



SORPRESA LANE

COLORADO SPRINGS, COLORADO

FINAL PLAN SET

NOVEMBER 2013

AGENCIES

SERVICE	ENTITY	P.O.C.
OWNER:	WOODMEN HEIGHTS METRO DISTRICT 455 E. PIKES PEAK AVE. #100 COLORADO SPRINGS, CO. 80903	TERRY SCHOOLER (719) 447-1777
CIVIL ENGINEER:	MATRIX DESIGN GROUP, INC. 2435 RESEARCH PKWAY, SUITE 300 COLORADO SPRINGS, CO. 80904	GERRIT SLATTER (719) 575-0100
ENGINEERING DIVISION:	CITY OF COLORADO SPRINGS 30 S. NEVADA AVE, SUITE 702 COLORADO SPRINGS, CO. 80903	TIM MITROS (719) 385-5061
TRAFFIC ENGINEERING:	CITY OF COLORADO SPRINGS 30 S. NEVADA AVE, SUITE 405 COLORADO SPRINGS, CO. 80903	KATHLEEN KRAGER (719) 385-5908
WATER RESOURCES:	WATER / WASTEWATER: COLORADO SPRINGS UTILITIES 1521 S. HANCOCK EXPRESSWAY COLORADO SPRINGS, CO. 80903	AL JUVERA (719) 668-8769
GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DRIVE COLORADO SPRINGS, CO. 80920	ANNE ALDRICH (719) 668-8707
ELECTRIC DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DRIVE COLORADO SPRINGS, CO. 80920	J.C. BUTTERFIELD (719) 668-5618
ELECTRIC COMPANY:	MOUNTAIN VIEW ELECTRIC ASSO. 1140 E. WOODMEN RD. FALCON, CO. 80931	WAYNE BAAB (719) 495-1594

CITY OF COLORADO SPRINGS ENGINEERING REVIEW:

 DATE 11/11/13
 TIM MITROS

CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING REVIEW:

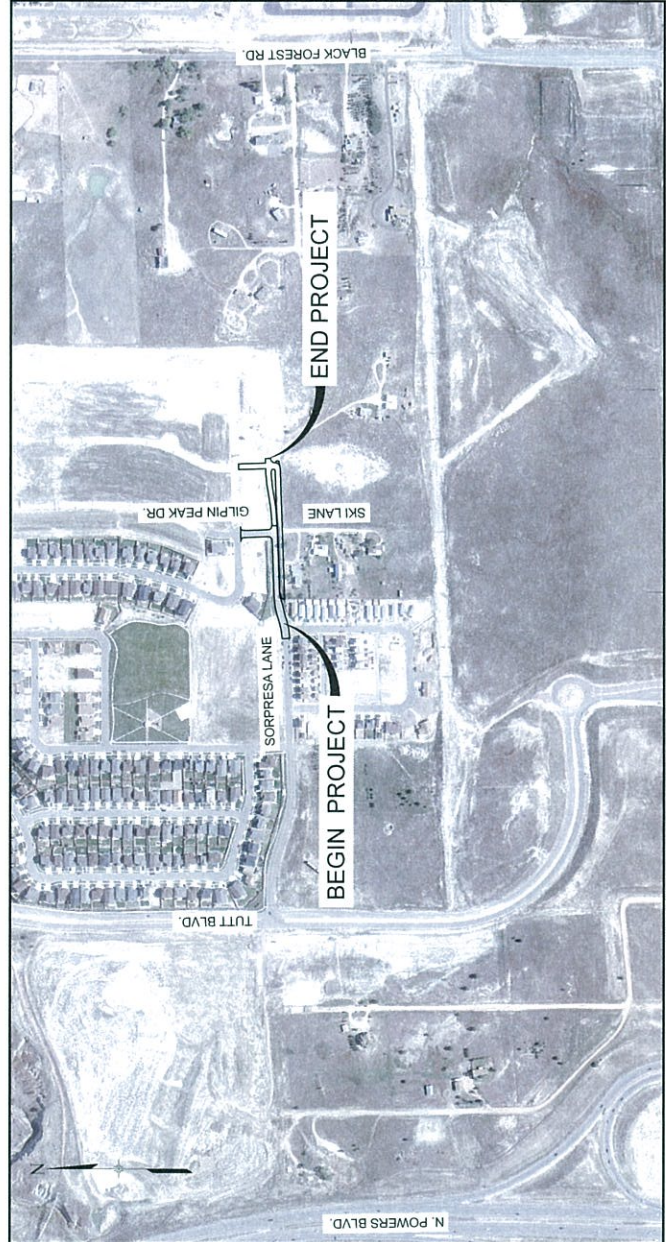
 DATE 11/11/13
 KATHLEEN KRAGER

OWNER:

OWNER: _____ DATE _____
 TERRY SCHOOLER
 WOODMEN HEIGHTS METRO DISTRICT
 455 E. PIKES PEAK AVE #100
 COLORADO SPRINGS, CO. 80903

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID DETAILED PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE CITY/COUNTY FOR DETAILED DRAINAGE PLANS AND SPECIFICATIONS, AND SAID DETAILED PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH THE MASTER PLAN OF THE DRAINAGE BASIN. SAID DETAILED DRAINAGE PLANS AND SPECIFICATIONS MEET THE PURPOSE FOR WHICH THE PARTICULAR DRAINAGE FACILITY(S) IS DESIGNED. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THE DETAILED DRAINAGE PLANS AND SPECIFICATIONS.

 DATE 11/11/13
 GERRIT L. SLATTER, PE #34907
 FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.



LOCATION MAP
NTS

Design is subject to the City's final decision

City considers this as an interim design when the south side of Sorpresa develops the wall will be removed and widened (Sorpresa) per the original plans

Tim 11/11/13

ACCEPTANCE BY THE CITY OF COLORADO SPRINGS OF DESIGN WORK BY DESIGN PROFESSIONALS CONSTITUTES BELIEF THAT THE WORK HAS BEEN DONE IN ACCORDANCE WITH THE CITY STANDARDS AND ORDINANCES. WORK PRODUCTS ARE THE RESPONSIBILITY OF THE DESIGN PROFESSIONAL AND CITY ACCEPTANCE DOES NOT RELIEVE THE PROFESSIONAL OF SAID RESPONSIBILITY.

BENCHMARK
 BENCHMARK FOR THIS PROJECT IS FIMS MONUMENT "BG_16A" BEING A "ZAP-IT" LEAD PLUG WITH BRASS WASHER STAMPED "FIMS", "CSU", ADN "BG-16A" ON TOP OF THE EAST CURB OF THE MEDIAN OF NORTH POWERS BOULEVARD APPROXIMATELY 930 FEET SOUTH OF THE CENTERLINE OF EAST WOODMONT ROAD, NEAR THE SOUTH END OF THE LEFT TURN LANE.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION	DRAWING NO.
1	TITLE SHEET	TS01
2	GENERAL NOTES / ABBREVIATIONS	GN01
3	TYPICAL SECTION	TY01
4	REMOVAL / RELOCATE PLAN	RM01
5	ROADWAY PLAN	RD01
6	SIGNING AND PAVEMENT MARKING	PM01
7-8	CROSS SECTIONS	XS01-XS02

<p>REVIEW: Street Design: _____ Date: _____ Curb & gutter review: _____ Date: _____ Final Review: _____ Date: _____ Drainage Design: _____ Date: _____</p>	<p>SCALE: _____ BENCHMARK: _____</p>	<p>REVISIONS:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Description</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	No.	Description	Date																<p>ENGINEER:  2435 Research Pkwy, Suite 300, Colorado Springs, CO 80920 Phone 719.575.0100</p> <p>Designed By: _____ Date: _____ Drawn By: _____ Date: _____ Checked By: _____ Date: _____</p>	<p style="text-align: center;">SORPRESA LANE</p> <p style="text-align: center;">TITLE SHEET</p> <p style="text-align: center;">City Project No. _____ Drainage Basin _____ Job No. 13.450.004 Sheet 1 of 8</p>
No.	Description	Date																				

FIGURE 4 - Approved Street Design



GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF COLORADO SPRINGS, ENGINEERING DIVISION, GENERAL PROVISIONS, SPECIAL PROVISIONS, STANDARD SPECIFICATIONS, REVISIONS TO STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS, LATEST REVISIONS.
- UTILITY LINES AS SHOWN ON THE PLAN SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION AND PROTECTION OF ALL UTILITIES IN PLACE.
- THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987 TWO BUSINESS DAYS IN ADVANCE OF ANY EXCAVATING OR GRADING. FOR A LIST OF SPECIFIC CONTACTS SEE SPECIFICATIONS.
- THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL UTILITIES AND STRUCTURES AFFECTED BY THE WORK AND ANY DAMAGE SHALL BE REPAIRED AND RESTORED TO THE SATISFACTION OF THE CITY OF COLORADO SPRINGS.
- THE PHYSICAL FEATURES WITHIN THE LIMITS OF THE PROJECT HAVE BEEN SHOWN BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE FEATURES SHOWN. THE CONTRACTOR SHALL REVIEW AND VERIFY EXISTING PHYSICAL FEATURES AND INFORM HIMSELF OF THE CONDITIONS TO BE ENCOUNTERED DURING CONSTRUCTION.
- ALL WORK SHALL BE DONE TO THE LINES, GRADES, SECTIONS, AND ELEVATIONS SHOWN ON THE PLANS UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF COLORADO SPRINGS AND THE ENGINEER.
- THE ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
- PAVEMENT DIMENSIONS AND RADII ARE SHOWN TO THE FLOW LINE UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AND/OR TOES OF SLOPE AS SHOWN ON THE PLANS AND CROSS SECTIONS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITIONS BY THE CONTRACTOR AT HIS/HER OWN EXPENSE. CONSTRUCTION ACTIVITIES, IN ADDITION TO NORMAL CONSTRUCTION PROCEDURES, SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.
- WHERE PAVEMENT IS TO ABUT EXISTING PAVEMENT, THE EXISTING PAVEMENT SHALL BE REMOVED TO A NEAR VERTICAL LINE BY FULL DEPTH SAWING. SAWING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF PAVEMENT. THE CONTRACTOR WILL BE REQUIRED TO PAINT THE EDGE OF EXISTING PAVEMENT TO BE REMOVED WITH A WHITE PAINT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERTICAL EDGES SHALL NOT BE REPAIRED OVERLAP. ALL NEW PAVEMENT SHALL BE CURBED ASH FOR TACK COAT SHALL CONSIST OF ONE PART EMULSIFIED ASPHALT AND ONE PART WATER.
- WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS SHALL BE AS ORDERED. THE COST OF THE WATER SHALL BE INCIDENTAL TO OTHER BID ITEMS.
- THE PHYSICAL FEATURES REQUIRING REMOVAL OR OBLITERATION WITHIN THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF-SITE. THE EXCEPTION IS TRAFFIC CONTROL DEVICES, WHICH SHALL BE SALVAGED FOR CITY MAINTENANCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING ANY MONUMENTATION, RANGE POINTS, TIES, BENCHMARKS AND/OR SURVEY CONTROL POINTS WHICH MAY BE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A REGISTERED PROFESSIONAL LAND SURVEYOR AUTHORIZED TO PRACTICE LAND SURVEYING IN COLORADO.
- THE CONTRACTOR SHALL HAVE A COPY OF ALL APPLICABLE STANDARDS ON SITE FOR THE DURATION OF THIS PROJECT.
- THE CONTRACTOR SHALL NOT STOCKPILE MATERIAL WITHIN 10 FT. OF THE EDGE OF TRAVELED WAY.
- THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY TRAFFIC CONTROL DEVICES NECESSARY THROUGHOUT THE DURATION OF CONSTRUCTION. THE CONTRACTOR SHALL CONTACT TRAFFIC ENGINEERING FORTY-EIGHT (48) HOURS IN ADVANCE FOR ANY REQUIRED MODIFICATION OF TRAFFIC SIGNALS WITHIN CONSTRUCTION AREA AS NECESSARY TO MAINTAIN SAFE OPERATIONS.
- THE CONTRACTOR SHALL AT THEIR EXPENSE, SUPPORT AND PROTECT ALL WATER MAINS SO THAT THEY WILL FUNCTION CONTINUOUSLY DURING CONSTRUCTION EXCEPT THOSE DESIGNATED TO BE TEMPORARILY SHUT DOWN. TEMPORARY WATER SERVICE DISRUPTION SHALL BE DONE TO MINIMIZE THE EFFECTS ON COLORADO SPRINGS UTILITIES CUSTOMERS. SHOULD A WATER MAIN FAIL AS A RESULT OF THE CONTRACTORS OPERATIONS, IT WILL BE REPAIRED IMMEDIATELY BY EITHER THE CONTRACTOR OR THE WATER RESOURCES DEPARTMENT AT THE FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR.
- ANY DISCREPANCY WITHIN THESE PLANS SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
- APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
- THE APPROVAL OF THESE PLANS OR ISSUANCE OF A PERMIT BY THE CITY OF COLORADO SPRINGS DOES NOT AUTHORIZE THE OWNER OR CONTRACTOR TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES.

DUST PERMIT:

THE CONTRACTOR SHALL OBTAIN AN EL PASO COUNTY FLUGITIVE DUST CONTROL PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT FOR THE CONSTRUCTION OF THIS PROJECT.

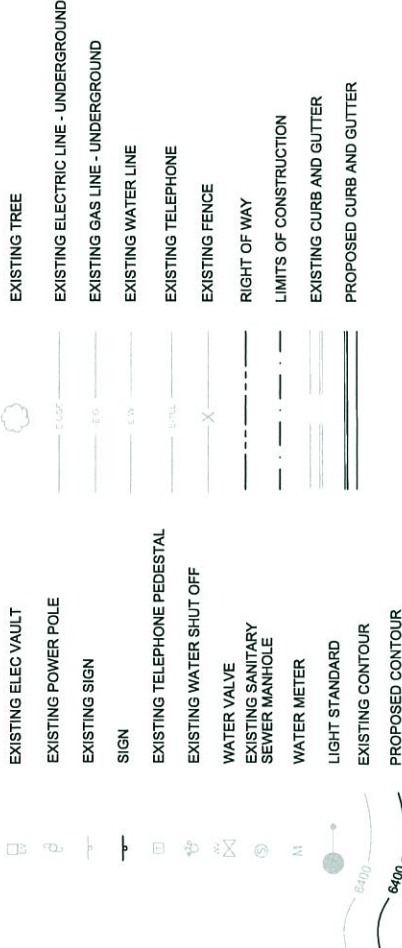
TRAFFIC GENERAL NOTES:

- BEFORE EXCAVATING, CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND/OR BENCHMARKS WHICH WILL BE DESTROYED OR DESTROYED BY CONSTRUCTION. BENCHMARKS TO BE REMOVED SHALL BE RELOCATED WITH APPROPRIATE MONUMENTATION BY A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING.
- APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
- THE APPROVAL OF THESE PLANS OR THE ISSUANCE OF A PERMIT BY THE CITY OF COLORADO SPRINGS DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NEW, TEMPORARY AND EXISTING TRAFFIC SIGNS FROM THE START OF THE CONSTRUCTION PROJECT UNTIL ACCEPTANCE BY CITY TRAFFIC ENGINEERING.
- ALL TRAFFIC SIGNS, PAVEMENT MARKINGS, AND TRAFFIC SIGNALS SHALL MEET OR EXCEED M.U.T.C.D. STANDARDS.
- THE CONTRACTOR SHALL NOT REMOVE ANY EXISTING SIGNS, PAVEMENT MARKINGS OR TRAFFIC SIGNALS DURING THE PROJECT WITHOUT SIGNED AUTHORIZATION OF THE CITY ENGINEERING INSPECTOR ASSIGNED TO THE PROJECT.
- CONTRACTOR SHALL PREPARE A DETAILED TRAFFIC CONTROL PLAN, SUBMIT TO CITY TRAFFIC ENGINEERING FOR APPROVAL, AND OBTAIN APPROPRIATE PERMITS IN ACCORDANCE WITH THE "TRAFFIC CONTROLS FOR STREET CONSTRUCTION, UTILITY WORK AND MAINTENANCE OPERATIONS", M.U.T.C.D. SUPPLEMENT FOR THE CITY OF COLORADO SPRINGS, AUGUST 1992.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC CONTROL. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING AND MAINTAINING THE TEMPORARY TRAFFIC CONTROL DEVICES THROUGHOUT THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NEW, TEMPORARY AND EXISTING SIGNAL MODIFICATIONS.

STRIPING AND SIGNAGE GENERAL NOTES:

- INSTALLATION OF ALL STRIPING, SIGNS AND PAVEMENT MARKERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMOVAL OR EXISTING PAVEMENT MARKINGS (SCARRING OF PAVEMENT IS NOT PERMITTED). AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OVERLAYING OR CHIP SEALING ROADWAY, IF SCARRING OCCURS DURING REMOVAL OR EXISTING OR TEMPORARY PAVEMENT MARKINGS. THE CITY TRAFFIC ENGINEER WILL DETERMINE THE METHOD OF PAVEMENT REPAIR.
- ALL STRIPING AND SIGNING SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF THE FOLLOWING MANUALS AND THEIR SUPPLEMENTAL AMENDMENTS:
 - MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
 - CITY OF COLORADO SPRINGS SIGNS AND MARKING GUIDELINES
 - CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS
 - CITY OF COLORADO SPRINGS PUBLIC WORKS DESIGN MANUAL
- ALL SIGNING AND STRIPING IS SUBJECT TO THE APPROVAL OF THE CITY TRAFFIC ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
- CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS AND LEGENDS BY HYDROBLASTING, SANDBLASTING AND/OR GRINDING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
- SIGN POSTS SHALL BE INSTALLED WITH A MINIMUM OF 1 1/2" X 10' SQUARE PERFORATED STEEL TUBING WITH SLEEVE PER CITY OF COLORADO SPRINGS STANDARD.
- ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM OF HIGH INTENSITY GRADE SHEETING.
- ANY DEVIATION FROM THE STRIPING AND SIGNING PLANS SHALL BE APPROVED BY THE ENGINEER OF WORK AND THE CITY TRAFFIC ENGINEER PRIOR TO ANY CHANGES BEING MADE IN THE FIELD.
- ALL SIGNS SHOWN ON THE STRIPING AND SIGNING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RELOCATED OR TO REMAIN.
- STRIPED CROSSWALKS SHALL HAVE AN INSIDE DIMENSION OF 10 FEET AND CONTINENTAL CROSSWALKS SHALL HAVE A MINIMUM WIDTH OF 9 FEET UNLESS INDICATED OTHERWISE.
- ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS (EXCEPT WITHIN BIKE LINES) SHALL BE A MINIMUM OF 90MIL THICKNESS THERMOPLASTIC OR PREFORMED PLASTIC TAPE.
- ALL LONGITUDINAL LINES SHALL BE A MINIMUM OF 15MIL THICKNESS EPOXY.
- CONTRACTOR TO DELIVER ALL REMOVED SIGNS TO THE CITY OF COLORADO SPRINGS SIGNMARKINGS SHOP AT 404 FONTANERO STREET, (719) 385-6721.
- CONTRACTOR SHALL NOTIFY CITY TRAFFIC ENGINEER (719) 385-5908 A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO AND UPON COMPLETION OF STRIPING AND SIGNAGE.

LEGEND OF SYMBOLS



ABBREVIATIONS

AMERICAN SOCIETY OF TESTING & MATERIALS APPROXIMATE or APPROXIMATELY	MAX
ANGLE POINT	MIN
BEGIN CURB RADIUS	MH
COLORADO DEPARTMENT OF TRANSPORTATION	MUTCD
CENTERLINE	NTS
CLEARANCE	PC
CONCRETE	PGL
DRAWING DRIVE	PI
EACH	R or P/L
EACH CURB RADIUS	RT
ELEVATION	ST
EASEMENT	STA
EACH WAY	STD
EXISTING	SW or SW
FLOWLINE	TYP
FOOT/FEET	TER
HOT BITUMINOUS PAVEMENT	WWF
HORIZONTAL CONTROL LINE	
VERTICAL CURVE FACTOR	
LEFT	

NPDES DRAINAGE WATER QUALITY NOTES:

- THE CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL REMOVE ALL SEDIMENT, MUD, AND CONSTRUCTION DEBRIS THAT MAY ACCUMULATE IN THE FLOWLINES AND PUBLIC RIGHTS OF WAY AS A RESULT OF THIS CONSTRUCTION PROJECT. SAID REMOVAL SHALL BE CONDUCTED IN A TIMELY MANNER.
- THE CLEANING OF CONCRETE TRUCK DELIVERY CHUTES IS PROHIBITED AT THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED.
- THE CONTRACTOR SHALL PROTECT ALL STORM SEWER FACILITIES ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS, INVOLVING WHEEL CUTTING, SAW CUTTING OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL WASTE PRODUCTS GENERATED BY SAID CUTTING OPERATIONS ON A DAILY BASIS. THE DISCHARGE OF ANY WATER CONTAMINATED BY WASTE PRODUCTS FROM CUTTING OPERATIONS TO THE STORM SEWER SYSTEM IS PROHIBITED.
- THE CONTRACTOR MUST KEEP ALL POLLUTANTS, INCLUDING TRENCH BACKFILL MATERIAL, FROM WASHING INTO THE STORM SEWER SYSTEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A STORM WATER MANAGEMENT PLAN PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT.

REVIEW:
Street Design: _____
Curb & Gutter review: _____
Final Review: _____
Drainage Design: _____

By: _____
Date: _____
Date: _____
Date: _____

SCALE: Horizontal _____ Vertical _____

BENCHMARK:

REVISIONS:	No.	Description	Date

ENGINEER: _____

2435 Research Pkwy, Suite 300, Colorado Springs, CO 80920
Phone 719.575.0100

Designed By: _____
Drawn By: _____
Checked By: _____

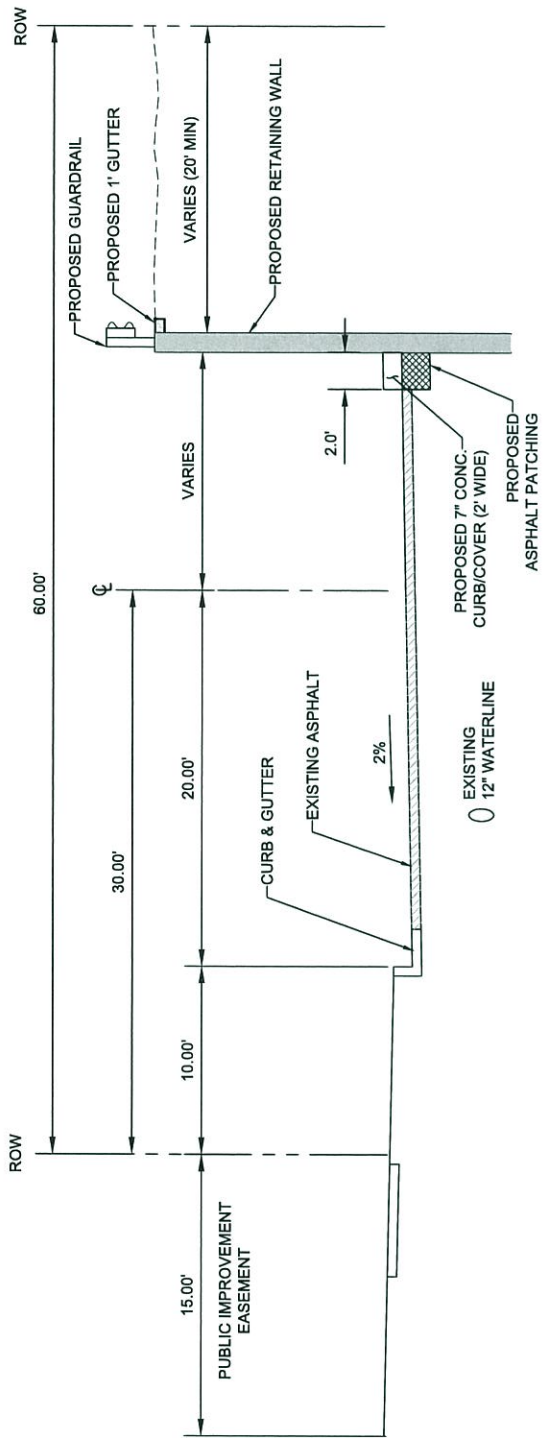
Date: _____
Date: _____
Date: _____

SORPRESA LANE

GENERAL NOTES / ABBREVIATIONS

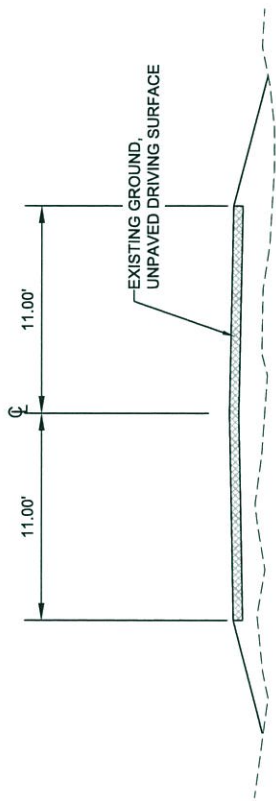
City Project No. _____
Drainage Basin _____
Job No. _____
Sheet _____ of _____

FIGURE 4 - Approved Street Design



EXISTING 8" SANITARY SEWER

SORPRESA LANE (60' ROW)
(N.T.S)



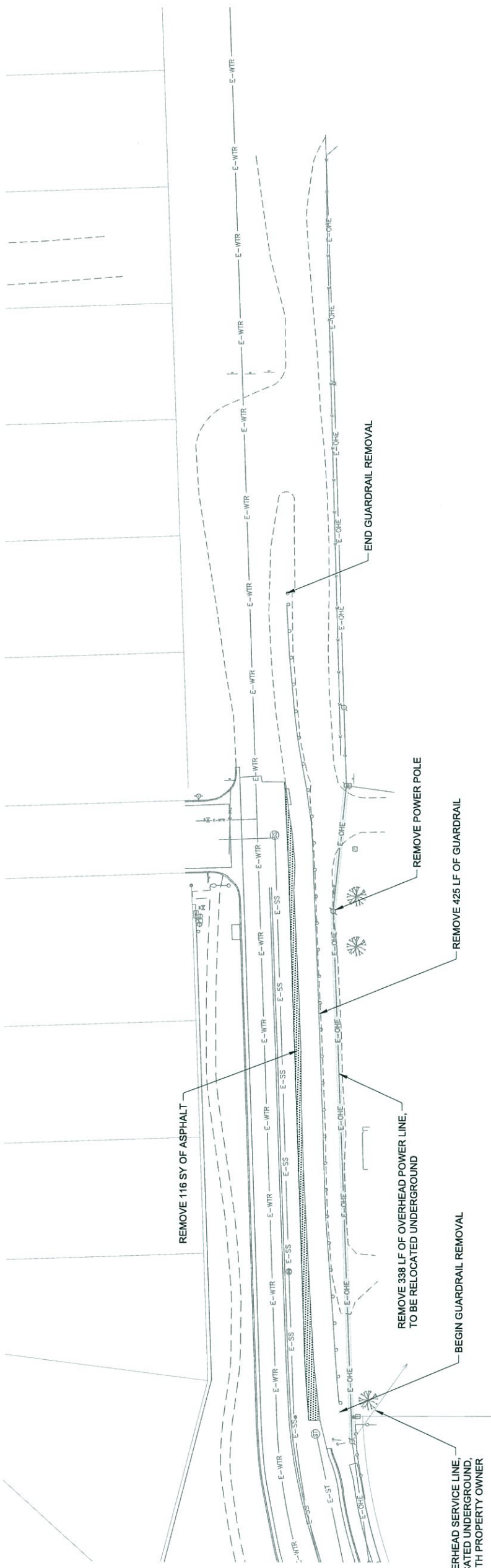
SORPRESA LANE (60' ROW)
(N.T.S)

<p>REVIEW:</p> <p>Street Design: _____ Date: _____</p> <p>Curb & Gutter review: _____ Date: _____</p> <p>Final Review: _____ Date: _____</p> <p>Drainage Design: _____ Date: _____</p> <p>By: _____ Date: _____</p>	<p>SCALE: Horizontal _____ Vertical _____</p> <p>BENCHMARK: _____</p>	<p>REVISIONS:</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Description</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	No.	Description	Date																			<p>ENGINEER: _____</p> <p>2435 Research Pkwy, Suite 300, Colorado Springs, CO 80920 Phone 719.575.0100</p> <p>Designed By: _____ Date: _____ Drawn By: _____ Date: _____ Checked By: _____ Date: _____</p>	<p>SORPRESA LANE</p> <p>TYPICAL SECTIONS</p> <p>City Project No. _____ Drainage Basin Cottonwood Creek Job No. 13.450.004 Sheet 3 of 8</p>
No.	Description	Date																							

FIGURE 4 - Approved Street Design



EXISTING CUMBRE VISTA FILLING 2 SUBDIVISION



WILLIAM M. PECK
53060-00-032

MARILYN J. HOWELL
53060-00-048

LEGEND



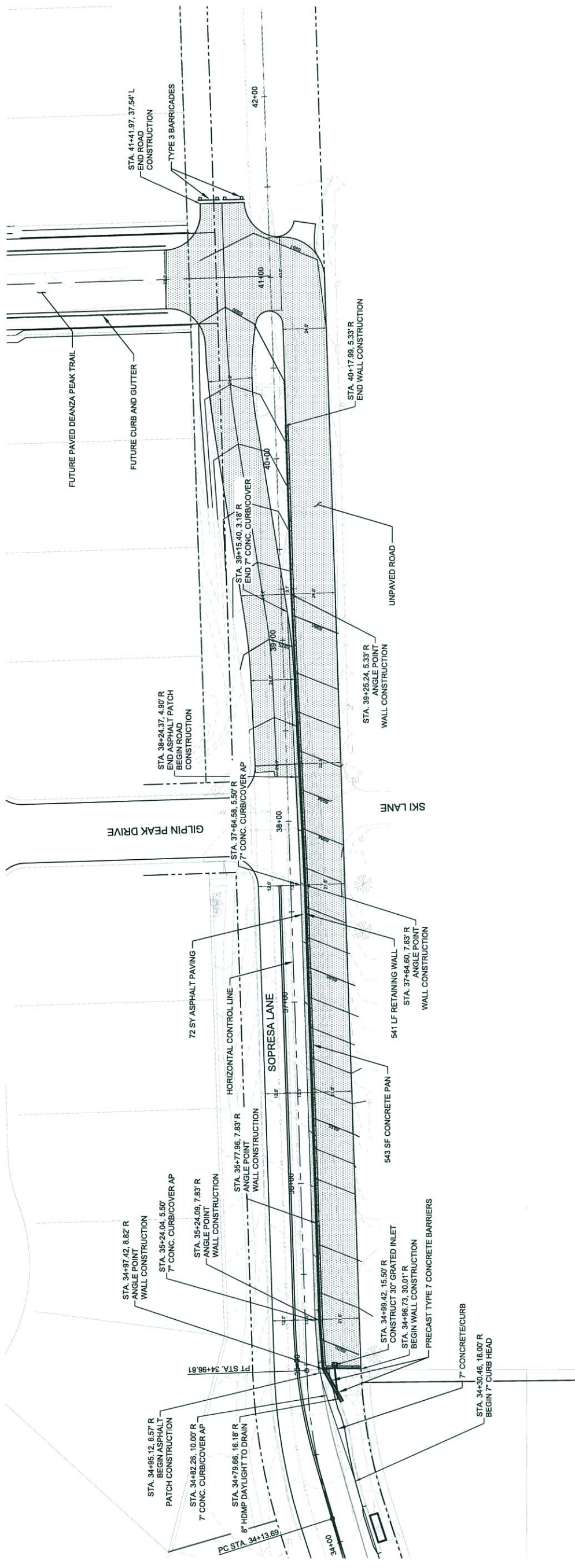
REMOVAL OF ASPHALT MAT



REVIEW: Street Design: _____ Curb & Gutter review: <i>ARM</i> Final Review: _____ Drainage Design: _____ By: _____ Date: _____	SCALE: Horizontal _____ Vertical _____ BENCHMARK: _____	REVISIONS: No. Description Date _____ _____ _____	ENGINEER: _____ Date: _____
			City Project No. _____ Drainage Basin: Cottonwood Creek Job No. 13.450.004 Sheet 4 of 8

Matrix
 DESIGN GROUP
 2435 Research Pkwy, Suite 300, Colorado Springs, CO 80920
 Phone 719.575.0100
 Designed By: GLS Date: November 2013
 Drawn By: JAB Date: November 2013
 Checked By: GLS Date: November 2013

FIGURE 4 - Approved Street Design



NOTE:

- FOR RETAINING WALL AND FOUNDATION INFORMATION SEE RETAINING WALL CONSTRUCTION PLANS PREPARED BY CTL THOMPSON.

LEGEND





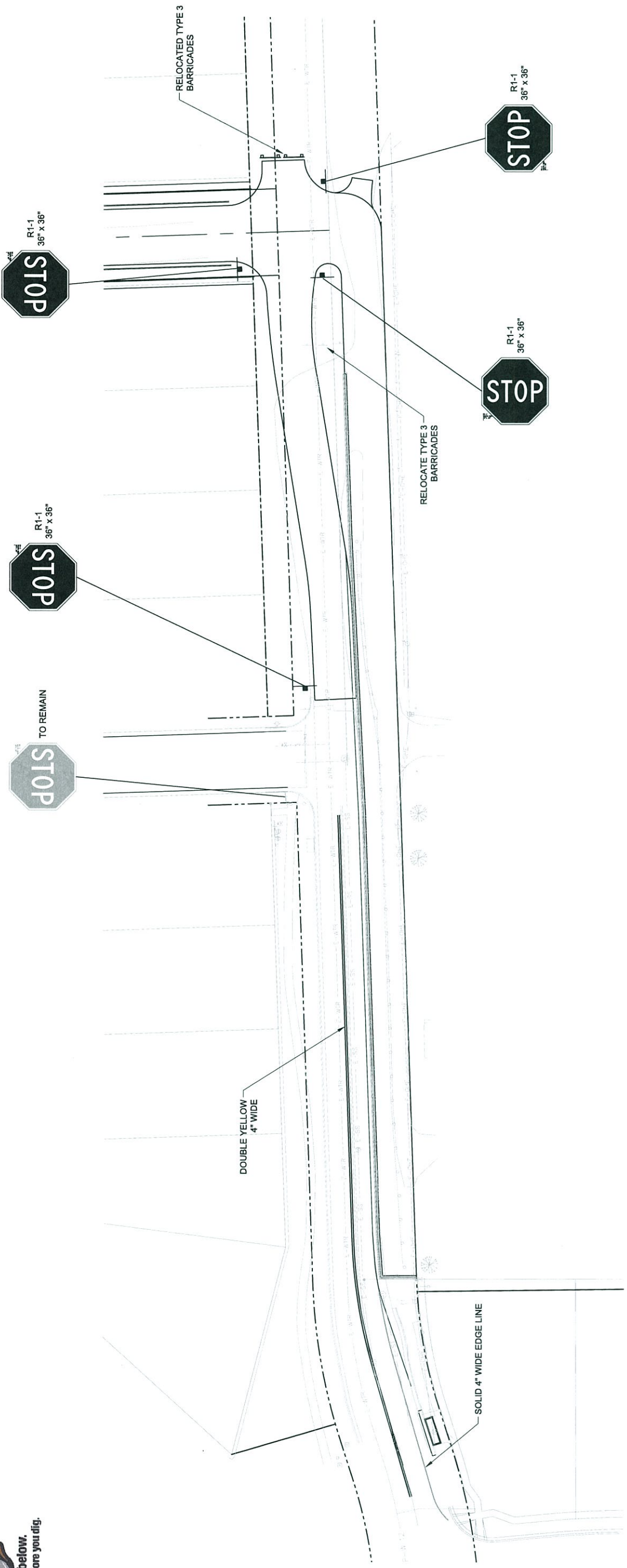
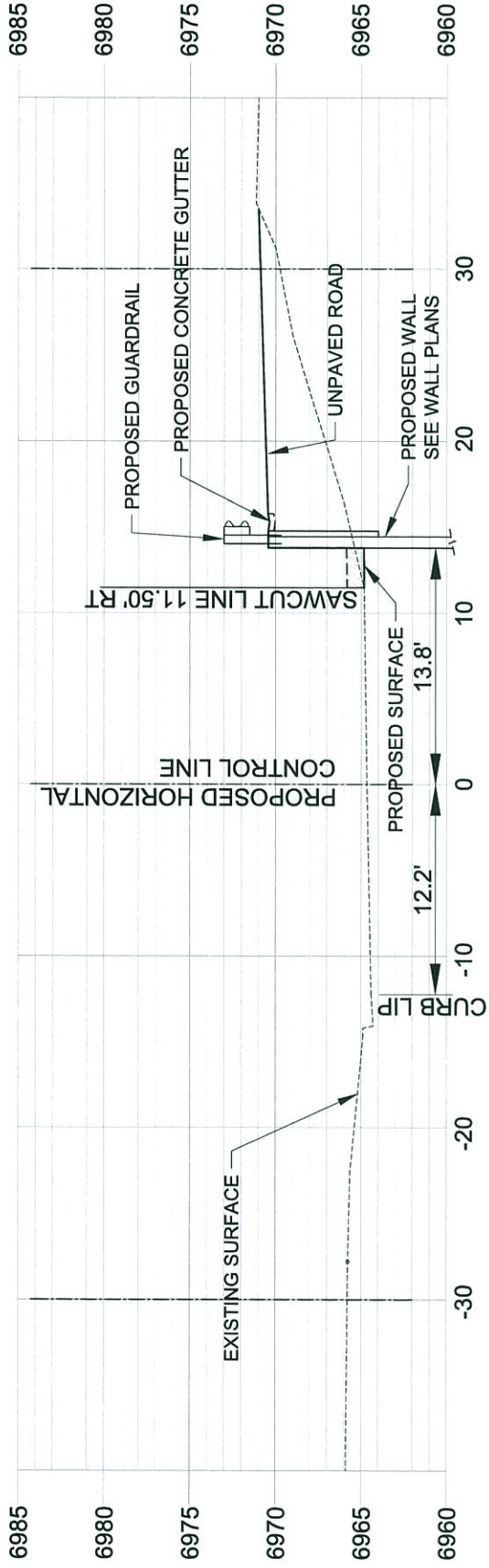
REVIEW: Street Design: _____ Curb & Gutter review: _____ Final Review: _____ Drainage Design: _____	Date: _____ Date: _____ Date: _____	 MAB	By: _____ Date: _____	SCALE: Horizontal _____ Vertical _____ BENCHMARK: _____	REVISIONS: No. Description Date _____ _____ _____	ENGINEER:  Matrix DESIGN GROUP 2435 Research Pkwy, Suite 300, Colorado Springs, CO 80920 Phone 719.575.0100	SORPRESA LANE ROADWAY PLAN

FIGURE 4 - Approved Street Design

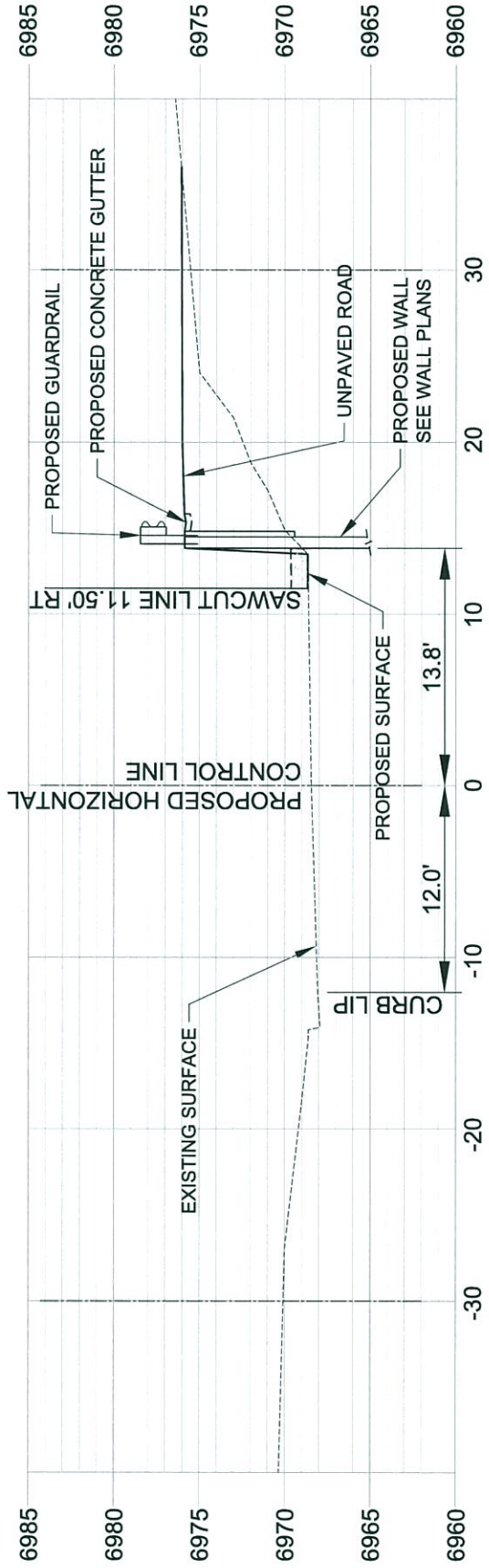


<p>REVIEW:</p> <p>Street Design: _____ Date: _____</p> <p>Curb & Gutter review: _____ Date: _____</p> <p>Final Review: _____ Date: _____</p> <p>Drainage Design: _____ Date: _____</p> <p>By: _____ Date: _____</p>	<p>SCALE: Horizontal _____ Vertical _____</p> <p>BENCHMARK: _____</p>	<p>REVISIONS:</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Description</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	No.	Description	Date																<p>ENGINEER:</p> <p>Matrix DESIGN GROUP</p> <p>2435 Research Pkwy, Suite 300, Colorado Springs, CO 80920 Phone 719.575.0100</p> <p>Designed By: _____ Date: _____</p> <p>Drawn By: _____ Date: _____</p> <p>Checked By: _____ Date: _____</p>	<p>SORPRESA LANE</p> <p>SIGNING AND PAVEMENT MARKING</p> <p>City Project No. _____</p> <p>Drainage Basin _____</p> <p>Job No. 13.450.004 Sheet 6 of 8</p>
No.	Description	Date																				

FIGURE 4 - Approved Street Design



STA 35+25

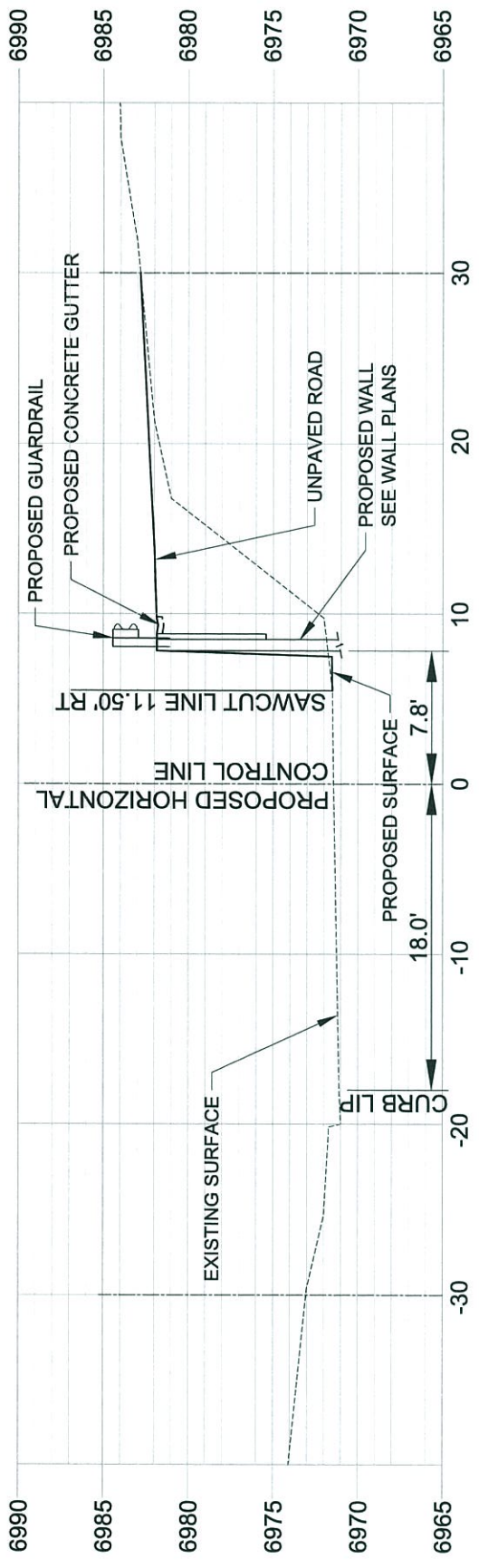


STA 36+50

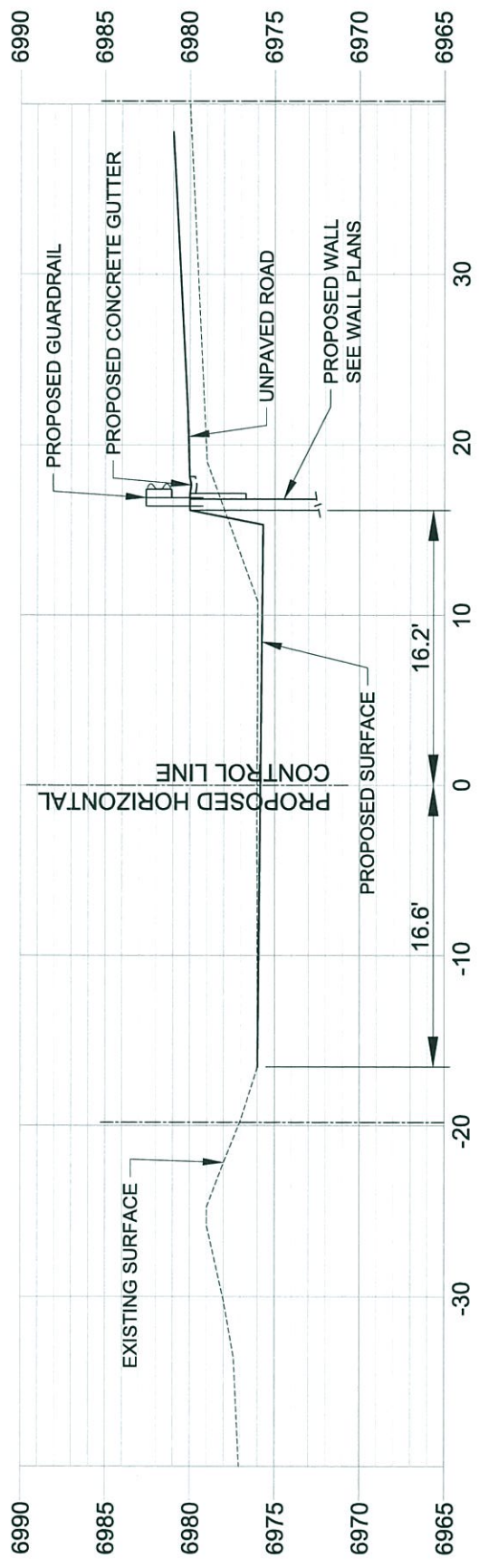


<p>REVIEW:</p> <p>Street Design: _____ Date: _____</p> <p>Curb & Gutter review: <i>[Signature]</i> Date: <i>11/13</i></p> <p>Final Review: _____ Date: _____</p> <p>Drainage Design: _____ Date: _____</p> <p>By: _____ Date: _____</p>	<p>SCALE: Horizontal _____ Vertical _____</p> <p>BENCHMARK: _____</p>	<p>REVISIONS:</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Description</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	No.	Description	Date															
No.	Description	Date																		
<p>ENGINEER:</p> <p>Matrix DESIGN GROUP</p> <p>2435 Research Pkwy, Suite 300, Colorado Springs, CO 80920 Phone 719.575.0100</p>																				
<p>SORPRESA LANE</p> <p>CROSS SECTIONS</p>																				
<p>City Project No. _____</p> <p>Drainage Basin _____</p> <p>Job No. 13.450.004 Sheet 7 of 8</p>																				

FIGURE 4 - Approved Street Design



STA 37+50



STA 39+25



REVIEW: Street Design: _____ Curb & Gutter review: _____ Final Review: _____ Drainage Design: _____	By: _____ Date: _____ Date: _____ Date: _____	SCALE: Horizontal _____ Vertical _____ BENCHMARK: _____	REVISIONS: No. Description Date	ENGINEER: Matrix DESIGN GROUP 2435 Research Pkwy, Suite 300, Colorado Springs, CO 80920 Phone 719.575.0100	SORPRESA LANE
					CROSS SECTIONS
City Project No. _____ Drainage Basin Cottonwood Creek Job No. 13.450.004 Sheet 8 of 8			Designed By: GLS Date: November 2013 Drawn By: MAB Date: November 2013 Checked By: GLS Date: November 2013		

FIGURE 4 - Approved Street Design



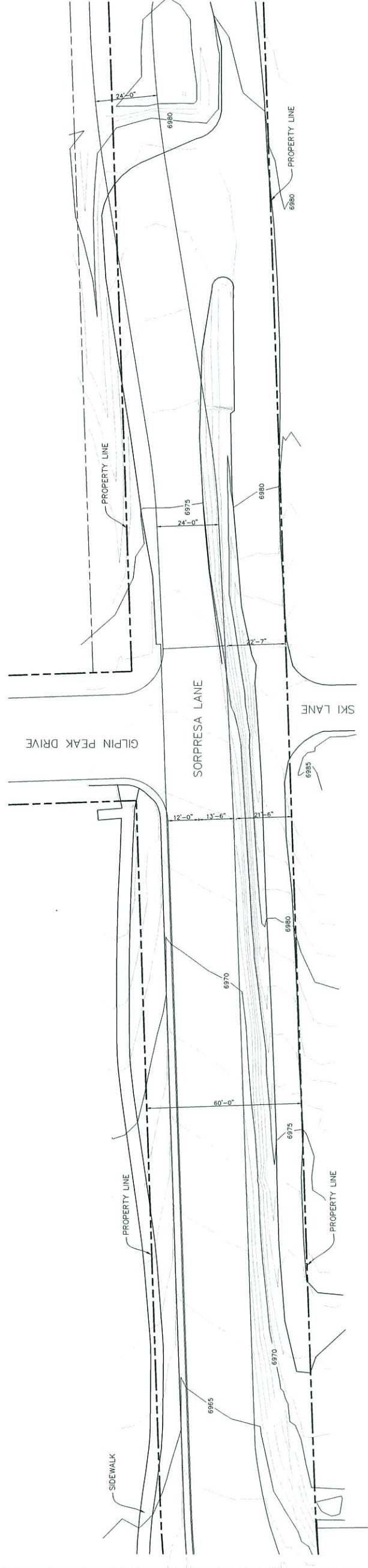
THIS DRAWING AND ALL INFORMATION CONTAINED HEREIN IS THE PROPERTY OF CTL THOMPSON, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. NO PART OF THIS DRAWING IS TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CTL THOMPSON, INC. ALL RIGHTS RESERVED.

PROJECT LOCATION:
 RETAINING WALL DESIGN
 SORPRESA LANE
 COLORADO SPRINGS, COLORADO

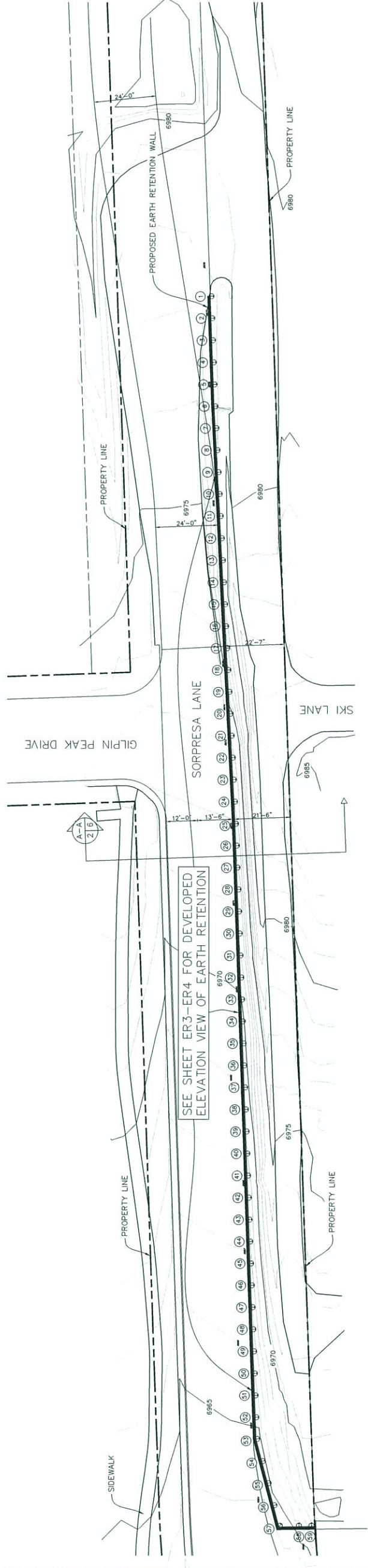
NO.	DATE	REVISION/ISSUE

CLIENT:
 Woodmen Heights Metropolitan
 District Nos. 1, 2, and 3
 102 East Pikes Peak Ave., #200
 Colorado Springs, CO 80903

DATE: 11-16-13
 DRAWN BY: ER2
 CHECKED BY: ER2
 SCALE: 1" = 20'-0"
 SHEET: 2 OF 8



PLAN VIEW - SORPRESA LANE
 EXISTING
 SCALE: 1" = 20'-0"

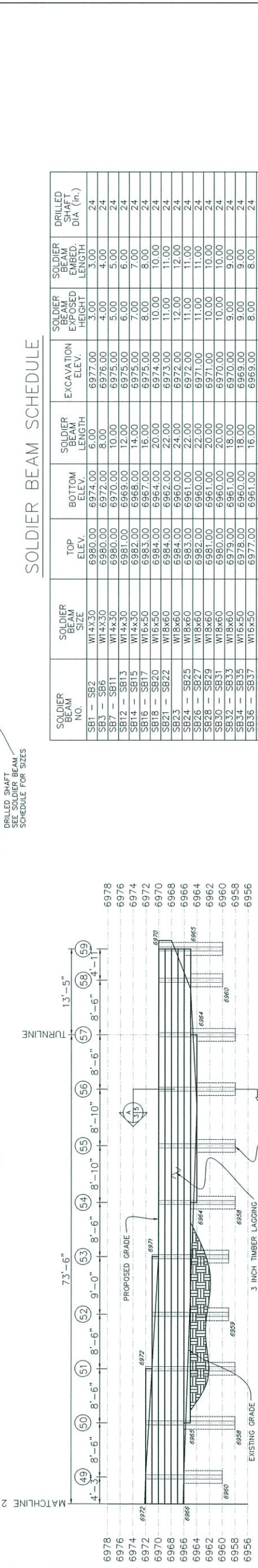
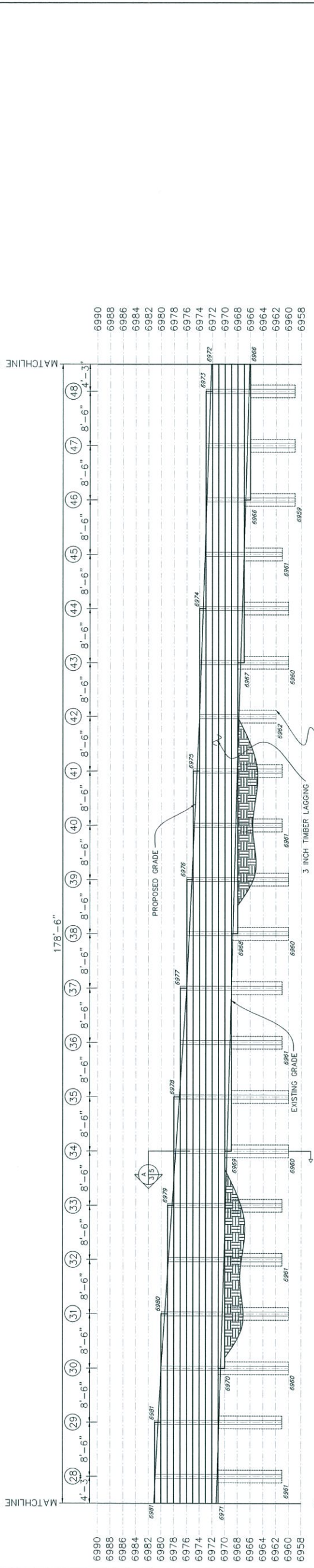
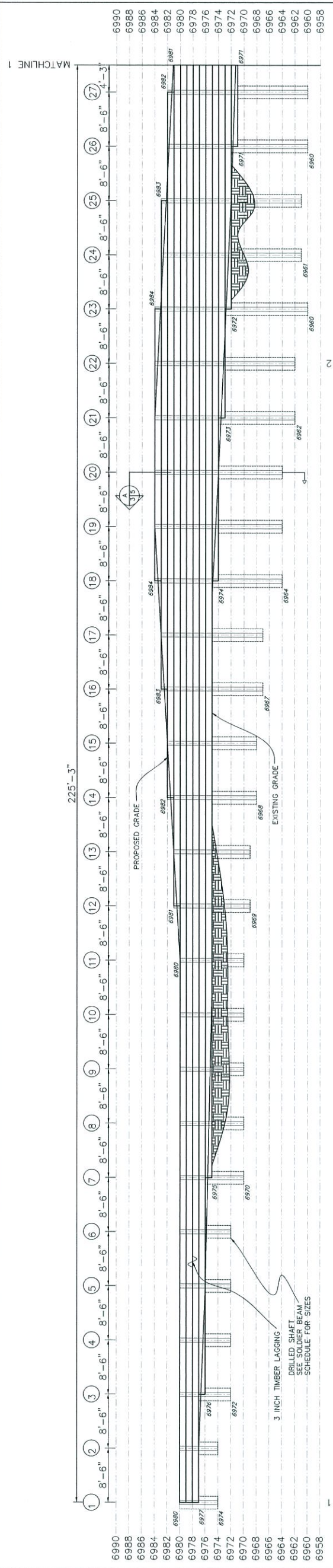


PLAN VIEW - SORPRESA LANE
 PROPOSED
 SCALE: 1" = 20'-0"

- LEGEND:**
- ① 3 DRILLED SHAFT WITH SOLDIER BEAM NUMBER INCLUDED
 - 6975 EXISTING GRADE - 5 FEET INTERVAL
 - 6980 EXISTING GRADE - 1 FOOT INTERVAL

ARM 11/11/13

FIGURE 4 - Approved Street Design



SOLDIER BEAM SCHEDULE

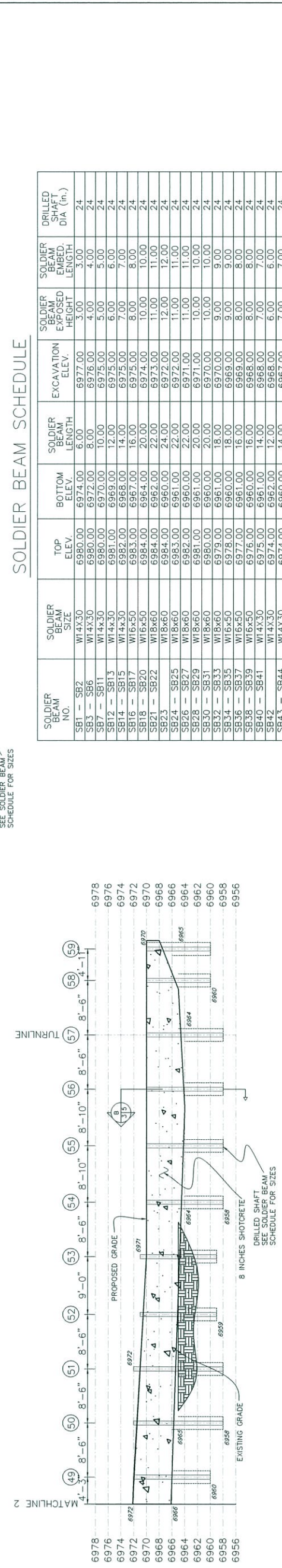
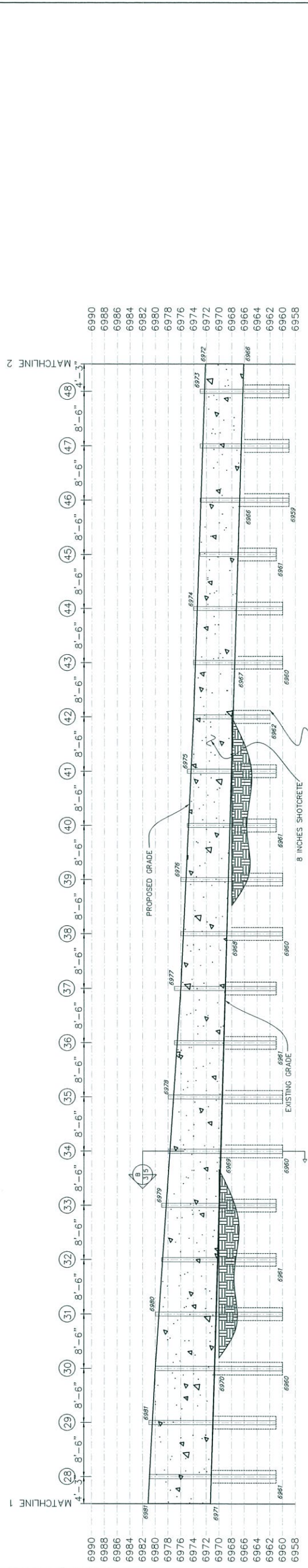
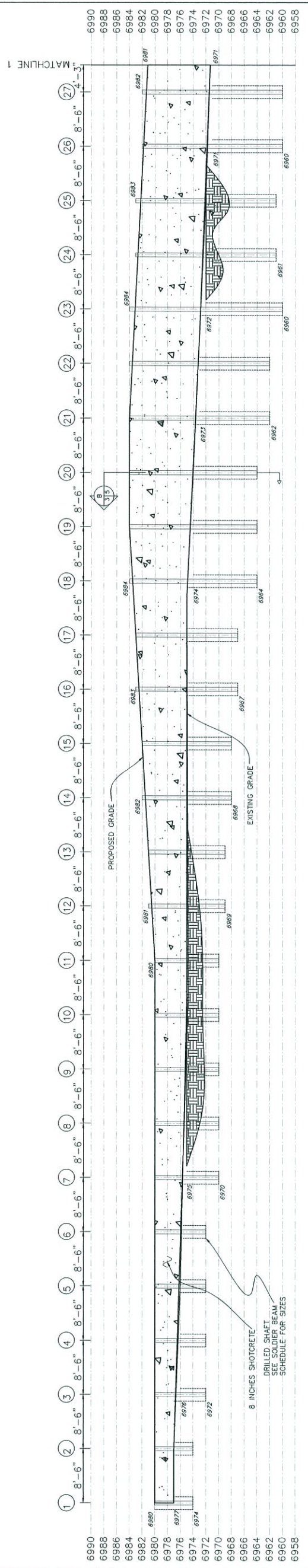
SOLDIER BEAM NO.	SOLDIER BEAM SIZE	TOP ELEV.	BOTTOM ELEV.	SOLDIER BEAM LENGTH	EXCAVATION ELEV.	SOLDIER BEAM EXPOSED HEIGHT	SOLDIER BEAM EMBED. LENGTH	DRILLED SHAFT DIA. (in.)
SB1 - SB2	W14X30	6980.00	6974.00	6.00	6977.00	3.00	3.00	24
SB3 - SB6	W14X30	6980.00	6972.00	8.00	6976.00	4.00	4.00	24
SB7 - SB11	W14X30	6980.00	6970.00	10.00	6975.00	5.00	5.00	24
SB12 - SB13	W14X30	6981.00	6969.00	12.00	6975.00	6.00	6.00	24
SB14 - SB15	W14X30	6982.00	6968.00	16.00	6975.00	7.00	7.00	24
SB16 - SB17	W16X50	6983.00	6967.00	16.00	6974.00	8.00	8.00	24
SB18 - SB20	W16X50	6984.00	6964.00	20.00	6974.00	10.00	10.00	24
SB21 - SB22	W18X60	6984.00	6962.00	22.00	6973.00	11.00	11.00	24
SB23 - SB24	W18X60	6984.00	6960.00	24.00	6972.00	12.00	12.00	24
SB25 - SB27	W18X60	6983.00	6961.00	22.00	6972.00	11.00	11.00	24
SB28 - SB29	W18X60	6982.00	6961.00	22.00	6971.00	10.00	10.00	24
SB30 - SB31	W18X60	6981.00	6960.00	20.00	6970.00	10.00	10.00	24
SB32 - SB33	W18X60	6979.00	6961.00	18.00	6970.00	9.00	9.00	24
SB34 - SB35	W16X50	6978.00	6960.00	18.00	6969.00	9.00	9.00	24
SB36 - SB37	W16X50	6977.00	6961.00	16.00	6969.00	8.00	8.00	24
SB38 - SB39	W16X50	6976.00	6961.00	16.00	6968.00	8.00	8.00	24
SB40 - SB41	W14X30	6975.00	6962.00	14.00	6968.00	7.00	7.00	24
SB42 - SB44	W14X30	6974.00	6960.00	12.00	6968.00	6.00	6.00	24
SB45 - SB46	W14X30	6973.00	6961.00	12.00	6967.00	6.00	6.00	24
SB47 - SB48	W14X30	6973.00	6959.00	14.00	6966.00	7.00	7.00	24
SB49 - SB50	W14X30	6972.00	6960.00	12.00	6966.00	6.00	6.00	24
SB51 - SB53	W14X30	6972.00	6958.00	14.00	6965.00	7.00	7.00	24
SB54 - SB57	W14X30	6971.00	6959.00	12.00	6965.00	6.00	6.00	24
SB58 - SB59	W14X30	6970.00	6958.00	12.00	6964.00	6.00	6.00	24
SB60 - SB66	W14X30	6970.00	6960.00	10.00	6965.00	5.00	5.00	24

NOTES:
 XXXXXXX

ELEVATION VIEW - TEMPORARY CONDITION
 LAGGING AREA = 3500 SF
 SCALE: 1/8" = 1'-0"

FIGURE 4 - Approved Street Design

Am 11/6/13



SOLDIER BEAM SCHEDULE

SOLDIER BEAM NO.	SOLDIER BEAM SIZE	TOP ELEV.	BOTTOM ELEV.	SOLDIER BEAM LENGTH	EXCAVATION ELEV.	SOLDIER BEAM EXPOSED HEIGHT	SOLDIER BEAM EXPOSED LENGTH	DRILLED SHAFT DIA. (in.)
SB1 - SB2	W14X30	6980.00	6974.00	6.00	6977.00	3.00	3.00	24
SB3 - SB6	W14X30	6980.00	6972.00	8.00	6976.00	4.00	4.00	24
SB7 - SB11	W14X30	6980.00	6970.00	10.00	6975.00	5.00	5.00	24
SB12 - SB13	W14X30	6981.00	6969.00	12.00	6975.00	6.00	6.00	24
SB14 - SB15	W14X30	6982.00	6968.00	14.00	6975.00	7.00	7.00	24
SB16 - SB17	W16X50	6983.00	6967.00	16.00	6975.00	8.00	8.00	24
SB18 - SB20	W14X30	6984.00	6964.00	20.00	6974.00	10.00	10.00	24
SB21 - SB22	W18X60	6984.00	6962.00	22.00	6973.00	11.00	11.00	24
SB23	W18X60	6984.00	6960.00	24.00	6972.00	12.00	12.00	24
SB24 - SB25	W18X60	6983.00	6961.00	22.00	6972.00	11.00	11.00	24
SB26 - SB27	W18X60	6982.00	6961.00	22.00	6971.00	11.00	11.00	24
SB28 - SB29	W18X60	6981.00	6961.00	20.00	6971.00	10.00	10.00	24
SB30 - SB31	W18X60	6980.00	6960.00	20.00	6970.00	10.00	10.00	24
SB32 - SB33	W18X60	6979.00	6961.00	18.00	6970.00	9.00	9.00	24
SB34 - SB35	W16X50	6978.00	6960.00	18.00	6969.00	9.00	9.00	24
SB36 - SB37	W16X50	6977.00	6961.00	16.00	6969.00	8.00	8.00	24
SB38 - SB39	W16X50	6976.00	6961.00	16.00	6968.00	8.00	8.00	24
SB40 - SB41	W14X30	6975.00	6962.00	14.00	6968.00	7.00	7.00	24
SB42	W14X30	6974.00	6962.00	12.00	6968.00	6.00	6.00	24
SB43 - SB44	W14X30	6974.00	6961.00	14.00	6967.00	7.00	7.00	24
SB45	W14X30	6973.00	6961.00	12.00	6967.00	6.00	6.00	24
SB46 - SB48	W14X30	6973.00	6959.00	14.00	6966.00	7.00	7.00	24
SB49	W14X30	6972.00	6960.00	12.00	6966.00	6.00	6.00	24
SB50 - SB51	W14X30	6972.00	6958.00	14.00	6965.00	7.00	7.00	24
SB52 - SB53	W14X30	6971.00	6958.00	12.00	6965.00	6.00	6.00	24
SB54 - SB57	W14X30	6970.00	6955.00	12.00	6965.00	6.00	6.00	24
SB58 - SB59	W14X30	6970.00	6960.00	10.00	6965.00	5.00	5.00	24

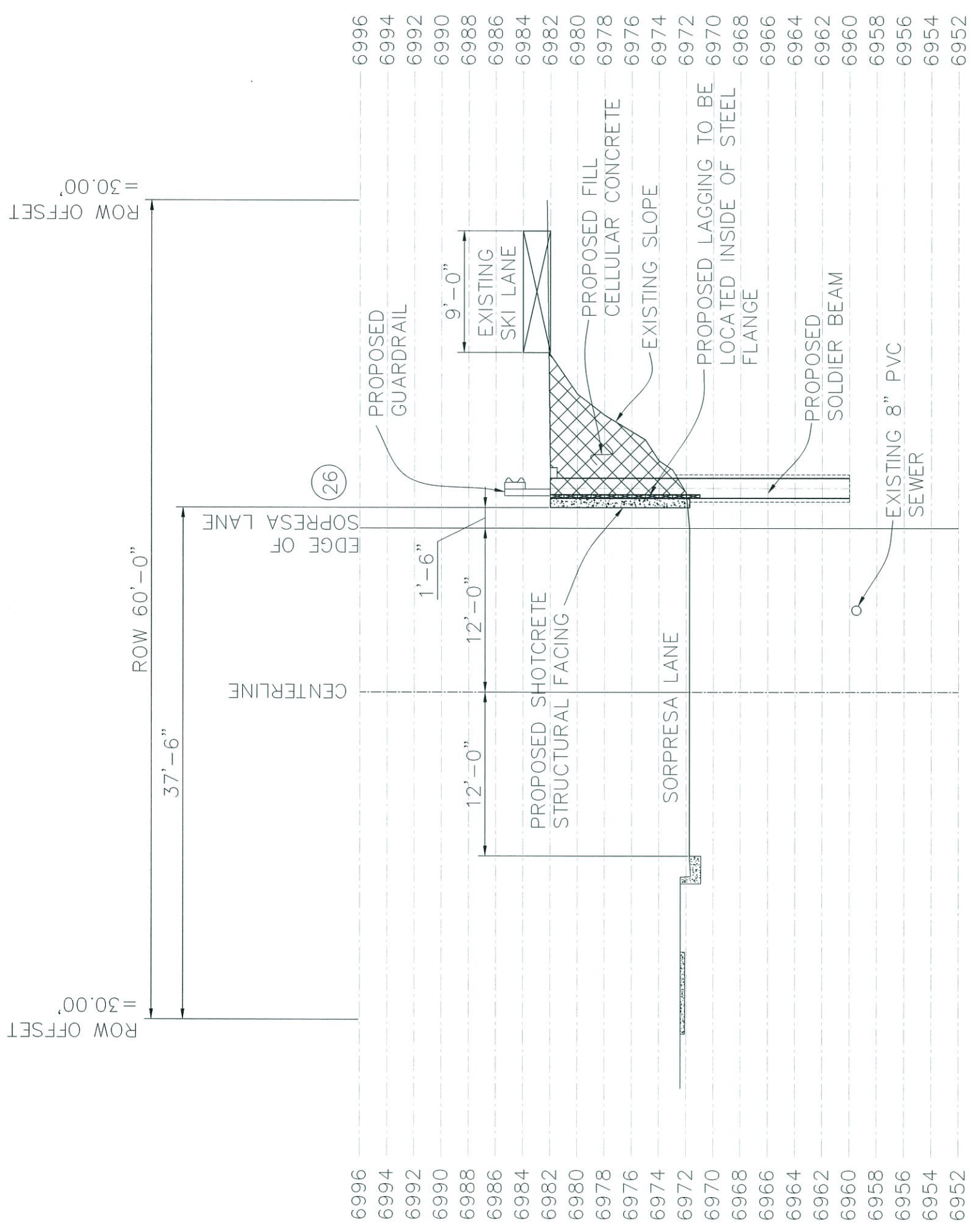
NOTES:
 SOLDIER BEAMS 1-7 TO HAVE BEARING PLATES LOCATED AT BOTTOM. REFER TO DETAIL X-4/4
 BEARING PLATES TO BE 8 INCH x 18 INCH x 1 INCH

ELEVATION VIEW - PERMANENT CONDITION

PERM SHOTCRETE AREA = 3338 SF
 88 PIECES OF MESH (2 LAYER)
 DRAIN BOARD - 700 LF = 58 @ AVG LENGTH OF 12 FEET
 SCALE: 1/8" = 1'-0"

Thom 1/16/13

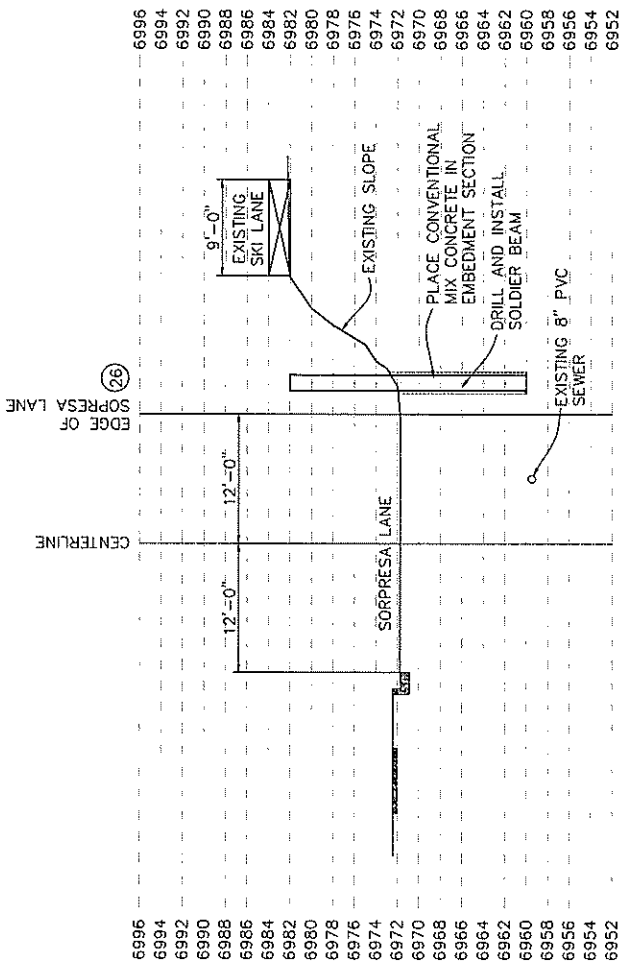
FIGURE 4 - Approved Street Design



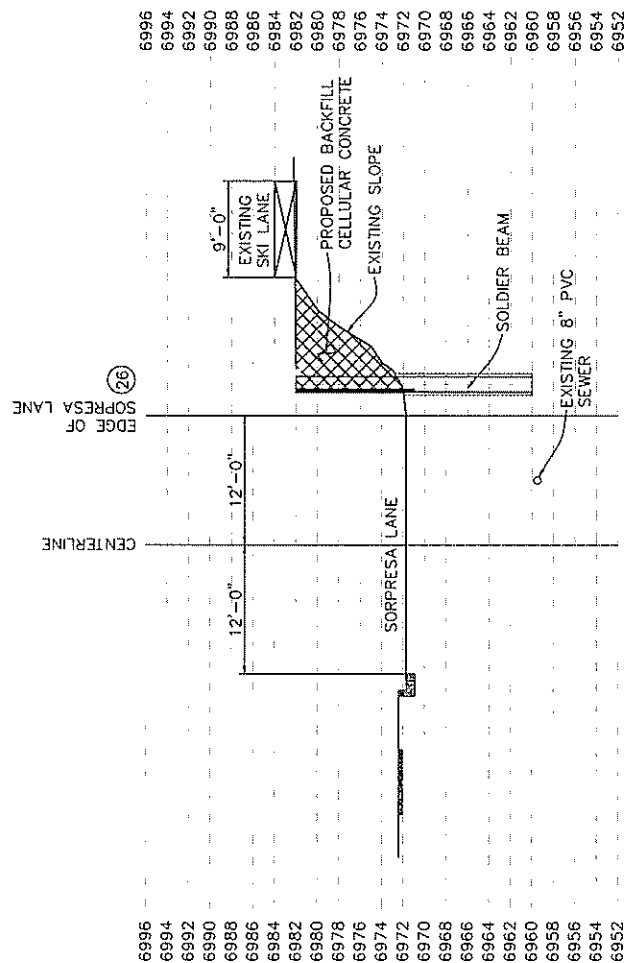
A-A' CROSS SECTION A-A'
 2/6
 SCALE: 1/4" = 1'-0"

Am 11/13

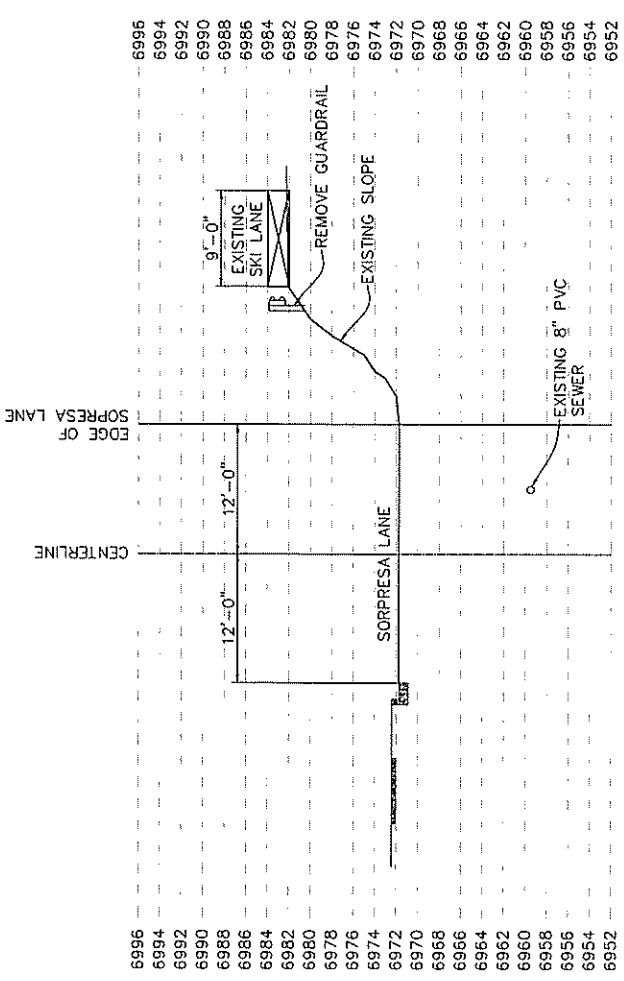
FIGURE 4 - Approved Street Design



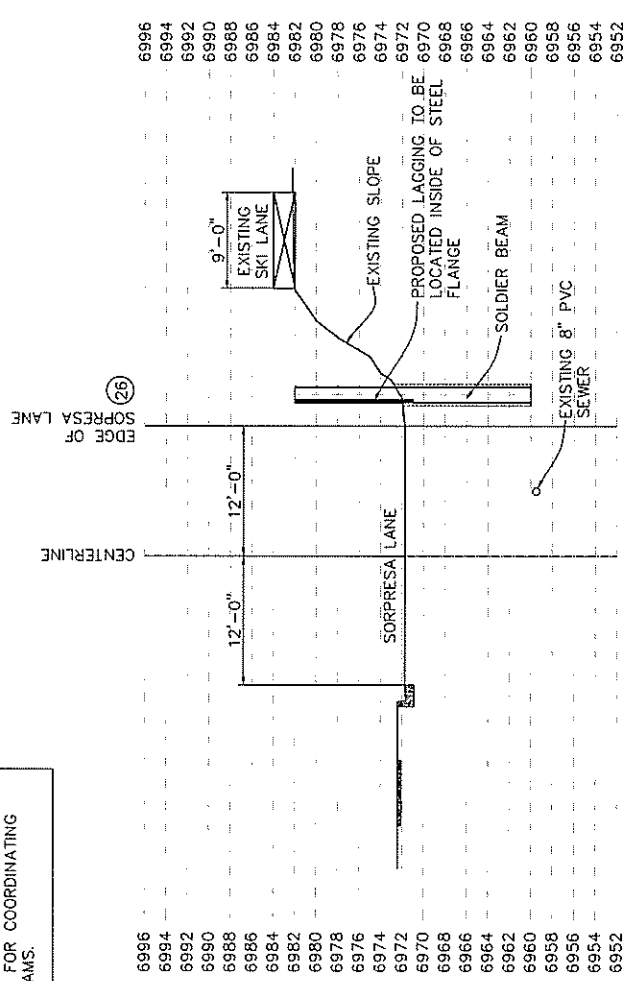
A-A' 26 STEP 1. DRILL AND INSTALL SOLDIER BEAM



A-A' 26 STEP 3. PLACE BACKFILL - CELLULAR CONCRETE



A-A' 26 EXISTING
SCALE: 1/8" = 1'-0"



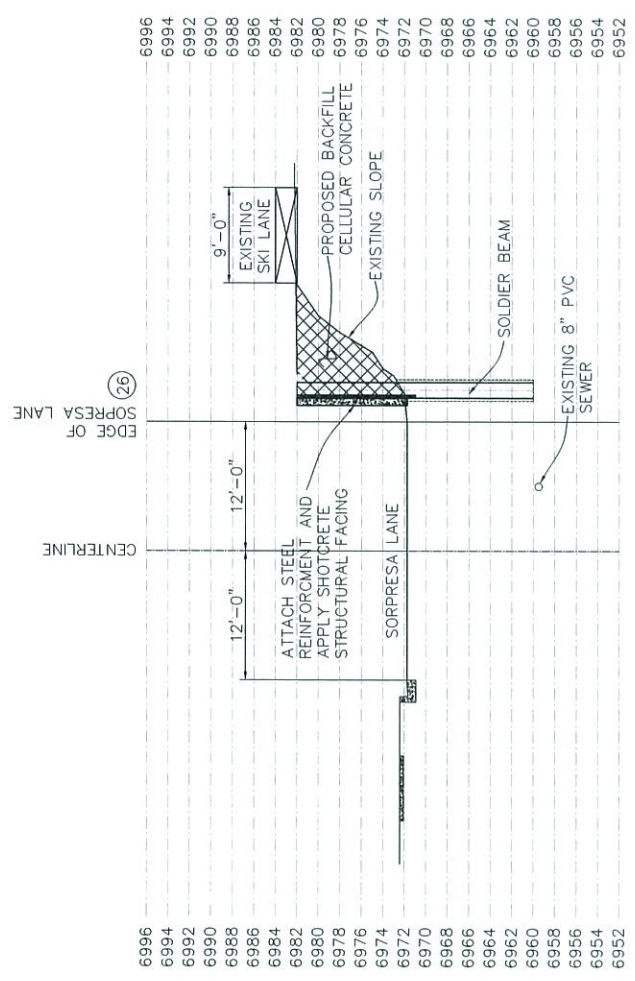
A-A' 26 STEP 2. INSTALL LAGGING

ALL UTILITIES WITH EQUIPMENT OR FACILITIES SERVING AN AREA WITHIN 300 FEET OF THE PLANNED EXCAVATION SHALL BE NOTIFIED NOT LATER THAN 2 DAYS PRIOR TO SOLDIER BEAM INSTALLATION THAT SUCH WORK IS TO TAKE PLACE. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF SOLDIER BEAMS.

- CONSTRUCTION SEQUENCE**
- 1) REMOVE EXISTING GUARDRAIL AND PROVIDE SAFE WORKPLACE AREA ADJACENT TO SOPRESA LANE.
 - 2) DRILL AND INSTALL SOLDIER BEAMS FROM SOPRESA LANE. VERIFY EXISTING GRADE ELEVATIONS. (SEE STEP 1 SHEET ER7).
 - 3) ATTACH STEEL ANGLES TO INSIDE OF SOLDIER BEAM FLANGE AND PLACE (SLIDE) LAGGING BEHIND FRONT SOLDIER BEAM FLANGE. REFER TO ER3 FOR DEVELOPED ELEVATION VIEW OF TEMPORARY SYSTEM (SEE STEP 2 SHEET ER7).
 - 4) PLACE CELLULAR CONCRETE AS BACKFILL IN AREA BEHIND TIMBER LAGGING AND EXISTING SLOPE NORTH OF SKI RUN. (SEE STEP 3 SHEET ER7). PLACEMENT OF CELLULAR CONCRETE PER SUPPLIER RECOMMENDATIONS.
 - 5) WELD HEADED ANCHOR STUDS TO FACE OF SOLDIER BEAM. ATTACH STEEL REINFORCEMENT TO STUDS AND APPLY SHOTCRETE. (SEE STEP 4 ER8)
 - 6) REINSTALL EXISTING GUARDRAIL. (SEE STEP 5 ER8)

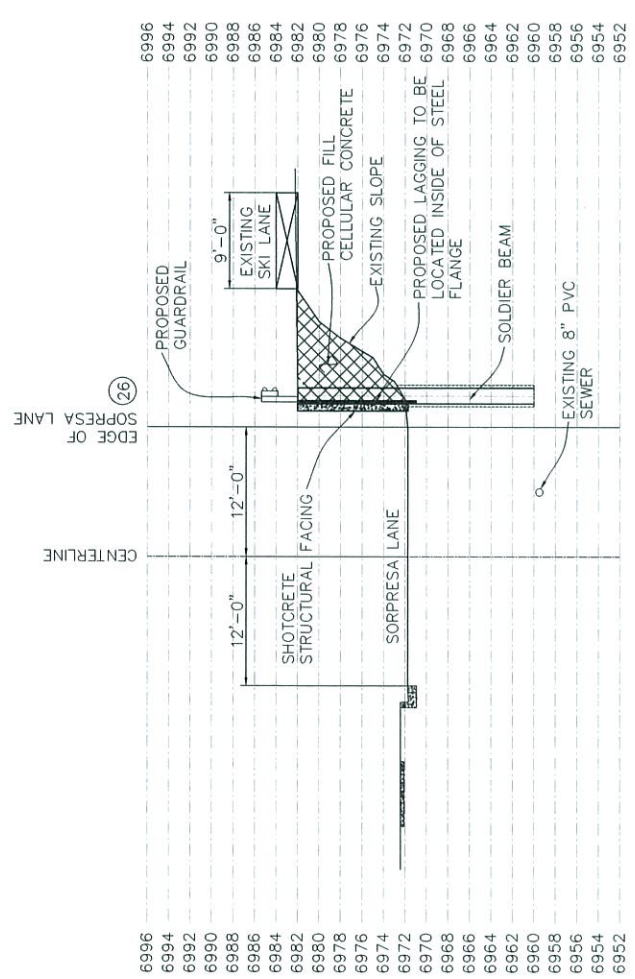
Handwritten signature/initials

FIGURE 4 - Approved Street Design



STEP 4. ATTACH STEEL REINFORCEMENT AND APPLY SHOTCRETE STRUCTURAL FACING

A-A' 2/6



STEP 5. INSTALL GUARDRAIL (REUSE EXISTING GUARDRAIL)

A-A' 2/6

- CONSTRUCTION SEQUENCE
- 1) REMOVE EXISTING GUARDRAIL AND PROVIDE SAFE WORKPLACE AREA ADJACENT TO SOPRESA LANE. DRILL AND INSTALL SOLDIER BEAMS FROM SOPRESA LANE. VERIFY EXISTING GRADE ELEVATIONS. (SEE STEP 1 SHEET ER7).
 - 2) ATTACH STEEL ANGLES TO INSIDE OF SOLDIER BEAM FLANGE AND PLACE (SLIDE) LAGGING BEHIND FRONT SOLDIER BEAM FLANGE. REFER TO ER3 FOR DEVELOPED ELEVATION VIEW OF TEMPORARY SYSTEM (SEE STEP 2 SHEET ER7).
 - 3) PLACE CELLULAR CONCRETE AS BACKFILL IN AREA BEHIND TIMBER LAGGING AND EXISTING SLOPE NORTH OF SKI RUN. (SEE STEP 3 SHEET ER7). PLACEMENT OF CELLULAR CONCRETE PER SUPPLIER RECOMMENDATIONS.
 - 4) WELD HEADED ANCHOR STUDS TO FACE OF SOLDIER BEAM. ATTACH STEEL REINFORCEMENT TO STUDS AND APPLY SHOTCRETE. (SEE STEP 4 ER8)
 - 5) REINSTALL EXISTING GUARDRAIL. (SEE STEP 5 ER8)

Handwritten signature and date: 11/11/13

CTL | THOMPSON
 5170 Mark Obling Blvd.
 Colorado Springs, CO 80918
 P: 719-528-8300
 F: 719-528-9362
 www.ctlthompson.com

RETAINING WALL DESIGN
 SOPRESA LANE
 COLORADO SPRINGS, COLORADO

PROJECT LOCATION:

NO.	DATE	REVISION/ISSUE

CLIENT:
 Woodmen Heights Metropolitan
 102 East Flakes Peak Ave., #200
 Colorado Springs, CO 80903

ER8
 8 of 8
 1/8" = 1'-0"

FIGURE 4 - Approved Street Design