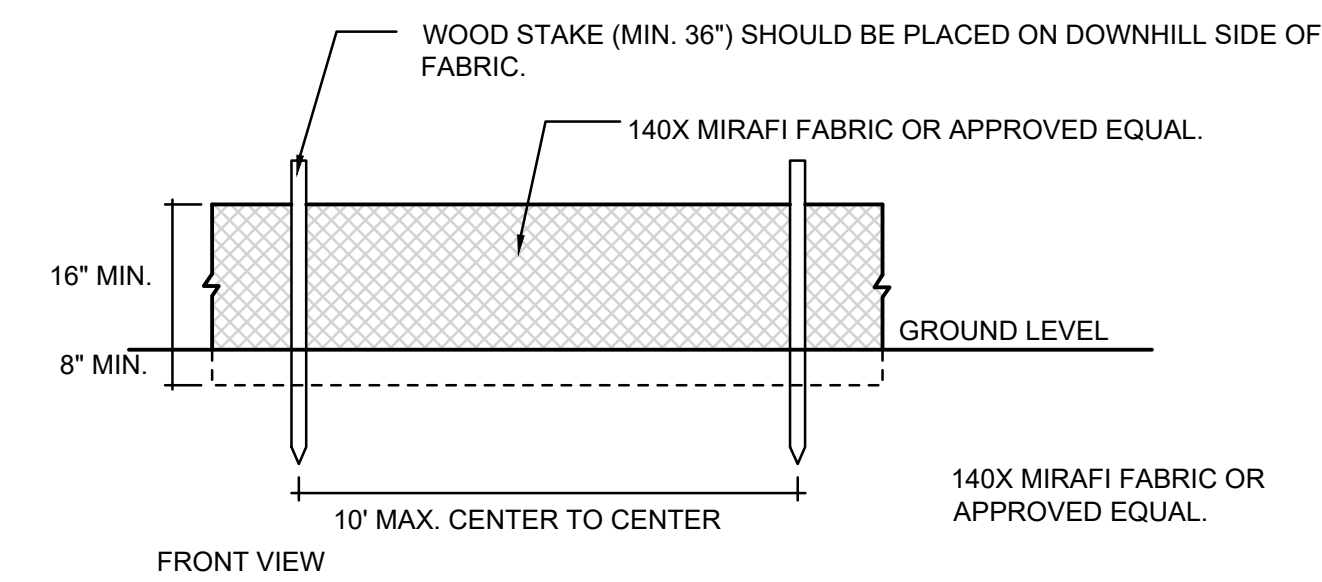
1A INLET PROTECTION - OPTION 1

Scale: NTS

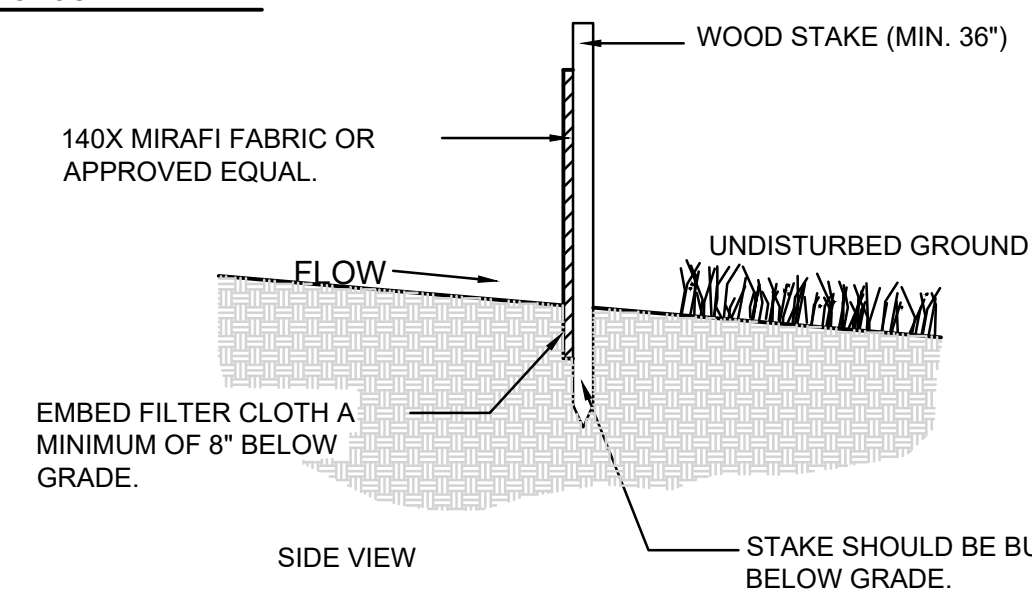


1B INLET PROTECTION - OPTION 2

Scale: NTS



FRONT VIEW



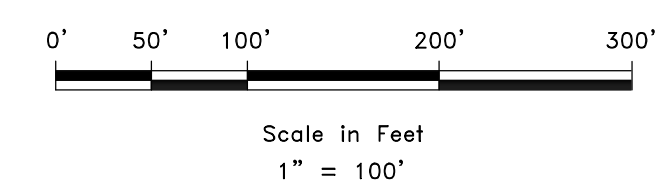
SIDE VIEW

2 SILT FENCE

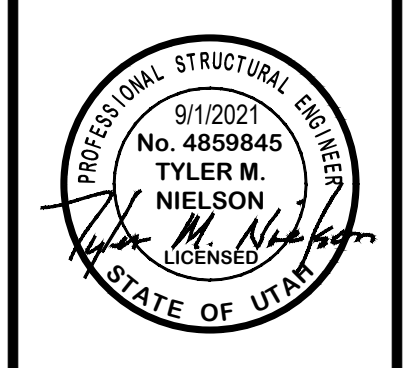
Scale: NTS

DEVELOPER:

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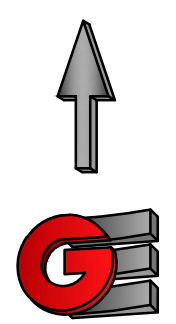
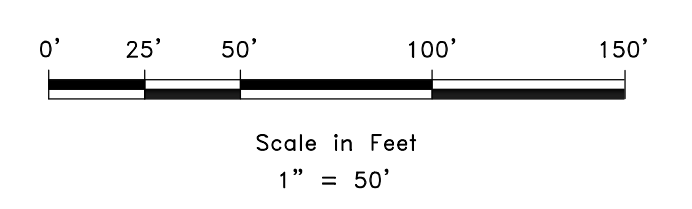
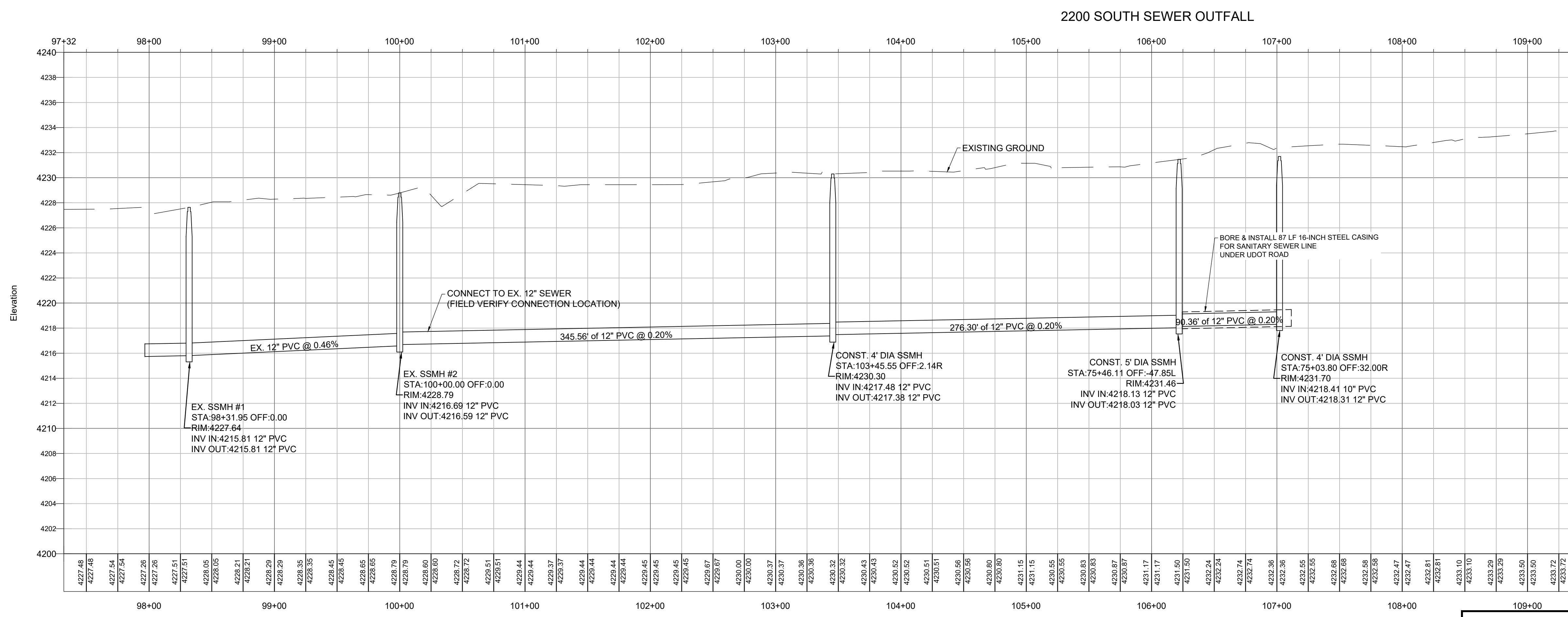
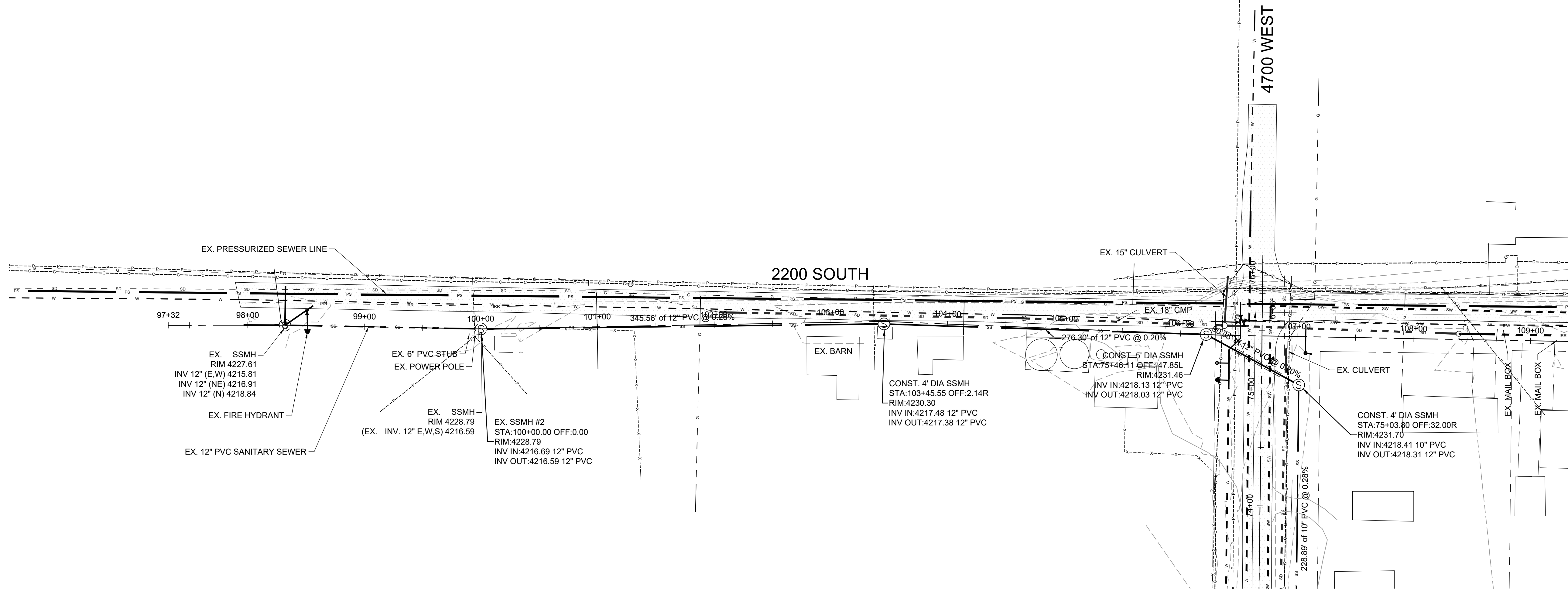
SCALE: 1" = 100'	DATE: 9/1/2021	DESIGN: WJS	DRAWN: WJS	CHECKED: TMN
REVISIONS	DESCRIPTION	DATE		



SWPPP
BUFFALO RUN ACRES SUBDIVISION
4700 WEST 2350 SOUTH
TAYLOR, WEBER COUNTY, UTAH

GARDNER ENGINEERING
CIVIL-LAND PLANNING
MUNICIPAL-LAND SURVEYING
5150 SOUTH 375 EAST OGDEN, UT
OFFICE: 801-476-0202 FAX: 801-476-0066

CE1-02



SCALE: 1" = 50'

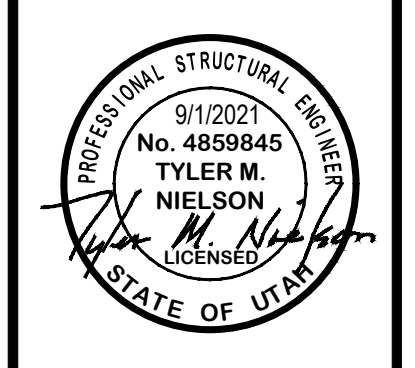
DATE: 9/1/2021

DESIGN: W.J.S.

DRAWN: W.J.S.

CHECKED: T.M.

DWG. NO.: R11345 - MARZALE, JAMESV101 - 4700 WEST SUBDIVISION DESIGN (MVC), CIVIL PLANS (DWG)



PLAN AND PROFILE

BUFFALO RUN ACRES SUBDIVISION

4700 WEST 2350 SOUTH

TAYLOR, WEBER COUNTY, UTAH

GARDNER ENGINEERING

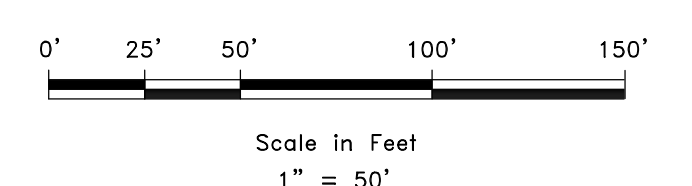
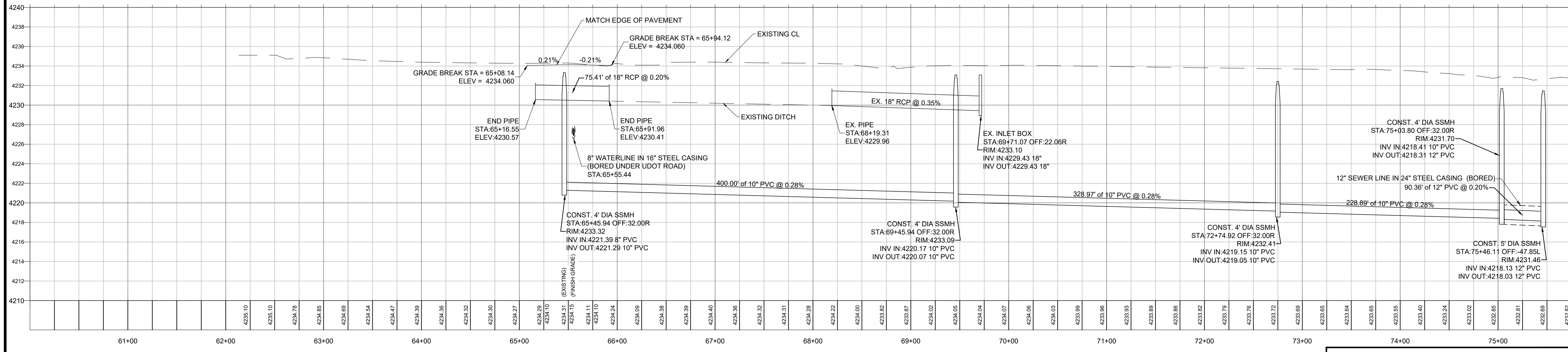
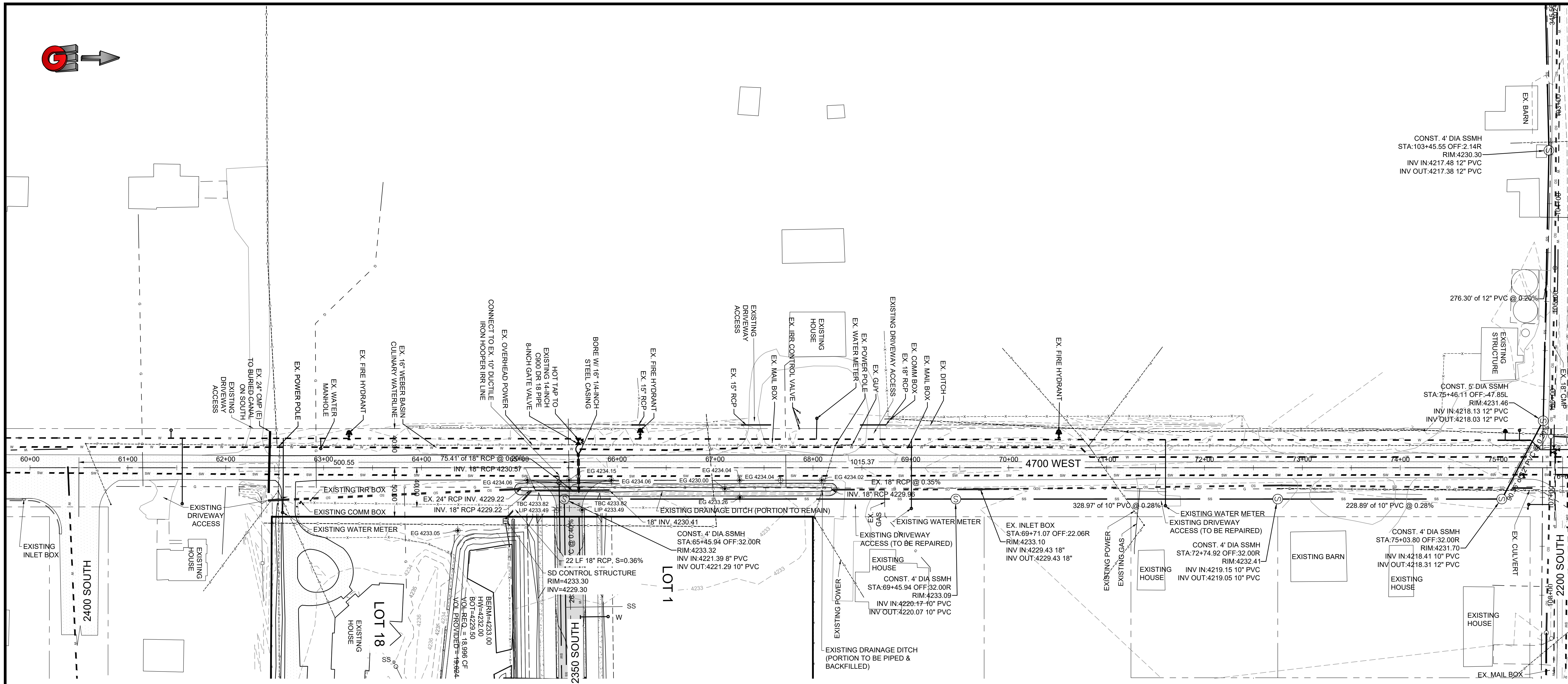
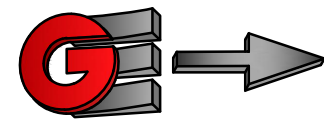
CIVIL • LAND PLANNING

MUNICIPAL • LAND SURVEYING

5150 SOUTH 375 EAST OGDEN, UT

OFFICE: 801.476.0202 FAX: 801.476.0066

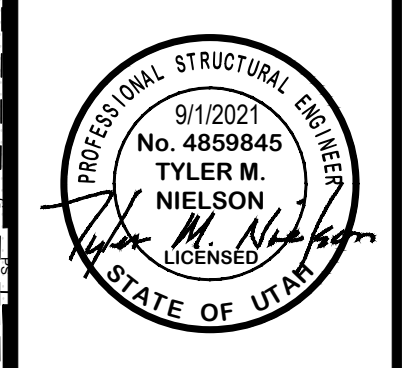
CE2-01



SCALE: 1" = 50'

DATE	9/1/2021
DESIGN	W.J.S.
DRAWN	W.J.S.
CHECKED	T.M.

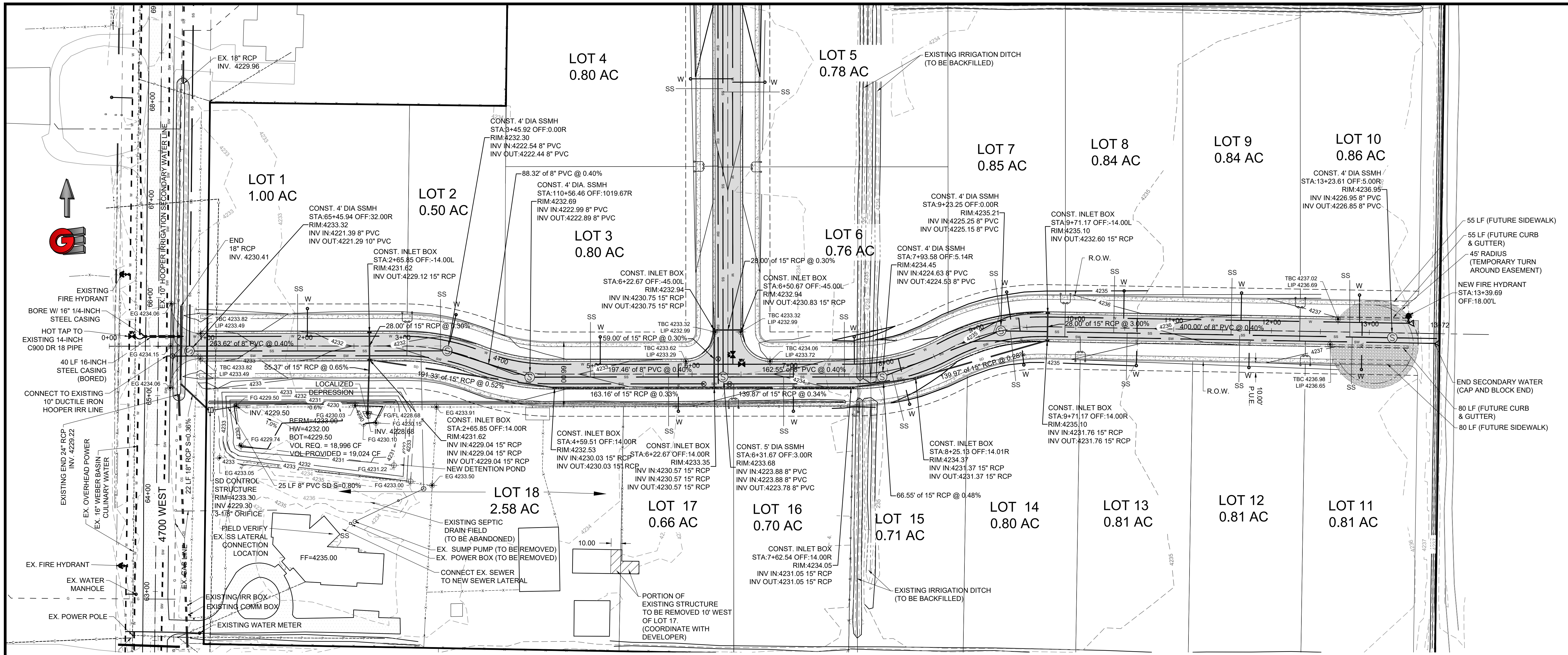
DWG: R.V.145 - MARZALE, JAMES.V.101 - 4700 WEST SUBDIVISION DESIGN (DWG), CIVIL PLANS (DWG)



4700 WEST PLAN AND PROFILE
BUFFALO RUN ACRES SUBDIVISION
4700 WEST 2350 SOUTH
TAYLOR, WEBER COUNTY, UTAH

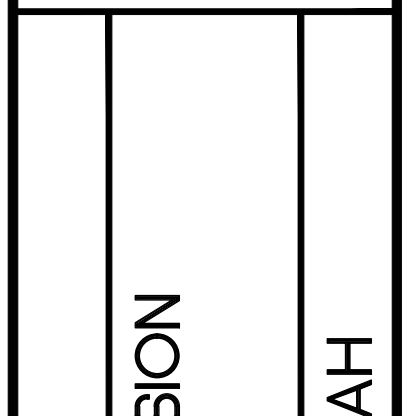
GARDNER ENGINEERING
 CIVIL-LAND PLANNING
 MUNICIPAL-LAND SURVEYING
 5150 SOUTH 375 EAST OGDEN, UT
 OFFICE: 801.476.0202 FAX: 801.476.0066

CE2-02



REVISIONS	DESCRIPTION
DATE	

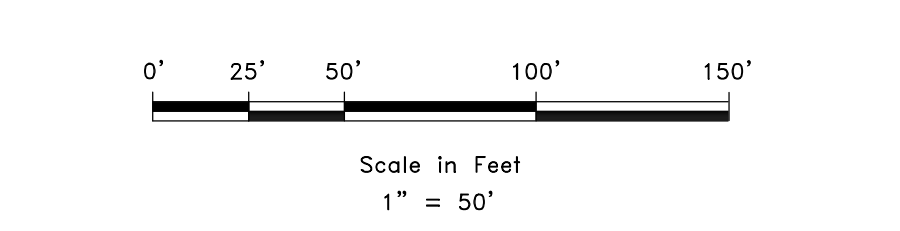
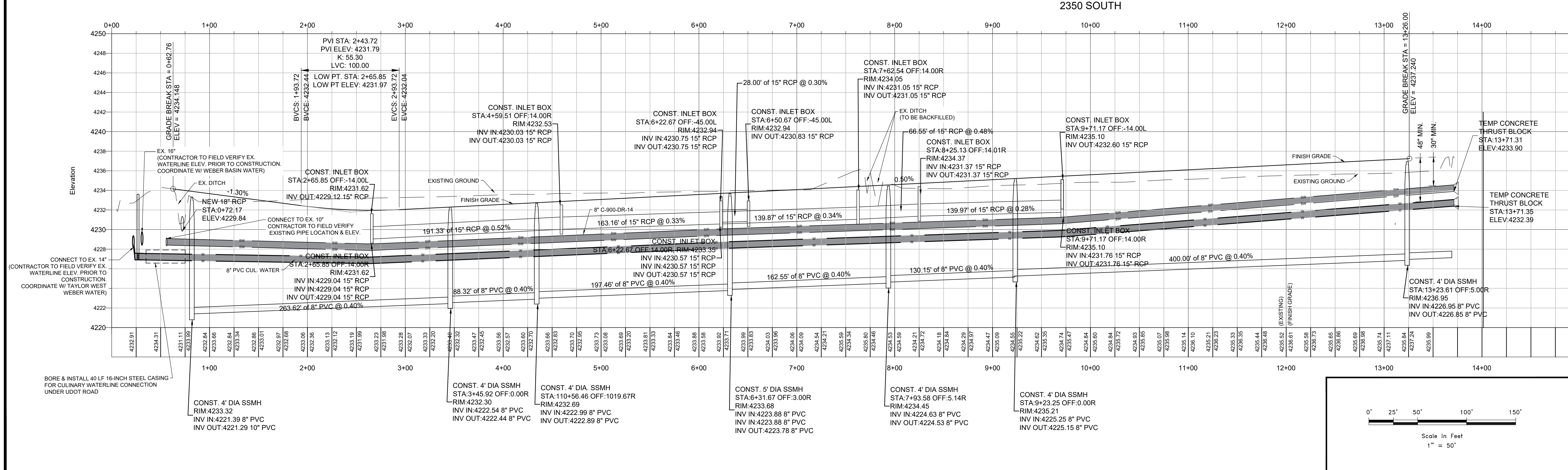
SCALE: 1" = 50'
 DATE: 9/1/2021
 DESIGN: WJS
 DRAWN: WJS
 CHECKED: TMN
 DWG#: 181145 - MARZALE, JAMESV101 - 4700 WEST SUBDIVISION DESIGN (WV), CIVIL PLANS (DWG)

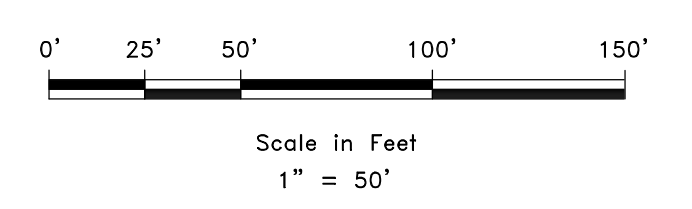
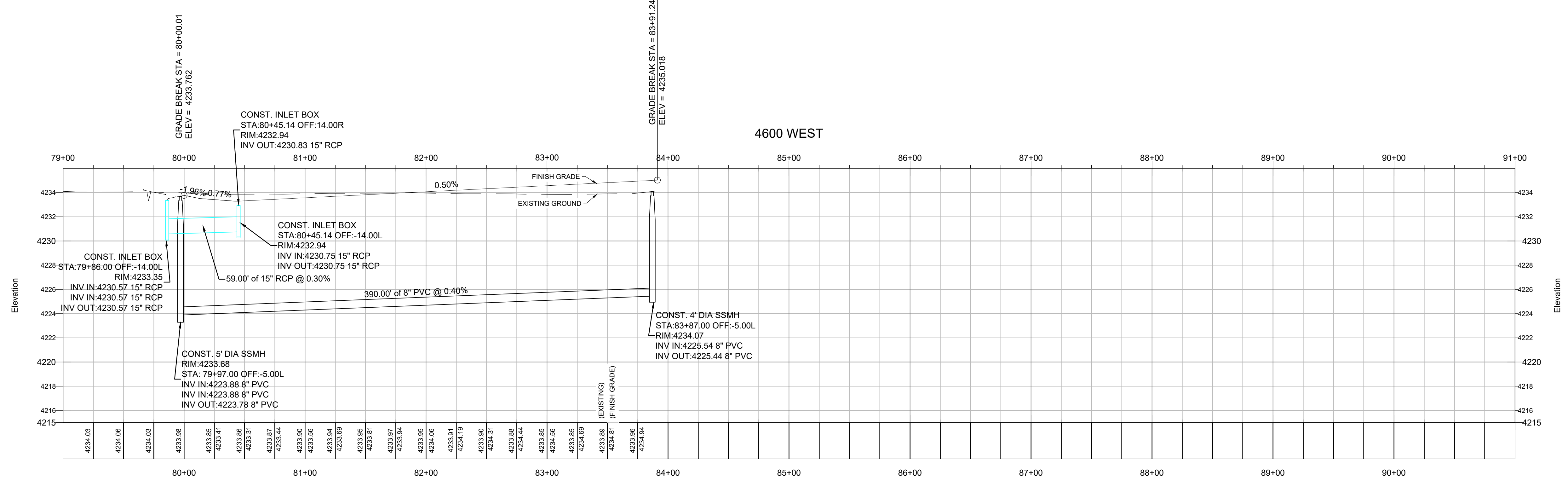
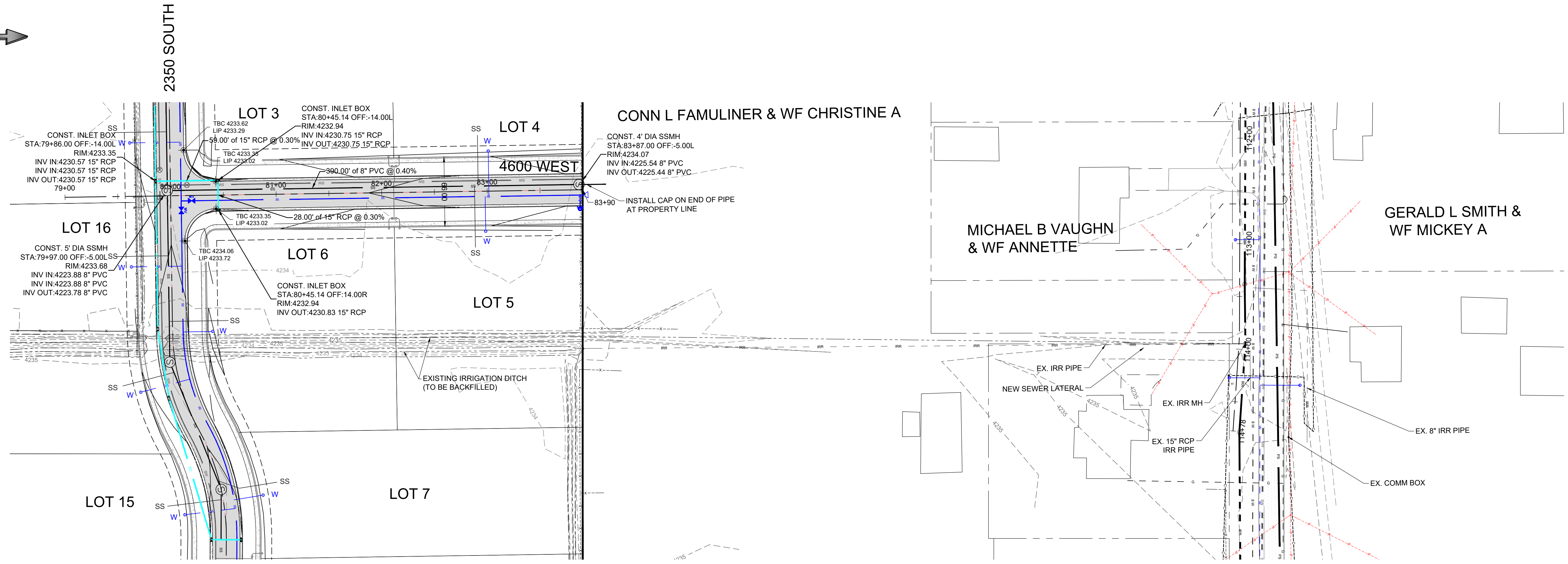
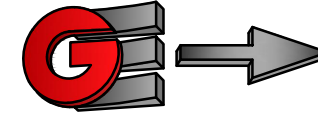


PLAN AND PROFILE
 BUFFALO RUN ACRES SUBDIVISION
 4700 WEST 2350 SOUTH
 TAYLOR, WEBER COUNTY, UTAH

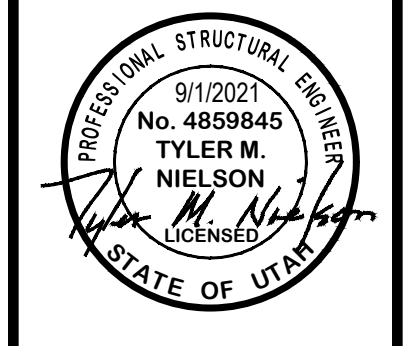
GARDNER ENGINEERING
 CIVIL-LAND PLANNING
 MUNICIPAL-LAND SURVEYING
 5150 SOUTH 375 EAST OGDEN, UT
 OFFICE: 801-476-0202 FAX: 801-476-0066

CE2-03





REVISIONS	DATE	DESCRIPTION



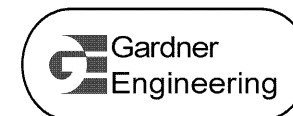
PLAN AND PROFILE
BUFFALO RUN ACRES SUBDIVISION
4700 WEST 2350 SOUTH
TAYLOR, WEBER COUNTY, UTAH

GARDNER ENGINEERING
 CIVIL - LAND PLANNING
 MUNICIPAL - LAND SURVEYING
 5150 SOUTH 375 EAST OGDEN, UT
 OFFICE: 801.476.0202 FAX: 801.476.0066

CE2-04

SCALE: 1" = 50'
 DATE: 9/12/2021
 DESIGN: WJS
 DRAWN: WJS
 CHECKED: TMN
 DWG: 811.145 - MARZALE, JAMES.101 - 4700 WEST SUBDIVISION DESIGN (MVC), CIVIL PLANS.DWG

Buffalo Run Acres Subdivision
4700 West 2350 South
Taylor, Weber County, Utah



Improved Areas	Total Site		
	Sq. Ft.	Acres	C
Hard Surface	63,666	1.4616	0.85
Gravel Areas	4,140	0.0950	0.50
Landscape	0	0.0000	0.10
Detention Ponds	14,879	0.3416	0.10
Building & Concrete	102,003	2.3417	0.85
Total/Weighted	184,688	4.2398	0.78
Undetained Area	0	0.00	0.78
	190,576	4.3750	

(18 Lots)

Allow Release Rate (cfs/acre)	0.100 cfs/acre
Q Allowable (cfs)	0.44
	0.00 cfs
Total Allowed Release	0.44 cfs
Effective Release Rate per Acre	0.10 cfs/Acre

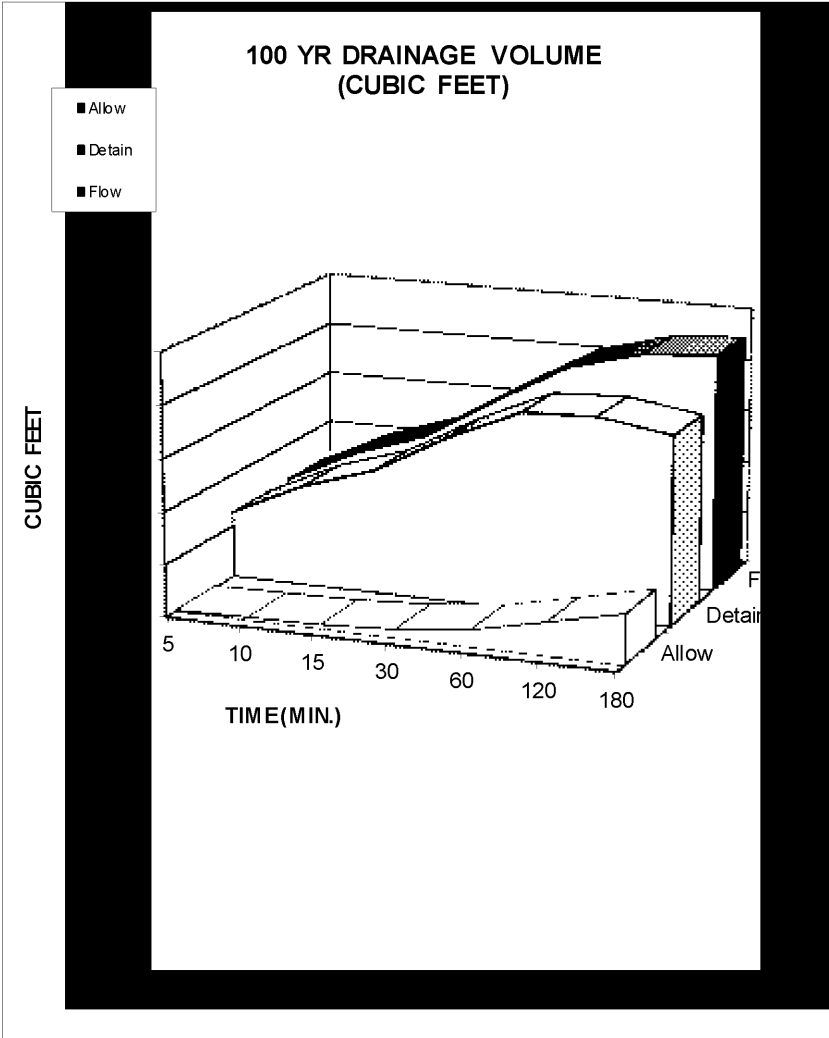
100 YEAR STORM RECOMMENDED MIN. VOLUME DETAINED

FEET	YARDS
18,996	704

100 yr

MIN	Runoff (cf)	Vol (cf)	100 YEAR	Detain Vol (cf)	Difference
5	131	6.5	6,463	6,332	
10	263	4.95	9,844	9,581	
15	394	4.09	12,200	11,807	
30	788	2.75	16,406	15,619	
60	1,575	1.7	20,284	18,709	
120	3,150	0.928	22,146	18,996	
180	4,725	0.633	22,659	17,934	
360	9,450	0.353	25,272	15,822	
720	18,900	0.215	30,784	11,884	
1440	34,078	0.119	34,078	0	

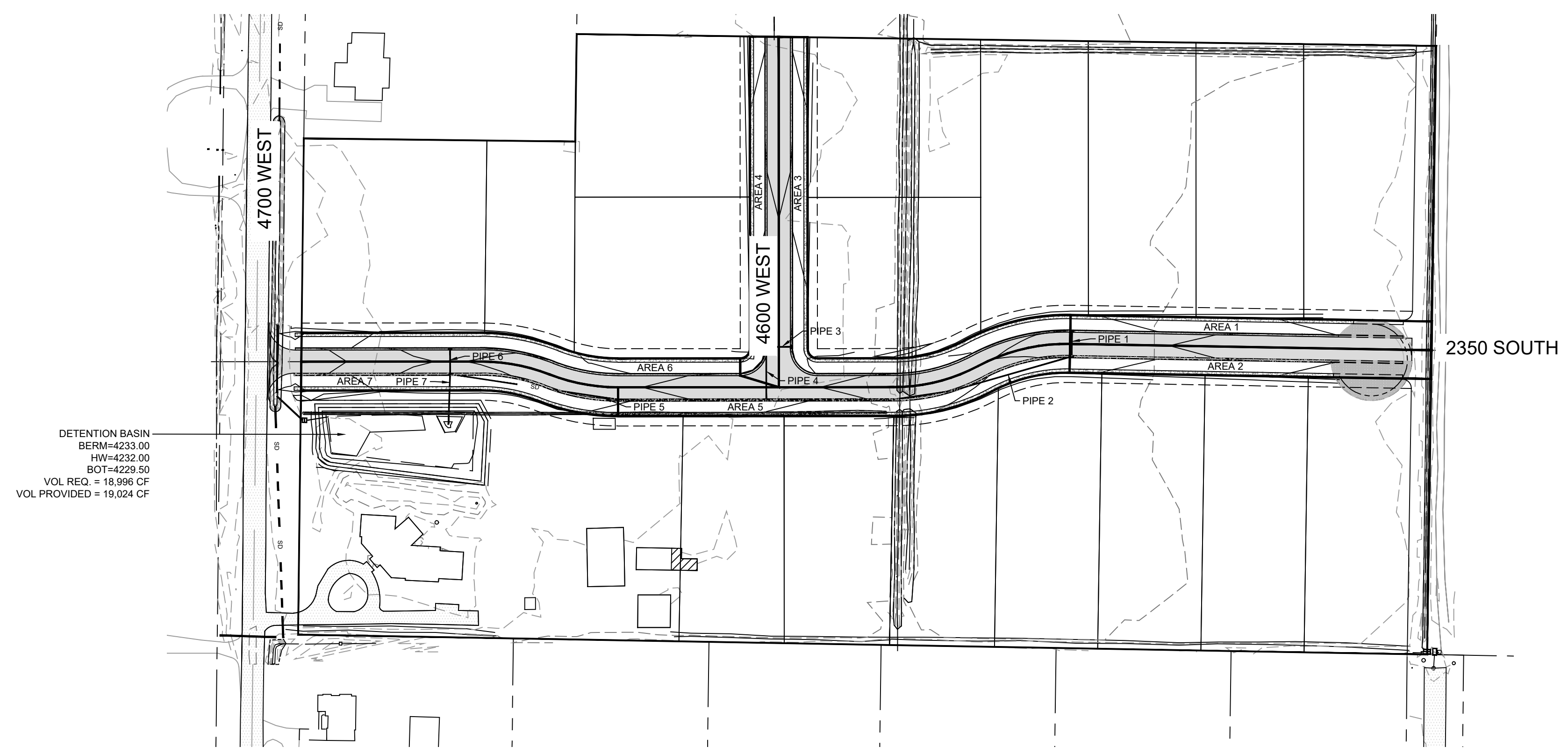
NOAA - Atlas 14



Orifice Calculation

H = 2.7 Maximum water height (ft)
 Q = 0.44 Flowrate out of orifice (cfs)
 Cc = 0.62 Coefficient of Contraction
 Cv = 0.98 Coefficient of Velocity
 Area = 0.055 Orifice Area (ft²)
 H = 3.14
 g = 32.17 Gravitational Constant
 d = 3.16 Orifice Diameter (in)
 d = 3 1/8 Orifice

PIPE	CONTRIBUTING BASINS	CONTRIBUTING Area (AC)	REQUIRED FLOW (cfs)	PIPE SIZE (in)	SLOPE (ft/ft)	n=	
						0.015 RCP	0.011 PVC
						Min.	Pipe SLOPE
1		0.52	1.01	10 Year	36	3.04E-06	0.001
					30	8.05E-06	0.001
					24	2.65E-05	0.003
					18	0.000123	0.012
					15	0.000325	0.032
12	0.001067	0.107					
2		1.05	2.02	10 Year	36	1.22E-05	0.001
					30	3.22E-05	0.003
					24	0.000106	0.011
					18	0.000491	0.049
					15	0.001298	0.130
12	0.004268	0.427					
3		0.90	1.74	10 Year	36	8.98E-06	0.001
					30	2.37E-05	0.002
					24	7.81E-05	0.008
					18	0.000362	0.036
					15	0.000957	0.096
12	0.003147	0.315					
4		1.41	2.73	10 Year	36	2.21E-05	0.002
					30	5.85E-05	0.006
					24	0.000192	0.019
					18	0.000891	0.089
					15	0.002357	0.236
12	0.007748	0.775					
5		1.71	3.08	10 Year	36	2.83E-05	0.003
					30	7.48E-05	0.007
					24	0.000246	0.025
					18	0.001141	0.114
					15	0.003017	0.302
12	0.009171	0.922					
6		0.65	1.26	10 Year	36	4.72E-06	0.000
					30	1.25E-05	0.001
					24	4.1E-05	0.004
					18	0.00019	0.019
					15	0.000503	0.050
12	0.001653	0.165					
7		4.24	4.54	10 Year	36	6.14E-05	0.006
					30	0.000162	0.016
					24	0.000534	0.053
					18	0.002474	0.247
					15	0.006543	0.654
12	0.02151	2.151					
Orifice Release	3	CFS	0.44		12	0.000109	0.011
					10	0.000287	0.029
					8	0.000944	0.094
					6	0.004379	0.438
					4	0.038066	3.807
3	0.176552	17.655					

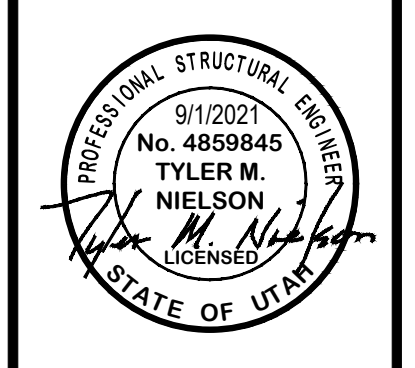


DETENTION BASIN
 BERIM=4233.00
 HW=4232.00
 BOT=4229.50
 VOL REQ. = 18,996 CF
 VOL PROVIDED = 19,024 CF

SCALE: 1"=60'

DATE	9/1/2021
DESIGN	W.B.
DRAWN	W.B.
CHECKED	T.M.

DWG. NO. 181245 - MARZALE, JAMES, 101 - 4700 WEST SUBDIVISION DESIGN (P&O), CIVIL PLANS.DWG



DETENTION CALCS
BUFFALO RUN ACRES SUBDIVISION
4700 WEST 2350 SOUTH
TAYLOR, WEBER COUNTY, UTAH

GARDNER ENGINEERING
 CIVIL-LAND PLANNING
 MUNICIPAL-LAND SURVEYING

5150 SOUTH 375 EAST OGDEN, UT
 OFFICE: 801.476.0202 FAX: 801.476.0066