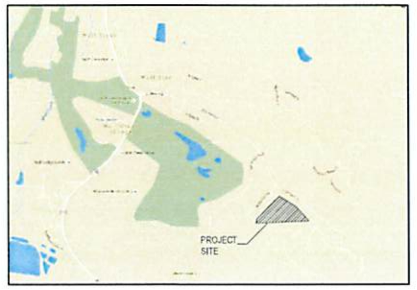
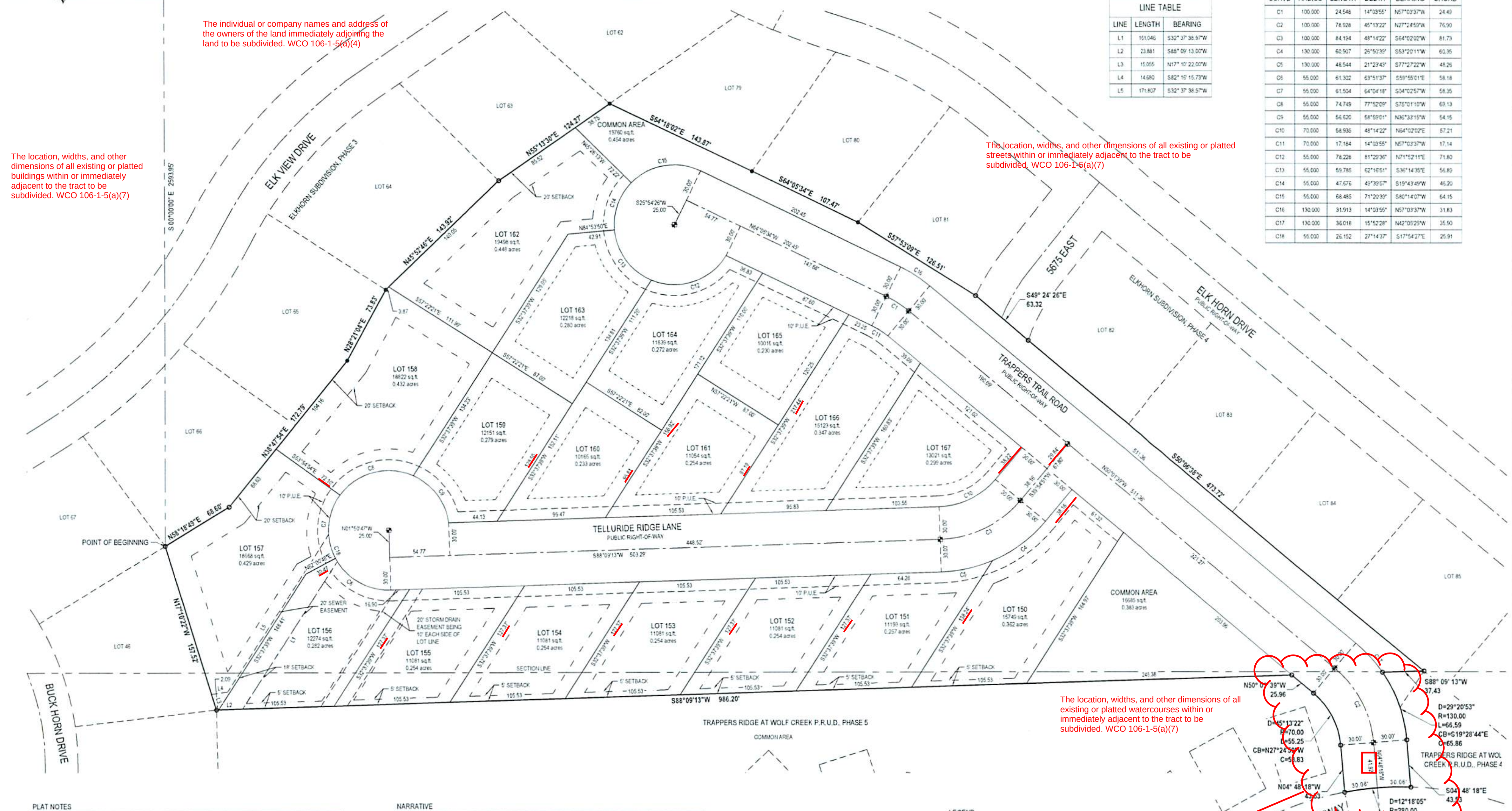
TRAPPERS RIDGE AT WOLF CREEK P.R.U.D., PHASE 8

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 23, AND A PORTION OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 7 NORTH, RANGE 1 EAST, SALT LAKE BASE & MERIDIAN
EDEN, COUNTY OF WEBER, STATE OFUTAH
MARCH 2016

IS THERE A REASONINIG AS TO WHY PHASE 7 WAS SKIPPED. ALSO THE LOT NUMBERING SEEMS TO HAVE RESERVED LOTS FOR A PHASE 7 IS THERE A PHASE 7 THAT I AM UNAWARE OF?



VICINITY MAP
NOT TO SCALE



The individual or company names and address of the owners of the land immediately adjoining the land to be subdivided. WCO 106-1-5(a)(4)

The location, widths, and other dimensions of all existing or platted buildings within or immediately adjacent to the tract to be subdivided. WCO 106-1-5(a)(7)

The location, widths, and other dimensions of all existing or platted streets within or immediately adjacent to the tract to be subdivided. WCO 106-1-5(a)(7)

The location, widths, and other dimensions of all existing or platted watercourses within or immediately adjacent to the tract to be subdivided. WCO 106-1-5(a)(7)

ENCROACHES TWO SOUTHER PHASES. HOA WILL NEED TO SIGN FOR THIS TO WORK. ALSO DENSITYS ON PRIOR PHASES, MAY NEED TO BE CHECKED TO SEE IF THIS CAN BE TAKEN FROM THEM.

LINE TABLE

LINE	LENGTH	BEARING
L1	161.046	S32° 37' 38.97"W
L2	23.881	S88° 09' 13.00"W
L3	15.055	N17° 10' 22.00"W
L4	14.680	S82° 16' 15.73"W
L5	171.807	S32° 37' 38.97"W

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	BEARING	CHORD
C1	100.000	24.548	14°03'55"	N57°03'37"W	24.49
C2	100.000	78.928	45°13'22"	N27°24'59"W	76.90
C3	100.000	84.194	48°14'22"	S64°02'02"W	81.73
C4	130.000	60.907	26°50'39"	S53°20'11"W	60.35
C5	130.000	48.544	21°23'43"	S77°27'22"W	48.26
C6	55.000	61.302	63°51'37"	S59°55'01"E	58.18
C7	55.000	61.504	64°04'18"	S04°02'57"W	58.35
C8	55.000	74.749	77°52'09"	S75°01'10"W	69.13
C9	55.000	56.620	58°59'01"	N36°33'15"W	54.15
C10	70.000	58.935	48°14'22"	N64°02'02"E	57.21
C11	70.000	17.184	14°03'55"	N57°03'37"W	17.14
C12	55.000	78.228	81°29'36"	N71°52'11"E	71.80
C13	55.000	59.785	62°16'51"	S36°14'35"E	56.89
C14	55.000	47.676	49°39'57"	S19°43'49"W	46.20
C15	55.000	68.485	71°20'39"	S80°14'07"W	64.15
C16	130.000	31.913	14°03'55"	N57°03'37"W	31.83
C17	130.000	36.018	15°52'28"	N42°05'25"W	35.90
C18	55.000	26.152	27°14'37"	S17°54'27"E	25.91

SURVEYOR'S CERTIFICATE

I, LYLE BISSEGGER, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 376082, AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW AND THAT THE REFERENCE MARKERS SHOWN ON THIS SUBDIVISION PLAT ARE LOCATED AS INDICATED AND ARE SUFFICIENT TO RETRACE OR REESTABLISH THE SURVEY. THAT THE INFORMATION SHOWN HEREIN IS SUFFICIENT TO ACCURATELY ESTABLISH THE LATERAL BOUNDARIES OF THE BELOW DESCRIBED TRACT OF REAL PROPERTY AND OF EACH OF THE LOTS LOCATED ON SAID TRACT AND THIS SUBDIVISION PLAT COMPLIES WITH THE PROVISIONS OF THE CURRENT SUBDIVISION AND ZONING ORDINANCE REGULATION OF WEBER COUNTY.

LEGAL DESCRIPTION

A PARCEL OF LAND SITUATED IN THE SOUTHWEST QUARTER OF SECTION 23 AND THE NORTHWEST QUARTER OF SECTION 23 T.7N. R.1E., OF THE SALT LAKE BASE AND MERIDIAN, EDEN, WEBER COUNTY, STATE OF UTAH AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
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.
COMMENCING AT THE CENTER CORNER OF SAID SECTION 22, THENCE S90°00'00"E A DISTANCE OF 2912.91 FEET, THENCE S00°00'00"E A DISTANCE OF 2593.95 FEET TO A POINT ON THE EAST LINE OF ELKHORN SUBDIVISION, PHASE 3, SAID POINT ALSO BEING THE POINT OF BEGINNING.
THENCE ALONG THE EAST LINE OF SAID ELKHORN SUBDIVISION THE FOLLOWING FIVE (5) COURSES:
THENCE N58°18'49"E A DISTANCE OF 68.60 FEET,
THENCE N38°47'54"E A DISTANCE OF 172.79 FEET,
THENCE N28°21'04"E A DISTANCE OF 73.83 FEET,
THENCE N45°52'46"E A DISTANCE OF 143.92 FEET,
THENCE N55°13'30" E A DISTANCE OF 124.27 FEET TO A POINT ON THE SOUTHWEST LINE OF ELKHORN SUBDIVISION, PHASE 4.
THENCE ALONG THE SOUTHWEST LINE OF SAID ELKHORN SUBDIVISION THE FOLLOWING FIVE (5) COURSES,
THENCE S64°18'02"E A DISTANCE OF 143.87 FEET,
THENCE S64°05'34"E A DISTANCE OF 107.47 FEET,
THENCE S57°53'09"E A DISTANCE OF 126.51 FEET,
THENCE S49°24'26"E A DISTANCE OF 63.32 FEET,
THENCE S50°06'38"E A DISTANCE OF 473.72 FEET TO A POINT ON THE NORTH LINE OF TRAPPERS RIDGE AT WOLF CREEK P.R.U.D., PHASE 5.
THENCE S88°09'13"W A DISTANCE OF 37.43 FEET ALONG THE NORTH LINE OF SAID TRAPPER RIDGE AT WOLF CREEK TO A POINT OF CURVATURE.
THENCE ALONG SAID CURVE TO THE RIGHT WHOSE CENTER BEARS S56°50'49"W, HAVING A RADIUS OF 130.00 FEET, A CENTRAL ANGLE OF 29°20'53" AND A LENGTH OF 66.59 FEET,
THENCE S04°48'18"E A DISTANCE OF 43.53 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY LINE OF BIG HORN PARKWAY SAID POINT ALSO BEING POINT OF CURVATURE.
THENCE ALONG SAID CURVE TO THE LEFT, AND ALONG SAID NORTHERLY RIGHT OF WAY, WHOSE CENTER BEARS S01°20'44"W, HAVING A RADIUS OF 280.00 FEET, A CENTRAL ANGLE OF 12°18'05" AND A LENGTH OF 60.12 FEET.
THENCE N04°48'18"W A DISTANCE OF 43.53 FEET TO A POINT OF CURVATURE,
THENCE ALONG SAID CURVE TO THE LEFT WHOSE CENTER BEARS S85°11'42"W, HAVING A RADIUS OF 70.00 FEET, A CENTRAL ANGLE OF 45°13'22" AND A LENGTH OF 55.25 FEET,
THENCE N50°01'39"W A DISTANCE OF 25.96 TO A POINT ON THE NORTH LINE OF TRAPPERS RIDGE AT WOLF CREEK P.R.U.D., PHASE 5.
THENCE S88°09'13"W A DISTANCE OF 986.20 FEET ALONG THE NORTH LINE OF SAID TRAPPER RIDGE AT WOLF CREEK TO A POINT ON THE EAST LINE OF ELKHORN SUBDIVISION, PHASE 3 OR 6.
THENCE N17°10'22"W A DISTANCE OF 157.52 FEET ALONG THE EAST LINE OF SAID ELKHORN SUBDIVISION TO THE POINT OF BEGINNING.
CONTAINING 375,390 SQUARE FEET OR 8.618 ACRES MORE OR LESS.

OWNERS DEDICATION

WE, THE UNDERSIGNED OWNERS OF THE HEREON DESCRIBED TRACT OF LAND, HEREBY SET APART AND SUBDIVIDE THE SAME INTO LOTS AND STREETS AS SHOWN ON THIS PLAT AND NAME SAID TRACT

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

AND DO HEREBY DEDICATE, GRANT AND CONVEY TO WEBER COUNTY, UTAH ALL THOSE PARTS OR PORTIONS OF SAID TRACT OF LAND DESIGNATED AS STREETS THE SAME TO BE USED AS PUBLIC THOROUGHFARES FOREVER.

AND HEREBY GRANT AND DEDICATE A PERPETUAL RIGHT AND EASEMENT OVER, UPON AND UNDER THE LANDS DESIGNATED ON THE PLAT AS PUBLIC UTILITY, STORM WATER DETENTION PONDS, DRAINAGE AND CANAL MAINTENANCE EASEMENTS, THE SAME TO BE USED FOR THE INSTALLATION, MAINTENANCE, AND OPERATION OF PUBLIC UTILITY SERVICE LINES, STORM DRAINAGE FACILITIES IRRIGATION CANALS OR FOR THE PERPETUAL PRESERVATION OF WATER DRAINAGE CHANNELS IN THEIR NATURAL STATE WHICHEVER IS APPLICABLE AS MAY AUTHORIZED BY WEBER COUNTY, UTAH, WITH NO BUILDINGS OR STRUCTURES BEING ERECTED WITHIN SUCH EASEMENTS.

SIGNED THIS THE ____________ DAY OF ______________ , 2016

EDEN VILLAGE LLC
RUSS WATTS, MANAGING MEMBER

ACKNOWLEDGMENT

STATE OF UTAH)
) SS
COUNTY OF WEBER)

ON THIS DAY OF , 2016

ON THE _____ DAY OF _____________ , 2016, PERSONALLY APPEARED BEFORE ME RUSS WATTS, WHO BEING BY ME DULY SWORN DID SAY THAT HE IS A MEMBER OF EDEN VILLAGE, L.L.C. AND THAT SAID INSTRUMENT WAS SIGNED IN BEHALF OF SAID L.L.C. BY A RESOLUTION OF ITS MEMBERS AND RUSS WATTS ACKNOWLEDGED TO ME THAT SAID L.L.C. EXECUTED THE SAME.

NOTARY PUBLIC

PLAT NOTES

1. UNLESS OTHERWISE DIMENSIONED ON THIS PLAT, SETBACKS FOR THIS SUBDIVISION ARE AS FOLLOWS: FRONT= 20 FEET, REAR= 20 FEET, SIDE= 12 FEET, SIDE FACING STREET ON CORNER LOT= 20 FEET
2. THIS PLAT IS SUBJECT TO THAT CERTAIN DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR ________ ("DECLARATION") EXECUTED BY ____________ EDEN VILLAGE LLC ("DECLARANT") THAT HAS BEEN RECORDED IN THE OFFICE OF THE WEBER COUNTY RECORDER WHICH SETS FORTH THE RESTRICTIONS AND GENERAL PLAN OF IMPROVEMENT FOR THE PROPERTY DESCRIBED IN THIS PLAT. CERTAIN TERMS NOT OTHERWISE DEFINED IN THIS PLAT SHALL HAVE THE MEANINGS SET FORTH IN THE DECLARATION.
3. PURSUANT TO THE DECLARATION, THE ________________ OWNERS ASSOCIATION, INC., A UTAH NONPROFIT CORPORATION ("COMMUNITY ASSOCIATION") IS RESPONSIBLE FOR MAINTAINING ALL COMMUNITY AREAS, IF ANY, AND SHALL HAVE A PERPETUAL NON-EXCLUSIVE EASEMENT OVER ALL PARCELS FOR SUCH MAINTENANCE PURPOSES AS FURTHER DESCRIBED IN THE DECLARATION.
4. THE PROPERTY AS DEPICTED ON THIS PLAT IS SUBJECT TO THE RIGHTS OF DECLARANT AS DESCRIBED IN THE DECLARATION, AND DECLARANT SHALL HAVE THE RIGHT TO EXERCISE ANY APPLICABLE RIGHTS PROVIDED THEREIN, INCLUDING, WITHOUT LIMITATION, RESERVATION AND GRANTING OF CERTAIN EASEMENTS, REDUCING OR RELOCATING IMPROVEMENTS WITHIN THE COMMUNITY, ADDING ADDITIONAL FACILITIES AND MAKING SUCH OTHER DEVELOPMENT DECISIONS AND CHANGES AS DECLARANT SHALL DETERMINE IN ITS SOLE AND EXCLUSIVE DISCRETION.
5. AS FURTHER DESCRIBED IN THE DECLARATION, ALL LOTS, AND ALL RESIDENCES AND IMPROVEMENTS CONSTRUCTED THEREON, SHALL COMPLY WITH THE DESIGN GUIDE. NO CONSTRUCTION, INSTALLATION, OR OTHER WORK WHICH IN ANY WAY ALTERS THE APPEARANCE OF ANY PROPERTY OR LOT WITHIN THE PROJECT, OR ANY RESIDENCES OR IMPROVEMENTS LOCATED THEREON, SHALL BE MADE OR DONE WITHOUT COMPLIANCE WITH THE DESIGN GUIDE AS DESCRIBED IN THE DECLARATION.

NARRATIVE

THIS SURVEY AND SUBSEQUENT SUBDIVISION PLAT WERE COMPLETED AT THE REQUEST OF THE "EDEN VILLAGE LLC" FRO THE PURPOSE OF SUBDIVIDING THEIR PROPERTY TO CREATE RESIDENTIAL LOTS.

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.

N

0 10 20 50
SCALE: 1"=50'

LEGEND

- ALIQUOT CORNER (AS DESCRIBED)
- ● FOUND MONUMENT 5/8 REBAR AND CAP (GARDENER ENG.)
- ○ SET MONUMENT 5/8" REBAR AND CAP PLS NO. 38069
- PROPOSED CENTERLINE MONUMENT
- PROPOSED BOUNDARY LIMITS
- PROPOSED LOT LINE
- PROPOSED RIGHT OF WAY LINE
- EXISTING BOUNDARY
- EXISTING LOT LINE
- EXISTING RIGHT OF WAY LINE
- SET BACK LINE

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TRAPPERS RIDGE AT WOLF CREEK P.R.U.D., PHASE 8
A PORTION OF THE SOUTHWEST QUARTER OF SECTION 23, AND A PORTION OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 7 NORTH, RANGE 1 EAST, SALT LAKE BASE & MERIDIAN
EDEN, COUNTY OF WEBER, STATE OF UTAH

DEVELOPER
EDEN VILLAGE LLC
5200 S. HIGHLAND DRIVE STE 101
SALT LAKE CITY, UT 84117

WEBER COUNTY ATTORNEY
I HAVE EXAMINED THE FINANCIAL GUARANTEE AND OTHER DOCUMENTS ASSOCIATED WITH THIS SUBDIVISION PLAT AND IN MY OPINION THEY CONFORM WITH THE COUNTY ORDINANCE APPLICABLE THERETO AND NOW IN FORCE AND AFFECT.
SIGNED THIS ____________, DAY OF ____________, 20________.
SIGNATURE

WEBER COUNTY SURVEYOR
I HEREBY CERTIFY THAT THE WEBER COUNTY SURVEYOR'S OFFICE HAS REVIEWED THIS PLAT FOR MATHEMATICAL CORRECTNESS, SECTION CORNER DATA AND FOR HARMONY WITH LINES AND MONUMENTS ON RECORD IN THE COUNTY OFFICES. THE APPROVAL OF THIS PLAT BY THE WEBER COUNTY SURVEYORS DOES NOT RELIEVE THE LICENSED LAND SURVEYOR WHO EXECUTED THIS PLAT FROM RESPONSIBILITIES AND/OR LIABILITIES ASSOCIATED THEREWITH. SIGNED THIS ________, DAY OF ____________, 20 _______.
COUNTY SURVEYOR

WEBER COUNTY ENGINEER
I HEREBY CERTIFY THAT THE REQUIRED PUBLIC IMPROVEMENT STANDARDS AND DRAWINGS FOR THIS SUBDIVISION CONFORM WITH COUNTY STANDARDS AND THE AMOUNT OF THE FINANCIAL GUARANTEE IS SUFFICIENT FOR THE INSTALLATION OF THESE IMPROVEMENT.
SIGNED THIS ____________, DAY OF ____________, 20 ______.
SIGNATURE

WEBER COUNTY PLANNING COMMISSION APPROVAL
THIS IS TO CERTIFY THAT THIS SUBDIVISION PLAT WAS DULY APPROVED BY THE WEBER COUNTY PLANNING COMMISSION ON THE DAY OF ______________, 20______.
CHAIRMAN-WEBER COUNTY PLANNING COMMISSION

WEBER COUNTY COMMISSION ACCEPTANCE
THIS IS TO CERTIFY THAT THIS SUBDIVISION PLAT, THE DEDICATION OF THE STREETS AND OTHER PUBLIC WAYS AND FINANCIAL GUARANTEE OF PUBLIC IMPROVEMENTS ASSOCIATED WITH THIS SUBDIVISION THEREON ARE HEREBY APPROVED AND ACCEPTED BY THE COMMISSIONERS OF WEBER COUNTY, UTAH THIS ________, DAY OF ______________, 20 ______.
CHAIRMAN, WEBER COUNTY COMMISSION
ATTEST: ______________
TITLE: ______________

RECORDED #
STATE OF UTAH, COUNTY OF WEBER, RECORDED AND FILED AT THE
REQUEST OF: ______________
ENTRY NO: ______________
DATE: ____________ TIME: ____________
BOOK: ____________ PAGE: ____________
FEE %
WEBER COUNTY RECORDER

ENTERPRISES

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

PROJECT CONTACTS

OWNER
WATTS ENTERPRISES
5200 SOUTH HIGHLAND DRIVE, SUITE 101
SALT LAKE CITY, UT 84117
TEL: (801) 897-4880
CONTACT: RICK EVERSON
EMAIL: RICK@WATTSENTERPRISES.COM

ENGINEER/CONSULTANT
GALLOWAY & COMPANY, INC.
515 SOUTH 700 EAST, SUITE 3F
SALT LAKE CITY, UT 84102
TEL: (801) 953-1357
FAX: (303) 770-3636
CONTACT: JEREMY TOONE
EMAIL: JEREMYTOONE@GALLOWAYUS.COM

PLANNER
LANGVARDT DESIGN GROUP
328 WEST 200 SOUTH
SALT LAKE CITY, UT 84102
TEL: (801) 583-1295
FAX: -
CONTACT: ERIC LANGVARDT
EMAIL: -

LANDSCAPE ARCHITECT
GALLOWAY & COMPANY, INC.
5300 DTC PARKWAY, SUITE 100
GREENWOOD VILLAGE, COLORADO 80111
TEL: (303) 770-8884
FAX: (303) 770-3636
CONTACT: -
EMAIL: -

SURVEYOR
GALLOWAY & COMPANY, INC.
515 SOUTH 700 EAST, SUITE 3F
SALT LAKE CITY, UT 84102
TEL: (801) 953-1357
FAX: (303) 770-3636
CONTACT: NATE CHRISTENSEN
EMAIL: NATECHRISTENSEN@GALLOWAYUS.COM

GEOTECHNICAL ENGINEER
-
-
-
TEL: -
FAX: -
CONTACT: -
EMAIL: -

UTILITY CONTACTS

WATER
WOLF CREEK WATER & SEWER IMPROVEMENT DISTRICT
3632 NORTH WOLF CREEK DRIVE
EDEN, UT 84310
TEL: (801) 745-3435
CONTACT: ROB THOMAS
EMAIL: RTHOMAS@WCWSID.COM

SANITARY SEWER
WOLF CREEK WATER & SEWER IMPROVEMENT DISTRICT
3632 NORTH WOLF CREEK DRIVE
EDEN, UT 84310
TEL: (801) 745-3435
CONTACT: ROB THOMAS
EMAIL: RTHOMAS@WCWSID.COM

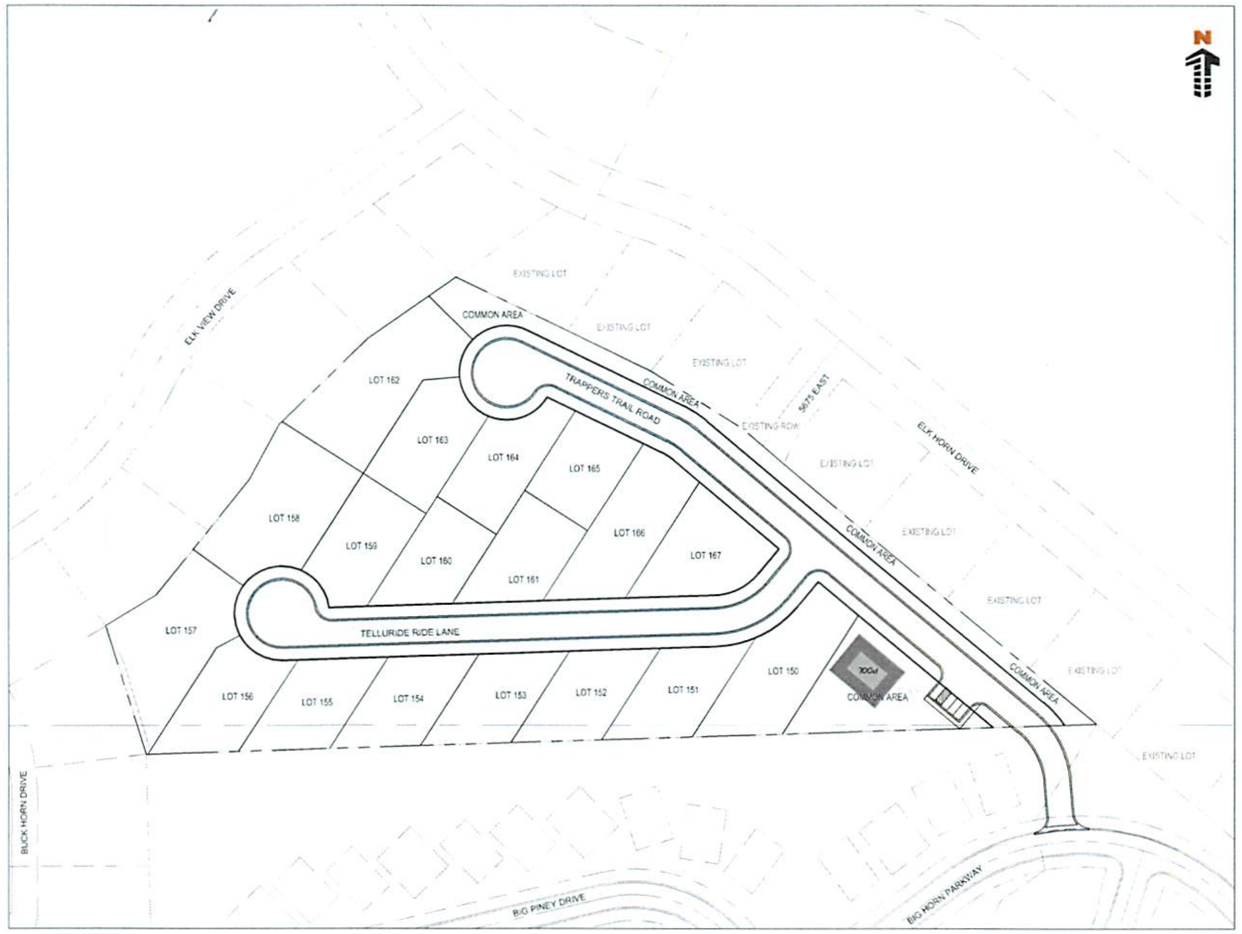
STORM SEWER
WEBER COUNTY
2380 WASHINGTON BLVD. SUITE 240
OGDEN, UT 84401
TEL: (801) 399-8374
CONTACT: BLAINE FRANDSEN
EMAIL: BFRANDSEN@CO.WEBER.UT.US

ELECTRIC
ROCKY MOUNTAIN POWER
1407 WEST NORTH TEMPLE
SALT LAKE CITY, UT 84116
TEL: (503) 813-6993
CONTACT: JOEL SIMMONS
EMAIL: GISDEPT@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) 782-3580
CONTACT: -
EMAIL: -



SITE MAP
SCALE: 1"=100'

SHEET INDEX

GENERAL 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.

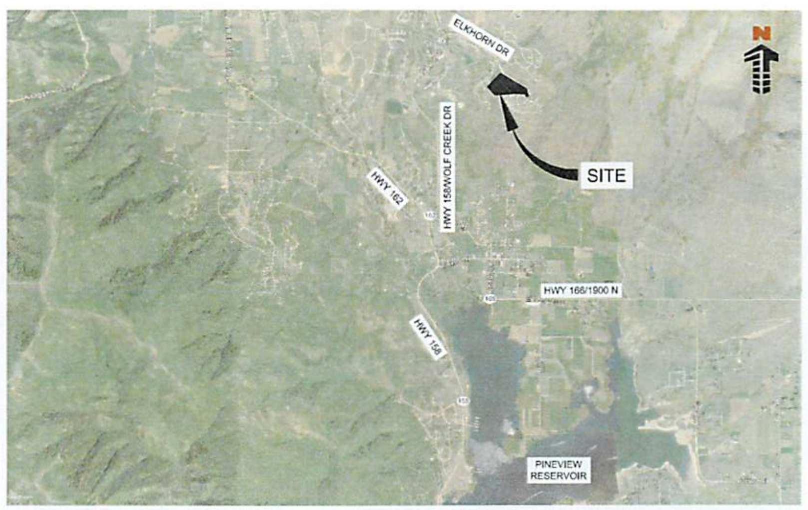
ALL IRRIGATION LINES ARE REQUIRED TO MAINTAIN A MINIMUM OF 3' OF COVER TO FINISH GRADE.

ALL CULINARY LINES ARE REQUIRED TO MAINTAIN A MINIMIM 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.

JURISDICTIONAL CONSTRUCTION NOTES



VICINITY MAP
NOT TO SCALE

BENCHMARK

BENCHMARK: ADAMS COUNTY SURVEY MARK #0186
3-1/4" ALUMINUM CAP STAMPED "95.0186 1995 2S66W S6" NORTHWEST OF THE INTERSECTION OF CHAMBERS ROAD AND E. 112TH AVENUE, 157 FEET NORTH OF THE CENTER LINE OF E. 112TH AVE., AND 30 FEET WEST OF THE CENTER LINE OF CHAMBERS ROAD.
ELEVATION=5143.89 (NAVD 1988 DATUM)

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

BEARINGS SHOWN HEREON ARE BASED ON THE SOUTH LINE OF THE SE 1/4 OF SECTION 7, T.2S., R.66W., OF THE 6TH P.M. BEARING S89°20'14" W MONUMENTED BY THE MONUMENTS SHOWN HEREON.

CAUTION - NOTICE TO CONTRACTOR

1. 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 ENGINEEER PRIOR TO CONSTRUCTION.
2. 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 POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

811
Know what's **below.**
Call before you dig.

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ENTERPRISES

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

EDEN, UTAH 84310

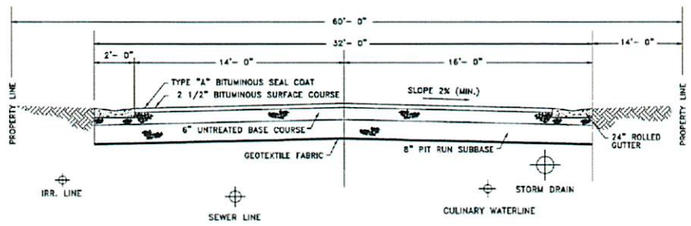
#	Date	Issue / Description	Init.

Project No:	WAT02.01
Drawn By:	JST
Checked By:	RMP
Date:	03/09/2016

SHEET TITLE:
COVER SHEET

C0.0

STANDARD 60' SUBDIVISION ROADWAY SECTION



INSTALL IRRIGATION LINE BURIED BELOW TAPE, 12" ABOVE PIPE
REQUIRE #14 PLASTIC COATED COPPER WIRE-TERMINATE IN VALVE BOXES.

NOTE:
PROVIDE 3/4" OR 1" UNTREATED BASE COURSE
4" THICKNESS UNDER GUTTER
6" THICKNESS UNDER DRIVEWAY APPROACHES

ELK VIEW DRIVE
ELKHORN SUBDIVISION, PHASE 3
RETAINING WALL
EXISTING LOT
ROCK WALL
COMMON AREA
TRAPPERS TRAIL ROAD
5675 EAST
EXISTING ROW
ELK HORN DRIVE
TRAPPERS RIDGE AT WOLF CREEK P.R.U.D., PHASE 5
LOT 162
LOT 163
LOT 164
LOT 165
LOT 166
LOT 167
LOT 158
LOT 159
LOT 160
LOT 161
PROPOSED TRAPPERS RIDGE AT WOLF CREEK P.R.U.D., PHASE 8
INSTALL APWA TYPE G CURB AND GUTTER (TYP.)
TELLURIDE RIDE LANE
LOT 157
LOT 156
LOT 155
LOT 154
LOT 153
LOT 152
LOT 151
LOT 150
WOOD FENCE
COMMON AREA
TRAPPERS RIDGE AT WOLF CREEK P.R.U.D., PHASE 4
INSTALL 8" CONCRETE WATERWAY
BUCK HORN DRIVE
POND
ELKHORN SUBDIVISION, PHASE 6
BIG PINEY DRIVE
BIG HORN PARKWAY
SCALE 1"=60'

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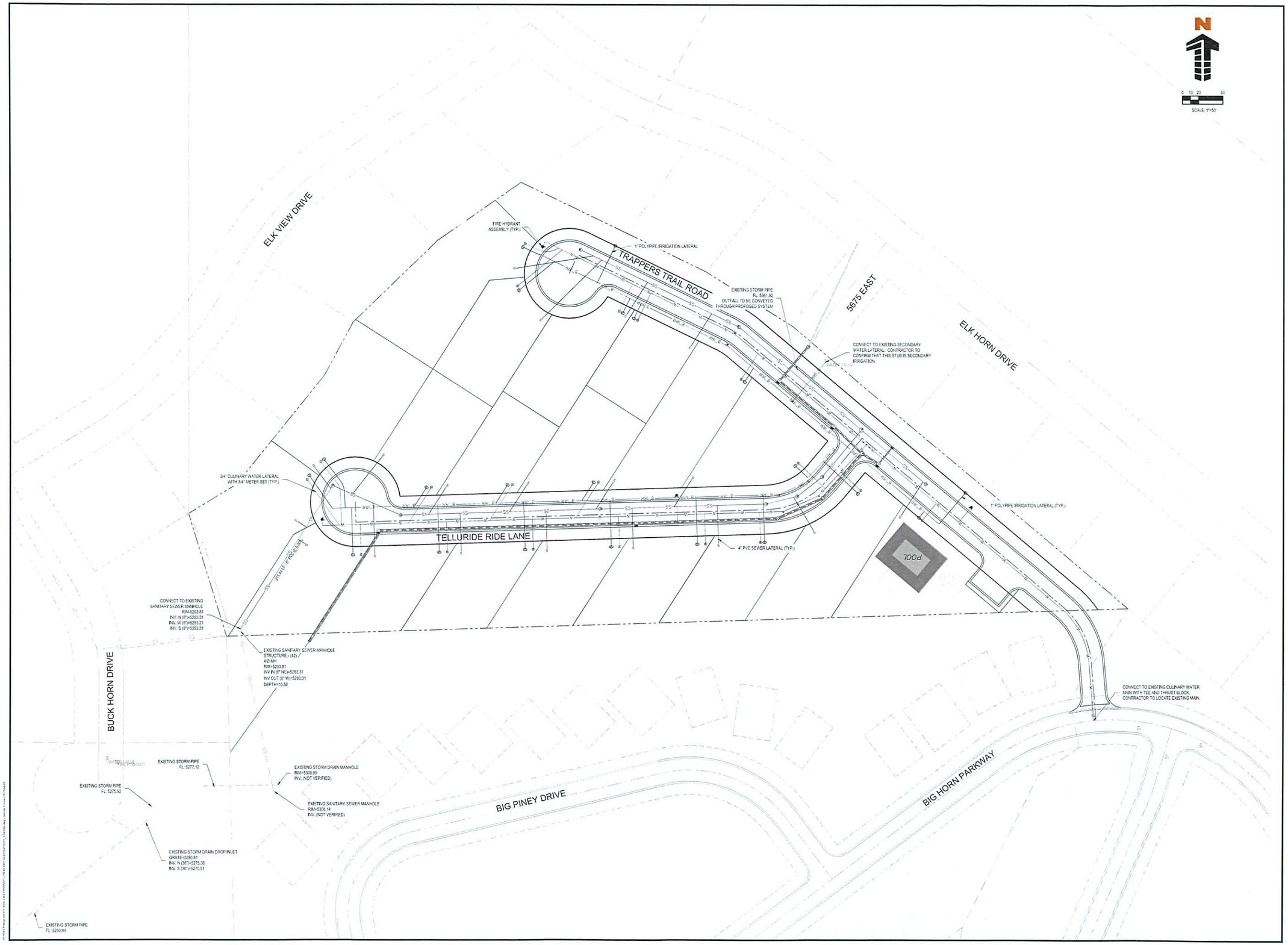
#	Date	Issue / Description	Init.

Project No:	####
Drawn By:	JST
Checked By:	RMP
Date:	03/09/2016

SHEET TITLE:
OVERALL SITE PLAN

SP2.0
Sheet X of X



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Project No:	####
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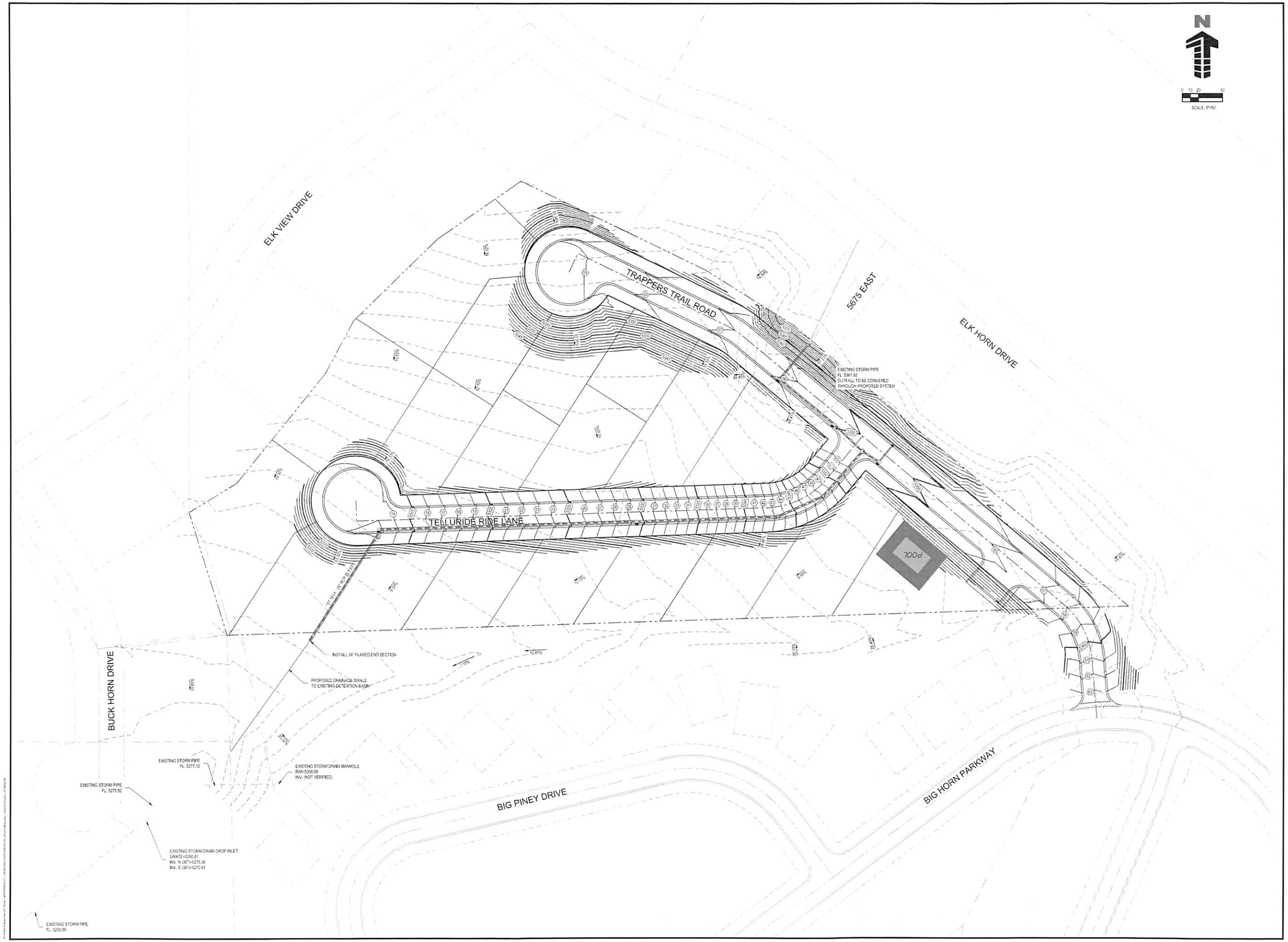
SHEET TITLE:
OVERALL UTILITY PLAN

UT1.0
Sheet X of X



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Project No:	####
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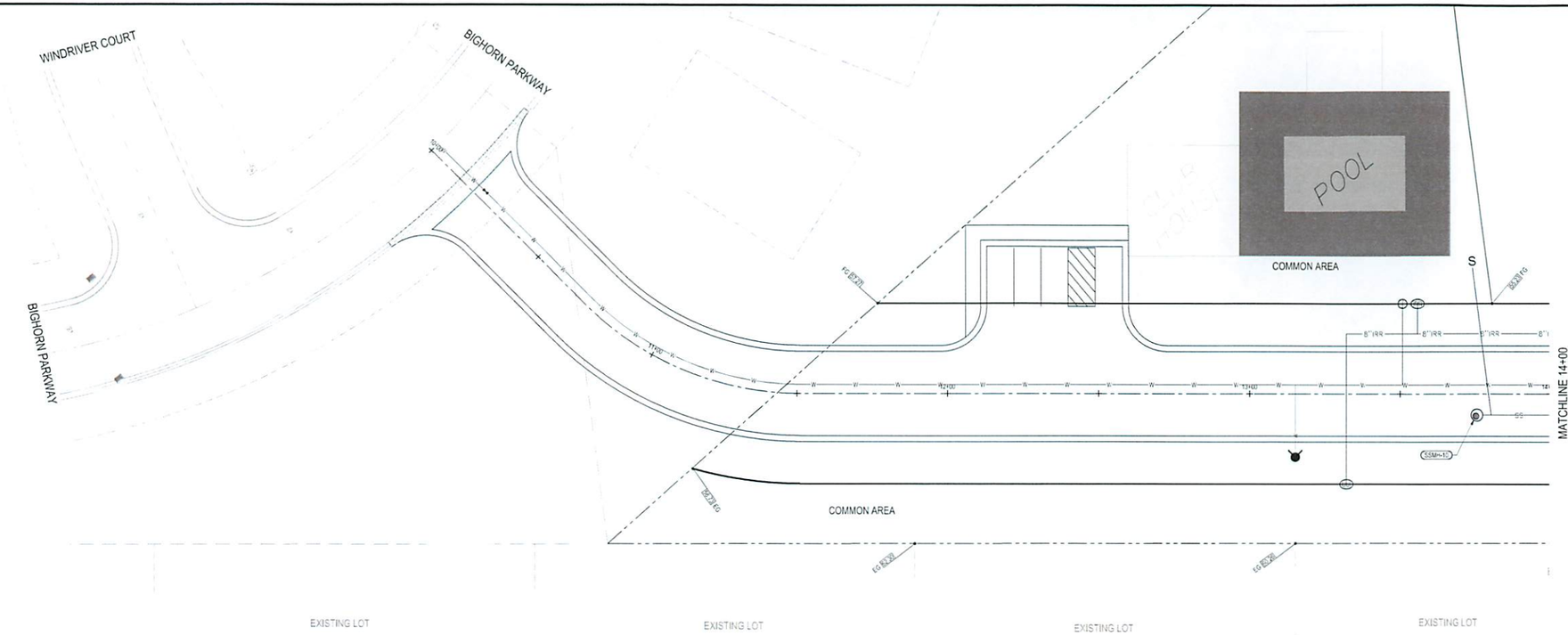
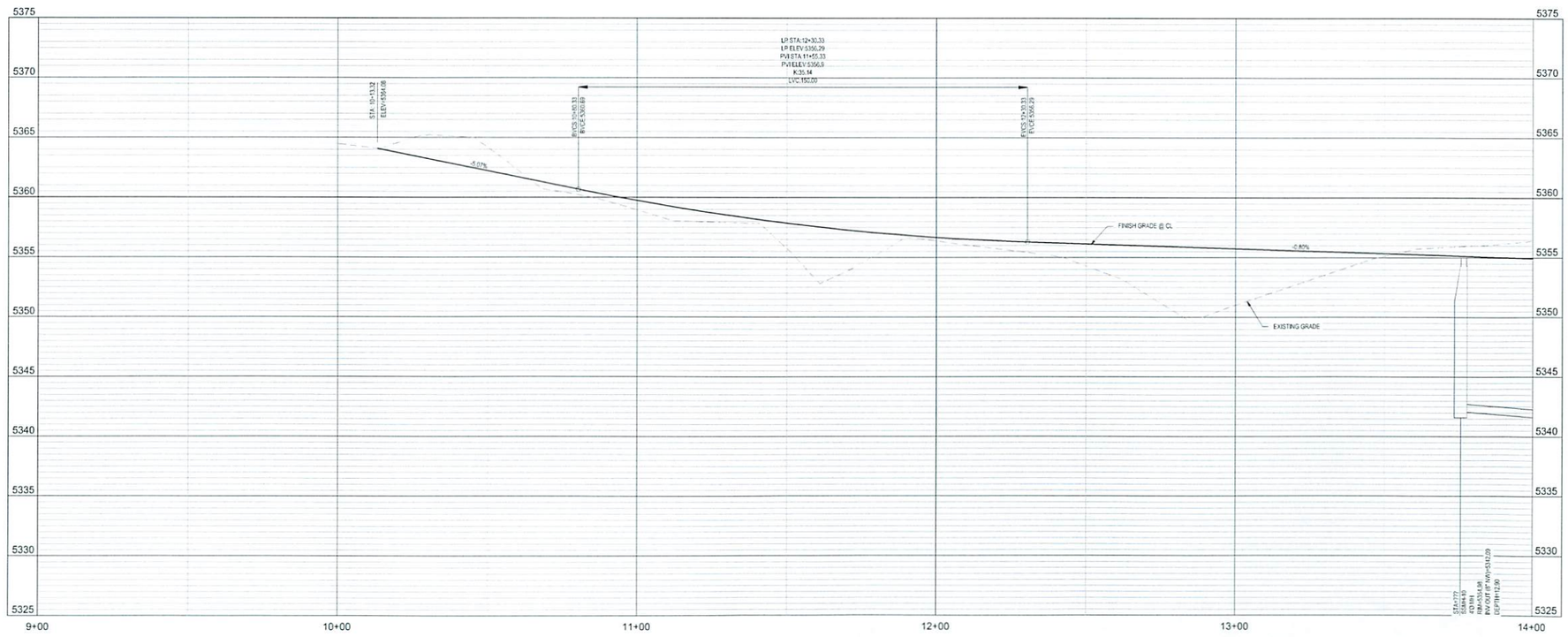
Date:	03/09/2016

SHEET TITLE:
OVERALL GRADING PLAN

GR1.0
Sheet X of X





PROFILE TRAPPERS TRAIL ROAD: STA 9+00 T0 STA 14+00

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#	Date	Issue / Description	Init.

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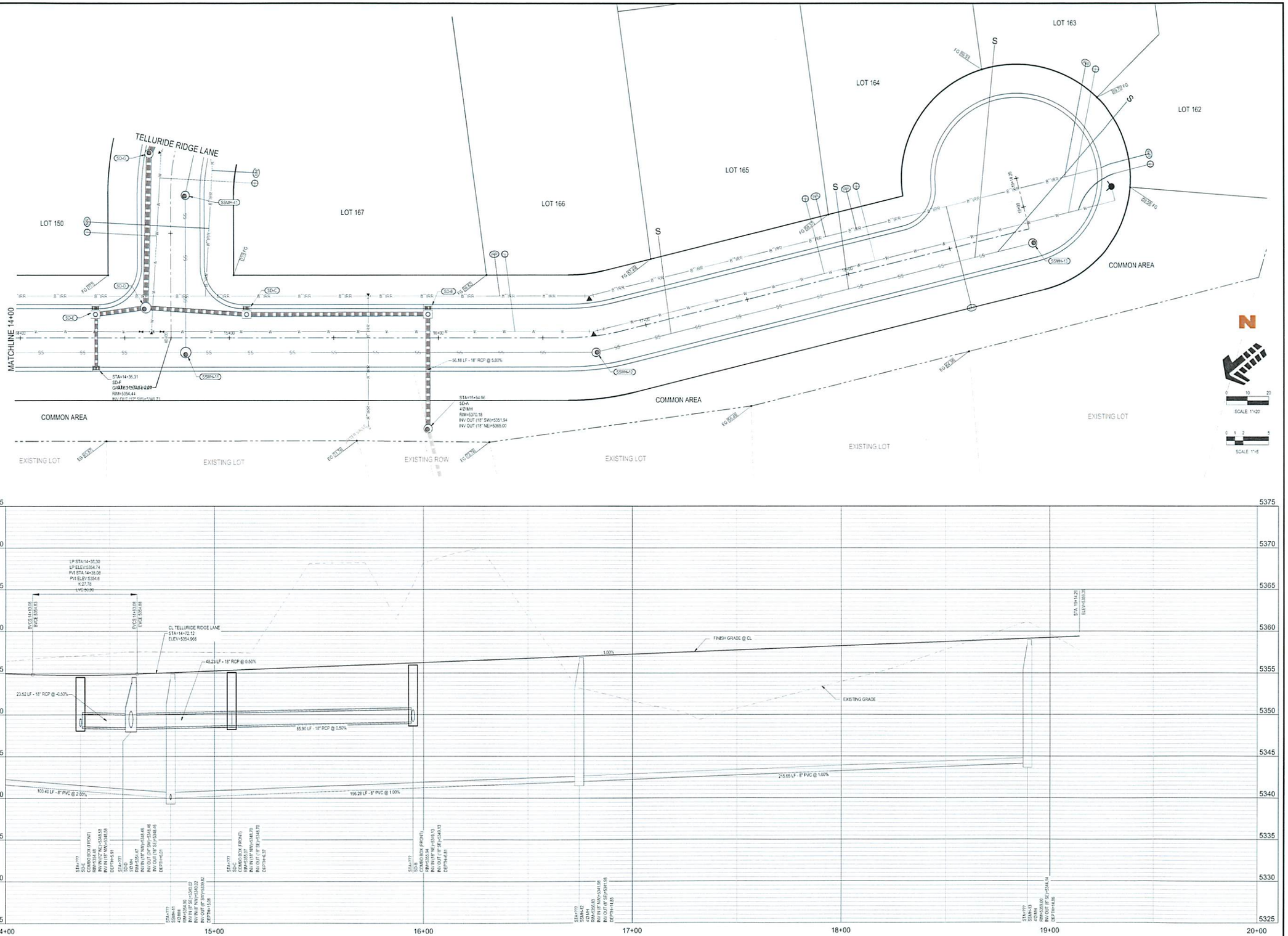
SHEET TITLE:
PLAN & PROFILE
TRAPPERS TRAIL ROAD

PP1.0
Sheet X of X



PROFILE TRAPPERS TRAIL ROAD: STA 14+00 T0 STA 20+00

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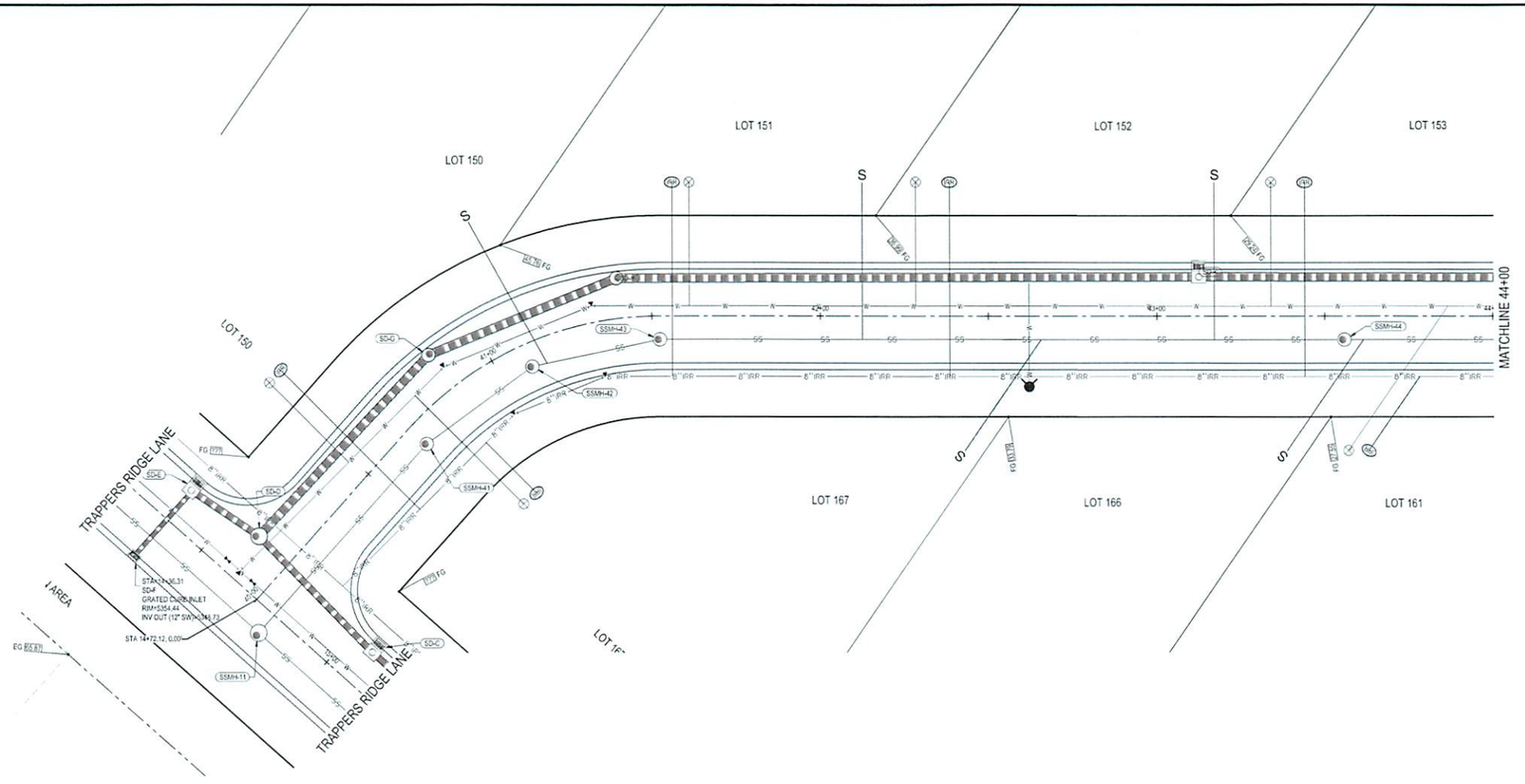
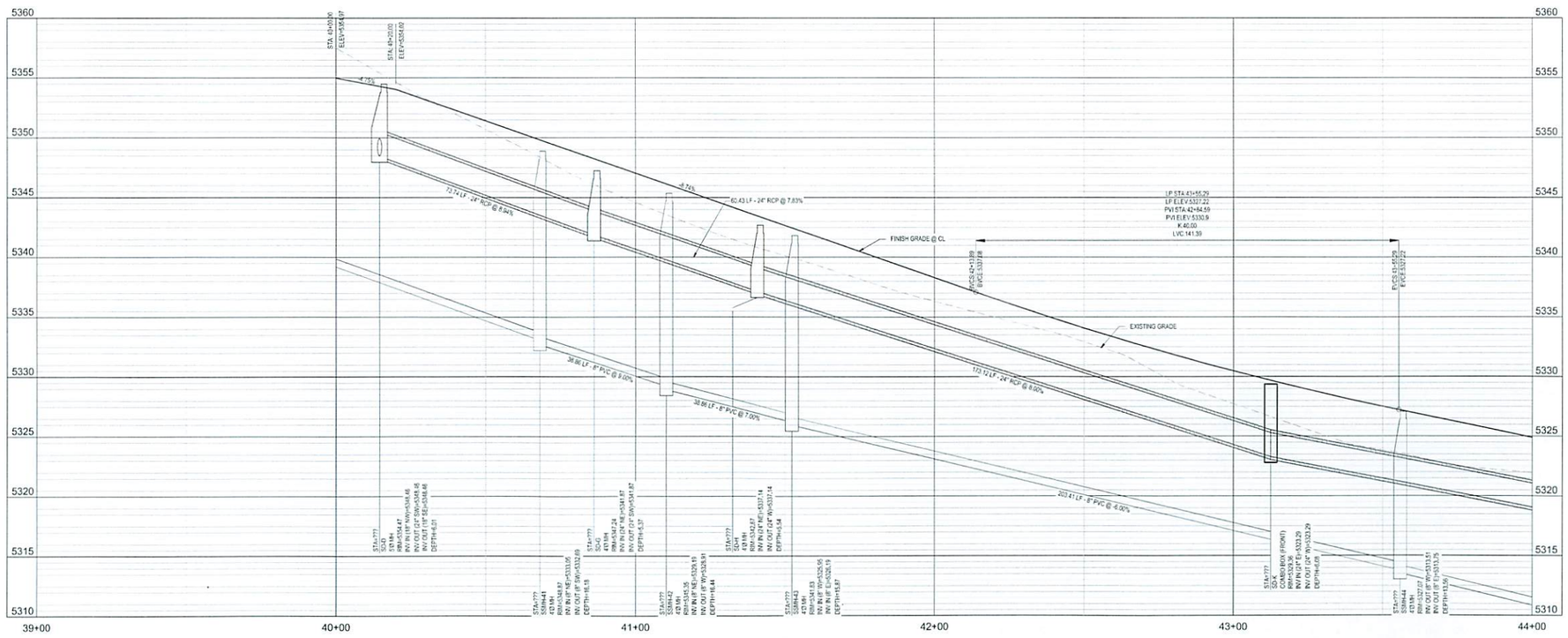
SHEET TITLE:
PLAND & PROFILE
TRAPPERS TRAIL ROAD

PP1.1
Sheet X of X





PROFILE TELLURIDE RIDGE LANE: STA 39+00 T0 STA 44+00

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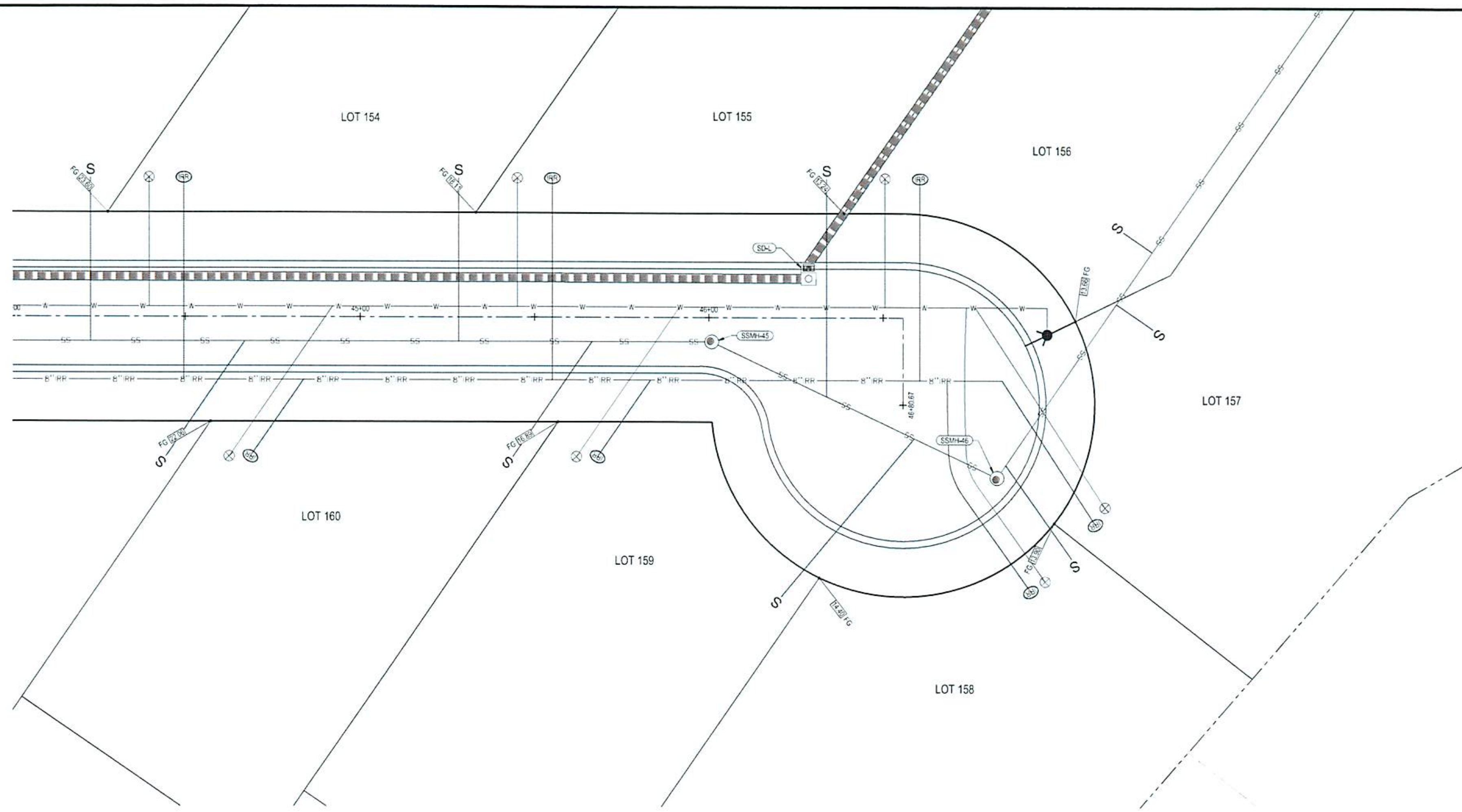
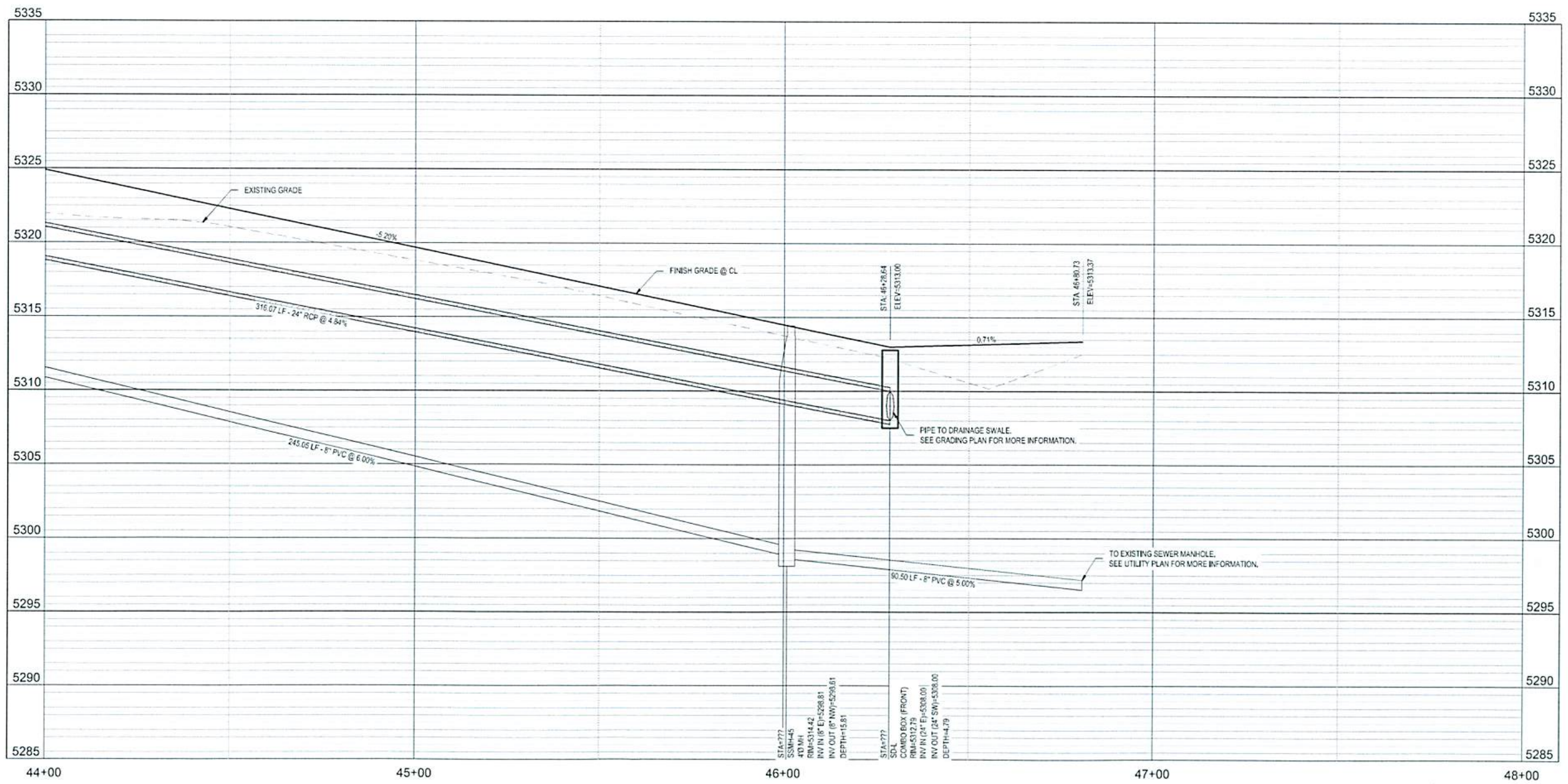
Project No:	WAT02.01
Drawn By:	JST
Checked By:	RMP
Date:	03/09/2016

SHEET TITLE:
PLAN & PROFILE
TELLURIDE RIDGE

PP1.3
Sheet X of X





PROFILE TELLURIDE RIDGE LANE: STA 44+00 T0 STA 48+00

N

SCALE: 1"=20'

SCALE: 1"=5'

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#	Date	Issue / Description	Init.

Project No:	WAT02.01
Drawn By:	JST
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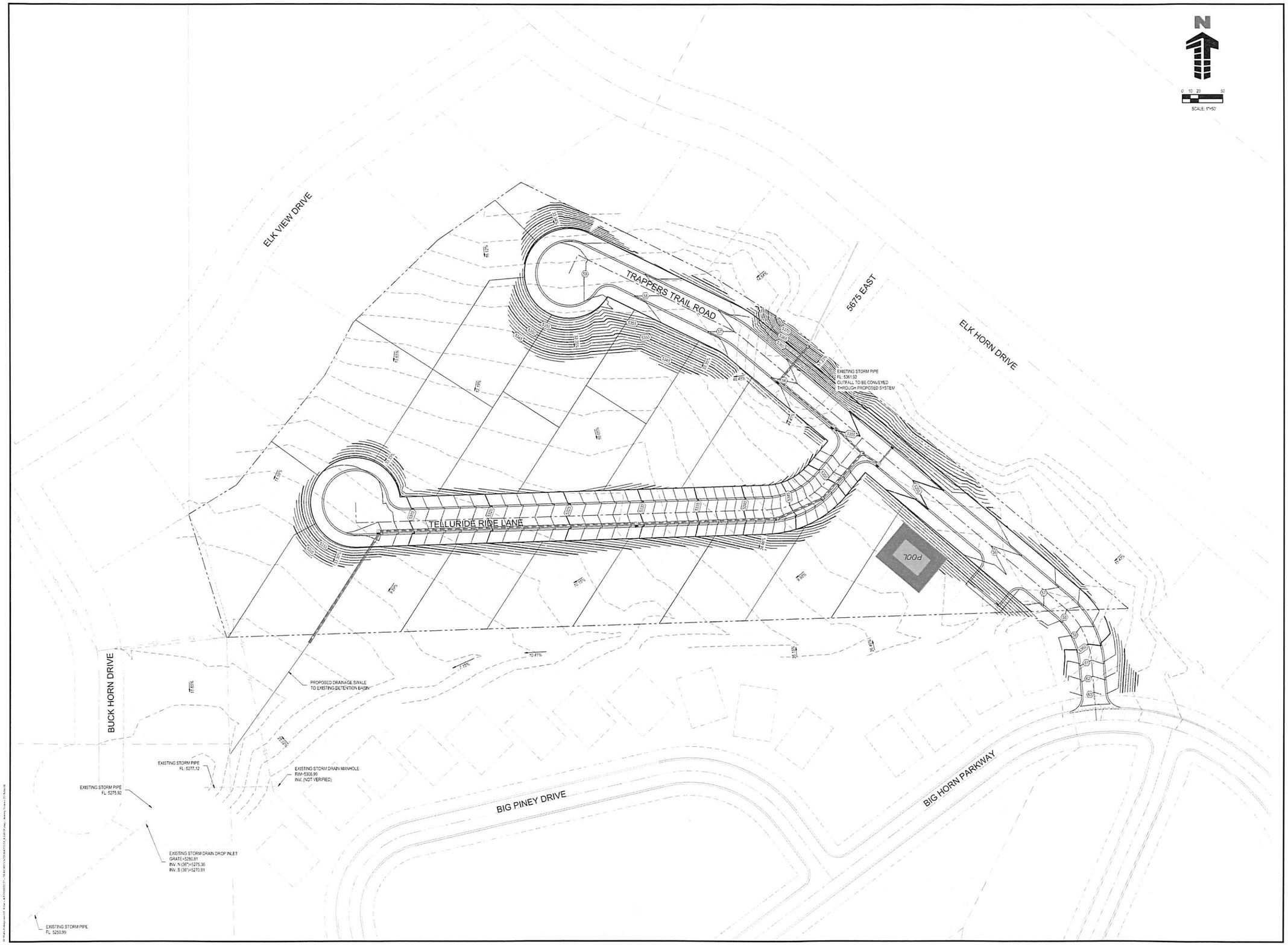
Date:	03/09/2016

SHEET TITLE:
PLAN & PROFILE
TELLURIDE RIDGE LANE

PP1.4

Sheet X of X



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#	Date	Issue / Description	Init.

Project No:	####
Drawn By:	JST
Checked By:	RMP
Date:	03/09/2016

SHEET TITLE:
EROSION CONTROL PLAN

EC.1
Sheet X of X

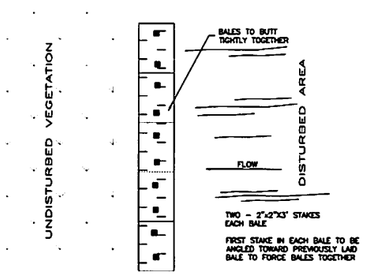
Straw bale barrier

1. **GENERAL**
   - A. Description. A temporary sediment barrier consisting of a row of entrenched and anchored straw bales.
   - B. 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.

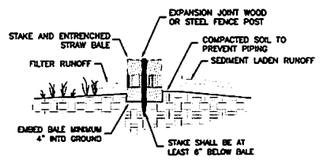
2. **PRODUCTS** (Not used)

3. **EXECUTION**
   - A. Place bales in a single row, lengthwise with ends of adjacent bales tightly abutting each other for the following conditions.
     1) Perimeter Control. Place barrier at down gradient limits of disturbance.
     2) Sediment Barrier. Place barrier at toe of slope or soil stockpile.
     3) Protection of Existing Waterways. Place barrier at top of stream bank.
     4) Inlet Protection.
   - B. 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).
   - C. 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.
   - D. When bales are installed at the toe of a slope, place the bales away from the slope for increased storage capacity.
   - E. Remove straw bale barriers when they have served their usefulness, but not before the up-slope areas have been permanently stabilized.
   - F. Maintenance.
     1) Inspect immediately after any rainfall and at least daily during prolonged rainfall.
     2) Pay close attention to the repair of damaged bales, end runs and undercutting beneath bales.
     3) Necessary repairs or replacement of bales must be accomplished promptly.
     4) 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).
     5) Realign bales to provide a continuous barrier and to fill gaps.
     6) Recompact soil around bales as necessary to prevent piping.

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.



PLAN



SECTION

Silt fence

1. **GENERAL**
   - A. Description. A temporary sediment barrier consisting of a filter fabric stretched across and attached to supporting posts and entrenched.
   - B. Application. To intercept sediment from disturbed areas of limited extent.
   - C. Perimeter Control: Place barrier at down gradient limits of disturbance.
   - D. Sediment Barrier: Place barrier at toe of slope or soil stockpile.
   - E. Protection of Existing Waterways: Place barrier at top of stream bank.
   - F. Inlet Protection.

2. **PRODUCTS**
   - A. 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.
   - B. Burlap. 10 ounces per square yard of fabric.
   - C. 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.

3. **EXECUTION**
   - A. 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.
   - B. 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.
   - C. When used to control sediments from a steep slope, place silt fences away from the toe of the slope for increased holding capacity.
   - D. Maintenance.
     1) Inspect immediately after each rainfall and at least daily during prolonged rainfall.
     2) 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.
     3) Remove sediment deposits after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.
     4) Re-anchor fence as necessary to prevent shortcutting.
     5) Inspect for runoff bypassing ends of barriers or undercutting barriers.

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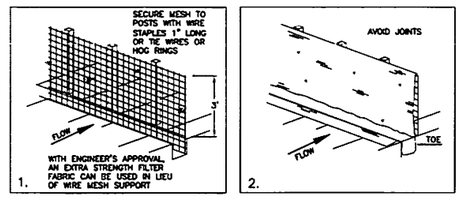
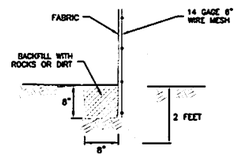


INSTALLATION SEQUENCE



TOE DETAIL

Diversion dike

1. **GENERAL**
   - A. Description: A temporary ridge of compacted soil located at the top or base of a sloping disturbed area.
   - B. Purpose. To intercept up gradient runoff and convey around construction site and to divert sediment laden runoff.

2. **PRODUCT** (Not used)

3. **EXECUTION**
   - A. Construct.
     1) Along midpoint of construction slope to intercept runoff and channel to controlled discharge point.
     2) Around base of soil stockpiles to capture sediment.
     3) Around perimeter of disturbed areas to capture sediment.
   - B. Locate the dike to minimize damages by construction operations and traffic.
   - C. Clear and grub area for dike construction. Build the dike before construction begins.
   - D. Excavate channel and place soil on down gradient side.
   - E. Shape and machine compact excavated soil to form ridge.
   - F. 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.
   - G. Maintenance.
     1) Inspect immediately after each rainfall and at least daily during prolonged rainfall.
     2) Look for runoff breaching dike or eroding channel or side slopes.
     3) Check discharge point for erosion or bypassing of flows.
     4) Repair and stabilize as necessary.
     5) Inspect daily during vehicular activity on slope, check for and repair any traffic damage.

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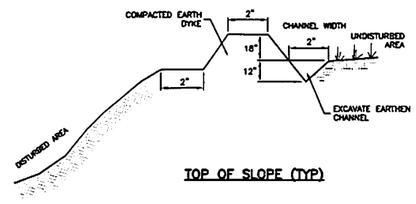
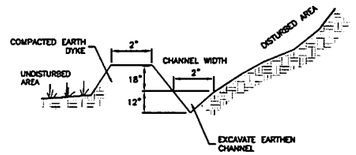


TOP OF SLOPE (TYP)



BASE OF SLOPE (TYP)

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#	Date	Issue / Description	Init.

Project No	WAT02.01
Drawn By	JS
Checked By	RMP
Date	03/09/2016

SHEET TITLE:
EROSION CONTROL DETAILS (APWA)

EC.2
Sheet X of X

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.

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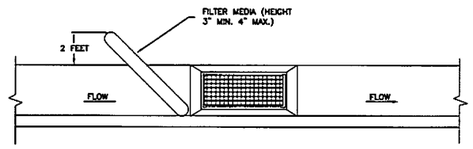
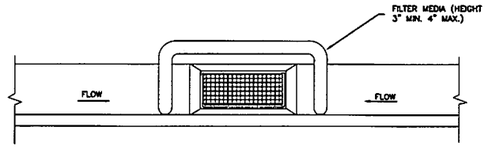


ON–GRADE INLET PROTECTION DETAIL



SUMP INLET PROTECTION DETAIL

Inlet protection - gravel sock

Plan 124 Sheet 1 of 3

September 2006

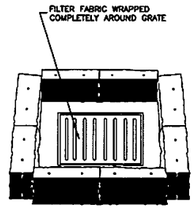
Inlet protection – fence or straw bale

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.

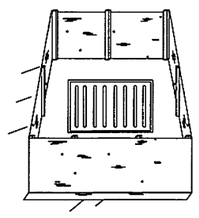
2. **PRODUCT** (Not used)

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.

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.



STRAW BALE BARRIER
(PLAN No. 121)



SILT FENCE
(PLAN No. 122)

Inlet protection - fence or straw bale

Plan 124 Sheet 3 of 3

February 2006

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.

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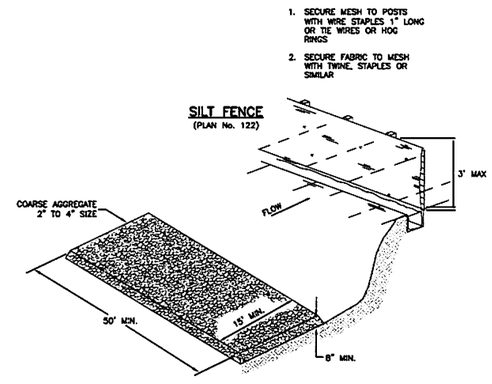

WASH DOWN AREA

Equipment and vehicle wash down area

Plan 125

February 2006

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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	03/09/2016

SHEET TITLE:
EROSION CONTROL
DETAILS (APWA)

EC.3
Sheet X of X

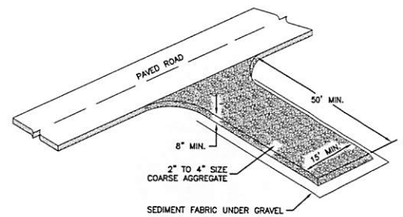
Stabilized roadway entrance

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.

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.



Stabilized roadway entrance

Plan
126

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SHEET TITLE:
EROSION CONTROL
DETAILS (APWA)

EC.4
Sheet X of X

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.

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.

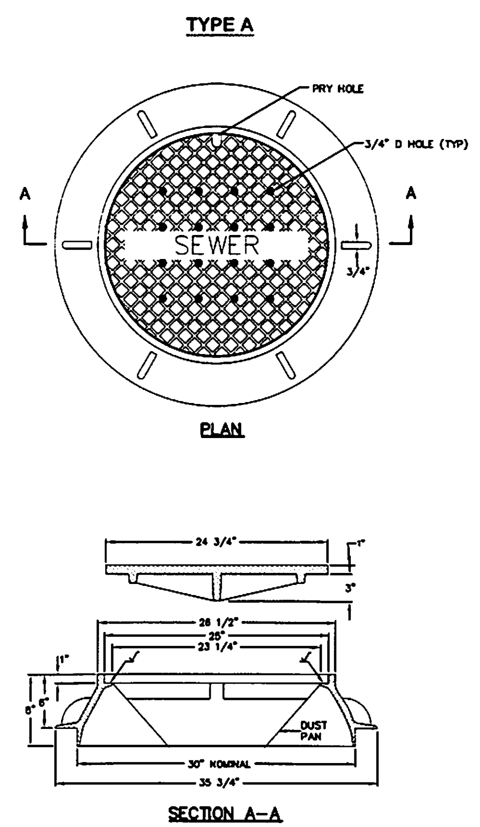
3. **EXECUTION**
   A. Foundation Stabilization: Get ENGINEER's permission to use a sewer rock or a granular backfill borrow in a geotextile wrap to stabilize an unstable foundation.
   B. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 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.

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.

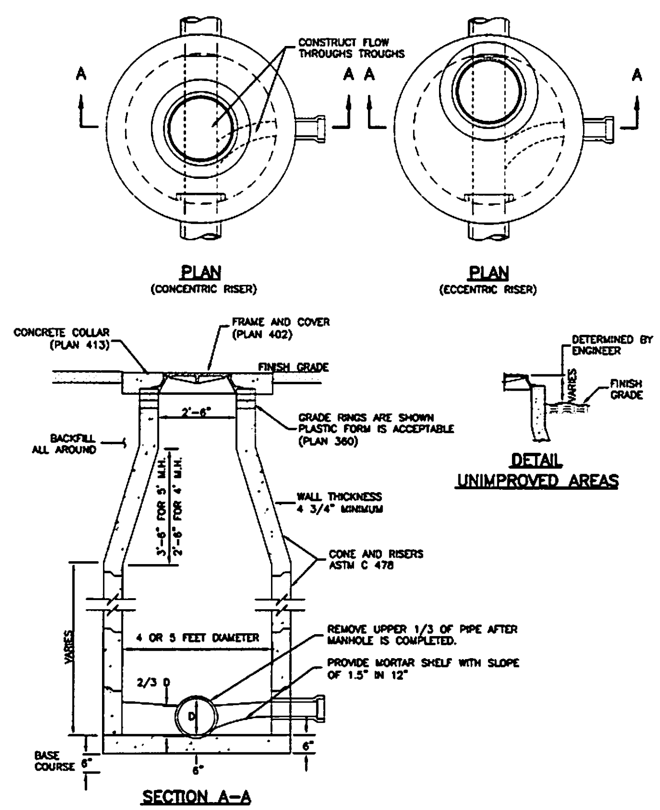
3. **EXECUTION**
   A. Pavement Preparation: Provide a neat vertical and concentric joint between concrete and existing asphalt concrete surfaces. Clean edges of all dirt, oil, and loose debris.
   B. Concrete Placement: Fill the annular space around the frame and cover casting with concrete. Apply a broom finish. Apply a curing agent.



30" Frame and cover

Plan **402**

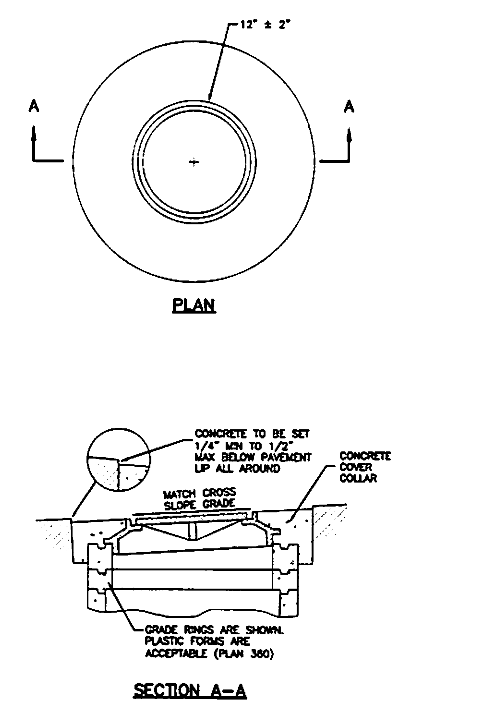
April 1997



Sanitary sewer manhole

Plan **411**

April 2011



Cover collar for sanitary sewer manhole

Plan **413**

September 2001

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#	Date	Issue / Description	Init.

Project No	WAT02.01
Drawn By	JS"
Checked By	RMP
Date	03/09/2016

SHEET TITLE:
SANITARY SEWER
DETAILS (APWA)

DT01

Sheet X of X

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.

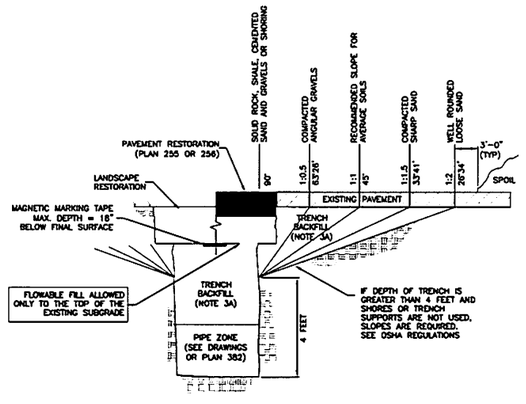
3. **EXECUTION**
   A. Trench Backfill:
      1) DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate as trench backfill.
      2) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.
      3) 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).

Pipe zone backfill

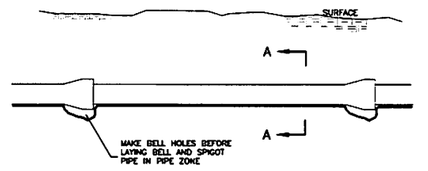
1. **GENERAL**
   A. Install the pipe in the center of the trench or no closer than 6-inches from the wall of the pipe to the wall of the trench.

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.

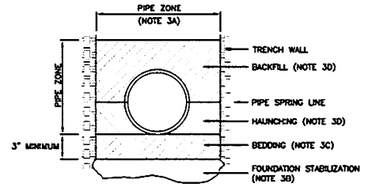
3. **EXECUTION**
   A. Excavate the Pipe Zone: Width is measured at the pipe spring line and includes any necessary sheathing. Provide width recommended by pipe manufacturer. Follow manufacturer's recommendations when using trench boxes.
   B. Foundation Stabilization: Get ENGINEER's permission before 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.



Trench backfill Plan **381**



ELEVATION VIEW



SECTION A–A

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."

Pipe zone backfill Plan **382**

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P.R.U.D. PHASE 8

EDEN, UTAH 84310

#	Date	Issue / Description	Int.

Project No	WAT02.01
Drawn By	JS*
Checked By	RWP
Date	03/09/2016

SHEET TITLE:
SANITARY SEWER DETAILS (APWA)

DT02
Sheet X of X

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

GARDNER ENGINEERING | WOLF CREEK WATER AND SEWER IMPROVEMENT DISTRICT STANDARD WATER DETAILS | 1/6

- 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, MAINGUARD 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.

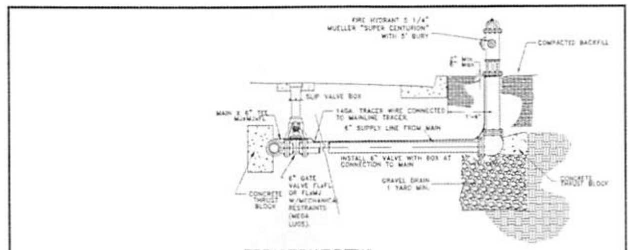
TAKE A CHLORINE TEST AT 50 PPM AND THEN 24 HRS LATER TAKE ANOTHER TEST TO ENSURE THAT A RESIDUAL OF 25 PPM REMAINS.

FLUSH AND TAKE A SAMPLE TO THE LAB TO VERIFY THAT IT PASSES.

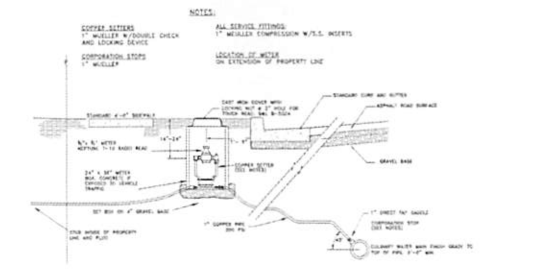
ALL PIPE AND SERVICE CONNECTIONS WILL BE BEDDED WITH IMPORTED MATERIAL, SAND OR LIKE MATERIAL.

CONTRACTOR'S LICENCE AND PROOF OF INSURANCE REQUIRED NO THIRD PARTY PERSON.

GARDNER ENGINEERING | WOLF CREEK WATER AND SEWER IMPROVEMENT DISTRICT STANDARD WATER DETAILS | 2/6



FIRE HYDRANT DETAIL

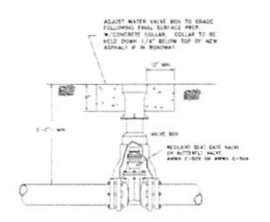


TYPICAL WATER CONNECTION\RE-CONNECTION

GENERAL NOTES:
1. ALL ITEMS SHALL BE INSTALLED NEW.
2. ALL ITEMS SHALL BE NSF 61 COMPLIANT AND MEET THE APPLICABLE AWWA STANDARD
3. THE CURRENT REQUIREMENTS OF THE UTAH DIVISION OF DRINKING WATER, GOVERNING THE MATERIALS AND INSTALLATION USED IN WATER PROJECTS SHALL BE MET.
4. THE WOLF CREEK WATER COMPANY SHALL BE CONTACTED AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION (CONTACT: SYSTEM OPERATOR, ROB THOMAS, 801.430.4647)
5. ALL PIPE SHALL BE DUCTILE IRON CLASS 51, MIN. WORKING PRESSURE 200 PSI.
6. ALL PIPE SHALL BE PRESSURE TESTED AT 200 PSI FOR AT LEAST 2 HOURS.
7. CHLORINE GRANULES SHALL BE INSTALLED AS MAIN LINE IS LAID.
8. TWO CHLORINE TESTS ARE REQUIRED, 24 HOURS APART, BEFORE FLUSHING AND TAKING A SAMPLE FOR BACTERIALOGICAL TESTING.
9. CONTRACTOR'S LICENSE AND PROOF OF INSURANCE MUST BE PRESENTED TO AND VERIFIED BY SYSTEM OPERATOR.

NOTE: WHERE A WATER MAIN AND A SEWER MAIN MUST CROSS, THE WATER MAIN SHALL BE AT LEAST 18" ABOVE THE SEWER MAIN. SEPARATION DISTANCES ARE TO BE MEASURED EDGE-TO-EDGE. ALSO WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH WITH EITHER SEWER OR SECONDARY PIPES.

GARDNER ENGINEERING | WOLF CREEK WATER AND SEWER IMPROVEMENT DISTRICT STANDARD WATER DETAILS | 3/6



TYPICAL VALVE

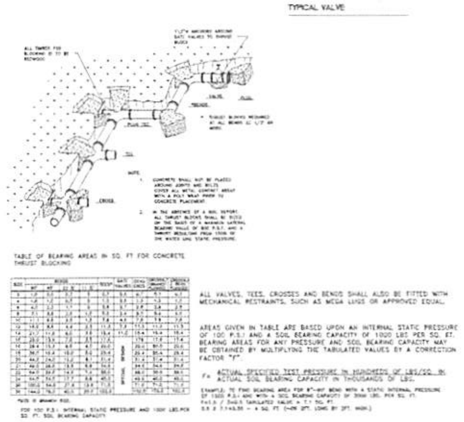


TABLE OF BEARING AREAS IN SQ. FT FOR CONCRETE THRUST BLOCKING

ALL VALVES, TEES, CROSSES AND BENDS SHALL ALSO BE FITTED WITH MECHANICAL RESTRAINTS, SUCH AS MEGA LUGS OR APPROVED EQUAL.

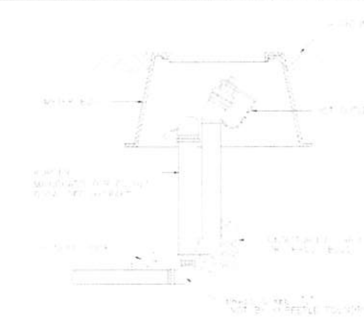
AREAS GIVEN IN TABLE ARE BASED UPON AN INTERNAL STATIC PRESSURE OF 100 P.S.I AND A SOIL BEARING CAPACITY OF 1000 LBS PER SQ. FT. BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING THE TABULATED VALUES BY A CORRECTION FACTOR "F".

F = ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF LBS/SQ. IN / ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.

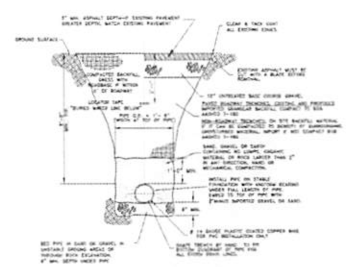
THRUST BLOCKING DETAIL

NOTE: WHERE A WATER MAIN AND A SEWER MAIN MUST CROSS, THE WATER MAIN SHALL BE AT LEAST 18" ABOVE THE SEWER MAIN. SEPARATION DISTANCES ARE TO BE MEASURED EDGE-TO-EDGE. ALSO WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH WITH EITHER SEWER OR SECONDARY PIPES.

GARDNER ENGINEERING | WOLF CREEK WATER AND SEWER IMPROVEMENT DISTRICT STANDARD WATER DETAILS | 4/6



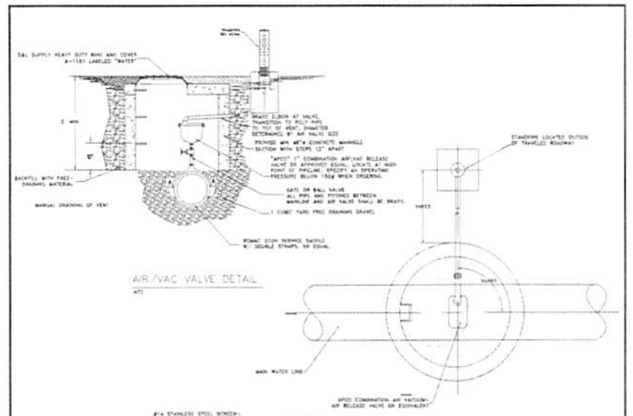
BLOW-OFF HYDRANT



TYPICAL TRENCH SECTION

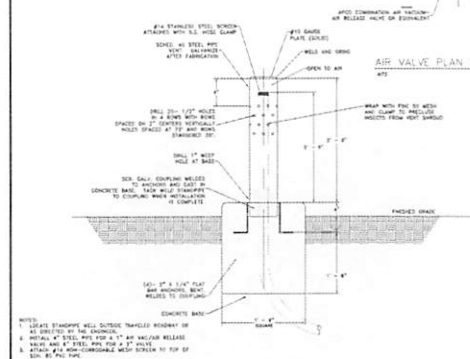
NOTE: WHERE A WATER MAIN AND A SEWER MAIN MUST CROSS, THE WATER MAIN SHALL BE AT LEAST 18" ABOVE THE SEWER MAIN. SEPARATION DISTANCES ARE TO BE MEASURED EDGE-TO-EDGE. ALSO WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH WITH EITHER SEWER OR SECONDARY PIPES.

GARDNER ENGINEERING | WOLF CREEK WATER AND SEWER IMPROVEMENT DISTRICT STANDARD WATER DETAILS | 5/6



AIR/VAC VALVE DETAIL

AIR VALVE PLAN VIEW



STANDPIPE DETAIL

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EDEN, UTAH 84310

#	Date	Issue / Description	Init.

Project No: ####
Drawn By: XXX
Checked By: XXX
Date: xx/xx/xx

SHEET TITLE:
WATER DETAILS (WCWSID)

DT03
Sheet X of X

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.

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.

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.

30" Frame and cover

September 2001

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Plan 302 Sheet 1 of 2

Catch basin

September 2010

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Plan 315 Sheet 1 of 2

Combination catch basin and cleanout box

March 2011

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Plan 316

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P.R.U.D. PHASE 8

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#	Date	Issue / Description	Int.

Project No	####
Drawn By	XXX
Checked By	XXX
Date	XX/XX/XX

SHEET TITLE:
STORM DRAIN DETAILS (APWA)

DT04

Sheet X of X

Pipe outfall

1. **GENERAL**
   A. Round concrete pipe application.
   B. Additional requirements are specified in APWA Section 33 05 02.

2. **PRODUCTS**
   A. Use the same quality of precast end section as the pipe.
   B. Use the joint material and connection that is the same as the joints in the pipeline.

3. **EXECUTION**
   A. General dimensions and geometric shapes may vary from manufacturer to manufacturer.
   B. Steel reinforcement is not required in the concrete end section shown.
   C. Provide joint restraint connectors if required by ENGINEER.

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Precast 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 pipe under 12" diameter.
      2) Diameter is 5 feet: For pipe 12" and larger, or when 3 or more drain pipes intersect the manhole.
   C. Wall thickness:
      1) Precast reinforced concrete walls 4 3/4" minimum.
      2) Cast-in-place concrete to be 8 inches thick minimum.
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: Reinforced concrete pipe, Class III, ASTM C 478.
   E. Joint Sealant: Rubber based, compressible.
   F. Grout: 2 parts sand to 1 part cement mortar.

3. **EXECUTION**
   A. Foundation Stabilization: Get ENGINEER's permission to use a sewer rock or pea gravel 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. 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.
   E. Pipe Connections: Grout around all pipe openings.
   F. 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.
   G. Joints: Place flexible sealant in all joints. Finish with grout.
   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.

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Raise frame to grade

1. **GENERAL**
   A. Grade rings are used in non-pressurized applications to adjust frame to grade.

2. **PRODUCTS**
   A. Concrete: Class 4000, APWA Section 03 30 04.
   B. Reinforcement: Deformed, 60 ksi yield grade hoop steel, ASTM A 615.
      1) 2 1/2" High Rings: Provide two 1/4" diameter steel hoops tied with No. 14 AWS gage wire, 8" on center.
      2) 6" and 8" High Rings: Provide four 1/4" diameter steel hoops, tied with No. 14 AWS gage wire, 8" on center.
   C. Gasket: Rubber-based, compressible.

3. **EXECUTION**
   A. Ring Manufacture:
      1) Fabrication, APWA Section 03 30 10.
      2) Cure, APWA Section 03 39 00.
   B. Field Installation: Seat rings with a compressible gasket.

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ROUND WITH FLARE

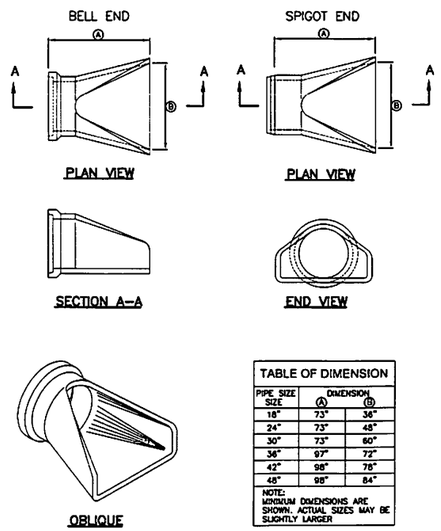


TABLE OF DIMENSION		
PIPE SIZE	DIMENSION (A)	DIMENSION (B)
18"	73"	36"
24"	73"	48"
30"	73"	60"
36"	97"	72"
42"	98"	78"
48"	98"	84"

NOTE: MINIMUM DIMENSIONS ARE SHOWN. ACTUAL SIZES MAY BE SLIGHTLY LARGER

PIPE PASS-THROUGH BASE

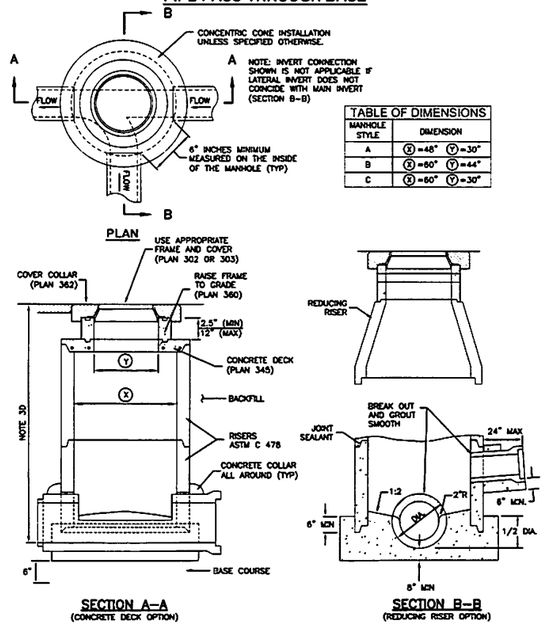
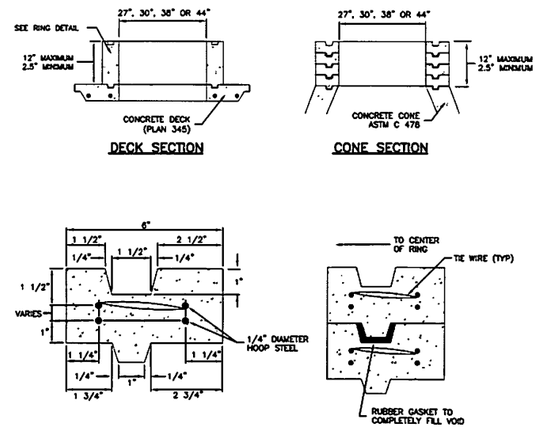


TABLE OF DIMENSIONS	
MANHOLE STYLE	DIMENSION
A	(X) =48" (Y) =30"
B	(X) =60" (Y) =44"
C	(X) =60" (Y) =30"

GRADE RING



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SHEET TITLE:
STORM DRAIN DETAILS (APWA)

DT05
Sheet X of X

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.

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.

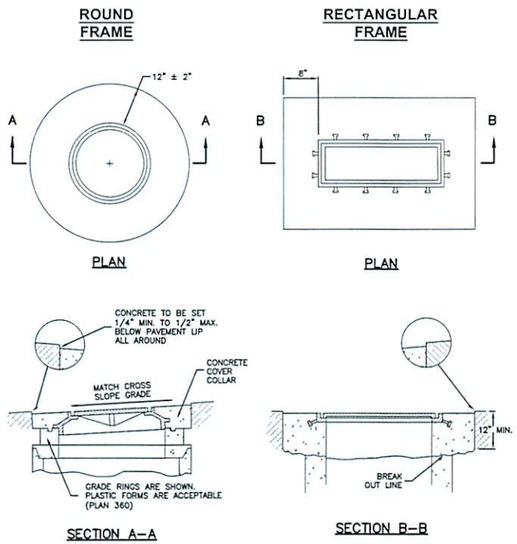
3. **EXECUTION**
   A. Trench Backfill:
      1) DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate as trench backfill.
      2) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.
      3) 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).

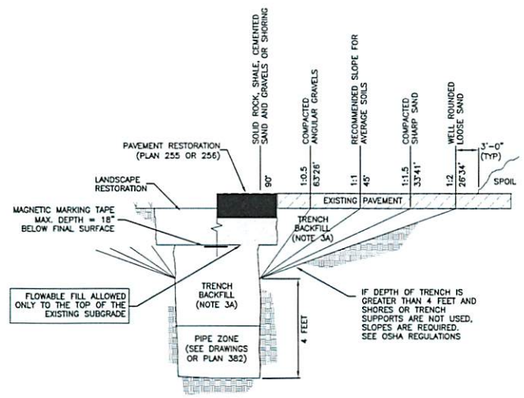
Pipe zone backfill

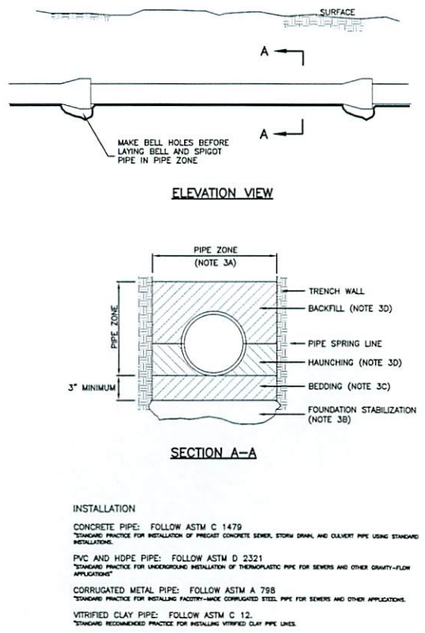
1. **GENERAL**
   A. Install the pipe in the center of the trench or no closer than 6-inches from the wall of the pipe to the wall of the trench.

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.







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."

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DT06
Sheet X of X