



STAMP

CONSULTANT

OWNER

Lehi City Corporation
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PROJECT TITLE

Shadow Ridge Park

SHEET TITLE

CIVIL PROJECT
NOTES

REVISIONS

MARK | DATE | DESCRIPTION

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CIVIL PROJECT NOTES

GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL AND CURRENT APPLICABLE LAWS, RULES, REGULATIONS, ORDINANCES, OSHA REQUIREMENTS, STANDARDS AND SPECIFICATIONS WHETHER OR NOT ANY SPECIFIC REFERENCE IS MADE TO SUCH IN THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE PROPERLY LICENSED IN THE STATE OF UTAH TO PERFORM ALL OF THE WORK DESCRIBED IN THESE CONTRACT DOCUMENTS. SUCH LICENSING SHALL REMAIN IN EFFECT CONTINUOUSLY THROUGHOUT THE ENTIRETY OF THIS PROJECT INCLUDING FROM TIME OF BID SUBMISSION THROUGH PROJECT COMPLETION AND WARRANTY PERIOD. THE CONTRACTOR SHALL CARRY APPROPRIATE INSURANCE, PERFORMANCE AND PAYMENT BONDS AS REQUIRED.
- ALL WORK SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING, AND THE ENGINEER, AT HIS SOLE DISCRETION, SHALL DETERMINE WHICH REQUIREMENTS GOVERN. THE CONTRACTOR SHALL KEEP ONE RECORD COPY OF ALL SPECIFICATIONS, DRAWINGS, ADDENDA, MODIFICATIONS, AND SHOP DRAWINGS AT THE SITE IN GOOD ORDER AND ANNOTATED TO SHOW ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE SHALL BE AVAILABLE TO THE ENGINEER AND SHALL BE DELIVERED TO HIM FOR THE OWNER UPON COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL ASPECTS OF THE PLANS AND DOCUMENTS, PERFORM A SITE VISIT TO SATISFY HIMSELF AS TO THE SITE CONDITIONS, ATTEND ALL PRECONSTRUCTION AND CONSTRUCTION MEETINGS, AND THOROUGHLY SATISFY HIMSELF AS TO THE TRUE MEANING AND INTENTION OF THIS CONTRACT. THE CONTRACTOR SHALL BE COMPETENT AND EXPERIENCED TO PERFORM ALL WORK REQUIRED. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND THE ENGINEER AND THEIR AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, DAMAGE, LOSS OR EXPENSE IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH, OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY (OTHER THAN THE WORK ITSELF) INCLUDING THE LOSS OF USE RESULTING THEREFROM, AND IS CAUSED IN WHOLE OR IN PART BY ANY NEGLIGENT ACT OR OMISSION OF THE CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, REGARDLESS OF WHETHER OR NOT IT IS CAUSED IN PART BY A PARTY INDEMNIFIED HEREUNDER. IN ANY AND ALL CLAIMS AGAINST THE OWNER OR THE ENGINEER OR ANY OF THEIR AGENTS OR EMPLOYEES BY ANY EMPLOYEE OF THE CONTRACTOR, AND SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, SAID INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR THE CONTRACTOR OR ANY SUBCONTRACTOR UNDER WORKERS COMPENSATION ACTS, DISABILITY BENEFIT ACTS OR OTHER EMPLOYEE BENEFIT ACTS.
- THE CONTRACTOR WARRANTS AND GUARANTEES TO THE OWNER AND ENGINEER THAT ALL MATERIAL AND EQUIPMENT USED IN THE PERFORMANCE OF THIS WORK SHALL BE NEW UNLESS OTHERWISE SPECIFIED AND THAT ALL WORK SHALL BE OF GOOD QUALITY AND FREE FROM FAULTS OR DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. IF REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND EQUIPMENT. ALL MATERIALS AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED AND CONDITIONED IN ACCORDANCE WITH THE INSTRUCTIONS OF THE APPLICABLE MANUFACTURER, FABRICATOR OR PROCESSOR, EXCEPT AS OTHERWISE PROVIDED IN THE PLANS AND DOCUMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, LICENSES AND FEES REQUIRED FOR THE PERFORMANCE AND COMPLETION OF THE WORK AND SHALL ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF SAID PERMITS AND LICENSES. THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SIGNAGE, BARRICADING AND TRAFFIC CONTROL IN CONFORMANCE TO THE UTAH DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL STANDARDS AND TO THE MOST RECENT EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, LABOR, TRANSPORTATION, CONSTRUCTION EQUIPMENT AND MACHINERY, TOOLS, APPLIANCES, FUEL, POWER, LIGHT, HEAT, TELEPHONE, WATER, SANITARY FACILITIES, AND ALL OTHER FACILITIES AND INCIDENTALS NECESSARY FOR THE EXECUTION, TESTING, INITIAL OPERATION AND COMPLETION OF THE WORK.
- THE CONTRACTOR SHALL AT ALL TIMES BE RESPONSIBLE FOR PROVIDING DUST, MUD, AND EROSION CONTROL, AND PROPER DRAINAGE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROPERLY HANDLE AND DISPOSE OF ALL CONSTRUCTION WATER. THE CONTRACTOR SHALL LIMIT TRAVEL ON THE PROJECT SITE TO ROADWAYS ONLY, EXCEPT WHERE CONSTRUCTION SPECIFICALLY REQUIRES TRAVEL ELSEWHERE. ANY DAMAGE CAUSED BY SUCH UNAUTHORIZED TRAVEL SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER OF THE PROPERTY PARCEL. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIAL, RUBBISH AND OTHER DEBRIS RESULTING FROM THE WORK. EQUIPMENT AND CONSTRUCTION MATERIALS, ETC., SHALL BE STORED ONSITE ONLY AT THE SATISFACTION OF THE OWNER OF THE PROPERTY PARCEL WHEREON THEY ARE STORED. AT THE COMPLETION OF THE WORK, ALL WASTE MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED FROM THE PREMISES AS WELL AS ALL TOOLS, CONSTRUCTION EQUIPMENT AND MACHINERY, AND SURPLUS MATERIALS. THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION THOSE PORTIONS OF THE SITE NOT DESIGNATED FOR ALTERATION BY THE PLANS AND DOCUMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING ALL REQUIRED TESTING AND INSPECTIONS A MINIMUM OF 48 HOURS IN ADVANCE. IN THE EVENT THAT TESTING AND INSPECTION SERVICES ARE FURNISHED BY THE OWNER, SUCH SERVICES SHALL BE PAID FOR BY THE OWNER; HOWEVER, ANY RETESTING/REINSPECTION THAT IS REQUIRED AS A RESULT OF INSUFFICIENT OR DEFECTIVE WORK SHALL BE CONDUCTED AT THE CONTRACTOR'S EXPENSE. NEITHER OBSERVATIONS BY THE ENGINEER NOR INSPECTIONS, TESTS OR APPROVALS BY PERSONS OTHER THAN THE CONTRACTOR SHALL RELIEVE THE CONTRACTOR FROM HIS OBLIGATIONS TO PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS AND DOCUMENTS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOBSITE CONDITIONS THROUGHOUT THE PROJECT, INCLUDING SUBSURFACE CONDITIONS AND UTILITY LOCATION. WARD ENGINEERING GROUP ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS, ANY EXISTING UTILITIES OR OTHER IMPROVEMENTS SHOWN ON THE PLANS HAVE BEEN DERIVED FROM FIELD INVESTIGATIONS AND/OR AVAILABLE RECORD INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITY LOCATIONS AND INVERT ELEVATIONS OF EXISTING MANHOLES PRIOR TO CONSTRUCTING ANY NEW UTILITY. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM HIS OPERATIONS, WHETHER OR NOT SUCH FACILITIES ARE SHOWN IN THESE PLANS. ALL IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE EXPEDITIOUSLY REPAIRED OR RECONSTRUCTED TO THE ENGINEER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE WITHOUT ADDITIONAL COMPENSATION. NO EXCAVATION OF ANY NATURE SHALL BE PERFORMED WITHOUT FIRST CONTACTING "BLUE STAKES" AT LEAST 48 HOURS PRIOR TO SUCH EXCAVATION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ASSURE SOUND EXCAVATION AND GRADING PRACTICES. FOR ALL EXCAVATIONS EXCEEDING A DEPTH OF 4 FEET, THE CONTRACTOR SHALL PROVIDE APPROPRIATE SHORING, BRACING, SLOPING OR OTHER APPROPRIATE PROVISIONS AS SPECIFIED BY OSHA THAT ARE NECESSARY TO PROTECT THE SAFETY OF THOSE AT THE SITE. ALL OPEN TRENCHES MUST BE PROPERLY COVERED AT THE END OF WORK EACH DAY. HARD HATS SHALL BE WORN BY ALL PERSONS AT THE SITE. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE CONDITIONS AND RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORT, PREPARED FOR THIS SITE AND IN CONJUNCTION WITH THIS PROJECT.
- ALL SPECIFICATIONS, DRAWINGS AND COPIES THEREOF FURNISHED BY THE ENGINEER SHALL REMAIN HIS PROPERTY. THEY SHALL NOT BE USED ON ANOTHER PROJECT AND, WITH EXCEPTION OF THOSE SETS WHICH HAVE BEEN SIGNED IN CONNECTION WITH THE EXECUTION OF THE AGREEMENT, SHALL BE RETURNED TO THE ENGINEER UPON REQUEST AT COMPLETION OF THE PROJECT.
- CONTRACTOR SHALL UTILIZE "BEST MANAGEMENT" PRACTICES FOR STORM WATER POLLUTION PREVENTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEVELOPMENT AND COMPLIANCE TO AN APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP).

CONSTRUCTION NOTES

GENERAL REQUIREMENTS

- CONTRACTOR WILL COORDINATE THE IMPROVEMENTS SHOWN IN THE CIVIL IMPROVEMENT PLANS WITH ALL OTHER DISCIPLINES IN THE ARCHITECTURAL DESIGN PACKAGE. IN CASE OF CONFLICT BETWEEN DISCIPLINES, THE CONTRACTOR SHALL NOTIFY ENGINEER/ARCHITECT IMMEDIATELY.
- PRIOR TO ABANDONMENT AND DISCONNECTION OF ANY EXISTING UTILITY SHOWN IN THESE PLANS, CONTRACTOR SHALL COORDINATE WITH THE OWNER THE SHUTDOWN PROCEDURES AND THE SCHEDULE FOR SHUTDOWN. CONTRACTOR WILL ENSURE THAT UTILITY SERVICE TO OTHER AREAS OF THE AVIARY, INCLUDING LANDSCAPING AND BUILDINGS IS NOT UNDULY INTERRUPTED.
- CONTRACTOR IS TO REVIEW THE SOIL REPORT FOR THIS PROJECT AND MAKE NOTE OF THE GROUND WATER ELEVATION IN THE CONSTRUCTION ZONES. DEWATERING OF SUBSOIL MAY BE NECESSARY TO ACCOMMODATE THE CONSTRUCTION OF UTILITIES AND STRUCTURES. IF DEWATERING IS NECESSARY, CONTRACTOR SHALL SUBMIT PLANS FOR SUCH, ADDRESSING SETTLING OF SUSPENDED SOLIDS IN THE PUMPED WATER PRIOR TO DISCHARGE TO THE STORM DRAIN SYSTEM.

- CONTRACTOR SHALL STERILIZE THE SUBGRADE BENEATH PROPOSED NEW PAVING AND WALKWAYS. CONTRACTOR SHALL SUBMIT MEANS AND METHODS FOR APPROVAL PRIOR TO IMPLEMENTATION.
- THE CONTRACTOR IS RESPONSIBLE FOR INDEPENDENT QUALITY CONTROL TESTING OF THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT QUALITY CONTROL AGENCY FOR ALL TESTING AS REQUIRED IN THESE PLANS. THE NUMBER AND TYPE OF TESTS SHALL BE PER THESE DRAWINGS, THE PROJECT SPECIFICATIONS AND APWA STANDARD SPECIFICATIONS. THE OWNER RESERVES THE RIGHT TO CONDUCT ADDITIONAL TESTING FOR QUALITY ASSURANCE OF THE INFRASTRUCTURE INSTALLED.
- ALL UTILITY PIPING SHALL HAVE WARNING TAPE INSTALLED 12" MIN. ABOVE AND ALONG THE ENTIRE LENGTH, INCLUDING SERVICE LATERAL. TAPE SHALL BE LABELED ACCORDING TO UTILITY.
- THE OPEN ENDS OF ALL PIPELINES UNDER CONSTRUCTION SHALL BE COVERED AND EFFECTIVELY SEALED AT THE END OF EACH DAY'S WORK.
- THE LOCATION OF THE STUB ENDS OF ALL LATERALS SHALL BE MARKED IN THE FIELD USING A 2" X 4" POST EXTENDING FROM THE END OF THE LATERAL TO A MINIMUM OF THREE FEET ABOVE THE GROUND SURFACE. THE 2" X 4" POST SHALL BE PAINTED USING GREEN PAINT FOR SEWER, BLUE PAINT FOR WATER, RED FOR POWER, YELLOW FOR GAS, AND ORANGE FOR COMMUNICATIONS. RECORD DRAWINGS SHALL BE MAINTAINED AT THE PROJECT SITE SHOWING ACCURATE LOCATIONS OF ALL LATERAL CONNECTIONS MEASURED FROM THE NEAREST MANHOLE AND ALL LATERAL STUBS MEASURED FROM THE NEAREST PROPERTY LINE.

CLEARING AND GRUBBING

- REMOVE AND DISPOSE OF TREES, STUMPS, LOGS, LIMBS, STICKS, VEGETATION, DEBRIS, AND OTHER MATERIAL ON THE NATURAL GROUND SURFACE.
- DISPOSE OF ALL MATERIAL OFF THE PROPERTY TO A FACILITY LICENSED TO ACCEPT THE MATERIAL TYPE.
- CONTRACTOR SHALL REMOVE ALL TOP SOIL WITHIN THE AREA OF CONSTRUCTION. STOCKPILE OR REMOVE FROM SITE PER OWNER INSTRUCTIONS.

WATER IMPROVEMENT REQUIREMENTS

- ALL WATER MAINS AND APPURTENANCES SHALL BE DESIGNED, CONSTRUCTED, DISINFECTED, TESTED, AND PLACED IN SERVICE IN ACCORDANCE WITH THIS PLAN, ALL APPLICABLE LAWS, RULES, REGULATIONS, ORDINANCES, AND REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, THE REQUIREMENTS OF OSHA, THE STATE DIVISION OF DRINKING WATER, AND LEHI CITY.
- ALL MATERIALS WHICH MAY CONTACT THE DRINKING WATER SHALL BE ANSI CERTIFIED AS MEETING NSF STANDARD 61.
- WATER MAINS SHALL BE DUCTILE IRON CLASS 52 PIPE AND SHALL MEET ALL REQUIREMENTS FOR APWA 33 05 05 AND SHALL BE TESTED ACCORDING TO APWA 33 08 00, PRESSURE TESTING AND DISINFECTION; AND IN ACCORDANCE WITH THE REQUIREMENTS OF SLC PUBLIC UTILITIES, OSHA, AND THE UTAH DIVISION OF DRINKING WATER.
- ALL BURIED DI (DUCTILE IRON) PIPES, VALVES AND FITTINGS SHALL BE POLY-WRAPPED AND THE NUTS GREASED IN ACCORDANCE WITH AWWA C105.
- ALL WATER DI (DUCTILE IRON) PIPES, VALVES AND FITTINGS SHALL HAVE PORTLAND CEMENT MORTAR LINING, OR ENGINEER APPROVED EQUAL.
- WATER LATERALS SHALL BE POLYETHYLENE (PE) PE3408, AWWA C901, SDR-7 UNLESS OTHERWISE INDICATED ON THE PLANS. INSTALLATION AND TESTING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA M55. DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C851.
- WATER MAINS AND LATERALS SHALL BE TESTED ACCORDING TO APWA 33 08 00 TO INCLUDE, PRESSURE TESTING AND DISINFECTION, AND IN ACCORDANCE WITH THE REQUIREMENTS OF SLC PUBLIC UTILITIES, OSHA, AND THE UTAH DIVISION OF DRINKING WATER.
- CONTRACTOR SHALL NOTIFY SALT LAKE CITY PUBLIC UTILITIES 48 HOURS IN ADVANCE OF MAKING ANY CONNECTIONS TO WATER LINES.
- IF POOR SOILS WITH A BEARING CAPACITY OF LESS THAN 1,000 PSF ARE ENCOUNTERED WHERE A THRUST BLOCK IS REQUIRED, THEN THE THRUST BLOCK SHALL BE REDESIGNED BY THE ENGINEER. THE REDESIGNED THRUST BLOCK SHALL NOT BE PLACED UNTIL THE ENGINEER HAS APPROVED OF THE REDESIGN.
- ANY PROPOSED CONNECTION TO EXISTING PIPELINES, OR ANY NON-FLANGED FITTING OR VALVE IS REQUIRED TO BE RESTRAINED OR THRUST BLOCKED.
- ALL WATER LINES SHALL BE CONSTRUCTED TO A DEPTH SO AS TO MAINTAIN 48" MIN GROUND COVER.
- PIPE BEDDING INSTALLATION AND BACKFILL SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL BURIED WATER PIPELINES SHALL HAVE TRACER WIRE (12 GAUGE) DIRECTLY ABOVE PIPE WHICH SHALL BE TIED TO ALL VALVES REFER TO TRENCH DETAIL FOR COMPACTION DENSITY REQUIREMENTS. COMPACTION TESTING SHALL BE A MINIMUM OF 1 PER LIFT FOR EVERY 200 FEET OF TRENCH LENGTH.

SEWER IMPROVEMENT REQUIREMENTS

- ALL SEWER MAINS AND APPURTENANCES SHALL BE DESIGNED, CONSTRUCTED, TESTED, AND PLACED IN SERVICE IN ACCORDANCE WITH ALL APPLICABLE LAWS, RULES, REGULATIONS, ORDINANCES, AND REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, THE REQUIREMENTS OF OSHA, THE STATE DIVISION OF WATER QUALITY AND LEHI CITY.
- ANY FLUSHING INTO THE EXISTING SANITARY SEWER SYSTEM IS STRICTLY PROHIBITED.
- GRAVITY SEWER MAINS AND LATERALS SHALL BE PVC, SDR 35 PIPE WITH INTEGRAL BELL AND SPIGOT, GASKETED JOINTS. SEWER FORCE MAINS SHALL BE PE (POLYETHYLENE) PIPE AND SHALL MEET THE REQUIREMENTS FOR AWWA C906 / PE 3408, MINIMUM PRESSURE CLASS 150 (DR-11 MINIMUM). INSTALLATION SHALL BE PER ASTM D 2321 AND ASTM F 1668.
- GRAVITY SEWER MAINS AND LATERALS SHALL BE TESTED ACCORDING TO APWA 33 08 00 TO INCLUDE, ALIGNMENT AND GRADE TESTING, OBSTRUCTIONS AND DEFLECTION TESTING, INFILTRATION TESTING FOR GRAVITY PIPELINES, PRESSURE TESTING FOR PRESSURE PIPELINES, AND VIDEO INSPECTION.
- FOLLOWING ESTABLISHMENT OF FINISHED GRADE, ALL SEWER LINES SHALL BE FLUSHED AND CLEANED, AND ALL MANHOLE LIDS ADJUSTED TO 0.1 FEET BELOW FINISHED GRADE AND IN ACCORDANCE WITH THE REQUIREMENTS HEREIN.
- PIPE BEDDING INSTALLATION AND BACKFILL SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. BACKFILL COMPACTION SHALL BE TO A MINIMUM OF NINETY-FIVE (95%) PERCENT MAXIMUM DRY DENSITY AND +/- 2% OPTIMUM MOISTURE CONTENT MODIFIED PROCTOR, AS SPECIFIED IN ASTM D-1557. COMPACTION TESTING SHALL BE A MINIMUM OF 1 PER LIFT FOR EVERY 200 FEET OF TRENCH LENGTH.

COMMUNICATION AND POWER CONDUIT REQUIREMENTS

- ALL COMMUNICATION CONDUITS SHALL BE 4-INCH SCH 40 NEMA TC2 PVC, PIPE AND SHALL BE INSTALLED WITH A PULL STRING, CONTINUOUSLY RUN THROUGH EACH CONDUIT. ALL JOINTS SHALL BE SOLVENT WELDED. ALL CONDUIT AND FITTINGS SHALL BE HOMOGENEOUS AND FREE OF CRACKS, HOLES OR OTHER DEFECTS.
- PROVIDE MAGNETIC 6" WIDE YELLOW WARNING RIBBON 12" DIRECTLY ABOVE CONDUIT, WHERE MULTIPLE CONDUITS ARE BURIED IN A COMMON TRENCH AND DO NOT EXCEED AN OVERALL WIDTH OF 16", INSTALL A SINGLE MARKER.
- CUT ALL CONDUITS SQUARE AND REMOVE ALL SHARP OR ROUGH EDGES. PENETRATIONS INTO PULL BOXES AND MANHOLES SHALL BE GROUTED OR OTHERWISE FINISHED WITH A WATERPROOF SEAL. PLUG ALL UNUSED CONDUITS AT EACH PULL BOX AND MANHOLE WITH A REMOVABLE CAP OR PLUG. IN TRENCHES WITH MULTIPLE CONDUITS, EACH CONDUIT SHALL RUN CONTINUOUS AND PARALLEL FROM POINT TO POINT, STARTING AND ENDING IN EACH PULL BOX OR MANHOLE IN THE SAME LOCATION RELATIVE TO OTHER CONDUITS.
- CONDUITS SHALL BE TESTED TO BE AIR-TIGHT BY MEANS OF A LOW PRESSURE AIR TEST SUCH AS UNI-BELL B-G, OR SOME OTHER ACCEPTABLE TESTING PROCEDURE.

- ALL FILL AREAS TO BE CLEARED OF ALL VEGETATION AND OTHER UNSUITABLE MATERIALS AND THE AREA SCARIFIED TO A DEPTH OF SIX (6) INCHES, OR TO A DEPTH TO REMOVE TOP SOIL, REFER TO GEOTECHNICAL REPORT.
- CONTRACTOR SHALL REMOVE ALL TOPSOIL AND ORGANIC MATERIALS FROM STRUCTURALLY LOADED EMBANKMENTS AND BUILD FOOTPRINT LOCATION ACCORDING TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.

CONCRETE

- ALL CONCRETE WORK SHALL BE NORMAL WEIGHT CONCRETE WITH A COMPRESSIVE STRENGTH EQUAL TO AT LEAST 4,000 PSI WITHIN 28 DAYS AFTER POURING. THE WATER CEMENT RATIO SHALL BE NO GREATER THAN 0.45 AND SLUMP SHALL BE 3.5" OR LESS. MINIMUM CEMENT CONTENT SHALL BE 6.5 SACKS PER CUBIC YARD. PROVIDE 5.5%-7.5% AIR ENTRAINMENT FOR CONCRETE OF THIS CLASS USED IN SLABS AND WALLS.
- UNLESS OTHERWISE NOTED, ALL CONSTRUCTION JOINTS SHALL BE KEYS WITH A KEY 1-1/2 IN. DEEP, A LENGTH 2 IN. LESS THAN THE MEMBER, AND A WIDTH 1/2 OF THE MEMBER. REINFORCING SHALL BE CONTINUOUS THROUGH THE JOINT.
- ALL CONCRETE WORK SHALL BE PLACED, CURED, STRIPPED, AND PROTECTED AS DIRECTED BY THE PROJECT AND APWA SPECIFICATIONS (03 30 10).
- BEFORE CONCRETE IS POURED CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, ETC. RELATIVE TO WORK.
- CONTRACTOR IS RESPONSIBLE FOR ALL SHORING AND FORMWORK.
- REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENT, CLIPS AND GROUNDS REQUIRED TO BE ENCASED IN CONCRETE SLAB AND SLAB FINISHES, COLOR, PATTERNS, AND DEPRESSIONS.
- REFER TO SLAB JOINT LAYOUT PLAN FOR CONTROL AND CONSTRUCTION JOINT LOCATIONS.
- CONCRETE TESTING SHALL BE PER PROJECT SPECIFICATIONS AND APWA 03 30 05. TESTING SHALL COMPRISE OF TEMPERATURE, AIR, SLUMP AND STRENGTH TESTING. THE FOLLOWING TABLE SUMMARIZES REQUIRED TESTING FREQUENCY:

Rate of Placement (cy/day)	Temperature	Air	Slump	Strength
0-8	1	1	1	1
0-50	1	1	1	1
Each additional 50 cy or fraction thereof	1	1	1	1

CONCRETE REINFORCEMENT

- ALL METAL REINFORCEMENT SHALL BE DEFORMED TYPE BARS (EXCEPT #2 BARS) AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS ASTM A615 GRADE 60.
- ALL SPLICES IN CONTINUOUS CONCRETE REINFORCING BARS SHALL LAP 36 BAR DIAMETER OR PER THE LATEST EDITION OF ACI 318. ALL SUCH SPLICES SHALL BE MADE IN A REGION OF COMPRESSION UNLESS OTHERWISE SHOWN. ALL CONTINUOUS REINFORCEMENT SHALL TERMINATE WITH A 90° TURN OR A SEPARATE CORNER BAR.
- ALL REINFORCEMENT BARS SHALL BE SECURELY ANCHORED AND HELD IN PLACE AND SHALL BE SPACED FROM ADJACENT SURFACES (UNLESS SHOWN OTHERWISE) AS FOLLOWS:
 - FORMED SURFACES IN CONTACT WITH THE GROUND OR EXPOSED TO WEATHER, AND SLABS ON GRADE - 2 IN.
 - UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH (BOTTOM AND SIDES OF FOOTINGS) -3 IN.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND SHALL HAVE A MINIMUM SIDE LAP OF 8 IN.
- ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF ACI DETAILING MANUAL 315-77 AND ACI STANDARD 318.

IRRIGATION IMPROVEMENT REQUIREMENTS

- ALL IRRIGATION MAINS AND APPURTENANCES, SHALL BE DESIGNED, CONSTRUCTED, TESTED, AND PLACED IN SERVICE IN ACCORDANCE WITH THIS PLAN, ALL APPLICABLE LAWS, RULES, REGULATIONS, ORDINANCES, AND REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, THE REQUIREMENTS OF OSHA, AND SALT LAKE CITY PUBLIC UTILITIES.
- IRRIGATION MAINS SHALL BE C-900 PVC CLASS 150 SECONDARY IRRIGATION PIPE AND SHALL MEET ALL REQUIREMENTS FOR APWA 33 05 07 AND SHALL BE TESTED ACCORDING TO APWA 33 08 00, PRESSURE TESTING AND DISINFECTION; AND IN ACCORDANCE WITH THE REQUIREMENTS OF SLC PUBLIC UTILITIES, OSHA, AND THE UTAH DIVISION OF DRINKING WATER.
- ALL BURIED VALVES AND FITTINGS SHALL BE POLY-WRAPPED AND THE NUTS GREASED IN ACCORDANCE WITH AWWA C105.
- IRRIGATION MAINS SHALL BE TESTED ACCORDING TO APWA 33 08 00 TO INCLUDE, PRESSURE TESTING AND DISINFECTION; AND IN ACCORDANCE WITH THE REQUIREMENTS OF SLC PUBLIC UTILITIES, OSHA, AND THE UTAH DIVISION OF DRINKING WATER.
- IF POOR SOILS WITH A BEARING CAPACITY OF LESS THAN 1,000 PSF ARE ENCOUNTERED WHERE A THRUST BLOCK IS REQUIRED, THEN THE THRUST BLOCK SHALL BE REDESIGNED BY THE ENGINEER. THE REDESIGNED THRUST BLOCK SHALL NOT BE PLACED UNTIL THE ENGINEER HAS APPROVED OF THE REDESIGN.
- ANY PROPOSED CONNECTION TO EXISTING PIPELINES, OR ANY NON-FLANGED FITTING OR VALVE IS REQUIRED TO BE RESTRAINED OR THRUST BLOCKED.
- ALL IRRIGATION MAIN LINES SHALL BE CONSTRUCTED TO A DEPTH SO AS TO MAINTAIN 24" MIN GROUND COVER.
- PIPE BEDDING INSTALLATION AND BACKFILL SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL BURIED IRRIGATION PIPELINES SHALL HAVE TRACER WIRE (12 GAUGE) DIRECTLY ABOVE PIPE WHICH SHALL BE TIED TO ALL VALVES REFER TO TRENCH DETAIL FOR COMPACTION DENSITY REQUIREMENTS. COMPACTION TESTING SHALL BE A MINIMUM OF 1 PER LIFT FOR EVERY 200 FEET OF TRENCH LENGTH.

ABBREVIATIONS AND LEGEND

ABBREVIATIONS

ABUT.	=	ABUTMENT	MH	=	MANHOLE
AGG.	=	AGGREGATE	MIN.	=	MINIMUM
APPROX.	=	APPROXIMATE	N/O.	=	NORTH
A.S.	=	AS SHOWN	NO./#	=	NUMBER
AUX.	=	AUXILIARY	N.T.S.	=	NOT TO SCALE
AVG.	=	AVERAGE	O.C.	=	ON CENTER
BCR	=	BEGIN OF CURB RETURN	O.D.	=	OUTER DIAMETER
BOW	=	BACK OF WALK	OHP	=	OVER HEAD POWER
BRG.	=	BEARING	PC	=	POINT OF CURVATURE
CL/C.L.	=	CONTROL LINE/CENTER LINE	PED	=	PEDESTRIAN
CATV	=	CABLE TELEVISION	PIP/I.	=	POINT OF INTERSECTION
CI	=	CAST IRON	PIP	=	PLASTIC IRRIGATION PIPE
CLR.	=	CLEAR/CLEARANCE	PL	=	PROPERTY LINE
CMP	=	CORRUGATED METAL PIPE	POC	=	POINT ON CURVE
COL	=	COLUMN	PP	=	POWER POLE
CONC.	=	CONCRETE	PT	=	POINT
CONN	=	CONNECTION	PT	=	POINT OF TANGENCY
CONST.	=	CONSTRUCTION	PVC	=	POLYVINYL CHLORIDE PLASTIC
CONT.	=	CONTINUOUS	PVC	=	POINT OF VERTICAL CURVATURE
COR.	=	CORNER	PVT	=	POINT OF VERTICAL TANGENCY
CP	=	CONTROL POINT	PVI	=	POINT OF VERTICAL INTERSECTION
C.F.	=	CUBIC FEET	PVMNT	=	PAVEMENT
DI	=	DUCTILE IRON	PVRC	=	POINT OF VERTICAL REVERSE CURVE
DIA./Ø	=	DIAMETER	R/RAD.	=	RADIUS
DIP	=	DUCTILE IRON PIPE	R/C	=	REBAR AND CAP
DIM.	=	DIMENSION	Rd.	=	ROAD
DR	=	DIMENSION RATIO	RCP	=	REINFORCED CONCRETE PIPE
DWG.	=	DRAWING	R/W	=	RIGHT OF WAY
E	=	EAST	REINF.	=	REINFORCING
EA	=	EACH	REQ'D	=	REQUIRED
ECR	=	END OF CURB RETURN	RET.	=	RETAINING
EL./ELEV.	=	ELEVATION	R.P.	=	REFERENCE POST
ELEC	=	ELECTRIC	RT	=	RIGHT
EO	=	EDGE OF OIL	S	=	SLOPE
EST.	=	ESTIMATED	S/SO.	=	SOUTH
EXIST	=	EXISTING	SCH	=	SCHEDULE
F.F.	=	FINISHED FLOOR	SD	=	STORM DRAIN
F.G.	=	FINISHED GRADE	SDMH	=	STORM DRAIN MANHOLE
FL/FL	=	FLOW LINE	SDR	=	STANDARD DIMENSION RATIO
FT.	=	FEET	SDWLK	=	SIDEWALK
FLG.	=	FLANGE	SECT./SEC	=	SECTION
GA.	=	GAUGE	SHLD	=	SHOULDER
G	=	GALLON	SHT	=	SHEET
GALV.	=	GALVANIZED	SPA.	=	SPACING/SPACES
GMH	=	GAS MANHOLE	SQ.	=	SQUARE
GV	=	GAS VALVE	STA.	=	STATION
HA	=	HECTARE	STD.	=	STANDARD
HDPE	=	HIGH DENSITY POLYETHYLENE	STD.	=	STANDARD DRAWING
HGL	=	HYDRAULIC GRADE LINE	STR.	=	STRUCTURE
HMA	=	HOT MIX ASPHALT	SS	=	SANITARY SEWER
HORIZ.	=	HORIZONTAL	SSMH	=	SANITARY SEWER MANHOLE
HP	=	HIGH PRESSURE/HIGH POINT	T	=	TANGENT DISTANCE
HWY	=	HIGHWAY	T.B.	=	THRUST BLOCK
I.D.	=	INSIDE DIAMETER	TBC	=	TOP BACK OF CURB
INCL.	=	INCLUDES	TBW	=	TOP BACK OF WALK
INT	=	INTERSECTION	TEL	=	TELEPHONE
INV	=	INVERT	TEMP	=	TEMPORARY
IRRIG	=	IRRIGATION	TMH	=	TELEPHONE MANHOLE
L	=	LENGTH	TOW	=	TOP OF WALL
LIN. FT.	=	LINEAR FEET	TYP.	=	TYPICAL
LOC	=	LIP OF CURB	UG	=	UNDERGROUND
LOC.	=	LOCATION	UTIL.	=	UTILITY
LP	=	LIGHT POLE/LOW POINT	VC	=	VERTICAL CURVE
LT	=	LEFT	VERT.	=	VERTICAL
M.J.	=	MECHANICAL JOINT FITTING	W	=	WEST
MISC.	=	MISCELLANEOUS	W/	=	WITH
MPa	=	MEGAPASCAL	WC	=	WITNESS CORNER
MAX.	=	MAXIMUM	WMH	=	WATER MANHOLE
MG	=	MEGAGRAM	WV	=	WATER VALVE
			YD 2	=	SQUARE YARD
			YD 3	=	CUBIC YARD
			YD.	=	YARD
			YR	=	YEAR

LEGEND

	LIMIT OF DISTURBANCE LINE
	PHASE 2C BOUNDARY LINE
	EXISTING 1-4" COMMUNICATION CONDUIT
	EXISTING 1-4" POWER CONDUIT
	EXISTING 2-4" POWER CONDUIT
	EXISTING 3-4" POWER CONDUIT
	EXISTING SANITARY SEWER LATERAL
	EXISTING 8" SANITARY SEWER LINE
	EXISTING 6" WATER LINE
	EXISTING 10" WATER LINE
	EXISTING WATER LATERAL
	EXISTING 4" IRRIGATION LINE
	EXISTING COMMUNICATION LINE
	EXISTING TELEPHONE LINE
	EXISTING ELECTRIC LINE
	EXISTING GAS LINE
	EXISTING 1" GAS LINE
	EXISTING 1-1/2" GAS LINE
	EXISTING 2" GAS LINE
	EXISTING 4" GAS LINE
	ABANDONED WATER LINE
	ABANDONED 1-1/4" SEWER FORCE MAIN
	PROPOSED 6" SANITARY SEWER LATERAL
	PROPOSED 8" STORM DRAIN
	EXISTING LINES TO BE ABANDONED
	EXISTING LIGHT POLES
	EXISTING VALVE
	EXISTING SEWER MANHOLE
	EXISTING STORM DRAIN MANHOLE
	DETAIL CALL OUT
	DETAIL TITLE
	DESIGN NOTE
	FINISH GRADE ELEVATION CALL
	EXISTING GRADE ELEVATION CALL

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Lehi, Utah 84043

PROJECT TITLE

Shadow Ridge Park

SHEET TITLE

ABBREVIATIONS
AND LEGEND

REVISIONS

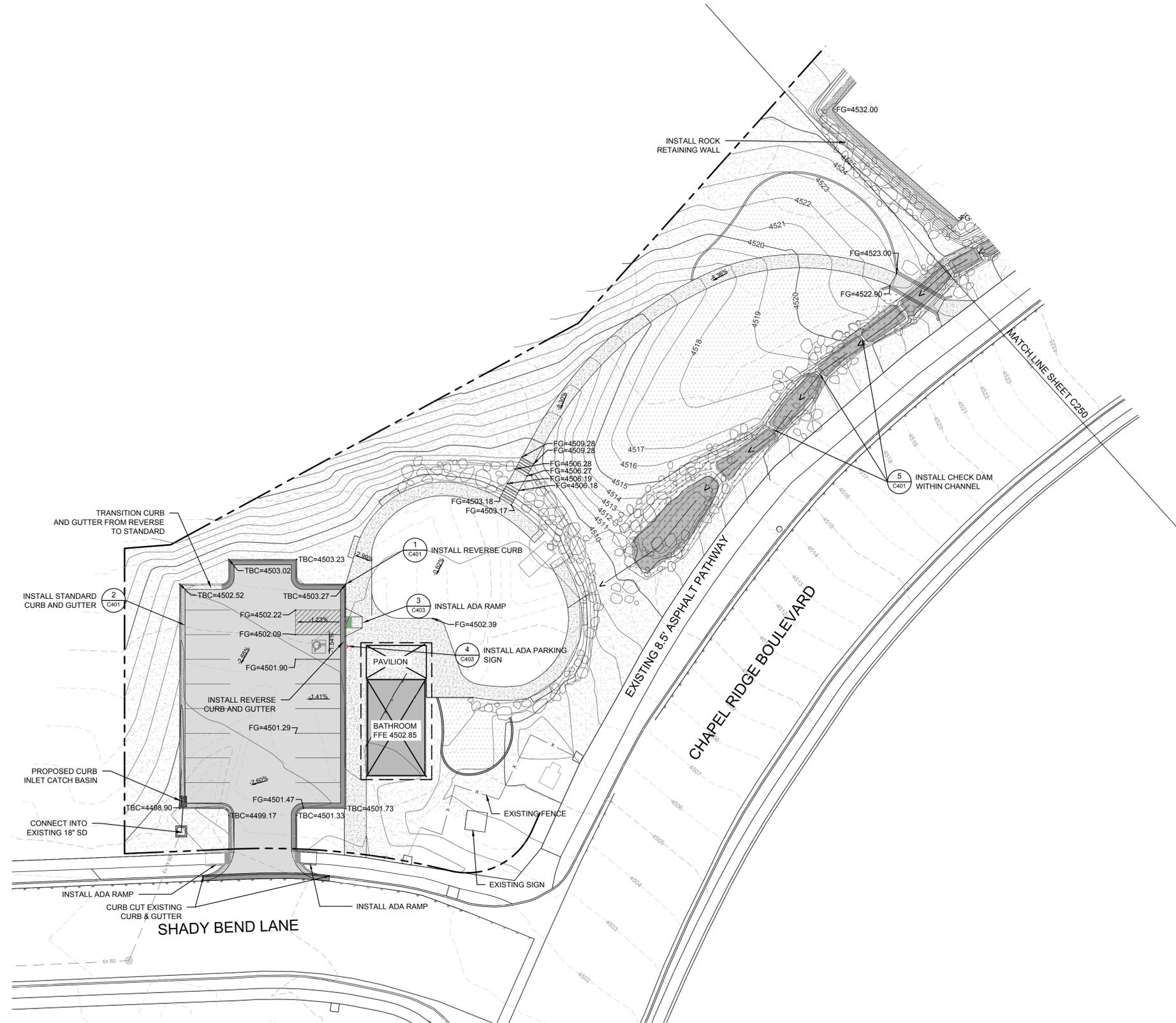
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PROJECT TITLE
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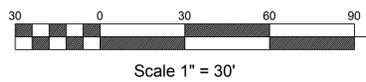
SHEET TITLE
GRADING PLAN, W.

MARK	DATE	DESCRIPTION

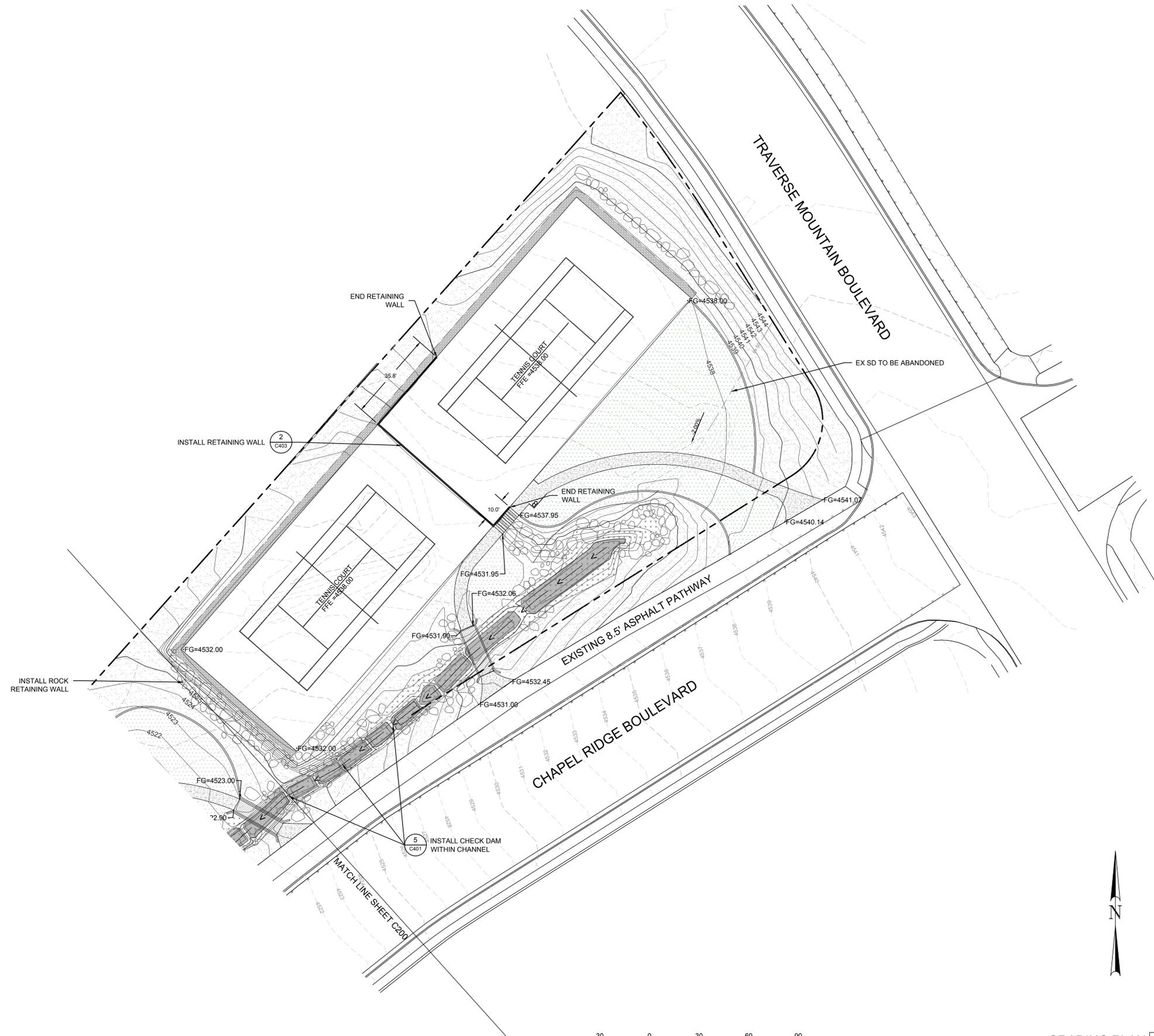
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 C200

GRADING PLAN 1
 Scale : 1" = 20'-0" L200



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PROJECT TITLE
Shadow Ridge Park

SHEET TITLE
GRADING PLAN, E.

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C250

GRADING PLAN 1
 Scale : 1" = 20'-0" L250

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Traverse Mountain Tennis Park

Drainage Calculations

Developed Conditions

Assumptions:
 Type II Storm
 100 - Year Frequency
 Time of Concentration 5 min.
 Rainfall Depth (in) 24 Hr. 100 Year Storm 2.50

***Computed Peak Flow per SCS TR 55 Type II Distribution**

Basin 1 Components	Area (ac)	CN
Pervious Area	0.47	61
Impervious Area	0.36	98
Total	0.83	77

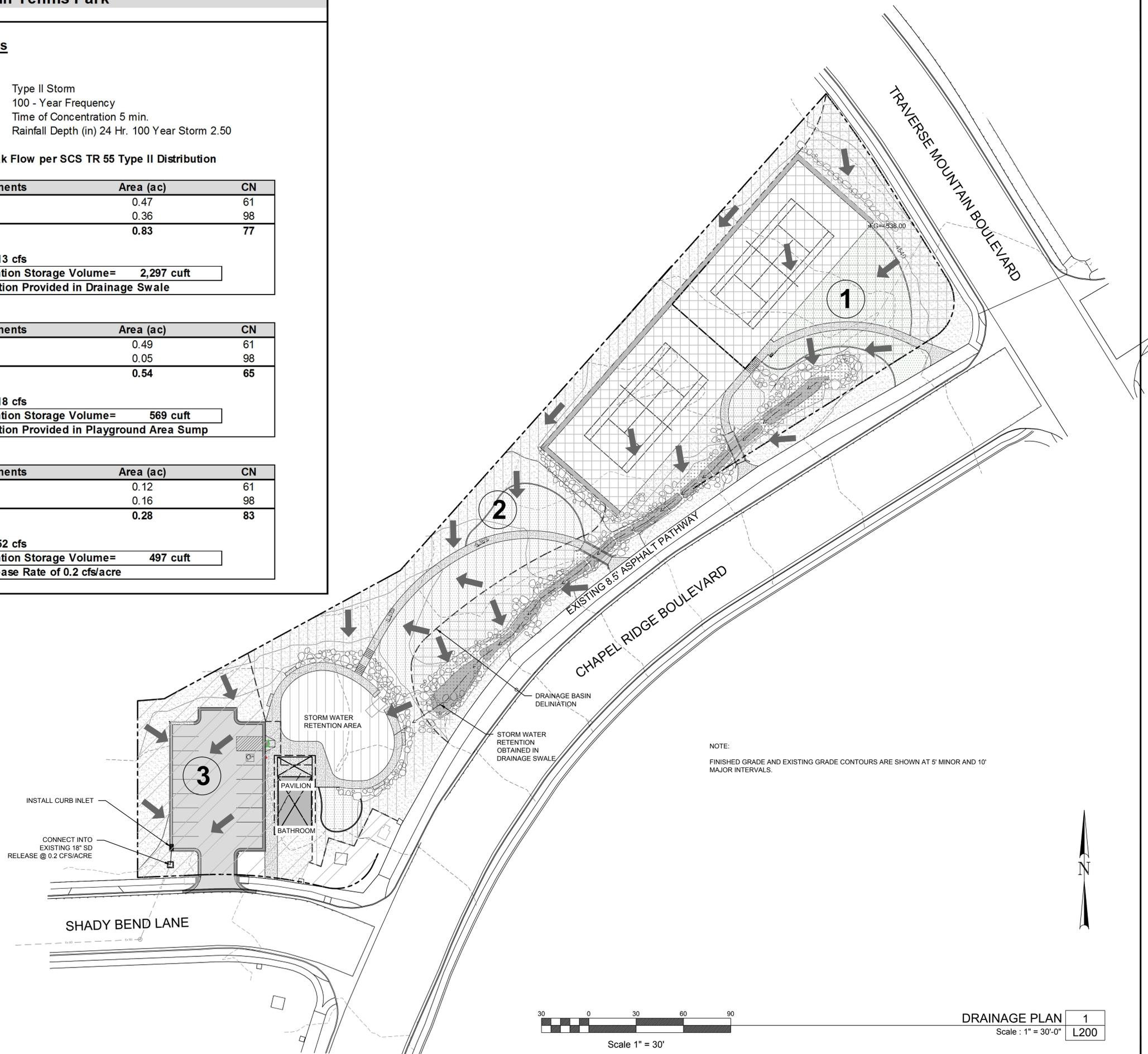
Q100= 1.13 cfs
Required Retention Storage Volume= 2,297 cuft
***Storage Retention Provided in Drainage Swale**

Basin 2 Components	Area (ac)	CN
Pervious Area	0.49	61
Impervious Area	0.05	98
Total	0.54	65

Q100= 0.18 cfs
Required Retention Storage Volume= 569 cuft
***Storage Retention Provided in Playground Area Sump**

Basin 3 Components	Area (ac)	CN
Pervious Area	0.12	61
Impervious Area	0.16	98
Total	0.28	83

Q100= 0.52 cfs
Required Detention Storage Volume= 497 cuft
***Detention Release Rate of 0.2 cfs/acre**



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SHEET TITLE
 DRAINAGE PLAN

REVISIONS		
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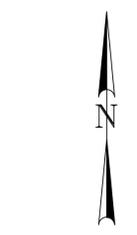
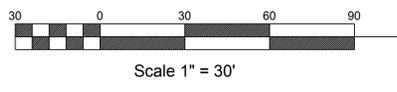
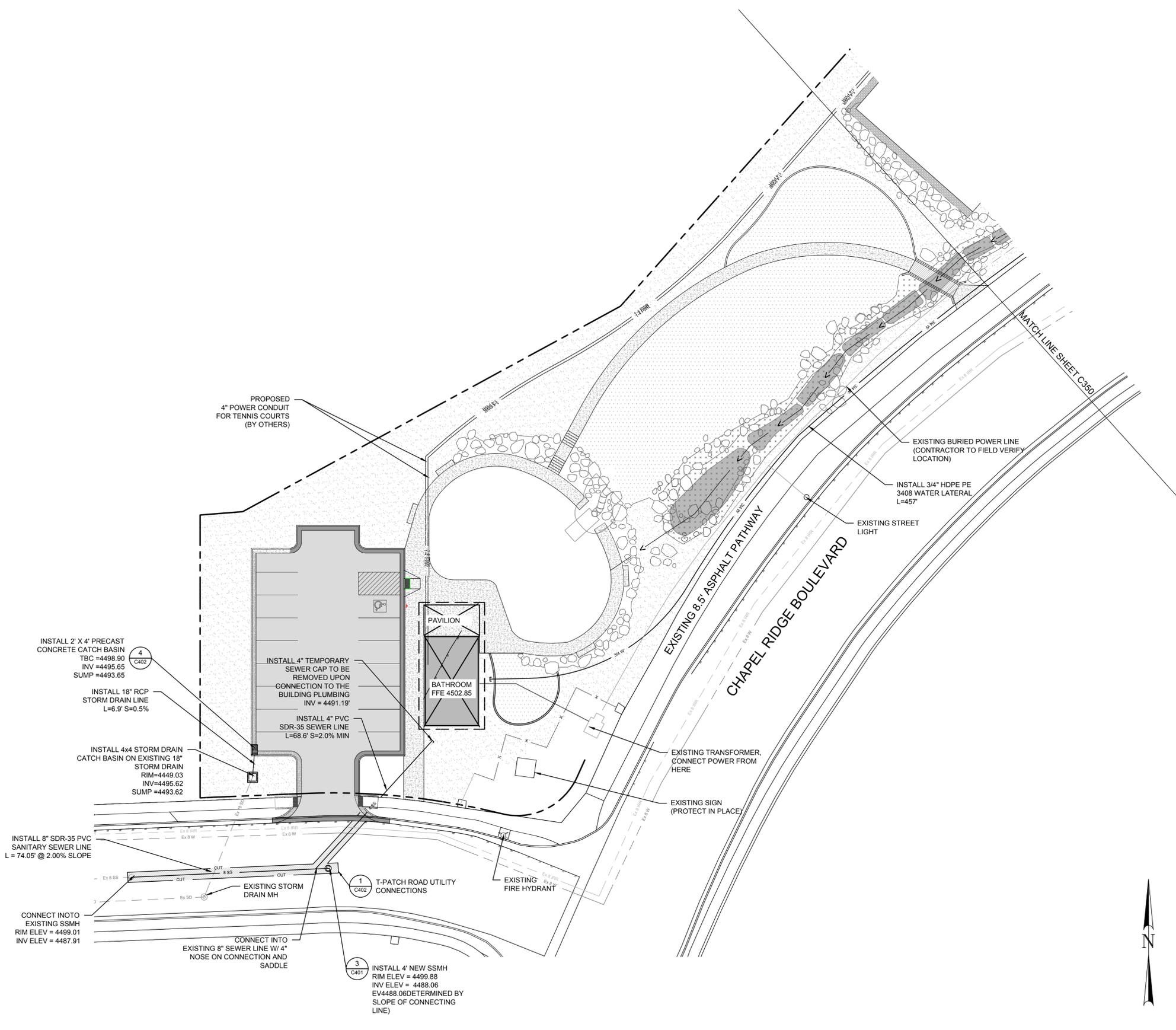
PROJECT TITLE
Shadow Ridge Park

SHEET TITLE
UTILITY PLAN, W.

REVISIONS		
MARK	DATE	DESCRIPTION

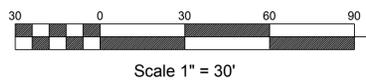
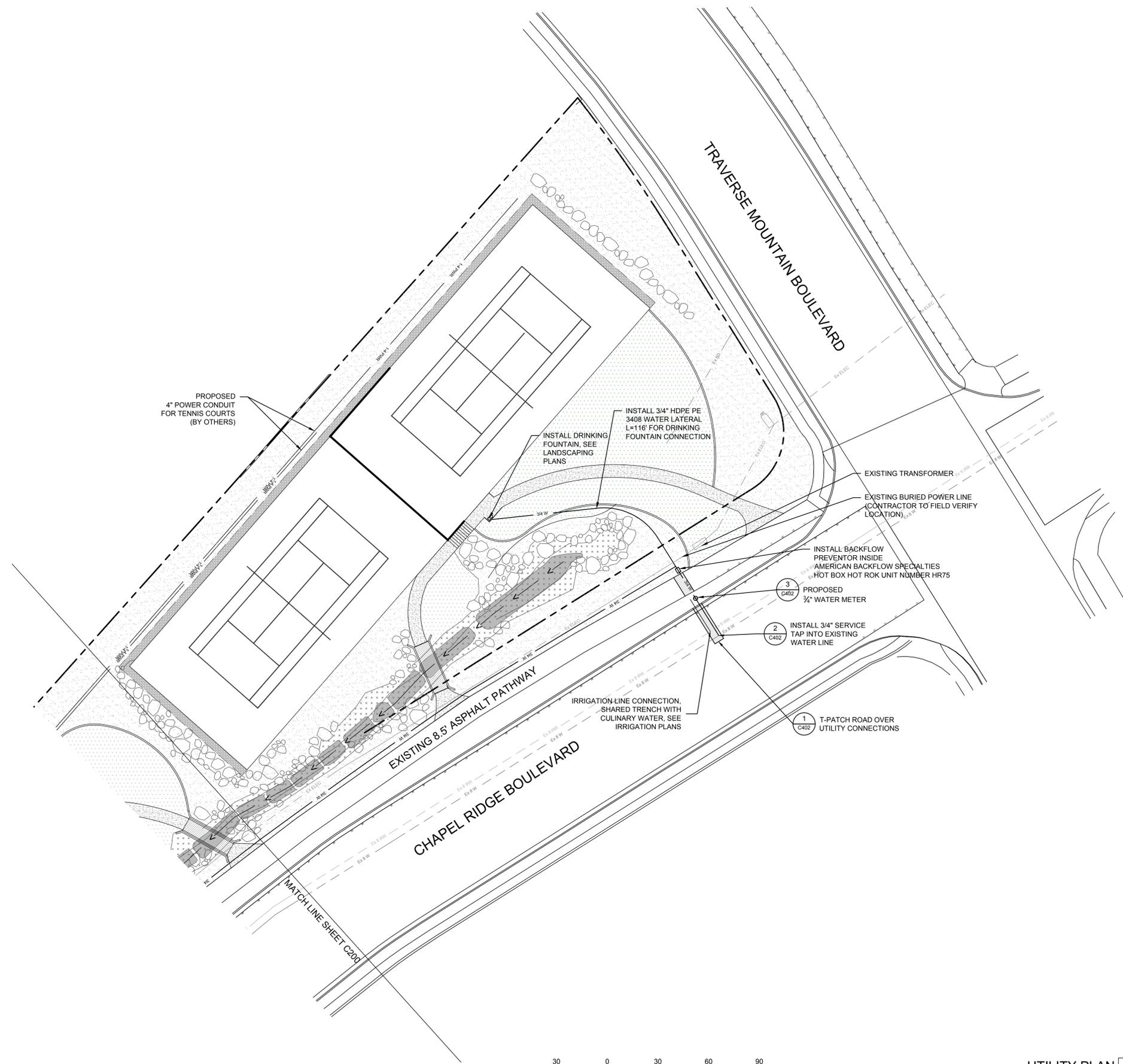
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C300



UTILITY PLAN 1
 Scale : 1" = 20'-0"
 L300

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UTILITY PLAN 1
Scale : 1" = 20'-0" L350



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PROJECT TITLE
Shadow Ridge Park

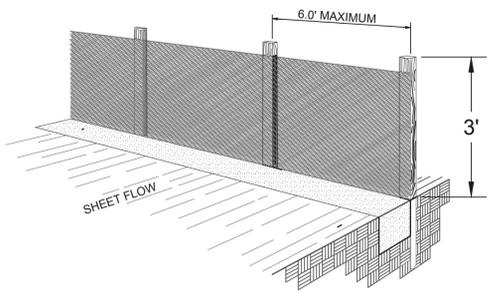
SHEET TITLE
UTILITY PLAN, E.

MARK	DATE	DESCRIPTION

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ISSUE TITLE 100% CD
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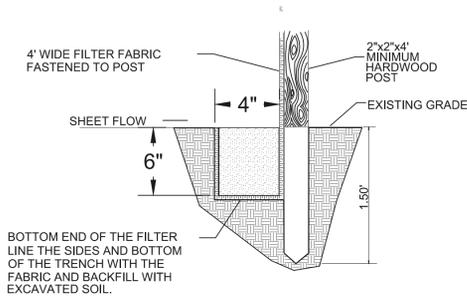
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C350

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General Silt Fence Notes

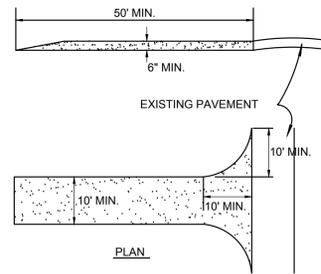
- WHERE POSSIBLE, LAYOUT THE SILT FENCE 5.0' TO 10.0' BEYOND THE TOE OF SLOPE.
- ALIGN THE FENCE ALONG THE CONTOUR AS CLOSE AS POSSIBLE.
- WHEN EXCAVATING THE TRENCH, USE MACHINERY THAT WILL PRODUCE NO MORE THAN THE DESIRED DIMENSIONS.
- EXTEND THE BOTTOM 3" OF FILTER FABRIC TO LINE ALL THREE SIDES OF THE TRENCH.
- TO AVOID EXCESSIVE PONDING OF WATER AT LOW POINTS ALONG THE FENCE, PROVIDE AN OPENING IN THE SILT FENCE AND INSTALL A CHECK DAM.
- AVOID USING JOINTS ALONG THE FENCE AS MUCH AS POSSIBLE. IF A JOINT IS NECESSARY, SPLICE THE FILTER FABRIC AT A POST WITH A 0.50' OVERLAPS AND SECURELY FASTEN BOTH ENDS TO THE POST.
- MAINTAIN A PROPERLY FUNCTIONING SILT FENCE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL DISTURBED AREAS HAVE BEEN VEGETATED.



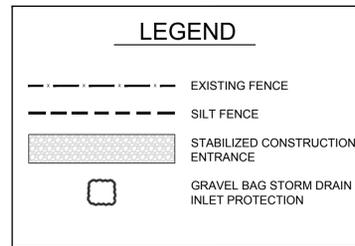
SILT FENCE DETAIL

STABILIZED CONSTRUCTION ENTRANCE NOTES:

- STONE SIZE - USE 4" STONE, OR RECLAIMED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET
- THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
- WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OF EGRESS OCCURS.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SIDE SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAINFALL.



STABILIZED CONSTRUCTION ENTRANCE

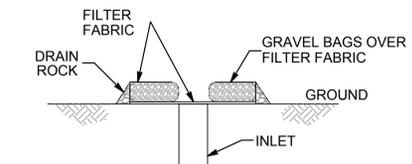


- EXISTING RESIDENTIAL FENCES ARE CONSTRUCTION LIMITS
- INSTALL SILT FENCE
- INSTALL STABILIZED CONSTRUCTION ENTRANCE
- INSTALL GRAVEL BAG INLET PROTECTION AFTER STORM DRAIN CATCH BASIN IS INSTALLED (TO REMAIN DURING CONSTRUCTION)
- INSTALL GRAVEL BAG INLET PROTECTION ON EXISTING STORM DRAIN CATCH BASIN (CAN BE REMOVED WHEN CONNECTED INTO NEW CATCH BASIN)
- STORM WATER RETENTION AREA
- PAVILION
- BATHROOM
- PROPERTY BOUNDARY

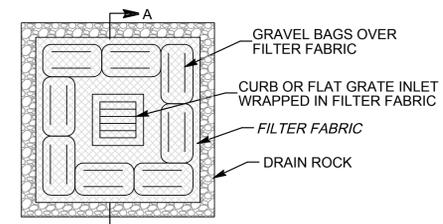
SHADY BEND LANE

EXISTING 8.5' ASPHALT PATHWAY
CHAPEL RIDGE BOULEVARD

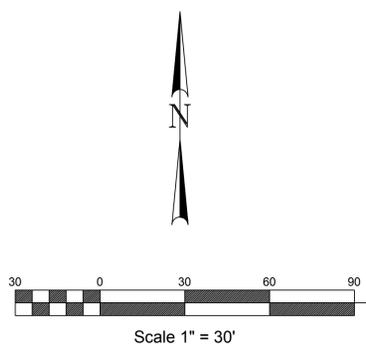
CONSTRUCTION FENCE TO BE INSTALLED AT BACK OF EXISTING SIDEWALK. SEE SHEET L100, L150 & DETAIL 2/L440



SECTION A-A
SCALE: NONE



GRAVEL BAG INLET PROTECTION



EROSION CONTROL PLAN 1
Scale: 1" = 30'-0" L375



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PROJECT TITLE
Shadow Ridge Park

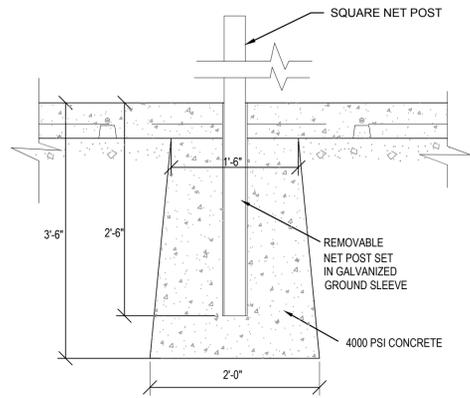
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EROSION CONTROL PLAN

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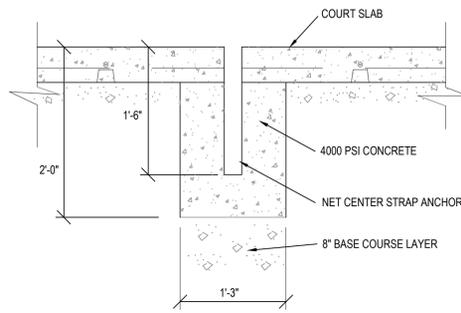
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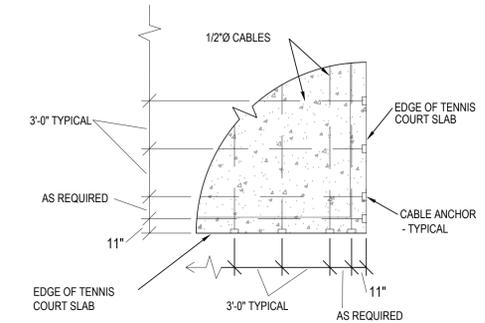
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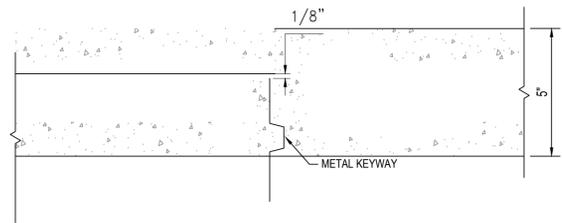
1 TYPICAL NET POST DETAIL
NTS



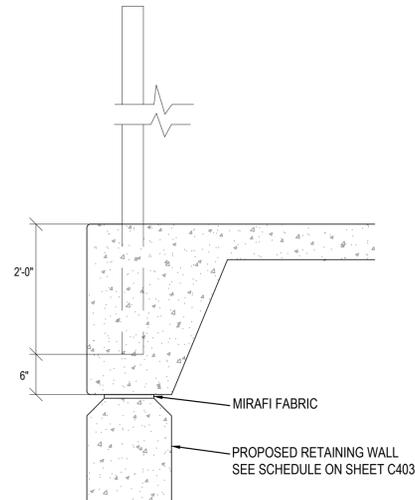
2 TYPICAL NET CENTER STRAP ANCHOR
NTS



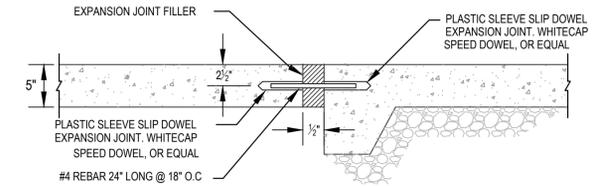
3 TYPICAL CABLE LAYOUT
NTS



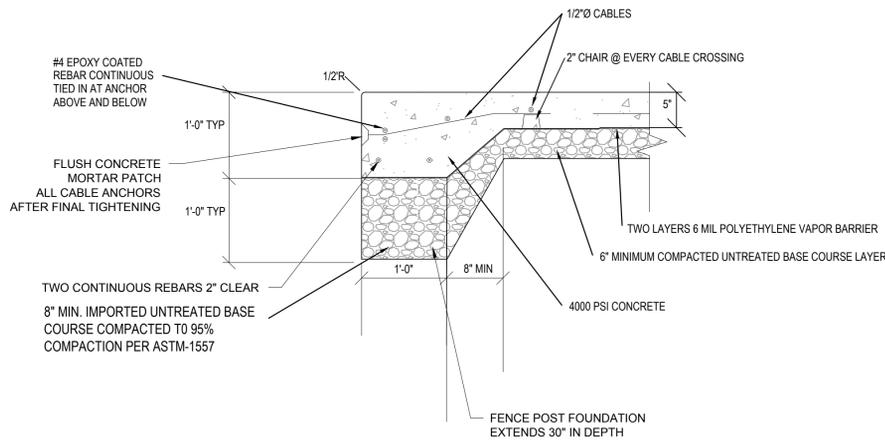
4 METAL KEYWAY/CONSTRUCTION POST DETAIL
NTS



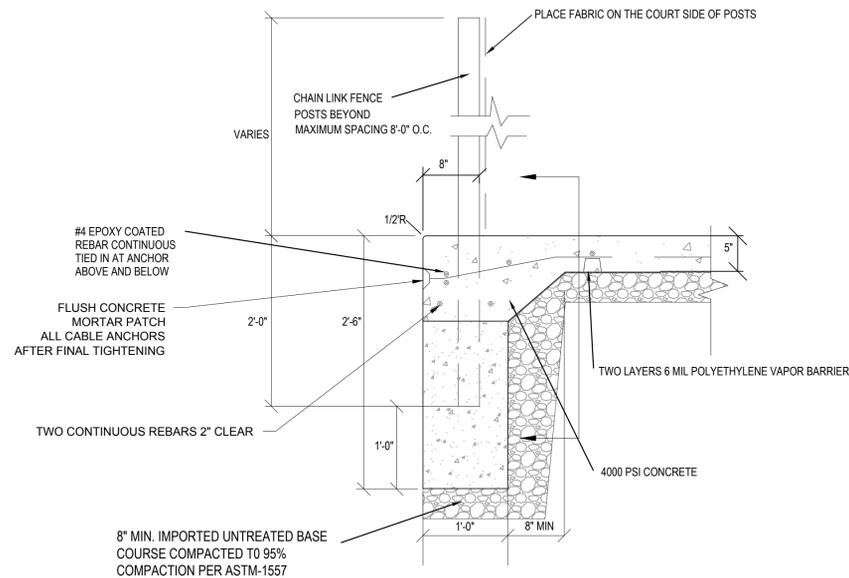
5 TENNIS COURT RETAINING WALL INTERFACE DETAIL
NTS



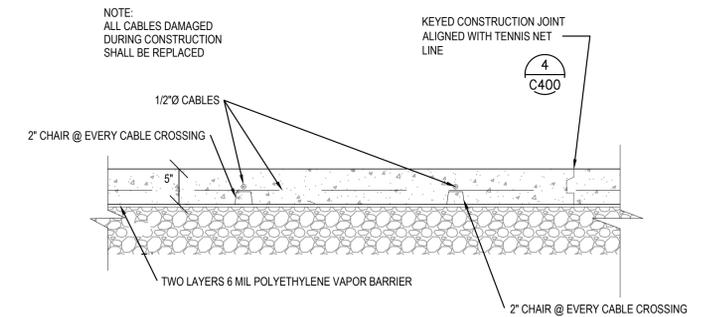
6 ALTERNATE EXPANSION JOINT WITH SLIP DOWEL
NTS



7 TYPICAL PERIMETER BEAM SECTION
NTS

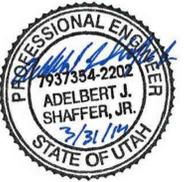


8 TYPICAL PERIMETER FENCE POST SECTION
NTS



9 TYPICAL TENNIS COURT CONCRETE SLAB SECTION
NTS

NOTE:
CONTRACTOR RESPONSIBLE FOR CONSTRUCTING TENNIS COURTS MUST CERTIFIED BY THE FOLLOWING.
ASBA - AMERICAN SPORTS BUILDERS ASSOCIATION
PTI - POST-TENSIONING INSTITUTE
ACI - AMERICAN CONCRETE INSTITUTE



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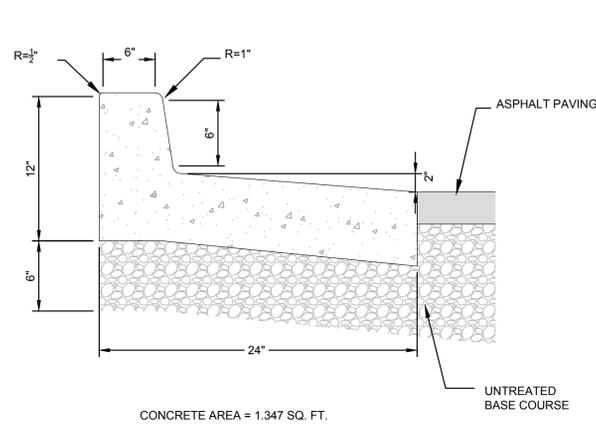
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C400

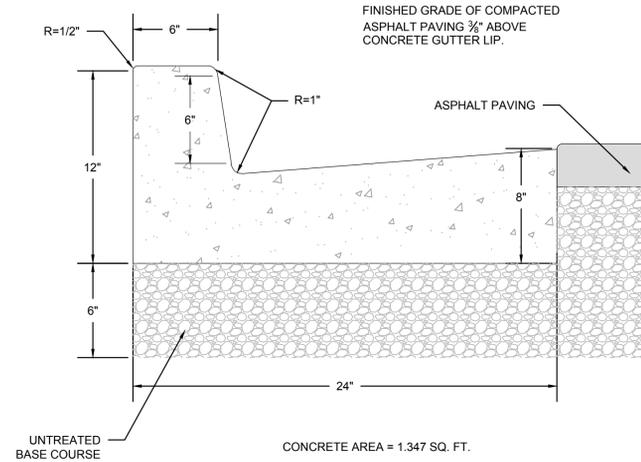
ALL IDEAS, DESIGN ARRANGEMENTS AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY AND THE PROPERTY OF COLONY DESIGN COLLECTIVE LLC AND WERE CREATED, DEVELOPED, AND DELIVERED FOR USE ON AND IN CONNECTION WITH THE SPECIFIED PROJECT. NONE OF THE IDEAS, DESIGN ARRANGEMENTS OR PLANS SHALL BE USED BY OR DISCLOSED TO ANY PERSON, FIRM, OR CONDITIONS SHOWN BY THESE DRAWINGS. WARNING: REPRODUCTION WITHOUT WRITTEN PERMISSION IS STRICTLY PROHIBITED. ANY UNAUTHORIZED REPRODUCTION OR DISSEMINATION OF ANY INFORMATION FROM THE DRAWINGS AND CONDITIONS SHOWN BY THESE DRAWINGS, INCLUDING REPRODUCTION OF ANY PART THEREOF, IS STRICTLY PROHIBITED AND WILL BE CONSIDERED A VIOLATION OF U.S. PATENT, TRADE SECRET, AND COPYRIGHT LAWS.



NOTES:
 1. UNTREATED BASE COURSE: PROVIDE MATERIAL AS PER SPECIFICATIONS. DO NOT USE GRAVEL OR SEWER ROCK. PLACE AS PER SPECIFICATIONS. COMPACT AS STATED IN SPECIFICATIONS TO A MODIFIED PROCTOR DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS IS 8-INCHES BEFORE COMPACTION.
 2. CONCRETE: CURBS SHALL BE CONSTRUCTED OF 4000 PSI CONCRETE.
 A. IF NECESSARY, PROVIDE CONCRETE THAT ACHIEVES DESIGN STRENGTH IN LESS THAN 7 DAYS. USE CAUTION, HOWEVER AS SPIDER CRACKS DEVELOP IF AIR TEMPERATURE EXCEEDS 90 DEGREES F.
 B. UNLESS SHOWN OTHERWISE, PROVIDE 1/2 INCH RADIUS ON CONCRETE EDGES EXPOSED TO PUBLIC VIEW.

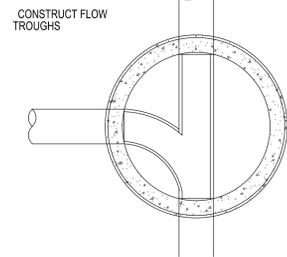
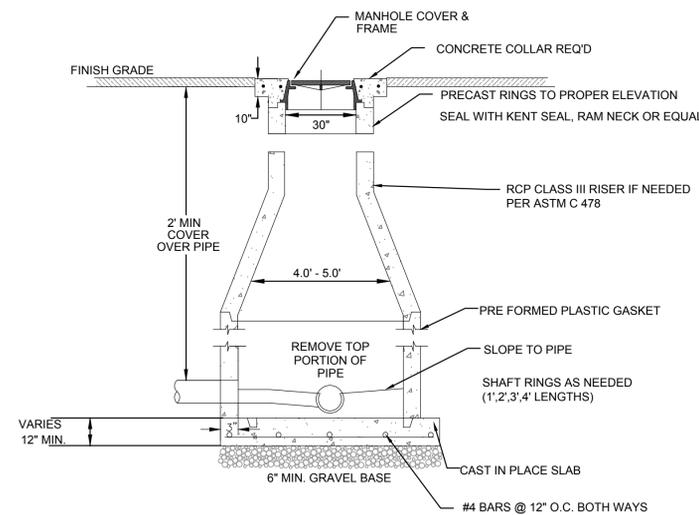
3. EXPANSION JOINTS: FULL DEPTH 1/2 INCH THICK TYPE F1 JOINT FILLER MATERIAL PER SPECIFICATIONS. SET TOP OF FILLER FLUSH WITH SURFACE FOR CONCRETE. PLACE JOINTS TO MATCH EXPANSION JOINT LOCATIONS IN SIDEWALK.
 4. CONTRACTION JOINTS: PLACE JOINTS AT 10 FEET INTERVALS. MAKE ALL JOINTS AT LEAST 1/8 INCH WIDE AND 2 INCHES DEEP.

1 24" On-Site Concrete Curb and Reverse Gutter Detail
 NTS

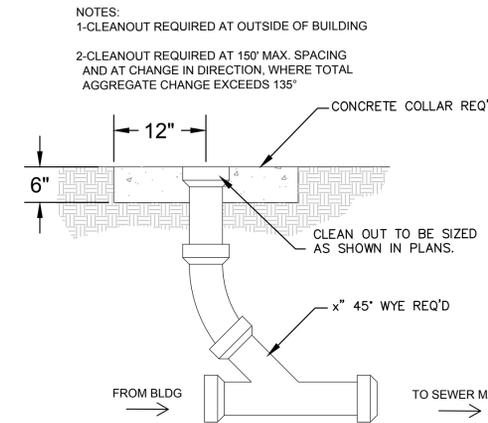


NOTES:
 1. UNTREATED BASE COURSE: PROVIDE MATERIAL AS PER SPECIFICATIONS. DO NOT USE GRAVEL OR SEWER ROCK. PLACE AS PER SPECIFICATIONS. COMPACT AS STATED IN SPECIFICATIONS TO A MODIFIED PROCTOR DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS IS 8-INCHES BEFORE COMPACTION.
 2. CONCRETE: CURBS SHALL BE CONSTRUCTED OF 3000 PSI CONCRETE.
 A. IF NECESSARY, PROVIDE CONCRETE THAT ACHIEVES DESIGN STRENGTH IN LESS THAN 7 DAYS. USE CAUTION, HOWEVER AS SPIDER CRACKS DEVELOP IF AIR TEMPERATURE EXCEEDS 90 DEGREES F.
 B. UNLESS SHOWN OTHERWISE, PROVIDE 1/2 INCH RADIUS ON CONCRETE EDGES EXPOSED TO PUBLIC VIEW.
 3. EXPANSION JOINTS: FULL DEPTH 1/2 INCH THICK TYPE F1 JOINT FILLER MATERIAL PER SPECIFICATIONS. SET TOP OF FILLER FLUSH WITH SURFACE FOR CONCRETE. PLACE JOINTS TO MATCH EXPANSION JOINT LOCATIONS IN SIDEWALK.
 4. CONTRACTION JOINTS: PLACE JOINTS AT 10 FEET INTERVALS. MAKE ALL JOINTS AT LEAST 1/8 INCH WIDE AND 2 INCHES DEEP.

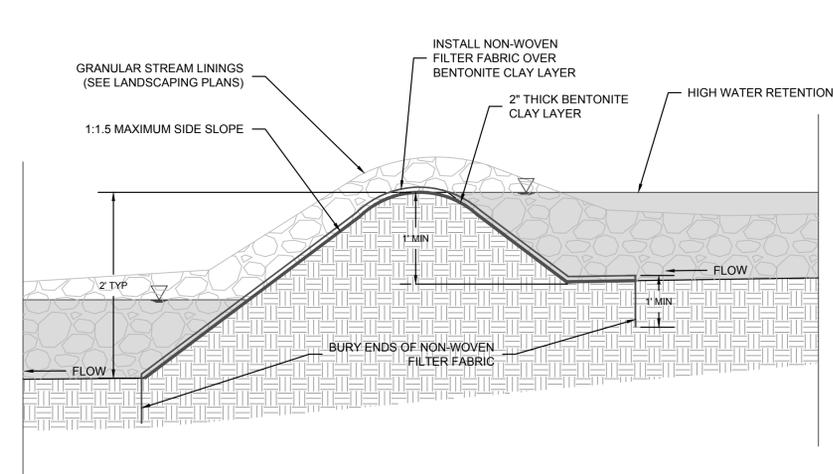
2 24" On-Site Concrete Curb and Gutter Detail
 NTS



3 Concentric Manhole Detail
 NTS



4 Sanitary Sewer Cleanout Detail
 NTS



5 Channel and Check Dam Detail
 NTS



STAMP
 CONSULTANT

OWNER
 Lehi City Corporation
 153 North 100 East
 Lehi, Utah 84043

PROJECT TITLE
 Shadow Ridge Park

SHEET TITLE
 DETAILS

REVISIONS
 MARK | DATE | DESCRIPTION

ISSUE DATE 27 MAR 2014
 ISSUE TITLE 100% CD
 SCALE AS NOTED
 DRAWN BY -
 CHECKED BY -

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STAMP
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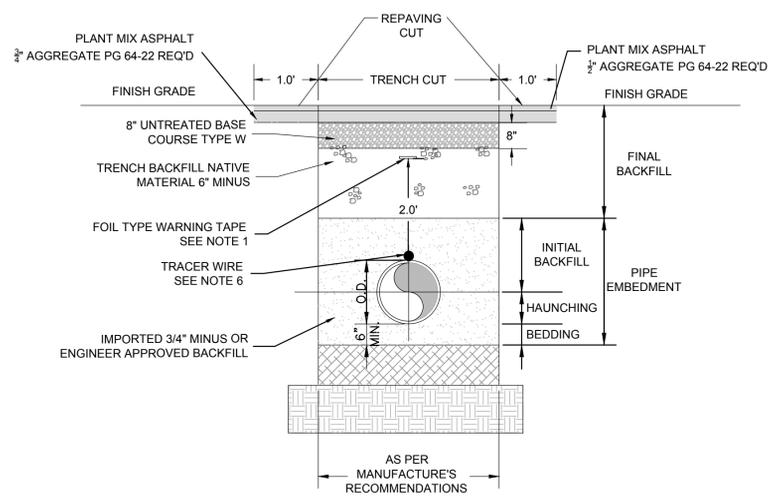
PROJECT TITLE
Shadow Ridge Park

SHEET TITLE
DETAILS

REVISIONS
 MARK | DATE | DESCRIPTION

ISSUE DATE 27 MAR 2014
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 CHECKED BY -

LC-TP
 C402



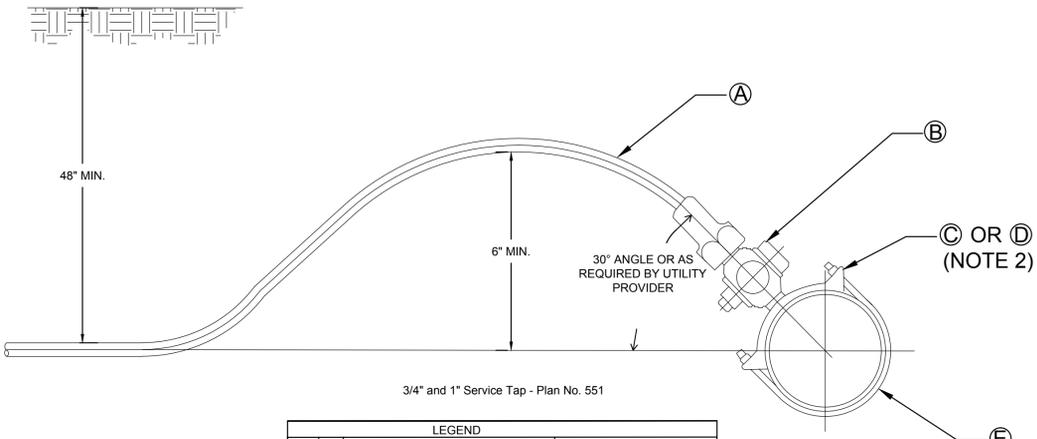
1. WARNING TAPE FOR ONSITE UTILITIES TO BE INSTALLED AT OWNERS DISCRETION. ALL PIPING IN R/W REQUIRES WARNING TAPE. WARNING TAPE SHALL BE INSTALLED ABOVE THE TOP OF PIPE ALONG THE ENTIRE LENGTH. TAPE SHALL BE LABELED APPROPRIATELY.

- NOTES:
- ALL UTILITY PIPING REQUIRES WARNING TAPE. WARNING TAPE SHALL BE INSTALLED 2.0' ABOVE PIPE ALONG THE ENTIRE LENGTH INCLUDING SERVICE LATERALS. TAPE SHALL BE LABELED ACCORDING TO UTILITY.
 - REFER TO PLANS FOR FINISH GRADES AND SURFACING.
 - ASPHALT TO BE PG-64-28 COMPACTION BENEATH ROADWAYS SHALL BE 95% MODIFIED PROCTOR.
 - 3/4" MINUS GRADATION TO BE 100% PASSING THE 3/4" SIEVE WITH NO MORE THAN 8% PASSING THE NUMBER 200 SIEVE.
 - "SQUEEGEE" AND/OR "PEA GRAVEL" ARE NOT ALLOWED WITHIN THE PIPE ZONE.
 - 12 GAUGE TRACER WIRE SHALL BE PLACED ALONG THE TOP OF ALL PIPE AND SHALL BE TIED TO ALL VALVES AND HYDRANTS. SPLICING BOXES SHALL BE USED FOR ALL JUNCTIONS AND TERMINATIONS OF THE TRACER WIRE NOT TERMINATED AT VALVE BOXES.
 - UNTREATED BASE COURSE, PROVIDE MATERIALS SPECIFIED IN UDOT STANDARD SPECIFICATION 02721. DO NOT USE GRAVEL AS SUBSTITUTE FOR UTBC. PLACE MATERIAL PER APWA STANDARD SPECIFICATION 32 05 10. COMPACT PER APWA STANDARD SPECIFICATION 31 23 26 TO A MODIFIED PROCTOR DENSITY OF 95%. MAXIMUM LIFT THICKNESS 8".

AS PER MANUFACTURE'S RECOMMENDATIONS

1 Utility Trenching w/ T-Patch Detail
 NTS

2 3/4" and 1" Service Tap Detail
 NTS

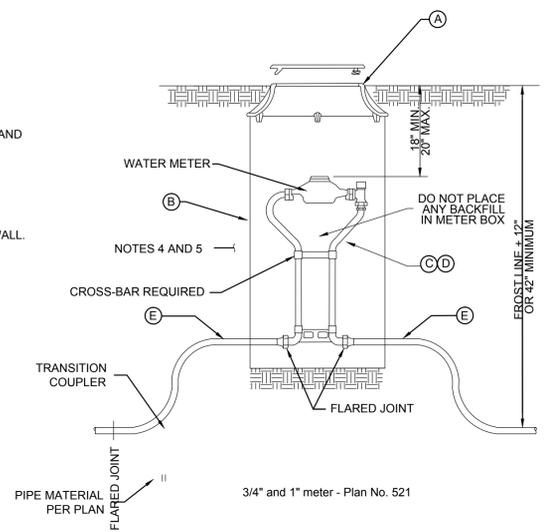


LEGEND		
No.	*	DESCRIPTION
(A)		SERVICE PIPE
(B)		CORPORATION STOP
(C)		SERVICE SADDLE CLAMP (D.I., C.I., A.C.)
(D)		SERVICE SADDLE CLAMP (P.V.C.)
(E)		WATER MAIN PIPE (D.I., C.I., A.C., P.V.C.)

- TAPPING: PLACE TAPS A MINIMUM OF 24" APART. USE A TAPPING TOOL THAT IS SIZED CORRESPONDING TO THE SIZE OF THE SERVICE LINE TO BE INSTALLED. NO TAPS WITHIN 24" OF END OF PIPE.
- PVC OR AC PIPE: A SERVICE SADDLE CLAMP IS REQUIRED ON ALL PVC AND AC PIPE.
- TAPE: TEFLON TAPE IS REQUIRED ON ALL TAPS.
- INSPECTION: PRIOR TO BACKFILLING AROUND TAPS, SECURE INSPECTION BY SERVICE PROVIDER.
- BACKFILL: PROVIDE AND PLACE PER APWA SECTION 33 05 20. COMPACT PER APWA SECTION 31 23 26 TO A MODIFIED PROCTOR DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS IS 8 INCHES BEFORE COMPACTION.

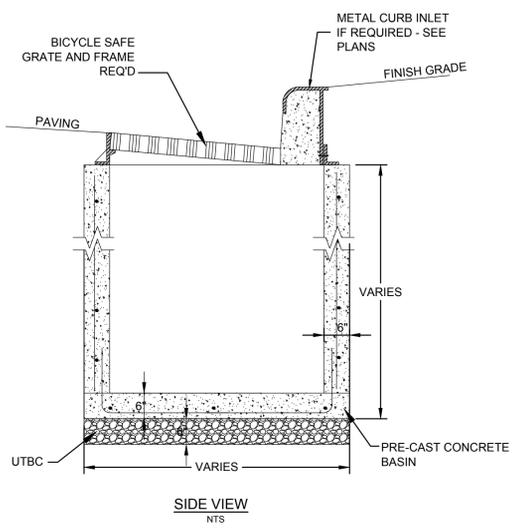
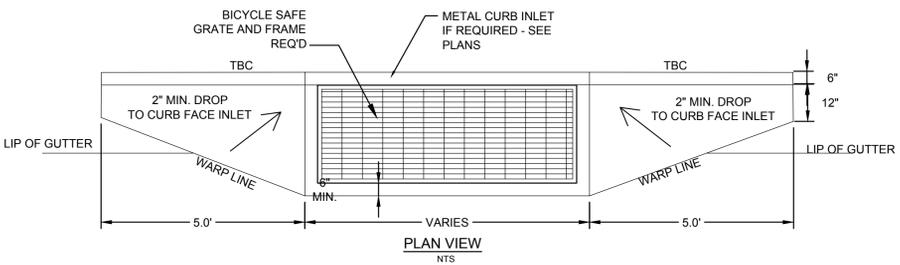
* FURNISHED BY UTILITY AGENCY
 DI AND CI PIPE MAY BE DIRECTLY TAPPED

3/4" and 1" Service Tap - Plan No. 551



LEGEND		
No.	*	DESCRIPTION
(A)		FRAME AND COVER
(B)		METER BOX (18" TO 21" DIAMETER) CORRUGATED PE, PVC, CMP, OR MATERIAL ACCEPTABLE TO AGENCY
(C)		3/4" METER YOKE
(D)		1" METER YOKE
(E)		SERVICE PIPE

* FURNISHED BY UTILITY AGENCY



4 Curb Inlet Detail
 NTS

3 3/4" and 1" Water Meter Detail
 NTS