

General Notes:

- ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: GOVERNING UTILITY MUNICIPALITY, GOVERNING CITY OR COUNTY (IF UNINCORPORATED), INDIVIDUAL PRODUCT MANUFACTURERS, AMERICAN PUBLIC WORKS ASSOCIATION (APWA), AND THE DESIGN ENGINEER. THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
- CONTRACTOR TO STRICTLY FOLLOW GEOTECHNICAL RECOMMENDATIONS FOR THIS PROJECT. ALL GRADING INCLUDING BUT NOT LIMITED TO CUT, FILL, COMPACTION, ASPHALT SECTION, SUBBASE, TRENCH EXCAVATION/BACKFILL, SITE GRUBBING, RETAINING WALLS AND FOOTINGS MUST BE COORDINATED DIRECTLY WITH THE PROJECT GEOTECHNICAL ENGINEER.
- TRAFFIC CONTROL, STRIPING & SIGNAGE TO CONFORM TO CURRENT GOVERNING AGENCIES TRANSPORTATION ENGINEER'S MANUAL AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
- CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
- AT ALL LOCATIONS WHERE EXISTING PAVEMENT ADJUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED THOROUGHLY REVIEWED PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
- CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND NOTIFYING ENGINEER OR INSPECTING AUTHORITY 48 HOURS IN ADVANCE OF COVERING UP ANY PHASE OF CONSTRUCTION REQUIRING OBSERVATION.
- ANY WORK IN THE PUBLIC RIGHT-OF-WAY WILL REQUIRE PERMITS FROM THE APPROPRIATE CITY, COUNTY OR STATE AGENCIES. CONTRACTOR SHALL OBTAIN REQUIRED PERMITS PRIOR TO ANY CONSTRUCTION.
- ALL DIMENSIONS, GRADES & UTILITY DESIGNS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.
- CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING AND BRING UP ANY QUESTIONS BEFOREHAND.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH BY THE GEOTECHNICAL ENGINEER.
- CATCH SLOPES SHALL BE GRADED AS SPECIFIED ON GRADING PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FLAGGING, CAUTION SIGNS, LIGHTS, BARRICADES, FLAGMEN, AND ALL OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
- CONTRACTOR SHALL AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE BONDABLE FOR AN AMOUNT EQUAL TO OR GREATER THAN THE AMOUNT BID AND TO DO THE TYPE OF WORK CONTEMPLATED IN THE PLANS AND SPECIFICATIONS AND THE ACTUAL CONDITIONS AND AT THE SITE OF WORK. IF DURING THE COURSE OF HIS EXAMINATION, A BIDDER FINDS FACTS OR CONDITIONS WHICH APPEAR TO HIM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PROJECT PLANS AND SPECIFICATIONS, HE SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING HIS BID. SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, HE HAS RELIED AND IS RELYING ON HIS OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE PROPER FULFILLMENT OF THE WORK AND ON HIS OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT. THE INFORMATION PROVIDED BY THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT HE HAS NOT RELIED SOLELY UPON OWNER- OR ENGINEER-FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING HIS BID.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL UTILITIES, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER, ENGINEER, AND/OR GOVERNING AGENCIES.
- CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.
- CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND 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 THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER. ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
- IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
- WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.
- CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR PRIOR TO ACCEPTANCE OF THE PROJECT. THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
- WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE HIGHEST QUALITY ARE TO BE USED.
- CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR. PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THE TRUE INTENT AND PURPOSE OF THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS IN THE NATURE, EXTENT AND INHERENT CONDITION OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN PECULIAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL STRIPING AND/OR PAVEMENT MARKINGS NECESSARY TO THE EXISTING STRIPING INTO FUTURE STRIPING. METHOD OF REMOVAL SHALL BE BY GRINDING OR SANDBLASTING.
- CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4 FEET OR MORE. FOR EXCAVATIONS 4 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH LOCAL, STATE AND NATIONAL SAFETY CODES, ORDINANCES OR REGULATIONS.
- ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE.

Utility Notes:

- CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE SERVICE, GAS SERVICE, CABLE, POWER, INTERNET.
- EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING A COMBINATION OF ON-SITE SURVEYS (BY OTHERS), PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE IN THE FIELD, THEIR MAIN AND SERVICE LINES 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
- CONTRACTOR SHALL NOT HOLE ALL UTILITIES TO DETERMINE IF CONFLICTS EXIST PRIOR TO BEGINNING ANY EXCAVATION. NOTIFY ENGINEER OF ANY CONFLICTS. CONTRACTOR SHALL VERIFY LOCATION AND INVERTS OF EXISTING UTILITIES TO WHICH NEW UTILITIES WILL BE CONNECTED. PRIOR TO COMMENCING ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE REQUIRED PROCEDURES.
- CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT HIS EXPENSE.
- ALL VALVES AND MANHOLE COVERS SHALL BE RAISED OR LOWERED TO MEET FINISHED GRADE.
- CONTRACTOR SHALL CUT PIPES OFF FLUSH WITH THE INSIDE WALL OF THE BOX OR MANHOLE.
- CONTRACTOR SHALL GROUT AT CONNECTION OF PIPE TO BOX WITH NON-SHRINKING GROUT, INCLUDING PIPE VOIDS LEFT BY CUTTING PROCESS, TO A SMOOTH FINISH.
- CONTRACTOR SHALL GROUT WITH NON-SHRINK GROUT BETWEEN GRADE RINGS AND BETWEEN BOTTOM OF INLET LID FRAME AND TOP OF CONCRETE BOX.
- SILT AND DEBRIS IS TO BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
- CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATERS TO ALLOW ACCESS.
- EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DE-WATERED CONDITIONS.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO REMOVE PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.
- MAINTAIN A MINIMUM 18" VERTICAL SEPARATION DISTANCE BETWEEN ALL UTILITY CROSSINGS.
- CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.
- ALL BOLTED FITTINGS MUST BE GREASED AND WRAPPED.
- UNLESS SPECIFICALLY NOTED OTHERWISE, MAINTAIN AT LEAST 2 FEET OF COVER OVER ALL STORM DRAIN LINES AT ALL TIMES (INCLUDING DURING CONSTRUCTION).
- ALL WATER LINES SHALL BE INSTALLED A MINIMUM OF 60" BELOW FINISHED GRADE.
- ALL SEWER LINES AND SEWER SERVICES SHALL HAVE A MINIMUM SEPARATION OF 10 FEET, PIPE EDGE TO PIPE EDGE, FROM THE WATER LINES. IF A 10 FOOT SEPARATION CAN NOT BE MAINTAINED, THE SEWER LINE AND WATER LINE SHALL BE LAID IN SEPARATE TRENCHES AND THE BOTTOM OF THE WATER LINE SHALL BE AT LEAST 18" ABOVE THE TOP OF THE SEWER LINE.
- CONTRACTOR SHALL INSTALL THRUST BLOCKING AT ALL WATERLINE ANGLE POINTS AND TEES.
- ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.
- CONTRACTOR SHALL INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL NONMETALLIC PIPE.

Erosion Control General Notes:

THE CONTRACTOR TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO GOVERNING AGENCIES ORDINANCES AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE AGENCIES. ALSO, INSPECTORS WILL HAVE THE RIGHT TO CHANGE THE FACILITIES AS NEEDED.

CONTRACTOR SHALL KEEP THE SITE WATERED TO CONTROL DUST. CONTRACTOR TO LOCATE A NEARBY HYDRANT FOR USE AND TO INSTALL TEMPORARY METER. CONSTRUCTION WATER COST TO BE INCLUDED IN BID.

WHEN GRADING OPERATIONS ARE COMPLETED AND THE DISTURBED GROUND IS LEFT "OPEN" FOR 14 DAYS OR MORE, THE AREA SHALL BE FURROWED PARALLEL TO THE CONTOURS.

THE CONTRACTOR SHALL MODIFY EROSION CONTROL MEASURES TO ACCOMMODATE PROJECT PLANNING.

ALL ACCESS TO PROPERTY WILL BE FROM PUBLIC RIGHT-OF-WAYS. THE CONTRACTOR IS REQUIRED BY STATE AND FEDERAL REGULATIONS TO PREPARE A STORM WATER POLLUTION PREVENTION PLAN AND FILE A "NOTICE OF INTENT" WITH THE GOVERNING AGENCIES.

Maintenance:

ALL BEST MANAGEMENT PRACTICES (BMP'S) SHOWN ON THIS PLAN MUST BE MAINTAINED AT ALL TIMES UNTIL PROJECT CLOSE-OUT.

THE CONTRACTOR'S RESPONSIBILITY SHALL INCLUDE MAKING BI-WEEKLY CHECKS ON ALL EROSION CONTROL MEASURES TO DETERMINE IF REPAIR OR SEDIMENT REMOVAL IS NECESSARY. CHECKS SHALL BE DOCUMENTED AND COPIES OF THE INSPECTIONS KEPT ON SITE.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF BARRIER.

SEDIMENT TRACKED ONTO PAVED ROADS MUST BE CLEANED UP AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN THE END OF THE NORMAL WORK DAY. THE CLEAN UP WILL INCLUDE SWEEPING OF THE TRACKED MATERIAL, PICKING IT UP, AND DEPOSITING IT TO A CONTAINED AREA.

EXPOSED SLOPES:

ANY EXPOSED SLOPE THAT WILL REMAIN UNTOUCHED FOR LONGER THAN 14 DAYS MUST BE STABILIZED BY ONE OR MORE OF THE FOLLOWING METHODS:
 A) SPRAYING DISTURBED AREAS WITH A TACKIFIER VIA HYDROSEED
 B) TRACKING STRAW PERPENDICULAR TO SLOPES
 C) INSTALLING A LIGHT-WEIGHT, TEMPORARY EROSION CONTROL BLANKET

Master Legend

- W- = PROPOSED CULINARY WATER LINE
- EX.W- = EXISTING CULINARY WATER LINE
- SS- = PROPOSED SANITARY SEWER LINE
- EX.SS- = EXISTING SANITARY SEWER LINE
- SD- = PROPOSED STORM DRAIN LINE
- EX.SD- = EXISTING STORM DRAIN LINE
- LD- = PROPOSED LAND DRAIN LINE
- EX.LD- = EXISTING LAND DRAIN LINE
- SW- = PROPOSED SECONDARY WATER LINE
- EX.SW- = EXISTING SECONDARY WATER LINE
- IRR- = PROPOSED IRRIGATION LINE
- EX.IRR- = EXISTING IRRIGATION LINE
- OHP- = EXISTING OVERHEAD POWER LINE
- TEL- = EXISTING TELEPHONE LINE
- GAS- = EXISTING NATURAL GAS LINE
- X-X-X- = EXISTING EDGE OF PAVEMENT
- X-X-X- = FENCE LINE
- X-X-X- = MASONRY BLOCK/RETAINING WALL
- X-X-X- = DITCH/SWALE FLOWLINE
- = PROPOSED FIRE HYDRANT
- = EXISTING FIRE HYDRANT
- = EXISTING MANHOLE
- = PROPOSED SEWER CLEAN-OUT
- X = PROPOSED GATE VALVE
- X = EXISTING GATE VALVE
- = PROPOSED WATER METER
- = EXISTING WATER METER
- = PROPOSED CATCH BASIN
- L.F. = LINEAR FEET
- NG = NATURAL GRADE
- O.C. = ON CENTER
- PC = POINT OF CURVE
- PRC = POINT OF REVERSE CURVE
- PRVC = POINT OF TANGENT VERTICAL CURVE
- PT = POINT OF TANGENT
- PP = PUBLIC UTILITY POLE
- P.U.E. = PUBLIC UTILITY EASEMENT
- R/C = REBAR & CAP
- RCB = REINFORCED CONCRETE BOX
- PCP = REINFORCED CONCRETE PIPE
- RIM = RIM OF MANHOLE
- R.O.W. = RIGHT-OF-WAY
- SD = STORM DRAIN
- SS = SANITARY SEWER
- SW = SECONDARY WATER
- TBC = TOP BACK OF CURB
- TOE = TOE OF SLOPE
- TOP = TOP OF SLOPE
- TOW = TOP OF WALL
- TSW = TOP OF SIDEWALK
- VPI = VERTICAL POINT OF INTERSECT.
- W = CULINARY WATER
- WM = WATER METER
- HDPE = HIGH DENSITY POLYETHYLENE PIPE
- INV = INVERT
- IRR = IRRIGATION
- LD = LAND DRAIN

General Project Notes

- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE DEVELOPMENT STANDARDS OF WEBER COUNTY AND THE STANDARD DRAWINGS CONTAINED THEREIN. WEBER COUNTY PUBLIC WORKS REQUIREMENTS SHALL BE MET.
- THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS.
- THE STREET STRUCTURAL CROSS SECTION IS PER WEBER COUNTY DETAILS CONTAINED WITHIN THESE PLANS.
- WATER LINE PIPE SHALL BE PVC C-900 CLASS 200. WASHOUT ASSEMBLIES SHALL CONSIST OF A KUPFERLE FOUNDRY CO. 2" BLOW-OFF HYDRANT (OR COUNTY-APPROVED EQUIV.).
- SECONDARY WATER LINE SHALL BE PVC C-900 CLASS 200. ALL SECONDARY WATER VALVE LIDS SHALL BE STAMPED "IRRIGATION".

SECONDARY WATER NOTES

- ALL SECONDARY WATER SHALL BE IN CONFORMANCE WITH HOOPER IRRIGATION WATER STANDARDS.
- ALL SECONDARY WATER MAINS TO HAVE A MINIMUM OF 4' OF COVER.
- A LOCATION RIBBON MUST BE INSTALLED ABOVE THE WATER MAIN IN ACCORDANCE WITH HOOPER IRRIGATION STANDARDS.
- CONTRACTOR MUST FILE FOR A LICENSE AGREEMENT FOR EVERY UTILITY CROSSING OF HOOPER IRRIGATION CANALS. THIS AGREEMENT MUST BE ACCOMPANIED WITH A COPY OF THE PLANS FOR THE CROSSING ALONG WITH THE FEES TO BE PAID. THERE NEEDS TO BE AT LEAST 2" VERTICAL SEPARATION FROM THE BOTTOM OF THE CANAL. THIS APPLIES TO BOTH THE CANAL ON 2200 SOUTH AND THE CANAL ON THE SOUTH END OF THE DEVELOPMENT.

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 920 CHAMBERS STREET, SUITE 14, OGDEN, UTAH 84403
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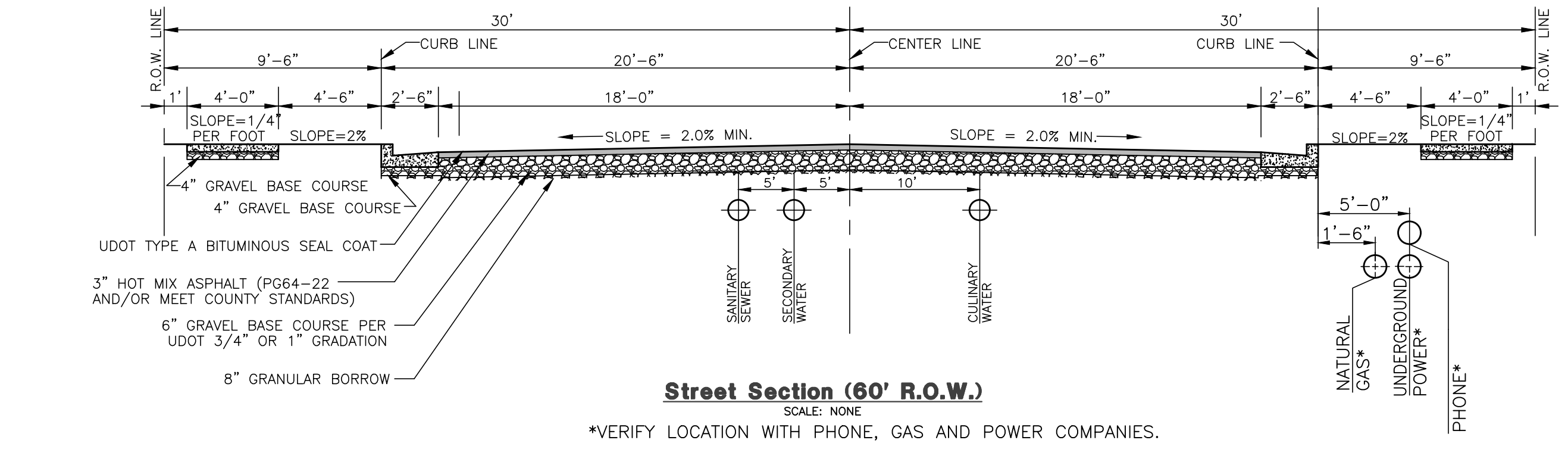
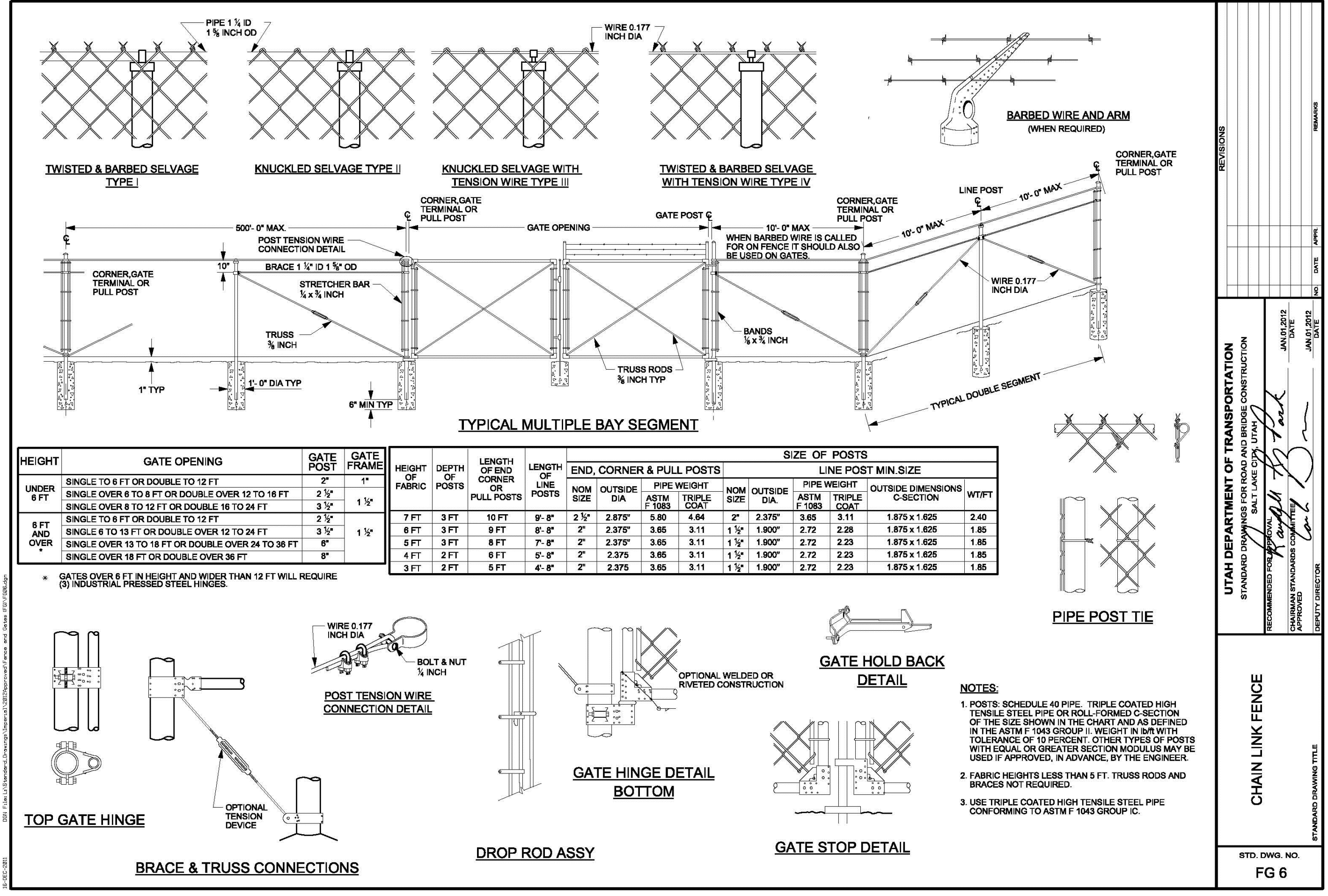
REVISIONS	DATE	DESCRIPTION
6-25-15	RH	County Comments
7-22-15	RH	County Comments
9-17-15	RH	County Comments
11-12-15	RH	County Comments
11-25-15	RH	County Comments
12-12-16	RH	Hooper Irr. Canal
1-17-17	RH	New Owner

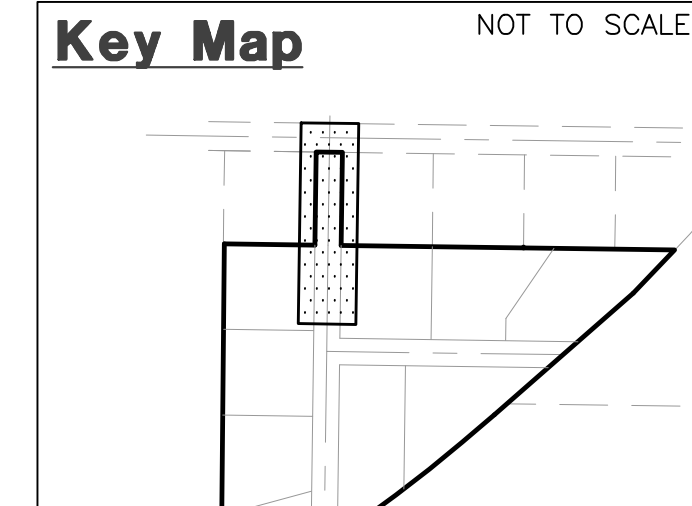
Cameron Crossing Subdivision
 WEBER COUNTY, UTAH

**Notes/Legend/
 Street Cross-Section**

Revised: 1-17-17

REGISTERED PROFESSIONAL ENGINEER
 375328
 J. NATE REEVE
 STATE OF UTAH





Construction Notes:

1) ALL CONSTRUCTION IS TO CONFORM TO THE STANDARD DRAWINGS AND SPECIFICATIONS OF WEBER COUNTY.

CULINARY WATER
W/10 - 10" PVC C-900 CLASS 200 WATER

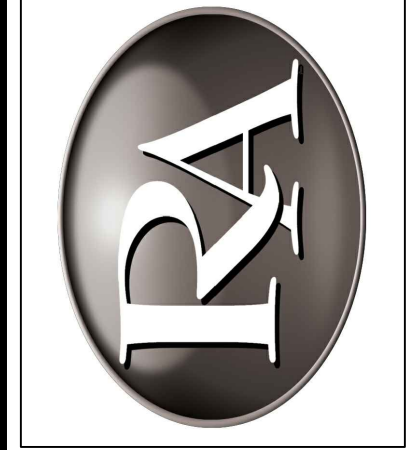
STORM DRAIN
SD/15 - 15" RCP STORM DRAIN
SD/15 ARCH - 15" ARCH RCP STORM DRAIN

SANITARY SEWER
SS/8 - 8" PVC C-900 SEWER LINE
SS/12 - 12" PVC C-900 SEWER LINE

SECONDARY WATER
SW/8 - 8" PVC C-900 SECONDARY WATER LINE

LAND DRAIN
LD/12 - 12" PVC C-900 LAND DRAIN LINE

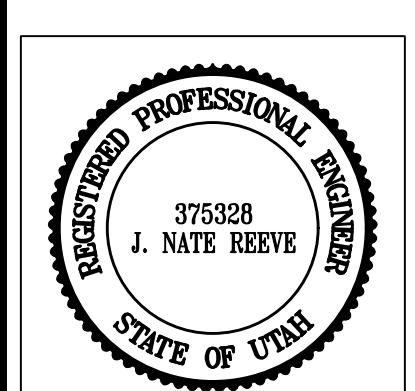
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DATE	DESCRIPTION
6-23-15	RH County Comments
7-22-15	RH County Comments
9-17-15	RH County Comments
11-12-15	RH County Comments
11-25-15	RH County Comments
12-12-16	RH Hooper Irr. Comm.
1-17-17	RH New Owner

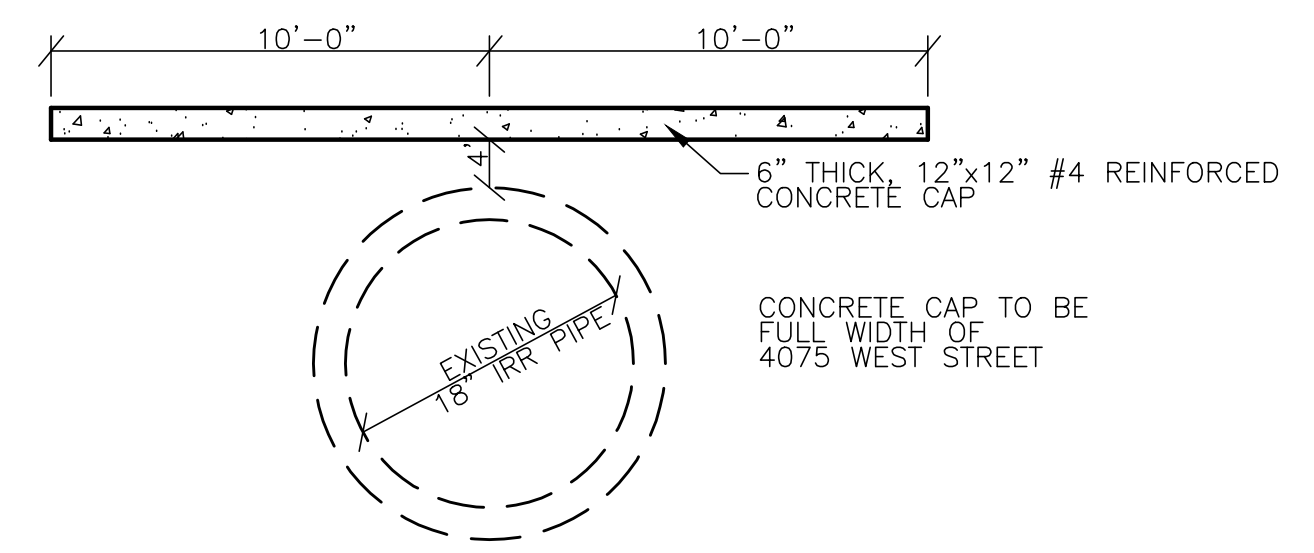
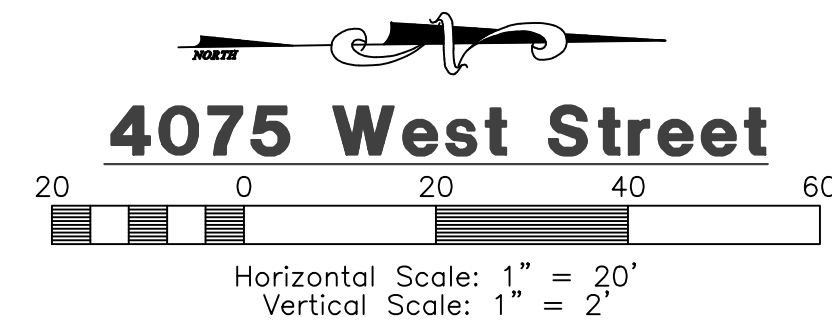
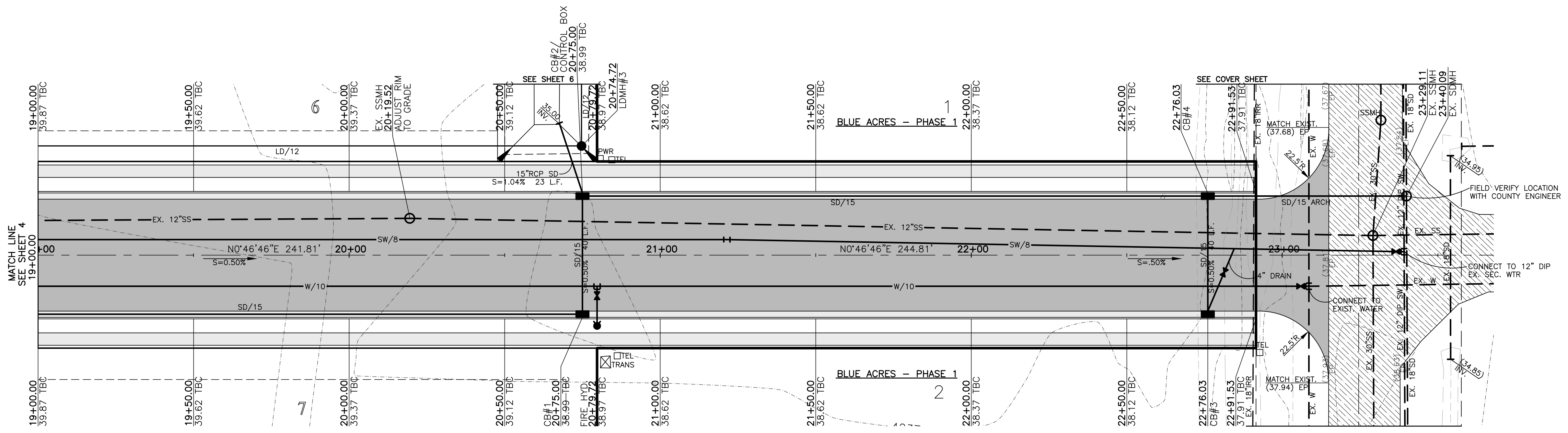
Cameron Crossing Subdivision
WEBER COUNTY, UTAH
4075 West Street
19+00.00 - 23+50.00

Revised: 1-17-17

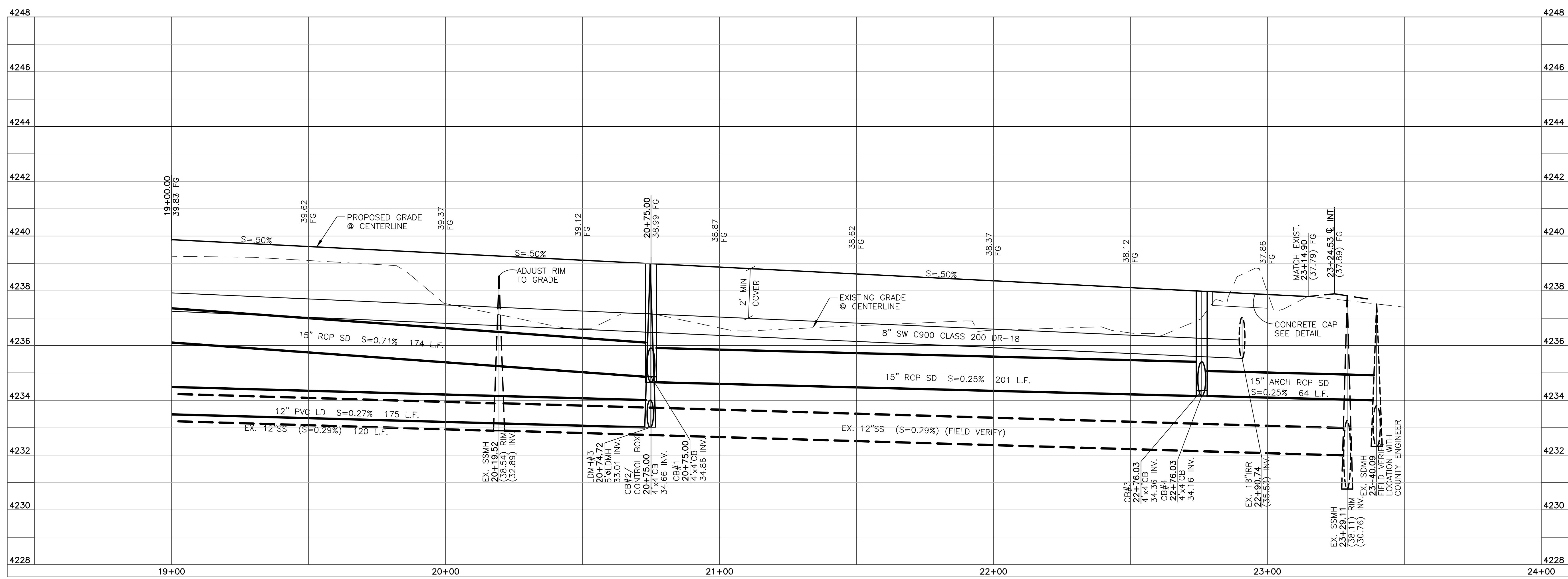


Project Info.
Engineer: J. NATE REEVE, P.E.
Drafted: R. HANSEN
Begin Date: JUNE 10, 2014
Name: CAMERON CROSSING SUBDIVISION
Number: 3442-A47

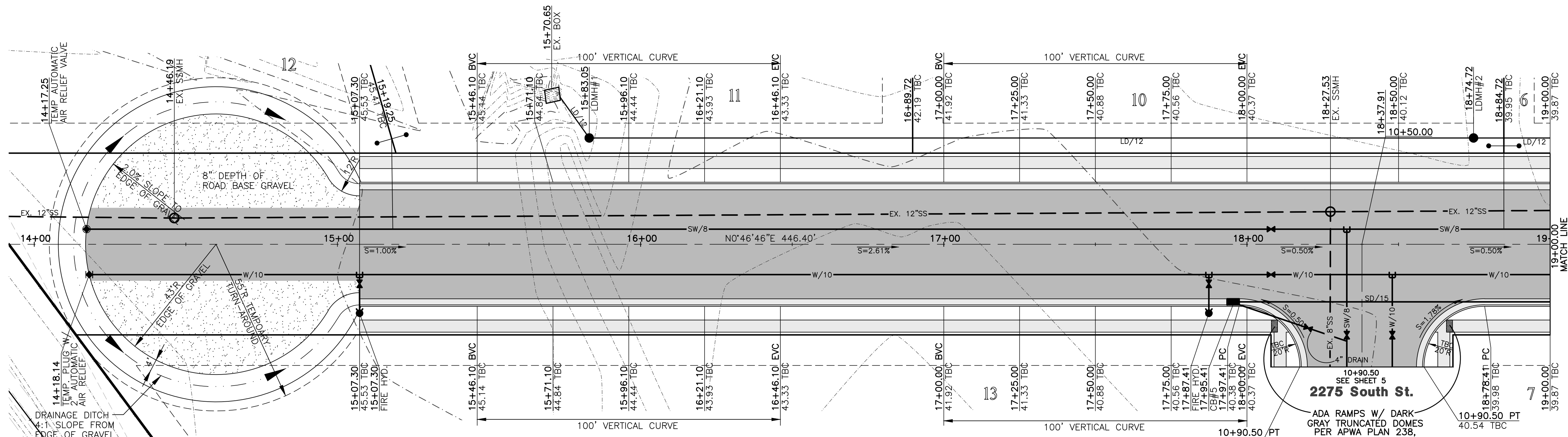
Sheet **3** of **12** Sheets



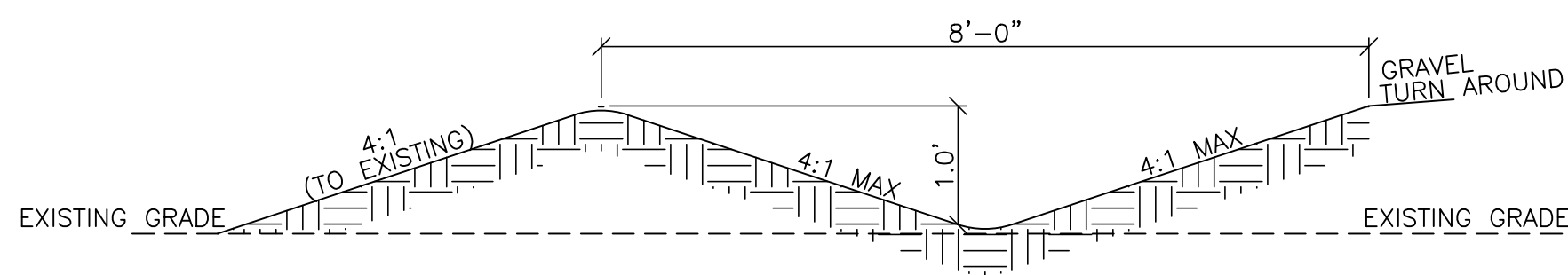
Irrigation Crossing Detail
SCALE: 1"=2'



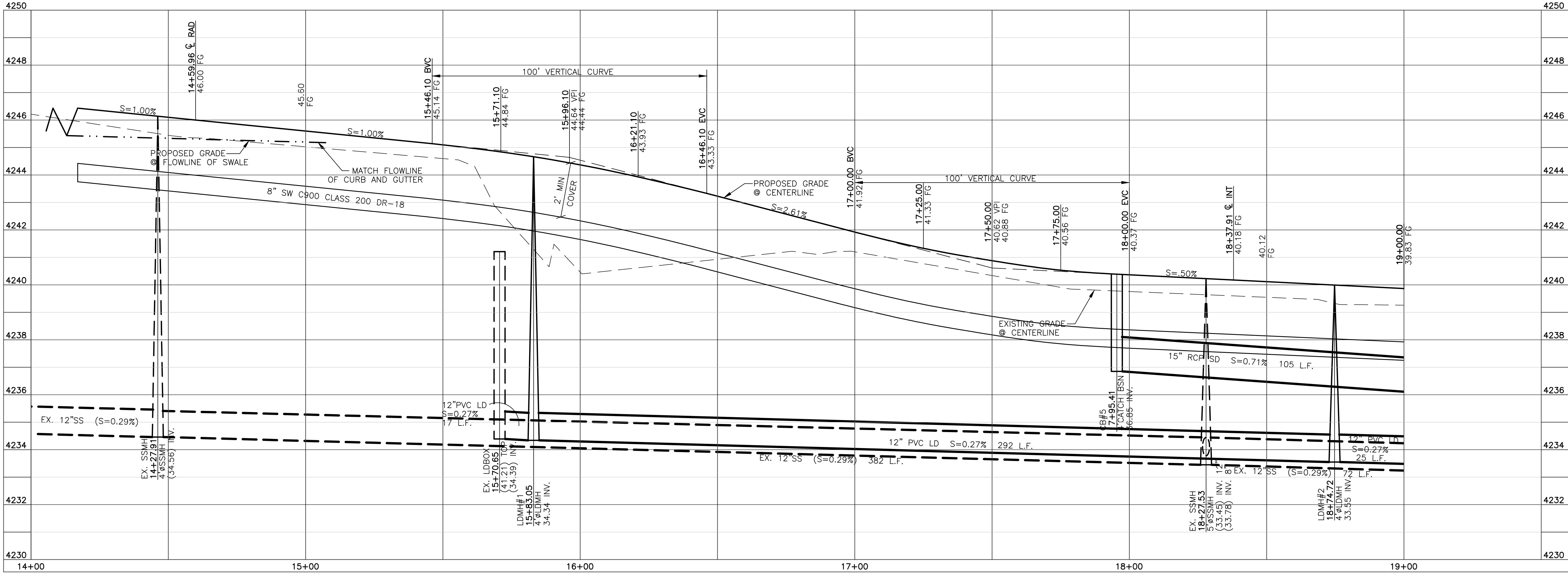
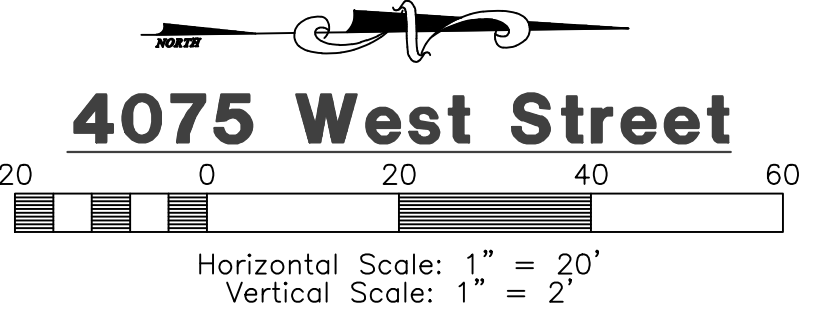
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Call: Toll Free 1-800-662-4111
Two Working Days Before You Dig



TEMPORARY TURNAROUND TO BE CONSTRUCTED PER WEBER COUNTY PUBLIC WORKS STANDARDS AND SPECIFICATIONS.



Drainage Ditch
SCALE: NONE

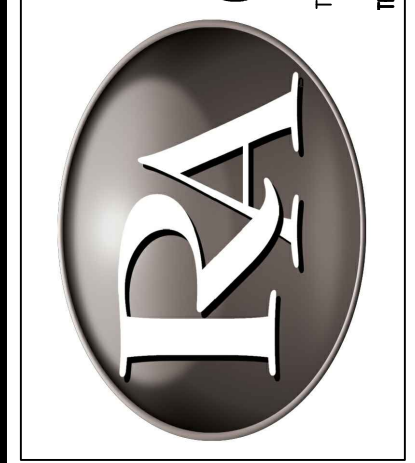


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Construction Notes:

- ALL CONSTRUCTION IS TO CONFORM TO THE STANDARD DRAWINGS AND SPECIFICATIONS OF WEBER COUNTY.
- CULINARY WATER**
W/10 - 10" PVC C-900 CLASS 200 WATER
- STORM DRAIN**
SD/15 - 15" RCP STORM DRAIN
SD/15 ARCH - 15" ARCH RCP STORM DRAIN
- SANITARY SEWER**
SS/8 - 8" PVC C-900 SEWER LINE
SS/12 - 12" PVC C-900 SEWER LINE
- SECONDARY WATER**
SW/8 - 8" PVC C-900 SECONDARY WATER LINE
- LAND DRAIN**
LD/12 - 12" PVC C-900 LAND DRAIN LINE

Reeve & Associates, Inc.
920 CHAMBERS STREET, SUITE 14, OGDEN, UTAH 84403
TEL: (801) 621-3100 FAX: (801) 621-2666 WWW.REEVE-ASSOC.COM
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REVISIONS	DATE	DESCRIPTION
6-23-15	RH	County Comments
7-22-15	RH	County Comments
9-17-15	RH	County Comments
11-12-15	RH	County Comments
11-25-15	RH	County Comments
12-12-16	RH	Hooper Irr. Comm.
1-17-17	RH	New Owner

Cameron Crossing Subdivision
WEBER COUNTY, UTAH
4075 West Street
14+00.00 - 19+00.00

Revised: 1-17-17

Project Info.
Engineer: J. NATE REEVE, P.E.
Drafted: R. HANSEN
Begin Date: JUNE 10, 2014
Name: CAMERON CROSSING SUBDIVISION
Number: 3442-A47

Sheet **12**
4 Sheets

Construction Notes:

1) ALL CONSTRUCTION IS TO CONFORM TO THE STANDARD DRAWINGS AND SPECIFICATIONS OF WEBER COUNTY.

CULINARY WATER

W/10 - 10" PVC C-900 CLASS 200 WATER

STORM DRAIN

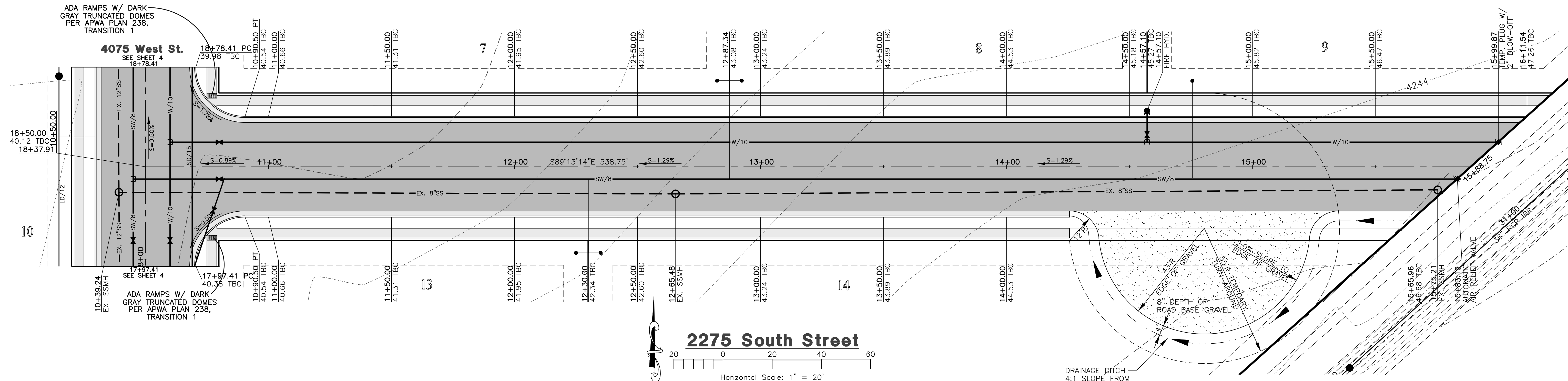
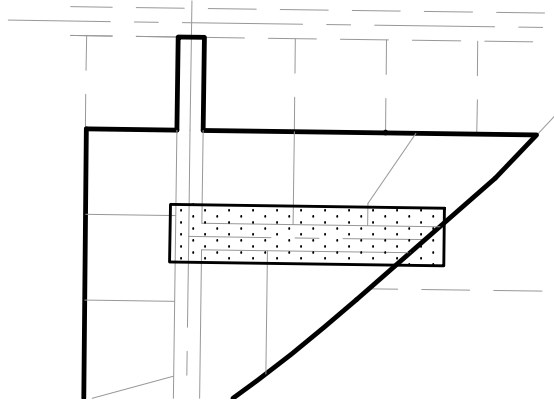
SD/15 - 15" RCP STORM DRAIN
SD/15 ARCH - 15" ARCH RCP STORM DRAIN

SANITARY SEWER

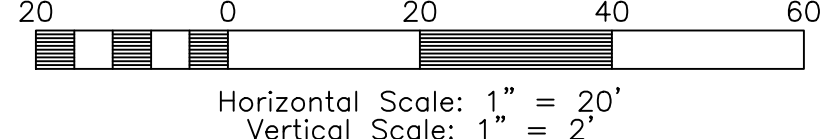
SS/8 - 8" PVC C-900 SEWER LINE
SS/12 - 12" PVC C-900 SEWER LINE

SECONDARY WATER

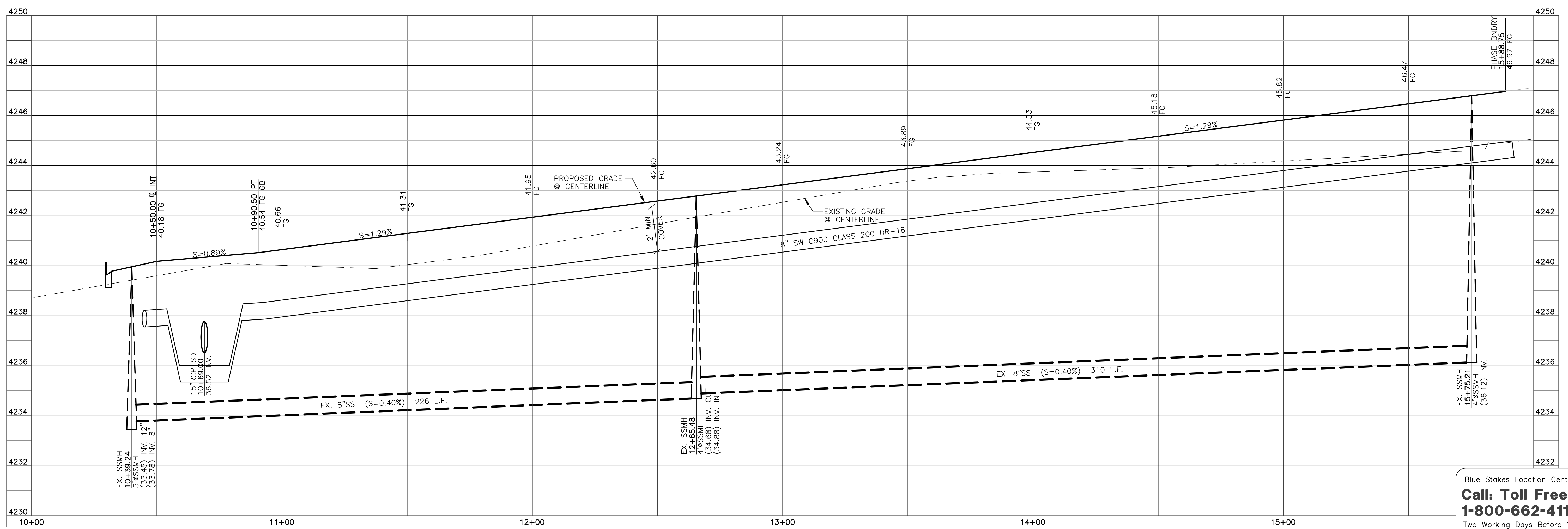
SW/8 - 8" PVC C-900 SECONDARY WATER LINE



2275 South Street



TEMPORARY TURNAROUND TO BE CONSTRUCTED PER WEBER COUNTY PUBLIC WORKS STANDARDS AND SPECIFICATIONS.

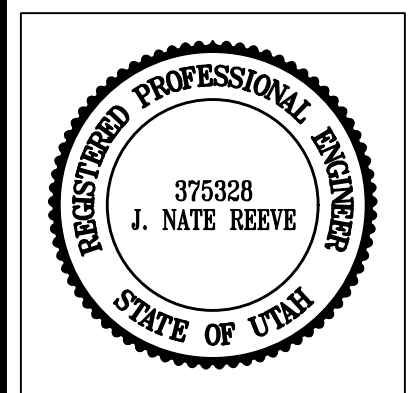


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DATE	DESCRIPTION
6-23-15	RH County Comments
7-22-15	RH County Comments
9-17-15	RH County Comments
11-12-15	RH County Comments
11-25-15	RH County Comments
12-12-16	RH Hooper Irr. Comm.
1-17-17	RH New Owner

Cameron Crossing Subdivision
WEBER COUNTY, UTAH
2275 South Street
10+00.00 - 15+50.00



Project Info.
Engineer: J. NATE REEVE, P.E.
Drafted: R. HANSEN
Begin Date: JUNE 10, 2014
Name: CAMERON CROSSING SUBDIVISION
Number: 3442-A47

Sheet **12**
5 Sheets

DATE	DESCRIPTION
6-23-15	RH County Comments
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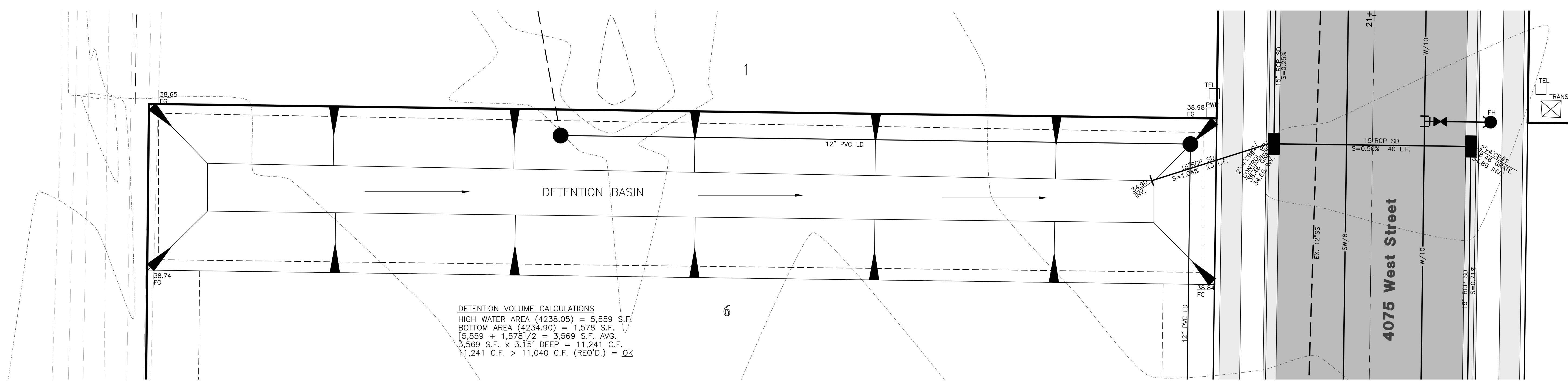
Cameron Crossing Subdivision
 WEBER COUNTY, UTAH
Detention Basin

Revised: 1-17-17

REGISTERED PROFESSIONAL ENGINEER
 375328
 J. NATE REEVE
 STATE OF UTAH

Project Info.
 Engineer: J. NATE REEVE, P.E.
 Drafter: R. HANSEN
 Begin Date: JUNE 10, 2014
 Name: CAMERON CROSSING SUBDIVISION
 Number: 3442-A47

Sheet **12**
6 Sheets



DETENTION VOLUME CALCULATIONS
 HIGH WATER AREA (4238.05) = 5,559 S.F.
 BOTTOM AREA (4234.90) = 1,578 S.F.
 $(5,559 + 1,578) / 2 = 3,569$ S.F. AVG.
 $3,569$ S.F. x $3.15'$ DEEP = $11,241$ C.F.
 $11,241$ C.F. > $11,040$ C.F. (REQ'D.) = **OK**

Storm Runoff Calculations
Blue Acres Subdivision - Phase 4
 8/19/2015 skt

The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Weber County, UT area taken from data compiled by NOAA Atlas 14, using a 100 year storm.

Runoff storm water has been calculated for two different sets of conditions, one being the existing undeveloped land and the other with land fully improved. The difference between the two quantities will be detained in a holding pond. All water that runs off and over the property at present will be diverted into the holding pond and released at a reduced rate into the existing drainage system.

The calculations are as follows:

- Runoff from the undeveloped existing land.

Runoff Coefficient	C = 0.200
Rainfall Intensity	i = 2.81 IN/HR.
Runoff Quantity	Q = 0.1 per acre
Acreage	A = 6.40 ACRES

$Q(out) = A \times 0.1 = 0.64$ CFS
- Runoff from developed land

Runoff Coefficients		
Paved Area	30,671	C = 0.9
Landscaped Area	222,225	C = 0.2
Roof	25,931	C = 0.8
Weighted Runoff Coefficient		C = 0.33

Rainfall Intensity i = varies with time
 Runoff Quantity Q = CIA
- Detention Basin

Volume in	Q * t
Volume out	0.64 * t

The capacity of the detention basin is calculated as the maximum difference between the volume flowing in and the volume flowing out.

The outflow from the detention basin is limited to outflow if undeveloped.
 Use 0.64 cfs for Q outflow

The required volume of the detention basin is 11,040 cubic feet

USE A 3.7 INCH DIAMETER ORIFICE AT OUTLET

