



WATTS ENTERPRISES TRAPPERS RIDGE AT WOLF CREEK P.R.U.D. PHASE 8 CONSTRUCTION DOCUMENTS

PROJECT CONTACTS

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CONTACT: FRANK NAMDAR
EMAIL: FNAMDAR@EARTHTECENG.COM

UTILITY CONTACTS

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EDEN, UT 84310
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CONTACT: ROB THOMAS
EMAIL: RTHOMAS@WCWSID.COM

SECONDARY IRRIGATION
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EDEN, UT 84310
TEL: (801) 745-3435
CONTACT: ROB THOMAS
EMAIL: RTHOMAS@WCWSID.COM

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STORM SEWER
WEBER COUNTY
2380 WASHINGTON BLVD, SUITE 240
OGDEN, UT 84401
TEL: (801) 399-8374
CONTACT: BLAINE FRANSEN
EMAIL: BFRANSEN@CO.WEBER.UT.US

ELECTRIC
ROCKY MOUNTAIN POWER
1407 WEST NORTH TEMPLE
SALT LAKE CITY, UT 84116
TEL: (801) 531-8993
CONTACT: JOEL SIMMONS
EMAIL: JSDEPT@PACIFICORP.COM

GAS
QUESTAR GAS COMPANY
333 SOUTH STATE STREET
SALT LAKE CITY, UT 84145
TEL: (801) 324-3970
CONTACT: MAPPING DEPT.
EMAIL: -

TELEPHONE
CENTURYLINK LOCAL NETWORK
TEL: (801) 974-8130
CONTACT: ARLENE DENNEY
EMAIL: ARLENE.DENNEY@CENTURYLINK.COM

FIRE
WEBER FIRE DISTRICT
2023 WEST 1300 NORTH
OGDEN, UT 84404
TEL: (801) 782-3550
CONTACT: -
EMAIL: -

JURISDICTIONAL CONSTRUCTION NOTES

ALL IRRIGATION PIPE AND FITTINGS ARE TO MEET WOLF CREEK WATER & SEWER IMPROVEMENT DISTRICT STANDARDS AND SPECIFICATIONS.

ALL IRRIGATION PIPING AND FITTINGS IS TO BE C-900 PVC AND MUELLER FITTINGS (TEES, HYDRANTS, VALVES, ETC. UNLESS APPROVED OTHERWISE BY THE ENGINEER.

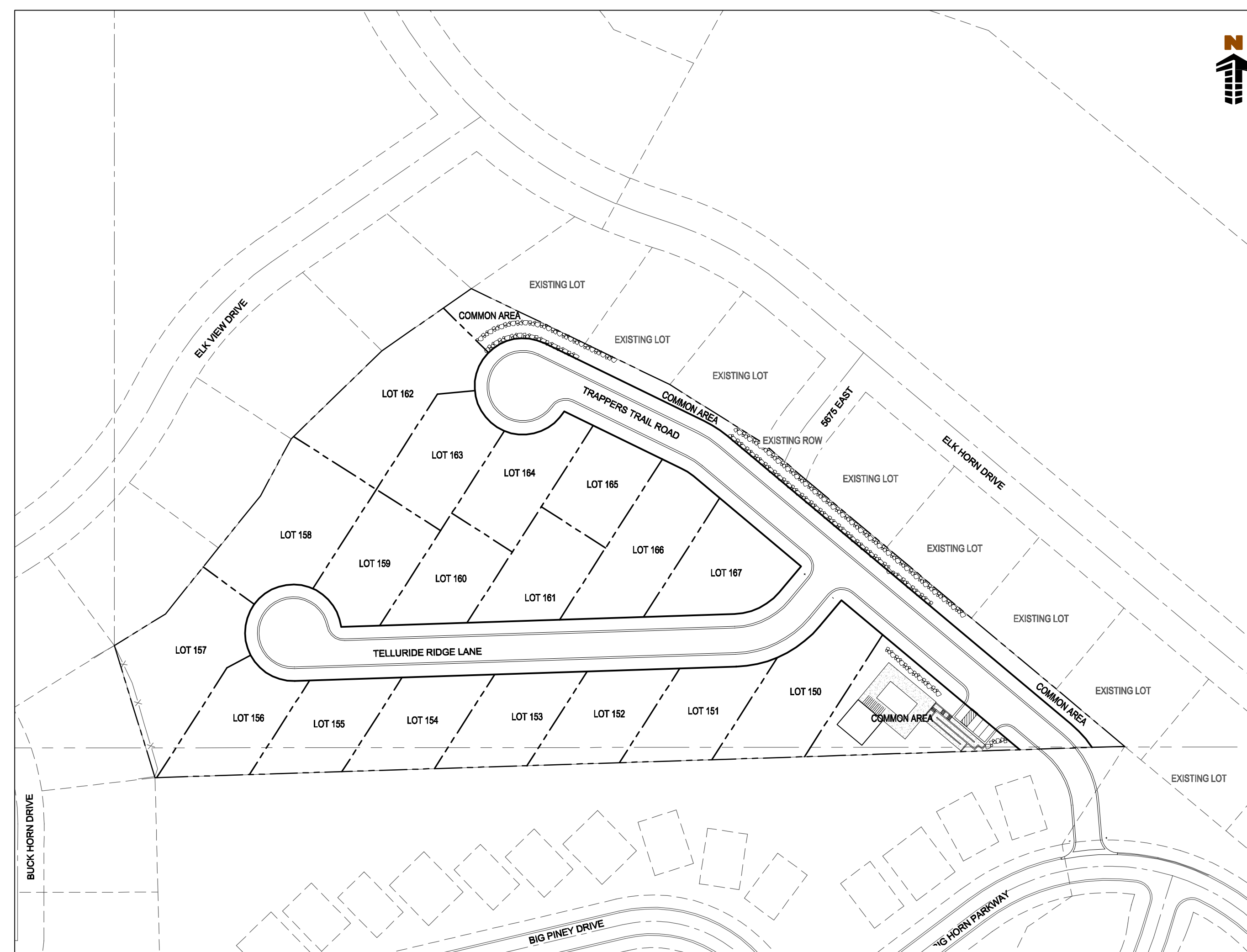
ALL CULINARY WATER PIPE AND FITTINGS IS TO BE C-900 PVC AND MUELLER FITTINGS (TEES, HYDRANTS, VALVES, ETC. UNLESS APPROVED OTHERWISE BY THE ENGINEER.

ALL IRRIGATION LINES ARE REQUIRED TO MAINTAIN A MINIMUM OF 3' OF COVER TO FINISH GRADE.

ALL CULINARY LINES ARE REQUIRED TO MAINTAIN A MINIMUM OF 5' OF COVER TO FINISH GRADE.

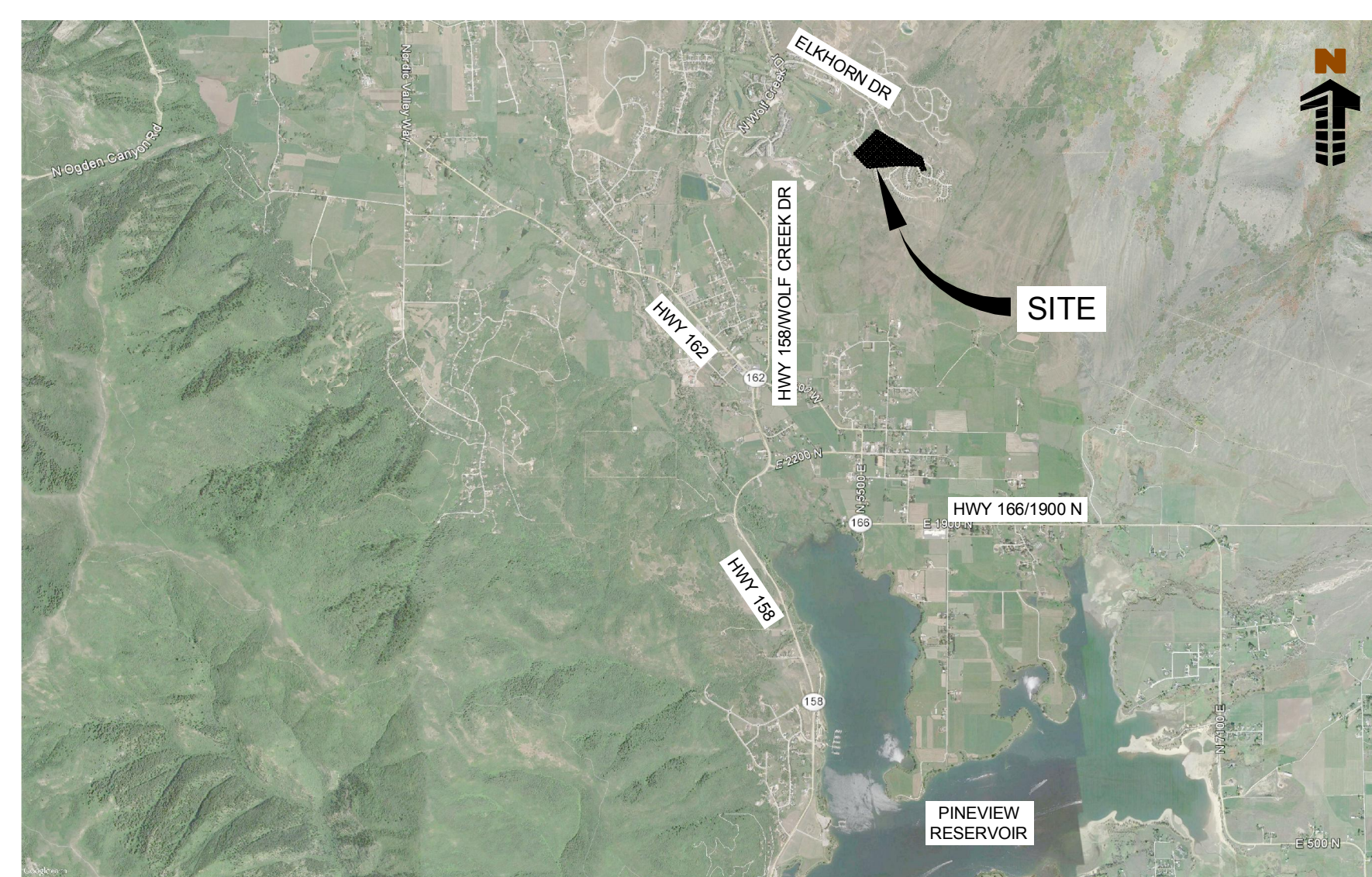
REFERENCE WOLF CREEK WATER & SEWER IMPROVEMENT DISTRICT (WCWSID) STANDARDS AND SPECIFICATIONS FOR ALL WATER, SEWER, AND SECONDARY IRRIGATION IMPROVEMENTS.

REFERENCE THE LATEST EDITION OF THE APWA (AND ALL AMENDMENTS) FOR STORM DRAIN IMPROVEMENTS.



SITE MAP

SCALE: 1"=100'



VICINITY MAP
NOT TO SCALE

SHEET INDEX		
# of 24	SHEET NUMBER	SHEET TITLE
1	C0.0	COVER SHEET
		SUBDIVISION PLAT
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3	UT01	OVERALL UTILITY PLAN
4	GR01	OVERALL GRADING PLAN
5	PP01	PLAN & PROFILE TRAPPERS TRAIL ROAD
6	PP02	PLAN & PROFILE TRAPPERS TRAIL ROAD
7	PP03	PLAN & PROFILE TELLURIDE RIDGE LANE
8	PP04	PLAN & PROFILE TELLURIDE RIDGE LANE
9	PP05	PLAN & PROFILE ONSITE STORM DRAIN OUTFALL
10	PP06	PLAN & PROFILE ONSITE STORM DRAIN OUTFALL
11	PP07	PLAN & PROFILE OFFSITE STORM DRAIN
12	EC01	EROSION CONTROL PLAN
13	EC02	EROSION CONTROL DETAILS (APWA)
14	EC03	EROSION CONTROL DETAILS (APWA)
15	EC04	EROSION CONTROL DETAILS (APWA)
16	DT01	SANITARY SEWER DETAILS (APWA)
17	DT02	SANITARY SEWER DETAILS (APWA)
18	DT03	WATER DETAILS (WCWSID)
19	DT04	STORM DRAIN DETAILS (APWA)
20	DT05	STORM DRAIN DETAILS (APWA)
21	DT06	STORM DRAIN DETAILS (APWA)
22	DT07	SITE DETAILS (APWA)
23	DT08	VARIOUS DETAILS
24	DT09	STREET LIGHT DETAILS

GENERAL NOTES:

- THE SITEWORK SHALL MEET OR EXCEED THE LATEST APWA STANDARD SITE SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES. THESE AND THE FINAL CONNECTIONS OF SERVICES SHALL BE COMPLETED 30 DAYS PRIOR TO STORE POSSESSION.
- QUESTAR GAS FIELD ENGINEER TO DETERMINE THE FINAL LOCATION FOR ALL GAS LINES.
- ROCKY MOUNTAIN POWER FIELD ENGINEER TO DETERMINE THE FINAL LOCATION OF ELECTRIC LINES.
- ENTIRE INSTALLATION SHALL MEET ALL APPLICABLE CODES.
- VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE.
- SET PROPERTY CORNER PINS IN CONCRETE. IF PROPERTY CORNERS ARE DESTROYED BY CONTRACTOR, THE CONTRACTOR SHALL BEAR THE EXPENSE OF RELOCATING CORNERS BY A REGISTERED SURVEYOR.
- CONTRACTOR TO PROVIDE GENERAL YARD AND BUILDING CLEAN-UP AT COMPLETION OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT INFORMATION ON A SET OF RECORD DRAWINGS KEPT ON THE CONSTRUCTION SITE, AND AVAILABLE TO THE CITY, ITS AGENTS, OWNER OR ENGINEER AT ALL TIMES. DIMENSIONS SHALL BE ANNOTATED ON AS-BUILT RECORD DRAWINGS. AS-BUILT DRAWINGS ARE REQUIRED PRIOR TO ISSUANCE OF FINAL PAYMENT. AS-BUILT DRAWINGS WILL BE SUPPLIED TO OWNER AND CITY/TOWN PRIOR TO FINAL PAYMENT.
- CONTRACTOR RESPONSIBLE FOR ALL WORK NECESSARY FOR FINAL ACCEPTANCE OF WORK FROM CITY, UTILITY DISTRICTS OR ANY OTHER GOVERNING AGENCY, INCLUDING BUT NOT LIMITED TO AS-BUILT DRAWINGS, INSPECTIONS, TESTING REPORTS AND CERTIFICATIONS.
- THE GENERAL CONTRACTOR'S SURVEYOR SHALL VERIFY ALL HORIZONTAL CONTROL, DIMENSIONING PRIOR TO CONSTRUCTION STAKING. SURVEYOR MUST VERIFY ALL BENCHMARK, BASIS OF BEARING AND DATUM INFORMATION TO ENSURE IMPROVEMENTS WILL BE AT THE SAME HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE DESIGN CONSTRUCTION DRAWINGS. PRIOR TO CONSTRUCTION STAKING ANY DISCREPANCY MUST BE REPORTED TO OWNER AND ENGINEER PRIOR TO CONTINUATION OF ANY FURTHER STAKING OR CONSTRUCTION WORK.
- CONTRACTOR TO PROVIDE ALL EQUIPMENT AND PERSONNEL REQUIRED FOR FINAL APPROVAL OF ALL FACILITIES BY OWNER'S REPRESENTATIVE.
- NO WORK IS TO BEGIN UNTIL ALL PERMITS HAVE BEEN OBTAINED.
- FINAL GRADES ARE SUBJECT TO MINOR CHANGE BY OWNER REPRESENTATIVE. NO GRADE CHANGES IN EXCESS OF 0.05' WITHOUT OWNER APPROVAL.
- ALL SPOT GRADES SHOWN ARE TO FLOWLINE UNLESS OTHERWISE NOTED.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MINIMIZING DEPOSITION OF ONSITE SEDIMENTS ONTO SURROUNDING PUBLIC STREETS DURING CONSTRUCTION. REFER TO EROSION CONTROL PLANS AND DETAILS FOR INFORMATION.
- GENERAL CONTRACTOR TO PROVIDE BARRICADE PROTECTION WITH FLASHING LIGHTS AROUND ALL FOOTINGS, EXCAVATIONS AND ALL OFFSITE WORK.
- PROPOSED FLOWLINE ELEVATIONS DO NOT TAKE INTO ACCOUNT GUTTER DEPRESSIONS AT INLETS.
- ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
- CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE OR AS REQUIRED BY UTILITY PROVIDER.
- SANITARY SEWER PIPE SHALL BE AS INDICATED ON THE UTILITY PLANS.
- WATER LINES SHALL BE AS INDICATED ON THE UTILITY PLANS.
- MINIMUM TRENCH WIDTH SHALL BE IN ACCORDANCE WITH THE GOVERNING AGENCIES CONSTRUCTION & DEVELOPMENT STANDARDS.
- ALL WATER JOINTS ARE TO BE IN ACCORDANCE WITH WCWSID POLICY CONSTRUCTION & DEVELOPMENT STANDARDS.
- ALL WATER AND SEWER UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) MIN. OR WHEN CROSSING 18" VERTICAL CLEARANCE MIN. (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE) UNLESS OTHERWISE INDICATED ON THE PLANS AND CONSISTENT WITH WCWSID CONSTRUCTION & DEVELOPMENT STANDARDS.
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5'-0" COVER ON ALL WATER LINES IN ACCORDANCE WITH WCWSID CONSTRUCTION & DEVELOPMENT STANDARDS.
- LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF WCWSID DISTRICT WITH REGARD TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
- TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS IN UNPAVED AREAS. ALL MANHOLES SHALL HAVE WATER TIGHT LIDS.
- EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF WCWSID DISTRICT WITH REGARD TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
- CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES.
- CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.

BENCHMARK

BENCHMARK: THE SITE BENCHMARK IS THE CENTER OF SECTION 22 TOWNSHIP 7 NORTH RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN. FOUND 3" WEBER COUNTY BRASS CAP. ELEVATION = 5324.27'

NOTE: CONTRACTOR RESPONSIBLE FOR AS-BUILT DRAWINGS, TESTS, REPORTS AND/OR ANY OTHER CERTIFICATES OR INFORMATION AS REQUIRED FOR ACCEPTANCE OF WORK FROM CITY, UTILITY DISTRICTS OR ANY OTHER GOVERNING AGENCY.

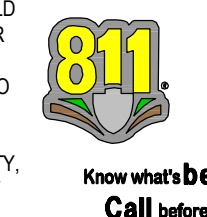
NOTE: CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION. CONTRACTOR SHALL HAVE LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THEIR COST.

BASIS OF BEARING

THE NORTH LINE OF THE SOUTHWEST QUARTER OF SECTION 22 T.7N. R.1E. SALT LAKE BASE AND MERIDIAN, MONUMENTED ON THE WEST BY A 3" BRASS CAP, STAMPED WEBER COUNTY, AND ON THE EAST BY A 3" BRASS CAP, STAMPED WEBER COUNTY, AND IS CONSIDERED TO BEAR S89°14'39"E.

CAUTION - NOTICE TO CONTRACTOR

- ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE FIELD LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT. PRIOR TO CONSTRUCTION, REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
- WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POT-HOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.



Project No: WAT02.01
Drawn By: JST
Checked By: RMP
Date: 8/17/2016

COVER SHEET

C0.0
Sheet 1 of 24

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WATTS ENTERPRISES
TRAPPERS RIDGE AT WOLF CREEK
P.R.U.D. PHASE 8
EDEN, UTAH 84310



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**WATTS ENTERPRISES
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 P.R.U.D. PHASE 8**

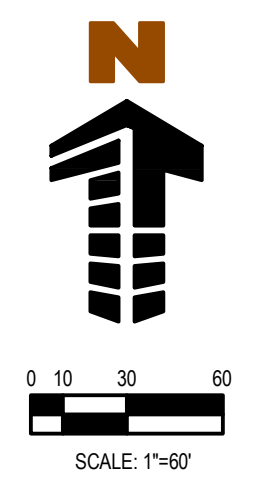
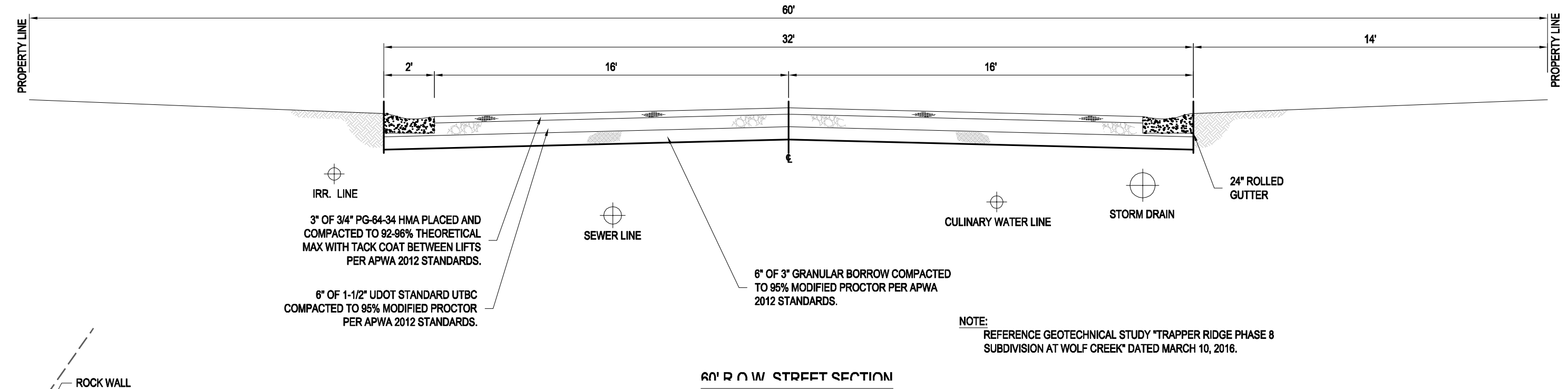
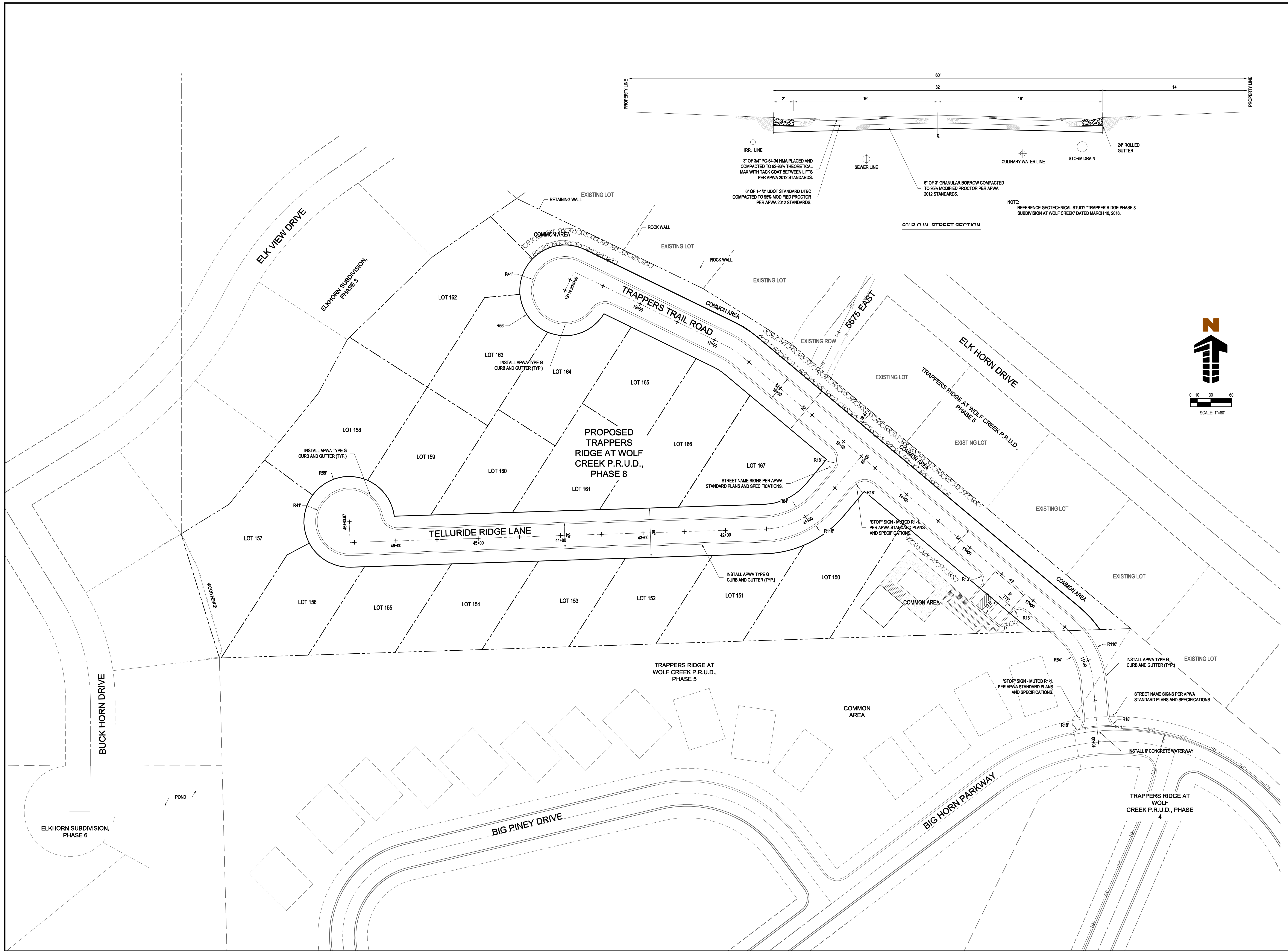
EDEN, UTAH 84310

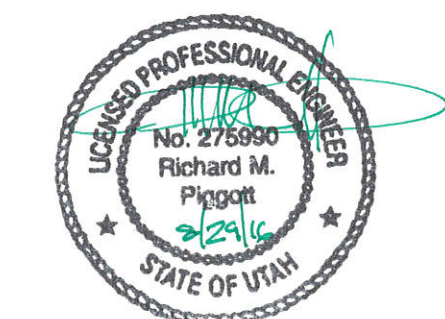
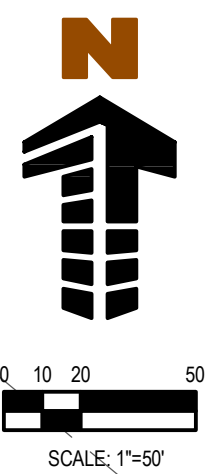
#	Date	Issue / Description	Init.

Project No:	WAT02.01
Drawn By:	JST
Checked By:	RMP
Date:	8/17/2016

OVERALL SITE PLAN

SP01
 Sheet 2 of 24





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WATTS ENTERPRISES
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P.R.U.D. PHASE 8

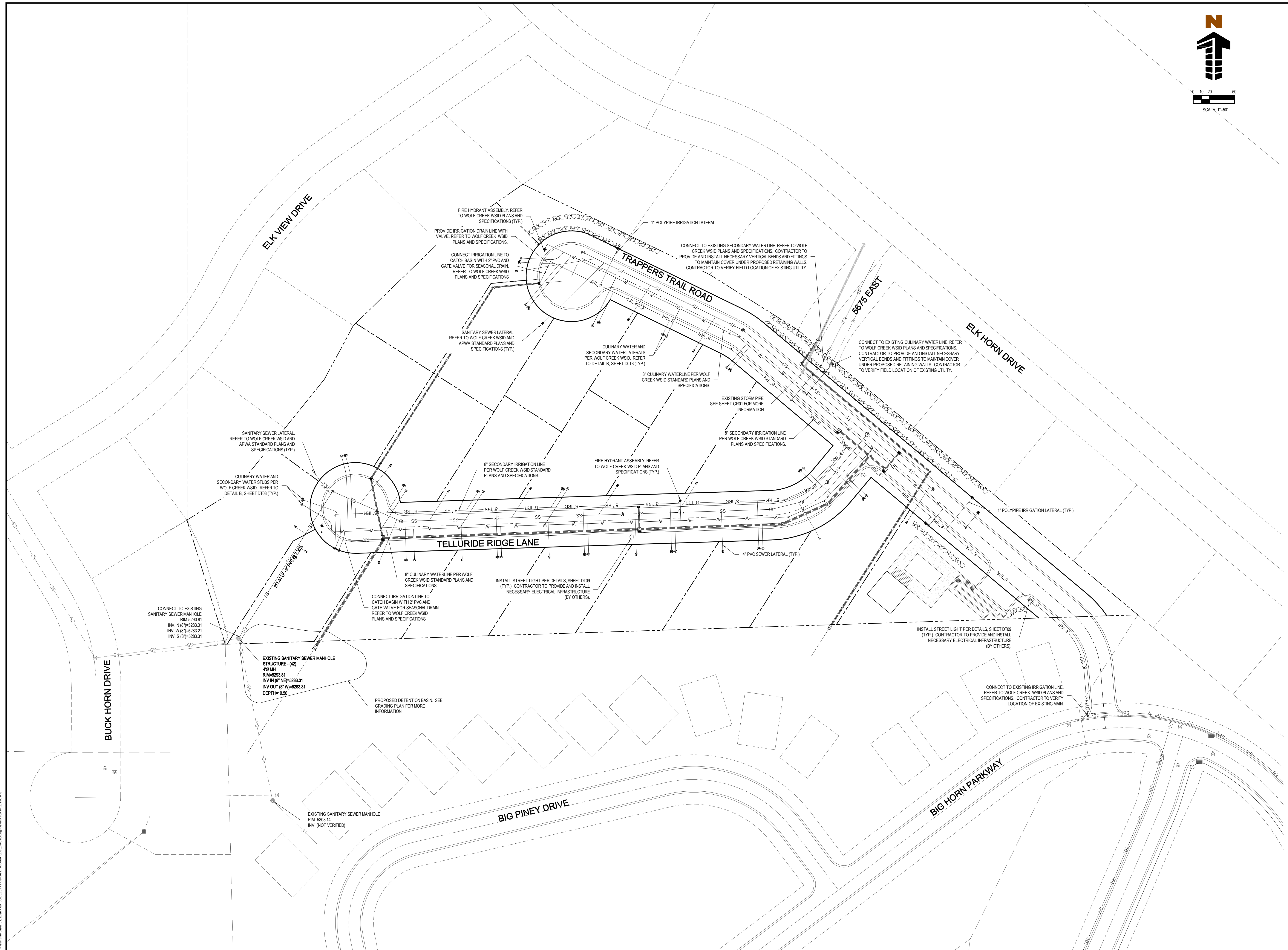
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#	Date	Issue / Description	Init.

Project No: WAT02.01
 Drawn By: JST
 Checked By: RMP
 Date: 8/17/2016

OVERALL UTILITY PLAN

UT01
Sheet 3 of 24



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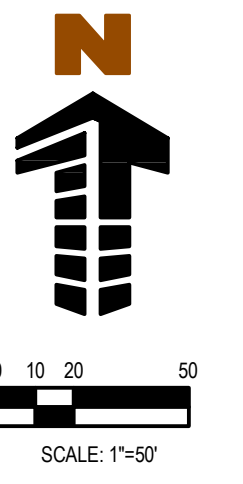
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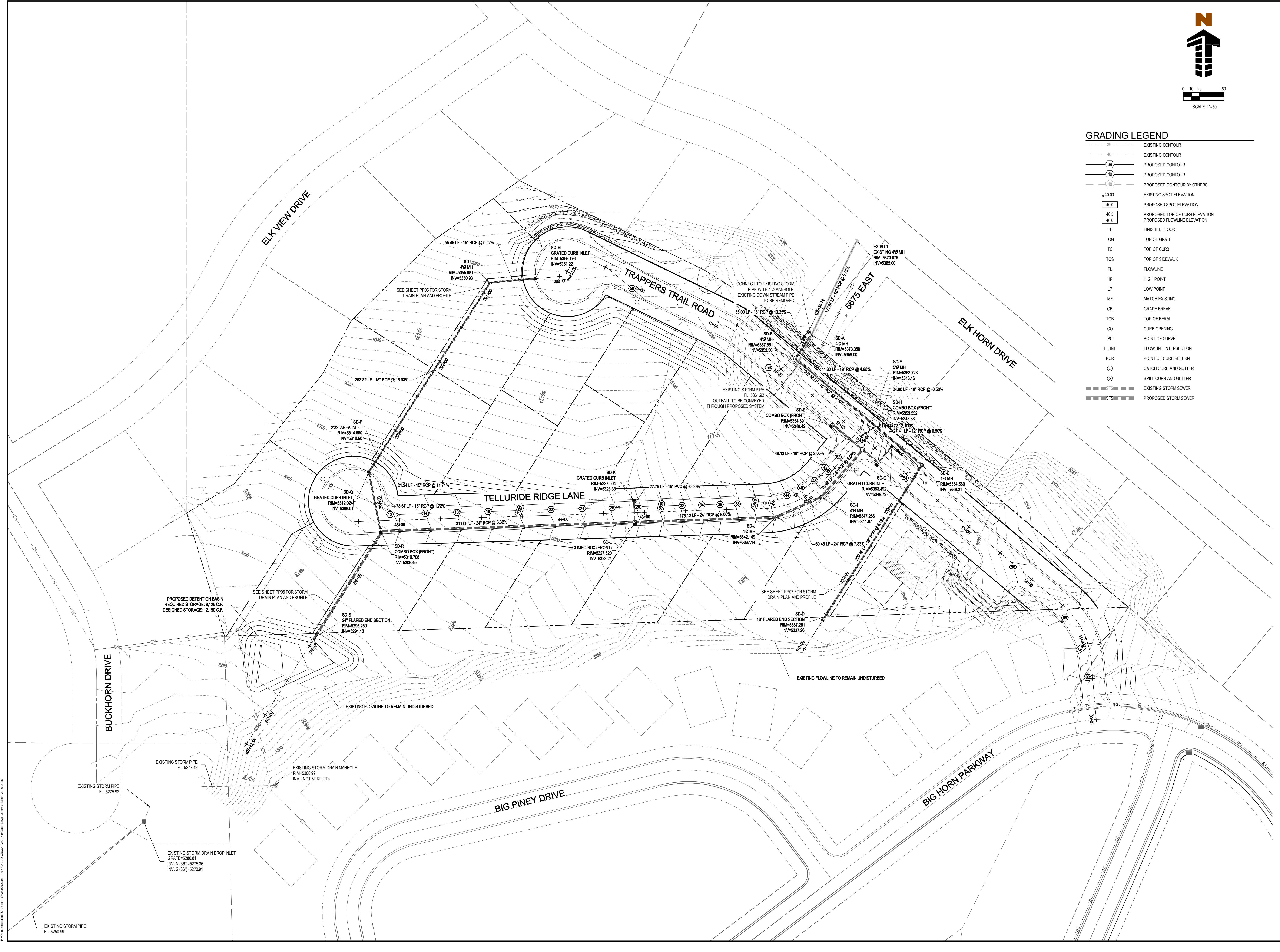
Project No:	WAT02.01
Drawn By:	JST
Checked By:	RMP
Date:	8/17/2016

OVERALL GRADING PLAN



GRADING LEGEND

- - - - -	EXISTING CONTOUR
— — — — —	EXISTING CONTOUR
(30)	PROPOSED CONTOUR
(40)	PROPOSED CONTOUR
(40)	PROPOSED CONTOUR BY OTHERS
▲ 40.00	EXISTING SPOT ELEVATION
□ 40.0	PROPOSED SPOT ELEVATION
□ 40.5	PROPOSED TOP OF CURB ELEVATION
□ 40.0	PROPOSED FLOWLINE ELEVATION
FF	FINISHED FLOOR
TOG	TOP OF GRATE
TC	TOP OF CURB
TOS	TOP OF SIDEWALK
FL	FLOWLINE
HP	HIGH POINT
LP	LOW POINT
ME	MATCH EXISTING
GB	GRADE BREAK
TOB	TOP OF BERM
CO	CURB OPENING
PC	POINT OF CURVE
FL INT	FLOWLINE INTERSECTION
PCR	POINT OF CURB RETURN
(C)	CATCH CURB AND GUTTER
(S)	SPILL CURB AND GUTTER
— — — — —	EXISTING STORM SEWER
— — — — —	PROPOSED STORM SEWER



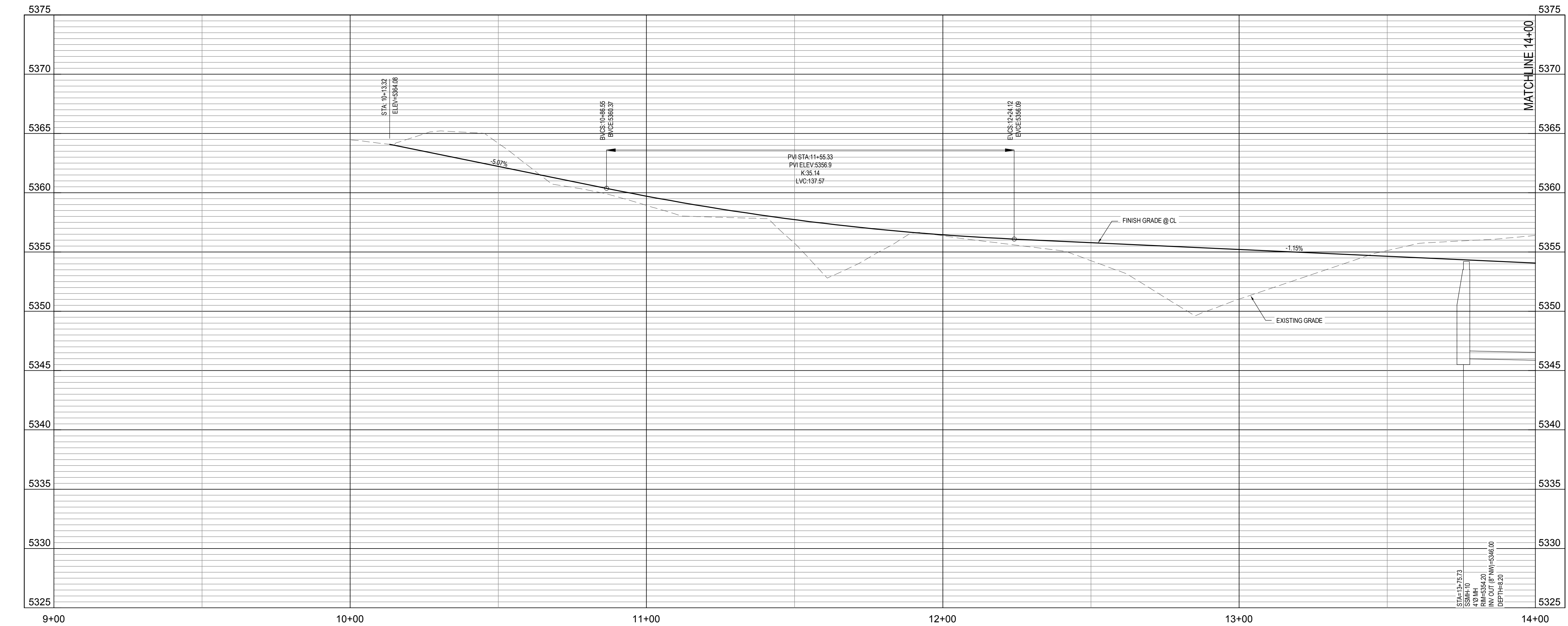
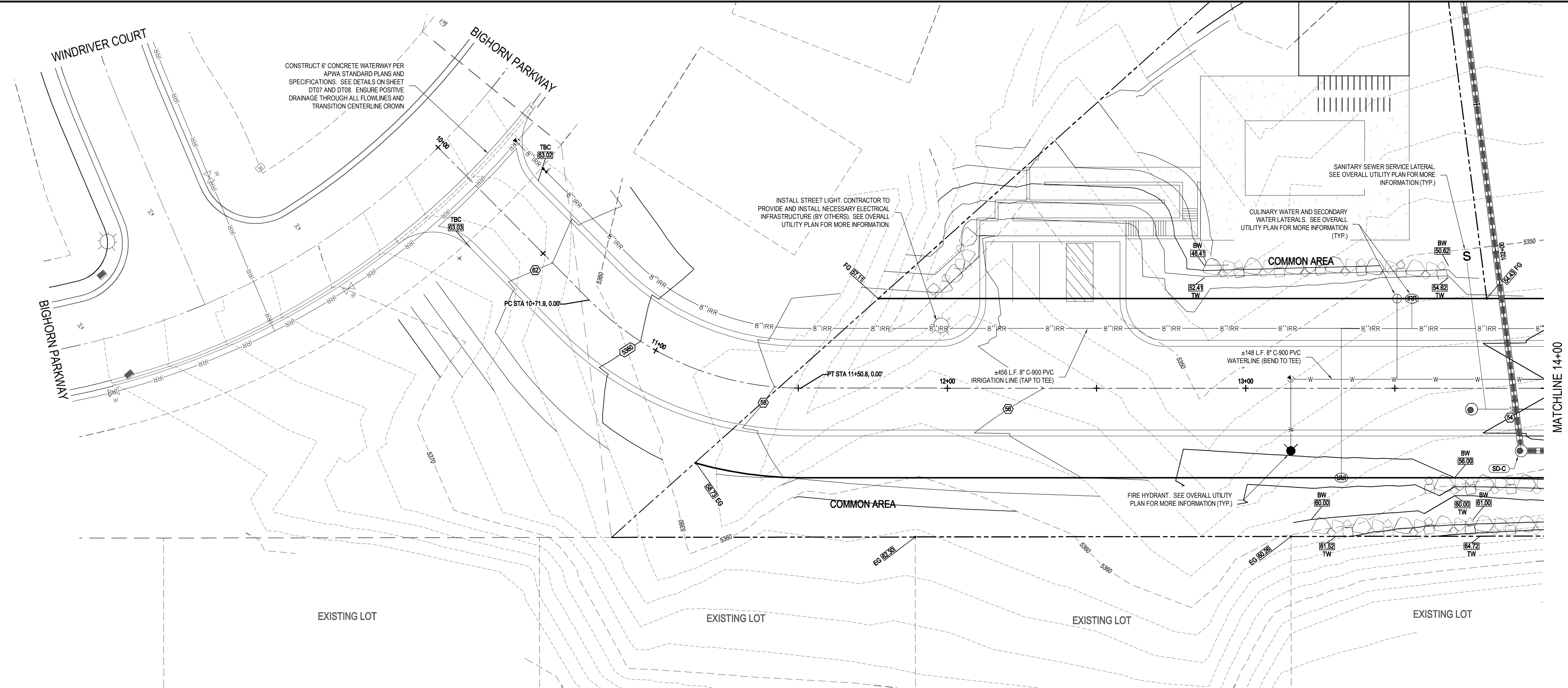
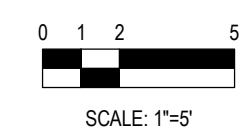
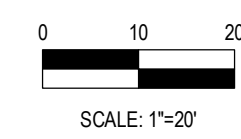
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#	Date	Issue / Description	Init.

Project No: WAT02.01
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PLAN & PROFILE
 TRAPPERS TRAIL ROAD

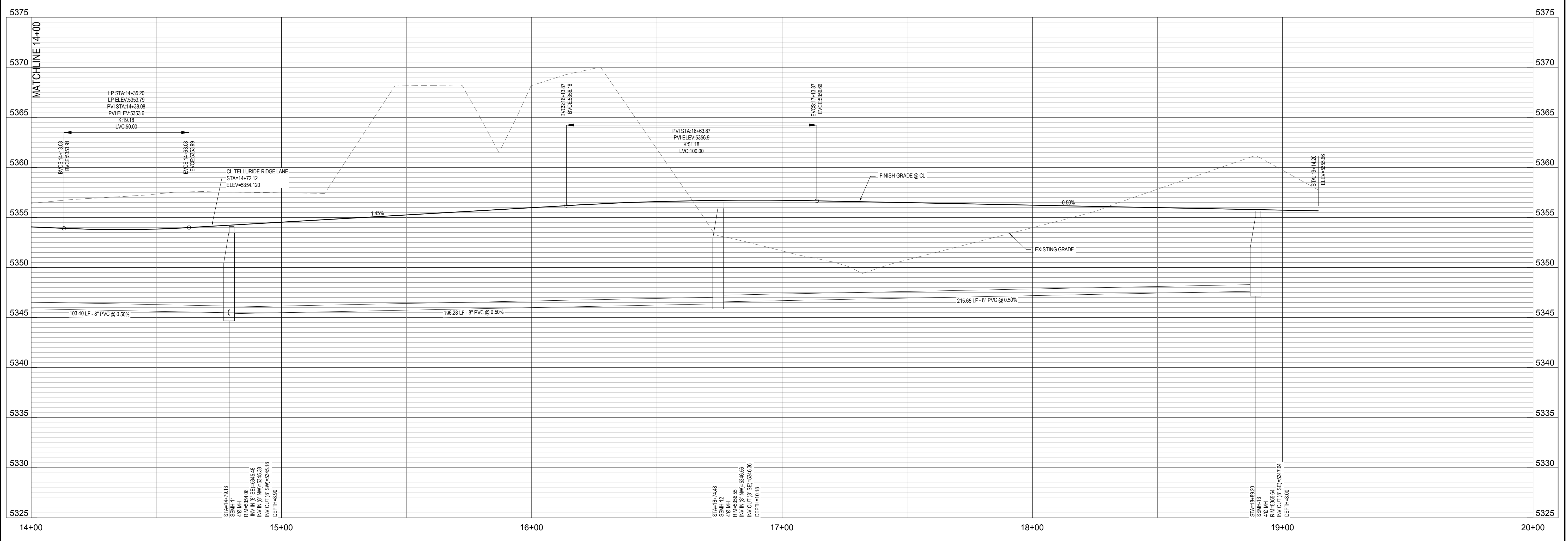
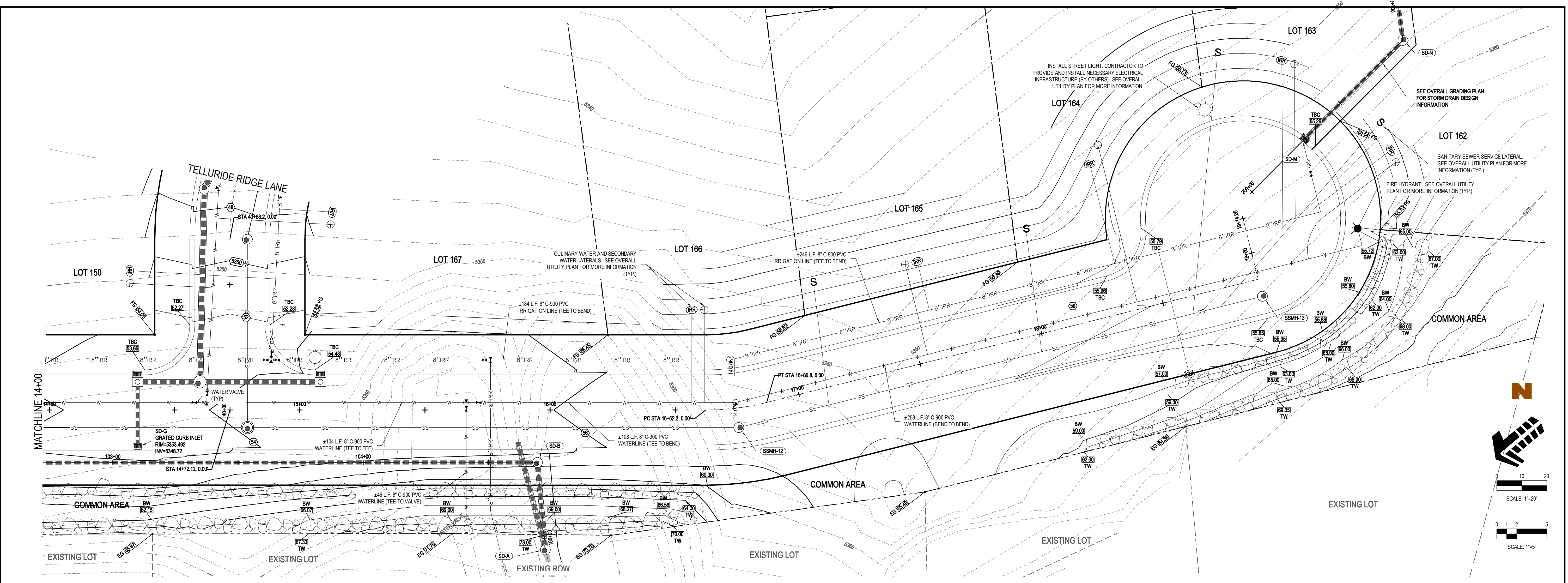
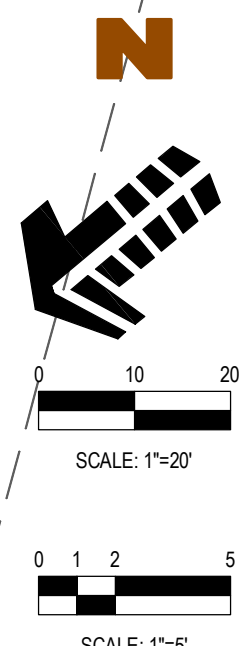
- ### LEGEND
- PROPERTY BOUNDARY LINE
 - PROPOSED RIGHT-OF-WAY
 - PROPOSED LOT LINE
 - PROPOSED DRAINAGE EASEMENT
 - PROPOSED ROADWAY CENTERLINE
 - ADJACENT PROPERTY CENTERLINE
 - SECTION LINE
 - EASEMENT BOUNDARY LINE
 - ADJACENT RIGHT-OF-WAY
 - ◇ SITE LIGHTING
 - ◇ EXISTING STREET LIGHT
 - ◇ EXISTING FIRE HYDRANT
 - PROPOSED FIRE HYDRANT
 - PROPOSED MANHOLE COVER
 - EXISTING MANHOLE COVER
 - PROPOSED MANHOLE COVER
 - UTILITY PEDESTAL
 - EXISTING INLET
 - PROPOSED INLET



PROFILE TRAPPERS TRAIL ROAD: STA 9+00 TO STA 14+00



Watts
ENTERPRISES



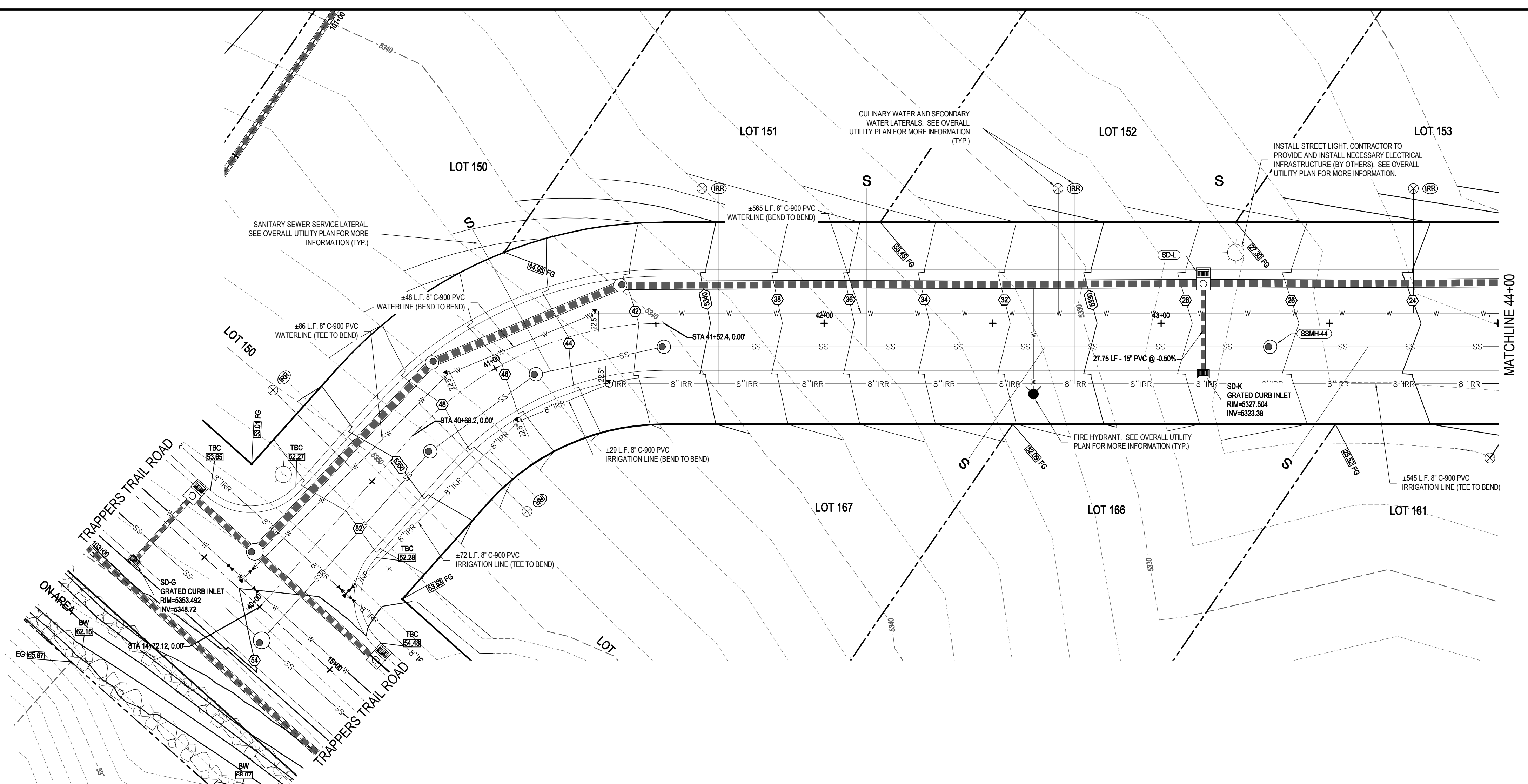
PROFILE TRAPPERS TRAIL ROAD: STA 14+00 TO STA 20+00

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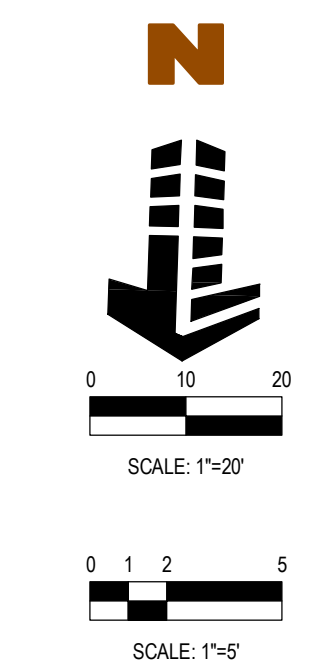
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PLAN & PROFILE
TRAPPERS TRAIL ROAD



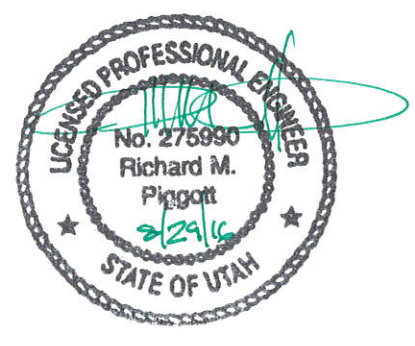
LEGEND

- PROPERTY BOUNDARY LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED LOT LINE
- PROPOSED DRAINAGE EASEMENT
- PROPOSED ROADWAY CENTERLINE
- ADJACENT PROPERTY BOUNDARY LINE
- SECTION LINE
- EASEMENT BOUNDARY LINE
- ADJACENT RIGHT-OF-WAY
- SITE LIGHTING
- EXISTING STREET LIGHT
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE COVER
- PROPOSED MANHOLE COVER
- UTILITY PEDESTAL
- EXISTING INLET
- PROPOSED INLET



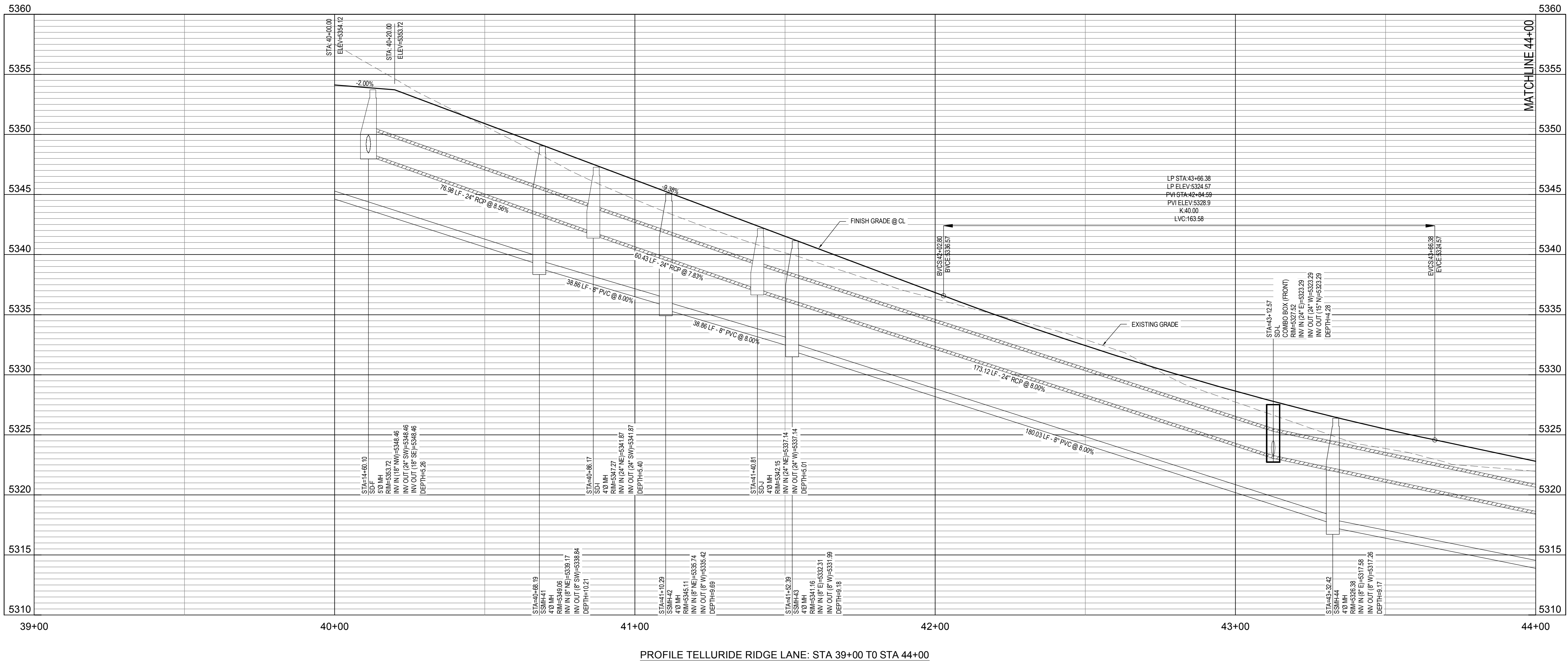
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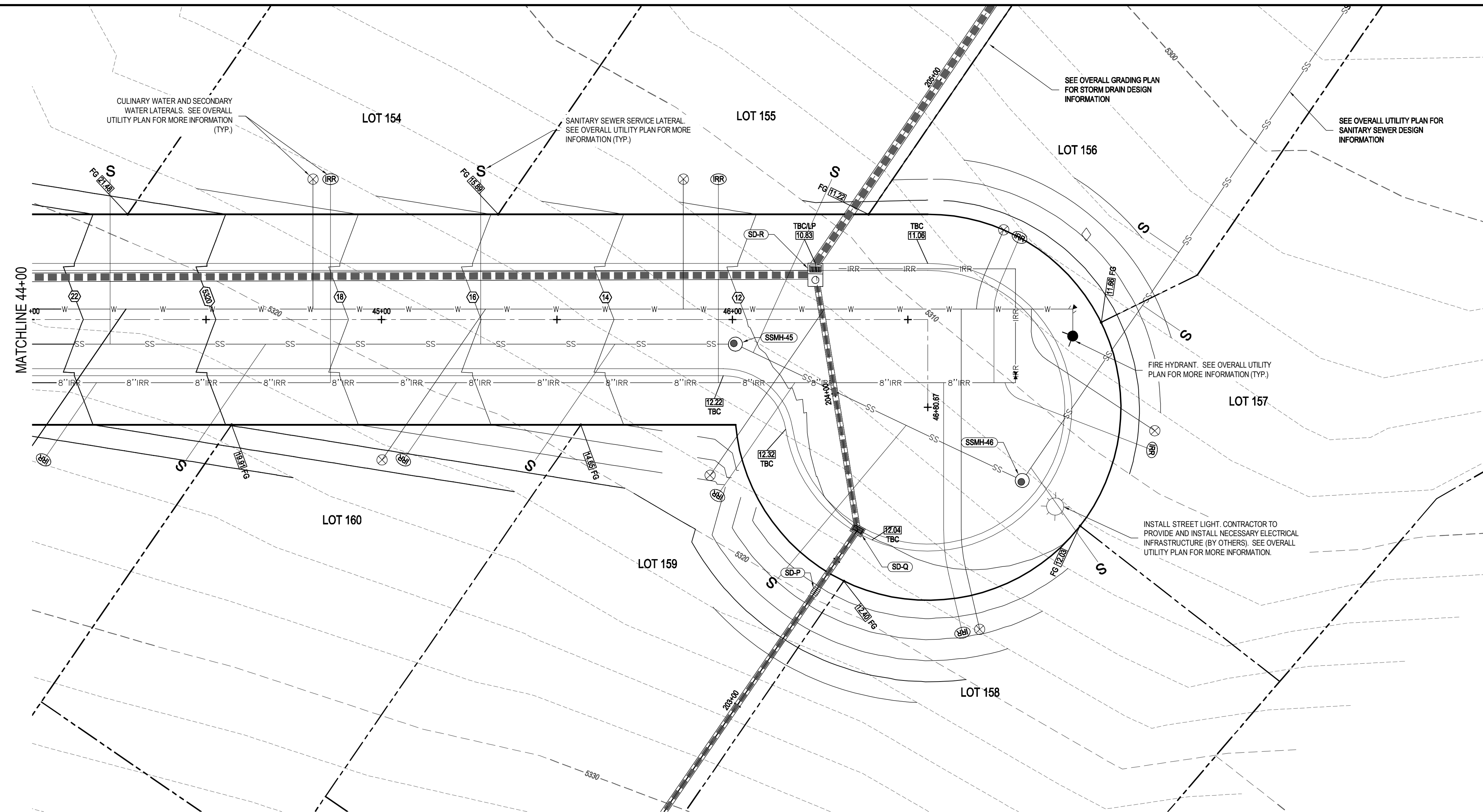
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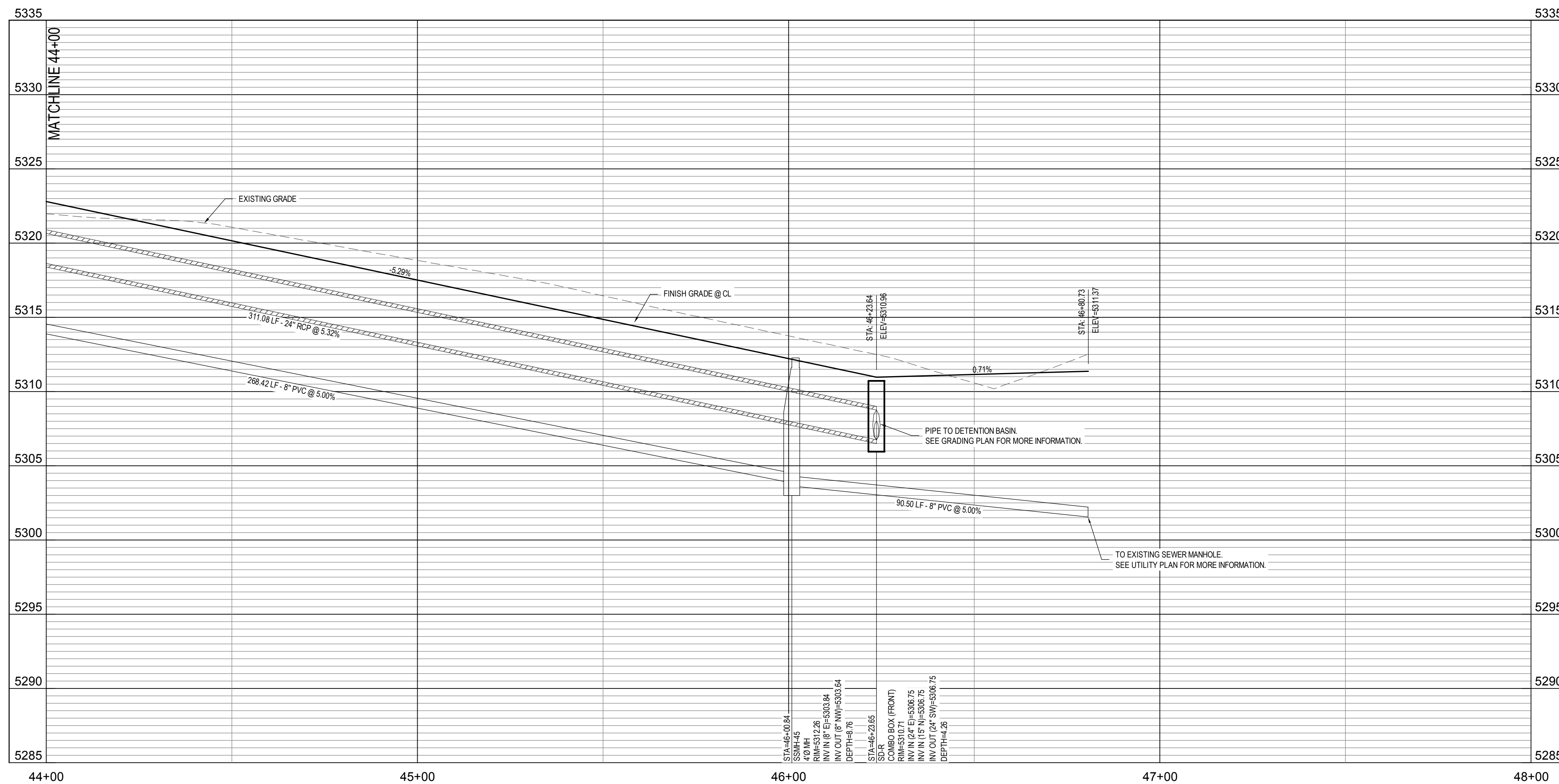
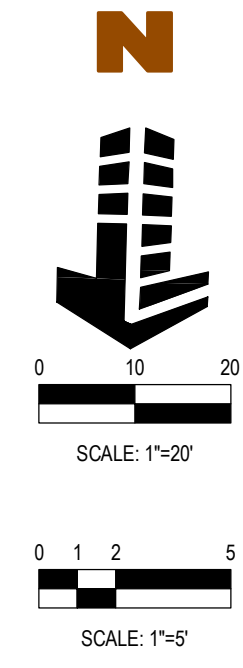
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PLAN & PROFILE
 TELLURIDE RIDGE LANE



LEGEND

- PROPERTY BOUNDARY LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED LOT LINE
- PROPOSED DRAINAGE EASEMENT
- PROPOSED ROADWAY CENTERLINE
- ADJACENT PROPERTY BOUNDARY LINE
- SECTION LINE
- EASEMENT BOUNDARY LINE
- ADJACENT RIGHT-OF-WAY
- SITE LIGHTING
- ◇ EXISTING STREET LIGHT
- ◇ EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE COVER
- PROPOSED MANHOLE COVER
- UTILITY PEDESTAL
- EXISTING INLET
- PROPOSED INLET



PROFILE TELLURIDE RIDGE LANE: STA 44+00 TO STA 48+00

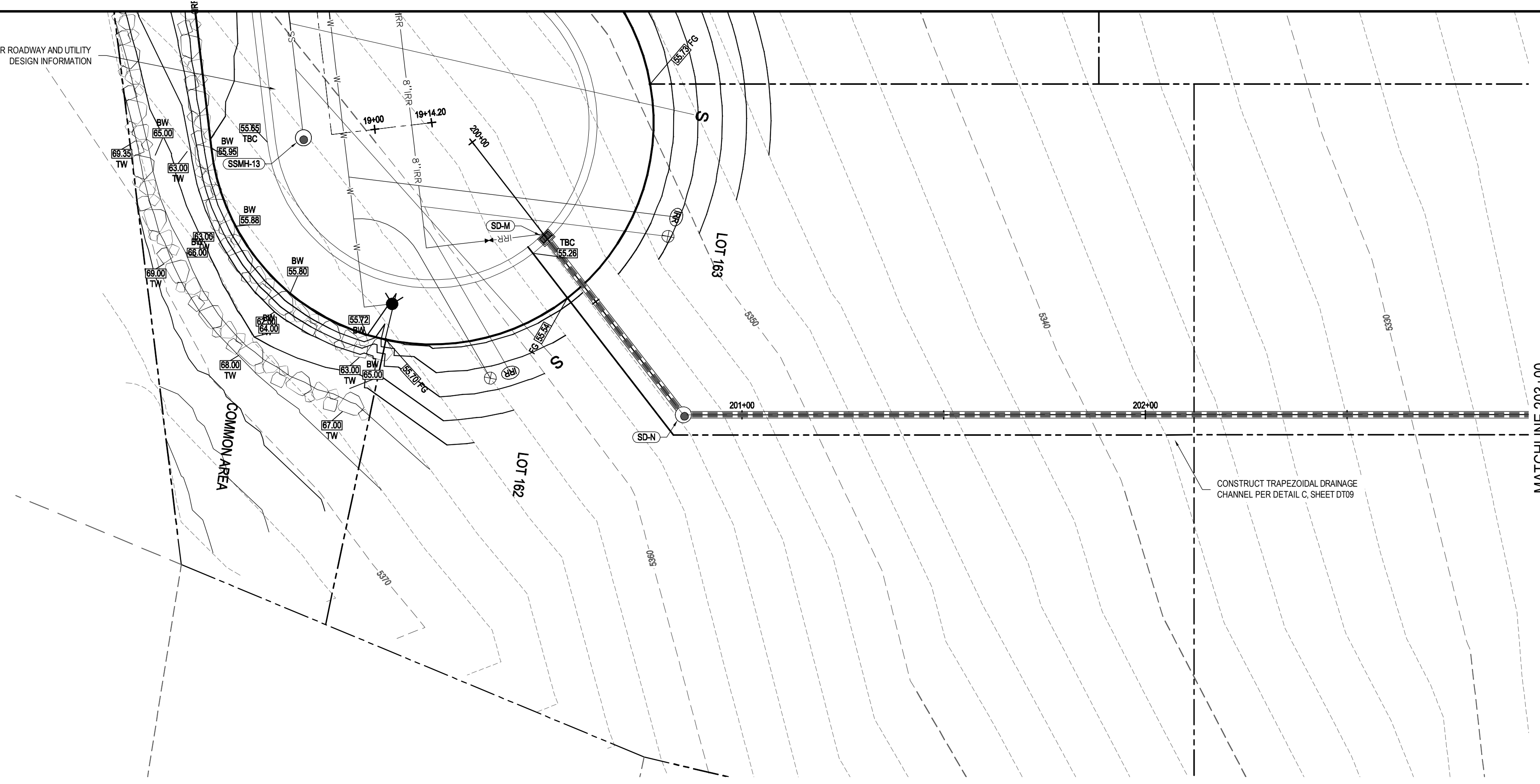


WATTS ENTERPRISES
TRAPPERS RIDGE AT WOLF CREEK
P.R.U.D. PHASE 8
EDEN, UTAH 84310

#	Date	Issue / Description	Init.

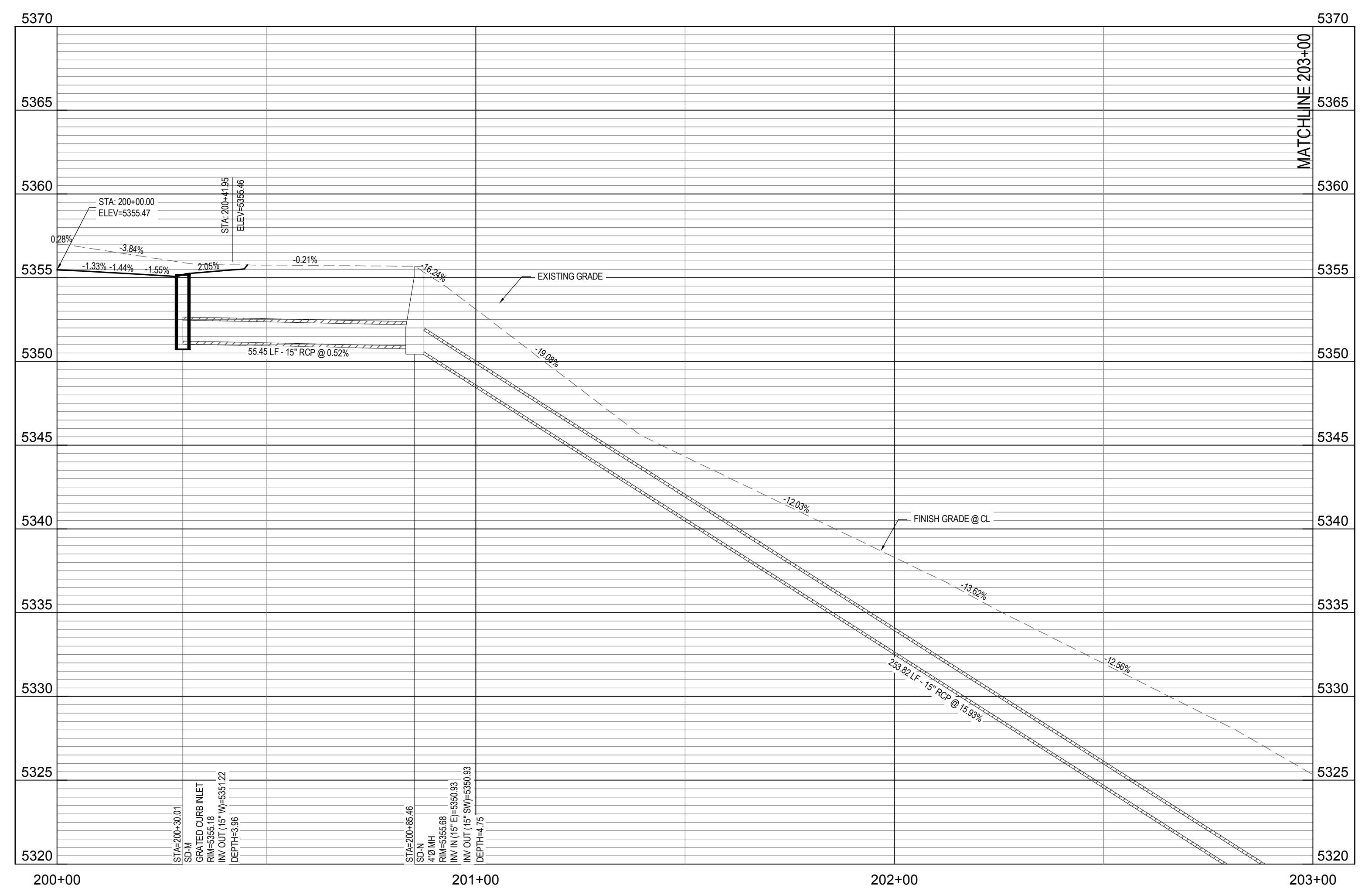
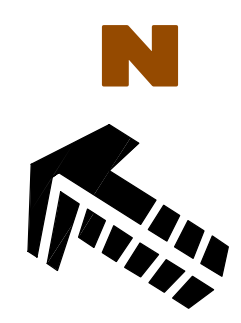
Project No: WAT02.01
 Drawn By: JST
 Checked By: RMP
 Date: 8/17/2016

SEE PP02 FOR ROADWAY AND UTILITY DESIGN INFORMATION

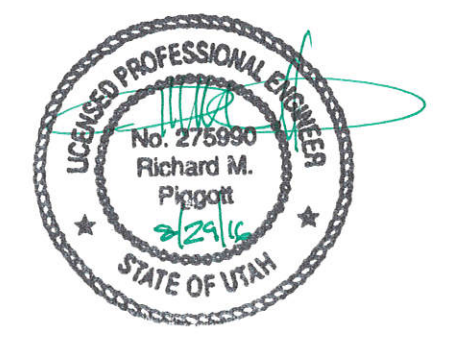


LEGEND

- PROPERTY BOUNDARY LINE
- - - PROPOSED RIGHT-OF-WAY
- - - PROPOSED LOT LINE
- - - PROPOSED DRAINAGE EASEMENT
- - - PROPOSED ROADWAY CENTERLINE
- ADJACENT PROPERTY BOUNDARY LINE
- - - SECTION LINE
- - - EASEMENT BOUNDARY LINE
- - - ADJACENT RIGHT-OF-WAY
- ◇ SITE LIGHTING
- ◇ EXISTING STREET LIGHT
- ◇ EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE COVER
- PROPOSED MANHOLE COVER
- UTILITY PEDESTAL
- EXISTING INLET
- PROPOSED INLET



PROFILE SD-200: STA 200+00 TO STA 203+00

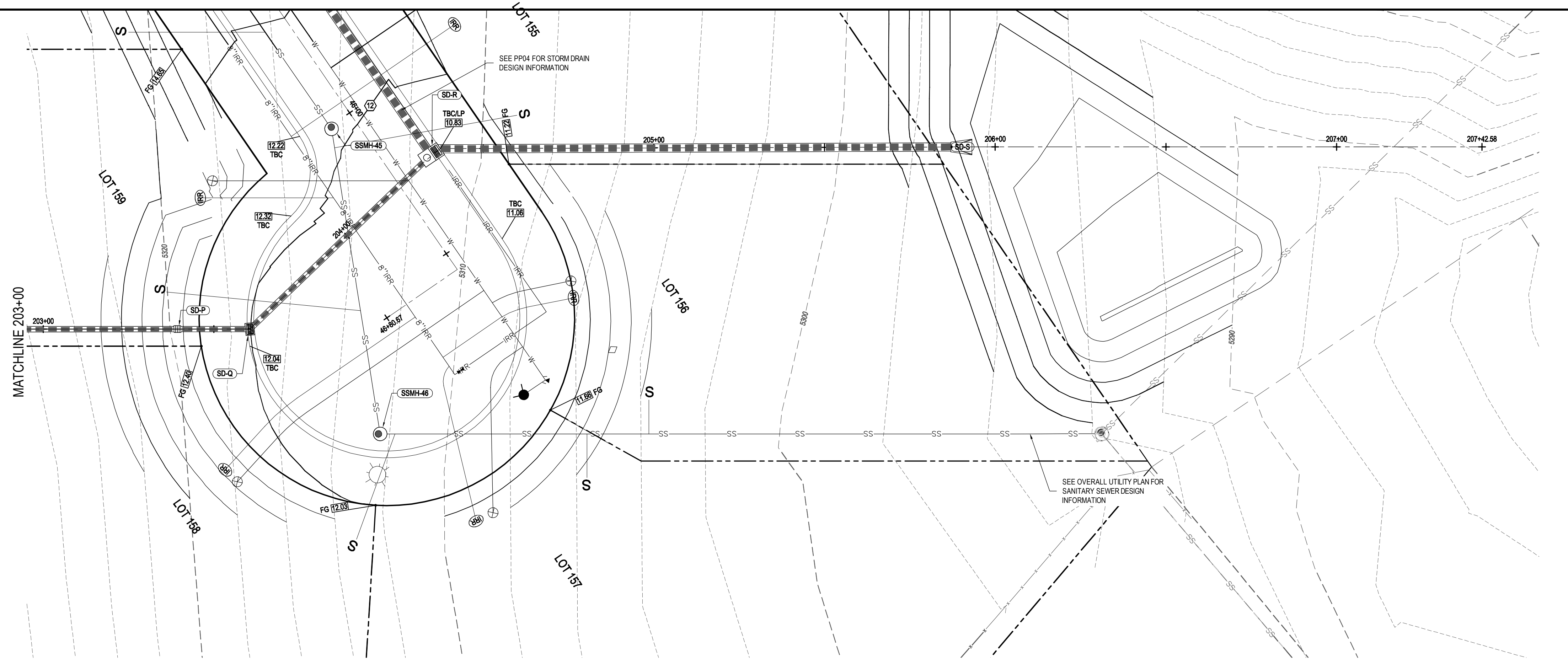


WATTS ENTERPRISES
TRAPPERS RIDGE AT WOLF CREEK
P.R.U.D. PHASE 8
EDEN, UTAH 84310

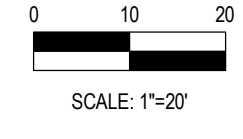
#	Date	Issue / Description	Init.

Project No:	WAT02.01
Drawn By:	JST
Checked By:	RMP
Date:	8/17/2016

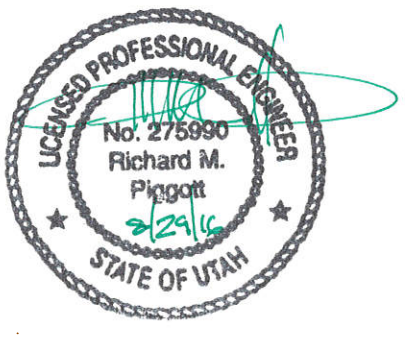
PLAN & PROFILE ONSITE
 STORM DRAIN OUTFALL



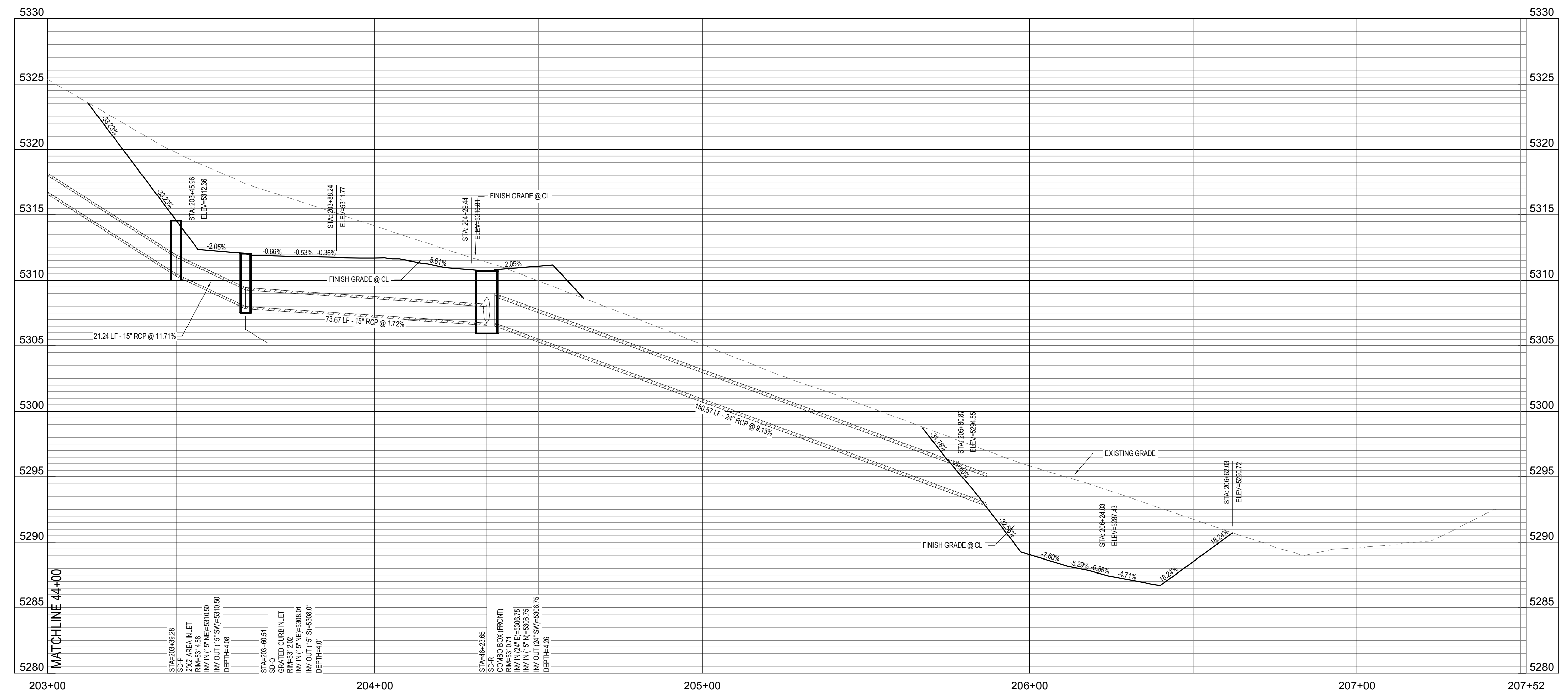
- LEGEND**
- PROPERTY BOUNDARY LINE
 - - - PROPOSED RIGHT-OF-WAY
 - - - PROPOSED LOT LINE
 - - - PROPOSED DRAINAGE EASEMENT
 - - - PROPOSED ROADWAY CENTERLINE
 - - - ADJACENT PROPERTY BOUNDARY LINE
 - - - SECTION LINE
 - - - EASEMENT BOUNDARY LINE
 - - - ADJACENT RIGHT-OF-WAY
 - ◊ SITE LIGHTING
 - ◇ EXISTING STREET LIGHT
 - EXISTING FIRE HYDRANT
 - PROPOSED FIRE HYDRANT
 - EXISTING MANHOLE COVER
 - PROPOSED MANHOLE COVER
 - UTILITY PEDESTAL
 - EXISTING INLET
 - PROPOSED INLET



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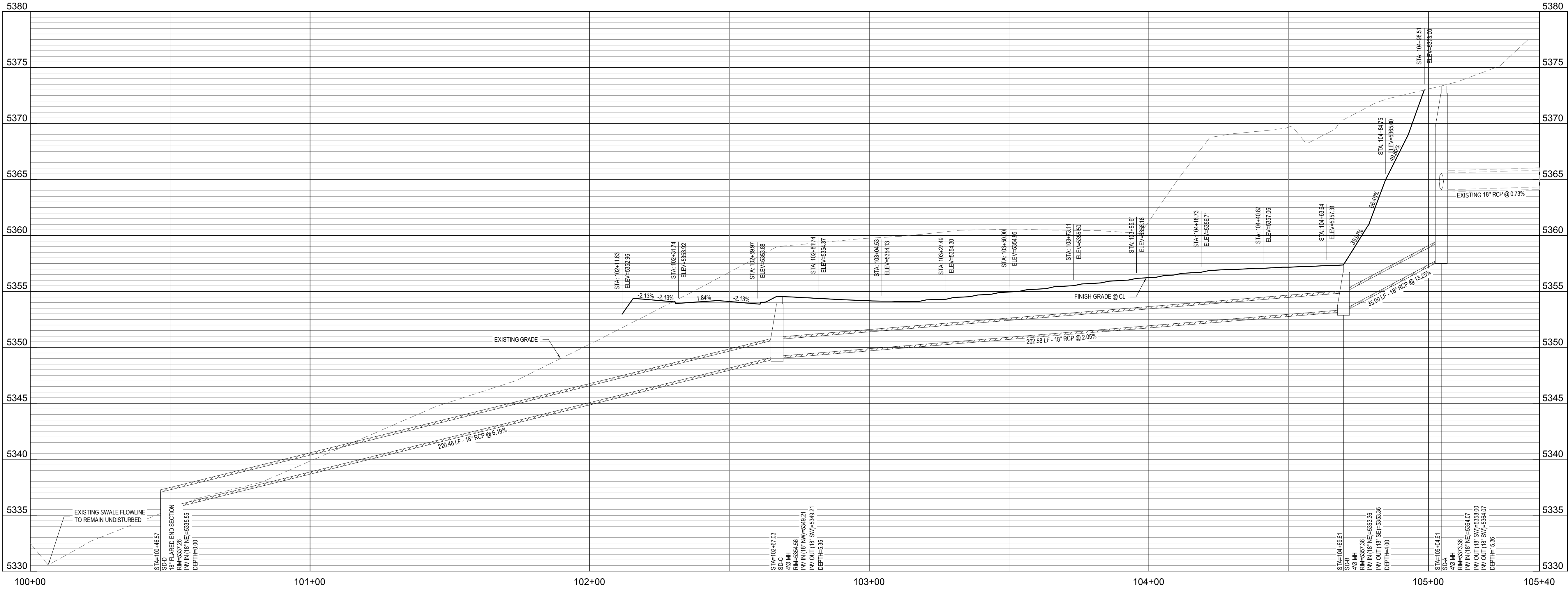
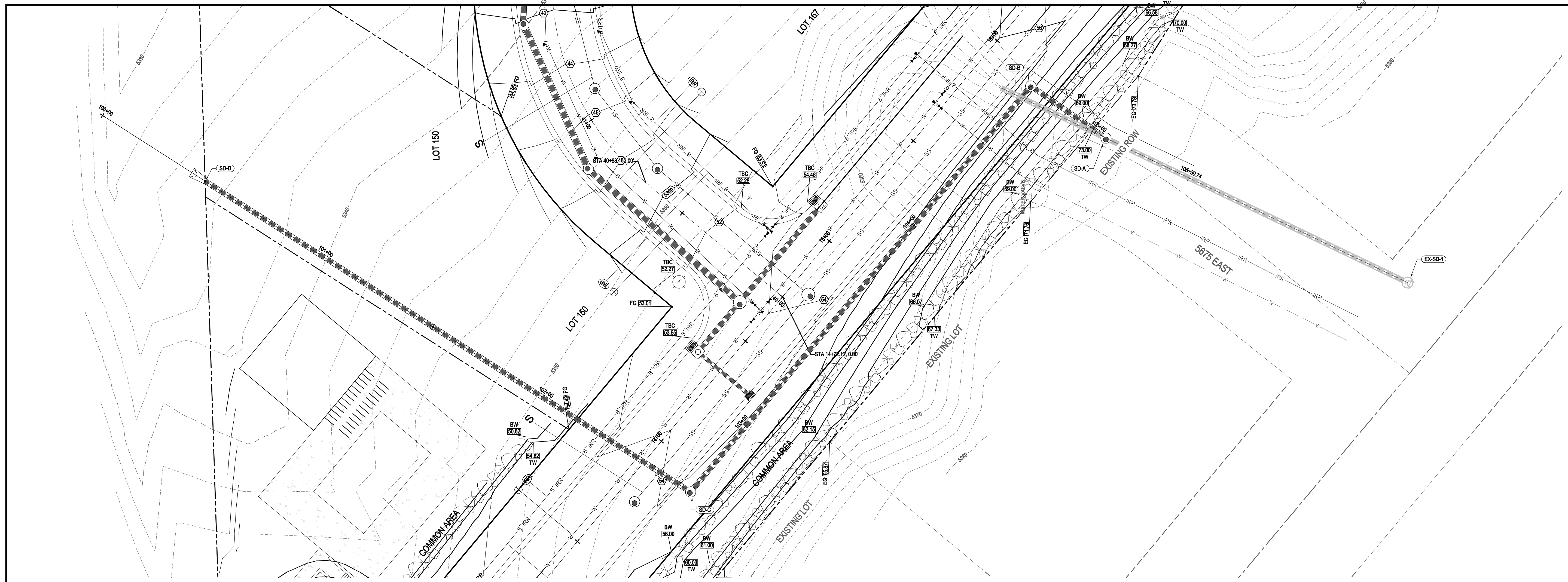
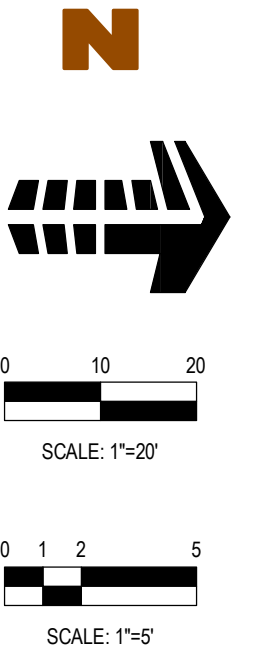
PROFILE SD-200: STA 203+00 TO STA 207+52

WATTS ENTERPRISES
TRAPPERS RIDGE AT WOLF CREEK
P.R.U.D. PHASE 8
 EDEN, UTAH 84310

#	Date	Issue / Description	Init.

Project No: WAT02.01
 Drawn By: JST
 Checked By: RMP
 Date: 8/17/2016

PLAN & PROFILE ONSITE
 STORM DRAIN OUTFALL



PROFILE SD-100: STA 100+00 TO STA 105+40

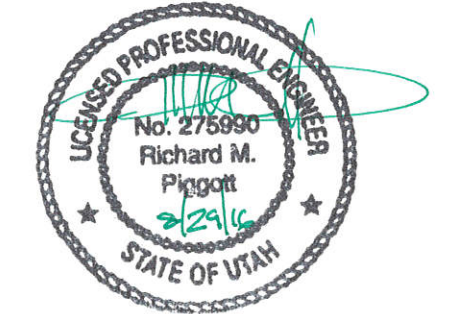
WATTS ENTERPRISES
TRAPPERS RIDGE AT WOLF CREEK
P.R.U.D. PHASE 8

EDEN, UTAH 84310

#	Date	Issue / Description	Init.

Project No: WAT02.01
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PLAN & PROFILE OFFSITE
STORM DRAIN



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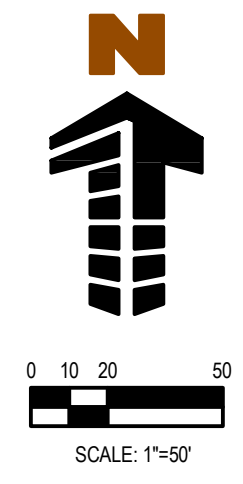
WATTS ENTERPRISES
TRAPPERS RIDGE AT WOLF CREEK
P.R.U.D. PHASE 8
EDEN, UTAH 84310

Date Issue / Description Int.

#	Date	Issue / Description	Int.

Project No: WAT02.01
Drawn By: JST
Checked By: RMP
Date: 8/17/2016

EROSION CONTROL PLAN



- EROSION CONTROL LEGEND**
- FLOW ARROW
 - LIMITS OF CONSTRUCTION (LOC)
 - - - SILT FENCE (SF)
 - - - CONSTRUCTION FENCE (CF)
 - DIVERSION DITCH/DIKE, INSTALL CHECK DAMS AS NOTED IN CDA DETAIL (DD)
 - ▭ STABILIZED STAGING AREA (SSA)
 - SMALL SITE CONCRETE WASHOUT AREA (CWS)
 - TEMPORARY STOCKPILE (TS)
 - VEHICLE TRACKING CONTROL (VTC)
 - INLET PROTECTION (IP)
 - SWPPP SITE POSTING (SP)
 - SEEDING AND MULCHING (REF. LANDSCAPE PLAN) (SM)
 - ▨ EROSION CONTROL BLANKET (ECB)
 - SEDIMENT BASIN (SB)
 - ▨ GRAVEL SOCK (GS)
 - OUTFALL PROTECTION (OP)

DIVERSION NOTE

CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ALONG ALL DIVERSIONS SO THAT FLOWS ARE CONVEYED TO SEDIMENT BASINS. THIS MAY REQUIRE SOME MINOR GRADE ADJUSTMENTS TO ENSURE POSITIVE DRAINAGE.

CONCRETE WASHOUT NOTE

CONCRETE WASHOUT MAY ONLY BE DISCHARGED ON SITE INTO PORTABLE, IMPERMEABLE BASINS. THE WASTE WATER AND CONCRETE RESIDUE WILL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

DISTURBANCE NOTE

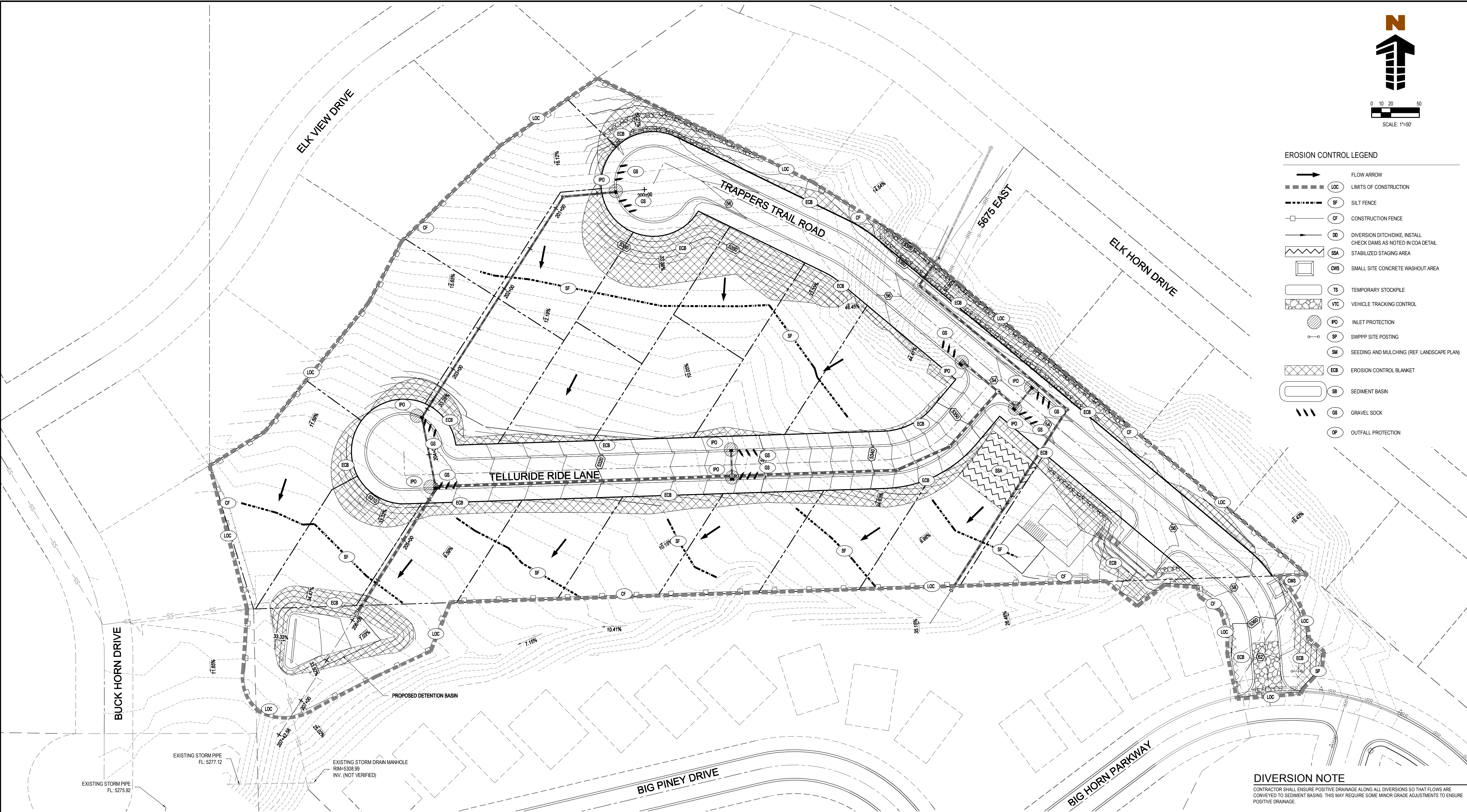
ALL AREAS TO BE SEEDDED SHALL BE DONE WITH A NATIVE FAST GERMINATION SEED MIX THAT IS APPROVED BY THE ENGINEER. SEEDDED AREAS SHALL BE PROTECTED WITH EITHER STRAW MULCH APPLIED AT A RATE OF 2 TONS PER ACRE AND CRIMPED IN, OR WITH EROSION CONTROL BLANKET COMPOSED OF COCONUT FIBER, AS CALLED OUT ON THIS SITE MAP.

STOCKPILE NOTE

ONLY ON-SITE MATERIALS DEEMED ACCEPTABLE FOR REUSE AS SUBGRADE BY THE GEOTECHNICAL CONSULTANT MAY BE STORED ON SITE. ALL OTHER EXCAVATED MATERIAL IS TO BE IMMEDIATELY TRUCKED OFF SITE FOR PROPER DISPOSAL. ANY ASPHALT AREAS USED FOR STOCKPILE MUST BE COVERED WITH A PROTECTIVE GEOTEXTILE. TARPULINS MUST BE USED TO COVER SPOILS AT ALL TIMES OTHER THAN DURING IMMEDIATE ACCESS.

CAUTION - NOTICE TO CONTRACTOR

- ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE FIELD LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
- WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POT-HOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.



GENERAL EROSION NOTES

- A. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- B. BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS REQUIRED BY PERMITTING AGENCY OR OWNER.
- C. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- D. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN, OR AS REQUIRED BY THE APPLICABLE GENERAL PERMIT. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.
- E. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERM ON DOWN STREAM SIDES.
- F. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- G. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- H. DUST ON THE SITE SHALL BE MINIMIZED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED P. OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- I. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- J. ALL DENUDED/BARE AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE, MUST BE STABILIZED IMMEDIATELY UPON COMPLETION OF MOST RECENT GRADING ACTIVITY, WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAN VARIETIES, STRAW/MULCH, WOOD CELLULOSE FIBERS, TACKLERS, NETTING OR BLANKETS.
- K. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE PLANS. THESE AREAS SHALL BE SEEDDED, SODED, AND/OR REVEGETATED IMMEDIATELY, AND NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR THE LANDSCAPE PLAN.
- L. IF THE ACTION OF VEHICLES TRAVELING OVER THE CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO PREVENT TRACKING OF DIRT, DUST OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.
- M. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- N. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- O. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- P. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- Q. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE.
- R. GENERAL CONTRACTOR IS TO DESIGNATE/IDENTIFY AREAS ON THE SITE MAPS, INSIDE OF THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.

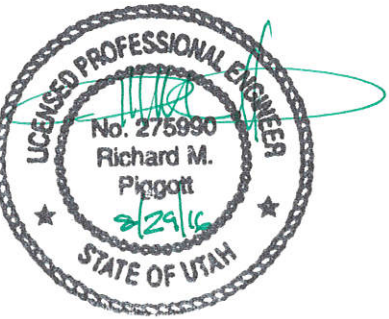
BEST MANAGEMENT PRACTICES SEQUENCE

- NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION, NOTE ALL AREAS WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.
- PHASE I
- INSTALL VEHICLE TRACKING CONTROL.
 - INSTALL SILT FENCE(S) ON THE SITE (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE).
 - INSTALL DIVERSION SWALES AND ASSOCIATED CHECK DAMS.
- HALT ALL ACTIVITIES AND CONTACT THE ENGINEER TO PERFORM INSPECTION AND CERTIFICATION OF BMPs. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT THE STORMWATER PRE-CONSTRUCTION MEETING WITH THE ENGINEER, AGENCY(IES) AND GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
- PHASE II
- TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
 - INSTALL UTILITIES, UNDERDRAINS, CURBS AND GUTTERS.
 - PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
 - PREPARE SITE FOR PAVING.
 - PAVE SITE.
 - COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS INCLUDING OUT LOTS.
- THE ACTUAL SCHEDULE FOR IMPLEMENTING POLLUTANT CONTROL MEASURES WILL BE DETERMINED BY PROJECT CONSTRUCTION PROGRESS AND RECORDED BY THE GENERAL CONTRACTOR. DOWN SLOPE PROTECTIVE MEASURES MUST ALWAYS BE IN PLACE BEFORE SOIL IS DISTURBED.
- INSTALL SEDIMENT TRAPS.
 - PREPARE TEMPORARY PARKING AND STORAGE AREA.
 - BEGIN CLEARING, DEMOLITION AND GRABBING THE SITE.
 - BEGIN GRADING THE SITE.
 - START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.

MAINTENANCE NOTES

- ALL MEASURES STATED ON THIS SITE MAP AND IN THE STORMWATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
- INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
 - ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED.
 - SILT FENCES/SEDIMENT FIBER FLOCCULENT TUBES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES/SEDIMENT FIBER FLOCCULENT TUBES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE/SEDIMENT FIBER FLOCCULENT TUBES.
 - THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
 - THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
 - OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITION AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
 - PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

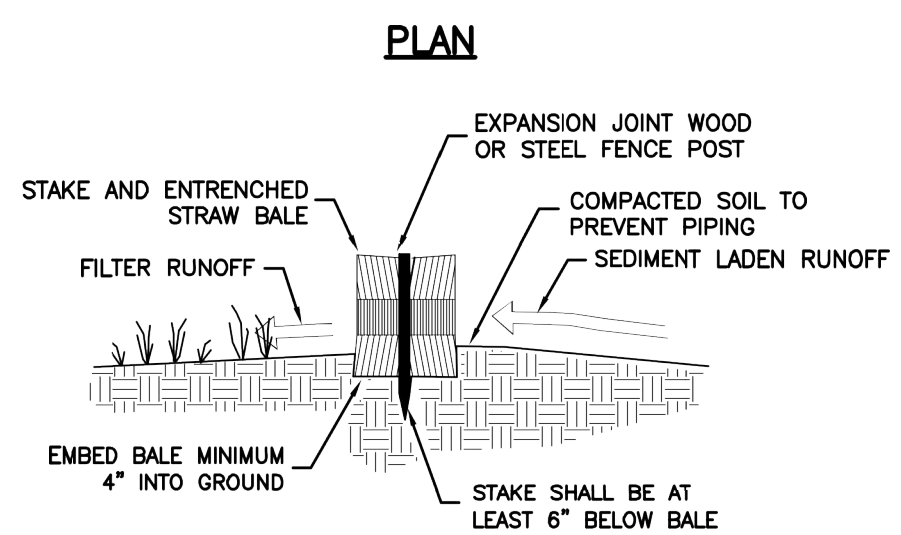
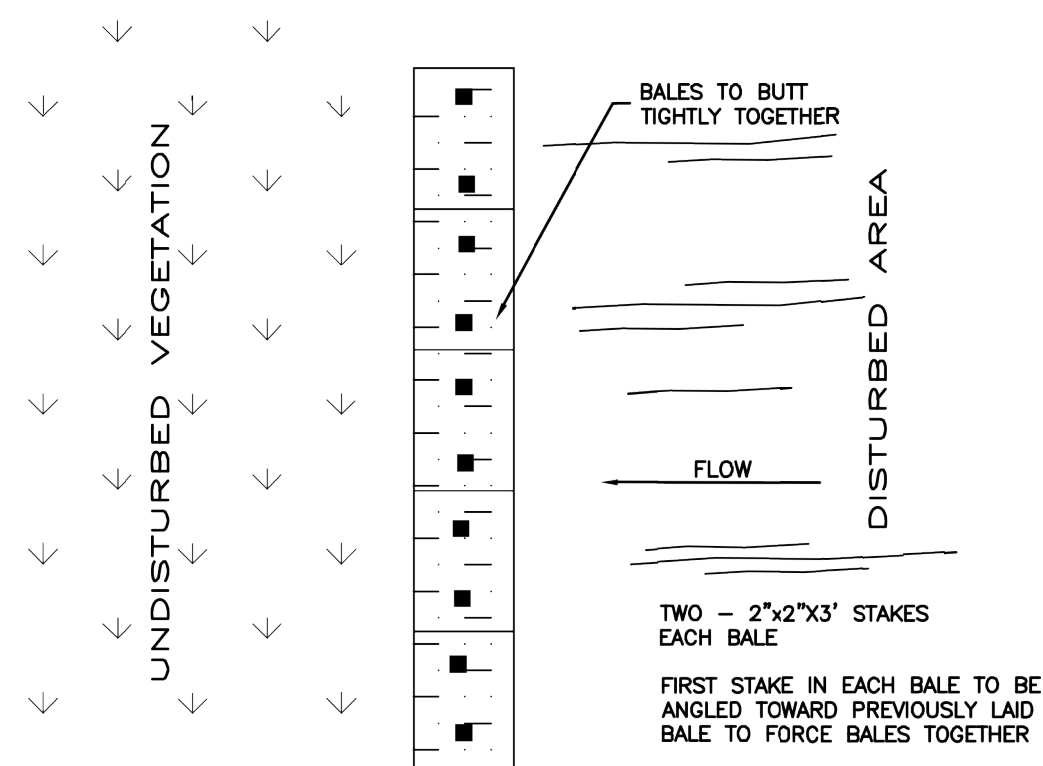
UTAH PROFESSIONAL ENGINEER LICENSE NO. 276900 - RICHARD M. PIROG OFF



- Straw bale barrier**
- GENERAL**
 - Description.** A temporary sediment barrier consisting of a row of entrenched and anchored straw bales.
 - Purpose.** To intercept and detain small amounts of sediment from disturbed areas of limited extent. To decrease the velocity of sheet flows and low-to-moderate level channel flows.
 - PRODUCTS** (Not used)
 - EXECUTION**
 - Place bales in a single row, lengthwise with ends of adjacent bales tightly abutting each other for the following conditions.
 - Perimeter Control. Place barrier at down gradient limits of disturbance.
 - Sediment Barrier. Place barrier at toe of slope or soil stockpile.
 - Protection of Existing Waterways. Place barrier at top of stream bank.
 - Inlet Protection.
 - Wire-bound or string-tie all bales. Install so straw bale bindings are oriented around the sides rather than along the tops and bottoms of the bales (in order to prevent deterioration of the bindings).
 - Chink the gaps between bales (filled by wedging) with straw to prevent water from escaping between the bales. Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency.
 - When bales are installed at the toe of a slope, place the bales away from the slope for increased storage capacity.
 - Remove straw bale barriers when they have served their usefulness, but not before the up-slope areas have been permanently stabilized.
 - Maintenance.
 - Inspect immediately after any rainfall and at least daily during prolonged rainfall.
 - Pay close attention to the repair of damaged bales, end runs and undercutting beneath bales.
 - Necessary repairs or replacement of bales must be accomplished promptly.
 - Remove sediment deposits after each rainfall. It must be removed when the level of deposition reaches approximately one-half the height of the bale(s).
 - Realign bales to provide a continuous barrier and to fill gaps.
 - Recompact soil around bales as necessary to prevent piping.

4

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.



SECTION

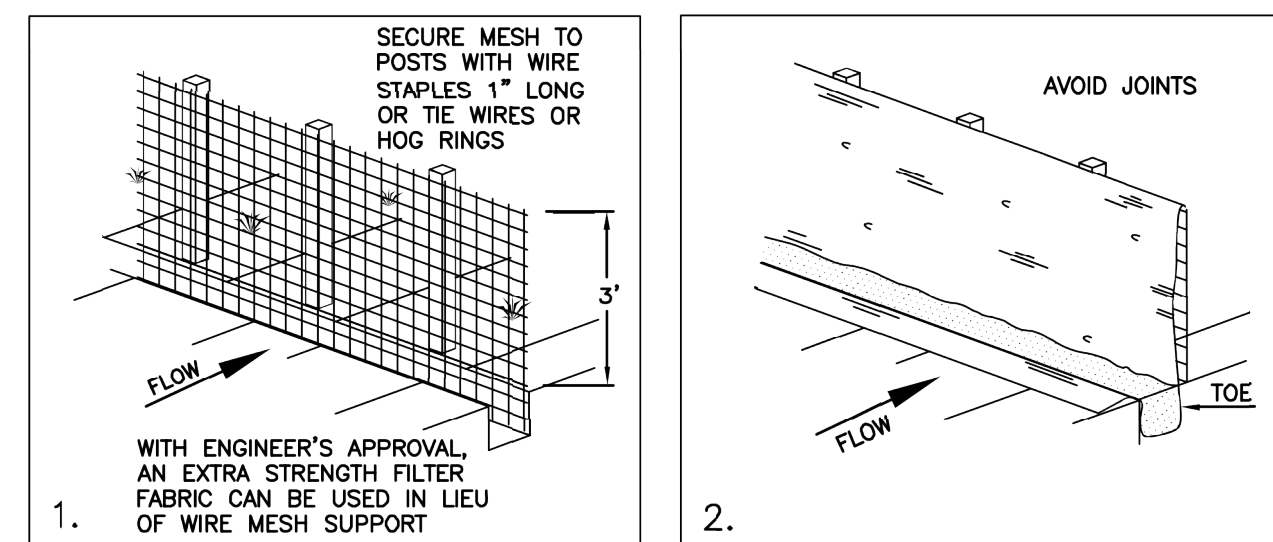
Straw bale barrier

Plan
121

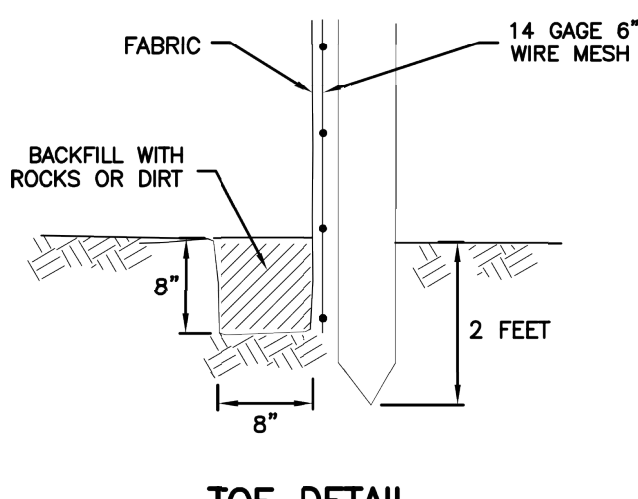
- Silt fence**
- GENERAL**
 - Description.** A temporary sediment barrier consisting of a filter fabric stretched across and attached to supporting posts and entrenched.
 - Application.** To intercept sediment from disturbed areas of limited extent.
 - Perimeter Control.** Place barrier at down gradient limits of disturbance.
 - Sediment Barrier.** Place barrier at toe of slope or soil stockpile.
 - Protection of Existing Waterways.** Place barrier at top of stream bank.
 - Inlet Protection.**
 - PRODUCTS**
 - Fabric. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester, or polyethylene yarn. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 deg F to 120 deg F.
 - Burlap. 10 ounces per square yard of fabric.
 - Posts. Either 2" x 4" diameter wood, or 1.33 pounds per linear foot steel with a minimum length of 5 feet, or steel posts with projections for fastening wire to them.
 - EXECUTION**
 - Cut the fabric on site to desired width, unroll, and drape over the barrier. Secure the fabric toe with rocks or dirt and secure the fabric to the mesh with twin, staples or similar devices.
 - When attaching two silt fences together, place the end post of the second fence inside the end post of the first fence. Rotate both posts at least 180 degrees on a clockwise direction to create a tight seal with the filter fabric. Drive both posts into the ground and bury the flap.
 - When used to control sediments from a steep slope, place silt fences away from the toe of the slope for increased holding capacity.
 - Maintenance.
 - Inspect immediately after each rainfall and at least daily during prolonged rainfall.
 - Should the fabric on a silt fence or filter barrier decompose or become ineffective before the end of the expected usable life and the barrier still be necessary, replace the fabric promptly.
 - Remove sediment deposits after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.
 - Re-anchor fence as necessary to prevent shortcutting.
 - Inspect for runoff bypassing ends of barriers or undercutting barriers.

6

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.



INSTALLATION SEQUENCE



TOE DETAIL

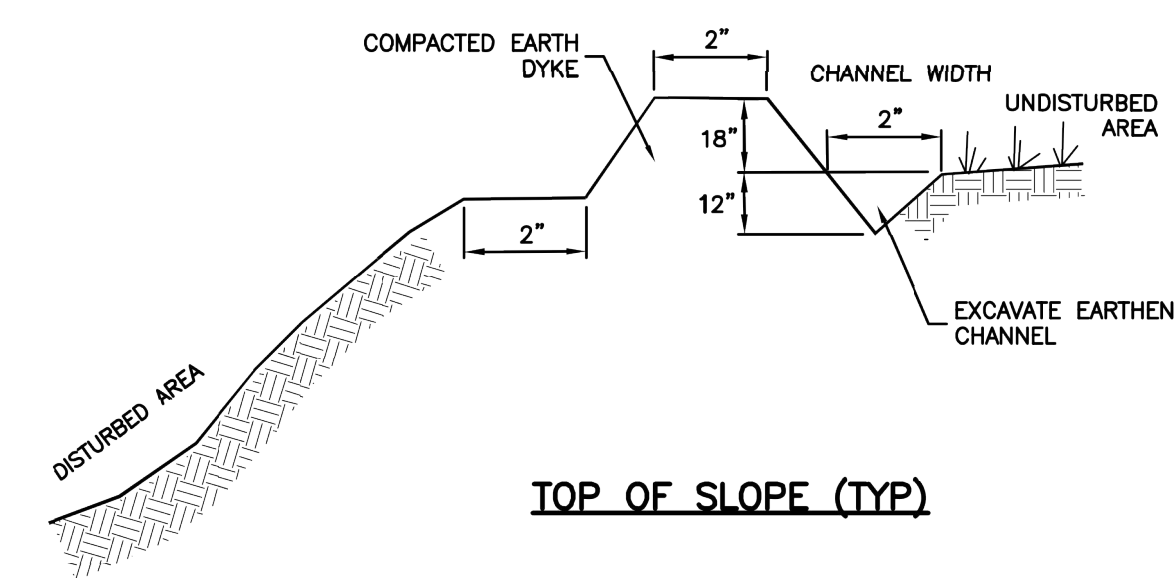
Silt fence

Plan
122

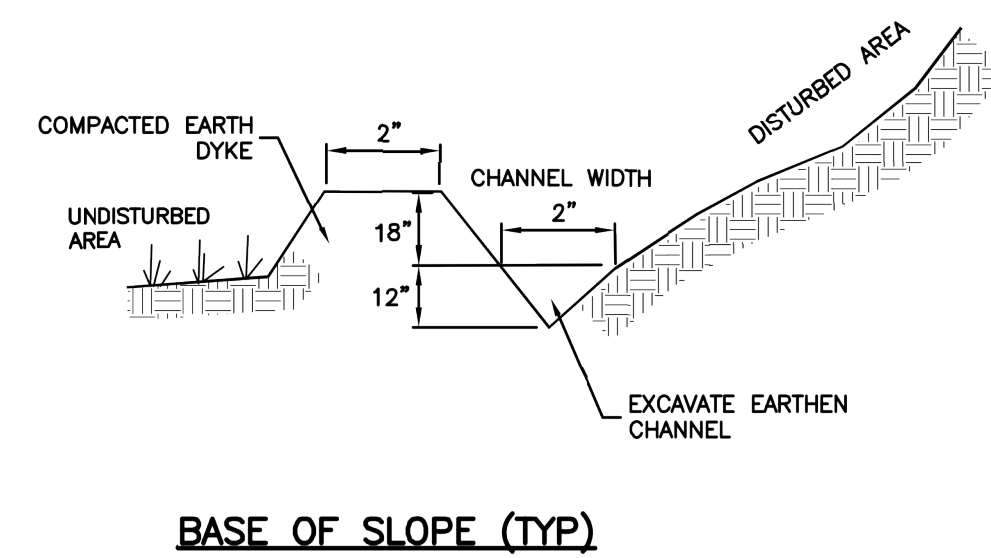
- Diversion dike**
- GENERAL**
 - Description.** A temporary ridge of compacted soil located at the top or base of a sloping disturbed area.
 - Purpose.** To intercept up gradient runoff and convey around construction site and to divert sediment laden runoff.
 - PRODUCTS** (Not used)
 - EXECUTION**
 - Construct.
 - Along midpoint of construction slope to intercept runoff and channel to controlled discharge point.
 - Around base of soil stockpiles to capture sediment.
 - Around perimeter of disturbed areas to capture sediment.
 - Locate the dike to minimize damages by construction operations and traffic.
 - Clear and grub area for dike construction. Build the dike before construction begins.
 - Excavate channel and place soil on down gradient side.
 - Shape and machine compact excavated soil to form ridge.
 - Place erosion protection (rip rap, mulch) at outlet. Stabilize channel and ridge as required with mulch, gravel or vegetative cover. Temporary or permanent seeding and mulch shall be applied to the dike within 15 days of construction.
 - Maintenance.
 - Inspect immediately after each rainfall and at least daily during prolonged rainfall.
 - Look for runoff breaching dike or eroding channel or side slopes.
 - Check discharge point for erosion or bypassing of flows.
 - Repair and stabilize as necessary.
 - Inspect daily during vehicular activity on slope, check for and repair any traffic damage.

8

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.



TOP OF SLOPE (TYP)



BASE OF SLOPE (TYP)

Diversion dike

Plan
123

#	Date	Issue / Description	Init.

Project No: WAT02.01
 Drawn By: JST
 Checked By: RMP
 Date: 8/17/2016

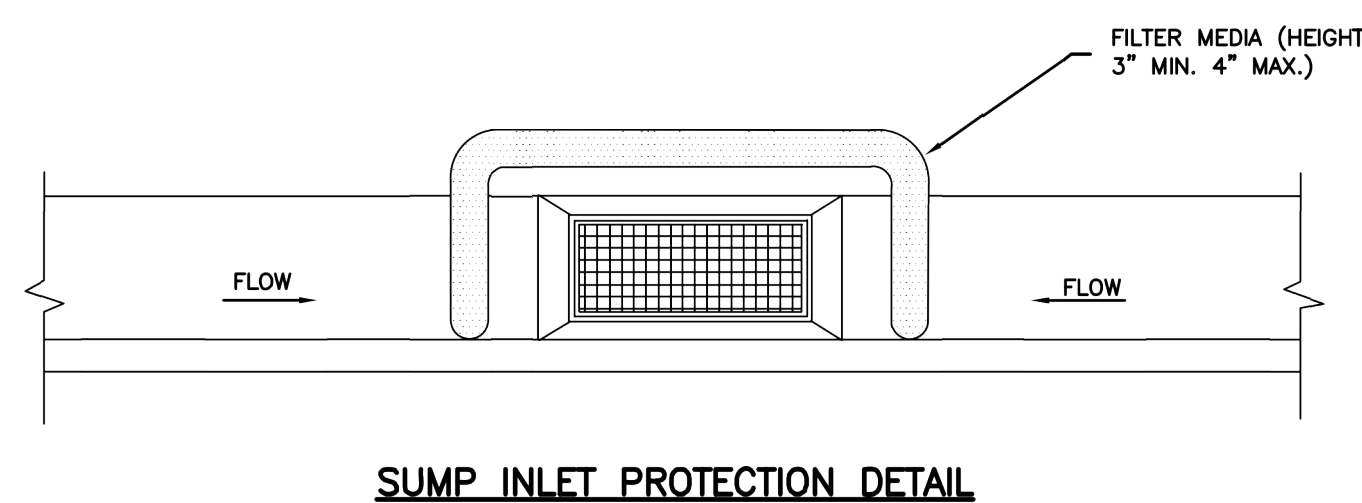
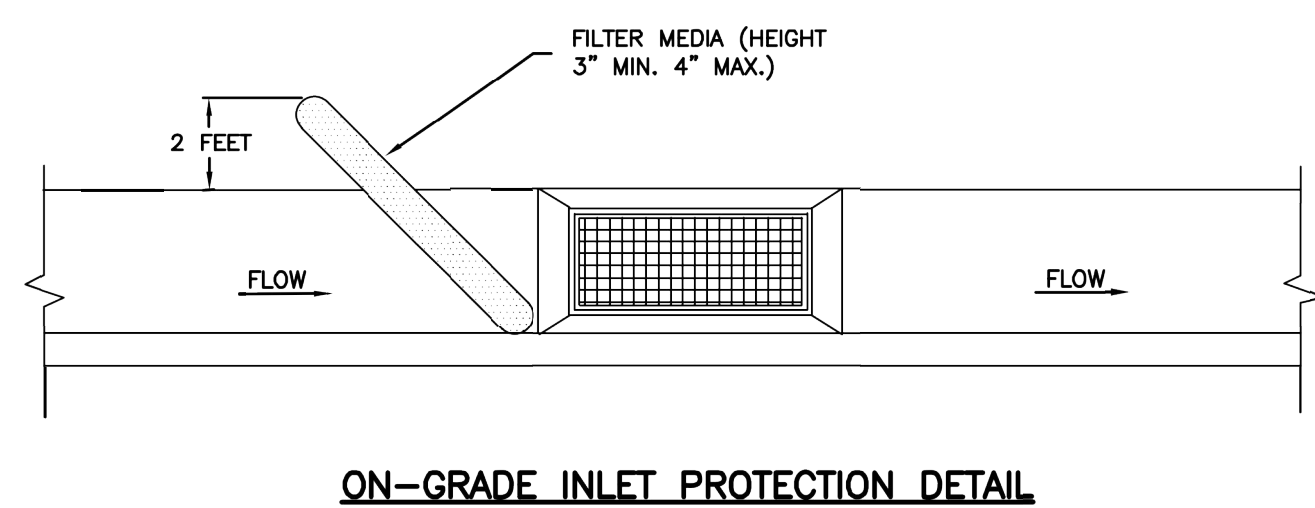
EROSION CONTROL
DETAILS (APWA)

Inlet protection – gravel sock

1. GENERAL
 - A. Description. Placement of gravel sock on grade.
 - 1) Upstream of, or in front of storm drain inlets to filter or pond water runoff.
 - 2) At inlets in paved or unpaved areas where up gradient area is to be disturbed by construction activities.
2. PRODUCTS (Not used)
3. EXECUTION
 - A. On-grade inlet protection:
 - 1) Provide on-grade inlet protection when completely blocking a storm drain inlet box would result in forcing water further downstream would cause flooding or other undesirable results.
 - 2) Prepare filter media (gravel sock, straw waddle, or other approved media) in accordance with manufacturer's recommendations.
 - 3) Install filter media just upstream of the inlet box.
 - 4) Filter media shall butt tightly against the face of the curb and angle at approximately a 45-degree angle away from the curb to trap runoff between the media and the curb.
 - 5) Excessive flows will flow either over or around the filter media and into the inlet box.
 - 6) Expect ponding behind the filter media.
 - B. Drop inlet protection:
 - 1) Use drop inlet protection at low points in the curb and when diverting flows further downstream will not cause undesirable results.
 - 2) Prepare filter media (gravel sock, straw waddle, or other approved media) in accordance with manufacturer's recommendations.
 - 3) Install filter media around the entire perimeter of the inlet grate.
 - 4) Filter media shall butt tightly against the face of the curb on both sides of the inlet grate.
 - 5) Excessive flows will either flow around the media or over the top and into the inlet box.
 - 6) Expect ponding around the inlet box.
 - C. Maintenance
 - 1) Inspect inlet protection after every large storm event and at a minimum of once monthly.
 - 2) Remove sediment accumulated when it reaches 2-inches in depth.
 - 3) Replace filter medium when damage has occurred or when medium is no longer functioning as intended.

10

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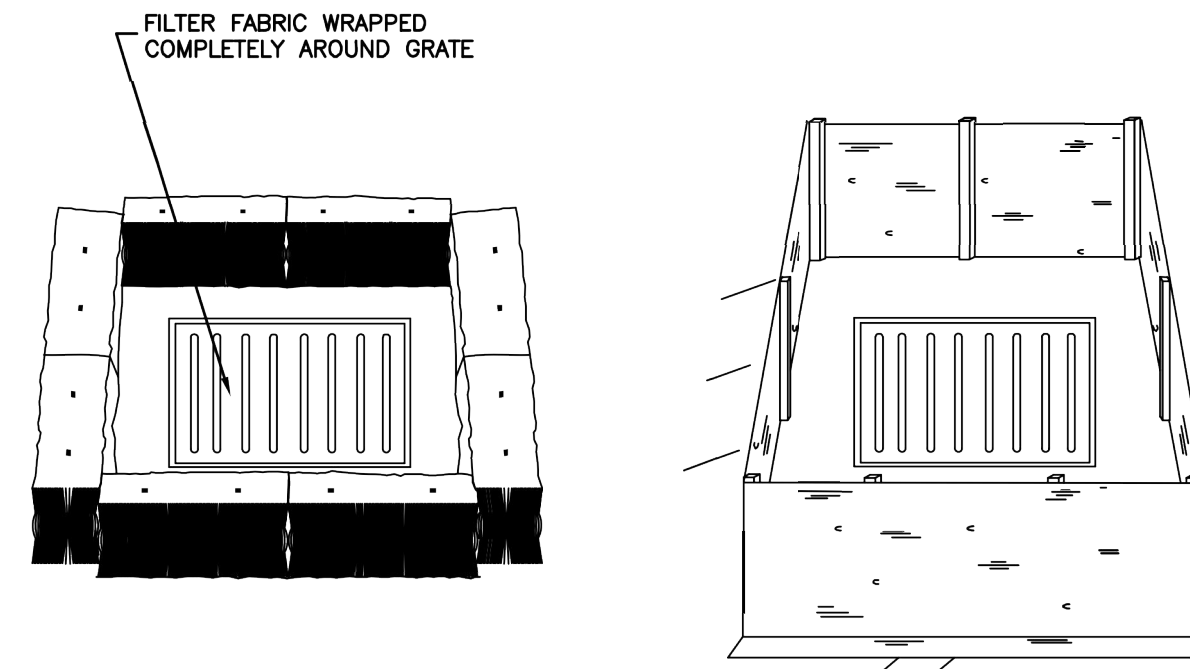
September 2006 **Inlet protection - gravel sock** Plan 124 Sheet 1 of 3

Inlet protection – fence or straw bale

1. GENERAL
 - A. Description. A temporary sediment barrier around storm drain inlet.
 - B. Application. At inlets in paved or unpaved areas where up gradient area is to be disturbed by construction activities.
2. PRODUCT (Not used)
3. EXECUTION
 - A. Installation and application criteria.
 - 1) Provide up gradient sediment controls, such as silt fence during construction of inlet.
 - 2) When construction of inlet is complete erect straw bale barrier, silt fence or other approved sediment barrier surrounding perimeter of inlet.
 - 3) Install filter fabric completely around grate.
 - B. Maintenance.
 - 1) Inspect inlet protection after every large storm event and at a minimum of once monthly.
 - 2) Remove sediment accumulated when it reaches 4-inches in depth.
 - 3) Repair or re-align barrier or fence as needed.
 - 4) Look for bypassing or undercutting and re-compact soil around barrier or fence as required.

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NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.



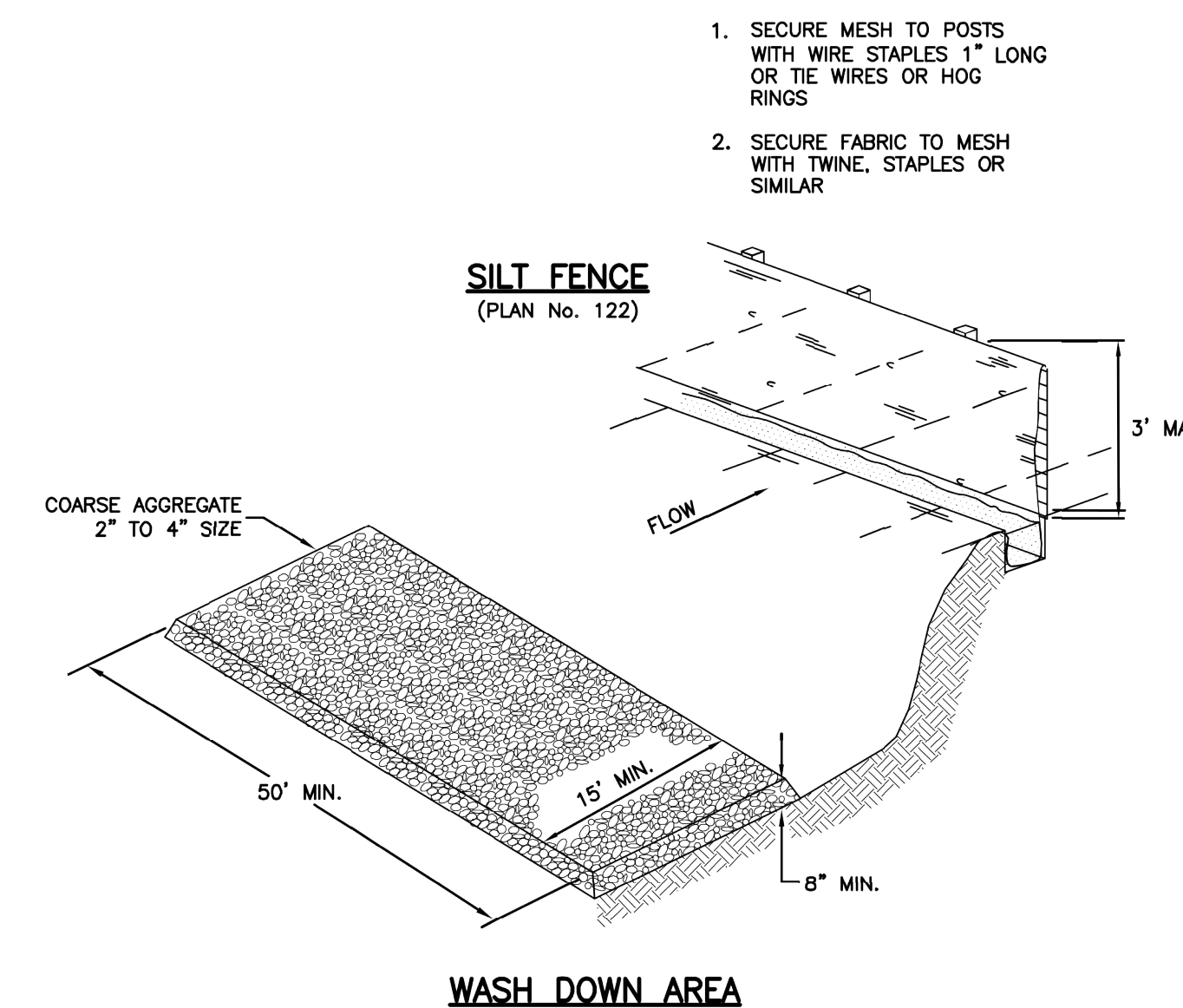
February 2006 **Inlet protection - fence or straw bale** Plan 124 Sheet 3 of 3

Equipment and vehicle wash down area

1. GENERAL
 - A. Description. A temporary stabilized pad of gravel for general washing of equipment and construction vehicles.
 - B. Application.
 - 1) At any site where regular washing of vehicles and equipment will occur.
 - 2) May also be used as a filling point for water trucks limiting erosion caused by overflow or spillage of water.
2. PRODUCT (Not used)
3. EXECUTION
 - A. Clear and grub area and grade to provide maximum slope of 1 percent away from paved roadway.
 - B. Compact subgrade.
 - C. Place filter fabric under wash down area if desired (recommended for wash area that remains more than 3 months).
 - D. Install silt fence down gradient (see Plan 122).
 - E. Maintenance.
 - 1) Requires periodic top dressing with additional stones.
 - 2) Solely used to control sediment in wash water. Cannot be utilized for washing equipment or vehicles that may cause contamination of runoff (such as fertilizer equipment or concrete equipment).
 - 3) Keep the wash area in a condition which will prevent tracking or flow of mud onto public rights-of-way.
 - 4) Periodically dress the top with 2-inch stone may be required, as conditions demand, and repair any structures used to trap sediments.
 - 5) Inspect daily for loss of gravel or sediment buildup.
 - 6) Inspect adjacent area for sediment deposit and install additional controls as necessary.
 - 7) Expand stabilized area as required to accommodate activities.
 - 8) Maintain silt fence as outlined in Plan 122.

16

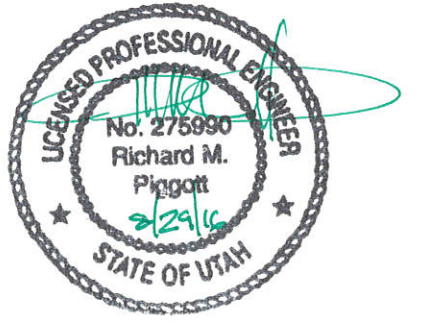
NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.



February 2006 **Equipment and vehicle wash down area** Plan 125

#	Date	Issue / Description	Init.

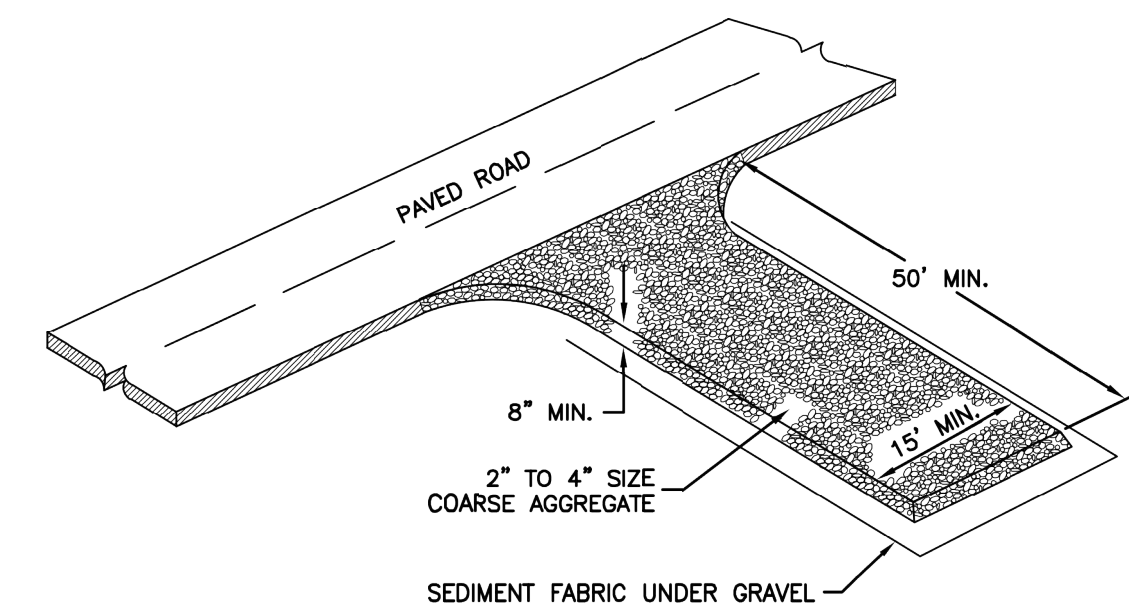
Project No: WAT02.01
 Drawn By: JST
 Checked By: RMP
 Date: 8/17/2016



- ### Stabilized roadway entrance
1. **GENERAL**
 - A. Description. A temporary stabilized pad of gravel for controlling equipment and construction vehicle access to the site.
 - B. Application. At any site where vehicles and equipment enter the public right of way.
 2. **PRODUCT** (Not used)
 3. **EXECUTION**
 - A. Clear and grub area and grade to provide maximum slope of 1 percent away from paved roadway.
 - B. Compact subgrade.
 - C. Place filter fabric under stone if desired (recommended for entrance area that remains more than 3 months).
 - D. Maintenance.
 - 1) Prevent tracking or flow of mud into the public right-of-way.
 - 2) Periodic top dressing with 2-inch stone may be required, as conditions demand, and repair any structures used to trap sediments.
 - 3) Inspect daily for loss of gravel or sediment buildup.
 - 4) Inspect adjacent area for sediment deposit and install additional controls as necessary.
 - 5) Expand stabilized area as required to accommodate activities.

18

NARRATIVE: THIS PLAN MAY BE USED FOR THE CONSTRUCTION OF A STORM WATER BEST MANAGEMENT PRACTICE (BMP). IT IS NOT INCLUSIVE OF ALL PRACTICES AVAILABLE AND IS ONLY SPECIFIC TO THE CONSTRUCTION OF THIS TYPE. MAINTENANCE OF THIS TYPE OF INSTALLATION IS IMPORTANT AND SHOULD BE CONTINUOUSLY MONITORED BY THE CONTRACTOR AND ENGINEER. DETAILS SHOWN HERE HIGHLIGHT IMPORTANT PARTS OF CONSTRUCTION, AND SHOULD BE MODIFIED AS NEEDED.



February 2006

Stabilized roadway entrance

Plan
126

WATTS ENTERPRISES
TRAPPERS RIDGE AT WOLF CREEK
P.R.U.D. PHASE 8
EDEN, UTAH 84310

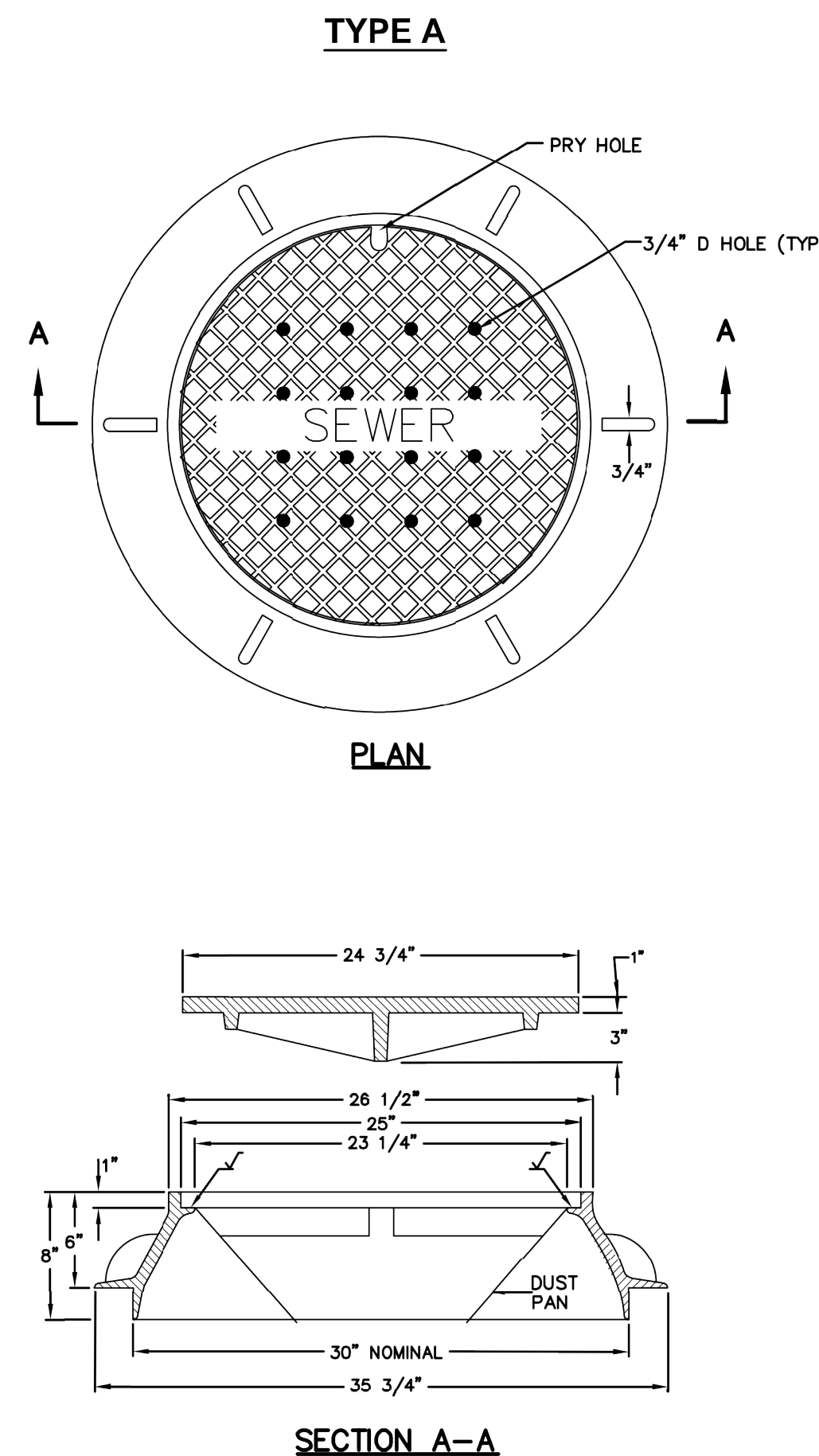
#	Date	Issue / Description	Init.

Project No: WAT02.01
 Drawn By: JST
 Checked By: RMP
 Date: 8/17/2016

30" Frame and cover

1. **GENERAL**
A. The frame and cover fits the manhole in Plan 411.
2. **PRODUCTS**
A. Castings: Grey iron class 35 minimum, ASTM A 48, coated with asphalt based paint or better (except on machined surfaces).
1) Cast the heat number on the frame and cover.
2) Give the frame and cover a machine finish so the cover will not rock.
3) √ designates machined surface.
4) Cast the words "SEWER" on the cover in upper case flush with the surface finish.
3. **EXECUTION**
A. Except in paved streets, provide locking manhole covers in easements, alleys, parking lots, and all other places. Drill and tap two holes to a depth of 1-inch at 90 degrees to pry hole and install 3/4 x 3/4-inch allen socket set screws.

210



30" Frame and cover

Plan 402

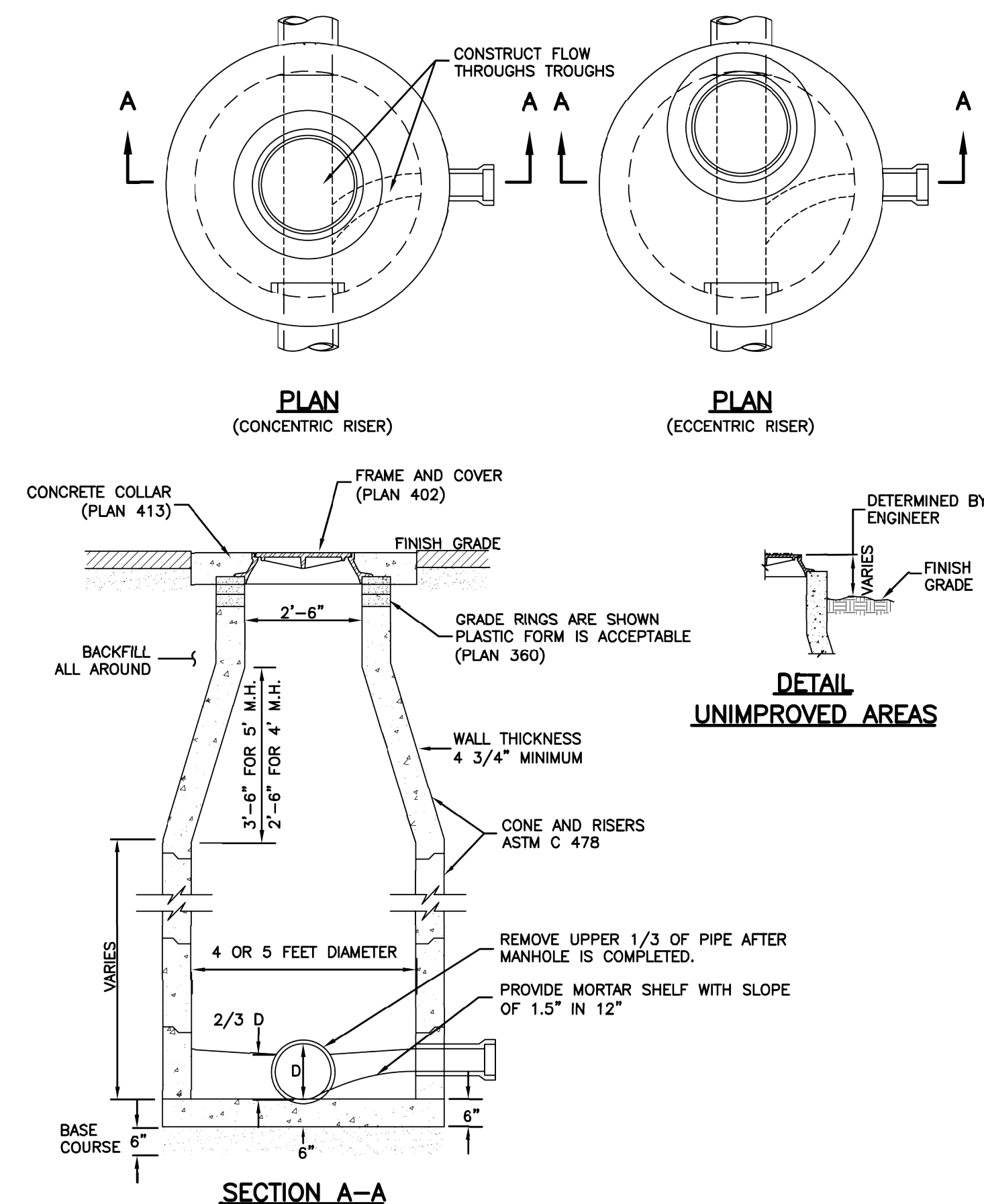
April 1997

211

Sanitary sewer manhole

1. **GENERAL**
A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the manhole.
B. Manhole size:
1) Diameter is 4 feet: For sewers under 12" diameter.
2) Diameter is 5 feet: For sewers 12" and larger, or when 3 or more pipes intersect the manhole.
2. **PRODUCTS**
A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
C. Concrete: Class 4000, APWA Section 03 30 04.
D. Riser and Reducing Riser: ASTM C 478.
E. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615.
F. Grout: 2 parts sand to 1 part cement mortar, ASTM C 1329.
G. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.
3. **EXECUTION**
A. Foundation Stabilization: Get ENGINEER's permission to use a sewer rock or a granular backfill borrow in a geotextile wrap to stabilize an unstable foundation.
B. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
C. Invert Cover. During construction, place invert covers over the top of pipe in manholes that currently convey sewerage. See Plan 412.
D. Pipe Connections: Grout around all pipe openings.
E. Pipe Seal: Install rubber-based pipe seals on all plastic pipes when connecting plastic pipes to manholes. Hold water-stop in place with stainless steel bands.
F. Joints: Place flexible gasket-type sealant in all riser joints. Finish with grout.
G. Adjustment: If the required manhole adjustment is more than 1'-0", remove the cone and grade rings and adjust the manhole elevation with the appropriate manhole section, the cone section, and the grade rings or plastic form to make frame and lid match finish grade.
H. Finish: Provide smooth and neat finishes on interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.
I. Backfill: Provide backfill against the manhole shaft. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

212



Sanitary sewer manhole

Plan 411

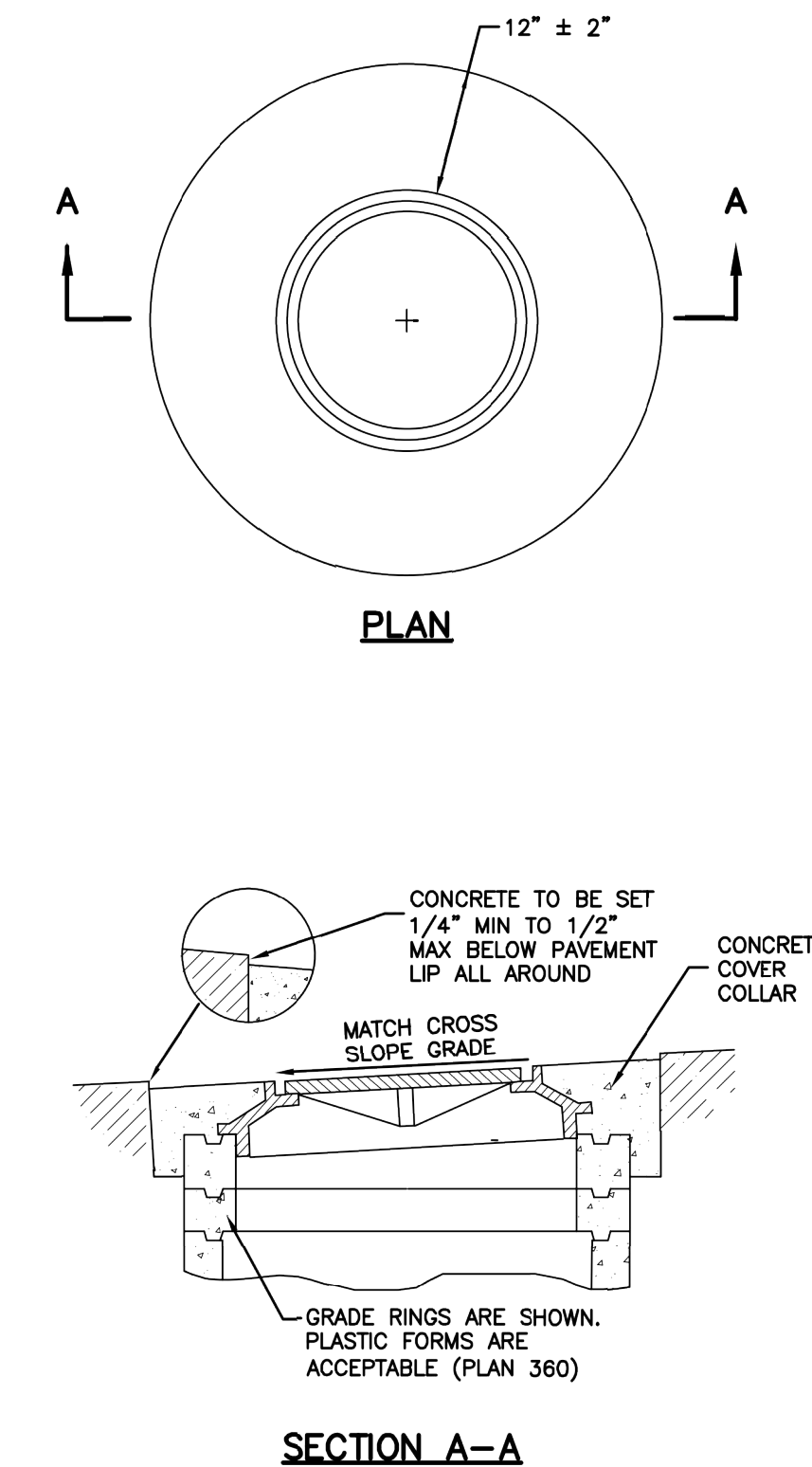
April 2011

213

Cover collar for sanitary sewer manhole

1. **GENERAL**
A. In a pavement surface, the concrete will support the frame under traffic loadings.
2. **PRODUCTS**
A. Concrete: Class 4000, APWA Section 03 30 04.
B. Concrete Curing Agent: Type ID Class A (clear with fugitive dye), membrane forming compound, APWA Section 03 39 00.
3. **EXECUTION**
A. Pavement Preparation: Provide a neat vertical and concentric joint between concrete and existing asphalt concrete surfaces. Clean edges of all dirt, oil, and loose debris.
B. Concrete Placement: Fill the annular space around the frame and cover casting with concrete. Apply a broom finish. Apply a curing agent.

216



Cover collar for sanitary sewer manhole

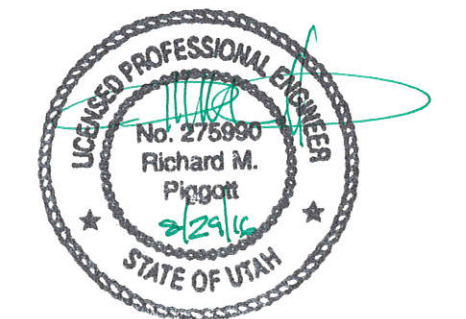
Plan 413

September 2001

217

#	Date	Issue / Description	Init.

Project No:	WAT02.01
Drawn By:	JST
Checked By:	RMP
Date:	8/17/2016



#	Date	Issue / Description	Init.

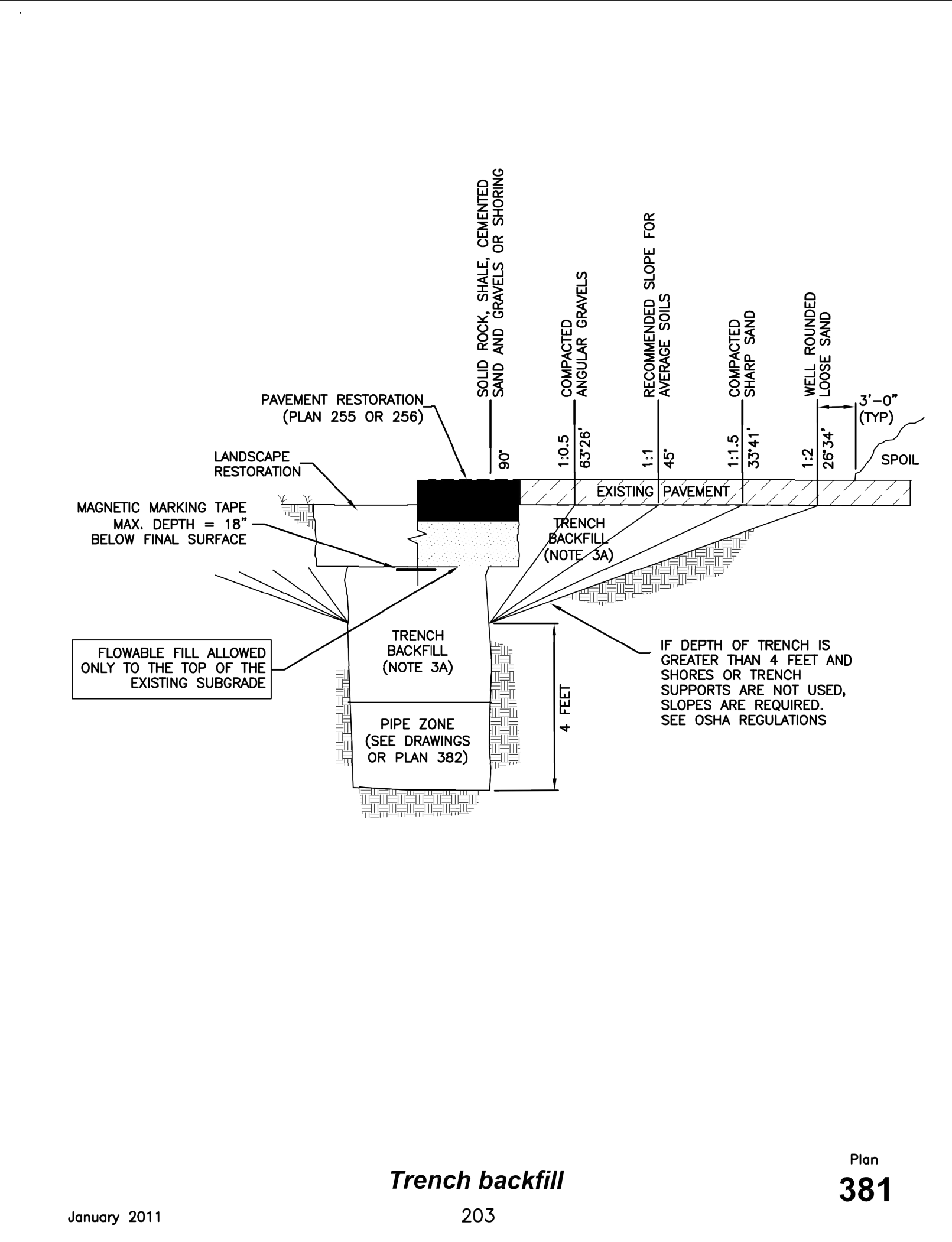
Project No:	WAT02.01
Drawn By:	JST
Checked By:	RMP
Date:	8/17/2016

SANITARY SEWER
DETAILS (APWA)

Trench backfill

- GENERAL**
 - The drawing applies to backfilling the trench above the pipe zone.
- PRODUCTS**
 - Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 3-inches.
 - Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
- EXECUTION**
 - Trench Backfill:
 - DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate as trench backfill.
 - Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.
 - Water jetting is NOT allowed.
 - Submission of quality control compaction test result data developed for haunching areas may be requested by ENGINEER at any time. Provide results of tests immediately upon request.
 - Flowable Fill: When required, place controlled low strength material in the trench, APWA Section 31 05 15. Cure the fill before placing surface restorations.
 - Surface Restoration:
 - Landscaped Surface: Rake to match existing grade. Replace vegetation to match pre-construction conditions. Follow APWA Section 32 92 00 (turf or grass) or APWA Section 32 93 13 (ground cover) requirements.
 - Paved Surface: Do not install asphalt or concrete surfacing until trench compaction is acceptable to ENGINEER. Follow APWA Section 33 05 25 (asphalt surfacing), or APWA Section 33 05 25 (concrete surfacing).

202



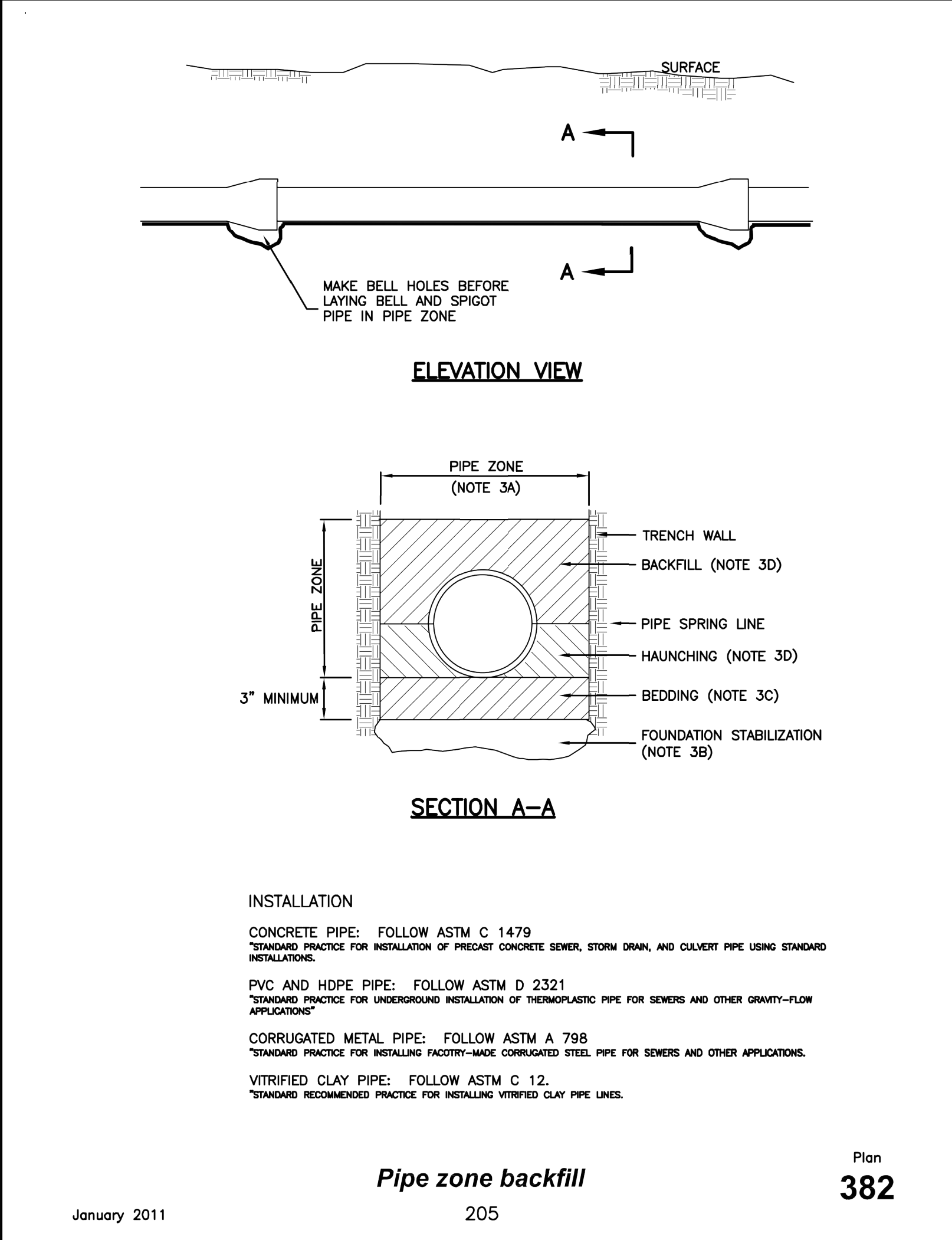
Trench backfill
Plan **381**

January 2011

Pipe zone backfill

- GENERAL**
 - Install the pipe in the center of the trench or no closer than 6-inches from the wall of the pipe to the wall of the trench.
- PRODUCTS**
 - Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
 - Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
 - Concrete: APWA Section 03 30 04.
 - Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
 - Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.
- EXECUTION**
 - Excavate the Pipe Zone: Width is measured at the pipe spring line and includes any necessary sheathing. Provide width recommended by pipe manufacturer. Follow manufacturer's recommendations when using trench boxes.
 - Foundation Stabilization: Get ENGINEER's permission before installing common fill. Vibrate to stabilize. Installation of stabilization-separation geotextile will be required to separate backfill material and native subgrade materials if common fill cannot provide a working surface or prevent soils migration.
 - Base Course:
 - Furnish untreated base course material unless specified otherwise by pipe manufacturer.
 - Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
 - When using concrete, provide at least Class 2,000 per APWA Section 03 30 04.
 - Pipe Zone: DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate in the pipe zone. Water jetting is NOT allowed.
 - Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26 unless pipe manufacturer requires more stringent installation.
 - Submission of quality control compaction test result data developed for the haunch zone may be requested by ENGINEER at any time. CONTRACTOR is to provide results of tests immediately upon request.
 - Flowable Fill (when required and if allowed by pipe manufacturer):
 - Place the controlled low strength material, APWA Section 31 05 15.
 - Prevent pipe flotation by installing in lifts and providing pipe restraints as required by pipe manufacturer.
 - Reset pipe to line and grade if pipe "floats" out of position.

204



Pipe zone backfill
Plan **382**

January 2011

INSTALLATION

CONCRETE PIPE: FOLLOW ASTM C 1479
*STANDARD PRACTICE FOR INSTALLATION OF PRECAST CONCRETE SEWER, STORM DRAIN, AND CULVERT PIPE USING STANDARD INSTALLATIONS.

PVC AND HDPE PIPE: FOLLOW ASTM D 2321
STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS

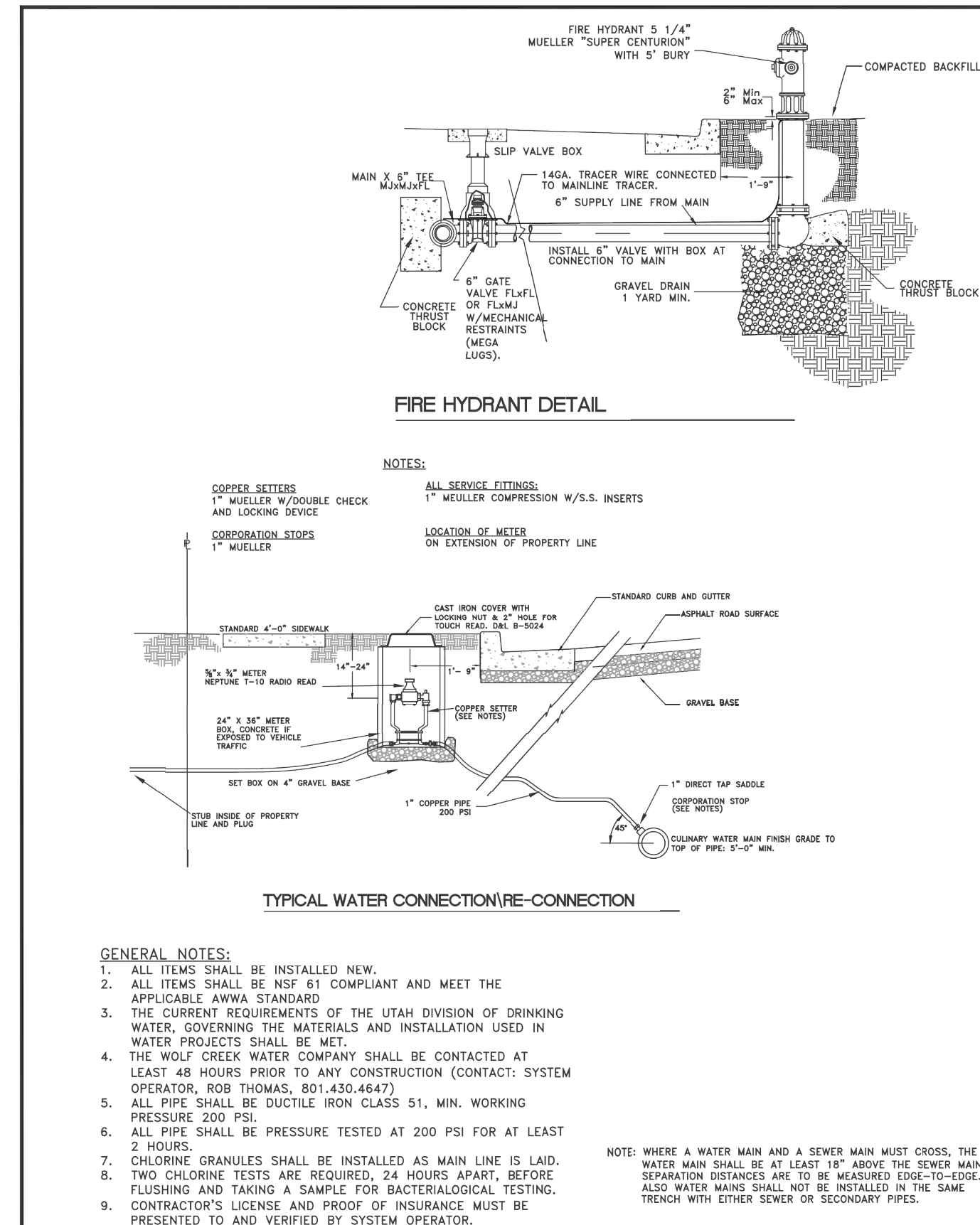
CORRUGATED METAL PIPE: FOLLOW ASTM A 798
*STANDARD PRACTICE FOR INSTALLING FACTORY-MADE CORRUGATED STEEL PIPE FOR SEWERS AND OTHER APPLICATIONS.

VITRIFIED CLAY PIPE: FOLLOW ASTM C 12.
*STANDARD RECOMMENDED PRACTICE FOR INSTALLING VITRIFIED CLAY PIPE LINES.

WOLF CREEK WATER AND SEWER IMPROVEMENT DISTRICT SPECIFICATIONS

- ALL WETTED MATERIALS SHALL BE CERTIFIED TO MEET NSF-61 AND NSF-372.
- MATERIAL OF PIPE (DUCTILE IRON CLASS 51)
- DEPTH OF COVER (5 FEET)
- TYPE OF SERVICE SADDLE (1" DIRECT TAP)
- SIZE AND TYPE OF SERVICE LATERAL (1" COPPER, 200 PSI OR CTS HDPE)
- SERVICE FITTINGS (1" MUELLER COMPRESSION FITTINGS)
- CORP. STOPS (1" MUELLER)
- SETTERS (1" MUELLER WITH DOUBLE CHECK AND LOCKING DEVICE)
- METER BOX (24" DIA. X 36" PLASTIC OR CONCRETE)
- METER BOX LID (24" WITH 2" HOLE IN THE MIDDLE)
- DEPTH OF SERVICE LINE AND METER (5', METER 14"-24" BELOW LID OF BOX)
- TYPE OF METER (NEPTUNE RADIO READ)
- THRUST RESTRAINT (BOTH MEGA-LUG AND CONCRETE)
- FIRE HYDRANTS (MUELLER 5' BURY)
- MAIN LINE LOCATION IN NEW SUBDIVISIONS (IN ROADS: SHOULDERS OK IF EXISTING ROAD WITHOUT C+G)
- UNDER NO CIRCUMSTANCE SHALL THE PIPE OR ACCESSORIES BE DROPPED INTO THE TRENCH
- OPEN ENDS OF ALL PIPELINES UNDER CONSTRUCTION SHALL BE COVERED AND EFFECTIVELY SEALED AT THE END OF THE DAY'S WORK

- METERS LOCATED IN R.O.W. ALONG FRONTAGE
- TRACER WIRE REQUIRED (MIN. 14 GA. BRING UP F.H. BARREL AND WRAP AT LEAST TWICE ABOVE GROUND)
- WARNING TAPE (2" WIDE METALLIC, "BURIED WATER LINE BELOW", LOCATE 18"-24" BELOW FINISHED GRADE)
- BLOW OFFS (2" FLUSH VALVE -TYPE WITH DRAIN, MANGUARD MODEL #78 OR EQUAL)
- PRV STATIONS (USE CLA-VAL VALVES WITH BYPASS AND PRESSURE RELIEF)
- AIR/VAC VALVES (LOCATED AT PEAKS, VENT OUTSIDE TRAVELED WAY, SEE DETAIL)
- MAIN LINE VALVES (MUELLER VALVES WITH MEGA LUG ON ALL BRANCHES AND RUNS OF TEES AND CROSSES)
PRESSURE TEST THE LINE TO 200 LBS FOR TWO HRS.
ADD CHLORINE GRANULES IN LINE AS IT IS LAID.
TAKE A CHLORINE TEST AT 50 PPM AND THEN 24 HRS LATER TAKE ANOTHER TEST TO ENSURE THAT A RESIDUAL OF 25 PPM REMAINS.
FLUSH AND TAKE A SAMPLE TO THE LAB TO VERIFY THAT IT PASSES.
- ALL PIPE AND SERVICE CONNECTIONS WILL BE BEDDED WITH IMPORTED MATERIAL, SAND OR LIKE MATERIAL.
- CONTRACTOR'S LICENCE AND PROOF OF INSURANCE REQUIRED NO THIRD PARTY PERSON.



GARDNER ENGINEERING
CIVIL-LAND PLANNING
MUNICIPAL-LAND DEVELOPMENT
9340 SOUTH 374 EAST OGDEN, UT
OFFICE 801-478-0282 FAX 801-478-0466

WOLF CREEK WATER AND SEWER
IMPROVEMENT DISTRICT
STANDARD WATER DETAILS

1 / 6

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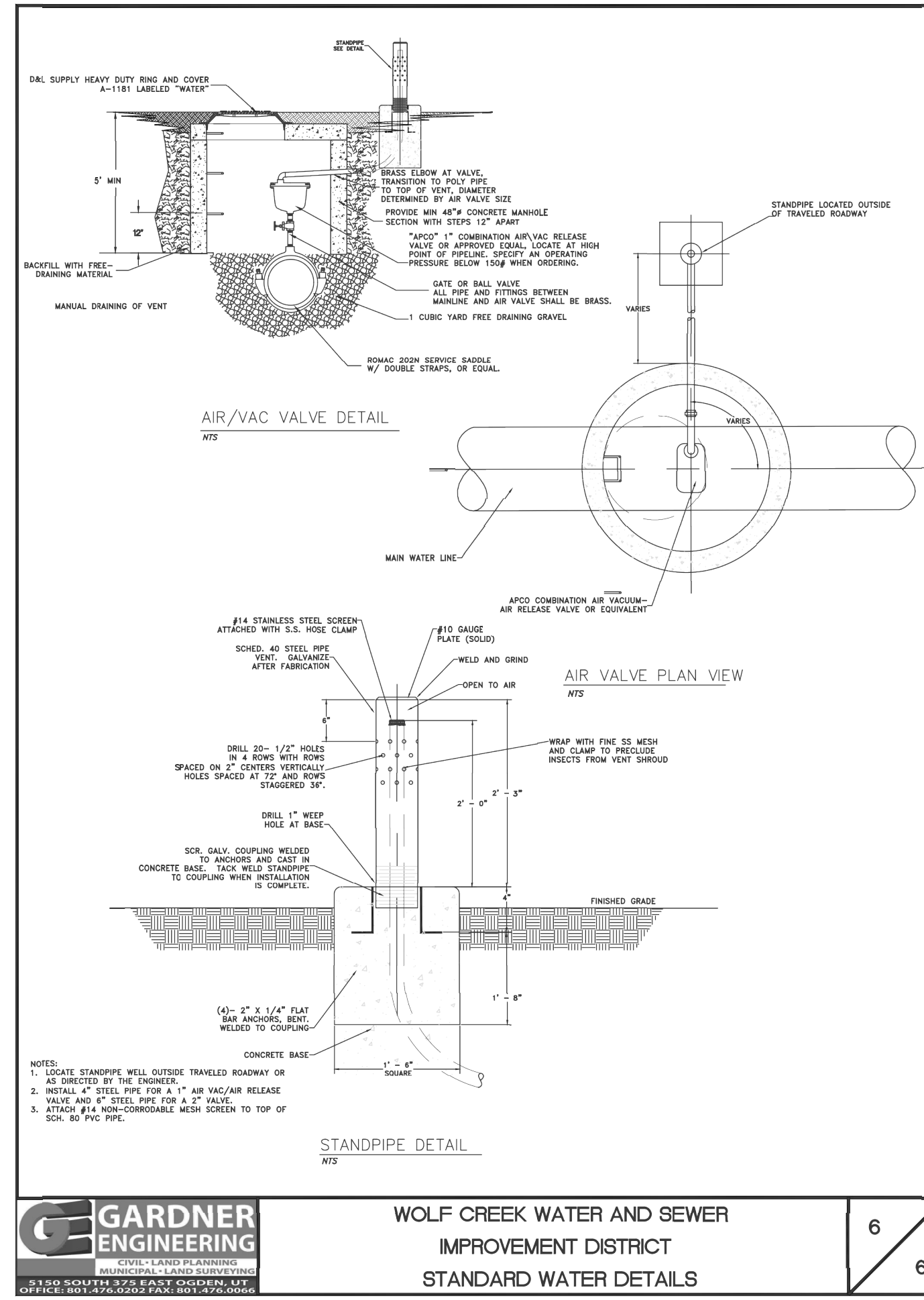
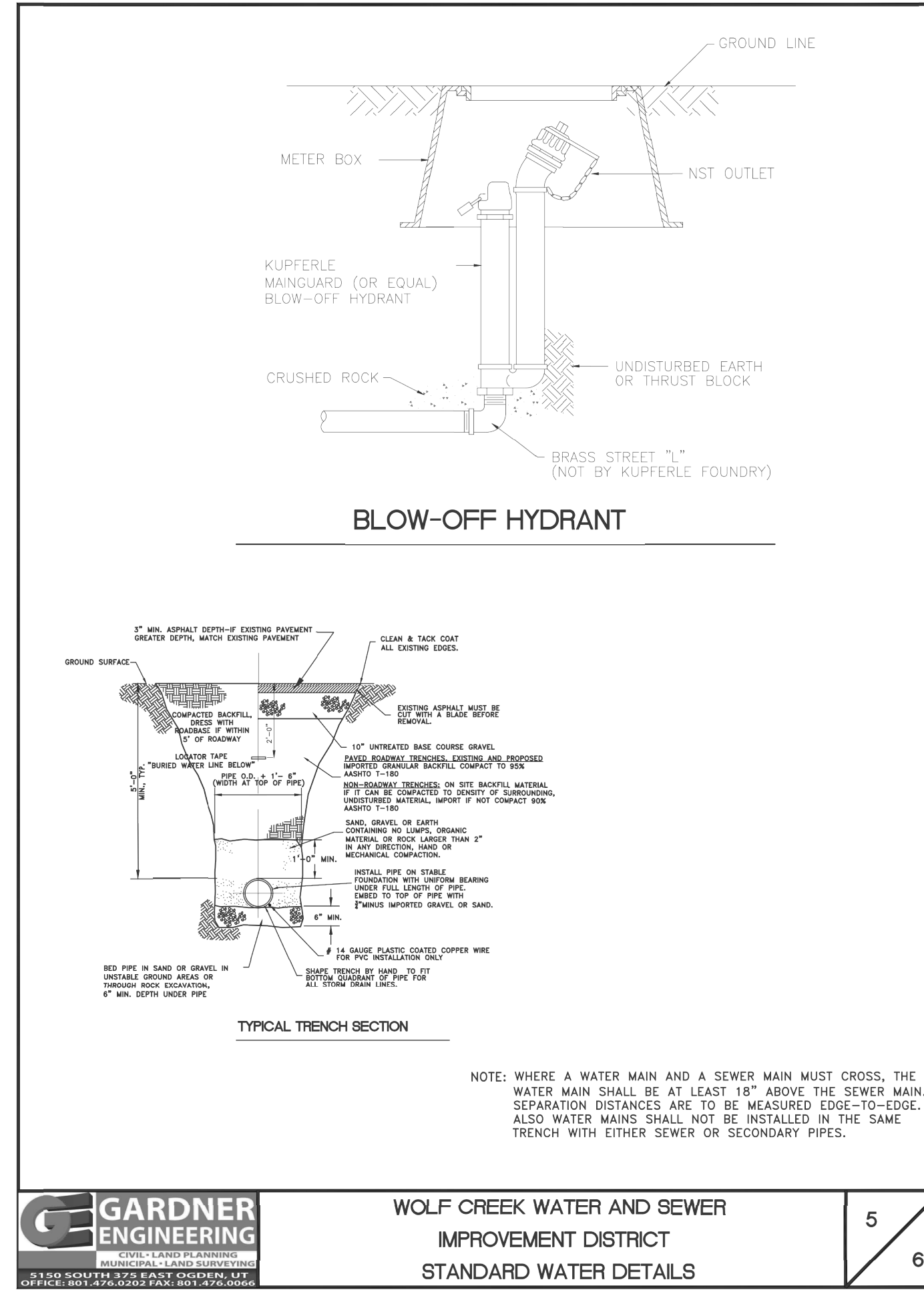
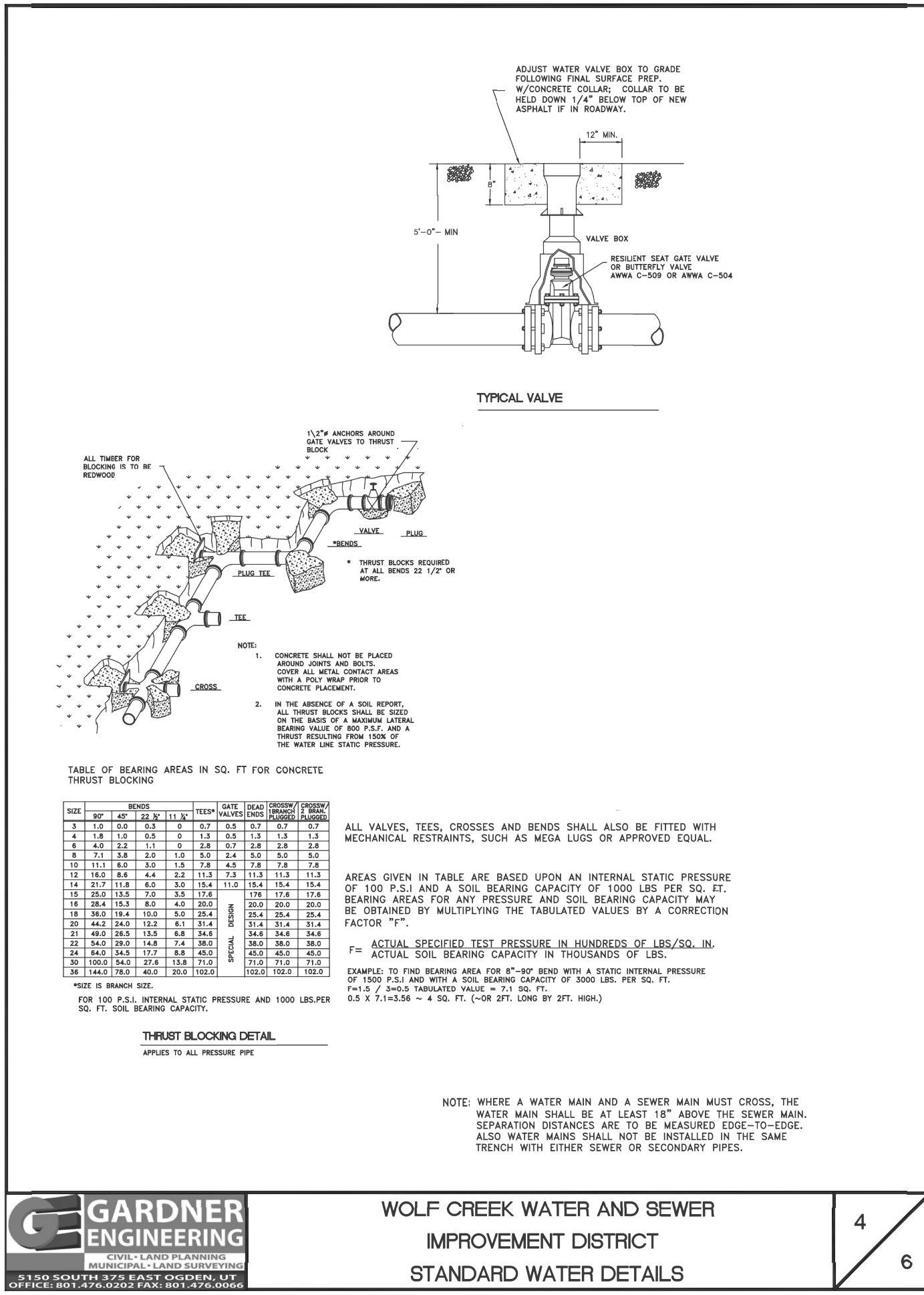
WOLF CREEK WATER AND SEWER
IMPROVEMENT DISTRICT
STANDARD WATER DETAILS

2 / 6

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WOLF CREEK WATER AND SEWER
IMPROVEMENT DISTRICT
STANDARD WATER DETAILS

3 / 6



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WOLF CREEK WATER AND SEWER
IMPROVEMENT DISTRICT
STANDARD WATER DETAILS

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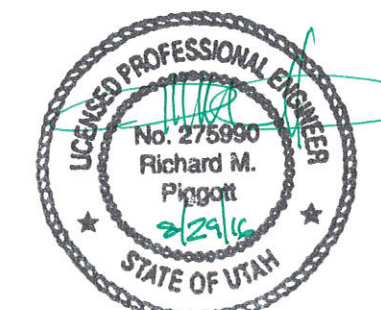
WOLF CREEK WATER AND SEWER
IMPROVEMENT DISTRICT
STANDARD WATER DETAILS

5 / 6

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WOLF CREEK WATER AND SEWER
IMPROVEMENT DISTRICT
STANDARD WATER DETAILS

6 / 6



#	Date	Issue / Description	Init.

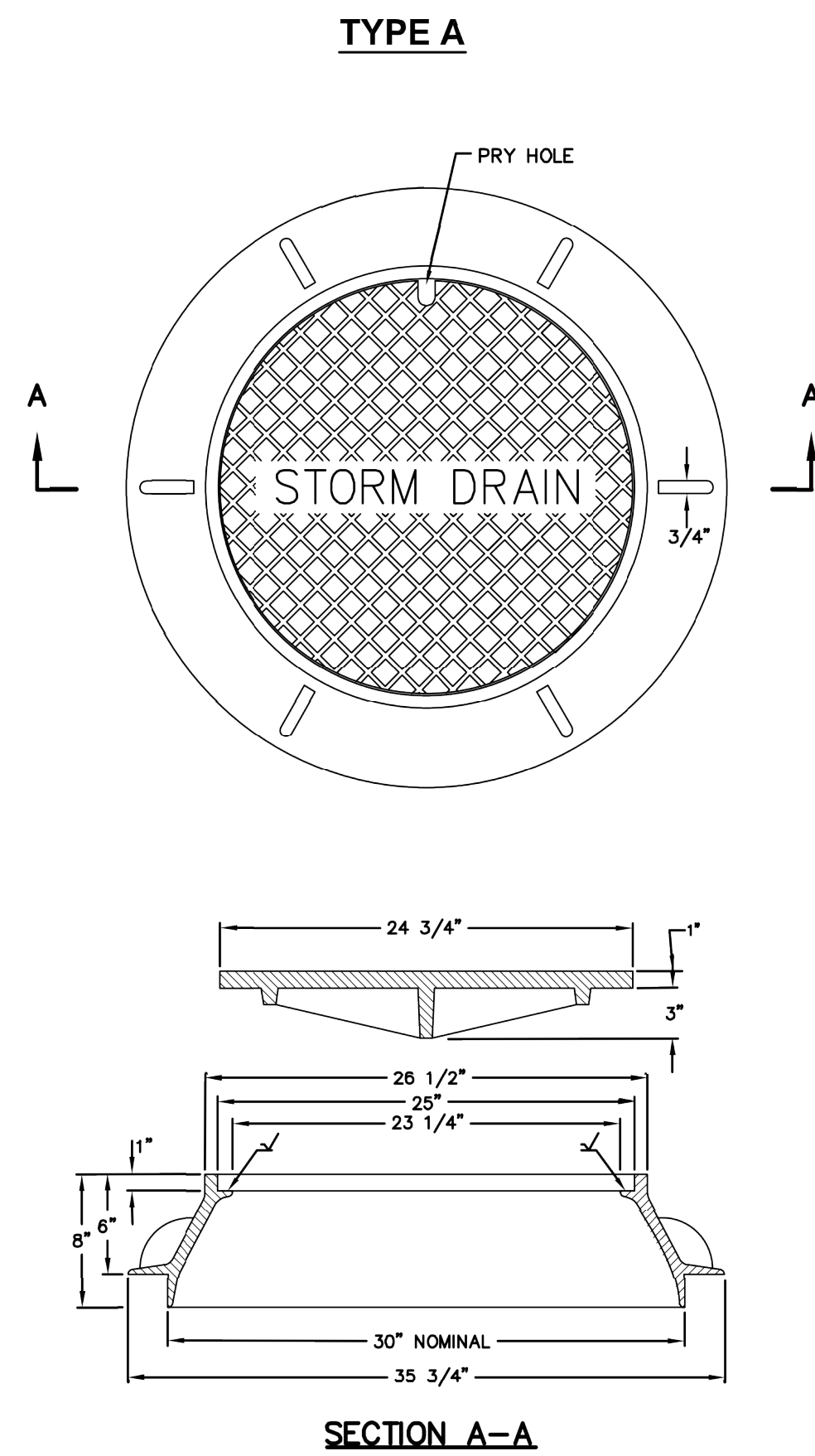
Project No:	WAT02.01
Drawn By:	JST
Checked By:	RMP
Date:	8/17/2016

WATER DETAILS (WCWSD)

30" Frame and cover

- 1. GENERAL
 - A. The frame and cover fits.
 - 1) Cleanout box type B in Plan 331, and
 - 2) Precast manhole in Plan 341.
- 2. PRODUCTS
 - A. Castings: Grey iron class 35 minimum, ASTM A 48.
 - 1) Coated with asphalt based paint or better (except on machined surfaces).
 - 2) Cast the heat number on the frame and cover.
 - 3) Give the frame and cover a machine finish so the cover will not rock.
 - 4) ∇ designates a machine finished surface.
 - 5) Cast the words "STORM DRAIN" on the cover in upper case flush with the surface finish.
- 3. EXECUTION
 - A. Except in paved streets, provide locking manhole covers in easements, alleys, parking lots, and all other places. Drill and tap two holes to a depth of 1-inch at 90 degrees to pry hole and install 3/4 x 3/4-inch allen socket set screws.

132



30" Frame and cover

Plan 302

September 2001

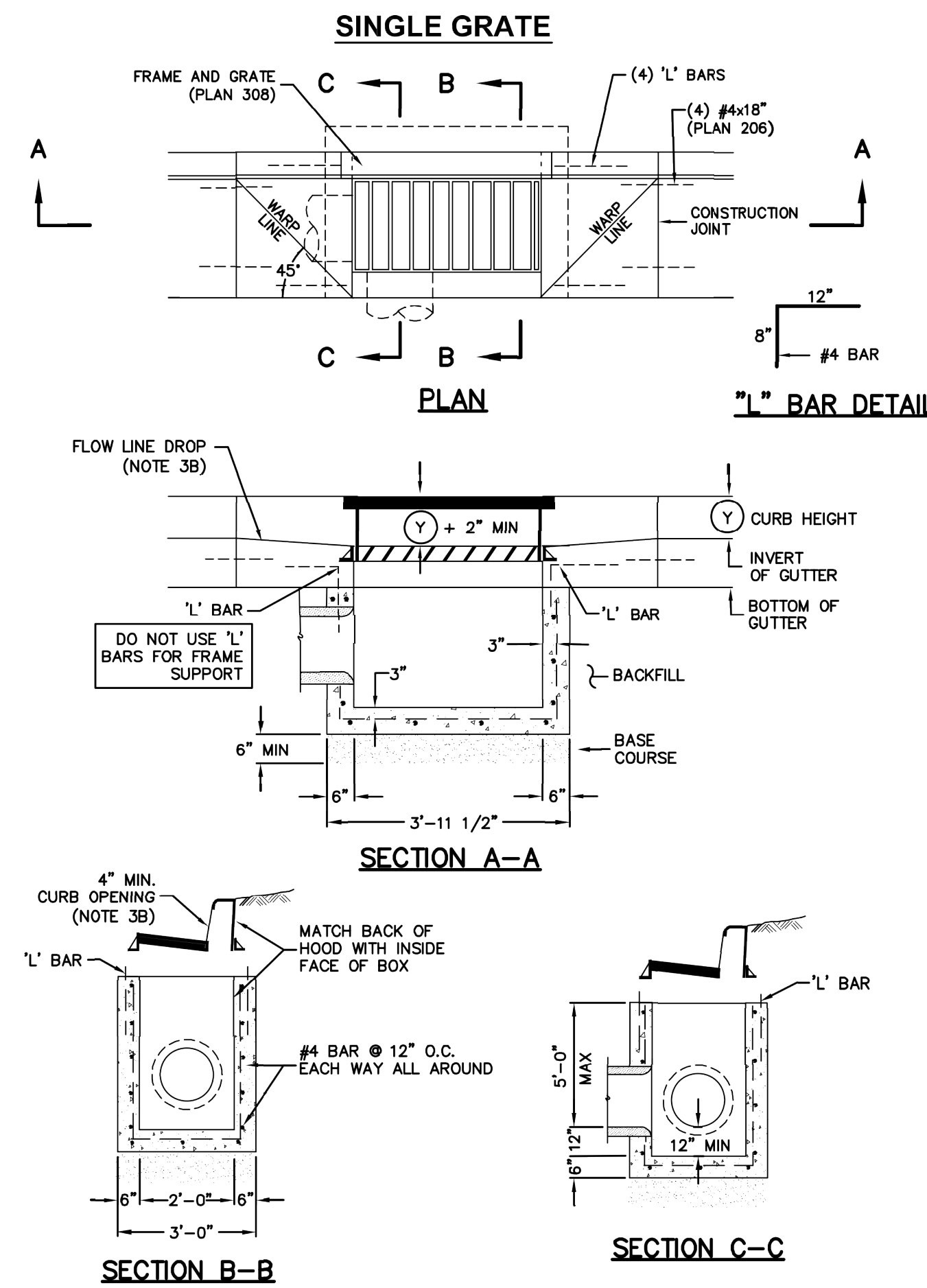
133

Sheet 1 of 2

Catch basin

- 1. GENERAL
 - A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the box.
- 2. PRODUCTS
 - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER'S permission.
 - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
 - C. Concrete: Class 4000, APWA Section 03 30 04.
 - D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615.
- 3. EXECUTION
 - A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
 - B. Curb Face Opening: Make opening at least 4-inches high. Provide at least a 2-inch drop between the "warp line" in the gutter flow-line and the top of the grate at the curb face opening.
 - C. Concrete Placement: APWA Section 03 30 10. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
 - D. Backfill: Place backfill against the basin wall. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

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Catch basin

Plan 315

September 2010

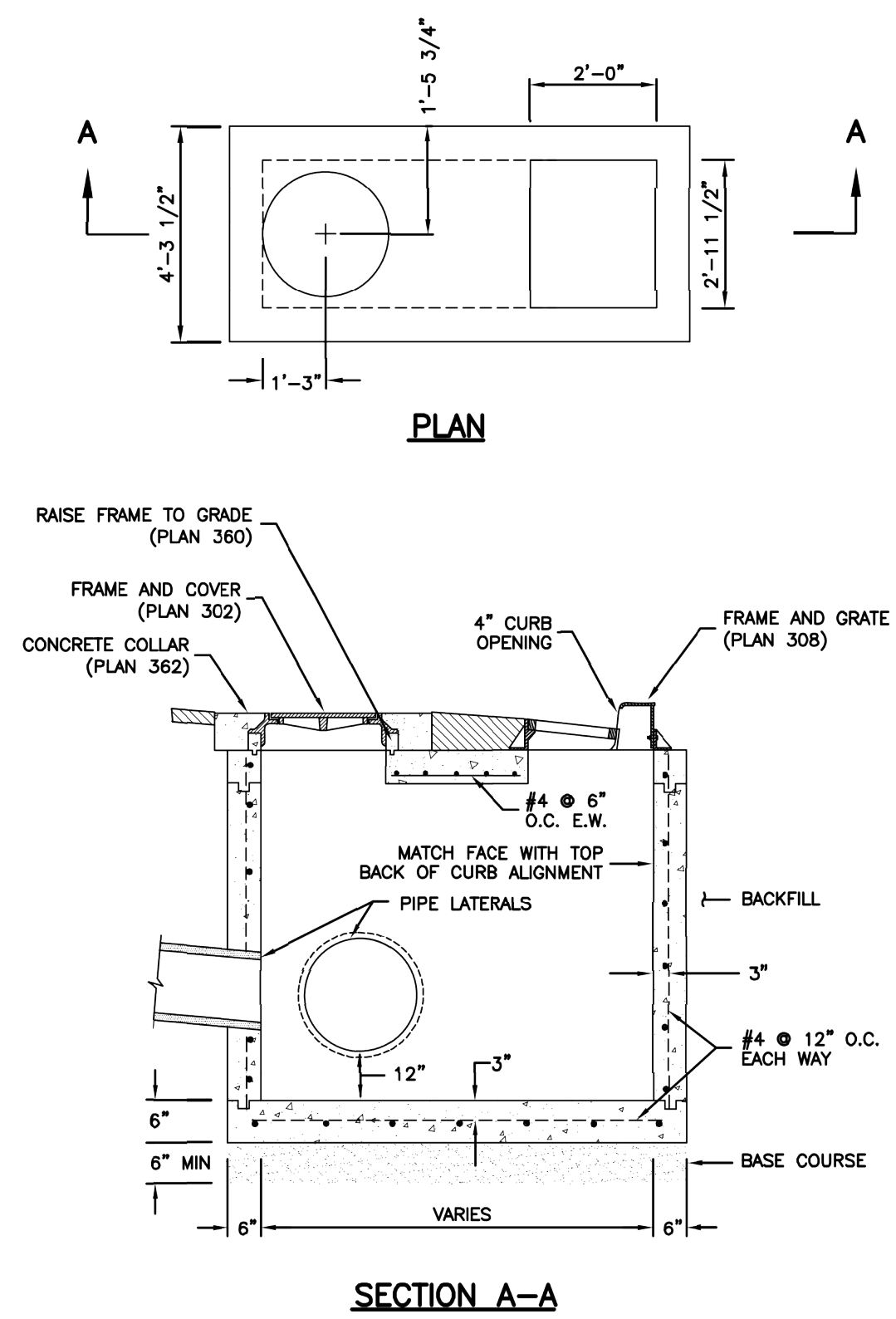
155

Sheet 1 of 2

Combination catch basin and cleanout box

- 1. GENERAL
 - A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the box.
- 2. PRODUCTS
 - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER'S permission.
 - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
 - C. Concrete: Class 4000, APWA Section 03 30 04.
 - D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A 615.
 - E. Ladder Rungs: Plastic, or plastic coated steel typically 8-inches wide.
- 3. EXECUTION
 - A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
 - B. Curb Face Opening: Make opening at least 4-inches high. Provide at least a 2-inch drop between the "begin warp" line in the gutter flow-line and the top of the grate at the curb face opening.
 - C. Ladder Rungs: Provide rungs in boxes over 6 feet deep. When measured from the floor of the box, place bottom rung the greater distance of 4 feet from the floor of the box or 1 foot above the top of the pipe. Place top rung within 3 feet of bottom of box ceiling.
 - D. Concrete Placement: APWA Section 03 30 10. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
 - E. Backfill: Provide backfill against all sides of the box. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

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Combination catch basin and cleanout box

Plan 316

March 2011

159

#	Date	Issue / Description	Int.

Project No: WAT02.01
Drawn By: JST
Checked By: RMP
Date: 8/17/2016

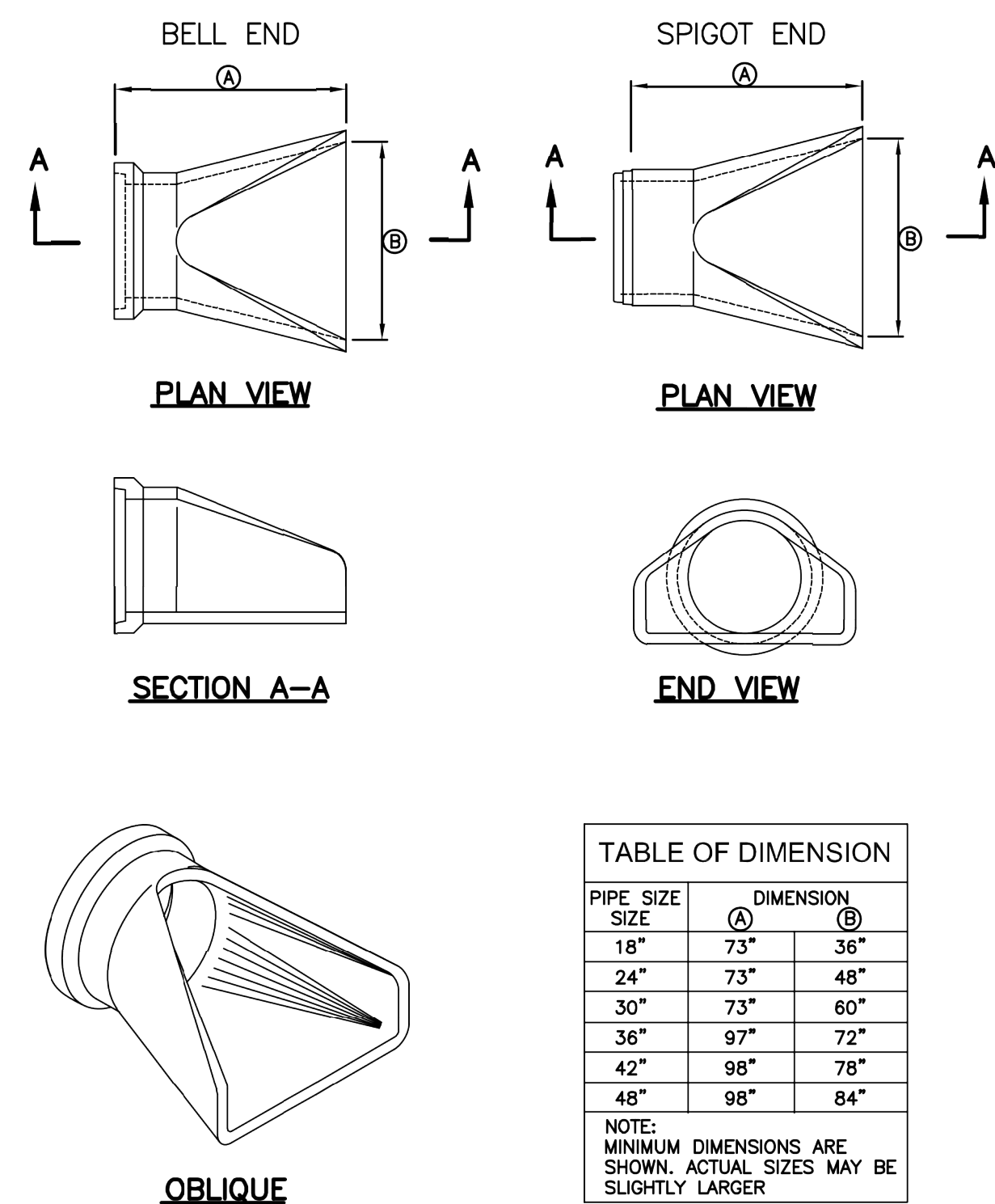
STORM DRAIN DETAILS (APWA)

Pipe outfall

- GENERAL**
 - Round concrete pipe application.
 - Additional requirements are specified in APWA Section 33 05 02.
- PRODUCTS**
 - Use the same quality of precast end section as the pipe.
 - Use the joint material and connection that is the same as the joints in the pipeline.
- EXECUTION**
 - General dimensions and geometric shapes may vary from manufacturer to manufacturer.
 - Steel reinforcement is not required in the concrete end section shown.
 - Provide joint restraint connectors if required by ENGINEER.

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ROUND WITH FLARE



Pipe outfall

November 2010

171

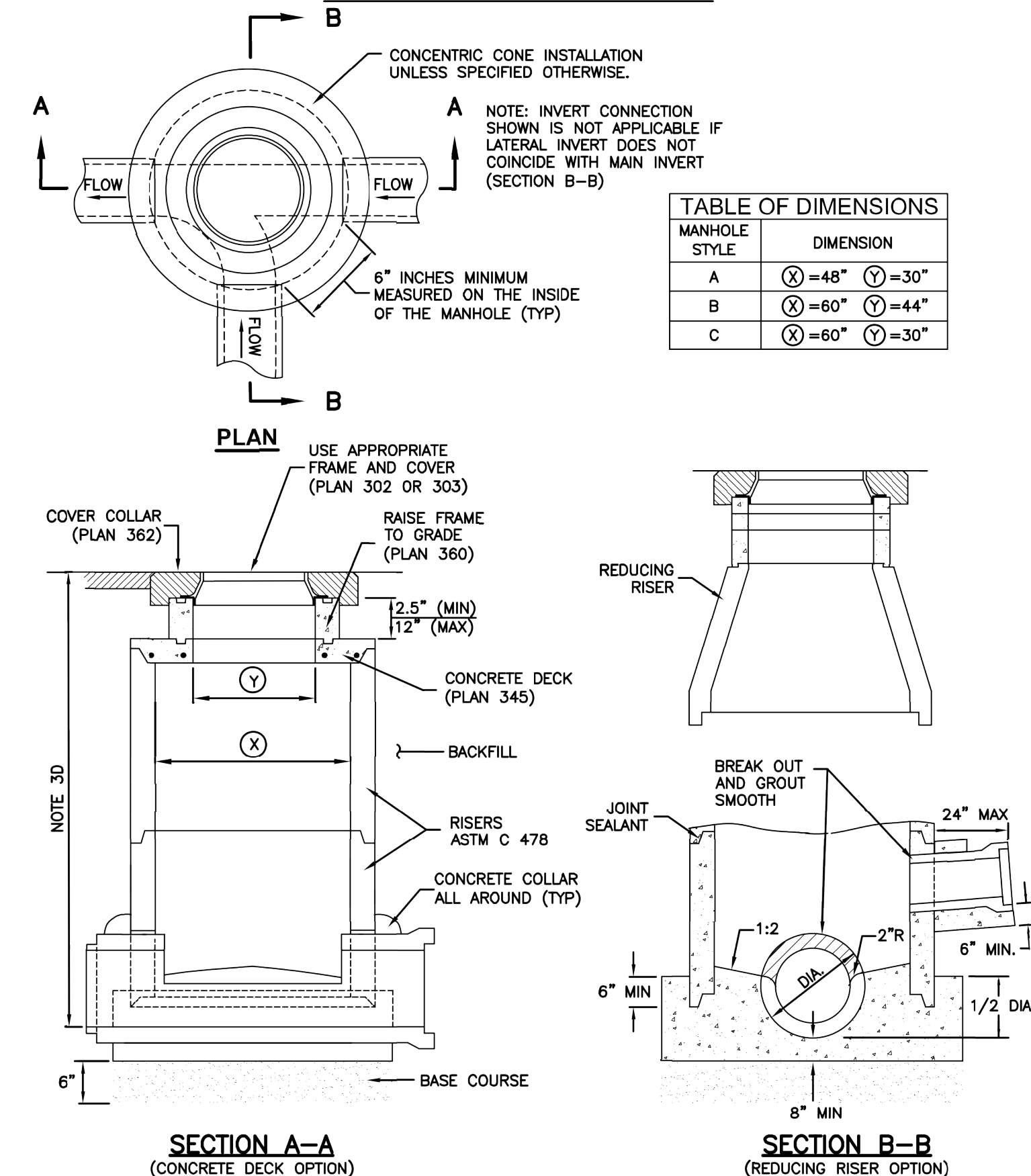
Plan
323
Sheet 1 of 3

Precast manhole

- GENERAL**
 - The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the manhole.
 - Manhole size:
 - Diameter is 4 feet: For pipe under 12" diameter.
 - Diameter is 5 feet: For pipe 12" and larger, or when 3 or more drain pipes intersect the manhole.
 - Wall thickness:
 - Precast reinforced concrete walls 4 3/4" minimum.
 - Cast-in-place concrete to be 8 inches thick minimum.
- PRODUCTS**
 - Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
 - Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
 - Concrete: Class 4000, APWA Section 03 30 04.
 - Riser and Reducing Riser: Reinforced concrete pipe, Class III, ASTM C 478.
 - Joint Sealant: Rubber based, compressible.
 - Grout: 2 parts sand to 1 part cement mortar.
- EXECUTION**
 - Foundation Stabilization: Get ENGINEER's permission to use a sewer rock or pea gravel to stabilize an unstable foundation.
 - Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
 - Invert cover. During construction, place invert covers over the top of pipe in manholes that currently convey sewerage. See Plan 412.
 - Concrete Deck or Reducing Riser: When depth of manhole from pipe invert to finish grade exceeds 7 feet, use an ASTM C 478 reducing riser cone.
 - Pipe Connections: Grout around all pipe openings.
 - Water Stops: Install rubber-based water-stops on all plastic pipes when connecting plastic pipes to manholes. Hold water-stop in place with stainless steel bands.
 - Joints: Place flexible sealant in all joints. Finish with grout.
 - Finish: Provide smooth and neat finishes on interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.
 - Backfill: Provide backfill against the manhole shaft. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

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PIPE PASS-THROUGH BASE



SECTION A-A
(CONCRETE DECK OPTION)

SECTION B-B
(REDUCING RISER OPTION)

November 2010

189

Precast manhole

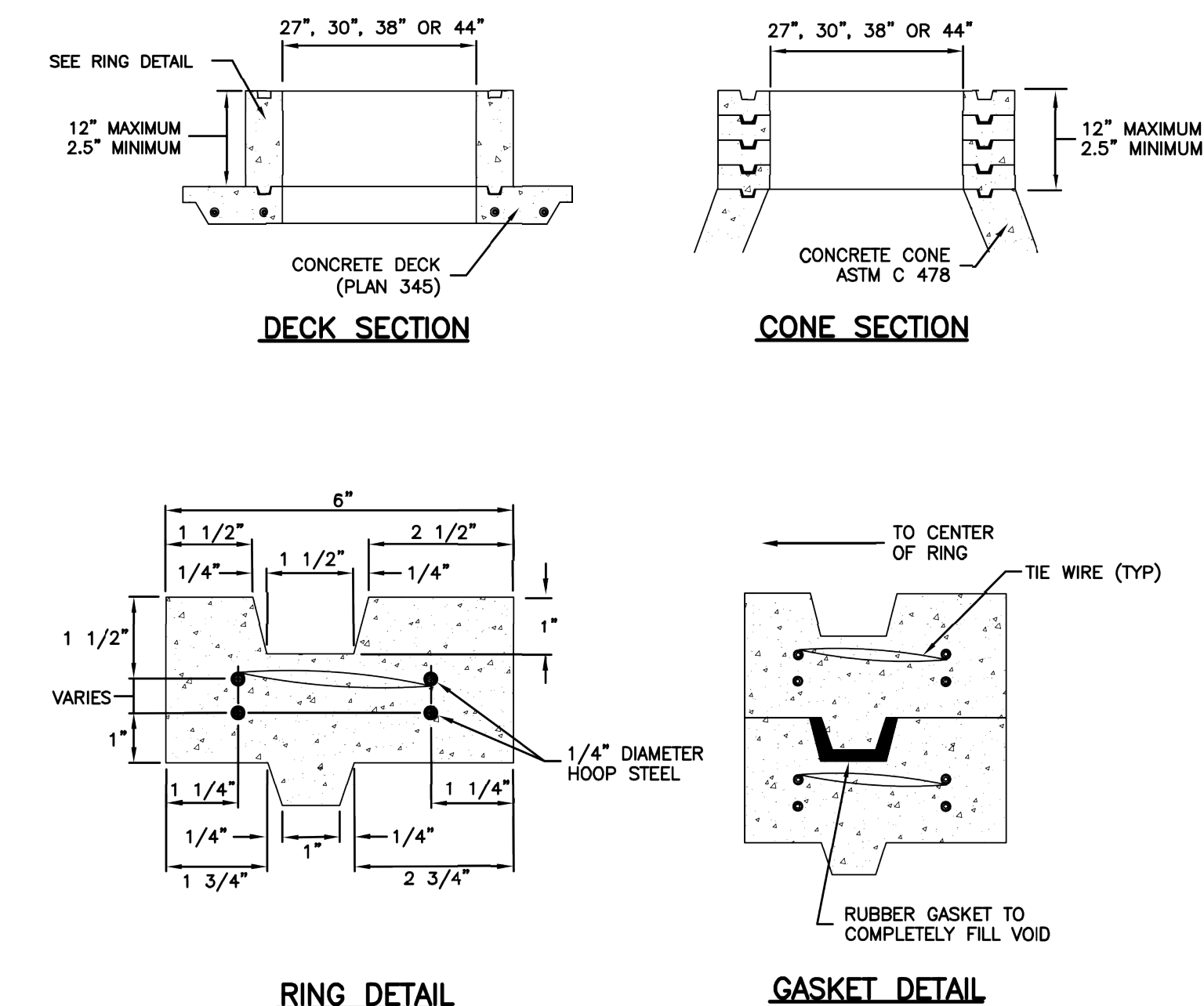
Plan
341
Sheet 2 of 2

Raise frame to grade

- GENERAL**
 - Grade rings are used in non-pressurized applications to adjust frame to grade.
- PRODUCTS**
 - Concrete: Class 4000, APWA Section 03 30 04.
 - Reinforcement: Deformed, 60 ksi yield grade hoop steel, ASTM A 615.
 - 2 1/2" High Rings: Provide two 1/4" diameter steel hoops tied with No. 14 AWS gage wire, 8" on center.
 - 6" and 8" High Rings: Provide four 1/4" diameter steel hoops, tied with No. 14 AWS gage wire, 8" on center.
 - Gasket: Rubber-based, compressible.
- EXECUTION**
 - Ring Manufacture:
 - Fabrication, APWA Section 03 30 10.
 - Cure, APWA Section 03 39 00.
 - Field Installation: Seat rings with a compressible gasket.

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GRADE RING



RING DETAIL

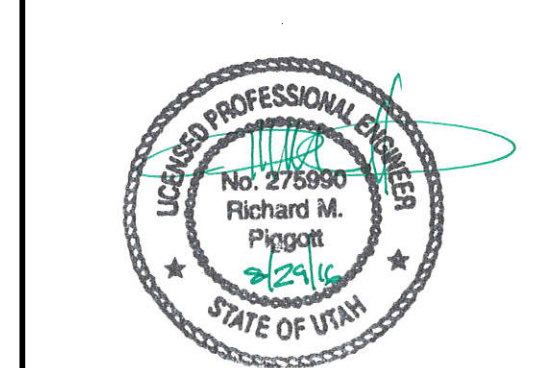
GASKET DETAIL

May 2006

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Raise frame to grade

Plan
360
Sheet 1 of 2



WATTS ENTERPRISES
TRAPPERS RIDGE AT WOLF CREEK
P.R.U.D. PHASE 8
EDEN, UTAH 84310

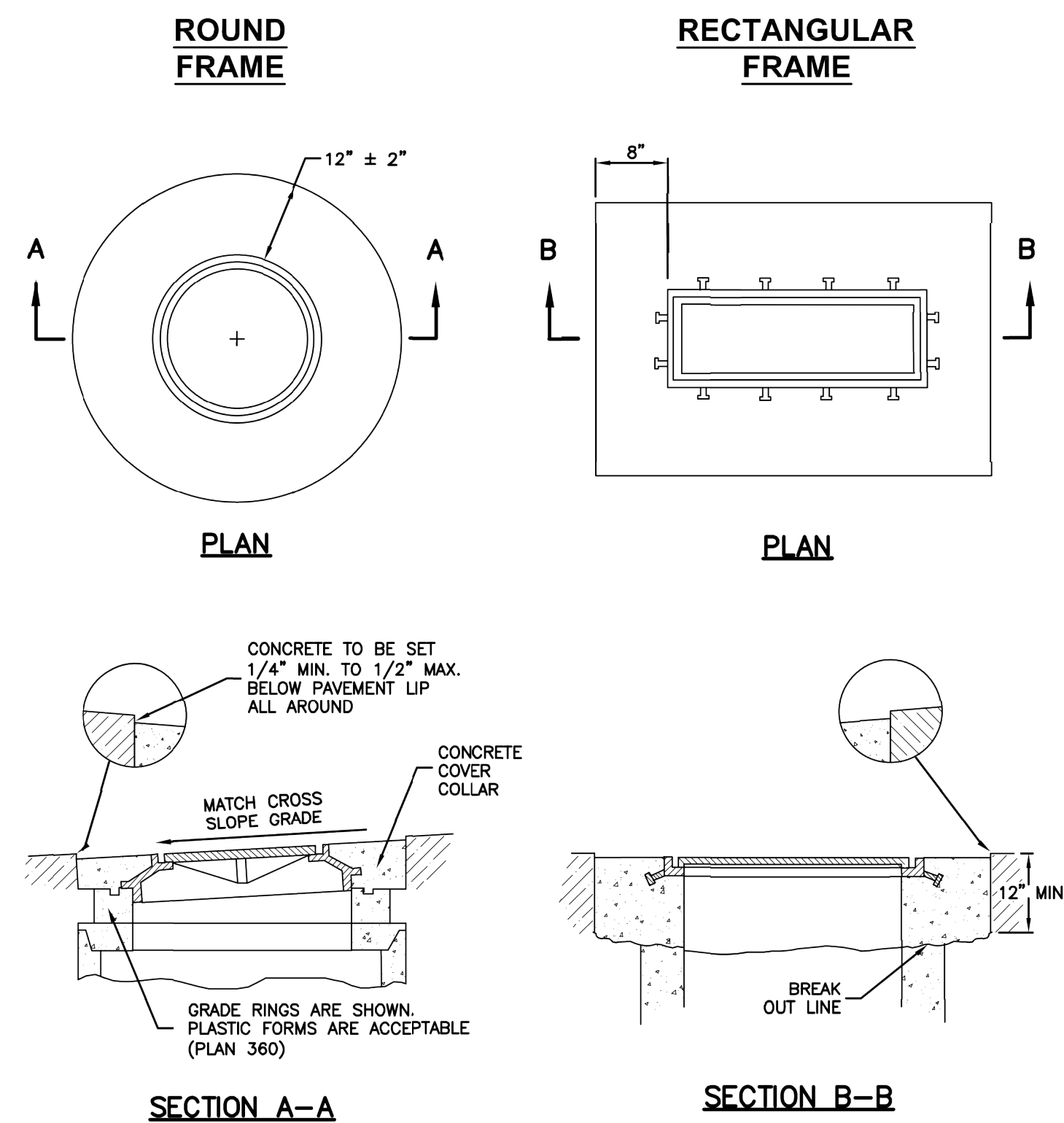
#	Date	Issue / Description	Init.

Project No: WAT02.01
Drawn By: JST
Checked By: RMP
Date: 8/17/2016

Cover collar for storm drains

1. **GENERAL**
 - A. In a pavement surface, the concrete will support the frame under traffic loadings.
2. **PRODUCTS**
 - A. Concrete: Class 4000, APWA Section 03 30 04.
 - B. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.
3. **EXECUTION**
 - A. Pavement Preparation: Provide a neat vertical and concentric joint between concrete and existing asphalt concrete surfaces. Clean edges of all dirt, oil, and loose debris.
 - B. Concrete Placement: APWA Section 03 30 10. Fill the annular space around the frame and cover casting with concrete. Apply a broom finish. Apply a curing agent.

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Cover collar for storm drains

Plan
362

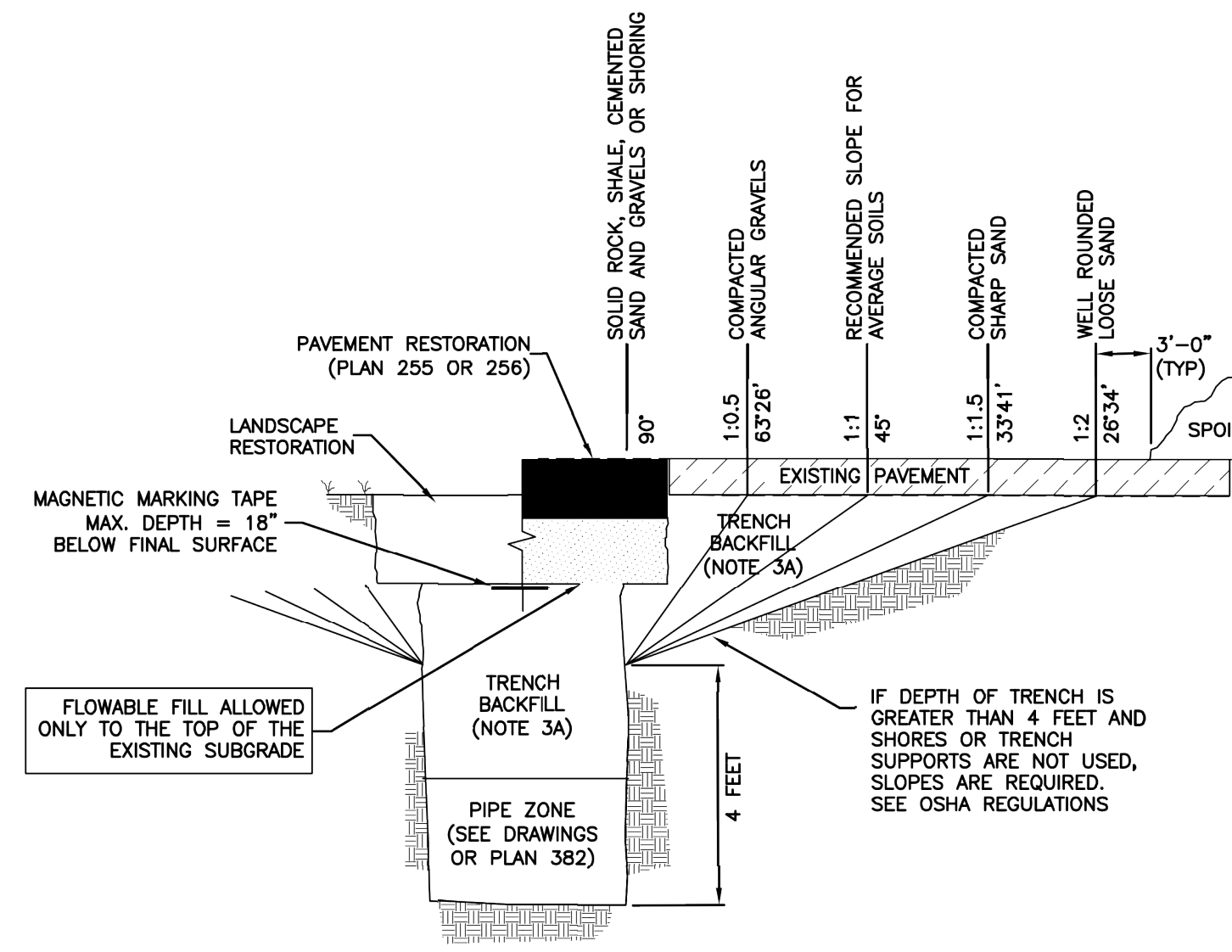
December 2010

197

Trench backfill

1. **GENERAL**
 - A. The drawing applies to backfilling the trench above the pipe zone.
2. **PRODUCTS**
 - A. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 3-inches.
 - B. Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
3. **EXECUTION**
 - A. Trench Backfill:
 - 1) DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate as trench backfill.
 - 2) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.
 - 3) Water jetting is NOT allowed.
 - 4) Submission of quality control compaction test result data developed for haunching areas may be requested by ENGINEER at any time. Provide results of tests immediately upon request.
 - B. Flowable Fill: When required, place controlled low strength material in the trench, APWA Section 31 05 15. Cure the fill before placing surface restorations.
 - C. Surface Restoration:
 - 1) Landscaped Surface: Rake to match existing grade. Replace vegetation to match pre-construction conditions. Follow APWA Section 32 92 00 (turf or grass) or APWA Section 32 93 13 (ground cover) requirements.
 - 2) Paved Surface: Do not install asphalt or concrete surfacing until trench compaction is acceptable to ENGINEER. Follow APWA Section 33 05 25 (asphalt surfacing), or APWA Section 33 05 25 (concrete surfacing).

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Trench backfill

Plan
381

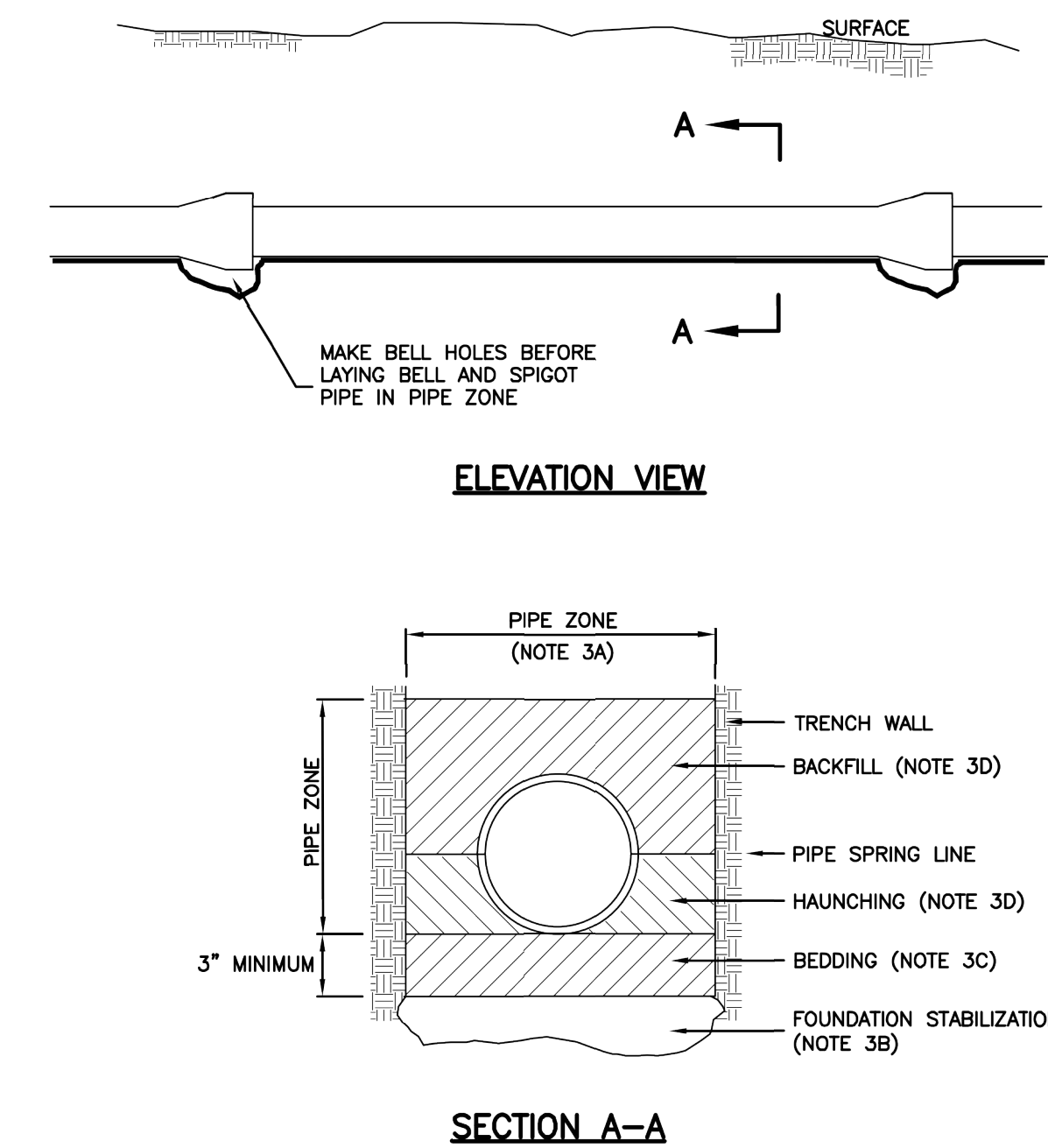
January 2011

203

Pipe zone backfill

1. **GENERAL**
 - A. Install the pipe in the center of the trench or no closer than 6-inches from the wall of the pipe to the wall of the trench.
2. **PRODUCTS**
 - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER'S permission.
 - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
 - C. Concrete: APWA Section 03 30 04.
 - D. Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
 - E. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR'S choice, APWA Section 31 05 19.
3. **EXECUTION**
 - A. Excavate the Pipe Zone: Width is measured at the pipe spring line and includes any necessary sheathing. Provide width recommended by pipe manufacturer. Follow manufacturer's recommendations when using trench boxes.
 - B. Foundation Stabilization: Get ENGINEER'S permission before installing common fill. Vibrate to stabilize. Installation of stabilization-separation geotextile will be required to separate backfill material and native subgrade materials if common fill cannot provide a working surface or prevent soils migration.
 - C. Base Course:
 - 1) Furnish untreated base course material unless specified otherwise by pipe manufacturer.
 - 2) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
 - 3) When using concrete, provide at least Class 2,000 per APWA Section 03 30 04.
 - D. Pipe Zone: DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate in the pipe zone. Water jetting is NOT allowed.
 - 1) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26 unless pipe manufacturer requires more stringent installation.
 - 2) Submission of quality control compaction test result data developed for the haunch zone may be requested by ENGINEER at any time. CONTRACTOR is to provide results of tests immediately upon request.
 - E. Flowable Fill (when required and if allowed by pipe manufacturer):
 - 1) Place the controlled low strength material, APWA Section 31 05 15.
 - 2) Prevent pipe flotation by installing in lifts and providing pipe restraints as required by pipe manufacturer.
 - 3) Reset pipe to line and grade if pipe "floats" out of position.

204



Pipe zone backfill

Plan
382

January 2011

205

INSTALLATION

CONCRETE PIPE: FOLLOW ASTM C 1479
*STANDARD PRACTICE FOR INSTALLATION OF PRECAST CONCRETE SEWER, STORM DRAIN, AND CULVERT PIPE USING STANDARD INSTALLATIONS.

PVC AND HDPE PIPE: FOLLOW ASTM D 2321
STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS

CORRUGATED METAL PIPE: FOLLOW ASTM A 798
*STANDARD PRACTICE FOR INSTALLING FACTORY-WAIVE CORRUGATED STEEL PIPE FOR SEWERS AND OTHER APPLICATIONS.

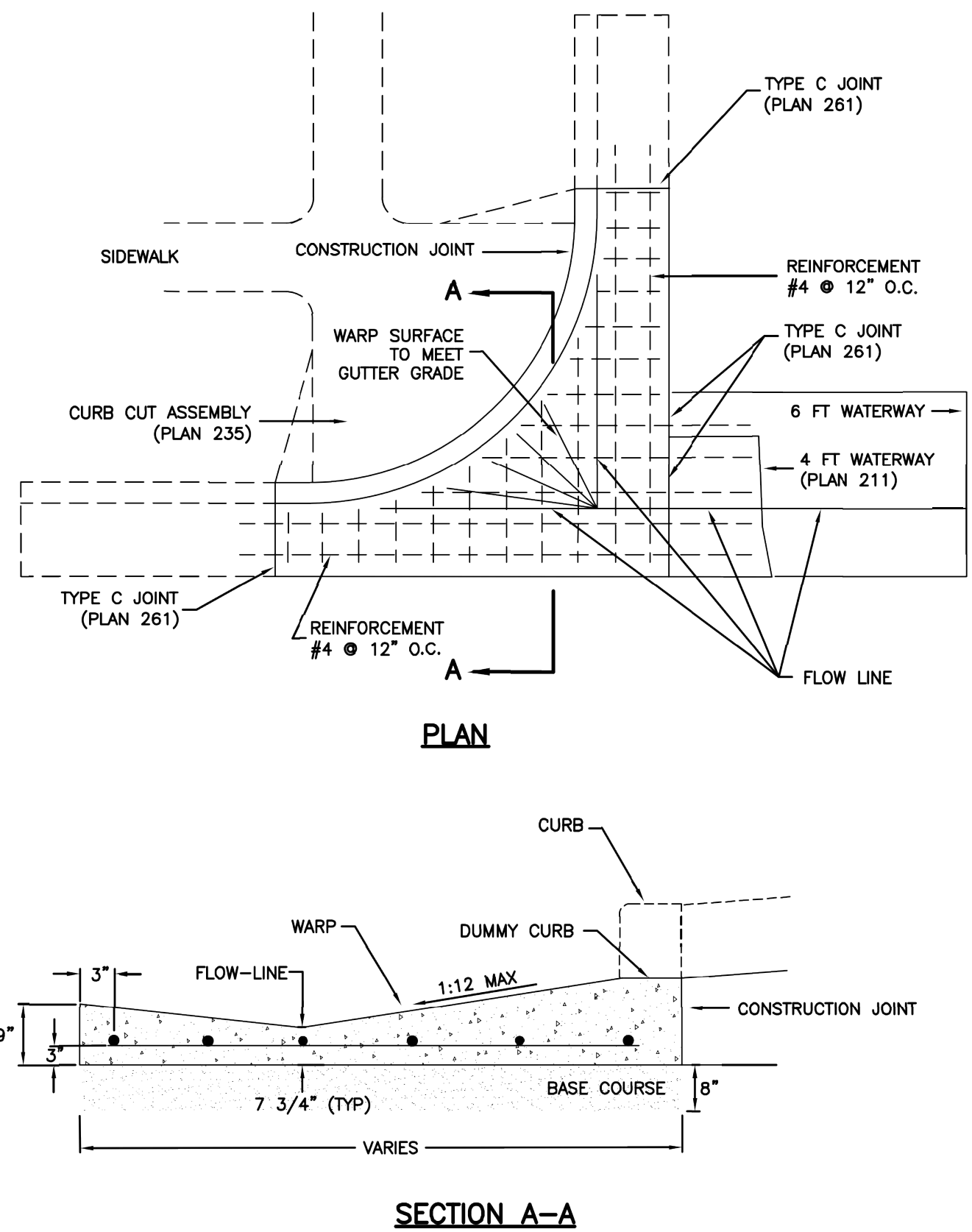
VITRIFIED CLAY PIPE: FOLLOW ASTM C 12.
*STANDARD RECOMMENDED PRACTICE FOR INSTALLING VITRIFIED CLAY PIPE LINES.

#	Date	Issue / Description	Init.

Project No:	WAT02.01
Drawn By:	JST
Checked By:	RMP
Date:	8/17/2016

- Waterway transition structure**
- 1. GENERAL**
 - A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER'S discretion.
 - B. Additional requirements are specified in APWA Section 32 16 13.
 - 2. PRODUCTS**
 - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER'S permission.
 - B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.
 - C. Concrete: Class 4000, APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
 - D. Reinforcement: Galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A 615.
 - E. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.
 - 3. EXECUTION**
 - A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
 - B. Concrete Placement: APWA Section 03 30 10.
 - 1) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Install at the start or end of a street intersection curb return. Expansion joints are not required in concrete placement using slip-form construction.
 - 2) Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Match joint location in adjacent Portland-cement concrete roadway pavement.
 - 3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
 - C. Protection and repair. Protect concrete from deicing chemicals during cure. Repair construction that does not drain. If necessary, fill flow-line with water to verify.

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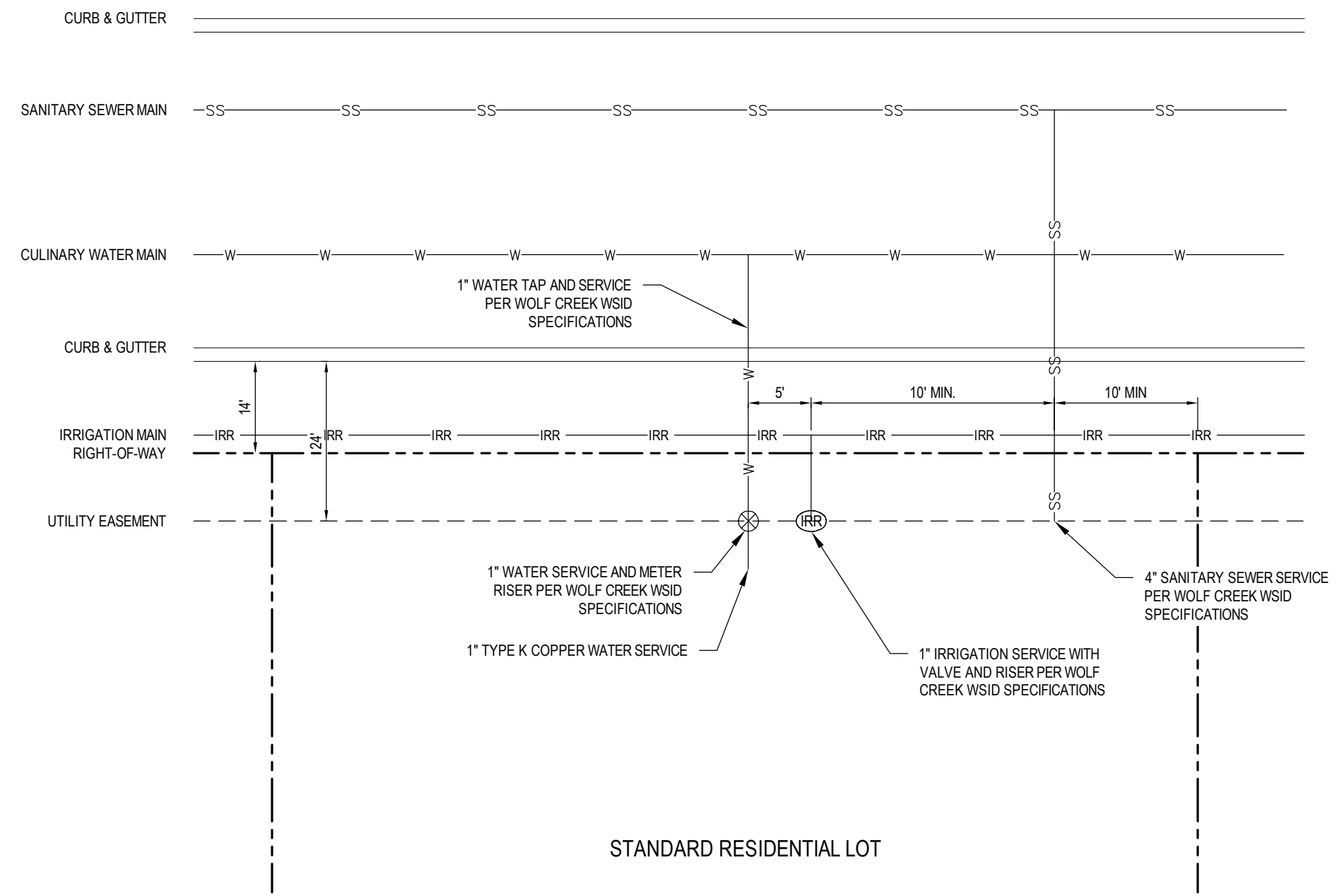


Waterway transition structure

Plan
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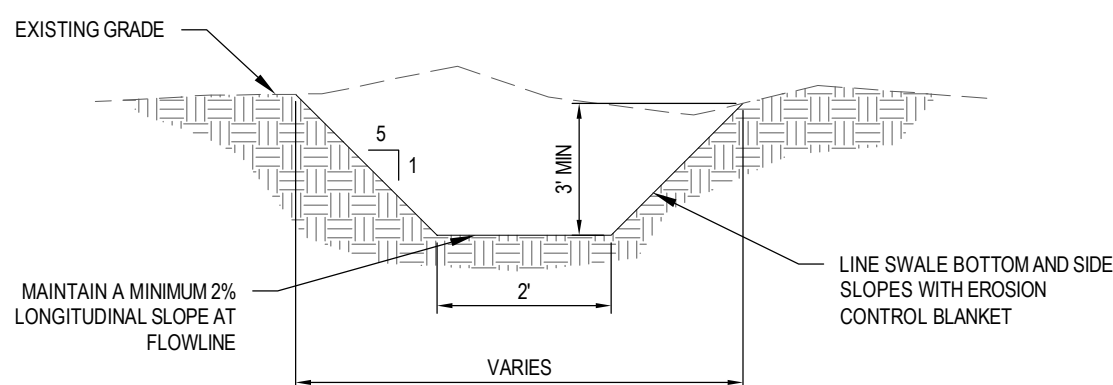
May 2005

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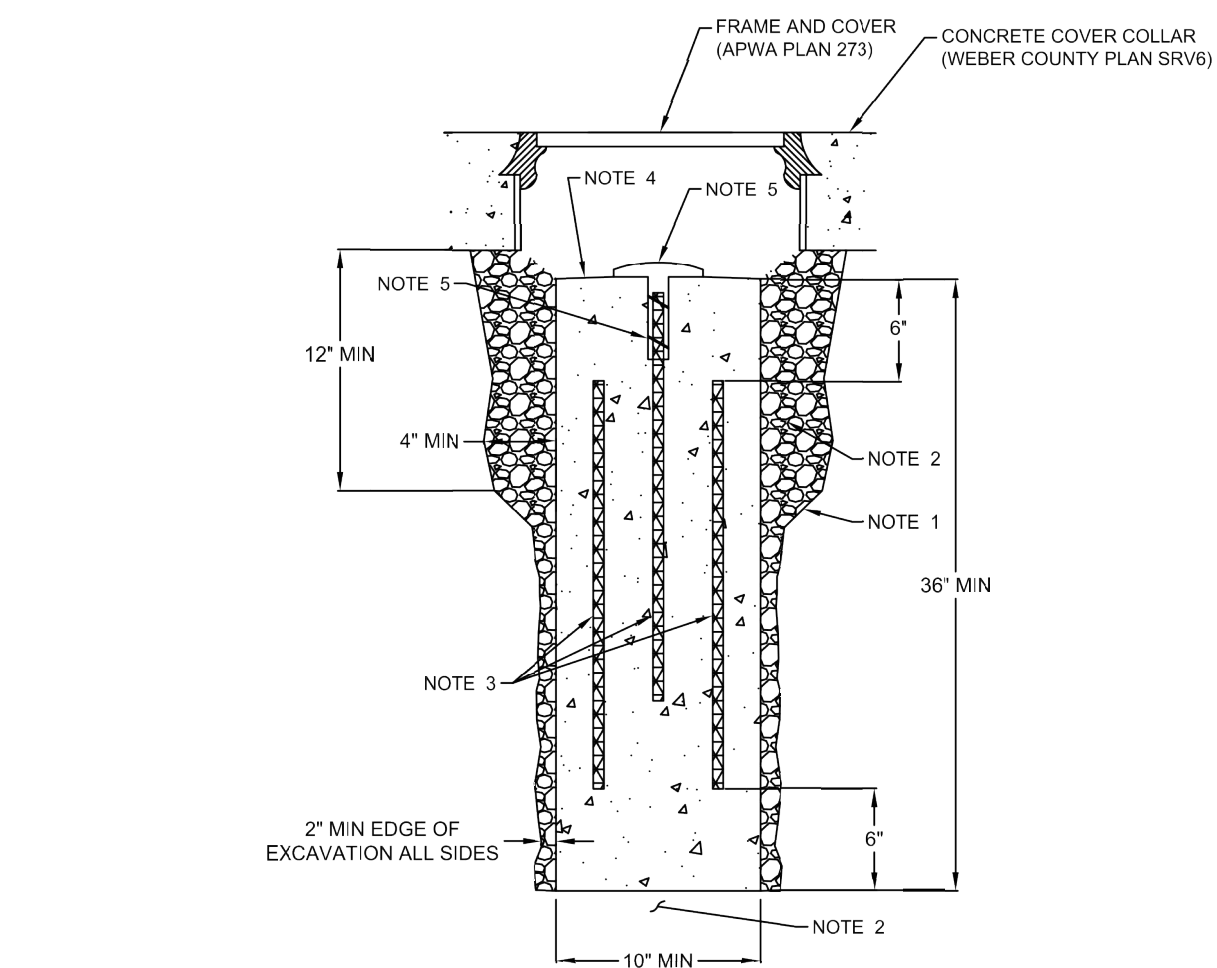
(B) SERVICE LATERAL DETAIL

NOT TO SCALE



(C) TRAPEZOIDAL DRAINAGE CHANNEL

NOT TO SCALE

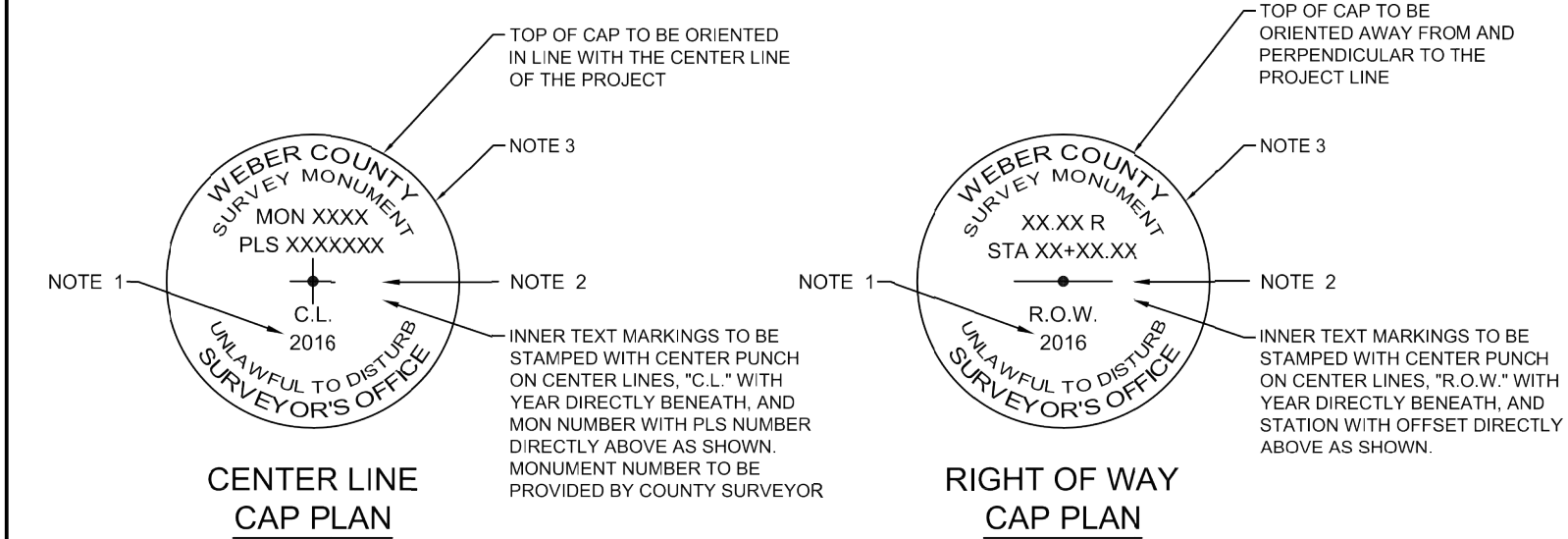
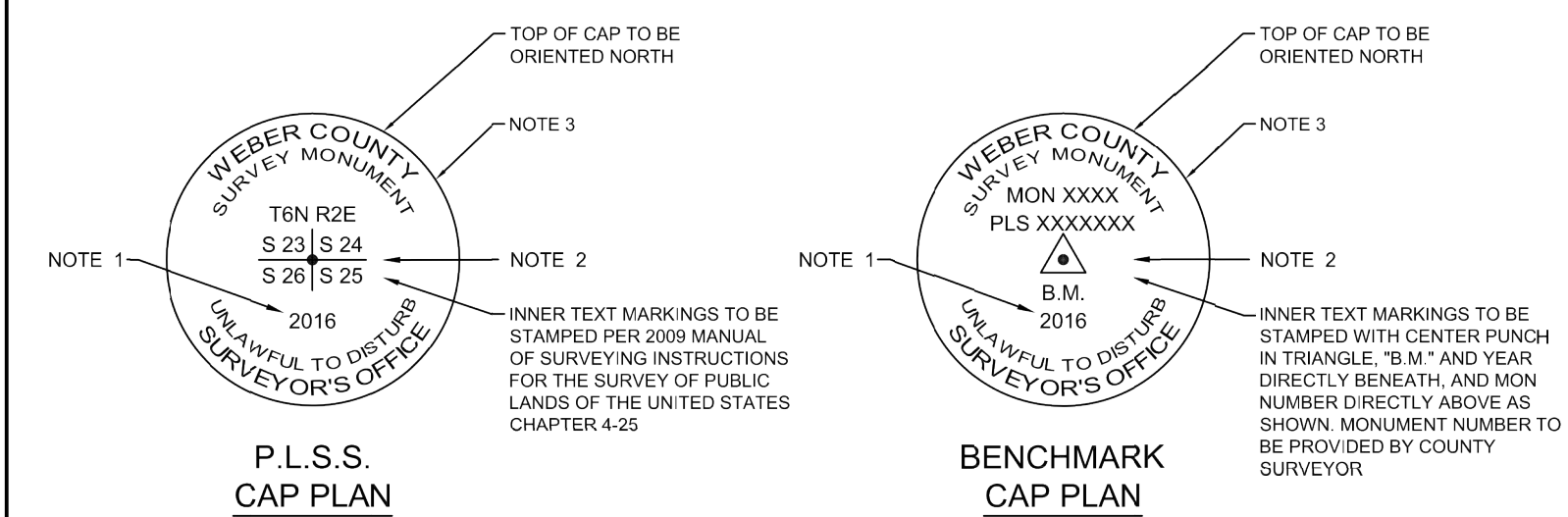


1. **EXCAVATION:** Call Blue Stakes before excavating and installing monument. Install monument only after cleared by all Blue Stakes. Over excavate the top 12" of the monument hole to a diameter of 18" min (or 4" wider than the diameter of the monument) for the installation of free draining material to drain water out of the monument box.
 2. **BACKFILL:** Tamp and compact bottom of excavated hole to ensure solid base before placement of monument. Tamp and compact 1/2" min to 3/4" max uniform free draining material into the void of the excavation on all sides of the monument with hand held equipment per APWA Section 32 05 10.
 3. **REINFORCEMENT:** #5 (5/8" diameter) galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A 615.
 4. **CONCRETE:** Finish concrete with a dome or slope to prevent water collection and puddling around the cap. Class 4000 per APWA Section 03 30 04.
 5. **CAP:** Attach cap (Barnston C350B or equivalent) to steel rebar with wire, clamp, or other approved device. Monument cap shall be centered in the monument base. Install cap in monument base before concrete sets. The center of the cap shall not exceed 0.04' (Approx. 1/2"), in any direction, of the actual position of the monument.
- * Cap to be provided to the contractor, by the county, on county funded projects. Equivalent products shall be approved by the County Surveyor prior to construction. The Weber County Surveyor's Office may have caps on hand and available for purchase to be used on privately funded projects. Contact the Surveyor's Office for availability and pricing.

SUB-SURFACE MONUMENT

July 2016

PLAN
SRV5
WEBER COUNTY
PUBLIC WORKS
STANDARDS

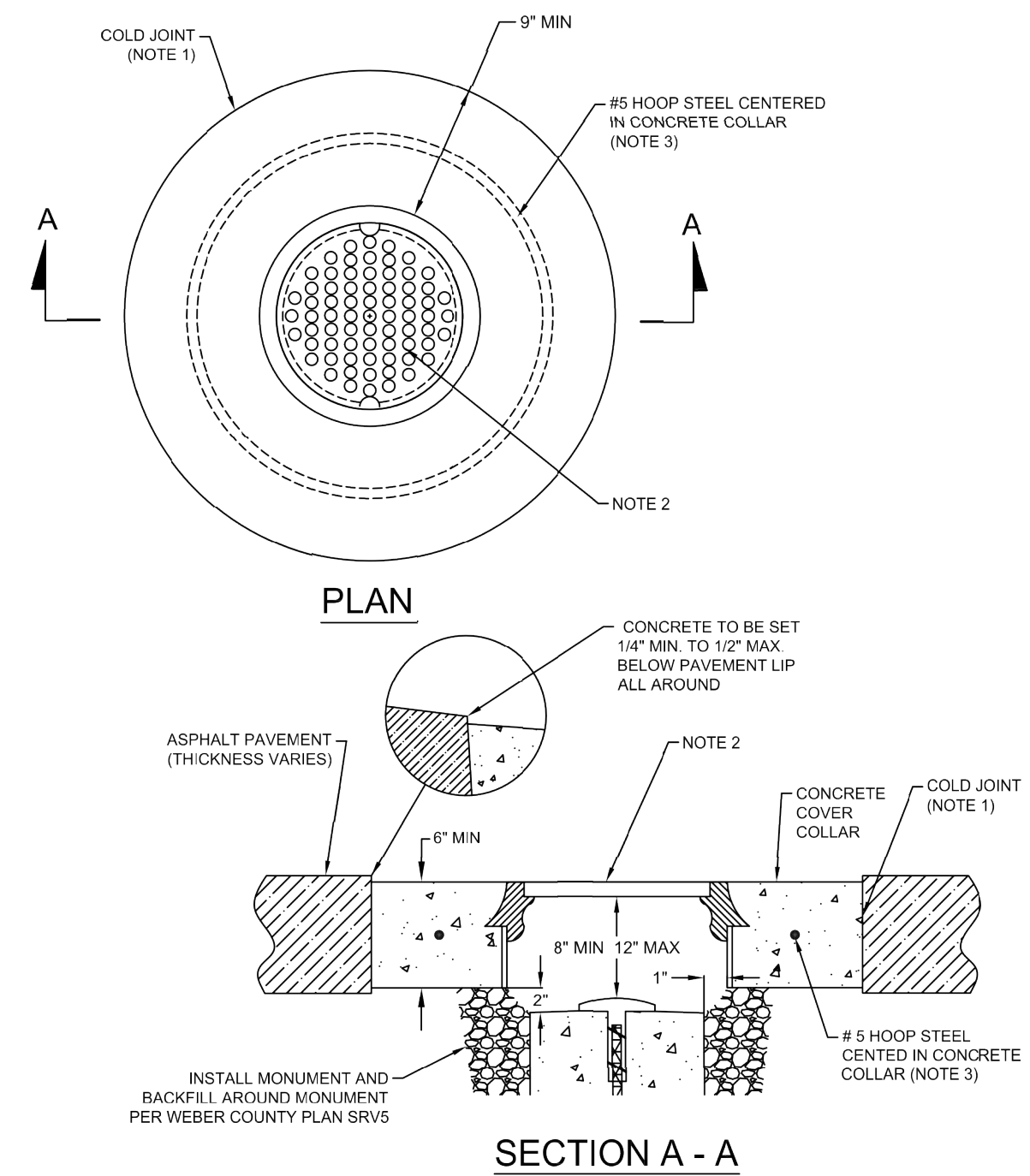


1. **DATE:** Stamp the full year of the date when the monument was constructed.
2. **SYMBOL AND CENTER PUNCH:** Apply a center punch at the actual surveyed position for the monument. Center punch of the surveyed position shall be within 0.04' (Approx. 1/2") of the center of the cap.
3. **OUTER TEXT:** Caps shall be brass or bronze. Text along outer edges of cap shall be pre-stamped.

July 2016

MONUMENT CAP PLANS

PLAN
SRV7
WEBER COUNTY
PUBLIC WORKS
STANDARDS



1. **JOINT:** Provide a neat vertical and concentric joint between concrete and existing asphalt surface. Clean edges of all dirt, oil, and loose debris.
2. **FRAME AND COVER:** Install traffic rated frame and cover (APWA Plan 273) on top of a 12" IDA SONO Tube or PVC Pipe out to the appropriate size to ensure top of frame and cover will be level with concrete collar. Frame and cover to be centered over and independent to the monument.
3. **REINFORCEMENT:** Install #5 (5/8" diameter) galvanized or epoxy coated hoop, deformed, 60 ksi yield grade steel, ASTM A 615.
4. **CONCRETE PLACEMENT:** APWA Section 03 30 10. Fill annular space around frame and cover with class 4000 concrete per APWA Section 03 30 04. A fiber mesh additive per ASTM 1116 may be added to the concrete mix instead of the hoop of steel. Apply a broom finish. Apply a curing agent.
5. **CURING AGENT:** Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

* Frame and Cover to be provided to the contractor, by the county, on county funded projects. Equivalent products shall be approved by the County Surveyor prior to construction. The Weber County Surveyor's Office may have Frames and Covers on hand and available for purchase to be used on privately funded projects. Contact the Surveyor's Office for availability and pricing.

COVER COLLAR FOR SURVEY MONUMENTS

July 2016

PLAN
SRV6
WEBER COUNTY
PUBLIC WORKS
STANDARDS

#	Date	Issue / Description	Init.

VARIOUS DETAILS

Project No: WAT02.01
 Drawn By: JST
 Checked By: RMP
 Date: 8/17/2016

ANPLighting
INNOVATIVE SITE LIGHTING

Specifications CB0201

Project: _____
Customer No: _____
Fixture Type: _____
Quantity: _____

CB0201
Weight: 23 lbs
Anchor Bolts: 3

2 See Page 2
3 See Page 2

1

Shaft Diameter	Finished Height	Wall Thickness	Smooth Shaft Order No.	Fluted Shaft Order No.
3"	10'	.125	CB0201-3510.125	CB0201-3F10.125
3"	11'	.125	CB0201-3511.125	-
3"	12'	.125	CB0201-3512.125	-
3"	13'	.188	CB0201-3513.188	-
4"	10'	.125	CB0201-4510.125	-
4"	11'	.125	CB0201-4511.125	-
4"	12'	.125	CB0201-4512.125	-
4"	13'	.125	CB0201-4513.125	-
4"	14'	.125	CB0201-4514.125	-
4"	10'	.188	-	CB0201-4F10.188
4"	11'	.188	-	CB0201-4F11.188
4"	12'	.188	-	CB0201-4F12.188
4"	13'	.188	-	CB0201-4F13.188
4"	14'	.188	-	CB0201-4F14.188

Additional heights and pole diameters may be available. Contact factory for your specific needs. Anchor Bolts: 3 - Cast Base Weight: 23 lbs.

Standard Grade	Marine Grade	Standard Grade	Marine Grade
40 NA	Raw Unfinished	53	110
41	101 Black	56	109 Silver
42	102 Forest Green	61	106 Black Verde
43	114 Bright Red	70	118 Painted Chrome
44	107 White	71	105 Painted Copper
45	112 Bright Blue	72	108 Textured Black
46	123 Sunny Yellow	73	125 Matte Black
47	120 Aqua Green	76	121 Textured Architectural Bronze
49	NA Galvanized	77	127 Textured White
50	111 Navy	78	124 Textured Silver
51	103 Architectural Bronze	10	130 Aspen Green
52	104 Patina Verde	11	131 Cartouche
12	133 Lilac	13	132 Putty

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ANPLighting
INNOVATIVE SITE LIGHTING

Specifications CB0201

Project: _____
Customer No: _____
Fixture Type: _____
Quantity: _____

POLE ACCESSORIES

- BAA-Banner Arm A
- BAB-Banner Arm B
- BAC-Banner Arm C
- GFI-GFI Receptacle/WP Cover
- GFIWP-GFI Receptacle/In-Use WP Cover
- LR1-Ladder Rest 1
- LR3-Ladder Rest 3
- LR4-Ladder Rest 4
- LR5-Ladder Rest 5
- Sign A
- Sign B
- Sign C
- Sign D
- FPH1-Flag Pole Holder
- TP-Tamper Proof Screws

FINISHES

* Std. = Standard Grade, Marine = Marine Grade

*Std.	Marine	*Std.	Marine
40	NA	53	110
41	101 Black	56	109 Silver
42	102 Forest Green	61	106 Black Verde
43	114 Bright Red	70	118 Painted Chrome
44	107 White	71	105 Painted Copper
45	112 Bright Blue	72	108 Textured Black
46	123 Sunny Yellow	73	125 Matte Black
47	120 Aqua Green	76	121 Textured Architectural Bronze
49	NA Galvanized	77	127 Textured White
50	111 Navy	78	124 Textured Silver
51	103 Architectural Bronze	10	130 Aspen Green
52	104 Patina Verde	11	131 Cartouche
12	133 Lilac	13	132 Putty

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ANPLighting
INNOVATIVE SITE LIGHTING

Specifications PA175

Project: _____
Fixture Type: _____
Quantity: _____
Customer: _____

Weight: 5 lbs
EPA: 1.31

Specifications

General: Due to size or weight, arm mounts may not accommodate all ANP luminaires.

Material: All parts are durable 356 cast aluminum and high strength extruded aluminum. All mounting hardware shall be stainless steel or zinc plated steel.

Fixture Mounting: Pin mount to tenon.

Post Arm Mounting: Slip tenon to accommodate 3", 4" and 5" pole.

Electrical: Pull wire provided.

Modifications: Consult factory for custom or modified arms.

PA175 - POST ARM
Extruded aluminum post arm for pendant fixture.

2 See Page 2
3 See Page 2

1

PA175 - 3 - 4 - N/A - 72

Post Arm Style: 3, Post: 4, Number of Arms: N/A, Center Mount: 72

Standard Grade	Marine Grade	Standard Grade	Marine Grade
40	NA	53	110
41	101 Black	56	109 Silver
42	102 Forest Green	61	106 Black Verde
43	114 Bright Red	70	118 Painted Chrome
44	107 White	71	105 Painted Copper
45	112 Bright Blue	72	108 Textured Black
46	123 Sunny Yellow	73	125 Matte Black
47	120 Aqua Green	76	121 Textured Architectural Bronze
49	NA Galvanized	77	127 Textured White
50	111 Navy	78	124 Textured Silver
51	103 Architectural Bronze	10	130 Aspen Green
52	104 Patina Verde	11	131 Cartouche
12	133 Lilac	13	132 Putty

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ANPLighting
INNOVATIVE SITE LIGHTING

Specifications BVF1801

Project: _____
Customer No: _____
Fixture Type: _____
Quantity: _____

BVF1801
This Bella Vista fixture is a 18" flared shade made of heavy gauge spinings with a heavy duty cast aluminum top dome. Dark Sky Compliant.

2 See Page 2
3 See Page 2
4 See Page 2
5 See Page 2
6 See Page 2

WATTAGE	CATALOG #
46w	P046LD4
78w	P078LD4
117w	P117LD4

WATTAGE	CCT	LUMENS	SYSTEM WATTAGE	EFFICACY
46w	2700K	3450	46w	80
46w	3500K	3910	46w	85
46w	4000K	5014	46w	109
46w	5000K	5290	46w	115
78w	2700K	6000	80w	80
78w	3500K	6800	80w	85
78w	4000K	8720	80w	109
78w	5000K	9200	80w	115
117w	2700K	9000	120w	80
117w	3500K	10200	120w	85
117w	4000K	13080	120w	109
117w	5000K	13920	120w	119

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ANPLighting
INNOVATIVE SITE LIGHTING

Specifications BVF1801

Project: _____
Customer No: _____
Fixture Type: _____
Quantity: _____

PLATFORM SPECIFICATION:

- Efficacy ranges from 80-115 lumens per watt
- Customized lens precisely directs the light
- Operating temperature of -30C to 55C
- Dimmable 10% - 100%
- Life: L70 60,000 hours
- Color temp: 2700K, 3500K, 4000K and 5000K
- CRI: >90 @ 5,000K
- Parallel circuitry ensures consistent light output in the event of single LED failure
- 7 year limited Warranty*

PLATFORM DRIVER SPECIFICATION:

- Operates at 400mA
- Built in surge protection
- Constant current output 50/60Hz
- Driver Efficiency >90% power factor above 99%
- 120-277 volts
- 5 year limited Warranty*

PLATFORM Listings

- Fully compliant with the RoHS Directive
- Certifications: ETL
- Rated IP65 rated with an optional IP66 rating

The Colors of ANP Lighting

All of our products are painted at a TIGER Drylac® approved facility, and are finished in our polyester powder coat for exceptional durability and color retention. Products undergo an intensive five-step process in which they are cleaned, treated with iron phosphate, and sealed to pre-treat the metal surface for maximum paint adhesion. Whether applied as a textured coat or a smooth gloss, our high quality finish is electro-statically applied and baked at 430° for maximum hardness and wear. The end result is a tough, attractive, durable, scratch resistant, and cost-effective product.

Optional Marine Grade Finish

For lighting fixtures exposed to more extreme conditions, such as those found in coastal regions or industrial environments, we offer a marine grade finish that provides superior salt, humidity, and UV protection. This specialty powder coating, available for an additional charge, withstands up to 3000 hours of continuous salt spray, comes with a 5-year warranty and is available in either a textured or gloss surface. Consult with our factory for additional paint charges.

OPTICS

- T2 (Type II)
- T3 (Type III)
- T5 (Type V)

ACCESSORIES

- HSS (House side shield is made from polished aluminum for high reflectivity with 120 degree light blockage)
- PC (Photo Cell)
- EMG (Emergency Back-up ballast - remote placement)

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Street name signpost

1. GENERAL
A. Get ENGINEER's approval of sign format and installation.

2. PRODUCTS
A. Bolts, Nuts, Washers, Accessories: Stainless or galvanized steel, APWA Section 05 05 23.

3. EXECUTION
A. Install sign posts on corner selected by ENGINEER.
B. Install the edge of the sign 2 feet from the vertical extension of the back of curb as near as possible to the approach curb P.C. (point of curvature).

PROVIDE SIGNS, LETTER AND BRACKETS TO AGENCY SPECIFICATIONS

STEEL TUBE 12"x1 3/4"x1 3/4" WITH 3/8" DIAMETER HOLES ON 1" CENTERS (FULL LENGTH OF POST)

FINISH GRADE

Street name signpost
Plan 292

April 1997 125

Project No: WAT02.01
Drawn By: JST
Checked By: RMP
Date: 8/17/2016

STREET LIGHT DETAILS

Galloway

Planning, Architecture, Engineering

Trolley Corners Building
515 South 700 East, Suite 3F
Salt Lake City, UT 84102
303.770.8884
www.gallowayUS.com

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Watts

ENTERPRISES

LICENSED PROFESSIONAL ENGINEER
No. 276900
Richard M. Piggott
2016
STATE OF UTAH

WATTS ENTERPRISES
TRAPPERS RIDGE AT WOLF CREEK
P.R.U.D. PHASE 8
EDEN, UTAH 84310

Date Issue / Description Init.

Project No: WAT02.01
Drawn By: JST
Checked By: RMP
Date: 8/17/2016

STREET LIGHT DETAILS

DT09

Sheet 24 of 24