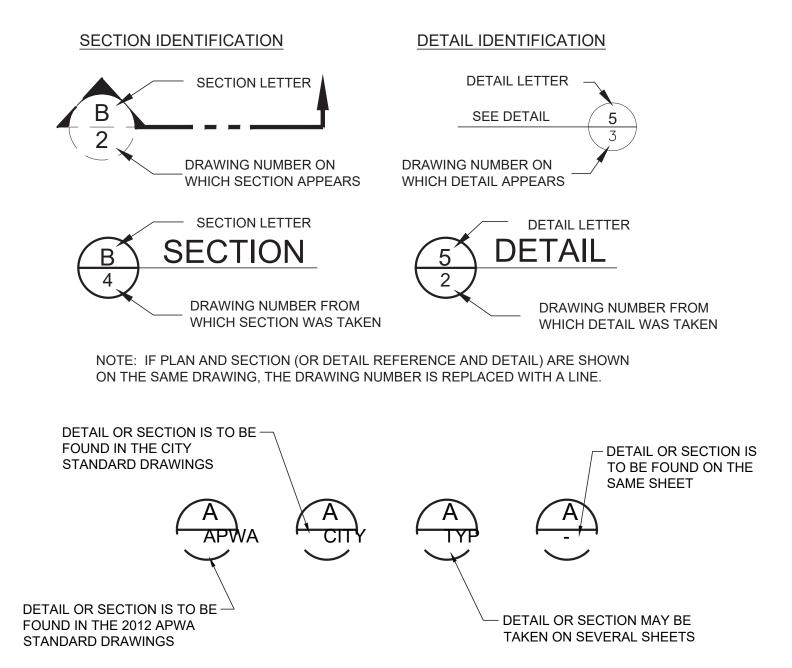
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LEGEND

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SECTION AND DETAIL IDENTIFICATION



EXISTING	PROPOSED	
■ = MONUMENT	■ ■ MONUMENT	
♦ = SECTION CORNER	\$\left\rightarrow\$ = Section corner	
→ BENCHMARK	• BENCHMARK	
• = RIVET	• = RIVET	
● ROD & CAP	• = ROD & CAP	
$\times \frac{29.65}{}$ = Spot elevation	× 29.65 = SPOT ELEVATION	
FF=6510.00 = FINISH FLOOR ELEVATION	FF=6510.00 = FINISH FLOOR ELEVAT	ION
FG=6507.75 = FINAL GRADE	FG=6507.75 = FINAL GRADE	
FH 💢 = FIRE HYDRANT	FH 🐺 = FIRE HYDRANT	
SSMH (S) = SEWER MANHOLE	SSMH (S) = SEWER MANHOLE	
SSCO O = SEWER CLEANOUT	SSCO O = SEWER CLEANOUT	
SDMH (D) = STORM DRAIN MANHOLE	SDMH (D) = STORM DRAIN MANHO	LE
BP O = BOLLARD POLE	BP 0 = BOLLARD POLE	
CB □ = CATCH BASIN	CB □ = CATCH BASIN	
= INLET GRATE	<pre>= INLET GRATE</pre>	
EMH O = ELECTRIC MANHOLE	EMHO = ELECTRIC MANHOLE	
EB □ = ELECTRIC BOX	EB □ = ELECTRIC BOX	
EM □ = ELECTRIC METER	EM □ = ELECTRIC METER	
GM □ = GAS METER	GM □ = GAS METER	
PPO = POWER POLE	PPO = POWER POLE	
LP☆ = LIGHT POLE	LP	
TRANS = TRANSFORMER PAD	TRANS = Transformer pad	
TMH () = TELEPHONE MANHOLE	TMH O = TELEPHONE MANHOLE	
TP = TELEPHONE PEDESTAL	TP = TELEPHONE PEDESTAL	-
FO & = FIBER OPTIC MARKER	GP- = GUY WIRE	
GP -● GUY WIRE	WMH O = WATER MANHOLE	
WMHO = WATER MANHOLE	WV ■ WATER VALVE	
WV ⋈ = WATER VALVE	WM (W) = WATER METER	
WM (W) = WATER METER	MWO = MONITOR WELL	
MWO = MONITOR WELL	SPB = SPRINKLER BOX	
SPB = SPRINKLER BOX	RDO = ROOF DRAIN	
RDO = ROOF DRAIN	RVO = ROOF VENT	
RVO = ROOF VENT	———— = VINYL FENCE	
——————————————————————————————————————	- CHAIN LINK FENCE	
		Έ.
x	4230 — = CONTOUR MAJOR	
— — 4230 — — = CONTOUR MAJOR	4231 — = CONTOUR MINOR	
	——————————————————————————————————————	
	——————————————————————————————————————	
——————————————————————————————————————	G = GAS LINE	
——————————————————————————————————————	——————————————————————————————————————	
— OP — = OVERHEAD POWER LINE	= BURIED ELECTRIC CAE	3LE
	——————————————————————————————————————	
— — COM — — = COMMUNICATION LINE	T = TELEPHONE LINE	_
T = TELEPHONE LINE	——————————————————————————————————————	
		٧Ľ
	SUT CUT FENCE	
$\frac{20}{3}$	_Y	
6" PVC		

@	AT	FEN COR	FENCE CORNER	PRC	POINT OF REVERSE CURVE
ABUT	ABUTMENT	FD	FLOOR DRAIN	PROJ	PROJECT
ASPH	ASPHALT	FDN	FOUNDATION	PROP	PROPERTY
ADT	AVERAGE DAILY TRAFFIC	FF	FINISH FLOOR	PSI	POUNDS PER SQUARE INCH
APPROX	APPROXIMATELY	FIN	FINISH	PT	POINT OF TANGENCY
AZ	AZIMUTH		FLOW LINE	POB	POINT OF BEGINNING
AZ	AZIMUTH	E			
D.4.1	5444405	FLR	FLOOR	PVC	POLYVINYL CHLORIDE
BAL	BALANCE	FL	FLANGE		
BEG	BEGINNING / BEGIN	FT	FEET	QTY	QUANTITY
BDRY	BOUNDARY	FTG	FOOTING		
BK	BACK	FW	FLAT WASHER	R	RANGE / RADIUS
BKFL	BACKFILL	FE	FIRE EXTINGUISHER	RCP	REINFORCED CONCRETE PIPE
BLD FLG	BLIND FLANGE	FP	FLOOR PENETRATION	RCCP	
BLDG	BUILDING		1 EGGITT ENETTOTION		
BLM	BUREAU OF LAND	_	0.4.0	DD	DOAD
DLIVI	MANAGEMENT	G	GAS	RD	ROAD
		GA	GAGE OR GAUGE	REF	REFERENCE
3M	BENCH MARK	GALV	GALVANIZED	REINF	REINFORCED
BLK	BLOCK	GEN	GENERAL	REQ'D	REQUIRED
BOT/BTM	BOTTOM	GM	GAS METER	REV	REVISION
BRG	BEARING	GSP	GALVANIZED STEEL PIPE	RP	REFERENCE POINT
BSMT	BASEMENT	GV	GATE VALVE	RR	RAILROAD
BTWN	BETWEEN			RT	RIGHT / ROUTE
	···	HDWI	HEADWALL	R/W	RIGHT OF WAY
CALC	CALCULATED	HDWL		I V/ V V	NOTE OF WAT
CALC	CALCULATED	H&T	HUB & TACK		0011711 / 01 007
CB	CATCH BASIN	HOR/HORZ/HORIZ	HORIZONTAL	S	SOUTH / SLOPE
CCW	COUNTER CLOCKWISE	HWL	HIGH WATER LEVEL	SAN	SANITARY
C-C	CENTER TO CENTER	HWY	HIGHWAY	SCH	SCHEDULE
C&G	CURB AND GUTTER	HYD	HYDRANT	SD	STORM SEWER
CEM	CEMETERY			SEC COR	SECTION CORNER
CFS	CUBIC FEET PER SECOND	ID	INSIDE DIAMETER	SHT	SHEET
CL	CENTERLINE	IE	INVERT ELEVATION	SPECS	SPECIFICATIONS
CIP	CAST IRON PIPE	IN	INCH	SQ	SQUARE
CMP	CORRUGATED METAL PIPE	INFO	INFORMATION	SQ FT	SQUARE FEET
CMP-A	CORRUGATED METAL	IRR	IRRIGATION	SQ YD	SQUARE YARD
	PIPE-ARCH	INV	INVERT	SS	STAINLESS STEEL
COB	CLEAN OUT BOX			ST	STREET
COL	COLUMN	JCT	JUNCTION	STL	STEEL
CONC	CONCRETE	33.		STN STL	STAINLESS STEEL
CONST	CONSTRUCT	ı	LENGTH	STA	STATION
		L	LENGTH		
COR	CORNER	LB	POUND	STD	STANDARD
CTR	CENTER	LG	LONG	STRUCT	STRUCTURE
CU FT	CUBIC FEET	LIC	LICENSE		
CU YD	CUBIC YARD	LIN	LINEAR / LINEAL	Т	TOWNSHIP / TELEPHONE
CUL	CULINARY	LPG	PROPANE GAS LINE	TA	TOP OF ASPHALT
CULV	CULVERT	LS	LAND SURVEYOR	TAN	TANGENT
CW	CLOCKWISE	LT	LEFT	TBC	TOP BACK CURB
	OLO OKWIOL				
D	DEODEE	LWL	LOW WATER LEVEL	TEMP	TEMPORARY
D 	DEGREE			TELE	TELEPHONE / TELEGRAM
DET	DETAIL	MAINT	MAINTENANCE	TF	TOP OF FOOTING
AIC	DIAMETER	MATL	MATERIAL	TP	TELEPHONE POLE
DIP	DUCTILE IRON PIPE	MAX	MAXIMUM	TW/TOW	TOP OF WALL
DIST	DISTANCE	MKR	MARKER	TOC	TOP OF CONCRETE
DN	DOWN	MH	MANHOLE	TYP	TYPICAL
DWG	DRAWINGS				
		MI	MILE	шо	LINDEDODOLIND
DWV	DRAIN WASTE VENT	MIN	MINIMUM	UG	UNDERGROUND
_					
E	EAST	MISC	MISCELLANEOUS	VBI	VINYL BACK INSULATION
EA	EACH	MON	MONUMENT	VC	VERTICAL CURVE
ELEV/ELV	ELEVATION	MPH	MILES PER HOUR	VERT	VERTICAL
ELEC	ELECTRIC			VIC	VICTAULIC
EMB	EMBANKMENT		NORTH	VOL	VOLUME
ENGR	ENGINEER	NO OR #	NUMBER	VPI	VERTICAL POINT OF INTERSECTION
ENT	ENTRANCE				
		NPW	NON-POTABLE WATER	VPC	VERTICAL POINT OF CURVE
EO	EDGE OF OIL	NTS	NOT TO SCALE	VPT	VERTICAL POINT OF TANGENCY
EQUIP	EQUIPMENT				
EST	ESTIMATE	OC	ON CENTER	W	WEST / WATER
EW	EACH WAY	OD	OUTSIDE DIAMETER	WM	WATER METER
EXC	EXCAVATION	0-0	OUTSIDE TO OUTSIDE	W/	WITH
EXIST	EXISTING	OFF REV	OFFICE REVISION	W/O	WITHOUT
ES	EXIT SIGN			V V / O	WIIIIOUI
_0	LAIT GION	ORIG	ORIGINAL	VINO	CDOCCINIC
				XING	CROSSING
		PVMT	PAVEMENT	X-SEC	CROSS SECTION
		PC	POINT OF CURVATURE		
		PCC	POINT OF COMPOUND		
			CLID\/ATLIDE		

CURVATURE

PERFORATED

PROPERTY LINE

POINT ON CURVE

POWER POLE

POINT OF INTERSECTION

PERF

POC

ABBREVIATIONS

CROSS ENGINEERING SERVICES

1544 Woodland Park Dr. Suite 310
Layton, Utah 84041
Phone: (801) 399-1858 Fax: (801) 399-1863

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DRAFTED BY: BKS
DESIGNED BY: JWC
CHECKED BY: JWC

REVISION DESCRIPTION

OWDER MOUNTAIN WEBER COUNTY

ABBREVIATIONS

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GEND,

INDEX,

SPEN RIDGE AT POWDER VINCORPORATED, WEBEF

SHEE OF JAMES ALE OF JAMES ALE

PROJECT NO. 18-03-21

SHEET NUMBER
C-001

CIVIL ENGINEER'S SITE & UTILITY NOTES

1. COMPLIANCE

ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE MOST RECENT EDITIONS OF THE FOLLOWING: THE INTERNATIONAL PLUMBING CODE, UTAH DRINKING WATER REGULATIONS, APWA STANDARDS & SPECIFICATIONS, CITY PUBLIC WORKS STANDARD PLANS AND CONSTRUCTION SPECIFICATIONS. THE CONTRACTOR IS REQUIRED TO ADHERE TO ALL OF THE ABOVE-MENTIONED DOCUMENTS UNLESS OTHERWISE NOTED AND APPROVED IN WRITING BY THE GOVERNING AUTHORITY.

2. CONTACT:

THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL APPROPRIATE GOVERNMENT AND PRIVATE ENTITIES ASSOCIATED WITH THE PROJECT.

3. PERMITS, FEES AND AGREEMENTS

CONTRACTOR MUST OBTAIN ALL THE NECESSARY PERMITS AND AGREEMENTS, AND PAY ALL APPLICABLE FEES PRIOR TO ANY CONSTRUCTION ACTIVITIES. CONTACT CITY PUBLIC WORKS, STATE, AND COUNTY REGARDING PERMITS AND INSPECTIONS REQUIRED FOR WORK CONDUCTED WITHIN THE PUBLIC RIGHT-OF-WAY. APPLICABLE UTILITY PERMITS MAY INCLUDE MAINLINE EXTENSION AGREEMENTS AND SERVICE CONNECTION PERMITS. ALL UTILITY WORK MUST BE BONDED. ALL CONTRACTORS MUST BE LICENSED TO WORK ON CITY UTILITY MAINS.

4. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NOTES CONSTRUCTION SITES MUST BE IN COMPLIANCE WITH THE UDEQ POLLUTION DISCHARGE ELIMINATION SYSTEM (NMPDES) STORM WATER PERMIT FOR CONSTRUCTION ACTIVITIES. A COPY OF THE PERMIT'S STORM WATER POLLUTION PREVENTION PLAN MUST BE KEPT ONSITE AT ALL TIMES. EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED AS SHOWN ON THE SWPPP. THE SWPPP IS CONSIDERED A DYNAMIC DOCUMENT AND MUST CHANGE AS CONDITIONS WARRANT, ADDITIONAL WATER QUALITY AND EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDING ON SITE CONDITIONS.

5. SAFETY

THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF SAFETY OF THE PROJECT, AND SHALL MEET ALL OSHA, STATE, COUNTY AND OTHER GOVERNING ENTITY REQUIREMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMING TO LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES, AND FOR THE PROTECTION OF WORKERS

6. TEMPORARY TRAFFIC CONTROL

TEMPORARY TRAFFIC CONTROL MUST CONFORM TO THE MOST CURRENT EDITION OF MUTCD PART 6 "TEMPORARY TRAFFIC CONTROL" AND CITY CONSTRUCTION SPECIFICATIONS. ALL TRAFFIC LANE CLOSURES AND PEDESTRIAN ROUTE CLOSURES MUST BE APPROVED BY CITY, COUNTY, OR STATE AGENCIES A MINIMUM OF 24 HOURS PRIOR TO BEGINNING WORK. THE CONTRACTOR MUST ALSO CONFORM TO CITY, NMDOT, COUNTY, OR OTHER APPLICABLE GOVERNING ENTITIES REQUIREMENTS FOR TRAFFIC CONTROL. MAINTAIN EMERGENCY ACCESS TO THE SITE AND ACCESS TO SURROUNDING FIRE HYDRANTS AT ALL TIMES.

7. SURVEY CONTROL

CONTRACTOR MUST PROVIDE A REGISTERED LAND SURVEYOR OR PERSONS UNDER SUPERVISION OF A REGISTERED LAND SURVEYOR TO SET STAKES FOR ALIGNMENT AND GRADE OF EACH UTILITY AND SITE IMPROVEMENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS, REFERENCE MARKS, AND PROPERTY MARKERS WITHIN THE PROJECT SITE. CONTACT THE COUNTY SURVEYOR FOR MONUMENT LOCATIONS. ALL ELEVATIONS SHALL BE REFERENCED TO THE BENCHMARK ELEVATION AS PROVIDED ON THE APPROVED PLANS.

8. QUALITY CONTROL

WHERE TWO OR MORE STANDARDS ARE SPECIFIED AND THE STANDARDS ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, COMPLY WITH THE CITY PUBLIC WORKS SPECIFICATION FIRST AND THE MOST STRINGENT REQUIREMENT SECOND. REFER UNCERTAINTIES AND REQUIREMENTS TO THE PROJECT ENGINEER FOR CLARIFICATION.

9. DUST CONTROL

THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL ACCORDING TO THE GOVERNING ENTITY STANDARDS. USE OF HYDRANT WATER OR PUMPING FROM CITY-OWNED CANALS OR STORM DRAINAGE FACILITIES IS NOT ALLOWED FOR DUST CONTROL ACTIVITIES WITHOUT WRITTEN APPROVAL BY THE PUBLIC WORKS DIRECTOR.

DEWATERING

ALL ON-SITE DEWATERING ACTIVITIES MUST BE APPROVED IN WRITING BY PUBLIC UTILITIES. PROPOSED OUTFALL LOCATIONS AND ESTIMATED FLOW VOLUME CALCULATIONS MUST BE SUBMITTED TO PUBLIC UTILITIES FOR REVIEW AND APPROVAL. ADEQUATE MEASURES MUST BE TAKEN TO REMOVE ALL SEDIMENT PRIOR TO DISCHARGE. PUBLIC UTILITIES MAY REQUIRE ADDITIONAL MEASURES FOR SEDIMENT CONTROL AND REMOVAL

THE CONTRACTOR MUST KEEP ALL EXCAVATIONS FREE FROM GROUNDWATER BY DEWATERING. THE CONTRACTOR MUST DISPOSE OF WATER SO AS NOT TO CAUSE A MENACE TO PUBLIC HEALTH, OR BECOME A NUISANCE. THE GROUNDWATER SHALL BE DRAWN DOWN TO 12" BELOW THE MINIMUM EXCAVATION. DEWATERING SHALL CONTINUE UNTIL FILL HAS BEEN PLACED AND COMPACTED A MINIMUM OF 24" ABOVE THE STATIC GROUNDWATER LEVEL. THE CONTRACTOR SHALL CONFORM TO BEST MANAGEMENT PRACTICES FOR REMOVING GROUNDWATER AS PER THE UPDES PERMIT

11. PROJECT LIMITS

THE CONTRACTOR IS REQUIRED TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE APPROVED PROJECT LIMITS. THIS INCLUDES, BUT IS NOT LIMITED TO, VEHICLE AND EQUIPMENT STAGING, MATERIAL STORAGE AND LIMITS OF TRENCH EXCAVATION. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN PERMISSION AND/OR EASEMENTS FROM THE APPROPRIATE GOVERNING ENTITY AND/OR INDIVIDUAL PROPERTY OWNER(S) FOR WORK OR STAGING OUTSIDE OF THE PROJECT LIMITS.

12. DAMAGE TO EXISTING UTILITIES

THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE, CAUSED BY ANY CONDITION INCLUDING SETTLEMENT, TO EXISTING UTILITIES FROM WORK PERFORMED AT OR NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT ALL EXISTING PUBLIC AND PRIVATE ROADWAYS AND UTILITY FACILITIES. DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR, MUST BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE, TO THE SATISFACTION OF THE OWNER OF SAID FACILITIES.

13. UTILITY LOCATIONS

CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING AND AVOIDING ALL UTILITIES AND SERVICE LATERALS, AND FOR REPAIRING ALL DAMAGE THAT OCCURS TO THE UTILITIES DUE TO THE CONTRACTOR'S ACTIVITIES. CONTRACTOR IS TO VERIFY LOCATION, DEPTH, SIZE. MATERIAL AND OUTSIDE DIAMETERS OF UTILITIES IN THE FIELD BY POTHOLING IN ORDER TO IDENTIFY POTENTIAL CONFLICTS, AND PROBLEMS WITH FUTURE CONSTRUCTION ACTIVITIES. EXISTING UTILITY INFORMATION SHOWN ON THE DRAWINGS WAS OBTAINED FROM PUBLIC UTILITIES' MAPS AND MUST BE ASSUMED AS APPROXIMATE; REQUIRING FIELD VERIFICATION. CONTACT BLUE STAKES OR APPROPRIATE OWNER FOR COMMUNICATION, GAS, TELEPHONE, FIBER OPTIC, CABLE, AND/OR PRIVATE UTILITY LOCATIONS.

14. UTILITY RELOCATIONS

FOR UTILITY CONFLICTS REQUIRING MAINLINE RELOCATIONS, THE CONTRACTOR MUST NOTIFY THE APPLICABLE UTILITY COMPANY, OR USER, A MINIMUM OF 2-WEEKS IN ADVANCE. A ONE-WEEK MINIMUM NOTIFICATION IS REQUIRED FOR CONFLICTS REQUIRING THE RELOCATION OF SERVICE LATERALS. ALL RELOCATIONS ARE SUBJECT TO APPROVAL FROM THE APPLICABLE UTILITY COMPANY AND/OR USER.

15. FIELD CHANGES

NO ROADWAY, UTILITY ALIGNMENT OR GRADE CHANGES ARE ALLOWED FROM THE APPROVED CONSTRUCTION PLANS/DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE PUBLIC WORKS DIRECTOR. CHANGES TO HYDRANT LOCATIONS AND/OR FIRE LINES MUST BE REVIEWED AND APPROVED BY THE FIRE DEPARTMENT (AS APPLICABLE TO THE PROJECT) AND PUBLIC WORKS.

16. PUBLIC NOTICE TO PROJECTS IN THE PUBLIC WAY

FOR APPROVED PROJECTS THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND DISTRIBUTE WRITTEN NOTICE TO ALL RESIDENTS LOCATED WITHIN THE PROJECT AREA AT LEAST 72-HOURS PRIOR TO CONSTRUCTION. WORK TO BE CONDUCTED WITHIN COMMERCIAL OR INDUSTRIAL AREAS MAY REQUIRE A LONGER NOTIFICATION PERIOD, AND ADDITIONAL CONTRACTOR COORDINATION WITH PROPERTY OWNERS. THE WRITTEN NOTICE IS TO BE APPROVED BY THE PUBLIC WORKS DIRECTOR OR CITY ENGINEER.

17. PUBLIC NOTICE FOR WATER MAIN SHUT DOWNS

THE PUBLIC WORKS DEPARTMENT AND CITY ENGINEER MUST APPROVE ALL WATER MAIN SHUTDOWNS. ONCE APPROVED, THE CONTRACTOR MUST NOTIFY ALL AFFECTED USERS BY WRITTEN NOTICE A MINIMUM OF 48-HOURS (RESIDENTIAL) AND 72-HOURS (COMMERCIAL/INDUSTRIAL) PRIOR TO THE WATER MAIN SHUT DOWN. PUBLIC WORKS MAY REQUIRE LONGER NOTICE PERIODS.

18. WATER AND SEWER SEPARATION

IN ACCORDANCE WITH UTAH'S DEPARTMENT OF HEALTH REGULATIONS, A MINIMUM TEN-FOOT HORIZONTAL AND 1.5-FOOT VERTICAL (WITH WATER ON TOP) SEPARATION IS REQUIRED. IF THESE CONDITIONS CANNOT BE MET, STATE AND PUBLIC WORKS APPROVAL IS REQUIRED. ADDITIONAL CONSTRUCTION MEASURES WILL BE REQUIRED FOR THESE CONDITIONS.

19. SEWER MAIN AND LATERAL CONSTRUCTION REQUIREMENTS PUBLIC WORKS MUST INSPECT ALL SEWER CONNECTIONS. ALL SEWER LATERALS 6-INCHES AND SMALLER MUST WYE INTO THE MAINS PER PUBLIC WORKS REQUIREMENTS. A MINIMUM 4-FOOT BURY DEPTH IS REQUIRED ON ALL SEWER MAINS AND LATERALS.

THE CONTRACTOR MUST PROVIDE AIR PRESSURE TESTING OF SEWER MAINS IN ACCORDANCE WITH PIPE MANUFACTURERS RECOMMENDATIONS AND PUBLIC WORKS REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE SEWER LATERAL WATER TESTING AS REQUIRED BY THE PUBLIC WORKS DIRECTOR OR INSPECTOR. ALL PIPES SUBJECT TO CONTRACTOR SHALL PROVIDE PAVEMENT MARKINGS JUST PRIOR TO PROJECT WATER TESTING SHALL BE FULLY VISIBLE TO THE INSPECTOR DURING TESTING. TESTING MUST BE PERFORMED IN THE PRESENCE OF A PUBLIC WORKS REPRESENTATIVE. ALL VISIBLE LEAKAGE MUST BE REPAIRED TO THE SATISFACTION OF THE PUBLIC WORKS ENGINEER OR INSPECTOR.

WATER AND FIRE MAIN AND SERVICE CONSTRUCTION REQUIREMENTS PUBLIC WORKS MUST INSPECT AND APPROVE ALL FIRE AND WATER SERVICE CONNECTIONS. A MINIMUM 3-FOOT SEPARATION IS REQUIRED BETWEEN ALL WATER AND FIRE SERVICE TAPS INTO THE MAIN. ALL CONNECTIONS MUST BE MADE MEETING PUBLIC WORKS REQUIREMENTS. A 7-FOOT MINIMUM BURY DEPTH (FINAL GRADE TO TOP OF PIPE) IS REQUIRED ON ALL WATER/FIRE LINES UNLESS OTHERWISE APPROVED BY PUBLIC UTILITIES. WATER LINE THRUST BLOCK AND RESTRAINTS ARE REQUIRED AS PER PUBLIC WORKS STANDARDS DRAWINGS AND CONSTRUCTION SPECIFICATIONS. ALL EXPOSED NUTS AND BOLTS WILL BE COATED WITH CHEVRON FM1 GREASE, PLUS A MINIMUM 8 MIL THICKNESS PLASTIC. PROVIDE STAINLESS STEEL NUTS, BOLTS, AND WASHERS FOR HIGH GROUNDWATER/ SATURATED CONDITIONS AT FLANGE FITTINGS, ETC.

ALL WATERLINE INSTALLATIONS AND TESTING TO BE ACCOMPLISHED IN ACCORDANCE WITH PUBLIC WORKS STANDARDS AND SPECIFICATIONS, INCLUDING UTAH STATE DRINKING WATER STANDARDS, AWWA SPECIFICATIONS, AND ALL OTHER APPLICABLE UPWS, ASTM, AND ANSI SPECIFICATIONS RELEVANT TO THE INSTALLATION AND COMPLETION OF THE PROJECT.

ALL NEW WATER MAINS OR APPURTENANCES SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651-99. THE SPECIFICATION SHALL INCLUDE DETAILED PROCEDURES FOR THE ADEQUATE FLUSHING, DISINFECTION, AND MICROBIOLOGICAL TESTING OF ALL WATER MAINS. ON ALL NEW AND EXTENSIVE DISTRIBUTION SYSTEM CONSTRUCTION, EVIDENCE OF SATISFACTORY DISINFECTION SHALL BE PROVIDED TO THE UTAH DIVISION OF DRINKING WATER. SAMPLES FOR COLIFORM ANALYSES SHALL BE COLLECTED AFTER DISINFECTION IS COMPLETE AND THE SYSTEM IS REFILLED WITH POTABLE WATER. A STANDARD HETEROTROPHIC PLATE COUNT IS ADVISABLE. THE USE OF WATER FOR CULINARY PURPOSES SHALL NOT COMMENCE UNTIL THE BACTERIOLOGIC TESTS INDICATE THE WATER TO BE FREE FROM CONTAMINATION.

CONTRACTOR IS TO INSTALL WATER SERVICE LINES, METER YOKES, AND/OR ASSEMBLIES AND METER BOXES WITH LIDS LOCATED AS APPROVED ON THE PLANS, AND PER APPLICABLE PUBLIC UTILITIES DETAIL DRAWINGS. METER BOXES ARE TO BE PLACED IN THE PARK STRIPS PERPENDICULAR TO THE WATERMAIN SERVICE TAP CONNECTION. ALL WATER METERS, CATCH BASINS, CLEANOUT BOXES, MANHOLES, DOUBLE CHECK VALVE DETECTOR ASSEMBLIES, REDUCED PRESSURE DETECTOR ASSEMBLIES, AND BACKFLOW PREVENTION DEVICES MUST BE LOCATED OUTSIDE OF ALL APPROACHES, DRIVEWAYS, PEDESTRIAN WALKWAYS, AND OTHER TRAVELED WAYS UNLESS OTHERWISE APPROVED ON PLANS.

BACKFLOW PREVENTERS ARE REQUIRED ON ALL IRRIGATION AND FIRE SPRINKLING TAPS BY ASTM D-1557: PER PUBLIC UTILITIES AND FIRE DEPARTMENT REQUIREMENTS.

21. GENERAL WATER, SEWER AND STORM DRAIN REQUIREMENTS NO CHANGE IN DESIGN OF UTILITY LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF CITY PUBLIC WORKS OR OTHER AUTHORITY HAVING JURISDICTION OVER THAT UTILITY.

NO SUBSTITUTES IN PIPE DIAMETER DIFFERENT FROM THOSE SHOWN ON THIS PLAN WILL BE PERMITTED UNLESS SUBMITTED TO AND APPROVED BY THE CITY PUBLIC WORKS, OR OTHER AUTHORITY HAVING JURISDICTION OVER THAT UTILITY.

ALL MANHOLES, HYDRANTS, VALVES, CLEAN-OUT BOXES, CATCH BASINS, METERS, ETC. MUST BE RAISED OR LOWERED TO FINAL GRADE PER PUBLIC WORKS STANDARDS. AND INSPECTOR REQUIREMENTS. CONCRETE COLLARS MUST BE CONSTRUCTED ON ALL MANHOLES, CLEANOUT BOXES, CATCH BASINS AND VALVES PER PUBLIC WORKS STANDARDS. ALL MANHOLE, CATCH BASIN, OR CLEANOUT BOX CONNECTIONS MUST BE AREAS) MADE WITH THE PIPE CUT FLUSH WITH THE INSIDE OF THE BOX, AND GROUTED OR SEALED. ALL MANHOLE, CLEANOUT BOX OR CATCH BASIN DISCONNECTIONS MUST BE REPAIRED AND GROUTED WATERTIGHT.

CONTRACTOR SHALL NOT ALLOW ANY SURFACE WATER, GROUNDWATER OR DEBRIS TO ENTER THE NEW, OR EXISTING PIPE DURING CONSTRUCTION.

22. TRENCH BACKFILL

PIPE BEDDING AND TRENCH BACKFILL SHALL CONFORM TO PUBLIC WORKS STANDARDS. PLACE BACKFILL IN 8-INCH MAXIMUM LIFTS AND COMPACT TO 95% MAXIMUM DRY DENSITY AS PER ASTM D1557. THE PIPE SHALL BE LAID ON 6-INCH MINIMUM SAND BED. THE BACKFILL MATERIAL FOR THE PIPE ZONE SHALL BE A-1 SOILS, FREE FROM STONES, CLODS AND OTHER DELETERIOUS MATERIALS.

THE BOTTOM OF ALL UTILITY TRENCHES SHALL BE COMPACTED THOROUGHLY PRIOR TO PLACING PIPE. IF ROCK IS ENCOUNTERED AT DESIGN GRADE, OR A SOFT OR SOGGY BOTTOM IS ENCOUNTERED, THE TRENCH BOTTOM SHALL BE OVEREXCAVATED AND SUITABLE MATERIAL PLACED AND COMPACTED TO BOTTOM OF TRENCH GRADE.

COMPACTION REPORTS ON ALL TRENCHES SHALL BE SUBMITTED TO THE PROJECT ENGINEER, CITY ENGINEER, AND/OR OWNER'S REPRESENTATIVE BY THE MATERIALS TESTER, WHICH CERTIFIES THAT TRENCH BACKFILL WAS COMPACTED AS DIRECTED BY THE GEOTECHNICAL REPORT, IN ACCORDANCE WITH EARTHWORK SPECIFICATIONS AND PUBLIC WORKS SPECIFICATIONS.

23. SITE CONSTRUCTION

ALL EXISTING ASPHALT TO BE CUT SHALL BE SAW CUT IN NEAT STRAIGHT LINES BY THE CONTRACTOR PRIOR TO EXCAVATION.

GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS ON SITE. CONTRACTORS SHALL HAVE VISITED AND BECOME FAMILIAR WITH THE PROJECT SITE.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE SITE CLEANUP INCLUDING DEBRIS, SCRAP, AND WASTE FROM SUBCONTRACTORS, AND INSTALLERS.

BEFORE BEGINNING ANY CUTTING OR DEMOLITION, THE CONTRACTOR SHALL HAVE REVIEWED THE SITE AND CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE CONTINUING.

COMPLETION. PAINT STRIPING SHALL CONSIST OF PAINTED LINES AND SYMBOLS IN ACCORDANCE WITH MUTCD STANDARDS & SPECIFICATIONS.

24. CONCRETE (CIVIL WORK ONLY)

COLUMNS GIRDERS AND BEAMS

CONCRETE PLACED AGAINST EARTH

ALL WORK SHALL CONFORM TO ACI AND ADA STANDARDS & SPECIFICATIONS. FINE BROOM FINISH REQUIRED ON EXTERIOR FLATWORK.

COVER (IN)

1 1/2

3

CONCRETE PLACED IN FORMS, EXPOSED TO WEATHER OR EARTH 2								
SLABS OR WALLS NOT EXPOSED TO EARTH OR WEATHER 1								
REINFORCING MATERIAL TABLE								
REINFORCING ELEMENT ASTM Fy (KSI) Fu (KSI) COMMENTS								
TYPICAL REINFORCING	A706	60	80	*	*			
WELDED & FIELD BENT	A706	60	80		_			
WELDED WIRE, SMOOTH	A185	65	75		-			
WELDED WIRE, DEFORMED	A497	70	80		-			

CONCRETE COVER

CASE

** OR SEISMICALLY QUALIFIED ASTM A615 REBAR PER ACI 318-05 SECTION

CONCRETE MIX TABLE											
CONCRETE		28 DAY STRENGTH,	CONCRETE	MAX W/C RATIO, INCLUDING	MIN CEMENT MATERIAL (#/CY), INCLUDING	MAX AGGREGATE	SLUMP	TOTAL AIR CONTENT (%) +/-	CEMENT	REQUIRED	OTHER
MIX TYPE	INTENDED USE	f`c (KSI)	WEIGHT	FLY ASH	FLY ASH	SIZE (IN)	LIMITS (IN)	1 1/2%	TYPE	ADMIXTURES	REQUIREMENTS
1	FOOTINGS	4	NWC	0.45	470	1	4	-	II/V	-	FLY ASH REQD
2	GRADE BEAMS, PILASTERS	4	NWC	0.45	517	1	4	6	II/V	AIR ENTRAINING	FLY ASH REQD
3	ALL CONCRETE EXPOSED TO WEATHER, OR DEICERS (SLABS AND WALLS)	5	NWC	0.4	564	1	4	6	II/V	AIR ENTRAINING, WATER REDUCING	FLY ASH REQD
4	INTERIOR SLABS ON GRADE	4	NWC	0.45	517	1	4	NOT PERMITTED	II/V	-	FLY ASH REQD
5	ALL CONCRETE OTHERWISE NOT SPECIFIED	4	NWC	0.45	517	1	4	6	II/V	AIR ENTRAINING	FLY ASH REQD

25. GRADING/EARTHWORK

THE GRADING CONTRACTOR SHALL OBTAIN A COPY OF THE SITE GEOTECHNICAL REPORT, AND FOLLOW ALL RECOMMENDATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER.

NO GRADE CHANGES WILL BE PERMITTED FROM THAT SHOWN AND APPROVED ON THIS PLAN WITHOUT RESUBMITTING THE PROPOSED CHANGES TO THE OWNER AND/OR HIS REPRESENTATIVE.

COMPACTION OF MATERIALS PLACED AT THE SITE SHOULD EQUAL OR EXCEED THE FOLLOWING DENSITIES WHEN COMPARED TO THE MAXIMUM DRY DENSITY AS DETERMINED.

FOOTINGS = (SEE STRUCTURAL DRAWINGS) PAVEMENT = 95% LANDSCAPING = 90%

PAVEMENT STRUCTURAL SECTION FOR THE AUTOMOBILE PARKING, MANEUVERING AREAS, AND LIGHT TO MEDIUM TRUCK AREAS SHALL CONSIST OF 4 INCHES OF ASPHALT SURFACE COURSE OVER 6 INCHES OF BASE COURSE OVER A PREPARED SUBGRADE, OR SELECT FILL. THE GRANULAR BASE SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. ALL CONCRETE SLABS SHALL CONSIST OF A 6" PORTLAND CEMENT CONCRETE SLAB OVER A PREPARED SUBGRADE OR SELECT FILL.

PAVEMENT MATERIALS SHOULD MEET THE UTAH DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR GRADATION & QUALITY. (1/2" AGGREGATE REQUIRED IN PARKING

27. AS-BUILT DRAWINGS

THE CONTRACTOR MUST MAINTAIN A SET OF COMPLETE PLANS ON THE SITE AT ALL TIMES. THE CONTRACTOR MUST MARK IN RED INK DEVIATIONS FROM THE APPROVED SET OF DRAWINGS, INCLUDING:

ALIGNMENT OR GRADE CHANGES

DRAINAGE CHANGES SUCH AS LOCATION, FLOWLINE, STRUCTURE, SIZE, ETC. SURFACE CHANGES SUCH AS DITCHES, PAVING, CURBS, SIDEWALKS, ETC. UTILITY CHANGES, RELOCATIONS, OR CONFLICTS ITEMS OR UTILITIES NOT SHOWN ON THE APPROVED SET OF PLANS LIST ALTERNATE CONSTRUCTION METHODS

STRUCTURAL CONFLICTS OR RELOCATION OF EXISTING WALLS, UTILITY POLES, ETC.

THE CONTRACTOR MUST PROVIDE THE PROJECT ENGINEER OR OWNER'S REPRESENTATIVE WITH A COMPLETE SET OF AS-BUILT PLANS FOR CITY RECORDS.

	CROSS ENG 1544 Woodland F Layton, Utah 84(Phone: (801) 399	THESE PLANS ARE INSTRUMENTS OF ARE PROTECTED BY COMMON LA RESERVED RIGHTS INCLI
	RAFTED BY:	BKS JWC JWC
DE	SIGNED BY:	JWC
CH	IECKED BY:	JWC
DATE		
NO		

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CIVIL $|A \cap Q|$ No. 7201213-2202 \ JOSEPH W. CROSS

PROJECT NO. 18-03-21 SHEET NUMBER

C-002

